

Options for Cleaning Up Colville Post & Poles



Soil and groundwater are contaminated from treating wood products at Colville Post & Poles.

Comments accepted:

November 29 –
December 30, 2021

Submit comments:

Online at
<https://tcp.ecology.commentinput.com/?id=3bk4Q>

Or by mail or email to:
Jeremy Schmidt, site manager
4601 North Monroe Street
Spokane, WA 99205
Jeremy.Schmidt@ecy.wa.gov

Review documents online:

<https://fortress.wa.gov/ecy/gsp/Sitepage.aspx?csid=46>

Due to coronavirus, in-person document reviews are not currently available. Please contact Erika Beresovoy at erika.beresovoy@ecy.wa.gov or 509-385-2290 if you need printed documents.

Facility Site ID: 765
Site Cleanup ID: 46

Site address: 396 Highway 395
North, Colville, Stevens County

Draft contamination and cleanup options report available for public review and comment

The Washington State Department of Ecology (Ecology) seeks your input on the draft Remedial Investigation and Feasibility Study (RI/FS) Report for the Colville Post & Poles cleanup site (site). The RI documents the extent and locations of pentachlorophenol (PCP), diesel, and dioxin contamination in soil and groundwater at the site. The FS evaluates cleanup options.

The nearly 23-acre site is within 200 feet of the Colville River, which flows into Lake Roosevelt, a reservoir created by the Grand Coulee Dam on the Columbia River.

Site history

Colville Post & Poles, Inc., used the site to treat wood, primarily fence posts and rails, for about 60 years from the 1940s to 2005. Throughout the wood-treating period, PCP and diesel leaked from piping and drip pads. In 1989, a 10,000-gallon, above-ground storage tank leaked PCP to the ground.

In 2000, the Confederated Tribes of the Colville Reservation petitioned the U.S. Environmental Protection Agency (EPA) to assess contamination at the site. Colville Post & Poles, Inc., closed down in 2005 when the owners couldn't afford upgrades required to meet environmental standards.

To address immediate threats to people and the environment, the EPA took action in 2005 and 2006. They investigated the site, demolished treatment and storage buildings, installed groundwater monitoring wells, and excavated and safely disposed of some contaminated soil, debris, and drummed wastes.

The Eastern Washington Clean Sites Initiative funds this cleanup because the former site owners/operators are unable pay for it. The funding cleans up abandoned sites to create healthier communities. The money comes from the state's voter-approved tax on hazardous substances.

When funding became available in 2015, Ecology took steps toward completing site cleanup. We removed debris in and around surface water and concrete footings in the area where wood was treated, temporarily stockpiled debris as necessary, and did an initial assessment of soil and groundwater contamination. Five groundwater samples contained PCP and diesel at levels requiring cleanup.

Ecology completed the RI/FS to find out how much contamination remains and evaluate final cleanup options.

Investigations findings

The RI found that PCP and dioxin are spread across shallow soil throughout the site. The greatest impacts are observed in the former process area, along with several spots in the south stockpile area and a drainage channel.

A PCP-contaminated groundwater plume extends from the former process area to the western property line. The PCP plume's western margin is not completely defined, as it likely extends off-site. Diesel- and dioxin-contaminated groundwater is only present in the former process area.

Groundwater seeping into the Colville River is not affecting river water quality.

Cleanup options

Three cleanup options, called "alternatives" in the FS, were developed for soil, and four cleanup options were developed for groundwater.

Soil cleanup options

All soil cleanup options include disposing of the debris piles at a facility permitted to accept the waste. Contamination in the wetland areas would also be capped with 12 inches of clean soil because excavating the wetlands would be too disruptive to this sensitive habitat. Excavated areas would be replanted in all cleanup options, too.

- 1. Soil washing, estimated cost = \$21,985,231.** Contaminated soil would be excavated and compiled at an on-site treatment area. A solvent that captures contaminants would be used to wash the soil. The washed soil would be sampled to verify the process was effective. The solvent would be treated and recycled, and the removed contaminants would be disposed off-site. Washed soil would be mixed with beneficial amendments and returned to the excavated areas. However, Ecology was concerned that soil washing wouldn't meet cleanup standards. After the draft RI/FS was completed, the effectiveness of this method was pilot-tested. That test showed that soil washing could not clean up the soil, so Ecology decided it is not a viable option.
- 2. Excavation and off-site disposal, estimated cost = \$26,820,847.** Contaminated soil would be excavated and disposed at the chemical waste facility in Arlington, Oregon.
- 3. On-site treatment, estimated cost = \$25,266,986.** Contaminated soil would be excavated and compiled at an on-site treatment area. Contaminants in the soil would be destroyed with thermal treatment by using heating electrodes and vapor recovery. Treated soil would be sampled to verify the process was effective, mixed with beneficial amendments, and returned to the excavated areas.

Groundwater cleanup options

All groundwater cleanup options include a monitoring program that would continue until groundwater quality met standards set to protect people and the environment.

- 1. Monitoring contamination as it decreases naturally, estimated cost = \$360,000.** This option doesn't protect people or the environment, so we will not choose it.

2. **Pump and treat, estimated cost = \$1,310,006.** Groundwater would be pumped to the surface and treated with activated carbon. The treated water would then be pumped back underground or into the Colville River so the water table would not be depleted.
3. **Bioremediation, estimated cost = \$2,095,700.** Chemicals that stimulate microbes that consume PCP would be injected underground. Injections would be repeated until groundwater met standards.
4. **Permeable reactive barrier, estimated cost = \$1,486,973.** A trench would be dug and the excavated soil mixed with zero-valent iron. This would be placed back into the trench to create the barrier. Contaminants in the groundwater react with the iron, which filters out the contaminants, cleaning the groundwater and leaving behind dissolved iron. Eventually the barrier would be excavated and disposed off-site.

Next steps

Ecology will hold an online public meeting to discuss the RI/FS if 10 or more people request it. After the comment period, we will respond to the comments we received, publish our responses online, and send them to the people who commented (if contact information was provided).

Then, we will use our assessment of the RI/FS and public input to draft a cleanup action plan. The draft plan will be available for public review and comment before becoming final.

Colville Post and Poles Conceptual Site Model

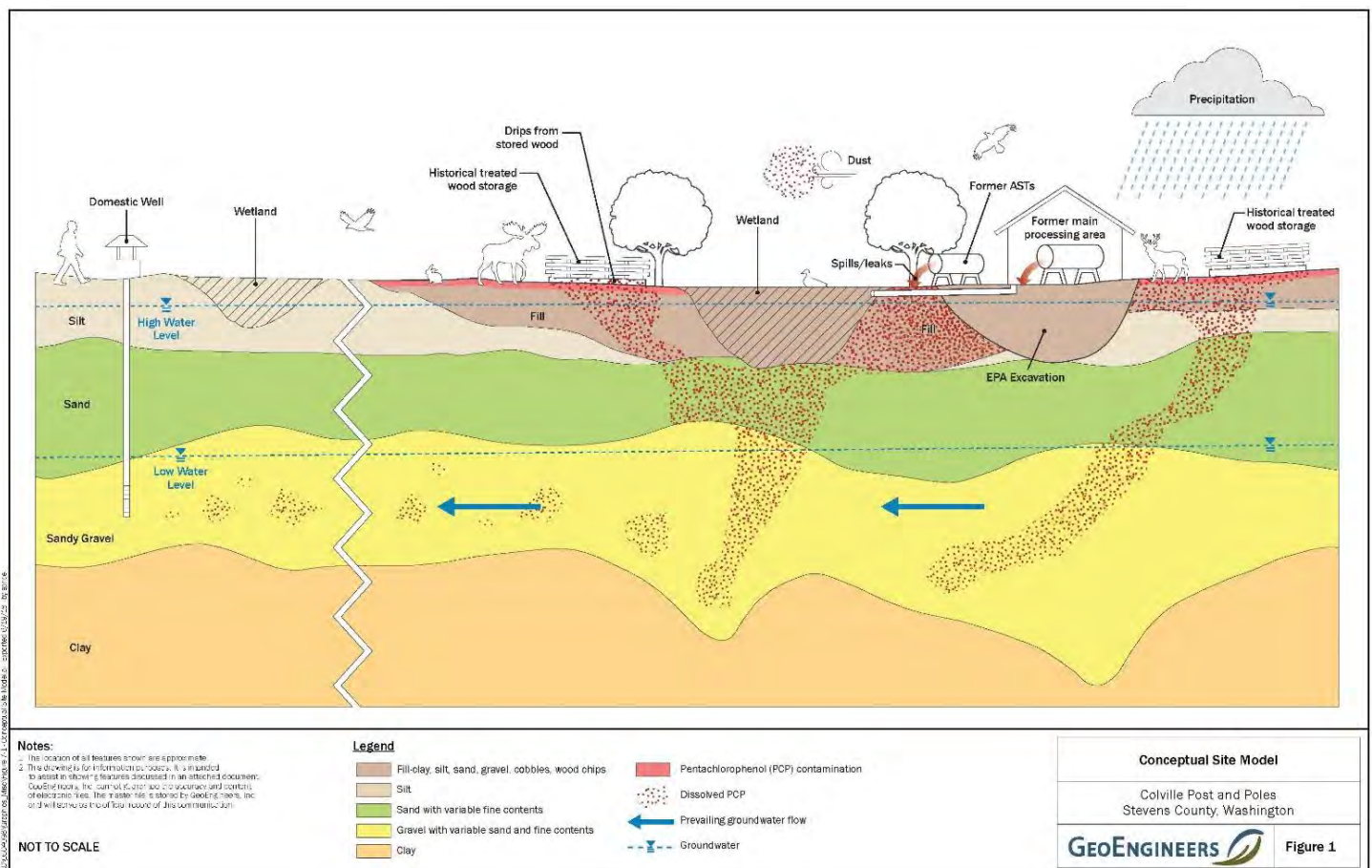


Figure 1. Model showing how the site became contaminated.

Remedial Investigation/Feasibility Study

Colville Post and Poles
396 North Highway 395
Stevens County, Washington

for
Washington State Department of Ecology

June 21, 2018



Remedial Investigation/Feasibility Study

Colville Post and Poles
396 North Highway 395
Stevens County, Washington

for

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June 21, 2018



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Spokane, Washington 99202
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Remedial Investigation/Feasibility Study
Colville Post and Poles
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Stevens County, Washington

File No. 0504-098-01

June 21, 2018

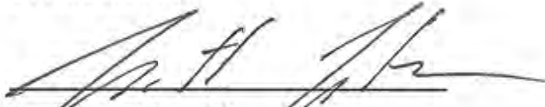
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ACRONYMS AND ABBREVIATIONS

ARAR – Applicable or Relevant and Appropriate Requirements
AST – above-ground storage tank
ASTM – American Society for Testing and Materials
bgs – below ground surface
BNSF – Burlington Northern-Santa Fe
CAP – Cleanup Action Plan
COC – chemicals of concern
CPPI – Colville Post and Poles, Inc.
CSM – conceptual site model
CUL – cleanup level
CY – cubic yards
DCA – Disproportionate Cost Analysis
DNAPL – dense non-aqueous phase liquid
DRPH – diesel-range petroleum hydrocarbons
Ecology – Washington State Department of Ecology
EPA – United States Environmental Protection Agency
ev – electron volt
ft/ft – feet per foot
ft/day – feet per day
GAC – granular activated carbon
GRPH – gasoline-range petroleum hydrocarbons
HDPE – high density polyethylene
IHS – indicators of hazardous substance
LDR – Land Disposal Restriction
mg/kg – milligrams per kilogram
µg/kg – microgram per kilogram
MNA – Monitored Natural Attenuation
MTCA – Model Toxics Control Act
NFA – No Further Action
ng/kg – nanogram per kilogram
NWTPH-Dx – Northwest Total Petroleum Hydrocarbon – Diesel Range
ORP – oxidation/reduction potential
ORPH – oil-range petroleum hydrocarbons
PAH – polycyclic aromatic hydrocarbons
PCP – pentachlorophenol
pg/g – picograms per gram

ACRONYMS AND ABBREVIATIONS (CONTINUED)

PID – photoionization detector
ppm – parts per million
PRB – Permeable Reactive Barrier
PQL – practical quantification limit
RA – remedial action
RAL – remediation action level
RI/FS – remedial investigation/feasibility study
RAO – Remedial Action Objective
ROW – right-of-way
RSE – removal site evaluation
SAP – sampling and analysis plan
SL – screening level
SS – shallow sediments
SVOC – semi-volatile organic compounds
TEE – terrestrial ecological evaluation
TEQ – toxicity equivalent
TestAmerica – TestAmerica Laboratories, Inc.
VOC– volatile organic compound
WAC – Washington Administrative Code
WM – Waste Management
WSDOT – Washington State Department of Transportation
ZVI – zero valent iron

EXECUTIVE SUMMARY

A Remedial Investigation/Feasibility Study (RI/FS) was conducted for the former Colville Post and Poles facility (Site) located at 396 Highway 395 near Colville in Stevens County, Washington. The RI summarizes previous and recent site characterization activities to evaluate soil and groundwater contamination. The FS evaluates, compares and quantifies several remedial alternatives for both soil and groundwater. The RI/FS has been prepared in accordance with the Model Toxics Control Act (MTCA) and complies with the Washington State Department of Ecology (Ecology) guidance documents for preparing an RI and an FS.

The Site was operated as a wood-treating facility from the 1940s until January 2005. Multiple characterizations and remedial actions have occurred at the Site from 1989 to present day. The initial investigation was in response to an above-ground storage tank rupture and release of wood-treating solution to soil and groundwater.

In 2005, the US Environmental Protection Agency (EPA) conducted Phase I and Phase II investigations and remedial actions to address volatile organic compounds, pentachlorophenol (PCP), polycyclic aromatic hydrocarbons (PAHs), heavy oil and dioxin soil impacts. As part of these actions, Site structures were demolished, contaminated material and soil was excavated and disposed, and groundwater was monitored. Based on the analytical results, contaminant action levels were established for PCP and dioxins in soil. By 2009, the groundwater plume appeared to have stabilized and EPA ceased remedial actions.

In 2015, GeoEngineers prepared a Pre-RI evaluation for Ecology that included advancing direct-push borings in selected areas across the Site including the western property boundary, former process area, and wood waste pile. In general, soil analyte concentrations (gasoline-range petroleum hydrocarbons [GRPH], diesel-range petroleum hydrocarbons [DRPH], oil-range petroleum hydrocarbons [ORPH], PAHs and PCP) were reported below the MTCA Method B cleanup levels. Groundwater analyte concentrations for DRPH and PCP were greater than the MTCA Method B cleanup levels; notably in the process area and along an apparent groundwater plume extending from the former process area to the western property boundary.

Further assessment in 2016 included advancing 69 borings across the Site, including 53 shallow borings to depths up to 2 feet below ground surface. Soil samples were field screened and collected from each boring for laboratory analysis except MW-30, MW-31 and MW-32, due to saturated conditions. Fifteen groundwater monitoring wells were installed in selected borings and sampled on a quarterly basis from November 2016 through May 2018. Additionally, two seeps discharging from the wetland areas to the Colville River were sampled. Impacted soils were not encountered in the monitoring well borings, except at one location within the former process area.

Based on these latest assessment results, PCP concentrations remain in groundwater above cleanup levels, and appear to extend beyond the Site's western property boundary. Dioxins/furans are present in shallow soil (less than 18 inches below grade) across most of the Site, including wetland areas. Additionally, DRPH and PCP concentrations exceed cleanup levels in soil in the former process area and in several smaller areas within or near the former stockpile areas.

To meet the proposed cleanup standards at the Site, an FS was conducted in accordance with WAC 173-340-350(8) to evaluate cleanup alternatives. As part of a site-wide remediation strategy, remedial alternatives were separated into soil and groundwater remediation alternatives, with a few common

cleanup alternatives. Primary indicators of hazardous substance (IHSs) for soil are generally limited to dioxins and furans in the upper 18 inches of soil (with limited diesel and PCP hotspots). Primary IHSs for groundwater include PCP and diesel.

Common to each remedial alternative is disposal of non-hazardous debris piles at the Site and the approach to remediation of the existing Category 2 wetlands. Debris will be disposed of as non-hazardous waste at either Waste Management's Graham Road Facility in Medical Lake, Washington or at the Stevens County Landfill.

The remediation strategy for the wetlands is thin-layer placement (thin capping) in areas exceeding an ecological risk-based remediation level (RL) for dioxin. Six inches of clean soil will be placed in wetlands exceeding the RL. This remedial approach is designed to preserve the important ecological functions that the existing wetlands and riparian habitats provide threatened and sensitive species. Aggressive remediation strategies for the wetlands would heavily impact the wetlands, diminish their function and require long recovery times.

The selected remedial alternatives provide an appropriate range of permanent cleanup actions for the Site and include:

- Soil Alternative 1: Soil Washing
- Soil Alternative 2: Excavation
- Soil Alternative 3: Thermal Desorption
- Groundwater Alternative 1: Monitored Natural Attenuation (MNA)
- Groundwater Alternative 2: Pump and Treat
- Groundwater Alternative 3: Enhanced Bioremediation
- Groundwater Alternative 4: Permeable Reactive Barrier (PRB)

Each cleanup alternative was evaluated using the Disproportionate Cost Analysis (DCA) evaluation criteria as specified in WAC 173-340-360(2). Based on the DCA, remedial Soil Alternative 3: Thermal Desorption is the preferred alternative for soil remediation coupled with Groundwater Alternative 2: Pump and Treat for groundwater. Both of the selected options had the highest benefit rankings and the lowest estimated implementation costs. Estimated remediation costs for the selected soil and groundwater alternatives are \$25,000,000 and \$1,300,000 respectively for a total remediation cost of approximately \$26,300,000.

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

1.0 INTRODUCTION

This document presents the results of the Remedial Investigation/Feasibility Study (RI/FS) conducted at the former Colville Post and Poles, Inc. (CPPI) facility located at 396 Highway 395 North near Colville in Stevens County, Washington (herein referred to as the “site”). The site location is shown in Vicinity Map, Figure 1-1. Site soil and groundwater contamination have been documented during several previous assessments, including the recent pre-remedial investigation (pre-RI) site assessment (GeoEngineers 2016). Previous assessments and data evaluations indicate that site soil, sediment and groundwater contain contaminants at concentrations greater than Washington Model Toxics Control Act (MTCA) cleanup levels. This RI/FS addresses the magnitude and extent of contamination and evaluates and compares several remedial alternatives to ultimately achieve a No Further Action (NFA) designation.

The site is currently managed by the Washington State Department of Ecology (Ecology) under the 2015-2017 Clean Sites Initiative administered by Ecology’s Eastern Regional Office Toxics Cleanup Program. Previous assessment and removal activities were primarily managed by the United States Environmental Protection Agency (EPA).

This RI/FS satisfies MTCA requirements and generally follows Ecology’s RI and FS outlines (Ecology 2016). Data from previous investigations are summarized, recent groundwater monitoring results are presented, and a conceptual site model is developed within the RI portion of this document, which support the development of cleanup alternatives and identification of a preferred combination of two alternatives in the FS portion of this document.

1.1. General Site Information

CPPI is located approximately four miles northwest of Colville in Stevens County, Washington. The approximately 23-acre site is bound by Burlington Northern-Santa Fe (BNSF) Railroad and US Highway 395 to the north/northeast, the former Bonanza Mill site (a former metals beneficiation facility) to the east, the Colville River to the south and residential/agricultural land to the west, as shown in Historical Site Operational Areas and Current Layout, Figure 1-2. The site is generally flat, sloping towards the river and vegetated with native/invasive grasses, shrubs and trees. Delineated wetland areas following historical river meanders also are present.

Please note that the site, as referred to in this document, is limited to the 23-acre CPPI property. Prior work indicated groundwater was contaminated beneath the adjacent western and downgradient property. Access to this adjacent property for assessment and monitoring purposes within the RI was not permitted by the property owner; therefore, there is no current information to determine if contamination is still present west of the CPPI site. If and when access to the western property is approved, the definition and size of the site might change. Additional site information is provided in the table below.

GENERAL SITE INFORMATION

Site Information	Description
Site Name	Colville Post and Poles, Inc.
Site Address	396 Highway 395 North, near Colville, Washington
Ecology Regional Office	Eastern Region, 4601 North Monroe Street, Spokane, Washington 99205

Site Information	Description
Ecology Site Manager	Jeremy Schmidt, PE
Consultant	GeoEngineers, Spokane, Washington
Potentially Liable Person	Orphan site
Current Owner	Orphan site
Ecology Facility/Site ID	765
Cleanup Site ID	46
Public Land Survey System	NE ¼, NE ¼, Section 36, Township 36 North, Range 38 East

1.2. Site History

CPPI and its predecessors operated a wood-treating facility at the site from the late 1940s until January 2005. The facility treated various wood products using an approximately 95 percent diesel and 5 percent pentachlorophenol (PCP) heated solution. Solution components or mixtures were stored in aboveground storage tanks (ASTs); boiler fuel, waste oil and other materials were also stored in other tanks. Wood treatment took place in a dedicated treatment building in the north-central portion of the site. Freshly-treated wood products were placed above drip pads that collected and directed excess PCP solution into a 3,300-gallon sump. The recovered PCP solution was transferred to a separate storage tank for recycling.

Both treated and raw wood were stored in two areas; one to the northwest and another to the south of the main process area. Surface water runoff from the site (particularly around the process tanks) was directed to a pond south of the main facility. Decant water from the ponds was sprayed on adjacent pasture (exact location unknown) and retained oil was skimmed and recycled. Water recovered from the main process sump was filtered through woodchips and likely allowed to infiltrate or run off the ground surface at the site. Former key facility features are depicted in Depth to Top of Clay Layer, Figure 2-2.

Several early environmental investigations related to tank leaks and spill were conducted in the 1990s. In 2002, EPA began investigations that led site demolition and hotspot cleanup (primarily the main process area). Ecology began planning additional cleanup of the site in 2015 to address identified data gaps regarding the remaining contamination.

1.3. Site Use

Operations ceased in 2005 and site structures were demolished during subsequent remediation conducted by EPA. The site is currently undeveloped and vacant. Anticipated future site use is unknown; however, an environmental covenant, which might be established as part of the selected remedy, prohibits residential use of the site and restricts some types of activities (Ecology 2012). Stevens County would like to include this property in its flood management program.

2.0 GEOLOGY AND HYDROGEOLOGY

The following sections provide information regarding regional geology, site-specific geology and site hydrogeology.

2.1. Regional Geology

The site is situated within the Colville River valley which is part of the Northern Rocky Mountains Physiographic Region; defined by generally north-south trending mountain ranges and valleys. Bedrock in the area consists of Belt Supergroup metamorphic rocks overlain by metasedimentary rocks originally deposited when the area was covered by shallow oceans. Tectonic forces caused crustal melting and eventual emplacement of granitic batholiths such as the Selkirk Mountains. Crustal stretching caused local mountain uplifts and faults (Harrison et al. 1972). Recent glaciation covered the area, and with the retreat of the Columbia River Lobe of the ice sheet, meltwaters scoured the Columbia River and Colville River valleys. With further glacial retreat, the nascent Columbia and Colville Rivers reworked the morainal deposits and erosional metamorphic and granitic material from the adjacent uplands (Lewis et al. 2008).

2.2. Site Geology

Surface conditions in the main process area and northern and southern stockpile areas have been altered by placement of fill, consisting of imported fill and pit-run gravel. Fill ranges from 1 to 8 feet in thickness with the thickest fill in low-lying areas that corresponded with historical river meanders. Access roads on the site were also constructed of gravel. No filling occurred in the remainder of the site, except the wood waste pile (wood chips and bark) just south of the main process area and backfill following removal actions conducted by the EPA. Disturbed soils occur in the southern stockpile area and contain varying amounts of wood debris. The area adjacent to the river is relatively undisturbed and consists of alluvial soils (sand and gravels with some silts) deposited by the Colville River.

Subsurface conditions generally consist of unconsolidated alluvium from the Holocene Epoch. The alluvium is characterized by mostly unconsolidated silt, sand and gravel fill with some clay. Local deposits might include low-level terrace, marsh, peat, artificial fill and glacial deposits (Hunting et al. 1961).

Subsurface conditions encountered during previous assessments conducted by EPA and GeoEngineers' Pre-RI site assessment generally correlate with the Department of Natural Resources' geologic map (Colville quadrangle; 1:100,000). Available boring logs indicate subsurface conditions consist of interbedded sand, gravel and silt overlaying a clay unit. The clay unit was encountered at depths ranging between 10 and 24 feet below ground surface (bgs); and is reportedly at least 380 feet thick (Herrera 2005). This clay aquitard appears to be continuous beneath the site, potentially limiting the downward migration of dense, non-aqueous phase liquid (DNAPL) contaminants (like PCP). DNAPLs tend to pool within low points atop non-permeable units and once settled likely spread laterally through the more overlying porous materials.

A three-dimensional model based on topography data obtained from digital elevation models and data obtained from historical and recent borings was prepared to depict the top of the clay surface beneath the site (Estimated Top of Clay Looking West, Figure 2-1). The modeling was used to better visualize and focus on areas where DNAPL contamination might be present. Based on the model results, several elevational low spots in the top of clay exist at the following locations:

- Near the central portion of the site;
- Near the western property boundary; and
- Near two locations in the north-central portion of the site.

To further visualize the subsurface geology, GeoEngineers prepared cross sections generated from available boring logs from previous and current assessments along the transects shown in Figure 2-2. The geologic cross sections (Cross Sections A-A', B-B', C-C' and D-D') are presented in Figures 2-3 through 2-6, respectively.

2.3. Site Hydrogeology

Groundwater conditions were evaluated during EPA's assessment and remedial actions, and GeoEngineers' Pre-RI assessment. Previously, 19 groundwater monitoring wells (MW-1 through MW-4, W-01 through W-08, and MW-9 through MW-15) were installed throughout the site. Four additional wells (MW-16 through MW-19) were installed down-gradient of the site within adjacent properties to the west and northwest. The locations of these previously-installed monitoring wells are shown in the figures included in Appendix A.

A shallow aquifer underlies the site and surrounding area and consists of relatively coarse-grained alluvial sediment. Observed aquifer thickness ranges from about 3 to 15 feet and the top of the aquifer is as shallow as 2 feet below ground surface. The shallow aquifer generally is unconfined, though in places it appears to be confined by overlying silt. The shallow aquifer is underlain by a clay aquitard that underlies much of the Colville River valley and is hundreds of feet thick through much of the area (Kahle et. al. 2003).

Shallow groundwater flow direction beneath the site appears to fluctuate seasonally. During periods of low groundwater recharge (late summer and fall), the adjacent Colville River influences the shallow groundwater flow regime and groundwater flow direction across the site generally is west to northwest. During spring and early summer, abundant recharge from upland areas to the north and northeast site influences the shallow groundwater flow regime. During these periods, groundwater flow generally is directed to the southwest across the site.

Hydraulic gradient within the shallow aquifer beneath the site varies as a function of location. A steep gradient, on the order of 5×10^{-3} feet per foot (ft/ft) frequently was observed in the east portion of the site (between monitoring wells MW-28 and MW-35). Within the remainder of the site, observed hydraulic gradient was shallower, on the order of 8×10^{-4} ft/ft.

Localized groundwater flow in the unconfined aquifer is connected to and recharges the Colville River (Herrera 2005); Based on the observed groundwater flow regime, discharge from the shallow aquifer underlying the site to the Colville River likely occurs west to southwest of site boundaries.

2.4. Wetlands

Wetlands were identified in areas associated with former meanders of the Colville River. In 2005, Herrera Environmental Consultants, Inc. (Herrera) delineated an approximately 6.2-acre Category II wetland (Herrera 2005). Category II wetlands are those that, although not rare, provide important ecological functions that are difficult to replace. Herrera characterized the site wetlands as forested, scrub-shrub and emergent wetlands. The majority of the emergent wetland areas at the site are included in the National Wetlands Inventory. In Stevens County, this type of wetland requires a 150-foot buffer as a protective measure (Stevens County Code 13.30.020(6), 2003). No other wetlands were delineated by Herrera during the 2005 survey.

In 2015, GeoEngineers identified, delineated and assessed two additional onsite wetlands designated Wetland A and Wetland B (GeoEngineers 2016). Wetland A was classified as a palustrine emergent/scrub-

shrub/forested Category II wetland approximately 4.9 acres in size. Wetland B (0.1 acres) was classified as a palustrine emergent Category III wetland. An isolated portion of Wetland A north of the railroad tracks is connected to the main wetland by a ditch and culvert. Wetland B is a small isolated wetland within the former South Stockpile area. The Herrera delineated wetland and GeoEngineers Wetlands A and B locations are depicted in Wetland Delineations, Figure 2-7.

3.0 PREVIOUS INVESTIGATIONS AND REMEDIAL ACTIONS

A chronological history of historical releases, assessments and remedial actions is presented below. Historical sampling locations for the investigations conducted for EPA are depicted in Explorations and Sampling Locations, Figure 3-1 and in Appendix A:

- 1989 – A 10,000-gallon AST containing PCP wood-treating solution reportedly ruptured and released solution to the ground. There are no records indicating the release was addressed, except as documented below.
- 1991 – Century West Engineering Corporation (Century West) conducted a limited site assessment and remediation focused near the ASTs. Soil and groundwater samples obtained during the assessment were contaminated with PCP and heavy oils. About 50 cubic yards (cy) of contaminated soil were excavated and stockpiled onsite (Century West Engineering 1991).
- 1991 – Ecology subsequently collected soil samples from the treated-wood storage area near the dip tanks and potential run-off areas. Additionally, one sample was collected from a location considered as an unimpacted “background” area. The investigation concluded that soil contamination was restricted to the area near the ASTs (Ecology 1994).
- 1994 to 1997 – CPPI’s consultants (Total Consultants, Inc. and Techcon) assessed and remediated the area near the ASTs. Assessment activities included installing monitoring wells MW-1 through MW-4. Elevated phenols and heavy oil concentrations were measured in groundwater samples from MW-3. In 1997, about 150 cy of PCP-contaminated soil was excavated near the ASTs and stockpiled on-site. However, the final stockpile location was not documented. An additional 20 cy of contaminated soil was removed from near the treatment building and stockpiled at an unknown/undocumented location (Total Consultants 1994).
- 2002 – Herrera conducted a removal site evaluation (RSE) for EPA that investigated contamination in surface soil, subsurface soil, sediment, groundwater and surface water. Free product was observed in the process area excavations, and surface soils contained elevated concentrations of polycyclic aromatic hydrocarbons (PAH), PCP, dioxins, petroleum hydrocarbons and volatile organic compounds (VOCs) (Herrera 2003, EPA 2009). Historical data are included in Appendix A.
- January 2005 – Wood-treating operations ceased in January 2005, and shortly thereafter, EPA began a Phase I remedial action (RA). During the RA, EPA disposed of excess wood-treating solution from tanks and sumps, collected sediment and soil samples, and installed fencing around the process area to limit access and reduce the risk of direct-contact with contaminated materials (Herrera 2005). Areas that were excavated or capped are shown in Phase II Removal Action Areas (Fall 2006), Figure 3-2.
- June 2005 – EPA returned to conduct a Phase II RSE. Surface soil samples (0 to 6 inches bgs), subsurface soil samples (1 foot to 11 feet bgs), and groundwater samples were collected. Eight new monitoring wells (W-01 through W-08) were also installed at this time. Ground-penetrating radar was

used to search the site for additional buried tanks (only a small pile of scrap metal was found in the South Stockpile Area). The Phase II RSE identified free product in the process area and a PCP groundwater plume extending westward from the process area, beneath the North Stockpile Area, and ultimately to the western property boundary. Petroleum hydrocarbons, PCP, and dioxin contamination were identified in subsurface and/or surface soils (Herrera 2005). Historical data are included in Appendix A.

- Fall 2006 – EPA conducted a Phase II RA from September 2006 through March 2007. The contaminant action levels established for the RA included:
 - PCP in soil: 8 milligrams per kilogram (mg/kg), based on the MTCA Method B cleanup level (Method B CUL) at the time of the RA.
 - PCP in sediment: 0.36 mg/kg, based on research conducted by the Oak Ridge National Laboratory.
 - Dioxins/furans in soil: 1 microgram per kilogram (µg/kg).

EPA demolished the treatment and storage buildings. Contaminated debris (concrete and wood) and drummed wastes were disposed according to their contaminant levels at appropriate facilities. After building demolition, EPA's contractor excavated soil and sediment to the action levels noted above (Ecology and Environment 2009). Site excavations are shown in Figure 3-2 and include the following:

- Main Excavation Area – Located in the process area near the treatment building. Confirmation samples from the sidewall and base of the excavation were analyzed using either a field screening kit or laboratory testing. The excavation measured about 165 feet by 50 feet and was about 9 feet deep. Free product was observed floating on infiltrated groundwater in the bottom of the excavation. Product recovery skimmers were used to capture about 300 gallons of free product. EPA ceased excavation activities in the main excavation area because of sidewall instability and infiltrating groundwater leaving contaminated soil in place. Field test kits and/or laboratory results indicated contaminant concentrations in 19 soil confirmation samples exceeded the established action levels for PCP.
- South Stockpile Area – Contaminated soil mounds were present in this area, possibly from the historical remediation actions described above. Targeted excavations addressed specific locations where contaminated soil was encountered during the RSE assessments. Confirmation soil sample contaminant concentrations were less than the established action levels except for one sample location (associated with historical sample location SAW08). Two additional sample locations adjacent to the wetlands contained dioxins at concentrations greater than the MTCA Method B CUL.
- North Stockpile Area – Previous assessment data indicated contaminants in surface soil were spread across this area. Five sample locations contained dioxin concentrations greater than the MTCA Method B CUL. This area also was used during the RA as a contaminated stockpile staging area. After the stockpiles were disposed, about 6 inches of the underlying soil was removed from a large portion of this area. No confirmation samples were collected from this area following the additional soil removal.
- Drainage Area (Channel) – The drainage area (described as a pond) located south of the process area was excavated until confirmation samples indicated the sediment PCP concentration was less than the established action level. The excavation was about 175 feet long by 50 feet wide and ranged between 1 and 4 feet in depth.

- Railroad Right of Way (ROW) – A ROW section located north of the process area was previously used to store treated wood products. An area about 90 feet long by 10 feet wide and 2 feet deep was excavated. PCP concentrations in soil confirmation samples were less than the established action levels except in one sample location.
- Contaminated soil excavated from these areas was stockpiled, profiled and disposed. Approximately 4,811 tons of soil with PCP concentrations less than the land disposal restriction [LDR] limit of 74 mg/kg were disposed at Waste Management’s Subtitle C landfill located in Arlington, Oregon (ChemWaste).
- Most of the stockpiled soil with PCP concentrations less than the LDR limit also contained dioxins/furans at concentrations greater than applicable LDR limits. To avoid the additional expense of treating this soil, a variance was obtained (based on adjusted concentrations using toxic equivalency factors) to directly dispose the soil at ChemWaste. However, 2,180 tons of soil with PCP concentrations greater than LDR limits required treatment prior to disposal at the same facility.
- Each excavated area (except the North Stockpile Area) was backfilled with imported pit-run gravel to approximately 1 foot below surrounding site grades. Imported topsoil was used to backfill the remaining 1-foot lift, including the North Stockpile Area, to match surrounding grades. The site was hydroseeded with a wild grass mixture in the spring of 2007.
- During backfill operations, six product recovery wells (RW-01 through RW-06) were installed in the process area to continue removal activities. The recovery wells operated from about December 2006 to October 2008, with about 21 liters of product recovered during the operational period. Additionally, 11 monitoring wells (MW-9 through MW-19) were installed to monitor groundwater conditions following the RA. Wells MW-9 through MW-15 were installed onsite and wells MW-16 through MW-18 were installed on the adjacent private property to the west. Monitoring well MW-19 was installed on private property to the northwest.
- June 2005 to August 2009 – Groundwater monitoring was conducted from June 2005 to August 2009. In 2010, EPA concluded the groundwater plume had stabilized and contaminant concentrations were declining and decommissioned the 22 existing monitoring wells (MW-1, MW-2 and MW-4 [MW-3 was previously decommissioned]; W-01 through W-08; and MW-9 through MW-19) (E&E 2010).
- 2015 – GeoEngineers, under contract with Ecology, conducted an Interim Action to address wetland permitting issues and remove and consolidate site debris. Removal and stockpile areas are depicted in Interim Action Site Plan, Figure 3-3. The consolidate site debris remains on the site and will be addressed during the remedial action.
- GeoEngineers also conducted a pre-RI assessment that included advancing 36 direct-push borings (DP-1 through DP-36) in select areas across the site including the western property boundary, process area, and wood waste pile area. Soil samples were collected at depths ranging from 8 to 25 feet bgs and were analyzed for petroleum hydrocarbons, PAHs, other semi-volatile organic compounds, and PCP. Dioxins/furans were not analyzed. Groundwater grab samples were collected from a subset of borings and analyzed for the same suite of chemicals as soil (GeoEngineers 2016). Chemical analytical data collected during the pre-RI assessment is presented in Appendix B.

4.0 CURRENT SITE CHARACTERIZATION

Recent site assessment activities were conducted to assess data gaps identified based on the historical sampling and remediation actions conducted by the EPA and the pre-RI assessment as described in the RI/FS Work Plan (GeoEngineers 2016b). Assessment actions primarily consisted of (1) installation and sampling groundwater monitoring wells and (2) shallow soil sampling. These data are discussed below; data collected prior to 2015 by the EPA are provided in Appendix A and the pre-RI assessment data is included in Appendix B. Figure 3-1 depicts the historical, pre-RI and RI sampling locations used to support the remedial investigation.

The sampling implemented based on the Final RI/FS Work Plan (GeoEngineers 2016b) addressed:

- Data gaps from previous investigations including the extent of elevated diesel-range petroleum hydrocarbons (DRPH), PCP, mercury and cadmium concentrations in sediment or shallow soil that were not addressed in EPA's remedial actions;
- The extent of dioxins/furan concentrations in shallow soil across the site; and
- The extent of PCP, DRPH and dioxin/furans in groundwater in the northern part of the site.

The RI assessment was conducted between fall 2016 and fall 2017. Groundwater sampling events were conducted on a quarterly basis from November 2016 through May 2018. Field procedures for collecting soil/sediment samples are included in Appendix C. RI assessment actions included the following actions:

- Monitoring well installation – 16 monitoring wells (MW-10 through MW-35) were installed between November 2016 to May 2017. Well installation, soil sample results from the monitoring well borings, field procedures, monitoring well logs and groundwater sample results are summarized in “Well Installation and Groundwater Monitoring Report, Fourth Quarter 2016 through Fourth Quarter 2017” (GeoEngineers 2017). Soil samples from MW-30, MW-31 and MW-32 borings were not analyzed due to saturated conditions. Groundwater sampling results from the First and Second Quarter 2018 will be reported in pending groundwater monitoring reports.

Groundwater samples collected during each event were analyzed for:

- PCP using EPA Method 8270DSIM.
- DRPH using Northwest Method NWTPH-Dx.
- During the May 2017 groundwater monitoring event, groundwater samples were additionally analyzed for dioxins using EPA Method 8290. Based on the analytical results, only the groundwater samples collected from monitoring well MW-27 were analyzed for dioxins during the groundwater monitoring events after May 2017.

The soil samples collected during the monitoring well installations were analyzed for PCP and DRPH using the methods described above.

- Seep sampling – Public comments to the RI Work Plan requested sampling of a seep to the Colville River to assess potential contaminant migration to the river. Shallow soil and groundwater samples were collected from two seep locations (Seep-1 and Seep-2) and were analyzed for PCP and DRPH using the methods listed above.
- Shallow soil sampling – Shallow soil samples were collected from 53 locations throughout the site to address data gaps identified after reviewing the historical assessment and remedial actions conducted

by the EPA. The data gaps addressed by the soil sampling are summarized in the RI/FS Work Plan (GeoEngineers 2016b). Up to four soil samples were collected from each location at depths between 0 to 24 inches. The samples are identified as HA (soil samples collected with a hand auger or other hand tools)/TP (samples collected from shallow test pits excavated using a backhoe)-1 through 53. The shallow soil samples were collected during three events in December 2016, March 2017, and November 2017.

The shallow soil samples were analyzed for dioxins (73 samples), PCP (16 samples) and DRPH (6 samples) using the analytical methods listed above. Three samples were analyzed for metals (cadmium and mercury) using EPA 6000/7000 Series Methods.

- Background dioxin samples – 10 shallow soil samples (BG-1 through BG-10) were collected to assess the regional background dioxin concentration for comparison to the dioxin concentrations encountered in site samples. The soil samples were collected using hand tools from shallow soil (about 0 to 6 inches bgs) from accessible right of ways. Sample locations are depicted in Background Dioxins/Furans – January 2017, Figure 4-1.
- Shallow sediment (SS) and ROW sampling – Shallow sediment samples were collected from the delineated wetland areas to assess the dioxin impact to the wetland sediments. The 12 sediment samples were collected from 7 locations (SS-1 through SS-7) at depths between 0 to 12 inches bgs. The sediment samples were collected using hand tools and were analyzed for dioxins using the method listed above.

In addition to the sediment samples, six shallow soil samples were collected from four locations (ROW-1 through ROW-4) in the Washington State Department of Transportation (WSDOT) ROW of Highway 395 adjacent to the site. The ROW soil samples were collected to assess the potential dioxin impacts to off-site shallow soil. ROW samples were collected at depths between 0 to 18 inches bgs using hand tools and were analyzed for dioxins using the method listed above. The SS and ROW samples were collected in October 2017.

5.0 INDICATORS OF HAZARDOUS SUBSTANCE AND SCREENING LEVELS

To establish the nature and extent of contamination at a site, screening levels (SLs) are developed for contaminants that might pose a risk to people or ecological receptors at the site. The most likely contaminants of concern are those chemicals that were used by the facility during its operation. The former facility treated wood with solutions of PCP, dissolved in a diesel carrier. Dioxins were present as a cross-contaminant in the PCP. Other petroleum products were used as lubricants or boiler feedstock.

Previous investigations confirmed that PCP, petroleum hydrocarbons (diesel) and dioxins were widespread in soil at concentrations greater than risk-based SLs used in the past. PCP and petroleum also were repeatedly measured in groundwater beneath the main process area and northern stockpile area at concentrations exceeding historical risk-based SLs for these contaminants (dioxins were typically not detected in groundwater). A few other related chemicals (PAHs) occasionally co-occurred in soil or groundwater samples that had elevated concentrations of DRPH. A few samples collected from within the PCP/DRPH footprint had elevated concentrations of several metals (mercury and cadmium). PCP also was detected in sediment samples collected in the holding pond and its main drainage channel and in surface water collected from the pond and main channel.

Based on these findings from numerous prior investigations at the site, the following contaminants were selected as indicators of hazardous substance (IHS):

Contaminant of Concern	Soil IHS	Groundwater IHS
Pentachlorophenol	Yes	Yes
Diesel-range petroleum hydrocarbons	Yes	Yes
Dioxins/furans	Yes	No

These IHSs will be used to focus the evaluation of the nature and extent of contaminants and the remedies evaluated in the FS. Other potential chemicals that were found at the site were not included as IHSs because they were seldom detected greater than historical SLs and have limited geographic footprints. The selected IHSs are not only representative of those chemicals that pose the greatest risk, but collectively encompass the footprint of other (non-IHS) contaminants. Remedial alternatives that address the IHSs will also address non-IHS chemicals that exceed SLs.

SLs were developed for IHSs measured in each site media (soil and groundwater) and accounted for the potential receptors and exposure pathways present at the site.

5.1.1. Screening Levels

Soil and groundwater SLs were developed for the IHSs based on the unrestricted land use scenario and applicable exposure pathways.

The SLs considered for soil and groundwater contaminants are presented in Tables 5-1 and 5-2. The SLs selected for use in the RI are identified in the right-hand column of the tables.

5.1.1.1. Soil

Screening levels considered for soil are presented in Table 5-1. The soil SLs were based on the following criteria:

- **Human Direct Contact – MTCA standard Method B soil cleanup levels protective of human health for unrestricted land use (WAC 173-340-740[3][b]).** These values were obtained from Ecology’s “CLARC Master Spreadsheet.xlsx” dated August 2015 (CLARC database), which were calculated using equations in WAC 173-340-740(3)(b)(iii)(B).
- **Terrestrial Ecological Evaluation (TEE) – Site-specific values.** A site-specific TEE was conducted for the Site (see Appendix D). The site does not qualify for any of the TEE off-ramps nor does it qualify for a simplified TEE approach because of its size and presence of threatened species and ecologically important habitats. These values were obtained from MTCA Table 749-3 or were derived as part of the site-specific TEE.
- **Groundwater Protection – Soil criteria protective of groundwater quality.** These soil criteria address the soil-to-groundwater pathway and were calculated using the MTCA fixed parameter three-phase partitioning model (WAC 173-340-747[4]). Default assumptions provided in WAC 173-340-747(4)(b) (Equation 747-1 and Equation 747-2) for vadose and saturated zone soils were used in the

calculations, and model input parameter values (K_{oc} and Henry's Law constants) were taken directly from Ecology's CLARC database.

The default f_{oc} of 0.001 was used to calculate MTCA Method B soil cleanup levels based on the protection of groundwater.

MTCA (WAC 173-340-705[6]) specifies that the SL for a given constituent shall not be set at a level lower than the natural background concentration or the practical quantification limit (PQL), whichever is higher. Soil SLs were based on the lowest of the risk-based numerical criteria, adjusted upward, as needed, based on background concentrations and PQLs. The PQLs listed in Table 5-1 are the lowest PQLs reported by TestAmerica in Spokane.

Soil SLs listed in the columns titled "Preliminary Soil Screening Level" in Table 5-1 are the lowest risk-based concentration and have not been adjusted for background or PQLs. The SLs for vadose and saturated zone soil are presented in the last two columns of Table 5-1, after adjustment for background and PQL.

5.1.1.2. Groundwater

The groundwater SLs are presented in Table 5-2. The groundwater SLs are based on protection of the following media/exposure scenarios:

- **Protection of Drinking Water – Groundwater numerical criteria are based on the standard for potable groundwater, WAC 173-340-720[4][b)].** MTCA Method B standard formula values based on the protection of human health via the consumption of drinking water were obtained from Ecology's "CLARC Master Spreadsheet.xlsx" dated August 2015. As noted in WAC 173-340-730(3)(b)(iii), the standard formula values are necessary when sufficiently protective drinking water criteria have not been established under applicable state and federal laws. If an existing state or federal drinking water criterion is sufficiently protective¹, then that state or federal criterion can be used as the cleanup level. If an existing state or federal criterion represents a cancer risk greater than 1×10^{-5} or a hazard (i.e., hazard quotient greater than 1) for non-cancerous effects, then the federal or other state criterion is adjusted downward to equal a cancer risk of 1×10^{-5} or a hazard quotient of 1. This adjustment was applied only to dioxins; all other criteria were sufficiently protective. Adjusted values are presented in Table 5-2 in the columns "Carc. Adjusted" and "Non-Carc. Adjusted," respectively.

MTCA (WAC 173-340-705[6]) specifies that the screening level for a given constituent shall not be set at a value below the natural background concentration or analytical PQL, whichever is higher. Preliminary groundwater SLs were selected based on the lowest of the applicable risk-based criteria described above. The SLs were then adjusted for PQLs (there are no established background levels for the site IHSs in groundwater). The PQLs listed in Table 5-2 were the lowest, regularly attained PQLs from groundwater samples analyzed by TestAmerica.

¹ Ecology considers a criterion sufficiently protective if the excess cancer risk is not greater than 1×10^{-5} or the hazard quotient is not greater than 1 (Ecology 2005).

Groundwater SLs listed in the column titled “Preliminary Groundwater Screening Level” in Table 5-2 are the lowest risk-based concentration and were not adjusted for background or PQLs. The SL for groundwater are presented in the last column of Table 5-2, after adjustment for PQL.

6.0 NATURE AND EXTENT OF CONTAMINATION

Contamination remaining at the site continues to impact both soil and groundwater; however, there is no indication that contamination extends to the Colville River south of the site. RI results for shallow soil (less than 2 feet bgs) indicate that dioxin/furans are widely distributed. PCP was detected in shallow soil during the RI at a few locations; DRPH was seldom detected. In the Pre-RI assessment, subsurface soil analytes (DRPH, PAHs and PCP) were not detected; however, detection limits were elevated due to soil moisture (Table B-3 in Appendix B). Impacted subsurface soils (i.e., visible sheen, staining or with odor) were not encountered in the direct-push borings, except at one location within the former process area. Dioxins/furans were not analyzed in the Pre-RI assessment.

Several PAHs, DRPH and PCP were detected in groundwater from selected groundwater grabs collected during the Pre-RI field event (Table B-5 in Appendix B). DRPH and PCP exceeded cleanup levels, notably in the process area and along an apparent PCP groundwater plume extending from the former process area to the western property boundary. RI groundwater quarterly groundwater monitoring data confirmed the continued presence of the PCP plume. The PCP plume’s western edge is not bounded; contaminated groundwater likely extends offsite to the west and might be impacting the domestic well to the west based on historical data (Figure A-7 in Appendix A). More details on the distribution of contaminants by media are provided below.

The most recent data collected in support of the RI are provided in Tables 6-1 through 6-5. Historical and Pre-RI assessment data tables are provided in Appendix A and B, respectively. Laboratory reports and data validation for the samples collected during the RI are included in Appendix E.

6.1.1. Soil

The occurrence of screening level exceedances of one or more IHSs (PCP, DRPH and dioxins/furans) in shallow soil is shown in Surface Soil Screening Level Exceedances, Figure 6-1. Concentrations of IHSs exceeding screening levels in deeper soil was limited to PCP in the former process area (represented by DP-35 at 9 feet bgs).

PCP – The main process area and selected locations within the southern and northern stockpile areas were previously addressed as part of an interim action conducted by EPA. Remaining areas of concern in shallow soil occur in limited areas (northwest corner, a low-lying area immediately south of the northern stockpile area and an area associated with the southern stockpile area). The northwest corner exceedances represent a small area and concentrations are relatively low (about 10 times the screening level) whereas the two other areas represent “hot spots” where exceedances range from 40 to over 1,900 times the screening level. PCP does not appear to extend into deeper subsurface soil. PCP in direct-push borings from the Pre-RI effort was generally not detected, except at DP-35 in the former process area.

DRPH – DRPH was seldom detected in shallow soil outside of the former process area that was addressed as part of EPA's interim action. The only exceedances of DRPH occurred at depth (8 to 13 feet bgs based on DP-35 and MW-27) at in the former process area.

Dioxin/furan toxicity equivalent (TEQ) – Shallow soil sample results indicate dioxins/furans (expressed on a 2,3,7,8-TCDD TEQ basis) are detected throughout the site, with the highest concentrations associated with the former process area (including the former retention pond) and northern and southern stockpile areas. Concentrations in shallow soil within the southern and eastern wetlands and along the western site boundary are much lower and are below the screening level at a number of locations.

6.1.2. Sediment

PCP – PCP was evaluated in sediment in the 2002 and 2005 EPA RSEs; data are presented in Tables A-4 and A-6 and on Figure A-11 of Appendix A. PCP concentrations were elevated above the historical screening levels (based on protection of benthic invertebrates) in the pond south of the process area and in drainages adjacent to the north and south stockpile areas. The pond represented the highest concentrations and sediment was excavated to below screening levels, removing this source material. PCP was not detected in sediment in the lower reach of the drainage area adjacent to the river. Several sediment samples were collected within the Colville River downstream of the site and in wetlands east (upgradient) of the sites; PCP was not detected in any of these samples (Herrera 2005).

DRPH – This IHS was evaluated in sediment in the 2002 and 2005 EPA RSEs. DRPH was detected in sediment but did not exceed its screening level in any sample.

Dioxin TEQ – Dioxins/furans were not analyzed in sediment in the historical RSEs. Dioxins were analyzed in the sediment samples collected in October 2017. Sample results are summarized in Table 6-2. The dioxin TEQ exceeded the screening level in 6 of the 12 sediment samples. The dioxin results indicate shallow sediment is impacted with dioxins exceeding SLs in the drainage wetland area south of the process area and north stockpile area. Dioxin concentrations also exceeded SLs in a sediment sample (SS-4-1) located in the wetlands west of the south stockpile area.

6.1.3. Groundwater

Groundwater monitoring results obtained between the fourth quarter 2016 and fourth quarter 2017 are summarized in “Well Installation and Groundwater Monitoring Report, Fourth Quarter 2016 through Fourth Quarter 2017” (GeoEngineers 2017); groundwater monitoring reports from the first and second quarter 2018 are pending.

PCP – PCP was detected in groundwater samplings historically, during the pre-RI assessment and in the all rounds of groundwater monitoring in wells and borings in the former process and northern stockpile area, indicating a persistent PCP plume. The plume extends from the former process area to the western property boundary and appears to be defined by monitoring wells MW-20 through MW-22, and MW-24 through MW-27. It is bounded to the north, south and east by wells with either no detections of PCP or concentrations below the screening level. Concentrations in these wells have been variable over time; currently there are too few monitoring events (n=6) to evaluate the presence or absences of trends. The results of six rounds of groundwater sampling are shown, in composite, in Approximate Groundwater Contamination Extent, Figure 6-3.

DRPH – DRPH occurred infrequently in groundwater; when detected it co-occurred with detections of PCP. DRPH only exceeded its SL in two monitoring wells in the most recent groundwater monitoring events: MW-26 and MW-27 (Figure 6-3). In the Pre-RI assessment diesel exceeded its SL in DP-15, -20 and -24, which were adjacent to MW-25, -26, and 27. These locations are immediately west of the former main process area and along the southern portion of the northern stockpile area.

Dioxin TEQ – Dioxins were analyzed in each of the existing monitoring wells in May 2017. Dioxins were only detected in one well (MW-27) but did not exceed its screening level. Dioxins have been

6.1.4. River Bank Seeps

Seep water results indicated that shallow groundwater discharging into the river does not contain PCP, DRPH or oil-range petroleum hydrocarbons (ORPH) (these contaminants were not detected), based on one sampling event. Seep sampling locations are shown on Figure 6-3). Seep sediment results are presented in Table 6-1; seep water analytical results are presented in Table 6-4.

6.1.5. Background and ROW Dioxin Samples

Background dioxin sample results were compared to the Washington State background dioxin concentration (5.2 nanograms per kilogram [ng/kg]) to evaluate using a regional background concentration as the dioxin screening level. Background sample results are summarized in Table 6-2. The dioxin concentration from only one background sample location (BG-1) exceeded the state background concentration; therefore, the background samples were not used to set the site SL because using these sample results to would have resulted in a lower site SL.

The shallow ROW soil samples were collected to evaluate the presence of dioxins in shallow soil adjacent to the north side of the property. Dioxin concentrations exceeded the site SL in three of the six samples analyzed from two locations. ROW sample results are summarized in Table 6-2.

7.0 CONCEPTUAL SITE MODEL

GeoEngineers prepared a conceptual site model (CSM) to describe surface and subsurface site conditions, define the nature and extent of known contamination, and identify potential exposure pathways to site IHSs and potential receptors. The CSM was developed using data from the previous studies listed above, available monitoring well logs, results of the Pre-RI site assessment, the RI and our observations from site visits. The Conceptual Site Model is graphically depicted in Figure 7-1 and further described below.

7.1. Potential Exposure Pathways and Receptors

Site contamination resulted from over 60 years of wood treatment operations. Treatment operations primarily occurred in the former main process area; however, treated lumber, contaminated soil, and other wastes were placed throughout the site, impacting the ground surface and shallow soil. Because the process area was the primary source area, contamination extended to and impacted shallow groundwater. PCP- and DRPH-contaminated groundwater occurs in monitoring wells within and to the west of the former process area. A residence with a private well, located about 700 feet west (hydrogeologically downgradient) of the site is a potential exposure pathway for PCP. Based on predominant site groundwater flow direction

to the west and southwest, the Colville River may receive impacted groundwater directly from the CPPI property or downstream of the site and through off-site properties.

Potential receptors include nearby residents, site trespassers, the site owner, wildlife (terrestrial and avian), and aquatic organisms in the wetland. Release mechanisms, exposure points, and exposure routes for contamination contained at the site may include:

1. Direct contact with exposed contaminated surface soil and sediments (dermal contact and inhalation/ingestion of dust and contaminants).
2. Direct contact with/ingestion of groundwater contaminated with site IHSs. Groundwater contact/ingestion can occur at downgradient residential wells; or through seepage into the wetland areas or onto the ground surface during high water/ground saturation events. Additionally, contaminants present in surface soil and sediments might infiltrate into shallow groundwater.
3. Direct contact with/ingestion of surface water runoff into wetland areas.

7.2. Shallow Surface Soil and Sediments

Based on the historical assessments, shallow soils and sediments were contaminated with PCP, DRPH, ORPH, metals (mercury and cadmium) and dioxins/furans at concentrations greater than the established regulatory cleanup levels. PCP and dioxins/furans had the widest distribution and highest exceedances in soil and sediment with process area representing the main source. EPA's 2006 removal action addressed much of the process area contamination and several hot spots in the southern stockpile area. Several areas with one or more contaminants exceeding cleanup levels in soil or sediment were not addressed; however, contamination appears to be limited in depth (typically 18 inches or less).

Though the site is heavily vegetated, the surface soils and sediments are an exposure pathway for direct contact, particularly for soil invertebrates or small mammals that live within the wetlands.

7.3. Groundwater

Historical and current groundwater monitoring data indicate that a PCP-contaminated groundwater plume extends from the former process area through the northern stockpile area to the western site boundary. It is likely the groundwater contaminant plume extends off-the CPPI property, potentially impacting nearby residential wells to the west. Monitoring wells to the north, south and east are not contaminated, establishing plume boundaries in those directions.

GeoEngineers observed groundwater seepage in low areas (such as tire ruts) during the recent sampling events. The groundwater seepage is a potential direct contact/ingestion exposure point during spring precipitation runoff and other ground-saturating events. When the groundwater table is lower, precipitation infiltrating contaminated surface soil and sediment could mobilize contaminants into the shallow aquifer, contributing to the groundwater contamination.

7.4. Surface Water

Stormwater runoff contacting surficial soil can transport IHSs into nearby wetland areas, offsite ditches, and neighboring properties. Contaminated sediment transport could potentially impact the Colville River. These transport pathways are likely minor because site contaminants have not been detected in nearby wetlands, offsite ditches or river sediment.

8.0 PROPOSED CLEANUP STANDARDS

The screening levels identified in Section 5.0 are proposed as cleanup levels for the site IHSs. Table 8.1 below presents the proposed soil and groundwater cleanup levels. To focus the remediation on the areas of highest risk, while minimizing disturbance of the valuable wetland habitats, a remediation action level (RAL) of 200 ng/kg for dioxins/furans is proposed. This RAL represents a site-specific risk-based cleanup level that is protective of invertebrates that may live in site soil or sediment. Areas that exceed the RAL will be evaluated in the FS for active remedial technologies (e.g., removal, treatments, etc.). Areas exceeding the RAL encompass the former process area, northern and southern stockpile areas and excludes most of the delineated wetlands. Exceptions are portions of the former pond, main drainage channel below the pond, and a low-lying area on the southern boundary of the northern stockpile that drains to the main channel. These wetlands are impacted by exceedances of the dioxin RAL and PCP cleanup level. These wetlands will be evaluated for inclusion in the active remediation area in the FS.

TABLE 8.1: PROPOSED SOIL AND GROUNDWATER CLEANUP LEVELS AND REMEDIATION LEVELS

Contaminant	Basis of Cleanup Level	Soil			Groundwater	
		CUL	RAL	Units	CUL	Units
PCP	PQL (soil) and MCL (groundwater as drinking water)	0.1	--	mg/kg	1.0	µg/L
DRPH	MTCA Method A	2,000	--	mg/kg	500	µg/L
Dioxin/Furans (2,3,7,8 TCDD TEQ)	Human health risk (soil) and estimated PQL (groundwater)	13	200	ng/kg	Not an IHS	

Notes: ng/L = nanograms per liter; MCL = maximum contaminant level

9.0 AREAS REQUIRING REMEDIATION

Areas requiring remediation are depicted in Proposed Remediation Areas, Figure 9-1, and will form the basis of the FS evaluation. These areas exceed either the dioxin TEQ RAL or the PCP cleanup level in shallow soil across the site. An area of deeper PCP and diesel contamination in the former process area will be addressed to control sources to groundwater. The FS will evaluate the use of various remediation technologies within these areas. Areas with lower concentrations of dioxins will be considered during the development of the long-term monitoring plan for the site.

10.0 SUMMARY

Based on the 2015/2016 soil sampling and recent quarterly groundwater sample chemical analytical results, we have drawn the following conclusions:

- PCP and dioxins continue to impact shallow soil at the site and represent risk to site receptors. The greatest impacts are in the former process area and several hot spots associated with the south stockpile area and a drainage channel.
- A PCP-contaminated groundwater plume extends from the former process area to the western property line. The PCP plume's western margin is not completely defined, as it likely extends off-site.
- DRPH- and dioxin-contaminated groundwater is confined to the area the former process area.

- Contaminated groundwater does not appear to extend to the southern portion of the site, as indicated by the groundwater sampling results.
- Water discharging from on-site seeps is not impacting the Colville River.

11.0 FEASIBILITY STUDY INTRODUCTION

This FS was conducted to develop and evaluate cleanup alternatives to address soil and groundwater contamination identified during previous assessment work conducted by others, GeoEngineers' (pre-RI) assessment (GeoEngineers 2016) and GeoEngineers' RI. Previous assessments and data evaluations indicate that site soil and groundwater contain chemicals of concern (COCs) at concentrations greater than the site cleanup levels. Areas of the site requiring remediation were identified in Section 9.0.

12.0 DEVELOPMENT OF REMEDIAL ACTION ALTERNATIVES

This section identifies the remedial action objectives and the initial screening of remedial alternatives for the site. An evaluation of the alternatives is presented in Section 14.0.

12.1. Remedial Action Objectives

MTCA requires that cleanup actions meet the threshold requirements identified in WAC 173-340-360. According to this section of the code, the cleanup action shall:

- Protect human health and the environment – Each remedial alternative is assessed for its ability to protect present and future public health, safety, welfare, and the environment.
- Comply with cleanup standards – Proposed cleanup standards are identified in Section 8.0. The MTCA cleanup regulation specifies that a cleanup action alternative that does not comply with cleanup standards is an “interim action” not a “cleanup action.”
- Comply with applicable state and federal laws.
- Provide for compliance monitoring – The cleanup action must provide for monitoring to verify that the cleanup action remains effective over time.
- Use permanent solutions to the maximum extent practicable – Permanent solutions are those in which cleanup standards can be met without further action being required such as long-term monitoring and inspection or institutional controls.
- Provide for a reasonable restoration time frame – This refers to the estimate of time required to achieve cleanup standards or other performance standards.
- Consider public concerns – This FS of remedial alternatives will seek to address the potential technical and administrative concerns of state and local regulatory entities, and concerns of the general public.

The primary remedial action objective (RAO) is to mitigate human exposure to contaminants by inhalation, dermal contact and ingestion. A secondary, although equally important, RAO is to mitigate ecological receptors (plants and animals) from exposure to contaminants.

12.2. General Categories of Response Actions and Initial Screening

The general categories of remedial response actions identified for the site include:

- No Action;
- Institutional Controls;
- Engineering Controls;
- Off-site Disposal; and
- On-site Treatment.

12.2.1. No Action

The no action alternative does not achieve the RAOs because it does not protect present and future public health, safety and welfare, and the environment. The no action alternative was not considered further.

12.2.2. Institutional Controls

Institutional controls involve the placement of access barriers such as fencing and barricades to motorized and non-motorized travel, as well as withdrawal or restrictions on development of affected lands from future use (i.e., deed restrictions). The primary purpose of these controls is to minimize development and human activities on contaminated areas and provide protection to an implemented solution. Institutional controls do not achieve the RAOs and were not considered further.

12.2.3. Engineering Controls

The engineering controls evaluated for this FS involve the use of containment technologies that serve as source control. These controls mitigate or reduce the migration of contaminants off site via the wind or erosion pathway and minimize leaching to groundwater by limiting precipitation infiltration and creating barriers to groundwater movement. The engineering controls do not affect the chemical composition of the contaminated materials nor do they reduce the toxicity of the materials. Engineering controls could include such measures as capping, placement of a coarse permeable barrier (to eliminate access to contaminated soil from burrowing animals), placement of a low-permeability (geomembrane) liner, grading, and revegetation.

The site is located within the 100-year floodplain of the Colville River and portions of the site flood annually during spring runoff. In addition, the site contains wetlands beneficial to wildlife including sensitive and threatened species. The continued presence of contaminated soil at the site limits use for high quality and beneficial habitat; therefore, leaving contaminated soil at the site is not desired. Engineering controls alone were not considered further.

12.2.4. Off-Site Disposal

Off-site disposal includes excavation and transport of contaminated material to an engineered, permitted landfill. Although this alternative can be very costly compared to other alternatives, it meets MTCA requirements and is retained as a remedial alternative.

12.2.5. Treatment

Treatment options include methods such as incineration, bioremediation, chemical oxidation, soil washing and carbon treatment. These methods result in contaminant removal or transformation to reduce the toxicity of the original contaminants. Treatment methods are protective of human and ecological receptors and allow a beneficial use of the site. These methods meet MTCA requirements and are retained as a remedial alternative.

12.3. Feasibility Study Considerations

The RI activities generally delineated the extent and types of contamination at the site; however, there are a few items to consider within the FS and during the remedial selection and engineering design components of this project:

- **Periodic Site Flooding:** Throughout RI activities, partial flooding of the site was observed concurrent with spring run-off conditions. Remedial alternative design and implementation at the site should account for periodic site flooding.
- **Aquifer Characterization:** Although groundwater gradient and flow direction have been previously estimated, many of the remedial technologies require additional characterization of the aquifer. Aquifer characterization is important to better understand during development of design parameters for many of the treatment alternatives. Aquifer properties including the hydraulic conductivity, porosity, groundwater velocity, soil carbon content should be further defined if the selected remedy is based upon aquifer characterization. Basic assumptions were used to estimate these properties for the purpose of this FS.
- **Treatment Technologies:** Many of the treatment technologies including soil washing and zero valent iron (ZVI) have not been implemented full scale or limited information on implementation is available. Bench tests and scaled-up pilot tests are likely required if these technologies are selected.
- **On-site Wetlands:** Approximately 5.64 acres of existing wetlands are present at the site. Through development of this FS, preservation of the existing wetlands for continued habitat, except for limited removal of hotspot areas, is the preferred approach as compared to full-scale removal of contaminated wetland soil which would result in habitat destruction and subsequent reconstruction. As a result, a single cleanup alternative was selected for most of the wetlands as discussed in Section 12.4.
- **Existing Debris Piles:** There are currently seven debris piles at the site. In addition, concrete and metal debris is scattered throughout the site. In addition to the debris piles, a pile of wood chips is located in the central portion of the property. Independent of which remedial alternative is selected, disposal of the debris from the site should be conducted concurrent with the selected remedial action. The debris piles likely can be disposed off-site as nonhazardous waste for much less than the contaminated soil.

12.4. Identification and Description of Cleanup Action Alternatives

Multiple remedial alternatives were developed for the CPPI site. As part of a site wide remediation strategy, remedial alternatives for the site were separated into soil and groundwater remediation alternatives, with a few common cleanup alternatives. Primary COCs for soil are generally limited to dioxins and furans in the upper 18 inches of soil at the site and diesel and PCP contamination in groundwater.

A source area of adsorbed phase PCP and diesel contamination in soil is also present. For the purpose of this FS, it is assumed that the adsorbed phase contamination extends from the ground surface to the clay soil stratum (about 20 feet bgs) within the extents identified in Soil Remediation Alternatives, Figure 12-1. It is also assumed that three of the four sides of the excavation would be sloped at a 2 horizontal to 1 vertical (2H:1V) slope 1 to achieve the assumed required excavation depth. The bottom of the excavation would include the approximate extents identified on Figure 12-1. Sloping results in an increase in excavation volume of about 30 percent compared to a vertical cut. Shoring is not anticipated for the excavation, but could be required if the excavation starts to encroach into the BNSF Railroad track right of way.

This area was partially excavated during previous cleanup activities conducted by the EPA at the site. Field screening and segregating previously imported fill could reduce the actual quantity of soil requiring treatment or removal, especially when constructing the side slopes. A contingency cost is included for each soil treatment alternative to manage groundwater infiltration into the open excavation, which will be treated using granulated activated carbon (GAC) before discharge on-site. If dewatering is required, it is likely cost prohibitive to dispose of significant quantities of fluids off site and on-site treatment should be employed.

Soil remediation alternatives are based on the assumption that soil from the PCP and diesel source area can be treated using the same technology as that used to treat shallow dioxin and furan contaminated soil. Quantities used for cost estimating purposes in the FS are identified in Table 12-1. Supporting documentation and calculations for cost estimates are provided in Appendix F.

Soil treatment areas are identified in Figure 12-1. The approximate groundwater treatment area is identified on Groundwater Remediation Alternatives, Figure 12-2. The selected remedial alternatives provide an appropriate range of permanent cleanup actions for the site and are summarized in Tables 12-2 and 12-3 for soil and groundwater respectively. The proposed alternatives are:

- Soil Alternative 1: Soil Washing
- Soil Alternative 2: Excavation
- Soil Alternative 3: Thermal Desorption
- Groundwater Alternative 1: Monitored Natural Attenuation (MNA)
- Groundwater Alternative 2: Pump and Treat
- Groundwater Alternative 3: Enhanced Bioremediation
- Groundwater Alternative 4: Permeable Reactive Barrier (PRB)

To fully address contamination at the site, the selected remedy will include both a soil and groundwater alternative.

Common to each remedial alternative is disposal of non-hazardous debris piles and wood chips at the site and remediation of the existing Category 2 wetlands. Debris is generally limited to seven existing piles of treated timber and soil and metal and concrete scattered throughout the site and it is expected that 50 percent or more of this material is debris (not soil). This debris can be disposed of using macro encapsulation at Waste Management's Arlington, Oregon facility. Macro encapsulation is where a specific

waste is placed into a containment unit constructed of high density polyethylene (HDPE). A flowable material like fly ash is then applied to seal any void spaces. The containment unit is then heat-welded shut.

The primary contamination in the wetlands is limited to dioxins in the upper 6 inches of soil. The riparian/wetlands are likely used by threatened and sensitive species including white tailed deer and yellow-billed cuckoo birds. Aggressive remediation strategies (i.e., removal) for the wetlands would heavily impact the existing wetland and diminish its function for years. As a result, the wetlands would need to be reconstructed at an additional cost and there could be a long lag-time to restore the wetland function following destruction and restoration of wetlands.

These wetlands also provide an important hydrological/physical buffer for the rest of the site and preservation of these features is important to enhance site recovery after remediation. As a result, thin-layer placement of imported soil into most of the wetlands is recommended to preserve the wetland function and protect ecological receptors. Thin-layer placement would involve placing approximately 6 inches of high quality wetland-appropriate soil over the extents of the wetland contamination. Thin-layer placement allows vegetation to survive but would cap and dilute the remaining dioxin and furans in surface soil. Thin layer placement can be conducted multiple times and it is likely that at least two placements would be needed, each occurring at least 11 months after the previous placement. Alternatively, areas of the wetlands with COC concentrations at least greater than the RAL of 200 picograms per gram (pg/g), could be excavated as identified on Figure 12-1. Final determination of the alternative to address the wetland areas will be based on additional pre-design assessment, public comments, and the expected final site use. For cost estimating purpose to evaluate the FS alternatives, the wetland areas adjacent to the process area are assumed to be included in the shallow soil remedies.

Cleanup action alternatives selected for evaluation represent a reasonable range of potentially applicable cleanup options to provide a basis for evaluation. The design parameters used to develop these cleanup action alternatives are based on engineering judgment and current knowledge of site conditions. The final design for the selected alternative could require additional characterization and analysis to better define the scope and costs associated with the final cleanup action.

Cleanup action alternatives were developed to be consistent with the current and anticipated future land uses at the site. Because the site sits adjacent to the Colville River and floods frequently, it is desired to treat or remove contamination at the site to restore the beneficial use of the site. As a result, capping contamination in place or consolidating the contamination and capping were not considered as alternatives. Components of each cleanup action alternatives evaluated for the site are described below and are summarized in Tables 12-2 and 12-3 for soil and groundwater, respectively.

12.4.1. Soil Alternative 1 – Soil Washing

Soil Alternative 1 involves excavating the upper 18 inches of soil (approximately 33,700 cubic yards) and adsorbed phase PCP and diesel source area (approximately 27,100 cubic yards) and employing a new soil washing technique to remove COCs (primarily dioxins and furans) from the soil called the ecoSPEARS RIDS system. This is a new technology developed by the National Aeronautics and Space Administration (NASA) Kennedy Space Center that has been proven to remove and concentrate hydrophobic contaminants from soil and sediments. This technology has not been proven for full scale remediation. Before implementation, both a lab treatability study and larger pilot study would be conducted before full scale implementation. The lab treatability study and larger 1,000-ton pilot study would take about 5 weeks and 3 months,

respectively, to implement. Full scale treatment time would be evaluated based up on the results of the other two studies, but would likely require multiple years to process the soil at the site. For this FS, we assumed a 3- to 4-year treatment window.

Once ready for full scale implementation, an on-site soil washing area would be designated. The upper 18 inches and deeper adsorbed phase source area soil in the designated soil remediation areas would be excavated and transferred to the soil washing area. Confirmation samples would be collected as needed to confirm the contaminated soil was successfully excavated.

The contaminated soil would then be processed through a proprietary system where a specialized food grade solvent is mixed with the contaminated soil. Dioxin, furan, diesel and PCP contamination are then expected to separate from the soil and become concentrated in the solvent. Performance sampling would be conducted to monitor the efficiency of the remediation by periodically sampling soil for COCs before and after soil washing.

The solvent is then separated from the soil and treated at the site to remove and destroy the contamination. The solvent treatment process involves exposing the solvent GAC filtration and chloride salts and dechlorinated dibenzo-p-dioxin are then adsorb to the GAC. The GAC would be disposed at Subtitle C landfill as F027 listed hazardous waste. By concentrating the contaminants into the solvent, breaking them down with the solvent and then removing the contaminants from the solvent with GAC, the off-site disposal mass is greatly reduced and is expected to be close to the actual mass of the contaminants. The treated solvent is then recovered and returned to ecoSPEARS for reuse.

The remediated soil is then placed back into the excavation area and vegetated with an appropriate seed mix. Residual food grade solvent left in the soil would be either volatilized or biodegraded. Supplemental nutrients would be amended to the treated soil to enhance microbial activity and assist with revegetation of the soil after treatment.

The approximate cost for Soil Alternative 1 is \$45,000,000.

12.4.2. Soil Alternative 2 – Excavation and Off-Site Disposal

Soil Alternative 2 includes excavating the top 18 inches of soil from the designated soil remediation area and from the deeper adsorbed phase source area. Confirmation samples would be collected as needed to confirm that the contamination was successfully removed. The soil is then loaded into a truck for off-site disposal. The waste would be transported by truck and pup to an appropriate disposal facility. Because the CPPI site is a former wood treatment facility, contaminated soil generated from the site is a listed categorical hazardous waste (F021). Wastewater from the site is a listed F032 hazardous waste. The closest Subtitle C disposal facility that can directly accept listed hazardous waste is Clean Harbors Aragonite incineration facility located near Aragonite, Utah, about 70 miles west of Salt Lake City, Utah and about 860 miles from the site via road.

A previous remedial action conducted at the site by the EPA (Ecology and Environment 2010) was successful in applying for a waste disposal variance to allow the disposal of waste from the site at Waste Management's (WM) subtitle C Arlington, Oregon landfill facility. Preliminary discussions with WM indicate that the variance doesn't expire, and soil from the site could again be accepted at the Arlington Facility. The Arlington, Oregon facility is approximately 290 miles from the site via roads. For the purposes of this

FS we assumed transportation by truck to the Arlington, Oregon facility, but additional cost savings could be realized if a transportation by rail solution were developed. To transport by rail, either a new rail siding would need to be installed at the site or the waste would need to be transported by truck to a nearby active railroad siding with permission of the rail siding owner and operator.

In accordance with Title 40 of the United States Code of Federal Regulations, Chapter I, Subchapter I, Part 268 (40CFR 268.2) and for the purpose of this FS, waste from the site has been designated as either soil or debris. Soil and debris have different disposal requirements and as a result have different costs for disposal. Debris includes material greater than 60 millimeters and is manufactured or plant matter. Soil includes unconsolidated earth material consisting of clay, silt, sand, or gravel size particles. For the landfill option, soil can be disposed of as typical landfill material, while debris requires macro encapsulation, which incurs a greater cost per ton for disposal

After soil removal, soil would be imported to replace excavated soil and the site would be regraded to simulate natural contours and reduce erosion. Additional savings are available if import fill quantities to restore site grades are reduced and limited to just the deep adsorbed phase source area. The imported soil would be revegetated with an appropriate seed mixture.

The approximate cost for Soil Alternative 2 is \$27,000,000.

12.4.3. Soil Alternative 3 – Thermal Desorption

Soil Alternative 3 to remediate soil involves thermal desorption. The upper 18 inches of soil from the designated soil remediation area and deeper adsorbed phase source area would be excavated and consolidated to a treatment cell. Confirmation samples would be collected as needed to confirm that the contamination was successfully removed. The treatment cell would be constructed with a concrete base approximately 6,400 square yards in area and large enough to encapsulate approximately 35,000 cubic yards of soil at a time. Heating electrodes and vapor recovery wells are then installed into the consolidated soil. The soil pile is then capped with an insulated vapor cap.

To power the thermal treatment system a high capacity power drop would be needed at the site. The electrodes would be heated to about 700 to 800 degrees Celsius (°C) to achieve a soil treatment temperature of about 335 °C, which is the required temperature to thermally destroy the contamination. Steam and vapors from the heated pile would be collected using the vapor recovery system. The vapors would be processed through a GAC treatment unit before venting to the atmosphere. The GAC would be exchanged as needed after it becomes saturated with volatilized contaminants. Weekly vapor monitoring would be conducted during pile heating.

The thermal treatment process is expected to take about one season to construct the treatment cell and about 1 year of thermal treating per batch once the system is constructed. It is expected that the soil could be treated in two batches. After thermal treatment, the soil would be amended with imported topsoil and then replaced at the site. The soil would then be vegetated with an appropriate seed mix.

The approximate cost for Soil Alternative 3 is \$25,000,000.

12.4.4. Groundwater Alternative 1 – Monitored Natural Attenuation

Groundwater Alternative 1 is dependent on removing the adsorbed phase deep contamination as part of the selected soil remediation efforts and then allowing groundwater recharge and naturally occurring microbes to break down the remaining PCP and diesel contamination in groundwater. As a standalone alternative, MNA without the source area removal does not meet the MTCA threshold requirements and is Groundwater performance monitoring would be conducted to monitor groundwater parameters and quality.

The approximate cost for Groundwater Alternative 1 is about \$360,000.

12.4.5. Groundwater Alternative 2 – Pump and Treat

Primary COCs in groundwater include diesel and PCP. Groundwater Alternative 2 would involve installing a network of groundwater extraction and injection wells, pumping contaminated groundwater from the wells, treating the water at the surface and then reinjecting the treated water into the subsurface upgradient of the capture zone. The groundwater pumping system would operate continuously with regular performance monitoring to evaluate the influent and effluent of the treatment system. For estimating purposes, this FS assumes 10 groundwater extraction/injection wells and a pumping rate of 100 gallons per minute.

The proposed water treatment technology for the CPPI site is GAC. As water is pumped through the GAC, PCP and diesel contamination are adsorbed to the GAC particles and treated water is then reinjected into the subsurface or potentially discharged to the Colville River. Performance monitoring would be conducted to monitor the removal efficiency of the GAC and the GAC would be changed out as needed. Multiple GAC treatment canisters would be installed in series to accommodate exhausted canister changeout and minimize the chances of breakthrough. For estimating purposes, we assume that GAC would need to be changed out twice, with each change out weighting approximately two tons. Exhausted GAC would be disposed of as a F027 listed hazardous waste.

The approximate cost for Groundwater Alternative 2 is \$1,300,000.

12.4.6. Groundwater Alternative 3 – Enhanced In-Situ Bioremediation

Groundwater Alternative 3 for groundwater involves the application of oxygen releasing compounds (ORC®) to break down PCP and diesel in the groundwater using aerobic microbial activity. The ORC® releases high amounts of oxygen into the subsurface to encourage aerobic conditions where naturally occurring microbes can break down the PCP and diesel contamination into water, carbon dioxide and free chlorine (Regenesis 2003). The ORC® would be applied by drilling a series of vertical injection points and then injecting the ORC® into the injection points.

For this FS, it was assumed that an injection area approximately 200 feet by 400 feet with injection points spaced 10 feet on center would be used for a total of about 800 injection points. ORC® would be injected into the saturated zone, estimated at a thickness of 15 feet for this FS. The ORC® would be applied at a rate of about 5 pounds per foot of saturated zone in each boring. We assumed the injection could be performed using direct push drilling methods (lance injections) using two crews at a time. Two applications were assumed for either retreatment of the original injection area or application to a similar sized injection area.

Although enhanced in-situ bioremediation is identified as a groundwater treatment alternative, it might also be applicable to remediate the adsorbed phase soil contamination area. If this technology is used to treat the adsorbed phase soil contamination, the selected soil treatment alternative would be limited to shallow dioxin and furan contamination. ORC® is not expected to be efficient at treating dioxin and furan contamination.

The approximate cost for Groundwater Alternative 3 is \$2,100,000, which does not include treatment of the adsorbed phase soil contamination.

12.4.7. Groundwater Alternative 4 – Permeable Reactive Barrier

Groundwater Alternative 4 involves excavation of a vertical trench in the northwest corner of the site and installing a ZVI PRB wall (Figure 12-2). A vertical trench would be excavated down to the clay aquitard at the site under slurry conditions. Soil excavated from the trench would be mixed with ZVI and then placed back into the excavation to create the PRB. For this feasibility study, we assumed a PRB wall approximately 700 feet long, 18 feet deep, and 6 feet thick, with a ZVI to soil mass ratio of 0.004.

As PCP and diesel contaminated groundwater flows through the PRB, the PCP and diesel react with the ZVI and the PCP undergoes a dichlorination process and produces ferrous iron (Fe²⁺) and free chlorine from contact with the ZVI. PCP and diesel are also removed from groundwater via sorption onto the ZVI surface (Gunawardana 2011). Literature on full scale implementation of a PRB ZVI wall to treat PCP and diesel is limited and there is a potential that pH and oxidation/reduction potential (ORP) can be impacted downgradient of the PRB. Bench scale testing would be required before full scale implementation.

The approximate cost for Groundwater Alternative 4 is \$1,500,000.

13.0 MTCA EVALUATION CRITERIA

This section presents a description of the threshold requirements for cleanup actions under MTCA and the additional criteria used in this FS to evaluate the cleanup action alternatives.

13.1. Threshold Requirements

Cleanup actions performed under MTCA must comply with several threshold requirements. Cleanup action alternatives that do not comply with these requirements are not considered suitable cleanup actions under MTCA. As provided in WAC 173-340-360(2)(a), cleanup action must:

- Protect human health and the environment;
- Comply with cleanup standards;
- Comply with applicable state and federal laws; and
- Provide for compliance monitoring.

13.1.1. Protection of Human Health and the Environment

Cleanup actions performed under MTCA must ensure that human health and the environment are protected.

13.1.2. Compliance with Cleanup Standards

Compliance with cleanup standards requires, in part, that cleanup levels are met at the applicable points of compliance. If a remedial action does not comply with cleanup standards, the remedial action is an interim action, not a cleanup action. Where a cleanup action involves containment of soil with hazardous substance concentrations exceeding cleanup levels at the point of compliance, the cleanup action may be determined to comply with cleanup standards, provided the requirements specified in WAC 173-340-740(6)(f) are met.

Cleanup alternatives must also comply with the Applicable or Relevant and Appropriate Requirements (ARARs) in accordance with WAC 173-340-710. An evaluation of the ARARs potentially applicable to each alternative was completed and is summarized in Summary of ARARs, Table 13-1. The alternatives evaluated in this FS comply with the intent of these laws and statutes and are protective of human health and the environment.

13.1.3. Compliance with Applicable State and Federal Laws

Cleanup actions conducted under MTCA must comply with applicable state and federal laws. The term "applicable state and federal laws" includes legally applicable requirements and those requirements that Ecology determines to be relevant and appropriate as described in WAC 173-340-710.

13.1.4. Provision for Compliance Monitoring

The cleanup action must allow for compliance monitoring in accordance with WAC 173-340-410. Compliance monitoring consists of protection monitoring, performance monitoring and conformational monitoring. Protection monitoring is conducted to confirm that human health and the environment are adequately protected during the construction, operation and maintenance phases of a cleanup action. Performance monitoring is conducted to confirm that the cleanup action has attained cleanup standards and/or, if applicable, remediation levels or other performance standards. Conformational monitoring is conducted to confirm the long-term effectiveness of the cleanup action once cleanup standards and/or, if applicable, remediation levels or other performance standards have been attained.

13.2. Other Requirements

Under MTCA, when selecting from the cleanup action alternatives that meet the threshold requirements described above, the alternatives must be further evaluated against the following additional criteria:

- **Use permanent solutions to the maximum extent practicable (WAC 173-340-360[2][b][i]):** MTCA Cleanup Regulation requires that when selecting from cleanup action alternatives that fulfill the threshold requirements, the selected action shall use permanent solutions to the maximum extent practicable (WAC 173-340-360[2][b][i]). MTCA specifies that the permanence of these qualifying alternatives shall be evaluated by balancing the costs and benefits of each of the alternatives using a "disproportionate cost analysis" in accordance with WAC 173-340-360(3)(e). The criteria for conducting a disproportionate cost analysis are described in Section 13.0.
- **Provide a reasonable restoration time frame (WAC 173-340-360[2][b][ii]):** In accordance with WAC 173-340-360(2)(b)(ii), selected cleanup actions must provide for a reasonable restoration time frame. The MTCA Cleanup Regulation lists factors to be considered in evaluating whether a cleanup action provides for a reasonable restoration time frame (WAC 173-340-360[4][b]).

- **Consideration of Public Concerns (WAC 173-340-360[2][b][iii]):** Ecology will consider public comments submitted during the RI/FS process in making its preliminary selection of an appropriate cleanup action alternative. This preliminary selection is subject to further public review and comment when the proposed remedy is published in the Draft Cleanup Action Plan.

13.3. MTCA Disproportionate Cost Analysis

The MTCA disproportionate cost analysis (DCA) is used to evaluate which of the cleanup action alternatives that meet the threshold requirements are permanent to the maximum extent practicable. This analysis involves comparing the costs and benefits of the alternatives and selecting the alternative whose incremental costs are not disproportionate to the incremental benefits. The evaluation criteria for the DCA are specified in WAC 173-340-360(2) and include protectiveness, permanence, long-term effectiveness, management of short-term risks, implementability, and consideration of public concerns compared to overall cost.

As outlined in WAC 173-340-360(3)(e), the MTCA Cleanup Regulation provides a methodology that uses the criteria below to determine whether the costs associated with each cleanup action alternative are disproportionate relative to the incremental benefit of the alternative over the next lowest cost alternative. The comparison of benefits relative to costs may be quantitative, but will often be qualitative. When possible for this FS, quantitative factors such as mass of contaminant removed or percentage of area of impacts remaining were compared to costs for the alternatives evaluated, but many of the benefits associated with the criteria described below were necessarily evaluated qualitatively. Costs are disproportionate to benefits if the incremental costs of the more permanent alternative exceed the incremental degree of benefits achieved over the lower-cost alternative (WAC 173-340-360[e][i]). Where two or more alternatives are equal in benefits, Ecology selects the less costly alternative (WAC 173-340-360[e][ii][c]).

The MTCA criteria used in the DCA are described below.

13.3.1. Protectiveness

The overall protectiveness of a cleanup action alternative is evaluated based on several factors. First, the extent to which human health and the environment are protected and the degree to which overall risk at a site is reduced are considered. Both on-site and off-site reductions in risk resulting from implementing the alternative are considered.

13.3.2. Permanence

MTCA specifies that when selecting a cleanup action alternative, preference shall be given to actions that are “permanent solutions to the maximum extent practicable.” Evaluation criteria include the degree to which the alternative permanently reduces the toxicity, mobility or mass of hazardous substances, including the effectiveness of the alternative in destroying the hazardous substances, the reduction or elimination of hazardous substance releases and sources of releases, the degree of irreversibility of waste treatment processes, and the characteristics and quantity of treatment residuals generated.

13.3.3. Long-Term Effectiveness

Long-term effectiveness is a parameter that expresses the degree of certainty that the cleanup action alternative will be successful in maintaining compliance with cleanup standards over the long-term

performance of the cleanup action. The MTCA Cleanup Regulation contains a specific preference ranking for different types of technologies that is to be considered as part of the comparative analysis. The ranking gives the highest preference to technologies such as reuse/recycling, treatment, immobilization/solidification, and disposal in an engineered, lined, and monitored facility. Lower preference rankings are given to technologies such as on-site isolation/containment with attendant engineered controls, and institutional controls and monitoring.

13.3.4. Management of Short-term Risks

Evaluation of this criterion considers the relative magnitude and complexity of actions required to maintain protection of human health and the environment during implementation of the cleanup action. Cleanup actions carry short-term risks, such as potential mobilization of contaminants during construction, or safety risks typical of large construction projects. Some short-term risks can be managed using best practices during project design and construction, while other risks are inherent to project alternatives and can offset the long-term benefits of an alternative.

13.3.5. Implementability

Implementability is an overall metric expressing the relative difficulty and uncertainty of implementing the cleanup action. Evaluation of implementability includes consideration of technical factors such as the availability of mature technologies and experienced contractors to accomplish the cleanup work. It also includes administrative factors associated with permitting and completing the cleanup.

13.3.6. Consideration of Public Concerns

The public involvement process under MTCA is used to identify potential public concerns regarding cleanup action alternatives. The extent to which an alternative addresses those concerns is considered as part of the evaluation process. This includes concerns raised by individuals, community groups, local governments, tribes, federal and state agencies, and other organizations that may have an interest in or knowledge of the site. The public concerns for this site would generally be associated with environmental concerns and performance of the cleanup action, which are addressed under other criteria such as protectiveness and permanence.

13.3.7. Cost

The analysis of cleanup action alternative costs under MTCA includes all costs associated with implementing an alternative, including design, construction, conformational monitoring, and institutional controls. Costs are intended to be comparable among different alternatives to assist in the overall analysis of relative costs and benefits of the alternatives. The costs to implement an alternative include the cost of construction and the net present value of any long-term costs. Long-term costs include operation and maintenance costs, monitoring costs, equipment replacement costs, and the cost of maintaining institutional controls. Unit costs used to develop cost estimates for the cleanup action alternatives in this FS were derived using a combination of published engineering reference manuals (i.e., R.S. Means), construction cost estimates solicited from applicable vendors and contractors, review of actual costs incurred during similar, applicable projects, and professional judgment.

14.0 EVALUATION AND COMPARISON OF CLEANUP ALTERNATIVES

This section provides an evaluation and comparative analysis of cleanup action alternatives developed for the site. The alternatives are evaluated with respect to the MTCA evaluation criteria described in Section 13.0 and then compared to each other relative to expected performance under each criterion. The components of each remedial alternative are described in Section 12.4 and summarized in Tables 12-2 and 12-3 for soil and groundwater respectively. Detailed evaluation of the alternatives is presented in Evaluation of Cleanup Action Alternatives, Tables 14-1 and 14-2 for soil and groundwater respectively. The results of the evaluation are summarized in Summary of MTCA Evaluation and Ranking of Cleanup Action Alternatives, Tables 14-3 and 14-4 for soil and groundwater respectively.

To evaluate reasonableness of costs, planning level estimates were developed for reach remedial alternative. While adequate for decision making purposes, final cost estimates will depend on the scope of the final remedial design. Please note that (1) the estimated costs for each alternative are considered to be within a margin of +/- 20 percent; (2) unit costs were derived from local and national vendors; (3) long-term monitoring and maintenance costs beyond 5 years are not included in the estimates; and (4) costs are based on 2018 dollars.

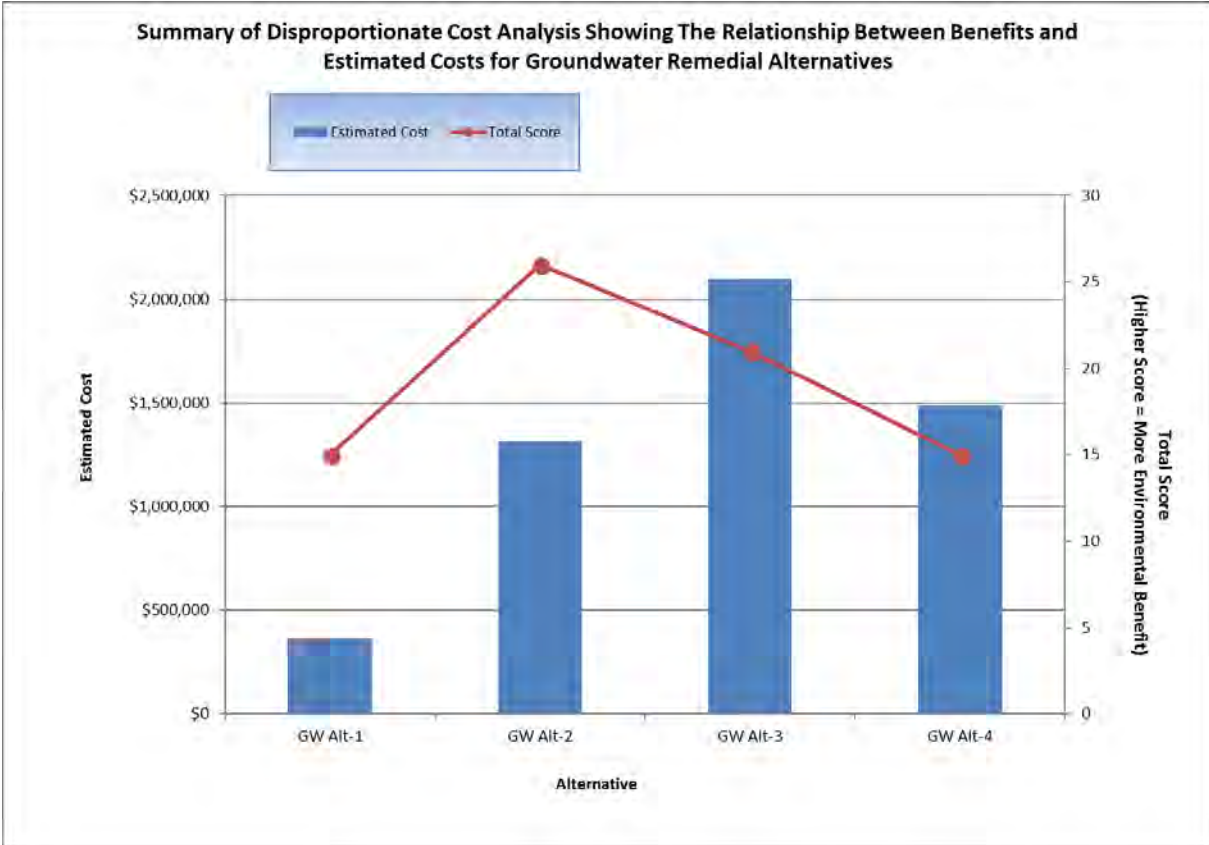
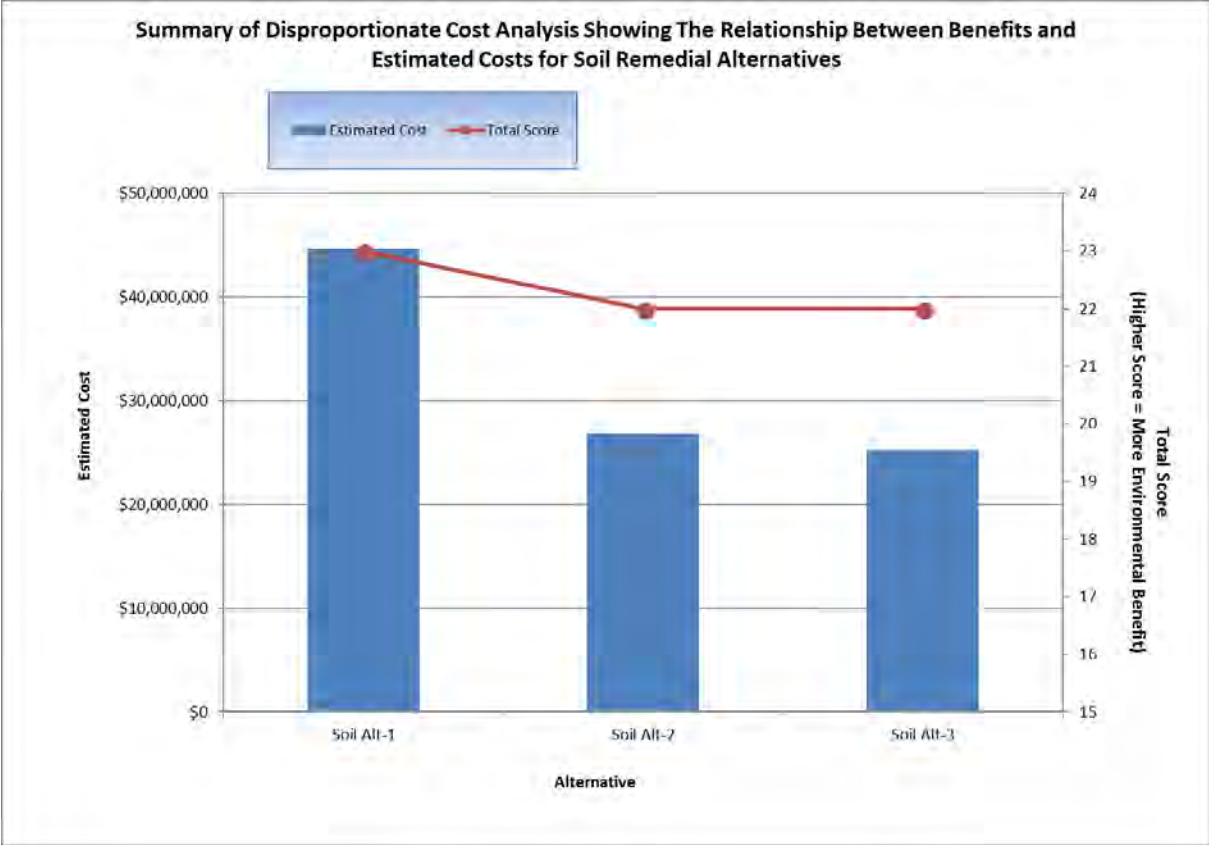
14.1. Threshold Requirements

The alternatives developed meet the four MTCA threshold requirements described for cleanup actions: (1) protection of human health and the environment; (2) compliance with cleanup standards; (3) compliance with applicable state and federal regulations; and (4) provisions for compliance monitoring. Please note that Groundwater Alternative 1 does not meet the four MTCA threshold requirements unless combined with a soil alternative that addresses the deeper adsorbed contaminant source area, Considering the expectation that both soil and groundwater alternatives will be selected, Groundwater Alternative 1 meets MTCA threshold requirements and is carried forward in the DCA.

14.2. MTCA Disproportionate Cost Analysis

As discussed in Section 13.1.3, the MTCA analysis of disproportionate costs is used to determine which cleanup alternative meets threshold requirements and is permanent to the maximum extent practicable. The alternatives were evaluated based on the relative benefits ranking factors of the DCA. Using a numeric scoring scale of 1 (lowest) to 5 (highest) and the methodology described in Section 13.0 alternatives were ranked and evaluated as shown in Tables 14-1 and 14-2 for soil and groundwater respectively. Each individual criterion is evaluated based on how it applies to each alternative. Tables 14-3 and 14-4 for soil and groundwater respectively present the summary of these results, including the summation of the resulting scores for each alternative and the determination of disproportionate cost. The conclusions of this evaluation are summarized in the following sections and the graphs below.

Evaluation of each groundwater alternative assumes that the deeper adsorbed soil contamination is addressed by the selected soil remediation alternative, removing a continuing source of groundwater impacts. In the discussion below, "source area" refers to the existing groundwater contamination plume that extends approximately from the former process area to the west property line.



14.3. Protectiveness

14.3.1. Soil

Soil Alternative 2, off-site disposal achieves a high level of protectiveness as a result of permanently removing the contamination from the site and relocating it to a controlled facility, however this doesn't reduce the toxicity of the COCs. Soil Alternative 1, soil washing and Soil Alternative 3, thermal desorption also achieves high levels of protectiveness by reducing the toxicity of contamination, but they have the potential to leave residual contamination, daughter products or byproducts at the site.

14.3.2. Groundwater

Groundwater Alternative 2, pump and treat achieves the highest level of protectiveness by extracting the contaminants from groundwater and source areas and capturing them in the GAC for off-site disposal. Groundwater Alternative 3, bioremediation achieves a higher level of protectiveness compared to Groundwater Alternatives 1, MNA and 4, PRB because the source area is directly treated, but Groundwater Alternatives 3 and 4 involve introducing chemicals into the saturated zone, which makes them less protective than Groundwater Alternative 2. Groundwater Alternative 4 achieves a higher level of protectiveness than Groundwater Alternative 1 because it treats the water before off-site migration but doesn't address the source area and allows for the presence of contaminated water upgradient of the PRB wall. Groundwater Alternative 1 is the least protective because it doesn't address the contamination and relies on the natural recovery of groundwater which hasn't occurred since operations at the facility were ceased in 2005, though natural recovery will likely be accelerated by the removal of the adsorb deeper contaminated soil.

14.4. Permanence

14.4.1. Soil

Each of the alternatives were ranked as the highest level of permeance because the permanently destroy or remove the contaminants from the site. There is little chance for remobilization or exposure to site COCs after treatment.

14.4.2. Groundwater

Groundwater Alternative 2, pump and treat achieves the highest level of permanence by extracting the contaminants from the groundwater and source areas and capturing them in the GAC for off-site disposal. Groundwater Alternative 3, bioremediation achieves a higher level of protectiveness compared to Groundwater Alternatives 1, MNA and 4, PRB because the source area is directly treated but Groundwater Alternative 3 has the potential to not target some areas of contamination if the injected products follow preferential flow paths or not fully break down the contaminants that could result in the remobilization of the contaminant.

Groundwater Alternative 4 achieves a higher level of permanence than Groundwater Alternative 1 because it treats the water before off-site migration but doesn't address the source area. Groundwater Alternative 1 is the least permeant because it doesn't address the contamination and relies on the natural recovery of groundwater.

14.5. Long-Term Effectiveness

14.5.1. Soil

Soil Alternative 2, off-site disposal achieves the highest level of long-term effectiveness as a result of permanently removing the contamination from the site and relocating it to a controlled facility. Soil Alternative 1, soil washing and Soil Alternative 3, thermal desorption also achieve moderate to high levels of long-term effectiveness by reducing the toxicity of contamination, but they have the potential to leave residual contamination if the treatment processes are not 100 percent effective.

14.5.2. Groundwater

Groundwater Alternative 2, pump and treat achieves the highest level of long-term effectiveness by extracting the contaminants from the groundwater and source areas and capturing them in the GAC for off-site disposal. Groundwater Alternative 3, bioremediation and Groundwater Alternative 4, PRB achieve a moderate level of long-term effectiveness compared to Groundwater Alternative 1, MNA because they destroy or transform the contamination, but they have the potential to leave behind residual contamination, daughter products or byproducts at the site. Groundwater Alternative 1 provides a low long-term effectiveness because it doesn't address the contamination and it could take a long period of time to achieve the cleanup goals.

14.6. Management of Short-Term Risks

14.6.1. Soil

Soil Alternative 1, soil washing achieves the highest level of managing short term risks because the process involves a food grade solvent and the same excavation techniques as the other alternatives. The process for Soil Alternative 1 is also limited to onsite activities, with the exception of a small quantity of off-site GAC disposal at the conclusion of the remediation. Soil Alternative 3, thermal desorption manages short term risks better than Soil Alternative 2, off-site disposal because remediation activities are generally limited to on-site activities.

However; with Soil Alternative 3 there is a risk of gasses not captured by the SVE system and there are risks of explosion by heating the soil to extremely high temperatures and utilizing high amounts of electrical power to heat the soil. Soil Alternative 2 has the lowest level of short-term risk management because it involves transportation of waste over significant distances. The risk of an accident or spill are moderate, especially given the location of the site and the number of two lane highways that would be utilized to transport waste to the disposal facility.

14.6.2. Groundwater

Groundwater Alternative 1, MNA involves very little short-term risks, by not taking disruptive action at the site. Groundwater Alternative 2, pump and treat has a low to moderate risk and involves the installation of multiple groundwater wells, small electrical works and activities are generally limited to onsite. However, this alternative requires the greatest operation and maintenance, including maintaining operation of the system during freezing conditions. Groundwater Alternatives 3 and 4 have low to moderate risk because the introduction of ORC® into the subsurface which can result in uncontrolled off gassing and has the potential to migrate off site or impact workers at the site and the PRB can impact downstream water chemistry and it involves deep slurry trenching.

14.7. Technical and Administrative Implementability

14.7.1. Soil

Soil Alternative 2, off-site disposal is the most easily implemented because approval for the waste at the disposal facility has already been achieved and the process involves excavation of the contaminated areas (common to all three alternatives) and then loading it into a truck for transportation to the disposal area. This process is not difficult to implement from a technical or administrative standpoint. Soil Alternative 3, thermal desorption requires more technical analysis and planning than Soil Alternative 2. Technical considerations include energy uses, vapor capture systems, treatment cell construction and performance monitoring. Soil Alternative 1, soil washing is the least implementable solution when compared to the other two. Soil Alternative 1 involves utilizing a process that has not been proven for full scale remediation projects. The technology in question is proprietary and the effectiveness and reasonableness of the solution is not vetted.

14.7.2. Groundwater

Groundwater Alternative 1, MNA requires no action and as a result it is easy to implement. Groundwater Alternative 3, bioremediation has a lower level of implementation because it could require multiple applications and relies on additional monitoring, but it is a proven and effective technology. In addition, Groundwater Alternative 3 would require approval to introduce chemicals into the subsurface. Groundwater Alternatives 2 and 4 have moderate implementability. Groundwater Alternative 2, pump and treat would require underground injection control permitting of the water discharge and the pump and treat system can be operations and maintenance intensive. Groundwater Alternative 4, PRB also has a moderate implementability ranking. The PRB wall could require recharge depending on performance and it doesn't treat the actual plume, but is dependent on treating contaminated groundwater as it moves through the PRB. Downstream water chemistry concerns would also need to be addressed for Groundwater Alternative 4.

14.8. Consideration of Public Concerns

14.8.1. Soil

Soil Alternative 1, soil washing likely has the highest level of public acceptance because the cleanup activities are generally limited to the site. Soil Alternative 3, thermal desorption has a slightly lower public acceptance because there could be concerns of off-site vapor migration or risks of explosion or problems with the high energy use. Soil Alternative 2, off-site disposal has the lowest public acceptance because the impacts to traffic on the two-lane highway adjacent to the site could be significant. Traffic along this route is already a concern and the addition of multiple large trucks hauling waste and consuming diesel fuel would reduce the public acceptance for this alternative.

14.8.2. Groundwater

Groundwater Alternative 2, pump and treat has the highest level of public acceptance because remediation activities are generally limited to the site and the process involves direct removal of contaminants from the groundwater. Groundwater Alternatives 3, bioremediation and 4, PRB have lower levels of public acceptance because they introduce chemicals into the groundwater and could impact downgradient water chemistry. Groundwater Alternative 1, MNA has the lowest level of acceptance because it doesn't directly

address the groundwater contamination. Its costs are significantly less than the other alternatives which could be a positive to the public if the remediation is publicly funded.

14.9. Reasonable Restoration Timeframe

14.9.1. Soil

The restoration timeframe for the proposed alternatives is expected to be on the order of 2 to 4 years. This timeframe includes project design, permitting, contracting and construction. Remedial action timeframes range from 2 (Soil Alternative 2) to 4 years (Soil Alternative 1). In general, each remedial alternative requires about the same restoration timeframe and they are not significantly different.

14.9.2. Groundwater

The restoration timeframe for the proposed alternatives is expected to be on the order of 2 to 20 years. This timeframe includes project design, permitting, contracting and construction. Remedial action timeframes range from as low as 2 years (Groundwater Alternatives 2 and 3) and up to 20 years (Groundwater Alternatives 1 and 4). Groundwater Alternatives 2 and 3 are aggressive remediation strategies developed to remediate the site within a short time period. Groundwater Alternatives 1 and 4 are passive technologies, which generally require longer cleanup times. Groundwater Alternatives 1 and 4 are dependent upon the natural groundwater movement through the site and therefore require extended periods of time to allow for natural groundwater movement through the site.

14.10. Cost

14.10.1. Soil

For purposes of this evaluation, higher cost equates to a reduction in score. Soil Alternative 3, thermal desorption is the lowest cost alternative and therefore ranks the highest for cost. Soil Alternative 1, soil washing had the highest cost and was therefore ranked the lowest. The cost estimates for each soil remediation alternative were developed as described in Section 12.4 and are presented in Tables 14-5 through 14-7. Estimated costs include design, implementation and performance and conformational monitoring of the process.

14.10.2. Groundwater

For purposes of this evaluation, higher cost equates to a reduction in score. Groundwater Alternative 1, MNA is the lowest cost alternative and therefore ranks the highest for cost. The next cheapest alternative is Groundwater Alternative 2, pump and treat, which was estimated as only \$200,000 less than Alternative 4, PRB. Groundwater Alternative 3, bioremediation is the most expensive remediation alternative. The estimated costs for Groundwater Alternative 4 includes about \$467,000 to excavate, dispose and backfill the PRB trench. If the PRB can be left in place indefinitely, then the costs for Groundwater Alternative 4 is greatly reduced.

The cost estimates for each groundwater remediation alternative were developed as described in Section 12.4 and are presented in Tables 14-8 through 14-11. Estimated costs include design, implementation and performance monitoring. To equalize monitoring costs across each alternative, 5 years of monitoring costs were estimated for each alternative.

15.0 RECOMMENDED REMEDIAL ACTIONS

Based on the DCA, Soil Alternative 3, thermal desorption is the preferred alternative for soil remediation. For groundwater remediation, Groundwater Alternative 2, pump and treat is the preferred alternative. Both of the selected options had high benefit rankings and the lowest or second lowest estimated implementation costs. Although the costs for Groundwater Alternative 2 were higher than Groundwater Alternative 1, the overall benefit and shorter timeframe resulted in a significantly higher score. In compliance with MTCA [WAC 173-340-360(3)(e)(ii)(c)], Soil Alternative 3 and Groundwater Alternative 2 should be the preferred remedial alternatives.

16.0 LIMITATIONS

We have prepared this RI/FS for use by the Washington State Department of Ecology. This RI/FS is not intended for use by others, and the information contained herein is not applicable to other sites.

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

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

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Table 5-1
Proposed Soil Screening Levels
 Colville Post and Poles
 Stevens County, Washington

Analyte	CAS Number	Human Health Direct Contact		Ecological	Concentrations Protective of Groundwater						Preliminary Soil Screening Level		Modifying Factors		Soil Screening Level (After adjustment for background and PQL)			
		MTCA Method B Standard Formula Value for Unrestricted Land Use		Site-Specific TEE Ecological Indicator Soil Concentrations ¹ mg/kg	Soil Concentration Protective of Groundwater Screening Level ⁵			Soil Concentration Protective of Groundwater Screening Level ⁵		GW SL µg/L	Vadose Zone Soil mg/kg	Saturated Soil mg/kg	Vadose mg/kg	Saturated mg/kg	Background Concentration ⁶ mg/kg	PQL ⁷ mg/kg	Vadose mg/kg	Saturated mg/kg
		Carcinogen mg/kg	Non-Carcinogen mg/kg																Koc^{2} L/kg	Kd^{3} L/kg	H^{4} (-)	Vadose mg/kg	Saturated mg/kg
Petroleum Hydrocarbons																		
Diesel-Range Hydrocarbons	NA	--	--	see Note 8	--	--	--	--	2000	2000	2000	2000	--	10.0	2000	2000		
Semivolatile Organic Compounds (SVOCs)																		
Pentachlorophenol	87-86-5	2.5	400	3.0	592	0.592	0.000001	1.0	0.0158	0.0009	0.0158	0.0009	--	0.05	0.05	0.05		
Dioxins and Furans																		
Dioxin TEQ	1746-01-6	0.000013	0.000093	0.0002	--	--	--	0.00011 (110 pg/L)	--	--	0.000013	0.000013	0.0000052	0.000011	0.000013	0.000013		

Notes:

- ¹Dioxin TEQ site-specific indicator soil concentration derived using default equations and parameter values in MTCA Tables 749-4 and 749-5, plus a literature-derived earthworm bioaccumulation factor (see text for details).
- ²Values for Koc are from Ecology's "CLARC Master Spreadsheet.xlsx" dated August 2015.
- ³For ionizing and non-ionizing organics, $K_d = K_{oc} \times f_{oc}$ and uses the MTCA default f_{oc} of 0.1% in upland soil. Metals Kd values are from Ecology's "CLARC Master Spreadsheet.xlsx" dated August 2015.
- ⁴Values for H are from Ecology's "CLARC Master Spreadsheet.xlsx" dated August 2015. Values are temperature-adjusted based on 13 degrees Celsius when available; otherwise values are based on 25 degrees Celsius.
- ⁵Soil concentrations protective of groundwater calculated per WAC 173-340-740(3)(b)(iii)(A) using Equations 747-1 and 747-2 referencing preliminary groundwater cleanup levels presented in Table 5-2. Method A Cleanup Values are used for total petroleum hydrocarbon soil concentrations protective of groundwater. Preliminary groundwater cleanup levels are presented in Table 5-2.
- ⁶Dioxin TEQ background value from Ecology Technical Memorandum No. 8, Natural Background for Dioxins/Furans in WA Soils, August 9, 2010.
- ⁷PQL is the lowest PQL reported by Test America.

f_{oc} = Sediment fraction of organic carbon	MTCA = Washington State Model Toxics Control Act
k_d = Distribution coefficient	NA = Not Applicable
k_{oc} = Soil organic carbon-water partitioning coefficient	PQL = Practical quantitation limit
L/kg = liter per kilogram	TEQ = Toxic equivalent concentration
mg/kg = milligram per kilogram	-- = No screening criteria available
µg/L = micrograms per liter	

Gray shading identifies the basis for the preliminary soil screening level.

Blue shading identifies the basis for the soil screening level (after PQL adjustment)

Green shading identifies the soil screening level after adjustment for background and the PQL.

Table 5-2
Proposed Groundwater Screening Levels
 Colville Post and Poles
 Stevens County, Washington

Analyte	CAS Number	Drinking Water Criteria						Preliminary Groundwater Screening Level µg/L	Modifying Factor	Groundwater Screening Level (After PQL Adjustment) µg/L
		Federal MCL ¹ µg/L	State MCL ² µg/L	MTCA Method B Standard Formula Value ^{3,4}						
				Carc. µg/L	Carc. Adjusted µg/L	Non-Carc. µg/L	Non-Carc. Adjusted µg/L		PQL ⁵ µg/L	
Petroleum Hydrocarbons										
Diesel-Range Hydrocarbons ⁶	NA	--	--	--	--	500	--	500	240	500
Semivolatile Organic Compounds										
Pentachlorophenol	87-86-5	1.0	1.0	0.22	--	80	--	1.0	0.02	1.0
Dioxins and Furans										
Dioxin TEQ	1746-01-6	0.00003	0.00003	0.0000007	0.0000067	0.0000112	0.0000112	0.00000673	0.00011	0.00011 (110 µg/L)

Notes:

¹ National Primary Drinking Water Regulation; <http://water.epa.gov/drink/contaminants.index.cfm>; CLARC Master Spreadsheet.xlsx dated August 2015.

² Washington Primary Drinking Water Standards, WAC 246-290-130; CLARC Master Spreadsheet.xlsx dated August 2015.

³ MTCA Method B groundwater screening levels calculated according to WAC-173-340-720(3)(b)(iii)(A)(equation 720-1) and WAC-173-340-720(3)(b)(iii)(B)(equation 720-2); CLARC Master Spreadsheet.xlsx dated August 2015.

⁴ "Carc. Adjusted" (i.e., carcinogenic adjusted) and "Non-Carc. Adjusted" (i.e., non-carcinogenic adjusted) columns are applicable when a state or federal surface water standard is available, but is not considered to be "sufficiently protective" under MTCA (that is, the standard is based on a hazard quotient greater than 1 or a cancer risk greater than 1×10^{-5}). In these cases WAC 173-340-720(7)(b) and -730(5)(b) allows the standard to be adjusted downward to a hazard quotient of 1 or a cancer risk of 1×10^{-5} . For this table, the "Carc. Adjusted" and "Non-Carc. Adjusted" column are also used in cases where no state or federal standards are available.

⁵ PQL is the lowest PQL reported by TestAmerica.

⁶ Diesel-range hydrocarbons were not detected in soil within the conditional point of compliance (0 to 6 feet below ground surface) at a concentration greater than the site-specific TEE indicator soil concentration of 260 mg/kg and is, therefore, not an ecological contaminant of concern for soil.

µg/L = micrograms per liter

PQL = Practical quantitation limit

MTCA = Washington State Model Toxics Control Act

TEQ = Toxic equivalent concentration

MCL = Maximum contaminant level

-- = No screening criteria available

NA = Not Applicable

Gray shading identifies the basis for the preliminary groundwater screening level.

Blue shading identifies the basis for the groundwater screening level (after PQL adjustment)

Green shading identifies the groundwater screening level after adjustment for background and the PQL.

Table 6-1

Soil Chemical Analytical Results - Total Petroleum Hydrocarbons, Metals and Pentachlorophenol¹

Colville Post and Poles
Stevens County, Washington

Sample ID	Date Collected	Depth (feet)	Semi-volatile Organic Compounds EPA Method 8270D SIM (µg/kg)	Petroleum Hydrocarbons NWTPH-Dx (mg/kg)		Metals EPA Series 6000/7000 Methods (mg/kg)	
			Pentachlorophenol ²	Diesel-Range	Lube Oil-Range	Cadmium	Mercury
HA-1 (0-6")	12/06/16	0-0.5	680	72 J	270 J	--	--
HA-10 (0-6")	12/07/16	0-0.5	25 J	--	--	--	--
HA-15 (0-6")	12/07/16	0-0.5	--	14 U	66 J	--	--
HA-16 (0-6")	12/07/16	0-0.5	--	13 U	32 U	--	--
HA-17 (0-6")	12/07/16	0-0.5	--	51 J	330 J	--	--
HA-20 (0-6")	12/07/16	0-0.5	--	--	--	0.56 U	0.038 U
HA-21 (0-6")	12/07/16	0-0.5	--	--	--	0.61 U	0.042
HA-24 (0-6")	12/07/16	0-0.5	3,700	--	--	0.52 U	0.025
HA-25 (0-6")	12/07/16	0-0.5	2,000	--	--	--	--
HA-26 (0-6")	12/07/16	0-0.5	3,700	--	--	--	--
HA-29 (0-6")	12/07/16	0-0.5	15,000	--	--	--	--
HA-30 (0-6")	12/07/16	0-0.5	9.6 U	--	--	--	--
HA-35 (0-6")	12/07/16	0-0.5	480	--	--	--	--
HA-36 (0-6")	12/06/16	0-0.5	310	59 J	230 J	--	--
HA-37 (0-6")	12/06/16	0-0.5	120	25 J	97 J	--	--
HA-54(0-6)	03/01/17	0-0.5	1,100 J	--	--	--	--
HA-55(0-6)	03/01/17	0-0.5	2,100	--	--	--	--
HA-56(0-6)	03/01/17	0-0.5	350	--	--	--	--
HA-57(-0-6)	03/01/17	0-0.5	14,000	--	--	--	--
HA-58(0-6)	03/01/17	0-0.5	97,000	--	--	--	--
HA-59(0-6)	03/01/17	0-0.5	4,700	--	--	--	--
MW20-1 (2-3)	11/08/16	2-3	10 U	13 U	33 U	--	--
MW20-3 (13-14)	11/08/16	13-14	9.0 U	12 U	29 U	--	--
MW21-2 (7-8)	11/09/16	7-8	9.5 U	11 U	28 U	--	--
MW21-3 (16-17)	11/09/16	16-17	8.6 U	11 U	27 U	--	--
MW22-1 (6.5-7)	11/09/16	6.5-7	8.6 U	11 U	27 U	--	--
MW22-2 (15.5-16)	11/09/16	15.5-16	9.2 U	12 U	29 U	--	--
MW23-1 (2-3)	11/09/16	2-3	9.3 U	12 U	30 U	--	--
MW23-3 (12.5-13)	11/09/16	12.5-13	8.9 U	11 U	28 U	--	--

Sample ID	Date Collected	Depth (feet)	Semi-volatile Organic Compounds EPA Method 8270D SIM (µg/kg)	Petroleum Hydrocarbons NWTPH-Dx (mg/kg)		Metals EPA Series 6000/7000 Methods (mg/kg)	
			Pentachlorophenol ²	Diesel-Range	Lube Oil-Range	Cadmium	Mercury
MW24-2 (6.5-7)	11/08/16	6.5-7	8.3 U	11 U	26 U	--	--
MW24-3 (11.5-12)	11/08/16	11.5-12	8.7 U	11 U	27 U	--	--
MW25-1 (5.5-6.5)	11/08/16	5.5-6.5	9.2 U	11 U	27 U	--	--
MW25-2 (9.5-10)	11/08/16	9.5-10	8.7 U	11 U	27 U	--	--
MW26-5 (25.5-26)	11/08/16	25.5-26	9.1 U	11 U	28 U	--	--
MW26-6 (8-9)	11/08/16	8-9	10 U	12 U	30 U	--	--
MW27-2 (12-13)	11/07/16	12-13	14,000	20,000 J	900 J	--	--
MW27-3 (16-17)	11/07/16	16-17	8.8 U	11 U	28 U	--	--
MW-28-1 (1)	11/07/16	1-1.5	10 U	13 U	32 U	--	--
MW28-2 (18.5)	11/07/16	18.5	8.7 U	11 U	26 U	--	--
MW29-3 (13-13.5)	11/09/16	13-13.5	8.9 U	10 U	26 U	--	--
MW29-5 (4-5)	11/09/16	4-5	9.9 U	12 U	29 U	--	--
MW-33 (5.0-5.5)	05/25/17	5-5.5	21 J	12 U	29 U	--	--
MW-33 (16.5-17.0)	05/25/17	16.5-17	8.6 U	10 U	26 U	--	--
MW-34 (15.5-16.0)	05/25/17	2-2.5	9.2 U	11 U	28 U	--	--
MW-34 (2.0-2.5)	05/25/17	15.5-16	10 U	12 U	30 U	--	--
MW-35 (1.5-2.0)	05/25/17	1.5-2	20 J	20	110	--	--
MW-35 (14.5-15.0)	05/25/17	14.5-15	8.4 U	11 U	26 U	--	--
SEEP-1 (6-12")	12/07/16	0-0.5	51 J	14 U	34 U	--	--
SEEP-2 (6-12")	12/07/16	0-0.5	38 J	15 U	37 U	--	--
MTCA Method A Unrestricted Land Use Cleanup Level ³			NE	2,000	2,000	2	2
Screening Level ⁴			100	260	NE	0.03	0.01

Notes:

¹ Samples analyzed by TestAmerica Laboratories, Inc. in Spokane Valley, Washington.

² The non-detected results for pentachlorophenol are reported at the laboratory method detection limit.

³ Model Toxics Control Act (MTCA) Method A unrestricted land use cleanup levels.

⁴ MTCA Method B non-cancer and cancer cleanup levels for diesel- and lube-oil range petroleum hydrocarbons. For details on PCP cleanup value, please refer to Table 5-1 in the RI text.

mg/kg = milligram per kilogram, µg/kg = microgram per kilogram

NE = Not established; NL = Not listed; EPA = Environmental Protection Agency

< = analyte was not detected at concentrations greater than the method reporting limit

'-' = sample not analyzed for this compound

Bold indicates analyte was detected at concentrations greater than the laboratory reporting limit

Shading indicates analyte was detected at concentrations above applicable cleanup levels

Table 6-2
Soil Chemical Analytical Results - Dioxins and Furans TEQ¹
 Colville Post and Poles
 Stevens County, Washington

			Dioxin Congeners (CDDs) (pg/g) ²						Furan Congeners (CDFs) (pg/g) ²				
			2,3,7,8-TCDD	1,2,3,7,8-PeCDD	1,2,3,4,7,8-HxCDD	1,2,3,6,7,8-HxCDD	1,2,3,7,8,9-HxCDD	1,2,3,4,6,7,8-HpCDD	OCDD	2,3,7,8-TCDF	1,2,3,7,8-PeCDF	2,3,4,7,8-PeCDF	1,2,3,4,7,8-HxCDF
Toxic Equivalency Factor			1	1	0.1	0.1	0.1	0.01	0.0003	0.1	0.03	0.3	0.1
Sample Identification	Sample Date	Depth (feet)											
BG-1 (0-6")	12/08/16	0-0.5	1.5 U	7.3 U	7.3 U	16	10	530	4,600	1.5 U	7.3 U	7.3 U	7.3 U
BG-2 (0-6")	12/09/16	0-0.5	1.2 U	6 U	6 U	6 U	6 U	19	200	1.2 U	6 U	6 U	6 U
BG-3 (0-6")	12/09/16	0-0.5	1.5 U	7.3 U	7.3 U	7.3 U	7.3 U	40	350	1.5 U	7.3 U	7.3 U	7.3 U
BG-4 (0-6")	12/08/16	0-0.5	1.2 U	6 U	6 U	6 U	6 U	22	210	1.2 U	6 U	6 U	6 U
BG-5 (0-6")	12/08/16	0-0.5	1.4 U	7.1 U	7.1 U	7.1 U	7.1 U	73	580	1.4 U	7.1 U	7.1 U	7.1 U
BG-6 (0-6")	12/08/16	0-0.5	1.3 U	6.3 U	6.3 U	6.3 U	6.3 U	15	110	1.3 U	6.3 U	6.3 U	6.3 U
BG-7 (0-6")	12/08/16	0-0.5	1.2 U	6.2 U	6.2 U	6.2 U	6.2 U	6.2 U	18	1.2 U	6.2 U	6.2 U	6.2 U
BG-8 (0-6")	12/08/16	0-0.5	1.2 U	6 U	6 U	6 U	6 U	150	2,100	1.2 U	6 U	6 U	6 U
BG-9 (0-6")	12/08/16	0-0.5	1.3 U	6.4 U	6.4 U	6.4 U	6.4 U	8	66	1.3 U	6.4 U	6.4 U	6.4 U
BG-10 (0-6")	12/09/16	0-0.5	1.3 U	6.5 U	6.5 U	6.5 U	6.5 U	6.5 U	29	1.3 U	6.5 U	6.5 U	6.5 U
HA-1 (0-6")	12/06/16	0-0.5	41 U	200 U	200 U	390	200 U	9,900	87,000	41 U	200 U	200 U	200 U
HA-2 (0-6")	12/06/16	0-0.5	4.7 U	23 U	23 U	97	49	2,400	21,000 J	4.7 U	23 U	23 U	23 U
HA-3 (0-6")	12/06/16	0-0.5	280 U	1400 U	1400 U	2900	1400 U	73,000	650,000	280 U	1400 U	1400 U	1400 U
HA-3A (6-12)	03/01/17	6-12	1800 U	8800 U	8800 U	8800 U	8800 U	190,000	1,600,000	1800 U	8800 U	8800 U	8800 U
HA-3A (12-18)	03/01/17	1-1.5	290 U	1400 U	1400 U	1700	1400 U	45,000	380,000	290 U	1400 U	1400 U	1400 U
TP-3 (1.5'-2.0')	11/09/17	1.5-2.0	2.5 U	13 U	13 U	20	13 U	580	5300	2.5 U	13 U	13 U	13 U
HA-4 (0-6")	12/06/16	0-0.5	130 U	660 U	660 U	780	660 U	24,000	220,000	130 U	660 U	660 U	660 U
HA-4A (6-12)	03/01/17	0.5-1	44 U	220 U	220 U	220 U	220 U	7,700	70,000	44 U	220 U	220 U	220 U
HA-4A (12-18)	03/01/17	1-1.5	98 U	490 U	490 U	490 U	490 U	13,000	110,000	98 U	490 U	490 U	490 U
TP-4 (1.5'-2.0')	11/09/17	1.5-2.0	1.4 U	7.2 U	7.2 U	7.2 U	7.2 U	83	1000	1.4 U	7.2 U	7.2 U	7.2 U
HA-5 (0-6")	12/06/16	0-0.5	19 U	97 U	97 U	280	150	7,000	64,000	19 U	97 U	97 U	97 U
HA-6 (0-6")	12/06/16	0-0.5	110 U	570 U	570 U	1200	570 U	33,000	310,000	110 U	570 U	570 U	570 U
HA-6A (6-12)	03/01/17	0.5-1	17 U	83 U	83 U	240	120	5,900	62,000	17 U	83 U	83 U	83 U
HA-6A (12-18)	03/01/17	1-1.5	33 U	160 U	160 U	340	160 U	6,800	50,000	33 U	160 U	160 U	160 U
TP-6 (1.5'-2.0')	11/09/17	1.5-2.0	1.1 U	5.6 U	5.6 U	5.6 U	5.6 U	5.6 U	37 J	1.1 U	5.6 U	5.6 U	5.6 U
HA-7 (0-6")	12/06/16	0-0.5	26 U	130 U	130 U	220	130 U	6,300	61,000	26 U	130 U	130 U	130 U
HA-8 (0-6")	12/06/16	0-0.5	15 U	73 U	73 U	120	73 U	3,400	36,000	15 U	73 U	73 U	73 U
HA-9 (0-6")	12/07/16	0-0.5	30 U	150 U	150 U	390	180	10,000	91,000	30 U	150 U	150 U	150 U
HA-10 (0-6")	12/07/16	0-0.5	1.3 U	6.4 U	6.4 U	6.4 U	6.4 U	130	1,000	1.3 U	6.4 U	6.4 U	6.4 U
HA-11 (0-6")	12/07/16	0-0.5	9.1 U	46 U	46 U	150	90	4,200	38,000 J	9.1 U	46 U	46 U	46 U
HA-11A (6-12)	03/01/17	0.5-1	5.4 U	27 U	27 U	52	27 U	1,900	19,000	5.4 U	27 U	27 U	27 U
HA-12 (0-6")	12/07/16	0-0.5	4.5 U	23 U	23 U	89	46	2,200	17,000	4.5 U	23 U	23 U	23 U
HA-13 (0-6")	12/06/16	0-0.5	170 U	870 U	870 U	970	990	37,000	330,000	170 U	870 U	870 U	870 U
HA-13A (6-12)	03/01/17	0.5-1	2 U	9.8 U	9.8 U	21	15	700	6600	2 U	9.8 U	9.8 U	9.8 U
HA-13A (12-18)	03/01/17	1-1.5	1.2 U	5.8 U	5.8 U	5.8 U	5.8 U	19	200	1.2 U	5.8 U	5.8 U	5.8 U
HA-14 (0-6")	12/06/16	0-0.5	13 U	65 U	65 U	210	150	5,300	51,000	13 U	65 U	65 U	65 U
HA-17 (0-6")	12/07/16	0-0.5	47 U	230 U	230 U	850	510	21,000	160,000	47 U	230 U	230 U	230 U
HA-17A (6-12)	03/01/17	0.5-1	1.4 U	7.1 U	7.1 U	10	7.3	290	2100	1.4 U	7.1 U	7.1 U	7.1 U
HA-18 (0-6")	12/07/16	0-0.5	1.4 U	7.2 U	7.2 U	22	7.7	440	3,000	1.4 U	7.2 U	7.2 U	7.2 U
HA-19 (0-6")	12/07/16	0-0.5	1.3 U	6.5 U	6.5 U	6.5 U	6.5 U	24	190	1.3 U	6.5 U	6.5 U	6.5 U
HA-20 (0-6")	12/07/16	0-0.5	30 U	150 U	150 U	490	200	11,000	90,000	30 U	150 U	150 U	150 U
HA-20A (6-12)	03/01/17	0.5-1	5.5 U	27 U	27 U	53	30	2,000	17,000	5.5 U	27 U	27 U	27 U

			Dioxin Congeners (CDDs) (pg/g) ²					Furan Congeners (CDFs) (pg/g) ²					
			2,3,7,8-TCDD	1,2,3,7,8-PeCDD	1,2,3,4,7,8-HxCDD	1,2,3,6,7,8-HxCDD	1,2,3,7,8,9-HxCDD	1,2,3,4,6,7,8-HpCDD	OCDD	2,3,7,8-TCDF	1,2,3,7,8-PeCDF	2,3,4,7,8-PeCDF	1,2,3,4,7,8-HxCDF
Toxic Equivalency Factor			1	1	0.1	0.1	0.1	0.01	0.0003	0.1	0.03	0.3	0.1
Sample Identification	Sample Date	Depth (feet)											
HA-20A (12-18)	03/01/17	1-1.5	6 U	30 U	30 U	35	30 U	1,100	9,600	6 U	30 U	30 U	30 U
TP-20 (1.5'-2.0')	11/09/17	1.5-2.0	1.3 U	6.6 U	6.6 U	6.6 U	6.6 U	34	210	1.3 U	6.6 U	6.6 U	6.6 U
HA-21 (0-6")	12/07/16	0-0.5	1.4 U	7 U	7 U	46	14	1,000	6,900 J	1.4 U	7 U	7 U	7 U
HA-22 (0-6")	12/07/16	0-0.5	1.4 U	7.1 U	7.1 U	14	9.1	400	3,600	1.4 U	7.1 U	7.1 U	7.1 U
HA-23 (0-6")	12/07/16	0-0.5	52 U	260 U	260 U	620	270	15,000	140,000	52 U	260 U	260 U	260 U
HA-25 (0-6")	12/07/16	0-0.5	57 U	280 U	280 U	490	320	17,000	180,000	57 U	280 U	280 U	280 U
HA-25A (6-12)	03/01/17	0.5-1	4.6 U	23 U	23 U	51	23 U	1,800	21,000 J	4.6 U	23 U	23 U	23 U
TP-25 (1.5'-2.0')	11/09/17	1.5-2.0	1.2 U	6.1 U	6.1 U	6.1 U	6.1 U	87	1300	1.2 U	6.1 U	6.1 U	6.1 U
HA-30 (0-6")	12/07/16	0-0.5	1.2 U	6.1 U	6.1 U	6.1 U	6.1 U	44	560	1.2 U	6.1 U	6.1 U	6.1 U
HA-32 (0-6")	12/06/16	0-0.5	3.6 U	18 U	18 U	82	44	1,900	15,000 J	3.6 U	18 U	18 U	18 U
HA-38 (0-6")	12/07/16	0-0.5	4.4 U	22 U	22 U	64	44	1700	13,000	4.4 U	22 U	22 U	22 U
HA-39 (0-6)	03/01/17	0-0.5	1.6 U	8.2 U	8.2 U	13	9.4	440	3,300	1.6 U	8.2 U	8.2 U	8.2 U
HA-40 (0-6)	03/01/17	0-0.5	21 U	100 U	100 U	310	140	7,600	66,000	21 U	100 U	100 U	100 U
HA-40 (12-18)	03/01/17	1-1.5	6.9 U	35 U	35 U	61	35 U	1,400	11,000	6.9 U	35 U	35 U	35 U
TP-40 (1.5'-2.0')	11/09/17	1.5-2.0	1.1 U	5.5 U	5.5 U	5.5 U	5.5 U	11	120	1.1 U	5.5 U	5.5 U	5.5 U
HA-41 (0-6)	03/01/17	0-0.5	8.5 U	42 U	42 U	140	83	3,900	33,000	8.5 U	42 U	42 U	68
HA-41 (12-18)	03/01/17	1-1.5	8.9 U	44 U	44 U	71	44 U	1700	14000	8.9 U	44 U	44 U	44 U
TP-41 (1.5'-2.0')	11/09/17	1.5-2.0	1.2 U	6.2 U	6.2 U	6.2 U	6.2 U	46	460	1.2 U	6.2 U	6.2 U	6.2 U
HA-42 (0-6)	03/01/17	0-0.5	30 U	150 U	150 U	270	220	8,000	64,000	30 U	150 U	150 U	150 U
HA-42 (12-18)	03/01/17	1-1.5	220 U	1100 U	1100 U	2800	1800	55,000	330,000	220 U	1100 U	1100 U	1100 U
TP-42 (1.5'-2.0')	11/09/17	1.5-2.0	1 U	5.1 U	5.1 U	5.1 U	5.1 U	41	440	1 U	5.1 U	5.1 U	5.1 U
HA-43 (0-6)	03/01/17	0-0.5	36 U	180 U	180 U	230	180 U	8,600	92,000	36 U	180 U	180 U	180 U
HA-43 (12-18)	03/01/17	1-1.5	310 U	1600 U	1600 U	1600 U	1600 U	17,000	230,000	310 U	1600 U	1600 U	1600 U
HA-44 (0-6)	03/01/17	0-0.5	80 U	400 U	400 U	840	440	23,000	170,000	80 U	400 U	400 U	400 U
HA-44 (12-18)	03/01/17	1-1.5	69 U	350 U	350 U	370	350 U	8,600	62,000	69 U	350 U	350 U	350 U
HA-45 (0-6)	03/01/17	0-0.5	47 U	230 U	230 U	240	230 U	7,200	75,000	47 U	230 U	230 U	230 U
HA-46 (0-6)	03/01/17	0-0.5	1.4 U	6.8 U	6.8 U	18	8.8	590	4,800	1.4 U	6.8 U	6.8 U	6.8 U
HA-46 (12-18)	03/01/17	1-1.5	1.3 U	6.7 U	6.7 U	6.7 U	6.7 U	42	390	1.3 U	6.7 U	6.7 U	6.7 U
TP-46 (1.5'-2.0')	11/09/17	1.5-2.0	1.4 U	7.2 U	7.2 U	7.2 U	7.2 U	48 J	430	1.4 U	7.2 U	7.2 U	7.2 U
HA-47 (0-6)	03/01/17	0-0.5	1.4 U	7 U	7 U	8.9	7 U	330	3,400	1.4 U	7 U	7 U	7 U
HA-47 (12-18)	03/01/17	1-1.5	2.5 U	13 U	13 U	13 U	13 U	280	2,900	2.5 U	13 U	13 U	13 U
HA-48 (0-6)	03/01/17	0-0.5	1.5 U	7.6 U	7.6 U	34	13	660	3,800	1.5 U	7.6 U	7.6 U	7.6 U
HA-49 (0-6)	03/01/17	0-0.5	12 U	61 U	61 U	210	89	5,500	49,000 J	12 U	61 U	61 U	77
HA-49 (12-18)	03/01/17	1-1.5	7.2 U	36 U	36 U	39	36 U	990	8,400	7.2 U	36 U	36 U	36 U
HA-50 (0-6)	03/01/17	0-0.5	1.1 U	5.5 U	5.5 U	8.1	5.5 U	230	1,900	1.1 U	5.5 U	5.5 U	5.5 U
HA-51 (0-6)	03/01/17	0-0.5	25 U	120 U	120 U	250	120 U	5,900	65,000	25 U	120 U	120 U	120 U
HA-51 (12-18)	03/01/17	1-1.5	14 U	72 U	72 U	72 U	72 U	1,700	16,000	14 U	72 U	72 U	72 U
HA-52 (0-6)	03/01/17	0-0.5	5.4 U	27 U	27 U	99	45	2,300	15,000	5.4 U	27 U	27 U	56
HA-53 (0-6)	03/01/17	0-0.5	25 U	130 U	130 U	320	130	7,400	66,000	25 U	130 U	130 U	130 U
HA-53 (12-18)	03/01/17	1-1.5	88 U	440 U	440 U	440 U	440 U	4,400	38,000	88 U	440 U	440 U	440 U
TP-53 (1.5'-2.0')	11/09/17	1.5-2.0	1.2 U	5.9 U	5.9 U	5.9 U	5.9 U	5.9 U	46	1.2 U	5.9 U	5.9 U	5.9 U
ROW-1-1(0-6")	10/16/17	0-0.5	1.0 U	5.1 U	5.1 U	5.1 U	5.1 U	37	330	1.0 U	5.1 U	5.1 U	5.1 U
ROW-2-1(0-6")	10/16/17	0-0.5	1.0 U	5 U	5 U	11	5.7	220	1,800	1.0 U	5.0 U	5.0 U	5.0 U
ROW-3-1(0-6")	10/16/17	0-0.5	1.4 U	7.2 U	7.2 U	7.7	15	750	5,600	1.4 U	7.2 U	7.2 U	7.5
ROW-3-3 (12-18")	10/16/17	1-1.5	2.6 U	13 U	13 U	13 U	13 U	330	2800 J	2.9 U	13 U	13 U	13 U
ROW-4-1(0-6")	10/16/17	0-0.5	1.3 U	8.0	18	44	38	1,100	9,100 J	1.3 U	6.4 U	6.4 U	10
ROW-4-3 (12-18")	10/16/17	1-1.5	4.2 U	21 U	21 U	28	28	770	7400	4.2 U	21 U	21 U	21 U
SS-1-1(0-6")	10/16/17	0-0.5	1.9 U	9.6 U	9.6 U	18	10	400	3,000	1.9 U	9.6 U	9.6 U	9.6 U
SS-1-2 (6-12")	10/16/17	1-1.5	1.1 U	5.4 U	5.4 U	5.4 U	5.4 U	7.9	80	1.1 U	5.4 U	5.4 U	5.4 U

			Dioxin Congeners (CDDs) (pg/g) ²					Furan Congeners (CDFs) (pg/g) ²					
			2,3,7,8-TCDD	1,2,3,7,8-PeCDD	1,2,3,4,7,8-HxCDD	1,2,3,6,7,8-HxCDD	1,2,3,7,8,9-HxCDD	1,2,3,4,6,7,8-HpCDD	OCDD	2,3,7,8-TCDF	1,2,3,7,8-PeCDF	2,3,4,7,8-PeCDF	1,2,3,4,7,8-HxCDF
Toxic Equivalency Factor			1	1	0.1	0.1	0.1	0.01	0.0003	0.1	0.03	0.3	0.1
Sample Identification	Sample Date	Depth (feet)											
SS-2-1(0-6")	10/16/17	0-0.5	2.0 U	10 U	10 U	10 U	10 U	320	1,900	2.0 U	10 U	10 U	10 U
SS-3-1(0-6")	10/16/17	0-0.5	2.0 U	10 U	14	44	23	1,100	9,600 J	2.0 U	10 U	10 U	10 U
SS-3-2 (6-12")	10/16/17	1-1.5	1.8 U	9.2 U	9.2 U	9.2 U	9.2 U	86	870	1.8 U	9.2 U	9.2 U	9.2 U
SS-4-1(0-6")	10/16/17	0-0.5	4.1 U	20 U	20 U	42	20 U	1,800	17,000 J	4.1 U	20 U	20 U	20 U
SS-4-2 (6-12")	10/16/17	1-1.5	1.9 U	9.5 U	9.5 U	9.5 U	9.5 U	95	1000	1.9 U	9.5 U	9.5 U	9.5 U
SS-5-1(0-6")	10/16/17	0-0.5	15 U	77 U	160	610	370	12,000	120,000 J	15 U	77 U	77 U	270
SS-5-2 (6-12")	10/16/17	1-1.5	27 U	140 U	140 U	150	140 U	4100	53000	27 U	140 U	140 U	140
SS-6-1(0-6")	10/16/17	0-0.5	130 U	660 U	660 U	3,700	1,200	78,000	650,000 J	130 U	660 U	660 U	660 U
SS-6-2 (6-12")	10/16/17	1-1.5	11,000 U	56,000 U	56,000 U	56,000 U	56,000 U	590,000	5,000,000	11,000 U	56,000 U	56,000 U	56,000 U
SS-7-1(0-6")	10/16/17	0-0.5	1.3 U	6.6 U	6.6 U	6.6 U	6.6 U	39	370	1.3 U	6.6 U	6.6 U	6.6 U

			Furan Congeners (CDFs) (pg/g) ²					Total TEQ ³ (detect only, pg/g)	
			1,2,3,6,7,8-HxCDF	1,2,3,7,8,9-HxCDF	2,3,4,6,7,8-HxCDF	1,2,3,4,6,7,8-HpCDF	1,2,3,4,7,8,9-HpCDF		OCDF
Toxic Equivalency Factor			0.1	0.1	0.1	0.01	0.01	0.0003	
Sample Identification	Sample Date	Depth (feet)							
BG-1 (0-6")	12/08/16	0-0.5	7.3 U	7.3 U	7.3 U	93	7.3 U	520	10
BG-2 (0-6")	12/09/16	0-0.5	6 U	6 U	6 U	6 U	6 U	13	0.25
BG-3 (0-6")	12/09/16	0-0.5	7.3 U	7.3 U	7.3 U	7.3 U	7.3 U	17	0.51
BG-4 (0-6")	12/08/16	0-0.5	6 U	6 U	6 U	6 U	6 U	12 U	0.28
BG-5 (0-6")	12/08/16	0-0.5	7.1 U	7.1 U	7.1 U	11	7.1 U	18	1.0
BG-6 (0-6")	12/08/16	0-0.5	6.3 U	6.3 U	6.3 U	6.3 U	6.3 U	13 U	0.18
BG-7 (0-6")	12/08/16	0-0.5	6.2 U	6.2 U	6.2 U	6.2 U	6.2 U	12 U	0.01
BG-8 (0-6")	12/08/16	0-0.5	6 U	6 U	6 U	28	6 U	210	2.5
BG-9 (0-6")	12/08/16	0-0.5	6.4 U	6.4 U	6.4 U	6.4 U	6.4 U	13 U	0.10
BG-10 (0-6")	12/09/16	0-0.5	6.5 U	6.5 U	6.5 U	6.5 U	6.5 U	13 U	0.01
HA-1 (0-6")	12/06/16	0-0.5	200 U	200 U	200 U	950	200 U	3,500	175
HA-2 (0-6")	12/06/16	0-0.5	23 U	23 U	23 U	230	23 U	670	47
HA-3 (0-6")	12/06/16	0-0.5	1400 U	1400 U	1400 U	5400	1400 U	15,000	1274
HA-3A (6-12)	03/01/17	6-12	8800 U	8800 U	8800 U	10000	8800 U	28,000	2488
HA-3A (12-18)	03/01/17	1-1.5	1400 U	1400 U	1400 U	2800	1400 U	7,900	764
TP-3 (1.5'-2.0')	11/09/17	1.5-2.0	13 U	13 U	13 U	86 J	13 U	300	10
HA-4 (0-6")	12/06/16	0-0.5	660 U	660 U	660 U	5500	660 U	18,000	444
HA-4A (6-12)	03/01/17	0.5-1	220 U	220 U	220 U	1600	220 U	3,900	115
HA-4A (12-18)	03/01/17	1-1.5	490 U	490 U	490 U	3000	490 U	7,400	195
TP-4 (1.5'-2.0')	11/09/17	1.5-2.0	7.2 U	7.2 U	7.2 U	8	7.2 U	32	1.2
HA-5 (0-6")	12/06/16	0-0.5	97 U	97 U	97 U	880	97 U	2,800	142
HA-6 (0-6")	12/06/16	0-0.5	570 U	570 U	570 U	3300	570 U	11,000	579
HA-6A (6-12)	03/01/17	0.5-1	83 U	83 U	83 U	690	83 U	2,000	121
HA-6A (12-18)	03/01/17	1-1.5	160 U	160 U	160 U	620	160 U	1,100	124
TP-6 (1.5'-2.0')	11/09/17	1.5-2.0	5.6 U	5.6 U	5.6 U	5.6 U	5.6 U	11 U	0.01
HA-7 (0-6")	12/06/16	0-0.5	130 U	130 U	130 U	710	130 U	2,600	111
HA-8 (0-6")	12/06/16	0-0.5	73 U	73 U	73 U	530	73 U	2,100	63
HA-9 (0-6")	12/07/16	0-0.5	150 U	150 U	150 U	1100	150 U	3,500	196
HA-10 (0-6")	12/07/16	0-0.5	6.4 U	6.4 U	6.4 U	22	6.4 U	67	1.8
HA-11 (0-6")	12/07/16	0-0.5	46 U	46 U	46 U	830	46 U	2,800	87
HA-11A (6-12)	03/01/17	0.5-1	27 U	27 U	27 U	230	27 U	1,500	33
HA-12 (0-6")	12/07/16	0-0.5	23 U	23 U	23 U	320	23 U	1,000	44
HA-13 (0-6")	12/06/16	0-0.5	870 U	870 U	870 U	8600	870 U	36,000	762
HA-13A (6-12)	03/01/17	0.5-1	9.8 U	9.8 U	9.8 U	130	9.8 U	410	14
HA-13A (12-18)	03/01/17	1-1.5	5.8 U	5.8 U	5.8 U	5.8 U	5.8 U	12	0.25
HA-14 (0-6")	12/06/16	0-0.5	65 U	65 U	65 U	1000	65 U	3,000	115
HA-17 (0-6")	12/07/16	0-0.5	230 U	230 U	230 U	2300	230 U	5,800	419
HA-17A (6-12)	03/01/17	0.5-1	7.1 U	7.1 U	7.1 U	37	7.1 U	100	5.7
HA-18 (0-6")	12/07/16	0-0.5	7.2 U	7.2 U	7.2 U	35	7.2 U	74	8.6
HA-19 (0-6")	12/07/16	0-0.5	6.5 U	6.5 U	6.5 U	6.5 U	6.5 U	13	0.30
HA-20 (0-6")	12/07/16	0-0.5	150 U	150 U	150 U	1300	150 U	4,800	220
HA-20A (6-12)	03/01/17	0.5-1	27 U	27 U	27 U	330	27 U	2,000	37

			Furan Congeners (CDFs) (pg/g) ²					Total TEQ ³ (detect only, pg/g)	
			1,2,3,6,7,8-HxCDF	1,2,3,7,8,9-HxCDF	2,3,4,6,7,8-HxCDF	1,2,3,4,6,7,8-HpCDF	1,2,3,4,7,8,9-HpCDF		OCDF
Toxic Equivalency Factor			0.1	0.1	0.1	0.01	0.01	0.0003	
Sample Identification	Sample Date	Depth (feet)							
HA-20A (12-18)	03/01/17	1-1.5	30 U	30 U	30 U	190	30 U	1,200	20
TP-20 (1.5'-2.0')	11/09/17	1.5-2.0	6.6 U	6.6 U	6.6 U	6.6 U	6.6 U	14	0.41
HA-21 (0-6")	12/07/16	0-0.5	7 U	7 U	7 U	93	7 U	350	19
HA-22 (0-6")	12/07/16	0-0.5	7.1 U	7.1 U	7.1 U	57	7.1 U	240	8.0
HA-23 (0-6")	12/07/16	0-0.5	260 U	260 U	260 U	1200	260 U	7,400	295
HA-25 (0-6")	12/07/16	0-0.5	280 U	280 U	280 U	2700	280 U	13,000	336
HA-25A (6-12)	03/01/17	0.5-1	23 U	23 U	23 U	210	23 U	940	32
TP-25 (1.5'-2.0')	11/09/17	1.5-2.0	6.1 U	6.1 U	6.1 U	17	6.1 U	110	1.5
HA-30 (0-6")	12/07/16	0-0.5	6.1 U	6.1 U	6.1 U	6.1 U	6.1 U	27	0.62
HA-32 (0-6")	12/06/16	0-0.5	18 U	18 U	18 U	250	18 U	670	39
HA-38 (0-6")	12/07/16	0-0.5	22 U	22 U	22 U	500	22 U	1,800	37
HA-39 (0-6)	03/01/17	0-0.5	8.2 U	8.2 U	8.2 U	43	8.2 U	190	8.1
HA-40 (0-6)	03/01/17	0-0.5	100 U	100 U	100 U	1100	100 U	2,000	152
HA-40 (12-18)	03/01/17	1-1.5	35 U	35 U	35 U	130	35 U	310	25
TP-40 (1.5'-2.0')	11/09/17	1.5-2.0	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	11 U	0.15
HA-41 (0-6)	03/01/17	0-0.5	42 U	42 U	42 U	550	42 U	980	84
HA-41 (12-18)	03/01/17	1-1.5	44 U	44 U	44 U	220	44 U	410	31
TP-41 (1.5'-2.0')	11/09/17	1.5-2.0	6.2 U	6.2 U	6.2 U	6.2 U	6.2 U	18	0.60
HA-42 (0-6)	03/01/17	0-0.5	150 U	150 U	150 U	1500	150 U	8,200	166
HA-42 (12-18)	03/01/17	1-1.5	1100 U	1100 U	1100 U	5700	1100 U	18,000	1171
TP-42 (1.5'-2.0')	11/09/17	1.5-2.0	5.1 U	5.1 U	5.1 U	5.1 U	5.1 U	16	0.55
HA-43 (0-6)	03/01/17	0-0.5	180 U	180 U	180 U	1700	180 U	8,700	156
HA-43 (12-18)	03/01/17	1-1.5	1600 U	1600 U	1600 U	3100	1600 U	20,000	276
HA-44 (0-6)	03/01/17	0-0.5	400 U	400 U	400 U	2600	400 U	5,800	437
HA-44 (12-18)	03/01/17	1-1.5	350 U	350 U	350 U	950	350 U	2,300	152
HA-45 (0-6)	03/01/17	0-0.5	230 U	230 U	230 U	500	230 U	2,300	124
HA-46 (0-6)	03/01/17	0-0.5	6.8 U	6.8 U	6.8 U	54	6.8 U	180	11
HA-46 (12-18)	03/01/17	1-1.5	6.7 U	6.7 U	6.7 U	6.7 U	6.7 U	15	0.54
TP-46 (1.5'-2.0')	11/09/17	1.5-2.0	7.2 U	7.2 U	7.2 U	7.2 U	7.2 U	14 U	0.61
HA-47 (0-6)	03/01/17	0-0.5	7 U	7 U	7 U	45	7 U	210	5.7
HA-47 (12-18)	03/01/17	1-1.5	13 U	13 U	13 U	33	13 U	160	4.0
HA-48 (0-6)	03/01/17	0-0.5	7.6 U	7.6 U	7.6 U	53	7.6 U	81	13
HA-49 (0-6)	03/01/17	0-0.5	61 U	61 U	61 U	820	61 U	1,500	116
HA-49 (12-18)	03/01/17	1-1.5	36 U	36 U	36 U	160	36 U	500	18
HA-50 (0-6)	03/01/17	0-0.5	5.5 U	5.5 U	5.5 U	27	5.5 U	64	4.0
HA-51 (0-6)	03/01/17	0-0.5	120 U	120 U	120 U	740	120 U	3,800	112
HA-51 (12-18)	03/01/17	1-1.5	72 U	72 U	72 U	170	72 U	1,100	24
HA-52 (0-6)	03/01/17	0-0.5	27 U	27 U	27 U	350	27 U	500	51
HA-53 (0-6)	03/01/17	0-0.5	130 U	130 U	130 U	600	130 U	2,300	145
HA-53 (12-18)	03/01/17	1-1.5	440 U	440 U	440 U	440 U	440 U	1,600	56
TP-53 (1.5'-2.0')	11/09/17	1.5-2.0	5.9 U	5.9 U	5.9 U	5.9 U	5.9 U	12 U	0.01
ROW-1-1(0-6")	10/16/17	0-0.5	5.1 U	5.1 U	5.1 U	8.6	5.1 U	20	0.56
ROW-2-1(0-6")	10/16/17	0-0.5	5.0 U	5.0 U	5.0 U	42	5.0 U	81	4.9
ROW-3-1(0-6")	10/16/17	0-0.5	16	7.2 U	7.2 U	160	7.2 U	300	20
ROW-3-3 (12-18")	10/16/17	1-1.5	13 U	13 U	13 U	53	13 U	130	4.7
ROW-4-1(0-6")	10/16/17	0-0.5	43	6.4 U	13	390	17	1,100	43
ROW-4-3 (12-18")	10/16/17	1-1.5	34	21 U	21 U	290	21 U	740	22
SS-1-1(0-6")	10/16/17	0-0.5	9.6 U	9.6 U	9.6 U	49	9.6 U	98	8.2
SS-1-2 (6-12")	10/16/17	1-1.5	5.4 U	5.4 U	5.4 U	5.4 U	5.4 U	11 U	0.10

			Furan Congeners (CDFs) (pg/g) ²					Total TEQ ³ (detect only, pg/g)	
			1,2,3,6,7,8-HxCDF	1,2,3,7,8,9-HxCDF	2,3,4,6,7,8-HxCDF	1,2,3,4,6,7,8-HpCDF	1,2,3,4,7,8,9-HpCDF		OCDF
Toxic Equivalency Factor			0.1	0.1	0.1	0.01	0.01	0.0003	
Sample Identification	Sample Date	Depth (feet)							
SS-2-1(0-6")	10/16/17	0-0.5	10 U	10 U	10 U	13	10 U	64	3.9
SS-3-1(0-6")	10/16/17	0-0.5	38 J	10 U	10 U	130	10 U	520	27
SS-3-2 (6-12")	10/16/17	1-1.5	9.2 U	9.2 U	9.2 U	13	9.2 U	40	1.3
SS-4-1(0-6")	10/16/17	0-0.5	24	20 U	20 U	220	20 U	1,000	32
SS-4-2 (6-12")	10/16/17	1-1.5	9.5 U	9.5 U	9.5 U	15	9.5 U	58	1.4
SS-5-1(0-6")	10/16/17	0-0.5	450	77 U	92	2,500	87	4,300	378
SS-5-2 (6-12")	10/16/17	1-1.5	140 U	140 U	140 U	770	140 U	580	94
SS-6-1(0-6")	10/16/17	0-0.5	970	660 U	660 U	9,000	660 U	22,000	1659
SS-6-2 (6-12")	10/16/17	1-1.5	56,000 U	56,000 U	56,000 U	61,000	56,000 U	140,000	8052
SS-7-1(0-6")	10/16/17	0-0.5	6.6 U	6.6 U	6.6 U	6.6 U	6.6 U	13	0.50
Screening Level ⁴									13

Notes:

¹ Samples analyzed by TestAmerica Laboratories, Inc. located in Spokane Valley, Washington.

² Dioxin/Furans analyzed by Environmental Protection Agency (EPA) Method 8290.

³ Toxicity Equivalent Concentration (TEQ) calculated only using the dioxin/furans detected at concentrations greater than the laboratory reporting limit.

⁴ For details on dioxin/furans screening level, please refer to Table 5-1 in the RI text.

pg/g = picogram per gram

< = analyte was not detected at concentrations greater than the method reporting limit

'-' = sample not analyzed for this compound

Bold indicates analyte was detected at concentrations greater than the laboratory reporting limit

Shading indicates analyte was detected at concentrations above applicable cleanup levels

Table 6-3
Summary of Groundwater Elevations and Field Quality Parameters
 Colville Post and Poles
 Stevens County, Washington

Well Number and Top of Casing Elevation ¹ (feet)	Date Measured	Depth to Water ² (feet)	Groundwater Elevation ³ (feet)	Change in Groundwater Elevation (feet)	pH (pH units)	Specific Conductivity (µS/cm)	Redox Potential (millivolts)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	Temperature (degrees C)	PID (ppm)
MW-20 1543.38	1/17/17 ⁴	7.18	1536.20	--	6.97	1008	-162	0.30	7.661	9.29	0.4
	03/02/17	4.55	1538.83	2.63	7.03	1020	-287	0.00	9.186	8.26	0.9
	6/21/17 ⁵	5.25	1538.13	-0.70	7.04	938.4	-290	0.00	0.6572	10.03	0.9
	08/30/17	8.09	1535.29	-2.84	7.17	1398	37.5	0.83	8.8	15.9	1.0
	11/07/17	7.91	1535.47	0.18	7.00	1333	-130	0.00	0.5674	12.31	1.1
	02/12/18	5.01	1538.37	2.9	7.03	1470	-44	0.03	0.0177	8.94	0.7
MW-21 1544.65	1/17/17 ⁴	8.47	1536.18	--	6.91	936	72.1	0.23	8.6	9.5	0.6
	03/02/17	5.93	1538.72	2.54	6.99	971.5	-283	0.00	6.134	7.88	1.0
	6/21/17 ⁵	6.67	1537.98	-0.74	6.83	1064	84.1	0.06	23.5	9.2	3.5
	08/30/17	9.37	1535.28	-2.70	7.03	1056	-6.1	0.23	7.7	13.6	3.5
	11/07/17	9.16	1535.49	0.21	7.04	1002	-159	0.00	0.7818	11.08	0.4
	02/12/18	6.43	1538.22	2.73	7.08	976.5	-26	0.01	2.884	8.79	0.4
MW-22 1543.2	1/17/17 ⁴	6.93	1536.27	--	6.96	1020	-138	0.19	28.16	8.60	0.3
	03/02/17	4.36	1538.84	2.57	7.04	978.5	-288	0.00	8.045	6.88	0.3
	6/21/17 ⁵	5.19	1538.01	-0.83	7.09	909.2	-230	0.01	3.098	9.03	0.7
	08/30/17	7.82	1535.38	-2.63	7.06	1054	40.1	0.28	5.2	14.2	1.1
	11/07/17	7.57	1535.63	0.25	6.98	975.1	-180	0.00	0.1129	9.93	0.6
	02/12/18	4.95	1538.25	2.62	7.22	1002	101	0.00	3.566	7.52	0.2
MW-23 1543.97	1/17/17 ⁴	7.89	1536.08	--	7.11	952	-99.7	0.08	46.2	7.7	0.2
	03/03/17	5.24	1538.73	2.65	7.29	1076	-166	0.00	9.403	6.44	0.8
	6/21/17 ⁵	6.25	1537.72	-1.01	7.52	645.8	-397	0.00	22.83	7.88	5.3
	08/30/17	8.47	1535.50	-2.22	7.24	782	-149.0	0.22	3.9	12.5	0.0
	11/07/17	8.10	1535.87	0.37	7.17	773.1	-203	0.00	0.0172	9.74	0.8
	02/12/18	6.18	1537.79	1.92	7.18	1011	-56	0.00	4.842	7.34	0.5

Well Number and Top of Casing Elevation ¹ (feet)	Date Measured	Depth to Water ² (feet)	Groundwater Elevation ³ (feet)	Change in Groundwater Elevation (feet)	pH (pH units)	Specific Conductivity (µS/cm)	Redox Potential (millivolts)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	Temperature (degrees C)	PID (ppm)
MW-24 1545.77	1/17/17 ⁴	9.21	1536.56	--	6.9	1073	-190	0.04	35.03	10.24	0.2
	03/02/17	6.47	1539.30	2.74	7.09	983.1	-216	0.00	8.837	7.26	0.5
	06/21/17	7.42	1538.35	-0.95	7.14	941.3	-253	1.22	5.172	11.64	0.6
	08/30/17	10.29	1535.48	-2.87	11.05*	1059	73.1	1.19	9.9	14.9	2.9
	11/07/17	10.07	1535.70	0.22	7.12	1026	-200	0.00	0.5588	12.06	0.9
	02/12/18	7.06	1538.71	3.01	7.33	1090	167.7	0.62	2.99	7.9	0.9
MW-25 1545.10	1/17/17 ⁴	7.56	1537.54	--	6.87	952	99.9	0.12	117.2	9.9	0.1
	03/02/17	5.94	1539.16	1.62	7.16	977.6	-288	0.00	3.299	7.98	0.4
	6/21/17 ⁵	6.90	1538.20	-0.96	6.93	115.2	72.1	0.01	8.9	10.6	4.4
	08/30/17	9.60	1535.50	-2.70	6.89	1089	70.7	0.31	9.2	18.3	1.8
	11/07/17	9.36	1535.74	0.24	6.90	1012	-150	0.07	0.3212	13.5	0.2
	02/12/18	6.53	1538.57	2.83	7.28	1100	183.9	0.59	1.79	8.4	1.0
MW-26 1547.46	1/17/17 ⁴	10.58	1536.88	--	7.07	981	37.1	0.09	5.1	9.4	0.6
	03/02/17	8.10	1539.36	2.48	7.16	998.6	-246	0.00	21.33	9.32	0.9
	6/21/17 ⁵	9.09	1538.37	-0.99	7.12	1163	-3.7	0.10	10.0	11.1	4.8
	08/30/17	11.86	1535.60	-2.77	7.14	1098	-208	0.00	6.2	14.35	2.7
	11/07/17	11.56	1535.90	0.30	7.25	979.8	-207	0.00	0.5	10.60	0.3
	02/12/18	8.65	1538.81	2.91	7.43	1084	25.3	0.53	1.75	8.9	0.8
MW-27 1548.37	1/17/17 ⁴	10.99	1537.38	--	7.14	993	-103.9	0.10	81.5	8.4	1.2
	03/02/17	9.10	1539.27	1.89	7.32	972.1	-232	0.00	20.09	7.66	0.7
	6/21/17 ⁵	9.88	1538.49	-0.78	7.27	1119	-138.9	0.01	20.5	10.9	0.5
	08/30/17	12.70	1535.67	-2.82	7.19	1032	-256	0.00	0.2	17.1	5.1
	11/07/17	12.25	1536.12	0.45	7.23	979.8	-226	0.00	0.5522	12.58	1.0
	02/12/18	9.44	1538.93	2.81	7.16	1478	-143	0.00	9.702	7.77	1.0
MW-28 1545.36	1/17/17 ⁴	6.35	1539.01	--	7.30	599.1	-118	3.74	2.777	7.40	1.0
	03/02/17	5.80	1539.56	0.55	7.77	523.3	-107	0.43	38.22	4.48	0.2
	6/21/17 ⁵	5.16	1540.20	0.64	7.82	612	-30.7	0.20	23.1	13.2	0.1
	08/30/17	7.94	1537.42	-2.78	7.48	552.1	-236	0.39	9.9	14.82	0.5
	11/07/17	7.77	1537.59	0.17	7.43	474.4	-108	6.08	20.93	10.05	0.2
	02/12/18	8.10	1537.26	-0.33	7.73	557	189.0	1.29	2.48	3.9	0.4

Well Number and Top of Casing Elevation ¹ (feet)	Date Measured	Depth to Water ² (feet)	Groundwater Elevation ³ (feet)	Change in Groundwater Elevation (feet)	pH (pH units)	Specific Conductivity (µS/cm)	Redox Potential (millivolts)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	Temperature (degrees C)	PID (ppm)
MW-29 1543.41	1/17/17 ⁴	7.73	1535.68	--	7.18	561.5	-79	0.03	41.33	9.36	0.3
	03/03/17	5.21	1538.20	2.52	7.26	854.7	-223	0.00	1.120	6.78	0.7
	6/21/17 ⁵	6.02	1537.39	-0.81	7.37	704.0	-429	0.00	19.63	7.79	1.9
	08/30/17	7.86	1535.55	-1.84	7.22	595	-91.6	0.26	3.1	12.4	0.0
	11/07/17	7.54	1535.87	0.32	7.33	411.1	-172	0.00	0.4612	11.16	0.2
	02/12/18	6.20	1537.21	1.34	7.23	879.8	-64	0.00	1.295	6.96	0.4
MW-30 1548.39	04/06/17	7.04	1541.35	--	7.32	972.2	-183	0.51	11.99	9.41	0.8
	6/21/17 ⁵	9.94	1538.45	-2.90	7.26	1119	9.2	0.84	5.4	10.9	0.9
	08/30/17	12.75	1535.64	-2.81	7.15	1036	-262	0.00	0.4	14.31	3.2
	11/07/17	12.38	1536.01	0.37	7.25	961.9	-175	0.00	0.4579	11.95	0.2
	02/12/18	9.45	1538.94	2.93	7.51	1108	184.7	1.59	4.24	9.0	0.3
MW-31 1544.38	04/06/17	3.23	1541.15	--	7.19	988.4	-133	2.40	10.01	7.95	0.3
	6/21/17 ⁵	5.87	1538.51	-2.64	7.19	964.7	-236	2.79	0.503	10.30	1.9
	08/30/17	8.80	1535.58	-2.93	*	1075	258.9	1.53	9.5	14.4	2.9
	11/08/17	8.58	1535.80	0.22	7.10	1012	-158	0.55	3.309	12.35	0.3
	02/12/18	5.51	1538.87	3.07	7.38	1144	166.5	2.08	3.31	6.7	0.8
MW-32 1543.70	04/06/17	3.10	1540.60	--	7.20	953.0	-94	5.59	18.27	8.06	--
	6/21/17 ⁵	5.30	1538.40		7.17	962.7	-215	4.66	0.1658	9.84	1.6
	08/30/17	8.29	1535.41	-2.99	7.29	1192	47.9	0.84	6.5	14.9	1.7
	11/07/17	8.16	1535.54	0.13	7.03	987.8	-116	1.11	1.095	10.92	0.7
	02/12/18	5.05	1538.65	3.11	7.45	1041	199.3	2.36	36.5	6.6	0.3
MW-33 1544.32	06/21/17	6.35	1537.97	--	7.04	890	-107.6	0.01	4.5	10.6	--
	08/30/17	8.77	1535.55	-2.42	7.25	971	-134.8	0.29	4.3	14.1	0.1
	11/07/17	8.41	1535.91	0.36	6.99	969.5	-210	0.00	0.3732	10.44	0.2
	02/12/18	6.10	1538.22	2.31	7.13	995.3	-90	0.00	0.2452	6.71	0.2
MW-34 1544.01	06/21/17	5.90	1538.11	--	7.33	1037	-220.5	0.05	12.5	11.6	--
	08/30/17	8.17	1535.84	-2.27	*	1028	-279.0	0.35	8.3	13.2	1.1
	11/07/17	7.74	1536.27	0.43	7.41	1002	-208	0.03	1.516	10.12	0.3
	02/12/18	5.60	1538.41	2.14	7.48	1044	-42.7	0.73	4.16	8.4	0.9

Well Number and Top of Casing Elevation ¹ (feet)	Date Measured	Depth to Water ² (feet)	Groundwater Elevation ³ (feet)	Change in Groundwater Elevation (feet)	pH (pH units)	Specific Conductivity (µS/cm)	Redox Potential (millivolts)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	Temperature (degrees C)	PID (ppm)
MW-35	06/21/17	5.59	1538.53	--	7.1	1074	84.3	0.17	9.9	12.9	--
1544.12	08/30/17	8.22	1535.90	-2.63	7.24	1063	-300	0.01	1.2	17.62	9.2
	11/07/17	7.56	1536.56	0.66	7.26	932.2	-162	0.01	0.325	12.32	0.6
	02/12/18	5.20	1538.92	2.36	7.46	1097	188.0	1.05	5.26	5.8	0.5

Notes:

¹ Elevations are referenced to NAVD 88. Top of casing elevation survey performed by Coffman Engineers on July 26, 2017.

² Depth to groundwater measured relative to the north side of the PVC well casing.

³ Groundwater elevations calculated using the formula: Groundwater Elevation = Top of Casing Elevation - Depth to Water

⁴ Elevation data collected on January 17, 2017. Field water quality measurements collected on December 8, 2017.

⁵ Elevation data collected on June 21, 2017. Field water quality measurements for MW-20 through MW-32 collected on May 21, 2017, and for MW-33 through MW-35 on June 21, 2017.

-- = not measured

mg/L = milligram per liter; ppm = parts per million

*pH measurements were either not taken or were abnormal due to calibration malfunction

Table 6-4
Groundwater Chemical Analytical Results - Total Petroleum Hydrocarbons and
Pentachlorophenol¹
Colville Post and Poles
Stevens County, Washington

Sample Location	Sample Name	Sample Date	Total Petroleum Hydrocarbons ²		SVOCs ³
			Diesel-range Hydrocarbons mg/L	Lube Oil-range Hydrocarbons mg/L	Pentachlorophenol µg/L
MW-20	MW-20:120816	12/08/16	0.13 U	0.22 U	2.6
	MW-20:030217	03/02/17	0.25 U	0.41 U	0.35
	MW-20:050917	05/09/17	0.25 U	0.41 U	0.097
	MW-20:083017	08/30/17	0.25 U	0.42 U	0.078 U
	MW-20:110717	11/07/17	0.25 U	0.41 U	1.4
	MW-20:021218	02/12/18	0.24 U	0.41 U	1.3
MW-21	MW-21:120816	12/08/16	0.13 U	0.22 U	30
	MW-21:030217	03/02/17	0.25 U	0.41 U	29
	MW-21:050917	05/09/17	0.26 U	0.44 U	41
	MW-21:083017	08/30/17	0.24 U	0.41 U	51
	MW-21:110717	11/07/17	0.24 U	0.41 U	80
	MW-21:021218	02/12/18	0.25 U	0.41 U	18
MW-22	MW-22:120816	12/08/16	0.13 U	0.22 U	3.2
	MW-22:030217	03/02/17	0.25 U	0.41 U	0.60
	MW-22:050917	05/09/17	0.24 U	0.40 U	0.48
	MW-22:083017	08/30/17	0.25 U	0.42 U	27
	MW-22:110717	11/07/17	0.24 U	0.41 U	7.5
	MW-22:021218	02/12/18	0.24 U	0.41 U	2.5
MW-23	MW-23:120816	12/08/16	0.13 U	0.21 U	0.084 U
	MW-23:030317	03/03/17	0.24 U	0.40 U	0.078 U
	MW-23:050917	05/09/17	0.24 U	0.41 U	0.079 U
	MW-23:083017	08/30/17	0.25 U	0.41 U	0.079 U
	MW-23:110717	11/07/17	0.24 U	0.41 U	0.21 U
	MW-23:021218	02/12/18	0.24 U	0.41 U	0.077 U
MW-24	MW-24:120816	12/08/16	0.19	0.21 U	190
	MW-24:030217	03/02/17	0.25 U	0.41 U	100
	MW-24:050917	05/09/17	0.25 U	0.41 U	1.0
	MW-24:083017	08/30/17	0.25 U	0.41 U	1.7
	MW-24:110817	11/08/17	0.25 U	0.41 U	38
	MW-24:021218	02/12/18	0.25 U	0.41 U	54
MW-25	MW-25:120816	12/08/16	0.15	0.21 U	36
	MW-25:030217	03/02/17	0.25 U	0.41 U	16
	MW-25:050917	05/09/17	0.26 U	0.44 U	3.6
	MW-25:083017	08/30/17	0.24 U	0.40 U	97
	MW-25:110717	11/07/17	0.25 U	0.41 U	31
	MW-25:021218	02/12/18	0.25 U	0.42 U	54
MW-26	MW-26:120816	12/08/16	0.73	0.20 U	150
	MW-26:030217	03/02/17	0.55	0.41 U	43
	MW-26:050917	05/09/17	0.40	0.41 U	120
	MW-26:083017	08/30/17	0.34	0.41 U	120
	MW-26:110717	11/08/17	0.38	0.41 U	69
	MW-26:021218	02/12/18	0.42	0.41 U	75

Sample Location	Sample Name	Sample Date	Total Petroleum Hydrocarbons ²		SVOCs ³
			Diesel-range Hydrocarbons mg/L	Lube Oil-range Hydrocarbons mg/L	Pentachlorophenol µg/L
MW-27	MW-27:120816	12/08/16	1.4	0.22 U	26 J
	MW-DUP:120816	12/08/16	0.86	0.41 U	17 J
	MW-27:030217	03/02/17	0.82	0.42 U	3.3 J
	DUP:030217	03/02/17	1.3	0.22 U	3.2 J
	MW-27:050917	05/09/17	0.87	0.41 U	5.3
	DUP:050917	05/09/17	0.78	0.42 U	5.9
	MW-27:083117	08/31/17	0.92	0.42 U	24
	DUP:083117	08/31/17	0.95	0.41 U	23
	MW-27:110817	11/08/17	0.87	0.41 U	16
	DUP:110817	11/08/17	0.92	0.41 U	16
	MW-27:021218	02/12/18	0.72	0.41 U	6.6
	DUP:021218	02/12/18	0.78	0.41 U	3.2
MW-28	MW-28:120816	12/08/16	0.13 U	0.22 U	0.21
	MW-28:011317	01/13/17	0.13 U	0.21 U	0.10
	MW-28:030217	03/02/17	0.25 U	0.41 U	0.12
	MW-28:050917	05/09/17	0.26 U	0.43 U	0.087 U
	MW-28:083117	08/31/17	0.24 U	0.40 U	0.095
	MW-28:110817	11/08/17	0.25 U	0.41 U	0.21 U
	MW-28:021218	02/12/18	0.25 U	0.41 U	0.078 U
MW-29	MW-29:120816	12/08/16	0.13 U	0.22 U	0.083 U
	MW-29:030317	03/03/17	0.24 U	0.41 U	0.077 UJ
	MW-29:050917	05/09/17	0.25 U	0.41 U	0.080 U
	MW-29:083017	08/30/17	0.25 U	0.42 U	0.078 U
	MW-29:110717	11/07/17	0.25 U	0.41 U	0.21 U
	MW-29:021218	02/12/18	0.24 U	0.41 U	0.078 U
MW-30	MW-30:040617	04/06/17	0.25 U	0.41 U	6.0
	MW-30:050917	05/09/17	0.25 U	0.42 U	0.078 U
	MW-30:083117	08/31/17	0.25 U	0.42 U	38
	MW-30:110817	11/08/17	0.25 U	0.41 U	120
	MW-30:021218	02/12/18	0.25 U	0.42 U	0.080 U
MW-31	MW-31:040617	04/06/17	0.25 U	0.42 U	0.080 U
	MW-31:050917	05/09/17	0.25 U	0.41 U	0.079 U
	MW-31:083017	08/30/17	0.25 U	0.41 U	0.080 U
	MW-31:110817	11/08/17	0.25 U	0.41 U	0.21 U
	MW-31:021218	02/12/18	0.25 U	0.42 U	0.082 U
MW-32	MW-32:040617	04/06/17	0.25 U	0.42 U	0.094
	MW-32:050917	05/09/17	0.24 U	0.41 U	0.077 U
	MW-32:083017	08/30/17	0.25 U	0.42 U	0.39
	MW-32:110717	11/07/17	0.25 U	0.41 U	0.21 U
	MW-32:021218	02/12/18	0.25 U	0.41 U	0.081 U
MW-33	MW-33:062117	06/21/17	0.25 U	0.42 U	0.076 U
	MW-33:083017	08/30/17	0.25 U	0.41 U	0.089
	MW-33:110717	11/07/17	0.25 U	0.41 U	0.21 U
	MW-33:021218	02/12/18	0.24 U	0.41 U	0.077 U
MW-34	MW-34:062117	06/21/17	0.26 U	0.43 U	0.077 U
	MW-34:083117	08/31/17	0.24 U	0.40 U	0.077 U
	MW-34:110817	11/08/17	0.25 U	0.41 U	0.21 U
	MW-34:021218	02/12/18	0.25 U	0.41 U	0.081 U

Sample Location	Sample Name	Sample Date	Total Petroleum Hydrocarbons ²		SVOCs ³
			Diesel-range Hydrocarbons mg/L	Lube Oil-range Hydrocarbons mg/L	Pentachlorophenol µg/L
MW-35	MW-35:062117	06/21/17	0.24 UJ	0.40 UJ	0.13
	MW-35:083117	08/31/17	0.24 U	0.41 U	0.078 U
	MW-35:110817	11/08/17	0.25 U	0.41 U	0.73
	MW-35:021218	02/12/18	0.24 U	0.40 U	0.21
SEEP-1	SEEP-1:GW:120716	12/07/16	0.14 U	0.23 U	0.078 U
SEEP-2	SEEP-2:GW:120716	12/07/16	0.13 U	0.22 U	0.083 U
Screening Levels ⁴			0.5	0.5	1

Notes:

¹ Samples analyzed by TestAmerica Laboratories, Inc. in Spokane Valley, Washington.

² Diesel- and oil-range hydrocarbons analyzed by Northwest Method NWTPH-Dx.

³ Pentachlorophenol (PCP) analyzed by Environmental Protection Agency (EPA) Method 8270DSIM.

⁴ Model Toxics Control Act (MTCA) Method A unrestricted land use cleanup levels used for diesel- and oil-range petroleum hydrocarbons. For details on PCP cleanup value, please refer to Table 5-2 in the RI text.

mg/L = milligram per liter; µg/L = microgram per liter; NE = Not established

U = analyte was not detected at concentrations greater than the method reporting limit

Bold indicates analyte was detected at concentrations greater than the laboratory reporting limit

Shading indicates analyte was detected at concentrations above applicable cleanup levels

Table 6-5
Groundwater Chemical Analytical Results - Dioxins and Furans TEQ¹
 Colville Post and Poles
 Stevens County, Washington

Analyte Group	Analyte	Unit	TEF ³	MW-20	MW-21	MW-22	MW-23	MW-24	MW-25	MW-26	MW-27	MW-27	MW-27	MW-27	MW-27	MW-27	
				MW-20:050917 05/09/17	MW-21:050917 05/09/17	MW-22:050917 05/09/17	MW-23:050917 05/09/17	MW-24:050917 05/09/17	MW-25:050917 05/09/17	MW-26:050917 05/09/17	MW-27:050917 05/09/17	DUP:050917 05/09/17	MW-27:083117 08/31/17	DUP:083117 08/31/17	MW-27:110817 11/08/17	DUP:110817 11/08/17	
Dioxin Congeners ²	2,3,7,8-TCDD	pg/L	1	9.7 U	9.8 U	9.8 U	9.8 U	9.7 U	9.8 U	9.9 U	9.8 U	10 U	15 U	12 U	9.9 U	19 U	
	1,2,3,7,8-PeCDD	pg/L	1	48 U	49 U	49 U	49 U	48 U	49 U	49 U	49 U	50 U	76 U	61 U	49 U	97 U	
	1,2,3,4,7,8-HxCDD	pg/L	0.1	48 U	49 U	49 U	49 U	48 U	49 U	49 U	49 U	50 U	76 U	61 U	49 U	97 U	
	1,2,3,6,7,8-HxCDD	pg/L	0.1	48 U	49 U	49 U	49 U	48 U	49 U	49 U	49 U	50 U	76 U	61 U	49 U	97 U	
	1,2,3,7,8,9-HxCDD	pg/L	0.1	48 U	49 U	49 U	49 U	48 U	49 U	49 U	49 U	50 U	76 U	61 U	49 U	97 U	
	1,2,3,4,6,7,8-HpCDD	pg/L	0.01	48 U	49 U	49 U	49 U	48 U	49 U	49 U	49 U	56	59	76 U	61 U	49 U	97 U
	OCDD	pg/L	0.0003	97 U	98 U	98 U	98 U	97 U	98 U	99 U	590	620	880 J	690 J	370 J	500 J	
Furan Congeners ²	2,3,7,8-TCDF	pg/L	0.1	9.7 U	9.8 U	9.8 U	9.8 U	9.7 U	9.8 U	9.9 U	9.8 U	10 U	15 U	12 U	9.9 U	19 U	
	1,2,3,7,8-PeCDF	pg/L	0.03	48 U	49 U	49 U	49 U	48 U	49 U	49 U	49 U	50 U	76 U	61 U	49 U	97 U	
	2,3,4,7,8-PeCDF	pg/L	0.3	48 U	49 U	49 U	49 U	48 U	49 U	49 U	49 U	50 U	76 U	61 U	49 U	97 U	
	1,2,3,4,7,8-HxCDF	pg/L	0.1	48 U	49 U	49 U	49 U	48 U	49 U	49 U	49 U	50 U	76 U	61 U	49 U	97 U	
	1,2,3,6,7,8-HxCDF	pg/L	0.1	48 U	49 U	49 U	49 U	48 U	49 U	49 U	49 U	50 U	76 U	61 U	49 U	97 U	
	1,2,3,7,8,9-HxCDF	pg/L	0.1	48 U	49 U	49 U	49 U	48 U	49 U	49 U	49 U	50 U	76 U	61 U	49 U	97 U	
	2,3,4,6,7,8-HxCDF	pg/L	0.1	48 U	49 U	49 U	49 U	48 U	49 U	49 U	49 U	50 U	76 U	61 U	49 U	97 U	
	1,2,3,4,6,7,8-HpCDF	pg/L	0.01	48 U	49 U	49 U	49 U	48 U	49 U	49 U	49 U	50 U	76 U	61 U	49 U	97 U	
	1,2,3,4,7,8,9-HpCDF	pg/L	0.01	48 U	49 U	49 U	49 U	48 U	49 U	49 U	49 U	50 U	76 U	61 U	49 U	97 U	
OCDF	pg/L	0.0003	97 U	98 U	98 U	98 U	97 U	98 U	99 U	98 U	100 U	150 U	120 U	99 U	190 U		
Total TEQ of CDDs and CDFs (detects only) (pg/L)				ND	ND	ND	ND	ND	ND	ND	0.737	0.776	0.264	0.207	0.111	0.150	
Screening Level ⁴ (pg/L)				110													

Analyte Group	Analyte	Unit	TEF ³	MW-27 MW-27:021218 02/12/18	MW-27 DUP:021218 02/12/18	MW-28 MW-28:050917 05/09/17	MW-29 MW-29:050917 05/09/17	MW-30 MW-30:050917 05/09/17	MW-31 MW-31:050917 05/09/17	MW-32 MW-32:050917 05/09/17	MW-33 MW-33:062117 06/21/17	MW-34 MW-34:062117 06/21/17	MW-35 MW-35:062117 06/21/17
Dioxin Congeners ²	2,3,7,8-TCDD	pg/L	1	9.8 U	9.7 U	9.8 U	9.8 U	10 U	9.7 U	9.7 U	10 U	10 U	9.5 U
	1,2,3,7,8-PeCDD	pg/L	1	49 U	48 U	49 U	49 U	50 U	48 U	49 U	51 U	51 U	48 U
	1,2,3,4,7,8-HxCDD	pg/L	0.1	49 U	48 U	49 U	49 U	50 U	48 U	49 U	51 U	51 U	48 U
	1,2,3,6,7,8-HxCDD	pg/L	0.1	49 U	48 U	49 U	49 U	50 U	48 U	49 U	51 U	51 U	48 U
	1,2,3,7,8,9-HxCDD	pg/L	0.1	49 U	48 U	49 U	49 U	50 U	48 U	49 U	51 U	51 U	48 U
	1,2,3,4,6,7,8-HpCDD	pg/L	0.01	49 U	48 U	49 U	49 U	50 U	48 U	49 U	51 U	51 U	48 U
	OCDD	pg/L	0.0003	270	170	98 U	98 U	100 U	97 U	97 U	100 U	100 U	95 U
Furan Congeners ²	2,3,7,8-TCDF	pg/L	0.1	9.8 U	9.7 U	9.8 U	9.8 U	10 U	9.7 U	9.7 U	10 U	10 U	9.5 U
	1,2,3,7,8-PeCDF	pg/L	0.03	49 U	48 U	49 U	49 U	50 U	48 U	49 U	51 U	51 U	48 U
	2,3,4,7,8-PeCDF	pg/L	0.3	49 U	48 U	49 U	49 U	50 U	48 U	49 U	51 U	51 U	48 U
	1,2,3,4,7,8-HxCDF	pg/L	0.1	49 U	48 U	49 U	49 U	50 U	48 U	49 U	51 U	51 U	48 U
	1,2,3,6,7,8-HxCDF	pg/L	0.1	49 U	48 U	49 U	49 U	50 U	48 U	49 U	51 U	51 U	48 U
	1,2,3,7,8,9-HxCDF	pg/L	0.1	49 U	48 U	49 U	49 U	50 U	48 U	49 U	51 U	51 U	48 U
	2,3,4,6,7,8-HxCDF	pg/L	0.1	49 U	48 U	49 U	49 U	50 U	48 U	49 U	51 U	51 U	48 U
	1,2,3,4,6,7,8-HpCDF	pg/L	0.01	49 U	48 U	49 U	49 U	50 U	48 U	49 U	51 U	51 U	48 U
	1,2,3,4,7,8,9-HpCDF	pg/L	0.01	49 U	48 U	49 U	49 U	50 U	48 U	49 U	51 U	51 U	48 U
OCDF	pg/L	0.0003	98 U	97 U	98 U	98 U	100 U	97 U	97 U	100 U	100 U	95 U	
TEQ (detects only) (pg/L)				0.38	0.05	ND	ND	ND	ND	ND	ND	ND	ND
Cleanup Level ⁴ (pg/L)				110									

Notes:

¹ Samples analyzed by TestAmerica Laboratories, Inc. located in Spokane Valley, Washington.

² Dioxins and furans analyzed by Environmental Protection Agency (EPA) Method 8290.

³ Toxicity Equivalent Concentration (TEQ) calculated only using the dioxins/furans detected at concentrations greater than the laboratory reporting limit.

⁴ For details on TEQ screening levels, please refer to Table 5.2 in the RI text.

pg/L = picogram per liter; TEF = toxic equivalency factor

ND = not detected; U = analyte was not detected at concentrations greater than the method reporting limit

Bold indicates analyte was detected at concentrations greater than the laboratory reporting limit

Shading indicates analyte was detected at concentrations above applicable cleanup levels

Table 12-1
Summary of Quantities Used in Feasibility Study
Colville Post and Poles
Stevens County, Washington

Item	Quantity	Units	Assumptions
Shallow (<18 inches) Dioxin and Furan Contaminated Soil			
Areal extent	13.92	acres	From Google Earth
Volume of contaminated soil	33,686	cubic yards	18 inches deep
Estimated soil weight	53,056	tons	1.575 tons per cubic yard
Adsorbed Phase Source Area PCP and Diesel Contaminated Soil			
Areal extent	0.84	acres	From Google Earth
Volume of contaminated soil	27,122	cubic yards	20 feet deep to clay layer
Volume to Soil to be Excavated using 2:1 Slope	35,122	cubic yards	Slope is 2H:1V and only three sides of the excavation sloped to avoid interfering with railroad.
Estimated soil weight	42,717	tons	1.575 tons per cubic yard
Debris			
Volume of debris	3,000	cubic yards	Based on seven debris piles, wood chip pile and misc. scattered concrete and steel debris.
Wetlands			
Areal extent	5.64	acres	Based on GeoEngineers 2015 Survey
Disturbed Wetlands	1.45	acres	Based on GeoEngineers 2015 Survey
Thin Layer Placement Wetlands	4.19	acres	Based on GeoEngineers 2015 Survey
Wetland Thin Lift Cover	6,760	cubic yards	Total of two 6 inch lifts (12 inches total)

Table 12-2
Comparison of Retained Remediation Alternatives - Soil
Colville Post and Poles
Stevens County, Washington

Remedial Method	Conceptual Description	Benefits	Limitations	Relative Cost	Construction Feasibility	Duration of O&M	Impacts to Future Development, Adjacent Land Uses	MTCA Preference
Alternative 1 - Soil Washing	Clear and grub vegetation. Dispose of debris piles using macroencapsulation in Arlington, Oregon. Excavate contaminated soil (shallow and deep) and deposit at a treatment area. Confirmation samples will be collected as soil is excavated. Soil will be washed with a solvent and performance samples of the soil before and after washing will be collected. The solvent will be treated and recycled. Impurities recovered from the solvent will be disposed of off-site. Treated soil will be amended and replaced on the site. Restore site vegetation. Two rounds of thin layer (6 inches) soil placement for the wetlands.	Permanent closure with soil remediated to concentrations less than site specific cleanup levels. Requires minimal energy use compared to other options. Contaminated soil not transported on public roads. Reduces long-term monitoring. Minimal waste disposed of off-site. Minimizes wetland recovery time.	Requires treatability and pilot study to confirm effectiveness. Unproven technology. Requires removing site vegetation. Soil processing could take multiple years with processing rates of about 80 tons/day.	High	Moderate	Moderate (3-4 years)	Low. Site remediated to concentrations less than cleanup levels.	High MTCA preference. Soil remediated to concentrations less than site-specific cleanup levels.
Alternative 2 - Excavation and Off-site Disposal	Clear and grub vegetation. Dispose of debris piles using macroencapsulation in Arlington, Oregon. Excavate shallow and deep contaminated soil and load into haul trucks for disposal at Waste Management's Chemical Waste facility near Arlington, Oregon. Confirmation samples will be collected as soil is excavated. Restore the site with imported fill and vegetation. Two rounds of thin layer (6 inches) soil placement for the wetlands.	Permanent closure with all waste removed from the Site. Reduces long-term monitoring. Minimizes wetland recovery time.	Requires removing site vegetation. Long construction schedule. Contaminated materials hauled on public roadways. Uses significant resources to transport a large volume of soil by truck. Requires import of soil to replace the soil removed.	Moderate	Easy	Short (2 years)	Low. Site remediated to concentrations less than cleanup levels.	High MTCA preference. Contaminated soil removed from the site.
Alternative 3 - Thermal Desorption	Clear and grub vegetation. Dispose of debris piles using macroencapsulation in Arlington, Oregon. Excavate shallow and deep contaminated soil and construct a treatment cell with an insulated floor and cap, heating electrodes and a vapor recovery system. Confirmation samples will be collected as soil is excavated. Soil is thermally treated in two batches. Treated soil will be amended and replaced on the site after collecting performance samples after treatment. Restore site vegetation. Two rounds of thin layer (6 inches) soil placement for the wetlands.	Permanent closure with soil remediated to concentrations less than site specific cleanup levels. Moderate costs because no soil import/export. Contaminated materials not transported on public roadways. Reduces long-term monitoring. Minimizes wetland recovery time.	Requires removing site vegetation. Long construction schedule. Requires power infrastructure and high energy demand.	Low	Moderate	Moderate (4 years)	Low. Site remediated to concentrations less than cleanup levels.	High MTCA preference. Soil remediated to concentrations less than site-specific cleanup levels.

Table 12-3
Comparison of Retained Remediation Alternatives - Groundwater
Colville Post and Poles
Stevens County, Washington

Remedial Method	Conceptual Description	Benefits	Limitations	Relative Cost	Construction Feasibility	Duration of O&M	Impacts to Future Development, Adjacent Land Uses	MTCA Preference
Alternative 1 - Monitored Natural Attenuation	Conduct regular groundwater monitoring until natural attenuation reduces groundwater contaminants to concentrations less than the site cleanup levels.	Low cost and minimal maintenance.	Does not control offsite contaminant migration. Long remediation timeframe. Does not address existing contaminant concentrations and is not protective of potential receptors.	Low	Easy	Long (5-20 years)	High. Long-term remediation timeframe affecting site use. Does not quickly address downgradient groundwater contamination.	Low MTCA preference. Not protective of onsite or downgradient receptors.
Alternative 2 - Groundwater Pump and Treat	Install extraction and re-injection wells and pump groundwater to establish a hydraulic capture zone and restrict groundwater flow and contamination in the downgradient direction. Pumped groundwater would be treated through granulated activated carbon (GAC) adsorption treatment units. Treated water is reinjected into the subsurface or discharged to the Colville River. Performance monitoring is conducted before and after GAC treatment.	Captures and treats groundwater to filter out contaminants. Protects downgradient receptors by controlling offsite contaminant migration. Removes source of groundwater contamination. Can remove other contaminants from groundwater. Proven technology. Initial estimates indicate long carbon life. Doesn't significantly alter water chemistry.	Requires installing power service. Maintenance can be costly and difficult, including problems during freezing conditions. Requires changeout of the filter media and regular performance monitoring. GAC consumption rates can be larger based upon other chemicals present in groundwater.	Moderate	Moderate	Moderate (2-5 years)	Low. Site remediated to concentrations less than cleanup levels. Remediation infrastructure onsite until remediation concluded. Minimal impact to land after removal of pumping equipment and abandonment of injection wells.	High MTCA preference. Groundwater remediated to concentrations less than site-specific cleanup levels. Off-site contaminant migration controlled.
Alternative 3 - Enhanced In-Situ Bioremediation	Use a direct push boring machine to drill 800 holes into the subsurface and inject chemicals to stimulate microbial degradation of the PCP and diesel. Repeat injections and monitoring until contaminant concentrations are reduced less than site specific cleanup levels. Groundwater monitoring would be conducted to monitor performance.	Moderate costs. Minimal site infrastructure and maintenance. Permanent closure with groundwater remediated to less than the site specific cleanup levels. Proven technology for PCP and diesel remediation.	Does not control offsite contaminant or injected product migration. Might require multiple injections. Requires injection of chemicals into the subsurface and groundwater chemistry could be impacted.	Moderate	Easy	Moderate to Long (2-10 years)	Moderate. Might require multiple injections and could alter subsurface soil and groundwater chemistry	Moderate MTCA preference. Groundwater remediated to concentrations less than site-specific cleanup levels.
Alternative 4 - Permeable Reactive Barrier	Excavate a 700 foot long by 6 foot wide by 18 foot deep trench under slurry conditions. The excavated soil is then mixed with zero valent iron (ZVI) and placed back into the excavation to form the permeable reactive barrier (PRB). As groundwater flows through the PRB, the ZVI reacts with PCP to break it down. Additional PCP is adsorbed to the ZVI within the PRB. Upgradient and downgradient groundwater monitoring conducted to monitor performance. The PRB would eventually be disposed off-site.	Moderate costs. Minimal site infrastructure and associated maintenance for the passive treatment system. Controls offsite migration of contaminants.	Proven effectiveness of technology is limited. Adsorbed PCP to the PRB might require excavation and disposal of the PRB after remediation. ZVI could require recharge if performance is reduced.	Moderate	Moderate	Long (5-20 years)	Low	Moderate MTCA preference. Groundwater remediated onsite and offsite migration controlled. Long remediation timeframe possible.

Table 13-1
Summary of ARARs
Colville Post and Poles
Stevens County, Washington

ARAR	Chemical, Location, or Action Specific ARAR	Regulated Activity	Soil Alternatives			Groundwater Alternatives				Evaluation
			Alternative 1 - Soil Washing	Alternative 2 - Excavation and Off-site Disposal	Alternative 3 - Thermal Desorption	Alternative 1 - Monitored Natural Attenuation	Alternative 2 - Groundwater Pump and Treat	Alternative 3 - Enhanced In-Situ Bioremediation	Alternative 4 - Permeable Reactive Barrier	
Stevens County Codes										
Ordinance 4-1990	Action	Solid Waste Disposal	Applies	Applies	Applies	Does Not Apply	Applies	Does Not Apply	Applies	Waste generated in Stevens County must be disposed in Stevens County if disposal facility is permitted to receive it.
Washington State Regulations										
Washington Administrative Code (WAC) 173-60	Action	Noise Levels	Applies	Applies	Applies	Does Not Apply	Applies	Applies	Applies	Maximum noise levels are applicable depending on action selected.
WAC 173-160	Action	Well Construction and Maintenance	Does Not Apply	Does Not Apply	Does Not Apply	Applies	Applies	Applies	Does Not Apply	Minimum standards for construction and maintenance of water and monitoring wells, and decommissioning.
WAC 173-162	Action	Well Contractors and Operators	Does Not Apply	Does Not Apply	Does Not Apply	Does Not Apply	Applies	Applies	Does Not Apply	Procedures for well contractors and operators, applicable to installation and decommissioning of wells and borings.
WAC 173-201A	Chemical	Water Quality Standards for Surface Waters	Applies	Applies	Applies	Applies	Applies	Applies	Applies	MTCA requires cleanup actions comply with applicable regulations.
WAC 173-303	Chemical/Action	Dangerous Waste Management	Applies	Applies	Applies	Does Not Apply	Applies	Applies	Applies	Identified dangerous waste onsite.
WAC 173-304	Chemical/Action/Location	Solid Waste Handling Standards	Applies	Applies	Applies	Does Not Apply	Applies	Does Not Apply	Applies	The facility was operated prior to and after 1985, when WAC 173-304 was promulgated. Therefore regulatory compliance is required.
WAC 173-333	Chemical	Bioaccumulation Toxins Rule	Applies	Applies	Applies	Applies	Applies	Applies	Applies	Criteria to identify persistent, bioaccumulative toxins that pose human and ecological threats, and action plan.
WAC 173-340 (and subsets)	Chemical/Action	Toxic Waste Cleanup (MTCA)	Applies	Applies	Applies	Applies	Applies	Applies	Applies	The remedial action will be conducted under MTCA. Remedial alternatives will comply with MTCA regulations.
WAC 173-400	Action	Fugitive Emissions	Applies	Applies	Applies	Applies	Applies	Does Not Apply	Applies	Requires owner to take reasonable precautions to prevent fugitive emissions.
WAC 197-11 and 173-802; Revised Code of Washington (RCW) 43.21C	Action	State Environmental Policy Act	Applies	Applies	Applies	Applies	Applies	Applies	Applies	A SEPA review is required for projects with potential significant environmental impacts. Stevens County would likely be the lead agency and make the determination of compliance with SEPA.
WAC 296-155	Action	Safety Standards for Construction Work	Applies	Applies	Applies	Does Not Apply	Applies	Applies	Applies	Applicable during construction activities.
WAC 296-62	Action	General Occupational Health Standards	Applies	Applies	Applies	Does Not Apply	Applies	Applies	Applies	Applicable during construction activities.
WAC 246-290	Chemical	State Maximum Contaminant Level (MCL) limits	Applies	Applies	Applies	Applies	Applies	Applies	Applies	State MCLs are applicable to potential groundwater sources of drinking water in accordance with MTCA.
RCW 90.03-0.44	Action	Surface and Groundwater Withdrawal	Does Not Apply	Does Not Apply	Does Not Apply	Does Not Apply	Applies	Does Not Apply	Does Not Apply	Substantive compliance with regulations is applicable since action could involve withdrawal or diversion of groundwater or surface water.
RCW 90.48	Action	Water Pollution Control (Construction Stormwater Permit)	Applies	Applies	Applies	Does Not Apply	Applies	Does Not Apply	Applies	A Stormwater Pollution Prevention Plan (SWPPP) is required for each remediation alternative.
RCW 119A	Chemical	Drinking Water Regulations	Applies	Applies	Applies	Applies	Applies	Applies	Applies	MTCA has risk-based MCLs to protect consumers using public water supplies (surface water and groundwater)

ARAR	Chemical, Location, or Action Specific ARAR	Regulated Activity	Soil Alternatives			Groundwater Alternatives				Evaluation
			Alternative 1 - Soil Washing	Alternative 2 - Excavation and Off-site Disposal	Alternative 3 - Thermal Desorption	Alternative 1 - Monitored Natural Attenuation	Alternative 2 - Groundwater Pump and Treat	Alternative 3 - Enhanced In-Situ Bioremediation	Alternative 4 - Permeable Reactive Barrier	
Federal Regulations										
Title 40 Code of Federal Regulations (CFR) 50	Action	Clean Air Act	Applies	Applies	Applies	Does Not Apply	Does Not Apply	Does Not Apply	Does Not Apply	MTCA requires cleanup actions comply with applicable regulations.
Title 40 CFR Part 131	Chemical	Water Quality Standards (National Toxics Rule)	Applies	Applies	Applies	Applies	Applies	Applies	Applies	MTCA requires cleanup actions comply with applicable regulations.
Title 40 CFR Part 141/143	Chemical	Drinking Water Regulations (MCLs)	Applies	Applies	Applies	Applies	Applies	Applies	Applies	MTCA requires cleanup actions comply with applicable regulations.
Title 42 USC Chapter 103; 40 CFR Chapter I, Subchapter J	Chemical/Action	Hazardous Waste (RCRA)	Applies	Applies	Applies	Does Not Apply	Applies	Applies	Applies	MTCA requires cleanup actions comply with applicable regulations.
US Environmental Protection Agency	Chemical	Regional Screening Levels (RSLs)	Applies	Applies	Applies	Applies	Applies	Applies	Applies	RSLs are used as a screening tool, used as part of the risk assessment process.
Title 16 of United States Code (USC) Section 469	Location	Archaeological and Historic Preservation Act	Applies	Applies	Applies	Applies	Applies	Applies	Applies	Would be applicable if actions cause loss or adverse impacts to significant, prehistoric, historic, and archaeological data
Title 16 USC, Sections 661-667, 2901-2911	Location	Fish and Wildlife Conservation Act	Applies	Does Not Apply		Does Not Apply	Does Not Apply	Does Not Apply	Does Not Apply	Applicable for actions that involve the Colville River or wetlands, including thin layer placement.
Title 16 USC Section 668-668d	Location	Bald Eagle Protection Act	Applies	Applies	Applies	Does Not Apply	Applies	Applies	Applies	Applicable and actions would be carried out in a way that avoids unnecessarily adversely affecting bald and golden eagles.
Title 16 USC §703 50 CFR §10.12	Location	Migratory Bird Treaty Act	Applies	Applies	Applies	Does Not Apply	Does Not Apply	Does Not Apply	Applies	Applicable and actions would be carried out in a way that avoids taking or killing of protected birds and their nests.
Title 16 USC §1361 et seq. 50 CFR 216	Location	Endangered Species Act	Applies	Applies	Applies	Does Not Apply	Does Not Apply	Does Not Apply	Applies	Protect species of fish, wildlife, and plants that are listed.
Title 25 USC Section 3001-3013	Location	Native American Graves Protection and Reparation Act	Applies	Applies	Applies	Does Not Apply	Does Not Apply	Does Not Apply	Applies	Would be applicable if actions cause disturbance or alteration of graves.
Title 33 USC Chapter 26§1251 et seq.; 40 CFR Chapter 1, Subchapter D	Chemical/Action	Water Pollution Control (Clean Water Act)	Applies	Applies	Applies	Applies	Applies	Applies	Applies	MTCA requires cleanup actions comply with applicable regulations.
Title 33 USC Section 300g-1	Action/Location	Water Pollution Control (Safe Drinking Water Act)	Applies	Applies	Applies	Applies	Applies	Applies	Applies	MTCA requires cleanup actions comply with applicable regulations.
Executive Order 11990	Location	Protection of Wetlands	Applies	Applies	Applies	Applies	Does Not Apply	Does Not Apply	Does Not Apply	Applicable for actions that involve the Colville River and onsite wetlands.
Executive Order 11988	Location	Protection of Floodplains	Applies	Applies	Applies	Does Not Apply	Does Not Apply	Does Not Apply	Applies	Applicable for actions that take place within the 100-year floodplain of the Colville River.

Table 14-1
Evaluation of Cleanup Action Alternatives - Soil
Colville Post and Poles
Stevens County, Washington

Alternative Numbers	Alternative 1	Alternative 2	Alternative 3
Alternative Descriptions	Alternative 1 - Soil Washing	Alternative 2 - Excavation and Off-site Disposal	Alternative 3 - Thermal Desorption
	Clear and grub vegetation. Dispose of debris piles using macroencapsulation in Arlington, Oregon. Excavate contaminated soil (shallow and deep) and deposit at a treatment area. Confirmation samples will be collected as soil is excavated. Soil will be washed with a solvent and performance samples of the soil before and after washing will be collected. The solvent will be treated and recycled. Impurities recovered from the solvent will be disposed of off-site. Treated soil will be amended and replaced on the site. Restore site vegetation. Two rounds of thin layer (6 inches) soil placement for the wetlands.	Clear and grub vegetation. Dispose of debris piles using macroencapsulation in Arlington, Oregon. Excavate shallow and deep contaminated soil and load into haul trucks for disposal at Waste Management's Chemical Waste facility near Arlington, Oregon. Confirmation samples will be collected as soil is excavated. Restore the site with imported fill and vegetation. Two rounds of thin layer (6 inches) soil placement for the wetlands.	Clear and grub vegetation. Dispose of debris piles using macroencapsulation in Arlington, Oregon. Excavate shallow and deep contaminated soil and construct a treatment cell with an insulated floor and cap, heating electrodes and a vapor recovery system. Confirmation samples will be collected as soil is excavated. Soil is thermally treated in two batches. Treated soil will be amended and replaced on the site after collecting performance samples after treatment. Restore site vegetation. Two rounds of thin layer (6 inches) soil placement for the wetlands.
Alternative Ranking Under MTCA			
1. Compliance with MTCA Threshold Criteria			
Protection of Human Health and the Environment	Yes - Alternative provides protection of human health and environment.	Yes - Alternative provides protection of human health and environment.	Yes - Alternative provides protection of human health and environment.
Compliance with Cleanup Standards	Yes - Alternative provides compliance with cleanup standards.	Yes - Alternative provides compliance with cleanup standards.	Yes - Alternative provides compliance with cleanup standards.
Compliance with Applicable State and Federal Regulations	Yes - Alternative will comply with applicable state and federal regulations.	Yes - Alternative will comply with applicable state and federal regulations.	Yes - Alternative will comply with applicable state and federal regulations.
Provision for Compliance Monitoring	Yes - Alternative includes confirmation and performance sampling and monitoring.	Yes - Alternative includes confirmation sampling.	Yes - Alternative includes confirmation and performance sampling and monitoring.
2. Restoration Time Frame			
	Initial restoration timeframe is moderate (3-4 years) due to a preliminary processing estimate of 100-120 tons per day.	Initial restoration timeframe short, as disposal is expected to take 2 years.	Initial restoration timeframe is moderate. Remediation expected to take 4 years to treat two batches and replace soil.

Alternative Numbers	Alternative 1	Alternative 2	Alternative 3			
3. Disproportionate Cost Analysis - Relative Benefits Ranking¹						
		Score	Score			
Protectiveness	Possibility to leave some food grade residual solvent in soil. Removes contaminants from the site.	4	Higher level of protectiveness with source removal and disposal off-site. Doesn't destroy contamination, only moves it. Decreased protectiveness because of highway transport.	4	Reduces toxicity of contaminants by thermally destroying them.	4
Permanence	Permanent closure with soil remediated to concentrations less than the site specific cleanup levels.	5	Permanent closure with source removed and disposal off-site.	5	Permanent closure with soil remediated to concentrations less than the site specific cleanup levels.	5
Long-Term Effectiveness	Effective soil treating for permanent closure.	4	Long term effectiveness with source removed and disposal off-site.	5	Effective soil treating for permanent closure.	4
Management of Short-Term Risks	Lower to moderate level of short-term risks with no export or import of material from the site.	4	Moderate to high short term risk with export and import of material from the site. High vehicle traffic on a two lane highway over long travel distances.	2	Moderate short-term risks with minimal import of material to the site. Risks include off gassing from pile and potential for explosion and very high electrical uses.	3
Technical and Administrative Implementability	Low to moderate level of Implementability and relies on treatability and pilot study results.	2	Moderate to high level of implementation. Especially if a transportation by rail solution is developed.	4	Moderate to low level of Implementability; requires power infrastructure and usage.	3
Consideration of Public Concerns	Moderate to high level of public acceptance because contaminated materials are not hauled offsite and treatment is onsite.	4	Low to moderate level of public acceptance because contaminated materials are excavated and hauled on public roads.	2	Moderate level of public acceptance because contaminated materials are not hauled offsite and treatment is onsite. Public concerns for vapor treatment and off gassing.	3
Total Score		23		22		22

Notes:

¹Alternatives were scored using a scale of 1 to 5 with a score of 1 being the least amount of benefits provided by the alternative and a score of 5 being the most amount of benefits provided by the alternative.

Table 14-2
Evaluation of Cleanup Action Alternatives - Groundwater
Colville Post and Poles
Stevens County, Washington

Alternative Numbers	Alternative 1 ¹	Alternative 2	Alternative 3	Alternative 4
Alternative Descriptions	Alternative 1 - Monitored Natural Attenuation	Alternative 2 - Groundwater Pump and Treat	Alternative 3 - Enhanced In-Situ Bioremediation	Alternative 4 - Permeable Reactive Barrier
	Conduct regular groundwater monitoring until natural attenuation reduces groundwater contaminants to concentrations less than the site cleanup levels.	Install extraction and re-injection wells and pump groundwater to establish a hydraulic capture zone and restrict groundwater flow and contamination in the downgradient direction. Pumped groundwater would be treated through granulated activated carbon (GAC) adsorption treatment units. Treated water is reinjected into the subsurface or discharged to the Colville River. Performance monitoring is conducted before and after GAC treatment.	Use a direct push boring machine to drill 800 holes into the subsurface and inject chemicals to stimulate microbial degradation of the PCP and diesel. Repeat injections and monitoring until contaminant concentrations are reduced less than site specific cleanup levels. Groundwater monitoring would be conducted to monitor performance.	Excavate a 700 foot long by 6 foot wide by 18 foot deep trench under slurry conditions. The excavated soil is then mixed with zero valent iron (ZVI) and placed back into the excavation to form the permeable reactive barrier (PRB). As groundwater flows through the PRB, the ZVI reacts with PCP to break it down. Additional PCP is adsorbed to the ZVI within the PRB. Upgradient and downgradient groundwater monitoring conducted to monitor performance. The PRB would eventually be disposed off-site.
Alternative Ranking Under MTCA				
1. Compliance with MTCA Threshold Criteria				
Protection of Human Health and the Environment	No - Alternative does not protect human health and the environment.	Yes - Alternative provides protection of human health and the environmental.	Yes - Alternative provides protection of human health and the environmental.	Yes - Alternative provides protection of human health and the environmental.
Compliance with Cleanup Standards	No - Alternative does not comply with cleanup standards	Yes - Alternative complies with cleanup standards.	Yes - Alternative complies with cleanup standards.	Yes - Alternative complies with cleanup standards.
Compliance with Applicable State and Federal Regulations	No - Alternative will not comply with applicable state and federal regulations.	Yes - Alternative will comply with applicable state and federal regulations.	Yes - Alternative will comply with applicable state and federal regulations.	Yes - Alternative will comply with applicable state and federal regulations.
Provision for Compliance Monitoring	Yes - Alternative includes long-term monitoring.	Yes - Alternative includes long-term monitoring.	Yes - Alternative includes provision for compliance monitoring (i.e., compliance sampling during remedial excavation, and long-term surface water and sediment monitoring).	Yes - Alternative includes long-term monitoring.
2. Restoration Time				
	Long (5-20 years)	Moderate (2-5 years)	Moderate to Long (2-10 years)	Long (5-20 years)

Alternative Numbers	Alternative 1 ¹	Alternative 2	Alternative 3	Alternative 4				
3. Disproportionate Cost Analysis - Relative Benefits Ranking²								
		Score		Score		Score		Score
Protectiveness	No protectiveness achieved	1	Protects by capturing and treating contaminated groundwater. Protects downgradient receptors by controlling offsite contaminant migration. Removes source of groundwater contamination.	5	Protective remediation of groundwater. Chemicals injected could have byproducts or change soil and water chemistry.	4	Low to moderate protectiveness because this does not remediate concentrations in the plume, only downgradient.	2
Permanence	No reduction in the toxicity, mobility, and mass of material onsite.	1	Contaminants are permanently removed from groundwater.	5	Moderate to high permanence as injections will reduce contaminant source mass; multiple injections may be required.	4	Low to moderate permanence; controls offsite contaminant migration.	2
Long-Term Effectiveness	No long-term effectiveness	1	Effective for long-term after contaminant source is removed and contaminants removed from groundwater.	5	Moderate long-term effectiveness with no control for offsite contaminant or injected product migration. May require multiple injections. Chemicals are not removed, but transformed.	3	Moderate long-term effectiveness. Contamination is transformed and captured by the PRB wall, but not removed entirely.	2
Management of Short-Term Risks	Lowest short-term risks because no action is taken.	5	Low to moderate short-term risks. Requires minimal electrical needs.	4	Moderate short-term risks. Off gassing from reactions have occurred and are possible when injecting chemicals.	3	Moderate short-term risks. There is a risk to modify water chemistry downgradient of the wall and during wall construction.	3
Technical and Administrative Implementability	Highest level of implementability because no actions taken at the site.	5	Moderate level of implementability. Requires power service and regular maintenance and performance monitoring.	3	Moderate to high level of Implementability, and relies on additional monitoring and may require multiple injections.	4	Moderate level of implementability, does not remediate contaminant plume and PRB might require recharge. Additional bench scale testing required.	3
Consideration of Public Concerns	Lowest level of public acceptance because contaminated materials remain onsite with no control on migration offsite.	2	Moderate to high level of public acceptance. Some concern could exist with depleting an aquifer or discharging into the groundwater or river.	4	Moderate level of public acceptable because contaminated groundwater is remediated onsite, but no control for offsite migration of injected products and contaminants. Possible public concerns related to chemicals and by products.	3	Moderate level of public concern; contaminant plume will not be remediated; Alternative will control offsite migration. Possible concerns about changing chemistry down gradient of the wall.	3
Total Score		15		26		21		15

Alternative Numbers	Alternative 1¹	Alternative 2	Alternative 3	Alternative 4
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Notes:

¹Groundwater Alternative 1 does not meet the four MTCA threshold requirements unless combined with a soil alternative. Considering the expectation that both soil and groundwater alternatives will be selected

²Alternatives were scored using a scale of 1 to 5 with a score of 1 being the least amount of benefits provided by the alternative and a score of 5 being the most amount of benefits provided by the alternative.

Table 14-3
Summary of MTCA Evaluation and Ranking of Cleanup Action Alternatives - Soil
 Colville Post and Poles
 Stevens County, Washington

	Alternative 1 - Soil Washing	Alternative 2 - Excavation and Off-site Disposal	Alternative 3 - Thermal Desorption
Alternative Ranking Under MTCA			
1. Compliance with MTCA Threshold Criteria¹	Yes	Yes	Yes
2. Restoration Time Frame	Restoration timeframe is moderate (estimated 3-4 seasons).	Restoration timeframe is low (estimated 2 seasons).	Restoration timeframe is high (estimated 4 seasons).
3. Disproportionate Cost Analysis Relative Benefits Ranking			
Protectiveness	4	4	4
Permanence	5	5	5
Long-Term Effectiveness	4	5	4
Management of Short-Term Risks	4	2	3
Technical and Administrative Implementability	2	4	3
Consideration of Public Concerns	4	2	3
Total of Scores	23	22	22
4. Disproportionate Cost Analysis			
	\$44,691,905	\$26,820,847	\$25,266,986
Costs Disproportionate to Incremental Benefits	Yes	Yes	No
Practicability of Remedy	Medium Practicability	High Practicability	Medium Practicability
Remedy Permanent to Maximum Extent Practicable	Permanent	Permanent	Permanent
Overall Alternative Ranking	3rd	2nd	1st

Notes:

¹WAC 173-340-360(2)(a)

²Low cost is a benefit.

Table 14-4

Summary of MTCA Evaluation and Ranking of Cleanup Action Alternatives - Groundwater Colville Post and Poles Stevens County, Washington

	Alternative 1 - Monitored Natural Attenuation	Alternative 2 - Groundwater Pump and Treat	Alternative 3 - Enhanced In-Situ Bioremediation	Alternative 4 - Permeable Reactive Barrier
Alternative Ranking Under MTCA				
1. Compliance with MTCA Threshold Criteria¹	No	Yes	Yes	Yes
2. Restoration Time Frame	Immediate for implementation, but length to achieve cleanup goals could be up to 20 years.	Short timeframe for installation of extraction wells, injection wells and remediation system structure. Estimated 2 to 5 year remediation timeframe.	Initial restoration timeframe is short with injections occurring over 1 to 2 months. Estimated 2 to 5 years of performance monitoring and an additional application.	Initial restoration timeframe is short, with the wall installed in 1 to 2 months. PRB is dependent on groundwater gradients and velocities. And actual remediation could extend over a long period of time.
3. Disproportionate Cost Analysis Relative Benefits Ranking				
Protectiveness	1	5	4	2
Permanence	1	5	4	2
Long-Term Effectiveness	1	5	3	2
Management of Short-Term Risks	5	4	3	3
Technical and Administrative Implementability	5	3	4	3
Consideration of Public Concerns	2	4	3	3
Total of Scores	15	26	21	15
4. Disproportionate Cost Analysis				
	\$360,000	\$1,310,006	\$2,095,700	\$1,486,973
Costs Disproportionate to Incremental Benefits	No	No	No	No
Practicability of Remedy	Not Practicable	High Practicability	Medium Practicability	Medium Practicability
Remedy Permanent to Maximum Extent Practicable	Not Permanent	Permanent	Permanent	Not Permanent
Overall Alternative Ranking	4th	1st	2nd	3rd

Notes:

¹WAC 173-340-360(2)(a)

²Low cost is a benefit.

Table 14-5
Alternative 1: Soil Washing - Soil
Colville Post and Poles
Stevens County, Washington

Scope Item	Unit	Unit Cost	Quantity	Extended
Design/Project Management				
Design, work plan and procurement	lump sum	\$100,000.00	1	\$100,000
Task Sub-Total				\$100,000
Construction Oversight / Project Management / Reporting				
Construction monitoring/oversight - assume 4 seasons construction, includes PM and Per Diem	day	\$2,000.00	900	\$1,800,000
Analytical (Performance and Confirmation Sampling)	lump sum	\$100,000.00	1	\$100,000
Remedial action report	lump sum	\$40,000.00	1	\$40,000
Task Sub-Total				\$1,940,000
Contaminated Soil Excavation				
Mobilization	lump sum	\$200,000.00	1	\$200,000
Clearing and grubbing ¹	acre	\$8,500.00	13.92	\$118,320
Excavation of contaminated shallow soil ¹	cubic yard	\$7.00	33,686	\$235,805
Excavation of contaminated source area ¹	cubic yard	\$15.00	35,122	\$526,825
On-site Dewatering Treatment and Discharge ²	lump sum	\$100,000.00	1	\$100,000
Task Sub-Total				\$1,180,950
Debris Disposal				
Hauling and disposal ³	cubic yard	\$318.00	3,000	\$954,000
Task Sub-Total				\$954,000
Soil Washing				
Utilities (power drop) ⁴	lump sum	\$50,000.00	1	\$50,000
Lab study ⁵	lump sum	\$30,000.00	1	\$30,000
Pilot study ⁵	lump sum	\$700,000.00	1	\$700,000
Soil processing and handling ⁵	Ton	\$350.00	95,773	\$33,520,438
Power usage ⁶	Year	\$50,000.00	4	\$200,000
Task Sub-Total				\$34,500,438
Site Restoration				
Site grading ⁷	acre	\$10,500.00	13.92	\$146,160
Wetland restoration ⁸	acre	\$15,000.00	1.45	\$21,750
Wetland thin lift (12 inches) ⁹	cubic yard	\$35.00	6,760	\$236,595
Revegetation ⁷	acre	\$3,500.00	13.92	\$48,720
Task Sub-Total				\$453,225
Remedial Action Sub-Total				\$37,088,613
Remedial Action Contingency (15%)				\$5,563,292
Engineering, Construction Oversight, Project Management, Reporting				\$2,040,000
Total Estimated Costs for Soil Alternative 1				\$44,691,905

Notes:

- 1) Cost estimated from WSDOT Bid Check Report, Deer Park Intersection Improvements, Appendix F.
 - 2) Cost assumes \$17,000 for GAC servicing and delivery, \$7,000 for sampling, \$3,000 per month equipment rental for 12 months and \$40,000 to install, operate and decommission system including GAC disposal.
 - 3) Cost estimated from Waste Management, Appendix F.
 - 4) Cost provided by Avista, Appendix F
 - 5) Cost provided EcoSPEARS, Appendix F.
 - 6) Estimated Cost.
 - 7) Cost estimated from contractor bid for a similar project.
 - 8) Estimated costs based on experience.
 - 9) Cost provided by local landscape supplier, Appendix F.
- Estimated costs are considered to be within a margin of +/- 30 percent.
Refer to Table 1 for assumptions used to generate material quantities.

Table 14-6
Alternative 2: Excavation and Off-site Disposal - Soil
Colville Post and Poles
Stevens County, Washington

Scope Item	Unit	Unit Cost	Quantity	Extended
Design / Work Plan / Project Management				
Design, Work Plan, Plans/Specs, Project Management	lump sum	\$100,000.00	1	\$100,000
Task Sub-Total				\$100,000
Construction Oversight / Project Management / Reporting				
Construction monitoring/oversight - assume 2 seasons construction, includes PM and Per Diem	day	\$2,000.00	480	\$960,000
Analytical (Confirmation Sampling)	lump sum	\$50,000.00	1	\$50,000
Remedial action report	lump sum	\$40,000.00	1	\$40,000
Task Sub-Total				\$1,050,000
Contaminated Soil Excavation, Hauling and Disposal				
Mobilization	lump sum	\$200,000.00	1	\$200,000
Clearing and Grubbing ¹	acre	\$8,500.00	13.92	\$118,320
Excavation of contaminated shallow soil ¹	cubic yard	\$7.00	33,686	\$235,805
Excavation of contaminated source area ¹	cubic yard	\$15.00	35,122	\$526,825
Hauling and Disposal (Hazardous Material) ²	ton	\$184.50	95,773	\$17,670,060
On-site Dewatering Treatment and Discharge ³	lump sum	\$100,000.00	1	\$100,000
Task Sub-Total				\$18,851,009
Debris Disposal				
Hauling and disposal ²	cubic yard	\$318.00	3,000	\$954,000
Task Sub-Total				\$954,000
Site Restoration				
Site grading ⁴	acre	\$10,500.00	13.92	\$146,160
Import fill material ⁵	cubic yard	\$30.00	68,808	\$2,064,242
Wetland restoration ⁶	acre	\$15,000.00	1.45	\$21,750
Wetland thin lift (12 inches) ⁵	cubic yard	\$35.00	6,760	\$236,595
Revegetation ⁴	acre	\$3,500.00	13.92	\$48,720
Task Sub-Total				\$2,517,467
Remedial Action Sub-Total				\$22,322,476
Remedial Action Contingency (15%)				\$3,348,371
Engineering, Construction Oversight, Project Management, Reporting				\$1,150,000
Total Estimated Costs for Soil Alternative 2				\$26,820,847

Notes:

- 1) Cost estimated from WSDOT Bid Check Report, Deer Park Intersection Improvements, Appendix F.
- 2) Cost estimated from Waste Management for disposal at the Arlington, Oregon facility, Appendix F.
- 3) Cost assumes \$17,000 for GAC servicing and delivery, \$7,000 for sampling, \$3,000 per month equipment rental for 12 months and \$40,000 to install, operate and decommission system including GAC disposal.
- 4) Cost estimated from contractor bid for a similar project.
- 5) Cost provided by local landscape supplier, Appendix F.
- 6) Estimated costs based on experience.
 Estimated costs are considered to be within a margin of +/- 30 percent.
 Refer to Table 1 for assumptions used to generate material quantities.

Table 14-7
Alternative 3: Thermal Desorption - Soil
Colville Post and Poles
Stevens County, Washington

Scope Item	Unit	Unit Cost	Quantity	Extended
Design / Work Plan / Project Management				
Design, Work Plan, Plans/Specs, Project Management	lump sum	\$125,000.00	1	\$125,000
			Task Sub-Total	\$125,000
Construction Oversight / Project Management / Reporting				
Construction monitoring/oversight - assume 4 seasons of construction, includes PM and Per Diem	day	\$2,000.00	960	\$1,920,000
Analytical (Performance and Confirmation Sampling)	lump sum	\$100,000.00	1	\$100,000
Remedial action report	lump sum	\$40,000.00	1	\$40,000
			Task Sub-Total	\$2,060,000
Contaminated Soil Excavation				
Mobilization	lump sum	\$200,000.00	1	\$200,000
Clearing and Grubbing ¹	acre	\$8,500.00	13.92	\$118,320
Excavation of contaminated shallow soil ¹	cubic yard	\$7.00	33,686	\$235,805
Excavation of contaminated source area ¹	cubic yard	\$15.00	35,122	\$526,825
On-site Dewatering Treatment and Discharge ²	lump sum	\$100,000.00	1	\$100,000
			Task Sub-Total	\$1,180,950
Debris Disposal				
Hauling and disposal ³	cubic yard	\$318.00	3,000	\$954,000
			Task Sub-Total	\$954,000
Thermal Desorption				
Utilities (power drop) ⁴	lump sum	\$100,000.00	1	\$100,000
Construct treatment cell ⁵	lump sum	\$400,000.00	1	\$400,000
Construct second batch treatment ⁵	lump sum	\$200,000.00	1	\$200,000
Thermal Soil Treatment ⁶	Cubic Yard	\$270.00	60,808	\$16,418,174
Vapor Monitoring ⁷	each	\$270.00	104	\$28,080
			Task Sub-Total	\$17,146,254

Scope Item	Unit	Unit Cost	Quantity	Extended
Site Restoration				
Site grading (treated soil and import soil) ⁸	acre	\$10,500.00	13.92	\$146,160
Import top soil (6 inches) ⁹	cubic yard	\$30.00	11,229	\$336,864
Wetland restoration ¹⁰	acre	\$15,000.00	1.45	\$21,750
Wetland thin lift (12 inches) ⁹	cubic yard	\$35.00	6,760	\$236,595
Revegetation ⁸	acre	\$3,500.00	13.92	\$48,720
Task Sub-Total				\$790,089
Remedial Action Sub-Total				\$20,071,292
Remedial Action Contingency (15%)				\$3,010,694
Engineering, Construction Oversight, Project Management, Reporting				\$2,185,000
Total Estimated Costs for Soil Alternative 3				\$25,266,986

Notes:

- 1) Cost estimated from WSDOT Bid Check Report, Deer Park Intersection Improvements, Appendix F.
- 2) Cost assumes \$17,000 for GAC servicing and delivery, \$7,000 for sampling, \$3,000 per month equipment rental for 12 months and \$40,000 to install, operate and decommission system including GAC disposal.
- 3) Cost estimated from Waste Management, Appendix F.
- 4) Similar cost provided by Avista and then doubled to accommodate larger power needs, Appendix F
- 5) Assumes a 6,400 square yard, 6-inch thick concrete slab. Concrete costs estimated at \$120,000 not including design, rebar, form work, foundation prep and
- 6) Unit cost provided by Casdade Thermal, Appendix F.
- 7) Assumes one vapor sample per week for 2 years analyzed for Dioxin, Furan, PCP and TPH.
- 6) Cost estimated from contractor bid for a similar project.
- 7) Cost provided by local landscape supplier, Appendix F.
- 8) Estimated costs based on experience.
Estimated costs are considered to be within a margin of +/- 30 percent.
Refer to Table 1 for assumptions used to generate material quantities.

Table 14-8

Alternative 1: Monitored Natural Attenuation - Groundwater

Colville Post and Poles
Stevens County, Washington

Scope Item	Unit	Unit Cost	Quantity	Extended
Work Plan / Project Management				
Work Plan / Project Management	lump sum	\$50,000.00	1	\$50,000
Task Sub-Total				\$50,000
Decommission Monitoring Wells				
Decommission Monitoring Wells	lump sum	\$10,000.00	1	\$10,000
Task Sub-Total				\$10,000
Reporting				
Remedial Action Report	lump sum	\$20,000.00	1	\$20,000
Task Sub-Total				\$20,000
Remedial Action Sub-Total				\$0
Remedial Action Contingency (15%)				\$0
Work Plan, Project Management, Reporting, Decommission Wells				\$80,000
Remedial Action Estimated Total				\$80,000
Groundwater Monitoring (5 Years)				
Quarterly Groundwater Monitoring/Inspection and Reporting (Years 1 and 5)	event	\$20,000	8	\$160,000
Bi-Annual Groundwater Monitoring and Reporting (Years 2-4)	event	\$20,000	6	\$120,000
Total Estimated Costs for Groundwater Alternative 1				\$360,000

Notes:

Estimated costs are considered to be within a margin of +/- 30 percent.

Refer to Table 1 for assumptions used to generate material quantities.

Table 14-9
Alternative 2: Pump and Treat - Groundwater
Colville Post and Poles
Stevens County, Washington

Scope Item	Unit	Unit Cost	Quantity	Extended
Design / Work Plan / Project Management				
Design, Work Plan, Plans/Specs, Project Management	lump sum	\$125,000.00	1	\$125,000
Task Sub-Total				\$125,000
Construction Oversight / Project Management / Reporting				
Construction monitoring/oversight - assume 1 month construction, includes PM and Per Diem	day	\$2,000.00	20	\$40,000
Remedial action report	lump	\$40,000.00	1	\$40,000
Task Sub-Total				\$80,000
Pump and Treat System (Assumes 2 year treatment)				
Utilities (power drop) ¹	lump sum	\$50,000.00	1	\$50,000
Install 10 extraction wells and 1 injection point ²	lump sum	\$100,000.00	1	\$100,000
Treatment system install ²	lump sum	\$200,000.00	1	\$200,000
Treatment system rental ³	monthly	\$5,405.00	24	\$129,720
Carbon media purchase (4,000 pounds) ³	lump sum	\$6,085.00	1	\$6,085
Carbon servicing (disposal and replace media once) ³	lump sum	\$27,100.00	2	\$54,200
Annual operating costs ²	annual	\$40,000.00	2	\$80,000
O&M ²	annual	\$25,000.00	2	\$50,000
Task Sub-Total				\$670,005
Performance Sampling				
Analytical ²	annual	\$20,000.00	2	\$40,000
Task Sub-Total				\$40,000
Decommission Wells				
Decommission monitoring wells ²	lump sum	\$10,000.00	1	\$10,000
Decommission treatment system wells and system ²	lump sum	\$30,000.00	1	\$30,000
Task Sub-Total				\$40,000
Remedial Action Sub-Total				\$750,005
Remedial Action Contingency (15%)				\$75,001
Engineering, Construction Oversight, Project Management, Reporting				\$205,000
Remedial Action Estimated Total				\$1,030,006
Annual Maintenance and Monitoring (5 Years)				
Quarterly Groundwater Monitoring/Inspection and Reporting (Years 1 and 5)	event	\$20,000	8	\$160,000
Bi-Annual Groundwater Monitoring and Reporting (Years 2-4)	event	\$20,000	6	\$120,000
Total Estimated Costs for Groundwater Alternative 2				\$1,310,006

Notes:

- 1) Cost provided by Avista, Appendix F
 - 2) Estimated cost based on experience.
 - 3) Unit cost provided by Baker Corp, Appendix F
- Estimated costs are considered to be within a margin of +/- 30 percent.
Refer to Table 1 for assumptions used to generate material quantities.

Table 14-10
Alternative 3: Enhanced In-Situ Bioremediation - Groundwater
Colville Post and Poles
Stevens County, Washington

Scope Item	Unit	Unit Cost	Quantity	Extended
Design / Work Plan / Project Management				
Design, Work Plan, Project Management	lump sum	\$100,000.00	1	\$100,000
Task Sub-Total				\$100,000
Construction Oversight / Project Management / Reporting				
Construction monitoring/oversight - assume 40 days of direct-push injections, includes PM and Per Diem (Initial 800 injections) ¹	day	\$2,000.00	40	\$80,000
Construction monitoring/oversight - assume 40 days of direct-push injections, includes PM and Per Diem (800 follow-up injections) ¹	day	\$2,000.00	40	\$80,000
Remedial action report	lump	\$40,000.00	1	\$40,000
Task Sub-Total				\$200,000
ORC Injections				
Drilling (assumes two direct push drill rigs) ¹	day	\$6,000.00	80	\$480,000
Amendments (ORC) ²	lump sum	\$369,000.00	2	\$738,000
ORC Mixing and Application ¹	lump sum	\$50,000.00	2	\$100,000
Task Sub-Total				\$1,318,000
Remedial Action Sub-Total				\$1,318,000
Remedial Action Contingency (15%)				\$197,700
Engineering, Construction Oversight, Project Management, Reporting				\$300,000
Remedial Action Estimated Total				\$1,815,700
Annual Maintenance and Monitoring (5 Years)				
Quarterly Groundwater Monitoring/Inspection and Reporting (Years 1 and 5)	event	\$20,000	8	\$160,000
Bi-Annual Groundwater Monitoring and Reporting (Years 2-4)	event	\$20,000	6	\$120,000
Total Estimated Costs for Groundwater Alternative 3				\$2,095,700

Notes:

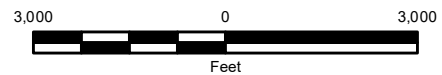
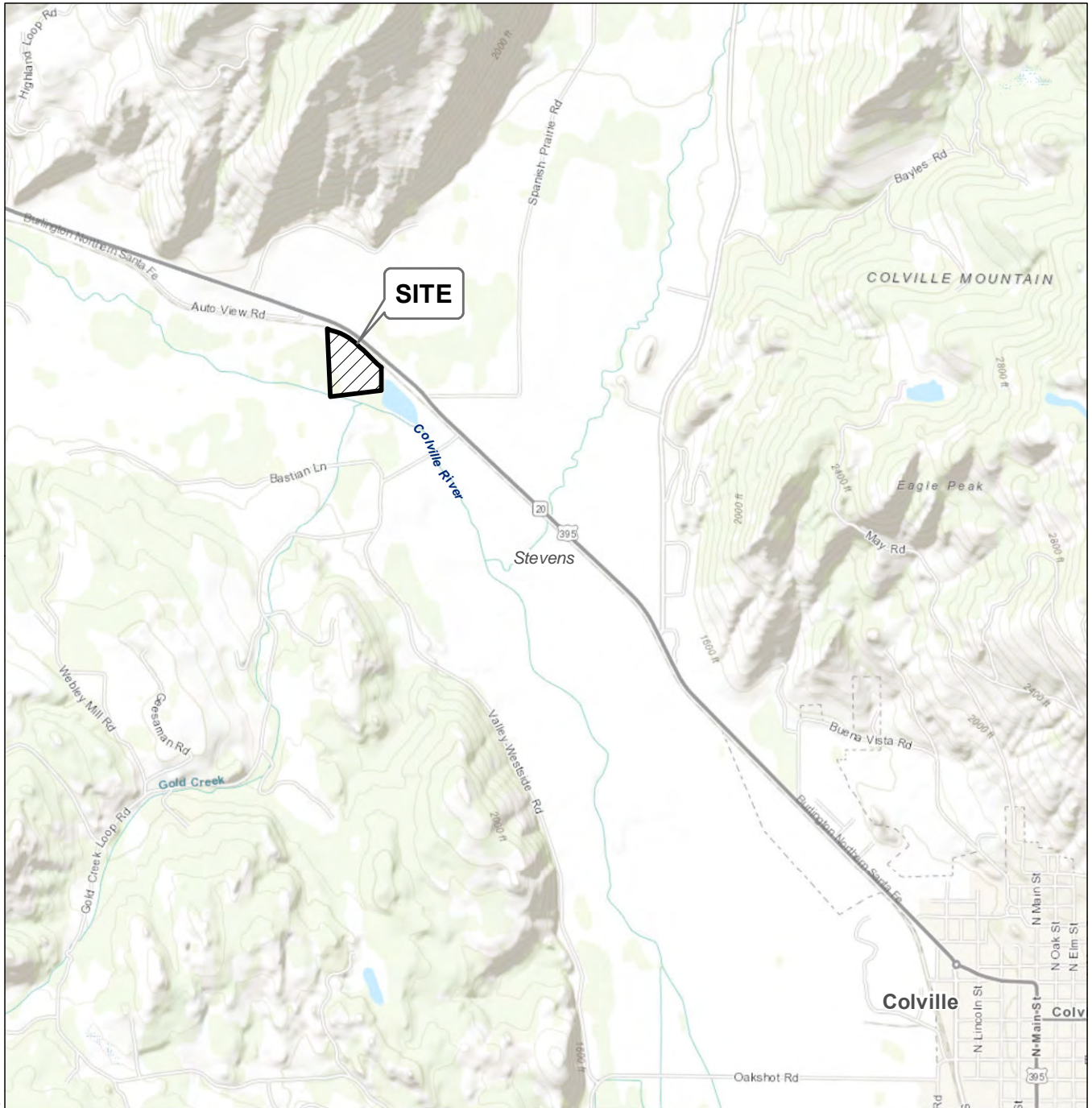
- 1) Estimated costs based on experience.
- 2) Estimated cost based on discussions with Regenesys and calculations, Appendix F
 Estimated costs are considered to be within a margin of +/- 30 percent.
 Refer to Table 1 for assumptions used to generate material quantities.

Table 14-11
Alternative 4: Permeable Reactive Barrier - Groundwater
Colville Post and Poles
Stevens County, Washington

Scope Item	Unit	Unit Cost	Quantity	Extended	
Design / Work Plan / Specifications / Project Management					
Design, Work Plan, Plans/Specs, Project Management	lump sum	\$125,000.00	1	\$125,000	
Bench scale testing	lump sum	\$30,000.00	1	\$30,000	
			Task Sub-Total	\$155,000	
Construction Oversight / Project Management / Reporting					
Construction monitoring/oversight - assume 5 week construction, includes PM and Per Diem	day	\$2,000.00	25	\$50,000	
Remedial action report	lump	\$40,000.00	1	\$40,000	
			Task Sub-Total	\$90,000	
Installation of ZVI Wall¹					
Mobilization	lump sum	\$67,525.28	1	\$67,525	
Mix Sand and ZVI	cubic yards	\$82.21	1,400	\$115,094	
Install ZVI Wall	cubic yards	\$95.91	1,400	\$134,274	
Regrade site	cubic yards	\$57.68	200	\$11,536	
Demobilization	lump sum	\$41,246.67	1	\$41,247	
			Task Sub-Total	\$369,676	
Disposal of ZVI Wall					
Excavate ZVI wall ²	day	\$1,800.00	10	\$18,000	
Disposal of ZVI Wall ³	ton	\$184.50	2,205	\$406,823	
Backfill excavated trench ⁴	cubic yards	\$30.00	1,400	\$42,000	
			Task Sub-Total	\$466,823	
				Remedial Action Sub-Total	\$836,498
				Remedial Action Contingency (15%)	\$125,475
Engineering, Construction Oversight, Project Management, Reporting				\$245,000	
Remedial Action Estimated Total				\$1,206,973	
Annual Maintenance and Monitoring (5 Years)					
Quarterly Groundwater Monitoring/Inspection and Reporting (Years 1 and 5)	event	\$20,000	8	\$160,000	
(Years 2-4)	event	\$20,000	6	\$120,000	
			Total Estimated Costs for Groundwater Alternative 4	\$1,486,973	

Notes:

- 1) Estimated costs based on quote from contractor, Appendix F.
 - 2) Estimated costs based on experience.
 - 3) Cost estimated from Waste Management, Appendix F.
 - 4) Cost provided by local landscape supplier, Appendix F.
- Estimated costs are considered to be within a margin of +/- 30 percent.
Refer to Table 1 for assumptions used to generate material quantities.



Vicinity Map

Colville Post and Poles
Stevens County, Washington



Figure 1-1




Notes:

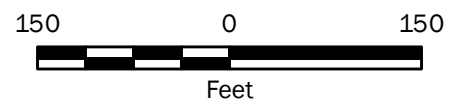
1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: ESRI
Projection: NAD 1983 UTM Zone 11N



Legend

-  Decision Area Boundary (Herrera 2003)
-  Approximate Culvert Location
-  Property Boundary



Notes:

1. The locations of all features shown are approximate and are referenced from the Herrera 2003 "Removal Site Evaluation Report."
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: ESRI, Siteboundary provided by EPA and Washington Department of Ecology.

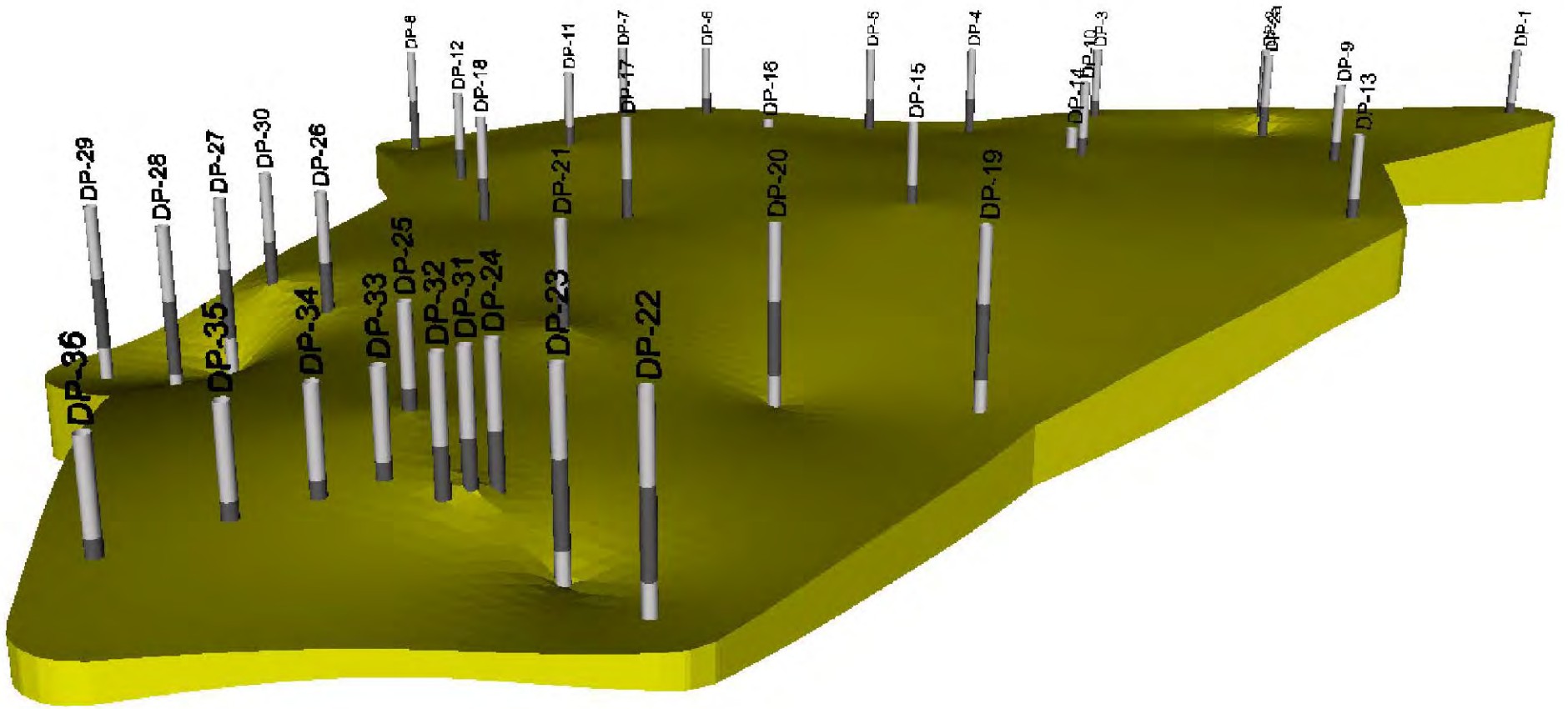
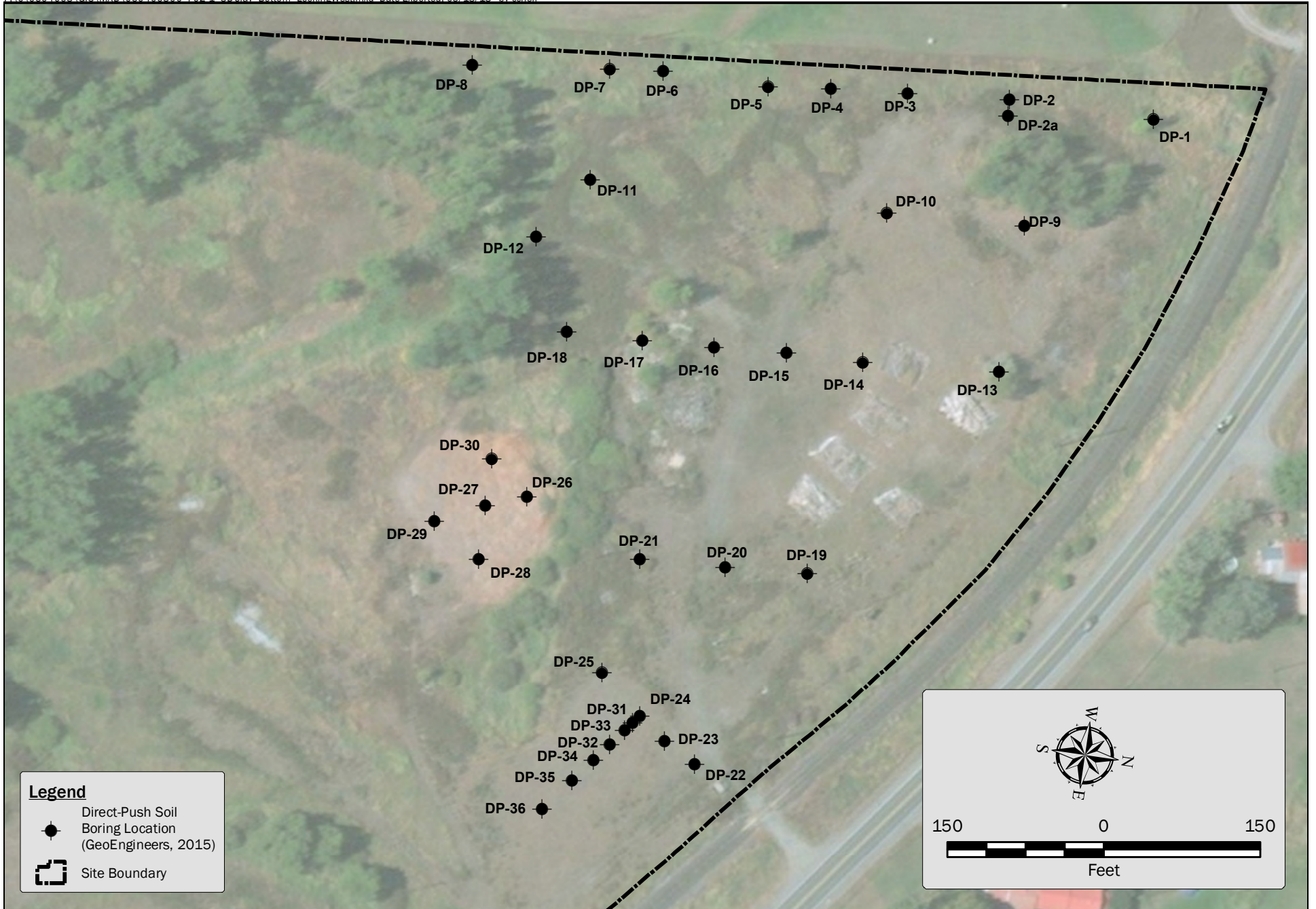
Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

Historical Site Operational Areas and Current Layout

Colville Post and Poles
Stevens County, Washington



Figure 1-2



Notes:

1. The locations of all features shown.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: ESRI.

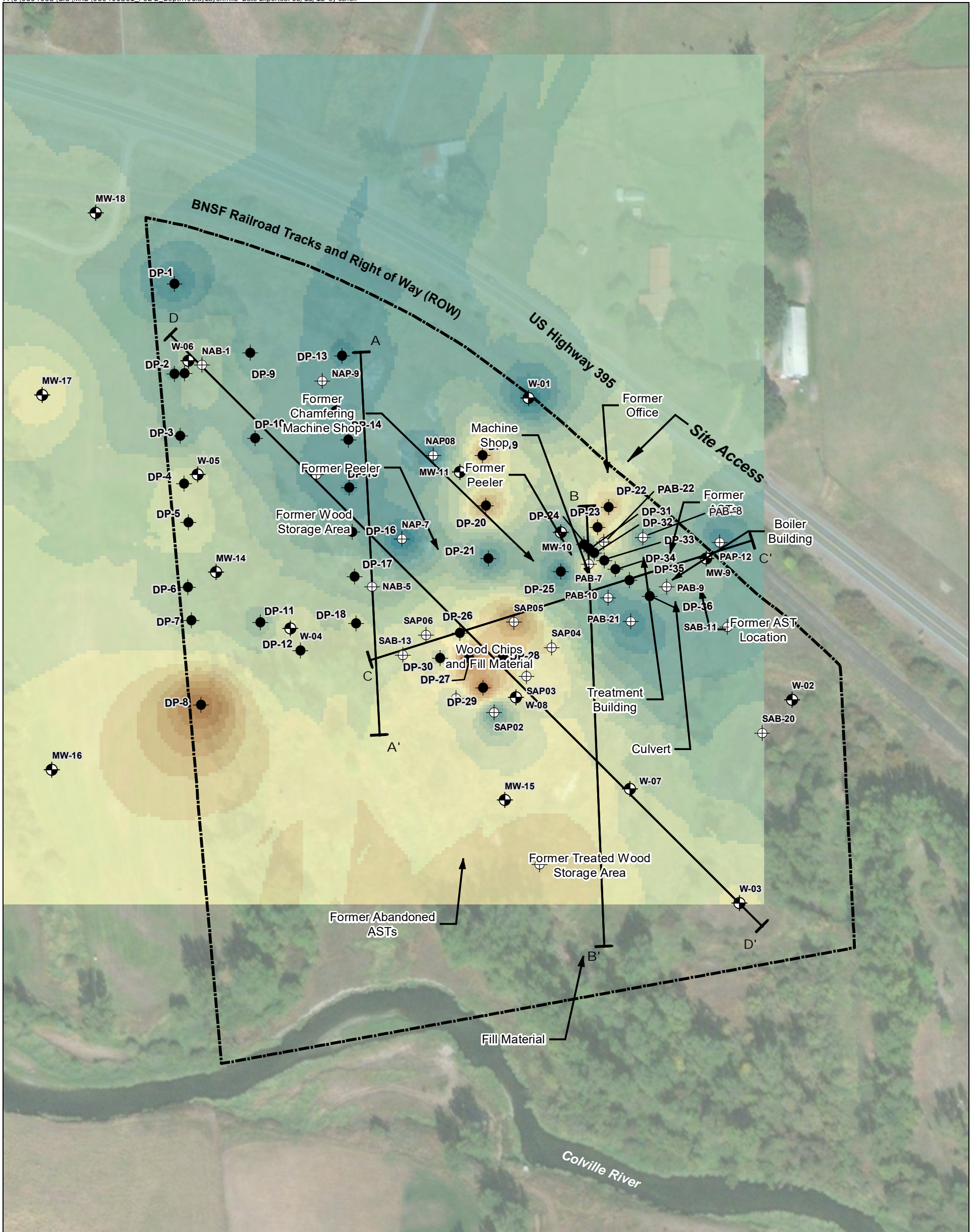
Projection: NAD 1983 HARN StatePlane Washington North FIPS 4601 Feet

Estimated Top of Clay Looking West

Colville Post and Poles
Stevens County, Washington

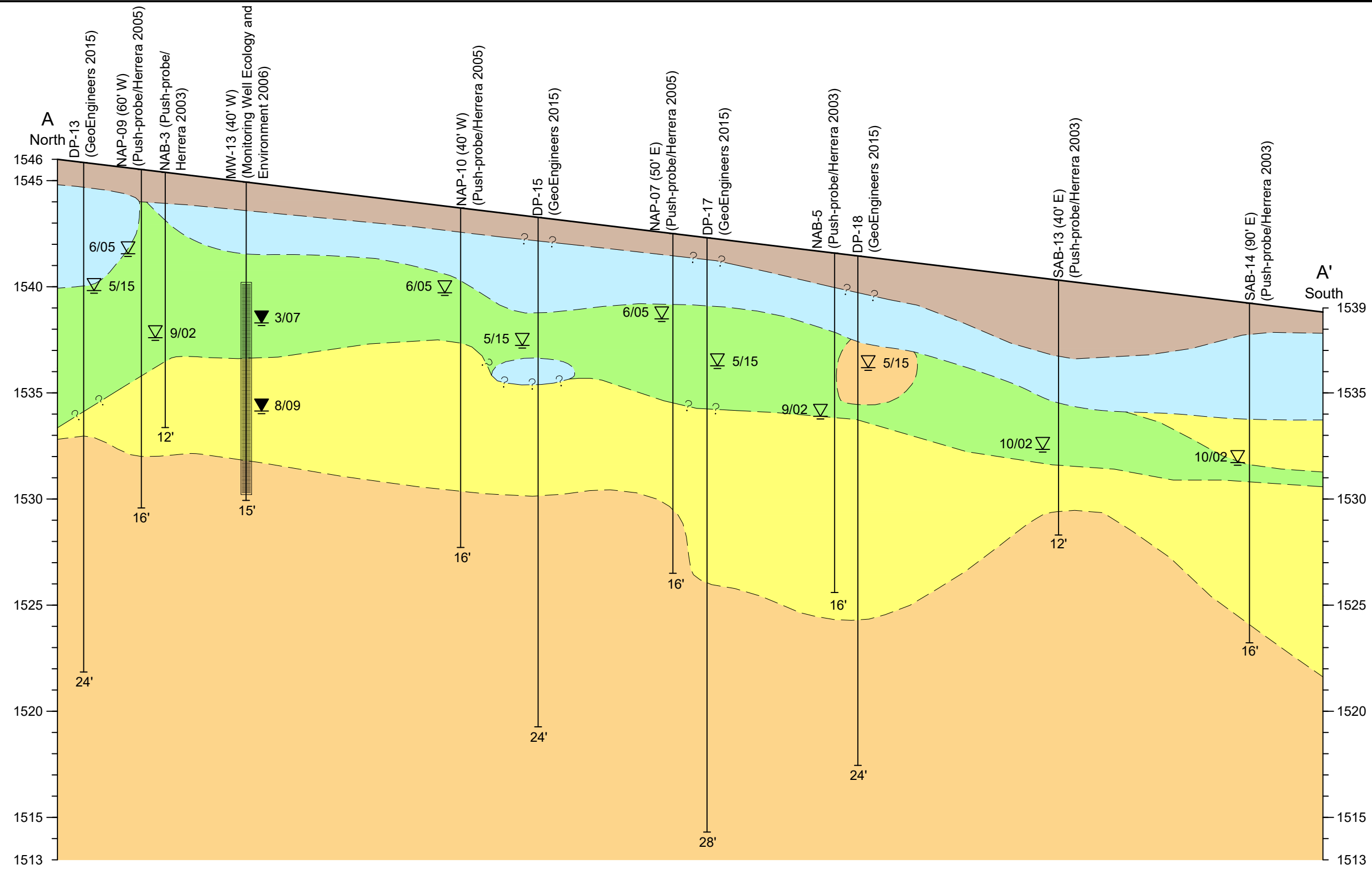


Figure 2-1



<p>Legend</p> <p>DP-1 ● Direct-Push Soil Boring Location (GeoEngineers, 2015)</p> <p>W-02 ● Historic Monitoring Wells (Various Consultants; 1994, 2005, 2006)</p> <p>PAB-21 ⊕ Historic Direct-push Borings (Herrera; 2003, 2005)</p>	<p>A A'</p> <p>— Cross Section Transect</p> <p>□ Site Boundary</p>	<p>Depth Range to Top of Clay (feet below ground surface)</p> <p>12 feet below ground surface</p> <p>36 feet below ground surface</p>							
<p>Notes:</p> <ol style="list-style-type: none"> The locations of all features shown are approximate. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication. <p>Data Source: ESRI, Siteboundary provided by EPA and Washington Department of Ecology. Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td colspan="2">Depth to Top of Clay Layer</td> </tr> <tr> <td colspan="2">Colville Post and Poles Stevens County, Washington</td> </tr> <tr> <td style="width: 70%;"></td> <td>Figure 2-2</td> </tr> </table>				Depth to Top of Clay Layer		Colville Post and Poles Stevens County, Washington			Figure 2-2
Depth to Top of Clay Layer									
Colville Post and Poles Stevens County, Washington									
	Figure 2-2								

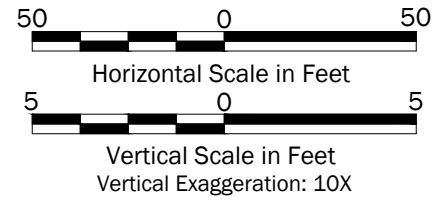
P:\0_0504098\CAD\01\T400_RL_FS Project Plan\050409801_F02-3 through F02-6 (Cross Sections).dwg TAB:F2-3 Date Exported: 05/17/18 - 15:15 by syj



- Notes:**
1. The locations of features shown are approximate.
 2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.
 3. Approximate ground surface elevations are based on aerial imagery (assumed flat or sloped).
 4. GeoEngineers Inc. completed direct-push borings using a DT22 soil sampling system which recovers a 1.125 inch soil core. In our opinion, this system underestimates the gravel content of a soil unit. Based on this, gravel contacts are inferred from previous subsurface investigations.

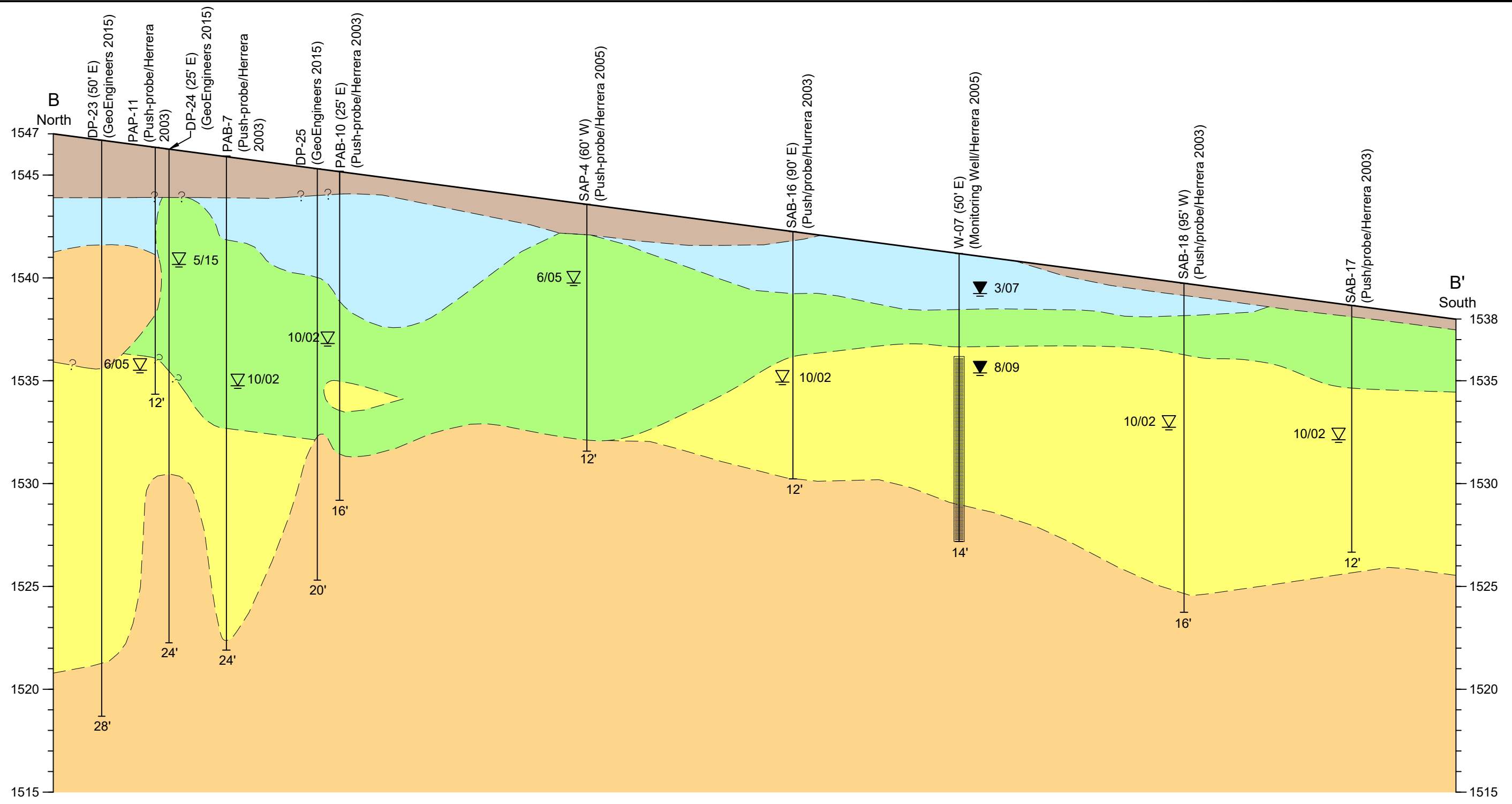
Legend

<ul style="list-style-type: none"> Fill-Clay, Silt, Sand, Gravel, Cobbles, Wood Chips Silt Sand With Variable Fines Content Gravel With Variable Sand and Fines Contents Clay 	<ul style="list-style-type: none"> Groundwater Level Observed During Drilling and Date Drilled Groundwater Levels Measured in Well and Date Measured
---	--






Cross Section A-A'	
Colville Post and Poles Stevens County, Washington	
	Figure 2-3

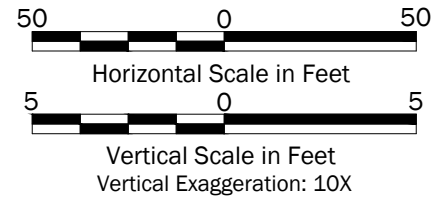
P:\0_0504098\CAD\01\T400_RI_FS Project Plan\050409801_F02-3 through F02-6 (Cross Sections).dwg:TAB:F2-4 Date Exported: 05/17/18 - 15:15 by syj



- Notes:**
1. The locations of features shown are approximate.
 2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.
 3. Approximate ground surface elevations are based on aerial imagery (assumed flat or sloped).
 4. GeoEngineers Inc. completed direct-push borings using a DT22 soil sampling system which recovers a 1.125 inch soil core. In our opinion, this system underestimates the gravel content of a soil unit. Based on this, gravel contacts are inferred from previous subsurface investigations.

Legend

 Fill-Clay, Silt, Sand, Gravel, Cobbles, Wood Chips	 Groundwater Level Observed During Drilling and Date Drilled
 Silt	 Groundwater Levels Measured in Well and Date Measured
 Sand With Variable Fines Content	
 Gravel With Variable Sand and Fines Contents	
 Clay	



Cross Section B-B'

Colville Post and Poles
Stevens County, Washington


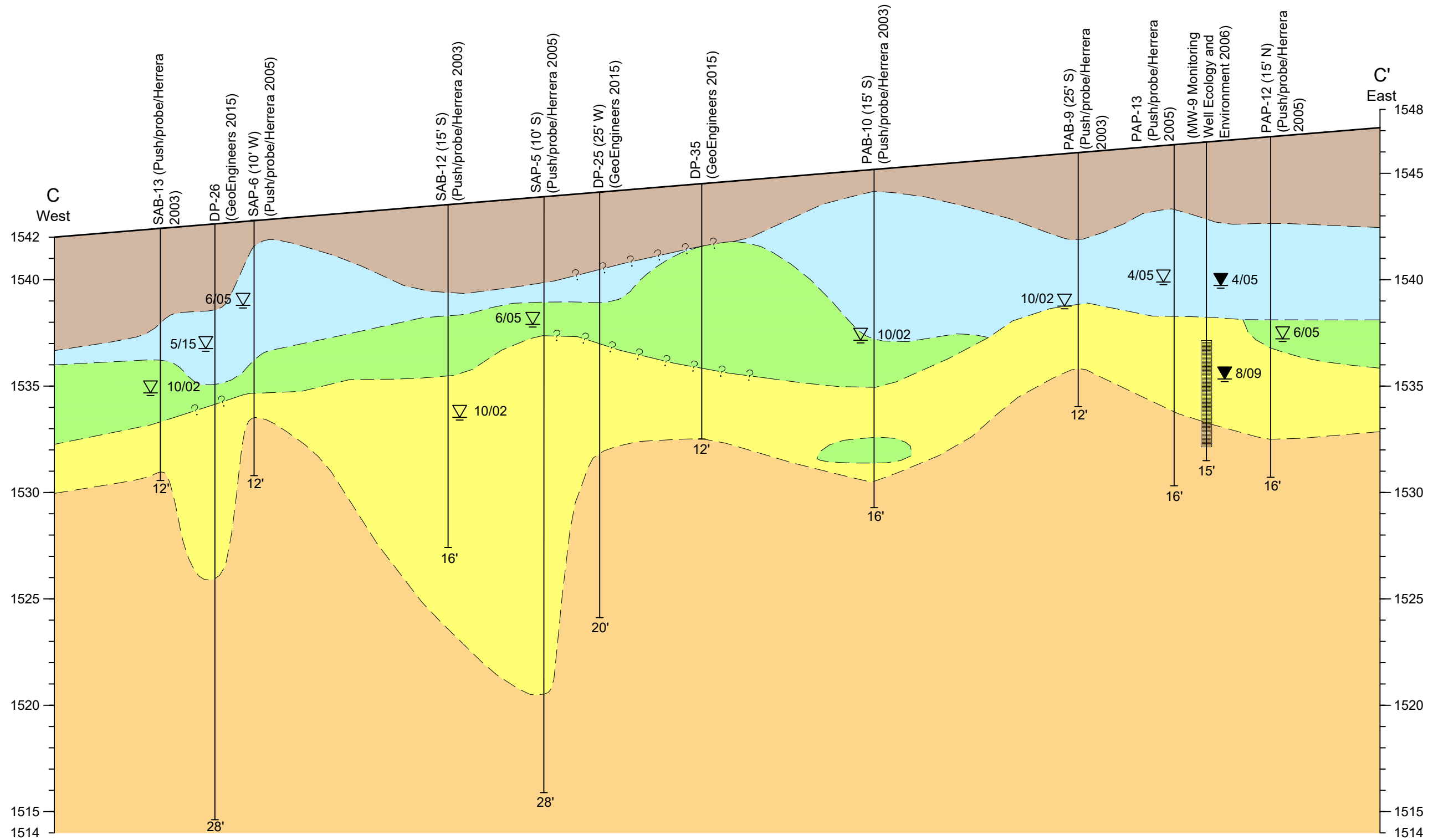
GEOENGINEERS 

Figure 2-4

P:\0_0504098\CAD\01\T400_RL_FS Project Plan\050409801_F02-3 through F02-6 (Cross Sections).dwg TAB:F2-5 Date Exported: 05/17/18 - 15:15 by syi

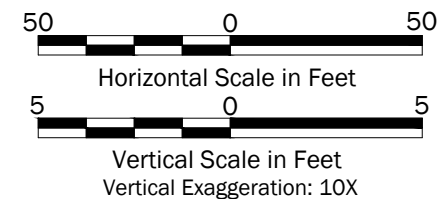


Notes:

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2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.
3. Approximate ground surface elevations are based on aerial imagery (assumed flat or sloped).
4. GeoEngineers Inc. completed direct-push borings using a DT22 soil sampling system which recovers a 1.125 inch soil core. In our opinion, this system underestimates the gravel content of a soil unit. Based on this, gravel contacts are inferred from previous subsurface investigations.

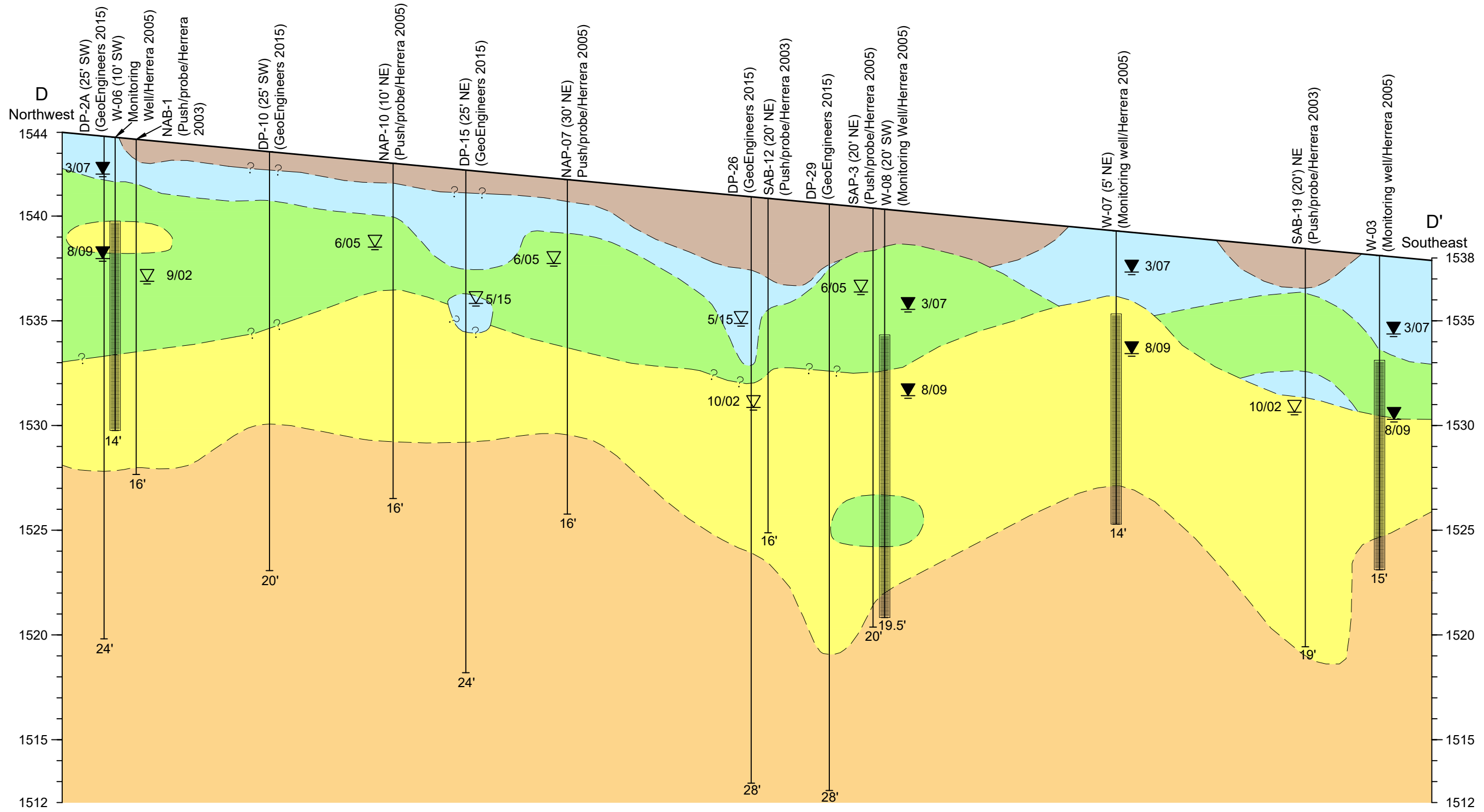
Legend

- Fill-Clay, Silt, Sand, Gravel, Cobbles, Wood Chips
- Silt
- Sand With Variable Fines Content
- Gravel With Variable Sand and Fines Contents
- Clay
- ▽ Groundwater Level Observed During Drilling and Date Drilled
- ▼ Groundwater Levels Measured in Well and Date Measured



Cross Section C-C'	
Colville Post and Poles Stevens County, Washington	
	Figure 2-5

P:\0_0504098\CAD\01\T400_RL_FS Project Plan\050409801_F02-3 through F02-6 (Cross Sections).dwg TAB:F2-6 Date Exported: 05/17/18 - 15:15 by syi

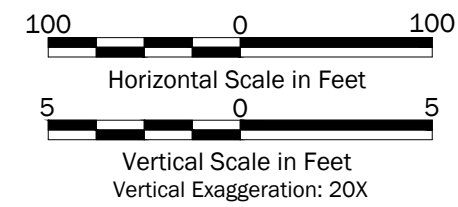


Notes:

- The locations of features shown are approximate.
- This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.
- Approximate ground surface elevations are based on aerial imagery (assumed flat or sloped).
- GeoEngineers Inc. completed direct-push borings using a DT22 soil sampling system which recovers a 1.125 inch soil core. In our opinion, this system underestimates the gravel content of a soil unit. Based on this, gravel contacts are inferred from previous subsurface investigations.

Legend

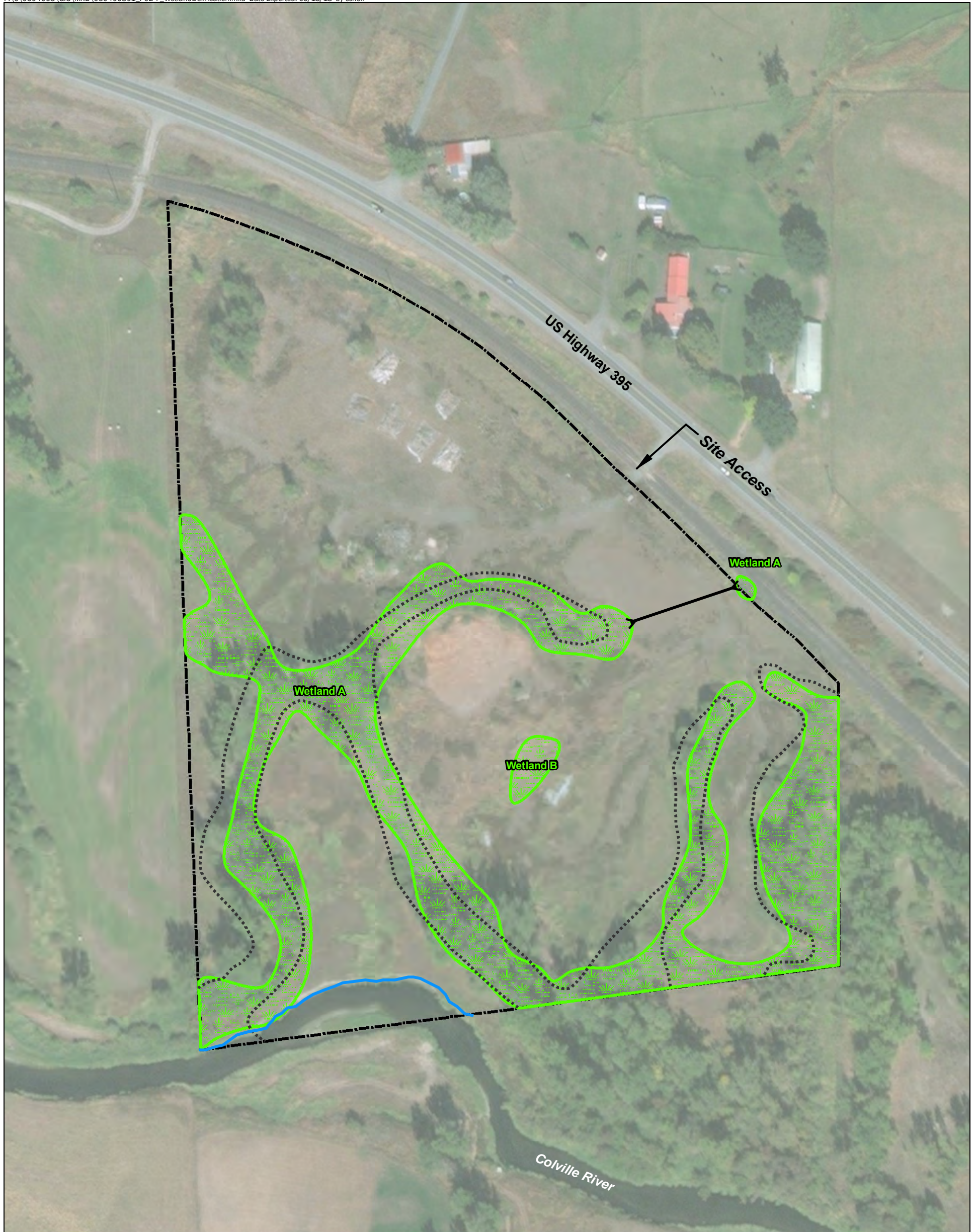
- Fill-Clay, Silt, Sand, Gravel, Cobbles, Wood Chips
- Silt
- Sand With Variable Fines Content
- Gravel With Variable Sand and Fines Contents
- Clay
- ▽ Groundwater Level Observed During Drilling and Date Drilled
- ▼ Groundwater Levels Measured in Well and Date Measured








Cross Section D-D'

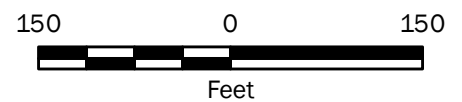
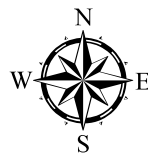
Colville Post and Poles
Stevens County, Washington

Figure 2-6



Legend

-  Wetland Area Delineated (GeoEngineers, 2015)
-  Previous Wetland Approximate Boundary (Herrera, 2005)
-  Ordinary High Water Mark (OHWM)
-  Site Boundary
-  Approximate Culvert Location



Notes:

1. The locations of all features shown are approximate and are referenced from the Herrera 2003 "Removal Site Evaluation Report."
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: ESRI, Siteboundary provided by EPA and Washington Department of Ecology. Previous wetland boundary digitized from ecology and environment, inc, Figure 3-1, Phase I Removal Action January 2005, 9/6/2007

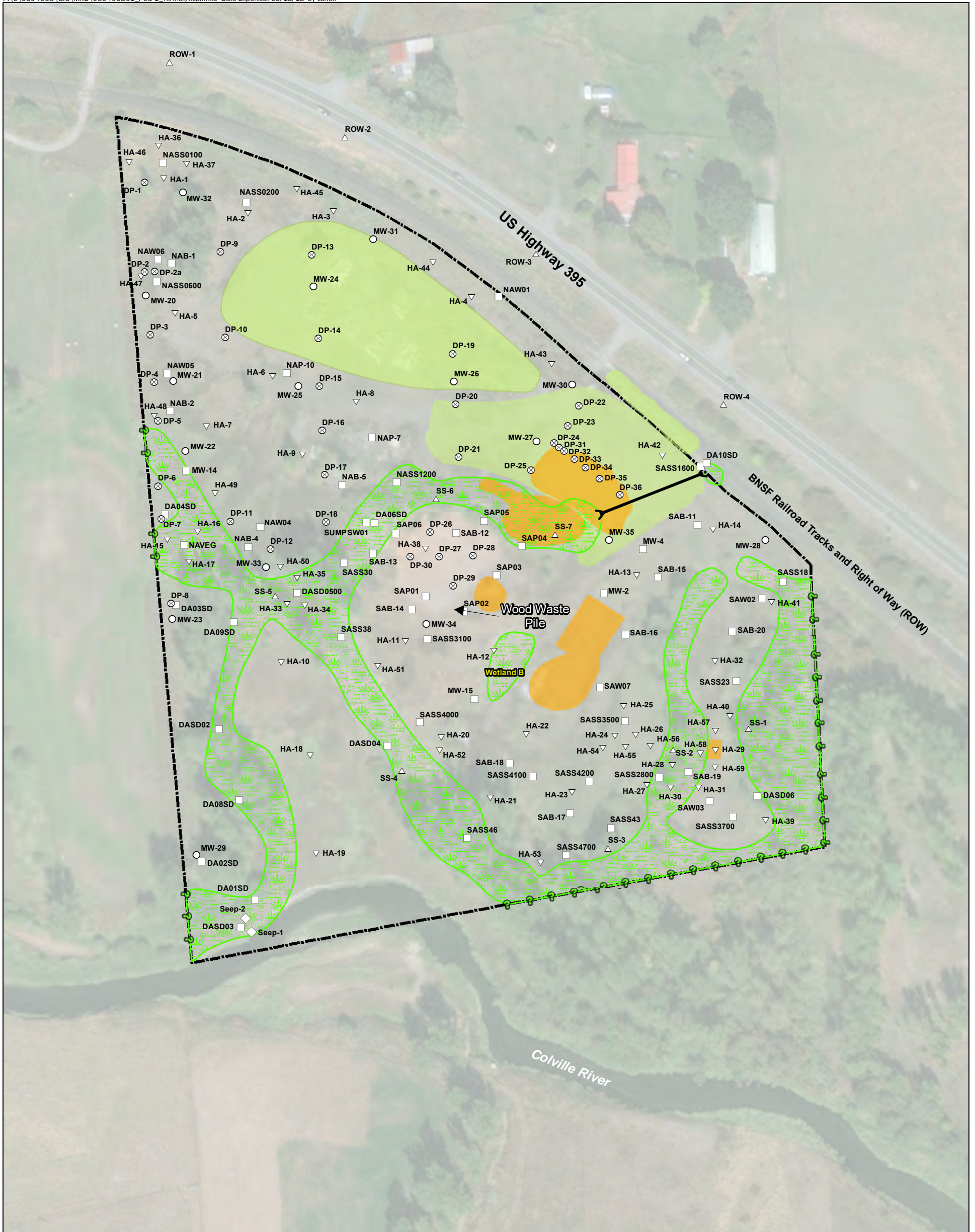
Projection: NAD 1983 UTM Zone 11N

Wetland Delineations

Colville Post and Poles
Stevens County, Washington



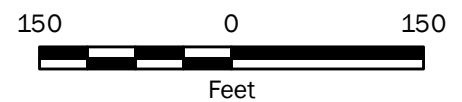
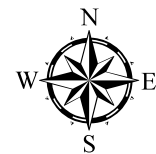
Figure 2-7



Legend

- | | | | |
|---------------------|---|----------------------|--|
| ROW-1/SS-1 △ | Sediment and ROW Sampling | HA-1/Seep-1 ▽ | Hand Auger Soil or Seep Sample Location |
| Seep-1 ◇ | Groundwater Seep Sample Location | | Approximate Culvert Location |
| DP-1 ⊗ | Direct-Push Soil Boring Location
(GeoEngineers, 2015) | | Wetland Boundary |
| MW-1 ○ | Monitoring Well Location | | Wetland Boundary
(GeoEngineers 2015) |
| NASS0100 □ | Historical Shallow Soil and Sediment Sample
Locations with Contaminant Concentrations
Greater than CULs | | Capped Area
(Ecology and Environment, 2009) |

- | | |
|--|---|
| | Excavated Area
(Ecology and Environment, 2009) |
| | Site Boundary |



Notes:

- The locations of all features shown are approximate and are referenced from the Herrera 2003 "Removal Site Evaluation Report."
- This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: ESRI, Siteboundary provided by EPA and Washington Department of Ecology.

Projection: NAD 1983 HARN StatePlane Washington North FIPS 4601 Feet

Explorations and Sampling Locations

Colville Post and Poles
Stevens County, Washington

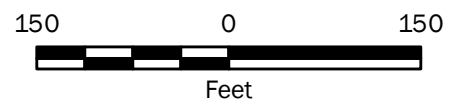


Figure 3-1



Legend

- Capped Area (Ecology and Environment, 2009)
- Excavated Area (Ecology and Environment, 2009)
- Mapped Streams
- Decision Area Boundary (Herrera, 2003)
- Site Boundary



Notes:

1. The locations of all features shown are approximate and are referenced from the Herrera 2003 "Removal Site Evaluation Report."
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: ESRI, Siteboundary provided by EPA and Washington Department of Ecology. Site features from Ecology and environment, inc, Figure 3-2, 9/22/2009

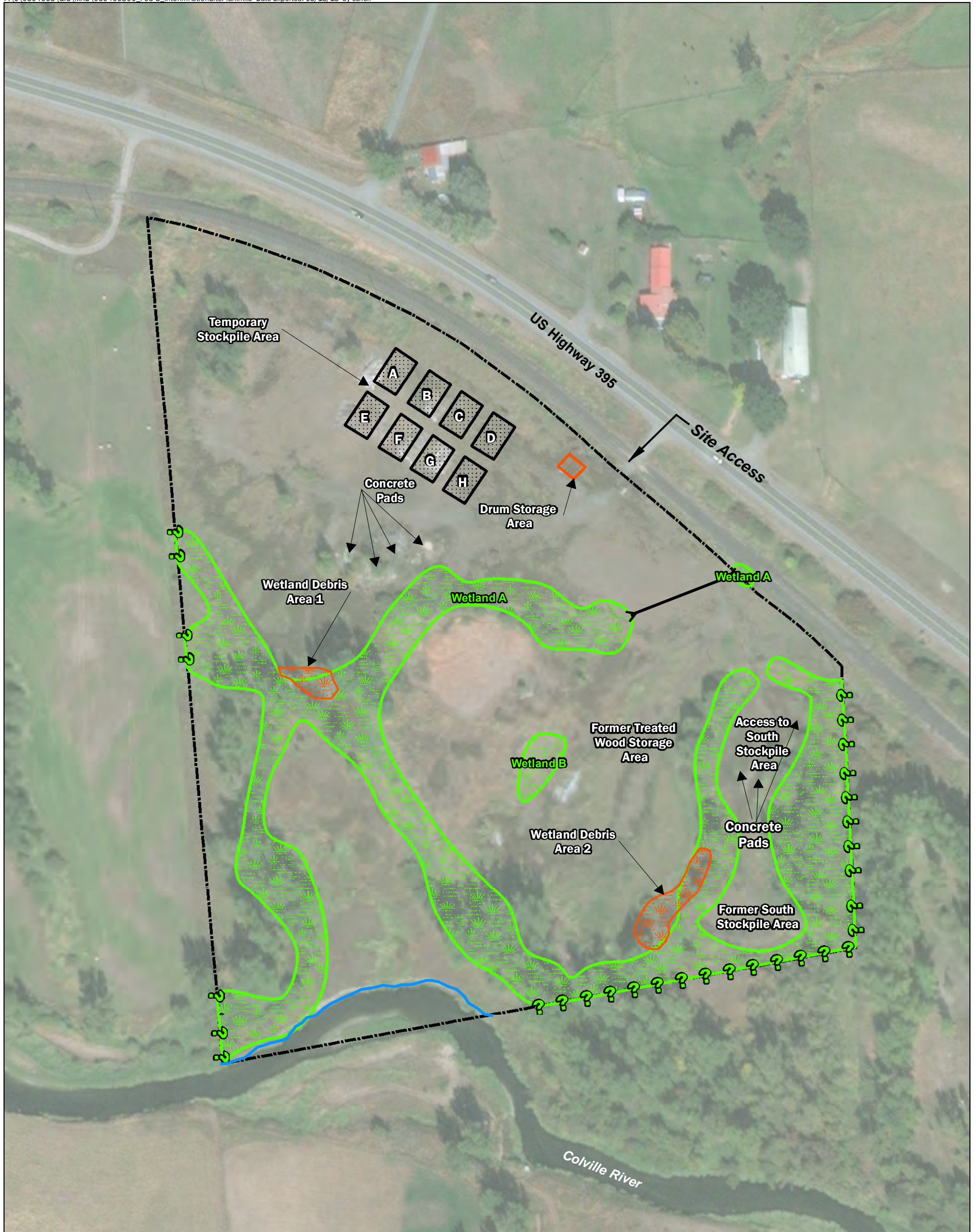
Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

**Phase II Removal Action Area
Fall 2006**








Colville Post and Poles
Stevens County, Washington

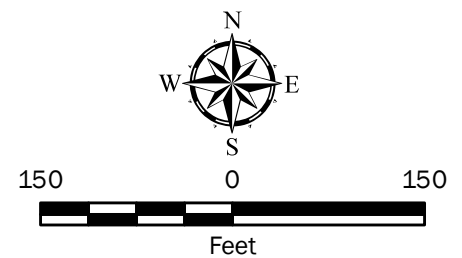


Figure 3-2



Legend

- | | |
|--|---|
|  Wetland Area Delineated (GeoEngineers, 2015) |  Approximate Culvert Location |
|  Wetland Debris Area |  Ordinary High Water Mark (OHWM) |
|  Investigation Derived Waste (IDW) Drum Storage |  Site Boundary |
|  Interim Action Stockpile | |




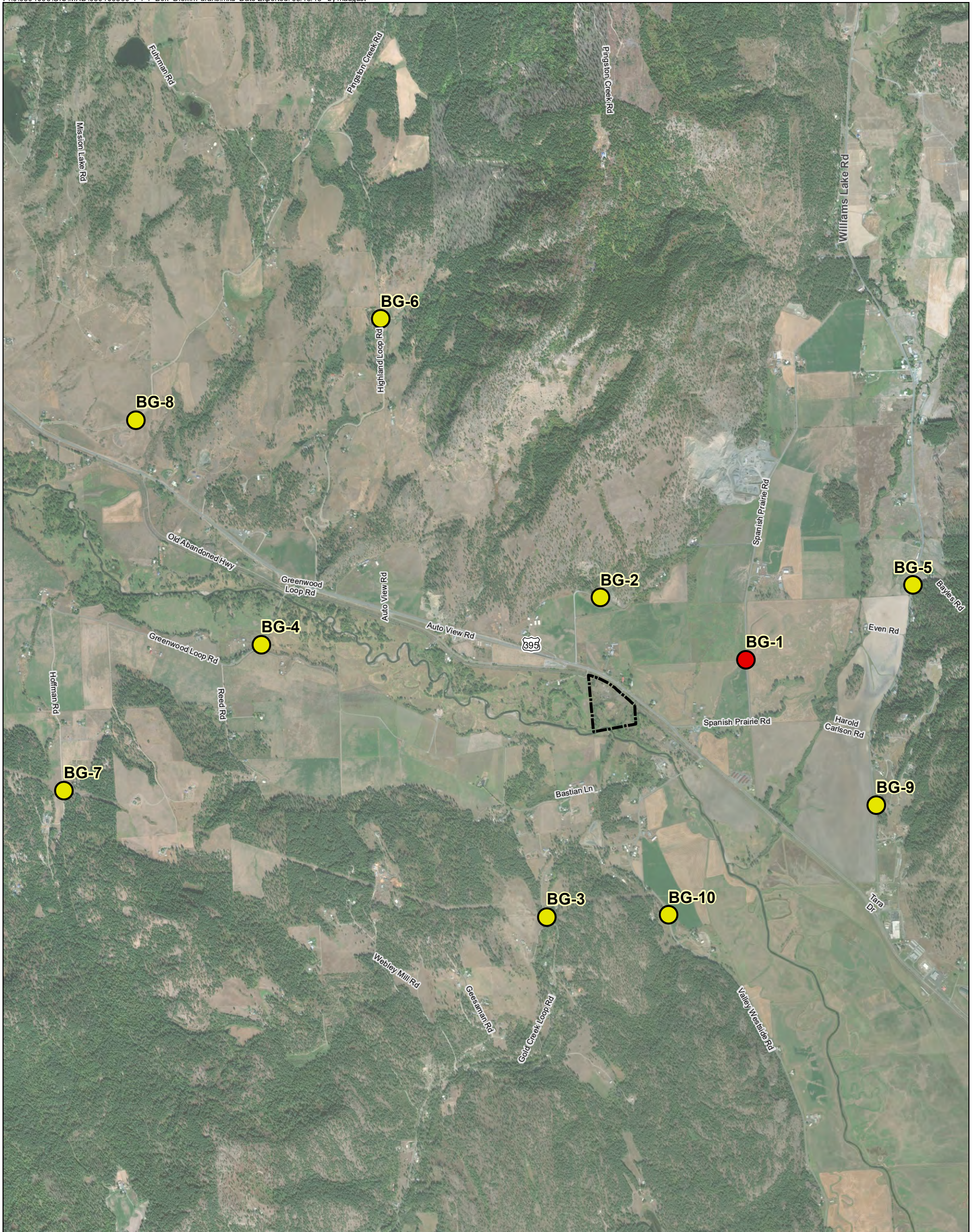
Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.




Data Source: ESRI, Siteboundary provided by EPA and Washington Department of Ecology.

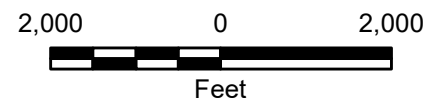
Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

Interim Action Site Plan	
Colville Post and Poles Stevens County, Washington	
	Figure 3-3



Legend

-  Site Boundary
-  Sample Location Number and Approximate Location with Chemical Result Less than MTCA Method B Cleanup Levels
-  Dioxins/Furans (2,3,7,8 TCDD Toxic Equivalent Concentration) Above Natural Background for Dioxins/Furans in Washington Soils of 5.2 pg/g



Background Dioxins/Furans - January 2017

Colville Post and Poles
Stevens County, Washington



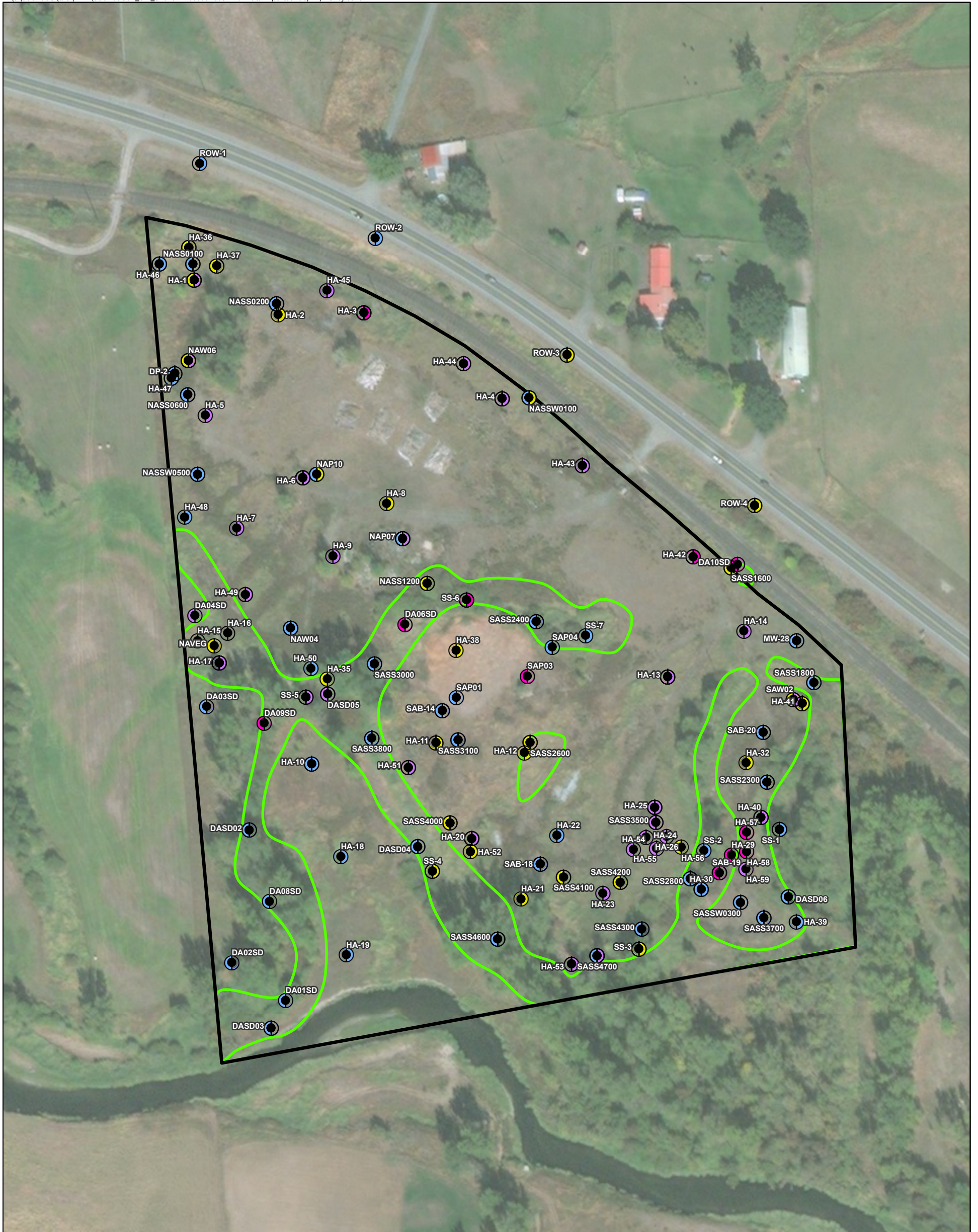
Figure 4-1

Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: Imagery from ESRI ArcGIS Online.

Projection: NAD 1983 HARN StatePlane Washington North FIPS 4601 Feet

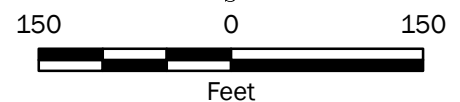
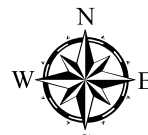


Legend

- Soil Sample Location
- ▭ Wetland Area Delineated by GeoEngineers
- ▭ Shallow Soil Remediation Area

PCP Dioxins/Furans

- | | |
|---|--|
| Blank - Not analyzed | Blank - Not analyzed |
| PCP detected at a concentration less than 100 µg/kg or not detected | Dioxins/furans TEQ detected at a concentration less than 13 pg/g or not detected |
| PCP detected at a concentration between 100 and 999 µg/kg | Dioxins/furans TEQ detected at a concentration between 13 and 100 pg/g |
| PCP detected at a concentration between 1,000 and 10,000 µg/kg | Dioxins/furans TEQ detected at a concentration between 100 and 1,000 pg/g |
| PCP detected at a concentration greater than 10,000 µg/kg | Dioxins/furans TEQ detected at a concentration greater than 1,000 pg/g |



Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: ESRI

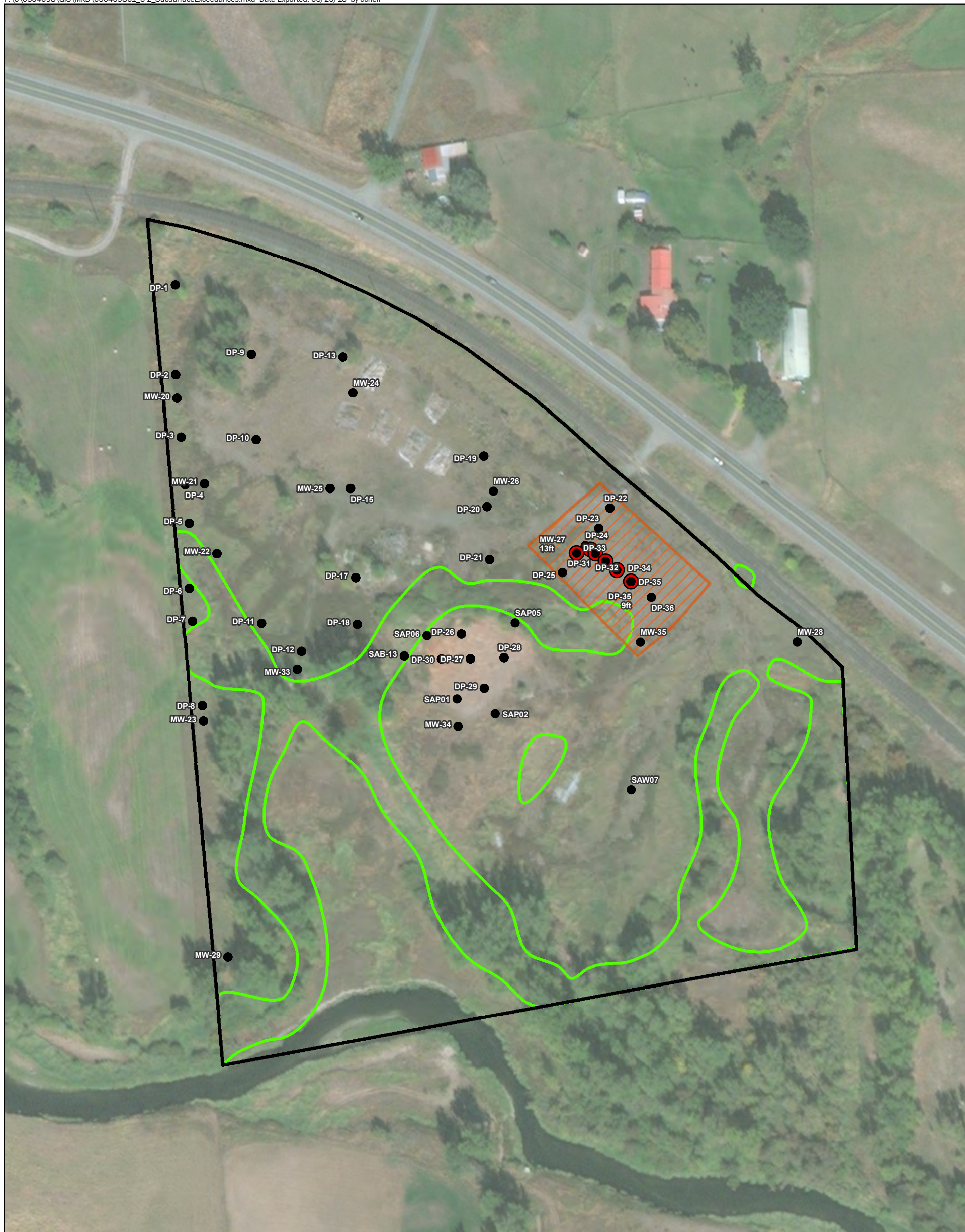
Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

Surface (<18 inches bgs) Soil Screening Level Exceedances

Colville Post and Poles
Stevens County, Washington



Figure 6-1



Legend

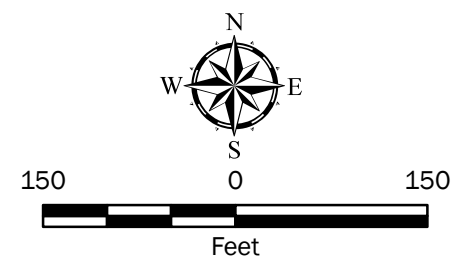
- Soil Sample Location
- Sample Exceeds Screening Level for PCP, Dioxin/Furans, or DRPH
- Wetland Area Delineated by GeoEngineers
- Adsorbed Phase Deep Soil Remediation Area

Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: ESRI

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

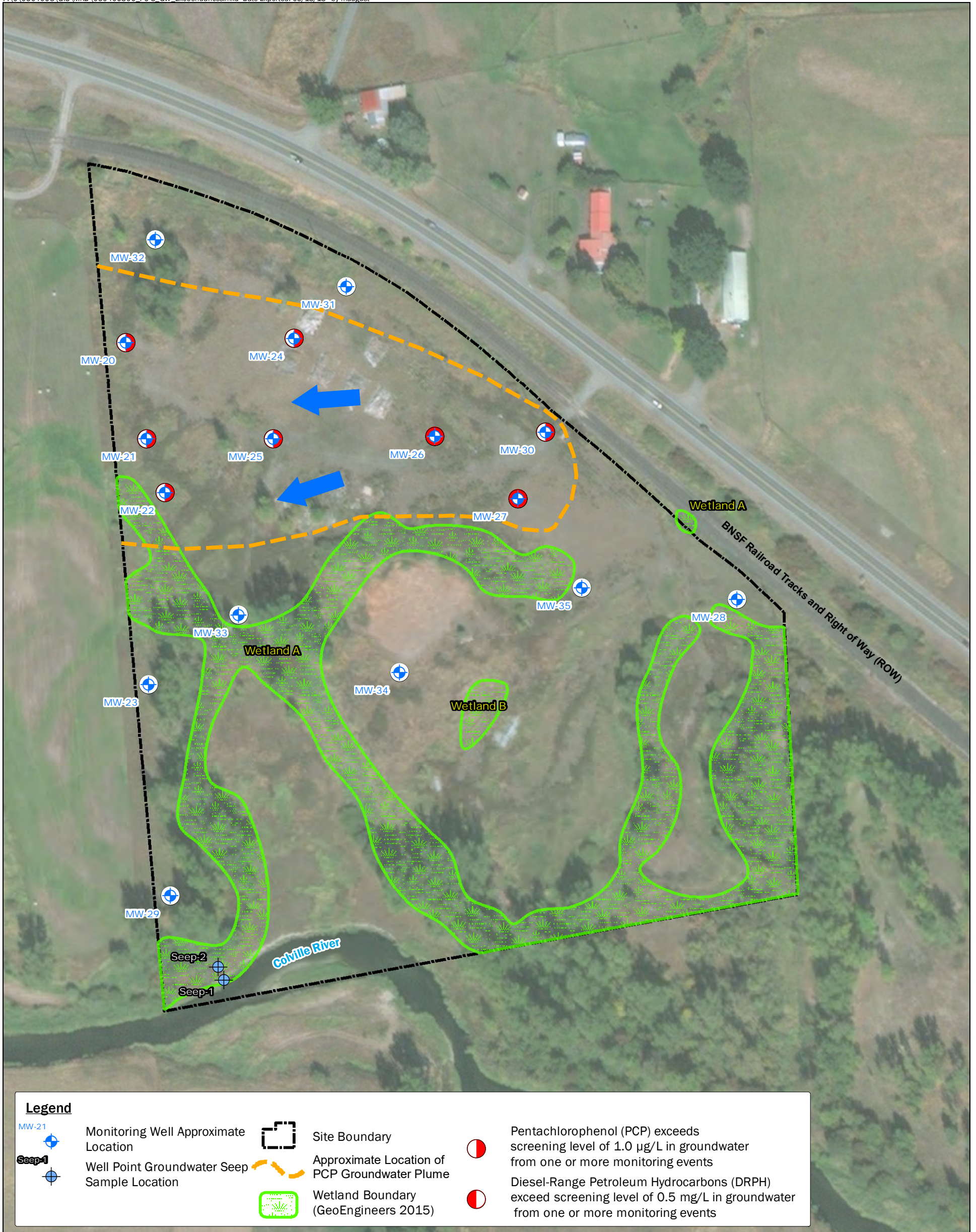


Subsurface (>18 inches bgs) Soil Screening Level Exceedances

Colville Post and Poles
Stevens County, Washington

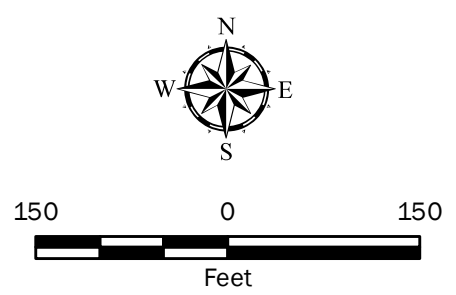


Figure 6-2



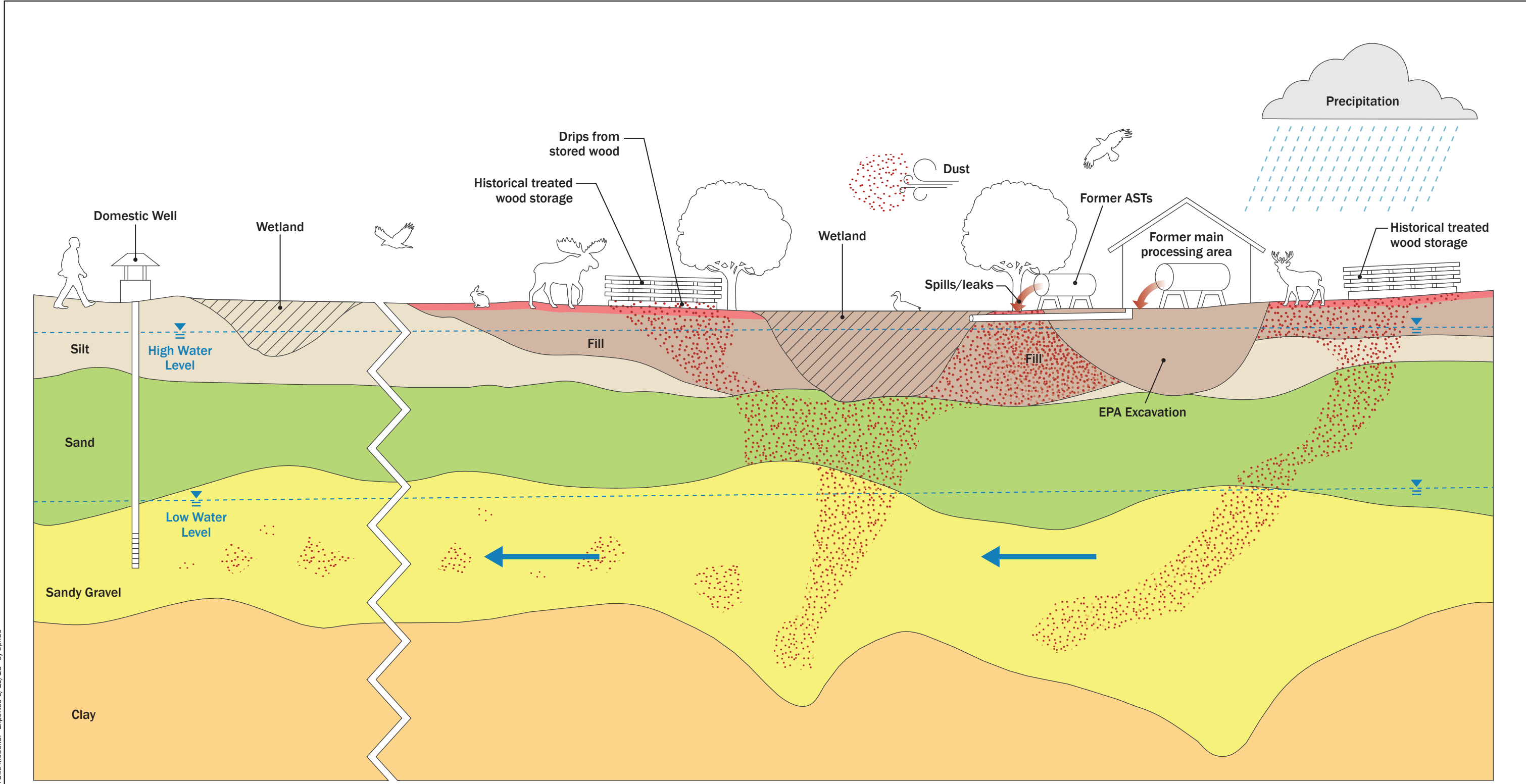
Legend

- | | | | | | |
|--------|---|--|---|--|---|
| MW-21 | Monitoring Well Approximate Location | | Site Boundary | | Pentachlorophenol (PCP) exceeds screening level of 1.0 µg/L in groundwater from one or more monitoring events |
| Seep-1 | Well Point Groundwater Seep Sample Location | | Approximate Location of PCP Groundwater Plume | | Diesel-Range Petroleum Hydrocarbons (DRPH) exceed screening level of 0.5 mg/L in groundwater from one or more monitoring events |
| | Wetland Boundary (GeoEngineers 2015) | | | | |



Notes:
 1. Groundwater sample data were collected on February 12, 2018.
 2. The locations of all features shown are approximate.
 3. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.
 Data Source: Imagery from ESRI ArcGIS Online.
 Projection: NAD 1983 HARN StatePlane Washington North FIPS 4601 Feet

Approximate Groundwater Contamination Extent	
Colville Post and Poles Stevens County, Washington	
	Figure 6-3



P:\0_0504098\Graphics_Misc\Figure 7-1 - Conceptual Site Model.ai Exported 6/19/18 by spride

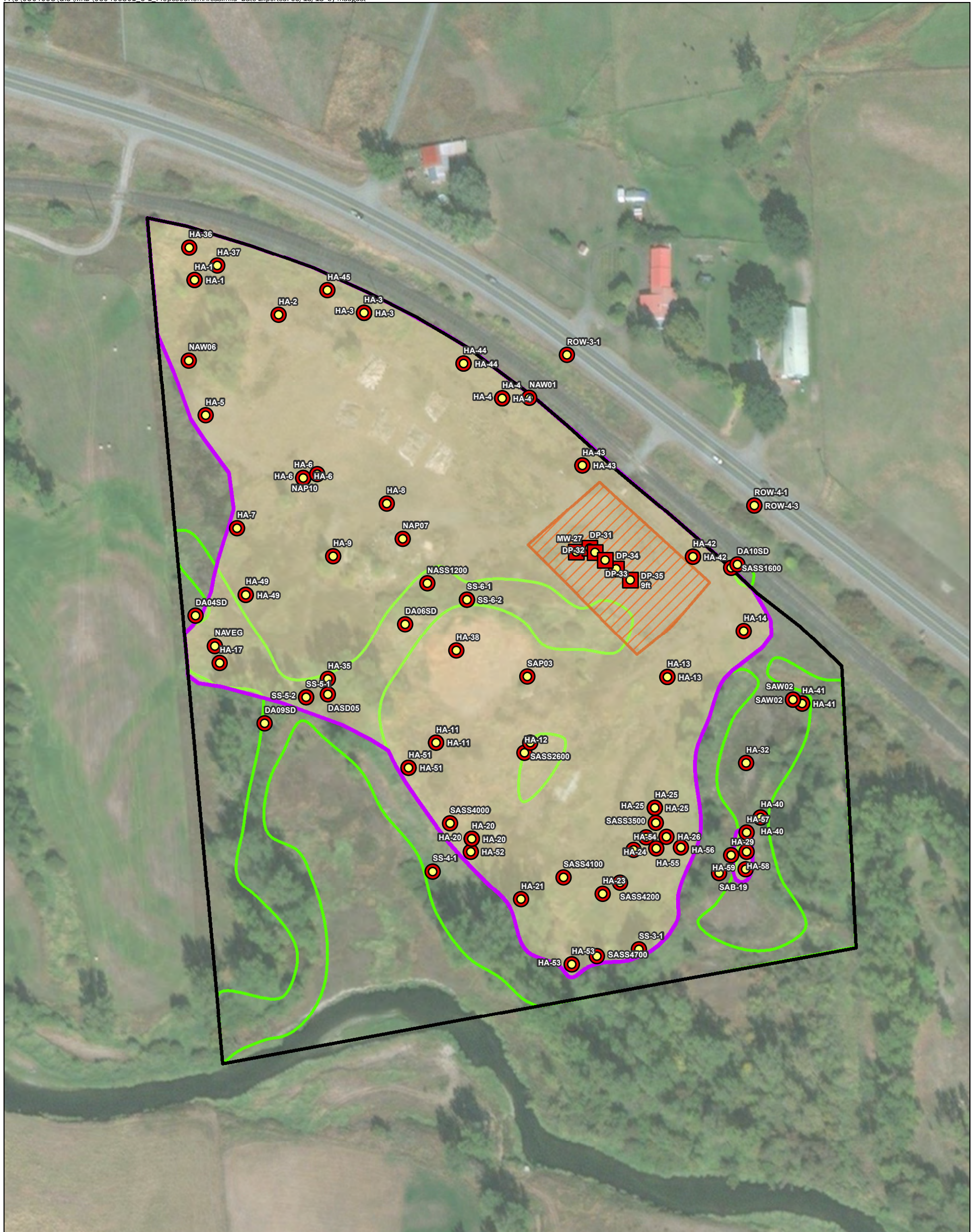
Notes:
 1. The location of all features shown are approximate.
 2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

NOT TO SCALE






Legend

- Fill-clay, silt, sand, gravel, cobbles, wood chips
- Silt
- Sand with variable fine contents
- Gravel with variable sand and fine contents
- Clay
- PCP contamination
- Dissolved PCP
- Prevailing groundwater flow
- Groundwater

Conceptual Site Model	
Colville Post and Poles Stevens County, Washington	
	Figure 7-1



Legend

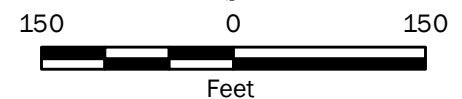
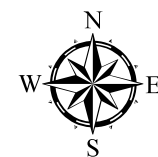
-  Shallow Soil Sample Exceeds Screening Level for PCP, Dioxin/Furans, or DRPH
-  Deeper Soil Sample Exceeds Screening Level for PCP, Dioxin/Furans, or DRPH
-  Wetland Area Delineated by GeoEngineers
-  Shallow Soil Remediation Areas
-  Deep Soil Remediation Area

Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: ESRI

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet



Proposed Remediation Areas

Colville Post and Poles
Stevens County, Washington



Figure 9-1

APPENDIX A

Historical Data

Table A-1
Surface Soil Analytical Results
 Colville Post and Poles
 Stevens County, Washington

Sample ID	Sample Location	Sample Type	Exploration Type	Date Collected	Petroleum Hydrocarbons ² (mg/kg)		Semi-Volatile Organic Compounds									
					DRPH	ORPH	1,2,4-Trichloro benzene	2-methyl naphthalene	bis(2-Chloroisopropyl) ether	Acenaphthene	Anthracene	Benz(a) anthracene	Benzo(a) pyrene	Benzo(b) fluoranthene	Benzo(g,h,i) perylene	Benzo(k) fluoranthene	Benzyl Alcohol
Process Area																
PASSP1100	PAP11	Surface Soil	Push-probe	June 2005	165 J	1220		0.0179 J			0.0192 J					
PASSP1200	PAP12	Surface Soil	Push-probe	June 2005	144 J	246 J		0.193			0.0247 J					
PASSP1200D	PAP12	Surface Soil	Push-probe	June 2005	111 J	177 J		0.117			0.0296					
PASSP1300	PAP13	Surface Soil	Push-probe	June 2005	16,400	197 J		<0.0213			<0.0213					
PASS0100		Surface Soil		October 2002				<0.43			<0.43	0.018 J	<0.43	<0.43	<0.43	<0.43
PASS0200		Surface Soil		October 2002				<0.34			<0.34	<0.34	<0.34	<0.34	0.032 J	<0.34
PASS0300		Surface Soil		October 2002				<3.8			<3.8	0.016 J	<0.38	<0.38	<0.38	<0.38
PASS0400		Surface Soil		October 2002				0.074 J			0.12 J	<0.36	0.88 J	0.94 J	0.84 J	0.67 J
PA01SS ¹		Surface Soil		January 2005				<2.38	<29.8		<2.38				2.88	<5.96
PA02SS ¹		Surface Soil		January 2006				<2.04	25.5 R		1.47 J				<2.04	<5.11
PA03SS ¹		Surface Soil		January 2007				3.09	27.3 R		3.45				<2.19	<5.47
PA04SS ¹		Surface Soil		January 2008				56.8	34.1 R		48.9				<2.73	<6.82
PA05SS ¹		Surface Soil		January 2009				<1.99	24.8 R		2.94				<1.99	<4.97
BKSS0100		Surface Soil		October 2002				<0.35			<2.66	<0.35	<0.35	<0.35	0.044 J	<0.35
BK01SS1		Surface Soil		January 2005				<2.66	<33.2						<2.66	14.1
North Stockpile Area																
NASSW0100	NAW01	Surface Soil	Monitoring Well	June 2005	NA	NA		NA			NA					
NASSW0400	NAW04	Surface Soil	Monitoring Well	June 2005	NA	NA		NA			NA					
NASSW0500	NAW05	Surface Soil	Monitoring Well	June 2005	NA	NA		NA			NA					
NASSW0600	NAW06	Surface Soil	Monitoring Well	June 2005	37.3 J	153 J		NA			NA					
NASSP0700	NAP07	Surface Soil	Push-probe	June 2005	8.13 J	79		NA			NA					
NASSP0800	NAP08	Surface Soil	Push-probe	June 2005	25.7 J	248		NA			NA					
NASSP0900	NAP09	Surface Soil	Push-probe	June 2005	NA	NA		NA			NA					
NASSP1000	NAP10	Surface Soil	Push-probe	June 2005	NA	NA		NA			NA					
NASS0100		Surface Soil		September 2002	490	1,900					<0.47	<0.47				
NASS0200		Surface Soil		September 2002	20	130					<0.35	0.024 J				
NASS0300		Surface Soil		September 2002	870	2,100					0.026 J	<0.37				
NASS0600		Surface Soil		September 2002	180	1,100					<0.43	<0.43				
NASS1200		Surface Soil		September 2002	24	200					<0.35	<0.35				
NAVEG		Surface Soil		October 2002							<0.36	<0.36				
BKSS0100		Surface Soil									<0.35	<0.35				
South Stockpile Area																
SASSW0200	SAW02	Surface Soil	Monitoring Well	June 2005	NA	NA		NA			<0.0228					
SASSW0300	SAW03	Surface Soil	Monitoring Well	June 2005	NA	NA		NA			<0.0224					
SASSW0300D	SAW03	Surface Soil	Monitoring Well	June 2005	NA	NA		NA			<0.0213					
SASSW0800	SAW08	Surface Soil	Monitoring Well	June 2005	7,750	352		NA			0.426					
SASS1600		Surface Soil		October 2002	66.0	410.0		0.062 J		0.025 J	0.062 J	0.19 J	0.2 J	0.2 J	0.16 J	0.22 J
SASS2400		Surface Soil		October 2002	110.0	370.0		<0.56		<0.56	<0.56	<0.56	<0.56	<0.56	<0.56	<0.56

SASS2600	Surface Soil	October 2002	140.0	280.0	0.051 J	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45
SASS2700	Surface Soil	October 2002	260.0	1,300.0	<0.37	<0.37	<0.37	<0.37	<0.37	0.021 J	0.026 J	<0.37	<0.37		
SASS3100	Surface Soil	October 2002	11.0	57.0	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36		
SASS3400	Surface Soil	October 2002	26.0	160.0	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4		
SASS3500	Surface Soil	October 2002	47.0	94.0	0.046 J	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39	<.39		
SASS3700	Surface Soil	October 2002	14.0	110.0	<0.35	<0.35	<0.35	<0.35	0.022 J	<0.35	0.026 J	<0.35	<0.35		
SASS4000	Surface Soil	October 2002	31.0	120.0	<0.41	<0.41	<0.41	<0.41	<0.41	<0.41	<0.41	<.41	<0.41		
SASS4100	Surface Soil	October 2002	16.0	48.0	<0.35	<0.35	<0.35	<0.35	<0.35	<0.35	<0.35	<0.35	<0.35		
SASS4200	Surface Soil	October 2002	20.0	160.0	0.013 J	<0.38	<0.38	0.035 J	0.033 J	0.038 J	0.097 J	0.035 J	<0.38		
SASS4700	Surface Soil	October 2002	48.0	210.0	0.091 J	<0.44	<0.44	<0.44	<0.44	<0.44	<0.44	<0.44	<0.44		
SAMOUND	Surface Soil	October 2002			<0.38	<3.8	<3.8	0.22 J	0.047 J	0.065 J	0.055 J	<0.38	<0.38		
SASPREAD	Surface Soil	October 2002			<0.37	<0.37	<0.37	<0.37	<0.37	<0.37	<0.37	<0.37	<0.37		
SA02SS ¹	Surface Soil	January 2005			1.04 J	<35.2	<2.81				<2.81	<7.03			
SA03SS ¹	Surface Soil	January 2005			2.36 J	<33.6	<2.68				<2.68	<6.71			
MTCA Method B Cleanup Level			460 ²	2,000	800	-	4,800	24,000	0.137 ca	0.137 ca	0.137 ca	-	0.137 ca		

Sample ID	Sample Location	Sample Type	Exploration Type	Date Collected	Semi-Volatile Organic Compounds													
					Benzoic Acid	Bis(2-ethylhexyl) phthalate	Butyl Benzyl Phthalate	Chrysene	Dibenzofuran	Di-n-butyl phthalate	Fluoranthene	Fluorene	Hexachloro benzene	Indeno(1,2,3-cd) pyrene	Naphthalene	PCP	Phenanthrene	Pyrene
Process Area																		
PASSP1100	PAP11	Surface Soil	Push-probe	June 2005		0.131 J				NA		0.0337			<0.025	4.23	0.046	<0.025
PASSP1200	PAP12	Surface Soil	Push-probe	June 2005		0.115 J				NA		<0.0261			0.0392	31.3	0.184	<0.0261
PASSP1200D	PAP12	Surface Soil	Push-probe	June 2005		<0.243				NA		0.116			0.0211 J	22.2	0.191	0.155
PASSP1300	PAP13	Surface Soil	Push-probe	June 2005		<0.213				NA		<0.0213			<0.0213	280	<0.0213	0.813
PASS0100		Surface Soil		October 2002		0.23 J		0.068 J	<0.43			<0.43	<0.43		<0.43	5.2	0.087 J	0.12 J
PASS0200		Surface Soil		October 2002		<0.34		<0.34	<0.34			<0.34	<0.34		<0.34	<2.1	<0.34	<0.34
PASS0300		Surface Soil		October 2002		0.28 J		0.1 J	<3.8			<3.8	<3.8		<3.8	130	<3.8	0.47
PASS0400		Surface Soil		October 2002		0.37		0.65	0.02 J			0.038 J	0.068 J		0.018 J	80	0.44	0.85
PA01SS ¹		Surface Soil		January 2005	71.5 R							<2.38	<2.38			25,500	<2.38	<2.38
PA02SS ¹		Surface Soil		January 2006	<61.3							<2.04	<2.04			597	<2.04	<2.04
PA03SS ¹		Surface Soil		January 2007	<65.6							5.26 JH	4.12			9,820	6.59	6.7
PA04SS ¹		Surface Soil		January 2008	44.3 J							28.7 JH	<2.73			19,700	58.5	72.1
PA05SS ¹		Surface Soil		January 2009	<59.6							2.49 JH	<1.99			640	<1.99	3.18
BKSS0100		Surface Soil		October 2002		<0.35		<0.35	<0.35			<0.35	<0.35		<0.35	<2.1	<0.35	<0.35
BK01SS1		Surface Soil		January 2005	79.7 R							<2.66	<2.66			<13.3	<2.66	<2.66
North Stockpile Area																		
NASSW0100	NAW01	Surface Soil	Monitoring Well	June 2005		0.0365 J				<0.114		NA			NA	0.0662 J	<0.0228	<0.0228
NASSW0400	NAW04	Surface Soil	Monitoring Well	June 2005		0.0252 J				<0.115		NA			NA	<0.0115	<0.0229	<0.0229
NASSW0500	NAW05	Surface Soil	Monitoring Well	June 2005		0.0333 J				<0.128		NA			NA	<0.128	<0.0255	<0.0255
NASSW0600	NAW06	Surface Soil	Monitoring Well	June 2005		<0.202				0.0227 J		NA			NA	0.129	<0.0202	<0.0202
NASSP0700	NAP07	Surface Soil	Push-probe	June 2005		0.0311				<0.0988		NA			NA	0.139	<0.0198	0.0142 J
NASSP0800	NAP08	Surface Soil	Push-probe	June 2005		<0.211				0.0198 J		NA			NA	0.21	0.0073 J	0.015 J
NASSP0900	NAP09	Surface Soil	Push-probe	June 2005		<0.207				0.0191 J		NA			NA	0.0331 J	<0.0207	<0.0207
NASSP1000	NAP10	Surface Soil	Push-probe	June 2005		0.0231 J				<0.108		NA			NA	<0.108	<0.0216	<0.0216
NASS0100		Surface Soil		September 2002		0.064 J		<0.47					<0.47			<2.9	<0.47	<0.47
NASS0200		Surface Soil		September 2002		0.057 J		0.018 J					<0.35			<2.1	<0.35	<0.35
NASS0300		Surface Soil		September 2002		0.14 J		0.11 J					0.019 J			2.6	0.087 J	0.18 J
NASS0600		Surface Soil		September 2002		0.05 J		<0.43					<0.43			<2.6	<0.43	<0.43
NASS1200		Surface Soil		September 2002		0.1 J		<0.35					<0.35			0.2 J	<0.35	<0.35
NAVEG		Surface Soil		October 2002		0.062 J		0.015 J					<0.36			0.24 J	<0.36	<0.36
BKSS0100		Surface Soil				<0.35		<0.35					<0.35			<2.1	<0.35	<0.35
South Stockpile Area																		
SASSW0200	SAW02	Surface Soil	Monitoring Well	June 2005		NA				NA		NA			NA	0.421	0.00785 J	NA
SASSW0300	SAW03	Surface Soil	Monitoring Well	June 2005		NA				NA		NA			NA	0.0861 J	<0.0224	NA
SASSW0300D	SAW03	Surface Soil	Monitoring Well	June 2005		NA				NA		NA			NA	0.0562 J	<0.0213	NA
SASSW0800	SAW08	Surface Soil	Monitoring Well	June 2005		NA				NA		NA			NA	73.5	2.97	NA
SASS1600		Surface Soil		October 2002		0.12 J		0.25 J	0.025 J	<0.48	0.46 J	0.036 J		0.16 J	0.11 J	0.26 J	0.61	0.59
SASS2400		Surface Soil		October 2002		<0.56		<0.56	<0.56	<0.56	<0.56	<0.56		<0.56	<0.56	<3.4	<0.56	<0.56

SASS2600		Surface Soil		October 2002		<0.45		<0.45	0.018 J	<0.45	<0.45	<0.45		<0.45	0.033 J	0.25 J	0.036 J	<0.45
SASS2700		Surface Soil		October 2002		0.075 J		0.02 J	<0.37	<0.37	<0.37	<0.37		<0.37	<0.37	1.2 J	0.023 J	0.022 J
SASS3100		Surface Soil		October 2002		<0.36		<0.36	<0.36	<0.36	<0.36	<0.36		<0.36	<0.36	<2.2	<0.36	<0.36
SASS3400		Surface Soil		October 2002		0.041 J		<0.4	<0.4	<0.4	<0.4	<0.4		<0.4	<0.34	0.9 J	0.036 J	0.018 J
SASS3500		Surface Soil		October 2002		0.032 J		0.023 J	<0.39	<0.39	<0.39	<0.39		<0.39	<0.39	4.2	0.16 J	0.035 J
SASS3700		Surface Soil		October 2002		0.028 J		<0.35	<0.35	<0.35	<0.35	<0.35		<0.35	<0.35	<2.1	<0.35	<0.35
SASS4000		Surface Soil		October 2002		0.046 J		<0.41	<0.41	<.41	<0.41	<0.41		<0.41	<0.41	0.44 J	<0.41	<0.41
SASS4100		Surface Soil		October 2002		0.029 J		<0.35	<0.35	<0.35	<0.35	<0.35		<0.35	<0.35	0.34 J	<0.35	<0.35
SASS4200		Surface Soil		October 2002		0.033 J		0.04 J	<0.38	<0.38	0.05 J	<0.38		0.054 J	<0.38	0.73 J	0.034 J	0.034 J
SASS4700		Surface Soil		October 2002		<0.44		<0.44	0.087 J	<0.44	0.019 J	<0.44		<0.44	0.33 J	<2.7	0.057 J	0.022J
SAMOUND		Surface Soil		October 2002		0.11 J		0.61	<3.8	<3.8	<3.8	<3.8		<0.38	<0.38	130	<3.8	1.4
SASPREAD		Surface Soil		October 2002		0.041 J		<0.37	<0.37	<0.37	<0.37	<0.37		<0.37	<0.37	0.75 J	0.014 J	0.014 J
SA02SS ¹		Surface Soil		January 2005	84.4 R							<2.81	<2.81			241	2.38 J	1.12 J
SA03SS ¹		Surface Soil		January 2005	80.5 R							<2.68	<2.68			1,930	7.12	<2.68
MTCA Method B Cleanup Level						71.4	16,000	0.137 ca	-	8,000	3,200	3,200	0.625 ca		1,600	2.50	-	2,400

Sample ID	Sample Location	Sample Type	Exploration Type	Date Collected	Volatile Organic Compounds (µg/kg)								NWTPH-Dx (mg/kg)		Dioxins/Furans ⁴ (µg/kg)	
					1,2,4-Trimethyl benzene	1,2,3-Trichloro propane	1,3,5-Trimethyl benzene	Acetone	Dichloromethane (Methylene Chloride)	m,p-Xylenes	Naphthalene	o-Xylene	Toluene	DRO	RRO	2,3,7,8-TCDD (TEQ 1987 EPA)	2,3,7,8-TCDD (1989 I-TEQ)
Process Area																
PASSP1100	PAP11	Surface Soil	Push-probe	June 2005												NA
PASSP1200	PAP12	Surface Soil	Push-probe	June 2005												NA
PASSP1200D	PAP12	Surface Soil	Push-probe	June 2005												NA
PASSP1300	PAP13	Surface Soil	Push-probe	June 2005												NA
PASS0100		Surface Soil		October 2002		<6.5	<26		<13	<6.5	<26			420	510	3.941 J
PASS0200		Surface Soil		October 2002		<5	<20		4.2 J	5 J	<20			7.9 J	16 J	0.03557 J
PASS0300		Surface Soil		October 2002		31	38 J		<57	<29	20 J			18,000	800	NA
PASS0400		Surface Soil		October 2002		<5.3	<21		<11	<5.3	<21			2,000	2,600	NA
PA01SS ¹		Surface Soil		January 2005												
PA02SS ¹		Surface Soil		January 2006												
PA03SS ¹		Surface Soil		January 2007												
PA04SS ¹		Surface Soil		January 2008												
PA05SS ¹		Surface Soil		January 2009												
BKSS0100		Surface Soil		October 2002		<5.1	<21		1 J	1.7 J	<21			<26	13 J	NA
BK01SS1		Surface Soil		January 2005												
North Stockpile Area																
NASSW0100	NAW01	Surface Soil	Monitoring Well	June 2005												0.012
NASSW0400	NAW04	Surface Soil	Monitoring Well	June 2005												0.0007
NASSW0500	NAW05	Surface Soil	Monitoring Well	June 2005												0.00005
NASSW0600	NAW06	Surface Soil	Monitoring Well	June 2005												0.03
NASSP0700	NAP07	Surface Soil	Push-probe	June 2005												0.05
NASSP0800	NAP08	Surface Soil	Push-probe	June 2005												0.078
NASSP0900	NAP09	Surface Soil	Push-probe	June 2005												0.022
NASSP1000	NAP10	Surface Soil	Push-probe	June 2005												0.026
NASS0100		Surface Soil		September 2002				<69	<14	<6.9		<6.9	<6.9	490 J	1,900 J	
NASS0200		Surface Soil		September 2002				<52	5.5 J	5.5		1.7 J	2.3 J	20 J	130	
NASS0300		Surface Soil		September 2002				<55	6.4 J	6		2.2 J	1.3 J	870	2,100	
NASS0600		Surface Soil		September 2002				<64	<13	<6.4		<6.4	<6.4	180	1,100	
NASS1200		Surface Soil		September 2002				<51	<11	4.8 J		2.3 J	0.95 J	24 J	200	
NAVEG		Surface Soil		October 2002				12 J	4.7 J	2 J		1.1 J	<5.5	320	3,100	
BKSS0100		Surface Soil						<51	1 J	1.7 J		<5.1	<5.1	<26	13 J	
South Stockpile Area																
SASSW0200	SAW02	Surface Soil	Monitoring Well	June 2005												0.043
SASSW0300	SAW03	Surface Soil	Monitoring Well	June 2005												NA
SASSW0300D	SAW03	Surface Soil	Monitoring Well	June 2005												NA
SASSW0800	SAW08	Surface Soil	Monitoring Well	June 2005												1.3
SASS1600		Surface Soil		October 2002				<70	<14	<7		<7	<7	66	410	NA
SASS2400		Surface Soil		October 2002				<83	<17	<8.3		<8.3	<8.3	110	370	NA

SASS2600	Surface Soil	October 2002			<67	2.1 J	<6.7		<6.7	<6.7	140 J	280 J		NA			
SASS2700	Surface Soil	October 2002			<55	<11	2.3 J		1.2 J	1.1 J	260	1,300		NA			
SASS3100	Surface Soil	October 2002			<53	1.7 J	5.8		1.8 J	1.5 J	11 J	57 J		NA			
SASS3400	Surface Soil	October 2002			<59	<12	<5.9		<5.9	<5.9	26 J	160		NA			
SASS3500	Surface Soil	October 2002			<57	1.2 J	<5.7		<5.7	<5.7	47	94 J		NA			
SASS3700	Surface Soil	October 2002			<51	1.4 J	9.2		2.8 J	2.7 J	14 J	110		NA			
SASS4000	Surface Soil	October 2002			<60	<12	5.4 J		1.8 J	1.7 J	31 J	120 J		NA			
SASS4100	Surface Soil	October 2002			<52	2.8 J	<5.2		<5.2	<5.2	16 J	48 J		NA			
SASS4200	Surface Soil	October 2002			<56	<12	<5.6		<5.6	<5.6	20 J	160		NA			
SASS4700	Surface Soil	October 2002			<66	<14	<6.6		<6.6	<6.6	48 J	210 J		0.1329 J			
SAMOUND	Surface Soil	October 2002			20 J	5.5 J	<5.7		<5.7	<5.7	6,000	710 J		NA			
SASPREAD	Surface Soil	October 2002			<55	2.8 J	<5.5		<5.5	<5.5	130 J	410 J		NA			
SA02SS ¹	Surface Soil	January 2005															
SA03SS ¹	Surface Soil	January 2005															
MTCB Method B Cleanup Level					-	143 ca	-	8,000,000	133,000 ca	160,000,000	1,600,000	160,000,000	160,000,000	2,000a	2,000a	0.000000005 ²	0.000000005 ²

Sample ID	Sample Location	Sample Type	Exploration Type	Date Collected	2,3,7,8-TCDD (TEQ 1997 WHO)	Inorganics (mg/kg)					Inorganics (mg/kg)							
						Antimony	Arsenic	Beryllium	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Silver	Thallium	Zinc
Process Area																		
PASSP1100	PAP11	Surface Soil	Push-probe	June 2005	NA													
PASSP1200	PAP12	Surface Soil	Push-probe	June 2005	NA													
PASSP1200D	PAP12	Surface Soil	Push-probe	June 2005	NA													
PASSP1300	PAP13	Surface Soil	Push-probe	June 2005	NA													
PASS0100		Surface Soil		October 2002	3.23 J	<10.7	4	0.82 J	1.17	42.5	35.6	46	0.02 J	34.6	<2.2	<2.2	0.2 J	2760
PASS0200		Surface Soil		October 2002	0.0349 J	<10.3	4.3	<1	<1	9	10.5	14.2 J	0.01 J	12.5	<2.6	<2.1	<2.6	44.2
PASS0300		Surface Soil		October 2002	NA	3.4 J	3.6	0.2 J	0.64 J	14.8	14.2	36.3	<0.02	10.8	<2.3	<2.3	<1.1	122
PASS0400		Surface Soil		October 2002	NA	2.5 J	3	0.35 J	0.81 J	14.5	22	25.7	0.02	16.7	<2.2	<0.9	<0.2	733
PA01SS ¹		Surface Soil		January 2005														
PA02SS ¹		Surface Soil		January 2006														
PA03SS ¹		Surface Soil		January 2007														
PA04SS ¹		Surface Soil		January 2008														
PA05SS ¹		Surface Soil		January 2009														
BKSS0100		Surface Soil		October 2002	NA	<10.3	4.5	0.34 J	0.38 J	16.2	15.7	9.4 J	<0.02	15.2	<1	<2.1	<1	46.7
BK01SS1		Surface Soil		January 2005														
North Stockpile Area																		
NASSW0100	NAW01	Surface Soil	Monitoring Well	June 2005	0.055													
NASSW0400	NAW04	Surface Soil	Monitoring Well	June 2005	0.0038													
NASSW0500	NAW05	Surface Soil	Monitoring Well	June 2005	0.0001													
NASSW0600	NAW06	Surface Soil	Monitoring Well	June 2005	0.12													
NASSP0700	NAP07	Surface Soil	Push-probe	June 2005	0.18													
NASSP0800	NAP08	Surface Soil	Push-probe	June 2005	0.30													
NASSP0900	NAP09	Surface Soil	Push-probe	June 2005	0.088													
NASSP1000	NAP10	Surface Soil	Push-probe	June 2005	0.089													
NASS0100		Surface Soil		September 2002		<11.7	4.2	0.3 J	0.8 J	8.8	23.1	<23.5	0.05	15.9	<2.5	<2.4	<2.9	66.7
NASS0200		Surface Soil		September 2002		<10.4	4.2	0.4 J	<1	13.5	12.6	16.7 J	0.03	12.7	<4.2	<2.1	0.6 J	67.5
NASS0300		Surface Soil		September 2002		<11	5.4	0.3 J	0.4 J	13.5	16.2	14.7 J	0.03	19.4	<4.4	<2.2	0.6 J	74.7
NASS0600		Surface Soil		September 2002		<10.8	5.9	0.4 J	0.68 J	15.3	25.5	13.7 J	0.04	23.1	<2.2	<2.2	<1.1	91.8
NASS1200		Surface Soil		September 2002		<10.4	3.7	0.29 J	0.64 J	14.9	29.7	10.7 J	0.04	28.6	<2.1	<2.1	<1	84
NAVEG		Surface Soil		October 2002		<10.9	2.9	0.3 J	0.6 J	10.6	15.2	12.3 J	0.02	15.5	<4.4	<2.2	0.5 J	78.2
BKSS0100		Surface Soil				<10.3	4.5	0.34 J	0.38 J	16.2	15.7	9.4 J	0.02	15.2	<1	<2.1	<1	46.7
South Stockpile Area																		
SASSW0200	SAW02	Surface Soil	Monitoring Well	June 2005	0.15													
SASSW0300	SAW03	Surface Soil	Monitoring Well	June 2005	NA													
SASSW0300D	SAW03	Surface Soil	Monitoring Well	June 2005	NA													
SASSW0800	SAW08	Surface Soil	Monitoring Well	June 2005	7.2													
SASS1600		Surface Soil		October 2002	NA	<10.3	2.3 J	0.4 J	<1	11.5	24.6	23.2	0.05	15.9	16.8	<2.1	<1	163
SASS2400		Surface Soil		October 2002	NA	<9.4	0.8 J	0.4 J	0.6 J	10.8	9.5	<18.7	0.03	11.9	7.4	<1.9	<0.9	237

SASS2600		Surface Soil		October 2002	NA	<11.2	<2.8	0.4 J	1 J	11.4	11.5	<22.4	0.03	12.7	<2.8	<2.2	<2.8	93.3
SASS2700		Surface Soil		October 2002	NA	<11	3.4	0.3 J	<1.1	11.5	14.1	<22	0.02	17	<4.4	<2.2	<1.1	81.1
SASS3100		Surface Soil		October 2002	NA	<10.6	<2.7	0.4 J	<1.1	11.4	8.8	13.2 J	0.02	10.1	<4.3	<2.1	<1.1	53.1
SASS3400		Surface Soil		October 2002	NA	<12	3.4	0.42 J	0.75 J	14.5	17.4	18 J	0.03	16.4	<2.4	<2.4	<1.2	80.9
SASS3500		Surface Soil		October 2002	NA	<11.6	3.4	0.5 J	0.9 J	15	14.6	<23.2	0.03	16.4	<4.6	<2.3	<1.2	72.6
SASS3700		Surface Soil		October 2002	NA	<10.3	4.9	0.3 J	<1	20.1	19.1	56.8	0.02	19	<4.1	<2.1	0.5 J	77.5
SASS4000		Surface Soil		October 2002	NA	<12.4	2.1	0.55 J	0.88 J	16.3	14.2	18.7 J	0.04	13.8	<2.5	<2.5	<1.2	92.9
SASS4100		Surface Soil		October 2002	NA	<10.5	2.6 J	0.3 J	<1.1	9.8	6.4	<21	0.01 J	12.3	<4.2	<2.1	<1.1	48.9
SASS4200		Surface Soil		October 2002	NA	<11.2	2.8	0.36 J	0.67 J	12.7	13	14.3 J	0.02	13.1	<2.2	<2.2	<1.1	72.4
SASS4700		Surface Soil		October 2002	0.130 J	<11	8	0.4 J	0.6 J	10.8	18	<22	0.03	13	<2.5	<2.2	<2.8	75.8
SAMOUND		Surface Soil		October 2002	NA	<11.3	4.2	0.5 J	<1.1	17.6	22.4	14.3 J	0.02	21.3	<4.5	<2.3	0.6 J	80.7
SASPREAD		Surface Soil		October 2002	NA	6.4 J	4.8	1.1 J	1 J	49.4	40.9	30	0.03	47.7	0.7 J	<2.2	0.6 J	130
SA02SS ¹		Surface Soil		January 2005														
SA03SS ¹		Surface Soil		January 2005														
MTCA Method B Cleanup Level					0.00000005 ²	-	24	160	80	2,000(crIII)	2,960	1,000a	24	1,600	400	400	5.6	24,000

Notes:

¹Sample Concentration compared to background sample BK01SS to determine if compound concentration is elevated.

²Soil, Method B, accounting for ecological risk, unrestricted land use

Values reported on a dry-weight basis

Shaded and **bolded** analytical results indicate concentration exceeds state cleanup criterion.

J = The associated numerical value is an estimated quantity because the reported concentrations were less than the required detection limits or quality control criteria were not met.

R = The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

JH = The associated numerical value is an estimated quantity and is biased high because quality control criteria were not met.

µg/kg = microgram per kilogram; mg/kg = milligram per kilogram

Table A-2
Subsurface Soil Chemical Analytical Results¹
 Colville Post and Poles
 Stevens County, Washington

Sample ID	Sample Location	Sample Depth (feet bgs)	Sample Type	Exploration Type	Date Collected	Petroleum Hydrocarbons ² (mg/kg)		Semi-Volatile Organic Compounds ³ (mg/kg)			Semi-Volatile Organic Compounds ³ (mg/kg)		
						DRPH	ORPH	1,2-Dichlorobenzene	2,4,5-Trichlorophenol	2-methylnaphthalene	Acenaphthene	Anthracene	Benz(a)anthracene
Process Area													
PASBP1109	PAP11	9	Subsurface Soil	Push-probe	June 2005	NA	NA			NA		NA	
PASBP1111	PAP11	11	Subsurface Soil	Push-probe	June 2005	5,590	323			NA		NA	
PASBP1111D	PAP11	11	Subsurface Soil	Push-probe	June 2005	5,820	225 J			NA		NA	
PASBP1204	PAP12	4	Subsurface Soil	Push-probe	June 2005	9.39 J	<76.7			NA		NA	
PASBP1204D	PAP12	4	Subsurface Soil	Push-probe	June 2005	<36.9	<73.8			NA		NA	
PASBP1208	PAP12	8	Subsurface Soil	Push-probe	June 2005	NA	NA			NA		NA	
PASBP1306	PAP13	6	Subsurface Soil	Push-probe	June 2005	18.5 J	<131			NA		NA	
PASBP1308	PAP13	8	Subsurface Soil	Push-probe	June 2005	NA	NA			NA		NA	
PASB0701	PAB-7	1	Subsurface Soil	Push-probe	October 2002	4.5 J	11 J	<0.47	<0.47	<0.47	<0.47	<0.47	<0.47
PASB0711	PAB-7	11	Subsurface Soil	Push-probe	October 2002	6,800 J	230 J	0.025 J	<3.7 UJ	19 J	2.3 J	1 J	0.085 J
PASB0721	PAB-7	21	Subsurface Soil	Push-probe	October 2002	85	10 J	<0.36	<0.36	0.089 J	0.047 J	0.024 J	<0.36
PASB0801	PAB-8	1	Subsurface Soil	Push-probe	October 2002	13 J	58 J	<0.46	<0.46	<0.46	<0.46	<0.46	<0.46
PASB0814	PAB-8	14	Subsurface Soil	Push-probe	October 2002	20 J	35 J	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36
PASB0906	PAB-9	6	Subsurface Soil	Push-probe	October 2002	450 J	140 J	<0.41	<0.41	<0.41	<0.41	<0.41	<0.41
PASB0908	PAB-9	8	Subsurface Soil	Push-probe	October 2002	18 J	12 J	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38
PASB1001	PAB-10	1	Subsurface Soil	Push-probe	October 2002	15,000 J	960 J	<0.42	<4.2	19	4.2	<4.2	0.17 J
PASB1006	PAB-10	6	Subsurface Soil	Push-probe	October 2002	6,800 J	550	0.047 J	<5.3	42	5.5	1.6	0.18 J
PASB1012	PAB-10	12	Subsurface Soil	Push-probe	October 2002	440	40 J	<0.38	0.025 J	1.9	0.33 J	0.089 J	<0.38
PASB2106	PAB-21	6	Subsurface Soil	Push-probe	October 2002	190	47 J	<0.41	<0.41	<0.41	<0.41	<0.41	<0.41
PASB2111	PAB-21	11	Subsurface Soil	Push-probe	October 2002	<27	<110	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36
PASB2212	PAB-22	12	Subsurface Soil	Push-probe	October 2002	17 J	84 J	<0.43	<0.43	<0.43	<0.43	<0.43	<0.43
PASB2221	PAB-22	21	Subsurface Soil	Push-probe	October 2002	10 J	20 J	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36
North Stockpile Area													
NASBP0804	NAP08	4	Subsurface Soil	Push-probe	June 2005	NA	NA			NA		NA	
South Stockpile Area													
SASBH0501	SAH05	1	Subsurface Soil	Push-probe	June 2005	90.2 J	267 J			NA		NA	
SASBH0604	SAH06	4	Subsurface Soil	Push-probe	June 2005	NA	NA			NA		NA	
SASBH0704	SAH07	4	Subsurface Soil	Push-probe	June 2005	17.1 J	69.4			NA		NA	
SASBH0801	SAH01	1	Subsurface Soil	Push-probe	June 2005	89 J	193 J			NA		NA	
SASBP0102	SAP01	2	Subsurface Soil	Push-probe	June 2005	NA	NA			NA		NA	
SASBP0104	SAP01	4	Subsurface Soil	Push-probe	June 2005	NA	NA			NA		NA	
SASBP0204	SAP02	4	Subsurface Soil	Push-probe	June 2005	NA	NA			NA		NA	
SASBP0302	SAP03	2	Subsurface Soil	Push-probe	June 2005	NA	NA			NA		NA	
SASBP0401	SAP04	1	Subsurface Soil	Push-probe	June 2005	NA	NA			NA		NA	
SASBP0505	SAP05	5	Subsurface Soil	Push-probe	June 2005	NA	NA			NA		NA	
SASBP0604	SAP06	4	Subsurface Soil	Push-probe	June 2005	NA	NA			NA		NA	
SASBW0704	SAW07	4	Subsurface Soil	Monitoring Well	June 2005	NA	NA			NA		NA	

Sample ID	Sample Location	Sample Depth (feet bgs)	Sample Type	Exploration Type	Date Collected	Petroleum Hydrocarbons ² (mg/kg)		Semi-Volatile Organic Compounds ³ (mg/kg)			Semi-Volatile Organic Compounds ³ (mg/kg)		
						DRPH	ORPH	1,2-Dichlorobenzene	2,4,5-Trichlorophenol	2-methylnaphthalene	Acenaphthene	Anthracene	Benz(a)anthracene
SASBW0804	SAW08	4	Subsurface Soil	Monitoring Well	June 2005	NA	NA			NA		NA	
SASBW0806	SAW08	6	Subsurface Soil	Monitoring Well	June 2005	NA	NA			NA		NA	
SASB1304	SAB-13	4	Subsurface Soil	Push-probe	October 2002	23 J	120 J			<0.47		<0.47	<0.47
SASB1402	SAB-14	2	Subsurface Soil	Push-probe	October 2002	21 J	70 J			<0.42		<0.42	0.035 J
SASB1801	SAB-18	1	Subsurface Soil	Push-probe	October 2002	22 J	65 J			<0.36		<0.36	<0.36
SASB1901	SAB-19	1	Subsurface Soil	Push-probe	October 2002	26 J	48 J			0.02 J		0.04 J	<0.52
SASB2001	SAB-20	1	Subsurface Soil	Push-probe	October 2002	11 J	31 J			<0.36		<0.36	<0.36
MTCA Method B Cleanup Level						460	2,000	7,200	8,000	--	4,800	24,000	0.137 ca
EPA Region 9 PRG						--	--	370	62,000	--	29,000	100,000	2.10

Sample ID	Sample Location	Sample Depth (feet bgs)	Sample Type	Exploration Type	Date Collected	Semi-Volatile Organic Compounds ³ (mg/kg)								Di-n-butyl phthalate	Fluoranthene
						Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Bis(2-ethylhexyl) phthalate	Butyl Benzyl Phthalate	Chrysene	Dibenzofuran			
Process Area															
PASBP1109	PAP11	9	Subsurface Soil	Push-probe	June 2005				NA				NA		
PASBP1111	PAP11	11	Subsurface Soil	Push-probe	June 2005				NA				NA		
PASBP1111D	PAP11	11	Subsurface Soil	Push-probe	June 2005				NA				NA		
PASBP1204	PAP12	4	Subsurface Soil	Push-probe	June 2005				NA				NA		
PASBP1204D	PAP12	4	Subsurface Soil	Push-probe	June 2005				NA				NA		
PASBP1208	PAP12	8	Subsurface Soil	Push-probe	June 2005				NA				NA		
PASBP1306	PAP13	6	Subsurface Soil	Push-probe	June 2005				NA				NA		
PASBP1308	PAP13	8	Subsurface Soil	Push-probe	June 2005				NA				NA		
PASB0701	PAB-7	1	Subsurface Soil	Push-probe	October 2002	<0.47	<0.47	<0.47	0.037 J		<0.47	<0.47	<0.47	<0.47	
PASB0711	PAB-7	11	Subsurface Soil	Push-probe	October 2002	<0.37 UJ	<0.37 UJ	<0.37 UJ	0.29 J		0.16 J	1.7 J	<3.7 UJ	0.26 J	
PASB0721	PAB-7	21	Subsurface Soil	Push-probe	October 2002	<0.36	<0.36	<0.36	0.72		<0.36	0.03 J	<0.36	<0.36	
PASB0801	PAB-8	1	Subsurface Soil	Push-probe	October 2002	<0.46	<0.46	<0.46	0.045 J		<0.46	<0.46	<0.46	<0.46	
PASB0814	PAB-8	14	Subsurface Soil	Push-probe	October 2002	<0.36	<0.36	<0.36	0.084 J		<0.36	<0.36	<0.36	<0.36	
PASB0906	PAB-9	6	Subsurface Soil	Push-probe	October 2002	<0.41	<0.41	<0.41	0.07 J		0.057 J	<0.41	0.12 J	<0.41	
PASB0908	PAB-9	8	Subsurface Soil	Push-probe	October 2002	<0.38	<0.38	<0.38	0.2 J		<0.38	<0.38	<0.38	<0.38	
PASB1001	PAB-10	1	Subsurface Soil	Push-probe	October 2002	0.046 J	0.057 J	0.027 J	0.32 J		0.78	4.2	<4.2	0.5	
PASB1006	PAB-10	6	Subsurface Soil	Push-probe	October 2002	0.047 J	0.048 J	<0.53	0.36 J		0.39 J	4 J	<0.53	0.29 J	
PASB1012	PAB-10	12	Subsurface Soil	Push-probe	October 2002	<0.38	<0.38	<0.38	0.12 J		0.029 J	0.23 J	<0.38	<0.38	
PASB2106	PAB-21	6	Subsurface Soil	Push-probe	October 2002	<0.41	<0.41	<0.41	0.063 J		<0.41	<0.41	<0.41	<0.41	
PASB2111	PAB-21	11	Subsurface Soil	Push-probe	October 2002	<0.36	<0.36	<0.36	0.025 J		<0.36	<0.36	<0.36	<0.36	
PASB2212	PAB-22	12	Subsurface Soil	Push-probe	October 2002	<0.43	0.034 J	<0.43	0.11 J		<0.43	<0.43	<0.43	<0.43	
PASB2221	PAB-22	21	Subsurface Soil	Push-probe	October 2002	0.039 J	<0.36	0.03 J	0.089 J		<0.36	<0.36	<0.36	<0.36	
North Stockpile Area															
NASBP0804	NAP08	4	Subsurface Soil	Push-probe	June 2005				NA				NA		
South Stockpile Area															
SASBH0501	SAH05	1	Subsurface Soil	Push-probe	June 2005				NA				NA		
SASBH0604	SAH06	4	Subsurface Soil	Push-probe	June 2005				NA				NA		
SASBH0704	SAH07	4	Subsurface Soil	Push-probe	June 2005				NA				NA		
SASBH0801	SAH01	1	Subsurface Soil	Push-probe	June 2005				NA				NA		
SASBP0102	SAP01	2	Subsurface Soil	Push-probe	June 2005				NA				NA		
SASBP0104	SAP01	4	Subsurface Soil	Push-probe	June 2005				NA				NA		
SASBP0204	SAP02	4	Subsurface Soil	Push-probe	June 2005				NA				NA		
SASBP0302	SAP03	2	Subsurface Soil	Push-probe	June 2005				NA				NA		
SASBP0401	SAP04	1	Subsurface Soil	Push-probe	June 2005				NA				NA		
SASBP0505	SAP05	5	Subsurface Soil	Push-probe	June 2005				NA				NA		
SASBP0604	SAP06	4	Subsurface Soil	Push-probe	June 2005				NA				NA		
SASBW0704	SAW07	4	Subsurface Soil	Monitoring Well	June 2005				NA				NA		

Sample ID	Sample Location	Sample Depth (feet bgs)	Sample Type	Exploration Type	Date Collected	Semi-Volatile Organic Compounds ³ (mg/kg)							Dibenzofuran	Di-n-butyl phthalate	Fluoranthene
						Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Bis(2-ethylhexyl) phthalate	Butyl Benzyl Phthalate	Chrysene				
SASBW0804	SAW08	4	Subsurface Soil	Monitoring Well	June 2005				NA				NA		
SASBW0806	SAW08	6	Subsurface Soil	Monitoring Well	June 2005				NA				NA		
SASB1304	SAB-13	4	Subsurface Soil	Push-probe	October 2002	<0.47	<0.47		0.098 J	<0.47	<0.47			<0.47	
SASB1402	SAB-14	2	Subsurface Soil	Push-probe	October 2002	0.025 J	0.027 J		0.15 J	0.021 J	0.033 J			0.033 J	
SASB1801	SAB-18	1	Subsurface Soil	Push-probe	October 2002	<0.36	<0.36		0.045 J	<0.36	<0.36			<0.36	
SASB1901	SAB-19	1	Subsurface Soil	Push-probe	October 2002	0.038 J	<0.52		0.28 J	<0.52	0.1 J			<0.52	
SASB2001	SAB-20	1	Subsurface Soil	Push-probe	October 2002	<0.36	<0.36		<0.36	<0.36	<0.36			<0.36	
MTCA Method B Cleanup Level						0.137 ca	-	0.137 ca	71.4	16,000	0.137 ca	-	8,000	3,200	
EPA Region 9 PRG						2.10	-	21	120	100,000	210	3,100	62,000	22,000	

Sample ID	Sample Location	Sample Depth (feet bgs)	Sample Type	Exploration Type	Date Collected	Semi-Volatile Organic Compounds ³ (mg/kg)										
						Fluorene	Isophorone	Naphthalene	PCP	Phenanthrene	Pyrene	1,2,4-Trimethylbenzene	1,2-Dichlorobenzene	1,3,5-Trimethylbenzene	1,4-Dichlorobenzene	2-Butanone (MEK)
Process Area																
PASBP1109	PAP11	9	Subsurface Soil	Push-probe	June 2005	NA		NA	0.0385 J	NA	NA					
PASBP1111	PAP11	11	Subsurface Soil	Push-probe	June 2005	NA		NA	24.2	NA	NA					
PASBP1111D	PAP11	11	Subsurface Soil	Push-probe	June 2005	NA		NA	25.7	NA	NA					
PASBP1204	PAP12	4	Subsurface Soil	Push-probe	June 2005	NA		NA	0.498	NA	NA					
PASBP1204D	PAP12	4	Subsurface Soil	Push-probe	June 2005	NA		NA	0.187	NA	NA					
PASBP1208	PAP12	8	Subsurface Soil	Push-probe	June 2005	NA		NA	0.0201 J	NA	NA					
PASBP1306	PAP13	6	Subsurface Soil	Push-probe	June 2005	NA		NA	0.126 J	NA	NA					
PASBP1308	PAP13	8	Subsurface Soil	Push-probe	June 2005	NA		NA	0.0278 J	NA	NA					
PASB0701	PAB-7	1	Subsurface Soil	Push-probe	October 2002	<0.47	<0.47	<0.47	<2.9	<0.47	<0.47	<28	<6.9	<28	<6.9	<28
PASB0711	PAB-7	11	Subsurface Soil	Push-probe	October 2002	4.5 J	<0.37 UJ	2.3 J	50 J	10 J	1.2 J	6400	380 J	1800 J	110 J	- R
PASB0721	PAB-7	21	Subsurface Soil	Push-probe	October 2002	0.091 J	<0.36	<0.36	0.77 J	0.25 J	0.035 J	<22	<5.4	<22	<5.4	<22
PASB0801	PAB-8	1	Subsurface Soil	Push-probe	October 2002	<0.46	<0.46	<0.46	<2.8	<0.46	<0.46	<28	<6.8	<28	<6.8	36
PASB0814	PAB-8	14	Subsurface Soil	Push-probe	October 2002	<0.36	<0.36	<0.36	<2.2	<0.36	<0.36	<22	<5.3	<22	<5.3	<22
PASB0906	PAB-9	6	Subsurface Soil	Push-probe	October 2002	<0.41	<0.41	<0.41	0.36 J	<0.41	0.18 J	<25	<6.1	<25	<6.1	<25
PASB0908	PAB-9	8	Subsurface Soil	Push-probe	October 2002	<0.38	<0.38	<0.38	<2.3	<0.38	<0.38	<22	<5.5	<22	<5.5	<22
PASB1001	PAB-10	1	Subsurface Soil	Push-probe	October 2002	14	<0.42	1.8	410	18	1.3	<25	<6.1	<25	<6.1	<25
PASB1006	PAB-10	6	Subsurface Soil	Push-probe	October 2002	9.3	0.88	1.7	500 J	9.2	1.2	110 J	12 J	34 J	7.8 J	<160
PASB1012	PAB-10	12	Subsurface Soil	Push-probe	October 2002	0.51	<0.38	<0.38	15	1	0.17 J	360 J	47 J	130 J	27 J	- R
PASB2106	PAB-21	6	Subsurface Soil	Push-probe	October 2002	<0.41	<0.41	<0.41	<2.5	<0.41	<0.41	<25	<6.1	<25	<6.1	26
PASB2111	PAB-21	11	Subsurface Soil	Push-probe	October 2002	<0.36	<0.36	<0.36	<2.2	<0.36	<0.36	<22	<5.4	<22	<5.4	<22
PASB2212	PAB-22	12	Subsurface Soil	Push-probe	October 2002	<0.43	<0.43	<0.43	<2.6	<0.43	<0.43	<26	<6.5	<26	<6.5	<26
PASB2221	PAB-22	21	Subsurface Soil	Push-probe	October 2002	<0.36	<0.36	<0.36	0.47 J	<0.36	<0.36	<22	<5.4	<22	<5.4	<22
North Stockpile Area																
NASBP0804	NAP08	4	Subsurface Soil	Push-probe	June 2005	NA		NA	<0.112	NA	NA					
South Stockpile Area																
SASBH0501	SAH05	1	Subsurface Soil	Push-probe	June 2005	NA		NA	10.3	NA	NA					
SASBH0604	SAH06	4	Subsurface Soil	Push-probe	June 2005	NA		NA	0.235	NA	NA					
SASBH0704	SAH07	4	Subsurface Soil	Push-probe	June 2005	NA		NA	1.39	NA	NA					
SASBH0801	SAH01	1	Subsurface Soil	Push-probe	June 2005	NA		NA	5.8	NA	NA					
SASBP0102	SAP01	2	Subsurface Soil	Push-probe	June 2005	NA		NA	0.0524 J	NA	NA					
SASBP0104	SAP01	4	Subsurface Soil	Push-probe	June 2005	NA		NA	<0.102	NA	NA					
SASBP0204	SAP02	4	Subsurface Soil	Push-probe	June 2005	NA		NA	<0.113	NA	NA					
SASBP0302	SAP03	2	Subsurface Soil	Push-probe	June 2005	NA		NA	20.5	NA	NA					
SASBP0401	SAP04	1	Subsurface Soil	Push-probe	June 2005	NA		NA	0.056 J	NA	NA					
SASBP0505	SAP05	5	Subsurface Soil	Push-probe	June 2005	NA		NA	<0.116	NA	NA					
SASBP0604	SAP06	4	Subsurface Soil	Push-probe	June 2005	NA		NA	0.0347 J	NA	NA					
SASBW0704	SAW07	4	Subsurface Soil	Monitoring Well	June 2005	NA		NA	<0.109	NA	NA					

Sample ID	Sample Location	Sample Depth (feet bgs)	Sample Type	Exploration Type	Date Collected	Semi-Volatile Organic Compounds ³ (mg/kg)										
						Fluorene	Isophorone	Naphthalene	PCP	Phenanthrene	Pyrene	1,2,4-Trimethylbenzene	1,2-Dichlorobenzene	1,3,5-Trimethylbenzene	1,4-Dichlorobenzene	2-Butanone (MEK)
SASBW0804	SAW08	4	Subsurface Soil	Monitoring Well	June 2005	NA		NA	<0.112	NA	NA					
SASBW0806	SAW08	6	Subsurface Soil	Monitoring Well	June 2005	NA		NA	<0.123	NA	NA					
SASB1304	SAB-13	4	Subsurface Soil	Push-probe	October 2002				<2.9	<0.47	<0.47	<28				18 J
SASB1402	SAB-14	2	Subsurface Soil	Push-probe	October 2002				<2.6	<0.42	0.031 J	<26				19 J
SASB1801	SAB-18	1	Subsurface Soil	Push-probe	October 2002				<2.2	<.36	<0.36	1.5 J				31
SASB1901	SAB-19	1	Subsurface Soil	Push-probe	October 2002				20	0.13 J	0.13 J	<32				<32
SASB2001	SAB-20	1	Subsurface Soil	Push-probe	October 2002				<2.2	<0.36	<0.36	<22				<22
MTCA Method B Cleanup Level						3,200	1,050 ca	1,600	8.33	--	2,400	--	7,200,000	--	41,700 ca	48,000,000
EPA Region 9 PRG						26,000	1,800	190	9	--	29,000	170	370	70	8	27,000

Sample ID	Sample Location	Sample Depth (feet bgs)	Sample Type	Exploration Type	Date Collected	4-	Acetone	Carbon	Dichloromethane	Ethylbenzene	Isopropylbenzene	m,p-Xylenes	Naphthalene	n-Butylbenzene	n-Propylbenzene	o-Xylene	sec-Butylbenzene
						Isopropyltoluene		Disulfide	(Methylene Chloride)								
Process Area																	
PASBP1109	PAP11	9	Subsurface Soil	Push-probe	June 2005												
PASBP1111	PAP11	11	Subsurface Soil	Push-probe	June 2005												
PASBP1111D	PAP11	11	Subsurface Soil	Push-probe	June 2005												
PASBP1204	PAP12	4	Subsurface Soil	Push-probe	June 2005												
PASBP1204D	PAP12	4	Subsurface Soil	Push-probe	June 2005												
PASBP1208	PAP12	8	Subsurface Soil	Push-probe	June 2005												
PASBP1306	PAP13	6	Subsurface Soil	Push-probe	June 2005												
PASBP1308	PAP13	8	Subsurface Soil	Push-probe	June 2005												
PASB0701	PAB-7	1	Subsurface Soil	Push-probe	October 2002	<28	<69	<6.9	3.3 J	<6.9	<28	<6.9	<28	<28	<28	<6.9	<28
PASB0711	PAB-7	11	Subsurface Soil	Push-probe	October 2002	820 J	- R	<550	270 J	200 J	240 J	750	13,000	2100 J	490 J	650	460 J
PASB0721	PAB-7	21	Subsurface Soil	Push-probe	October 2002	<22	16 J	<5.4	1.7 J	<5.4	<22	<5.4	1.7 J	<22	<22	<5.4	<22
PASB0801	PAB-8	1	Subsurface Soil	Push-probe	October 2002	<28	180	<6.8	8 J	<6.8	<28	<6.8	<28	<28	<28	<6.8	<28
PASB0814	PAB-8	14	Subsurface Soil	Push-probe	October 2002	<22	16 J	<5.3	4.7 J	<5.3	<22	<5.3	<22	<22	<22	<5.3	<22
PASB0906	PAB-9	6	Subsurface Soil	Push-probe	October 2002	<25	15 J	<6.1	<13	<6.1	<25	<6.1	<25	<25	<25	<6.1	<25
PASB0908	PAB-9	8	Subsurface Soil	Push-probe	October 2002	<22	14 J	<5.5	1.4 J	<5.5	<22	<5.5	<22	<22	<22	<5.5	<22
PASB1001	PAB-10	1	Subsurface Soil	Push-probe	October 2002	<25	<61	<6.1	2.2 J	<6.1	<25	<6.1	<25	<25	<25	<6.1	<25
PASB1006	PAB-10	6	Subsurface Soil	Push-probe	October 2002	18 J	170 J	12 J	49 J	<38	<160	15 J	200	<160	<160	8.9 J	<160
PASB1012	PAB-10	12	Subsurface Soil	Push-probe	October 2002	58 J	- R	<120	85 J	<120	<450	<120	710	160 J	<450	22 J	<450
PASB2106	PAB-21	6	Subsurface Soil	Push-probe	October 2002	<25	140	<6.1	<13	<6.1	<25	4.7 J	<25	<25	<25	1.5 J	<25
PASB2111	PAB-21	11	Subsurface Soil	Push-probe	October 2002	<22	19 J	<5.4	<11	<5.4	<22	<5.4	<22	<22	<22	<5.4	<22
PASB2212	PAB-22	12	Subsurface Soil	Push-probe	October 2002	<26	<65	<6.5	<13	<6.5	<26	2.6 J	<26	<26	<26	0.95 J	<26
PASB2221	PAB-22	21	Subsurface Soil	Push-probe	October 2002	<22	16 J	<5.4	<11	<5.4	<22	<5.4	<22	<22	<22	<5.4	<22
North Stockpile Area																	
NASBP0804	NAP08	4	Subsurface Soil	Push-probe	June 2005												
South Stockpile Area																	
SASBH0501	SAH05	1	Subsurface Soil	Push-probe	June 2005												
SASBH0604	SAH06	4	Subsurface Soil	Push-probe	June 2005												
SASBH0704	SAH07	4	Subsurface Soil	Push-probe	June 2005												
SASBH0801	SAH01	1	Subsurface Soil	Push-probe	June 2005												
SASBP0102	SAP01	2	Subsurface Soil	Push-probe	June 2005												
SASBP0104	SAP01	4	Subsurface Soil	Push-probe	June 2005												
SASBP0204	SAP02	4	Subsurface Soil	Push-probe	June 2005												
SASBP0302	SAP03	2	Subsurface Soil	Push-probe	June 2005												
SASBP0401	SAP04	1	Subsurface Soil	Push-probe	June 2005												
SASBP0505	SAP05	5	Subsurface Soil	Push-probe	June 2005												
SASBP0604	SAP06	4	Subsurface Soil	Push-probe	June 2005												
SASBW0704	SAW07	4	Subsurface Soil	Monitoring Well	June 2005												

Sample ID	Sample Location	Sample Depth (feet bgs)	Sample Type	Exploration Type	Date Collected	4-		Carbon	Dichloromethane								sec-
						Isopropyltoluene	Acetone	Disulfide	(Methylene Chloride)	Ethylbenzene	Isopropylbenzene	m,p-Xylenes	Naphthalene	n-Butylbenzene	n-Propylbenzene	o-Xylene	Butylbenzene
SASBW0804	SAW08	4	Subsurface Soil	Monitoring Well	June 2005												
SASBW0806	SAW08	6	Subsurface Soil	Monitoring Well	June 2005												
SASB1304	SAB-13	4	Subsurface Soil	Push-probe	October 2002		85		<14	<6.9		3.1 J				1.1 J	
SASB1402	SAB-14	2	Subsurface Soil	Push-probe	October 2002		140		<13	<6.3		<6.3				<6.3	
SASB1801	SAB-18	1	Subsurface Soil	Push-probe	October 2002		520		20	0.92 J		21				5.5	
SASB1901	SAB-19	1	Subsurface Soil	Push-probe	October 2002		<79		16	<7.9		<7.9				<7.9	
SASB2001	SAB-20	1	Subsurface Soil	Push-probe	October 2002		<55		11	<5.5		3.7 J				1.1 J	
MTCA Method B Cleanup Level						--	8,000,000	8,000,000	133,000 ca	8,000,000	--	160,000,000	1,600,000	--	--	160,000,000	--
EPA Region 9 PRG						--	6,000	720	21	20	240	--	190	240	240	420	220

Sample ID	Sample Location	Sample Depth (feet bgs)	Sample Type	Exploration Type	Date Collected	Dioxins/Furans ⁴ (µg/kg)				Inorganics (mg/kg)										
						PCE	Toluene	2,3,7,8-TCDD (TEQ 1987 EPA)	2,3,7,8-TCDD (1989 I-TEQ)	2,3,7,8-TCDD (TEQ 1997 WHO)	2,3,7,8-TCDD (1998 WHO TEQ)	Antimony	Arsenic	Beryllium	Cadmium	Chromium	Copper	Lead	Mercury	Nickel
Process Area																				
PASBP1109	PAP11	9	Subsurface Soil	Push-probe	June 2005			NA		NA										
PASBP1111	PAP11	11	Subsurface Soil	Push-probe	June 2005			NA		NA										
PASBP1111D	PAP11	11	Subsurface Soil	Push-probe	June 2005			NA		NA										
PASBP1204	PAP12	4	Subsurface Soil	Push-probe	June 2005			NA		NA										
PASBP1204D	PAP12	4	Subsurface Soil	Push-probe	June 2005			NA		NA										
PASBP1208	PAP12	8	Subsurface Soil	Push-probe	June 2005			NA		NA										
PASBP1306	PAP13	6	Subsurface Soil	Push-probe	June 2005			NA		NA										
PASBP1308	PAP13	8	Subsurface Soil	Push-probe	June 2005			NA		NA										
PASB0701	PAB-7	1	Subsurface Soil	Push-probe	October 2002	1.9 J	<6.9		NA		NA	<11.7	3.2	0.49 J	0.71 J	19.6	24.4	13.8 J	0.01 J	24.4
PASB0711	PAB-7	11	Subsurface Soil	Push-probe	October 2002	<550	<550		NA		NA	6.4 J	3.7	<1.1	0.5 J	11.7	9.2	<22.3	0.02 J	14.4
PASB0721	PAB-7	21	Subsurface Soil	Push-probe	October 2002	<5.4	<5.4		NA		NA	<10.9	8.3	0.12 J	<1.09	7.5	5.7	8.6 J	<0.01	10.3
PASB0801	PAB-8	1	Subsurface Soil	Push-probe	October 2002	<6.8	<6.8		NA		NA	<11.4	5.5	0.6 J	<1.1	18.2	31.9	18.1 J	0.03	28.1
PASB0814	PAB-8	14	Subsurface Soil	Push-probe	October 2002	<5.3	<5.3		NA		NA	<10.6	4.5	<1.1	0.4 J	6.3	7.1	<21.3	0.01 J	10
PASB0906	PAB-9	6	Subsurface Soil	Push-probe	October 2002	<6.1	<6.1		NA		NA	8 J	3.9	0.3 J	<1.2	11	13.9	<24.4	0.01 J	15
PASB0908	PAB-9	8	Subsurface Soil	Push-probe	October 2002	<5.5	<5.5		NA		NA	<11.3	1.8 J	0.16 J	<1.13	10.2	9.4	7.9 J	<0.02	11.4
PASB1001	PAB-10	1	Subsurface Soil	Push-probe	October 2002	<6.1	<6.1		11.51 J		8.79 J	7.4 J	<3.1	0.6 J	<1.3	19.6	13.7	<25	0.03	21.5
PASB1006	PAB-10	6	Subsurface Soil	Push-probe	October 2002	<38	<38		NA		NA	<11.3	7.8	0.4 J	0.5 J	12.6	44.1	10.1 J	0.03	25.8
PASB1012	PAB-10	12	Subsurface Soil	Push-probe	October 2002	<120	<120		NA		NA	<11.4	4.1	<1.1	<1.1	8.5	9.1	<22.9	0.01 J	13.7
PASB2106	PAB-21	6	Subsurface Soil	Push-probe	October 2002	<6.1	1.3 J		NA		NA	<12.4	1.9	0.35 J	0.37 J	14	21.5	10.3 J	0.02	15.8
PASB2111	PAB-21	11	Subsurface Soil	Push-probe	October 2002	<5.4	<5.4		NA		NA	<10.8	3.3	0.15 J	0.3 J	9.9	8.5	5.2 J	<0.02	12.2
PASB2212	PAB-22	12	Subsurface Soil	Push-probe	October 2002	<6.5	<6.5		NA		NA	<10.7	4.6	0.3 J	0.71 J	15.6	14.8	8.7 J	0.02	18.9
PASB2221	PAB-22	21	Subsurface Soil	Push-probe	October 2002	<5.4	<5.4		NA		NA	<10.7	3	0.09 J	0.27 J	4.6	3.3	<21.5	0.01 J	7.7
North Stockpile Area																				
NASBP0804	NAP08	4	Subsurface Soil	Push-probe	June 2005			NA		NA										
South Stockpile Area																				
SASBH0501	SAH05	1	Subsurface Soil	Push-probe	June 2005			NA		NA										
SASBH0604	SAH06	4	Subsurface Soil	Push-probe	June 2005			NA		NA										
SASBH0704	SAH07	4	Subsurface Soil	Push-probe	June 2005			NA		NA										
SASBH0801	SAH01	1	Subsurface Soil	Push-probe	June 2005			NA		NA										
SASBP0102	SAP01	2	Subsurface Soil	Push-probe	June 2005			NA		NA										
SASBP0104	SAP01	4	Subsurface Soil	Push-probe	June 2005			NA		NA										
SASBP0204	SAP02	4	Subsurface Soil	Push-probe	June 2005			NA		NA										
SASBP0302	SAP03	2	Subsurface Soil	Push-probe	June 2005			NA		NA										
SASBP0401	SAP04	1	Subsurface Soil	Push-probe	June 2005			NA		NA										
SASBP0505	SAP05	5	Subsurface Soil	Push-probe	June 2005			NA		NA										
SASBP0604	SAP06	4	Subsurface Soil	Push-probe	June 2005			NA		NA										
SASBW0704	SAW07	4	Subsurface Soil	Monitoring Well	June 2005			NA		NA										

Sample ID	Sample Location	Sample Depth (feet bgs)	Sample Type	Exploration Type	Date Collected	Dioxins/Furans ⁴ (µg/kg)				Inorganics (mg/kg)										
						PCE	Toluene	2,3,7,8-TCDD (TEQ 1987 EPA)	2,3,7,8-TCDD (1989 I-TEQ)	2,3,7,8-TCDD (TEQ 1997 WHO)	2,3,7,8-TCDD (1998 WHO TEQ)	Antimony	Arsenic	Beryllium	Cadmium	Chromium	Copper	Lead	Mercury	Nickel
SASBW0804	SAW08	4	Subsurface Soil	Monitoring Well	June 2005			NA		NA										
SASBW0806	SAW08	6	Subsurface Soil	Monitoring Well	June 2005			NA		NA										
SASB1304	SAB-13	4	Subsurface Soil	Push-probe	October 2002		1.3 J					<11.7	2.8	0.44 J	0.38 J	13.2	9.5	6.5 J	0.02	12.3
SASB1402	SAB-14	2	Subsurface Soil	Push-probe	October 2002		<6.3					<10.5	1.7	0.48 J	0.65 J	15.5	13.3	14.8 J	0.03	14
SASB1801	SAB-18	1	Subsurface Soil	Push-probe	October 2002		9.7					3.7 J	4.7	0.21 J	0.33 J	8.4	6.7	5.3 J	0.02 J	10.2
SASB1901	SAB-19	1	Subsurface Soil	Push-probe	October 2002		<7.9					4.2 J	2.4	0.56 J	0.82 J	17.8	18.2	25.6	0.03	17.4
SASB2001	SAB-20	1	Subsurface Soil	Push-probe	October 2002		1.5 J					2.5 J	1.4	0.33 J	0.24 J	11.6	7.6	7 J	0.02	10
MTCA Method B Cleanup Level						19,600 ca	160,000,000	0.000000005	0.000000005	0.000000005	0.000000005	-	24	160	80	2,000(crIII)	2,960	1,000a	24	1,600
EPA Region 9 PRG						3	520	0.16 / (5 to 20)	0.16 / (5 to 20)	0.16 / (5 to 20)	0.16 / (5 to 20)	410	1.6 ca	1,900	450	450	41,500	750	310	20,000

Sample ID	Sample Location	Sample Depth (feet bgs)	Sample Type	Exploration Type	Date Collected	Inorganics (mg/kg)			
						Selenium	Silver	Thallium	Zinc
Process Area									
PASBP1109	PAP11	9	Subsurface Soil	Push-probe	June 2005				
PASBP1111	PAP11	11	Subsurface Soil	Push-probe	June 2005				
PASBP1111D	PAP11	11	Subsurface Soil	Push-probe	June 2005				
PASBP1204	PAP12	4	Subsurface Soil	Push-probe	June 2005				
PASBP1204D	PAP12	4	Subsurface Soil	Push-probe	June 2005				
PASBP1208	PAP12	8	Subsurface Soil	Push-probe	June 2005				
PASBP1306	PAP13	6	Subsurface Soil	Push-probe	June 2005				
PASBP1308	PAP13	8	Subsurface Soil	Push-probe	June 2005				
PASB0701	PAB-7	1	Subsurface Soil	Push-probe	October 2002	<1.2	<2.3	<1.2	98.4
PASB0711	PAB-7	11	Subsurface Soil	Push-probe	October 2002	<2.8	<2.2	<2.8	50.1
PASB0721	PAB-7	21	Subsurface Soil	Push-probe	October 2002	<1.1	<2.2	<1.1	30.5
PASB0801	PAB-8	1	Subsurface Soil	Push-probe	October 2002	<4.6	<2.3	0.6 J	99.5
PASB0814	PAB-8	14	Subsurface Soil	Push-probe	October 2002	<21.3	<2.1	<1.1	30.8
PASB0906	PAB-9	6	Subsurface Soil	Push-probe	October 2002	4.6	<2.4	<3.1	45.8
PASB0908	PAB-9	8	Subsurface Soil	Push-probe	October 2002	<1.1	<2.3	<1.1	46.4
PASB1001	PAB-10	1	Subsurface Soil	Push-probe	October 2002	<3.1	<2.5	<3.1	92
PASB1006	PAB-10	6	Subsurface Soil	Push-probe	October 2002	15.7	<2.3	0.6 J	68.1
PASB1012	PAB-10	12	Subsurface Soil	Push-probe	October 2002	<4.6	<2.3	<1.1	38.7
PASB2106	PAB-21	6	Subsurface Soil	Push-probe	October 2002	3.7	<2.5	<1.2	62.1
PASB2111	PAB-21	11	Subsurface Soil	Push-probe	October 2002	<2.2	<2.2	<1.1	38.2
PASB2212	PAB-22	12	Subsurface Soil	Push-probe	October 2002	3.9	<2.2	<1.1	73.2
PASB2221	PAB-22	21	Subsurface Soil	Push-probe	October 2002	<2.2	<2.2	<1.1	21.1
North Stockpile Area									
NASBP0804	NAP08	4	Subsurface Soil	Push-probe	June 2005				
South Stockpile Area									
SASBH0501	SAH05	1	Subsurface Soil	Push-probe	June 2005				
SASBH0604	SAH06	4	Subsurface Soil	Push-probe	June 2005				
SASBH0704	SAH07	4	Subsurface Soil	Push-probe	June 2005				
SASBH0801	SAH01	1	Subsurface Soil	Push-probe	June 2005				
SASBP0102	SAP01	2	Subsurface Soil	Push-probe	June 2005				
SASBP0104	SAP01	4	Subsurface Soil	Push-probe	June 2005				
SASBP0204	SAP02	4	Subsurface Soil	Push-probe	June 2005				
SASBP0302	SAP03	2	Subsurface Soil	Push-probe	June 2005				
SASBP0401	SAP04	1	Subsurface Soil	Push-probe	June 2005				
SASBP0505	SAP05	5	Subsurface Soil	Push-probe	June 2005				
SASBP0604	SAP06	4	Subsurface Soil	Push-probe	June 2005				
SASBW0704	SAW07	4	Subsurface Soil	Monitoring Well	June 2005				

Sample ID	Sample Location	Sample Depth (feet bgs)	Sample Type	Exploration Type	Date Collected	Inorganics (mg/kg)			
						Selenium	Silver	Thallium	Zinc
SASBW0804	SAW08	4	Subsurface Soil	Monitoring Well	June 2005				
SASBW0806	SAW08	6	Subsurface Soil	Monitoring Well	June 2005				
SASB1304	SAB-13	4	Subsurface Soil	Push-probe	October 2002	<1.7	<2.3	<1.2	55.4
SASB1402	SAB-14	2	Subsurface Soil	Push-probe	October 2002	<2.1	<2.1	<1.1	73.1
SASB1801	SAB-18	1	Subsurface Soil	Push-probe	October 2002	<2.2	<2.2	<1.1	39.1
SASB1901	SAB-19	1	Subsurface Soil	Push-probe	October 2002	<2.2	<2.2	<1.1	95.7
SASB2001	SAB-20	1	Subsurface Soil	Push-probe	October 2002	<2.2	<2.2	<1.1	46.7
MTCA Method B Cleanup Level						400	400	5.6	24,000
EPA Region 9 PRG						5,100	5,100	67	100,000

Notes:

¹Samples analyzed at Columbia Analytical Services, Inc. of Kelso, Washington

²Diesel- and oil-range petroleum hydrocarbons (DRPH and ORPH, respectively) analyzed using Northwest Method NWTPH-Dx.

³Semi-volatile organic compounds analyzed using Environmental Protection Agency (EPA) Method 8270C.

⁴Dioxins/furans analyzed using EPA Method 8290.

Shaded and **bolded** analytical results indicate concentration exceeds state cleanup criterion.

J = The associated numerical value is an estimated quantity because the reported concentrations were less than the required detection limits or quality control criteria were not met.

UJ = The material was analyzed for, but was not detected. The reported detection limit is estimated because quality control criteria were not met.

MTCA = Model Toxic Control Act (Ecology 2001)

µg/kg = microgram per kilogram; mg/kg = milligram per kilogram; bgs = below ground surface

Table A-3
Sediment Analytical Results
Colville Post and Poles
Stevens County, Washington

Sample ID	Sample Location	Sample Type	Date Collected	Petroleum Hydrocarbons (mg/kg)		Semi-Volatile Organic Compounds (mg/kg)											
				DRPH	ORPH	1,2,4-Trichloro benzene	2-methyl naphthalene	bis(2-Chloroisopropyl) ether	Acenaphthylene	Anthracene	Benzo(a) anthracene	Benzo(a) pyrene	Benzo(b) fluoranthene	Benzo(g,h,i) perylene	Benzofluoranthenes	Phenol	Benzyl Alcohol
BK01SD			January 2005				<3.2		<3.2	2.15 J	5.48	9.07			20.1	<8	<8
BK02SD			January 2005				<2.6		<2.6	<2.6	<2.6	<2.6			<5.21	<6.51	3.75 J
CR01SD ¹			January 2005				<2.75		<2.75	1.11 J	<2.75	<2.75			2 J	<6.87	<6.87
CR02SD ¹			January 2005				<2.35		<2.35	<2.35	<2.35	<2.35			<4.71	<5.89	<5.89
CR03SD ¹			January 2005				<2.35		<2.35	<2.35	<2.35	<2.35			<4.7	5.33 J	<5.88
DA01SD ²			January 2005				<3.35		<3.35	<3.35	<3.35	<3.35			<6.7	<8.37	14.9
DA02SD ²			January 2005				<2.51		<2.51	<2.51	<2.51	<2.51			<5.01	<6.26	14.3
DA03SD ²			January 2005				<2.29		<2.29	<2.29	<2.29	<2.29			<4.57	<5.72	11.3
DA04SD ²			January 2005				<2.59		<2.59	<2.59	<2.59	<2.59			<5.19	<6.48	10.3
DA05SD ²			January 2005				<3.09		<3.09	<3.09	<3.09	<3.09			<6.19	<7.73	<7.73
DA06SD ²			January 2005				<4.46		<4.46	<4.46	<4.46	<4.46			<8.91	19.8	8.78 J
DA07SD ²			January 2005				7.75		4.2	8.77	<34.6	<3.46			<6.92	3.86 J	3.76 J
DA08SD ²			January 2005				<4.2		<4.2	<4.2	<4.2	<4.2			<8.4	<10.5	<10.5
DA09SD ²			January 2005				<4.77		<4.77	<4.77	<4.77	<4.77			<9.54	8.88 J	62.1
DA10SD ²			January 2005				2.03 J		1.06 J	1.32 J	3.86	4.6			6.29 J	2.44 J	<8.26
DASD0100		Sediment (Drainage)	October 2002	270	600	<0.69	<0.69			0.034 J				<0.69			<0.69
DASD0200		Sediment (Drainage)	October 2002	87 J	850	<0.82	<0.82			<0.82				<0.82			<0.82
DASD0300		Sediment (Drainage)	October 2002	9.4 J	93 J	<0.38	<0.38			<0.38				<0.38			<0.38
DASD0400		Sediment (Drainage)	October 2002	43 J	150 J	<0.76	<0.76			<0.76				<0.76			<0.76
DASD0500		Sediment (Drainage)	October 2002	960	1,700	<1.1	0.058 J			<1.1				<1.1			0.23 J
DASD6200		Sediment (Drainage)	October 2002	130 J	700 J	<0.91	<0.91			<0.91				<0.91			0.051 J
SASS1800		Sediment (Drainage)	October 2002	16 J	110 J	<0.58	<0.58			<0.58				<0.58			<0.58
SASS2300		Sediment (Drainage)	October 2002	7.3 J	40 J	<0.35	<0.35			<0.35				<0.35			<0.35
SASS2800		Sediment (Drainage)	October 2002	20 J	170 J	<0.7	<0.7			<0.7				0.074 J			<0.7
SASS3000		Sediment (Drainage)	October 2002	24 J	100 J	<0.51	<0.51			<0.51				<0.51			<0.51
SASS3800		Sediment (Drainage)	October 2002	69 J	490	<0.8	<0.8			<0.8				<0.8			<0.8
SASS4300		Sediment (Drainage)	October 2002	43 J	350 J	<0.85	<0.85			<0.85				<0.85			<0.85
SASS4600		Sediment (Drainage)	October 2002	23 J	300	<0.48	<0.48			<0.48				<0.48			0.085 J
BKSD0100		Sediment (Drainage)	October 2002	16 J	100 J	<0.39	<0.39			<0.39				<0.39			<0.39
MTCA Cleanup Levels				460 ⁵	2,000	35 ³	320 ⁴	-	48,000 ⁴	24,000 ⁴	1,400 ⁴	140 ³	1.4		1,400 ³	24,000 ⁴	8,000 ⁴

Sample ID	Sample Location	Sample Type	Date Collected	Semi-Volatile Organic Compounds (mg/kg)														
				3-&4-Methylphenol	N-nitroso-di-n-propylamine	Benzoic Acid	Bis(2-ethylhexyl)phthalate	Butyl Benzyl Phthalate	Chrysene	Dibenzofuran	Di-n-butyl phthalate	Fluoranthene	Fluorene	Hexachloro benzene	Indeno(1,2,3-cd) pyrene	Pentachloro phenol	Phenanthrene	Pyrene
BK01SD			January 2005	<8	<8	96 R			14.2			2.08 J	<3.2			<16	2.48 J	<3.2
BK02SD			January 2005	<6.51	<6.51	78.1 R			8.89			<2.6	<2.6			<13	<2.6	<2.6
CR01SD ¹			January 2005	14.7	<6.87	82.5 R			2.97			4.96	1.21 J			<13.7	4.66	3.75
CR02SD ¹			January 2005	<5.89	<5.89	70.6 R			<2.35			<2.35	<2.35			<11.8	<2.35	<2.35
CR03SD ¹			January 2005	4.26 J	<5.88	70.5 R			<2.35			<2.35	<2.35			<11.8	<2.35	<2.35
DA01SD ²			January 2005	<8.37	<8.37	33.8 J			<3.35			1.99 J	<3.35			<16.7	<3.35	2.44 J
DA02SD ²			January 2005	<6.26	<6.26	297 J			<2.51			<2.51	<2.51			<12.5	<2.51	<2.51
DA03SD ²			January 2005	<5.72	<5.72	68.6 R			<2.29			<2.29	<2.29			<11.4	<2.29	<2.29
DA04SD ²			January 2005	<6.48	<6.48	77.8 R			<2.59			<2.59	<2.59			9.41 J	<2.59	<2.59
DA05SD ²			January 2005	<7.73	<7.73	92.8 R			<3.09			<3.09	<3.09			5.35 J	<3.09	<3.09
DA06SD ²			January 2005	<11.1	<11.1	134 R			<4.46			<4.46	<4.46			11.4 J	<4.46	<4.46
DA07SD ²			January 2005	<8.65	<8.65	104 R			7.72			<3.46	7.82			2520	17.8	11.3
DA08SD ²			January 2005	<10.5	<10.5	126 R			<4.2			<4.2	<4.2			<21	<4.2	<4.2
DA09SD ²			January 2005	5.24 J	18.5	143 R			<4.77			<4.77	<4.77			45.3	<4.77	0.971 J
DA10SD ²			January 2005	<8.26	<8.26	99.2 R			2.71 J			8.76	<3.31			90.4	6.64	9.26
DASD0100		Sediment (Drainage)	October 2002				0.19 J		0.036 J			<0.69	<0.69			0.85 J	0.036 J	0.041 J
DASD0200		Sediment (Drainage)	October 2002				0.047 J		<0.82			<0.82	<0.82			<5	<0.82	<0.82
DASD0300		Sediment (Drainage)	October 2002				<0.38		<0.38			<0.38	<0.38			<2.3	<0.38	<0.38
DASD0400		Sediment (Drainage)	October 2002				<0.76		<0.76			<0.76	<0.76			<4.6	<0.76	<0.76
DASD0500		Sediment (Drainage)	October 2002				0.1 J		0.2 J			0.14 J	0.75 J			4.3 J	4.3	<0.73
DASD6200		Sediment (Drainage)	October 2002				<0.91		<0.91			<0.91	<0.91			<5.6	<0.91	<0.91
SASS1800		Sediment (Drainage)	October 2002				<0.58		<0.58			<0.58	<0.58			<3.5	<0.58	<0.58
SASS2300		Sediment (Drainage)	October 2002				0.041 J		<0.35			<0.35	<0.35			<2.2	<0.35	<0.35
SASS2800		Sediment (Drainage)	October 2002				<0.7		<0.7			<0.7	<0.7			<4.3	<0.7	<0.7
SASS3000		Sediment (Drainage)	October 2002				<0.51		<0.51			<0.51	<0.51			<3.1	<0.51	<0.51
SASS3800		Sediment (Drainage)	October 2002				<0.8		<0.8			<0.8	<0.8			<4.8	<0.8	<0.8
SASS4300		Sediment (Drainage)	October 2002				0.076 J		<0.85			<0.85	<0.85			<5.2	<0.85	<0.85
SASS4600		Sediment (Drainage)	October 2002				<0.48		<0.48			<0.48	<0.48			<2.9	<0.48	<0.48
BKSD0100		Sediment (Drainage)	October 2002				<0.39		<0.39	<0.39		<0.39	<0.39			<2.4	<0.39	<0.39
MTCA Cleanup Levels				80,000 ³	0.14 ³	320,000 ⁴	71 ³		140 ³	80 ⁴	8,000 ⁴	3,200 ⁴	3,200,000 ⁴	0.63 ³		2.5	-	2,400 ⁴

Sample ID	Sample Location	Sample Type	Date Collected	Volatile Organic Compounds (µg/kg)								Dioxins/Furans (µg/kg)			Inorganics (mg/kg)			
				1,2,4-Trimethylbenzene	1,2,3-Trichloropropane	1,3,5-Trimethylbenzene	Acetone	Dichloromethane (Methylene Chloride)	m,p-Xylenes	Naphthalene	o-Xylene	Toluene	2,3,7,8-TCDD (TEQ 1987 EPA)	2,3,7,8-TCDD (1989 I-TEQ)	2,3,7,8-TCDD (TEQ 1997 WHO)	Antimony	Arsenic	Beryllium
BK01SD			January 2005															
BK02SD			January 2005															
CR01SD ¹			January 2005															
CR02SD ¹			January 2005															
CR03SD ¹			January 2005															
DA01SD ²			January 2005															
DA02SD ²			January 2005															
DA03SD ²			January 2005															
DA04SD ²			January 2005															
DA05SD ²			January 2005															
DA06SD ²			January 2005															
DA07SD ²			January 2005															
DA08SD ²			January 2005															
DA09SD ²			January 2005															
DA10SD ²			January 2005															
DASD0100		Sediment (Drainage)	October 2002					<21	<11		<11				<9.5	1.8	0.34 J	
DASD0200		Sediment (Drainage)	October 2002					<25	<13		<13				<11.2	5.7	0.7 J	
DASD0300		Sediment (Drainage)	October 2002					<12	<5.7		<5.7				<11.3	1.5 J	0.21 J	
DASD0400		Sediment (Drainage)	October 2002					3.3 J	3.5 J		<12				5.5 J	4.9	0.8 J	
DASD0500		Sediment (Drainage)	October 2002					<33	<17		<17				<11	6.3	0.47 J	
DASD6200		Sediment (Drainage)	October 2002					<27	6.9 J		2.1 J				5.2 J	3.4	0.3 J	
SASS1800		Sediment (Drainage)	October 2002					<18	<8.6		<8.6				<9.7	<2.4	0.6 J	
SASS2300		Sediment (Drainage)	October 2002					3.4 J	<5.1		<5.1				<10.5	<2.6	0.3 J	
SASS2800		Sediment (Drainage)	October 2002					8.1 J	<11		<11				3.8	0.6 J	1.2	
SASS3000		Sediment (Drainage)	October 2002					<16	<7.7		<7.7				<10.9	1.6	0.62 J	
SASS3800		Sediment (Drainage)	October 2002					9.8 J	<12		<12				<10.9	4.7	0.5 J	
SASS4300		Sediment (Drainage)	October 2002					7.1 J	<13		<13				<9.6	3.8	0.6 J	
SASS4600		Sediment (Drainage)	October 2002					<15	<7.2		1.4 J				<10.4	2.2	0.59 J	
BKSD0100		Sediment (Drainage)	October 2002					3.4 J	<5.9		<5.9				<11.8	4.1	0.6 J	
MTCA Cleanup Levels				-	0.033 ³	800 ⁴	72,000 ⁴	0.02	9	5	9	7	0.000000005 ⁵	0.000000005 ⁵	0.000000005 ⁵	32 ⁴	20	160 ⁴

Sample ID	Sample Location	Sample Type	Date Collected	Inorganics (mg/kg)									
				Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Silver	Thallium	Zinc
BK01SD			January 2005										
BK02SD			January 2005										
CR01SD ¹			January 2005										
CR02SD ¹			January 2005										
CR03SD ¹			January 2005										
DA01SD ²			January 2005										
DA02SD ²			January 2005										
DA03SD ²			January 2005										
DA04SD ²			January 2005										
DA05SD ²			January 2005										
DA06SD ²			January 2005										
DA07SD ²			January 2005										
DA08SD ²			January 2005										
DA09SD ²			January 2005										
DA10SD ²			January 2005										
DASD0100		Sediment (Drainage)	October 2002	0.62 J	11.4	15.1	14.6 J	0.03	11.3	8.5	<1.9	<0.9	172
DASD0200		Sediment (Drainage)	October 2002	0.7 J	20	25.8	38.8	0.06	23.7	6.6	<2.2	0.6 J	194
DASD0300		Sediment (Drainage)	October 2002	0.4 J	8.8	4.8	4.8 J	0.01 J	8.6	<1.1	<2.3	<1.1	46.9
DASD0400		Sediment (Drainage)	October 2002	1.2	24.4	23.8	158	0.07	26.4	2.6	<2.1	<2.6	160
DASD0500		Sediment (Drainage)	October 2002	1.19	15.7	19.1	33	0.04	16.9	3.2	<2.2	<1.1	225
DASD6200		Sediment (Drainage)	October 2002	1 J	7	13.3	<20.4	0.04	9.9	10.5	<2	<2.6	141
SASS1800		Sediment (Drainage)	October 2002	0.8 J	16.2	19.7	29.3	0.04	19.5	4.5	<1.9	0.6 J	89.6
SASS2300		Sediment (Drainage)	October 2002	<1.1	7.2	4.9	6.4 J	0.01 J	7.4	<4.2	<2.1	0.5 J	37.7
SASS2800		Sediment (Drainage)	October 2002	17.2	16.2	36.2	0.04	16.2	2.4	<1.9	0.7 J	90.3	3.8
SASS3000		Sediment (Drainage)	October 2002	0.86 J	18.2	18	21.1 J	0.03	15.9	3	<2.2	<1.1	99.3
SASS3800		Sediment (Drainage)	October 2002	0.5 J	15.8	20.7	51.7	0.03	18	<4.4	<2.2	<1.1	105
SASS4300		Sediment (Drainage)	October 2002	0.6 J	17.1	20.2	39.8	0.05	18.4	5.6	<1.9	0.6 J	123
SASS4600		Sediment (Drainage)	October 2002	1.16	19	23.4	70.2	0.06	19.8	5.4	<2.1	<1	118
BKSD0100		Sediment (Drainage)	October 2002	<1.2	17.7	21.5	44	0.03	22.9	<4.7	<2.4	0.8 J	151
MTCA Cleanup Levels				2	2,000(crIII)	3,200 ⁴	1,000	24	1,600	400 ⁴	400 ⁴	5.6	24000 ⁴

Notes:

¹Sample concentration compared to background sample BK01SD to determine if compound concentration is elevated.

²Sample concentration compared to background sample BK02SD to determine if compound concentration is elevated.

³Soil, Method B, Carcinogen, Standard Formula Value, Direct Contact (ingestion only), unrestricted land use.

⁴Soil, Method B, Non-carcinogen, Standard Formula Value, Direct Contact (ingestion only), unrestricted land use.

⁵Soil, Method B, accounting for ecological risk, unrestricted land use.

Values reported on a dry-weight basis

Shaded and **bolded** analytical results indicate concentration exceeds state cleanup criterion.

µg/kg = microgram per kilogram; mg/kg = milligram per kilogram

J = The associated numerical value is an estimated quantity because the reported concentrations were less than the required detection limits or quality control criteria were not met.

R = The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

Table A-4
Groundwater Chemical Analytical Results
 Colville Post and Poles
 Stevens County, Washington

Sample ID	Sample Location	Date Collected	Petroleum Hydrocarbons (mg/L)		Semi-Volatile Organic Compounds (µg/L)									
			DRPH	ORPH	1,2-Dichlorobenzene	1,4-Dichlorobenzene	2,4,5-trichlorophenol	2,4,6-Trichlorophenol	2,4-dichlorophenol	2-methylnaphthalene	3-&4-methylphenol	4-nitroaniline	4,6-Dinitro-2-methylphenol	4-Chloro-3-methylphenol	Acenaphthene
Process Area														
06121019	MW-09	December 2006	0.620	NA			NA		NA	NA	NA	NA		NA
07030023		March 2007	<0.120	NA			NA		NA	NA	NA	NA		NA
07070121		July 2007	0.062 J	NA			NA		NA	NA	NA	NA		NA
07119021		November 2007	<0.050	NA			NA		NA	NA	NA	NA		NA
09080704		August 2009	<0.00025	NA			NA		NA	NA	NA	NA		NA
06121026	MW-10	December 2006	2.8	NA			NA		NA	NA	NA	NA		NA
07030043		March 2007	2.8	NA			NA		NA	NA	NA	NA		NA
07070135		July 2007	3.1	NA			NA		NA	NA	NA	NA		NA
07119033		November 2007	2.2	NA			NA		NA	NA	NA	NA		NA
08060016		Jun-08	NA	NA			NA		NA	NA	NA	NA		NA
09080727	August 2009	NA	NA			NA		NA	NA	NA	NA		NA	
PAGWP1109	PAP11	June 2005	0.734 J	<0.477			NA		NA	103	NA	3.03		14.5
PAGWP1208	PAP12	June 2005	32.9	1.84 J			NA		NA	<0.473	NA	<1.89		<0.189
PAGWP1308	PAP13	June 2005	0.342 J	<0.476			NA		NA	<0.488	NA	<1.95		<0.195
06121036	RW-03	December 2006	7.2	NA			NA		NA	NA	NA	NA		NA
07030015		March 2007	4	NA			NA		NA	NA	NA	NA		NA
07070122		July 2007	3	NA			NA		NA	NA	NA	NA		NA
07119035		November 2007	12	NA			NA		NA	NA	NA	NA		NA
PAGW0711		October 2002			1.2 J		1 J	2.4 J	<9.6	130				14
PAG20811		October 2002			<9.6		<9.6	<9.6	<9.6	<9.6				<9.6
PAGW0907		October 2002			<9.6		<9.6	<9.6	<9.6	5.9 J				1.1 J
PAGW1008		October 2002			<9.6		2.6 J	0.73 J	2.2 J	42				5.3 J
PAGW2107		October 2002			<9.6		<9.6	<9.6	<9.6	5 J				1.4 J
PAGW2212		October 2002			<9.6		<9.6	1.5 J	<9.6	1.1 J				<9.6
North Stockpile Area														
NAGWP0705	NAP07	June 2005	<0.2337 J	<0.473 J			<1.9		<1.9	<0.476	NA	NA		<0.19
NAGWP0805	NAP08	June 2005	1.07 J	1.25 J			<1.9		<1.9	<0.476	NA	NA		<0.19
NAGWP0906	NAP09	June 2005	0.79 J	0.222 J			0.568 J		0.828 J	<0.476	NA	NA		<0.19
NAGWP1005	NAP10	June 2005	0.121 J	0.114 J			<1.9		<1.9	<0.476	NA	NA		<0.19
NAGWW0106	NAW01/W-01	June 2005	<0.237	<0.475			<1.88		<1.88	<0.471	NA	NA		<0.188
W-01		September 2005	<0.244	NA			NA		NA	NA	NA	NA		NA
06010007		January 2006	<0.050	NA			NA		NA	NA	NA	NA		NA
06040008		April 2006	<0.052 J	NA			NA		NA	NA	NA	NA		NA
06080120		August 2006	<0.053	NA			NA		NA	NA	NA	NA		NA
06121001		December 2006	0.047 J	NA			NA		NA	NA	NA	NA		NA
07030025		March 2007	0.084 J	NA			NA		NA	NA	NA	NA		NA
07070130		July 2007	0.046 J	NA			NA		NA	NA	NA	NA		NA
07119018		November 2007	<0.050	NA			NA		NA	NA	NA	NA		NA
08060013		March 2009	NA	NA			NA		NA	NA	NA	NA		NA
09080721	August 2009	NA	NA			NA		NA	NA	NA	NA		NA	
NAGWW0106D	NAW01	June 2005	<0.236	<0.473			<1.9		<1.9	0.212 J	NA	NA		<0.19

Sample ID	Sample Location	Date Collected	Petroleum Hydrocarbons (mg/L)		Semi-Volatile Organic Compounds (µg/L)										
			DRPH	ORPH	1,2-Dichlorobenzene	1,4-Dichlorobenzene	2,4,5-trichlorophenol	2,4,6-Trichlorophenol	2,4-dichlorophenol	2-methylnaphthalene	3-&4-methylphenol	4-nitroaniline	4,6-Dinitro-2-methylphenol	4-Chloro-3-methylphenol	Acenaphthene
NAGWW0403	NAW04/W-04	June 2005	<0.237	<0.47			<1.9		<1.9	3.32	NA	NA			0.383
W-04		September 2005	<0.244	NA			NA		NA	NA	NA	NA			NA
06010003		January 2006	0.095	NA			NA		NA	NA	NA	NA			NA
06040010		April 2006	0.095 J	NA			NA		NA	NA	NA	NA			NA
06080122		August 2006	0.095 J	NA			NA		NA	NA	NA	NA			NA
06121014		December 2006	0.053 J	NA			NA		NA	NA	NA	NA			NA
07030026		March 2007	0.043 J	NA			NA		NA	NA	NA	NA			NA
07070126		July 2007	0.087 J	NA			NA		NA	NA	NA	NA			NA
07119028		November 2007	<0.050	NA			NA		NA	NA	NA	NA			NA
09080706		August 2009	<0.250 J	NA			NA		NA	NA	NA	NA			NA
NAGWW0504		June 2005	0.283 J	0.0952 J			<1.89		<1.89	0.643	NA	NA			0.078 J
W-05	NAW05/W-05	September 2005	<0.243	NA			NA		NA	NA	NA	NA			NA
06010006		January 2006	0.210	NA			NA		NA	NA	NA	NA			NA
06040012		April 2006	0.210 J	NA			NA		NA	NA	NA	NA			NA
06080121		August 2006	0.420 J	NA			NA		NA	NA	NA	NA			NA
06121018		December 2006	0.150 J	NA			NA		NA	NA	NA	NA			NA
07030031		March 2007	0.140	NA			NA		NA	NA	NA	NA			NA
07070127		July 2007	1.2	NA			NA		NA	NA	NA	NA			NA
07119030		November 2007	0.550	NA			NA		NA	NA	NA	NA			NA
08060011		June 2008	NA	NA			NA		NA	NA	NA	NA			NA
09030707		March 2009	NA	NA			NA		NA	NA	NA	NA			NA
09080724		August 2009	NA	NA			NA		NA	NA	NA	NA			NA
NAGWW0603		NAW06/W-06	June 2005	0.284 J	<0.473			<1.89		<1.89	2.93	NA	NA			0.348
W-06	September 2005		0.0789 J	NA			NA		NA	NA	NA	NA			NA
06010001	January 2006		0.270	NA			NA		NA	NA	NA	NA			NA
06040011	April 2006		<0.052 J	NA			NA		NA	NA	NA	NA			NA
06080118	August 2006		<0.053	NA			NA		NA	NA	NA	NA			NA
06121017	December 2006		<0.240	NA			NA		NA	NA	NA	NA			NA
07030027	March 2007		0.18	NA			NA		NA	NA	NA	NA			NA
07070129	July 2007		0.069 J	NA			NA		NA	NA	NA	NA			NA
07119031	November 2007		<0.050	NA			NA		NA	NA	NA	NA			NA
09080723	August 2009		NA	NA			NA		NA	NA	NA	NA			NA
06121024	MW-11 (lower interval)	December 2006	1.7	NA			NA		NA	NA	NA	NA			NA
07030044		March 2007	0.590	NA			NA		NA	NA	NA	NA			NA
07070133		July 2007	1.9	NA			NA		NA	NA	NA	NA			NA
07119034		November 2007	1.4	NA			NA		NA	NA	NA	NA			NA
08060015		June 2008	NA	NA			NA		NA	NA	NA	NA			NA
09030710		March 2009	NA	NA			NA		NA	NA	NA	NA			NA
09080726		August 2009	0.320 J	NA			NA		NA	NA	NA	NA			NA
06121025	MW-12 (upper interval)	December 2006	0.760	NA			NA		NA	NA	NA	NA			NA
07030045		March 2007	0.340	NA			NA		NA	NA	NA	NA			NA
07070134		July 2007	1.0	NA			NA		NA	NA	NA	NA			NA
06121021	MW-13	December 2006	0.52	NA			NA		NA	NA	NA	NA			NA
07030029		March 2007	2.7	NA			NA		NA	NA	NA	NA			NA
07070132		July 2007	0.38	NA			NA		NA	NA	NA	NA			NA
07119032		November 2007	2.2	NA			NA		NA	NA	NA	NA			NA
08060014		June 2008	NA	NA			NA		NA	NA	NA	NA			NA
09030709		March 2009	NA	NA			NA		NA	NA	NA	NA			NA
09080725		August 2009	NA	NA			NA		NA	NA	NA	NA			NA

Sample ID	Sample Location	Date Collected	Petroleum Hydrocarbons (mg/L)		Semi-Volatile Organic Compounds (µg/L)									
			DRPH	ORPH	1,2-Dichlorobenzene	1,4-Dichlorobenzene	2,4,5-trichlorophenol	2,4,6-Trichlorophenol	2,4-dichlorophenol	2-methylnaphthalene	3-&4-methylphenol	4-nitroaniline	4,6-Dinitro-2-methylphenol	4-Chloro-3-methylphenol	Acenaphthene
06121012	MW-14	December 2006	0.041 J	NA			NA		NA	NA	NA	NA		NA
07030028		March 2007	<0.120	NA			NA		NA	NA	NA	NA		NA
07070128		July 2007	0.095 J	NA			NA		NA	NA	NA	NA		NA
07119027		November 2007	<0.050	NA			NA		NA	NA	NA	NA		NA
08060010		June 2008	NA	NA			NA		NA	NA	NA	NA		NA
NAGW0107		October 2002												
NAGW0207		October 2002												
NAGW0308		October 2002												
NAGW0406		October 2002												
NAGW0508		October 2002												
NAGW0611		October 2002												
South Stockpile Area														
SAGWMW105	MW-1	June 2005	<0.237	<0.474			NA		NA	<0.474	<3.79	NA		<0.19
SAGWMW105D		June 2005	<0.237	<0.473			NA		NA	<0.475	<3.8	NA		<0.19
MW-01		September 2005	0.124 J	NA			NA		NA	NA	NA	NA		NA
06010008		January 2006	0.120	NA			NA		NA	NA	NA	NA		NA
06040006		April 2006	0.110 J	NA			NA		NA	NA	NA	NA		NA
06080107		August 2006	0.110	NA			NA		NA	NA	NA	NA		NA
06121007		December 2006	<0.240	NA			NA		NA	NA	NA	NA		NA
07030016		March 2007	<0.120	NA			NA		NA	NA	NA	NA		NA
07070119		July 2007	260	NA			NA		NA	NA	NA	NA		NA
07119019		November 2007	120	NA			NA		NA	NA	NA	NA		NA
08060006	June 2008	NA	NA			NA		NA	NA	NA	NA		NA	
SAGWMW205	MW-2	June 2005	0.212 J	<0.478			NA		NA	<0.474	<3.8	NA		<0.19
MW-02		September 2005	<0.244	NA			NA		NA	NA	NA	NA		NA
06010009		January 2006	0.140	NA			NA		NA	NA	NA	NA		NA
06040005		April 2006	0.086 J	NA			NA		NA	NA	NA	NA		NA
06080106		August 2006	0.054	NA			NA		NA	NA	NA	NA		NA
06121007		December 2006	<0.240	NA			NA		NA	NA	NA	NA		NA
07030019		March 2007	<0.120	NA			NA		NA	NA	NA	NA		NA
07070120		July 2007	0.069 J	NA			NA		NA	NA	NA	NA		NA
07119020		November 2007	<0.050	NA			NA		NA	NA	NA	NA		NA
09080719		August 2009	<0.250	NA			NA		NA	NA	NA	NA		NA
SAGWMW407	MW-4	June 2005	<0.237	<0.473			NA		NA	<0.475	<3.8	NA		<0.19
MW-04		September 2005	<0.237	NA			NA		NA	NA	NA	NA		NA
06010010		January 2006	0.08	NA			NA		NA	NA	NA	NA		NA
06040004		April 2006	0.160 J	NA			NA		NA	NA	NA	NA		NA
06080105		August 2006	0.052	NA			NA		NA	NA	NA	NA		NA
06121008		December 2006	0.084 J	NA			NA		NA	NA	NA	NA		NA
07030020		March 2007	0.083 J	NA			NA		NA	NA	NA	NA		NA
07070118		July 2007	0.044 J	NA			NA		NA	NA	NA	NA		NA
07119018		November 2007	<0.050	NA			NA		NA	NA	NA	NA		NA
09080720		August 2009	<0.250	NA			NA		NA	NA	NA	NA		NA
SAGWP0104	SAP01	June 2005	0.606 J	0.606 J			NA		NA	<0.5	4.64	NA		<0.2
SAGWP0203	SAP02	June 2005	0.274 J	0.443 J			NA		NA	<0.485	<3.88	NA		<0.194
SAGWP0302	SAP03	June 2005	0.271 J	0.277 J			NA		NA	<0.476	<3.81	NA		<0.19
SAGWP0404	SAP04	June 2005	0.0925 J	<0.473			NA		NA	<0.476	<3.81	NA		<0.19
SAGWP0505	SAP05	June 2005	0.352 J	0.205 J			NA		NA	<0.481	<3.85	NA		<0.192
SAGWP0602	SAP06	June 2005	0.293 J	0.616 J			NA		NA	<0.5	<4	NA		<0.2

Sample ID	Sample Location	Date Collected	Petroleum Hydrocarbons (mg/L)		Semi-Volatile Organic Compounds (µg/L)										
			DRPH	ORPH	1,2-Dichlorobenzene	1,4-Dichlorobenzene	2,4,5-trichlorophenol	2,4,6-Trichlorophenol	2,4-dichlorophenol	2-methylnaphthalene	3-&4-methylphenol	4-nitroaniline	4,6-Dinitro-2-methylphenol	4-Chloro-3-methylphenol	Acenaphthene
SAGWW0203	SAW02/W-02	June 2005	<0.236	<0.472			NA		NA	3.01	<3.8	NA			0.377
W-02		September 2005	<0.238	NA			NA		NA	NA	NA	NA			NA
06010012		January 2006	<0.049	NA			NA		NA	NA	NA	NA			NA
06040002		April 2006	<0.054 J	NA			NA		NA	NA	NA	NA			NA
06080102		August 2006	<0.053	NA			NA		NA	NA	NA	NA			NA
06121002		December 2006	<0.240	NA			NA		NA	NA	NA	NA			NA
07030017		March 2007	<0.120	NA			NA		NA	NA	NA	NA			NA
07070114		July 2007	0.037 J	NA			NA		NA	NA	NA	NA			NA
07119014		November 2007	<0.050	NA			NA		NA	NA	NA	NA			NA
09080701		August 2009	<0.250	NA			NA		NA	NA	NA	NA			NA
SAGWW0305	SAW03/W-03	June 2005	<0.238	<0.475			NA		NA	4.07	<3.82	NA			0.597
W-03		September 2005	<0.239	NA			NA		NA	NA	NA	NA			NA
06010011		January 2006	<0.049	NA			NA		NA	NA	NA	NA			NA
06040001		April 2006	<0.052	NA			NA		NA	NA	NA	NA			NA
06080101		August 2006	<0.052	NA			NA		NA	NA	NA	NA			NA
06121015		December 2006	<0.240	NA			NA		NA	NA	NA	NA			NA
07030018		March 2007	<0.120	NA			NA		NA	NA	NA	NA			NA
07070113		July 2007	0.036 J	NA			NA		NA	NA	NA	NA			NA
07119013		November 2007	<0.050	NA			NA		NA	NA	NA	NA			NA
09070702		August 2009	<0.250	NA			NA		NA	NA	NA	NA			NA
SAGWW0703	SAW07/W-07	June 2005	<0.236	<0.473			NA		NA	3.78	<3.79	NA			0.453
W-07		September 2005	0.287 J	NA			NA		NA	NA	NA	NA			NA
06010005		January 2006	<0.048	NA			NA		NA	NA	NA	NA			NA
06040003		April 2006	<0.052 J	NA			NA		NA	NA	NA	NA			NA
06080103		August 2006	<0.052	NA			NA		NA	NA	NA	NA			NA
06121003		December 2006	<0.240	NA			NA		NA	NA	NA	NA			NA
07030021		March 2007	<0.120	NA			NA		NA	NA	NA	NA			NA
07070115		July 2007	<0.120	NA			NA		NA	NA	NA	NA			NA
07119015		November 2007	<0.050	NA			NA		NA	NA	NA	NA			NA
09080703		August 2009	<0.250 J	NA			NA		NA	NA	NA	NA			NA
SAGWW0806	SAW08/W-08	June 2005	<0.237	<0.474			NA		NA	4.02	<3.81	NA			0.432
W-08		September 2005	NA	NA			NA		NA	NA	NA	NA			NA
06010004		January 2006	0.051	NA			NA		NA	NA	NA	NA			NA
06040007		April 2006	0.079 J	NA			NA		NA	NA	NA	NA			NA
06080104		August 2006	0.076	NA			NA		NA	NA	NA	NA			NA
06121006		December 2006	<0.240	NA			NA		NA	NA	NA	NA			NA
07030022		March 2007	<0.130	NA			NA		NA	NA	NA	NA			NA
07070117		July 2007	0.045 J	NA			NA		NA	NA	NA	NA			NA
07119017		November 2007	<0.050	NA			NA		NA	NA	NA	NA			NA
08060005		June 2008	NA	NA			NA		NA	NA	NA	NA			NA
09080704	August 2009	<0.250 J	NA			NA		NA	NA	NA	NA			NA	
06121004	MW-15	December 2006	<0.250	NA			NA		NA	NA	NA	NA			NA
07030028		March 2007	<0.120	NA			NA		NA	NA	NA	NA			NA
07070116		July 2007	0.071 J	NA			NA		NA	NA	NA	NA			NA
07119016		November 2007	<0.050	NA			NA		NA	NA	NA	NA			NA
09080705		August 2009	<0.250 J	NA			NA		NA	NA	NA	NA			NA

Sample ID	Sample Location	Date Collected	Petroleum Hydrocarbons (mg/L)		Semi-Volatile Organic Compounds (µg/L)										
			DRPH	ORPH	1,2-Dichlorobenzene	1,4-Dichlorobenzene	2,4,5-trichlorophenol	2,4,6-Trichlorophenol	2,4-dichlorophenol	2-methylnaphthalene	3-&4-methylphenol	4-nitroaniline	4,6-Dinitro-2-methylphenol	4-Chloro-3-methylphenol	Acenaphthene
SAGW1107		October 2002				0.059 J					<0.2		<0.2	0.04 J	
SAGW1210		October 2002				NA					0.021 J		<0.2	0.12 J	
SAGW1308		October 2002				0.028 J					<0.2		<0.2	0.063 J	
SAGW1408		October 2002				NA					0.012 J		<0.2	0.041 J	
SAGW1508		October 2002				NA					<0.2		<0.2	<0.48	
SAGW1608		October 2002				NA					<0.2		<0.2	<0.48	
SAGW1707		October 2002				0.038 J					<0.2		<0.2	0.036 J	
SAGW1807		October 2002				NA					<0.2		<0.2	0.037 J	
SAGW1908		October 2002				0.018 J					<0.2		<0.2	0.041 J	
SAGW2007		October 2002				0.034 J					<0.2		<0.2	0.043 J	
SAGWMMW02		October 2002				NA					<0.2		0.084 J	0.057 J	
Offsite (Downgradient) Wells															
06121009	MW-16	December 2006	<0.250	NA				NA		NA	NA	NA	NA		NA
07030012		March 2007	<0.120	NA					NA		NA	NA	NA		NA
07070124		July 2007	0.069 J	NA					NA		NA	NA	NA		NA
07119024		November 2007	<0.050	NA					NA		NA	NA	NA		NA
09030704		June 2008	NA	NA					NA		NA	NA	NA		NA
09080708		August 2009	<0.250	NA					NA		NA	NA	NA		NA
06121010	MW-17	December 2006	0.072 J	NA				NA		NA	NA	NA		NA	
07030013		March 2007	0.048 J	NA					NA		NA	NA	NA		NA
07070125		July 2007	0.074 J	NA					NA		NA	NA	NA		NA
07119025		November 2007	0.230	NA					NA		NA	NA	NA		NA
08060009		June 2008	NA	NA					NA		NA	NA	NA		NA
09030706		March 2009	NA	NA					NA		NA	NA	NA		NA
09090710	August 2009	NA	NA					NA		NA	NA	NA		NA	
06121011	MW-18	December 2006	<0.240	NA				NA		NA	NA	NA		NA	
07030014		March 2007	<0.120	NA					NA		NA	NA	NA		NA
07070123		July 2007	0.077 J	NA					NA		NA	NA	NA		NA
07119023		November 2007	<0.050	NA					NA		NA	NA	NA		NA
08060008		June 2008	NA	NA					NA		NA	NA	NA		NA
09030705		March 2009	NA	NA					NA		NA	NA	NA		NA
09080709	August 2009	<0.250	NA					NA		NA	NA	NA		NA	
06121020	MW-19	December 2006	<0.250	NA				NA		NA	NA	NA		NA	
7030015		March 2007	<0.120	NA					NA		NA	NA	NA		NA
07070122		July 2007	0.083 J	NA					NA		NA	NA	NA		NA
07119022		November 2007	<0.050	NA					NA		NA	NA	NA		NA
09080707		August 2009	<0.250	NA					NA		NA	NA	NA		NA
MTCA Method B Cleanup Level			0.5	0.5	720.0			1,600	7.95 ca	48	--	80	--		960
EPA Region 9 PRG			--	--	370.00			3,600	4	110	--	180	3.20		370

Sample ID	Sample Location	Date Collected	Semi-Volatile Organic Compounds (µg/L)																
			Anthracene	Benzo(A) anthracene	Benzoic Acid	Bis(2-ethylhexyl) Phthalate	Butylbenzyl Phthalate	Chrysene	Dibenzofuran	Diethyl phthalate	Dimethyl Phthalate	Di-n-butyl phthalate	Di-n-octyl phthalate	Fluoranthene	Fluorene	Isophorone	Naphthalene	PCP	Phenanthrene
Process Area																			
06121019	MW-09	December 2006	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA	NA	110	NA	
07030023		March 2007	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	<0.22 J	NA
07070121		July 2007	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	1.5	NA
07119021		November 2007	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	2.1	NA
09080704		August 2009	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	2.6	NA
06121026	MW-10	December 2006	NA	NA	NA		NA	NA	NA		NA	NA	NA	NA	NA	NA	1800	NA	
07030043		March 2007	NA	NA	NA		NA	NA	NA		NA	NA	NA	NA	NA	NA	1300	NA	
07070135		July 2007	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA	NA	1000	NA	
07119033		November 2007	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA	NA	870	NA	
08060016		Jun-08	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA	NA	450	NA	
PAGWP1109	PAP11	June 2005	3.97	0.191	NA		<2.84	<0.189	NA	NA		<1.89	NA	10.9		24	2,690	18.3	
PAGWP1208	PAP12	June 2005	<0.189	<0.189	NA		3.14	<0.189	NA	NA		1.63 J	NA	<0.189		<0.473	<1.89	<0.189	
PAGWP1308	PAP13	June 2005	<0.195	0.172 J	NA		<2.93	0.151 J	NA	NA		0.608 J	NA	<0.195		<0.488	55.8	<0.195	
06121036	RW-03	December 2006	NA	NA	NA		NA	NA	NA		NA	NA	NA	NA	NA	NA	16,000	NA	
07030015		March 2007	NA	NA	NA		NA	NA	NA		NA	NA	NA	NA	NA	NA	710	NA	
07070122		July 2007	NA	NA	NA		NA	NA	NA		NA	NA	NA	NA	NA	NA	3,800	NA	
07119035		November 2007	NA	NA	NA		NA	NA	NA		NA	NA	NA	NA	NA	NA	6,600	NA	
PAGW0711		October 2002	2.8 J			2 J		9.8					0.71 J	21	27	40	8,000	34	
PAG20811		October 2002	<9.6			<9.6		<9.6					<9.6	<9.6	<9.6	<9.6	6.2 J	<9.6	
PAGW0907		October 2002	<9.6			2.3 J		0.66 J					<9.6	1.7 J	<9.6	0.51 J	65	3.5 J	
PAGW1008		October 2002	<9.6			3.6 J		3.1 J					<9.6	5.4 J	1.9 J	5.7 J	2,200	8.7 J	
PAGW2107		October 2002	<9.6			2.1 J		0.66 J					<9.6	1.3 J	<9.6	0.77 J	65	2.2 J	
PAGW2212		October 2002	<9.6			<9.6		0.62 J					<9.6	0.97 J	8.5 J	<9.6	2,400	0.88 J	
North Stockpile Area																			
NAGWP0705	NAP07	June 2005	NA	NA	NA		NA	NA	<1.9	NA		NA	NA	<0.19	<0.19		<0.476	<1.9	<0.19
NAGWP0805	NAP08	June 2005	NA	NA	NA		NA	NA	0.278 J	NA		NA	NA	<0.19	0.11 J		<0.476	121	<0.19
NAGWP0906	NAP09	June 2005	NA	NA	NA		NA	NA	<1.9	NA		NA	NA	<0.19	<0.19		<0.476	875	<0.19
NAGWP1005	NAP10	June 2005	NA	NA	NA		NA	NA	<1.9	NA		NA	NA	<0.19	<0.19		<0.476	40.1	<0.19
NAGWW0106	NAW01/W-01	June 2005	NA	NA	NA		NA	NA	<1.88	NA		NA	NA	<0.188	<0.188		<0.471	<1.88	0.0534 J
W-01		September 2005	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	<0.195 J	NA
06010007		January 2006	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	1.44	NA
06040008		April 2006	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	<0.25	NA
06080120		August 2006	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	<0.25	NA
06121001		December 2006	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	40	NA
07030025		March 2007	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	76	NA
07070130		July 2007	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	<0.34 J	NA
07119018		November 2007	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	50	NA
08060013		March 2009	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	18	NA
09080721	August 2009	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	2.1 J	NA	
NAGWW0106D	NAW01	June 2005	NA	NA	NA		NA	NA	<1.9	NA		NA	NA	<0.19	<0.19		0.365 J	<1.9	<0.19

Sample ID	Sample Location	Date Collected	Semi-Volatile Organic Compounds (µg/L)																	
			Anthracene	Benzo(A) anthracene	Benzoic Acid	Bis(2-ethylhexyl) Phthalate	Butylbenzyl Phthalate	Chrysene	Dibenzofuran	Diethyl phthalate	Dimethyl Phthalate	Di-n-butyl phthalate	Di-n-octyl phthalate	Fluoranthene	Fluorene	Isophorone	Naphthalene	PCP	Phenanthrene	
NAGWW0403	NAW04/W-04	June 2005	NA	NA	NA		NA	NA	0.665 J	NA		NA	NA	0.305	0.319		11.9	<1.9	1.01	
W-04		September 2005	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	<0.195 J	NA	
06010003		January 2006	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	<0.25	NA	
06040010		April 2006	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	<0.24	NA	
06080122		August 2006	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	<0.25	NA	
06121014		December 2006	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	<0.097	NA	
07030026		March 2007	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	0.22 J	NA	
07070126		July 2007	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	<0.33 J	NA	
07119028		November 2007	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	<0.5	NA	
09080706		August 2009	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	<0.48 J	NA	
NAGWW0504		NAW05/W-05	June 2005	NA	NA	NA		NA	NA	<1.89	NA		NA	NA	0.0945 J	0.103 J		2.7	256	0.18 J
W-05			September 2005	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	385	NA
06010006	January 2006		NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	146	NA	
06040012	April 2006		NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	134	NA	
06080121	August 2006		NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	280	NA	
06121018	December 2006		NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	160	NA	
07030031	March 2007		NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	3.3 J	NA	
07070127	July 2007		NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	72	NA	
07119030	November 2007		NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	860	NA	
08060011	June 2008		NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	1000	NA	
09030707	March 2009		NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	800	NA	
09080724	August 2009		NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	540 J	NA	
NAGWW0603	NAW06/W-06	June 2005	NA	NA	NA		NA	NA	0.653 J	NA		NA	NA	0.238	0.459		10.8	153	0.889	
W-06		September 2005	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	78.8	NA	
06010001		January 2006	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	<0.24	NA	
06040011		April 2006	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	0.27	NA	
06080118		August 2006	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	6.8	NA	
06121017		December 2006	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	25 J	NA	
07030027		March 2007	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	14	NA	
07070129		July 2007	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	12	NA	
07119031		November 2007	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	420.2	NA	
09080723		August 2009	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	13 J	NA	
06121024	MW-11 (lower interval)	December 2006	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	920	NA	
07030044		March 2007	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	100 J	NA	
07070133		July 2007	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	2,400	NA	
07119034		November 2007	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	1,700	NA	
08060015		June 2008	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	580	NA	
09030710		March 2009	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	370	NA	
09080726		August 2009	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	270 J	NA	
06121025		MW-12 (upper interval)	December 2006	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	500	NA
07030045	March 2007		NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	240	NA	
07070134	July 2007		NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	1,100	NA	
06121021	MW-13	December 2006	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	360	NA	
07030029		March 2007	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	2,100	NA	
07070132		July 2007	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	67 J	NA	
07119032		November 2007	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	3,500	NA	
08060014		June 2008	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	1,800	NA	
09030709		March 2009	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	1,200	NA	
09080725		August 2009	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	680	NA	

Sample ID	Sample Location	Date Collected	Semi-Volatile Organic Compounds (µg/L)																
			Anthracene	Benzo(A) anthracene	Benzoic Acid	Bis(2-ethylhexyl) Phthalate	Butylbenzyl Phthalate	Chrysene	Dibenzofuran	Diethyl phthalate	Dimethyl Phthalate	Di-n-butyl phthalate	Di-n-octyl phthalate	Fluoranthene	Fluorene	Isophorone	Naphthalene	PCP	Phenanthrene
06121012	MW-14	December 2006	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA	NA	0.19	NA	
07030028		March 2007	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA	NA	0.25 J	NA	
07070128		July 2007	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA	NA	0.89	NA	
07119027		November 2007	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA	NA	<0.5	NA	
08060010		June 2008	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA	NA	<0.5	NA	
NAGW0107		October 2002	<9.6				<9.6			<9.6	<9.6	<9.6			<9.6		17 J	<9.6	
NAGW0207		October 2002	<9.6				<9.6			0.72 J	<9.6	<9.6			<9.6		39	<9.6	
NAGW0308		October 2002	<9.7				<9.7			<9.7	<9.7	<9.7			<9.7		92	<9.7	
NAGW0406		October 2002	<0.2				<0.2			0.096 J	0.086 J	0.044 J			<0.2		0.24 J	<0.2	
NAGW0508		October 2002	<0.2				<0.2			0.12 J	0.081 J	0.049 J			<0.2		1.3	<0.2	
NAGW0611		October 2002	0.028 J					0.031 J			0.059 J	0.027 J	0.029 J			0.026 J		7.8	0.013 J
South Stockpile Area																			
SAGWMW105	MW-1	June 2005	<0.19	NA	<9.48		<2.84	NA	<1.9	<1.9		0.731 J	<1.9	<0.19	<0.19		<0.474	<1.9	0.0473 J
SAGWMW105D		June 2005	<0.19	NA	<9.51		<2.85	NA	<1.9	<1.9		0.614 J	<1.9	<0.19	<0.19		<0.475	<1.9	<0.19
MW-01		September 2005	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		0.211 J	NA	NA
06010008		January 2006	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		<0.24	NA	NA
06040006		April 2006	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		<0.25	NA	NA
06080107		August 2006	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		<0.25	NA	NA
06121007		December 2006	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		<0.11	NA	NA
07030016		March 2007	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		<0.34	NA	NA
07070119		July 2007	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		120	NA	NA
07119019		November 2007	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		74	NA	NA
08060006	June 2008	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		<0.5	NA	NA	
SAGWMW205	MW-2	June 2005	<0.19	NA	<9.49		<2.85	NA	<1.9	<1.9		1.34 J	<1.9	<0.19	<0.19		<0.474	<1.9	<0.19
MW-02		September 2005	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		<0.195 J	NA	NA
06010009		January 2006	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		0.7	NA	NA
06040005		April 2006	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		0.48	NA	NA
06080106		August 2006	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		<0.25	NA	NA
06121007		December 2006	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		<0.10	NA	NA
07030019		March 2007	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		0.067 J	NA	NA
07070120		July 2007	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		<0.35	NA	NA
07119020		November 2007	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		<0.5	NA	NA
09080719	August 2009	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		<0.47	NA	NA	
SAGWMW407	MW-4	June 2005	<0.19	NA	<9.51		<2.85	NA	<1.9	<1.9		1.03 J	<1.9	<0.19	<0.19		<0.475	<1.9	<0.19
MW-04		September 2005	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		<0.193 J	NA	NA
06010010		January 2006	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		0.22 J	NA	NA
06040004		April 2006	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		0.16 J	NA	NA
06080105		August 2006	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		<0.25	NA	NA
06121008		December 2006	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		<0.097	NA	NA
07030020		March 2007	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		0.15 J	NA	NA
07070118		July 2007	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		<0.35	NA	NA
07119018		November 2007	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		<0.5	NA	NA
09080720	August 2009	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		0.74	NA	NA	
SAGWP0104	SAP01	June 2005	<0.2	NA	11.4 J		1.29 J	NA	<2	0.958 J		4.27	<0.2	<0.2	<0.2		<0.5	<2	<0.2
SAGWP0203	SAP02	June 2005	<0.194	NA	2.39 J		<2.91	NA	<1.94	0.579 J		<3.76	<0.194	<0.194	<0.194		<0.485	<1.94	<0.194
SAGWP0302	SAP03	June 2005	<0.19	NA	9.52 J		<2.86	NA	<1.9	<1.9		<1.9	<0.19	<0.19	<0.19		<0.476	<1.9	<0.19
SAGWP0404	SAP04	June 2005	<0.19	NA	<9.52 J		<2.86	NA	<1.9	<1.9		<1.9	<0.19	<0.19	<0.19		<0.476	<1.9	<0.19
SAGWP0505	SAP05	June 2005	<0.192	NA	<9.62 J		<2.88	NA	<1.92	<1.92		<1.92	<0.192	<0.192	<0.192		<0.481	<1.92	<0.192
SAGWP0602	SAP06	June 2005	<0.2	NA	<10 J		<3	NA	<2	<2		<2	<0.2	<0.2	<0.2		<0.5	<2	<0.2

Sample ID	Sample Location	Date Collected	Semi-Volatile Organic Compounds (µg/L)																
			Anthracene	Benzo(A) anthracene	Benzoic Acid	Bis(2-ethylhexyl) Phthalate	Butylbenzyl Phthalate	Chrysene	Dibenzofuran	Diethyl phthalate	Dimethyl Phthalate	Di-n-butyl phthalate	Di-n-octyl phthalate	Fluoranthene	Fluorene	Isophorone	Naphthalene	PCP	Phenanthrene
SAGWW0203	SAW02/W-02	June 2005	<0.19	NA	<9.51		<2.85	NA	0.667 J	<1.9		<1.9	0.312 J	0.311	0.414		11.3	<1.9	0.973
W-02		September 2005	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA
06010012		January 2006	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	<0.24	NA
06040002		April 2006	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	<0.24	NA
06080102		August 2006	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	<0.25	NA
06121002		December 2006	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	<0.10	NA
07030017		March 2007	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	<0.34	NA
07070114		July 2007	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	<0.35	NA
07119014		November 2007	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	<0.5	NA
09080701		August 2009	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	<0.48	NA
SAGWW0305	SAW03/W-03	June 2005	<0.191	NA	<9.55		<2.87	NA	1.07 J	<1.91		<1.91	0.448 J	0.348	0.521		13.2	<1.91	1.32
W-03		September 2005	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	<0.191 J	NA
06010011		January 2006	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	<0.24	NA
06040001		April 2006	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	<0.24	NA
06080101		August 2006	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	<0.24	NA
06121015		December 2006	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	<0.098	NA
07030018		March 2007	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	<0.36	NA
07070113		July 2007	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	<0.35	NA
07119013		November 2007	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	<0.5	NA
09070702		August 2009	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	<0.51	NA
SAGWW0703	SAW07/W-07	June 2005	<0.189	NA	<9.47		<2.84	NA	0.808 J	<1.89		<1.89	<0.189	0.395	0.49		12.2	<1.89	1.21
W-07		September 2005	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	0.203 J	NA
06010005		January 2006	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	<0.24	NA
06040003		April 2006	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	<0.24	NA
06080103		August 2006	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	<0.25	NA
06121003		December 2006	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	<0.10	NA
07030021		March 2007	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	<0.35	NA
07070115		July 2007	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	0.25 J	NA
07119015		November 2007	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	<0.5	NA
09080703		August 2009	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	<0.48 J	NA
SAGWW0806	SAW08/W-08	June 2005	0.0233 J	NA	<9.52		<2.86	NA	0.776 J	<1.9		<1.9	<1.9	0.323	0.42		13.7	<1.9	1.1
W-08		September 2005	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	<1.93	NA
06010004		January 2006	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	<0.24	NA
06040007		April 2006	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	<0.24	NA
06080104		August 2006	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	<0.24	NA
06121006		December 2006	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	0.024 J	NA
07030022		March 2007	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	<0.34	NA
07070117		July 2007	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	<0.35	NA
07119017		November 2007	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	<0.5	NA
08060005		June 2008	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	<0.5	NA
09080704	August 2009	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	<0.47 J	NA	
06121004	MW-15	December 2006	NA	NA	NA		NA	NA	NA		NA	NA	NA	NA		NA	0.013 J	NA	
07030028		March 2007	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA		NA	<0.34	NA	
07070116		July 2007	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA		NA	0.39	NA	
07119016		November 2007	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA		NA	<0.5	NA	
09080705		August 2009	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA		NA	<0.47 J	NA	

Sample ID	Sample Location	Date Collected	Semi-Volatile Organic Compounds (µg/L)																
			Anthracene	Benzo(A) anthracene	Benzoic Acid	Bis(2-ethylhexyl) Phthalate	Butylbenzyl Phthalate	Chrysene	Dibenzofuran	Diethyl phthalate	Dimethyl Phthalate	Di-n-butyl phthalate	Di-n-octyl phthalate	Fluoranthene	Fluorene	Isophorone	Naphthalene	PCP	Phenanthrene
SAGW1107		October 2002				<2	0.027 J			0.15 J	0.15 J	0.058 J		<0.2		0.024 J	<0.2	<0.96	<0.2
SAGW1210		October 2002				1.9 J	<0.2			0.094 J	0.12 J	0.051 J		<0.2		0.028 J	0.013 J	0.058 J	<0.2
SAGW1308		October 2002				0.79 J	<0.2			0.13 J	0.16 J	0.062 J		<0.2		0.04 J	0.015 J	<0.96	<0.2
SAGW1408		October 2002				4.3	0.03 J			0.081 J	0.029 J	0.036 J		<0.2		0.044 J	0.016 J	0.075 J	<0.2
SAGW1508		October 2002				0.41 J	<0.2			0.035 J	<0.2	0.034 J		<0.2		0.015 J	<0.2	<0.96	<0.2
SAGW1608		October 2002				0.59 J	<0.2			0.07 J	0.047 J	<0.2		<0.2		0.017 J	<0.2	<0.96	<0.2
SAGW1707		October 2002				2.4	0.027 J			0.099 J	0.1 J	0.044 J		<0.2		0.027 J	<0.2	<0.96	<0.2
SAGW1807		October 2002				98	0.034 J			0.1 J	0.11 J	0.066 J		<0.2		0.027 J	0.019 J	<0.96	<0.2
SAGW1908		October 2002				0.64 J	0.029 J			0.059 J	0.024 J	0.042 J		<0.2		<0.2	0.029 J	1	0.014 J
SAGW2007		October 2002				<2	0.041 J			0.73	0.15 J	0.044 J		<0.2		<0.2	0.089 J	0.072 J	<0.2
SAGWMW02		October 2002				0.66 J	<0.2			0.083 J	0.12 J	0.064 J		<0.2		<0.2	<0.2	0.21 J	<0.2
Offsite (Downgradient) Wells																			
06121009	MW-16	December 2006	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	0.012 J	NA
07030012		March 2007	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	<0.36 J	NA
07070124		July 2007	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	<0.35	NA
07119024		November 2007	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	<0.5	NA
09030704		June 2008	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	<0.51	NA
09080708		August 2009	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	<0.47	NA
06121010	MW-17	December 2006	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	47	NA
07030013		March 2007	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	11 J	NA
07070125		July 2007	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	11	NA
07119025		November 2007	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	320	NA
08060009		June 2008	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	300	NA
09030706		March 2009	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	280	NA
09090710	August 2009	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	270	NA	
06121011	MW-18	December 2006	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	<0.097	NA
07030014		March 2007	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	<0.35	NA
07070123		July 2007	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	<0.35	NA
07119023		November 2007	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	<0.5	NA
08060008		June 2008	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	<0.5	NA
09030705		March 2009	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	<0.51	NA
09080709	August 2009	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	<0.47	NA	
06121020	MW-19	December 2006	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	<0.096	NA
7030015		March 2007	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	<0.34	NA
07070122		July 2007	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	<0.34	NA
07119022		November 2007	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	<0.5	NA
09080707		August 2009	NA	NA	NA		NA	NA	NA	NA		NA	NA	NA	NA		NA	<0.47	NA
MTCM Method B Cleanup Level			2,400	0.012	64,000	6.25	3,200	0.012	--	12,800		1,600	320	640	640	92.1 ca	160	0.792	--
EPA Region 9 PRG			1,800	0.092	150,000	4.80	7,300	9.20	12	29,000		3,600	1,500	1,500	240	71	6.20	0.560	--

Sample ID	Sample Location	Date Collected	Volatile Organic Compounds (µg/L)														
			Phenol	Pyrene	1,2,4-Trimethylbenzene	1,2-Dichlorobenzene	1,3,5-Trimethylbenzene	1,4-Dichlorobenzene	4-Isopropyltoluene	Benzene	Carbon Disulfide	Ethylbenzene	Isopropylbenzene	m,p-Xylenes	Naphthalene	n-Butylbenzene	n-Propylbenzene
Process Area																	
06121019	MW-09	December 2006	NA	NA													
07030023		March 2007	NA	NA													
07070121		July 2007	NA	NA													
07119021		November 2007	NA	NA													
09080704		August 2009	NA	NA													
06121026	MW-10	December 2006	NA	NA													
07030043		March 2007	NA	NA													
07070135		July 2007	NA	NA													
07119033		November 2007	NA	NA													
08060016		Jun-08	NA	NA													
09080727	August 2009	NA	NA														
PAGWP1109	PAP11	June 2005	NA	3.86													
PAGWP1208	PAP12	June 2005	NA	<0.189													
PAGWP1308	PAP13	June 2005	NA	<0.195													
06121036	RW-03	December 2006	NA	NA													
07030015		March 2007	NA	NA													
07070122		July 2007	NA	NA													
07119035		November 2007	NA	NA													
PAGW0711		October 2002	<9.6	2.6 J	12	1.2	3.3	0.31 J	0.73 J	0.14 J		1.2	0.36 J	3.8	37	1.6 J	0.82 J
PAG20811		October 2002	<9.6	<9.6	<2	<0.5	<2	<0.5	<2	<0.5	<0.5	<0.5	<2	<0.5	1.3 J	<2	<2
PAGW0907		October 2002	<9.6	0.85 J	<2	<0.5	<2	<0.5	<2	<0.5	<0.5	<2	<0.5	<2	<2	<2	<2
PAGW1008		October 2002	4.2 J	<9.6	2.5	0.35 J	0.74 J	0.17 J	0.25 J	<0.5	<0.5	<2	0.33 J	5.8	0.53 J	<2	<2
PAGW2107		October 2002	<9.6	<9.6	0.41 J	<0.5	0.14 J	<0.5	<2	<0.5	<0.5	<2	<0.5	0.72 J	<2	<2	<2
PAGW2212		October 2002	<9.6	<9.6	0.67 J	<0.5	<2	<0.5	<2	0.32 J		0.46 J	0.12 J	0.64	<2	<2	0.17 J
North Stockpile Area																	
NAGWP0705	NAP07	June 2005	NA	<0.19													
NAGWP0805	NAP08	June 2005	NA	<0.19													
NAGWP0906	NAP09	June 2005	NA	<0.19													
NAGWP1005	NAP10	June 2005	NA	<0.19													
NAGWW0106	NAW01/W-01	June 2005	NA	<0.188													
W-01		September 2005	NA	NA													
06010007		January 2006	NA	NA													
06040008		April 2006	NA	NA													
06080120		August 2006	NA	NA													
06121001		December 2006	NA	NA													
07030025		March 2007	NA	NA													
07070130		July 2007	NA	NA													
07119018		November 2007	NA	NA													
08060013		March 2009	NA	NA													
09080721	August 2009	NA	NA														
NAGWW0106D	NAW01	June 2005	NA	<0.19													

Sample ID	Sample Location	Date Collected	Volatile Organic Compounds (µg/L)													
			Phenol	Pyrene	1,2,4-Trimethylbenzene	1,2-Dichlorobenzene	1,3,5-Trimethylbenzene	1,4-Dichlorobenzene	4-Isopropyltoluene	Benzene	Carbon Disulfide	Ethylbenzene	Isopropylbenzene	m,p-Xylenes	Naphthalene	n-Butylbenzene	n-Propylbenzene
NAGWW0403	NAW04/W-04	June 2005	NA	0.122 J												
W-04		September 2005	NA	NA												
06010003		January 2006	NA	NA												
06040010		April 2006	NA	NA												
06080122		August 2006	NA	NA												
06121014		December 2006	NA	NA												
07030026		March 2007	NA	NA												
07070126		July 2007	NA	NA												
07119028		November 2007	NA	NA												
09080706		August 2009	NA	NA												
NAGWW0504		NAW05/W-05	June 2005	NA	<0.189											
W-05	September 2005		NA	NA												
06010006	January 2006		NA	NA												
06040012	April 2006		NA	NA												
06080121	August 2006		NA	NA												
06121018	December 2006		NA	NA												
07030031	March 2007		NA	NA												
07070127	July 2007		NA	NA												
07119030	November 2007		NA	NA												
08060011	June 2008		NA	NA												
09030707	March 2009		NA	NA												
09080724	August 2009	NA	NA													
NAGWW0603	NAW06/W-06	June 2005	NA	0.112 J												
W-06		September 2005	NA	NA												
06010001		January 2006	NA	NA												
06040011		April 2006	NA	NA												
06080118		August 2006	NA	NA												
06121017		December 2006	NA	NA												
07030027		March 2007	NA	NA												
07070129		July 2007	NA	NA												
07119031		November 2007	NA	NA												
09080723		August 2009	NA	NA												
06121024	MW-11 (lower interval)	December 2006	NA	NA												
07030044		March 2007	NA	NA												
07070133		July 2007	NA	NA												
07119034		November 2007	NA	NA												
08060015		June 2008	NA	NA												
09030710	MW-12 (upper interval)	March 2009	NA	NA												
09080726		August 2009	NA	NA												
06121025		December 2006	NA	NA												
07030045	MW-13	March 2007	NA	NA												
07070134		July 2007	NA	NA												
06121021	MW-13	December 2006	NA	NA												
07030029		March 2007	NA	NA												
07070132		July 2007	NA	NA												
07119032		November 2007	NA	NA												
08060014		June 2008	NA	NA												
09030709		March 2009	NA	NA												
09080725	August 2009	NA	NA													

Sample ID	Sample Location	Date Collected	Volatile Organic Compounds (µg/L)													
			Phenol	Pyrene	1,2,4-Trimethylbenzene	1,2-Dichlorobenzene	1,3,5-Trimethylbenzene	1,4-Dichlorobenzene	4-Isopropyltoluene	Benzene	Carbon Disulfide	Ethylbenzene	Isopropylbenzene	m,p-Xylenes	Naphthalene	n-Butylbenzene	n-Propylbenzene
06121012	MW-14	December 2006	NA	NA												
07030028		March 2007	NA	NA												
07070128		July 2007	NA	NA												
07119027		November 2007	NA	NA												
08060010		June 2008	NA	NA												
NAGW0107		October 2002		<9.6												
NAGW0207		October 2002		<9.6												
NAGW0308		October 2002		<9.7												
NAGW0406		October 2002		<0.2												
NAGW0508		October 2002		<0.2												
NAGW0611		October 2002		<0.2												
South Stockpile Area																
SAGWMW105	MW-1	June 2005	<1.9	<0.19												
SAGWMW105D		June 2005	<1.9	<0.19												
MW-01		September 2005	NA	NA												
06010008		January 2006	NA	NA												
06040006		April 2006	NA	NA												
06080107		August 2006	NA	NA												
06121007		December 2006	NA	NA												
07030016		March 2007	NA	NA												
07070119		July 2007	NA	NA												
07119019		November 2007	NA	NA												
08060006	June 2008	NA	NA													
SAGWMW205	MW-2	June 2005	<1.9	<0.19												
MW-02		September 2005	NA	NA												
06010009		January 2006	NA	NA												
06040005		April 2006	NA	NA												
06080106		August 2006	NA	NA												
06121007		December 2006	NA	NA												
07030019		March 2007	NA	NA												
07070120		July 2007	NA	NA												
07119020	November 2007	NA	NA													
09080719	August 2009	NA	NA													
SAGWMW407	MW-4	June 2005	<1.9	<0.19												
MW-04		September 2005	NA	NA												
06010010		January 2006	NA	NA												
06040004		April 2006	NA	NA												
06080105		August 2006	NA	NA												
06121008		December 2006	NA	NA												
07030020		March 2007	NA	NA												
07070118		July 2007	NA	NA												
07119018	November 2007	NA	NA													
09080720	August 2009	NA	NA													
SAGWP0104	SAP01	June 2005	1.98 J	<0.2												
SAGWP0203	SAP02	June 2005	<1.94	<0.194												
SAGWP0302	SAP03	June 2005	<1.9	<0.19												
SAGWP0404	SAP04	June 2005	<1.9	<0.19												
SAGWP0505	SAP05	June 2005	<1.92	<0.192												
SAGWP0602	SAP06	June 2005	<2	<0.2												

Sample ID	Sample Location	Date Collected	Volatile Organic Compounds (µg/L)														
			Phenol	Pyrene	1,2,4-Trimethylbenzene	1,2-Dichlorobenzene	1,3,5-Trimethylbenzene	1,4-Dichlorobenzene	4-Isopropyltoluene	Benzene	Carbon Disulfide	Ethylbenzene	Isopropylbenzene	m,p-Xylenes	Naphthalene	n-Butylbenzene	n-Propylbenzene
SAGWW0203	SAW02/W-02	June 2005	<1.9	0.12 J													
W-02		September 2005	NA	NA													
06010012		January 2006	NA	NA													
06040002		April 2006	NA	NA													
06080102		August 2006	NA	NA													
06121002		December 2006	NA	NA													
07030017		March 2007	NA	NA													
07070114		July 2007	NA	NA													
07119014		November 2007	NA	NA													
09080701		August 2009	NA	NA													
SAGWW0305	SAW03/W-03	June 2005	<1.91	0.159 J													
W-03		September 2005	NA	NA													
06010011		January 2006	NA	NA													
06040001		April 2006	NA	NA													
06080101		August 2006	NA	NA													
06121015		December 2006	NA	NA													
07030018		March 2007	NA	NA													
07070113		July 2007	NA	NA													
07119013		November 2007	NA	NA													
09070702		August 2009	NA	NA													
SAGWW0703	SAW07/W-07	June 2005	<1.89	0.171 J													
W-07		September 2005	NA	NA													
06010005		January 2006	NA	NA													
06040003		April 2006	NA	NA													
06080103		August 2006	NA	NA													
06121003		December 2006	NA	NA													
07030021		March 2007	NA	NA													
07070115		July 2007	NA	NA													
07119015		November 2007	NA	NA													
09080703		August 2009	NA	NA													
SAGWW0806	SAW08/W-08	June 2005	<1.9	0.15 J													
W-08		September 2005	NA	NA													
06010004		January 2006	NA	NA													
06040007		April 2006	NA	NA													
06080104		August 2006	NA	NA													
06121006		December 2006	NA	NA													
07030022		March 2007	NA	NA													
07070117		July 2007	NA	NA													
07119017		November 2007	NA	NA													
08060005		June 2008	NA	NA													
09080704	August 2009	NA	NA														
06121004	MW-15	December 2006	NA	NA													
07030028		March 2007	NA	NA													
07070116		July 2007	NA	NA													
07119016		November 2007	NA	NA													
09080705		August 2009	NA	NA													

Sample ID	Sample Location	Date Collected	Volatile Organic Compounds (µg/L)													
			Phenol	Pyrene	1,2,4-Trimethylbenzene	1,2-Dichlorobenzene	1,3,5-Trimethylbenzene	1,4-Dichlorobenzene	4-Isopropyltoluene	Benzene	Carbon Disulfide	Ethylbenzene	Isopropylbenzene	m,p-Xylenes	Naphthalene	n-Butylbenzene	n-Propylbenzene
SAGW1107		October 2002	0.08 J							<0.5						
SAGW1210		October 2002	0.22 J							<0.5						
SAGW1308		October 2002	0.09 J							<0.5						
SAGW1408		October 2002	0.12 J							<0.5						
SAGW1508		October 2002	0.35 J							<0.5						
SAGW1608		October 2002	0.049 J							<0.5						
SAGW1707		October 2002	0.1 J							<0.5						
SAGW1807		October 2002	0.057 J							<0.5						
SAGW1908		October 2002	0.048 J							<0.5						
SAGW2007		October 2002	0.16 J							0.38 J						
SAGWMW02		October 2002	0.064 J							<0.5						
Offsite (Downgradient) Wells																
06121009	MW-16	December 2006	NA	NA												
07030012		March 2007	NA	NA												
07070124		July 2007	NA	NA												
07119024		November 2007	NA	NA												
09030704		June 2008	NA	NA												
09080708		August 2009	NA	NA												
06121010	MW-17	December 2006	NA	NA												
07030013		March 2007	NA	NA												
07070125		July 2007	NA	NA												
07119025		November 2007	NA	NA												
08060009		June 2008	NA	NA												
09030706		March 2009	NA	NA												
09090710	August 2009	NA	NA													
06121011	MW-18	December 2006	NA	NA												
07030014		March 2007	NA	NA												
07070123		July 2007	NA	NA												
07119023		November 2007	NA	NA												
08060008		June 2008	NA	NA												
09030705		March 2009	NA	NA												
09080709	August 2009	NA	NA													
06121020	MW-19	December 2006	NA	NA												
7030015		March 2007	NA	NA												
07070122		July 2007	NA	NA												
07119022		November 2007	NA	NA												
09080707		August 2009	NA	NA												
MTCA Method B Cleanup Level			9,600	480	--	720	--	1.82	--	0.795 ca	800	1,600	16,000	160	--	--
EPA Region 9 PRG			11,000	180	12	370	12	0.50	--	0.34	2.9	240	--	6.2	240	240

Sample ID	Sample Location	Date Collected	NWTPH-Dx (µg/L)				Inorganics													
			o-Xylene	sec-Butylbenzene	Toluene	DRO	RRO	Antimony	Arsenic	Beryllium	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Silver	Thallium	Zinc
Process Area																				
06121019	MW-09	December 2006																		
07030023		March 2007																		
07070121		July 2007																		
07119021		November 2007																		
09080704		August 2009																		
06121026	MW-10	December 2006																		
07030043		March 2007																		
07070135		July 2007																		
07119033		November 2007																		
08060016		Jun-08																		
09080727	August 2009																			
PAGWP1109	PAP11	June 2005																		
PAGWP1208	PAP12	June 2005																		
PAGWP1308	PAP13	June 2005																		
06121036	RW-03	December 2006																		
07030015		March 2007																		
07070122		July 2007																		
07119035		November 2007																		
PAGW0711		October 2002	4.3	0.35 J	0.78	13,000	810	<50	<5	<5	<5	<5	14.7	<2	<0.2	<20	<5	<10	<5	11.2
PAG20811		October 2002	<0.5	<2	<0.5	52 J	<500	<50	<5	<5	<5	<5	6.3 J	1.9 J	<0.2	<20	<5	<10	<5	15.2
PAGW0907		October 2002	<0.5	<2	<0.5	2,600	430 J	<50	<5	<5	2.5 J	<5	7.0 J	2.5	<0.2	<20	<5	<10	<5	20.8
PAGW1008		October 2002	0.28 J	<2	0.2 J	2,700	200 J	<50	<5	<5	<5	<5	5.6 J	1 J	<0.2	<20	<5	<10	<5	7.7 J
PAGW2107		October 2002	0.19 J	1.1 J	0.1 J	1,300	230 J	<50	<25	<5	<5	<5	9.1 J	6.4	<0.2	<20	7.8 J	<10	<5	31.4
PAGW2212		October 2002	1.4	<2	0.33 J	2,100	300 J	<50	<25	<5	<5	8.5	13.2	8.8	<0.2	20.6	<25	<10	<5	51.1
North Stockpile Area																				
NAGWP0705	NAP07	June 2005																		
NAGWP0805	NAP08	June 2005																		
NAGWP0906	NAP09	June 2005																		
NAGWP1005	NAP10	June 2005																		
NAGWW0106	NAW01/W-01	June 2005																		
W-01		September 2005																		
06010007		January 2006																		
06040008		April 2006																		
06080120		August 2006																		
06121001		December 2006																		
07030025		March 2007																		
07070130		July 2007																		
07119018		November 2007																		
08060013		March 2009																		
09080721	August 2009																			
NAGWW0106D	NAW01	June 2005																		

Sample ID	Sample Location	Date Collected	NWTPH-Dx (µg/L)					Inorganics													
			o-Xylene	sec-Butylbenzene	Toluene	DRO	RRO	Antimony	Arsenic	Beryllium	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Silver	Thallium	Zinc	
NAGWW0403	NAW04/W-04	June 2005																			
W-04		September 2005																			
06010003		January 2006																			
06040010		April 2006																			
06080122		August 2006																			
06121014		December 2006																			
07030026		March 2007																			
07070126		July 2007																			
07119028		November 2007																			
09080706		August 2009																			
NAGWW0504		NAW05/W-05	June 2005																		
W-05			September 2005																		
06010006	January 2006																				
06040012	April 2006																				
06080121	August 2006																				
06121018	December 2006																				
07030031	March 2007																				
07070127	July 2007																				
07119030	November 2007																				
08060011	June 2008																				
09030707	March 2009																				
09080724	August 2009																				
NAGWW0603	NAW06/W-06		June 2005																		
W-06			September 2005																		
06010001		January 2006																			
06040011		April 2006																			
06080118		August 2006																			
06121017		December 2006																			
07030027		March 2007																			
07070129		July 2007																			
07119031		November 2007																			
09080723		August 2009																			
06121024	MW-11 (lower interval)	December 2006																			
07030044		March 2007																			
07070133		July 2007																			
07119034		November 2007																			
08060015		June 2008																			
09030710	MW-12 (upper interval)	March 2009																			
09080726		August 2009																			
06121025		December 2006																			
07030045	MW-12 (upper interval)	March 2007																			
07070134		July 2007																			
06121021	MW-13	December 2006																			
07030029		March 2007																			
07070132		July 2007																			
07119032		November 2007																			
08060014		June 2008																			
09030709		March 2009																			
09080725	August 2009																				

Sample ID	Sample Location	Date Collected	NWTPH-Dx (µg/L)					Inorganics												
			o-Xylene	sec-Butylbenzene	Toluene	DRO	RRO	Antimony	Arsenic	Beryllium	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Silver	Thallium	Zinc
06121012	MW-14	December 2006																		
07030028		March 2007																		
07070128		July 2007																		
07119027		November 2007																		
08060010		June 2008																		
NAGW0107		October 2002			<0.5	<250	<500	<50	<5	<5	<5	<5	7.1 J	1.3 J	<0.2	<20	1.8 J	<10	<5	22.5
NAGW0207		October 2002			<0.5	58 J	<500	<50	<5	<5	<5	<5	<10	<2	<0.2	<20	2.1 J	<10	<5	5.7 J
NAGW0308		October 2002			<0.5	140 J	46 J	<50	<5	<5	<5	<5	<10	<2	<0.2	<20	<5	<10	<5	7.1 J
NAGW0406		October 2002			<0.5	78 J	190 J	<50	20.9	4.8 J	<5	110	131	89	<0.2	109	<5	<10	1	576
NAGW0508		October 2002			<0.5	<250	31 J	<50	1.5	<5	<5	<5	8.1	3.2	<0.2	<20	<5	<10	<5	28.5
NAGW0611		October 2002			0.17 J	<250	<500	<50	<5	<5	<5	<5	6.3 J	<2	<0.2	<20	<10	<10	<5	<10
South Stockpile Area																				
SAGWMW105	MW-1	June 2005																		
SAGWMW105D		June 2005																		
MW-01		September 2005																		
06010008		January 2006																		
06040006		April 2006																		
06080107		August 2006																		
06121007		December 2006																		
07030016		March 2007																		
07070119		July 2007																		
07119019		November 2007																		
08060006	June 2008																			
SAGWMW205	MW-2	June 2005																		
MW-02		September 2005																		
06010009		January 2006																		
06040005		April 2006																		
06080106		August 2006																		
06121007		December 2006																		
07030019		March 2007																		
07070120		July 2007																		
07119020	November 2007																			
09080719	August 2009																			
SAGWMW407	MW-4	June 2005																		
MW-04		September 2005																		
06010010		January 2006																		
06040004		April 2006																		
06080105		August 2006																		
06121008		December 2006																		
07030020		March 2007																		
07070118		July 2007																		
07119018	November 2007																			
09080720	August 2009																			
SAGWPO104	SAP01	June 2005																		
SAGWPO203	SAP02	June 2005																		
SAGWPO302	SAP03	June 2005																		
SAGWPO404	SAP04	June 2005																		
SAGWPO505	SAP05	June 2005																		
SAGWPO602	SAP06	June 2005																		

Sample ID	Sample Location	Date Collected	NWTPH-Dx (µg/L)					Inorganics												
			o-Xylene	sec-Butylbenzene	Toluene	DRO	RRO	Antimony	Arsenic	Beryllium	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Silver	Thallium	Zinc
SAGWW0203	SAW02/W-02	June 2005																		
W-02		September 2005																		
06010012		January 2006																		
06040002		April 2006																		
06080102		August 2006																		
06121002		December 2006																		
07030017		March 2007																		
07070114		July 2007																		
07119014		November 2007																		
09080701		August 2009																		
SAGWW0305	SAW03/W-03	June 2005																		
W-03		September 2005																		
06010011		January 2006																		
06040001		April 2006																		
06080101		August 2006																		
06121015		December 2006																		
07030018		March 2007																		
07070113		July 2007																		
07119013		November 2007																		
09070702		August 2009																		
SAGWW0703	SAW07/W-07	June 2005																		
W-07		September 2005																		
06010005		January 2006																		
06040003		April 2006																		
06080103		August 2006																		
06121003		December 2006																		
07030021		March 2007																		
07070115		July 2007																		
07119015		November 2007																		
09080703		August 2009																		
SAGWW0806	SAW08/W-08	June 2005																		
W-08		September 2005																		
06010004		January 2006																		
06040007		April 2006																		
06080104		August 2006																		
06121006		December 2006																		
07030022		March 2007																		
07070117		July 2007																		
07119017		November 2007																		
08060005		June 2008																		
09080704	August 2009																			
06121004	MW-15	December 2006																		
07030028		March 2007																		
07070116		July 2007																		
07119016		November 2007																		
09080705	August 2009																			

Sample ID	Sample Location	Date Collected	NWTPH-Dx (µg/L)					Inorganics													
			o-Xylene	sec-Butylbenzene	Toluene	DRO	RRO	Antimony	Arsenic	Beryllium	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Silver	Thallium	Zinc	
SAGW1107		October 2002			0.1 J	<250	<500	36.7 J	<5	<5	<5	<5	5.6 J	1 J	<0.2	<20	<5	<10	<5	9.7 J	
SAGW1210		October 2002			0.18 J	78 J	34 J	<50	<5	<5	<5	<5	6.3 J	<2	<0.2	<20	<10	<10	<5	5.4 J	
SAGW1308		October 2002			0.11 J	89 J	55 J	<50	7.6	<5	<5	4 J	10.5	6.8	<0.2	<20	1.7 J	<10	<5	19.7	
SAGW1408		October 2002			<0.5	70 J	54 J	<50	6.7	<5	<5	<5	14.8	7.2	<0.2	<20	<5	<10	<5	31.9	
SAGW1508		October 2002			0.16 J	<250	<500	<50	<5	<5	2.5 J	<5	4.9 J	<2	<0.2	<20	<5	<10	<5	5.6 J	
SAGW1608		October 2002			0.2 J	<250	<500	<50	<5	<5	<5	<5	4.9 J	1.1 J	<0.2	<20	<10	<10	<5	12.4	
SAGW1707		October 2002			0.13 J	<250	<500	<50	7.9	<5	<5	4.2 J	11.2	4.4	<0.2	<20	<10	<10	<5	18.3	
SAGW1807		October 2002			0.18 J	<250	62 J	<50	<5	<5	<5	7.1	12	4.9	<0.2	<20	<5	<10	<5	33.7	
SAGW1908		October 2002			0.12 J	<250	<500	<50	<5	<5	<5	3.8 J	5.6 J	2.7	<0.2	<20	<5	<10	<5	11	
SAGW2007		October 2002			0.22 J	<250	<500	45.8 J	2.4 J	<5	<5	<5	7.7 J	1.7 J	<0.2	<20	1.4 J	<10	<5	11.8	
SAGWMW02		October 2002			<0.5	78 J	140 J	<50	<25	<5	2.1 J	<5	<10	<2	<0.2	<20	<25	<10	<5	2.7 J	
Offsite (Downgradient) Wells																					
06121009	MW-16	December 2006																			
07030012		March 2007																			
07070124		July 2007																			
07119024		November 2007																			
09030704		June 2008																			
09080708		August 2009																			
06121010	MW-17	December 2006																			
07030013		March 2007																			
07070125		July 2007																			
07119025		November 2007																			
08060009		June 2008																			
09030706		March 2009																			
09090710	August 2009																				
06121011	MW-18	December 2006																			
07030014		March 2007																			
07070123		July 2007																			
07119023		November 2007																			
08060008		June 2008																			
09030705		March 2009																			
09080709	August 2009																				
06121020	MW-19	December 2006																			
7030015		March 2007																			
07070122		July 2007																			
07119022		November 2007																			
09080707		August 2009																			
MTCA Method B Cleanup Level			16,000	--	1,600	500	500	--	0.0583 ca	32	8	50	592	15	4.8	320	80	80	1.12	4,800	
EPA Region 9 PRG			420	240	720	--	--	15	0.045 ca	73	18	55,000 (Cr III)	1,500	--	11	730	180	180	2.40	11,000	

Notes:

Shaded and **bolded** analytical results indicate concentration exceeds state cleanup criterion.

J = The associated numerical value is an estimated quantity because the reported concentrations were less than the required detection limits or quality control criteria were not met

MTCA - Model Toxic Control Act (Ecology 2001)

µg/kg = microgram per kilogram

mg/kg = milligram per kilogram

Table A-5
Surface Water Chemical Analytical Results
 Colville Post and Poles
 Stevens County, Washington

Sample ID	Sample Location	Date Collected	Petroleum Hydrocarbons (mg/L)		PCP
			DRPH	ORPH	
PASUMP02		10/2/2002	490	970	2.8 J
SUMSW01		10/2/2002	660	1500	3
MTCA Method B Cleanup Level			500	--	0.792 ca
EPA Region 9 PRG			500	--	0.56

Notes:

Shaded and **bolded** analytical results indicate concentration exceeds state cleanup criterion.

Table A-6
Confirmation Sampling Analytical Results
Colville Post and Poles
Stevens County, Washington

Sample ID	Location ID	Sample Date	Matrix	Location Description	PCP Test Kit Results (1) SW-486 Method 4010A (mg/kg)		PCP Lab Results SW-486 Method 8270 (mg/kg)
					Standard Dilution	Diluted Result	
6090703	RR00SS03	9/26/2006	Soil	Railroad Right-of-way	>28	NA	47
6090704	RR00SS0	9/26/2006	Soil	Railroad Right-of-way	>28	NA	74
6090705	DAP05	9/26/2006	Sediment	Drainage Area Pathway	NA	NA	9.2
6090707	DAP02	9/26/2006	Sediment	Drainage Area Pathway	NA	NA	5.4
6090708	DAP03	9/26/2006	Sediment	Drainage Area Pathway	NA	NA	9.3
6090709	DAP04	9/26/2006	Sediment	Drainage Area Pathway	NA	NA	13
6090713	DAP09	9/26/2006	Sediment	Drainage Area Pathway	NA	NA	130
6090714	DAP10	9/26/2006	Sediment	Drainage Area Pathway	NA	NA	23
6090722	TB02SB09	10/1/2006	Soil	Treatment Building	>28	>560	4,100
6090723	TB02SB11	10/1/2006	Soil	Treatment Building	>28	>549	720
6090725	TDP01SB01	10/2/2006	Soil	Treatment Drainage Path	>28	24	5.5
6090733	TB04SB06	10/4/2006	Soil	Treatment Building	>28	NA	310
6090738	TBS02SB07	10/9/2006	Soil	Treatment Building Support	>28	>554	4.6
6090743	TLA09SB02	10/9/2006	Soil	Truck Loading Area	>28	>554	390
6090750	TLA05SB03	10/11/2006	Soil	Truck Loading Area	>28	59	18
6090752	PACW04	10/12/2006	Soil	Process Area Confirmation Wall	>28	257	3.5
6090753	PACW08	10/12/2006	Soil	Process Area Confirmation Wall	>28	532	57
6090755	PACF09	10/13/2006	Soil	Process Area Confirmation Floor	>28	418	51
6090756	PACF14	10/13/2006	Soil	Process Area Confirmation Floor	>28	158	6.8
6090763	AST02SB01	10/2/2006	Soil	Above-Ground Storage Tanks	13	NA	NA
6090764	AST02SB02	10/2/2006	Soil	Above-Ground Storage Tanks	11	NA	NA
6090765	AST02SB03	10/2/2006	Soil	Above-Ground Storage Tanks	6.0	NA	NA
6090766	AST02SB04	10/2/2006	Soil	Above-Ground Storage Tanks	>28	NA	NA
6090770	AST03SB04	10/9/2006	Soil	Above-Ground Storage Tanks	23	NA	NA
6090772	CPA00SS01	10/2/2006	Soil	Concrete Pad Area	>28	>560	NA
6090773	CPA00SS02	10/2/2006	Soil	Concrete Pad Area	>27	>137	NA
6090779	HP01SB03	10/9/2006	Soil	Heap Area	11	NA	NA
6090785	PACF01	10/12/2006	Soil	Process Area Confirmation Floor	>28	NA	NA
6090787	PACF04	10/12/2006	Soil	Process Area Confirmation Floor	>28	NA	NA
6090788	PACF05	10/12/2006	Soil	Process Area Confirmation Floor	>28	>560	NA
6090789	PACF06	10/12/2006	Soil	Process Area Confirmation Floor	>28	>554	NA
6090790	PACF07	10/12/2006	Soil	Process Area Confirmation Floor	>28	>566	NA
6090791	PACF08	10/12/2006	Soil	Process Area Confirmation Floor	>28	>560	NA
6090792	PACF10	10/12/2006	Soil	Process Area Confirmation Floor	>28	460	NA
6090793	PACF11	10/12/2006	Soil	Process Area Confirmation Floor	>28	>566	NA
6090794	PACF12	10/12/2006	Soil	Process Area Confirmation Floor	27	NA	NA
6090795	PACF13	10/12/2006	Soil	Process Area Confirmation Floor	>28	>566	NA
6090797	PACF16	10/13/2006	Soil	Process Area Confirmation Floor	10	<14	NA
6090801	PACW07	10/13/2006	Soil	Process Area Confirmation Wall	>28	159	NA
6090803	PS02SB01	10/2/2006	Soil	Penta Shed	9.6	NA	NA

Sample ID	Location ID	Sample Date	Matrix	Location Description	PCP Test Kit Results (1) SW-486 Method 4010A (mg/kg)		PCP Lab Results SW-486 Method 8270 (mg/kg)
					Standard Dilution	Diluted Result	
					6090813	SPR00SS01		10/2/2006	Soil	Soil Spread Area	9.2	NA	NA
6090814	SPR00SS03	10/2/2006	Soil	Soil Spread Area	12	NA	NA
6090815	SPR00SS04	10/2/2006	Soil	Soil Spread Area	>28	25	NA
6090819	SPR02SB06	10/10/2006	Soil	Soil Spread Area	4.1	NA	NA
6090821	TB02SB02	10/1/2006	Soil	Treatment Building	>28	NA	NA
6090822	TB02SB03	10/1/2006	Soil	Treatment Building	>28	NA	NA
6090823	TB02SB04	10/1/2006	Soil	Treatment Building	>28	NA	NA
6090824	TB02SB06	10/1/2006	Soil	Treatment Building	>28	NA	NA
6090825	TB02SB07	10/1/2006	Soil	Treatment Building	>29	NA	NA
6090826	TB02SB08	10/1/2006	Soil	Treatment Building	>28	NA	NA
6090827	TB02SB10	10/1/2006	Soil	Treatment Building	>28	NA	NA
6090830	TB02SB14	10/1/2006	Soil	Treatment Building	19	NA	NA
6090831	TB02SB15	10/1/2006	Soil	Treatment Building	>27	NA	NA
6090833	TB02SB17	10/1/2006	Soil	Treatment Building	7.2	NA	NA
6090834	TB02SB18	10/1/2006	Soil	Treatment Building	>28	NA	NA
6090835	TB02SB19	10/1/2006	Soil	Treatment Building	>28	>560	NA
6090836	TB02SB20	10/1/2006	Soil	Treatment Building	>28	28	NA
6090837	TB02SB21	10/1/2006	Soil	Treatment Building	14	NA	NA
6090838	TB04SB01	10/4/2006	Soil	Treatment Building	4.4	NA	NA
6090839	TB04SB02	10/4/2006	Soil	Treatment Building	4.7	NA	NA
6090840	TB04SB03	10/4/2006	Soil	Treatment Building	>28	NA	NA
6090841	TB04SB04	10/4/2006	Soil	Treatment Building	>27	NA	NA
6090842	TB04SB05	10/4/2006	Soil	Treatment Building	>28	NA	NA
6090843	TB04SB07	10/4/2006	Soil	Treatment Building	>28	NA	NA
6090844	TB04SB08	10/4/2006	Soil	Treatment Building	>28	NA	NA
6090845	TB04SB09	10/4/2006	Soil	Treatment Building	>28	NA	NA
6090846	TB04SB10	10/4/2006	Soil	Treatment Building	>28	NA	NA
6090847	TBS00SS01	10/2/2006	Soil	Treatment Building Support	>28	NA	NA
6090848	TBS00SS02	10/2/2006	Soil	Treatment Building Support	>27	NA	NA
6090850	TBS00SS04	10/2/2006	Soil	Treatment Building Support	19	NA	NA
6090851	TBS00SS05	10/2/2006	Soil	Treatment Building Support	>28	NA	NA
6090852	TBS00SS06	10/2/2006	Soil	Treatment Building Support	>27	NA	NA
6090859	TBS02SB09	10/9/2006	Soil	Treatment Building Support	>28	229	NA
6090860	TBS02SB10	10/9/2006	Soil	Treatment Building Support	>28	26	NA
6090863	TBS04SB02	10/11/2006	Soil	Treatment Building Support	>28	17	NA
6090864	TBS04SB03	10/11/2006	Soil	Treatment Building Support	>28	>560	NA
6090865	TBS04SB04	10/11/2006	Soil	Treatment Building Support	12	<14	NA
6090866	TBS04SB05	10/11/2006	Soil	Treatment Building Support	8.9	31	NA
6090868	TBS04SB07	10/11/2006	Soil	Treatment Building Support	>28	242	NA
6090869	TBS04SB08	10/11/2006	Soil	Treatment Building Support	>28	10	NA
6090870	TBS04SB06	10/11/2006	Soil	Treatment Building Support	>28 / >28	130 / 123	NA
6090871	TDP00SS01	10/2/2006	Soil	Treatment Drainage Path	>28	NA	NA
6090872	TDP00SS01	10/2/2006	Soil	Treatment Drainage Path	>29	NA	NA
6090873	TDP00SS01	10/4/2006	Soil	Treatment Drainage Path	>28	NA	NA
6090874	TDP00SS01	10/4/2006	Soil	Treatment Drainage Path	>28	NA	NA
6090882	TLA01SB09	10/4/2006	Soil	Truck Loading Area	23	NA	NA

Sample ID	Location ID	Sample Date	Matrix	Location Description	PCP Test Kit Results (1) SW-486 Method 4010A (mg/kg)		PCP Lab Results SW-486 Method 8270 (mg/kg)
					Standard Dilution	Diluted Result	
					6090884	TLA01SB12		10/4/2006	Soil	Truck Loading Area	4.9	NA	NA
6090885	TLA01SB13	10/4/2006	Soil	Truck Loading Area	21	NA	NA
6090886	TLA01SB14	10/4/2006	Soil	Truck Loading Area	3.2	NA	NA
6090887	TLA01SB15	10/4/2006	Soil	Truck Loading Area	>27	NA	NA
6090896	TLA05SB02	10/9/2006	Soil	Truck Loading Area	>28	51	NA
6090897	TLA05SB04	10/11/2006	Soil	Truck Loading Area	>28	>566	NA
6090898	TLA05SB05	10/11/2006	Soil	Truck Loading Area	11	NA	NA
6090899	TLA05SB06	10/11/2006	Soil	Truck Loading Area	3.1	NA	NA
6090901	TLA06SB01	10/9/2006	Soil	Truck Loading Area	>28	<14	NA
6090902	TLA07SB01	10/9/2006	Soil	Truck Loading Area	>28	84	NA
6090905	TLA09SB01	10/9/2006	Soil	Truck Loading Area	15	NA	NA
6090916	RR00SS05	10/14/2006	Soil	Railroad Right-of-Way	>28	>566	NA
6090917	RR00SS06	10/14/2006	Soil	Railroad Right-of-Way	>28	>560	NA
6090918	RR00SS07	10/14/2006	Soil	Railroad Right-of-Way	>28	>554	NA
6090919	RR00SS08	10/14/2006	Soil	Railroad Right-of-Way	>28	>560	NA
6090920	RR00SS09	10/14/2006	Soil	Railroad Right-of-Way	>28	>554	48
6090921	RR00SS10	10/14/2006	Soil	Railroad Right-of-Way	>28	51	NA
6090922	RR00SS11	10/14/2006	Soil	Railroad Right-of-Way	>28	NA	2.7
6090923	RR00SS12	10/14/2006	Soil	Railroad Right-of-Way	>28 / >28	>566 / >564	NA
6090925	AST05SB01	10/11/2006	Soil	Above-Ground Storage Tanks	>28	129	NA
6090926	PACW10	10/16/2006	Soil	Process Area Confirmation Wall	>28	>566	NA
6090927	PACW11	10/16/2006	Soil	Process Area Confirmation Wall	>28	46	NA
6090930	PACW14	10/16/2006	Soil	Process Area Confirmation Wall	>28	223	NA
6090931	PACW15	10/16/2006	Soil	Process Area Confirmation Wall	2.6	<14	NA
6090941	DAP17	10/17/2006	Sediment	Drainage Area Pathway	7.6	NA	NA
6090948	DAP24	10/18/2006	Sediment	Drainage Area Pathway	>14	NA	NA
6090949	DAP25	10/18/2006	Sediment	Drainage Area Pathway	10	NA	NA
6090955	DAP31	10/19/2006	Sediment	Drainage Area Pathway	>14	NA	NA
6090956	DAP32	10/19/2006	Sediment	Drainage Area Pathway	>14	NA	NA
6090959	RP2W	10/19/2006	Water	Recovery Pit	NA	NA	65 mg/L
6090966	DAP36	10/20/2006	Soil	Drainage Area Pathway	>14	NA	NA
6090968	RR14	10/20/2006	Soil	Railroad Right-of-Way	3.6	<14	NA
6090971	RR17	10/20/2006	Soil	Railroad Right-of-Way	<0.70	32	NA
6090975	RR20	10/23/2006	Soil	Railroad Right-of-Way	>28/28	NA	NA
6090976	RR21	10/23/2006	Soil	Railroad Right-of-Way	>28	NA	NA
6090977	RR22	10/23/2006	Soil	Railroad Right-of-Way	>27	NA	NA
6090978	RR23	10/23/2006	Soil	Railroad Right-of-Way	>27	NA	NA
6090979	RR24	10/23/2006	Soil	Railroad Right-of-Way	>28	NA	NA
6090980	RR25	10/23/2006	Soil	Railroad Right-of-Way	>29	NA	NA
6090981	PACW16	10/23/2006	Soil	Railroad Right-of-Way	>28	NA	NA
6090983	PACW18	10/23/2006	Soil	Process Area Confirmation Wall	>28	105	NA
6090984	PACF17	10/23/2006	Soil	Process Area Confirmation Wall	>28	322	NA
6090988	TDAW01	10/23/2006	Soil	Treatment Drainage Area Wall	>28	NA	NA
6090989	TDAW02	10/23/2006	Soil	Treatment Drainage Area Wall	>28	NA	NA
6090990	TDAW03	10/23/2006	Soil	Treatment Drainage Area Wall	>28	NA	NA
6090991	TDAW04	10/23/2006	Soil	Treatment Drainage Area Wall	12	NA	NA

Sample ID	Location ID	Sample Date	Matrix	Location Description	PCP Test Kit Results (1) SW-486 Method 4010A (mg/kg)		PCP Lab Results SW-486 Method 8270 (mg/kg)
					Standard Dilution	Diluted Result	
					6090992	TDAW05		10/23/2006	Soil	Treatment Drainage Area Wall	>28	NA	NA
6090993	DAPW01	10/23/2006	Sediment	Drainage Area Pond Wall	>14/>14	NA	NA
6090994	DAPW02	10/23/2006	Sediment	Drainage Area Pond Wall	>14	NA	NA
6090995	DAPW03	10/23/2006	Sediment	Drainage Area Pond Wall	>14	NA	NA
6090996	DAPW04	10/23/2006	Sediment	Drainage Area Pond Wall	>14	NA	NA
6090997	DAPW05	10/23/2006	Sediment	Drainage Area Pond Wall	>14	NA	NA
6090999	DAPW07	10/23/2006	Sediment	Drainage Area Pond Wall	9.9	NA	NA
6091000	DAPW08	10/23/2006	Sediment	Drainage Area Pond Wall	>14	NA	NA
6091001	DAPW09	10/23/2006	Sediment	Drainage Area Pond Wall	>14	NA	NA
6091006	DAP40	10/26/2006	Sediment	Drainage Area Pathway	>27	NA	NA
6091007	DAP41	10/26/2006	Sediment	Drainage Area Pathway	>29	NA	NA
6091008	DAPW12	10/26/2006	Sediment	Drainage Area Pond Wall	>28	NA	NA
6091009	DAPW13	10/26/2006	Sediment	Drainage Area Pond Wall	>28	NA	NA
6091010	DAPW14	10/26/2006	Sediment	Drainage Area Pond Wall	>28	NA	NA
6091011	DAPW15	10/26/2006	Sediment	Drainage Area Pond Wall	3.7	NA	NA
6091012	DAPW16	10/26/2006	Sediment	Drainage Area Pond Wall	>28	NA	NA
6091013	DAPW17	10/26/2006	Sediment	Drainage Area Pond Wall	18	NA	NA
6091014	TDAF18	10/26/2006	Soil	Treatment Drainage Area Floor	>28/>29	NA	NA
6091015	TDAF19	10/26/2006	Soil	Treatment Drainage Area Floor	>28	963	NA
6091016	TDAF20	10/26/2006	Soil	Treatment Drainage Area Floor	>28	NA	NA
6091017	TDAF21	10/26/2006	Soil	Treatment Drainage Area Floor	>28	NA	NA
6091018	TDAF22	10/26/2006	Soil	Treatment Drainage Area Floor	>27	>1,098	NA
6091019	TDAF23	10/26/2006	Soil	Treatment Drainage Area Floor	>28	NA	NA
6091020	TDAF24	10/26/2006	Soil	Treatment Drainage Area Floor	>28	592	NA
6091021	TDAF25	10/26/2006	Soil	Treatment Drainage Area Floor	>28	516	NA
6091022	TDAW06	10/26/2006	Soil	Treatment Drainage Area Wall	>28	1,000	NA
6091023	TDAW07	10/26/2006	Soil	Treatment Drainage Area Wall	>28	908	NA
6091024	TDAW08	10/26/2006	Soil	Treatment Drainage Area Wall	>28	NA	NA
6091025	TDAW09	10/26/2006	Soil	Treatment Drainage Area Wall	>28	NA	NA
6091026	TDAW10	10/26/2006	Soil	Treatment Drainage Area Wall	>28	51	NA
6091027	TDAW11	10/26/2006	Soil	Treatment Drainage Area Wall	>28	597	NA
6091028	TDAW12	10/26/2006	Soil	Treatment Drainage Area Wall	>28	122	NA
6091029	TDAW13	10/26/2006	Soil	Treatment Drainage Area Wall	>29	108	NA
6091030	TDAW14	10/26/2006	Soil	Treatment Drainage Area Wall	>29	104	NA
6091031	TDAW15	10/26/2006	Soil	Treatment Drainage Area Wall	10	NA	NA
6091032	TDAW16	10/26/2006	Soil	Treatment Drainage Area Wall	7.2	NA	NA
6091033	TPSW01	10/26/2006	Water	Test Pit 6	>0.80	NA	NA
6091034	TPSW02	10/26/2006	Water	Test Pit 7	>0.80	NA	NA
6091035	TPSW03	10/26/2006	Water	Test Pit 8	0.26	NA	NA
6091040	RRF28	10/28/2006	Soil	Railroad Right-of-Way	>28	<14	NA
6091041	RRF29	10/28/2006	Soil	Railroad Right-of-Way	>27	47	NA
6091042	TDAF26	10/28/2006	Soil	Treatment Drainage Area Floor	>14	993	NA
6091043	TDAF27	10/28/2006	Soil	Treatment Drainage Area Floor	>14	>1,050	NA
6091044	TDAF28	10/28/2006	Soil	Treatment Drainage Area Floor	>14	937	NA
6091045	TDAF29	10/28/2006	Soil	Treatment Drainage Area Floor	>14	895	NA
6091046	TDAF30	10/28/2006	Soil	Treatment Drainage Area Floor	>14	421	NA

Sample ID	Location ID	Sample Date	Matrix	Location Description	PCP Test Kit Results (1) SW-486 Method 4010A (mg/kg)		PCP Lab Results SW-486 Method 8270 (mg/kg)
					Standard Dilution	Diluted Result	
6091047	TDAW17	10/28/2006	Soil	Treatment Drainage Area Wall	>14	750	NA
6091048	TDAW18	10/28/2006	Soil	Treatment Drainage Area Wall	>14	84	NA
6091049	TDAW19	10/28/2006	Soil	Treatment Drainage Area Wall	7.3	<26	NA
6091053	RRF31	10/31/2006	Soil	Railroad Right-of-Way Floor	>10	97	12
MTCA Method B Cleanup Levels					2.5		

Notes:

Shaded and **bolded** analytical results indicate concentration exceeds state cleanup criterion.

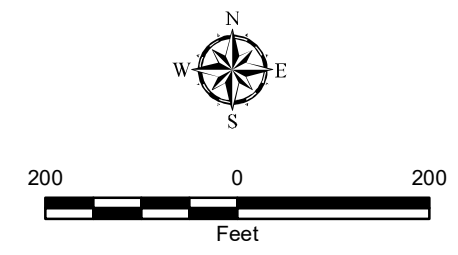
Map Revised: 17 May 2016 cvoss

Office: POKT Path: P:\0504098\GIS\MXD\050409800_A-1_SurfaceSoil.mxd



Legend

- Surface Soil Sample Locations (Hererra 2003)
- Surface Soil Sample Locations (Hererra 2005)
- Groundwater Monitoring Well (Ecology and Environment, Inc., 2006)
- Site Boundary
- Wetland Boundary (GeoEngineers 2015)



Data Source: Aerial base from ESRI Data Online.
 Site boundary provided by EPA.

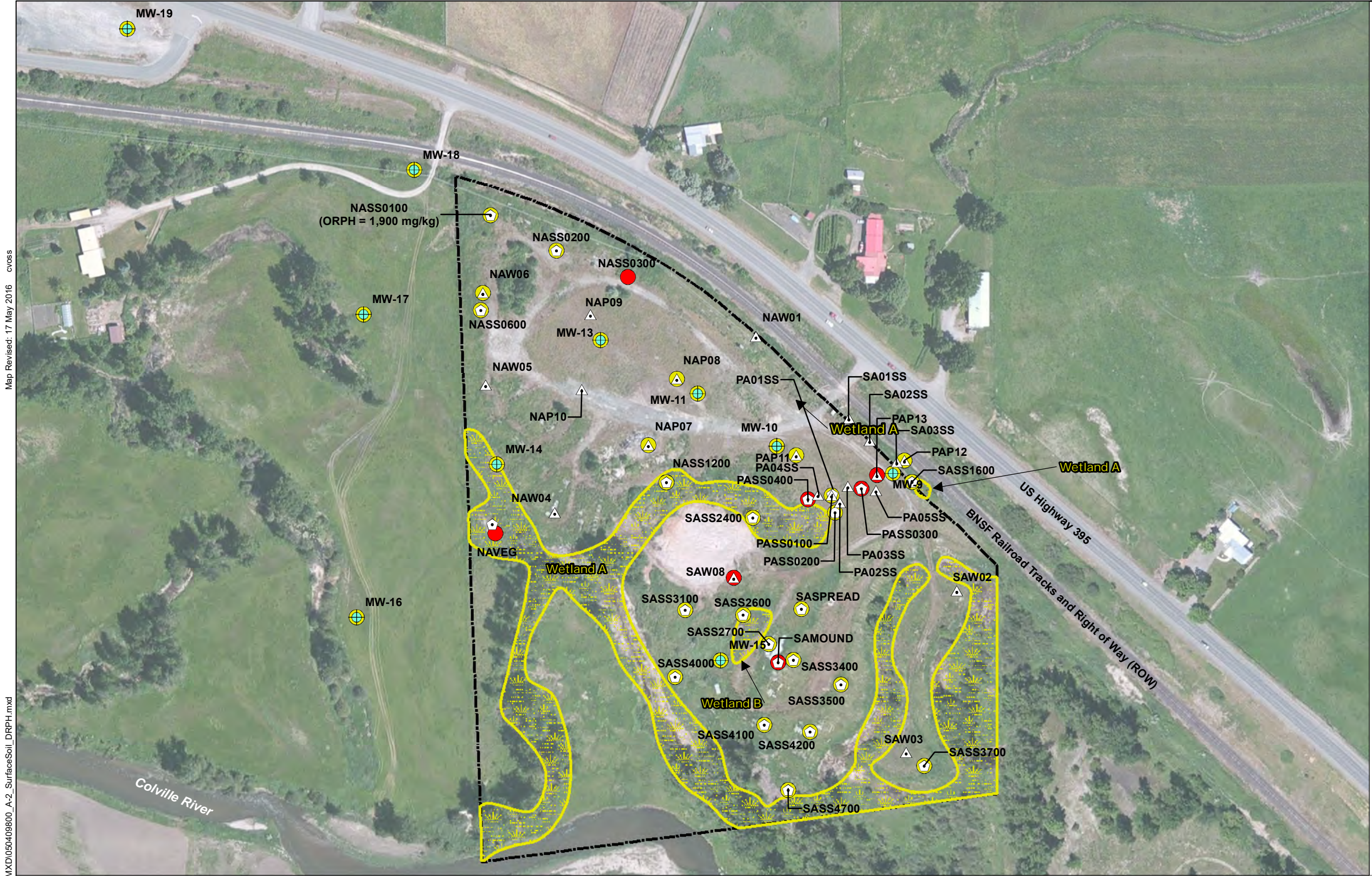
Projection: NAD 1983 UTM Zone 11N

Notes:
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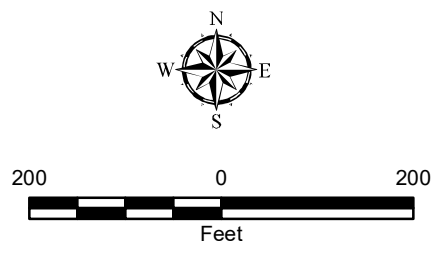
Surface Soil Assessment Sample Locations

Colville Post and Poles
 Colville, Washington

GEOENGINEERS **Figure A-1**



- Legend**
- Surface Soil Sample Locations (Hererra 2003)
 - Surface Soil Sample Locations (Hererra 2005)
 - Groundwater Monitoring Well (Ecology and Environment, Inc., 2006)
 - DRPH and/or ORPH < MTCA Method A CUL
 - DRPH and/or ORPH > MTCA Method A CUL
 - Wetland Boundary (GeoEngineers 2015)



Map Revised: 17 May 2016 cvoss

Office: POKT Path: P:\010504098\GIS\MXD\050409800_A-2_SurfaceSoil_DRPH.mxd

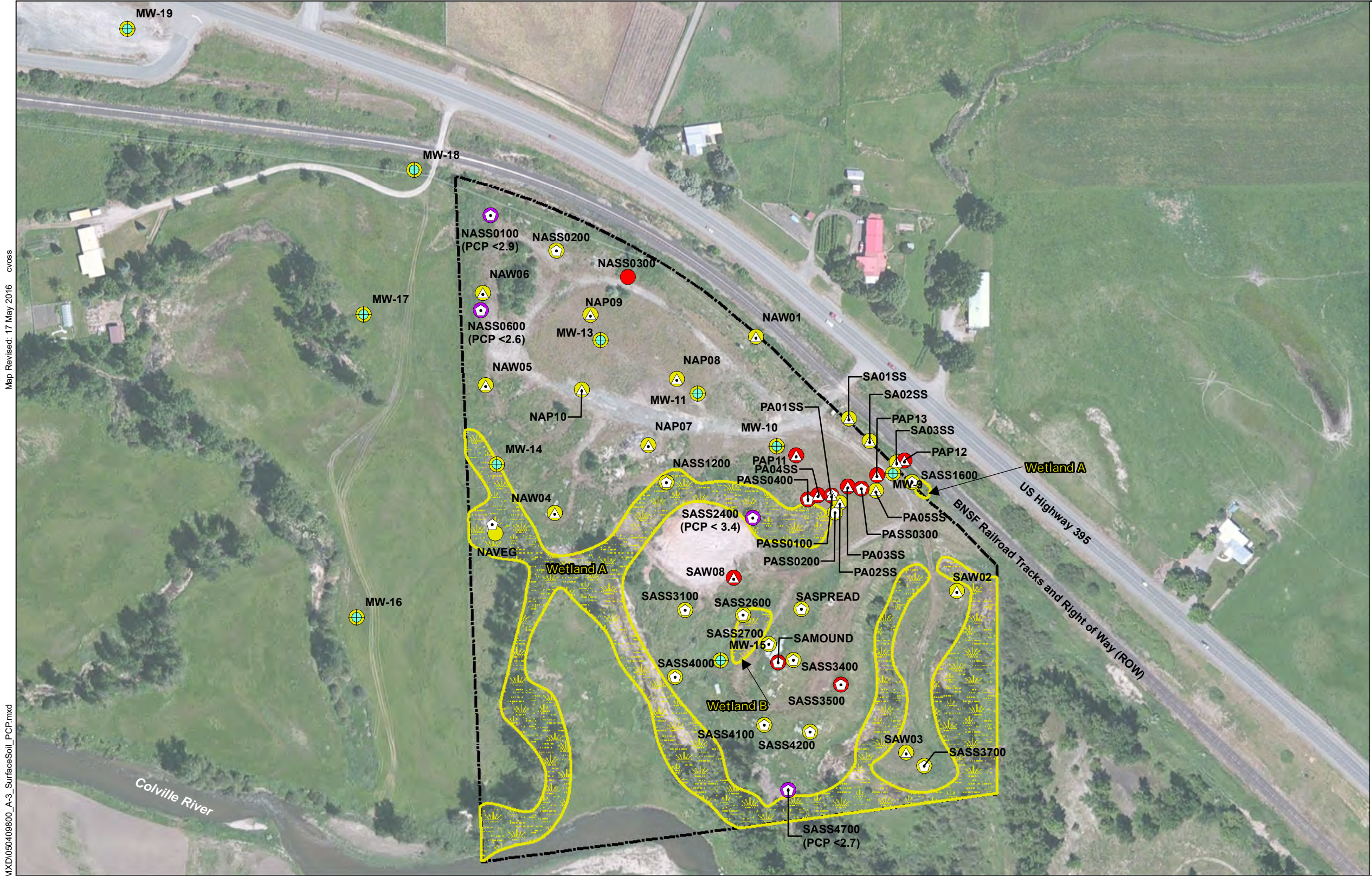
Data Source: Aerial base from ESRI Data Online.
 Site boundary provided by EPA.
 Projection: NAD 1983 UTM Zone 11N

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 3. CUL = Cleanup Levels

**Surface Soil Assessment Sample Locations
 Petroleum Hydrocarbons Concentrations**

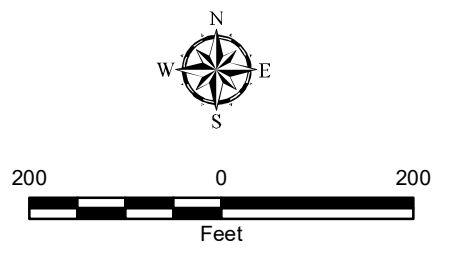
Colville Post and Poles
 Colville, Washington

GEOENGINEERS **Figure A-2**



Legend

- Surface Soil Sample Locations (Hererra 2003)
- Surface Soil Sample Locations (Hererra 2005)
- Groundwater Monitoring Well (Ecology and Environment, Inc., 2006)
- PCP < MTCA Method B CUL
- PCP Not Detected >Reporting Limit; Reporting Limit > MTCA Method B CUL
- PCP > MTCA Method B (carcinogenic) CUL 2.5 mg/kg
- Site Boundary
- Wetland Boundary (GeoEngineers 2015)



Data Source: Aerial base from ESRI Data Online.
 Site boundary provided by EPA.

Projection: NAD 1983 UTM Zone 11N

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**Surface Soil Assessment Sample Locations
 PCP Concentrations**

Colville Post and Poles
 Colville, Washington

GEOENGINEERS

Figure A-3

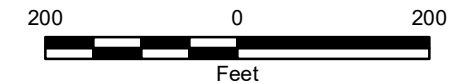
Map Revised: 17 May 2016 cvoss
 Office: P:\010504098\GIS\MXD\050409800_A-3_SurfaceSoil_PCP.mxd

Map Revised: 17 May 2016 cvoss

Office: P:\010504098\GIS\MXD\050409800_A-4_SurfaceSoil_Dioxins.mxd



- Legend**
- Surface Soil Sample Locations (Hererra 2003)
 - Surface Soil Sample Locations (Hererra 2005)
 - Dioxins (2, 3, 7, 8-TCDD) Detected > MTCA Method B CUL (1.1 x 10⁻⁵ mg/kg)
 - Site Boundary
 - Wetland Boundary (GeoEngineers 2015)



Data Source: Aerial base from ESRI Data Online.
 Site boundary provided by EPA.

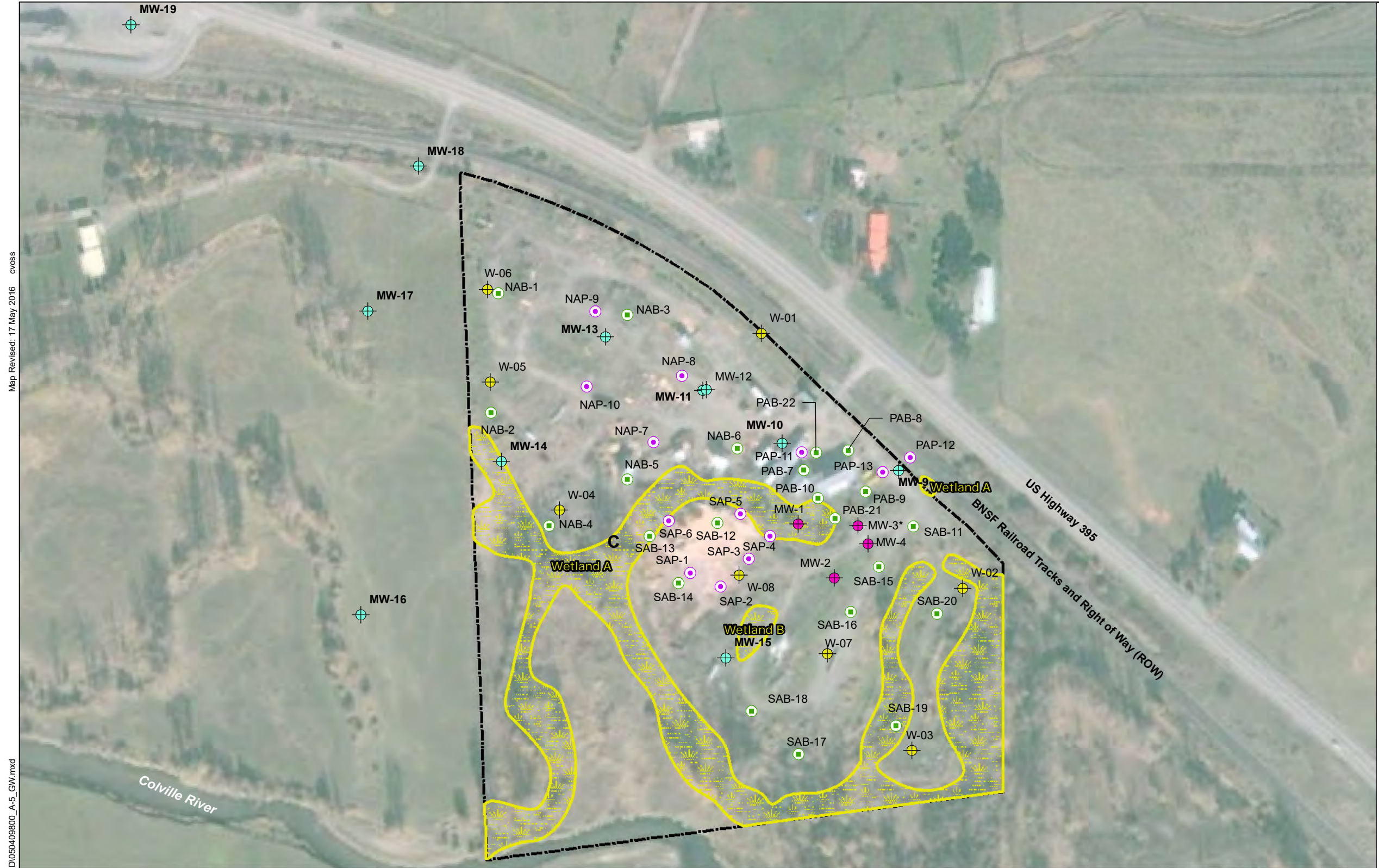
Projection: NAD 1983 UTM Zone 11N

Notes:
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 2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

**Surface Soil Assessment Sample Locations
 Dioxin Concentrations**

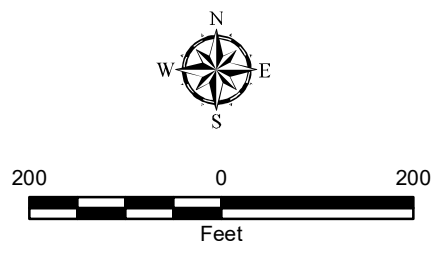
Colville Post and Poles
 Colville, Washington

GEOENGINEERS  **Figure A-4**



Legend

- MW-1 Groundwater Monitoring Well (Total Consultants, Inc 1994)
- NAB-1 Push-probe Groundwater Sample Locations (Herrera 2003)
- SAP-1 Push-probe Groundwater Sample Locations (Herrera 2005)
- W-01 Groundwater Monitoring Well (Herrera 2005)
- MW-9 Groundwater Monitoring Well (Ecology and Environment, Inc., 2006)
- Site Boundary
- Wetland Boundary (GeoEngineers 2015)



Map Revised: 17 May 2016 cvoss

Office: POFRT Path: P:\0\0504098\GIS\MXD\050409800_A-5_CW.mxd

Data Source: 2004 Aerial base from Goole Earth Pro.
Site boundary provided by EPA.

Projection: NAD 1983 UTM Zone 11N

- Notes:
1. The locations of all features shown are approximate.
 2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.
 3. * MW-3 was removed by 1995.

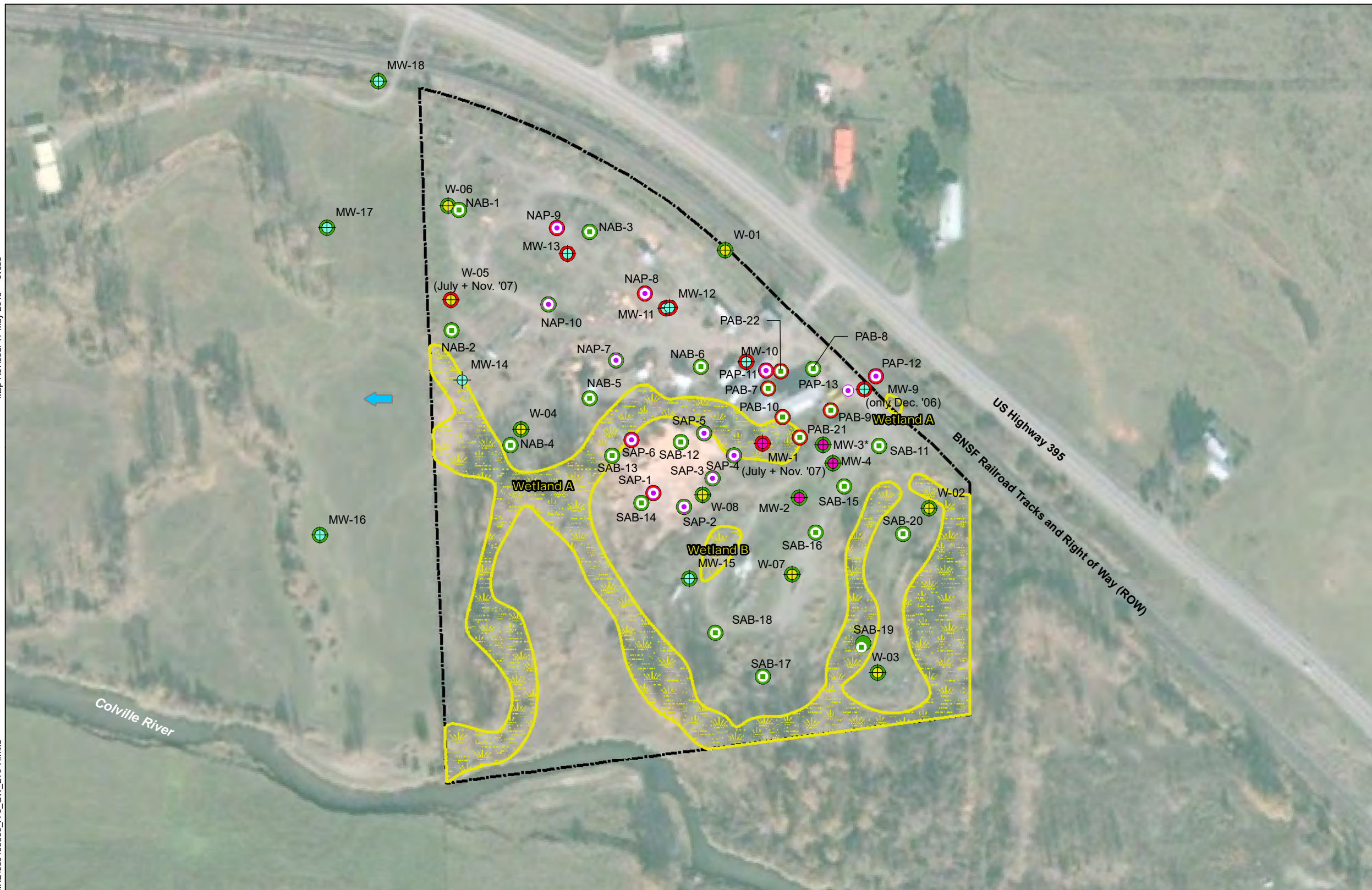
Groundwater Sample Locations

Colville Post and Poles
Colville, Washington

Figure A-5

Map Revised: 17 May 2016 cvoss

Office: POKT Path: P:\0504098\GIS\MXD\050409800_A-6_CW_DRPH.mxd



Legend

- MW-1 Groundwater Monitoring Well (Total Consultants, Inc 1994)
- NAB-1 Push-probe Groundwater Sample Locations (Herrera 2003)
- SAP-1 Push-probe Groundwater Sample Locations (Herrera 2005)
- W-01 Groundwater Monitoring Well (Herrera 2005)
- MW-9 Groundwater Monitoring Well (Ecology and Environment, Inc., 2006)
- ← Approximate Groundwater Flow Direction
- DRPH and/or ORPH Either Not Detected or Detected and Concentrations < MTCA Method A CUL
- DRPH and/or ORPH > MTCA Method A CUL
- ⬡ Site Boundary
- ⬡ Wetland Boundary (GeoEngineers 2015)



Data Source: 2004 Aerial base from Goole Earth Pro.
Site boundary provided by EPA.

Projection: NAD 1983 UTM Zone 11N

Notes:

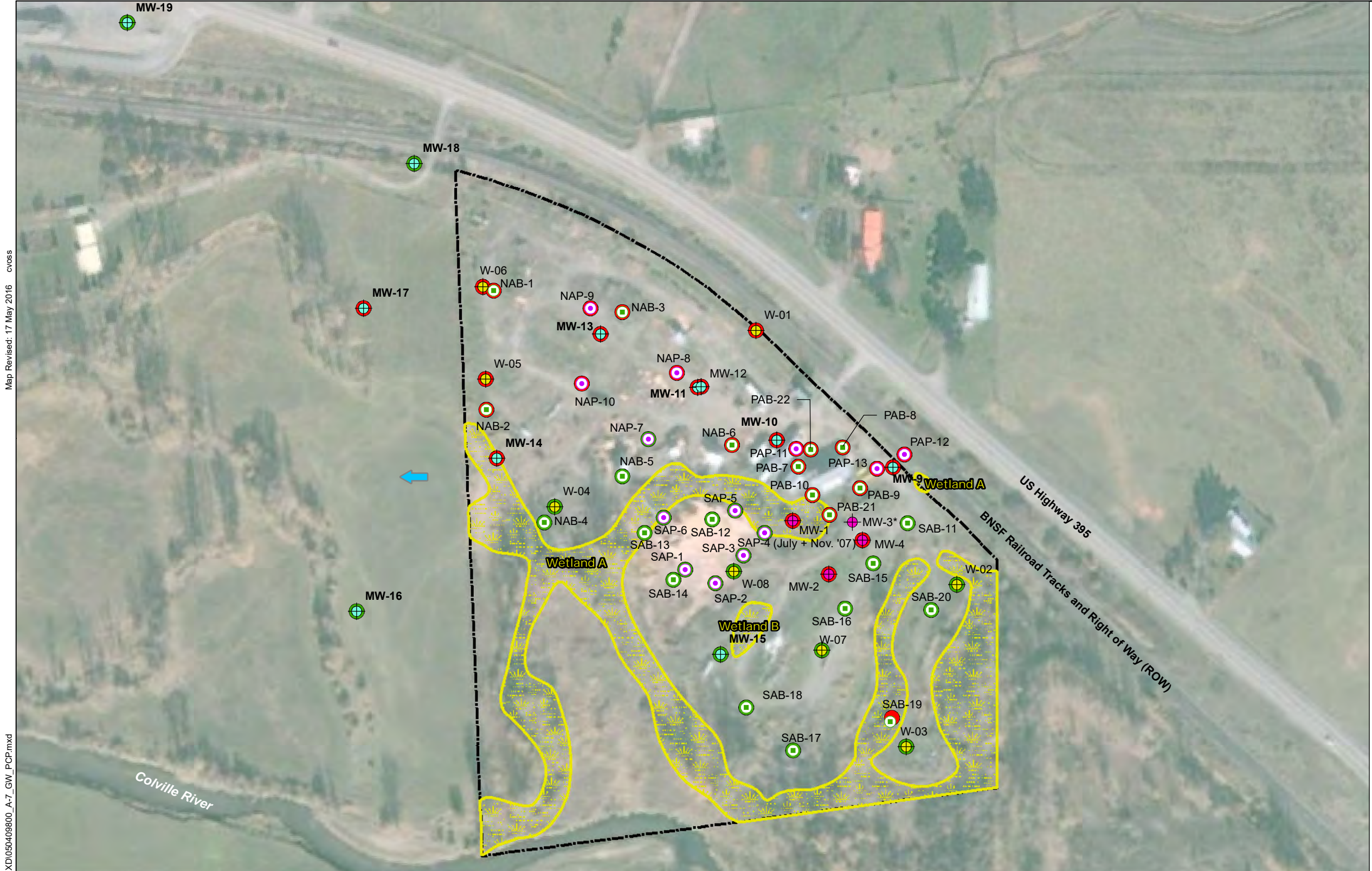
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2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.
3. * MW-3 was removed by 1995.
4. CUL = Cleanup Levels

**Groundwater Sample Locations
Petroleum Hydrocarbon Concentrations**

Colville Post and Poles
Colville, Washington



Figure A-6



Legend

- MW-1 Groundwater Monitoring Well (Total Consultants, Inc 1994)
- NAB-1 Push-probe Groundwater Sample Locations (Herrera 2003)
- SAP-1 Push-probe Groundwater Sample Locations (Herrera 2005)
- W-01 Groundwater Monitoring Well (Herrera 2005)
- MW-9 Groundwater Monitoring Well (Ecology and Environment, Inc., 2006)
- Approximate Groundwater Flow Direction
- PCP was Either Not Detected at Concentrations > Laboratory Reporting Limits or Detected at Concentrations < MTCA Method B CUL
- PCP Concentration > MTCA Method B (Carcinogenic) CUL (0.22 µg/L)
- Site Boundary
- Wetland Boundary (GeoEngineers 2015)

Note: The reporting limit for most of the groundwater samples is greater than the MTCA Method B CUL

Data Source: 2004 Aerial base from Goole Earth Pro.
 Site boundary provided by EPA.
 Projection: NAD 1983 UTM Zone 11N

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 3. * MW-3 was removed by 1995.
 4. CUL = Cleanup Levels

**Groundwater Sample Locations
PCP Concentrations**

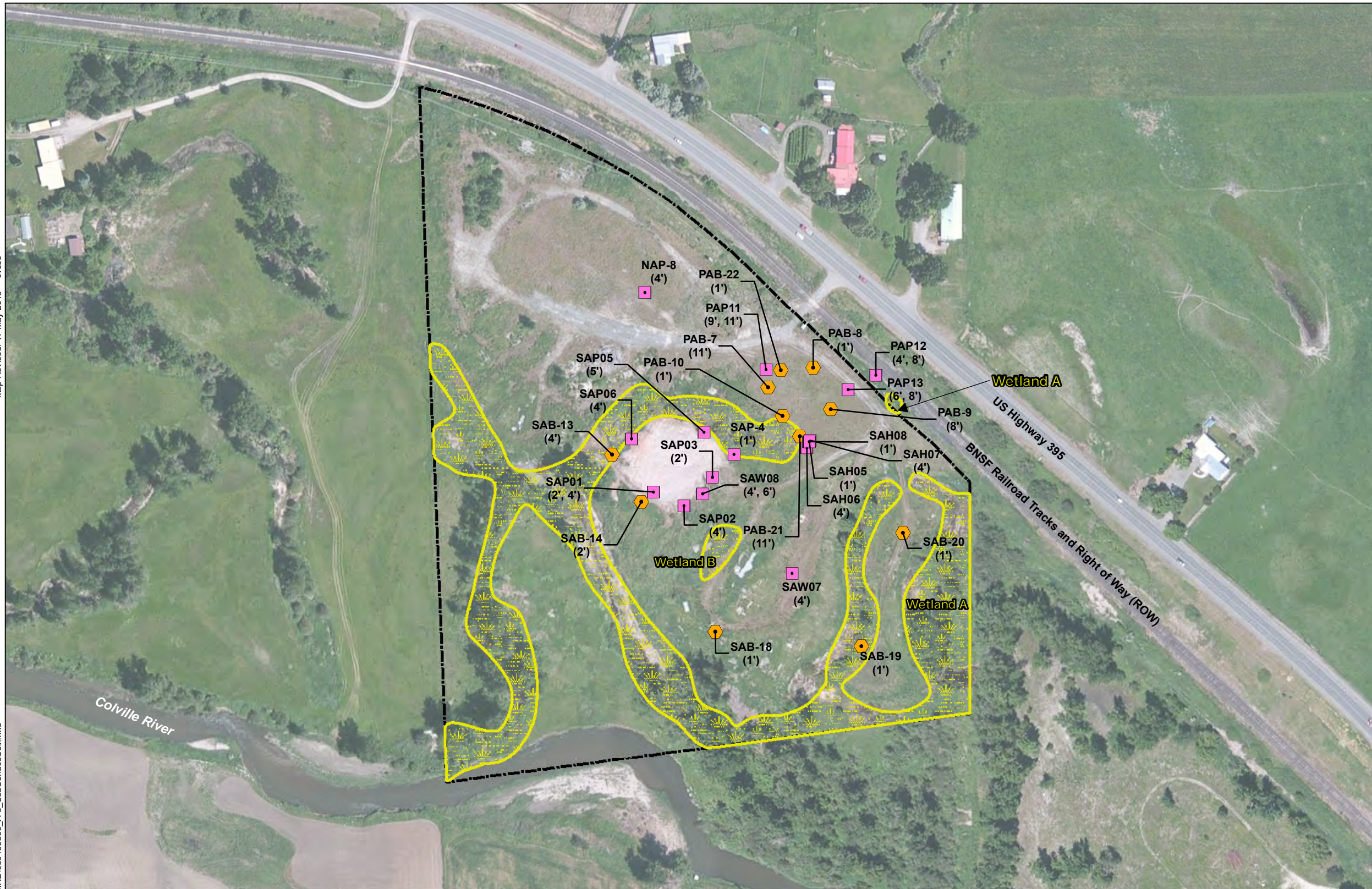
Colville Post and Poles
Colville, Washington

GEOENGINEERS **Figure A-7**

Map Revised: 17 May 2016 cvoss
 Office: P:\010504098\GIS\MXD\050409800_A-7_GW_PCP.mxd

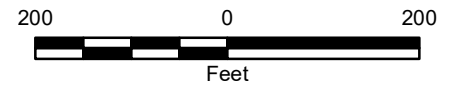
Map Revised: 17 May 2016 cvoss

Office: POFRT Path: P:\0504098\GIS\MXD\050409800_A-8_SubSurfaceSoil.mxd



Legend

- PAB-8 (1') Subsurface Soil Sample Locations and Depths (Hererra 2003)
- SAP01 (2', 4') Subsurface Soil Sample Locations and Depths (Hererra 2005)
- Site Boundary
- Wetland Boundary (GeoEngineers 2015)



Data Source: Aerial base from ESRI Data Online.
 Site boundary provided by EPA.

Projection: NAD 1983 UTM Zone 11N

Notes:
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Subsurface Soil Sample Locations

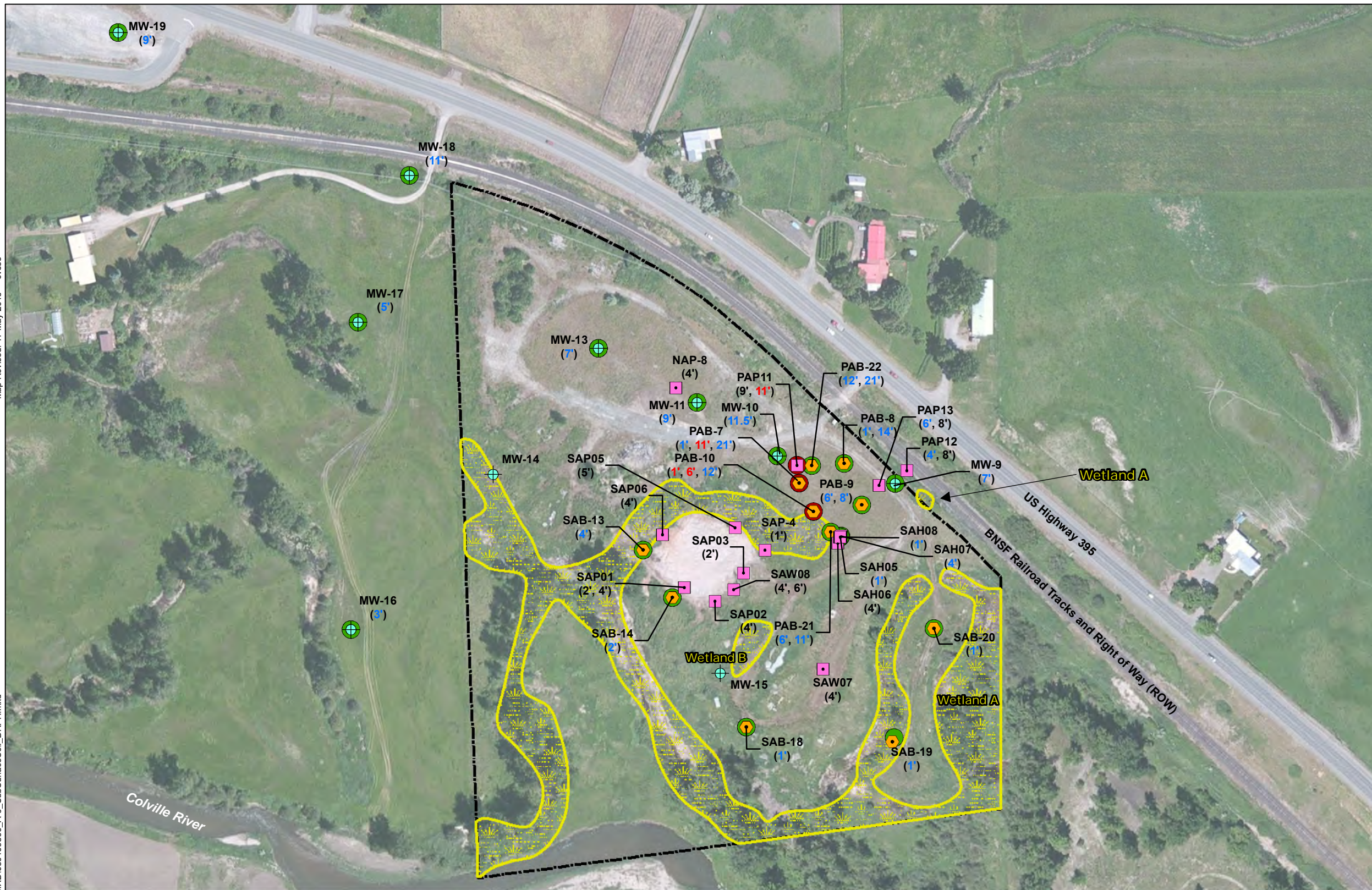
Colville Post and Poles
 Colville, Washington



Figure A-8

Map Revised: 17 May 2016 cvoss

Office: P:\010504098\GIS\MXD\050409800_A-9_SubSurfaceSoil_DRPH.mxd



Legend

- PAB-8 (1') Subsurface Soil Sample Locations and Depths (Hererra 2003)
 - SAP01 (2', 4') Subsurface Soil Sample Locations and Depths (Hererra 2005)
 - DRPH and/or ORPH Either Not Detected or Detected at Concentrations < MTCA Method A CUL
 - At Least One Sample at This Location had DRPH and/or ORPH Concentrations > MTCA Method A CUL
 - Site Boundary
 - Wetland Boundary (GeoEngineers 2015)
- (1') = Sample at Depth Not Analyzed for DRPH and/or ORPH
- (1') = DRPH and/or ORPH Either Not Detected or Detected at Concentrations < MTCA Method A CUL
- (1') = DRPH and or ORPH Concentrations > MTCA Method A CUL



Data Source: Aerial base from ESRI Data Online.
Site boundary provided by EPA.

Projection: NAD 1983 UTM Zone 11N

Notes:

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**Subsurface Soil Sample Locations
Petroleum Hydrocarbon Concentrations**

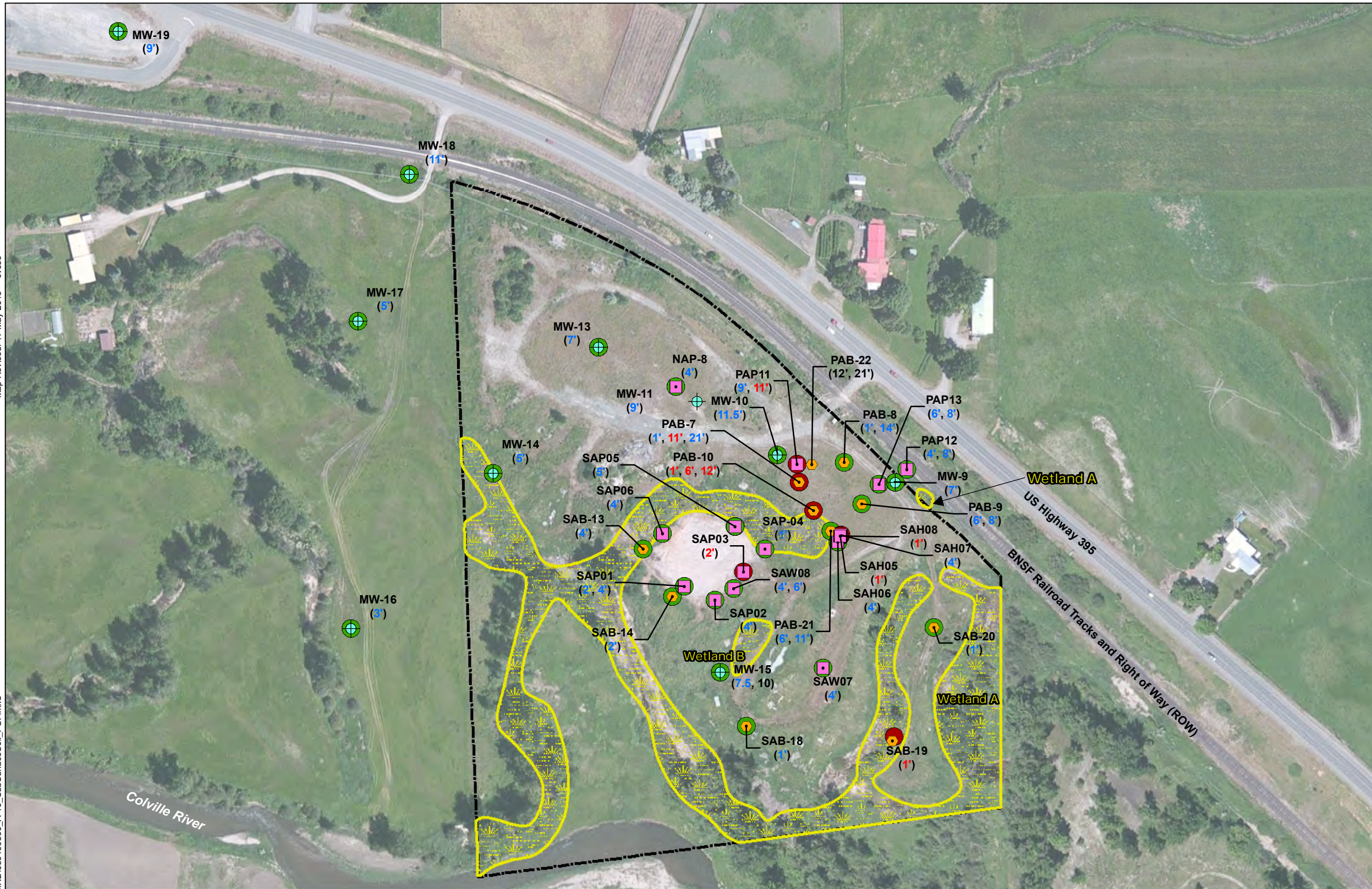
Colville Post and Poles
Colville, Washington



Figure A-9

Map Revised: 17 May 2016 cvoss

Office: P:\010504098\GIS\MXD\050409800_A-10_SubSurfaceSoil_PCF.mxd



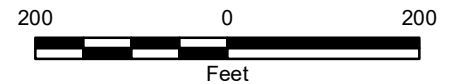
Legend

- PAB-8 (1') Subsurface Soil Sample Locations and Depths (Hererra 2003)
- SAP01 (2', 4') Subsurface Soil Sample Locations and Depths (Hererra 2005)
- PCP Either Not Detected or Detected at Concentrations < MTCA Method B CUL
- At Least One Sample at This Location had PCP Concentrations > MTCA Method B CUL
- Site Boundary
- Wetland Boundary (GeoEngineers 2015)

(1') = Sample at Depth Not Analyzed for PCP

(1') = PCP Either Not Detected or Detected at Concentrations < MTCA Method B CUL

(1') = PCP Concentrations > MTCA Method B CUL



Data Source: Aerial base from ESRI Data Online.
Site boundary provided by EPA.

Projection: NAD 1983 UTM Zone 11N

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**Subsurface Soil Sample Locations
PCP Concentrations**

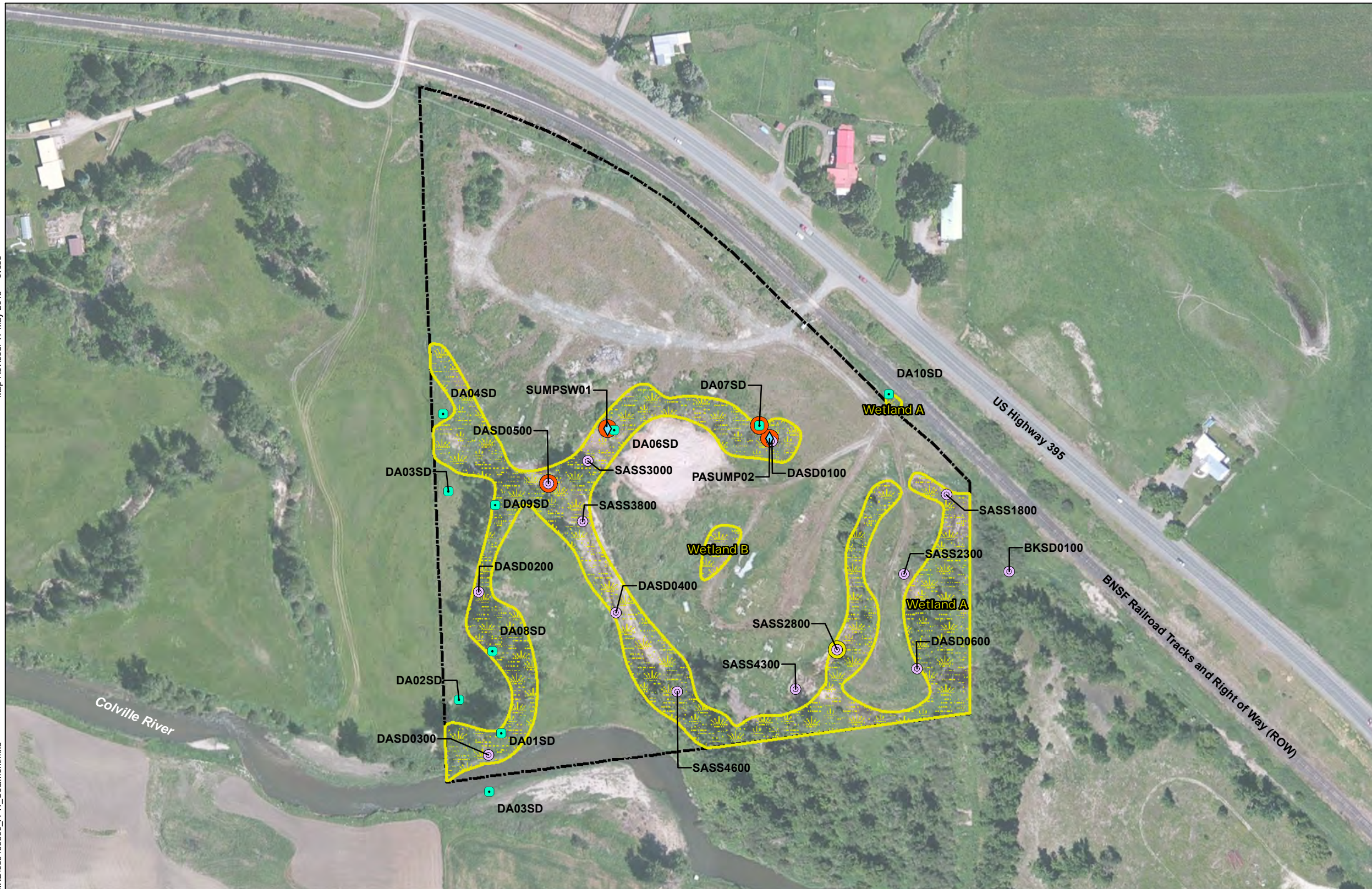
Colville Post and Poles
Colville, Washington



Figure A-10

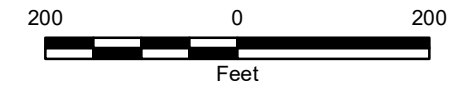
Map Revised: 17 May 2016 c.voss

Office: P:\010504098\GIS\MXD\050409800_A-11_Sediment.mxd



Legend

- SUMPSW01 Surface Water Sample Locations (Hererra 2002)
- DASD0100 Sediment Sample Locations (Hererra 2003)
- SASS4600 Sediment Sample Locations (Hererra 2005)
- Sediment or Surface Water Sample Locations with PCP Concentrations > MTCA Method B CUL
- Sediment Sample Location with Cd and Hg Concentrations > MTCA Method A CULs
- Site Boundary
- Wetland Boundary (GeoEngineers 2015)



Data Source: Aerial base from ESRI Data Online.
 Site boundary provided by EPA.

Projection: NAD 1983 UTM Zone 11N

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Sediment and Surface Water Sample Locations

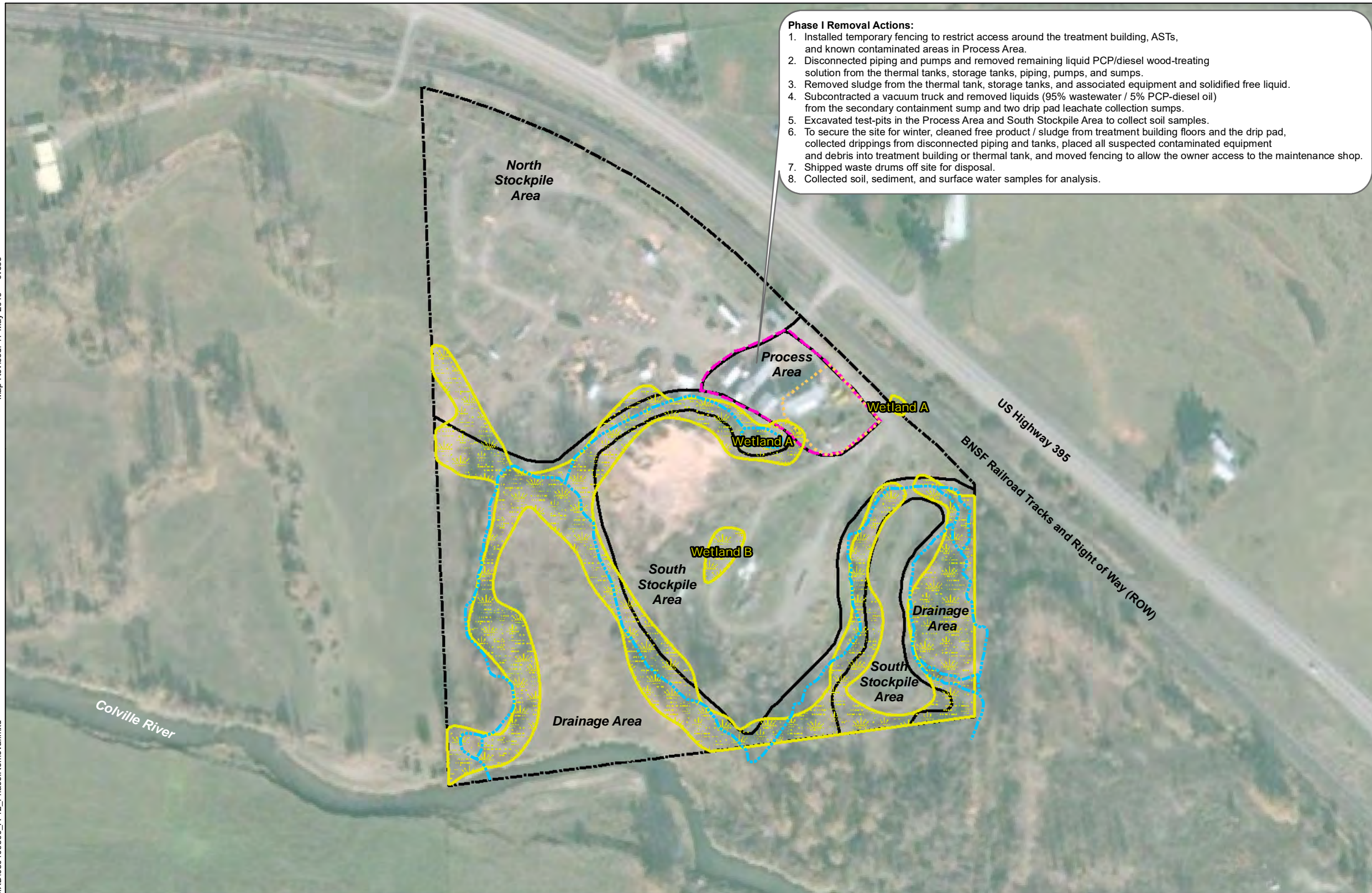
Colville Post and Poles
 Colville, Washington



Figure A-11

Map Revised: 17 May 2016 cvoss







Office: POFRT Path: P:\010504098\GIS\MXD\050409800_A-12_PhaseIRemoval.mxd

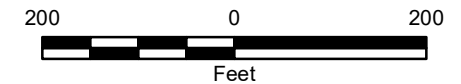


Phase I Removal Actions:

1. Installed temporary fencing to restrict access around the treatment building, ASTs, and known contaminated areas in Process Area.
2. Disconnected piping and pumps and removed remaining liquid PCP/diesel wood-treating solution from the thermal tanks, storage tanks, piping, pumps, and sumps.
3. Removed sludge from the thermal tank, storage tanks, and associated equipment and solidified free liquid.
4. Subcontracted a vacuum truck and removed liquids (95% wastewater / 5% PCP-diesel oil) from the secondary containment sump and two drip pad leachate collection sumps.
5. Excavated test-pits in the Process Area and South Stockpile Area to collect soil samples.
6. To secure the site for winter, cleaned free product / sludge from treatment building floors and the drip pad, collected drippings from disconnected piping and tanks, placed all suspected contaminated equipment and debris into treatment building or thermal tank, and moved fencing to allow the owner access to the maintenance shop.
7. Shipped waste drums off site for disposal.
8. Collected soil, sediment, and surface water samples for analysis.

Legend

-  Site Boundary
-  Wetland Boundary (GeoEngineers 2015)
-  Decision Area Boundary
-  Temporary Fence
-  Primary Phase I Removal Action Area
-  Mapped Streams



Data Source: 2004 Aerial base from Goole Earth Pro.
 Site boundary provided by EPA. Temporary fence and Primary Phase I removal action area and streams from Ecology and environment, inc, Figure 3-1, 9/6/2007.

Projection: NAD 1983 UTM Zone 11N

Notes:

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**Phase I Removal Action Area
 January 2005**

Colville Post and Poles
 Colville, Washington











Figure A-12

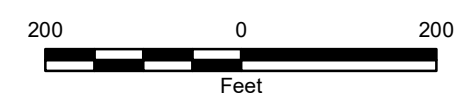
Map Revised: 17 May 2016 cvoss

Office: POFRT Path: P:\0\0504098\GIS\MXD\050409800_A-13_PhaseIIRemoval.mxd



Legend

-  Site Boundary
-  Process Area Capping Area (1' Topsoil Cap)
-  Railroad Right-of-Way Excavation (≈ 2' bgs)
-  Main Excavation Area (max ≈ 9' bgs)
-  Drainage Area Sediment Removal Area (1-4' bgs)
-  Hot Spot Removal Areas
-  North Cap (6", bgs Excavated, 1' Topsoil Cap)
-  Mapped Streams



**Phase II Removal Action Area
Fall 2006**

Colville Post and Poles
Colville, Washington



Figure A-13

Data Source: Aerial base from ESRI Data Online.
 Site features from Ecology and environment, inc, Figure 3-2, 9/22/2009.
 Projection: NAD 1983 UTM Zone 11N

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ecology and environment, inc.

International Specialists in the Environment

720 Third Avenue, Suite 1700, Seattle, WA 98104
Tel: (206) 624-9537, Fax: (206) 621-9832

October 8, 2007

Michael Boykin, On-Scene Coordinator
United States Environmental Protection Agency, Region 10
1200 Sixth Street
Seattle, Washington 98101

RE: Contract No. EP-S7-06-02; Technical Direction Document No. 05-12-0003
Results of Quarterly Groundwater Monitoring, July 2007
Colville Post and Poles Site

Dear Mr. Boykin:

Enclosed please find a memorandum with the results of quarterly groundwater monitoring performed in July 2007 at the Colville Post and Poles site in Colville, Washington. If you have any further questions or comments, please contact me at (206) 624-9537.

Sincerely,

ECOLOGY AND ENVIRONMENT, INC.

Jeffrey Fowlow
START-3 Project Leader

cc: Steven Hall, START-3 Project Manager, E & E, Seattle, Washington

MEMORANDUM

DATE: October 8, 2007

TO: Michael Boykin, On-Scene Coordinator, U.S. EPA, Seattle, WA

FROM: Steven G. Hall, START-3 Project Manager, E & E, Seattle, WA

SUBJECT: Colville Post and Poles Site
Results of Quarterly Groundwater Monitoring, July 2007

REFERENCE: Contract No. EP-S7-06-02
Technical Direction Document No. 05-12-0003

The United States Environmental Protection Agency (EPA) has tasked Ecology and Environment, Inc. (E & E) under Superfund Technical Assessment and Response Team (START)-3 Contract EP-S7-06-02, Technical Direction Document 05-12-0003, to provide quarterly groundwater monitoring and sampling at the Colville Post and Poles site in Colville, Washington (Figure 1).

This technical memorandum describes the results of the quarterly groundwater monitoring performed at the site from July 16 through 18, 2007. The July 2007 sampling event is the eighth performed at the site since monitoring began in June 2005¹. The objective of the quarterly groundwater sampling events is to evaluate site hydraulic conditions through groundwater measurements of site monitoring wells and to collect groundwater samples for analytical testing from the site monitoring wells and neighboring domestic wells.

There are 22 monitoring wells for the site, including 18 on the Colville Post and Poles site itself and four located to the west and downgradient of the site. There are also six surface water gages (SW-01 through SW-06) used to monitor surface water elevations at the site.

Access to Neighboring Domestic Wells

Since January 2006, neighboring domestic wells have been included in the quarterly sampling events. EPA currently has access to 12 domestic wells on 11 neighboring properties, and all 12 wells were sampled during the July 2007 sampling event. Copies of access agreements for the sampled domestic wells are maintained on file at EPA.

Upon receipt and validation of the analytical results for the July 2007 sampling event, EPA sent Owner Notification Tables to each property owner with a summary of the domestic well results for their property. Copies of the Owner Notification Tables for the July 2007 sampling event are maintained on file at EPA.

¹ Previous groundwater monitoring events have been performed in June and September 2005; January, April, August, and December 2006; and March 2007.

Groundwater Conditions

On July 16, 2007, START-3 measured and recorded static groundwater levels in 22 monitoring wells, six recovery wells, and two domestic wells at the site and vicinity. START-3 also measured surface water levels at the six surface water gages.

The elevation data, which represent conditions in the shallow unconfined aquifer at the site, are presented in Table 1. Past data and a chart summarizing average groundwater elevations for previous monitoring events are included in Attachment A (Herrera 2005, Herrera 2006, E & E 2006a, E & E 2006b, E & E 2007a, E & E 2007b, and E & E 2007c). The average groundwater elevation² on July 16, 2007, was 1531.90 feet above mean sea level (MSL), which is 2.92 feet lower than in April 2007 and 3.36 feet lower than in March 2007. The groundwater elevation changes are consistent with seasonal changes in precipitation and elevations recorded during past monitoring events.

Table 1 also contains product level data for recovery wells RW-01 through RW-06. During the July 2007 sampling event, free product was observed in five of the six recovery wells, with product thicknesses ranging from 0.04 (RW-04) to 0.21 (RW-01) feet. Recovery well RW-05 did not contain any measurable free product, and none of the monitoring wells contained any observable product or sheen.

Figure 2 presents groundwater surface contours based on the static groundwater level data collected on July 16, 2007. Note that domestic well DW-09 is not included in the groundwater contours in this figure because the groundwater levels in this well are significantly higher than those located on site and the relationship between the groundwater level in this well and the aquifer in the immediate vicinity has not been determined.

The horizontal hydraulic gradient across the site was 0.0020 foot/foot (ft/ft) on July 16. This gradient was calculated from the vertical distance divided by the horizontal distance between the 1,530.5 feet and 1,532.0 feet groundwater contour lines. Groundwater velocity across the site is estimated to range from 0.13 feet per day (ft/day) to 13 ft/day based on the following equation:

$$v = KI / Sy$$

where:

v is velocity (in feet per day),

K is hydraulic conductivity (in gallons per day per square foot [gal/day/ft²])³,

I is horizontal hydraulic gradient (in ft/ft), and

Sy is specific yield (dimensionless).

The values for hydraulic conductivity used in calculations were 100 gallons/day/foot² for silty sand and 10,000 gallons/day/foot² for sandy gravel (Heath 1983). The value for specific yield used in calculations was 0.2 based on the midpoint of specific yield for sand (0.1 to 0.3) and for gravel (0.15 to 0.30; Herrera 2005).

² Average groundwater elevation values do not include DW-09, located across Highway 395 from the site, in which the groundwater level is significantly higher than those on site.

³ Gallons are converted to cubic feet in the equation.

The hydraulic characteristics for all rounds of quarterly monitoring are provided below. The values for the June and September 2005 quarters were obtained/calculated from data provided in Herrera reports (Herrera 2005, Herrera 2006, Fedirchuk 2005a, Fedirchuk 2005b).

<u>Field Event</u>	<u>Average Groundwater Elevation (feet above mean sea level)</u>	<u>Hydraulic Gradient (ft/ft)</u>	<u>Estimated Groundwater Velocity Range (ft/day)</u>
June 2005	1534.16	0.0017	0.11 to 11
September 2005	1531.23	0.0008	0.05 to 5
January 2006	1535.33	0.0019	0.13 to 13
April 2006	1536.61	0.0015	0.10 to 10
August 2006	1531.82	0.0013	0.08 to 8.7
December 2006	1532.83	0.0019	0.13 to 13
March 2007	1535.26	0.0010	0.067 to 6.7
April 2007	1534.82	0.0010	0.067 to 6.7
July 2007	1531.90	0.0020	0.13 to 13

Groundwater Sampling and Results

On July 17 and 18, 2007, START-3 collected a total of 36 groundwater samples from the site and neighboring properties. The 36 samples included 22 monitoring wells, 12 neighboring domestic wells, one recovery well (RW-03), and one field duplicate from an on-site monitoring well (W-01).

Groundwater samples were collected in accordance with the Site-Specific Sampling Plan (SSSP; E & E 2006c). START-3 collected the monitoring well samples using the low-flow method with a peristaltic pump and dedicated polyethylene tubing. For each monitoring well, START-3 pumped water from the well at an approximate rate of 1 liter per minute and monitored the water quality parameters (temperature, pH, dissolved oxygen, conductivity, turbidity, and salinity) with a field water quality instrument. Once the readings stabilized, START-3 collected the sample. The sample from recovery well RW-03 was also collected using the peristaltic pump and dedicated tubing, but the water was not purged or monitored prior to sampling because the well contained free product and was collected as an estimate of worst-case contamination. The domestic well samples were collected from the nearest spigot to the groundwater pump, after the water was allowed to purge for 10 minutes.

The samples were submitted for laboratory analysis to STL-Seattle in Tacoma, Washington, under chain of custody protocol. The groundwater samples were submitted for the analysis of semi-volatile organic compounds (SVOCs) by SW-846 Method 8270 and for the analysis of diesel- and heavy oil-range hydrocarbon constituents using the Washington State Department of Ecology NWTPH-Dx method. Laboratory analytical reports, including data validation memoranda, are included in Attachment B.

The analytical results of the groundwater samples are presented in Tables 2, 3, and 4 and Figures 3 and 4. Table 2 presents the results of the two primary constituents of concern, PCP and diesel-range organics (DRO), in the monitoring and recovery wells, while Table 3 presents the PCP and DRO results for the domestic wells. Complete results for all analytes are presented in Table 4. PCP and DRO results are indicated on Figure 3 for the monitoring and recovery wells and Figure 4 for all monitoring, recovery, and domestic wells.

Pentachlorophenol Results

Monitoring Wells

During the July 2007 groundwater sampling event, PCP was detected in groundwater samples from 11 of the 18 on-site monitoring wells, one of the four off-site monitoring wells, and none of the 12 domestic wells.

PCP was detected in on-site monitoring wells in patterns that were generally consistent with previous sampling events. The highest concentrations of PCP were detected in the monitoring wells located to the west and downgradient of the former process area. PCP was detected at a concentration of 1,000 micrograms per liter ($\mu\text{g/L}$) in MW-10, 2,400 $\mu\text{g/L}$ in MW-11, and 1,100 $\mu\text{g/L}$ in MW-12. Additional wells to the west and downgradient of this plume area also contained PCP, although at lower concentrations: 67 J $\mu\text{g/L}$ in MW-13, 72 $\mu\text{g/L}$ in W-05, 14 $\mu\text{g/L}$ in W-06, and 11 $\mu\text{g/L}$ in MW-17 (off-site). PCP was also detected at a trace concentration (0.89 $\mu\text{g/L}$) in MW-14. PCP was not detected in the other monitoring wells to the west of the source area, including on-site wells W-01 and W-04 and off-site wells MW-16, MW-18, and MW-19. The detection limit for PCP was approximately 0.35 $\mu\text{g/L}$.

In the source area (the former process area), PCP was detected at a concentration of 3,800 $\mu\text{g/L}$ in recovery well RW-03. This concentration is higher than in March 2007 (710 $\mu\text{g/L}$), but lower than in December 2006 (16,000 $\mu\text{g/L}$). To the south and east of the source area, PCP was detected at a concentration of 120 $\mu\text{g/L}$ in MW-1, 1.5 $\mu\text{g/L}$ in MW-09, 0.39 $\mu\text{g/L}$ in MW-15, and 0.25 J in W-07. PCP was not detected in the other monitoring wells in this location, including MW-2, MW-4, W-02, W-03, and W-08.

These results indicate that the contaminant plume is persisting downgradient to the west from the source area and is migrating off site through the area of MW-17 on the neighboring property. However, the area of higher concentrations has receded somewhat from March 2007. For example, the highest concentration of PCP in a monitoring well was detected in MW-13 (2,100 and 1,300 J $\mu\text{g/L}$) in March 2007. During July, though, MW-13 contained PCP at a concentration of 67 J $\mu\text{g/L}$, while the highest concentration was detected in MW-11 (2,400 $\mu\text{g/L}$), which is located to the east of MW-17 and closer to the source area. Additionally, W-01, which has contained PCP as high as 76 $\mu\text{g/L}$ in March 2007, did not contain PCP (less than 0.34 UJ $\mu\text{g/L}$) in July 2007. This may be related to seasonal groundwater changes, with the area of higher concentrations receding as the groundwater level lowers during the drier summer months.

PCP has never been detected at such a high concentration (120 $\mu\text{g/L}$) in MW-1 during previous sampling events. MW-1 did contain a trace level of PCP (0.211 J $\mu\text{g/L}$) in September 2005, and PCP has not been detected in the other sampling events. The presence of PCP at a concentration of 120 $\mu\text{g/L}$ in MW-1 during July 2007 could be an indication that the contaminant plume is extending to the south from the process area. MW-1 is the monitoring well located closest to the south of the source area.

Domestic Wells

PCP was not detected in any of the 12 domestic wells sampled in July 2007. Detection limits for PCP were approximately 0.35 $\mu\text{g/L}$.

Comparison of PCP Results to Applicable Standards and Cleanup Levels

The PCP results in Tables 2 and 3 have been compared to several relevant cleanup levels, including the Federal Maximum Contaminant Level (MCL) of 1.0 µg/L, the U.S. EPA Region 6 Human Health Medium-Specific Screening Level (HHMSSL) for tap water of 0.56 µg/L, the Washington Department of Ecology (Ecology) Model Toxics Control Act (MTCA) Method B cleanup level for unrestricted groundwater of 0.729 µg/L, and the MTCA Method C industrial cleanup level of 7.29 µg/L. Monitoring wells MW-1, W-05, W-06, MW-10, MW-11, MW-12, MW-13, and MW-17 exceeded all four of these standards; MW-09 exceeded the MCL, the HHMSSL, and the MTCA method B cleanup level; and MW-14 exceeded the HHMSSL and the MTCA method B cleanup level.

Semivolatile Organic Compound Results

Table 4 includes the results for all analyses performed, including the complete list of SVOCs analyzed by the laboratory. Besides PCP, a few additional SVOCs were detected at relatively low concentrations in the samples, including anthracene, fluoranthene, fluorene, naphthalene, pyrene, and others. For complete details, please refer to Table 4. With the exception of one SVOC, bis(2-ethyl hexyl) phthalate, none of the SVOCs were present in the samples above standards for drinking water. Bis (2-ethyl hexyl) phthalate was detected in laboratory blanks and, therefore, may be attributed to cross-contamination. Some of the SVOCs were also detected in some of the domestic well samples. However, those SVOCs with an MCL did not exceed the MCL in any domestic well sample.

Total Petroleum Hydrocarbons

During the July 2007 sampling event, DRO was detected in groundwater samples from 21 of the 22 monitoring wells, with a concentration as high as 3,100 µg/L in MW-10 (Table 2). Four of the monitoring wells (W-05, MW-10, MW-11, and MW-12) contained DRO at concentrations above the MTCA Method A cleanup level of 500 µg/L. In general, the pattern of the DRO contaminant plume was similar to that of PCP, with lower concentrations in MW-13 (380 µg/L compared to 2,700/2,800 µg/L in March 2007) and higher concentrations in MW-11 (1,900 µg/L compared to 590 µg/L in March 2007) and MW-12 (1,000 µg/L compared to 340 µg/L in March 2007). DRO was detected in the recovery well sample RW-03 at a concentration of 3,000 µg/L, which is lower than in March 2007 (4,000 µg/L).

DRO was detected in several monitoring wells for the first time since monitoring began. Monitoring wells W-02 and W-03, located upgradient of the source area on the eastern portion of the site, both contained DRO at trace levels (37 J and 36 J µg/L, respectively). Previously, W-02 and W-03 had never contained either PCP or DRO. To the west of the source area, DRO was also detected for the first time at trace levels in MW-15 (71 J µg/L), MW-16 (69 J µg/L), MW-18 (77 J µg/L), and MW-19 (83 J µg/L).

DRO was detected in one of the domestic wells (DW-06) at a trace concentration of 42 J µg/L, which is below the MTCA Method A cleanup level of 500 µg/L.

Heavy oil-range organics (Table 4) were detected in six of the monitoring wells, including W-04, W-05, MW-10, MW-12, MW-16, and MW-19, at concentrations ranging from 69 J to 240 J µg/L. Recovery well RW-03 contained heavy oil-range organics at a concentration of 230 J µg/L. One of the domestic

wells, DW-01, contained heavy oil-range organics at a concentration of 100 J µg/L, which is below the MTCA Method A cleanup level of 500 µg/L.

Summary and Recommendations

The results of the July 2007 sampling event indicates that a contaminant plume of PCP and DRO persists at the Colville Post and Poles site. The plume contained PCP at concentrations as high as 2,400 µg/L (MW-11) and DRO at concentrations as high as 3,100 µg/L (MW-10). The plume extends to the west of the source area (former Process Area) and continues off-site onto the neighboring property through the location of MW-17. The area of highest contaminant concentrations has receded since March 2007, which may be caused by the lower groundwater levels observed during July 2007. However, PCP was detected at a concentration of 120 µg/L in MW-1, where PCP had not been detected in the past five sampling events. These results indicate that the contaminant plume may be extending to the south from the source area.

None of the domestic wells contained PCP, although DW-01 contained heavy oil-range organics at a concentration of 100 J µg/L and DW-06 contained DRO at a concentration of 42 J µg/L. Both detections were lower than applicable state cleanup levels.

Groundwater elevations fell by an average of 3.36 feet from March 2007. Groundwater elevations and hydraulic conductivity were typical for the season, and the hydraulic gradient was generally to the west, as has been observed in the past.

START-3 recommends continued quarterly groundwater sampling of the monitoring wells and neighboring domestic wells to monitor the concentrations of contaminants in on-site groundwater and to determine the impact to groundwater on neighboring properties.

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Table 1

**SUMMARY OF GROUNDWATER AND SURFACE WATER ELEVATION DATA
JULY 2007 QUARTERLY GROUNDWATER SAMPLING
COLVILLE POST AND POLES SITE
COLVILLE, STEVENS COUNTY, WASHINGTON**

Monitoring Well ⁽¹⁾	Measurement Date	Reference Elevation (feet above MSL) ⁽²⁾	Depth to Product (feet) ⁽³⁾	Depth to Water (feet) ⁽³⁾	Product Thickness (feet)	Water Level Elevation (feet above MSL) ⁽⁴⁾
MW-1	7/16/2007	1539.18	none	7.11	0.00	1532.07
MW-2	7/16/2007	1539.45	none	7.35	0.00	1532.10
MW-4	7/16/2007	1541.02	none	8.75	0.00	1532.27
W-01	7/16/2007	1540.36	none	8.26	0.00	1532.10
W-02	7/16/2007	1538.12	none	5.70	0.00	1532.42
W-03	7/16/2007	1539.49	none	7.34	0.00	1532.15
W-04	7/16/2007	1536.73	none	5.19	0.00	1531.54
W-05	7/16/2007	1537.70	none	6.10	0.00	1531.60
W-06	7/16/2007	1536.55	none	4.77	0.00	1531.78
W-07	7/16/2007	1537.26	none	5.42	0.00	1531.84
W-08	7/16/2007	1540.20	none	8.36	0.00	1531.84
MW-09	7/16/2007	1542.69	none	10.23	0.00	1532.46
MW-10	7/16/2007	1544.53	none	12.46	0.00	1532.07
MW-11	7/16/2007	1542.92	none	10.87	0.00	1532.05
MW-12	7/16/2007	1543.05	none	11.01	0.00	1532.04
MW-13	7/16/2007	1541.75	none	9.81	0.00	1531.94
MW-14	7/16/2007	1538.98	none	7.38	0.00	1531.60
MW-15	7/16/2007	1541.18	none	9.54	0.00	1531.64
MW-16	7/16/2007	1535.52	none	5.01	0.00	1530.51
MW-17	7/16/2007	1537.57	none	6.18	0.00	1531.39
MW-18	7/16/2007	1538.68	none	6.94	0.00	1531.74
MW-19	7/16/2007	1543.40	none	11.90	0.00	1531.50
DW-05	7/16/2007	1538.61	none	7.82	0.00	1530.79
DW-09	7/18/2007	1545.12	none	6.26	0.00	1538.86
RW-01	7/16/2007	1544.49	12.56	12.35	0.21	1532.14
RW-02	7/16/2007	1544.67	12.57	12.44	0.13	1532.23
RW-03	7/16/2007	1544.15	12.07	11.91	0.16	1532.24
RW-04	7/16/2007	1543.05	10.89	10.85	0.04	1532.20
RW-05	7/16/2007	1542.72	none	10.53	0.00	1532.19
RW-06	7/16/2007	1541.94	9.86	9.71	0.15	1532.23
SW-01	7/16/2007	1538.33	none	No Water	0.00	NA
SW-02	7/16/2007	1538.38	none	No Water	0.00	NA
SW-03	7/16/2007	1538.89	none	No Water	0.00	NA
SW-04	7/16/2007	1540.39	none	No Water	0.00	NA
SW-05	7/16/2007	1540.19	none	No Water	0.00	NA
SW-06	7/16/2007	1538.56	none	6.22	0.00	1532.34

Notes: (1) Monitoring Wells NAW-01, SAW-02, SAW-03, NAW-04, NAW-05, NAW-06, SAW-07, and SAW-08 have been re-designated W-01 through W-08 in this report.

(2) Elevations of reference points (top of well casing) were surveyed relative to mean sea level.

(3) Depth to product or water measurements were taken from reference point marks on top of well casing.

(4) Elevation in feet (mean sea level).

Key:

MSL = mean sea level

NA = not available

NM = not measured

Table 2

**SUMMARY OF PCP AND DRO RESULTS IN MONITORING WELLS
JULY 2007 QUARTERLY GROUNDWATER SAMPLING
COLVILLE POST AND POLES SITE
COLVILLE, STEVENS COUNTY, WASHINGTON**

Monitoring Well ⁽¹⁾	Sample ID	Collected By	Sample Date	PCP (µg/L)	DRO (µg/L)
MTCA Method A cleanup level				--	500
MTCA Method B cleanup level (unrestricted)				0.729	--
MTCA Method C cleanup level (industrial)				7.29	--
EPA Region 6 2006 HHMSSL tap water				0.56	--
Federal Maximum Contaminant Level (MCL)				1.0	--
MW-1	SAGWMW105	START-2 (Herrera)	6/17/2005	1.9 U	237 U
MW-1	MW-01	START-2 (Herrera)	9/14/2005	0.211 J ⁽²⁾	124 J
MW-1	06010008	START-3 (E & E)	1/17/2006	0.24 U	120
MW-1	06040006	START-3 (E & E)	4/18/2006	0.25 U	110 J
MW-1	06080107	START-3 (E & E)	8/17/2006	0.25 U	110
MW-1	06121007	START-3 (E & E)	12/3/2006	0.11 U	240 U
MW-1	07030016	START-3 (E & E)	3/20/2007	0.34 U	120 U
MW-1	07070119	START-3 (E & E)	7/17/2007	120	260
MW-2	SAGWMW205	START-2 (Herrera)	6/17/2005	1.9 U	212 J
MW-2	MW-02	START-2 (Herrera)	9/13/2005	0.195 UJ ⁽²⁾	244 U
MW-2	06010009	START-3 (E & E)	1/17/2006	0.70	140
MW-2	06040005	START-3 (E & E)	4/18/2006	0.48	86 J
MW-2	06080106	START-3 (E & E)	8/17/2006	0.25 U	54
MW-2	06121005	START-3 (E & E)	12/3/2006	0.10 U	240 U
MW-2	07030019	START-3 (E & E)	3/20/2007	0.067 J	120 U
MW-2	07070120	START-3 (E & E)	7/17/2007	0.35 U	69 J
MW-4	SAGWMW407	START-2 (Herrera)	6/17/2005	1.9 U	237 U
MW-4	MW-04	START-2 (Herrera)	9/13/2005	0.193 UJ ⁽²⁾	237 U
MW-4	06010010	START-3 (E & E)	1/18/2006	0.22 J	80
MW-4	06040004	START-3 (E & E)	4/18/2006	0.16 J	160 J
MW-4	06080105	START-3 (E & E)	8/17/2006	0.25 U	52
MW-4	06121008	START-3 (E & E)	12/3/2006	0.097 U	84 J
MW-4	07030020	START-3 (E & E)	3/20/2007	0.15 J	83 J
MW-4	07070118	START-3 (E & E)	7/17/2007	0.35 U	44 J
W-01	NAGWW0106	START-2 (Herrera)	6/17/2005	1.88 U	237 U
W-01	W-01	START-2 (Herrera)	9/13/2005	0.195 UJ ⁽²⁾	244 U
W-01	06010007	START-3 (E & E)	1/17/2006	1.44	50 U
W-01	06040008 / 09 ⁽⁵⁾	START-3 (E & E)	4/18/2006	0.25 U / 0.24 U ⁽⁵⁾	52 U / 52 UJ ⁽⁵⁾
W-01	06080120	START-3 (E & E)	8/17/2006	0.25 U	53 U
W-01	06121001	START-3 (E & E)	12/2/2006	40	47 J
W-01	07030025	START-3 (E & E)	3/21/2007	76	84 J
W-01	07070130 / 31 ⁽⁵⁾	START-3 (E & E)	7/18/2007	0.34 UJ / 0.34 UJ ⁽⁵⁾	46 J / 42 J ⁽⁵⁾
W-02	SAGWW0203	START-2 (Herrera)	6/17/2005	1.9 U	238 U
W-02	W-02	START-2 (Herrera)	9/14/2005	NA	238 U
W-02	06010012	START-3 (E & E)	1/18/2006	0.24 U	49 U
W-02	06040002	START-3 (E & E)	4/18/2006	0.24 U	54 UJ
W-02	06080102	START-3 (E & E)	8/17/2006	0.25 U	53 U
W-02	06121002	START-3 (E & E)	12/2/2006	0.10 U	240 U
W-02	07030017	START-3 (E & E)	3/20/2007	0.34 U	120 U
W-02	07070114	START-3 (E & E)	7/17/2007	0.35 U	37 J
W-03 ⁽³⁾	SAGWW0305	START-2 (Herrera)	6/17/2005	1.91 U ⁽³⁾	238 U
W-03	W-03	START-2 (Herrera)	9/14/2005	0.191 UJ ⁽²⁾	239 U
W-03	06010011	START-3 (E & E)	1/18/2006	0.24 U	49 U
W-03	06040001	START-3 (E & E)	4/18/2006	0.24 U	52 UJ
W-03	06080101	START-3 (E & E)	8/17/2006	0.24 U	52 U
W-03	06121015	START-3 (E & E)	12/4/2006	0.098 U	240 U
W-03	07030018	START-3 (E & E)	3/20/2007	0.36 U	120 U
W-03	07070113	START-3 (E & E)	7/17/2007	0.35 U	36 J

Table 2

**SUMMARY OF PCP AND DRO RESULTS IN MONITORING WELLS
JULY 2007 QUARTERLY GROUNDWATER SAMPLING
COLVILLE POST AND POLES SITE
COLVILLE, STEVENS COUNTY, WASHINGTON**

Monitoring Well ⁽¹⁾	Sample ID	Collected By	Sample Date	PCP (µg/L)	DRO (µg/L)
MTCA Method A cleanup level				--	500
MTCA Method B cleanup level (unrestricted)				0.729	--
MTCA Method C cleanup level (industrial)				7.29	--
EPA Region 6 2006 HHMSSL tap water				0.56	--
Federal Maximum Contaminant Level (MCL)				1.0	--
W-04	NAGWW0403	START-2 (Herrera)	6/17/2005	1.9 U	237 U
W-04	W-04	START-2 (Herrera)	9/13/2005	0.195 UJ ⁽²⁾	244 U
W-04	06010003	START-3 (E & E)	1/17/2006	0.25 U	95
W-04	06040010	START-3 (E & E)	4/18/2006	0.24 U	95 J
W-04	06080122	START-3 (E & E)	8/17/2006	0.25 U	95 J
W-04	06121014	START-3 (E & E)	12/4/2006	0.097 U	53 J
W-04	07030026	START-3 (E & E)	3/21/2007	0.22 J	43 J
W-04	07070126	START-3 (E & E)	7/18/2007	0.33 UJ	87 J
W-05 ⁽³⁾	NAGWW0504	START-2 (Herrera)	6/17/2005	256 ⁽³⁾	283 J
W-05	W-05	START-2 (Herrera)	9/13/2005	385	243 U
W-05	06010006	START-3 (E & E)	1/17/2006	146	210
W-05	06040012	START-3 (E & E)	4/18/2006	134	210 J
W-05	06080121	START-3 (E & E)	8/17/2006	280	420 J
W-05	06121018	START-3 (E & E)	12/4/2006	160	150 J
W-05	07030031	START-3 (E & E)	3/21/2007	3.3 J	140
W-05	07070127	START-3 (E & E)	7/18/2007	72	1,200
W-06	NAGWW0603	START-2 (Herrera)	6/17/2005	153	284 J
W-06 ⁽⁴⁾	W-06 ⁽⁵⁾	START-2 (Herrera)	9/13/2005	78.8 / 86.1 ^{(4), (5)}	78.9 / 82.9 J ⁽⁵⁾
W-06	06010001 / 02 ⁽⁵⁾	START-3 (E & E)	1/17/2006	118 / 113 ⁽⁵⁾	270 / 270 ⁽⁵⁾
W-06	06040011	START-3 (E & E)	4/18/2006	0.24 U	52 UJ
W-06	06080118 / 19 ⁽⁵⁾	START-3 (E & E)	8/17/2006	0.27 / 0.31 ⁽⁵⁾	53 / 53 U ⁽⁵⁾
W-06	06121017	START-3 (E & E)	12/4/2006	6.8	240 U
W-06	07030027	START-3 (E & E)	3/21/2007	25 J	180
W-06	07070129	START-3 (E & E)	7/18/2007	14	69 J
W-07	SAGWW0703	START-2 (Herrera)	6/17/2005	1.89 U	236 U
W-07 ⁽⁴⁾	W-07	START-2 (Herrera)	9/14/2005	0.203 J ^{(2), (4)}	287 J
W-07	06010005	START-3 (E & E)	1/17/2006	0.24 U	48 U
W-07	06040003	START-3 (E & E)	4/18/2006	0.24 U	52 UJ
W-07	06080103	START-3 (E & E)	8/17/2006	0.25 U	52 U
W-07	06121003	START-3 (E & E)	12/3/2006	0.10 U	240 U
W-07	07030021	START-3 (E & E)	3/20/2007	0.35 U	120 U
W-07	07070115	START-3 (E & E)	7/17/2007	0.25 J	120 U
W-08	SAGWW0806	START-2 (Herrera)	6/17/2005	1.9 U	237 U
W-08	W-08	START-2 (Herrera)	9/14/2005	1.93 U	NA
W-08	06010004	START-3 (E & E)	1/17/2006	0.24 U	51
W-08	06040007	START-3 (E & E)	4/18/2006	0.24 U	79 J
W-08	06080104	START-3 (E & E)	8/17/2006	0.24 U	76
W-08	06121006	START-3 (E & E)	12/3/2006	0.024 J	240 U
W-08	07030022	START-3 (E & E)	3/20/2007	0.34 U	130 U
W-08	07070117	START-3 (E & E)	7/17/2007	0.35 U	45 J
MW-09	06121019	START-3 (E & E)	12/4/2006	110	620
MW-09	07030023	START-3 (E & E)	3/20/2007	0.22 J	120 U
MW-09	07070121	START-3 (E & E)	7/17/2007	1.5	62 J
MW-10	06121026	START-3 (E & E)	12/5/2006	1,800	2,800
MW-10	07030043	START-3 (E & E)	3/21/2007	1,300	2,800
MW-10	07070135	START-3 (E & E)	7/18/2007	1,000	3,100
MW-11 (deep)	06121024	START-3 (E & E)	12/5/2006	920	1,700
MW-11 (deep)	07030044	START-3 (E & E)	3/21/2007	100 J	590
MW-11 (deep)	07070133	START-3 (E & E)	7/18/2007	2,400	1,900

Table 2

**SUMMARY OF PCP AND DRO RESULTS IN MONITORING WELLS
JULY 2007 QUARTERLY GROUNDWATER SAMPLING
COLVILLE POST AND POLES SITE
COLVILLE, STEVENS COUNTY, WASHINGTON**

Monitoring Well ⁽¹⁾	Sample ID	Collected By	Sample Date	PCP (µg/L)	DRO (µg/L)
MTCA Method A cleanup level				--	500
MTCA Method B cleanup level (unrestricted)				0.729	--
MTCA Method C cleanup level (industrial)				7.29	--
EPA Region 6 2006 HHMSSL tap water				0.56	--
Federal Maximum Contaminant Level (MCL)				1.0	--
MW-12 (shallow)	06121025	START-3 (E & E)	12/5/2006	500	760
MW-12 (shallow)	07030045	START-3 (E & E)	3/21/2007	240	340
MW-12 (shallow)	07070134	START-3 (E & E)	7/18/2007	1,100	1,000
MW-13	06121021 / 22 ⁽⁵⁾	START-3 (E & E)	12/5/2006	360 / 370 ⁽⁵⁾	520 / 520 ⁽⁵⁾
MW-13	07030029 / 30 ⁽⁵⁾	START-3 (E & E)	3/21/2007	2,100 / 1,300 J ⁽⁵⁾	2,700 / 2,800 ⁽⁵⁾
MW-13	07070132	START-3 (E & E)	7/18/2007	67 J	380
MW-14	06121012	START-3 (E & E)	12/4/2006	0.19	41 J
MW-14	07030028	START-3 (E & E)	3/21/2007	0.25 J	120 U
MW-14	07070128	START-3 (E & E)	7/18/2007	0.89	95 J
MW-15	06121004	START-3 (E & E)	12/3/2006	0.013 J	250 U
MW-15	07030024	START-3 (E & E)	3/20/2007	0.34 U	120 U
MW-15	07070116	START-3 (E & E)	7/17/2007	0.39	71 J
MW-16	06121009	START-3 (E & E)	12/3/2006	0.012 J	250 U
MW-16	07030012	START-3 (E & E)	3/20/2007	0.36 UJ	120 U
MW-16	07070124	START-3 (E & E)	7/17/2007	0.35 U	69 J
MW-17	06121010	START-3 (E & E)	12/3/2006	47	72 J
MW-17	07030013	START-3 (E & E)	3/20/2007	11 J	48 J
MW-17	07070125	START-3 (E & E)	7/17/2007	11	74 J
MW-18	06121011	START-3 (E & E)	12/3/2006	0.097 U	240 U
MW-18	07030014	START-3 (E & E)	3/20/2007	0.35 U	120 U
MW-18	07070123	START-3 (E & E)	7/17/2007	0.35 U	77 J
MW-19	06121020	START-3 (E & E)	12/5/2006	0.096 U	250 U
MW-19	07030015	START-3 (E & E)	3/20/2007	0.34 U	120 U
MW-19	07070122	START-3 (E & E)	7/17/2007	0.34 U	83 J
RW-03	06121036	START-3 (E & E)	12/5/2006	16,000	7,200
RW-03	07030046	START-3 (E & E)	3/21/2007	710	4,000
RW-03	07070136	START-3 (E & E)	7/18/2007	3,800	3,000

Notes: Results in BOLD typeface indicate a detected compound.]

(1) Monitoring Wells NAW-01, SAW-02, SAW-03, NAW-04, NAW-05, NAW-06, SAW-07, and SAW-08 have been re-designated W-01 through W-08 in this report.

(2) J-flags have been added to these results as a result of START-3 validation performed in May 2007.

(3) Data for SAW-03 (W-03) and NAW-05 (W-05) from June 2005 were switched in December 2005 (Herrera) report.

(4) Data for NAW-06 (W-06) and SAW-07 (W-07) from September 2005 have been switched.

(5) The two results for these samples indicate that field duplicates were collected and analyzed.

Key:

DRO	= Diesel-Range Organics
HHMSSL	= Human Health Medium-Specific Screening Levels
J	= estimated value
µg/L	= micrograms per liter
MTCA	= Model Toxic Control Act (Washington State)
PCP	= Pentachlorophenol
U	= not detected

Table 3

**SUMMARY OF PCP AND DRO RESULTS IN DOMESTIC WELLS AND SURFACE WATER SAMPLES
JULY 2007 QUARTERLY GROUNDWATER SAMPLING
COLVILLE POST AND POLES SITE
COLVILLE, STEVENS COUNTY, WASHINGTON**

Domestic Well ID	Sample ID	Collected By	Sample Type	Aquifer	Sample Date	PCP (µg/L)	DRO (µg/L)
MTCA Method A cleanup level						--	500
MTCA Method B cleanup level (unrestricted)						0.729	--
MTCA Method C cleanup level (industrial)						7.29	--
EPA Region 6 2006 HHMSSL tap water						0.56	--
Federal Maximum Contaminant Level (MCL)						1.0	--
DOMESTIC WELL SAMPLES							
DW-01	06010013	E & E	Domestic Well	Upper	1/18/2006	0.24 U	50 U
DW-01	06040013	E & E	Domestic Well	Upper	4/18/2006	0.24 U	51 U
DW-01	06080108	E & E	Domestic Well	Upper	8/17/2006	0.24 U	55 U
DW-01	06121027	E & E	Domestic Well	Upper	12/5/2006	0.099 U	240 U
DW-01	07030001	E & E	Domestic Well	Upper	3/20/2007	0.37 U	130 U
DW-01	07070101	E & E	Domestic Well	Upper	7/17/2007	0.35 U	120 U
DW-02	06010014	E & E	Domestic Well	Upper	1/18/2006	0.24 U	50 U
DW-02	06040014	E & E	Domestic Well	Upper	4/18/2006	0.24 U	51 U
DW-02	06080116	E & E	Domestic Well	Upper	8/17/2006	0.24 U	54 U
DW-02	06121031	E & E	Domestic Well	Upper	12/5/2006	0.0064 J	240 U
DW-02	07030002	E & E	Domestic Well	Upper	3/20/2007	0.33 U	120 U
DW-02	07070102	E & E	Domestic Well	Upper	7/17/2007	0.35 U	120 U
DW-03	06010015	E & E	Domestic Well	Upper	1/18/2006	0.24 U	52 U
DW-03	06040015	E & E	Domestic Well	Upper	4/18/2006	0.24 U	53 U
DW-03	06080114	E & E	Domestic Well	Upper	8/17/2006	0.24 U	53 U
DW-03	06121033	E & E	Domestic Well	Upper	12/5/2006	0.11 U	260 U
DW-03	07030003	E & E	Domestic Well	Upper	3/20/2007	0.34 U	120 U
DW-03	07070103	E & E	Domestic Well	Upper	7/17/2007	0.35 U	120 U
DW-04	06010016	E & E	Domestic Well	Upper	1/18/2006	0.24 U	50 U
DW-04	06040016	E & E	Domestic Well	Upper	4/18/2006	0.24 U	53 U
DW-04	06080115	E & E	Domestic Well	Upper	8/17/2006	0.25 U	53 U
DW-04	06121034	E & E	Domestic Well	Upper	12/5/2006	0.10 U	260 U
DW-04	07030004	E & E	Domestic Well	Upper	3/20/2007	0.35 UJ	130 U
DW-04	07070104	E & E	Domestic Well	Upper	7/17/2007	0.35 U	120 U
DW-05	06040017	E & E	Domestic Well	Upper	4/18/2006	0.24 U	52 U
DW-05	06080117	E & E	Domestic Well	Upper	8/17/2006	0.24 U	55 U
DW-05	06121030	E & E	Domestic Well	Upper	12/5/2006	0.12	240 U
DW-05	07030005	E & E	Domestic Well	Upper	3/20/2007	0.26 J	130 U
DW-05	07070105	E & E	Domestic Well	Upper	7/17/2007	0.35 U	130 U
DW-06	06040018	E & E	Domestic Well	Upper	4/19/2006	0.24 U	52 U
DW-06	06080112	E & E	Domestic Well	Upper	8/17/2006	0.25 U	53 U
DW-06	NS ⁽¹⁾	E & E	Domestic Well	Upper	12/5/2006	NS ⁽¹⁾	NS ⁽¹⁾
DW-06	07030006	E & E	Domestic Well	Upper	3/20/2007	0.35 U	120 U
DW-06	07070106	E & E	Domestic Well	Upper	7/17/2007	0.35 UJ	42 J
DW-07	06040019	E & E	Domestic Well	Lower	4/19/2006	0.24 U	53 U
DW-07	06080111	E & E	Domestic Well	Lower	8/17/2006	0.24 U	53 U
DW-07	06121029	E & E	Domestic Well	Lower	12/5/2006	0.096 U	240 U
DW-07	07030007	E & E	Domestic Well	Lower	3/20/2007	0.35 UJ	120 U
DW-07	07070107	E & E	Domestic Well	Lower	7/17/2007	0.35 UJ	140 U
DW-08	06040020	E & E	Domestic Well	Upper	4/19/2006	0.24 U	53 U
DW-08	06080110	E & E	Domestic Well	Upper	8/17/2006	0.25 U	53 U
DW-08	06121035	E & E	Domestic Well	Upper	12/5/2006	0.10 U	260 U
DW-08	07030008	E & E	Domestic Well	Upper	3/20/2007	0.45 J	120 U
DW-08	07070108	E & E	Domestic Well	Upper	7/17/2007	0.35 UJ	120 U
DW-09 ⁽²⁾	06040021	E & E	Domestic Well (Irrigation)	Upper	4/19/2006	0.24 U	52 U
DW-09 ⁽²⁾	07070109	E & E	Domestic Well (Irrigation)	Upper	7/17/2007	0.35 U	120 U

Table 3

**SUMMARY OF PCP AND DRO RESULTS IN DOMESTIC WELLS AND SURFACE WATER SAMPLES
JULY 2007 QUARTERLY GROUNDWATER SAMPLING
COLVILLE POST AND POLES SITE
COLVILLE, STEVENS COUNTY, WASHINGTON**

Domestic Well ID	Sample ID	Collected By	Sample Type	Aquifer	Sample Date	PCP (µg/L)	DRO (µg/L)
MTCA Method A cleanup level						--	500
MTCA Method B cleanup level (unrestricted)						0.729	--
MTCA Method C cleanup level (industrial)						7.29	--
EPA Region 6 2006 HHMSSL tap water						0.56	--
Federal Maximum Contaminant Level (MCL)						1.0	--
DW-10 ⁽²⁾	06040022	E & E	Domestic Well (Drinking Water)	Upper	4/19/2006	0.24 U	54 U
DW-10 ⁽²⁾	07030009	E & E	Domestic Well (Drinking Water)	Upper	3/20/2007	0.36 UJ	130 U
DW-10 ⁽²⁾	07070110	E & E	Domestic Well (Drinking Water)	Upper	7/17/2007	0.35 UJ	120 U
DW-11	06040023	E & E	Domestic Well	Upper	4/19/2006	0.24 U	52 U
DW-11	06080109	E & E	Domestic Well	Upper	8/17/2006	0.24 U	53 U
DW-11	06121028	E & E	Domestic Well	Upper	12/5/2006	0.040 J	240 U
DW-11	07030010	E & E	Domestic Well	Upper	3/20/2007	0.35 U	120 U
DW-11	07070111	E & E	Domestic Well	Upper	7/17/2007	0.35 U	120 U
DW-12	06040024	E & E	Domestic Well	Upper	4/19/2006	0.24 U	54 U
DW-12	06080113	E & E	Domestic Well	Upper	8/17/2006	0.24 U	52 U
DW-12	06121032	E & E	Domestic Well	Upper	12/5/2006	0.099 U	37 J
DW-12	07030011	E & E	Domestic Well	Upper	3/20/2007	0.34 U	130 U
DW-12	07070112	E & E	Domestic Well	Upper	7/17/2007	0.35 U	120 U
SURFACE WATER SAMPLES (April 2006 and March 2007, only)							
SW-01	06040025	E & E	Surface Water	Upper	4/19/2006	0.41	110 J
SW-02	06040026	E & E	Surface Water	Upper	4/19/2006	0.68	270 J
0307SW-01	07030032	E & E	Surface Water	Upper	3/21/2007	0.42	Not Analyzed
0307SW-02	07030033	E & E	Surface Water	Upper	3/21/2007	0.54	Not Analyzed
0307SW-03	07030034	E & E	Surface Water	Upper	3/21/2007	1.2	Not Analyzed
0307SW-04	07030035	E & E	Surface Water	Upper	3/21/2007	0.17 J	Not Analyzed
0307SW-05	07030036	E & E	Surface Water	Upper	3/21/2007	0.29 J	Not Analyzed
0307SW-06	07030037	E & E	Surface Water	Upper	3/21/2007	0.32 J	Not Analyzed
0307SW-07	07030038	E & E	Surface Water	Upper	3/21/2007	0.22 J	Not Analyzed
0307SW-08	07030039	E & E	Surface Water	Upper	3/21/2007	0.065 J	Not Analyzed
0307SW-09	07030040	E & E	Surface Water	Upper	3/21/2007	0.12 J	Not Analyzed
0307SW-10	07030041	E & E	Surface Water	Upper	3/21/2007	1.2	Not Analyzed
0307SW-11	07030042	E & E	Surface Water	Upper	3/21/2007	0.10 J	Not Analyzed
SEDIMENT SAMPLES (March 2007, only)						PCP (µg/kg)	DRO (µg/kg)
0307SD-02	07030051	E & E	Sediment	N/A	3/21/2007	280 U	Not Analyzed
0307SD-05	07030052	E & E	Sediment	N/A	3/21/2007	190 U	Not Analyzed

Notes: Results in BOLD typeface indicate a detected compound.

(1) DW-06 was not sampled on 12/05/2006 because the domestic well was shut down for the winter.

(2) Groundwater monitoring of domestic wells DW-09 and DW-10 was discontinued after the April 2006 sampling event at the request of the property owner. Monitoring of DW-10 continued with the March 2007 sampling event.

Key:

DRO	= Diesel-Range Organics
HHMSSL	= Human Health Medium-Specific Screening Levels
J	= estimated value
µg/kg	= micrograms per kilogram
µg/L	= micrograms per liter
MTCA	= Model Toxic Control Act (Washington State)
N/A	= not applicable
NS	= Not Sampled
PCP	= Pentachlorophenol
U	= not detected

Table 4

**SUMMARY OF ANALYTICAL RESULTS
JULY 2007 QUARTERLY GROUNDWATER SAMPLING
COLVILLE POST AND POLES SITE
COLVILLE, STEVENS COUNTY, WASHINGTON**

Sample Number:	07070101	07070102	07070103	07070104	07070105	07070106
Sample Location:	DW-01	DW-02	DW-03	DW-04	DW-05	DW-06
Sample Date:	7/17/2007	7/17/2007	7/17/2007	7/17/2007	7/17/2007	7/17/2007
SVOCs (µg/L)						
1,2,4-Trichlorobenzene	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 UJ
1,2-Dichlorobenzene	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 UJ
1,3-Dichlorobenzene	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 UJ
1,4-Dichlorobenzene	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 UJ
1-Methylnaphthalene	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 UJ
2,4,5-Trichlorophenol	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 UJ
2,4,6-Trichlorophenol	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 UJ
2,4-Dichlorophenol	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 UJ
2,4-Dimethylphenol	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ
2,4-Dinitrophenol	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 UJ
2,4-Dinitrotoluene	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 UJ
2,6-Dinitrotoluene	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 UJ
2-Chloronaphthalene	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 UJ
2-Chlorophenol	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 UJ
2-Methylnaphthalene	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 UJ
2-Methylphenol	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 UJ
2-Nitroaniline	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 UJ
2-Nitrophenol	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 UJ
3 & 4 Methylphenol	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 UJ
3,3'-Dichlorobenzidine	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ
3-Nitroaniline	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 UJ
4,6-Dinitro-2-methylphenol	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 UJ
4-Bromophenyl phenyl ether	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 UJ
4-Chloro-3-methylphenol	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 UJ
4-Chloroaniline	0.20 UJ	0.20 UJ	0.20 UJ	0.20 UJ	0.20 UJ	0.20 UJ
4-Chlorophenyl phenyl ether	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 UJ
4-Nitroaniline	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 UJ
4-Nitrophenol	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ
Acenaphthene	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 UJ
Acenaphthylene	0.040 U	0.040 U	0.040 U	0.040 U	0.040 U	0.040 UJ
Anthracene	0.0023 J	0.020 U	0.020 U	0.020 U	0.020 U	0.020 UJ
Benzo[a]anthracene	0.010 J	0.030 U	0.030 U	0.030 U	0.030 U	0.030 UJ
Benzo[a]pyrene	0.025 J	0.020 U	0.020 U	0.020 U	0.020 U	0.020 UJ
Benzo[g,h,i]perylene	0.0090 J	0.030 U	0.030 U	0.030 U	0.030 U	0.030 UJ
Benzo[fluoranthene]	0.060 J	0.040 U	0.040 U	0.040 U	0.040 U	0.040 UJ
Benzoic acid	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ
Benzyl alcohol	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 UJ
Bis(2-chloroethoxy)methane	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 UJ
Bis(2-chloroethyl)ether	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 UJ
Bis(2-chloroisopropyl) ether	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 UJ
Bis(2-ethylhexyl) phthalate	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	0.26 J
Butyl benzyl phthalate	0.30 U	0.31 J	0.30 U	0.30 U	0.30 U	0.051 J
Carbazole	0.20 UJ	0.20 UJ	0.20 UJ	0.20 UJ	0.20 UJ	0.20 UJ
Chrysene	0.0087 J	0.020 U	0.020 U	0.020 U	0.020 U	0.020 UJ
Dibenz(a,h)anthracene	0.017 J	0.030 U	0.030 U	0.030 U	0.030 U	0.030 UJ
Dibenzofuran	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 UJ
Diethyl phthalate	0.021 J	0.013 J	0.013 J	0.20 U	0.010 J	0.20 UJ
Dimethyl phthalate	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 UJ
Di-n-butyl phthalate	0.19 J	0.14 J	0.20 U	0.20 U	0.20 U	0.043 J
Di-n-octyl phthalate	0.20 U	0.035 J	0.20 U	0.20 U	0.20 U	0.20 UJ
Fluoranthene	0.0058 J	0.025 U	0.025 U	0.025 U	0.025 U	0.025 UJ
Fluorene	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 UJ
Hexachlorobenzene	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 UJ
Hexachlorobutadiene	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 UJ
Hexachlorocyclopentadiene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ
Hexachloroethane	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 UJ
Indeno[1,2,3-cd]pyrene	0.013 J	0.030 U	0.030 U	0.030 U	0.030 U	0.030 UJ
Isophorone	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 UJ
Naphthalene	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 UJ
Nitrobenzene	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 UJ
N-Nitrosodi-n-propylamine	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 UJ
N-Nitrosodiphenylamine	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 UJ
Pentachlorophenol	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 UJ
Phenanthrene	0.015 J	0.040 U	0.040 U	0.040 U	0.040 U	0.040 UJ
Phenol	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 UJ
Pyrene	0.0041 J	0.030 U	0.030 U	0.030 U	0.030 U	0.030 UJ
TPH-DRO (µg/L)						
Diesel Range Organics	120 U	120 U	120 U	120 U	130 U	42 J
Oil Range Organics	100 J	240 U	240 U	240 U	250 U	240 U

Key is on last page.

Bold type indicates a detected compound.

Table 4

**SUMMARY OF ANALYTICAL RESULTS
JULY 2007 QUARTERLY GROUNDWATER SAMPLING
COLVILLE POST AND POLES SITE
COLVILLE, STEVENS COUNTY, WASHINGTON**

Sample Number:	07070107	07070108	07070109	07070110	07070111	07070112
Sample Location:	DW-07	DW-08	DW-09	DW-10	DW-11	DW-12
Sample Date:	7/17/2007	7/17/2007	7/17/2007	7/17/2007	7/17/2007	7/17/2007
SVOCs (µg/L)						
1,2,4-Trichlorobenzene	0.20 UJ	0.20 UJ	0.20 U	0.20 UJ	0.20 U	0.20 U
1,2-Dichlorobenzene	0.20 UJ	0.20 UJ	0.20 U	0.20 UJ	0.20 U	0.20 U
1,3-Dichlorobenzene	0.20 UJ	0.20 UJ	0.20 U	0.20 UJ	0.20 U	0.20 U
1,4-Dichlorobenzene	0.20 UJ	0.20 UJ	0.20 U	0.20 UJ	0.20 U	0.20 U
1-Methylnaphthalene	0.030 UJ	0.030 UJ	0.030 U	0.030 UJ	0.030 UJ	0.030 U
2,4,5-Trichlorophenol	0.20 UJ	0.20 UJ	0.20 U	0.20 UJ	0.20 U	0.20 U
2,4,6-Trichlorophenol	0.30 UJ	0.30 UJ	0.30 U	0.30 UJ	0.30 U	0.30 U
2,4-Dichlorophenol	0.20 UJ	0.20 UJ	0.20 U	0.20 UJ	0.20 UJ	0.20 U
2,4-Dimethylphenol	1.0 UJ	1.0 UJ	1.0 U	1.0 UJ	1.0 U	1.0 U
2,4-Dinitrophenol	2.5 UJ	2.5 UJ	2.5 U	2.5 UJ	2.5 UJ	2.5 U
2,4-Dinitrotoluene	0.20 UJ	0.20 UJ	0.20 U	0.20 UJ	0.20 UJ	0.20 U
2,6-Dinitrotoluene	0.20 UJ	0.20 UJ	0.20 U	0.20 UJ	0.20 U	0.20 U
2-Chloronaphthalene	0.030 UJ	0.030 UJ	0.030 U	0.030 UJ	0.030 U	0.030 U
2-Chlorophenol	0.20 UJ	0.20 UJ	0.20 U	0.20 UJ	0.20 U	0.20 U
2-Methylnaphthalene	0.10 UJ	0.10 UJ	0.10 U	0.10 UJ	0.10 U	0.10 U
2-Methylphenol	0.20 UJ	0.20 UJ	0.20 U	0.20 UJ	0.20 U	0.20 U
2-Nitroaniline	0.20 UJ	0.20 UJ	0.20 U	0.20 UJ	0.20 U	0.20 U
2-Nitrophenol	0.20 UJ	0.20 UJ	0.20 U	0.20 UJ	0.20 U	0.20 U
3 & 4 Methylphenol	0.40 UJ	0.40 UJ	0.40 U	0.40 UJ	0.40 U	0.40 U
3,3'-Dichlorobenzidine	1.0 UJ	1.0 UJ	1.0 U	1.0 UJ	1.0 U	1.0 U
3-Nitroaniline	0.20 UJ	0.20 UJ	0.20 U	0.20 UJ	0.20 U	0.20 U
4,6-Dinitro-2-methylphenol	2.0 UJ	2.0 UJ	2.0 U	2.0 UJ	2.0 UJ	2.0 U
4-Bromophenyl phenyl ether	0.20 UJ	0.20 UJ	0.20 U	0.20 UJ	0.20 U	0.20 U
4-Chloro-3-methylphenol	0.20 UJ	0.20 UJ	0.20 U	0.20 UJ	0.20 U	0.20 U
4-Chloroaniline	0.20 UJ	0.20 UJ	0.20 UJ	0.20 UJ	0.20 UJ	0.20 UJ
4-Chlorophenyl phenyl ether	0.20 UJ	0.20 UJ	0.20 U	0.20 UJ	0.20 UJ	0.20 U
4-Nitroaniline	0.30 UJ	0.30 UJ	0.30 U	0.30 UJ	0.30 U	0.30 U
4-Nitrophenol	1.0 UJ	1.0 UJ	1.0 U	1.0 UJ	1.0 U	1.0 U
Acenaphthene	0.050 UJ	0.050 UJ	0.050 U	0.050 UJ	0.050 U	0.050 U
Acenaphthylene	0.040 UJ	0.040 UJ	0.040 U	0.040 UJ	0.040 U	0.040 U
Anthracene	0.020 UJ	0.020 UJ	0.020 U	0.020 UJ	0.020 U	0.020 U
Benzo[a]anthracene	0.030 UJ	0.030 UJ	0.030 U	0.030 UJ	0.030 U	0.030 U
Benzo[a]pyrene	0.020 UJ	0.020 UJ	0.020 U	0.020 UJ	0.020 U	0.020 U
Benzo[g,h,i]perylene	0.030 UJ	0.030 UJ	0.030 U	0.030 UJ	0.030 U	0.030 U
Benzo[fluoranthene]	0.040 UJ	0.040 UJ	0.040 U	0.040 UJ	0.040 U	0.040 U
Benzoic acid	1.0 UJ	1.0 UJ	1.0 U	1.0 UJ	1.0 U	1.0 U
Benzyl alcohol	0.20 UJ	0.20 UJ	0.20 U	0.20 UJ	0.20 UJ	0.20 U
Bis(2-chloroethoxy)methane	0.20 UJ	0.20 UJ	0.20 U	0.20 UJ	0.20 U	0.20 U
Bis(2-chloroethyl)ether	0.20 UJ	0.20 UJ	0.20 U	0.20 UJ	0.20 U	0.20 U
Bis(2-chloroisopropyl) ether	0.20 UJ	0.20 UJ	0.20 U	0.20 UJ	0.20 U	0.20 U
Bis(2-ethylhexyl) phthalate	0.36 J	0.16 J	1.5 U	0.14 J	1.5 U	1.5 U
Butyl benzyl phthalate	0.040 J	0.041 J	0.30 U	0.089 J	0.30 U	0.30 U
Carbazole	0.20 UJ	0.20 UJ	0.20 UJ	0.20 UJ	R	0.20 UJ
Chrysene	0.020 UJ	0.020 UJ	0.020 U	0.020 UJ	0.020 U	0.020 U
Dibenz(a,h)anthracene	0.030 UJ	0.030 UJ	0.030 U	0.030 UJ	0.030 U	0.030 U
Dibenzofuran	0.20 UJ	0.20 UJ	0.20 U	0.20 UJ	0.20 UJ	0.20 U
Diethyl phthalate	0.20 UJ	0.20 UJ	0.012 J	0.011 J	0.20 U	0.20 U
Dimethyl phthalate	0.20 UJ	0.20 UJ	0.20 U	0.20 UJ	0.20 U	0.20 U
Di-n-butyl phthalate	0.033 J	0.034 J	0.20 U	0.098 J	0.20 U	0.14
Di-n-octyl phthalate	0.20 UJ	0.20 UJ	0.20 U	0.20 UJ	0.20 U	0.038 J
Fluoranthene	0.025 UJ	0.025 UJ	0.025 U	0.025 UJ	0.025 U	0.025 U
Fluorene	0.030 UJ	0.030 UJ	0.030 U	0.030 UJ	0.030 UJ	0.030 U
Hexachlorobenzene	0.20 UJ	0.20 UJ	0.20 U	0.20 UJ	0.20 U	0.20 U
Hexachlorobutadiene	0.30 UJ	0.30 UJ	0.30 U	0.30 UJ	0.30 UJ	0.30 U
Hexachlorocyclopentadiene	1.0 UJ	1.0 UJ	1.0 U	1.0 UJ	1.0 U	1.0 U
Hexachloroethane	0.30 UJ	0.30 UJ	0.30 U	0.30 UJ	0.30 U	0.30 U
Indeno[1,2,3-cd]pyrene	0.030 UJ	0.030 UJ	0.030 U	0.030 UJ	0.030 U	0.030 U
Isophorone	0.20 UJ	0.20 UJ	0.20 U	0.20 UJ	0.20 UJ	0.023 J
Naphthalene	0.20 UJ	0.20 UJ	0.20 U	0.20 UJ	0.20 U	0.20 U
Nitrobenzene	0.20 UJ	0.20 UJ	0.20 U	0.20 UJ	0.20 U	0.20 U
N-Nitrosodi-n-propylamine	0.20 UJ	0.20 UJ	0.20 U	0.20 UJ	0.20 U	0.20 U
N-Nitrosodiphenylamine	0.20 UJ	0.20 UJ	0.20 U	0.20 UJ	0.20 U	0.20 U
Pentachlorophenol	0.35 UJ	0.35 UJ	0.35 U	0.35 UJ	0.35 U	0.35 U
Phenanthrene	0.040 UJ	0.040 UJ	0.040 U	0.040 UJ	0.040 U	0.040 U
Phenol	0.30 UJ	0.30 UJ	0.30 U	0.30 UJ	0.30 U	0.30 U
Pyrene	0.030 UJ	0.030 UJ	0.030 U	0.030 UJ	0.030 U	0.0034 J
TPH-DRO (µg/L)						
Diesel Range Organics	140 U	120 U	120 U	120 U	120 U	120 U
Oil Range Organics	270 U	240 U	240 U	230 U	240 U	240 U

Key is on last page.

Bold type indicates a detected compound.

Table 4

**SUMMARY OF ANALYTICAL RESULTS
JULY 2007 QUARTERLY GROUNDWATER SAMPLING
COLVILLE POST AND POLES SITE
COLVILLE, STEVENS COUNTY, WASHINGTON**

Sample Number:	07070113	07070114	07070115	07070116	07070117	07070118
Sample Location:	W-03	W-02	W-07	MW-15	W-08	MW-04
Sample Date:	7/17/2007	7/17/2007	7/17/2007	7/17/2007	7/17/2007	7/17/2007
SVOCs (µg/L)						
1,2,4-Trichlorobenzene	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
1,2-Dichlorobenzene	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
1,3-Dichlorobenzene	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
1,4-Dichlorobenzene	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
1-Methylnaphthalene	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U
2,4,5-Trichlorophenol	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
2,4,6-Trichlorophenol	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U
2,4-Dichlorophenol	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
2,4-Dimethylphenol	1.0 U	0.99 U	1.0 U	1.0 U	1.0 U	1.0 U
2,4-Dinitrophenol	2.5 U	2.5 UJ	2.5 U	2.5 U	2.5 U	2.5 U
2,4-Dinitrotoluene	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
2,6-Dinitrotoluene	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
2-Chloronaphthalene	0.030 U	0.030 U	0.030 U	0.011 J	0.030 U	0.030 U
2-Chlorophenol	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
2-Methylnaphthalene	0.10 U	0.099 U	0.10 U	0.011 J	0.10 U	0.10 U
2-Methylphenol	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
2-Nitroaniline	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
2-Nitrophenol	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
3 & 4 Methylphenol	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U
3,3'-Dichlorobenzidine	1.0 U	0.99 U	1.0 U	1.0 U	1.0 U	1.0 U
3-Nitroaniline	0.20 U	0.20 UJ	0.20 U	0.20 U	0.20 U	0.20 U
4,6-Dinitro-2-methylphenol	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4-Bromophenyl phenyl ether	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
4-Chloro-3-methylphenol	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
4-Chloroaniline	0.20 UJ	0.20 U	0.20 UJ	0.20 UJ	0.20 UJ	0.20 UJ
4-Chlorophenyl phenyl ether	0.20 U	0.20 U	0.20 U	0.017 J	0.20 U	0.20 U
4-Nitroaniline	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U
4-Nitrophenol	1.0 U	0.99 U	1.0 U	1.0 U	1.0 U	1.0 U
Acenaphthene	0.050 U	0.050 U	0.050 U	0.0035 J	0.050 U	0.050 U
Acenaphthylene	0.040 U	0.040 U	0.040 U	0.040 U	0.040 U	0.040 U
Anthracene	0.020 U	0.020 U	0.020 U	0.018 J	0.020 U	0.020 U
Benzo[a]anthracene	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U
Benzo[a]pyrene	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U
Benzo[g,h,i]perylene	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U
Benzo[fluoranthene]	0.040 U	0.040 U	0.040 U	0.041	0.040 U	0.040 U
Benzoic acid	1.0 U	0.99 U	1.0 U	1.0 U	1.0 U	1.0 U
Benzyl alcohol	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Bis(2-chloroethoxy)methane	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Bis(2-chloroethyl)ether	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Bis(2-chloroisopropyl) ether	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Bis(2-ethylhexyl) phthalate	2.2 U	1.5 U	1.6 U	1.5 U	4.4 U	3.9 U
Butyl benzyl phthalate	0.30 U	0.53 J	0.30 U	0.30 U	0.30 U	0.30 U
Carbazole	0.20 UJ	0.20 U	0.20 UJ	0.20 UJ	0.20 UJ	0.20 UJ
Chrysene	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U
Dibenz(a,h)anthracene	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U
Dibenzofuran	0.20 U	0.20 U	0.20 U	0.015 J	0.20 U	0.20 U
Diethyl phthalate	0.024 J	0.040 J	0.017 J	0.20 U	0.025 J	0.019 J
Dimethyl phthalate	0.022 J	0.20 U	0.018 J	0.015 J	0.024 J	0.20 U
Di-n-butyl phthalate	0.20 U	0.38 J	0.20 U	0.20 U	0.12 J	0.13 J
Di-n-octyl phthalate	0.036 J	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Fluoranthene	0.025 U	0.025 U	0.025 U	0.016 J	0.025 U	0.025 U
Fluorene	0.030 U	0.030 U	0.030 U	0.010 J	0.030 U	0.030 U
Hexachlorobenzene	0.20 U	0.20 U	0.20 U	0.033 J	0.20 U	0.20 U
Hexachlorobutadiene	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U
Hexachlorocyclopentadiene	1.0 U	0.99 U	1.0 U	1.0 U	1.0 U	1.0 U
Hexachloroethane	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U
Indeno[1,2,3-cd]pyrene	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U
Isophorone	0.20 U	0.20 U	0.20 U	0.20 U	0.48	0.20 U
Naphthalene	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Nitrobenzene	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
N-Nitrosodi-n-propylamine	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
N-Nitrosodiphenylamine	0.20 U	0.20 UJ	0.20 U	0.20 U	0.20 U	0.20 U
Pentachlorophenol	0.35 U	0.35 U	0.25 J	0.39	0.35 U	0.35 U
Phenanthrene	0.040 U	0.013 J	0.040 U	0.022 J	0.040 U	0.040 U
Phenol	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U
Pyrene	0.030 U	0.030 U	0.030 U	0.012 J	0.030 U	0.030 U
TPH-DRO (µg/L)						
Diesel Range Organics	36 J	37 J	120 U	71 J	45 J	44 J
Oil Range Organics	240 U	240 UJ	250 U	250 U	240 U	250 U

Key is on last page.

Bold type indicates a detected compound.

Table 4

**SUMMARY OF ANALYTICAL RESULTS
JULY 2007 QUARTERLY GROUNDWATER SAMPLING
COLVILLE POST AND POLES SITE
COLVILLE, STEVENS COUNTY, WASHINGTON**

Sample Number:	07070119	07070120	07070121	07070122	07070123	07070124
Sample Location:	MW-01	MW-02	MW-09	MW-19	MW-18	MW-16
Sample Date:	7/17/2007	7/17/2007	7/17/2007	7/17/2007	7/17/2007	7/17/2007
SVOCs (µg/L)						
1,2,4-Trichlorobenzene	0.20 U	0.20 U	0.20 U	0.19 U	0.20 U	0.20 U
1,2-Dichlorobenzene	0.20 U	0.20 U	0.20 U	0.19 U	0.20 U	0.20 U
1,3-Dichlorobenzene	0.20 U	0.20 U	0.20 U	0.19 U	0.20 U	0.20 U
1,4-Dichlorobenzene	0.20 U	0.20 U	0.20 U	0.19 U	0.20 U	0.20 U
1-Methylnaphthalene	0.33	0.030 U	0.14	0.029 U	0.030 U	0.030 U
2,4,5-Trichlorophenol	0.63	0.20 U	0.014 J	0.19 U	0.20 U	0.20 U
2,4,6-Trichlorophenol	0.073 J	0.30 U	0.30 U	0.29 U	0.30 U	0.30 U
2,4-Dichlorophenol	0.20 U	0.20 U	0.20 U	0.19 U	0.20 U	0.20 U
2,4-Dimethylphenol	1.0 U	1.0 U	1.0 U	0.97 U	1.0 U	0.99 U
2,4-Dinitrophenol	2.5 U	2.5 U	2.5 U	2.4 U	2.5 U	2.5 U
2,4-Dinitrotoluene	0.20 U	0.20 U	0.20 U	0.19 U	0.20 U	0.20 U
2,6-Dinitrotoluene	0.20 U	0.20 U	0.20 U	0.19 U	0.20 U	0.20 U
2-Chloronaphthalene	0.019 J	0.030 U	0.030 U	0.029 U	0.030 U	0.030 U
2-Chlorophenol	0.20 U	0.20 U	0.20 U	0.19 U	0.20 U	0.20 U
2-Methylnaphthalene	0.067 J	0.10 U	0.078 J	0.097 U	0.10 U	0.099 U
2-Methylphenol	0.20 U	0.20 U	0.20 U	0.19 U	0.20 U	0.20 U
2-Nitroaniline	0.20 U	0.20 U	0.20 U	0.19 U	0.20 U	0.20 U
2-Nitrophenol	0.20 U	0.20 U	0.20 U	0.19 U	0.20 U	0.20 U
3 & 4 Methylphenol	0.40 U	0.40 U	0.40 U	0.39 U	0.40 U	0.40 U
3,3'-Dichlorobenzidine	1.0 U	1.0 U	1.0 U	0.97 U	1.0 U	0.99 UJ
3-Nitroaniline	0.20 U	0.20 U	0.20 U	0.19 UJ	0.20 UJ	0.20 UJ
4,6-Dinitro-2-methylphenol	2.0 U	2.0 U	2.0 U	1.9 U	2.0 U	2.0 U
4-Bromophenyl phenyl ether	0.20 U	0.20 U	0.20 U	0.19 U	0.20 U	0.20 U
4-Chloro-3-methylphenol	0.20 U	0.20 U	0.20 U	0.19 U	0.20 U	0.20 U
4-Chloroaniline	0.20 UJ	0.20 UJ	0.20 UJ	0.19 U	0.20 U	0.20 U
4-Chlorophenyl phenyl ether	0.20 U	0.20 U	0.20 U	0.19 U	0.20 U	0.20 U
4-Nitroaniline	0.30 U	0.30 U	0.30 U	0.29 U	0.30 U	0.30 U
4-Nitrophenol	1.0 U	1.0 U	1.0 U	0.97 U	1.0 U	0.99 U
Acenaphthene	0.050 U	0.050 U	0.011 J	0.049 U	0.051 U	0.050 U
Acenaphthylene	0.040 U	0.040 U	0.040 U	0.039 U	0.040 U	0.040 U
Anthracene	0.020 U	0.020 U	0.020 U	0.019 U	0.020 U	0.020 U
Benzo[a]anthracene	0.030 U	0.030 U	0.030 U	0.029 U	0.030 U	0.030 UJ
Benzo[a]pyrene	0.020 U	0.020 U	0.020 U	0.019 U	0.020 U	0.020 U
Benzo[g,h,i]perylene	0.030 U	0.030 U	0.030 U	0.029 U	0.030 U	0.030 U
Benzo[fluoranthene]	0.040 U	0.040 U	0.040 U	0.039 U	0.040 U	0.040 U
Benzoic acid	1.0 U	1.0 U	1.0 U	0.97 U	1.0 U	0.99 U
Benzyl alcohol	0.20 U	0.20 U	0.20 U	0.19 U	0.20 U	0.20 U
Bis(2-chloroethoxy)methane	0.20 U	0.20 U	0.20 U	0.19 U	0.20 U	0.20 U
Bis(2-chloroethyl)ether	0.20 U	0.20 U	0.20 U	0.19 U	0.20 U	0.20 U
Bis(2-chloroisopropyl) ether	0.20 U	0.20 U	0.20 U	0.19 U	0.20 U	0.20 U
Bis(2-ethylhexyl) phthalate	2.0 U	2.3 U	1.6 U	85 J	9.7 J	2.8 U
Butyl benzyl phthalate	0.30 U	0.30 U	0.30 U	0.072 J	0.060 J	0.17 J
Carbazole	0.022 J	0.20 UJ	0.20 UJ	0.19 U	0.20 U	0.20 U
Chrysene	0.020 U	0.020 U	0.020 U	0.019 U	0.020 U	0.020 UJ
Dibenz(a,h)anthracene	0.030 U	0.030 U	0.030 U	0.029 U	0.030 U	0.030 U
Dibenzofuran	0.20 U	0.20 U	0.20 U	0.19 U	0.20 U	0.20 U
Diethyl phthalate	0.022 J	0.014 J	0.013 J	0.060 J	0.20 U	0.20 U
Dimethyl phthalate	0.20 U	0.20 U	0.20 U	0.057 J	0.20 U	0.20 U
Di-n-butyl phthalate	0.12 J	0.20 U	0.20 U	0.078 J	0.20 U	0.11 J
Di-n-octyl phthalate	0.20 U	0.20 U	0.20 U	0.19 U	0.20 U	0.20 U
Fluoranthene	0.025 U	0.025 U	0.025 U	0.024 U	0.025 U	0.025 U
Fluorene	0.030 U	0.030 U	0.030 U	0.029 U	0.030 U	0.030 U
Hexachlorobenzene	0.20 U	0.20 U	0.20 U	0.19 U	0.20 U	0.20 U
Hexachlorobutadiene	0.30 U	0.30 U	0.30 U	0.29 U	0.30 U	0.30 U
Hexachlorocyclopentadiene	1.0 U	1.0 U	1.0 U	0.97 U	1.0 U	0.99 U
Hexachloroethane	0.30 U	0.30 U	0.30 U	0.29 U	0.30 U	0.30 U
Indeno[1,2,3-cd]pyrene	0.030 U	0.030 U	0.030 U	0.029 U	0.030 U	0.030 U
Isophorone	1.2	0.20 U	0.20 U	0.19 U	0.20 U	0.20 U
Naphthalene	0.41	0.20 U	0.031 J	0.011 J	0.20 U	0.20 U
Nitrobenzene	0.20 U	0.20 U	0.20 U	0.19 U	0.20 U	0.20 U
N-Nitrosodi-n-propylamine	0.20 U	0.20 U	0.20 U	0.19 U	0.20 U	0.20 U
N-Nitrosodiphenylamine	0.20 U	0.20 U	0.20 U	0.19 UJ	0.20 UJ	0.20 UJ
Pentachlorophenol	120	0.35 U	1.5	0.34 U	0.35 U	0.35 U
Phenanthrene	0.0081 J	0.040 U	0.040 U	0.039 U	0.040 U	0.040 U
Phenol	0.30 U	0.30 U	0.30 U	0.29 U	0.30 U	0.30 U
Pyrene	0.030 U	0.030 U	0.030 U	0.029 U	0.030 U	0.030 U
TPH-DRO (µg/L)						
Diesel Range Organics	260	69 J	62 J	83 J	77 J	69 J
Oil Range Organics	250 U	250 U	240 U	130 J	240 U	100 J

Key is on last page.

Bold type indicates a detected compound.

Table 4

**SUMMARY OF ANALYTICAL RESULTS
JULY 2007 QUARTERLY GROUNDWATER SAMPLING
COLVILLE POST AND POLES SITE
COLVILLE, STEVENS COUNTY, WASHINGTON**

Sample Number:	07070125	07070126	07070127	07070128	07070129	07070130 ⁽¹⁾
Sample Location:	MW-17	W-04	W-05	MW-14	W-06	W-01
Sample Date:	7/17/2007	7/18/2007	7/18/2007	7/18/2007	7/18/2007	7/18/2007
SVOCs (µg/L)						
1,2,4-Trichlorobenzene	0.20 UJ	0.19 UJ	0.19 UJ	0.19 U	0.20 UJ	0.20 UJ
1,2-Dichlorobenzene	0.20 UJ	0.19 UJ	0.19 UJ	0.19 U	0.20 UJ	0.20 UJ
1,3-Dichlorobenzene	0.20 UJ	0.19 UJ	0.19 UJ	0.19 U	0.20 UJ	0.20 UJ
1,4-Dichlorobenzene	0.20 UJ	0.19 UJ	0.19 UJ	0.19 U	0.20 UJ	0.20 UJ
1-Methylnaphthalene	0.029 UJ	0.029 UJ	0.029 UJ	0.029 U	0.030 UJ	0.029 UJ
2,4,5-Trichlorophenol	0.20 UJ	0.19 UJ	0.047 J	0.19 U	0.20 UJ	0.20 UJ
2,4,6-Trichlorophenol	0.29 UJ	0.29 UJ	0.29 UJ	0.29 U	0.30 UJ	0.29 UJ
2,4-Dichlorophenol	0.20 UJ	0.19 UJ	0.19 UJ	0.19 U	0.20 UJ	0.20 UJ
2,4-Dimethylphenol	0.98 UJ	0.95 UJ	0.97 UJ	0.97 U	1.0 UJ	0.98 UJ
2,4-Dinitrophenol	2.5 UJ	2.4 UJ	2.4 UJ	2.4 U	2.5 UJ	2.5 UJ
2,4-Dinitrotoluene	0.20 UJ	0.19 UJ	0.19 UJ	0.19 U	0.20 UJ	0.20 UJ
2,6-Dinitrotoluene	0.20 UJ	0.19 UJ	0.19 UJ	0.19 U	0.20 UJ	0.20 UJ
2-Chloronaphthalene	0.029 UJ	0.029 UJ	0.029 UJ	0.029 U	0.030 UJ	0.029 UJ
2-Chlorophenol	0.20 UJ	0.19 UJ	0.19 UJ	0.19 U	0.20 UJ	0.20 UJ
2-Methylnaphthalene	0.098 UJ	0.095 UJ	0.097 UJ	0.097 U	0.1 UJ	0.098 UJ
2-Methylphenol	0.20 UJ	0.19 UJ	0.19 UJ	0.19 U	0.20 UJ	0.20 UJ
2-Nitroaniline	0.20 UJ	0.19 UJ	0.19 UJ	0.19 U	0.20 UJ	0.20 UJ
2-Nitrophenol	0.20 UJ	0.19 UJ	0.19 UJ	0.19 U	0.20 UJ	0.20 UJ
3 & 4 Methylphenol	0.39 UJ	0.38 UJ	0.39 UJ	0.39 U	0.40 UJ	0.39 UJ
3,3'-Dichlorobenzidine	0.98 UJ	0.95 UJ	0.97 UJ	0.97 U	1.0 UJ	0.98 UJ
3-Nitroaniline	0.20 UJ	0.19 UJ	0.19 UJ	0.19 UJ	0.20 UJ	0.20 UJ
4,6-Dinitro-2-methylphenol	2.0 UJ	1.9 UJ	1.9 UJ	1.9 U	2.0 UJ	2.0 UJ
4-Bromophenyl phenyl ether	0.20 UJ	0.063 J	0.19 UJ	0.19 U	0.20 UJ	0.20 UJ
4-Chloro-3-methylphenol	0.20 UJ	0.19 UJ	0.19 UJ	0.19 U	0.20 UJ	0.20 UJ
4-Chloroaniline	0.20 UJ	0.19 UJ	0.19 UJ	0.19 U	0.20 UJ	0.20 UJ
4-Chlorophenyl phenyl ether	0.20 UJ	0.19 UJ	0.19 UJ	0.19 U	0.20 UJ	0.20 UJ
4-Nitroaniline	0.29 UJ	0.29 UJ	0.29 UJ	0.29 U	0.30 UJ	0.29 UJ
4-Nitrophenol	0.98 UJ	0.95 UJ	0.97 UJ	0.97 U	1.0 UJ	0.98 UJ
Acenaphthene	0.049 UJ	0.048 UJ	0.049 UJ	0.049 U	0.050 UJ	0.049 UJ
Acenaphthylene	0.039 UJ	0.038 UJ	0.039 UJ	0.039 U	0.040 UJ	0.039 UJ
Anthracene	0.020 UJ	0.043	0.019 UJ	0.019 U	0.020 UJ	0.020 UJ
Benzo[a]anthracene	0.029 UJ	0.029 UJ	0.029 UJ	0.029 U	0.030 UJ	0.029 UJ
Benzo[a]pyrene	0.020 UJ	0.019 UJ	0.019 UJ	0.019 U	0.020 UJ	0.020 UJ
Benzo[g,h,i]perylene	0.029 UJ	0.029 UJ	0.029 UJ	0.029 U	0.030 UJ	0.029 UJ
Benzo[fluoranthene]	0.039 UJ	0.038 UJ	0.039 UJ	0.039 U	0.040 UJ	0.039 UJ
Benzoic acid	0.98 UJ	0.95 UJ	0.97 UJ	0.97 U	1.0 UJ	0.98 UJ
Benzyl alcohol	0.20 UJ	0.19 UJ	0.19 UJ	0.19 U	0.20 UJ	0.20 UJ
Bis(2-chloroethoxy)methane	0.20 UJ	0.19 UJ	0.19 UJ	0.19 U	0.20 UJ	0.20 UJ
Bis(2-chloroethyl)ether	0.20 UJ	0.19 UJ	0.19 UJ	0.19 U	0.20 UJ	0.20 UJ
Bis(2-chloroisopropyl) ether	0.20 UJ	0.19 UJ	0.19 UJ	0.19 U	0.20 UJ	0.20 UJ
Bis(2-ethylhexyl) phthalate	2.2	0.97 J	1.5	1.6 U	3.7	2.4
Butyl benzyl phthalate	0.069 J	0.072 J	0.11 J	0.12 J	0.61	0.090 J
Carbazole	0.20 UJ	0.19 UJ	0.19 UJ	0.19 U	0.20 UJ	0.20 UJ
Chrysene	0.020 UJ	0.019 UJ	0.019 UJ	0.019 U	0.020 UJ	0.020 UJ
Dibenz[a,h]anthracene	0.029 UJ	0.029 UJ	0.029 UJ	0.029 U	0.030 UJ	0.029 UJ
Dibenzofuran	0.20 UJ	0.051 J	0.19 UJ	0.19 U	0.20 UJ	0.20 UJ
Diethyl phthalate	0.20 UJ	0.19 UJ	0.19 UJ	0.19 U	0.20 UJ	0.20 UJ
Dimethyl phthalate	0.20 UJ	0.19 UJ	0.19 UJ	0.19 U	0.20 UJ	0.20 UJ
Di-n-butyl phthalate	0.20 UJ	0.19 UJ	0.076 J	0.19 U	0.22	0.20 UJ
Di-n-octyl phthalate	0.20 UJ	0.028 J	0.054 J	0.19 U	0.20 UJ	0.20 UJ
Fluoranthene	0.025 UJ	0.024 UJ	0.070	0.024 U	0.025 UJ	0.025 UJ
Fluorene	0.029 UJ	0.032	0.029 UJ	0.029 U	0.030 UJ	0.029 UJ
Hexachlorobenzene	0.20 UJ	0.088 J	0.19 UJ	0.19 U	0.20 UJ	0.20 UJ
Hexachlorobutadiene	0.29 UJ	0.29 UJ	0.29 UJ	0.29 U	0.30 UJ	0.29 UJ
Hexachlorocyclopentadiene	0.98 UJ	0.95 UJ	0.97 UJ	0.97 U	1.0 UJ	0.98 UJ
Hexachloroethane	0.29 UJ	0.29 UJ	0.29 UJ	0.29 U	0.30 UJ	0.29 UJ
Indeno[1,2,3-cd]pyrene	0.029 UJ	0.029 UJ	0.029 UJ	0.029 U	0.030 UJ	0.029 UJ
Isophorone	0.20 UJ	0.19 UJ	0.19 UJ	0.19 U	0.20 UJ	0.20 UJ
Naphthalene	0.20 UJ	0.19 UJ	0.19 UJ	0.19 U	0.20 UJ	0.20 UJ
Nitrobenzene	0.20 UJ	0.19 UJ	0.19 UJ	0.19 U	0.20 UJ	0.20 UJ
N-Nitrosodi-n-propylamine	0.20 UJ	0.19 UJ	0.19 UJ	0.19 U	0.20 UJ	0.20 UJ
N-Nitrosodiphenylamine	0.20 UJ	0.19 UJ	0.19 UJ	0.19 UJ	0.20 UJ	0.20 UJ
Pentachlorophenol	11	0.33 UJ	72	0.89	14	0.34 UJ
Phenanthrene	0.039 UJ	0.039	0.086	0.039 U	0.040 UJ	0.039 UJ
Phenol	0.29 UJ	0.29 UJ	0.29 UJ	0.29 U	0.30 UJ	0.29 UJ
Pyrene	0.029 UJ	0.029 UJ	0.061	0.029 U	0.030 UJ	0.029 UJ
TPH-DRO (µg/L)						
Diesel Range Organics	74 J	87 J	1,200	95 J	69 J	46 J
Oil Range Organics	240 U	81 J	160 J	240 U	250 U	240 U

Key is on last page.

Bold type indicates a detected compound.

Table 4

**SUMMARY OF ANALYTICAL RESULTS
JULY 2007 QUARTERLY GROUNDWATER SAMPLING
COLVILLE POST AND POLES SITE
COLVILLE, STEVENS COUNTY, WASHINGTON**

Sample Number:	07070131 ⁽¹⁾	07070132	07070133	07070134	07070135	07070136
Sample Location:	W-01 FD	MW-13	MW-11	MW-12	MW-10	RW-01
Sample Date:	7/18/2007	7/18/2007	7/18/2007	7/18/2007	7/18/2007	7/18/2007
SVOCs (µg/L)						
1,2,4-Trichlorobenzene	0.20 UJ	0.20 U	0.20 U	0.20 U	0.21 U	0.20 U
1,2-Dichlorobenzene	0.20 UJ	0.20 U	0.20 U	0.20 U	0.21 U	0.20 U
1,3-Dichlorobenzene	0.20 UJ	0.20 U	0.20 U	0.20 U	0.21 U	0.20 U
1,4-Dichlorobenzene	0.20 UJ	0.20 U	0.20 U	0.20 U	0.21 U	0.20 U
1-Methylnaphthalene	0.029 UJ	0.030 U	4.8	0.031 U	72	110
2,4,5-Trichlorophenol	0.20 UJ	0.20 UJ	0.20 UJ	0.20 UJ	0.21 U	0.20 U
2,4,6-Trichlorophenol	0.29 UJ	0.30 UJ	0.30 UJ	0.31 UJ	0.31 U	0.30 U
2,4-Dichlorophenol	0.20 UJ	0.20 UJ	0.20 UJ	0.20 UJ	0.21 U	0.20 U
2,4-Dimethylphenol	0.98 UJ	0.99 UJ	0.99 UJ	1.0 UJ	1.0 U	1.0 U
2,4-Dinitrophenol	2.5 UJ	2.5 UJ	2.5 UJ	2.6 UJ	2.6 U	2.5 U
2,4-Dinitrotoluene	0.20 UJ	0.20 U	0.20 U	0.20 U	0.21 U	0.20 U
2,6-Dinitrotoluene	0.20 UJ	0.20 U	0.20 U	0.20 U	0.21 U	0.20 U
2-Chloronaphthalene	0.029 UJ	0.030 U	0.030 U	0.031 U	0.031 U	0.030 U
2-Chlorophenol	0.20 UJ	0.20 UJ	0.20 UJ	0.20 UJ	0.21 U	0.20 U
2-Methylnaphthalene	0.098 UJ	0.099 U	0.099 U	0.10 U	0.10 U	80
2-Methylphenol	0.20 UJ	0.20 UJ	0.20 UJ	0.20 UJ	0.21 U	0.20 U
2-Nitroaniline	0.20 UJ	0.20 U	0.20 U	0.20 U	0.21 U	0.20 U
2-Nitrophenol	0.20 UJ	0.20 UJ	0.20 UJ	0.20 UJ	0.21 U	0.20 U
3 & 4 Methylphenol	0.39 UJ	0.4 UJ	0.4 UJ	0.41 UJ	0.045 J	3.8 J
3,3'-Dichlorobenzidine	0.98 UJ	0.99 U	0.99 U	1.0 U	1.0 U	1.0 U
3-Nitroaniline	0.20 UJ	0.20 U	0.20 U	0.20 U	0.21 UJ	0.20 UJ
4,6-Dinitro-2-methylphenol	2.0 UJ	2.0 UJ	2.0 UJ	2.0 UJ	2.1 U	2.0 U
4-Bromophenyl phenyl ether	0.20 UJ	0.20 U	0.20 U	0.20 U	0.21 U	0.20 U
4-Chloro-3-methylphenol	0.20 UJ	0.20 UJ	0.20 UJ	0.20 UJ	0.21 U	0.20 U
4-Chloroaniline	0.20 UJ	0.20 U	0.69	0.20 U	0.21 U	0.20 U
4-Chlorophenyl phenyl ether	0.20 UJ	0.20 U	0.20 U	0.20 U	0.21 U	0.20 U
4-Nitroaniline	0.29 UJ	0.30 U	0.30 U	0.31 U	0.31 U	0.30 U
4-Nitrophenol	0.98 UJ	0.99 UJ	0.99 UJ	1.0 UJ	1.0 U	1.0 U
Acenaphthene	0.049 UJ	0.050 U	0.77	0.051 U	4.6	8.1
Acenaphthylene	0.039 UJ	0.040 U	0.040 U	0.041 U	0.041 U	0.040 U
Anthracene	0.020 UJ	0.020 U	0.020 U	0.020 U	0.021 U	0.020 U
Benzo[a]anthracene	0.029 UJ	0.030 U	0.030 U	0.031 U	0.031 U	0.030 U
Benzo[a]pyrene	0.020 UJ	0.020 U	0.020 U	0.020 U	0.021 U	0.020 U
Benzo[g,h,i]perylene	0.029 UJ	0.030 U	0.030 U	0.031 U	0.031 U	0.030 U
Benzo[fluoranthene]	0.039 UJ	0.040 U	0.040 U	0.041 U	0.041 U	0.040 U
Benzoic acid	0.98 UJ	0.99 UJ	0.99 UJ	1.0 UJ	1.0 U	1.0 U
Benzyl alcohol	0.20 UJ	0.20 UJ	0.20 UJ	0.20 UJ	0.21 U	0.20 U
Bis(2-chloroethoxy)methane	0.20 UJ	0.20 U	0.20 U	0.20 U	0.21 U	0.20 U
Bis(2-chloroethyl)ether	0.20 UJ	0.20 U	0.20 U	0.20 U	0.21 U	0.20 U
Bis(2-chloroisopropyl) ether	0.20 UJ	0.20 U	0.20 U	0.20 U	0.21 U	0.20 U
Bis(2-ethylhexyl) phthalate	1.6	2.2	1.4 J	2.3	1.5 U	21 J
Butyl benzyl phthalate	0.046 J	0.052 J	0.30 U	0.049 J	0.098 J	0.30 U
Carbazole	0.20 UJ	0.20 U	2.7	0.74	2.9	0.20 U
Chrysene	0.020 UJ	0.020 U	0.020 U	0.020 U	0.021 U	0.020 U
Dibenz(a,h)anthracene	0.029 UJ	0.030 U	0.030 U	0.031 U	0.031 U	0.030 U
Dibenzofuran	0.20 UJ	0.19 J	1.5	0.20 U	3.4	0.20 U
Diethyl phthalate	0.20 UJ	0.20 U	0.20 U	0.20 U	0.21 U	0.20 U
Dimethyl phthalate	0.20 UJ	0.20 U	0.20 U	0.20 U	0.21 U	0.20 U
Di-n-butyl phthalate	0.050 J	0.20 U	0.20 U	0.20 U	0.21 U	0.20 U
Di-n-octyl phthalate	0.20 UJ	0.20 U	0.20 U	0.20 U	0.21 U	0.20 U
Fluoranthene	0.025 UJ	0.025 U	0.025 U	0.026 U	0.026 U	0.025 U
Fluorene	0.029 UJ	0.33	2.8	0.90	9.1	7.0
Hexachlorobenzene	0.20 UJ	0.20 U	0.20 U	0.20 U	0.21 U	0.20 U
Hexachlorobutadiene	0.29 UJ	0.30 U	0.30 U	0.31 U	0.31 U	0.30 U
Hexachlorocyclopentadiene	0.98 UJ	0.99 U	0.99 U	1.0 U	1.0 U	1.0 U
Hexachloroethane	0.29 UJ	0.30 U	0.30 U	0.31 U	0.31 U	0.30 U
Indeno[1,2,3-cd]pyrene	0.029 UJ	0.030 U	0.030 U	0.031 U	0.031 U	0.030 U
Isophorone	0.20 UJ	0.20 U	0.20 U	0.42	1.8	4.2
Naphthalene	0.20 UJ	0.20 U	2.0	0.20 U	8.0	19
Nitrobenzene	0.20 UJ	0.20 U	0.20 U	0.20 U	0.21 U	0.20 U
N-Nitrosodi-n-propylamine	0.20 UJ	0.20 U	0.20 U	0.20 U	0.21 U	0.20 U
N-Nitrosodiphenylamine	0.20 UJ	0.20 U	0.20 U	0.20 U	0.21 UJ	0.20 UJ
Pentachlorophenol	0.34 UJ	67 J	2,400	1,100	1,000	3,800
Phenanthrene	0.039 UJ	0.040 U	0.040 U	0.041 U	5.8	0.040 U
Phenol	0.29 UJ	0.30 UJ	0.30 UJ	0.31 UJ	0.31 U	0.28 J
Pyrene	0.029 UJ	0.030 U	0.030 U	0.031 U	0.10	0.34
TPH-DRO (µg/L)						
Diesel Range Organics	42 J	380	1,900	1,000	3,100	3,000
Oil Range Organics	250 U	250 U	270 U	69 J	240 J	230 J

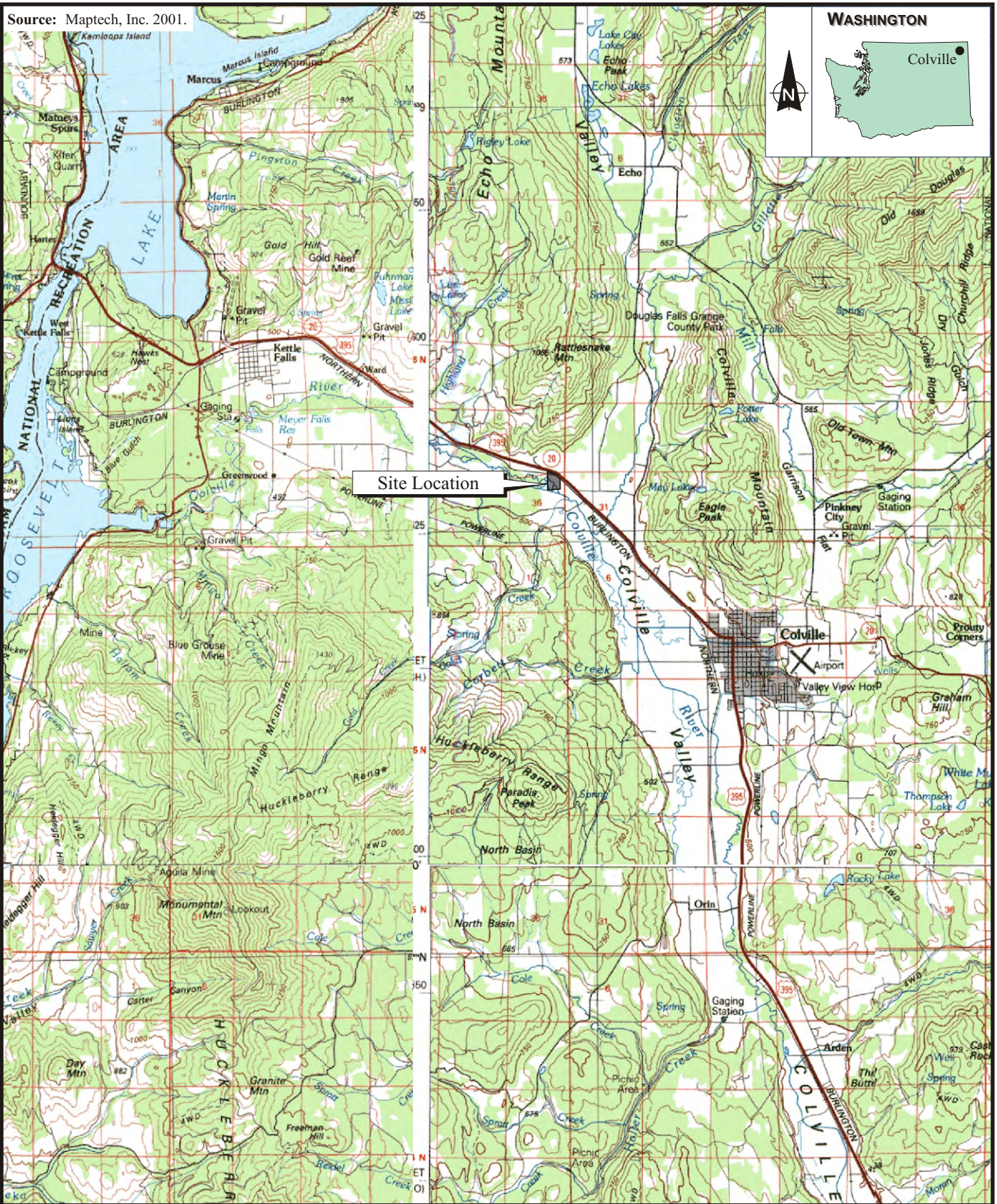
Notes:

Bold type indicates a detected compound.

(1) Sample 07070131 is a field duplicate of 07070130.

Key:
DRO = Diesel Range Organics
EPA = Environmental Protection Agency
FD = Field Duplicate
ID = Identification
J = estimated value (less than PQL)
MCL = Maximum Contaminant Level
µg/L = micrograms per liter
µg/kg = micrograms per kilogram
NA = not analyzed
PQL = Practical Quantitation Limit
R = Sample quantitation limits were rejected because surrogate spike, matrix spike, and/or continuing calibration factor recoveries were outside quality control limits.
SVOC = Semivolatile Organic Compound
TPH = Total Petroleum Hydrocarbons
U = not detected

Source: Maptech, Inc. 2001.

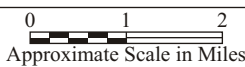


COLVILLE POST & POLE
 QUARTERLY GROUNDWATER MONITORING
 Colville, Washington

Figure 1
 SITE LOCATION MAP



ecology and environment, inc.
 10000 1st Avenue, Everett, WA 98203
 Phone: 425-336-7222



Date: 8-14-06	Drawn by: AES	10:START-2\05120003\fig 1
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Scale 1:2,250

0 50 100 200 300 400 Feet

ecology and environment, inc.
International Specialists in the Environment
Seattle, Washington

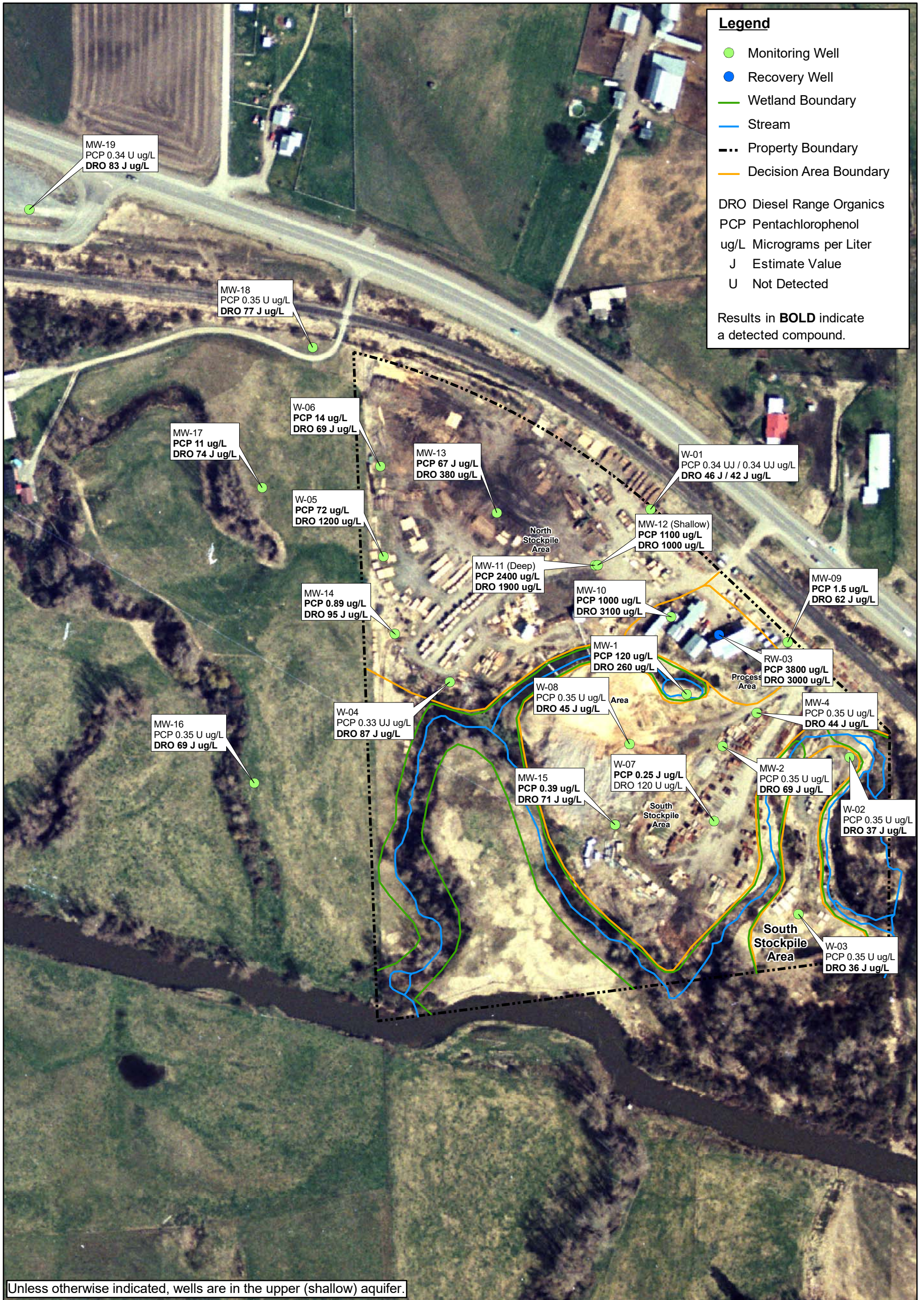
**COLVILLE POST & POLE
QUARTERLY GROUNDWATER MONITORING
JULY 2007**

Colville, Washington

**Figure 2
Groundwater Elevations
and Contour Map
July 16, 2007**

Map Reference: WSDOT Aerial Photography, 4/16/1994.

Job Number: 002233.0003.01SF
File Location: r:\...colville post & pole removal\
Date: 10/2/2007 gis: avh



Scale 1:2,250

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**COLVILLE POST & POLES
 QUARTERLY GROUNDWATER MONITORING
 JULY 2007**

Colville, Washington

Figure 3
**Groundwater Sample Results
 from Monitoring Wells
 July 17-18, 2007**

Map Reference: WSDOT Aerial Photography, 4/16/1994.

Job Number:
 002233.0003.01SF

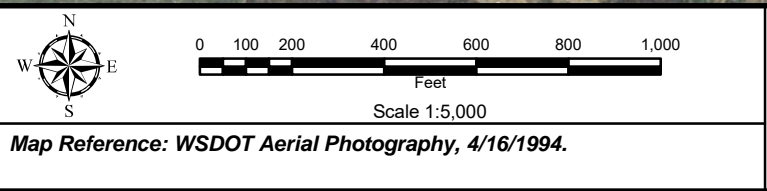
File Location:
 r:\...colville post & pole removal\

Date:
 10/2/2007

Prepared by:
 avh



Unless otherwise indicated, wells are in the upper (shallow) aquifer.



**COLVILLE POST & POLES
 QUARTERLY GROUNDWATER MONITORING
 JULY 2007**

Colville, Washington

Figure 4 Groundwater Sample Results from Monitoring Wells and Domestic Wells July 17-18, 2007		
Date: 10/3/2007	Drawn by: avh	Job Number: 002233.0003.01SF

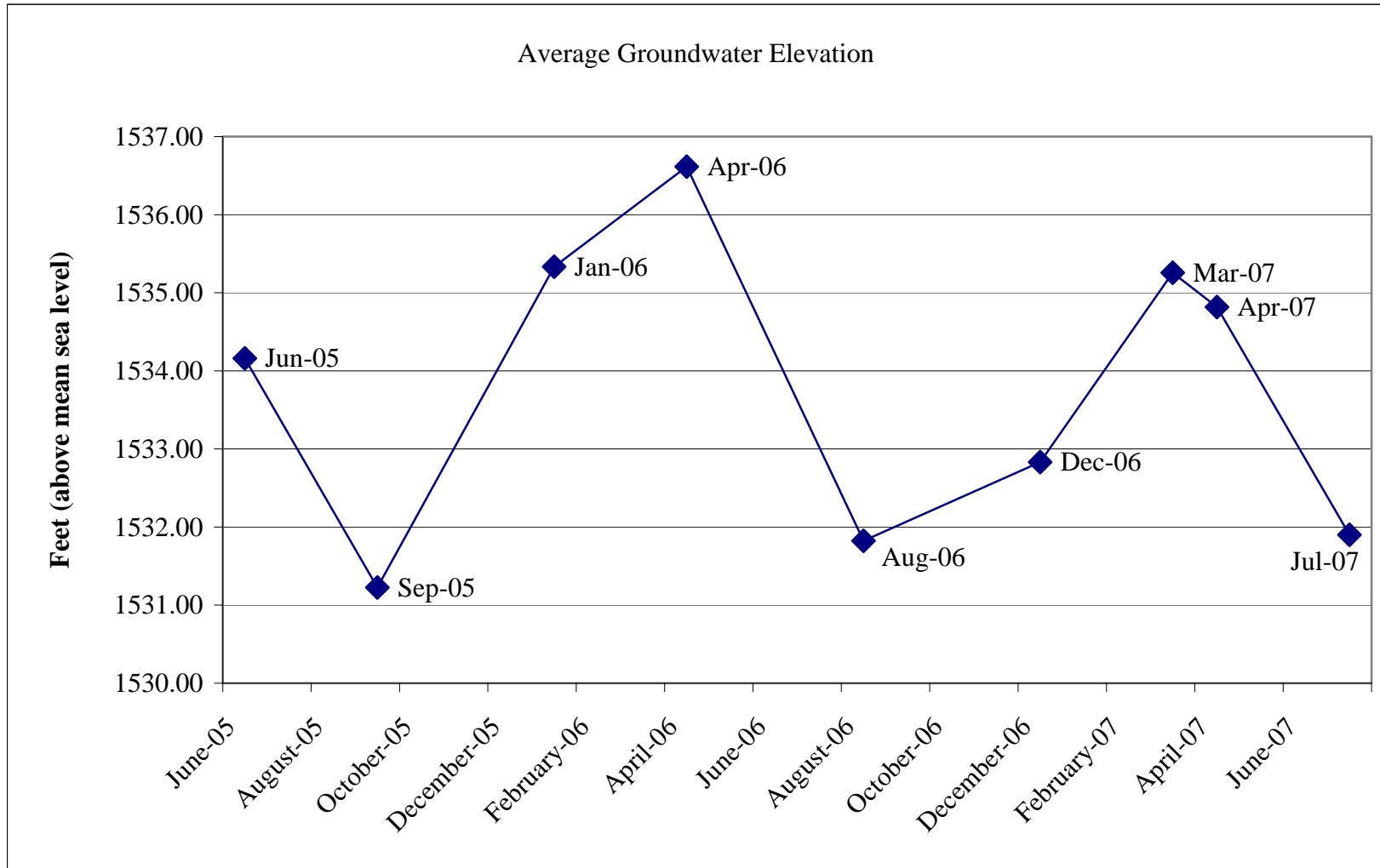
edms-projects\colville post and pole removal\2007_gw_sampling_event\report figure report figure 4-gw dw samp results july-07.mxd

Attachment A
Historic Groundwater Level Data

Attachment A									
Summary of Quarterly Groundwater Elevation Data									
Colville Post and Poles Site									
Colville, Washington									
Groundwater Elevations (feet above mean sea level)									
Monitoring	6/17/05	9/13/05	1/16/06	4/17/06	8/16/06	12/6/06	3/19/07	4/22/07	7/16/07
Feature	June 2005	Sept. 2005	Jan. 2006	April 2006	August 2006	December 2006	March 2007	April 2007	July 2007
MW-1	1534.64	1531.38	1535.56	1536.78	1531.94	1533.67	1535.53	1535.04	1532.07
MW-2	1534.70	1531.53	1535.52	1536.84	1532.02	1533.32	1535.50	1534.97	1532.10
MW-4	1534.67	1531.67	1535.70	1536.81	1532.10	1533.69	1535.68	1535.21	1532.27
W-01	1534.16	1530.92	1535.38	1536.60	1531.77	1532.68	1535.47	1534.96	1532.10
W-02	1534.83	1531.85	1535.98	1536.86	1532.22	1533.72	1535.93	1535.40	1532.42
W-03	1534.34	1531.69	1535.81	1536.89	1532.09	1533.20	1535.74	1535.21	1532.15
W-04	1533.70	1530.78	1535.06	1536.47	1531.43	1532.15	1535.17	1534.65	1531.54
W-05	1533.28	1530.50	1534.43	1535.94	1531.38	1531.85	1534.66	1534.32	1531.60
W-06	1533.31	1530.51	1534.43	1536.07	1531.52	1531.89	1534.79	1534.46	1531.78
W-07	1534.03	1531.41	1535.38	1536.74	1531.84	1532.88	1535.31	1534.77	1531.84
W-08	1534.10	1531.25	1535.41	1536.76	1531.75	1532.88	1535.42	1534.88	1531.84
MW-09	--	--	--	--	--	1534.43	1536.30	1535.86	1532.46
MW-10	--	--	--	--	--	1532.96	1535.51	1535.05	1532.07
MW-11	--	--	--	--	--	1532.67	1535.40	1534.95	1532.05
MW-12	--	--	--	--	--	1532.69	1535.41	1534.94	1532.04
MW-13	--	--	--	--	--	1532.24	1535.13	1534.71	1531.94
MW-14	--	--	--	--	--	1532.00	1534.86	1534.44	1531.60
MW-15	--	--	--	--	--	1532.57	1535.24	1534.69	1531.64
MW-16	--	--	--	--	--	1531.58	1533.96	1533.75	1530.51
MW-17	--	--	--	--	--	1531.63	1534.34	1534.05	1531.39
MW-18	--	--	--	--	--	1531.77	1534.73	1534.38	1531.74
MW-19	--	--	--	--	--	1531.03	1534.08	1534.14	1531.50
DW-05	--	--	--	--	--	Not Measured	1533.73	1533.73	1530.79
DW-09	--	--	--	--	--	1542.50 ⁽¹⁾	1542.78 ⁽¹⁾	1542.39 ⁽¹⁾	1538.86 ⁽¹⁾
RW-01	--	--	--	--	--	1533.48	1535.68	1535.17	1532.14
RW-02	--	--	--	--	--	1533.55	1535.75	1535.19	1532.23
RW-03	--	--	--	--	--	1533.53	1535.75	1534.97	1532.24
RW-04	--	--	--	--	--	1533.53	1535.73	1535.25	1532.20
RW-05	--	--	--	--	--	1533.50	1535.70	1535.22	1532.19
RW-06	--	--	--	--	--	1533.51	1535.72	1535.22	1532.23
SW-01	--	--	--	--	--	1532.05	1533.78	1533.67	NA
SW-02	--	--	--	--	--	1532.04	1535.24	1534.67	NA
SW-03	--	--	--	--	--	1532.36	1535.57	1534.98	NA
SW-04	--	--	--	--	--	1534.79	1535.57	1535.18	NA
SW-05	--	--	--	--	--	No Water	1535.63	1535.02	NA
SW-06	--	--	--	--	--	1533.56	1535.96	1535.53	1532.34
Maximum ⁽¹⁾	1534.83	1531.85	1535.98	1536.89	1532.22	1534.79	1536.30	1535.86	1532.46
Minimum ⁽¹⁾	1533.28	1530.50	1534.43	1535.94	1531.38	1531.03	1533.73	1533.67	1530.51
Average ⁽¹⁾	1534.16	1531.23	1535.33	1536.61	1531.82	1532.83	1535.26	1534.82	1531.90
Difference between Max and Min	1.55	1.35	1.55	0.95	0.84	3.76	2.57	2.19	1.95
Difference in average value from last event	n.a.	-2.93	4.11	1.28	-4.79	1.01	2.43	-0.44	-2.92
Note:	(1) Data from DW-09 is not included in the maximum, minimum, and average calculations because its groundwater elevations are significantly higher than those found on the site.								

Attachment A

Chart of Quarterly Groundwater Elevation Data
Colville Post and Poles Site
Colville, Washington



Attachment B
Analytical Data and Data Validation Memoranda



ecology and environment, inc.

International Specialists in the Environment

720 Third Avenue, Suite 1700, Seattle, WA 98104

Tel: (206) 624-9537, Fax: (206) 621-9832

MEMORANDUM

DATE: August 6, 2007

TO: Steve Hall, Project Manager, E & E, Seattle, Washington

FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, Washington *MW*

SUBJ: **Organic Data Quality Assurance Review, Colville Post and Pole Removal Assessment Site, Colville, Washington**

REF: TDD: 05-12-0003 PAN: 002233.0003.01SF

The data quality assurance review of 36 water samples collected from the Colville Post and Pole Removal Assessment site in Colville, Washington, has been completed. Semivolatile Organic Compounds (SVOCs) analysis (EPA Method 8270C) was performed by STL-Seattle, Tacoma, Washington.

The samples were numbered:

07070101	07070102	07070103	07070104	07070105
07070106	07070107	07070108	07070109	07070110
07070111	07070112	07070113	07070114	07070115
07070116	07070117	07070118	07070119	07070120
07070121	07070122	07070123	07070124	07070125
07070126	07070127	07070128	07070129	07070130
07070131	07070132	07070133	07070134	07070135
07070136				

Data Qualifications:

1. **Sample Holding Times: Acceptable.**

The samples were maintained and received within the QC limits of $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$. The samples were collected on July 17 or 18, 2007, were extracted by July 20, 2007, and were analyzed by July 25, 2007, therefore meeting holding time criteria of less than 7 days between collection and extraction and less than 40 days between extraction and analysis.

2. **Tuning: Acceptable.**

Tuning was performed at the beginning of each 12-hour analysis sequence. All results were within QC limits.

3. Initial Calibration: Satisfactory.

All average Relative Response Factors (RRFs) were greater than the QC limit of 0.050. All Relative Standard Deviations (RSDs) were less than the QC limit of 30% except benzoic acid and 2,4-dinitrophenol in the July 9, 2007 calibration (associated with samples 07070101 through 07070121 [except for sample 07070114] and the dilution for sample 07070119) and the surrogate 2-fluorophenol (no action taken based on this outlier), benzoic acid, and 2-nitroaniline in the July 16, 2007 calibration (associated with all other samples and dilutions). Associated positive results were qualified as estimated quantities (J).

4. Continuing Calibration: Acceptable.

All RRFs were greater than the QC limit of 0.050. All % differences were less than the QC limit of 25% or the outliers did not result in sample qualifications.

5. Blanks: Satisfactory.

A method blank was analyzed for each 20 sample batch per matrix. There were no detections in any method blank except benzoic acid (0.96 µg/L), di-n-butyl phthalate (0.011 µg/L), butyl benzyl phthalate (0.029 µg/L), and bis(2-ethylhexyl)phthalate (0.97 µg/L) in Prep Batch 20823, and bis(2-ethylhexyl)phthalate (0.95 µg/L) in Prep Batch 120828. Associated sample results less than five times the benzoic acid blank result (10 times for the other contaminants) were qualified as not detected (U).

6. System Monitoring Compounds (SMCs): Satisfactory.

All SMC recoveries were within QC limits except terphenyl-d14 (high recoveries in samples 07070101, 07070102, 07070111, and 07070114; no action taken based on one high outlier per sample), phenol-d5 (less than 10% recovery in sample 07070133 and 07070134; positive acid fraction analytes were qualified as estimated quantities [J] and non-detect acid fraction analytes were qualified as estimated quantities [UJ]), 2-fluorophenol (less than 10% recovery) and nitrobenzene (low recovery in sample 07070126; positive analytes were qualified as estimated quantities [J] and non-detect analytes were qualified as estimated quantities [UJ]), 2-fluorophenol (low recovery; no action based on this outlier alone) and phenol and 2,4,6-tribromophenol (0% recoveries in sample 07070132; positive acid fraction analytes were qualified as estimated quantities [J] and non-detect acid fraction analytes were qualified as estimated quantities [UJ]), 2-fluorophenol, phenol-d5, and nitrobenzene (less than 10% recoveries; positive analytes were qualified as estimated quantities [J] and non-detect analytes were qualified as estimated quantities [UJ]) and 2-fluorobiphenyl (low recoveries in samples 07070106, 07070107, 07070110, 07070125, and 07070127; no additional action taken), 2-fluorophenol, phenol-d5, nitrobenzene, and 2-fluorobiphenyl (all less than 10% recoveries in samples 07070108; positive base/neutral fraction analytes were qualified as estimated quantities [J] and non-detect analytes were qualified as estimated quantities [UJ]), 2-fluorobiphenyl and terphenyl-d14 (high recoveries in samples 07070122 and 07070123; positive acid-fraction analytes were qualified as estimated quantities [J]), and 2-fluorophenol, phenol-d5, and nitrobenzene (0% recoveries; positive analytes were qualified as estimated quantities [J] and non-detect analytes were qualified as estimated quantities [UJ]) and 2-fluorobiphenyl (low recoveries in samples 07070129, 07070130, and 07070131; no additional action taken). The laboratory indicated that emulsions and/or matrix effects caused many of the low recoveries listed above.

7. Matrix Spike (MS)/MS Duplicate (MSD)/Blank Spike (BS)/BS Duplicate (BSD) Analysis: Satisfactory.

All spike analyses were performed per SDG or per matrix per concentration level, whichever was more frequent. All BS/BSD recoveries were within the QC limits except the following with low recoveries in batch 20823: 4-chloroaniline and carbazole; and the following with low recoveries in batch 20828: 3-nitroaniline, n-nitrosodiphenylamine. Positive results and sample quantitation limits in the associated samples (batch 20823 = samples 07070101 through 07070121 [except for sample 07070114] and batch 20828 = samples 07070114 and 07070122 through 07070136) were qualified as estimated quantities (J or UJ, respectively).

All MS/MSD recoveries were within the QC limits except the following in sample 07070111: low recoveries - isophorone, 2,4-dichlorophenol, 4-chloroaniline, 2,4-dinitrophenol, dibenzofuran, 2,4-dinitrotoluene, 4-chlorophenyl phenylether, fluorene, 4,6-dinitro-2-methylphenol, carbazole (0% recovery), and 1-methylnaphthalene and the following with high recoveries: 2-methylnaphthalene, hexachlorocyclopentadiene, 2-chloronaphthalene, acenaphthylene, 2,6-dinitrotoluene, acenaphthene, n-nitrosodiphenylamine, 4-bromophenyl phenylether, hexachlorobenzene, phenanthrene, anthracene, di-n-butyl phthalate, fluoranthene, pyrene, butyl benzyl phthalate, 3,3'-dichlorobenzidine, benzo(a)anthracene, chrysene, bis(2-ethylhexyl)phthalate, di-n-octyl phthalate, benzofluoranthene, benzo(a)pyrene, indeno(1,2,3-cd)pyrene, dibenz(a,h)anthracene, and benzo(g,h,i)perylene; and the following with low recoveries in sample 07070114: di-n-butylphthalate and butyl benzyl phthalate. Results in the associated spiked samples were qualified as follows: high recoveries-J for positive results; low recoveries-J for positive results and UJ for non-detects; 0% recoveries-J for positive results and R for non-detects.

8. Duplicate Analysis: Satisfactory.

Spike duplicate analysis was performed per SDG or per matrix per concentration level, whichever was more frequent. Spike duplicate outliers previously qualified due to spike recovery outliers are not discussed here as no additional qualifiers were added. The following MS duplicate results exceeded QC limits and were qualified J or UJ based on duplicate outliers: sample 07070111-benzyl alcohol and hexachlorobutadiene; sample 07070114-2,4-dinitrophenol. There were several other spike duplicate outliers, however, no additional qualifiers were applied based on duplicate outliers as they were already qualified based on spike results.

9. Internal Standards: Satisfactory.

All internal standards (IS) were within ± 30 seconds of the continuing calibration IS retention times. All area counts were within 50 % to 200 % of the continuing calibration area counts except chrysene with a low recovery in samples 07070124 and 07070130 and chrysene and perylene with low recoveries in sample 07070129. Positive sample results associated with low recoveries were qualified as estimated quantities (J) and non-detects were qualified as estimated quantities (UJ).

10. Precision and Bias Determination: Not Performed.

Samples necessary to determine precision and bias were not provided to the laboratory. All results were flagged "PND" (Precision Not Determined) and "RND" (Recovery Not Determined), although the flags do not appear on the data sheets.

11. Performance Evaluation Sample Analysis: Not Provided.

Performance evaluation samples were not provided to the laboratory.

12. Overall Assessment of Data for Use

The overall usefulness of the data is based on the criteria outlined in the OSWER Guidance Document "Quality Assurance/Quality Control Guidance for Removal Activities, Sampling QA/QC Plan, and Data Validation Procedures" (EPA/540/G-90/004), the analytical method, and, when applicable, the Office of Emergency and Remedial Response Publication "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review". Based upon the information provided, the data are acceptable for use with the above stated data qualifications.

Data Qualifiers and Definitions

- J - The associated numerical value is an estimated quantity because the reported concentrations were less than the sample quantitation limits or because quality control criteria limits were not met.
- U - The material was analyzed for but was not detected. The associated numerical value is the sample quantitation limit.
- UJ - The material was analyzed for but was not detected. The associated numerical value is the estimated sample quantitation limit.

Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070101

Lab Sample ID: 580-6583-1

Client Matrix: Water

Date Sampled: 07/17/2007 0000

Date Received: 07/19/2007 1510

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method: 8270C Analysis Batch: 580-20992 Instrument ID: SEA040
Preparation: 3510C Prep Batch: 580-20823 Lab File ID: ak010375.D
Dilution: 1.0 Initial Weight/Volume: 1000 mL
Date Analyzed: 07/22/2007 1215 Final Weight/Volume: 1 mL
Date Prepared: 07/20/2007 0932 Injection Volume:

Analyte	Result (ug/L)	Qualifier	MDL	RL
Phenol	ND		0.0074	0.30
Bis(2-chloroethyl)ether	ND		0.018	0.20
2-Chlorophenol	ND		0.022	0.20
1,3-Dichlorobenzene	ND		0.011	0.20
1,4-Dichlorobenzene	ND		0.012	0.20
Benzyl alcohol	ND		0.013	0.20
1,2-Dichlorobenzene	ND		0.011	0.20
2-Methylphenol	ND		0.038	0.20
Bis(2-chloroisopropyl) ether	ND		0.0088	0.20
3 & 4 Methylphenol	ND		0.017	0.40
N-Nitrosodi-n-propylamine	ND		0.020	0.20
Hexachloroethane	ND		0.013	0.30
Nitrobenzene	ND		0.0075	0.20
Isophorone	ND		0.011	0.20
2-Nitrophenol	ND		0.021	0.20
2,4-Dimethylphenol	ND		0.018	1.0
Benzoic acid	ND		0.021	1.0
Bis(2-chloroethoxy)methane	ND		0.0095	0.20
2,4-Dichlorophenol	ND		0.013	0.20
1,2,4-Trichlorobenzene	ND		0.010	0.20
Naphthalene	ND		0.0014	0.20
4-Chloroaniline	ND		0.019	0.20
Hexachlorobutadiene	ND		0.016	0.30
4-Chloro-3-methylphenol	ND		0.014	0.20
2-Methylnaphthalene	ND		0.0055	0.10
Hexachlorocyclopentadiene	ND		0.012	1.0
2,4,6-Trichlorophenol	ND		0.010	0.30
2,4,5-Trichlorophenol	ND		0.0085	0.20
2-Chloronaphthalene	ND		0.0030	0.030
2-Nitroaniline	ND		0.011	0.20
Dimethyl phthalate	ND		0.012	0.20
Acenaphthylene	ND		0.0026	0.040
2,6-Dinitrotoluene	ND		0.014	0.20
3-Nitroaniline	ND		0.056	0.20
Acenaphthene	ND		0.0012	0.050
2,4-Dinitrophenol	ND		0.058	2.5
4-Nitrophenol	ND		0.16	1.0
Dibenzofuran	ND		0.0098	0.20
2,4-Dinitrotoluene	ND		0.012	0.20
Diethyl phthalate	0.021	J	0.0093	0.20
4-Chlorophenyl phenyl ether	ND		0.012	0.20
Fluorene	ND		0.0042	0.030
4-Nitroaniline	ND		0.018	0.30
4,6-Dinitro-2-methylphenol	ND		0.053	2.0

MW 8607

Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070101

Lab Sample ID: 580-6583-1
 Client Matrix: Water

Date Sampled: 07/17/2007 0000
 Date Received: 07/19/2007 1510

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method: 8270C Analysis Batch: 580-20992 Instrument ID: SEA040
 Preparation: 3510C Prep Batch: 580-20823 Lab File ID: ak010375.D
 Dilution: 1.0 Initial Weight/Volume: 1000 mL
 Date Analyzed: 07/22/2007 1215 Final Weight/Volume: 1 mL
 Date Prepared: 07/20/2007 0932 Injection Volume:

Analyte	Result (ug/L)	Qualifier	MDL	RL
N-Nitrosodiphenylamine	ND		0.013	0.20
4-Bromophenyl phenyl ether	ND		0.010	0.20
Hexachlorobenzene	ND		0.0082	0.20
Pentachlorophenol	ND		0.013	0.35
Phenanthrene	0.015	J	0.0024	0.040
Anthracene	0.0023	J	0.0019	0.020
Di-n-butyl phthalate	0.19	J <i>EW</i>	0.0088	0.20
Fluoranthene	0.0058	J	0.0027	0.025
Pyrene	0.0041	J	0.0020	0.030
Butyl benzyl phthalate	0.28	J <i>EW</i>	0.024	0.30
3,3'-Dichlorobenzidine	ND		0.16	1.0
Benzo[a]anthracene	0.010	J	0.0033	0.030
Chrysene	0.0087	J	0.0045	0.020
Bis(2-ethylhexyl) phthalate	0.45	J <i>EW</i>	0.032	1.5
Di-n-octyl phthalate	ND		0.018	0.20
Benzo[fluoranthene	0.060		0.0055	0.040
Benzo[a]pyrene	0.025		0.0027	0.020
Indeno[1,2,3-cd]pyrene	0.013	J	0.0051	0.030
Dibenz(a,h)anthracene	0.017	J	0.0046	0.030
Benzo[g,h,i]perylene	0.0090	J	0.0060	0.030
Carbazole	ND	<i>EW</i>	0.0090	0.20
1-Methylnaphthalene	ND		0.0052	0.030

Surrogate	%Rec	Acceptance Limits
2-Fluorophenol	30	10 - 120
Phenol-d5	23	10 - 102
Nitrobenzene-d5	86	34 - 146
2-Fluorobiphenyl	114	35 - 143
2,4,6-Tribromophenol	71	29 - 151
Terphenyl-d14	573	35 - 166

MW 867

Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070102

Lab Sample ID: 580-6583-2

Date Sampled: 07/17/2007 0000

Client Matrix: Water

Date Received: 07/19/2007 1510

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 580-20992	Instrument ID: SEA040
Preparation:	3510C	Prep Batch: 580-20823	Lab File ID: ak010376.D
Dilution:	1.0		Initial Weight/Volume: 1000 mL
Date Analyzed:	07/22/2007 1242		Final Weight/Volume: 1 mL
Date Prepared:	07/20/2007 0932		Injection Volume:

Analyte	Result (ug/L)	Qualifier	MDL	RL
Phenol	ND		0.0074	0.30
Bis(2-chloroethyl)ether	ND		0.018	0.20
2-Chlorophenol	ND		0.022	0.20
1,3-Dichlorobenzene	ND		0.011	0.20
1,4-Dichlorobenzene	ND		0.012	0.20
Benzyl alcohol	ND		0.013	0.20
1,2-Dichlorobenzene	ND		0.011	0.20
2-Methylphenol	ND		0.038	0.20
Bis(2-chloroisopropyl) ether	ND		0.0088	0.20
3 & 4 Methylphenol	ND		0.017	0.40
N-Nitrosodi-n-propylamine	ND		0.020	0.20
Hexachloroethane	ND		0.013	0.30
Nitrobenzene	ND		0.0075	0.20
Isophorone	ND		0.011	0.20
2-Nitrophenol	ND		0.021	0.20
2,4-Dimethylphenol	ND		0.018	1.0
Benzoic acid	ND		0.021	1.0
Bis(2-chloroethoxy)methane	ND		0.0095	0.20
2,4-Dichlorophenol	ND		0.013	0.20
1,2,4-Trichlorobenzene	ND		0.010	0.20
Naphthalene	ND		0.0014	0.20
4-Chloroaniline	ND	<i>Handwritten mark</i>	0.019	0.20
Hexachlorobutadiene	ND		0.016	0.30
4-Chloro-3-methylphenol	ND		0.014	0.20
2-Methylnaphthalene	ND		0.0055	0.10
Hexachlorocyclopentadiene	ND		0.012	1.0
2,4,6-Trichlorophenol	ND		0.010	0.30
2,4,5-Trichlorophenol	ND		0.0085	0.20
2-Chloronaphthalene	ND		0.0030	0.030
2-Nitroaniline	ND		0.011	0.20
Dimethyl phthalate	ND		0.012	0.20
Acenaphthylene	ND		0.0026	0.040
2,6-Dinitrotoluene	ND		0.014	0.20
3-Nitroaniline	ND		0.056	0.20
Acenaphthene	ND		0.0012	0.050
2,4-Dinitrophenol	ND		0.058	2.5
4-Nitrophenol	ND		0.16	1.0
Dibenzofuran	ND		0.0098	0.20
2,4-Dinitrotoluene	ND		0.012	0.20
Diethyl phthalate	0.013	J	0.0093	0.20
4-Chlorophenyl phenyl ether	ND		0.012	0.20
Fluorene	ND		0.0042	0.030
4-Nitroaniline	ND		0.018	0.30
4,6-Dinitro-2-methylphenol	ND		0.053	2.0

Handwritten signature

Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070102

Lab Sample ID: 580-6583-2
Client Matrix: Water

Date Sampled: 07/17/2007 0000
Date Received: 07/19/2007 1510

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 580-20992	Instrument ID: SEA040
Preparation:	3510C	Prep Batch: 580-20823	Lab File ID: ak010376.D
Dilution:	1.0		Initial Weight/Volume: 1000 mL
Date Analyzed:	07/22/2007 1242		Final Weight/Volume: 1 mL
Date Prepared:	07/20/2007 0932		Injection Volume:

Analyte	Result (ug/L)	Qualifier	MDL	RL
N-Nitrosodiphenylamine	ND		0.013	0.20
4-Bromophenyl phenyl ether	ND		0.010	0.20
Hexachlorobenzene	ND		0.0082	0.20
Pentachlorophenol	ND		0.013	0.35
Phenanthrene	ND		0.0024	0.040
Anthracene	ND		0.0019	0.020
Di-n-butyl phthalate	0.14	JFW	0.0088	0.20
Fluoranthene	ND		0.0027	0.025
Pyrene	ND		0.0020	0.030
Butyl benzyl phthalate	0.31	JFW	0.024	0.30
3,3'-Dichlorobenzidine	ND		0.16	1.0
Benzo[a]anthracene	ND		0.0033	0.030
Chrysene	ND		0.0045	0.020
Bis(2-ethylhexyl) phthalate	0.29	JFW	0.032	1.5
Di-n-octyl phthalate	0.035	JFW	0.018	0.20
Benzofluoranthene	ND		0.0055	0.040
Benzo[a]pyrene	ND		0.0027	0.020
Indeno[1,2,3-cd]pyrene	ND		0.0051	0.030
Dibenz(a,h)anthracene	ND		0.0046	0.030
Benzo[g,h,i]perylene	ND		0.0060	0.030
Carbazole	ND	JFW	0.0090	0.20
1-Methylnaphthalene	ND		0.0052	0.030

Surrogate	%Rec	Acceptance Limits
2-Fluorophenol	33	10 - 120
Phenol-d5	21	10 - 102
Nitrobenzene-d5	90	34 - 146
2-Fluorobiphenyl	110	35 - 143
2,4,6-Tribromophenol	74	29 - 151
Terphenyl-d14	667	35 - 166

MW & JFW

Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070103

Lab Sample ID: 580-6583-3

Date Sampled: 07/17/2007 0000

Client Matrix: Water

Date Received: 07/19/2007 1510

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 580-20992	Instrument ID: SEA040
Preparation:	3510C	Prep Batch: 580-20823	Lab File ID: ak010377.D
Dilution:	1.0		Initial Weight/Volume: 1000 mL
Date Analyzed:	07/22/2007 1309		Final Weight/Volume: 1 mL
Date Prepared:	07/20/2007 0932		Injection Volume:

Analyte	Result (ug/L)	Qualifier	MDL	RL
Phenol	ND		0.0074	0.30
Bis(2-chloroethyl)ether	ND		0.018	0.20
2-Chlorophenol	ND		0.022	0.20
1,3-Dichlorobenzene	ND		0.011	0.20
1,4-Dichlorobenzene	ND		0.012	0.20
Benzyl alcohol	ND		0.013	0.20
1,2-Dichlorobenzene	ND		0.011	0.20
2-Methylphenol	ND		0.038	0.20
Bis(2-chloroisopropyl) ether	ND		0.0088	0.20
3 & 4 Methylphenol	ND		0.017	0.40
N-Nitrosodi-n-propylamine	ND		0.020	0.20
Hexachloroethane	ND		0.013	0.30
Nitrobenzene	ND		0.0075	0.20
isophorone	ND		0.011	0.20
2-Nitrophenol	ND		0.021	0.20
2,4-Dimethylphenol	ND		0.018	1.0
Benzoic acid	ND		0.021	1.0
Bis(2-chloroethoxy)methane	ND		0.0095	0.20
2,4-Dichlorophenol	ND		0.013	0.20
1,2,4-Trichlorobenzene	ND		0.010	0.20
Naphthalene	ND		0.0014	0.20
4-Chloroaniline	ND		0.019	0.20
Hexachlorobutadiene	ND		0.016	0.30
4-Chloro-3-methylphenol	ND		0.014	0.20
2-Methylnaphthalene	ND		0.0055	0.10
Hexachlorocyclopentadiene	ND		0.012	1.0
2,4,6-Trichlorophenol	ND		0.010	0.30
2,4,5-Trichlorophenol	ND		0.0085	0.20
2-Chloronaphthalene	ND		0.0030	0.030
2-Nitroaniline	ND		0.011	0.20
Dimethyl phthalate	ND		0.012	0.20
Acenaphthylene	ND		0.0026	0.040
2,6-Dinitrotoluene	ND		0.014	0.20
3-Nitroaniline	ND		0.056	0.20
Acenaphthene	ND		0.0012	0.050
2,4-Dinitrophenol	ND		0.058	2.5
4-Nitrophenol	ND		0.16	1.0
Dibenzofuran	ND		0.0098	0.20
2,4-Dinitrotoluene	ND		0.012	0.20
Diethyl phthalate	0.013	J	0.0093	0.20
4-Chlorophenyl phenyl ether	ND		0.012	0.20
Fluorene	ND		0.0042	0.030
4-Nitroaniline	ND		0.018	0.30
4,6-Dinitro-2-methylphenol	ND		0.053	2.0

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Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070103

Lab Sample ID: 580-6583-3
 Client Matrix: Water

Date Sampled: 07/17/2007 0000
 Date Received: 07/19/2007 1510

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 580-20992	Instrument ID: SEA040
Preparation:	3510C	Prep Batch: 580-20823	Lab File ID: ak010377.D
Dilution:	1.0		Initial Weight/Volume: 1000 mL
Date Analyzed:	07/22/2007 1309		Final Weight/Volume: 1 mL
Date Prepared:	07/20/2007 0932		Injection Volume:

Analyte	Result (ug/L)	Qualifier	MDL	RL
N-Nitrosodiphenylamine	ND		0.013	0.20
4-Bromophenyl phenyl ether	ND		0.010	0.20
Hexachlorobenzene	ND		0.0082	0.20
Pentachlorophenol	ND		0.013	0.35
Phenanthrene	ND		0.0024	0.040
Anthracene	ND		0.0019	0.020
Di-n-butyl phthalate	0.040	JFW	0.0088	0.20
Fluoranthene	ND		0.0027	0.025
Pyrene	ND		0.0020	0.030
Butyl benzyl phthalate	0.001	JFW	0.024	0.30
3,3'-Dichlorobenzidine	ND		0.16	1.0
Benzo[a]anthracene	ND		0.0033	0.030
Chrysene	ND		0.0045	0.020
Bis(2-ethylhexyl) phthalate	0.37	JFW	0.032	1.5
Di-n-octyl phthalate	ND		0.018	0.20
Benzofluoranthene	ND		0.0055	0.040
Benzo[a]pyrene	ND		0.0027	0.020
Indeno[1,2,3-cd]pyrene	ND		0.0051	0.030
Dibenz(a,h)anthracene	ND		0.0046	0.030
Benzo[g,h,i]perylene	ND		0.0060	0.030
Carbazole	ND	JFW	0.0090	0.20
1-Methylnaphthalene	ND		0.0052	0.030

Surrogate	%Rec	Acceptance Limits
2-Fluorophenol	35	10 - 120
Phenol-d5	24	10 - 102
Nitrobenzene-d5	97	34 - 146
2-Fluorobiphenyl	86	35 - 143
2,4,6-Tribromophenol	75	29 - 151
Terphenyl-d14	99	35 - 166

JFW
8-6-07

Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070104

Lab Sample ID: 580-6583-4

Date Sampled: 07/17/2007 0000

Client Matrix: Water

Date Received: 07/19/2007 1510

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 580-20992	Instrument ID: SEA040
Preparation:	3510C	Prep Batch: 580-20823	Lab File ID: ak010378.D
Dilution:	1.0		Initial Weight/Volume: 1000 mL
Date Analyzed:	07/22/2007 1336		Final Weight/Volume: 1 mL
Date Prepared:	07/20/2007 0932		Injection Volume:

Analyte	Result (ug/L)	Qualifier	MDL	RL
Phenol	ND		0.0074	0.30
Bis(2-chloroethyl)ether	ND		0.018	0.20
2-Chlorophenol	ND		0.022	0.20
1,3-Dichlorobenzene	ND		0.011	0.20
1,4-Dichlorobenzene	ND		0.012	0.20
Benzyl alcohol	ND		0.013	0.20
1,2-Dichlorobenzene	ND		0.011	0.20
2-Methylphenol	ND		0.038	0.20
Bis(2-chloroisopropyl) ether	ND		0.0088	0.20
3 & 4 Methylphenol	ND		0.017	0.40
N-Nitrosodi-n-propylamine	ND		0.020	0.20
Hexachloroethane	ND		0.013	0.30
Nitrobenzene	ND		0.0075	0.20
Isophorone	ND		0.011	0.20
2-Nitrophenol	ND		0.021	0.20
2,4-Dimethylphenol	ND		0.018	1.0
Benzoic acid	ND		0.021	1.0
Bis(2-chloroethoxy)methane	ND		0.0095	0.20
2,4-Dichlorophenol	ND		0.013	0.20
1,2,4-Trichlorobenzene	ND		0.010	0.20
Naphthalene	ND		0.0014	0.20
4-Chloroaniline	ND	<i>Am</i>	0.019	0.20
Hexachlorobutadiene	ND		0.016	0.30
4-Chloro-3-methylphenol	ND		0.014	0.20
2-Methylnaphthalene	ND		0.0055	0.10
Hexachlorocyclopentadiene	ND		0.012	1.0
2,4,6-Trichlorophenol	ND		0.010	0.30
2,4,5-Trichlorophenol	ND		0.0085	0.20
2-Chloronaphthalene	ND		0.0030	0.030
2-Nitroaniline	ND		0.011	0.20
Dimethyl phthalate	ND		0.012	0.20
Acenaphthylene	ND		0.0026	0.040
2,6-Dinitrotoluene	ND		0.014	0.20
3-Nitroaniline	ND		0.056	0.20
Acenaphthene	ND		0.0012	0.050
2,4-Dinitrophenol	ND		0.058	2.5
4-Nitrophenol	ND		0.16	1.0
Dibenzofuran	ND		0.0098	0.20
2,4-Dinitrotoluene	ND		0.012	0.20
Diethyl phthalate	ND		0.0093	0.20
4-Chlorophenyl phenyl ether	ND		0.012	0.20
Fluorene	ND		0.0042	0.030
4-Nitroaniline	ND		0.018	0.30
4,6-Dinitro-2-methylphenol	ND		0.053	2.0

MWS 6/07

Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070104

Lab Sample ID: 580-6583-4
 Client Matrix: Water

Date Sampled: 07/17/2007 0000
 Date Received: 07/19/2007 1510

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method: 8270C Analysis Batch: 580-20992 Instrument ID: SEA040
 Preparation: 3510C Prep Batch: 580-20823 Lab File ID: ak010378.D
 Dilution: 1.0 Initial Weight/Volume: 1000 mL
 Date Analyzed: 07/22/2007 1336 Final Weight/Volume: 1 mL
 Date Prepared: 07/20/2007 0932 Injection Volume:

Analyte	Result (ug/L)	Qualifier	MDL	RL
N-Nitrosodiphenylamine	ND		0.013	0.20
4-Bromophenyl phenyl ether	ND		0.010	0.20
Hexachlorobenzene	ND		0.0082	0.20
Pentachlorophenol	ND		0.013	0.35
Phenanthrene	ND		0.0024	0.040
Anthracene	ND		0.0019	0.020
Di-n-butyl phthalate	0.037	JBM	0.0088	0.20
Fluoranthene	ND		0.0027	0.025
Pyrene	ND		0.0020	0.030
Butyl benzyl phthalate	0.049	JBM	0.024	0.30
3,3'-Dichlorobenzidine	ND		0.16	1.0
Benzo[a]anthracene	ND		0.0033	0.030
Chrysene	ND		0.0045	0.020
Bis(2-ethylhexyl) phthalate	0.63	JBM	0.032	1.5
Di-n-octyl phthalate	ND		0.018	0.20
Benzofluoranthene	ND		0.0055	0.040
Benzo[a]pyrene	ND		0.0027	0.020
Indeno[1,2,3-cd]pyrene	ND		0.0051	0.030
Dibenz(a,h)anthracene	ND		0.0046	0.030
Benzo[g,h,i]perylene	ND		0.0060	0.030
Carbazole	ND	JM	0.0090	0.20
1-Methylnaphthalene	ND		0.0052	0.030

Surrogate	%Rec	Acceptance Limits
2-Fluorophenol	35	10 - 120
Phenol-d5	26	10 - 102
Nitrobenzene-d5	95	34 - 146
2-Fluorobiphenyl	85	35 - 143
2,4,6-Tribromophenol	69	29 - 151
Terphenyl-d14	110	35 - 166

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8607

Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070105

Lab Sample ID: 580-6583-5

Date Sampled: 07/17/2007 0000

Client Matrix: Water

Date Received: 07/19/2007 1510

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 580-20992	Instrument ID: SEA040
Preparation:	3510C	Prep Batch: 580-20823	Lab File ID: ak010379.D
Dilution:	1.0		Initial Weight/Volume: 1000 mL
Date Analyzed:	07/22/2007 1404		Final Weight/Volume: 1 mL
Date Prepared:	07/20/2007 0932		Injection Volume:

Analyte	Result (ug/L)	Qualifier	MDL	RL
Phenol	ND		0.0074	0.30
Bis(2-chloroethyl)ether	ND		0.018	0.20
2-Chlorophenol	ND		0.022	0.20
1,3-Dichlorobenzene	ND		0.011	0.20
1,4-Dichlorobenzene	ND		0.012	0.20
Benzyl alcohol	ND		0.013	0.20
1,2-Dichlorobenzene	ND		0.011	0.20
2-Methylphenol	ND		0.038	0.20
Bis(2-chloroisopropyl) ether	ND		0.0088	0.20
3 & 4 Methylphenol	ND		0.017	0.40
N-Nitrosodi-n-propylamine	ND		0.020	0.20
Hexachloroethane	ND		0.013	0.30
Nitrobenzene	ND		0.0075	0.20
Isophorone	ND		0.011	0.20
2-Nitrophenol	ND		0.021	0.20
2,4-Dimethylphenol	ND		0.018	1.0
Benzoic acid	ND		0.021	1.0
Bis(2-chloroethoxy)methane	ND		0.0095	0.20
2,4-Dichlorophenol	ND		0.013	0.20
1,2,4-Trichlorobenzene	ND		0.010	0.20
Naphthalene	ND		0.0014	0.20
4-Chloroaniline	ND	*	0.019	0.20
Hexachlorobutadiene	ND		0.016	0.30
4-Chloro-3-methylphenol	ND		0.014	0.20
2-Methylnaphthalene	ND		0.0055	0.10
Hexachlorocyclopentadiene	ND		0.012	1.0
2,4,6-Trichlorophenol	ND		0.010	0.30
2,4,5-Trichlorophenol	ND		0.0085	0.20
2-Chloronaphthalene	ND		0.0030	0.030
2-Nitroaniline	ND		0.011	0.20
Dimethyl phthalate	ND		0.012	0.20
Acenaphthylene	ND		0.0026	0.040
2,6-Dinitrotoluene	ND		0.014	0.20
3-Nitroaniline	ND		0.056	0.20
Acenaphthene	ND		0.0012	0.050
2,4-Dinitrophenol	ND		0.058	2.5
4-Nitrophenol	ND		0.16	1.0
Dibenzofuran	ND		0.0098	0.20
2,4-Dinitrotoluene	ND		0.012	0.20
Diethyl phthalate	0.010	J	0.0093	0.20
4-Chlorophenyl phenyl ether	ND		0.012	0.20
Fluorene	ND		0.0042	0.030
4-Nitroaniline	ND		0.018	0.30
4,6-Dinitro-2-methylphenol	ND		0.053	2.0

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MVG 607

Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070105

Lab Sample ID: 580-6583-5

Date Sampled: 07/17/2007 0000

Client Matrix: Water

Date Received: 07/19/2007 1510

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 580-20992	Instrument ID: SEA040
Preparation:	3510C	Prep Batch: 580-20823	Lab File ID: ak010379.D
Dilution:	1.0		Initial Weight/Volume: 1000 mL
Date Analyzed:	07/22/2007 1404		Final Weight/Volume: 1 mL
Date Prepared:	07/20/2007 0932		Injection Volume:

Analyte	Result (ug/L)	Qualifier	MDL	RL
N-Nitrosodiphenylamine	ND		0.013	0.20
4-Bromophenyl phenyl ether	ND		0.010	0.20
Hexachlorobenzene	ND		0.0082	0.20
Pentachlorophenol	ND		0.013	0.35
Phenanthrene	ND		0.0024	0.040
Anthracene	ND		0.0019	0.020
Di-n-butyl phthalate	0.028	JEM	0.0088	0.20
Fluoranthene	ND		0.0027	0.025
Pyrene	ND		0.0020	0.030
Butyl benzyl phthalate	0.042	JEM	0.024	0.30
3,3'-Dichlorobenzidine	ND		0.16	1.0
Benzo[a]anthracene	ND		0.0033	0.030
Chrysene	ND		0.0045	0.020
Bis(2-ethylhexyl) phthalate	0.34	JEM	0.032	1.5
Di-n-octyl phthalate	ND		0.018	0.20
Benzo[fluoranthene]	ND		0.0055	0.040
Benzo[a]pyrene	ND		0.0027	0.020
Indeno[1,2,3-cd]pyrene	ND		0.0051	0.030
Dibenz(a,h)anthracene	ND		0.0046	0.030
Benzo[g,h,i]perylene	ND		0.0060	0.030
Carbazole	ND	Am	0.0090	0.20
1-Methylnaphthalene	ND		0.0052	0.030

Surrogate	%Rec	Acceptance Limits
2-Fluorophenol	43	10 - 120
Phenol-d5	31	10 - 102
Nitrobenzene-d5	101	34 - 146
2-Fluorobiphenyl	89	35 - 143
2,4,6-Tribromophenol	77	29 - 151
Terphenyl-d14	106	35 - 166

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8/6/07

Analytical Data

Job Number: 580-6583-1

Client: Environmental Quality Mgt., Inc.

Client Sample ID: 07070106

Lab Sample ID: 580-6583-6

Client Matrix: Water

Date Sampled: 07/17/2007 0000

Date Received: 07/19/2007 1510

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method: 8270C
Preparation: 3510C
Dilution: 1.0
Date Analyzed: 07/22/2007 1431
Date Prepared: 07/20/2007 0932

Analysis Batch: 580-20992
Prep Batch: 580-20823

Instrument ID: SEA040
Lab File ID: ak010380.D
Initial Weight/Volume: 1000 mL
Final Weight/Volume: 1 mL
Injection Volume:

Analyte	Result (ug/L)	Qualifier	MDL	RL
Phenol	ND		0.0074	0.30
Bis(2-chloroethyl)ether	ND		0.018	0.20
2-Chlorophenol	ND		0.022	0.20
1,3-Dichlorobenzene	ND		0.011	0.20
1,4-Dichlorobenzene	ND		0.012	0.20
Benzyl alcohol	ND		0.013	0.20
1,2-Dichlorobenzene	ND		0.011	0.20
2-Methylphenol	ND		0.038	0.20
Bis(2-chloroisopropyl) ether	ND		0.0088	0.20
3 & 4 Methylphenol	ND		0.017	0.40
N-Nitrosodi-n-propylamine	ND		0.020	0.20
Hexachloroethane	ND		0.013	0.30
Nitrobenzene	ND		0.0075	0.20
Isophorone	ND		0.011	0.20
2-Nitrophenol	ND		0.021	0.20
2,4-Dimethylphenol	ND		0.018	1.0
Benzoic acid	ND		0.021	1.0
Bis(2-chloroethoxy)methane	ND		0.0095	0.20
2,4-Dichlorophenol	ND		0.013	0.20
1,2,4-Trichlorobenzene	ND		0.010	0.20
Naphthalene	ND	*	0.0014	0.20
4-Chloroaniline	ND		0.019	0.20
Hexachlorobutadiene	ND		0.016	0.30
4-Chloro-3-methylphenol	ND		0.014	0.20
2-Methylnaphthalene	ND		0.0055	0.10
Hexachlorocyclopentadiene	ND		0.012	1.0
2,4,6-Trichlorophenol	ND		0.010	0.30
2,4,5-Trichlorophenol	ND		0.0085	0.20
2-Chloronaphthalene	ND		0.0030	0.030
2-Nitroaniline	ND		0.011	0.20
Dimethyl phthalate	ND		0.012	0.20
Acenaphthylene	ND		0.0026	0.040
2,6-Dinitrotoluene	ND		0.014	0.20
3-Nitroaniline	ND		0.056	0.20
Acenaphthene	ND		0.0012	0.050
2,4-Dinitrophenol	ND		0.058	2.5
4-Nitrophenol	ND		0.16	1.0
Dibenzofuran	ND		0.0098	0.20
2,4-Dinitrotoluene	ND		0.012	0.20
Diethyl phthalate	ND		0.0093	0.20
4-Chlorophenyl phenyl ether	ND		0.012	0.20
Fluorene	ND		0.0042	0.030
4-Nitroaniline	ND		0.018	0.30
4,6-Dinitro-2-methylphenol	ND		0.053	2.0

MW JGA

Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070106

Lab Sample ID: 580-6583-6
Client Matrix: Water

Date Sampled: 07/17/2007 0000
Date Received: 07/19/2007 1510

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method: 8270C Analysis Batch: 580-20992 Instrument ID: SEA040
Preparation: 3510C Prep Batch: 580-20823 Lab File ID: ak010380.D
Dilution: 1.0 Initial Weight/Volume: 1000 mL
Date Analyzed: 07/22/2007 1431 Final Weight/Volume: 1 mL
Date Prepared: 07/20/2007 0932 Injection Volume:

Analyte	Result (ug/L)	Qualifier	MDL	RL
N-Nitrosodiphenylamine	ND		0.013	0.20
4-Bromophenyl phenyl ether	ND		0.010	0.20
Hexachlorobenzene	ND		0.0082	0.20
Pentachlorophenol	ND		0.013	0.35
Phenanthrene	ND		0.0024	0.040
Anthracene	ND		0.0019	0.020
Di-n-butyl phthalate	0.043	JB	0.0088	0.20
Fluoranthene	ND		0.0027	0.025
Pyrene	ND		0.0020	0.030
Butyl benzyl phthalate	0.051	JB	0.024	0.30
3,3'-Dichlorobenzidine	ND		0.16	1.0
Benzo[a]anthracene	ND		0.0033	0.030
Chrysene	ND		0.0045	0.020
Bis(2-ethylhexyl) phthalate	0.26	JB	0.032	1.5
Di-n-octyl phthalate	ND		0.018	0.20
Benzofluoranthene	ND		0.0055	0.040
Benzo[a]pyrene	ND		0.0027	0.020
Indeno[1,2,3-cd]pyrene	ND		0.0051	0.030
Dibenz(a,h)anthracene	ND		0.0046	0.030
Benzo[g,h,i]perylene	ND		0.0060	0.030
Carbazole	ND	*	0.0090	0.20
1-Methylnaphthalene	ND		0.0052	0.030
Surrogate	%Rec		Acceptance Limits	
2-Fluorophenol	0	XI	10 - 120	
Phenol-d5	3	XI	10 - 102	
Nitrobenzene-d5	2	XI	34 - 146	
2-Fluorobiphenyl	19	XI	35 - 143	
2,4,6-Tribromophenol	66		29 - 151	
Terphenyl-d14	96		35 - 166	

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Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070107

Lab Sample ID: 580-6583-7
Client Matrix: Water

Date Sampled: 07/17/2007 0000
Date Received: 07/19/2007 1510

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method: 8270C Analysis Batch: 580-20992 Instrument ID: SEA040
Preparation: 3510C Prep Batch: 580-20823 Lab File ID: ak010381.D
Dilution: 1.0 Initial Weight/Volume: 1000 mL
Date Analyzed: 07/22/2007 1458 Final Weight/Volume: 1 mL
Date Prepared: 07/20/2007 0932 Injection Volume:

Analyte	Result (ug/L)	Qualifier	MDL	RL
Phenol	ND		0.0074	0.30
Bis(2-chloroethyl)ether	ND		0.018	0.20
2-Chlorophenol	ND		0.022	0.20
1,3-Dichlorobenzene	ND		0.011	0.20
1,4-Dichlorobenzene	ND		0.012	0.20
Benzyl alcohol	ND		0.013	0.20
1,2-Dichlorobenzene	ND		0.011	0.20
2-Methylphenol	ND		0.038	0.20
Bis(2-chloroisopropyl) ether	ND		0.0088	0.20
3 & 4 Methylphenol	ND		0.017	0.40
N-Nitrosodi-n-propylamine	ND		0.020	0.20
Hexachloroethane	ND		0.013	0.30
Nitrobenzene	ND		0.0075	0.20
Isophorone	ND		0.011	0.20
2-Nitrophenol	ND		0.021	0.20
2,4-Dimethylphenol	ND		0.018	1.0
Benzoic acid	ND		0.021	1.0
Bis(2-chloroethoxy)methane	ND		0.0095	0.20
2,4-Dichlorophenol	ND		0.013	0.20
1,2,4-Trichlorobenzene	ND		0.010	0.20
Naphthalene	ND		0.0014	0.20
4-Chloroaniline	ND	*	0.019	0.20
Hexachlorobutadiene	ND		0.016	0.30
4-Chloro-3-methylphenol	ND		0.014	0.20
2-Methylnaphthalene	ND		0.0055	0.10
Hexachlorocyclopentadiene	ND		0.012	1.0
2,4,6-Trichlorophenol	ND		0.010	0.30
2,4,5-Trichlorophenol	ND		0.0085	0.20
2-Chloronaphthalene	ND		0.0030	0.030
2-Nitroaniline	ND		0.011	0.20
Dimethyl phthalate	ND		0.012	0.20
Acenaphthylene	ND		0.0026	0.040
2,6-Dinitrotoluene	ND		0.014	0.20
3-Nitroaniline	ND		0.056	0.20
Acenaphthene	ND		0.0012	0.050
2,4-Dinitrophenol	ND		0.058	2.5
4-Nitrophenol	ND		0.16	1.0
Dibenzofuran	ND		0.0098	0.20
2,4-Dinitrotoluene	ND		0.012	0.20
Diethyl phthalate	ND		0.0093	0.20
4-Chlorophenyl phenyl ether	ND		0.012	0.20
Fluorene	ND		0.0042	0.030
4-Nitroaniline	ND		0.018	0.30
4,6-Dinitro-2-methylphenol	ND		0.053	2.0

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MW 8-6-07

Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070107

Lab Sample ID: 580-6583-7
 Client Matrix: Water

Date Sampled: 07/17/2007 0000
 Date Received: 07/19/2007 1510

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method: 8270C Analysis Batch: 580-20992 Instrument ID: SEA040
 Preparation: 3510C Prep Batch: 580-20823 Lab File ID: ak010381.D
 Dilution: 1.0 Initial Weight/Volume: 1000 mL
 Date Analyzed: 07/22/2007 1458 Final Weight/Volume: 1 mL
 Date Prepared: 07/20/2007 0932 Injection Volume:

Analyte	Result (ug/L)	Qualifier	MDL	RL
N-Nitrosodiphenylamine	ND		0.013	0.20
4-Bromophenyl phenyl ether	ND		0.010	0.20
Hexachlorobenzene	ND		0.0082	0.20
Pentachlorophenol	ND		0.013	0.35
Phenanthrene	ND		0.0024	0.040
Anthracene	ND		0.0019	0.020
Di-n-butyl phthalate	0.033	J B	0.0088	0.20
Fluoranthene	ND		0.0027	0.025
Pyrene	ND		0.0020	0.030
Butyl benzyl phthalate	0.040	J B	0.024	0.30
3,3'-Dichlorobenzidine	ND		0.16	1.0
Benzo[a]anthracene	ND		0.0033	0.030
Chrysene	ND		0.0045	0.020
Bis(2-ethylhexyl) phthalate	0.36	J B	0.032	1.5
Di-n-octyl phthalate	ND		0.018	0.20
Benzo[fluoranthene	ND		0.0055	0.040
Benzo[a]pyrene	ND		0.0027	0.020
Indeno[1,2,3-cd]pyrene	ND		0.0051	0.030
Dibenz(a,h)anthracene	ND		0.0046	0.030
Benzo[g,h,i]perylene	ND		0.0060	0.030
Carbazole	ND	*	0.0090	0.20
1-Methylnaphthalene	ND		0.0052	0.030

Surrogate	%Rec		Acceptance Limits
2-Fluorophenol	1	XI	10 - 120
Phenol-d5	4	XI	10 - 102
Nitrobenzene-d5	4	XI	34 - 146
2-Fluorobiphenyl	29	XI	35 - 143
2,4,6-Tribromophenol	63		29 - 151
Terphenyl-d14	106		35 - 166

MW
8-6-07

Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070108

Lab Sample ID: 580-6583-8
Client Matrix: Water

Date Sampled: 07/17/2007 0000
Date Received: 07/19/2007 1510

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method: 8270C Analysis Batch: 580-20992 Instrument ID: SEA040
Preparation: 3510C Prep Batch: 580-20823 Lab File ID: ak010382.D
Dilution: 1.0 Initial Weight/Volume: 1000 mL
Date Analyzed: 07/22/2007 1526 Final Weight/Volume: 1 mL
Date Prepared: 07/20/2007 0932 Injection Volume:

Analyte	Result (ug/L)	Qualifier	MDL	RL
Phenol	ND		0.0074	0.30
Bis(2-chloroethyl)ether	ND		0.018	0.20
2-Chlorophenol	ND		0.022	0.20
1,3-Dichlorobenzene	ND		0.011	0.20
1,4-Dichlorobenzene	ND		0.012	0.20
Benzyl alcohol	ND		0.013	0.20
1,2-Dichlorobenzene	ND		0.011	0.20
2-Methylphenol	ND		0.038	0.20
Bis(2-chloroisopropyl) ether	ND		0.0088	0.20
3 & 4 Methylphenol	ND		0.017	0.40
N-Nitrosodi-n-propylamine	ND		0.020	0.20
Hexachloroethane	ND		0.013	0.30
Nitrobenzene	ND		0.0075	0.20
Isophorone	ND		0.011	0.20
2-Nitrophenol	ND		0.021	0.20
2,4-Dimethylphenol	ND		0.018	1.0
Benzoic acid	ND		0.021	1.0
Bis(2-chloroethoxy)methane	ND		0.0095	0.20
2,4-Dichlorophenol	ND		0.013	0.20
1,2,4-Trichlorobenzene	ND		0.010	0.20
Naphthalene	ND		0.0014	0.20
4-Chloroaniline	ND	*	0.019	0.20
Hexachlorobutadiene	ND		0.016	0.30
4-Chloro-3-methylphenol	ND		0.014	0.20
2-Methylnaphthalene	ND		0.0055	0.10
Hexachlorocyclopentadiene	ND		0.012	1.0
2,4,6-Trichlorophenol	ND		0.010	0.30
2,4,5-Trichlorophenol	ND		0.0085	0.20
2-Chloronaphthalene	ND		0.0030	0.030
2-Nitroaniline	ND		0.011	0.20
Dimethyl phthalate	ND		0.012	0.20
Acenaphthylene	ND		0.0026	0.040
2,6-Dinitrotoluene	ND		0.014	0.20
3-Nitroaniline	ND		0.056	0.20
Acenaphthene	ND		0.0012	0.050
2,4-Dinitrophenol	ND		0.058	2.5
4-Nitrophenol	ND		0.16	1.0
Dibenzofuran	ND		0.0098	0.20
2,4-Dinitrotoluene	ND		0.012	0.20
Diethyl phthalate	ND		0.0093	0.20
4-Chlorophenyl phenyl ether	ND		0.012	0.20
Fluorene	ND		0.0042	0.030
4-Nitroaniline	ND		0.018	0.30
4,6-Dinitro-2-methylphenol	ND		0.053	2.0

Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070108

Lab Sample ID: 580-6583-8
Client Matrix: Water

Date Sampled: 07/17/2007 0000
Date Received: 07/19/2007 1510

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method: 8270C Analysis Batch: 580-20992 Instrument ID: SEA040
Preparation: 3510C Prep Batch: 580-20823 Lab File ID: ak010382.D
Dilution: 1.0 Initial Weight/Volume: 1000 mL
Date Analyzed: 07/22/2007 1526 Final Weight/Volume: 1 mL
Date Prepared: 07/20/2007 0932 Injection Volume:

Analyte	Result (ug/L)	Qualifier	MDL	RL
N-Nitrosodiphenylamine	ND		0.013	0.20
4-Bromophenyl phenyl ether	ND		0.010	0.20
Hexachlorobenzene	ND		0.0082	0.20
Pentachlorophenol	ND		0.013	0.35
Phenanthrene	ND		0.0024	0.040
Anthracene	ND		0.0019	0.020
Di-n-butyl phthalate	0.034	JB	0.0088	0.20
Fluoranthene	ND		0.0027	0.025
Pyrene	ND		0.0020	0.030
Butyl benzyl phthalate	0.041	JB	0.024	0.30
3,3'-Dichlorobenzidine	ND		0.16	1.0
Benzo[a]anthracene	ND		0.0033	0.030
Chrysene	ND		0.0045	0.020
Bis(2-ethylhexyl) phthalate	0.16	JB	0.032	1.5
Di-n-octyl phthalate	ND		0.018	0.20
Benzofluoranthene	ND		0.0055	0.040
Benzo[a]pyrene	ND		0.0027	0.020
Indeno[1,2,3-cd]pyrene	ND		0.0051	0.030
Dibenz(a,h)anthracene	ND		0.0046	0.030
Benzo[g,h,i]perylene	ND		0.0060	0.030
Carbazole	ND	*	0.0090	0.20
1-Methylnaphthalene	ND		0.0052	0.030

Surrogate	%Rec		Acceptance Limits
2-Fluorophenol	0	XI	10 - 120
Phenol-d5	1	XI	10 - 102
Nitrobenzene-d5	0	XI	34 - 146
2-Fluorobiphenyl	3	XI	35 - 143
2,4,6-Tribromophenol	48		29 - 151
Terphenyl-d14	101		35 - 166

MW
J-607

Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070109

Lab Sample ID: 580-6583-9
Client Matrix: Water

Date Sampled: 07/17/2007 0000
Date Received: 07/19/2007 1510

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 580-20992	Instrument ID: SEA040
Preparation:	3510C	Prep Batch: 580-20823	Lab File ID: ak010383.D
Dilution:	1.0		Initial Weight/Volume: 1000 mL
Date Analyzed:	07/22/2007 1553		Final Weight/Volume: 1 mL
Date Prepared:	07/20/2007 0932		Injection Volume:

Analyte	Result (ug/L)	Qualifier	MDL	RL
Phenol	ND		0.0074	0.30
Bis(2-chloroethyl)ether	ND		0.018	0.20
2-Chlorophenol	ND		0.022	0.20
1,3-Dichlorobenzene	ND		0.011	0.20
1,4-Dichlorobenzene	ND		0.012	0.20
Benzyl alcohol	ND		0.013	0.20
1,2-Dichlorobenzene	ND		0.011	0.20
2-Methylphenol	ND		0.038	0.20
Bis(2-chloroisopropyl) ether	ND		0.0088	0.20
3 & 4 Methylphenol	ND		0.017	0.40
N-Nitrosodi-n-propylamine	ND		0.020	0.20
Hexachloroethane	ND		0.013	0.30
Nitrobenzene	ND		0.0075	0.20
Isophorone	ND		0.011	0.20
2-Nitrophenol	ND		0.021	0.20
2,4-Dimethylphenol	ND		0.018	1.0
Benzoic acid	ND		0.021	1.0
Bis(2-chloroethoxy)methane	ND		0.0095	0.20
2,4-Dichlorophenol	ND		0.013	0.20
1,2,4-Trichlorobenzene	ND		0.010	0.20
Naphthalene	ND		0.0014	0.20
4-Chloroaniline	ND	<i>mu</i>	0.019	0.20
Hexachlorobutadiene	ND		0.016	0.30
4-Chloro-3-methylphenol	ND		0.014	0.20
2-Methylnaphthalene	ND		0.0055	0.10
Hexachlorocyclopentadiene	ND		0.012	1.0
2,4,6-Trichlorophenol	ND		0.010	0.30
2,4,5-Trichlorophenol	ND		0.0085	0.20
2-Chloronaphthalene	ND		0.0030	0.030
2-Nitroaniline	ND		0.011	0.20
Dimethyl phthalate	ND		0.012	0.20
Acenaphthylene	ND		0.0026	0.040
2,6-Dinitrotoluene	ND		0.014	0.20
3-Nitroaniline	ND		0.056	0.20
Acenaphthene	ND		0.0012	0.050
2,4-Dinitrophenol	ND		0.058	2.5
4-Nitrophenol	ND		0.16	1.0
Dibenzofuran	ND		0.0098	0.20
2,4-Dinitrotoluene	ND		0.012	0.20
Diethyl phthalate	0.012	J	0.0093	0.20
4-Chlorophenyl phenyl ether	ND		0.012	0.20
Fluorene	ND		0.0042	0.030
4-Nitroaniline	ND		0.018	0.30
4,6-Dinitro-2-methylphenol	ND		0.053	2.0

mw 8 607

Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070109

Lab Sample ID: 580-6583-9

Date Sampled: 07/17/2007 0000

Client Matrix: Water

Date Received: 07/19/2007 1510

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 580-20992	Instrument ID: SEA040
Preparation:	3510C	Prep Batch: 580-20823	Lab File ID: ak010383.D
Dilution:	1.0		Initial Weight/Volume: 1000 mL
Date Analyzed:	07/22/2007 1553		Final Weight/Volume: 1 mL
Date Prepared:	07/20/2007 0932		Injection Volume:

Analyte	Result (ug/L)	Qualifier	MDL	RL
N-Nitrosodiphenylamine	ND		0.013	0.20
4-Bromophenyl phenyl ether	ND		0.010	0.20
Hexachlorobenzene	ND		0.0082	0.20
Pentachlorophenol	ND		0.013	0.35
Phenanthrene	ND		0.0024	0.040
Anthracene	ND		0.0019	0.020
Di-n-butyl phthalate	0.065	J.P.	0.0088	0.20
Fluoranthene	ND		0.0027	0.025
Pyrene	ND		0.0020	0.030
Butyl benzyl phthalate	0.064	J.P.	0.024	0.30
3,3'-Dichlorobenzidine	ND		0.16	1.0
Benzo[a]anthracene	ND		0.0033	0.030
Chrysene	ND		0.0045	0.020
Bis(2-ethylhexyl) phthalate	0.14	J.P.	0.032	1.5
Di-n-octyl phthalate	ND		0.018	0.20
Benzofluoranthene	ND		0.0055	0.040
Benzo[a]pyrene	ND		0.0027	0.020
Indeno[1,2,3-cd]pyrene	ND		0.0051	0.030
Dibenz(a,h)anthracene	ND		0.0046	0.030
Benzo[g,h,i]perylene	ND		0.0060	0.030
Carbazole	ND	MW	0.0090	0.20
1-Methylnaphthalene	ND		0.0052	0.030

Surrogate	%Rec	Acceptance Limits
2-Fluorophenol	13	10 - 120
Phenol-d5	12	10 - 102
Nitrobenzene-d5	37	34 - 146
2-Fluorobiphenyl	48	35 - 143
2,4,6-Tribromophenol	71	29 - 151
Terphenyl-d14	104	35 - 166

MW
8/6/07

Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070110

Lab Sample ID: 580-6583-10
Client Matrix: Water

Date Sampled: 07/17/2007 0000
Date Received: 07/19/2007 1510

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 580-20992	Instrument ID: SEA040
Preparation:	3510C	Prep Batch: 580-20823	Lab File ID: ak010384.D
Dilution:	1.0		Initial Weight/Volume: 1000 mL
Date Analyzed:	07/22/2007 1620		Final Weight/Volume: 1 mL
Date Prepared:	07/20/2007 0932		Injection Volume:

Analyte	Result (ug/L)	Qualifier	MDL	RL
Phenol	ND		0.0074	0.30
Bis(2-chloroethyl)ether	ND		0.018	0.20
2-Chlorophenol	ND		0.022	0.20
1,3-Dichlorobenzene	ND		0.011	0.20
1,4-Dichlorobenzene	ND		0.012	0.20
Benzyl alcohol	ND		0.013	0.20
1,2-Dichlorobenzene	ND		0.011	0.20
2-Methylphenol	ND		0.038	0.20
Bis(2-chloroisopropyl) ether	ND		0.0088	0.20
3 & 4 Methylphenol	ND		0.017	0.40
N-Nitrosodi-n-propylamine	ND		0.020	0.20
Hexachloroethane	ND		0.013	0.30
Nitrobenzene	ND		0.0075	0.20
Isophorone	ND		0.011	0.20
2-Nitrophenol	ND		0.021	0.20
2,4-Dimethylphenol	ND		0.018	1.0
Benzoic acid	ND		0.021	1.0
Bis(2-chloroethoxy)methane	ND		0.0095	0.20
2,4-Dichlorophenol	ND		0.013	0.20
1,2,4-Trichlorobenzene	ND		0.010	0.20
Naphthalene	ND		0.0014	0.20
4-Chloroaniline	ND	*	0.019	0.20
Hexachlorobutadiene	ND		0.016	0.30
4-Chloro-3-methylphenol	ND		0.014	0.20
2-Methylnaphthalene	ND		0.0055	0.10
Hexachlorocyclopentadiene	ND		0.012	1.0
2,4,6-Trichlorophenol	ND		0.010	0.30
2,4,5-Trichlorophenol	ND		0.0085	0.20
2-Chloronaphthalene	ND		0.0030	0.030
2-Nitroaniline	ND		0.011	0.20
Dimethyl phthalate	ND		0.012	0.20
Acenaphthylene	ND		0.0026	0.040
2,6-Dinitrotoluene	ND		0.014	0.20
3-Nitroaniline	ND		0.056	0.20
Acenaphthene	ND		0.0012	0.050
2,4-Dinitrophenol	ND		0.058	2.5
4-Nitrophenol	ND		0.16	1.0
Dibenzofuran	ND		0.0098	0.20
2,4-Dinitrotoluene	ND		0.012	0.20
Diethyl phthalate	0.011	J	0.0093	0.20
4-Chlorophenyl phenyl ether	ND		0.012	0.20
Fluorene	ND		0.0042	0.030
4-Nitroaniline	ND		0.018	0.30
4,6-Dinitro-2-methylphenol	ND		0.053	2.0

Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070110

Lab Sample ID: 580-6583-10
Client Matrix: Water

Date Sampled: 07/17/2007 0000
Date Received: 07/19/2007 1510

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 580-20992	Instrument ID: SEA040
Preparation:	3510C	Prep Batch: 580-20823	Lab File ID: ak010384.D
Dilution:	1.0		Initial Weight/Volume: 1000 mL
Date Analyzed:	07/22/2007 1620		Final Weight/Volume: 1 mL
Date Prepared:	07/20/2007 0932		Injection Volume:

Analyte	Result (ug/L)	Qualifier	MDL	RL
N-Nitrosodiphenylamine	ND		0.013	0.20
4-Bromophenyl phenyl ether	ND		0.010	0.20
Hexachlorobenzene	ND		0.0082	0.20
Pentachlorophenol	ND		0.013	0.35
Phenanthrene	ND		0.0024	0.040
Anthracene	ND		0.0019	0.020
Di-n-butyl phthalate	0.098	JB	0.0088	0.20
Fluoranthene	ND		0.0027	0.025
Pyrene	ND		0.0020	0.030
Butyl benzyl phthalate	0.089	JB	0.024	0.30
3,3'-Dichlorobenzidine	ND		0.16	1.0
Benzo[a]anthracene	ND		0.0033	0.030
Chrysene	ND		0.0045	0.020
Bis(2-ethylhexyl) phthalate	0.14	JB	0.032	1.5
Di-n-octyl phthalate	ND		0.018	0.20
Benzo[a]fluoranthene	ND		0.0055	0.040
Benzo[a]pyrene	ND		0.0027	0.020
Indeno[1,2,3-cd]pyrene	ND		0.0051	0.030
Dibenz(a,h)anthracene	ND		0.0046	0.030
Benzo[g,h,i]perylene	ND		0.0060	0.030
Carbazole	ND	*	0.0090	0.20
1-Methylnaphthalene	ND		0.0052	0.030

Surrogate	%Rec		Acceptance Limits
2-Fluorophenol	2	XI	10 - 120
Phenol-d5	5	XI	10 - 102
Nitrobenzene-d5	7	XI	34 - 146
2-Fluorobiphenyl	29	XI	35 - 143
2,4,6-Tribromophenol	68		29 - 151
Terphenyl-d14	110		35 - 166

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8/6/07

Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070111

Lab Sample ID: 580-6583-11
 Client Matrix: Water

Date Sampled: 07/17/2007 0000
 Date Received: 07/19/2007 1510

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method: 8270C Analysis Batch: 580-20992 Instrument ID: SEA040
 Preparation: 3510C Prep Batch: 580-20823 Lab File ID: ak010385.D
 Dilution: 1.0 Initial Weight/Volume: 1000 mL
 Date Analyzed: 07/22/2007 1648 Final Weight/Volume: 1 mL
 Date Prepared: 07/20/2007 0932 Injection Volume:

Analyte	Result (ug/L)	Qualifier	MDL	RL
N-Nitrosodiphenylamine	ND		0.013	0.20
4-Bromophenyl phenyl ether	ND		0.010	0.20
Hexachlorobenzene	ND		0.0082	0.20
Pentachlorophenol	ND		0.013	0.35
Phenanthrene	ND		0.0024	0.040
Anthracene	ND		0.0019	0.020
Di-n-butyl phthalate	0.009	JPM	0.0088	0.20
Fluoranthene	ND		0.0027	0.025
Pyrene	ND		0.0020	0.030
Butyl benzyl phthalate	0.001	JPM	0.024	0.30
3,3'-Dichlorobenzidine	ND		0.16	1.0
Benzo[a]anthracene	ND		0.0033	0.030
Chrysene	ND		0.0045	0.020
Bis(2-ethylhexyl) phthalate	0.16	JPM	0.032	1.5
Di-n-octyl phthalate	ND		0.018	0.20
Benzofluoranthene	ND		0.0055	0.040
Benzo[a]pyrene	ND		0.0027	0.020
Indeno[1,2,3-cd]pyrene	ND		0.0051	0.030
Dibenz(a,h)anthracene	ND		0.0046	0.030
Benzo[g,h,i]perylene	ND		0.0060	0.030
Carbazole	ND	JPM	0.0090	0.20
1-Methylnaphthalene	ND		0.0052	0.030

Surrogate	%Rec	Acceptance Limits
2-Fluorophenol	28	10 - 120
Phenol-d5	22	10 - 102
Nitrobenzene-d5	70	34 - 146
2-Fluorobiphenyl	99	35 - 143
2,4,6-Tribromophenol	66	29 - 151
Terphenyl-d14	585	35 - 166

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Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070112

Lab Sample ID: 580-6583-12

Date Sampled: 07/17/2007 0000

Client Matrix: Water

Date Received: 07/19/2007 1510

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method: 8270C Analysis Batch: 580-20992 Instrument ID: SEA040
 Preparation: 3510C Prep Batch: 580-20823 Lab File ID: ak010388.D
 Dilution: 1.0 Initial Weight/Volume: 1000 mL
 Date Analyzed: 07/22/2007 1810 Final Weight/Volume: 1 mL
 Date Prepared: 07/20/2007 0932 Injection Volume:

Analyte	Result (ug/L)	Qualifier	MDL	RL
Phenol	ND		0.0074	0.30
Bis(2-chloroethyl)ether	ND		0.018	0.20
2-Chlorophenol	ND		0.022	0.20
1,3-Dichlorobenzene	ND		0.011	0.20
1,4-Dichlorobenzene	ND		0.012	0.20
Benzyl alcohol	ND		0.013	0.20
1,2-Dichlorobenzene	ND		0.011	0.20
2-Methylphenol	ND		0.038	0.20
Bis(2-chloroisopropyl) ether	ND		0.0088	0.20
3 & 4 Methylphenol	ND		0.017	0.40
N-Nitrosodi-n-propylamine	ND		0.020	0.20
Hexachloroethane	ND		0.013	0.30
Nitrobenzene	ND		0.0075	0.20
Isophorone	0.023	J	0.011	0.20
2-Nitrophenol	ND		0.021	0.20
2,4-Dimethylphenol	ND		0.018	1.0
Benzoic acid	0.95	J B/M	0.021	1.0
Bis(2-chloroethoxy)methane	ND		0.0095	0.20
2,4-Dichlorophenol	ND		0.013	0.20
1,2,4-Trichlorobenzene	ND		0.010	0.20
Naphthalene	ND		0.0014	0.20
4-Chloroaniline	ND	J	0.019	0.20
Hexachlorobutadiene	ND		0.016	0.30
4-Chloro-3-methylphenol	ND		0.014	0.20
2-Methylnaphthalene	ND		0.0055	0.10
Hexachlorocyclopentadiene	ND		0.012	1.0
2,4,6-Trichlorophenol	ND		0.010	0.30
2,4,5-Trichlorophenol	ND		0.0085	0.20
2-Chloronaphthalene	ND		0.0030	0.030
2-Nitroaniline	ND		0.011	0.20
Dimethyl phthalate	ND		0.012	0.20
Acenaphthylene	ND		0.0026	0.040
2,6-Dinitrotoluene	ND		0.014	0.20
3-Nitroaniline	ND		0.056	0.20
Acenaphthene	ND		0.0012	0.050
2,4-Dinitrophenol	ND		0.058	2.5
4-Nitrophenol	ND		0.16	1.0
Dibenzofuran	ND		0.0098	0.20
2,4-Dinitrotoluene	ND		0.012	0.20
Diethyl phthalate	ND		0.0093	0.20
4-Chlorophenyl phenyl ether	ND		0.012	0.20
Fluorene	ND		0.0042	0.030
4-Nitroaniline	ND		0.018	0.30
4,6-Dinitro-2-methylphenol	ND		0.053	2.0

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Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070112

Lab Sample ID: 580-6583-12

Client Matrix: Water

Date Sampled: 07/17/2007 0000

Date Received: 07/19/2007 1510

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 580-20992	Instrument ID: SEA040
Preparation:	3510C	Prep Batch: 580-20823	Lab File ID: ak010388.D
Dilution:	1.0		Initial Weight/Volume: 1000 mL
Date Analyzed:	07/22/2007 1810		Final Weight/Volume: 1 mL
Date Prepared:	07/20/2007 0932		Injection Volume:

Analyte	Result (ug/L)	Qualifier	MDL	RL
N-Nitrosodiphenylamine	ND		0.013	0.20
4-Bromophenyl phenyl ether	ND		0.010	0.20
Hexachlorobenzene	ND		0.0082	0.20
Pentachlorophenol	ND		0.013	0.35
Phenanthrene	ND		0.0024	0.040
Anthracene	ND		0.0019	0.020
Di-n-butyl phthalate	0.14	J B <i>mm</i>	0.0088	0.20
Fluoranthene	ND		0.0027	0.025
Pyrene	0.0034	J	0.0020	0.030
Butyl benzyl phthalate	0.21	J B <i>mm</i>	0.024	0.30
3,3'-Dichlorobenzidine	ND		0.16	1.0
Benzo[a]anthracene	ND		0.0033	0.030
Chrysene	ND		0.0045	0.020
Bis(2-ethylhexyl) phthalate	0.02	J B <i>mm</i>	0.032	1.5
Di-n-octyl phthalate	0.038	J	0.018	0.20
Benzofluoranthene	ND		0.0055	0.040
Benzo[a]pyrene	ND		0.0027	0.020
Indeno[1,2,3-cd]pyrene	ND		0.0051	0.030
Dibenz(a,h)anthracene	ND		0.0046	0.030
Benzo[g,h,i]perylene	ND		0.0060	0.030
Carbazole	ND	<i>mm</i>	0.0090	0.20
1-Methylnaphthalene	ND		0.0052	0.030

Surrogate	%Rec	Acceptance Limits
2-Fluorophenol	36	10 - 120
Phenol-d5	23	10 - 102
Nitrobenzene-d5	97	34 - 146
2-Fluorobiphenyl	81	35 - 143
2,4,6-Tribromophenol	64	29 - 151
Terphenyl-d14	88	35 - 166

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Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070113

Lab Sample ID: 580-6583-13

Date Sampled: 07/17/2007 0000

Client Matrix: Water

Date Received: 07/19/2007 1510

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method: 8270C Analysis Batch: 580-20992 Instrument ID: SEA040
 Preparation: 3510C Prep Batch: 580-20823 Lab File ID: ak010389.D
 Dilution: 1.0 Initial Weight/Volume: 1000 mL
 Date Analyzed: 07/22/2007 1837 Final Weight/Volume: 1 mL
 Date Prepared: 07/20/2007 0932 Injection Volume:

Analyte	Result (ug/L)	Qualifier	MDL	RL
Phenol	ND		0.0074	0.30
Bis(2-chloroethyl)ether	ND		0.018	0.20
2-Chlorophenol	ND		0.022	0.20
1,3-Dichlorobenzene	ND		0.011	0.20
1,4-Dichlorobenzene	ND		0.012	0.20
Benzyl alcohol	ND		0.013	0.20
1,2-Dichlorobenzene	ND		0.011	0.20
2-Methylphenol	ND		0.038	0.20
Bis(2-chloroisopropyl) ether	ND		0.0088	0.20
3 & 4 Methylphenol	ND		0.017	0.40
N-Nitrosodi-n-propylamine	ND		0.020	0.20
Hexachloroethane	ND		0.013	0.30
Nitrobenzene	ND		0.0075	0.20
Isophorone	ND		0.011	0.20
2-Nitrophenol	ND		0.021	0.20
2,4-Dimethylphenol	ND		0.018	1.0
Benzoic acid	ND		0.021	1.0
Bis(2-chloroethoxy)methane	ND		0.0095	0.20
2,4-Dichlorophenol	ND		0.013	0.20
1,2,4-Trichlorobenzene	ND		0.010	0.20
Naphthalene	ND		0.0014	0.20
4-Chloroaniline	ND	J	0.019	0.20
Hexachlorobutadiene	ND		0.016	0.30
4-Chloro-3-methylphenol	ND		0.014	0.20
2-Methylnaphthalene	ND		0.0055	0.10
Hexachlorocyclopentadiene	ND		0.012	1.0
2,4,6-Trichlorophenol	ND		0.010	0.30
2,4,5-Trichlorophenol	ND		0.0085	0.20
2-Chloronaphthalene	ND		0.0030	0.030
2-Nitroaniline	ND		0.011	0.20
Dimethyl phthalate	0.022	J	0.012	0.20
Acenaphthylene	ND		0.0026	0.040
2,6-Dinitrotoluene	ND		0.014	0.20
3-Nitroaniline	ND		0.056	0.20
Acenaphthene	ND		0.0012	0.050
2,4-Dinitrophenol	ND		0.058	2.5
4-Nitrophenol	ND		0.16	1.0
Dibenzofuran	ND		0.0098	0.20
2,4-Dinitrotoluene	ND		0.012	0.20
Diethyl phthalate	0.024	J	0.0093	0.20
4-Chlorophenyl phenyl ether	ND		0.012	0.20
Fluorene	ND		0.0042	0.030
4-Nitroaniline	ND		0.018	0.30
4,6-Dinitro-2-methylphenol	ND		0.053	2.0

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Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070113

Lab Sample ID: 580-6583-13

Date Sampled: 07/17/2007 0000

Client Matrix: Water

Date Received: 07/19/2007 1510

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 580-20992	Instrument ID: SEA040
Preparation:	3510C	Prep Batch: 580-20823	Lab File ID: ak010389.D
Dilution:	1.0		Initial Weight/Volume: 1000 mL
Date Analyzed:	07/22/2007 1837		Final Weight/Volume: 1 mL
Date Prepared:	07/20/2007 0932		Injection Volume:

Analyte	Result (ug/L)	Qualifier	MDL	RL
N-Nitrosodiphenylamine	ND		0.013	0.20
4-Bromophenyl phenyl ether	ND		0.010	0.20
Hexachlorobenzene	ND		0.0082	0.20
Pentachlorophenol	ND		0.013	0.35
Phenanthrene	ND		0.0024	0.040
Anthracene	ND		0.0019	0.020
Di-n-butyl phthalate	0.049	JF	0.0088	0.20
Fluoranthene	ND		0.0027	0.025
Pyrene	ND		0.0020	0.030
Butyl benzyl phthalate	0.074	JF	0.024	0.30
3,3'-Dichlorobenzidine	ND		0.16	1.0
Benzo[a]anthracene	ND		0.0033	0.030
Chrysene	ND		0.0045	0.020
Bis(2-ethylhexyl) phthalate	2.2 U	J	0.032	1.5
Di-n-octyl phthalate	0.036	J	0.018	0.20
Benzo[fluoranthene]	ND		0.0055	0.040
Benzo[a]pyrene	ND		0.0027	0.020
Indeno[1,2,3-cd]pyrene	ND		0.0051	0.030
Dibenz(a,h)anthracene	ND		0.0046	0.030
Benzo[g,h,i]perylene	ND		0.0060	0.030
Carbazole	ND	J	0.0090	0.20
1-Methylnaphthalene	ND		0.0052	0.030

Surrogate	%Rec	Acceptance Limits
2-Fluorophenol	38	10 - 120
Phenol-d5	32	10 - 102
Nitrobenzene-d5	95	34 - 146
2-Fluorobiphenyl	83	35 - 143
2,4,6-Tribromophenol	66	29 - 151
Terphenyl-d14	90	35 - 166

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Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070114

Lab Sample ID: 580-6583-14

Date Sampled: 07/17/2007 0000

Client Matrix: Water

Date Received: 07/19/2007 1510

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method: 8270C Analysis Batch: 580-21040 Instrument ID: SEA023
 Preparation: 3510C Prep Batch: 580-20828 Lab File ID: HP04990.D
 Dilution: 1.0 Initial Weight/Volume: 1010 mL
 Date Analyzed: 07/22/2007 1831 Final Weight/Volume: 1 mL
 Date Prepared: 07/20/2007 0946 Injection Volume:

Analyte	Result (ug/L)	Qualifier	MDL	RL
Phenol	ND		0.0073	0.30
Bis(2-chloroethyl)ether	ND		0.018	0.20
2-Chlorophenol	ND		0.022	0.20
1,3-Dichlorobenzene	ND		0.011	0.20
1,4-Dichlorobenzene	ND		0.012	0.20
Benzy alcohol	ND		0.013	0.20
1,2-Dichlorobenzene	ND		0.011	0.20
2-Methylphenol	ND		0.038	0.20
Bis(2-chloroisopropyl) ether	ND		0.0087	0.20
3 & 4 Methylphenol	ND		0.017	0.40
N-Nitrosodi-n-propylamine	ND		0.020	0.20
Hexachloroethane	ND		0.013	0.30
Nitrobenzene	ND		0.0074	0.20
Isophorone	ND		0.011	0.20
2-Nitrophenol	ND		0.021	0.20
2,4-Dimethylphenol	ND		0.018	0.99
Benzoic acid	ND		0.021	0.99
Bis(2-chloroethoxy)methane	ND		0.0094	0.20
2,4-Dichlorophenol	ND		0.013	0.20
1,2,4-Trichlorobenzene	ND		0.0099	0.20
Naphthalene	ND		0.0014	0.20
4-Chloroaniline	ND		0.019	0.20
Hexachlorobutadiene	ND		0.016	0.30
4-Chloro-3-methylphenol	ND		0.014	0.20
2-Methylnaphthalene	ND		0.0054	0.099
Hexachlorocyclopentadiene	ND		0.012	0.99
2,4,6-Trichlorophenol	ND		0.0099	0.30
2,4,5-Trichlorophenol	ND		0.0084	0.20
2-Chloronaphthalene	ND		0.0030	0.030
2-Nitroaniline	ND		0.011	0.20
Dimethyl phthalate	ND		0.012	0.20
Acenaphthylene	ND		0.0026	0.040
2,6-Dinitrotoluene	ND		0.014	0.20
3-Nitroaniline	ND	<i>mu</i>	0.055	0.20
Acenaphthene	ND		0.0012	0.050
2,4-Dinitrophenol	ND		0.057	2.5
4-Nitrophenol	ND		0.16	0.99
Dibenzofuran	ND		0.0097	0.20
2,4-Dinitrotoluene	ND		0.012	0.20
Diethyl phthalate	0.040	J	0.0092	0.20
4-Chlorophenyl phenyl ether	ND		0.012	0.20
Fluorene	ND		0.0042	0.030
4-Nitroaniline	ND		0.018	0.30
4,6-Dinitro-2-methylphenol	ND		0.052	2.0

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Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070114

Lab Sample ID: 580-6583-14
Client Matrix: Water

Date Sampled: 07/17/2007 0000
Date Received: 07/19/2007 1510

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 580-21040	Instrument ID: SEA023
Preparation:	3510C	Prep Batch: 580-20828	Lab File ID: HP04990.D
Dilution:	1.0		Initial Weight/Volume: 1010 mL
Date Analyzed:	07/22/2007 1831		Final Weight/Volume: 1 mL
Date Prepared:	07/20/2007 0946		Injection Volume:

Analyte	Result (ug/L)	Qualifier	MDL	RL
N-Nitrosodiphenylamine	ND	MW	0.013	0.20
4-Bromophenyl phenyl ether	ND		0.0099	0.20
Hexachlorobenzene	ND		0.0081	0.20
Pentachlorophenol	ND		0.013	0.35
Phenanthrene	0.013	J	0.0024	0.040
Anthracene	ND		0.0019	0.020
Di-n-butyl phthalate	0.38	J	0.0087	0.20
Fluoranthene	ND		0.0027	0.025
Pyrene	ND		0.0020	0.030
Butyl benzyl phthalate	0.53	J	0.024	0.30
3,3'-Dichlorobenzidine	ND		0.16	0.99
Benzo[a]anthracene	ND		0.0033	0.030
Chrysene	ND		0.0045	0.020
Bis(2-ethylhexyl) phthalate	0.78	J	0.032	1.5
Di-n-octyl phthalate	ND		0.018	0.20
Benzofluoranthene	ND		0.0054	0.040
Benzo[a]pyrene	ND		0.0027	0.020
Indeno[1,2,3-cd]pyrene	ND		0.0050	0.030
Dibenz(a,h)anthracene	ND		0.0046	0.030
Benzo[g,h,i]perylene	ND		0.0059	0.030
Carbazole	ND		0.0089	0.20
1-Methylnaphthalene	ND		0.0051	0.030

Surrogate	%Rec	Acceptance Limits
2-Fluorophenol	23	10 - 120
Phenol-d5	19	10 - 102
Nitrobenzene-d5	77	34 - 146
2-Fluorobiphenyl	133	35 - 143
2,4,6-Tribromophenol	87	29 - 151
Terphenyl-d14	638	35 - 166

MW
8607

Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070115

Lab Sample ID: 580-6583-15

Date Sampled: 07/17/2007 0000

Client Matrix: Water

Date Received: 07/19/2007 1510

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 580-20992	Instrument ID: SEA040
Preparation:	3510C	Prep Batch: 580-20823	Lab File ID: ak010390.D
Dilution:	1.0		Initial Weight/Volume: 1000 mL
Date Analyzed:	07/22/2007 1904		Final Weight/Volume: 1 mL
Date Prepared:	07/20/2007 0932		Injection Volume:

Analyte	Result (ug/L)	Qualifier	MDL	RL
Phenol	ND		0.0074	0.30
Bis(2-chloroethyl)ether	ND		0.018	0.20
2-Chlorophenol	ND		0.022	0.20
1,3-Dichlorobenzene	ND		0.011	0.20
1,4-Dichlorobenzene	ND		0.012	0.20
Benzyl alcohol	ND		0.013	0.20
1,2-Dichlorobenzene	ND		0.011	0.20
2-Methylphenol	ND		0.038	0.20
Bis(2-chloroisopropyl) ether	ND		0.0088	0.20
3 & 4 Methylphenol	ND		0.017	0.40
N-Nitrosodi-n-propylamine	ND		0.020	0.20
Hexachloroethane	ND		0.013	0.30
Nitrobenzene	ND		0.0075	0.20
Isophorone	ND		0.011	0.20
2-Nitrophenol	ND		0.021	0.20
2,4-Dimethylphenol	ND		0.018	1.0
Benzoic acid	ND		0.021	1.0
Bis(2-chloroethoxy)methane	ND		0.0095	0.20
2,4-Dichlorophenol	ND		0.013	0.20
1,2,4-Trichlorobenzene	ND		0.010	0.20
Naphthalene	ND		0.0014	0.20
4-Chloroaniline	ND	<i>Am</i>	0.019	0.20
Hexachlorobutadiene	ND		0.016	0.30
4-Chloro-3-methylphenol	ND		0.014	0.20
2-Methylnaphthalene	ND		0.0055	0.10
Hexachlorocyclopentadiene	ND		0.012	1.0
2,4,6-Trichlorophenol	ND		0.010	0.30
2,4,5-Trichlorophenol	ND		0.0085	0.20
2-Chloronaphthalene	ND		0.0030	0.030
2-Nitroaniline	ND		0.011	0.20
Dimethyl phthalate	0.018	J	0.012	0.20
Acenaphthylene	ND		0.0026	0.040
2,6-Dinitrotoluene	ND		0.014	0.20
3-Nitroaniline	ND		0.056	0.20
Acenaphthene	ND		0.0012	0.050
2,4-Dinitrophenol	ND		0.058	2.5
4-Nitrophenol	ND		0.16	1.0
Dibenzofuran	ND		0.0098	0.20
2,4-Dinitrotoluene	ND		0.012	0.20
Diethyl phthalate	0.017	J	0.0093	0.20
4-Chlorophenyl phenyl ether	ND		0.012	0.20
Fluorene	ND		0.0042	0.030
4-Nitroaniline	ND		0.018	0.30
4,6-Dinitro-2-methylphenol	ND		0.053	2.0

mmw 2/6/07

Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070115

Lab Sample ID: 580-6583-15
 Client Matrix: Water

Date Sampled: 07/17/2007 0000
 Date Received: 07/19/2007 1510

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method: 8270C Analysis Batch: 580-20992 Instrument ID: SEA040
 Preparation: 3510C Prep Batch: 580-20823 Lab File ID: ak010390.D
 Dilution: 1.0 Initial Weight/Volume: 1000 mL
 Date Analyzed: 07/22/2007 1904 Final Weight/Volume: 1 mL
 Date Prepared: 07/20/2007 0932 Injection Volume:

Analyte	Result (ug/L)	Qualifier	MDL	RL
N-Nitrosodiphenylamine	ND		0.013	0.20
4-Bromophenyl phenyl ether	ND		0.010	0.20
Hexachlorobenzene	ND		0.0082	0.20
Pentachlorophenol	0.25	J	0.013	0.35
Phenanthrene	ND		0.0024	0.040
Anthracene	ND		0.0019	0.020
Di-n-butyl phthalate	0.072	J Bm	0.0088	0.20
Fluoranthene	ND		0.0027	0.025
Pyrene	ND		0.0020	0.030
Butyl benzyl phthalate	0.20	J Bm	0.024	0.30
3,3'-Dichlorobenzidine	ND		0.16	1.0
Benzo[a]anthracene	ND		0.0033	0.030
Chrysene	ND		0.0045	0.020
Bis(2-ethylhexyl) phthalate	1.6 U	Bm	0.032	1.5
Di-n-octyl phthalate	ND		0.018	0.20
Benzo[fluoranthene]	ND		0.0055	0.040
Benzo[a]pyrene	ND		0.0027	0.020
Indeno[1,2,3-cd]pyrene	ND		0.0051	0.030
Dibenz(a,h)anthracene	ND		0.0046	0.030
Benzo[g,h,i]perylene	ND		0.0060	0.030
Carbazole	ND	Bm	0.0090	0.20
1-Methylnaphthalene	ND		0.0052	0.030

Surrogate	%Rec	Acceptance Limits
2-Fluorophenol	30	10 - 120
Phenol-d5	26	10 - 102
Nitrobenzene-d5	84	34 - 146
2-Fluorobiphenyl	73	35 - 143
2,4,6-Tribromophenol	52	29 - 151
Terphenyl-d14	76	35 - 166

MW
8/07

Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070116

Lab Sample ID: 580-6583-16
Client Matrix: Water

Date Sampled: 07/17/2007 0000
Date Received: 07/19/2007 1510

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method: 8270C Analysis Batch: 580-20992 Instrument ID: SEA040
Preparation: 3510C Prep Batch: 580-20823 Lab File ID: ak010391.D
Dilution: 1.0 Initial Weight/Volume: 1000 mL
Date Analyzed: 07/22/2007 1932 Final Weight/Volume: 1 mL
Date Prepared: 07/20/2007 0932 Injection Volume:

Analyte	Result (ug/L)	Qualifier	MDL	RL
Phenol	ND		0.0074	0.30
Bis(2-chloroethyl)ether	ND		0.018	0.20
2-Chlorophenol	ND		0.022	0.20
1,3-Dichlorobenzene	ND		0.011	0.20
1,4-Dichlorobenzene	ND		0.012	0.20
Benzyl alcohol	ND		0.013	0.20
1,2-Dichlorobenzene	ND		0.011	0.20
2-Methylphenol	ND		0.038	0.20
Bis(2-chloroisopropyl) ether	ND		0.0088	0.20
3 & 4 Methylphenol	ND		0.017	0.40
N-Nitrosodi-n-propylamine	ND		0.020	0.20
Hexachloroethane	ND		0.013	0.30
Nitrobenzene	ND		0.0075	0.20
Isophorone	ND		0.011	0.20
2-Nitrophenol	ND		0.021	0.20
2,4-Dimethylphenol	ND		0.018	1.0
Benzoic acid	ND		0.021	1.0
Bis(2-chloroethoxy)methane	ND		0.0095	0.20
2,4-Dichlorophenol	ND		0.013	0.20
1,2,4-Trichlorobenzene	ND		0.010	0.20
Naphthalene	ND		0.0014	0.20
4-Chloroaniline	ND		0.019	0.20
Hexachlorobutadiene	ND		0.016	0.30
4-Chloro-3-methylphenol	ND		0.014	0.20
2-Methylnaphthalene	0.011	J	0.0055	0.10
Hexachlorocyclopentadiene	ND		0.012	1.0
2,4,6-Trichlorophenol	ND		0.010	0.30
2,4,5-Trichlorophenol	ND		0.0085	0.20
2-Chloronaphthalene	0.011	J	0.0030	0.030
2-Nitroaniline	ND		0.011	0.20
Dimethyl phthalate	0.015	J	0.012	0.20
Acenaphthylene	ND		0.0026	0.040
2,6-Dinitrotoluene	ND		0.014	0.20
3-Nitroaniline	ND		0.056	0.20
Acenaphthene	0.0035	J	0.0012	0.050
2,4-Dinitrophenol	ND		0.058	2.5
4-Nitrophenol	ND		0.16	1.0
Dibenzofuran	0.015	J	0.0098	0.20
2,4-Dinitrotoluene	ND		0.012	0.20
Diethyl phthalate	ND		0.0093	0.20
4-Chlorophenyl phenyl ether	0.017	J	0.012	0.20
Fluorene	0.010	J	0.0042	0.030
4-Nitroaniline	ND		0.018	0.30
4,6-Dinitro-2-methylphenol	ND		0.053	2.0

Handwritten notes on the right side of the table, including a vertical line with arrows pointing down and various symbols like 'U', 'C', and 'H'.

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Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070116

Lab Sample ID: 580-6583-16

Date Sampled: 07/17/2007 0000

Client Matrix: Water

Date Received: 07/19/2007 1510

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 580-20992	Instrument ID: SEA040
Preparation:	3510C	Prep Batch: 580-20823	Lab File ID: ak010391.D
Dilution:	1.0		Initial Weight/Volume: 1000 mL
Date Analyzed:	07/22/2007 1932		Final Weight/Volume: 1 mL
Date Prepared:	07/20/2007 0932		Injection Volume:

Analyte	Result (ug/L)	Qualifier	MDL	RL
N-Nitrosodiphenylamine	ND		0.013	0.20
4-Bromophenyl phenyl ether	ND		0.010	0.20
Hexachlorobenzene	0.033	J	0.0082	0.20
Pentachlorophenol	0.39		0.013	0.35
Phenanthrene	0.022	J	0.0024	0.040
Anthracene	0.018	J	0.0019	0.020
Di-n-butyl phthalate	0.073	J <i>mn</i>	0.0088	0.20
Fluoranthene	0.016	J	0.0027	0.025
Pyrene	0.012	J	0.0020	0.030
Butyl benzyl phthalate	ND		0.024	0.30
3,3'-Dichlorobenzidine	ND		0.16	1.0
Benzo[a]anthracene	ND		0.0033	0.030
Chrysene	ND		0.0045	0.020
Bis(2-ethylhexyl) phthalate	ND		0.032	1.5
Di-n-octyl phthalate	ND		0.018	0.20
Benzofluoranthene	0.041		0.0055	0.040
Benzo[a]pyrene	ND		0.0027	0.020
Indeno[1,2,3-cd]pyrene	ND		0.0051	0.030
Dibenz(a,h)anthracene	ND		0.0046	0.030
Benzo[g,h,i]perylene	ND		0.0060	0.030
Carbazole	ND	<i>mn</i>	0.0090	0.20
1-Methylnaphthalene	ND		0.0052	0.030

Surrogate	%Rec	Acceptance Limits
2-Fluorophenol	35	10 - 120
Phenol-d5	24	10 - 102
Nitrobenzene-d5	103	34 - 146
2-Fluorobiphenyl	87	35 - 143
2,4,6-Tribromophenol	65	29 - 151
Terphenyl-d14	91	35 - 166

mn
8607

Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070117

Lab Sample ID: 580-6583-17

Date Sampled: 07/17/2007 0000

Client Matrix: Water

Date Received: 07/19/2007 1510

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 580-20992	Instrument ID: SEA040
Preparation:	3510C	Prep Batch: 580-20823	Lab File ID: ak010392.D
Dilution:	1.0		Initial Weight/Volume: 1000 mL
Date Analyzed:	07/22/2007 1959		Final Weight/Volume: 1 mL
Date Prepared:	07/20/2007 0932		Injection Volume:

Analyte	Result (ug/L)	Qualifier	MDL	RL
Phenol	ND		0.0074	0.30
Bis(2-chloroethyl)ether	ND		0.018	0.20
2-Chlorophenol	ND		0.022	0.20
1,3-Dichlorobenzene	ND		0.011	0.20
1,4-Dichlorobenzene	ND		0.012	0.20
Benzyl alcohol	ND		0.013	0.20
1,2-Dichlorobenzene	ND		0.011	0.20
2-Methylphenol	ND		0.038	0.20
Bis(2-chloroisopropyl) ether	ND		0.0088	0.20
3 & 4 Methylphenol	ND		0.017	0.40
N-Nitrosodi-n-propylamine	ND		0.020	0.20
Hexachloroethane	ND		0.013	0.30
Nitrobenzene	ND		0.0075	0.20
Isophorone	0.48		0.011	0.20
2-Nitrophenol	ND		0.021	0.20
2,4-Dimethylphenol	ND		0.018	1.0
Benzoic acid	ND		0.021	1.0
Bis(2-chloroethoxy)methane	ND		0.0095	0.20
2,4-Dichlorophenol	ND		0.013	0.20
1,2,4-Trichlorobenzene	ND		0.010	0.20
Naphthalene	ND		0.0014	0.20
4-Chloroaniline	ND		0.019	0.20
Hexachlorobutadiene	ND		0.016	0.30
4-Chloro-3-methylphenol	ND		0.014	0.20
2-Methylnaphthalene	ND		0.0055	0.10
Hexachlorocyclopentadiene	ND		0.012	1.0
2,4,6-Trichlorophenol	ND		0.010	0.30
2,4,5-Trichlorophenol	ND		0.0085	0.20
2-Chloronaphthalene	ND		0.0030	0.030
2-Nitroaniline	ND		0.011	0.20
Dimethyl phthalate	0.024	J	0.012	0.20
Acenaphthylene	ND		0.0026	0.040
2,6-Dinitrotoluene	ND		0.014	0.20
3-Nitroaniline	ND		0.056	0.20
Acenaphthene	ND		0.0012	0.050
2,4-Dinitrophenol	ND		0.058	2.5
4-Nitrophenol	ND		0.16	1.0
Dibenzofuran	ND		0.0098	0.20
2,4-Dinitrotoluene	ND		0.012	0.20
Diethyl phthalate	0.025	J	0.0093	0.20
4-Chlorophenyl phenyl ether	ND		0.012	0.20
Fluorene	ND		0.0042	0.030
4-Nitroaniline	ND		0.018	0.30
4,6-Dinitro-2-methylphenol	ND		0.053	2.0

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Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070117

Lab Sample ID: 580-6583-17
 Client Matrix: Water

Date Sampled: 07/17/2007 0000
 Date Received: 07/19/2007 1510

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 580-20992	Instrument ID: SEA040
Preparation:	3510C	Prep Batch: 580-20823	Lab File ID: ak010392.D
Dilution:	1.0		Initial Weight/Volume: 1000 mL
Date Analyzed:	07/22/2007 1959		Final Weight/Volume: 1 mL
Date Prepared:	07/20/2007 0932		Injection Volume:

Analyte	Result (ug/L)	Qualifier	MDL	RL
N-Nitrosodiphenylamine	ND		0.013	0.20
4-Bromophenyl phenyl ether	ND		0.010	0.20
Hexachlorobenzene	ND		0.0082	0.20
Pentachlorophenol	ND		0.013	0.35
Phenanthrene	ND		0.0024	0.040
Anthracene	ND		0.0019	0.020
Di-n-butyl phthalate	0.12	JFW	0.0088	0.20
Fluoranthene	ND		0.0027	0.025
Pyrene	ND		0.0020	0.030
Butyl benzyl phthalate	0.15	JFW	0.024	0.30
3,3'-Dichlorobenzidine	ND		0.16	1.0
Benzo[a]anthracene	ND		0.0033	0.030
Chrysene	ND		0.0045	0.020
Bis(2-ethylhexyl) phthalate	4.4 U	JFW	0.032	1.5
Di-n-octyl phthalate	ND		0.018	0.20
Benzofluoranthene	ND		0.0055	0.040
Benzo[a]pyrene	ND		0.0027	0.020
Indeno[1,2,3-cd]pyrene	ND		0.0051	0.030
Dibenz(a,h)anthracene	ND		0.0046	0.030
Benzo[g,h,i]perylene	ND		0.0060	0.030
Carbazole	ND	JFW	0.0090	0.20
1-Methylnaphthalene	ND		0.0052	0.030

Surrogate	%Rec	Acceptance Limits
2-Fluorophenol	32	10 - 120
Phenol-d5	20	10 - 102
Nitrobenzene-d5	83	34 - 146
2-Fluorobiphenyl	71	35 - 143
2,4,6-Tribromophenol	57	29 - 151
Terphenyl-d14	77	35 - 166

MW
8/6/07

Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070118

Lab Sample ID: 580-6583-18

Date Sampled: 07/17/2007 0000

Client Matrix: Water

Date Received: 07/19/2007 1510

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 580-20992	Instrument ID:	SEA040
Preparation:	3510C	Prep Batch: 580-20823	Lab File ID:	ak010393.D
Dilution:	1.0		Initial Weight/Volume:	1000 mL
Date Analyzed:	07/22/2007 2026		Final Weight/Volume:	1 mL
Date Prepared:	07/20/2007 0932		Injection Volume:	

Analyte	Result (ug/L)	Qualifier	MDL	RL
Phenol	ND		0.0074	0.30
Bis(2-chloroethyl)ether	ND		0.018	0.20
2-Chlorophenol	ND		0.022	0.20
1,3-Dichlorobenzene	ND		0.011	0.20
1,4-Dichlorobenzene	ND		0.012	0.20
Benzyl alcohol	ND		0.013	0.20
1,2-Dichlorobenzene	ND		0.011	0.20
2-Methylphenol	ND		0.038	0.20
Bis(2-chloroisopropyl) ether	ND		0.0088	0.20
3 & 4 Methylphenol	ND		0.017	0.40
N-Nitrosodi-n-propylamine	ND		0.020	0.20
Hexachloroethane	ND		0.013	0.30
Nitrobenzene	ND		0.0075	0.20
Isophorone	ND		0.011	0.20
2-Nitrophenol	ND		0.021	0.20
2,4-Dimethylphenol	ND		0.018	1.0
Benzoic acid	ND		0.021	1.0
Bis(2-chloroethoxy)methane	ND		0.0095	0.20
2,4-Dichlorophenol	ND		0.013	0.20
1,2,4-Trichlorobenzene	ND		0.010	0.20
Naphthalene	ND		0.0014	0.20
4-Chloroaniline	ND	<i>mw</i>	0.019	0.20
Hexachlorobutadiene	ND		0.016	0.30
4-Chloro-3-methylphenol	ND		0.014	0.20
2-Methylnaphthalene	ND		0.0055	0.10
Hexachlorocyclopentadiene	ND		0.012	1.0
2,4,6-Trichlorophenol	ND		0.010	0.30
2,4,5-Trichlorophenol	ND		0.0085	0.20
2-Chloronaphthalene	ND		0.0030	0.030
2-Nitroaniline	ND		0.011	0.20
Dimethyl phthalate	ND		0.012	0.20
Acenaphthylene	ND		0.0026	0.040
2,6-Dinitrotoluene	ND		0.014	0.20
3-Nitroaniline	ND		0.056	0.20
Acenaphthene	ND		0.0012	0.050
2,4-Dinitrophenol	ND		0.058	2.5
4-Nitrophenol	ND		0.16	1.0
Dibenzofuran	ND		0.0098	0.20
2,4-Dinitrotoluene	ND		0.012	0.20
Diethyl phthalate	0.019	J	0.0093	0.20
4-Chlorophenyl phenyl ether	ND		0.012	0.20
Fluorene	ND		0.0042	0.030
4-Nitroaniline	ND		0.018	0.30
4,6-Dinitro-2-methylphenol	ND		0.053	2.0

Handwritten notes:
 A large vertical arrow pointing downwards is drawn on the right side of the table, spanning from the top of the Phenol row to the bottom of the 4,6-Dinitro-2-methylphenol row.
 There are also some smaller handwritten marks, including a 'U' at the top right and a 'J' next to the Diethyl phthalate row.

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Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070118

Lab Sample ID: 580-6583-18
Client Matrix: Water

Date Sampled: 07/17/2007 0000
Date Received: 07/19/2007 1510

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 580-20992	Instrument ID: SEA040
Preparation:	3510C	Prep Batch: 580-20823	Lab File ID: ak010393.D
Dilution:	1.0		Initial Weight/Volume: 1000 mL
Date Analyzed:	07/22/2007 2026		Final Weight/Volume: 1 mL
Date Prepared:	07/20/2007 0932		Injection Volume:

Analyte	Result (ug/L)	Qualifier	MDL	RL
N-Nitrosodiphenylamine	ND		0.013	0.20
4-Bromophenyl phenyl ether	ND		0.010	0.20
Hexachlorobenzene	ND		0.0082	0.20
Pentachlorophenol	ND		0.013	0.35
Phenanthrene	ND		0.0024	0.040
Anthracene	ND		0.0019	0.020
Di-n-butyl phthalate	0.13	JBM	0.0088	0.20
Fluoranthene	ND		0.0027	0.025
Pyrene	ND		0.0020	0.030
Butyl benzyl phthalate	0.24	JBM	0.024	0.30
3,3'-Dichlorobenzidine	ND		0.16	1.0
Benzo[a]anthracene	ND		0.0033	0.030
Chrysene	ND		0.0045	0.020
Bis(2-ethylhexyl) phthalate	3.9 U	JBM	0.032	1.5
Di-n-octyl phthalate	ND		0.018	0.20
Benzofluoranthene	ND		0.0055	0.040
Benzo[a]pyrene	ND		0.0027	0.020
Indeno[1,2,3-cd]pyrene	ND		0.0051	0.030
Dibenz(a,h)anthracene	ND		0.0046	0.030
Benzo[g,h,i]perylene	ND		0.0060	0.030
Carbazole	ND	JBM	0.0090	0.20
1-Methylnaphthalene	ND		0.0052	0.030

Surrogate	%Rec	Acceptance Limits
2-Fluorophenol	49	10 - 120
Phenol-d5	44	10 - 102
Nitrobenzene-d5	117	34 - 146
2-Fluorobiphenyl	101	35 - 143
2,4,6-Tribromophenol	83	29 - 151
Terphenyl-d14	108	35 - 166

mw
8-6-07

Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070119

Lab Sample ID: 580-6583-19
Client Matrix: Water

Date Sampled: 07/17/2007 0000
Date Received: 07/19/2007 1510

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method: 8270C Analysis Batch: 580-20992 Instrument ID: SEA040
Preparation: 3510C Prep Batch: 580-20823 Lab File ID: ak010394.D
Dilution: 1.0 Initial Weight/Volume: 1000 mL
Date Analyzed: 07/22/2007 2054 Final Weight/Volume: 1 mL
Date Prepared: 07/20/2007 0932 Injection Volume:

Analyte	Result (ug/L)	Qualifier	MDL	RL
Phenol	ND		0.0074	0.30
Bis(2-chloroethyl)ether	ND		0.018	0.20
2-Chlorophenol	ND		0.022	0.20
1,3-Dichlorobenzene	ND		0.011	0.20
1,4-Dichlorobenzene	ND		0.012	0.20
Benzyl alcohol	ND		0.013	0.20
1,2-Dichlorobenzene	ND		0.011	0.20
2-Methylphenol	ND		0.038	0.20
Bis(2-chloroisopropyl) ether	ND		0.0088	0.20
3 & 4 Methylphenol	ND		0.017	0.40
N-Nitrosodi-n-propylamine	ND		0.020	0.20
Hexachloroethane	ND		0.013	0.30
Nitrobenzene	ND		0.0075	0.20
Isophorone	1.2		0.011	0.20
2-Nitrophenol	ND		0.021	0.20
2,4-Dimethylphenol	ND		0.018	1.0
Benzoic acid	ND		0.021	1.0
Bis(2-chloroethoxy)methane	ND		0.0095	0.20
2,4-Dichlorophenol	ND		0.013	0.20
1,2,4-Trichlorobenzene	ND		0.010	0.20
Naphthalene	0.41		0.0014	0.20
4-Chloroaniline	ND	M	0.019	0.20
Hexachlorobutadiene	ND		0.016	0.30
4-Chloro-3-methylphenol	ND		0.014	0.20
2-Methylnaphthalene	0.067	J	0.0055	0.10
Hexachlorocyclopentadiene	ND		0.012	1.0
2,4,6-Trichlorophenol	0.073	J	0.010	0.30
2,4,5-Trichlorophenol	0.63		0.0085	0.20
2-Chloronaphthalene	0.019	J	0.0030	0.030
2-Nitroaniline	ND		0.011	0.20
Dimethyl phthalate	ND		0.012	0.20
Acenaphthylene	ND		0.0026	0.040
2,6-Dinitrotoluene	ND		0.014	0.20
3-Nitroaniline	ND		0.056	0.20
Acenaphthene	ND		0.0012	0.050
2,4-Dinitrophenol	ND		0.058	2.5
4-Nitrophenol	ND		0.16	1.0
Dibenzofuran	ND		0.0098	0.20
2,4-Dinitrotoluene	ND		0.012	0.20
Diethyl phthalate	0.022	J	0.0093	0.20
4-Chlorophenyl phenyl ether	ND		0.012	0.20
Fluorene	ND		0.0042	0.030
4-Nitroaniline	ND		0.018	0.30
4,6-Dinitro-2-methylphenol	ND		0.053	2.0

Handwritten annotations: A vertical line with arrows pointing downwards is drawn on the right side of the table, spanning from the top to the bottom. There are also some handwritten marks resembling 'UJ' and 'U' near the right edge of the table.

Handwritten signature: MWS 607

Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070119

Lab Sample ID: 580-6583-19

Date Sampled: 07/17/2007 0000

Client Matrix: Water

Date Received: 07/19/2007 1510

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 580-20992	Instrument ID: SEA040
Preparation:	3510C	Prep Batch: 580-20823	Lab File ID: ak010394.D
Dilution:	1.0		Initial Weight/Volume: 1000 mL
Date Analyzed:	07/22/2007 2054		Final Weight/Volume: 1 mL
Date Prepared:	07/20/2007 0932		Injection Volume:

Analyte	Result (ug/L)	Qualifier	MDL	RL
N-Nitrosodiphenylamine	ND		0.013	0.20
4-Bromophenyl phenyl ether	ND		0.010	0.20
Hexachlorobenzene	ND		0.0082	0.20
Phenanthrene	0.0081	J	0.0024	0.040
Anthracene	ND		0.0019	0.020
Di-n-butyl phthalate	0.12	J <i>sum</i>	0.0088	0.20
Fluoranthene	ND		0.0027	0.025
Pyrene	ND		0.0020	0.030
Butyl benzyl phthalate	0.19	J <i>sum</i>	0.024	0.30
3,3'-Dichlorobenzidine	ND		0.16	1.0
Benzo[a]anthracene	ND		0.0033	0.030
Chrysene	ND		0.0045	0.020
Bis(2-ethylhexyl) phthalate	2.0 U	J <i>sum</i>	0.032	1.5
Di-n-octyl phthalate	ND		0.018	0.20
Benzo[fluoranthene]	ND		0.0055	0.040
Benzo[a]pyrene	ND		0.0027	0.020
Indeno[1,2,3-cd]pyrene	ND		0.0051	0.030
Dibenz(a,h)anthracene	ND		0.0046	0.030
Benzo[g,h,i]perylene	ND		0.0060	0.030
Carbazole	0.022	J <i>sum</i>	0.0090	0.20
1-Methylnaphthalene	0.33		0.0052	0.030

Surrogate	%Rec	Acceptance Limits
2-Fluorophenol	34	10 - 120
Phenol-d5	29	10 - 102
Nitrobenzene-d5	79	34 - 146
2-Fluorobiphenyl	63	35 - 143
2,4,6-Tribromophenol	68	29 - 151
Terphenyl-d14	72	35 - 166

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Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070119

Lab Sample ID: 580-6583-19

Date Sampled: 07/17/2007 0000

Client Matrix: Water

Date Received: 07/19/2007 1510

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method: 8270C

Analysis Batch: 580-20992

Instrument ID: SEA040

Preparation: 3510C

Prep Batch: 580-20823

Lab File ID: ak011112.D

Dilution: 100

Initial Weight/Volume: 1000 mL

Date Analyzed: 07/24/2007 0939

Final Weight/Volume: 1 mL

Date Prepared: 07/20/2007 0932

Injection Volume:

Analyte	Result (ug/L)	Qualifier	MDL	RL
Pentachlorophenol	120		1.3	35

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Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070120

Lab Sample ID: 580-6583-20

Date Sampled: 07/17/2007 0000

Client Matrix: Water

Date Received: 07/19/2007 1510

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 580-20992	Instrument ID: SEA040
Preparation:	3510C	Prep Batch: 580-20823	Lab File ID: ak010395.D
Dilution:	1.0		Initial Weight/Volume: 1000 mL
Date Analyzed:	07/22/2007 2121		Final Weight/Volume: 1 mL
Date Prepared:	07/20/2007 0932		Injection Volume:

Analyte	Result (ug/L)	Qualifier	MDL	RL
Phenol	ND		0.0074	0.30
Bis(2-chloroethyl)ether	ND		0.018	0.20
2-Chlorophenol	ND		0.022	0.20
1,3-Dichlorobenzene	ND		0.011	0.20
1,4-Dichlorobenzene	ND		0.012	0.20
Benzyl alcohol	ND		0.013	0.20
1,2-Dichlorobenzene	ND		0.011	0.20
2-Methylphenol	ND		0.038	0.20
Bis(2-chloroisopropyl) ether	ND		0.0088	0.20
3 & 4 Methylphenol	ND		0.017	0.40
N-Nitrosodi-n-propylamine	ND		0.020	0.20
Hexachloroethane	ND		0.013	0.30
Nitrobenzene	ND		0.0075	0.20
Isophorone	ND		0.011	0.20
2-Nitrophenol	ND		0.021	0.20
2,4-Dimethylphenol	ND		0.018	1.0
Benzoic acid	ND		0.021	1.0
Bis(2-chloroethoxy)methane	ND		0.0095	0.20
2,4-Dichlorophenol	ND		0.013	0.20
1,2,4-Trichlorobenzene	ND		0.010	0.20
Naphthalene	ND		0.0014	0.20
4-Chloroaniline	ND	<i>Amu</i>	0.019	0.20
Hexachlorobutadiene	ND		0.016	0.30
4-Chloro-3-methylphenol	ND		0.014	0.20
2-Methylnaphthalene	ND		0.0055	0.10
Hexachlorocyclopentadiene	ND		0.012	1.0
2,4,6-Trichlorophenol	ND		0.010	0.30
2,4,5-Trichlorophenol	ND		0.0085	0.20
2-Chloronaphthalene	ND		0.0030	0.030
2-Nitroaniline	ND		0.011	0.20
Dimethyl phthalate	ND		0.012	0.20
Acenaphthylene	ND		0.0026	0.040
2,6-Dinitrotoluene	ND		0.014	0.20
3-Nitroaniline	ND		0.056	0.20
Acenaphthene	ND		0.0012	0.050
2,4-Dinitrophenol	ND		0.058	2.5
4-Nitrophenol	ND		0.16	1.0
Dibenzofuran	ND		0.0098	0.20
2,4-Dinitrotoluene	ND		0.012	0.20
Diethyl phthalate	0.014	J	0.0093	0.20
4-Chlorophenyl phenyl ether	ND		0.012	0.20
Fluorene	ND		0.0042	0.030
4-Nitroaniline	ND		0.018	0.30
4,6-Dinitro-2-methylphenol	ND		0.053	2.0

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Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070120

Lab Sample ID: 580-6583-20
Client Matrix: Water

Date Sampled: 07/17/2007 0000
Date Received: 07/19/2007 1510

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 580-20992	Instrument ID: SEA040
Preparation:	3510C	Prep Batch: 580-20823	Lab File ID: ak010395.D
Dilution:	1.0		Initial Weight/Volume: 1000 mL
Date Analyzed:	07/22/2007 2121		Final Weight/Volume: 1 mL
Date Prepared:	07/20/2007 0932		Injection Volume:

Analyte	Result (ug/L)	Qualifier	MDL	RL
N-Nitrosodiphenylamine	ND		0.013	0.20
4-Bromophenyl phenyl ether	ND		0.010	0.20
Hexachlorobenzene	ND		0.0082	0.20
Pentachlorophenol	ND		0.013	0.35
Phenanthrene	ND		0.0024	0.040
Anthracene	ND		0.0019	0.020
Di-n-butyl phthalate	0.042	JFW	0.0088	0.20
Fluoranthene	ND		0.0027	0.025
Pyrene	ND		0.0020	0.030
Butyl benzyl phthalate	0.097	JFW	0.024	0.30
3,3'-Dichlorobenzidine	ND		0.16	1.0
Benzo[a]anthracene	ND		0.0033	0.030
Chrysene	ND		0.0045	0.020
Bis(2-ethylhexyl) phthalate	2.3 U	JFW	0.032	1.5
Di-n-octyl phthalate	ND		0.018	0.20
Benzofluoranthene	ND		0.0055	0.040
Benzo[a]pyrene	ND		0.0027	0.020
Indeno[1,2,3-cd]pyrene	ND		0.0051	0.030
Dibenz(a,h)anthracene	ND		0.0046	0.030
Benzo[g,h,i]perylene	ND		0.0060	0.030
Carbazole	ND	JFW	0.0090	0.20
1-Methylnaphthalene	ND		0.0052	0.030

Surrogate	%Rec	Acceptance Limits
2-Fluorophenol	41	10 - 120
Phenol-d5	29	10 - 102
Nitrobenzene-d5	100	34 - 146
2-Fluorobiphenyl	89	35 - 143
2,4,6-Tribromophenol	72	29 - 151
Terphenyl-d14	90	35 - 166

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Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070121

Lab Sample ID: 580-6583-21
Client Matrix: Water

Date Sampled: 07/17/2007 0000
Date Received: 07/19/2007 1510

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method: 8270C Analysis Batch: 580-20992 Instrument ID: SEA040
Preparation: 3510C Prep Batch: 580-20823 Lab File ID: ak010396.D
Dilution: 1.0 Initial Weight/Volume: 1000 mL
Date Analyzed: 07/22/2007 2149 Final Weight/Volume: 1 mL
Date Prepared: 07/20/2007 0932 Injection Volume:

Analyte	Result (ug/L)	Qualifier	MDL	RL
Phenol	ND		0.0074	0.30
Bis(2-chloroethyl)ether	ND		0.018	0.20
2-Chlorophenol	ND		0.022	0.20
1,3-Dichlorobenzene	ND		0.011	0.20
1,4-Dichlorobenzene	ND		0.012	0.20
Benzyl alcohol	ND		0.013	0.20
1,2-Dichlorobenzene	ND		0.011	0.20
2-Methylphenol	ND		0.038	0.20
Bis(2-chloroisopropyl) ether	ND		0.0088	0.20
3 & 4 Methylphenol	ND		0.017	0.40
N-Nitrosodi-n-propylamine	ND		0.020	0.20
Hexachloroethane	ND		0.013	0.30
Nitrobenzene	ND		0.0075	0.20
Isophorone	ND		0.011	0.20
2-Nitrophenol	ND		0.021	0.20
2,4-Dimethylphenol	ND		0.018	1.0
Benzoic acid	ND		0.021	1.0
Bis(2-chloroethoxy)methane	ND		0.0095	0.20
2,4-Dichlorophenol	ND		0.013	0.20
1,2,4-Trichlorobenzene	ND		0.010	0.20
Naphthalene	0.031	J	0.0014	0.20
4-Chloroaniline	ND	J	0.019	0.20
Hexachlorobutadiene	ND		0.016	0.30
4-Chloro-3-methylphenol	ND		0.014	0.20
2-Methylnaphthalene	0.078	J	0.0055	0.10
Hexachlorocyclopentadiene	ND		0.012	1.0
2,4,6-Trichlorophenol	ND		0.010	0.30
2,4,5-Trichlorophenol	0.014	J	0.0085	0.20
2-Chloronaphthalene	ND		0.0030	0.030
2-Nitroaniline	ND		0.011	0.20
Dimethyl phthalate	ND		0.012	0.20
Acenaphthylene	ND		0.0026	0.040
2,6-Dinitrotoluene	ND		0.014	0.20
3-Nitroaniline	ND		0.056	0.20
Acenaphthene	0.011	J	0.0012	0.050
2,4-Dinitrophenol	ND		0.058	2.5
4-Nitrophenol	ND		0.16	1.0
Dibenzofuran	ND		0.0098	0.20
2,4-Dinitrotoluene	ND		0.012	0.20
Diethyl phthalate	0.013	J	0.0093	0.20
4-Chlorophenyl phenyl ether	ND		0.012	0.20
Fluorene	ND		0.0042	0.030
4-Nitroaniline	ND		0.018	0.30
4,6-Dinitro-2-methylphenol	ND		0.053	2.0

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Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070121

Lab Sample ID: 580-6583-21

Date Sampled: 07/17/2007 0000

Client Matrix: Water

Date Received: 07/19/2007 1510

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 580-20992	Instrument ID: SEA040
Preparation:	3510C	Prep Batch: 580-20823	Lab File ID: ak010396.D
Dilution:	1.0		Initial Weight/Volume: 1000 mL
Date Analyzed:	07/22/2007 2149		Final Weight/Volume: 1 mL
Date Prepared:	07/20/2007 0932		Injection Volume:

Analyte	Result (ug/L)	Qualifier	MDL	RL
N-Nitrosodiphenylamine	ND		0.013	0.20
4-Bromophenyl phenyl ether	ND		0.010	0.20
Hexachlorobenzene	ND		0.0082	0.20
Pentachlorophenol	1.5		0.013	0.35
Phenanthrene	ND		0.0024	0.040
Anthracene	ND		0.0019	0.020
Di-n-butyl phthalate	0.024	JF	0.0088	0.20
Fluoranthene	ND		0.0027	0.025
Pyrene	ND		0.0020	0.030
Butyl benzyl phthalate	0.040	JF	0.024	0.30
3,3'-Dichlorobenzidine	ND		0.16	1.0
Benzo[a]anthracene	ND		0.0033	0.030
Chrysene	ND		0.0045	0.020
Bis(2-ethylhexyl) phthalate	1.6 U	B/m	0.032	1.5
Di-n-octyl phthalate	ND		0.018	0.20
Benzo[fluoranthene]	ND		0.0055	0.040
Benzo[a]pyrene	ND		0.0027	0.020
Indeno[1,2,3-cd]pyrene	ND		0.0051	0.030
Dibenz(a,h)anthracene	ND		0.0046	0.030
Benzo[g,h,i]perylene	ND		0.0060	0.030
Carbazole	ND		0.0090	0.20
1-Methylnaphthalene	0.14		0.0052	0.030

Surrogate	%Rec	Acceptance Limits
2-Fluorophenol	41	10 - 120
Phenol-d5	34	10 - 102
Nitrobenzene-d5	111	34 - 146
2-Fluorobiphenyl	93	35 - 143
2,4,6-Tribromophenol	74	29 - 151
Terphenyl-d14	98	35 - 166

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Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070122

Lab Sample ID: 580-6583-22
 Client Matrix: Water

Date Sampled: 07/17/2007 0000
 Date Received: 07/19/2007 1510

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method: 8270C Analysis Batch: 580-21040 Instrument ID: SEA023
 Preparation: 3510C Prep Batch: 580-20828 Lab File ID: HP04993.D
 Dilution: 1.0 Initial Weight/Volume: 1030 mL
 Date Analyzed: 07/22/2007 1953 Final Weight/Volume: 1 mL
 Date Prepared: 07/20/2007 0946 Injection Volume:

Analyte	Result (ug/L)	Qualifier	MDL	RL
Phenol	ND		0.0072	0.29
Bis(2-chloroethyl)ether	ND		0.017	0.19
2-Chlorophenol	ND		0.021	0.19
1,3-Dichlorobenzene	ND		0.011	0.19
1,4-Dichlorobenzene	ND		0.012	0.19
Benzyl alcohol	ND		0.013	0.19
1,2-Dichlorobenzene	ND		0.011	0.19
2-Methylphenol	ND		0.037	0.19
Bis(2-chloroisopropyl) ether	ND		0.0085	0.19
3 & 4 Methylphenol	ND		0.017	0.39
N-Nitrosodi-n-propylamine	ND		0.019	0.19
Hexachloroethane	ND		0.013	0.29
Nitrobenzene	ND		0.0073	0.19
Isophorone	ND		0.011	0.19
2-Nitrophenol	ND		0.020	0.19
2,4-Dimethylphenol	ND		0.017	0.97
Benzoic acid	ND		0.020	0.97
Bis(2-chloroethoxy)methane	ND		0.0092	0.19
2,4-Dichlorophenol	ND		0.013	0.19
1,2,4-Trichlorobenzene	ND		0.0097	0.19
Naphthalene	0.011	J	0.0014	0.19
4-Chloroaniline	ND		0.018	0.19
Hexachlorobutadiene	ND		0.016	0.29
4-Chloro-3-methylphenol	ND		0.014	0.19
2-Methylnaphthalene	ND		0.0053	0.097
Hexachlorocyclopentadiene	ND		0.012	0.97
2,4,6-Trichlorophenol	ND		0.0097	0.29
2,4,5-Trichlorophenol	ND		0.0083	0.19
2-Chloronaphthalene	ND		0.0029	0.029
2-Nitroaniline	ND		0.011	0.19
Dimethyl phthalate	0.057	J	0.012	0.19
Acenaphthylene	ND		0.0025	0.039
2,6-Dinitrotoluene	ND		0.014	0.19
3-Nitroaniline	ND	Am	0.054	0.19
Acenaphthene	ND		0.0012	0.049
2,4-Dinitrophenol	ND		0.056	2.4
4-Nitrophenol	ND		0.16	0.97
Dibenzofuran	ND		0.0095	0.19
2,4-Dinitrotoluene	ND		0.012	0.19
Diethyl phthalate	0.060	J	0.0090	0.19
4-Chlorophenyl phenyl ether	ND		0.012	0.19
Fluorene	ND		0.0041	0.029
4-Nitroaniline	ND		0.017	0.29
4,6-Dinitro-2-methylphenol	ND		0.051	1.9



MW 8607

Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070122

Lab Sample ID: 580-6583-22

Date Sampled: 07/17/2007 0000

Client Matrix: Water

Date Received: 07/19/2007 1510

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 580-21040	Instrument ID: SEA023
Preparation:	3510C	Prep Batch: 580-20828	Lab File ID: HP04993.D
Dilution:	1.0		Initial Weight/Volume: 1030 mL
Date Analyzed:	07/22/2007 1953		Final Weight/Volume: 1 mL
Date Prepared:	07/20/2007 0946		Injection Volume:

Analyte	Result (ug/L)	Qualifier	MDL	RL
N-Nitrosodiphenylamine	ND	<i>mu</i>	0.013	0.19
4-Bromophenyl phenyl ether	ND		0.0097	0.19
Hexachlorobenzene	ND		0.0080	0.19
Pentachlorophenol	ND		0.013	0.34
Phenanthrene	ND		0.0023	0.039
Anthracene	ND		0.0018	0.019
Di-n-butyl phthalate	0.078	J	0.0085	0.19
Fluoranthene	ND		0.0026	0.024
Pyrene	ND		0.0019	0.029
Butyl benzyl phthalate	0.072	J	0.023	0.29
3,3'-Dichlorobenzidine	ND		0.16	0.97
Benzo[a]anthracene	ND		0.0032	0.029
Chrysene	ND		0.0044	0.019
Bis(2-ethylhexyl) phthalate	85	<i>J</i>	0.031	1.5
Di-n-octyl phthalate	ND		0.017	0.19
Benzofluoranthene	ND		0.0053	0.039
Benzo[a]pyrene	ND		0.0026	0.019
Indeno[1,2,3-cd]pyrene	ND		0.0050	0.029
Dibenz(a,h)anthracene	ND		0.0045	0.029
Benzo[g,h,i]perylene	ND		0.0058	0.029
Carbazole	ND		0.0087	0.19
1-Methylnaphthalene	ND		0.0050	0.029

Surrogate	%Rec	Acceptance Limits
2-Fluorophenol	34	10 - 120
Phenol-d5	27	10 - 102
Nitrobenzene-d5	115	34 - 146
2-Fluorobiphenyl	158	35 - 143
2,4,6-Tribromophenol	88	29 - 151
Terphenyl-d14	711	35 - 166

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8/6/07

Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070123

Lab Sample ID: 580-6583-23

Date Sampled: 07/17/2007 0000

Client Matrix: Water

Date Received: 07/19/2007 1510

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 580-21040	Instrument ID: SEA023
Preparation:	3510C	Prep Batch: 580-20828	Lab File ID: HP04994.D
Dilution:	1.0		Initial Weight/Volume: 990 mL
Date Analyzed:	07/22/2007 2021		Final Weight/Volume: 1 mL
Date Prepared:	07/20/2007 0946		Injection Volume:

Analyte	Result (ug/L)	Qualifier	MDL	RL
Phenol	ND		0.0075	0.30
Bis(2-chloroethyl)ether	ND		0.018	0.20
2-Chlorophenol	ND		0.022	0.20
1,3-Dichlorobenzene	ND		0.011	0.20
1,4-Dichlorobenzene	ND		0.012	0.20
Benzyl alcohol	ND		0.013	0.20
1,2-Dichlorobenzene	ND		0.011	0.20
2-Methylphenol	ND		0.038	0.20
Bis(2-chloroisopropyl) ether	ND		0.0089	0.20
3 & 4 Methylphenol	ND		0.017	0.40
N-Nitrosodi-n-propylamine	ND		0.020	0.20
Hexachloroethane	ND		0.013	0.30
Nitrobenzene	ND		0.0076	0.20
Isophorone	ND		0.011	0.20
2-Nitrophenol	ND		0.021	0.20
2,4-Dimethylphenol	ND		0.018	1.0
Benzoic acid	ND		0.021	1.0
Bis(2-chloroethoxy)methane	ND		0.0096	0.20
2,4-Dichlorophenol	ND		0.013	0.20
1,2,4-Trichlorobenzene	ND		0.010	0.20
Naphthalene	ND		0.0014	0.20
4-Chloroaniline	ND		0.019	0.20
Hexachlorobutadiene	ND		0.016	0.30
4-Chloro-3-methylphenol	ND		0.014	0.20
2-Methylnaphthalene	ND		0.0056	0.10
Hexachlorocyclopentadiene	ND		0.012	1.0
2,4,6-Trichlorophenol	ND		0.010	0.30
2,4,5-Trichlorophenol	ND		0.0086	0.20
2-Chloronaphthalene	ND		0.0030	0.030
2-Nitroaniline	ND		0.011	0.20
Dimethyl phthalate	ND		0.012	0.20
Acenaphthylene	ND		0.0026	0.040
2,6-Dinitrotoluene	ND		0.014	0.20
3-Nitroaniline	ND	M	0.057	0.20
Acenaphthene	ND		0.0012	0.051
2,4-Dinitrophenol	ND		0.059	2.5
4-Nitrophenol	ND		0.16	1.0
Dibenzofuran	ND		0.0099	0.20
2,4-Dinitrotoluene	ND		0.012	0.20
Diethyl phthalate	ND		0.0094	0.20
4-Chlorophenyl phenyl ether	ND		0.012	0.20
Fluorene	ND		0.0042	0.030
4-Nitroaniline	ND		0.018	0.30
4,6-Dinitro-2-methylphenol	ND		0.054	2.0

J

MW 8/6/07

Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070123

Lab Sample ID: 580-6583-23

Date Sampled: 07/17/2007 0000

Client Matrix: Water

Date Received: 07/19/2007 1510

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method: 8270C	Analysis Batch: 580-21040	Instrument ID: SEA023
Preparation: 3510C	Prep Batch: 580-20828	Lab File ID: HP04994.D
Dilution: 1.0		Initial Weight/Volume: 990 mL
Date Analyzed: 07/22/2007 2021		Final Weight/Volume: 1 mL
Date Prepared: 07/20/2007 0946		Injection Volume:

Analyte	Result (ug/L)	Qualifier	MDL	RL
N-Nitrosodiphenylamine	ND	<i>me</i>	0.013	0.20
4-Bromophenyl phenyl ether	ND		0.010	0.20
Hexachlorobenzene	ND		0.0083	0.20
Pentachlorophenol	ND		0.013	0.35
Phenanthrene	ND		0.0024	0.040
Anthracene	ND		0.0019	0.020
Di-n-butyl phthalate	ND		0.0089	0.20
Fluoranthene	ND		0.0027	0.025
Pyrene	ND		0.0020	0.030
Butyl benzyl phthalate	0.060	J	0.024	0.30
3,3'-Dichlorobenzidine	ND		0.16	1.0
Benzo[a]anthracene	ND		0.0033	0.030
Chrysene	ND		0.0045	0.020
Bis(2-ethylhexyl) phthalate	9.7	J	0.032	1.5
Di-n-octyl phthalate	ND		0.018	0.20
Benzofluoranthene	ND		0.0056	0.040
Benzo[a]pyrene	ND		0.0027	0.020
Indeno[1,2,3-cd]pyrene	ND		0.0052	0.030
Dibenz(a,h)anthracene	ND		0.0046	0.030
Benzo[g,h,i]perylene	ND		0.0061	0.030
Carbazole	ND		0.0091	0.20
1-Methylnaphthalene	ND		0.0053	0.030

Surrogate	%Rec	Acceptance Limits
2-Fluorophenol	21	10 - 120
Phenol-d5	22	10 - 102
Nitrobenzene-d5	78	34 - 146
2-Fluorobiphenyl	147	35 - 143
2,4,6-Tribromophenol	85	29 - 151
Terphenyl-d14	777	35 - 166

MW
8-6-07

Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070124

Lab Sample ID: 580-6583-24
Client Matrix: Water

Date Sampled: 07/17/2007 0000
Date Received: 07/19/2007 1510

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 580-21040	Instrument ID: SEA023
Preparation:	3510C	Prep Batch: 580-20828	Lab File ID: HP04995.D
Dilution:	1.0		Initial Weight/Volume: 1010 mL
Date Analyzed:	07/22/2007 2048		Final Weight/Volume: 1 mL
Date Prepared:	07/20/2007 0946		Injection Volume:

Analyte	Result (ug/L)	Qualifier	MDL	RL
Phenol	ND		0.0073	0.30
Bis(2-chloroethyl)ether	ND		0.018	0.20
2-Chlorophenol	ND		0.022	0.20
1,3-Dichlorobenzene	ND		0.011	0.20
1,4-Dichlorobenzene	ND		0.012	0.20
Benzyl alcohol	ND		0.013	0.20
1,2-Dichlorobenzene	ND		0.011	0.20
2-Methylphenol	ND		0.038	0.20
Bis(2-chloroisopropyl) ether	ND		0.0087	0.20
3 & 4 Methylphenol	ND		0.017	0.40
N-Nitrosodi-n-propylamine	ND		0.020	0.20
Hexachloroethane	ND		0.013	0.30
Nitrobenzene	ND		0.0074	0.20
Isophorone	ND		0.011	0.20
2-Nitrophenol	ND		0.021	0.20
2,4-Dimethylphenol	ND		0.018	0.99
Benzoic acid	ND		0.021	0.99
Bis(2-chloroethoxy)methane	ND		0.0094	0.20
2,4-Dichlorophenol	ND		0.013	0.20
1,2,4-Trichlorobenzene	ND		0.0099	0.20
Naphthalene	ND		0.0014	0.20
4-Chloroaniline	ND		0.019	0.20
Hexachlorobutadiene	ND		0.016	0.30
4-Chloro-3-methylphenol	ND		0.014	0.20
2-Methylnaphthalene	ND		0.0054	0.099
Hexachlorocyclopentadiene	ND		0.012	0.99
2,4,6-Trichlorophenol	ND		0.0099	0.30
2,4,5-Trichlorophenol	ND		0.0084	0.20
2-Chloronaphthalene	ND		0.0030	0.030
2-Nitroaniline	ND		0.011	0.20
Dimethyl phthalate	ND		0.012	0.20
Acenaphthylene	ND		0.0026	0.040
2,6-Dinitrotoluene	ND		0.014	0.20
3-Nitroaniline	ND	<i>mm</i>	0.055	0.20
Acenaphthene	ND		0.0012	0.050
2,4-Dinitrophenol	ND		0.057	2.5
4-Nitrophenol	ND		0.16	0.99
Dibenzofuran	ND		0.0097	0.20
2,4-Dinitrotoluene	ND		0.012	0.20
Diethyl phthalate	ND		0.0092	0.20
4-Chlorophenyl phenyl ether	ND		0.012	0.20
Fluorene	ND		0.0042	0.030
4-Nitroaniline	ND		0.018	0.30
4,6-Dinitro-2-methylphenol	ND		0.052	2.0

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Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070124

Lab Sample ID: 580-6583-24

Date Sampled: 07/17/2007 0000

Client Matrix: Water

Date Received: 07/19/2007 1510

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 580-21040	Instrument ID: SEA023
Preparation:	3510C	Prep Batch: 580-20828	Lab File ID: HP04995.D
Dilution:	1.0		Initial Weight/Volume: 1010 mL
Date Analyzed:	07/22/2007 2048		Final Weight/Volume: 1 mL
Date Prepared:	07/20/2007 0946		Injection Volume:

Analyte	Result (ug/L)	Qualifier	MDL	RL
N-Nitrosodiphenylamine	ND	<i>mm</i>	0.013	0.20
4-Bromophenyl phenyl ether	ND		0.0099	0.20
Hexachlorobenzene	ND		0.0081	0.20
Pentachlorophenol	ND		0.013	0.35
Phenanthrene	ND		0.0024	0.040
Anthracene	ND		0.0019	0.020
Di-n-butyl phthalate	0.11	J	0.0087	0.20
Fluoranthene	ND		0.0027	0.025
Pyrene	ND		0.0020	0.030
Butyl benzyl phthalate	0.17	J	0.024	0.30
3,3'-Dichlorobenzidine	ND		0.16	0.99
Benzo[a]anthracene	ND		0.0033	0.030
Chrysene	ND		0.0045	0.020
Bis(2-ethylhexyl) phthalate	2.8 <i>U</i>	<i>mm</i>	0.032	1.5
Di-n-octyl phthalate	ND		0.018	0.20
Benzofluoranthene	ND		0.0054	0.040
Benzo[a]pyrene	ND		0.0027	0.020
Indeno[1,2,3-cd]pyrene	ND		0.0050	0.030
Dibenz(a,h)anthracene	ND		0.0046	0.030
Benzo[g,h,i]perylene	ND		0.0059	0.030
Carbazole	ND		0.0089	0.20
1-Methylnaphthalene	ND		0.0051	0.030

Surrogate	%Rec	Acceptance Limits
2-Fluorophenol	33	10 - 120
Phenol-d5	24	10 - 102
Nitrobenzene-d5	71	34 - 146
2-Fluorobiphenyl	82	35 - 143
2,4,6-Tribromophenol	79	29 - 151
Terphenyl-d14	106	35 - 166

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8/6/07

Analytical Data

Job Number: 580-6583-1

Client: Environmental Quality Mgt., Inc.

Client Sample ID: 07070125

Lab Sample ID: 580-6583-25

Client Matrix: Water

Date Sampled: 07/17/2007 0000

Date Received: 07/19/2007 1510

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 580-21040	Instrument ID: SEA023
Preparation:	3510C	Prep Batch: 580-20828	Lab File ID: HP04996.D
Dilution:	1.0		Initial Weight/Volume: 1020 mL
Date Analyzed:	07/22/2007 2115		Final Weight/Volume: 1 mL
Date Prepared:	07/20/2007 0946		Injection Volume:

Analyte	Result (ug/L)	Qualifier	MDL	RL
Phenol	ND		0.0073	0.29
Bis(2-chloroethyl)ether	ND		0.018	0.20
2-Chlorophenol	ND		0.022	0.20
1,3-Dichlorobenzene	ND		0.011	0.20
1,4-Dichlorobenzene	ND		0.012	0.20
Benzyl alcohol	ND		0.013	0.20
1,2-Dichlorobenzene	ND		0.011	0.20
2-Methylphenol	ND		0.037	0.20
Bis(2-chloroisopropyl) ether	ND		0.0086	0.20
3 & 4 Methylphenol	ND		0.017	0.39
N-Nitrosodi-n-propylamine	ND		0.020	0.20
Hexachloroethane	ND		0.013	0.29
Nitrobenzene	ND		0.0074	0.20
Isophorone	ND		0.011	0.20
2-Nitrophenol	ND		0.021	0.20
2,4-Dimethylphenol	ND		0.018	0.98
Benzoic acid	ND		0.021	0.98
Bis(2-chloroethoxy)methane	ND		0.0093	0.20
2,4-Dichlorophenol	ND		0.013	0.20
1,2,4-Trichlorobenzene	ND		0.0098	0.20
Naphthalene	ND		0.0014	0.20
4-Chloroaniline	ND		0.019	0.20
Hexachlorobutadiene	ND		0.016	0.29
4-Chloro-3-methylphenol	ND		0.014	0.20
2-Methylnaphthalene	ND		0.0054	0.098
Hexachlorocyclopentadiene	ND		0.012	0.98
2,4,6-Trichlorophenol	ND		0.0098	0.29
2,4,5-Trichlorophenol	ND		0.0083	0.20
2-Chloronaphthalene	ND		0.0029	0.029
2-Nitroaniline	ND		0.011	0.20
Dimethyl phthalate	ND		0.012	0.20
Acenaphthylene	ND		0.0025	0.039
2,6-Dinitrotoluene	ND		0.014	0.20
3-Nitroaniline	ND	*	0.055	0.20
Acenaphthene	ND		0.0012	0.049
2,4-Dinitrophenol	ND		0.057	2.5
4-Nitrophenol	ND		0.16	0.98
Dibenzofuran	ND		0.0096	0.20
2,4-Dinitrotoluene	ND		0.012	0.20
Diethyl phthalate	ND		0.0091	0.20
4-Chlorophenyl phenyl ether	ND		0.012	0.20
Fluorene	ND		0.0041	0.029
4-Nitroaniline	ND		0.018	0.29
4,6-Dinitro-2-methylphenol	ND		0.052	2.0

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Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070125

Lab Sample ID: 580-6583-25

Date Sampled: 07/17/2007 0000

Client Matrix: Water

Date Received: 07/19/2007 1510

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 580-21040	Instrument ID: SEA023
Preparation:	3510C	Prep Batch: 580-20828	Lab File ID: HP04996.D
Dilution:	1.0		Initial Weight/Volume: 1020 mL
Date Analyzed:	07/22/2007 2115		Final Weight/Volume: 1 mL
Date Prepared:	07/20/2007 0946		Injection Volume:

Analyte	Result (ug/L)	Qualifier	MDL	RL
N-Nitrosodiphenylamine	ND	*	0.013	0.20
4-Bromophenyl phenyl ether	ND		0.0098	0.20
Hexachlorobenzene	ND		0.0080	0.20
Pentachlorophenol	11		0.013	0.34
Phenanthrene	ND		0.0024	0.039
Anthracene	ND		0.0019	0.020
Di-n-butyl phthalate	ND		0.0086	0.20
Fluoranthene	ND		0.0026	0.025
Pyrene	ND		0.0020	0.029
Butyl benzyl phthalate	0.069	J	0.024	0.29
3,3'-Dichlorobenzidine	ND		0.16	0.98
Benzo[a]anthracene	ND		0.0032	0.029
Chrysene	ND		0.0044	0.020
Bis(2-ethylhexyl) phthalate	2.2		0.031	1.5
Di-n-octyl phthalate	ND		0.018	0.20
Benzofluoranthene	ND		0.0054	0.039
Benzo[a]pyrene	ND		0.0026	0.020
Indeno[1,2,3-cd]pyrene	ND		0.0050	0.029
Dibenz(a,h)anthracene	ND		0.0045	0.029
Benzo[g,h,i]perylene	ND		0.0059	0.029
Carbazole	ND		0.0088	0.20
1-Methylnaphthalene	ND		0.0051	0.029

Surrogate	%Rec		Acceptance Limits
2-Fluorophenol	0	IX	10 - 120
Phenol-d5	4	IX	10 - 102
Nitrobenzene-d5	0	IX	34 - 146
2-Fluorobiphenyl	33	IX	35 - 143
2,4,6-Tribromophenol	83		29 - 151
Terphenyl-d14	111		35 - 166

MW
2607

Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070126

Lab Sample ID: 580-6583-26
Client Matrix: Water

Date Sampled: 07/18/2007 0000
Date Received: 07/19/2007 1510

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 580-21040	Instrument ID:	SEA023
Preparation:	3510C	Prep Batch: 580-20828	Lab File ID:	HP04997.D
Dilution:	1.0		Initial Weight/Volume:	1050 mL
Date Analyzed:	07/22/2007 2143		Final Weight/Volume:	1 mL
Date Prepared:	07/20/2007 0946		Injection Volume:	

Analyte	Result (ug/L)	Qualifier	MDL	RL
Phenol	ND		0.0070	0.29
Bis(2-chloroethyl)ether	ND		0.017	0.19
2-Chlorophenol	ND		0.021	0.19
1,3-Dichlorobenzene	ND		0.010	0.19
1,4-Dichlorobenzene	ND		0.011	0.19
Benzyl alcohol	ND		0.012	0.19
1,2-Dichlorobenzene	ND		0.010	0.19
2-Methylphenol	ND		0.036	0.19
Bis(2-chloroisopropyl) ether	ND		0.0084	0.19
3 & 4 Methylphenol	ND		0.016	0.38
N-Nitrosodi-n-propylamine	ND		0.019	0.19
Hexachloroethane	ND		0.012	0.29
Nitrobenzene	ND		0.0071	0.19
Isophorone	ND		0.010	0.19
2-Nitrophenol	ND		0.020	0.19
2,4-Dimethylphenol	ND		0.017	0.95
Benzoic acid	ND		0.020	0.95
Bis(2-chloroethoxy)methane	ND		0.0090	0.19
2,4-Dichlorophenol	ND		0.012	0.19
1,2,4-Trichlorobenzene	ND		0.0095	0.19
Naphthalene	ND		0.0013	0.19
4-Chloroaniline	ND		0.018	0.19
Hexachlorobutadiene	ND		0.015	0.29
4-Chloro-3-methylphenol	ND		0.013	0.19
2-Methylnaphthalene	ND		0.0052	0.095
Hexachlorocyclopentadiene	ND		0.011	0.95
2,4,6-Trichlorophenol	ND		0.0095	0.29
2,4,5-Trichlorophenol	ND		0.0081	0.19
2-Chloronaphthalene	ND		0.0029	0.029
2-Nitroaniline	ND		0.010	0.19
Dimethyl phthalate	ND		0.011	0.19
Acenaphthylene	ND		0.0025	0.038
2,6-Dinitrotoluene	ND		0.013	0.19
3-Nitroaniline	ND	*	0.053	0.19
Acenaphthene	ND		0.0011	0.048
2,4-Dinitrophenol	ND		0.055	2.4
4-Nitrophenol	ND		0.15	0.95
Dibenzofuran	0.051	J	0.0093	0.19
2,4-Dinitrotoluene	ND		0.011	0.19
Diethyl phthalate	ND		0.0089	0.19
4-Chlorophenyl phenyl ether	ND		0.011	0.19
Fluorene	0.032		0.0040	0.029
4-Nitroaniline	ND		0.017	0.29
4,6-Dinitro-2-methylphenol	ND		0.050	1.9

Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070126

Lab Sample ID: 580-6583-26

Date Sampled: 07/18/2007 0000

Client Matrix: Water

Date Received: 07/19/2007 1510

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 580-21040	Instrument ID: SEA023
Preparation:	3510C	Prep Batch: 580-20828	Lab File ID: HP04997.D
Dilution:	1.0		Initial Weight/Volume: 1050 mL
Date Analyzed:	07/22/2007 2143		Final Weight/Volume: 1 mL
Date Prepared:	07/20/2007 0946		Injection Volume:

Analyte	Result (ug/L)	Qualifier	MDL	RL
N-Nitrosodiphenylamine	ND	*	0.012	0.19 UJ
4-Bromophenyl phenyl ether	0.063	J	0.0095	0.19
Hexachlorobenzene	0.088	J	0.0078	0.19
Pentachlorophenol	ND		0.012	0.33 UJ
Phenanthrene	0.039		0.0023	0.038
Anthracene	0.043		0.0018	0.019
Di-n-butyl phthalate	ND		0.0084	0.19 UJ
Fluoranthene	ND		0.0026	0.024 UJ
Pyrene	ND		0.0019	0.029 UJ
Butyl benzyl phthalate	0.072	J	0.023	0.29
3,3'-Dichlorobenzidine	ND		0.15	0.95 UJ
Benzo[a]anthracene	ND		0.0031	0.029 UJ
Chrysene	ND		0.0043	0.019 UJ
Bis(2-ethylhexyl) phthalate	0.97	J	0.030	1.4
Di-n-octyl phthalate	0.028	J	0.017	0.19 UJ
Benzo[fluoranthene]	ND		0.0052	0.038
Benzo[a]pyrene	ND		0.0026	0.019
Indeno[1,2,3-cd]pyrene	ND		0.0049	0.029
Dibenz(a,h)anthracene	ND		0.0044	0.029
Benzo[g,h,i]perylene	ND		0.0057	0.029
Carbazole	ND		0.0086	0.19
1-Methylnaphthalene	ND		0.0050	0.029

Surrogate	%Rec		Acceptance Limits
2-Fluorophenol	9	IX	10 - 120
Phenol-d5	12		10 - 102
Nitrobenzene-d5	25	IX	34 - 146
2-Fluorobiphenyl	57		35 - 143
2,4,6-Tribromophenol	94		29 - 151
Terphenyl-d14	116		35 - 166

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Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070127

Lab Sample ID: 580-6583-27

Date Sampled: 07/18/2007 0000

Client Matrix: Water

Date Received: 07/19/2007 1510

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 580-21040	Instrument ID:	SEA023
Preparation:	3510C	Prep Batch: 580-20828	Lab File ID:	HP04998.D
Dilution:	1.0		Initial Weight/Volume:	1030 mL
Date Analyzed:	07/22/2007 2210		Final Weight/Volume:	1 mL
Date Prepared:	07/20/2007 0946		Injection Volume:	

Analyte	Result (ug/L)	Qualifier	MDL	RL
Phenol	ND		0.0072	0.29
Bis(2-chloroethyl)ether	ND		0.017	0.19
2-Chlorophenol	ND		0.021	0.19
1,3-Dichlorobenzene	ND		0.011	0.19
1,4-Dichlorobenzene	ND		0.012	0.19
Benzyl alcohol	ND		0.013	0.19
1,2-Dichlorobenzene	ND		0.011	0.19
2-Methylphenol	ND		0.037	0.19
Bis(2-chloroisopropyl) ether	ND		0.0085	0.19
3 & 4 Methylphenol	ND		0.017	0.39
N-Nitrosodi-n-propylamine	ND		0.019	0.19
Hexachloroethane	ND		0.013	0.29
Nitrobenzene	ND		0.0073	0.19
Isophorone	ND		0.011	0.19
2-Nitrophenol	ND		0.020	0.19
2,4-Dimethylphenol	ND		0.017	0.97
Benzoic acid	ND		0.020	0.97
Bis(2-chloroethoxy)methane	ND		0.0092	0.19
2,4-Dichlorophenol	ND		0.013	0.19
1,2,4-Trichlorobenzene	ND		0.0097	0.19
Naphthalene	ND		0.0014	0.19
4-Chloroaniline	ND		0.018	0.19
Hexachlorobutadiene	ND		0.016	0.29
4-Chloro-3-methylphenol	ND		0.014	0.19
2-Methylnaphthalene	ND		0.0053	0.097
Hexachlorocyclopentadiene	ND		0.012	0.97
2,4,6-Trichlorophenol	ND		0.0097	0.29
2,4,5-Trichlorophenol	0.047	J	0.0083	0.19
2-Chloronaphthalene	ND		0.0029	0.029
2-Nitroaniline	ND		0.011	0.19
Dimethyl phthalate	ND		0.012	0.19
Acenaphthylene	ND		0.0025	0.039
2,6-Dinitrotoluene	ND		0.014	0.19
3-Nitroaniline	ND	*	0.054	0.19
Acenaphthene	ND		0.0012	0.049
2,4-Dinitrophenol	ND		0.056	2.4
4-Nitrophenol	ND		0.16	0.97
Dibenzofuran	ND		0.0095	0.19
2,4-Dinitrotoluene	ND		0.012	0.19
Diethyl phthalate	ND		0.0090	0.19
4-Chlorophenyl phenyl ether	ND		0.012	0.19
Fluorene	ND		0.0041	0.029
4-Nitroaniline	ND		0.017	0.29
4,6-Dinitro-2-methylphenol	ND		0.051	1.9

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Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070127

Lab Sample ID: 580-6583-27

Date Sampled: 07/18/2007 0000

Client Matrix: Water

Date Received: 07/19/2007 1510

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 580-21040	Instrument ID: SEA023
Preparation:	3510C	Prep Batch: 580-20828	Lab File ID: HP04998.D
Dilution:	1.0		Initial Weight/Volume: 1030 mL
Date Analyzed:	07/22/2007 2210		Final Weight/Volume: 1 mL
Date Prepared:	07/20/2007 0946		Injection Volume:

Analyte	Result (ug/L)	Qualifier	MDL	RL	
N-Nitrosodiphenylamine	ND	*	0.013	0.19	UT
4-Bromophenyl phenyl ether	ND		0.0097	0.19	↓
Hexachlorobenzene	ND		0.0080	0.19	↓
Pentachlorophenol	72		0.013	0.34	↓
Phenanthrene	0.086		0.0023	0.039	UT
Anthracene	ND		0.0018	0.019	UT
Di-n-butyl phthalate	0.076	J	0.0085	0.19	
Fluoranthene	0.070		0.0026	0.024	
Pyrene	0.061		0.0019	0.029	
Butyl benzyl phthalate	0.11	J	0.023	0.29	UT
3,3'-Dichlorobenzidine	ND		0.16	0.97	UT
Benzo[a]anthracene	ND		0.0032	0.029	↓
Chrysene	ND		0.0044	0.019	↓
Bis(2-ethylhexyl) phthalate	1.5		0.031	1.5	
Di-n-octyl phthalate	0.054	J	0.017	0.19	UT
Benzo[fluoranthene]	ND		0.0053	0.039	UT
Benzo[a]pyrene	ND		0.0026	0.019	
Indeno[1,2,3-cd]pyrene	ND		0.0050	0.029	
Dibenz(a,h)anthracene	ND		0.0045	0.029	
Benzo[g,h,i]perylene	ND		0.0058	0.029	
Carbazole	ND		0.0087	0.19	↓
1-Methylnaphthalene	ND		0.0050	0.029	↓

Surrogate	%Rec		Acceptance Limits
2-Fluorophenol	0	IX	10 - 120
Phenol-d5	0	IX	10 - 102
Nitrobenzene-d5	6	IX	34 - 146
2-Fluorobiphenyl	20	IX	35 - 143
2,4,6-Tribromophenol	58		29 - 151
Terphenyl-d14	84		35 - 166

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8/6/07

Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070128

Lab Sample ID: 580-6583-28

Date Sampled: 07/18/2007 0000

Client Matrix: Water

Date Received: 07/19/2007 1510

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method: 8270C Analysis Batch: 580-21040 Instrument ID: SEA023
 Preparation: 3510C Prep Batch: 580-20828 Lab File ID: HP04999.D
 Dilution: 1.0 Initial Weight/Volume: 1030 mL
 Date Analyzed: 07/22/2007 2238 Final Weight/Volume: 1 mL
 Date Prepared: 07/20/2007 0946 Injection Volume:

Analyte	Result (ug/L)	Qualifier	MDL	RL
Phenol	ND		0.0072	0.29
Bis(2-chloroethyl)ether	ND		0.017	0.19
2-Chlorophenol	ND		0.021	0.19
1,3-Dichlorobenzene	ND		0.011	0.19
1,4-Dichlorobenzene	ND		0.012	0.19
Benzyl alcohol	ND		0.013	0.19
1,2-Dichlorobenzene	ND		0.011	0.19
2-Methylphenol	ND		0.037	0.19
Bis(2-chloroisopropyl) ether	ND		0.0085	0.19
3 & 4 Methylphenol	ND		0.017	0.39
N-Nitrosodi-n-propylamine	ND		0.019	0.19
Hexachloroethane	ND		0.013	0.29
Nitrobenzene	ND		0.0073	0.19
Isophorone	ND		0.011	0.19
2-Nitrophenol	ND		0.020	0.19
2,4-Dimethylphenol	ND		0.017	0.97
Benzoic acid	ND		0.020	0.97
Bis(2-chloroethoxy)methane	ND		0.0092	0.19
2,4-Dichlorophenol	ND		0.013	0.19
1,2,4-Trichlorobenzene	ND		0.0097	0.19
Naphthalene	ND		0.0014	0.19
4-Chloroaniline	ND		0.018	0.19
Hexachlorobutadiene	ND		0.016	0.29
4-Chloro-3-methylphenol	ND		0.014	0.19
2-Methylnaphthalene	ND		0.0053	0.097
Hexachlorocyclopentadiene	ND		0.012	0.97
2,4,6-Trichlorophenol	ND		0.0097	0.29
2,4,5-Trichlorophenol	ND		0.0083	0.19
2-Chloronaphthalene	ND		0.0029	0.029
2-Nitroaniline	ND		0.011	0.19
Dimethyl phthalate	ND		0.012	0.19
Acenaphthylene	ND		0.0025	0.039
2,6-Dinitrotoluene	ND		0.014	0.19
3-Nitroaniline	ND	<i>mn</i>	0.054	0.19
Acenaphthene	ND		0.0012	0.049
2,4-Dinitrophenol	ND		0.056	2.4
4-Nitrophenol	ND		0.16	0.97
Dibenzofuran	ND		0.0095	0.19
2,4-Dinitrotoluene	ND		0.012	0.19
Diethyl phthalate	ND		0.0090	0.19
4-Chlorophenyl phenyl ether	ND		0.012	0.19
Fluorene	ND		0.0041	0.029
4-Nitroaniline	ND		0.017	0.29
4,6-Dinitro-2-methylphenol	ND		0.051	1.9

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MW 6/27

Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070128

Lab Sample ID: 580-6583-28

Date Sampled: 07/18/2007 0000

Client Matrix: Water

Date Received: 07/19/2007 1510

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 580-21040	Instrument ID: SEA023
Preparation:	3510C	Prep Batch: 580-20828	Lab File ID: HP04999.D
Dilution:	1.0		Initial Weight/Volume: 1030 mL
Date Analyzed:	07/22/2007 2238		Final Weight/Volume: 1 mL
Date Prepared:	07/20/2007 0946		Injection Volume:

Analyte	Result (ug/L)	Qualifier	MDL	RL
N-Nitrosodiphenylamine	ND	<i>me</i>	0.013	0.19
4-Bromophenyl phenyl ether	ND		0.0097	0.19
Hexachlorobenzene	ND		0.0080	0.19
Pentachlorophenol	0.89		0.013	0.34
Phenanthrene	ND		0.0023	0.039
Anthracene	ND		0.0018	0.019
Di-n-butyl phthalate	ND		0.0085	0.19
Fluoranthene	ND		0.0026	0.024
Pyrene	ND		0.0019	0.029
Butyl benzyl phthalate	0.12	J	0.023	0.29
3,3'-Dichlorobenzidine	ND		0.16	0.97
Benzo[a]anthracene	ND		0.0032	0.029
Chrysene	ND		0.0044	0.019
Bis(2-ethylhexyl) phthalate	1.6 <i>u</i>		0.031	1.5
Di-n-octyl phthalate	ND		0.017	0.19
Benzofluoranthene	ND		0.0053	0.039
Benzo[a]pyrene	ND		0.0026	0.019
Indeno[1,2,3-cd]pyrene	ND		0.0050	0.029
Dibenz(a,h)anthracene	ND		0.0045	0.029
Benzo[g,h,i]perylene	ND		0.0058	0.029
Carbazole	ND		0.0087	0.19
1-Methylnaphthalene	ND		0.0050	0.029

Handwritten notes:
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Surrogate	%Rec	Acceptance Limits
2-Fluorophenol	14	10 - 120
Phenol-d5	15	10 - 102
Nitrobenzene-d5	45	34 - 146
2-Fluorobiphenyl	69	35 - 143
2,4,6-Tribromophenol	77	29 - 151
Terphenyl-d14	102	35 - 166

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Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070129

Lab Sample ID: 580-6583-29

Date Sampled: 07/18/2007 0000

Client Matrix: Water

Date Received: 07/19/2007 1510

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 580-21040	Instrument ID: SEA023
Preparation:	3510C	Prep Batch: 580-20828	Lab File ID: HP05000.D
Dilution:	1.0		Initial Weight/Volume: 1000 mL
Date Analyzed:	07/22/2007 2305		Final Weight/Volume: 1 mL
Date Prepared:	07/20/2007 0946		Injection Volume:

Analyte	Result (ug/L)	Qualifier	MDL	RL
Phenol	ND		0.0074	0.30
Bis(2-chloroethyl)ether	ND		0.018	0.20
2-Chlorophenol	ND		0.022	0.20
1,3-Dichlorobenzene	ND		0.011	0.20
1,4-Dichlorobenzene	ND		0.012	0.20
Benzyl alcohol	ND		0.013	0.20
1,2-Dichlorobenzene	ND		0.011	0.20
2-Methylphenol	ND		0.038	0.20
Bis(2-chloroisopropyl) ether	ND		0.0088	0.20
3 & 4 Methylphenol	ND		0.017	0.40
N-Nitrosodi-n-propylamine	ND		0.020	0.20
Hexachloroethane	ND		0.013	0.30
Nitrobenzene	ND		0.0075	0.20
Isophorone	ND		0.011	0.20
2-Nitrophenol	ND		0.021	0.20
2,4-Dimethylphenol	ND		0.018	1.0
Benzoic acid	ND		0.021	1.0
Bis(2-chloroethoxy)methane	ND		0.0095	0.20
2,4-Dichlorophenol	ND		0.013	0.20
1,2,4-Trichlorobenzene	ND		0.010	0.20
Naphthalene	ND		0.0014	0.20
4-Chloroaniline	ND		0.019	0.20
Hexachlorobutadiene	ND		0.016	0.30
4-Chloro-3-methylphenol	ND		0.014	0.20
2-Methylnaphthalene	ND		0.0055	0.10
Hexachlorocyclopentadiene	ND		0.012	1.0
2,4,6-Trichlorophenol	ND		0.010	0.30
2,4,5-Trichlorophenol	ND		0.0085	0.20
2-Chloronaphthalene	ND		0.0030	0.030
2-Nitroaniline	ND		0.011	0.20
Dimethyl phthalate	ND		0.012	0.20
Acenaphthylene	ND		0.0026	0.040
2,6-Dinitrotoluene	ND		0.014	0.20
3-Nitroaniline	ND	*	0.056	0.20
Acenaphthene	ND		0.0012	0.050
2,4-Dinitrophenol	ND		0.058	2.5
4-Nitrophenol	ND		0.16	1.0
Dibenzofuran	ND		0.0098	0.20
2,4-Dinitrotoluene	ND		0.012	0.20
Diethyl phthalate	ND		0.0093	0.20
4-Chlorophenyl phenyl ether	ND		0.012	0.20
Fluorene	ND		0.0042	0.030
4-Nitroaniline	ND		0.018	0.30
4,6-Dinitro-2-methylphenol	ND		0.053	2.0

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Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070129

Lab Sample ID: 580-6583-29

Date Sampled: 07/18/2007 0000

Client Matrix: Water

Date Received: 07/19/2007 1510

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 580-21040	Instrument ID: SEA023
Preparation:	3510C	Prep Batch: 580-20828	Lab File ID: HP05000.D
Dilution:	1.0		Initial Weight/Volume: 1000 mL
Date Analyzed:	07/22/2007 2305		Final Weight/Volume: 1 mL
Date Prepared:	07/20/2007 0946		Injection Volume:

Analyte	Result (ug/L)	Qualifier	MDL	RL
N-Nitrosodiphenylamine	ND	*	0.013	0.20 UJ
4-Bromophenyl phenyl ether	ND		0.010	0.20 UJ
Hexachlorobenzene	ND		0.0082	0.20 UJ
Pentachlorophenol	14		0.013	0.35 UJ
Phenanthrene	ND		0.0024	0.040 UJ
Anthracene	ND		0.0019	0.020 UJ
Di-n-butyl phthalate	0.22		0.0088	0.20 UJ
Fluoranthene	ND		0.0027	0.025 UJ
Pyrene	ND		0.0020	0.030 UJ
Butyl benzyl phthalate	0.61		0.024	0.30 UJ
3,3'-Dichlorobenzidine	ND		0.16	1.0 UJ
Benzo[a]anthracene	ND		0.0033	0.030 UJ
Chrysene	ND		0.0045	0.020 UJ
Bis(2-ethylhexyl) phthalate	3.7		0.032	1.5 UJ
Di-n-octyl phthalate	ND		0.018	0.20 UJ
Benzofluoranthene	ND		0.0055	0.040 UJ
Benzo[a]pyrene	ND		0.0027	0.020 UJ
Indeno[1,2,3-cd]pyrene	ND		0.0051	0.030 UJ
Dibenz(a,h)anthracene	ND		0.0046	0.030 UJ
Benzo[g,h,i]perylene	ND		0.0060	0.030 UJ
Carbazole	ND		0.0090	0.20 UJ
1-Methylnaphthalene	ND		0.0052	0.030 UJ

Surrogate	%Rec		Acceptance Limits
2-Fluorophenol	0	IX	10 - 120
Phenol-d5	0	IX	10 - 102
Nitrobenzene-d5	0	IX	34 - 146
2-Fluorobiphenyl	20	IX	35 - 143
2,4,6-Tribromophenol	85		29 - 151
Terphenyl-d14	104		35 - 166

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Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070130

Lab Sample ID: 580-6583-30

Date Sampled: 07/18/2007 0000

Client Matrix: Water

Date Received: 07/19/2007 1510

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 580-21040	Instrument ID: SEA023
Preparation:	3510C	Prep Batch: 580-20828	Lab File ID: HP05001.D
Dilution:	1.0		Initial Weight/Volume: 1020 mL
Date Analyzed:	07/22/2007 2332		Final Weight/Volume: 1 mL
Date Prepared:	07/20/2007 0946		Injection Volume:

Analyte	Result (ug/L)	Qualifier	MDL	RL
Phenol	ND		0.0073	0.29
Bis(2-chloroethyl)ether	ND		0.018	0.20
2-Chlorophenol	ND		0.022	0.20
1,3-Dichlorobenzene	ND		0.011	0.20
1,4-Dichlorobenzene	ND		0.012	0.20
Benzyl alcohol	ND		0.013	0.20
1,2-Dichlorobenzene	ND		0.011	0.20
2-Methylphenol	ND		0.037	0.20
Bis(2-chloroisopropyl) ether	ND		0.0086	0.20
3 & 4 Methylphenol	ND		0.017	0.39
N-Nitrosodi-n-propylamine	ND		0.020	0.20
Hexachloroethane	ND		0.013	0.29
Nitrobenzene	ND		0.0074	0.20
Isophorone	ND		0.011	0.20
2-Nitrophenol	ND		0.021	0.20
2,4-Dimethylphenol	ND		0.018	0.98
Benzoic acid	ND		0.021	0.98
Bis(2-chloroethoxy)methane	ND		0.0093	0.20
2,4-Dichlorophenol	ND		0.013	0.20
1,2,4-Trichlorobenzene	ND		0.0098	0.20
Naphthalene	ND		0.0014	0.20
4-Chloroaniline	ND		0.019	0.20
Hexachlorobutadiene	ND		0.016	0.29
4-Chloro-3-methylphenol	ND		0.014	0.20
2-Methylnaphthalene	ND		0.0054	0.098
Hexachlorocyclopentadiene	ND		0.012	0.98
2,4,6-Trichlorophenol	ND		0.0098	0.29
2,4,5-Trichlorophenol	ND		0.0083	0.20
2-Chloronaphthalene	ND		0.0029	0.029
2-Nitroaniline	ND		0.011	0.20
Dimethyl phthalate	ND		0.012	0.20
Acenaphthylene	ND		0.0025	0.039
2,6-Dinitrotoluene	ND		0.014	0.20
3-Nitroaniline	ND	*	0.055	0.20
Acenaphthene	ND		0.0012	0.049
2,4-Dinitrophenol	ND		0.057	2.5
4-Nitrophenol	ND		0.16	0.98
Dibenzofuran	ND		0.0096	0.20
2,4-Dinitrotoluene	ND		0.012	0.20
Diethyl phthalate	ND		0.0091	0.20
4-Chlorophenyl phenyl ether	ND		0.012	0.20
Fluorene	ND		0.0041	0.029
4-Nitroaniline	ND		0.018	0.29
4,6-Dinitro-2-methylphenol	ND		0.052	2.0

Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070130

Lab Sample ID: 580-6583-30

Date Sampled: 07/18/2007 0000

Client Matrix: Water

Date Received: 07/19/2007 1510

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 580-21040	Instrument ID: SEA023
Preparation:	3510C	Prep Batch: 580-20828	Lab File ID: HP05001.D
Dilution:	1.0		Initial Weight/Volume: 1020 mL
Date Analyzed:	07/22/2007 2332		Final Weight/Volume: 1 mL
Date Prepared:	07/20/2007 0946		Injection Volume:

Analyte	Result (ug/L)	Qualifier	MDL	RL
N-Nitrosodiphenylamine	ND	*	0.013	0.20
4-Bromophenyl phenyl ether	ND		0.0098	0.20
Hexachlorobenzene	ND		0.0080	0.20
Pentachlorophenol	ND		0.013	0.34
Phenanthrene	ND		0.0024	0.039
Anthracene	ND		0.0019	0.020
Di-n-butyl phthalate	ND		0.0086	0.20
Fluoranthene	ND		0.0026	0.025
Pyrene	ND		0.0020	0.029
Butyl benzyl phthalate	0.090	J	0.024	0.29
3,3'-Dichlorobenzidine	ND		0.16	0.98
Benzo[a]anthracene	ND		0.0032	0.029
Chrysene	ND		0.0044	0.020
Bis(2-ethylhexyl) phthalate	2.4		0.031	1.5
Di-n-octyl phthalate	ND		0.018	0.20
Benzofluoranthene	ND		0.0054	0.039
Benzo[a]pyrene	ND		0.0026	0.020
indeno[1,2,3-cd]pyrene	ND		0.0050	0.029
Dibenz(a,h)anthracene	ND		0.0045	0.029
Benzo[g,h,i]perylene	ND		0.0059	0.029
Carbazole	ND		0.0088	0.20
1-Methylnaphthalene	ND		0.0051	0.029

Surrogate	%Rec		Acceptance Limits
2-Fluorophenol	0	IX	10 - 120
Phenol-d5	0	IX	10 - 102
Nitrobenzene-d5	0	IX	34 - 146
2-Fluorobiphenyl	14	IX	35 - 143
2,4,6-Tribromophenol	80		29 - 151
Terphenyl-d14	98		35 - 166

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Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070131

Lab Sample ID: 580-6583-31

Date Sampled: 07/18/2007 0000

Client Matrix: Water

Date Received: 07/19/2007 1510

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 580-21040	Instrument ID: SEA023
Preparation:	3510C	Prep Batch: 580-20828	Lab File ID: HP05002.D
Dilution:	1.0		Initial Weight/Volume: 1020 mL
Date Analyzed:	07/23/2007 0000		Final Weight/Volume: 1 mL
Date Prepared:	07/20/2007 0946		Injection Volume:

Analyte	Result (ug/L)	Qualifier	MDL	RL
Phenol	ND		0.0073	0.29
Bis(2-chloroethyl)ether	ND		0.018	0.20
2-Chlorophenol	ND		0.022	0.20
1,3-Dichlorobenzene	ND		0.011	0.20
1,4-Dichlorobenzene	ND		0.012	0.20
Benzyl alcohol	ND		0.013	0.20
1,2-Dichlorobenzene	ND		0.011	0.20
2-Methylphenol	ND		0.037	0.20
Bis(2-chloroisopropyl) ether	ND		0.0086	0.20
3 & 4 Methylphenol	ND		0.017	0.39
N-Nitrosodi-n-propylamine	ND		0.020	0.20
Hexachloroethane	ND		0.013	0.29
Nitrobenzene	ND		0.0074	0.20
Isophorone	ND		0.011	0.20
2-Nitrophenol	ND		0.021	0.20
2,4-Dimethylphenol	ND		0.018	0.98
Benzoic acid	ND		0.021	0.98
Bis(2-chloroethoxy)methane	ND		0.0093	0.20
2,4-Dichlorophenol	ND		0.013	0.20
1,2,4-Trichlorobenzene	ND		0.0098	0.20
Naphthalene	ND		0.0014	0.20
4-Chloroaniline	ND		0.019	0.20
Hexachlorobutadiene	ND		0.016	0.29
4-Chloro-3-methylphenol	ND		0.014	0.20
2-Methylnaphthalene	ND		0.0054	0.098
Hexachlorocyclopentadiene	ND		0.012	0.98
2,4,6-Trichlorophenol	ND		0.0098	0.29
2,4,5-Trichlorophenol	ND		0.0083	0.20
2-Chloronaphthalene	ND		0.0029	0.029
2-Nitroaniline	ND		0.011	0.20
Dimethyl phthalate	ND		0.012	0.20
Acenaphthylene	ND		0.0025	0.039
2,6-Dinitrotoluene	ND		0.014	0.20
3-Nitroaniline	ND	*	0.055	0.20
Acenaphthene	ND		0.0012	0.049
2,4-Dinitrophenol	ND		0.057	2.5
4-Nitrophenol	ND		0.16	0.98
Dibenzofuran	ND		0.0096	0.20
2,4-Dinitrotoluene	ND		0.012	0.20
Diethyl phthalate	ND		0.0091	0.20
4-Chlorophenyl phenyl ether	ND		0.012	0.20
Fluorene	ND		0.0041	0.029
4-Nitroaniline	ND		0.018	0.29
4,6-Dinitro-2-methylphenol	ND		0.052	2.0

MW 860

Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070131

Lab Sample ID: 580-6583-31

Date Sampled: 07/18/2007 0000

Client Matrix: Water

Date Received: 07/19/2007 1510

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 580-21040	Instrument ID: SEA023
Preparation:	3510C	Prep Batch: 580-20828	Lab File ID: HP05002.D
Dilution:	1.0		Initial Weight/Volume: 1020 mL
Date Analyzed:	07/23/2007 0000		Final Weight/Volume: 1 mL
Date Prepared:	07/20/2007 0946		Injection Volume:

Analyte	Result (ug/L)	Qualifier	MDL	RL
N-Nitrosodiphenylamine	ND	*	0.013	0.20
4-Bromophenyl phenyl ether	ND		0.0098	0.20
Hexachlorobenzene	ND		0.0080	0.20
Pentachlorophenol	ND		0.013	0.34
Phenanthrene	ND		0.0024	0.039
Anthracene	ND		0.0019	0.020
Di-n-butyl phthalate	0.050	J	0.0086	0.20
Fluoranthene	ND		0.0026	0.025
Pyrene	ND		0.0020	0.029
Butyl benzyl phthalate	0.046	J	0.024	0.29
3,3'-Dichlorobenzidine	ND		0.16	0.98
Benzo[a]anthracene	ND		0.0032	0.029
Chrysene	ND		0.0044	0.020
Bis(2-ethylhexyl) phthalate	1.6		0.031	1.5
Di-n-octyl phthalate	ND		0.018	0.20
Benzofluoranthene	ND		0.0054	0.039
Benzo[a]pyrene	ND		0.0026	0.020
Indeno[1,2,3-cd]pyrene	ND		0.0050	0.029
Dibenz(a,h)anthracene	ND		0.0045	0.029
Benzo[g,h,i]perylene	ND		0.0059	0.029
Carbazole	ND		0.0088	0.20
1-Methylnaphthalene	ND		0.0051	0.029

Surrogate	%Rec		Acceptance Limits
2-Fluorophenol	0	IX	10 - 120
Phenol-d5	0	IX	10 - 102
Nitrobenzene-d5	0	IX	34 - 146
2-Fluorobiphenyl	2	IX	35 - 143
2,4,6-Tribromophenol	72		29 - 151
Terphenyl-d14	121		35 - 166

MW
8/6/07

Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070132

Lab Sample ID: 580-6583-32

Date Sampled: 07/18/2007 0000

Client Matrix: Water

Date Received: 07/19/2007 1510

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method: 8270C Analysis Batch: 580-21040 Instrument ID: SEA023
Preparation: 3510C Prep Batch: 580-20828 Lab File ID: HP05003.D
Dilution: 1.0 Initial Weight/Volume: 1010 mL
Date Analyzed: 07/23/2007 0027 Final Weight/Volume: 1 mL
Date Prepared: 07/20/2007 0946 Injection Volume:

Analyte	Result (ug/L)	Qualifier	MDL	RL
Phenol	ND		0.0073	0.30
Bis(2-chloroethyl)ether	ND		0.018	0.20
2-Chlorophenol	ND		0.022	0.20
1,3-Dichlorobenzene	ND		0.011	0.20
1,4-Dichlorobenzene	ND		0.012	0.20
Benzyl alcohol	ND		0.013	0.20
1,2-Dichlorobenzene	ND		0.011	0.20
2-Methylphenol	ND		0.038	0.20
Bis(2-chloroisopropyl) ether	ND		0.0087	0.20
3 & 4 Methylphenol	ND		0.017	0.40
N-Nitrosodi-n-propylamine	ND		0.020	0.20
Hexachloroethane	ND		0.013	0.30
Nitrobenzene	ND		0.0074	0.20
Isophorone	ND		0.011	0.20
2-Nitrophenol	ND		0.021	0.20
2,4-Dimethylphenol	ND		0.018	0.99
Benzoic acid	ND		0.021	0.99
Bis(2-chloroethoxy)methane	ND		0.0094	0.20
2,4-Dichlorophenol	ND		0.013	0.20
1,2,4-Trichlorobenzene	ND		0.0099	0.20
Naphthalene	ND		0.0014	0.20
4-Chloroaniline	ND		0.019	0.20
Hexachlorobutadiene	ND		0.016	0.30
4-Chloro-3-methylphenol	ND		0.014	0.20
2-Methylnaphthalene	ND		0.0054	0.099
Hexachlorocyclopentadiene	ND		0.012	0.99
2,4,6-Trichlorophenol	ND		0.0099	0.30
2,4,5-Trichlorophenol	ND		0.0084	0.20
2-Chloronaphthalene	ND		0.0030	0.030
2-Nitroaniline	ND		0.011	0.20
Dimethyl phthalate	ND		0.012	0.20
Acenaphthylene	ND		0.0026	0.040
2,6-Dinitrotoluene	ND		0.014	0.20
3-Nitroaniline	ND		0.055	0.20
Acenaphthene	ND		0.0012	0.050
2,4-Dinitrophenol	ND		0.057	2.5
4-Nitrophenol	ND		0.16	0.99
Dibenzofuran	0.19	J	0.0097	0.20
2,4-Dinitrotoluene	ND		0.012	0.20
Diethyl phthalate	ND		0.0092	0.20
4-Chlorophenyl phenyl ether	ND		0.012	0.20
Fluorene	0.33		0.0042	0.030
4-Nitroaniline	ND		0.018	0.30
4,6-Dinitro-2-methylphenol	ND		0.052	2.0

Handwritten notes on the right side of the table, including a vertical line and various scribbles and initials. A vertical line is drawn through the RL column, with handwritten numbers and letters next to it. At the bottom right, there is a signature that appears to read "MURPHY".

Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070132

Lab Sample ID: 580-6583-32

Date Sampled: 07/18/2007 0000

Client Matrix: Water

Date Received: 07/19/2007 1510

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 580-21040	Instrument ID: SEA023
Preparation:	3510C	Prep Batch: 580-20828	Lab File ID: HP05003.D
Dilution:	1.0		Initial Weight/Volume: 1010 mL
Date Analyzed:	07/23/2007 0027		Final Weight/Volume: 1 mL
Date Prepared:	07/20/2007 0946		Injection Volume:

Analyte	Result (ug/L)	Qualifier	MDL	RL
N-Nitrosodiphenylamine	ND	IX	0.013	0.20
4-Bromophenyl phenyl ether	ND		0.0099	0.20
Hexachlorobenzene	ND		0.0081	0.20
Pentachlorophenol	67	J	0.013	0.35
Phenanthrene	ND		0.0024	0.040
Anthracene	ND		0.0019	0.020
Di-n-butyl phthalate	ND		0.0087	0.20
Fluoranthene	ND		0.0027	0.025
Pyrene	ND		0.0020	0.030
Butyl benzyl phthalate	0.052	J	0.024	0.30
3,3'-Dichlorobenzidine	ND		0.16	0.99
Benzo[a]anthracene	ND		0.0033	0.030
Chrysene	ND		0.0045	0.020
Bis(2-ethylhexyl) phthalate	2.2		0.032	1.5
Di-n-octyl phthalate	ND		0.018	0.20
Benzo[fluoranthene]	ND		0.0054	0.040
Benzo[a]pyrene	ND		0.0027	0.020
Indeno[1,2,3-cd]pyrene	ND		0.0050	0.030
Dibenz(a,h)anthracene	ND		0.0046	0.030
Benzo[g,h,i]perylene	ND		0.0059	0.030
Carbazole	ND		0.0089	0.20
1-Methylnaphthalene	ND		0.0051	0.030

Surrogate	%Rec		Acceptance Limits
2-Fluorophenol	9	IX	10 - 120
Phenol-d5	0	IX	10 - 102
Nitrobenzene-d5	96		34 - 146
2-Fluorobiphenyl	97		35 - 143
2,4,6-Tribromophenol	27	IX	29 - 151
Terphenyl-d14	111		35 - 166

MW 8-6-07

Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070133

Lab Sample ID: 580-6583-33
Client Matrix: Water

Date Sampled: 07/18/2007 0000
Date Received: 07/19/2007 1510

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method: 8270C Analysis Batch: 580-21040 Instrument ID: SEA023
Preparation: 3510C Prep Batch: 580-20828 Lab File ID: HP05004.D
Dilution: 1.0 Initial Weight/Volume: 1010 mL
Date Analyzed: 07/23/2007 0054 Final Weight/Volume: 1 mL
Date Prepared: 07/20/2007 0946 Injection Volume:

Analyte	Result (ug/L)	Qualifier	MDL	RL
Phenol	ND		0.0073	0.30
Bis(2-chloroethyl)ether	ND		0.018	0.20
2-Chlorophenol	ND		0.022	0.20
1,3-Dichlorobenzene	ND		0.011	0.20
1,4-Dichlorobenzene	ND		0.012	0.20
Benzyl alcohol	ND		0.013	0.20
1,2-Dichlorobenzene	ND		0.011	0.20
2-Methylphenol	ND		0.038	0.20
Bis(2-chloroisopropyl) ether	ND		0.0087	0.20
3 & 4 Methylphenol	ND		0.017	0.40
N-Nitrosodi-n-propylamine	ND		0.020	0.20
Hexachloroethane	ND		0.013	0.30
Nitrobenzene	ND		0.0074	0.20
Isophorone	ND		0.011	0.20
2-Nitrophenol	ND		0.021	0.20
2,4-Dimethylphenol	ND		0.018	0.99
Benzoic acid	ND		0.021	0.99
Bis(2-chloroethoxy)methane	ND		0.0094	0.20
2,4-Dichlorophenol	ND		0.013	0.20
1,2,4-Trichlorobenzene	ND		0.0099	0.20
Naphthalene	2.0		0.0014	0.20
4-Chloroaniline	0.69		0.019	0.20
Hexachlorobutadiene	ND		0.016	0.30
4-Chloro-3-methylphenol	ND		0.014	0.20
2-Methylnaphthalene	ND		0.0054	0.099
Hexachlorocyclopentadiene	ND		0.012	0.99
2,4,6-Trichlorophenol	ND		0.0099	0.30
2,4,5-Trichlorophenol	ND		0.0084	0.20
2-Chloronaphthalene	ND		0.0030	0.030
2-Nitroaniline	ND		0.011	0.20
Dimethyl phthalate	ND		0.012	0.20
Acenaphthylene	ND		0.0026	0.040
2,6-Dinitrotoluene	ND		0.014	0.20
3-Nitroaniline	ND		0.055	0.20
Acenaphthene	0.77		0.0012	0.050
2,4-Dinitrophenol	ND		0.057	2.5
4-Nitrophenol	ND		0.16	0.99
Dibenzofuran	1.5		0.0097	0.20
2,4-Dinitrotoluene	ND		0.012	0.20
Diethyl phthalate	ND		0.0092	0.20
4-Chlorophenyl phenyl ether	ND		0.012	0.20
Fluorene	2.8		0.0042	0.030
4-Nitroaniline	ND		0.018	0.30
4,6-Dinitro-2-methylphenol	ND		0.052	2.0

MW 8607

Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070133

Lab Sample ID: 580-6583-33

Date Sampled: 07/18/2007 0000

Client Matrix: Water

Date Received: 07/19/2007 1510

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 580-21040	Instrument ID: SEA023
Preparation:	3510C	Prep Batch: 580-20828	Lab File ID: HP05004.D
Dilution:	1.0		Initial Weight/Volume: 1010 mL
Date Analyzed:	07/23/2007 0054		Final Weight/Volume: 1 mL
Date Prepared:	07/20/2007 0946		Injection Volume:

Analyte	Result (ug/L)	Qualifier	MDL	RL
N-Nitrosodiphenylamine	ND	*	0.013	0.20
4-Bromophenyl phenyl ether	ND		0.0099	0.20
Hexachlorobenzene	ND		0.0081	0.20
Phenanthrene	ND		0.0024	0.040
Anthracene	ND		0.0019	0.020
Di-n-butyl phthalate	ND		0.0087	0.20
Fluoranthene	ND		0.0027	0.025
Pyrene	ND		0.0020	0.030
Butyl benzyl phthalate	ND		0.024	0.30
3,3'-Dichlorobenzidine	ND		0.16	0.99
Benzo[a]anthracene	ND		0.0033	0.030
Chrysene	ND		0.0045	0.020
Bis(2-ethylhexyl) phthalate	1.4	J	0.032	1.5
Di-n-octyl phthalate	ND		0.018	0.20
Benzo[fluoranthene	ND		0.0054	0.040
Benzo[a]pyrene	ND		0.0027	0.020
Indeno[1,2,3-cd]pyrene	ND		0.0050	0.030
Dibenz(a,h)anthracene	ND		0.0046	0.030
Benzo[g,h,i]perylene	ND		0.0059	0.030
Carbazole	2.7		0.0089	0.20
1-Methylnaphthalene	4.8		0.0051	0.030

Surrogate	%Rec	Acceptance Limits
2-Fluorophenol	18	10 - 120
Phenol-d5	4	IX 10 - 102
Nitrobenzene-d5	90	34 - 146
2-Fluorobiphenyl	71	35 - 143
2,4,6-Tribromophenol	63	29 - 151
Terphenyl-d14	104	35 - 166

MW
8/6/07

Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070133

Lab Sample ID: 580-6583-33

Client Matrix: Water

Date Sampled: 07/18/2007 0000

Date Received: 07/19/2007 1510

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method: 8270C

Analysis Batch: 580-21040

Instrument ID: SEA023

Preparation: 3510C

Prep Batch: 580-20828

Lab File ID: HP05056.D

Dilution: 1000

Initial Weight/Volume: 1010 mL

Date Analyzed: 07/25/2007 1319

Final Weight/Volume: 1 mL

Date Prepared: 07/20/2007 0946

Injection Volume:

Analyte	Result (ug/L)	Qualifier	MDL	RL
Pentachlorophenol	2400		13	350

MW
8/6/07

Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070134

Lab Sample ID: 580-6583-34
Client Matrix: Water

Date Sampled: 07/18/2007 0000
Date Received: 07/19/2007 1510

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method: 8270C Analysis Batch: 580-21040 Instrument ID: SEA023
Preparation: 3510C Prep Batch: 580-20828 Lab File ID: HP05005.D
Dilution: 1.0 Initial Weight/Volume: 980 mL
Date Analyzed: 07/23/2007 0122 Final Weight/Volume: 1 mL
Date Prepared: 07/20/2007 0946 Injection Volume:

Table with 5 columns: Analyte, Result (ug/L), Qualifier, MDL, RL. Lists various chemical compounds and their detection results.

MW 8607

Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070134

Lab Sample ID: 580-6583-34
 Client Matrix: Water

Date Sampled: 07/18/2007 0000
 Date Received: 07/19/2007 1510

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 580-21040	Instrument ID: SEA023
Preparation:	3510C	Prep Batch: 580-20828	Lab File ID: HP05005.D
Dilution:	1.0		Initial Weight/Volume: 980 mL
Date Analyzed:	07/23/2007 0122		Final Weight/Volume: 1 mL
Date Prepared:	07/20/2007 0946		Injection Volume:

Analyte	Result (ug/L)	Qualifier	MDL	RL
N-Nitrosodiphenylamine	ND	<i>MW</i>	0.013	0.20
4-Bromophenyl phenyl ether	ND		0.010	0.20
Hexachlorobenzene	ND		0.0084	0.20
Phenanthrene	ND		0.0024	0.041
Anthracene	ND		0.0019	0.020
Di-n-butyl phthalate	ND		0.0090	0.20
Fluoranthene	ND		0.0028	0.026
Pyrene	ND		0.0020	0.031
Butyl benzyl phthalate	0.049	J	0.024	0.31
3,3'-Dichlorobenzidine	ND		0.16	1.0
Benzo[a]anthracene	ND		0.0034	0.031
Chrysene	ND		0.0046	0.020
Bis(2-ethylhexyl) phthalate	2.3		0.033	1.5
Di-n-octyl phthalate	ND		0.018	0.20
Benzo[fluoranthene	ND		0.0056	0.041
Benzo[a]pyrene	ND		0.0028	0.020
Indeno[1,2,3-cd]pyrene	ND		0.0052	0.031
Dibenz(a,h)anthracene	ND		0.0047	0.031
Benzo[g,h,i]perylene	ND		0.0061	0.031
Carbazole	0.74		0.0092	0.20
1-Methylnaphthalene	ND		0.0053	0.031

Surrogate	%Rec	Acceptance Limits
2-Fluorophenol	15	10 - 120
Phenol-d5	3	10 - 102
Nitrobenzene-d5	94	34 - 146
2-Fluorobiphenyl	76	35 - 143
2,4,6-Tribromophenol	61	29 - 151
Terphenyl-d14	101	35 - 166

MW
8/6/07

Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070134

Lab Sample ID: 580-6583-34

Date Sampled: 07/18/2007 0000

Client Matrix: Water

Date Received: 07/19/2007 1510

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method: 8270C

Analysis Batch: 580-21040

Instrument ID: SEA023

Preparation: 3510C

Prep Batch: 580-20828

Lab File ID: HP05057.D

Dilution: 1000

Initial Weight/Volume: 980 mL

Date Analyzed: 07/25/2007 1346

Final Weight/Volume: 1 mL

Date Prepared: 07/20/2007 0946

Injection Volume:

Analyte	Result (ug/L)	Qualifier	MDL	RL
Pentachlorophenol	1100		13	360

MW
8/6/07

Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070135

Lab Sample ID: 580-6583-35
 Client Matrix: Water

Date Sampled: 07/18/2007 0000
 Date Received: 07/19/2007 1510

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method: 8270C Analysis Batch: 580-21040 Instrument ID: SEA023
 Preparation: 3510C Prep Batch: 580-20828 Lab File ID: HP05006.D
 Dilution: 1.0 Initial Weight/Volume: 970 mL
 Date Analyzed: 07/23/2007 0149 Final Weight/Volume: 1 mL
 Date Prepared: 07/20/2007 0946 Injection Volume:

Analyte	Result (ug/L)	Qualifier	MDL	RL
Phenol	ND		0.0076	0.31
Bis(2-chloroethyl)ether	ND		0.019	0.21
2-Chlorophenol	ND		0.023	0.21
1,3-Dichlorobenzene	ND		0.011	0.21
1,4-Dichlorobenzene	ND		0.012	0.21
Benzyl alcohol	ND		0.013	0.21
1,2-Dichlorobenzene	ND		0.011	0.21
2-Methylphenol	ND		0.039	0.21
Bis(2-chloroisopropyl) ether	ND		0.0091	0.21
3 & 4 Methylphenol	0.045	J	0.018	0.41
N-Nitrosodi-n-propylamine	ND		0.021	0.21
Hexachloroethane	ND		0.013	0.31
Nitrobenzene	ND		0.0077	0.21
Isophorone	1.8		0.011	0.21
2-Nitrophenol	ND		0.022	0.21
2,4-Dimethylphenol	ND		0.019	1.0
Benzoic acid	ND		0.022	1.0
Bis(2-chloroethoxy)methane	ND		0.0098	0.21
2,4-Dichlorophenol	ND		0.013	0.21
1,2,4-Trichlorobenzene	ND		0.010	0.21
4-Chloroaniline	ND		0.020	0.21
Hexachlorobutadiene	ND		0.016	0.31
4-Chloro-3-methylphenol	ND		0.014	0.21
2-Methylnaphthalene	ND		0.0057	0.10
Hexachlorocyclopentadiene	ND		0.012	1.0
2,4,6-Trichlorophenol	ND		0.010	0.31
2,4,5-Trichlorophenol	ND		0.0088	0.21
2-Chloronaphthalene	ND		0.0031	0.031
2-Nitroaniline	ND		0.011	0.21
Dimethyl phthalate	ND		0.012	0.21
Acenaphthylene	ND		0.0027	0.041
2,6-Dinitrotoluene	ND		0.014	0.21
3-Nitroaniline	ND	me	0.058	0.21
Acenaphthene	4.6		0.0012	0.052
2,4-Dinitrophenol	ND		0.060	2.6
4-Nitrophenol	ND		0.16	1.0
Dibenzofuran	3.4		0.010	0.21
2,4-Dinitrotoluene	ND		0.012	0.21
Diethyl phthalate	ND		0.0096	0.21
4-Chlorophenyl phenyl ether	ND		0.012	0.21
4-Nitroaniline	ND		0.019	0.31
4,6-Dinitro-2-methylphenol	ND		0.055	2.1
N-Nitrosodiphenylamine	ND	me	0.013	0.21
4-Bromophenyl phenyl ether	ND		0.010	0.21

MW 8607

Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070135

Lab Sample ID: 580-6583-35

Client Matrix: Water

Date Sampled: 07/18/2007 0000

Date Received: 07/19/2007 1510

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 580-21040	Instrument ID: SEA023
Preparation:	3510C	Prep Batch: 580-20828	Lab File ID: HP05006.D
Dilution:	1.0		Initial Weight/Volume: 970 mL
Date Analyzed:	07/23/2007 0149		Final Weight/Volume: 1 mL
Date Prepared:	07/20/2007 0946		Injection Volume:

Analyte	Result (ug/L)	Qualifier	MDL	RL
Hexachlorobenzene	ND		0.0085	0.21
Anthracene	ND		0.0020	0.021
Di-n-butyl phthalate	ND		0.0091	0.21
Fluoranthene	ND		0.0028	0.026
Pyrene	0.10		0.0021	0.031
Butyl benzyl phthalate	0.098	J	0.025	0.31
3,3'-Dichlorobenzidine	ND		0.16	1.0
Benzo[a]anthracene	ND		0.0034	0.031
Chrysene	ND		0.0046	0.021
Bis(2-ethylhexyl) phthalate	4.3	J	0.033	1.5
Di-n-octyl phthalate	ND		0.019	0.21
Benzofluoranthene	ND		0.0057	0.041
Benzo[a]pyrene	ND		0.0028	0.021
Indeno[1,2,3-cd]pyrene	ND		0.0053	0.031
Dibenz(a,h)anthracene	ND		0.0047	0.031
Benzo[g,h,i]perylene	ND		0.0062	0.031
Carbazole	2.9		0.0093	0.21

Surrogate	%Rec	Acceptance Limits
2-Fluorophenol	37	10 - 120
Phenol-d5	25	10 - 102
Nitrobenzene-d5	87	34 - 146
2-Fluorobiphenyl	65	35 - 143
2,4,6-Tribromophenol	84	29 - 151
Terphenyl-d14	105	35 - 166

MW
8/6/07

Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070135

Lab Sample ID: 580-6583-35

Date Sampled: 07/18/2007 0000

Client Matrix: Water

Date Received: 07/19/2007 1510

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method: 8270C

Analysis Batch: 580-21040

Instrument ID: SEA023

Preparation: 3510C

Prep Batch: 580-20828

Lab File ID: HP05018.D

Dilution: 20

Initial Weight/Volume: 970 mL

Date Analyzed: 07/23/2007 2001

Final Weight/Volume: 1 mL

Date Prepared: 07/20/2007 0946

Injection Volume:

Analyte	Result (ug/L)	Qualifier	MDL	RL
Naphthalene	8.0		0.029	4.1
Fluorene	9.1		0.087	0.62
Phenanthrene	5.8		0.049	0.82
1-Methylnaphthalene	72		0.11	0.62

mw
8/6/07

Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070135

Lab Sample ID: 580-6583-35

Date Sampled: 07/18/2007 0000

Client Matrix: Water

Date Received: 07/19/2007 1510

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 580-21040	Instrument ID: SEA023
Preparation:	3510C	Prep Batch: 580-20828	Lab File ID: HP05017.D
Dilution:	200		Initial Weight/Volume: 970 mL
Date Analyzed:	07/23/2007 1934		Final Weight/Volume: 1 mL
Date Prepared:	07/20/2007 0946		Injection Volume:

Analyte	Result (ug/L)	Qualifier	MDL	RL
Pentachlorophenol	1000		2.7	72

MW
8/6/07

Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070136

Lab Sample ID: 580-6583-36
 Client Matrix: Water

Date Sampled: 07/18/2007 0000
 Date Received: 07/19/2007 1510

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 580-21040	Instrument ID: SEA023
Preparation:	3510C	Prep Batch: 580-20828	Lab File ID: HP05007.D
Dilution:	1.0		Initial Weight/Volume: 990 mL
Date Analyzed:	07/23/2007 0217		Final Weight/Volume: 1 mL
Date Prepared:	07/20/2007 0946		Injection Volume:

Analyte	Result (ug/L)	Qualifier	MDL	RL
Phenol	0.28	J	0.0075	0.30
Bis(2-chloroethyl)ether	ND		0.018	0.20
2-Chlorophenol	ND		0.022	0.20
1,3-Dichlorobenzene	ND		0.011	0.20
1,4-Dichlorobenzene	ND		0.012	0.20
Benzyl alcohol	ND		0.013	0.20
1,2-Dichlorobenzene	ND		0.011	0.20
2-Methylphenol	ND		0.038	0.20
Bis(2-chloroisopropyl) ether	ND		0.0089	0.20
N-Nitrosodi-n-propylamine	ND		0.020	0.20
Hexachloroethane	ND		0.013	0.30
Nitrobenzene	ND		0.0076	0.20
Isophorone	4.2		0.011	0.20
2-Nitrophenol	ND		0.021	0.20
2,4-Dimethylphenol	ND		0.018	1.0
Benzoic acid	ND		0.021	1.0
Bis(2-chloroethoxy)methane	ND		0.0096	0.20
2,4-Dichlorophenol	ND		0.013	0.20
1,2,4-Trichlorobenzene	ND		0.010	0.20
4-Chloroaniline	ND		0.019	0.20
Hexachlorobutadiene	ND		0.016	0.30
4-Chloro-3-methylphenol	ND		0.014	0.20
Hexachlorocyclopentadiene	ND		0.012	1.0
2,4,6-Trichlorophenol	ND		0.010	0.30
2,4,5-Trichlorophenol	ND		0.0086	0.20
2-Chloronaphthalene	ND		0.0030	0.030
2-Nitroaniline	ND		0.011	0.20
Dimethyl phthalate	ND		0.012	0.20
Acenaphthylene	ND		0.0026	0.040
2,6-Dinitrotoluene	ND		0.014	0.20
3-Nitroaniline	ND	<i>no</i>	0.057	0.20
2,4-Dinitrophenol	ND		0.059	2.5
4-Nitrophenol	ND		0.16	1.0
Dibenzofuran	ND		0.0099	0.20
2,4-Dinitrotoluene	ND		0.012	0.20
Diethyl phthalate	ND		0.0094	0.20
4-Chlorophenyl phenyl ether	ND		0.012	0.20
4-Nitroaniline	ND		0.018	0.30
4,6-Dinitro-2-methylphenol	ND		0.054	2.0
N-Nitrosodiphenylamine	ND	<i>low</i>	0.013	0.20
4-Bromophenyl phenyl ether	ND		0.010	0.20
Hexachlorobenzene	ND		0.0083	0.20
Phenanthrene	ND		0.0024	0.040
Anthracene	ND		0.0019	0.020

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Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070136

Lab Sample ID: 580-6583-36
 Client Matrix: Water

Date Sampled: 07/18/2007 0000
 Date Received: 07/19/2007 1510

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 580-21040	Instrument ID: SEA023
Preparation:	3510C	Prep Batch: 580-20828	Lab File ID: HP05007.D
Dilution:	1.0		Initial Weight/Volume: 990 mL
Date Analyzed:	07/23/2007 0217		Final Weight/Volume: 1 mL
Date Prepared:	07/20/2007 0946		Injection Volume:

Analyte	Result (ug/L)	Qualifier	MDL	RL
Di-n-butyl phthalate	ND		0.0089	0.20
Fluoranthene	ND		0.0027	0.025
Pyrene	0.34		0.0020	0.030
Butyl benzyl phthalate	ND		0.024	0.30
3,3'-Dichlorobenzidine	ND		0.16	1.0
Benzo[a]anthracene	ND		0.0033	0.030
Chrysene	ND		0.0045	0.020
Di-n-octyl phthalate	ND		0.018	0.20
Benzofluoranthene	ND		0.0056	0.040
Benzo[a]pyrene	ND		0.0027	0.020
Indeno[1,2,3-cd]pyrene	ND		0.0052	0.030
Dibenz(a,h)anthracene	ND		0.0046	0.030
Benzo[g,h,i]perylene	ND		0.0061	0.030
Carbazole	ND		0.0091	0.20

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Surrogate	%Rec	Acceptance Limits
2-Fluorophenol	39	10 - 120
Phenol-d5	30	10 - 102
Nitrobenzene-d5	83	34 - 146
2-Fluorobiphenyl	68	35 - 143
2,4,6-Tribromophenol	97	29 - 151
Terphenyl-d14	85	35 - 166

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Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070136

Lab Sample ID: 580-6583-36
Client Matrix: Water

Date Sampled: 07/18/2007 0000
Date Received: 07/19/2007 1510

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 580-21040	Instrument ID: SEA023
Preparation:	3510C	Prep Batch: 580-20828	Lab File ID: HP05020.D
Dilution:	20		Initial Weight/Volume: 990 mL
Date Analyzed:	07/23/2007 2056		Final Weight/Volume: 1 mL
Date Prepared:	07/20/2007 0946		Injection Volume:

Analyte	Result (ug/L)	Qualifier	MDL	RL
3 & 4 Methylphenol	3.8	J	0.34	8.1
Naphthalene	19		0.028	4.0
2-Methylnaphthalene	80		0.11	2.0
Acenaphthene	8.1		0.024	1.0
Fluorene	7.0		0.085	0.61
Bis(2-ethylhexyl) phthalate	21	J	0.65	30

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Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070136

Lab Sample ID: 580-6583-36

Date Sampled: 07/18/2007 0000

Client Matrix: Water

Date Received: 07/19/2007 1510

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method: 8270C Analysis Batch: 580-21040 Instrument ID: SEA023
Preparation: 3510C Prep Batch: 580-20828 Lab File ID: HP05019.D
Dilution: 200 Initial Weight/Volume: 990 mL
Date Analyzed: 07/23/2007 2028 Final Weight/Volume: 1 mL
Date Prepared: 07/20/2007 0946 Injection Volume:

Analyte	Result (ug/L)	Qualifier	MDL	RL
1-Methylnaphthalene	110		1.1	6.1

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Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070136

Lab Sample ID: 580-6583-36

Date Sampled: 07/18/2007 0000

Client Matrix: Water

Date Received: 07/19/2007 1510

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method: 8270C Analysis Batch: 580-21040 Instrument ID: SEA023
Preparation: 3510C Prep Batch: 580-20828 Lab File ID: HP05058.D
Dilution: 2000 Initial Weight/Volume: 990 mL
Date Analyzed: 07/25/2007 1413 Final Weight/Volume: 1 mL
Date Prepared: 07/20/2007 0946 Injection Volume:

Analyte	Result (ug/L)	Qualifier	MDL	RL
Pentachlorophenol	3800		26	710

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8-6-07



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MEMORANDUM

DATE: August 6, 2007

TO: Steve Hall, START-3 Project Manager, E & E, Seattle, WA

FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, Washington *MW*

SUBJ: **Organic Data Quality Assurance Review, Colville Post and Pole Removal Assessment Site, Colville, Washington**

REF: TDD: 05-12-0003 PAN: 002233.0003.01SF

The data quality assurance review of 36 water samples collected from the Colville Post and Pole Removal Assessment site in Colville, Washington, has been completed. Analysis for Extended Diesel Range Total Petroleum Hydrocarbons (Ecology Method NWTPH-Dx) was performed by STL-Seattle, Tacoma, Washington. The samples were numbered:

07070101	07070102	07070103	07070104	07070105
07070106	07070107	07070108	07070109	07070110
07070111	07070112	07070113	07070114	07070115
07070116	07070117	07070118	07070119	07070120
07070121	07070122	07070123	07070124	07070125
07070126	07070127	07070128	07070129	07070130
07070131	07070132	07070133	07070134	07070135
07070136				

Data Qualifications:

1. **Sample Holding Times: Acceptable.**

The samples were maintained and received within the QC limits of $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$. The samples were collected between July 17 or 18, 2007, were extracted by July 23, 2007, and were analyzed by July 26, 2007 for NWTPH-Dx, therefore meeting holding time criteria of less than 7 days between collection and extraction and less than 40 days between extraction and analysis.

2. **Initial Calibration: Acceptable.**

Calculations were verified as correct and relative standard deviations were less than 20%.

3. **Continuing Calibration: Acceptable.**

Calculations were verified as correct. All NWTPH-Dx percent differences (%Ds) were \leq the laboratory control limits of 15%.

4. **Error Determination: Not Performed.**

Samples necessary for bias and precision determination were not provided to the laboratory. All samples were flagged RND (Recovery Not Determined) and PND (Precision Not Determined), although

the flags are not found on the Form I's.

5. Blanks: Acceptable.

A method blank was analyzed for each extraction batch for each matrix and analysis system. Diesel- and motor oil-range TPHs were not detected in any blank.

6. System Monitoring Compounds (SMC): Acceptable.

All NWTPH-Dx recoveries of the SMCs were greater than 10% and within QC criteria.

7. Performance Evaluation Samples: Not Provided.

Performance evaluation samples were not provided to the laboratory.

8. Matrix Spikes (MS) and Blank Spikes (BS): Satisfactory.

MS and BS results were within QC limits except the diesel and motor oil low recoveries associated with sample 07070114. Positive results and sample quantitation limits in sample 07070114 were qualified as estimated quantities (J or UJ).

9. Duplicates: Acceptable.

Spike duplicate results were acceptable.

10. Quantitation and Quantitation Limits: Acceptable.

Sample concentrations were correctly calculated.

11. Laboratory Contact: Not Required.

No laboratory contact was required.

12. Overall Assessment of Data for Use

The overall usefulness of the data is based on the criteria outlined in the OSWER Directive "Quality Assurance/Quality Control Guidance for Removal Activities, Data Validation Procedures" (EPA/540/G-90/004) and the analytical method. Based upon the information provided, the data are acceptable for use with the above stated data qualifications.

Data Qualifiers and Definitions

J - The associated numerical value is an estimated quantity because the reported concentrations were less than the sample quantitation limits or because quality control criteria limits were not met.

U - The material was analyzed for but was not detected. The associated numerical value is the sample quantitation limit.

UJ - The material was analyzed for but was not detected. The associated numerical value is the estimated sample quantitation limit.

Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070101

Lab Sample ID: 580-6583-1
Client Matrix: Water

Date Sampled: 07/17/2007 0000
Date Received: 07/19/2007 1510

NWTPH-Dx Semi-Volatile Petroleum Products by NWTPH-Dx

Method: NWTPH-Dx
Preparation: 3510C
Dilution: 1.0
Date Analyzed: 07/24/2007 1424
Date Prepared: 07/23/2007 1116

Analysis Batch: 580-20966
Prep Batch: 580-20896

Instrument ID: SEA013
Lab File ID: FA30189.D
Initial Weight/Volume: 1050 mL
Final Weight/Volume: 5 mL
Injection Volume:
Column ID: PRIMARY

Analyte	Result (mg/L)	Qualifier	MDL	RL
Motor Oil (>C24-C36)	0.10	J	0.057	0.24

Surrogate	%Rec	Acceptance Limits
o-Terphenyl	95	50 - 150

Method: NWTPH-Dx
Preparation: 3510C
Dilution: 1.0
Date Analyzed: 07/25/2007 0950
Date Prepared: 07/23/2007 1116

Analysis Batch: 580-20966
Prep Batch: 580-20896

Instrument ID: SEA013
Lab File ID: FA30215.D
Initial Weight/Volume: 1050 mL
Final Weight/Volume: 5 mL
Injection Volume:
Column ID: PRIMARY

Analyte	Result (mg/L)	Qualifier	MDL	RL
#2 Diesel (C10-C24)	ND		0.030	0.12

MW
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Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070102

Lab Sample ID: 580-6583-2

Client Matrix: Water

Date Sampled: 07/17/2007 0000

Date Received: 07/19/2007 1510

NWTPH-Dx Semi-Volatile Petroleum Products by NWTPH-Dx

Method:	NWTPH-Dx	Analysis Batch: 580-20966	Instrument ID: SEA013
Preparation:	3510C	Prep Batch: 580-20896	Lab File ID: FA30190.D
Dilution:	1.0		Initial Weight/Volume: 1040 mL
Date Analyzed:	07/24/2007 1444		Final Weight/Volume: 5 mL
Date Prepared:	07/23/2007 1116		Injection Volume:
			Column ID: PRIMARY

Analyte	Result (mg/L)	Qualifier	MDL	RL
Motor Oil (>C24-C36)	ND		0.058	0.24 <i>U</i>

Surrogate	%Rec	Acceptance Limits
o-Terphenyl	93	50 - 150

Method:	NWTPH-Dx	Analysis Batch: 580-20966	Instrument ID: SEA013
Preparation:	3510C	Prep Batch: 580-20896	Lab File ID: FA30216.D
Dilution:	1.0		Initial Weight/Volume: 1040 mL
Date Analyzed:	07/25/2007 1010		Final Weight/Volume: 5 mL
Date Prepared:	07/23/2007 1116		Injection Volume:
			Column ID: PRIMARY

Analyte	Result (mg/L)	Qualifier	MDL	RL
#2 Diesel (C10-C24)	ND		0.031	0.12 <i>U</i>

MW
[Signature]

Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070103

Lab Sample ID: 580-6583-3
Client Matrix: Water

Date Sampled: 07/17/2007 0000
Date Received: 07/19/2007 1510

NWTPH-Dx Semi-Volatile Petroleum Products by NWTPH-Dx

Method: NWTPH-Dx Analysis Batch: 580-20966 Instrument ID: SEA013
Preparation: 3510C Prep Batch: 580-20896 Lab File ID: FA30191.D
Dilution: 1.0 Initial Weight/Volume: 1040 mL
Date Analyzed: 07/24/2007 1505 Final Weight/Volume: 5 mL
Date Prepared: 07/23/2007 1116 Injection Volume:
Column ID: PRIMARY

Analyte	Result (mg/L)	Qualifier	MDL	RL
Motor Oil (>C24-C36)	ND		0.058	0.24()

Surrogate	%Rec	Acceptance Limits
o-Terphenyl	93	50 - 150

Method: NWTPH-Dx Analysis Batch: 580-20966 Instrument ID: SEA013
Preparation: 3510C Prep Batch: 580-20896 Lab File ID: FA30217.D
Dilution: 1.0 Initial Weight/Volume: 1040 mL
Date Analyzed: 07/25/2007 1030 Final Weight/Volume: 5 mL
Date Prepared: 07/23/2007 1116 Injection Volume:
Column ID: PRIMARY

Analyte	Result (mg/L)	Qualifier	MDL	RL
#2 Diesel (C10-C24)	ND		0.031	0.12()

Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070104
Lab Sample ID: 580-6583-4
Client Matrix: Water

Date Sampled: 07/17/2007 0000
Date Received: 07/19/2007 1510

NWTPH-Dx Semi-Volatile Petroleum Products by NWTPH-Dx

Method: NWTPH-Dx
Preparation: 3510C
Dilution: 1.0
Date Analyzed: 07/24/2007 1525
Date Prepared: 07/23/2007 1116

Analysis Batch: 580-20966
Prep Batch: 580-20896

Instrument ID: SEA013
Lab File ID: FA30192.D
Initial Weight/Volume: 1030 mL
Final Weight/Volume: 5 mL
Injection Volume:
Column ID: PRIMARY

Analyte	Result (mg/L)	Qualifier	MDL	RL
Motor Oil (>C24-C36)	ND		0.058	0.24 U

Surrogate	%Rec	Acceptance Limits
o-Terphenyl	76	50 - 150

Method: NWTPH-Dx
Preparation: 3510C
Dilution: 1.0
Date Analyzed: 07/25/2007 1050
Date Prepared: 07/23/2007 1116

Analysis Batch: 580-20966
Prep Batch: 580-20896

Instrument ID: SEA013
Lab File ID: FA30218.D
Initial Weight/Volume: 1030 mL
Final Weight/Volume: 5 mL
Injection Volume:
Column ID: PRIMARY

Analyte	Result (mg/L)	Qualifier	MDL	RL
#2 Diesel (C10-C24)	ND		0.031	0.12 U

Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070105

Lab Sample ID: 580-6583-5

Client Matrix: Water

Date Sampled: 07/17/2007 0000

Date Received: 07/19/2007 1510

NWTPH-Dx Semi-Volatile Petroleum Products by NWTPH-Dx

Method: NWTPH-Dx
Preparation: 3510C
Dilution: 1.0
Date Analyzed: 07/24/2007 1546
Date Prepared: 07/23/2007 1116

Analysis Batch: 580-20966
Prep Batch: 580-20896

Instrument ID: SEA013
Lab File ID: FA30193.D
Initial Weight/Volume: 1000 mL
Final Weight/Volume: 5 mL
Injection Volume:
Column ID: PRIMARY

Analyte	Result (mg/L)	Qualifier	MDL	RL
Motor Oil (>C24-C36)	ND		0.060	0.25 U

Surrogate	%Rec	Acceptance Limits
o-Terphenyl	94	50 - 150

Method: NWTPH-Dx
Preparation: 3510C
Dilution: 1.0
Date Analyzed: 07/25/2007 1110
Date Prepared: 07/23/2007 1116

Analysis Batch: 580-20966
Prep Batch: 580-20896

Instrument ID: SEA013
Lab File ID: FA30219.D
Initial Weight/Volume: 1000 mL
Final Weight/Volume: 5 mL
Injection Volume:
Column ID: PRIMARY

Analyte	Result (mg/L)	Qualifier	MDL	RL
#2 Diesel (C10-C24)	ND		0.032	0.13 U

Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070106

Lab Sample ID: 580-6583-6

Date Sampled: 07/17/2007 0000

Client Matrix: Water

Date Received: 07/19/2007 1510

NWTPH-Dx Semi-Volatile Petroleum Products by NWTPH-Dx

Method:	NWTPH-Dx	Analysis Batch: 580-20966	Instrument ID: SEA013
Preparation:	3510C	Prep Batch: 580-20896	Lab File ID: FA30194.D
Dilution:	1.0		Initial Weight/Volume: 1040 mL
Date Analyzed:	07/24/2007 1606		Final Weight/Volume: 5 mL
Date Prepared:	07/23/2007 1116		Injection Volume:
			Column ID: PRIMARY

Analyte	Result (mg/L)	Qualifier	MDL	RL
Motor Oil (>C24-C36)	ND		0.058	0.24 <i>U</i>

Surrogate	%Rec	Acceptance Limits
o-Terphenyl	89	50 - 150

Method:	NWTPH-Dx	Analysis Batch: 580-20966	Instrument ID: SEA013
Preparation:	3510C	Prep Batch: 580-20896	Lab File ID: FA30220.D
Dilution:	1.0		Initial Weight/Volume: 1040 mL
Date Analyzed:	07/25/2007 1206		Final Weight/Volume: 5 mL
Date Prepared:	07/23/2007 1116		Injection Volume:
			Column ID: PRIMARY

Analyte	Result (mg/L)	Qualifier	MDL	RL
#2 Diesel (C10-C24)	0.042	J	0.031	0.12

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Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070107

Lab Sample ID: 580-6583-7

Client Matrix: Water

Date Sampled: 07/17/2007 0000

Date Received: 07/19/2007 1510

NWTPH-Dx Semi-Volatile Petroleum Products by NWTPH-Dx

Method: NWTPH-Dx Analysis Batch: 580-20966 Instrument ID: SEA013
Preparation: 3510C Prep Batch: 580-20896 Lab File ID: FA30195.D
Dilution: 1.0 Initial Weight/Volume: 910 mL
Date Analyzed: 07/24/2007 1627 Final Weight/Volume: 5 mL
Date Prepared: 07/23/2007 1116 Injection Volume:
Column ID: PRIMARY

Analyte	Result (mg/L)	Qualifier	MDL	RL
Motor Oil (>C24-C36)	ND		0.066	0.27 U

Surrogate	%Rec	Acceptance Limits
o-Terphenyl	80	50 - 150

Method: NWTPH-Dx Analysis Batch: 580-20966 Instrument ID: SEA013
Preparation: 3510C Prep Batch: 580-20896 Lab File ID: FA30221.D
Dilution: 1.0 Initial Weight/Volume: 910 mL
Date Analyzed: 07/25/2007 1239 Final Weight/Volume: 5 mL
Date Prepared: 07/23/2007 1116 Injection Volume:
Column ID: PRIMARY

Analyte	Result (mg/L)	Qualifier	MDL	RL
#2 Diesel (C10-C24)	ND		0.035	0.14 U

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Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070108

Lab Sample ID: 580-6583-8

Client Matrix: Water

Date Sampled: 07/17/2007 0000

Date Received: 07/19/2007 1510

NWTPH-Dx Semi-Volatile Petroleum Products by NWTPH-Dx

Method:	NWTPH-Dx	Analysis Batch: 580-20966	Instrument ID: SEA013
Preparation:	3510C	Prep Batch: 580-20896	Lab File ID: FA30196.D
Dilution:	1.0		Initial Weight/Volume: 1040 mL
Date Analyzed:	07/24/2007 1647		Final Weight/Volume: 5 mL
Date Prepared:	07/23/2007 1116		Injection Volume:
			Column ID: PRIMARY

Analyte	Result (mg/L)	Qualifier	MDL	RL
Motor Oil (>C24-C36)	ND		0.058	0.24 U

Surrogate	%Rec	Acceptance Limits
o-Terphenyl	92	50 - 150

Method:	NWTPH-Dx	Analysis Batch: 580-20966	Instrument ID: SEA013
Preparation:	3510C	Prep Batch: 580-20896	Lab File ID: FA30222.D
Dilution:	1.0		Initial Weight/Volume: 1040 mL
Date Analyzed:	07/25/2007 1259		Final Weight/Volume: 5 mL
Date Prepared:	07/23/2007 1116		Injection Volume:
			Column ID: PRIMARY

Analyte	Result (mg/L)	Qualifier	MDL	RL
#2 Diesel (C10-C24)	ND		0.031	0.12 U

Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070109

Lab Sample ID: 580-6583-9

Client Matrix: Water

Date Sampled: 07/17/2007 0000

Date Received: 07/19/2007 1510

NWTPH-Dx Semi-Volatile Petroleum Products by NWTPH-Dx

Method: NWTPH-Dx Analysis Batch: 580-20966 Instrument ID: SEA013
Preparation: 3510C Prep Batch: 580-20896 Lab File ID: FA30187.D
Dilution: 1.0 Initial Weight/Volume: 1040 mL
Date Analyzed: 07/24/2007 1707 Final Weight/Volume: 5 mL
Date Prepared: 07/23/2007 1116 Injection Volume:
Column ID: PRIMARY

Analyte	Result (mg/L)	Qualifier	MDL	RL
Motor Oil (>C24-C36)	ND		0.058	0.24 U

Surrogate %Rec Acceptance Limits
o-Terphenyl 91 50 - 150

Method: NWTPH-Dx Analysis Batch: 580-20966 Instrument ID: SEA013
Preparation: 3510C Prep Batch: 580-20896 Lab File ID: FA30223.D
Dilution: 1.0 Initial Weight/Volume: 1040 mL
Date Analyzed: 07/25/2007 1319 Final Weight/Volume: 5 mL
Date Prepared: 07/23/2007 1116 Injection Volume:
Column ID: PRIMARY

Analyte	Result (mg/L)	Qualifier	MDL	RL
#2 Diesel (C10-C24)	ND		0.031	0.12 U

Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070110

Lab Sample ID: 580-6583-10

Date Sampled: 07/17/2007 0000

Client Matrix: Water

Date Received: 07/19/2007 1510

NWTPH-Dx Semi-Volatile Petroleum Products by NWTPH-Dx

Method:	NWTPH-Dx	Analysis Batch: 580-20966	Instrument ID: SEA013
Preparation:	3510C	Prep Batch: 580-20896	Lab File ID: FA30198.D
Dilution:	1.0		Initial Weight/Volume: 1070 mL
Date Analyzed:	07/24/2007 1727		Final Weight/Volume: 5 mL
Date Prepared:	07/23/2007 1116		Injection Volume:
			Column ID: PRIMARY

Analyte	Result (mg/L)	Qualifier	MDL	RL
Motor Oil (>C24-C36)	ND		0.056	0.23 <i>U</i>

Surrogate	%Rec	Acceptance Limits
o-Terphenyl	86	50 - 150

Method:	NWTPH-Dx	Analysis Batch: 580-20966	Instrument ID: SEA013
Preparation:	3510C	Prep Batch: 580-20896	Lab File ID: FA30224.D
Dilution:	1.0		Initial Weight/Volume: 1070 mL
Date Analyzed:	07/25/2007 1340		Final Weight/Volume: 5 mL
Date Prepared:	07/23/2007 1116		Injection Volume:
			Column ID: PRIMARY

Analyte	Result (mg/L)	Qualifier	MDL	RL
#2 Diesel (C10-C24)	ND		0.030	0.12 <i>U</i>

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Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070111

Lab Sample ID: 580-6583-11

Client Matrix: Water

Date Sampled: 07/17/2007 0000

Date Received: 07/19/2007 1510

NWTPH-Dx Semi-Volatile Petroleum Products by NWTPH-Dx

Method: NWTPH-Dx Analysis Batch: 580-20966 Instrument ID: SEA013
 Preparation: 3510C Prep Batch: 580-20896 Lab File ID: FA30199.D
 Dilution: 1.0 Initial Weight/Volume: 1040 mL
 Date Analyzed: 07/24/2007 1748 Final Weight/Volume: 5 mL
 Date Prepared: 07/23/2007 1116 Injection Volume:
 Column ID: PRIMARY

Analyte	Result (mg/L)	Qualifier	MDL	RL
Motor Oil (>C24-C36)	ND		0.058	0.24 U

Surrogate	%Rec	Acceptance Limits
o-Terphenyl	88	50 - 150

Method: NWTPH-Dx Analysis Batch: 580-20966 Instrument ID: SEA013
 Preparation: 3510C Prep Batch: 580-20896 Lab File ID: FA30225.D
 Dilution: 1.0 Initial Weight/Volume: 1040 mL
 Date Analyzed: 07/25/2007 1400 Final Weight/Volume: 5 mL
 Date Prepared: 07/23/2007 1116 Injection Volume:
 Column ID: PRIMARY

Analyte	Result (mg/L)	Qualifier	MDL	RL
#2 Diesel (C10-C24)	ND		0.031	0.12 U

Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070112

Lab Sample ID: 580-6583-12

Client Matrix: Water

Date Sampled: 07/17/2007 0000

Date Received: 07/19/2007 1510

NWTPH-Dx Semi-Volatile Petroleum Products by NWTPH-Dx

Method: NWTPH-Dx
Preparation: 3510C
Dilution: 1.0
Date Analyzed: 07/24/2007 1854
Date Prepared: 07/23/2007 1116

Analysis Batch: 580-20966
Prep Batch: 580-20896

Instrument ID: SEA013
Lab File ID: FA30202.D
Initial Weight/Volume: 1040 mL
Final Weight/Volume: 5 mL
Injection Volume:
Column ID: PRIMARY

Analyte	Result (mg/L)	Qualifier	MDL	RL
Motor Oil (>C24-C36)	ND		0.058	0.24 U

Surrogate	%Rec	Acceptance Limits
o-Terphenyl	94	50 - 150

Method: NWTPH-Dx
Preparation: 3510C
Dilution: 1.0
Date Analyzed: 07/25/2007 1511
Date Prepared: 07/23/2007 1116

Analysis Batch: 580-20966
Prep Batch: 580-20896

Instrument ID: SEA013
Lab File ID: FA30228.D
Initial Weight/Volume: 1040 mL
Final Weight/Volume: 5 mL
Injection Volume:
Column ID: PRIMARY

Analyte	Result (mg/L)	Qualifier	MDL	RL
#2 Diesel (C10-C24)	ND		0.031	0.12 U

Handwritten signature/initials

Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070113
 Lab Sample ID: 580-6583-13
 Client Matrix: Water

Date Sampled: 07/17/2007 0000
 Date Received: 07/19/2007 1510

NWTPH-Dx Semi-Volatile Petroleum Products by NWTPH-Dx

Method:	NWTPH-Dx	Analysis Batch: 580-20966	Instrument ID: SEA013
Preparation:	3510C	Prep Batch: 580-20896	Lab File ID: FA30203.D
Dilution:	1.0		Initial Weight/Volume: 1050 mL
Date Analyzed:	07/24/2007 1920		Final Weight/Volume: 5 mL
Date Prepared:	07/23/2007 1116		Injection Volume:
			Column ID: PRIMARY

Analyte	Result (mg/L)	Qualifier	MDL	RL
Motor Oil (>C24-C36)	ND		0.057	0.24 <i>U</i>

Surrogate	%Rec	Acceptance Limits
o-Terphenyl	92	50 - 150

Method:	NWTPH-Dx	Analysis Batch: 580-20966	Instrument ID: SEA013
Preparation:	3510C	Prep Batch: 580-20896	Lab File ID: FA30229.D
Dilution:	1.0		Initial Weight/Volume: 1050 mL
Date Analyzed:	07/25/2007 1531		Final Weight/Volume: 5 mL
Date Prepared:	07/23/2007 1116		Injection Volume:
			Column ID: PRIMARY

Analyte	Result (mg/L)	Qualifier	MDL	RL
#2 Diesel (C10-C24)	0.036	J	0.030	0.12

Handwritten signature and date: J 6/07

Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070114
Lab Sample ID: 580-6583-14
Client Matrix: Water

Date Sampled: 07/17/2007 0000
Date Received: 07/19/2007 1510

NWTPH-Dx Semi-Volatile Petroleum Products by NWTPH-Dx

Method: NWTPH-Dx Analysis Batch: 580-19918 Instrument ID: SEA013
Preparation: 3510C Prep Batch: 580-20904 Lab File ID: FA30242.D
Dilution: 1.0 Initial Weight/Volume: 1050 mL
Date Analyzed: 07/26/2007 1042 Final Weight/Volume: 5 mL
Date Prepared: 07/23/2007 1227 Injection Volume:
Column ID: PRIMARY

Analyte	Result (mg/L)	Qualifier	MDL	RL
Motor Oil (>C24-C36)	ND		0.057	0.24 <i>UT</i>
#2 Diesel (C10-C24)	0.037	J	0.030	0.12
Surrogate	%Rec		Acceptance Limits	
<i>o</i> -Terphenyl	95		50 - 150	

Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070115

Lab Sample ID: 580-6583-15
 Client Matrix: Water

Date Sampled: 07/17/2007 0000
 Date Received: 07/19/2007 1510

NWTPH-Dx Semi-Volatile Petroleum Products by NWTPH-Dx

Method:	NWTPH-Dx	Analysis Batch: 580-20966	Instrument ID: SEA013
Preparation:	3510C	Prep Batch: 580-20896	Lab File ID: FA30204.D
Dilution:	1.0		Initial Weight/Volume: 1020 mL
Date Analyzed:	07/24/2007 1940		Final Weight/Volume: 5 mL
Date Prepared:	07/23/2007 1116		Injection Volume:
			Column ID: PRIMARY

Analyte	Result (mg/L)	Qualifier	MDL	RL
Motor Oil (>C24-C36)	ND		0.059	0.25 U

Surrogate	%Rec	Acceptance Limits
o-Terphenyl	88	50 - 150

Method:	NWTPH-Dx	Analysis Batch: 580-20966	Instrument ID: SEA013
Preparation:	3510C	Prep Batch: 580-20896	Lab File ID: FA30230.D
Dilution:	1.0		Initial Weight/Volume: 1020 mL
Date Analyzed:	07/25/2007 1551		Final Weight/Volume: 5 mL
Date Prepared:	07/23/2007 1116		Injection Volume:
			Column ID: PRIMARY

Analyte	Result (mg/L)	Qualifier	MDL	RL
#2 Diesel (C10-C24)	ND		0.031	0.12 U

Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070116

Lab Sample ID: 580-6583-16

Date Sampled: 07/17/2007 0000

Client Matrix: Water

Date Received: 07/19/2007 1510

NWTPH-Dx Semi-Volatile Petroleum Products by NWTPH-Dx

Method:	NWTPH-Dx	Analysis Batch: 580-20966	Instrument ID: SEA013
Preparation:	3510C	Prep Batch: 580-20896	Lab File ID: FA30205.D
Dilution:	1.0		Initial Weight/Volume: 1020 mL
Date Analyzed:	07/24/2007 2001		Final Weight/Volume: 5 mL
Date Prepared:	07/23/2007 1116		Injection Volume:
			Column ID: PRIMARY

Analyte	Result (mg/L)	Qualifier	MDL	RL
Motor Oil (>C24-C36)	ND		0.059	0.25 U

Surrogate	%Rec	Acceptance Limits
o-Terphenyl	92	50 - 150

Method:	NWTPH-Dx	Analysis Batch: 580-20966	Instrument ID: SEA013
Preparation:	3510C	Prep Batch: 580-20896	Lab File ID: FA30231.D
Dilution:	1.0		Initial Weight/Volume: 1020 mL
Date Analyzed:	07/25/2007 1612		Final Weight/Volume: 5 mL
Date Prepared:	07/23/2007 1116		Injection Volume:
			Column ID: PRIMARY

Analyte	Result (mg/L)	Qualifier	MDL	RL
#2 Diesel (C10-C24)	0.071	J	0.031	0.12

Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070117
Lab Sample ID: 580-6583-17
Client Matrix: Water

Date Sampled: 07/17/2007 0000
Date Received: 07/19/2007 1510

NWTPH-Dx Semi-Volatile Petroleum Products by NWTPH-Dx

Method: NWTPH-Dx Analysis Batch: 580-20966 Instrument ID: SEA013
Preparation: 3510C Prep Batch: 580-20896 Lab File ID: FA30206.D
Dilution: 1.0 Initial Weight/Volume: 1030 mL
Date Analyzed: 07/24/2007 2021 Final Weight/Volume: 5 mL
Date Prepared: 07/23/2007 1116 Injection Volume:
Column ID: PRIMARY

Analyte	Result (mg/L)	Qualifier	MDL	RL
Motor Oil (>C24-C36)	ND		0.058	0.24 U

Surrogate	%Rec	Acceptance Limits
o-Terphenyl	83	50 - 150

Method: NWTPH-Dx Analysis Batch: 580-20966 Instrument ID: SEA013
Preparation: 3510C Prep Batch: 580-20896 Lab File ID: FA30232.D
Dilution: 1.0 Initial Weight/Volume: 1030 mL
Date Analyzed: 07/25/2007 1632 Final Weight/Volume: 5 mL
Date Prepared: 07/23/2007 1116 Injection Volume:
Column ID: PRIMARY

Analyte	Result (mg/L)	Qualifier	MDL	RL
#2 Diesel (C10-C24)	0.045	J	0.031	0.12

Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070118

Lab Sample ID: 580-6583-18

Date Sampled: 07/17/2007 0000

Client Matrix: Water

Date Received: 07/19/2007 1510

NWTPH-Dx Semi-Volatile Petroleum Products by NWTPH-Dx

Method:	NWTPH-Dx	Analysis Batch: 580-20966	Instrument ID:	SEA013
Preparation:	3510C	Prep Batch: 580-20896	Lab File ID:	FA30207.D
Dilution:	1.0		Initial Weight/Volume:	990 mL
Date Analyzed:	07/24/2007 2042		Final Weight/Volume:	5 mL
Date Prepared:	07/23/2007 1116		Injection Volume:	
			Column ID:	PRIMARY

Analyte	Result (mg/L)	Qualifier	MDL	RL
Motor Oil (>C24-C36)	ND		0.061	0.25 U

Surrogate	%Rec	Acceptance Limits
o-Terphenyl	90	50 - 150

Method:	NWTPH-Dx	Analysis Batch: 580-20966	Instrument ID:	SEA013
Preparation:	3510C	Prep Batch: 580-20896	Lab File ID:	FA30233.D
Dilution:	1.0		Initial Weight/Volume:	990 mL
Date Analyzed:	07/25/2007 1652		Final Weight/Volume:	5 mL
Date Prepared:	07/23/2007 1116		Injection Volume:	
			Column ID:	PRIMARY

Analyte	Result (mg/L)	Qualifier	MDL	RL
#2 Diesel (C10-C24)	0.044	J	0.032	0.13

mw
2/6/07

Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070119

Lab Sample ID: 580-6583-19
Client Matrix: Water

Date Sampled: 07/17/2007 0000
Date Received: 07/19/2007 1510

NWTPH-Dx Semi-Volatile Petroleum Products by NWTPH-Dx

Method: NWTPH-Dx
Preparation: 3510C
Dilution: 1.0
Date Analyzed: 07/24/2007 2102
Date Prepared: 07/23/2007 1116

Analysis Batch: 580-20966
Prep Batch: 580-20896

Instrument ID: SEA013
Lab File ID: FA30208.D
Initial Weight/Volume: 1020 mL
Final Weight/Volume: 5 mL
Injection Volume:
Column ID: PRIMARY

Analyte	Result (mg/L)	Qualifier	MDL	RL
Motor Oil (>C24-C36)	ND		0.059	0.25 U

Surrogate	%Rec	Acceptance Limits
o-Terphenyl	67	50 - 150

Method: NWTPH-Dx
Preparation: 3510C
Dilution: 1.0
Date Analyzed: 07/25/2007 1712
Date Prepared: 07/23/2007 1116

Analysis Batch: 580-20966
Prep Batch: 580-20896

Instrument ID: SEA013
Lab File ID: FA30234.D
Initial Weight/Volume: 1020 mL
Final Weight/Volume: 5 mL
Injection Volume:
Column ID: PRIMARY

Analyte	Result (mg/L)	Qualifier	MDL	RL
#2 Diesel (C10-C24)	0.26		0.031	0.12

mw
8/6/07

Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070120

Lab Sample ID: 580-6583-20

Date Sampled: 07/17/2007 0000

Client Matrix: Water

Date Received: 07/19/2007 1510

NWTPH-Dx Semi-Volatile Petroleum Products by NWTPH-Dx

Method: NWTPH-Dx Analysis Batch: 580-19918 Instrument ID: SEA013
Preparation: 3510C Prep Batch: 580-20904 Lab File ID: FA30245.D
Dilution: 1.0 Initial Weight/Volume: 990 mL
Date Analyzed: 07/26/2007 1153 Final Weight/Volume: 5 mL
Date Prepared: 07/23/2007 1227 Injection Volume:
Column ID: PRIMARY

Analyte	Result (mg/L)	Qualifier	MDL	RL
Motor Oil (>C24-C36)	ND		0.061	0.25 U
#2 Diesel (C10-C24)	0.069	J	0.032	0.13
Surrogate	%Rec		Acceptance Limits	
o-Terphenyl	91		50 - 150	

Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070121

Lab Sample ID: 580-6583-21
Client Matrix: Water

Date Sampled: 07/17/2007 0000
Date Received: 07/19/2007 1510

NWTPH-Dx Semi-Volatile Petroleum Products by NWTPH-Dx

Method: NWTPH-Dx Analysis Batch: 580-19918 Instrument ID: SEA013
Preparation: 3510C Prep Batch: 580-20904 Lab File ID: FA30246.D
Dilution: 1.0 Initial Weight/Volume: 1030 mL
Date Analyzed: 07/26/2007 1214 Final Weight/Volume: 5 mL
Date Prepared: 07/23/2007 1227 Injection Volume:
Column ID: PRIMARY

Analyte	Result (mg/L)	Qualifier	MDL	RL
Motor Oil (>C24-C36)	ND		0.058	0.24 U
#2 Diesel (C10-C24)	0.062	J	0.031	0.12

Surrogate	%Rec	Acceptance Limits
o-Terphenyl	92	50 - 150

MW
8/6/07

Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070122

Lab Sample ID: 580-6583-22

Client Matrix: Water

Date Sampled: 07/17/2007 0000

Date Received: 07/19/2007 1510

NWTPH-Dx Semi-Volatile Petroleum Products by NWTPH-Dx

Method: NWTPH-Dx Analysis Batch: 580-19918 Instrument ID: SEA013
Preparation: 3510C Prep Batch: 580-20904 Lab File ID: FA30247.D
Dilution: 1.0 Initial Weight/Volume: 980 mL
Date Analyzed: 07/26/2007 1234 Final Weight/Volume: 5 mL
Date Prepared: 07/23/2007 1227 Injection Volume:
Column ID: PRIMARY

Analyte	Result (mg/L)	Qualifier	MDL	RL
Motor Oil (>C24-C36)	0.13	J	0.061	0.26
#2 Diesel (C10-C24)	0.083	J	0.033	0.13
Surrogate	%Rec		Acceptance Limits	
o-Terphenyl	95		50 - 150	

Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070123
Lab Sample ID: 580-6583-23
Client Matrix: Water

Date Sampled: 07/17/2007 0000
Date Received: 07/19/2007 1510

NWTPH-Dx Semi-Volatile Petroleum Products by NWTPH-Dx

Method: NWTPH-Dx Analysis Batch: 580-19918 Instrument ID: SEA013
Preparation: 3510C Prep Batch: 580-20904 Lab File ID: FA30248.D
Dilution: 1.0 Initial Weight/Volume: 1030 mL
Date Analyzed: 07/26/2007 1254 Final Weight/Volume: 5 mL
Date Prepared: 07/23/2007 1227 Injection Volume:
Column ID: PRIMARY

Analyte	Result (mg/L)	Qualifier	MDL	RL
Motor Oil (>C24-C36)	ND		0.058	0.24 U
#2 Diesel (C10-C24)	0.077	J	0.031	0.12
Surrogate	%Rec		Acceptance Limits	
o-Terphenyl	96		50 - 150	

Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070124

Lab Sample ID: 580-6583-24

Client Matrix: Water

Date Sampled: 07/17/2007 0000

Date Received: 07/19/2007 1510

NWTPH-Dx Semi-Volatile Petroleum Products by NWTPH-Dx

Method:	NWTPH-Dx	Analysis Batch: 580-19918	Instrument ID: SEA013
Preparation:	3510C	Prep Batch: 580-20904	Lab File ID: FA30249.D
Dilution:	1.0		Initial Weight/Volume: 1030 mL
Date Analyzed:	07/26/2007 1314		Final Weight/Volume: 5 mL
Date Prepared:	07/23/2007 1227		Injection Volume:
			Column ID: PRIMARY

Analyte	Result (mg/L)	Qualifier	MDL	RL
Motor Oil (>C24-C36)	0.10	J	0.058	0.24
#2 Diesel (C10-C24)	0.069	J	0.031	0.12
Surrogate	%Rec		Acceptance Limits	
o-Terphenyl	89		50 - 150	

MW
8/6/07

Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070125

Lab Sample ID: 580-6583-25

Client Matrix: Water

Date Sampled: 07/17/2007 0000

Date Received: 07/19/2007 1510

NWTPH-Dx Semi-Volatile Petroleum Products by NWTPH-Dx

Method: NWTPH-Dx
Preparation: 3510C
Dilution: 1.0
Date Analyzed: 07/26/2007 1334
Date Prepared: 07/23/2007 1227

Analysis Batch: 580-19918
Prep Batch: 580-20904

Instrument ID: SEA013
Lab File ID: FA30250.D
Initial Weight/Volume: 1030 mL
Final Weight/Volume: 5 mL
Injection Volume:
Column ID: PRIMARY

Analyte	Result (mg/L)	Qualifier	MDL	RL
Motor Oil (>C24-C36)	ND		0.058	0.24
#2 Diesel (C10-C24)	0.074	J	0.031	0.12
Surrogate	%Rec		Acceptance Limits	
o-Terphenyl	91		50 - 150	

MW
JFJ

Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

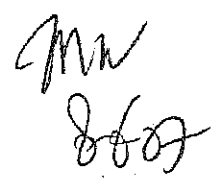
Client Sample ID: 07070126
Lab Sample ID: 580-6583-26
Client Matrix: Water

Date Sampled: 07/18/2007 0000
Date Received: 07/19/2007 1510

NWTPH-Dx Semi-Volatile Petroleum Products by NWTPH-Dx

Method: NWTPH-Dx Analysis Batch: 580-19918 Instrument ID: SEA013
Preparation: 3510C Prep Batch: 580-20904 Lab File ID: FA30251.D
Dilution: 1.0 Initial Weight/Volume: 1050 mL
Date Analyzed: 07/26/2007 1355 Final Weight/Volume: 5 mL
Date Prepared: 07/23/2007 1227 Injection Volume:
Column ID: PRIMARY

Analyte	Result (mg/L)	Qualifier	MDL	RL
Motor Oil (>C24-C36)	0.081	J	0.057	0.24
#2 Diesel (C10-C24)	0.087	J	0.030	0.12
Surrogate	%Rec		Acceptance Limits	
o-Terphenyl	89		50 - 150	



Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070127

Lab Sample ID: 580-6583-27

Client Matrix: Water

Date Sampled: 07/18/2007 0000

Date Received: 07/19/2007 1510

NWTPH-Dx Semi-Volatile Petroleum Products by NWTPH-Dx

Method:	NWTPH-Dx	Analysis Batch: 580-19918	Instrument ID: SEA013
Preparation:	3510C	Prep Batch: 580-20904	Lab File ID: FA30252.D
Dilution:	1.0		Initial Weight/Volume: 1020 mL
Date Analyzed:	07/26/2007 1415		Final Weight/Volume: 5 mL
Date Prepared:	07/23/2007 1227		Injection Volume:
			Column ID: PRIMARY

Analyte	Result (mg/L)	Qualifier	MDL	RL
Motor Oil (>C24-C36)	0.16	J	0.059	0.25
#2 Diesel (C10-C24)	1.2		0.031	0.12

Surrogate	%Rec	Acceptance Limits
o-Terphenyl	96	50 - 150

mw
8/6/07

Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070128
Lab Sample ID: 580-6583-28
Client Matrix: Water

Date Sampled: 07/18/2007 0000
Date Received: 07/19/2007 1510

NWTPH-Dx Semi-Volatile Petroleum Products by NWTPH-Dx

Method: NWTPH-Dx Analysis Batch: 580-19918 Instrument ID: SEA013
Preparation: 3510C Prep Batch: 580-20904 Lab File ID: FA30253.D
Dilution: 1.0 Initial Weight/Volume: 1050 mL
Date Analyzed: 07/26/2007 1435 Final Weight/Volume: 5 mL
Date Prepared: 07/23/2007 1227 Injection Volume:
Column ID: PRIMARY

Analyte	Result (mg/L)	Qualifier	MDL	RL
Motor Oil (>C24-C36)	ND		0.057	0.24
#2 Diesel (C10-C24)	0.095	J	0.030	0.12
Surrogate	%Rec		Acceptance Limits	
o-Terphenyl	98		50 - 150	

gmw
8/6/07

Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070129

Lab Sample ID: 580-6583-29

Client Matrix: Water

Date Sampled: 07/18/2007 0000

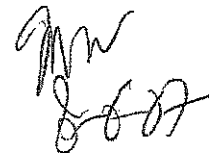
Date Received: 07/19/2007 1510

NWTPH-Dx Semi-Volatile Petroleum Products by NWTPH-Dx

Method:	NWTPH-Dx	Analysis Batch: 580-19918	Instrument ID: SEA013
Preparation:	3510C	Prep Batch: 580-20904	Lab File ID: FA30254.D
Dilution:	1.0		Initial Weight/Volume: 1020 mL
Date Analyzed:	07/26/2007 1455		Final Weight/Volume: 5 mL
Date Prepared:	07/23/2007 1227		Injection Volume:
			Column ID: PRIMARY

Analyte	Result (mg/L)	Qualifier	MDL	RL
Motor Oil (>C24-C36)	ND		0.059	0.25
#2 Diesel (C10-C24)	0.069	J	0.031	0.12

Surrogate	%Rec	Acceptance Limits
o-Terphenyl	97	50 - 150



Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070130

Lab Sample ID: 580-6583-30

Client Matrix: Water

Date Sampled: 07/18/2007 0000

Date Received: 07/19/2007 1510

NWTPH-Dx Semi-Volatile Petroleum Products by NWTPH-Dx

Method: NWTPH-Dx
Preparation: 3510C
Dilution: 1.0
Date Analyzed: 07/26/2007 1516
Date Prepared: 07/23/2007 1227

Analysis Batch: 580-19918
Prep Batch: 580-20904

Instrument ID: SEA013
Lab File ID: FA30255.D
Initial Weight/Volume: 1030 mL
Final Weight/Volume: 5 mL
Injection Volume:
Column ID: PRIMARY

Analyte	Result (mg/L)	Qualifier	MDL	RL
Motor Oil (>C24-C36)	ND		0.058	0.24
#2 Diesel (C10-C24)	0.046	J	0.031	0.12
Surrogate	%Rec			Acceptance Limits
o-Terphenyl	94			50 - 150

Handwritten signature

Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070131

Lab Sample ID: 580-6583-31
Client Matrix: Water

Date Sampled: 07/18/2007 0000
Date Received: 07/19/2007 1510

NWTPH-Dx Semi-Volatile Petroleum Products by NWTPH-Dx

Method: NWTPH-Dx Analysis Batch: 580-19918 Instrument ID: SEA013
Preparation: 351DC Prep Batch: 580-20904 Lab File ID: FA30256.D
Dilution: 1.0 Initial Weight/Volume: 1020 mL
Date Analyzed: 07/26/2007 1536 Final Weight/Volume: 5 mL
Date Prepared: 07/23/2007 1227 Injection Volume:
Column ID: PRIMARY

Analyte	Result (mg/L)	Qualifier	MDL	RL
Motor Oil (>C24-C36)	ND		0.059	0.25 U
#2 Diesel (C10-C24)	0.042	J	0.031	0.12

Surrogate	%Rec	Acceptance Limits
o-Terphenyl	96	50 - 150

MW
8/6/07

Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070132

Lab Sample ID: 580-6583-32
Client Matrix: Water

Date Sampled: 07/18/2007 0000
Date Received: 07/19/2007 1510

NWTPH-Dx Semi-Volatile Petroleum Products by NWTPH-Dx

Method: NWTPH-Dx Analysis Batch: 580-19918 Instrument ID: SEA013
Preparation: 3510C Prep Batch: 580-20904 Lab File ID: FA30257.D
Dilution: 1.0 Initial Weight/Volume: 1020 mL
Date Analyzed: 07/26/2007 1556 Final Weight/Volume: 5 mL
Date Prepared: 07/23/2007 1227 Injection Volume:
Column ID: PRIMARY

Analyte	Result (mg/L)	Qualifier	MDL	RL
Motor Oil (>C24-C36)	ND		0.059	0.25 U
#2 Diesel (C10-C24)	0.38		0.031	0.12
Surrogate	%Rec		Acceptance Limits	
o-Terphenyl	94		50 - 150	

MW
8/6/07

Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070133

Lab Sample ID: 580-6583-33
Client Matrix: Water

Date Sampled: 07/18/2007 0000
Date Received: 07/19/2007 1510

NWTPH-Dx Semi-Volatile Petroleum Products by NWTPH-Dx

Method: NWTPH-Dx Analysis Batch: 580-19918 Instrument ID: SEA013
Preparation: 3510C Prep Batch: 580-20904 Lab File ID: FA30258.D
Dilution: 1.0 Initial Weight/Volume: 910 mL
Date Analyzed: 07/26/2007 1616 Final Weight/Volume: 5 mL
Date Prepared: 07/23/2007 1227 Injection Volume:
Column ID: PRIMARY

Analyte	Result (mg/L)	Qualifier	MDL	RL
Motor Oil (>C24-C36)	ND		0.066	0.27
#2 Diesel (C10-C24)	1.9		0.035	0.14

Surrogate	%Rec	Acceptance Limits
o-Terphenyl	93	50 - 150

mm
8/6/07

Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070134

Lab Sample ID: 580-6583-34

Client Matrix: Water

Date Sampled: 07/18/2007 0000

Date Received: 07/19/2007 1510

NWTPH-Dx Semi-Volatile Petroleum Products by NWTPH-Dx

Method:	NWTPH-Dx	Analysis Batch: 580-19918	Instrument ID: SEA013
Preparation:	3510C	Prep Batch: 580-20904	Lab File ID: FA30259.D
Dilution:	1.0		Initial Weight/Volume: 1020 mL
Date Analyzed:	07/26/2007 1638		Final Weight/Volume: 5 mL
Date Prepared:	07/23/2007 1227		Injection Volume:
			Column ID: PRIMARY

Analyte	Result (mg/L)	Qualifier	MDL	RL
Motor Oil (>C24-C36)	0.069	J	0.059	0.25
#2 Diesel (C10-C24)	1.0		0.031	0.12

Surrogate	%Rec	Acceptance Limits
o-Terphenyl	101	50 - 150

mm
8/6/07

Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070135

Lab Sample ID: 580-6583-35

Client Matrix: Water

Date Sampled: 07/18/2007 0000

Date Received: 07/19/2007 1510

NWTPH-Dx Semi-Volatile Petroleum Products by NWTPH-Dx

Method:	NWTPH-Dx	Analysis Batch: 580-19918	Instrument ID: SEA013
Preparation:	3510C	Prep Batch: 580-20904	Lab File ID: FA30260.D
Dilution:	1.0		Initial Weight/Volume: 1020 mL
Date Analyzed:	07/26/2007 1656		Final Weight/Volume: 5 mL
Date Prepared:	07/23/2007 1227		Injection Volume:
			Column ID: PRIMARY

Analyte	Result (mg/L)	Qualifier	MDL	RL
Motor Oil (>C24-C36)	0.24	J	0.058	0.25
#2 Diesel (C10-C24)	3.1		0.031	0.12

Surrogate	%Rec	Acceptance Limits
o-Terphenyl	97	50 - 150

mw
8-6-07

Analytical Data

Client: Environmental Quality Mgt., Inc.

Job Number: 580-6583-1

Client Sample ID: 07070136

Lab Sample ID: 580-6583-36

Client Matrix: Water

Date Sampled: 07/18/2007 0000

Date Received: 07/19/2007 1510

NWTPH-Dx Semi-Volatile Petroleum Products by NWTPH-Dx

Method: NWTPH-Dx
Preparation: 3510C
Dilution: 1.0
Date Analyzed: 07/26/2007 1716
Date Prepared: 07/23/2007 1227

Analysis Batch: 580-19918
Prep Batch: 580-20904

Instrument ID: SEAD13
Lab File ID: FA30261.D
Initial Weight/Volume: 1020 mL
Final Weight/Volume: 5 mL
Injection Volume:
Column ID: PRIMARY

Analyte	Result (mg/L)	Qualifier	MDL	RL
Motor Oil (>C24-C36)	0.23	J	0.059	0.25
#2 Diesel (C10-C24)	3.0		0.031	0.12
Surrogate	%Rec		Acceptance Limits	
o-Terphenyl	97		50 - 150	

APPENDIX B
Pre-RI Assessment Data

Table B-1
Summary of Interim Action Field Activities
Colville Post and Poles
Stevens County, Washington

Date	Time On-site	Contractors/Consultants On-site	Equipment On-site	Summary of Daily Activities
September 21, 2015	1000-1700	BCI, NRC, GeoEngineers	CAT 312E excavator, 10-yard dump truck, Ford F450 truck	Conducted a site safety meeting followed by a site walk to orient workers to key features of the property and tasks to be completed. Staged three laydown areas with 10-mil plastic sheeting for temporary stockpiles. Began removing debris from Wetland Debris Area 1 (see Figure 3-3) using excavator and manual labor. Removed debris was loaded into the 10-yard dump truck and transported to the Temporary Stockpile Area.
September 22, 2015	0700-1700	NRC, GeoEngineers	CAT 312E excavator, CAT 320D extended-arm excavator, 10-yard dump truck, Ford F450 truck	Removed debris from Wetland Debris Area 1 and surrounding upland areas using CAT 312E excavator. Removed debris was loaded into the 10-yard dump truck and transported to the Temporary Stockpile Area. CAT 320D excavator delivered to replace CAT 312E. Debris along fence line and in Former Treated Wood Storage Area is removed by hand and transported by F450 to the Temporary Stockpile Area. A fourth laydown area was constructed with 10-mil-thick plastic sheeting for temporary stockpile. NRC uses excavator to overturn concrete pads south of Temporary Stockpile Area. Ecology Representatives visit site.
September 23, 2015	0650-1700	NRC, GeoEngineers	CAT 320D extended-arm excavator, 10-yard dump truck	NRC lined two more laydown areas for temporary stockpiles with 20-mil-thick plastic sheeting. NRC removed debris from Wetland Debris Area 2 and surrounding upland areas (see Figure 3-3). Workers manually removed debris from Wetland A areas inaccessible to the excavator and stockpiled the debris in upland areas for the excavator to pick up. Removed debris was loaded into the 10-yard dump truck and transported to the Temporary Stockpile Area. By the end of the day, Wetland A generally was clear of debris.
September 24, 2015	0700-1715	NRC, GeoEngineers	CAT 320D extended-arm excavator, 10-yard dump truck	NRC lined two more laydown areas for temporary stockpiles with 20-mil-thick plastic sheeting. NRC removed debris from the South Stockpile Area and upland areas on the east and west portions of the site (see Figure 3-3). Removed debris was loaded into the 10-yard dump truck and transported to the Temporary Stockpile Area. Ecology and additional GeoEngineers representatives visited the site. NRC used the excavator to remove small concrete pads from the South Stockpile Area. NRC removed 5-gallon containers of used oil from the west boundary of the site and drums, and labeled the waste material containers.

Table B-2
Summary of Soil Chemical Analytical Results - SVOCs¹
 Colville Post and Poles
 Stevens County, Washington

Sample ID Date Collected Sample Depth	MTCA Method B CUL (µg/kg)	DP-1 (12-13) 5/11/2015 12-13 ft	DP-2a (1-2) 3/16/2015 1-2 ft	DP-2a (15-16) 3/16/2015 15-16 ft	DP-2 (12-12.5) 5/11/2015 12-12.5 ft	DP-2 (12.5-13.5) 5/11/2015 12.5-13.5 ft	DP-3 (12-13) 5/11/2015 12-13 ft	DP-3 (13-14) 5/11/2015 13-14 ft	DP-4 (16-16.5) 5/11/2015 16-16.5 ft	DP-4 (16.5-17.5) 5/11/2015 16.5-17.5 ft	DP-5 (16-16.5) 5/11/2015 16-16.5 ft
Semi-volatile Organic Compounds² (µg/kg)											
1,2,4-Trichlorobenzene	34,500	422 U	447 U	394 U	369 U	470 U	361 U	480 U	371 UJ	518 UJ	471 U
1,2-Dichlorobenzene (o-Dichlorobenzene)	7,200,000	422 U	447 U	394 U	369 U	470 U	361 U	480 U	371 UJ	518 UJ	471 U
1,2-Diphenylhydrazine	1,250	422 U	447 U	394 U	369 U	470 U	361 U	480 U	371 UJ	518 UJ	471 U
1,3-Dichlorobenzene (m-Dichlorobenzene)	NE	422 U	447 U	394 U	369 U	470 U	361 U	480 U	371 UJ	518 UJ	471 U
1,4-Dichlorobenzene (p-Dichlorobenzene)	185,000	422 U	447 U	394 U	369 U	470 U	361 U	480 U	371 UJ	518 UJ	471 U
2,2'-Oxybis[1-chloropropane]	NE	422 U	447 U	394 U	369 U	470 U	361 U	480 U	371 UJ	518 UJ	471 U
2,4,5-Trichlorophenol	8,000,000	422 U	447 U	394 U	369 U	470 U	361 U	480 U	371 UJ	518 U	471 U
2,4,6-Trichlorophenol	90,900	422 U	447 U	394 U	369 U	470 U	361 U	480 U	371 UJ	518 U	471 U
2,4-Dichlorophenol	240,000	422 U	447 U	394 U	369 U	470 U	361 U	480 U	371 UJ	518 U	471 U
2,4-Dimethylphenol	1,600,000	422 U	447 U	394 U	369 U	470 U	361 U	480 U	371 UJ	518 U	471 U
2,4-Dinitrophenol	160,000	422 U	447 U	394 U	369 U	470 U	361 U	480 U	371 UJ	518 U	471 U
2,4-Dinitrotoluene	3,230	422 U	447 U	394 U	369 U	470 U	361 U	480 U	371 UJ	518 UJ	471 U
2,6-Dinitrotoluene	667	422 U	447 U	394 U	369 U	470 U	361 U	480 U	371 UJ	518 UJ	471 U
2-Chloronaphthalene	NE	422 U	447 U	394 U	369 U	470 U	361 U	480 U	371 UJ	518 UJ	471 U
2-Chlorophenol	400,000	422 U	447 U	394 U	369 U	470 U	361 U	480 U	371 UJ	518 U	471 U
2-Nitroaniline	800,000	422 U	447 U	394 U	369 U	470 U	361 U	480 U	371 UJ	518 UJ	471 U
2-Nitrophenol	NE	422 U	447 U	394 U	369 U	470 U	361 U	480 U	371 UJ	518 U	471 U
3 & 4 Methylphenol	NE	843 U	895 U	789 U	738 U	940 U	722 U	961 U	742 UJ	1040 U	942 U
3,3'-Dichlorobenzidine	2,220	422 U	447 U	394 U	369 U	470 U	361 U	480 U	371 UJ	518 UJ	471 U
3-Nitroaniline	NE	422 U	447 U	394 U	369 U	470 U	361 U	480 U	371 UJ	518 UJ	471 U
4,6-Dinitro-2-Methylphenol	NE	2,170 U	2,300 U	2,030 U	1,900 U	2,420 U	1,860 U	2,470 U	1,910 UJ	2,670 U	2,430 U
4-Bromophenyl phenyl ether	NE	422 U	447 U	394 U	369 U	470 U	361 U	480 U	371 UJ	518 UJ	471 U
4-Chloro-3-Methylphenol	NE	422 U	447 U	394 U	369 U	470 U	361 U	480 U	371 UJ	518 U	471 U
4-Chloroaniline	NE	422 U	447 U	394 U	369 U	470 U	361 U	480 U	371 UJ	518 UJ	471 U
4-Chlorophenyl-Phenylether	NE	422 U	447 U	394 U	369 U	470 U	361 U	480 U	371 UJ	518 UJ	471 U
4-Nitroaniline	NE	422 U	447 U	394 U	369 U	470 U	361 U	480 U	371 UJ	518 UJ	471 U
4-Nitrophenol (p-Nitrophenol)	NE	422 U	447 U	394 U	369 U	470 U	361 U	480 U	371 UJ	518 U	471 U
Bis(2-Chloroethoxy)Methane	NE	422 U	447 U	394 U	369 U	470 U	361 U	480 U	371 UJ	518 UJ	471 U
Bis(2-Chloroethyl)Ether	909	422 U	447 U	394 U	369 U	470 U	361 U	480 U	371 UJ	518 UJ	471 U
Bis(2-Ethylhexyl) Phthalate	71,400	422 U	447 U	394 U	369 U	470 U	361 U	480 U	371 UJ	518 UJ	471 U
Butyl benzyl Phthalate	526,000	422 U	447 U	394 U	369 U	470 U	361 U	480 U	371 UJ	518 UJ	471 U
Carbazole	NE	422 U	447 U	394 U	369 U	470 U	361 U	480 U	371 UJ	518 UJ	471 U
Dibenzofuran	80,000	422 U	447 U	394 U	369 U	470 U	361 U	480 U	371 UJ	518 UJ	471 U
Dibutyl Phthalate	8,000,000	422 U	447 U	394 U	369 U	470 U	361 U	480 U	371 UJ	518 UJ	471 U
Diethyl Phthalate	64,000,000	422 U	447 U	394 U	369 U	470 U	361 U	480 U	371 UJ	518 UJ	471 U

Sample ID Date Collected Sample Depth	MTCA Method B CUL (µg/kg)	DP-1 (12-13) 5/11/2015 12-13 ft	DP-2a (1-2) 3/16/2015 1-2 ft	DP-2a (15-16) 3/16/2015 15-16 ft	DP-2 (12-12.5) 5/11/2015 12-12.5 ft	DP-2 (12.5-13.5) 5/11/2015 12.5-13.5 ft	DP-3 (12-13) 5/11/2015 12-13 ft	DP-3 (13-14) 5/11/2015 13-14 ft	DP-4 (16-16.5) 5/11/2015 16-16.5 ft	DP-4 (16.5-17.5) 5/11/2015 16.5-17.5 ft	DP-5 (16-16.5) 5/11/2015 16-16.5 ft
Dimethyl Phthalate	NE	422 U	447 U	394 U	369 U	470 U	361 U	480 U	371 UJ	518 UJ	471 U
Di-N-Octyl Phthalate	800,000	422 U	447 U	394 U	369 U	470 U	361 U	480 U	371 UJ	518 UJ	471 U
Hexachlorobenzene	625	422 U	447 U	394 U	369 U	470 U	361 U	480 U	371 UJ	518 UJ	471 U
Hexachlorobutadiene	12,800	422 U	447 U	394 U	369 U	470 U	361 U	480 U	371 UJ	518 UJ	471 U
Hexachloroethane	25,000	422 U	447 U	394 U	369 U	470 U	361 U	480 U	371 UJ	518 UJ	471 U
Isophorone	1,050,000	422 U	447 U	394 U	369 U	470 U	361 U	480 U	371 UJ	518 UJ	471 U
Nitrobenzene	160,000	422 U	447 U	394 U	369 U	470 U	361 U	480 U	371 UJ	518 UJ	471 U
N-Nitrosodimethylamine	19.6 ³	422 U	447 U	394 U	369 U	470 U	361 U	480 U	371 UJ	518 UJ	471 U
N-Nitrosodi-n-propylamine	143 ³	422 U	447 U	394 U	369 U	470 U	361 U	480 U	371 UJ	518 UJ	471 U
N-Nitrosodiphenylamine (as diphenylamine)	204,000	422 U	447 U	394 U	369 U	470 U	361 U	480 U	371 UJ	518 UJ	471 U
o-Cresol (2-methylphenol)	4,000,000	422 U	447 U	394 U	369 U	470 U	361 U	480 U	371 UJ	518 U	471 U
Phenol	24,000,000	422 U	447 U	394 U	369 U	470 U	361 U	480 U	371 UJ	518 U	471 U

Sample ID Date Collected Sample Depth	MTCA Method B CUL (µg/kg)	DP-5 (16.5-17) 5/11/2015 16.5-17 ft	DP-6 (12-13) 5/11/2015 12-13 ft	DP-6 (13-14) 5/12/2015 13-14 ft	DP-7 (12.5-13.5) 5/12/2015 12.5-13.5 ft	DP-7 (13.5-14.5) 5/12/2015 13.5-14.5 ft	DP-8 (20-20.5) 5/12/2015 20-20.5 ft	DP-8 (20.5-21) 5/12/2015 20.5-21 ft	DP-9 (12.5-13.5) 5/14/2015 12.5-13.5 ft	DP-9 (13.5-14.5) 5/14/2015 13.5-14.5 ft	DP-10 (12-12.5) 5/14/2015 12-12.5 ft	DP-10 (12.5-13) 5/14/2015 12.5-13 ft
Semi-volatile Organic Compounds² (µg/kg)												
1,2,4-Trichlorobenzene	34,500	499 U	481 U	457 U	370 U	452 U	418 U	447 U	353 U	442 U	455 UJ	517 U
1,2-Dichlorobenzene (o-Dichlorobenzene)	7,200,000	499 U	481 U	457 U	370 U	452 U	418 U	447 U	353 U	442 U	455 UJ	517 U
1,2-Diphenylhydrazine	1,250	499 U	481 U	457 U	370 U	452 U	418 U	447 U	353 U	442 U	455 UJ	517 U
1,3-Dichlorobenzene (m-Dichlorobenzene)	NE	499 U	481 U	457 U	370 U	452 U	418 U	447 U	353 U	442 U	455 UJ	517 U
1,4-Dichlorobenzene (p-Dichlorobenzene)	185,000	499 U	481 U	457 U	370 U	452 U	418 U	447 U	353 U	442 U	455 UJ	517 U
2,2'-Oxybis[1-chloropropane]	NE	499 U	481 U	457 U	370 U	452 U	418 U	447 U	353 U	442 U	455 UJ	517 U
2,4,5-Trichlorophenol	8,000,000	499 U	481 U	457 U	370 U	452 U	418 U	447 U	353 U	442 U	455 U	517 U
2,4,6-Trichlorophenol	90,900	499 U	481 U	457 U	370 U	452 U	418 U	447 U	353 U	442 U	455 U	517 U
2,4-Dichlorophenol	240,000	499 U	481 U	457 U	370 U	452 U	418 U	447 U	353 U	442 U	455 U	517 U
2,4-Dimethylphenol	1,600,000	499 U	481 U	457 U	370 U	452 U	418 U	447 U	353 U	442 U	455 U	517 U
2,4-Dinitrophenol	160,000	499 U	481 U	457 U	370 U	452 U	418 U	447 U	353 U	442 U	455 U	517 U
2,4-Dinitrotoluene	3,230	499 U	481 U	457 U	370 U	452 U	418 U	447 U	353 U	442 U	455 UJ	517 U
2,6-Dinitrotoluene	667	499 U	481 U	457 U	370 U	452 U	418 U	447 U	353 U	442 U	455 UJ	517 U
2-Chloronaphthalene	NE	499 U	481 U	457 U	370 U	452 U	418 U	447 U	353 U	442 U	455 UJ	517 U
2-Chlorophenol	400,000	499 U	481 U	457 U	370 U	452 U	418 U	447 U	353 U	442 U	455 U	517 U
2-Nitroaniline	800,000	499 U	481 U	457 U	370 U	452 U	418 U	447 U	353 U	442 U	455 UJ	517 U
2-Nitrophenol	NE	499 U	481 U	457 U	370 U	452 U	418 U	447 U	353 U	442 U	455 U	517 U
3 & 4 Methylphenol	NE	998 U	963 U	915 U	741 U	904 U	835 U	895 U	705 U	884 U	909 U	1030 U
3,3'-Dichlorobenzidine	2,220	499 U	481 U	457 U	370 U	452 U	418 U	447 U	353 U	442 U	455 UJ	517 U
3-Nitroaniline	NE	499 U	481 U	457 U	370 U	452 U	418 U	447 U	353 U	442 U	455 UJ	517 U
4,6-Dinitro-2-Methylphenol	NE	2,570 U	2,480 U	2,360 U	1,910 U	2,330 U	2,150 U	2,300 U	1,820 U	2,280 U	2,340 U	2,660 U
4-Bromophenyl phenyl ether	NE	499 U	481 U	457 U	370 U	452 U	418 U	447 U	353 U	442 U	455 UJ	517 U
4-Chloro-3-Methylphenol	NE	499 U	481 U	457 U	370 U	452 U	418 U	447 U	353 U	442 U	455 U	517 U
4-Chloroaniline	NE	499 U	481 U	457 U	370 U	452 U	418 U	447 U	353 U	442 U	455 UJ	517 U
4-Chlorophenyl-Phenylether	NE	499 U	481 U	457 U	370 U	452 U	418 U	447 U	353 U	442 U	455 UJ	517 U
4-Nitroaniline	NE	499 U	481 U	457 U	370 U	452 U	418 U	447 U	353 U	442 U	455 UJ	517 U
4-Nitrophenol (p-Nitrophenol)	NE	499 U	481 U	457 U	370 U	452 U	418 U	447 U	353 U	442 U	455 U	517 U
Bis(2-Chloroethoxy)Methane	NE	499 U	481 U	457 U	370 U	452 U	418 U	447 U	353 U	442 U	455 UJ	517 U
Bis(2-Chloroethyl)Ether	909	499 U	481 U	457 U	370 U	452 U	418 U	447 U	353 U	442 U	455 UJ	517 U
Bis(2-Ethylhexyl) Phthalate	71,400	499 U	481 U	457 U	370 U	452 U	418 U	447 U	353 U	442 U	455 UJ	517 U
Butyl benzyl Phthalate	526,000	499 U	481 U	457 U	370 U	452 U	418 U	447 U	353 U	442 U	455 UJ	517 U
Carbazole	NE	499 U	481 U	457 U	370 U	452 U	418 U	447 U	353 U	442 U	455 UJ	517 U
Dibenzofuran	80,000	499 U	481 U	457 U	370 U	452 U	418 U	447 U	353 U	442 U	455 UJ	517 U
Dibutyl Phthalate	8,000,000	499 U	481 U	457 U	370 U	452 U	418 U	447 U	353 U	442 U	455 UJ	517 U
Diethyl Phthalate	64,000,000	499 U	481 U	457 U	370 U	452 U	418 U	447 U	353 U	442 U	455 UJ	517 U

Sample ID Date Collected Sample Depth	MTCA Method B CUL (µg/kg)	DP-5 (16.5-17) 5/11/2015 16.5-17 ft	DP-6 (12-13) 5/11/2015 12-13 ft	DP-6 (13-14) 5/12/2015 13-14 ft	DP-7 (12.5-13.5) 5/12/2015 12.5-13.5 ft	DP-7 (13.5-14.5) 5/12/2015 13.5-14.5 ft	DP-8 (20-20.5) 5/12/2015 20-20.5 ft	DP-8 (20.5-21) 5/12/2015 20.5-21 ft	DP-9 (12.5-13.5) 5/14/2015 12.5-13.5 ft	DP-9 (13.5-14.5) 5/14/2015 13.5-14.5 ft	DP-10 (12-12.5) 5/14/2015 12-12.5 ft	DP-10 (12.5-13) 5/14/2015 12.5-13 ft
Dimethyl Phthalate	NE	499 U	481 U	457 U	370 U	452 U	418 U	447 U	353 U	442 U	455 UJ	517 U
Di-N-Octyl Phthalate	800,000	499 U	481 U	457 U	370 U	452 U	418 U	447 U	353 U	442 U	455 UJ	517 U
Hexachlorobenzene	625	499 U	481 U	457 U	370 U	452 U	418 U	447 U	353 U	442 U	455 UJ	517 U
Hexachlorobutadiene	12,800	499 U	481 U	457 U	370 U	452 U	418 U	447 U	353 U	442 U	455 UJ	517 U
Hexachloroethane	25,000	499 U	481 U	457 U	370 U	452 U	418 U	447 U	353 U	442 U	455 UJ	517 U
Isophorone	1,050,000	499 U	481 U	457 U	370 U	452 U	418 U	447 U	353 U	442 U	455 UJ	517 U
Nitrobenzene	160,000	499 U	481 U	457 U	370 U	452 U	418 U	447 U	353 U	442 U	455 UJ	517 U
N-Nitrosodimethylamine	19.6 ³	499 U	481 U	457 U	370 U	452 U	418 U	447 U	353 U	442 U	455 UJ	517 U
N-Nitrosodi-n-propylamine	143 ³	499 U	481 U	457 U	370 U	452 U	418 U	447 U	353 U	442 U	455 UJ	517 U
N-Nitrosodiphenylamine (as diphenylamine)	204,000	499 U	481 U	457 U	370 U	452 U	418 U	447 U	353 U	442 U	455 UJ	517 U
o-Cresol (2-methylphenol)	4,000,000	499 U	481 U	457 U	370 U	452 U	418 U	447 U	353 U	442 U	455 U	517 U
Phenol	24,000,000	499 U	481 U	457 U	370 U	452 U	418 U	447 U	353 U	442 U	455 U	517 U

Sample ID Date Collected Sample Depth	MTCA Method B CUL (µg/kg)	DP-11 (12.5-13.5) 5/12/2015 12.5-13.5 ft	DP-11 (13.5-14.5) 5/12/2015 13.5-14.5 ft	DP-12 (12-12.5) 5/14/2015 12-12.5 ft	DP-12 (16-17) 5/14/2015 16-17 ft	DP-13 (12-13) 5/12/2015 12-13 ft	DP-13 (13-14) 5/12/2015 13-14 ft	DP-15 (12-13) 5/13/2015 12-13 ft	DP-15 (13-14) 5/13/2015 13-14 ft	DP-17 (16-16.5) 5/12/2015 16-16.5 ft	DP-17 (16.5-17.5) 5/12/2015 16.5-17.5 ft	DP-18 (16-17) 5/14/2015 16-17 ft
Semi-volatile Organic Compounds² (µg/kg)												
1,2,4-Trichlorobenzene	34,500	355 U	546 U	373 U	453 UJ	363 U	490 UJ	364 U	486 UJ	499 U	399 UJ	355 U
1,2-Dichlorobenzene (o-Dichlorobenzene)	7,200,000	355 U	546 U	373 U	453 UJ	363 U	490 UJ	364 U	486 UJ	499 U	399 UJ	355 U
1,2-Diphenylhydrazine	1,250	355 U	546 U	373 U	453 UJ	363 U	490 UJ	364 U	486 UJ	499 U	399 UJ	355 U
1,3-Dichlorobenzene (m-Dichlorobenzene)	NE	355 U	546 U	373 U	453 UJ	363 U	490 UJ	364 U	486 UJ	499 U	399 UJ	355 U
1,4-Dichlorobenzene (p-Dichlorobenzene)	185,000	355 U	546 U	373 U	453 UJ	363 U	490 UJ	364 U	486 UJ	499 U	399 UJ	355 U
2,2'-Oxybis[1-chloropropane]	NE	355 U	546 U	373 U	453 UJ	363 U	490 UJ	364 U	486 UJ	499 U	399 UJ	355 U
2,4,5-Trichlorophenol	8,000,000	355 U	546 U	373 U	453 U	363 U	490 UJ	364 U	486 UJ	499 U	399 U	355 U
2,4,6-Trichlorophenol	90,900	355 U	546 U	373 U	453 U	363 U	490 UJ	364 U	486 UJ	499 U	399 U	355 U
2,4-Dichlorophenol	240,000	355 U	546 U	373 U	453 U	363 U	490 UJ	364 U	486 UJ	499 U	399 U	355 U
2,4-Dimethylphenol	1,600,000	355 U	546 U	373 U	453 U	363 U	490 UJ	364 U	486 UJ	499 U	399 U	355 U
2,4-Dinitrophenol	160,000	355 U	546 U	373 U	453 U	363 U	490 UJ	364 U	486 UJ	499 U	399 U	355 U
2,4-Dinitrotoluene	3,230	355 U	546 U	373 U	453 UJ	363 U	490 UJ	364 U	486 UJ	499 U	399 UJ	355 U
2,6-Dinitrotoluene	667	355 U	546 U	373 U	453 UJ	363 U	490 UJ	364 U	486 UJ	499 U	399 UJ	355 U
2-Chloronaphthalene	NE	355 U	546 U	373 U	453 UJ	363 U	490 UJ	364 U	486 UJ	499 U	399 UJ	355 U
2-Chlorophenol	400,000	355 U	546 U	373 U	453 U	363 U	490 UJ	364 U	486 UJ	499 U	399 U	355 U
2-Nitroaniline	800,000	355 U	546 U	373 U	453 UJ	363 U	490 UJ	364 U	486 UJ	499 U	399 UJ	355 U
2-Nitrophenol	NE	355 U	546 U	373 U	453 U	363 U	490 UJ	364 U	486 UJ	499 U	399 U	355 U
3 & 4 Methylphenol	NE	709 U	1090 U	745 U	905 U	726 U	980 UJ	728 U	972 UJ	997 U	798 U	710 U
3,3'-Dichlorobenzidine	2,220	355 U	546 U	373 U	453 UJ	363 U	490 UJ	364 U	486 UJ	499 U	399 UJ	355 U
3-Nitroaniline	NE	355 U	546 U	373 U	453 UJ	363 U	490 UJ	364 U	486 UJ	499 U	399 UJ	355 U
4,6-Dinitro-2-Methylphenol	NE	1,830 U	2,810 U	1,920 U	2,330 U	1,870 U	2,520 UJ	1,880 U	2,500 UJ	2,570 U	2,050 U	1,830 U
4-Bromophenyl phenyl ether	NE	355 U	546 U	373 U	453 UJ	363 U	490 UJ	364 U	486 UJ	499 U	399 UJ	355 U
4-Chloro-3-Methylphenol	NE	355 U	546 U	373 U	453 U	363 U	490 UJ	364 U	486 UJ	499 U	399 U	355 U
4-Chloroaniline	NE	355 U	546 U	373 U	453 UJ	363 U	490 UJ	364 U	486 UJ	499 U	399 UJ	355 U
4-Chlorophenyl-Phenylether	NE	355 U	546 U	373 U	453 UJ	363 U	490 UJ	364 U	486 UJ	499 U	399 UJ	355 U
4-Nitroaniline	NE	355 U	546 U	373 U	453 UJ	363 U	490 UJ	364 U	486 UJ	499 U	399 UJ	355 U
4-Nitrophenol (p-Nitrophenol)	NE	355 U	546 U	373 U	453 U	363 U	490 UJ	364 U	486 UJ	499 U	399 U	355 U
Bis(2-Chloroethoxy)Methane	NE	355 U	546 U	373 U	453 UJ	363 U	490 UJ	364 U	486 UJ	499 U	399 UJ	355 U
Bis(2-Chloroethyl)Ether	909	355 U	546 U	373 U	453 UJ	363 U	490 UJ	364 U	486 UJ	499 U	399 UJ	355 U
Bis(2-Ethylhexyl) Phthalate	71,400	355 U	546 U	373 U	453 UJ	363 U	490 UJ	364 U	486 UJ	499 U	399 UJ	355 U
Butyl benzyl Phthalate	526,000	355 U	546 U	373 U	453 UJ	363 U	490 UJ	364 U	486 UJ	499 U	399 UJ	355 U
Carbazole	NE	355 U	546 U	373 U	453 UJ	363 U	490 UJ	364 U	486 UJ	499 U	399 UJ	355 U
Dibenzofuran	80,000	355 U	546 U	373 U	453 UJ	363 U	490 UJ	364 U	486 UJ	499 U	399 UJ	355 U
Dibutyl Phthalate	8,000,000	355 U	546 U	373 U	453 UJ	363 U	490 UJ	364 U	486 UJ	499 U	399 UJ	355 U
Diethyl Phthalate	64,000,000	355 U	546 U	373 U	453 UJ	363 U	490 UJ	364 U	486 UJ	499 U	399 UJ	355 U

Sample ID Date Collected Sample Depth	MTCA Method B CUL (µg/kg)	DP-11 (12.5-13.5)	DP-11 (13.5-14.5)	DP-12 (12-12.5)	DP-12 (16-17)	DP-13 (12-13)	DP-13 (13-14)	DP-15 (12-13)	DP-15 (13-14)	DP-17 (16-16.5)	DP-17 (16.5-17.5)	DP-18 (16-17)
		5/12/2015 12.5-13.5 ft	5/12/2015 13.5-14.5 ft	5/14/2015 12-12.5 ft	5/14/2015 16-17 ft	5/12/2015 12-13 ft	5/12/2015 13-14 ft	5/13/2015 12-13 ft	5/13/2015 13-14 ft	5/12/2015 16-16.5 ft	5/12/2015 16.5-17.5 ft	5/14/2015 16-17 ft
Dimethyl Phthalate	NE	355 U	546 U	373 U	453 UJ	363 U	490 UJ	364 U	486 UJ	499 U	399 UJ	355 U
Di-N-Octyl Phthalate	800,000	355 U	546 U	373 U	453 UJ	363 U	490 UJ	364 U	486 UJ	499 U	399 UJ	355 U
Hexachlorobenzene	625	355 U	546 U	373 U	453 UJ	363 U	490 UJ	364 U	486 UJ	499 U	399 UJ	355 U
Hexachlorobutadiene	12,800	355 U	546 U	373 U	453 UJ	363 U	490 UJ	364 U	486 UJ	499 U	399 UJ	355 U
Hexachloroethane	25,000	355 U	546 U	373 U	453 UJ	363 U	490 UJ	364 U	486 UJ	499 U	399 UJ	355 U
Isophorone	1,050,000	355 U	546 U	373 U	453 UJ	363 U	490 UJ	364 U	486 UJ	499 U	399 UJ	355 U
Nitrobenzene	160,000	355 U	546 U	373 U	453 UJ	363 U	490 UJ	364 U	486 UJ	499 U	399 UJ	355 U
N-Nitrosodimethylamine	19.6 ³	355 U	546 U	373 U	453 UJ	363 U	490 UJ	364 U	486 UJ	499 U	399 UJ	355 U
N-Nitrosodi-n-propylamine	143 ³	355 U	546 U	373 U	453 UJ	363 U	490 UJ	364 U	486 UJ	499 U	399 UJ	355 U
N-Nitrosodiphenylamine (as diphenylamine)	204,000	355 U	546 U	373 U	453 UJ	363 U	490 UJ	364 U	486 UJ	499 U	399 UJ	355 U
o-Cresol (2-methylphenol)	4,000,000	355 U	546 U	373 U	453 U	363 U	490 UJ	364 U	486 UJ	499 U	399 U	355 U
Phenol	24,000,000	355 U	546 U	373 U	453 U	363 U	490 UJ	364 U	486 UJ	499 U	399 U	355 U

Sample ID Date Collected Sample Depth	MTCA Method B CUL (µg/kg)	DP-18 (17-17.5) 5/14/2015 17-17.5 ft	DP-19 (24-24.5) 5/15/2015 24-24.5 ft	DP-19 (24.5-25) 5/15/2015 24.5-25 ft	DP-20 (24-24.5) 5/13/2015 24-24.5 ft	DP-20 (24.5-25.5) 5/13/2015 24.5-25.5 ft	DP-21 (13-14) 5/15/2015 13-14 ft	DP-21 (14-15) 5/15/2015 14-15 ft	DP-22 (20-20.5) 5/15/2015 20-20.5 ft	DP-22 (24-25) 5/15/2015 24-25 ft	DP-23 (16-16.5) 5/15/2015 16-16.5 ft
Semi-volatile Organic Compounds² (µg/kg)											
1,2,4-Trichlorobenzene	34,500	481 UJ	376 UJ	484 UJ	483 U	492 U	353 U	447 UJ	363 U	473 UJ	373 U
1,2-Dichlorobenzene (o-Dichlorobenzene)	7,200,000	481 UJ	376 UJ	484 UJ	483 U	492 U	353 U	447 UJ	363 U	473 UJ	373 U
1,2-Diphenylhydrazine	1,250	481 UJ	376 UJ	484 UJ	483 U	492 U	353 U	447 UJ	363 U	473 UJ	373 U
1,3-Dichlorobenzene (m-Dichlorobenzene)	NE	481 UJ	376 UJ	484 UJ	483 U	492 U	353 U	447 UJ	363 U	473 UJ	373 U
1,4-Dichlorobenzene (p-Dichlorobenzene)	185,000	481 UJ	376 UJ	484 UJ	483 U	492 U	353 U	447 UJ	363 U	473 UJ	373 U
2,2'-Oxybis[1-chloropropane]	NE	481 UJ	376 UJ	484 UJ	483 U	492 U	353 U	447 UJ	363 U	473 UJ	373 U
2,4,5-Trichlorophenol	8,000,000	481 U	376 UJ	484 UJ	483 U	492 U	353 U	447 UJ	363 U	473 U	373 U
2,4,6-Trichlorophenol	90,900	481 U	376 UJ	484 UJ	483 U	492 U	353 U	447 UJ	363 U	473 U	373 U
2,4-Dichlorophenol	240,000	481 U	376 UJ	484 UJ	483 U	492 U	353 U	447 UJ	363 U	473 U	373 U
2,4-Dimethylphenol	1,600,000	481 U	376 UJ	484 UJ	483 U	492 U	353 U	447 UJ	363 U	473 U	373 U
2,4-Dinitrophenol	160,000	481 U	376 UJ	484 UJ	483 U	492 U	353 UJ	447 UJ	363 UJ	473 UJ	373 UJ
2,4-Dinitrotoluene	3,230	481 UJ	376 UJ	484 UJ	483 U	492 U	353 U	447 UJ	363 U	473 UJ	373 U
2,6-Dinitrotoluene	667	481 UJ	376 UJ	484 UJ	483 U	492 U	353 U	447 UJ	363 U	473 UJ	373 U
2-Chloronaphthalene	NE	481 UJ	376 UJ	484 UJ	483 U	492 U	353 U	447 UJ	363 U	473 UJ	373 U
2-Chlorophenol	400,000	481 U	376 UJ	484 UJ	483 U	492 U	353 U	447 UJ	363 U	473 U	373 U
2-Nitroaniline	800,000	481 UJ	376 UJ	484 UJ	483 U	492 U	353 U	447 UJ	363 U	473 UJ	373 U
2-Nitrophenol	NE	481 U	376 UJ	484 UJ	483 U	492 U	353 U	447 UJ	363 U	473 U	373 U
3 & 4 Methylphenol	NE	962 U	753 UJ	969 UJ	966 U	984 U	706 U	894 UJ	727 U	946 U	745 U
3,3'-Dichlorobenzidine	2,220	481 UJ	376 UJ	484 UJ	483 U	492 U	353 U	447 UJ	363 U	473 UJ	373 U
3-Nitroaniline	NE	481 UJ	376 UJ	484 UJ	483 U	492 U	353 U	447 UJ	363 U	473 UJ	373 U
4,6-Dinitro-2-Methylphenol	NE	2,480 U	1,940 UJ	2,500 UJ	2,490 U	2,540 U	1,820 UJ	2,300 UJ	1,870 UJ	2,440 UJ	1,920 UJ
4-Bromophenyl phenyl ether	NE	481 UJ	376 UJ	484 UJ	483 U	492 U	353 U	447 UJ	363 U	473 UJ	373 U
4-Chloro-3-Methylphenol	NE	481 U	376 UJ	484 UJ	483 U	492 U	353 U	447 UJ	363 U	473 U	373 U
4-Chloroaniline	NE	481 UJ	376 UJ	484 UJ	483 U	492 U	353 U	447 UJ	363 U	473 UJ	373 U
4-Chlorophenyl-Phenylether	NE	481 UJ	376 UJ	484 UJ	483 U	492 U	353 U	447 UJ	363 U	473 UJ	373 U
4-Nitroaniline	NE	481 UJ	376 UJ	484 UJ	483 U	492 U	353 U	447 UJ	363 U	473 UJ	373 U
4-Nitrophenol (p-Nitrophenol)	NE	481 U	376 UJ	484 UJ	483 U	492 U	353 U	447 UJ	363 U	473 U	373 U
Bis(2-Chloroethoxy)Methane	NE	481 UJ	376 UJ	484 UJ	483 U	492 U	353 U	447 UJ	363 U	473 UJ	373 U
Bis(2-Chloroethyl)Ether	909	481 UJ	376 UJ	484 UJ	483 U	492 U	353 U	447 UJ	363 U	473 UJ	373 U
Bis(2-Ethylhexyl) Phthalate	71,400	481 UJ	376 UJ	484 UJ	483 U	492 U	353 U	447 UJ	363 U	473 UJ	373 U
Butyl benzyl Phthalate	526,000	481 UJ	376 UJ	484 UJ	483 U	492 U	353 U	447 UJ	363 U	473 UJ	373 U
Carbazole	NE	481 UJ	376 UJ	484 UJ	483 U	492 U	353 U	447 UJ	363 U	473 UJ	373 U
Dibenzofuran	80,000	481 UJ	376 UJ	484 UJ	483 U	492 U	353 U	447 UJ	363 U	473 UJ	373 U
Dibutyl Phthalate	8,000,000	481 UJ	376 UJ	484 UJ	483 U	492 U	353 U	447 UJ	363 U	473 UJ	373 U
Diethyl Phthalate	64,000,000	481 UJ	376 UJ	484 UJ	483 U	492 U	353 U	447 UJ	363 U	473 UJ	373 U

Sample ID Date Collected Sample Depth	MTCA Method B CUL (µg/kg)	DP-18 (17-17.5) 5/14/2015 17-17.5 ft	DP-19 (24-24.5) 5/15/2015 24-24.5 ft	DP-19 (24.5-25) 5/15/2015 24.5-25 ft	DP-20 (24-24.5) 5/13/2015 24-24.5 ft	DP-20 (24.5-25.5) 5/13/2015 24.5-25.5 ft	DP-21 (13-14) 5/15/2015 13-14 ft	DP-21 (14-15) 5/15/2015 14-15 ft	DP-22 (20-20.5) 5/15/2015 20-20.5 ft	DP-22 (24-25) 5/15/2015 24-25 ft	DP-23 (16-16.5) 5/15/2015 16-16.5 ft
Dimethyl Phthalate	NE	481 UJ	376 UJ	484 UJ	483 U	492 U	353 U	447 UJ	363 U	473 UJ	373 U
Di-N-Octyl Phthalate	800,000	481 UJ	376 UJ	484 UJ	483 U	492 U	353 U	447 UJ	363 U	473 UJ	373 U
Hexachlorobenzene	625	481 UJ	376 UJ	484 UJ	483 U	492 U	353 U	447 UJ	363 U	473 UJ	373 U
Hexachlorobutadiene	12,800	481 UJ	376 UJ	484 UJ	483 U	492 U	353 U	447 UJ	363 U	473 UJ	373 U
Hexachloroethane	25,000	481 UJ	376 UJ	484 UJ	483 U	492 U	353 UJ	447 UJ	363 UJ	473 UJ	373 UJ
Isophorone	1,050,000	481 UJ	376 UJ	484 UJ	483 U	492 U	353 U	447 UJ	363 U	473 UJ	373 U
Nitrobenzene	160,000	481 UJ	376 UJ	484 UJ	483 U	492 U	353 U	447 UJ	363 U	473 UJ	373 U
N-Nitrosodimethylamine	19.6 ³	481 UJ	376 UJ	484 UJ	483 U	492 U	353 U	447 UJ	363 U	473 UJ	373 U
N-Nitrosodi-n-propylamine	143 ³	481 UJ	376 UJ	484 UJ	483 U	492 U	353 U	447 UJ	363 U	473 UJ	373 U
N-Nitrosodiphenylamine (as diphenylamine)	204,000	481 UJ	376 UJ	484 UJ	483 U	492 U	353 U	447 UJ	363 U	473 UJ	373 U
o-Cresol (2-methylphenol)	4,000,000	481 U	376 UJ	484 UJ	483 U	492 U	353 U	447 UJ	363 U	473 U	373 U
Phenol	24,000,000	481 U	376 UJ	484 UJ	483 U	492 U	353 U	447 UJ	363 U	473 U	373 U

Sample ID Date Collected Sample Depth	MTCA Method B CUL (µg/kg)	DP-23 (20-20.5) 5/15/2015 20-20.5 ft	DP-24 (16-16.5) 5/13/2015 16-16.5 ft	DP-24 (16.5-17.5) 5/13/2015 16.5-17.5 ft	DP-25 (12-12.5) 5/15/2015 12-12.5 ft	DP-25 (12.5-13.5) 5/15/2015 12.5-13.5 ft	DP-26 (16-17) 5/13/2015 16-17 ft	DP-26 (17-18) 5/13/2015 17-18 ft	DP-27 (16-17) 5/13/2015 16-17 ft	DP-27 (24-24.5) 5/13/2015 24-24.5 ft	DP-28 (20.5-21.5) 5/14/2015 20.5-21.5 ft
Semi-volatile Organic Compounds² (µg/kg)											
1,2,4-Trichlorobenzene	34,500	459 U	479 U	515 U	353 U	510 U	392 U	503 U	387 U	378 U	478 UJ
1,2-Dichlorobenzene (o-Dichlorobenzene)	7,200,000	459 U	479 U	515 U	353 U	510 U	392 U	503 U	387 U	378 U	478 UJ
1,2-Diphenylhydrazine	1,250	459 U	479 U	515 U	353 U	510 U	392 U	503 U	387 U	378 U	478 UJ
1,3-Dichlorobenzene (m-Dichlorobenzene)	NE	459 U	479 U	515 U	353 U	510 U	392 U	503 U	387 U	378 U	478 UJ
1,4-Dichlorobenzene (p-Dichlorobenzene)	185,000	459 U	479 U	515 U	353 U	510 U	392 U	503 U	387 U	378 U	478 UJ
2,2'-Oxybis[1-chloropropane]	NE	459 U	479 U	515 U	353 U	510 U	392 U	503 U	387 U	378 U	478 UJ
2,4,5-Trichlorophenol	8,000,000	459 U	479 U	515 U	353 U	510 U	392 U	503 U	387 U	378 U	478 UJ
2,4,6-Trichlorophenol	90,900	459 U	479 U	515 U	353 U	510 U	392 U	503 U	387 U	378 U	478 UJ
2,4-Dichlorophenol	240,000	459 U	479 U	515 U	353 U	510 U	392 U	503 U	387 U	378 U	478 UJ
2,4-Dimethylphenol	1,600,000	459 U	479 U	515 U	353 U	510 U	392 U	503 U	387 U	378 U	478 UJ
2,4-Dinitrophenol	160,000	459 UJ	479 U	515 U	353 UJ	510 UJ	392 U	503 U	387 U	378 U	478 UJ
2,4-Dinitrotoluene	3,230	459 U	479 U	515 U	353 U	510 U	392 U	503 U	387 U	378 U	478 UJ
2,6-Dinitrotoluene	667	459 U	479 U	515 U	353 U	510 U	392 U	503 U	387 U	378 U	478 UJ
2-Chloronaphthalene	NE	459 U	479 U	515 U	353 U	510 U	392 U	503 U	387 U	378 U	478 UJ
2-Chlorophenol	400,000	459 U	479 U	515 U	353 U	510 U	392 U	503 U	387 U	378 U	478 UJ
2-Nitroaniline	800,000	459 U	479 U	515 U	353 U	510 U	392 U	503 U	387 U	378 U	478 UJ
2-Nitrophenol	NE	459 U	479 U	515 U	353 U	510 U	392 U	503 U	387 U	378 U	478 UJ
3 & 4 Methylphenol	NE	918 U	959 U	1030 U	706 U	1020 U	784 U	1010 U	775 U	756 U	957 UJ
3,3'-Dichlorobenzidine	2,220	459 U	479 U	515 U	353 U	510 U	392 U	503 U	387 U	378 U	478 UJ
3-Nitroaniline	NE	459 U	479 U	515 U	353 U	510 U	392 U	503 U	387 U	378 U	478 UJ
4,6-Dinitro-2-Methylphenol	NE	2,370 UJ	2,470 U	2,650 U	1,820 UJ	2,630 UJ	2,020 U	2,590 U	2,000 U	1,950 U	2,460 UJ
4-Bromophenyl phenyl ether	NE	459 U	479 U	515 U	353 U	510 U	392 U	503 U	387 U	378 U	478 UJ
4-Chloro-3-Methylphenol	NE	459 U	479 U	515 U	353 U	510 U	392 U	503 U	387 U	378 U	478 UJ
4-Chloroaniline	NE	459 U	479 U	515 U	353 U	510 U	392 U	503 U	387 U	378 U	478 UJ
4-Chlorophenyl-Phenylether	NE	459 U	479 U	515 U	353 U	510 U	392 U	503 U	387 U	378 U	478 UJ
4-Nitroaniline	NE	459 U	479 U	515 U	353 U	510 U	392 U	503 U	387 U	378 U	478 UJ
4-Nitrophenol (p-Nitrophenol)	NE	459 U	479 U	515 U	353 U	510 U	392 U	503 U	387 U	378 U	478 UJ
Bis(2-Chloroethoxy)Methane	NE	459 U	479 U	515 U	353 U	510 U	392 U	503 U	387 U	378 U	478 UJ
Bis(2-Chloroethyl)Ether	909	459 U	479 U	515 U	353 U	510 U	392 U	503 U	387 U	378 U	478 UJ
Bis(2-Ethylhexyl) Phthalate	71,400	459 U	479 U	515 U	353 U	510 U	392 U	503 U	387 U	378 U	478 UJ
Butyl benzyl Phthalate	526,000	459 U	479 U	515 U	353 U	510 U	392 U	503 U	387 U	378 U	478 UJ
Carbazole	NE	459 U	479 U	515 U	353 U	510 U	392 U	503 U	387 U	378 U	478 UJ
Dibenzofuran	80,000	459 U	479 U	515 U	353 U	510 U	392 U	503 U	387 U	378 U	478 UJ
Dibutyl Phthalate	8,000,000	459 U	479 U	515 U	353 U	510 U	392 U	503 U	387 U	378 U	478 UJ
Diethyl Phthalate	64,000,000	459 U	479 U	515 U	353 U	510 U	392 U	503 U	387 U	378 U	478 UJ

Sample ID	Date Collected	MTCA Method B Sample Depth	DP-23 (20-20.5) 5/15/2015 20-20.5 ft	DP-24 (16-16.5) 5/13/2015 16-16.5 ft	DP-24 (16.5-17.5) 5/13/2015 16.5-17.5 ft	DP-25 (12-12.5) 5/15/2015 12-12.5 ft	DP-25 (12.5-13.5) 5/15/2015 12.5-13.5 ft	DP-26 (16-17) 5/13/2015 16-17 ft	DP-26 (17-18) 5/13/2015 17-18 ft	DP-27 (16-17) 5/13/2015 16-17 ft	DP-27 (24-24.5) 5/13/2015 24-24.5 ft	DP-28 (20.5-21.5) 5/14/2015 20.5-21.5 ft
Dimethyl Phthalate		NE	459 U	479 U	515 U	353 U	510 U	392 U	503 U	387 U	378 U	478 UJ
Di-N-Octyl Phthalate		800,000	459 U	479 U	515 U	353 U	510 U	392 U	503 U	387 U	378 U	478 UJ
Hexachlorobenzene		625	459 U	479 U	515 U	353 U	510 U	392 U	503 U	387 U	378 U	478 UJ
Hexachlorobutadiene		12,800	459 U	479 U	515 U	353 U	510 U	392 U	503 U	387 U	378 U	478 UJ
Hexachloroethane		25,000	459 UJ	479 U	515 U	353 UJ	510 UJ	392 U	503 U	387 U	378 U	478 UJ
Isophorone		1,050,000	459 U	479 U	515 U	353 U	510 U	392 U	503 U	387 U	378 U	478 UJ
Nitrobenzene		160,000	459 U	479 U	515 U	353 U	510 U	392 U	503 U	387 U	378 U	478 UJ
N-Nitrosodimethylamine		19.6 ³	459 U	479 U	515 U	353 U	510 U	392 U	503 U	387 U	378 U	478 UJ
N-Nitrosodi-n-propylamine		143 ³	459 U	479 U	515 U	353 U	510 U	392 U	503 U	387 U	378 U	478 UJ
N-Nitrosodiphenylamine (as diphenylamine)		204,000	459 U	479 U	515 U	353 U	510 U	392 U	503 U	387 U	378 U	478 UJ
o-Cresol (2-methylphenol)		4,000,000	459 U	479 U	515 U	353 U	510 U	392 U	503 U	387 U	378 U	478 UJ
Phenol		24,000,000	459 U	479 U	515 U	353 U	510 U	392 U	503 U	387 U	378 U	478 UJ

Sample ID Date Collected Sample Depth	MTCA Method B CUL (µg/kg)	DP-28 (21.5-22.5) 5/14/2015 21.5-22.5 ft	DP-29 (24-24.5) 5/14/2015 24-24.5 ft	DP-29 (24.5-25.5) 5/14/2015 24.5-25.5 ft	DP-30 (12-12.5) 5/14/2015 12-12.5 ft	DP-30 (16-17) 5/14/2015 16-17.5 ft	DP-35 (8-9) 5/15/2015 8-9 ft	DP-36 (8-9) 5/15/2015 8-9 ft
Semi-volatile Organic Compounds² (µg/kg)								
1,2,4-Trichlorobenzene	34,500	481 UJ	387 UJ	528 U	385 U	499 U	377 U	360 U
1,2-Dichlorobenzene (o-Dichlorobenzene)	7,200,000	481 UJ	387 UJ	528 U	385 U	499 U	377 U	360 U
1,2-Diphenylhydrazine	1,250	481 UJ	387 UJ	528 U	385 U	499 U	377 U	360 U
1,3-Dichlorobenzene (m-Dichlorobenzene)	NE	481 UJ	387 UJ	528 U	385 U	499 U	377 U	360 U
1,4-Dichlorobenzene (p-Dichlorobenzene)	185,000	481 UJ	387 UJ	528 U	385 U	499 U	377 U	360 U
2,2'-Oxybis[1-chloropropane]	NE	481 UJ	387 UJ	528 U	385 U	499 U	377 U	360 U
2,4,5-Trichlorophenol	8,000,000	481 UJ	387 UJ	528 U	385 U	499 U	377 U	360 U
2,4,6-Trichlorophenol	90,900	481 UJ	387 UJ	528 U	385 U	499 U	377 U	360 U
2,4-Dichlorophenol	240,000	481 UJ	387 UJ	528 U	385 U	499 U	377 U	360 U
2,4-Dimethylphenol	1,600,000	481 UJ	387 UJ	528 U	385 U	499 U	377 U	360 U
2,4-Dinitrophenol	160,000	481 UJ	387 UJ	528 U	385 U	499 U	377 UJ	360 UJ
2,4-Dinitrotoluene	3,230	481 UJ	387 UJ	528 U	385 U	499 U	377 U	360 U
2,6-Dinitrotoluene	667	481 UJ	387 UJ	528 U	385 U	499 U	377 U	360 U
2-Chloronaphthalene	NE	481 UJ	387 UJ	528 U	385 U	499 U	377 U	360 U
2-Chlorophenol	400,000	481 UJ	387 UJ	528 U	385 U	499 U	377 U	360 U
2-Nitroaniline	800,000	481 UJ	387 UJ	528 U	385 U	499 U	377 U	360 U
2-Nitrophenol	NE	481 UJ	387 UJ	528 U	385 U	499 U	377 U	360 U
3 & 4 Methylphenol	NE	961 UJ	775 UJ	1060 U	770 U	998 U	754 U	720 U
3,3'-Dichlorobenzidine	2,220	481 UJ	387 UJ	528 U	385 U	499 U	377 U	360 U
3-Nitroaniline	NE	481 UJ	387 UJ	528 U	385 U	499 U	377 U	360 U
4,6-Dinitro-2-Methylphenol	NE	2,480 UJ	2,000 UJ	2,720 U	1,980 U	2,570 U	1,940 UJ	1,860 UJ
4-Bromophenyl phenyl ether	NE	481 UJ	387 UJ	528 U	385 U	499 U	377 U	360 U
4-Chloro-3-Methylphenol	NE	481 UJ	387 UJ	528 U	385 U	499 U	377 U	360 U
4-Chloroaniline	NE	481 UJ	387 UJ	528 U	385 U	499 U	377 U	360 U
4-Chlorophenyl-Phenylether	NE	481 UJ	387 UJ	528 U	385 U	499 U	377 U	360 U
4-Nitroaniline	NE	481 UJ	387 UJ	528 U	385 U	499 U	377 U	360 U
4-Nitrophenol (p-Nitrophenol)	NE	481 UJ	387 UJ	528 U	385 U	499 U	377 U	360 U
Bis(2-Chloroethoxy)Methane	NE	481 UJ	387 UJ	528 U	385 U	499 U	377 U	360 U
Bis(2-Chloroethyl)Ether	909	481 UJ	387 UJ	528 U	385 U	499 U	377 U	360 U
Bis(2-Ethylhexyl) Phthalate	71,400	481 UJ	387 UJ	528 U	385 U	499 U	377 U	360 U
Butyl benzyl Phthalate	526,000	481 UJ	387 UJ	528 U	385 U	499 U	377 U	360 U
Carbazole	NE	481 UJ	387 UJ	528 U	385 U	499 U	377 U	360 U
Dibenzofuran	80,000	481 UJ	387 UJ	528 U	385 U	499 U	206 J	360 U
Dibutyl Phthalate	8,000,000	481 UJ	387 UJ	528 U	385 U	499 U	377 U	360 U
Diethyl Phthalate	64,000,000	481 UJ	387 UJ	528 U	385 U	499 U	377 U	360 U

Sample ID	Date Collected	Sample Depth	MTCA Method B CUL (µg/kg)	DP-28 (21.5-22.5) 5/14/2015 21.5-22.5 ft	DP-29 (24-24.5) 5/14/2015 24-24.5 ft	DP-29 (24.5-25.5) 5/14/2015 24.5-25.5 ft	DP-30 (12-12.5) 5/14/2015 12-12.5 ft	DP-30 (16-17) 5/14/2015 16-17.5 ft	DP-35 (8-9) 5/15/2015 8-9 ft	DP-36 (8-9) 5/15/2015 8-9 ft
Dimethyl Phthalate			NE	481 UJ	387 UJ	528 U	385 U	499 U	377 U	360 U
Di-N-Octyl Phthalate			800,000	481 UJ	387 UJ	528 U	385 U	499 U	377 U	360 U
Hexachlorobenzene			625	481 UJ	387 UJ	528 U	385 U	499 U	377 U	360 U
Hexachlorobutadiene			12,800	481 UJ	387 UJ	528 U	385 U	499 U	377 U	360 U
Hexachloroethane			25,000	481 UJ	387 UJ	528 U	385 U	499 U	377 UJ	360 UJ
Isophorone			1,050,000	481 UJ	387 UJ	528 U	385 U	499 U	377 U	360 U
Nitrobenzene			160,000	481 UJ	387 UJ	528 U	385 U	499 U	377 U	360 U
N-Nitrosodimethylamine			19.6 ³	481 UJ	387 UJ	528 U	385 U	499 U	377 U	360 U
N-Nitrosodi-n-propylamine			143 ³	481 UJ	387 UJ	528 U	385 U	499 U	377 U	360 U
N-Nitrosodiphenylamine (as diphenylamine)			204,000	481 UJ	387 UJ	528 U	385 U	499 U	377 U	360 U
o-Cresol (2-methylphenol)			4,000,000	481 UJ	387 UJ	528 U	385 U	499 U	377 U	360 U
Phenol			24,000,000	481 UJ	387 UJ	528 U	385 U	499 U	377 U	360 U

Notes:

¹Chemical analyses were conducted by Pace Analytical Services, Inc. located in Minneapolis, Minnesota.

²Semi-volatile organic compounds (SVOCs) were analyzed using Environmental Protection Agency (EPA) Method SW8270D.

³Laboratory reporting limits and method detection limits were greater than MTCA Method B cleanup levels.

CUL = cleanup level; NE = not established; µg/kg = micrograms per kilogram

J = estimated result.

U = result not detected above the reporting limit

Table B-3

Summary of Soil Chemical Analytical Results - TPH, PAHs and PCP¹
 Colville Post & Pole
 Stevens County, Washington

Sample ID Date Collected Sample Depth	MTCA Method A CUL	MTCA Method B CUL	DP-1 (12-13) 5/11/2015 12-13 ft	DP-2a (1-2) 3/16/2015 1-2 ft	DP-2a (15-16) 3/16/2015 15-16 ft	DP-2 (12-12.5) 5/11/2015 12-12.5 ft	DP-2 (12.5-13.5) 5/11/2015 12.5-13.5 ft	DP-3 (12-13) 5/11/2015 12-13 ft	DP-3 (13-14) 5/11/2015 13-14 ft	DP-4 (16-16.5) 5/11/2015 16-16.5 ft	DP-4 (16.5-17.5) 5/11/2015 16.5-17.5 ft	DP-5 (16-16.5) 5/11/2015 16-16.5 ft	DP-5 (16.5-17) 5/11/2015 16.5-17 ft	DP-6 (12-13) 5/12/2015 12-13 ft	DP-6 (13-14) 5/12/2015 13-14 ft
Petroleum Hydrocarbons (mg/kg)²															
Gasoline-range Hydrocarbons ³	100/30	NE	--	--	--	--	--	--	--	--	--	--	--	--	--
Diesel-range Hydrocarbons	2,000	NE	19.0 U	20.1 U	17.9 U	16.7 U	21.4 U	16.5 U	21.6 U	16.5 UJ	23.5 U	21.4 U	22.5 U	21.9 U	20.9 U
Oil-range Hydrocarbons	2,000	NE	2.9 J	13.4 U	11.9 U	2.2 J	2.6 J	2.6 J	3.9 J	11.0 UJ	15.7 U	4.0 J	5.1 J	14.6 U	13.9 U
Non-carcinogenic PAHs (µg/kg)⁴															
Naphthalene ⁵	5,000 ⁵	1,600,000	12.8 U	13.6 U	12.0 U	11.3 U	14.2 U	11.0 U	14.6 U	11.2 UJ	15.6 U	14.3 U	15.2 U	14.5 U	13.9 U
1-Methylnaphthalene ⁵		34,500	12.8 U	13.6 U	12.0 U	11.3 U	14.2 U	11.0 U	14.6 U	11.2 UJ	15.6 U	14.3 U	15.2 U	14.5 U	13.9 U
2-Methylnaphthalene ⁵		320,000	12.8 U	13.6 U	12.0 U	11.3 U	14.2 U	11.0 U	14.6 U	11.2 UJ	15.6 U	14.3 U	15.2 U	14.5 U	13.9 U
2-Chloronaphthalene	NE	NE	12.8 U	13.6 U	12.0 U	11.3 U	14.2 U	11.0 U	14.6 U	11.2 UJ	15.6 U	14.3 U	15.2 U	14.5 UJ	13.9 UJ
Acenaphthene	NE	4,800,000	12.8 U	13.6 U	12.0 U	11.3 U	14.2 U	11.0 U	14.6 U	11.2 UJ	15.6 U	14.3 U	15.2 U	14.5 U	13.9 U
Acenaphthylene	NE	NE	12.8 U	13.6 U	12.0 U	11.3 U	14.2 U	11.0 U	14.6 U	11.2 UJ	15.6 U	14.3 U	15.2 U	14.5 U	13.9 U
Anthracene	NE	24,000,000	12.8 U	13.6 U	12.0 U	11.3 U	14.2 U	11.0 U	14.6 U	11.2 UJ	15.6 U	14.3 U	15.2 U	14.5 U	13.9 U
Benzo(ghi)perylene	NE	NE	12.8 U	13.6 U	12.0 U	11.3 U	14.2 U	11.0 U	14.6 U	11.2 UJ	15.6 U	14.3 U	15.2 U	14.5 U	13.9 U
Fluoranthene	NE	3,200,000	12.8 U	13.6 U	12.0 U	11.3 U	14.2 U	11.0 U	14.6 U	11.2 UJ	15.6 U	14.3 U	15.2 U	14.5 U	13.9 U
Fluorene	NE	3,200,000	12.8 U	13.6 U	12.0 U	11.3 U	14.2 U	11.0 U	14.6 U	11.2 UJ	15.6 U	14.3 U	15.2 U	14.5 U	13.9 U
Phenanthrene	NE	NE	12.8 U	13.6 U	12.0 U	11.3 U	14.2 U	11.0 U	14.6 U	11.2 UJ	0.60 J	0.49 J	0.51 J	14.5 U	13.9 U
Pyrene	NE	2,400,000	12.8 U	13.6 U	12.0 U	11.3 U	14.2 U	11.0 U	14.6 U	0.54 J	15.6 U	14.3 U	15.2 U	14.5 U	13.9 U
Carcinogenic PAHs (µg/kg)⁴															
Benzo(a)anthracene	NE	1,370	12.8 U	13.6 U	12.0 U	11.3 U	14.2 U	11.0 U	14.6 U	11.2 UJ	15.6 U	14.3 U	15.2 U	14.5 U	13.9 U
Benzo(a)pyrene	100	137	12.8 U	13.6 U	12.0 U	11.3 U	14.2 U	11.0 U	14.6 U	11.2 UJ	15.6 U	14.3 U	15.2 U	14.5 U	13.9 U
Benzo(b)fluoranthene	NE	1,370	12.8 U	13.6 U	12.0 U	11.3 U	14.2 U	11.0 U	14.6 U	11.2 UJ	15.6 U	14.3 U	15.2 U	14.5 U	13.9 U
Benzo(k)fluoranthene	NE	13,700	12.8 U	13.6 U	12.0 U	11.3 U	14.2 U	11.0 U	14.6 U	11.2 UJ	15.6 U	14.3 U	15.2 U	14.5 U	13.9 U
Chrysene	NE	137,000	12.8 U	13.6 U	12.0 U	11.3 U	14.2 U	11.0 U	14.6 U	0.40 J	15.6 U	14.3 U	15.2 U	14.5 U	13.9 U
Dibenzo(a,h)anthracene	NE	137	12.8 U	13.6 U	12.0 U	11.3 U	14.2 U	11.0 U	14.6 U	11.2 UJ	15.6 U	14.3 U	15.2 U	14.5 U	13.9 U
Indeno(1,2,3-cd)pyrene	NE	1,370	12.8 U	13.6 U	12.0 U	11.3 U	14.2 U	11.0 U	14.6 U	11.2 UJ	15.6 U	14.3 U	15.2 U	14.5 U	13.9 U
Total cPAH TEQ ⁷	100	-	9.664 U	10.268 U	9.06 U	8.5315 U	10.721 U	8.305 U	11.023 U	8.404	11.778 U	10.7965 U	11.476 U	10.9475 U	10.4945 U
SVOCs (µg/kg)⁶															
Pentachlorophenol ⁸	NE	2,500	211 U	224 U	197 U	185 U	235 U	180 U	240 U	185 UJ	259 U	235 U	249 U	241 U	229 U

Sample ID Date Collected Sample Depth	MTCA Method A CUL	MTCA Method B CUL	DP-7 (12.5-13.5) 5/12/2015 12.5-13.5 ft	DP-7 (13.5-14.5) 5/12/2015 13.5-14.5 ft	DP-8 (20-20.5) 5/12/2015 20-20.5 ft	DP-8 (20.5-21) 5/12/2015 20.5-21 ft	DP-9 (12.5-13.5) 5/14/2015 12.5-13.5 ft	DP-9 (13.5-14.5) 5/14/2015 13.5-14.5 ft	DP-10 (12-12.5) 5/14/2015 12-12.5 ft	DP-10 (12.5-13) 5/14/2015 12.5-13 ft	DP-11 (12.5-13.5) 5/12/2015 12.5-13.5 ft	DP-11 (13.5-14.5) 5/12/2015 13.5-14.5 ft	DP-12 (12-12.5) 5/14/2015 12-12.5 ft	DP-12 (16-17) 5/14/2015 16-17 ft
Petroleum Hydrocarbons (mg/kg)²														
Gasoline-range Hydrocarbons ³	100/30	NE	-	-	-	-	-	-	-	-	-	-	-	-
Diesel-range Hydrocarbons	2,000	NE	16.8 U	20.3 U	19.0 U	20.3 U	16.0 U	20.1 U	20.5 U	23.5 U	16.0 U	24.9 U	17.0 U	20.6 U
Oil-range Hydrocarbons	2,000	NE	11.2 U	13.6 U	12.7 U	13.6 U	10.7 U	13.4 U	13.6 U	15.7 U	10.7 U	16.6 U	11.3 U	13.8 U
Non-carcinogenic PAHs (µg/kg)⁴														
Naphthalene ⁵	5,000 ⁵	1,600,000	11.2 U	13.6 U	12.7 U	13.6 U	10.7 U	13.4 U	13.8 U	15.7 U	10.8 U	16.5 U	11.3 U	13.8 U
1-Methylnaphthalene ⁵		34,500	11.2 U	13.6 U	12.7 U	13.6 U	10.7 U	13.4 U	13.8 U	15.7 U	10.8 U	16.5 U	11.3 U	13.8 U
2-Methylnaphthalene ⁵		320,000	11.2 U	13.6 U	12.7 U	13.6 U	10.7 U	13.4 U	13.8 U	15.7 U	10.8 U	16.5 U	11.3 U	13.8 U
2-Chloronaphthalene	NE	NE	11.2 UJ	13.6 UJ	12.7 UJ	13.6 UJ	10.7 UJ	13.4 UJ	13.8 UJ	15.7 UJ	10.8 UJ	16.5 UJ	11.3 UJ	13.8 UJ
Acenaphthene	NE	4,800,000	11.2 U	13.6 U	12.7 U	13.6 U	10.7 U	13.4 U	13.8 U	15.7 U	10.8 U	16.5 U	11.3 U	13.8 U
Acenaphthylene	NE	NE	11.2 U	13.6 U	12.7 U	13.6 U	10.7 U	13.4 U	13.8 U	15.7 U	10.8 U	16.5 U	11.3 U	13.8 U
Anthracene	NE	24,000,000	11.2 U	13.6 U	12.7 U	13.6 U	10.7 U	13.4 U	13.8 U	15.7 U	10.8 U	16.5 U	11.3 U	13.8 U
Benzo(ghi)perylene	NE	NE	11.2 U	13.6 U	12.7 U	13.6 U	10.7 U	13.4 U	13.8 U	15.7 U	10.8 U	16.5 U	11.3 U	13.8 U
Fluoranthene	NE	3,200,000	11.2 U	13.6 U	12.7 U	13.6 U	10.7 U	13.4 U	13.8 U	15.7 U	10.8 U	16.5 U	11.3 U	13.8 U
Fluorene	NE	3,200,000	11.2 U	13.6 U	12.7 U	13.6 U	10.7 U	13.4 U	13.8 U	15.7 U	10.8 U	16.5 U	11.3 U	13.8 U
Phenanthrene	NE	NE	11.2 U	13.6 U	12.7 U	13.6 U	10.7 U	13.4 U	13.8 U	15.7 U	10.8 U	16.5 U	11.3 U	13.8 U
Pyrene	NE	2,400,000	11.2 U	0.87 J	12.7 U	13.6 U	10.7 U	13.4 U	13.8 U	15.7 U	10.8 U	0.90 J	11.3 U	13.8 U
Carcinogenic PAHs (µg/kg)⁴														
Benzo(a)anthracene	NE	1,370	11.2 U	13.6 U	12.7 U	13.6 U	10.7 U	13.4 U	13.8 U	15.7 U	10.8 U	16.5 U	11.3 U	13.8 U
Benzo(a)pyrene	100	137	11.2 U	13.6 U	12.7 U	13.6 U	10.7 U	13.4 U	13.8 U	15.7 U	10.8 U	16.5 U	11.3 U	13.8 U
Benzo(b)fluoranthene	NE	1,370	11.2 U	13.6 U	12.7 U	13.6 U	10.7 U	13.4 U	13.8 U	15.7 U	10.8 U	16.5 U	11.3 U	13.8 U
Benzo(k)fluoranthene	NE	13,700	11.2 U	13.6 U	12.7 U	13.6 U	10.7 U	13.4 U	13.8 U	15.7 U	10.8 U	16.5 U	11.3 U	13.8 U
Chrysene	NE	137,000	11.2 U	0.63 J	12.7 U	13.6 U	10.7 U	13.4 U	13.8 U	15.7 U	10.8 U	16.5 U	11.3 U	13.8 U
Dibenzo(a,h)anthracene	NE	137	11.2 U	13.6 U	12.7 U	13.6 U	10.7 U	13.4 U	13.8 U	15.7 U	10.8 U	16.5 U	11.3 U	13.8 U
Indeno(1,2,3-cd)pyrene	NE	1,370	11.2 U	13.6 U	12.7 U	13.6 U	10.7 U	13.4 U	13.8 U	15.7 U	10.8 U	16.5 U	11.3 U	13.8 U
Total cPAH TEQ ⁷	100	-	8.456 U	10.2063	9.5885 U	10.268 U	8.0785 U	10.117 U	10.419 U	11.8535 U	8.154 U	12.4575 U	8.5315 U	10.419 U
SVOCs (µg/kg)⁶														
Pentachlorophenol	NE	2,500	185 U	226 U	209 U	224 U	176 U	221 U	227 U	259 U	177 U	273 U	186 U	226 U

Sample ID Date Collected Sample Depth	MTCA Method A CUL	MTCA Method B CUL	DP-13 (12-13) 5/12/2015 12-13 ft	DP-13 (13-14) 5/12/2015 13-14 ft	DP-15 (12-13) 5/13/2015 12-13 ft	DP-15 (13-14) 5/13/2015 13-14 ft	DP-17 (16-16.5) 5/12/2015 16-16.5 ft	DP-17 (16.5-17.5) 5/12/2015 16.5-17.5 ft	DP-18 (16-17) 5/14/2015 16-17 ft	DP-18 (17-17.5) 5/14/2015 17-17.5 ft	DP-19 (24-24.5) 5/15/2015 24-24.5 ft	DP-19 (24.5-25) 5/15/2015 24.5-25 ft	DP-20 (24-24.5) 5/13/2015 24-24.5 ft	DP-20 (24.5-25.5) 5/13/2015 24.5-25.5 ft
Petroleum Hydrocarbons (mg/kg)²														
Gasoline-range Hydrocarbons ³	100/30	NE	--	--	--	--	--	--	--	--	--	--	--	--
Diesel-range Hydrocarbons	2,000	NE	16.5 U	22.0 U	16.6 U	22.0 U	22.4 U	18.2 U	16.1 U	21.9 U	16.9 U	21.9 U	22.0 U	22.2 U
Oil-range Hydrocarbons	2,000	NE	11.0 U	14.7 U	11.1 U	14.7 U	15.0 U	12.2 U	10.8 U	14.6 U	2.2 J	4.3 J	14.6 U	14.8 U
Non-carcinogenic PAHs (µg/kg)⁴														
Naphthalene ⁵	5,000 ⁵	1,600,000	11.0 U	14.8 U	11.1 U	14.8 U	15.1 U	12.1 U	10.8 U	14.6 U	11.4 U	14.7 U	14.6 U	14.9 U
1-Methylnaphthalene ⁵		34,500	11.0 U	14.8 U	11.1 U	14.8 U	15.1 U	12.1 U	10.8 U	14.6 U	11.4 U	14.7 U	14.6 U	14.9 U
2-Methylnaphthalene ⁵		320,000	11.0 U	14.8 U	11.1 U	14.8 U	15.1 U	12.1 U	10.8 U	14.6 U	11.4 U	14.7 U	14.6 U	14.9 U
2-Chloronaphthalene	NE	NE	11.0 UJ	14.8 UJ	11.1 U	14.8 U	15.1 UJ	12.1 UJ	10.8 UJ	14.6 UJ	11.4 UJ	14.7 UJ	14.6 U	14.9 U
Acenaphthene	NE	4,800,000	11.0 U	14.8 U	11.1 U	14.8 U	15.1 U	12.1 U	10.8 U	14.6 U	11.4 U	14.7 U	14.6 U	14.9 U
Acenaphthylene	NE	NE	11.0 U	14.8 U	11.1 U	14.8 U	15.1 U	12.1 U	10.8 U	14.6 U	11.4 U	14.7 U	14.6 U	14.9 U
Anthracene	NE	24,000,000	11.0 U	14.8 U	11.1 U	14.8 U	15.1 U	12.1 U	10.8 U	14.6 U	11.4 U	14.7 U	14.6 U	14.9 U
Benzo(ghi)perylene	NE	NE	11.0 U	14.8 U	11.1 U	14.8 U	15.1 U	12.1 U	10.8 U	14.6 U	11.4 U	14.7 U	14.6 U	14.9 U
Fluoranthene	NE	3,200,000	11.0 U	14.8 U	11.1 U	14.8 U	15.1 U	12.1 U	10.8 U	14.6 U	11.4 U	14.7 U	14.6 U	14.9 U
Fluorene	NE	3,200,000	11.0 U	14.8 U	11.1 U	14.8 U	15.1 U	12.1 U	10.8 U	14.6 U	11.4 U	14.7 U	14.6 U	14.9 U
Phenanthrene	NE	NE	11.0 U	14.8 U	11.1 U	14.8 U	15.1 U	12.1 U	10.8 U	14.6 U	11.4 U	14.7 U	14.6 U	14.9 U
Pyrene	NE	2,400,000	11.0 U	14.8 U	11.1 U	14.8 U	15.1 U	12.1 U	10.8 U	14.6 U	0.95 J	14.7 U	14.6 U	14.9 U
Carcinogenic PAHs (µg/kg)⁴														
Benzo(a)anthracene	NE	1,370	11.0 U	14.8 U	11.1 U	14.8 U	15.1 U	12.1 U	10.8 U	14.6 U	11.4 U	14.7 U	14.6 U	14.9 U
Benzo(a)pyrene	100	137	11.0 U	14.8 U	11.1 U	14.8 U	15.1 U	12.1 U	10.8 U	14.6 U	11.4 U	14.7 U	14.6 U	14.9 U
Benzo(b)fluoranthene	NE	1,370	11.0 U	14.8 U	11.1 U	14.8 U	15.1 U	12.1 U	10.8 U	14.6 U	11.4 U	14.7 U	14.6 U	14.9 U
Benzo(k)fluoranthene	NE	13,700	11.0 U	14.8 U	11.1 U	14.8 U	15.1 U	12.1 U	10.8 U	14.6 U	11.4 U	14.7 U	14.6 U	14.9 U
Chrysene	NE	137,000	11.0 U	14.8 U	11.1 U	14.8 U	15.1 U	12.1 U	10.8 U	14.6 U	11.4 U	14.7 U	14.6 U	14.9 U
Dibenzo(a,h)anthracene	NE	137	11.0 U	14.8 U	11.1 U	14.8 U	15.1 U	12.1 U	10.8 U	14.6 U	11.4 U	14.7 U	14.6 U	14.9 U
Indeno(1,2,3-cd)pyrene	NE	1,370	11.0 U	14.8 U	11.1 U	14.8 U	15.1 U	12.1 U	10.8 U	14.6 U	11.4 U	14.7 U	14.6 U	14.9 U
Total cPAH TEQ ⁷	100	-	8.305 U	11.174 U	8.3805 U	11.174 U	11.4005 U	9.1355 U	8.154 U	11.023 U	8.607 U	11.0985 U	11.023 U	11.2495 U
SVOCs (µg/kg)⁶														
Pentachlorophenol	NE	2,500	181 U	245 UJ	182 U	243 UJ	249 U	199 U	178 U	241 U	188 UJ	242 UJ	242 U	246 U

Sample ID Date Collected Sample Depth	MTCA Method A CUL	MTCA Method B CUL	DP-21 (13-14) 5/15/2015 13-14 ft	DP-21 (14-15) 5/15/2015 14-15 ft	DP-22 (20-20.5) 5/15/2015 20-20.5 ft	DP-22 (24-25) 5/15/2015 24-25 ft	DP-23 (16-16.5) 5/15/2015 16-16.5 ft	DP-23 (20-20.5) 5/15/2015 20-20.5 ft	DP-24 (16-16.5) 5/13/2015 16-16.5 ft	DP-24 (16.5-17.5) 5/13/2015 16.5-17.5 ft	DP-25 (12-12.5) 5/15/2015 12-12.5 ft	DP-25 (12.5-13.5) 5/15/2015 12.5-13.5 ft	DP-26 (16-17) 5/13/2015 16-17 ft
Petroleum Hydrocarbons (mg/kg)²													
Gasoline-range Hydrocarbons ³	100/30	NE	--	--	--	--	--	--	7.2 UJ	7.5 UJ	--	--	--
Diesel-range Hydrocarbons	2,000	NE	16.0 U	20.3 U	16.5 U	21.3 U	16.9 U	20.9 U	21.8 U	23.4 U	15.9 U	23.3 U	17.6 U
Oil-range Hydrocarbons	2,000	NE	10.7 U	13.5 U	11.0 U	14.2 U	11.3 U	14.0 U	14.5 U	15.6 U	10.6 U	15.5 U	11.8 U
Non-carcinogenic PAHs (µg/kg)⁴													
Naphthalene ⁵	5,000 ⁵	1,600,000	10.7 U	13.5 U	11.0 U	14.3 U	11.3 U	14.0 U	14.5 U	15.6 U	10.7 U	15.5 U	11.9 U
1-Methylnaphthalene ⁵		34,500	10.7 U	13.5 U	11.0 U	14.3 U	11.3 U	14.0 U	14.5 U	15.6 U	10.7 U	0.63 J	11.9 U
2-Methylnaphthalene ⁵		320,000	10.7 U	13.5 U	11.0 U	14.3 U	11.3 U	14.0 U	14.5 U	15.6 U	10.7 U	15.5 U	11.9 U
2-Chloronaphthalene	NE	NE	10.7 UJ	13.5 UJ	11.0 UJ	14.3 UJ	11.3 UJ	14.0 UJ	14.5 U	15.6 U	10.7 UJ	15.5 UJ	11.9 U
Acenaphthene	NE	4,800,000	10.7 U	13.5 U	11.0 U	14.3 U	1.0 J	0.53 J	14.5 U	15.6 U	10.7 U	15.5 U	11.9 U
Acenaphthylene	NE	NE	10.7 U	13.5 U	11.0 U	14.3 U	11.3 U	14.0 U	14.5 U	15.6 U	10.7 U	15.5 U	11.9 U
Anthracene	NE	24,000,000	10.7 U	13.5 U	11.0 U	14.3 U	11.3 U	14.0 U	14.5 U	15.6 U	10.7 U	15.5 U	11.9 U
Benzo(ghi)perylene	NE	NE	10.7 U	13.5 U	11.0 U	14.3 U	11.3 U	14.0 U	14.5 U	15.6 U	10.7 U	15.5 U	11.9 U
Fluoranthene	NE	3,200,000	10.7 U	13.5 U	11.0 U	14.3 U	11.3 U	14.0 U	14.5 U	15.6 U	10.7 U	15.5 U	11.9 U
Fluorene	NE	3,200,000	10.7 U	13.5 U	1.3 J	14.3 U	2.2 J	0.94 J	14.5 U	15.6 U	10.7 U	15.5 U	11.9 U
Phenanthrene	NE	NE	10.7 U	13.5 U	11.0 U	14.3 U	6.2 J	2.4 J	14.5 U	15.6 U	10.7 U	15.5 U	11.9 U
Pyrene	NE	2,400,000	10.7 U	13.5 U	11.0 U	14.3 U	1.4 J	0.70 J	14.5 U	15.6 U	10.7 U	15.5 U	11.9 U
Carcinogenic PAHs (µg/kg)⁴													
Benzo(a)anthracene	NE	1,370	10.7 U	13.5 U	11.0 U	14.3 U	11.3 U	14.0 U	14.5 U	15.6 U	10.7 U	15.5 U	11.9 U
Benzo(a)pyrene	100	137	10.7 U	13.5 U	11.0 U	14.3 U	11.3 U	14.0 U	14.5 U	15.6 U	10.7 U	15.5 U	11.9 U
Benzo(b)fluoranthene	NE	1,370	10.7 U	13.5 U	11.0 U	14.3 U	11.3 U	14.0 U	14.5 U	15.6 U	10.7 U	15.5 U	11.9 U
Benzo(k)fluoranthene	NE	13,700	10.7 U	13.5 U	11.0 U	14.3 U	11.3 U	14.0 U	14.5 U	15.6 U	10.7 U	15.5 U	11.9 U
Chrysene	NE	137,000	10.7 U	13.5 U	11.0 U	14.3 U	11.3 U	14.0 U	14.5 U	15.6 U	10.7 U	15.5 U	11.9 U
Dibenzo(a,h)anthracene	NE	137	10.7 U	13.5 U	11.0 U	14.3 U	11.3 U	14.0 U	14.5 U	15.6 U	10.7 U	15.5 U	11.9 U
Indeno(1,2,3-cd)pyrene	NE	1,370	10.7 U	13.5 U	11.0 U	14.3 U	11.3 U	14.0 U	14.5 U	15.6 U	10.7 U	15.5 U	11.9 U
Total cPAH TEQ ⁷	100	-	8.0785 U	10.1925 U	8.305 U	10.7965 U	8.5315 U	10.57 U	10.9475 U	11.778 U	8.0785 U	11.7025 U	8.9845 U
SVOCs (µg/kg)⁶													
Pentachlorophenol	NE	2,500	177 U	223 UJ	182 U	237 U	186 U	230 U	240 U	258 U	177 U	255 U	196 U

Sample ID Date Collected Sample Depth	MTCA Method A CUL	MTCA Method B CUL	DP-26 (17-18) 5/13/2015 17-18 ft	DP-27 (16-17) 5/13/2015 16-17 ft	DP-27 (24-24.5) 5/13/2015 24-24.5 ft	DP-28 (20.5-21.5) 5/14/2015 20.5-21.5 ft	DP-28 (21.5-22.5) 5/14/2015 21.5-22.5 ft	DP-29 (24-24.5) 5/14/2015 24-24.5 ft	DP-29 (24.5-25.5) 5/14/2015 24.5-25.5 ft	DP-30 (12-12.5) 5/14/2015 12-12.5 ft	DP-30 (16-17) 5/14/2015 16-17.5 ft	DP-35 (8-9) 5/15/2015 8-9 ft	DP-36 (8-9) 5/15/2015 8-9 ft
Petroleum Hydrocarbons (mg/kg)²													
Gasoline-range Hydrocarbons ³	100/30	NE	--	--	--	--	--	--	--	--	--	11.5	5.5 U
Diesel-range Hydrocarbons	2,000	NE	22.8 U	17.5 U	17.2 U	21.3 U	21.8 U	17.5 U	24.0 U	17.4 U	22.5 U	972	26.3
Oil-range Hydrocarbons	2,000	NE	15.2 U	11.7 U	61.6	14.2 U	14.6 U	11.7 U	16.0 U	11.6 U	15.0 U	74.9	5.0 J
Non-carcinogenic PAHs (µg/kg)⁴													
Naphthalene ⁵	5,000 ⁵	1,600,000	15.2 U	11.7 U	11.5 U	14.5 U	14.5 U	11.8 U	16.0 U	11.6 U	15.1 U	59.2	10.9 U
1-Methylnaphthalene ⁵		34,500	15.2 U	11.7 U	11.5 U	14.5 U	14.5 U	11.8 U	16.0 U	11.6 U	15.1 U	1,200	10.9 U
2-Methylnaphthalene ⁵		320,000	15.2 U	11.7 U	11.5 U	14.5 U	14.5 U	11.8 U	16.0 U	11.6 U	15.1 U	11.4 U	10.9 U
2-Chloronaphthalene	NE	NE	15.2 U	11.7 U	11.5 U	14.5 UJ	14.5 UJ	11.8 UJ	16.0 UJ	11.6 UJ	15.1 UJ	73.3 J	10.9 UJ
Acenaphthene	NE	4,800,000	15.2 U	11.7 U	11.5 U	14.5 U	14.5 U	11.8 U	16.0 U	11.6 U	15.1 U	310	0.68 J
Acenaphthylene	NE	NE	15.2 U	11.7 U	11.5 U	14.5 U	14.5 U	11.8 U	16.0 U	11.6 U	15.1 U	78.1	10.9 U
Anthracene	NE	24,000,000	15.2 U	11.7 U	11.5 U	14.5 U	14.5 U	11.8 U	16.0 U	11.6 U	15.1 U	221	10.9 U
Benzo(ghi)perylene	NE	NE	15.2 U	11.7 U	11.5 U	14.5 U	14.5 U	11.8 U	16.0 U	11.6 U	15.1 U	3.5 J	10.9 U
Fluoranthene	NE	3,200,000	15.2 U	11.7 U	11.5 U	14.5 U	14.5 U	11.8 U	16.0 U	11.6 U	15.1 U	124	10.9 U
Fluorene	NE	3,200,000	15.2 U	11.7 U	11.5 U	14.5 U	14.5 U	11.8 U	16.0 U	11.6 U	15.1 U	1,020	1.3 J
Phenanthrene	NE	NE	15.2 U	11.7 U	11.5 U	14.5 U	14.5 U	11.8 U	16.0 U	11.6 U	15.1 U	2,910	4.3 J
Pyrene	NE	2,400,000	15.2 U	11.7 U	11.5 U	14.5 U	14.5 U	11.8 U	16.0 U	11.6 U	15.1 U	290	0.98 J
Carcinogenic PAHs (µg/kg)⁴													
Benzo(a)anthracene	NE	1,370	15.2 U	11.7 U	11.5 U	14.5 U	14.5 U	11.8 U	16.0 U	11.6 U	15.1 U	23.5	10.9 U
Benzo(a)pyrene	100	137	15.2 U	11.7 U	11.5 U	14.5 U	14.5 U	11.8 U	16.0 U	11.6 U	15.1 U	8.5 J	10.9 U
Benzo(b)fluoranthene	NE	1,370	15.2 U	11.7 U	11.5 U	14.5 U	14.5 U	11.8 U	16.0 U	11.6 U	15.1 U	6.0 J	10.9 U
Benzo(k)fluoranthene	NE	13,700	15.2 U	11.7 U	11.5 U	14.5 U	14.5 U	11.8 U	16.0 U	11.6 U	15.1 U	11.4 U	10.9 U
Chrysene	NE	137,000	15.2 U	11.7 U	11.5 U	14.5 U	14.5 U	11.8 U	16.0 U	11.6 U	15.1 U	78.3	10.9 U
Dibenzo(a,h)anthracene	NE	137	15.2 U	11.7 U	11.5 U	14.5 U	14.5 U	11.8 U	16.0 U	11.6 U	15.1 U	11.4 U	10.9 U
Indeno(1,2,3-cd)pyrene	NE	1,370	15.2 U	11.7 U	11.5 U	14.5 U	14.5 U	11.8 U	16.0 U	11.6 U	15.1 U	11.4 U	10.9 U
Total cPAH TEQ ⁷	100	-	11.476 U	8.8335 U	8.6825 U	10.9475 U	10.9475 U	8.909 U	12.08 U	8.758 U	11.4005 U	27.443	8.2295 U
SVOCs (µg/kg)⁶													
Pentachlorophenol	NE	2,500	251 U	194 U	189 U	239 UJ	240 UJ	194 UJ	264 U	192 U	250 U	891	180 U

Notes

¹Chemical analyses were conducted by Pace Analytical Services, Inc. located in Minneapolis, Minnesota.

²Gasoline-range petroleum hydrocarbons were analyzed using NWTPH-Gx. Diesel-range and oil-range petroleum hydrocarbons were analyzed using NWTPH-Dx.

For Samples DP-2a (1-2), DP-2a (15-16) and DP-4 (16-16.5), the reported diesel-range and oil-range petroleum hydrocarbons were analyzed using NWTPH-Dx with an acid silica gel cleanup.

³The cleanup level for gasoline-range petroleum hydrocarbons is 100 mg/kg when benzene is not detected and 30 mg/kg when benzene is present.

⁴PAHs were analyzed using EPA Method SW8270D-SIM

⁵The MTCA Method A cleanup level for total naphthalenes (naphthalene, 1-methylnaphthalene, and 2-methylnaphthalene) is 5,000 µg/kg.

⁶SVOCs were analyzed using EPA Method SW8270D-SIM

⁷Carcinogenic PAH (cPAH) toxic equivalency (TEQ) calculated using toxic equivalency factors (TEF) from MTCA Table 708-2, based on methodology described in MTCA Cleanup Regulation WAC 173-340-708.

One-half the reporting limit was used to calculate the TEQ.

⁸The non-detected results for pentachlorophenol are reported at the laboratory method detection limit.

CUL = cleanup level; NE = not established

J = estimated result. U = result not detected above the reporting limit.

µg/kg = micrograms per kilogram; mg/kg = milligrams per kilogram; PAHs = Polycyclic Aromatic Hydrocarbons; SVOCs = Semi-Volatile Organic Compounds; PCP = Pentachlorophenol; TPH = Total Petroleum Hydrocarbons;

-- = not analyzed; NE = not established; **Bold** indicates analyte was detected above the reporting limit.

Table B-4

Summary of Groundwater Chemical Analytical Results - SVOCs¹

Colville Post & Poles
Stevens County, Washington

Sample ID Date Collected	MTCA Method B CUL (µg/L)	DP-1:GW:051115 5/11/2015	DP-4:GW:051115 5/11/2015	DP-7:GW:051215 5/12/2015	DP-13:GW:051215 5/11/2015 0:00	DP-15:GW:051315 5/13/2015	DP-17:GW:051215 5/12/2015	DP-20:GW:051315 5/13/2015	DP-24:GW:051315 5/13/2015	DP-DUPLICATE:GW:051315 ³ 5/13/2015	DP-26:GW:051315 5/13/2015
SVOCs² (µg/L)											
1,2,4-Trichlorobenzene	1.51 ⁴	10.4 U	10.6 U	10.4 U	10.9 U	10.9 U	10.6 U	10.9 U	11.1 U	10.8 U	10.6 U
1,2-Dichlorobenzene (o-Dichlorobenzene)	720	10.4 U	10.6 U	10.4 U	10.9 U	10.9 U	10.6 U	10.9 U	11.1 U	10.8 U	10.6 U
1,2-Diphenylhydrazine	0.109 ⁴	10.4 U	10.6 U	10.4 U	10.9 U	10.9 U	10.6 U	10.9 U	11.1 U	10.8 U	10.6 U
1,3-Dichlorobenzene (m-Dichlorobenzene)	NE	10.4 U	10.6 U	10.4 U	10.9 U	10.9 U	10.6 U	10.9 U	11.1 U	10.8 U	10.6 U
1,4-Dichlorobenzene (p-Dichlorobenzene)	8.1 ⁵	10.4 U	10.6 U	10.4 U	10.9 U	10.9 U	10.6 U	10.9 U	11.1 U	10.8 U	10.6 U
1-Methylnaphthalene	1.51 ⁴	10.4 U	10.6 U	10.4 U	10.9 U	10.9 U	10.6 U	10.9 U	11.1 U	10.8 U	10.6 U
2,4,5-Trichlorophenol	800	10.4 U	10.6 U	10.4 U	10.9 U	10.9 U	10.6 U	10.9 U	11.1 U	10.8 U	10.6 U
2,4,6-Trichlorophenol	3.98 ⁵	10.4 U	10.6 U	10.4 U	10.9 U	10.9 U	10.6 U	10.9 U	11.1 U	10.8 U	10.6 U
2,4-Dichlorophenol	24.0	10.4 U	10.6 U	10.4 U	10.9 U	10.9 U	10.6 U	10.9 U	11.1 U	10.8 U	10.6 U
2,4-Dimethylphenol	160	52.1 U	53.2 U	51.8 U	54.3 U	54.3 U	53.2 U	54.3 U	55.6 U	53.8 U	53.2 U
2,4-Dinitrophenol	32.0	10.4 U	10.6 U	10.4 U	10.9 U	10.9 U	10.6 U	10.9 U	11.1 U	10.8 U	10.6 U
2,4-Dinitrotoluene	0.282 ⁴	10.4 U	10.6 U	10.4 U	10.9 U	10.9 U	10.6 U	10.9 U	11.1 U	10.8 U	10.6 U
2,6-Dinitrotoluene	0.0583 ⁴	10.4 U	10.6 U	10.4 U	10.9 U	10.9 U	10.6 U	10.9 U	11.1 U	10.8 U	10.6 U
2-Chloronaphthalene	NE	10.4 U	10.6 U	10.4 U	10.9 U	10.9 U	10.6 U	10.9 U	11.1 U	10.8 U	10.6 U
2-Chlorophenol	40.0	10.4 U	10.6 U	10.4 U	10.9 U	10.9 U	10.6 U	10.9 U	11.1 U	10.8 U	10.6 U
2-Methylnaphthalene	32	10.4 U	10.6 U	10.4 U	10.9 U	10.9 U	10.6 U	10.9 U	11.1 U	10.8 U	10.6 U
2-Nitroaniline	160	10.4 U	10.6 U	10.4 U	10.9 U	10.9 U	10.6 U	10.9 U	11.1 U	10.8 U	10.6 U
2-Nitrophenol	NE	10.4 U	10.6 U	10.4 U	10.9 U	10.9 U	10.6 U	10.9 U	11.1 U	10.8 U	10.6 U
3 & 4 Methylphenol	NE	20.8 U	21.3 U	20.7 U	21.7 U	21.7 U	21.3 U	21.7 U	22.2 U	21.5 U	21.3 U
3,3'-Dichlorobenzidine	0.194 ⁴	52.1 U	53.2 U	51.8 U	54.3 U	54.3 U	53.2 U	54.3 U	55.6 U	53.8 U	53.2 U
3-Nitroaniline	NE	10.4 U	10.6 U	10.4 U	10.9 U	10.9 U	10.6 U	10.9 U	11.1 U	10.8 U	10.6 U
4,6-Dinitro-2-Methylphenol	NE	10.4 U	10.6 U	10.4 U	10.9 U	10.9 U	10.6 U	10.9 U	11.1 U	10.8 U	10.6 U
4-Bromophenyl phenyl ether	NE	10.4 U	10.6 U	10.4 U	10.9 U	10.9 U	10.6 U	10.9 U	11.1 U	10.8 U	10.6 U
4-Chloro-3-Methylphenol	NE	10.4 U	10.6 U	10.4 U	10.9 U	10.9 U	10.6 U	10.9 U	11.1 U	10.8 U	10.6 U
4-Chloroaniline	0.219 ⁴	52.1 U	53.2 U	51.8 U	54.3 U	54.3 U	53.2 U	54.3 U	55.6 U	53.8 U	53.2 U
4-Chlorophenyl-Phenylether	NE	10.4 U	10.6 U	10.4 U	10.9 U	10.9 U	10.6 U	10.9 U	11.1 U	10.8 U	10.6 U
4-Nitroaniline	NE	10.4 U	10.6 U	10.4 U	10.9 U	10.9 U	10.6 U	10.9 U	11.1 U	10.8 U	10.6 U
4-Nitrophenol (p-Nitrophenol)	NE	10.4 U	10.6 U	10.4 U	10.9 U	10.9 U	10.6 U	10.9 U	11.1 U	10.8 U	10.6 U
Bis(2-Chloroethoxy)Methane	NE	10.4 U	10.6 U	10.4 U	10.9 U	10.9 U	10.6 U	10.9 U	11.1 U	10.8 U	10.6 U
Bis(2-Chloroethyl)Ether	0.0398 ⁴	10.4 U	10.6 U	10.4 U	10.9 U	10.9 U	10.6 U	10.9 U	11.1 U	10.8 U	10.6 U
bis(2-chloroisopropyl) ether	NE	10.4 U	10.6 U	10.4 U	10.9 U	10.9 U	10.6 U	10.9 U	11.1 U	10.8 U	10.6 U
Bis(2-Ethylhexyl) Phthalate	6.25 ⁵	10.4 U	10.6 U	10.4 U	10.9 U	10.9 U	10.6 U	10.9 U	11.1 U	10.8 U	10.6 U
Butyl benzyl Phthalate	46.1	10.4 U	10.6 U	10.4 U	10.9 U	10.9 U	10.6 U	10.9 U	11.1 U	10.8 U	10.6 U
Carbazole	NE	10.4 U	10.6 U	10.4 U	10.9 U	10.9 U	10.6 U	10.9 U	11.1 U	10.8 U	10.6 U
Dibenzofuran	16	10.4 U	10.6 U	10.4 U	10.9 U	10.9 U	10.6 U	10.9 U	11.1 U	10.8 U	10.6 U
Diethyl Phthalate	12,800	10.4 U	10.6 U	10.4 U	10.9 U	10.9 U	10.6 U	10.9 U	11.1 U	10.8 U	10.6 U
Dimethyl Phthalate	NE	10.4 U	10.6 U	10.4 U	10.9 U	10.9 U	10.6 U	10.9 U	11.1 U	10.8 U	10.6 U

Sample ID Date Collected	MTCA Method B CUL (µg/L)	DP-1:GW:051115 5/11/2015	DP-4:GW:051115 5/11/2015	DP-7:GW:051215 5/12/2015	DP-13:GW:051215 5/11/2015 0:00	DP-15:GW:051315 5/13/2015	DP-17:GW:051215 5/12/2015	DP-20:GW:051315 5/13/2015	DP-24:GW:051315 5/13/2015	DP-DUPLICATE:GW:051315 ³ 5/13/2015	DP-26:GW:051315 5/13/2015
Di-N-Butyl Phthalate	NE	10.4 U	10.6 U	10.4 U	10.9 U	10.9 U	10.6 U	10.9 U	11.1 U	10.8 U	10.6 U
Di-N-Octyl Phthalate	160	10.4 U	10.6 U	10.4 U	10.9 U	10.9 U	10.6 U	10.9 U	11.1 U	10.8 U	10.6 U
Hexachlorobenzene	0.0547 ⁴	10.4 U	10.6 U	10.4 U	10.9 U	10.9 U	10.6 U	10.9 U	11.1 U	10.8 U	10.6 U
Hexachlorobutadiene	0.561 ⁴	10.4 U	10.6 U	10.4 U	10.9 U	10.9 U	10.6 U	10.9 U	11.1 U	10.8 U	10.6 U
Hexachloroethane	1.09 ⁴	10.4 U	10.6 U	10.4 U	10.9 U	10.9 U	10.6 U	10.9 U	11.1 U	10.8 U	10.6 U
Isophorone	46.1	10.4 U	10.6 U	10.4 U	10.9 U	10.9 U	10.6 U	10.9 U	11.1 U	10.8 U	10.6 U
Nitrobenzene	16	10.4 U	10.6 U	10.4 U	10.9 U	10.9 U	10.6 U	10.9 U	11.1 U	10.8 U	10.6 U
N-Nitrosodimethylamine	0.000858	10.4 U	10.6 U	10.4 U	10.9 U	10.9 U	10.6 U	10.9 U	11.1 U	10.8 U	10.6 U
N-Nitrosodiphenylamine (as diphenylamine)	17.9	10.4 U	10.6 U	10.4 U	10.9 U	10.9 U	10.6 U	10.9 U	11.1 U	10.8 U	10.6 U
o-Cresol (2-methylphenol)	400	10.4 U	10.6 U	10.4 U	10.9 U	10.9 U	10.6 U	10.9 U	11.1 U	10.8 U	10.6 U
Phenol	2400	10.4 U	10.6 U	10.4 U	10.9 U	10.9 U	10.6 U	10.9 U	11.1 U	10.8 U	10.6 U

Notes:

¹Chemical analyses conducted by Pace Analytical Services, Inc. located in Minneapolis, Minnesota.

²SVOCs analyzed using EPA Method SW8270D-SIM.

³Sample DP-Duplicate:GW:051315 is a duplicate sample of DP-24.

⁴Laboratory reporting limits and method detection limits were greater than the corresponding MTCA Method B groundwater cleanup levels.

⁵Analyte was not detected. The reporting limit was greater than the MTCA Method B groundwater CUL; however the compound was not detected greater than the method detection limit which is less than the MTCA Method B groundwater CUL.

SVOCs = Semi-volatile organic compounds

µg/L = micrograms per liter

U = result not detected above the reporting limit

CUL = cleanup level; NE = Not established

Table B-5

Summary of Groundwater Chemical Analytical Results - PAHs, PCP and TPH¹

Colville Post & Poles
Stevens County, Washington

Sample ID Date Collected	MTCA Method A Unrestricted Land Use CUL	MTCA Method B CUL	DP-1:GW:051115 05/11/2015	DP-4:GW:051115 05/11/2015	DP-7:GW:051215 05/12/2015	DP-13:GW:051215 05/12/2015	DP-15:GW:051315 05/13/2015	DP-17:GW:051215 05/12/2015	DP-20:GW:051315 05/13/2015	DP-24:GW:051315 ² 05/13/2015	DP-DUPLICATE:GW:051315 05/13/2015	DP-26:GW:051315 05/13/2015
Carcinogenic Polycyclic Aromatic Hydrocarbons³ (cPAHs) (µg/L)												
Benzo(a)anthracene	NE	0.120	0.041 U	0.042 U	0.043 U	0.043 U	0.042 U	0.042 U	0.044 U	0.043 U	0.044 U	0.043 U
Benzo(a)pyrene	0.1	0.0120	0.041 U	0.042 U	0.043 U	0.043 U	0.042 U	0.042 U	0.044 U	0.043 U	0.044 U	0.043 U
Benzo(b)fluoranthene	NE	0.120	0.041 U	0.042 U	0.043 U	0.043 U	0.042 U	0.042 U	0.044 U	0.043 U	0.044 U	0.043 U
Benzo(k)fluoranthene	NE	1.20	0.041 U	0.042 U	0.043 U	0.043 U	0.042 U	0.042 U	0.044 U	0.043 U	0.044 U	0.043 U
Chrysene	NE	1.20	0.041 U	0.042 U	0.043 U	0.043 U	0.042 U	0.042 U	0.044 U	0.043 U	0.044 U	0.043 U
Dibenzo(a,h)anthracene	NE	0.0120	0.041 U	0.042 U	0.043 U	0.043 U	0.042 U	0.042 U	0.044 U	0.043 U	0.044 U	0.043 U
Indeno(1,2,3-cd)pyrene	NE	0.120	0.041 U	0.042 U	0.043 U	0.043 U	0.042 U	0.042 U	0.044 U	0.043 U	0.044 U	0.043 U
cPAH TEQ ⁴	0.1	-	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Polycyclic Aromatic Hydrocarbons³ (PAHs) (µg/L)												
Acenaphthene	NE	960	0.041 U	0.042 U	0.043 U	0.043 U	0.042 U	0.042 U	0.044 U	0.36 J	0.26 J	0.043 U
Acenaphthylene	NE	NE	0.041 U	0.042 U	0.043 U	0.043 U	0.042 U	0.042 U	0.044 U	0.15 J	0.081 J	0.043 U
Anthracene	NE	4800	0.041 U	0.042 U	0.043 U	0.043 U	0.042 U	0.042 U	0.40	0.25 J	0.11 J	0.043 U
Benzo(ghi)perylene	NE	NE	0.041 U	0.042 U	0.043 U	0.043 U	0.042 U	0.042 U	0.044 U	0.043 U	0.044 U	0.043 U
Fluoranthene	NE	640	0.041 U	0.042 U	0.043 U	0.043 U	0.042 U	0.042 U	0.044 U	0.054	0.044 U	0.043 U
Fluorene	NE	640	0.041 U	0.042 U	0.043 U	0.043 U	0.042 U	0.042 U	0.044 U	0.79 J	0.43 J	0.043 U
Naphthalene	160	160	0.041 U	0.042 U	0.043 U	0.043 U	0.10	0.042 U	0.092	0.055	0.054	0.043 U
Phenanthrene	NE	NE	0.041 U	0.042 U	0.043 U	0.043 U	0.042 U	0.042 U	0.087	1.7 J	0.62 J	0.043 U
Pyrene	NE	480	0.041 U	0.042 U	0.043 U	0.043 U	0.042 U	0.042 U	0.044 U	0.17 J	0.070 J	0.043 U
Semi-volatile Organic Compound⁵ (µg/L)												
Pentachlorophenol (PCP)	NE	0.219	0.33 ⁶ UJ	17.6 J	0.34 ⁶ UJ	0.33 ⁶ UJ	123	1.3 J	107	38.0	40.5	0.32 ⁶ U
Total Petroleum Hydrocarbons (TPH)⁷ (mg/L)												
Diesel-range	0.5	NE	0.11 U	0.17	0.11 U	0.11 U	0.62	0.14	0.51	0.65 J	0.41 J	0.11 U
Oil-range	0.5	NE	0.11 U	0.11 U	0.11 U	0.11 U	0.13	0.10 U	0.11 U	0.11 U	0.11 U	0.11 U

Notes:

¹Chemical analyses were conducted by Pace Analytical Services, Inc. located in Minneapolis, Minnesota.

²BTEX analysis was run on sample DP-24:GW:051315. Results were all non-detect and are therefore not being represented on this table. Results can be found in the chemical analytical report provided in Appendix C.

³PAHs and cPAHs were analyzed using EPA Method SW8270D-SIM.

⁴Carcinogenic PAH (cPAH) toxic equivalency (TEQ) calculated using toxicity equivalency factors (TEF) from MTCA Table 708-2, based on methodology described in MTCA Cleanup Regulation Washington Administrative Code 173-340-708. One half the reporting limit was used to calculate the TEQ.

⁵SVOCs analyzed using EPA Method SW8270D.

⁶PCP was not detected. The reporting limit was greater than the MTCA Method B groundwater CUL; however PCP was not detected at concentrations greater than the method detection limit which is less than the MTCA Method B groundwater CUL.

⁷Total petroleum hydrocarbons were analyzed using NWTPH-Dx.

CUL = cleanup level; NE = not established

J = estimated result.

U = result not detected above the reporting limit

µg/L = micrograms per liter; mg/L = milligrams per liter; PAHs = Polycyclic Aromatic Hydrocarbons; PCP = Pentachlorophenol; TPH = Total Petroleum Hydrocarbons; SVOCs = Semi-volatile organic compounds

Bold indicates analyte was detected above the reporting limit

Red outline indicates analyte concentration exceeds referenced regulatory level.

APPENDIX C
Field Procedures

APPENDIX C FIELD PROCEDURES

General

Shallow soil and sediment samples were collected from the site, adjacent right-of-way and regional background locations. Soil and sediment samples were collected using hand equipment (augers, shovels, etc.) to depths of about 18 inches below ground surface (bgs). Samples collected deeper than 18 inches bgs were obtained using a backhoe.

Field methods generally were performed in compliance with the project Sampling and Analysis Plan (SAP). Groundwater sampling procedures are included in the site groundwater monitoring reports.

Soil Sample Collection

Soil was placed in laboratory-supplied sample bottles and filled to minimize headspace. Soil samples were stored in a chilled cooler until delivery to the analytical laboratory. Soil samples were collected using clean nitrile gloves to obtain soil from the sampling instrument or directly from the exploration. Hand sampling instruments were decontaminated between each sample location using distilled water and Liquinox. Soil and sediment sample locations were recorded using GPS enabled devices.

Field Screening of Soil Samples

GeoEngineers' field representative performed field-screening tests on soil samples obtained from the borings. Field screening results were used as a general guideline to assess areas of possible petroleum-related contamination. The field screening methods used include: (1) visual screening; (2) water-sheen screening; and (3) headspace-vapor screening using a MiniRAE photoionization detector (PID) calibrated to isobutylene on the day of testing.

Visual screening consisted of observing soil for stains indicative of metal- or petroleum-related contamination. Water-sheen screening involved placing soil in a pan of water and observing the water surface for signs of sheen. Sheen screening may detect both volatile and nonvolatile petroleum hydrocarbons. Sheens observed are classified as follows:

No Sheen (NS)	No visible sheen on the water surface.
Slight Sheen (SS)	Light, colorless, dull sheen; spread is irregular, not rapid; sheen dissipates rapidly. Natural organic matter in the soil may produce a slight sheen.
Moderate Sheen (MS)	Light to heavy sheen; may have some color/iridescence; spread is irregular to flowing, may be rapid; few remaining areas of no sheen on the water surface.
Heavy Sheen (HS)	Heavy sheen with color/iridescence; spread is rapid; entire water surface may be covered with sheen.

Headspace vapor screening involved placing a soil sample in a plastic sample bag. Air was captured in the bag and the bag was shaken to expose the soil to the air trapped in the bag. Headspace vapor screening targeted volatile petroleum hydrocarbon compounds. In this application, the PID measured concentration

of organic vapors ionizable by a 10.6 electron volt (ev) lamp in the range between 1.0 and 2,000 parts per million (ppm), with a resolution of +/- 2 ppm.

Field screening results can be site specific. The effectiveness of field screening can vary with temperature, moisture content, organic content, soil type and type and age of contaminant. The presence or absence of a sheen or headspace vapors does not necessarily indicate the presence or absence of contaminants.

APPENDIX D
Terrestrial Ecological Evaluation

APPENDIX D TERRESTRIAL ECOLOGICAL EVALUATION

D1.0 TERRESTRIAL ECOLOGICAL EVALUATION

A terrestrial ecological evaluation (TEE) was conducted for the Colville Post and Poles facility (site) consistent with the Model Toxics Control Act (MTCA¹). The purpose of the TEE is to evaluate whether hazardous substances detected in soil at a site pose a threat to terrestrial receptors (plants, soil biota and wildlife). The steps followed are described in the following sections.

D1.1 TEE Exclusions

MTCA² outlines four criteria for determining that no further evaluation is required. A TEE is not required if a site meets any of these criteria:

1. “All soil contaminated with hazardous substances, is, or will be, located below the point of compliance.” The standard point of compliance is 15 feet and the conditional point of compliance is 6 feet. The site does not meet this criterion because contaminants have been detected in soil within the upper 6 and 15 feet.
2. “All soil contaminated with hazardous substances is, or will be, covered by buildings, paved roads, pavement, or other physical barriers that will prevent plants or wildlife from being exposed to the soil contamination.” The site is not covered; there are no barriers preventing terrestrial receptors from contacting contaminated soil. The site does not meet this criterion.
3. “There is less than 0.25 acres of contiguous undeveloped land on the site or within 500 feet of any area of the site.” The 0.25 acres criterion is applicable to sites where dioxins/furans have been detected such as the Colville Post and Poles facility. The site does not meet this criterion because the site includes approximately 23 acres of undeveloped land.
4. “Concentrations of hazardous substances in soil do not exceed natural background levels.” The site does not meet this criterion as dioxin and furans are detected in soil at concentrations greater than natural background levels and pentachlorophenol and petroleum hydrocarbons, which do not have natural background levels, were also detected in soil.

The site does not qualify for a TEE exclusion based on all four criteria. Therefore, further evaluation is required and is provided below.

¹ WAC 173-340-7490

² WAC 173-340-7491(1)

D2.1 Simplified or Site-Specific TEE Determination

Further evaluation can be based on a simplified or site-specific TEE for sites that do not qualify for a TEE exclusion. A site-specific TEE is required if a site meets any of the four criteria outlined in MTCA³:

1. “The site is located on, or directly adjacent to, an area where management or land use plans will maintain or restore native or semi-native vegetation.” The site meets this criterion due to the presence of protected wetlands (see Section 2.4 of RI/FS). In 2015, GeoEngineers identified, delineated and assessed two onsite wetlands: (1) a 4.9-acre palustrine emergent/scrub-shrub/forested Category II wetland and (2) a 0.1-acre palustrine emergent Category III wetland. In Stevens County, this type of wetland requires a 150-foot buffer as a protective measure (Stevens County Code 13.30.020(6) 2003). The wetlands are also listed in Washington Department of Fish and Wildlife’s (WDFW’s) Priority Habitats and Species (PHS) database.
2. “The site is used by a threatened or endangered species, wildlife species classified as priority species or species of concern, or plants classified as endangered, threatened, or sensitive.” The site meets this criterion. Several species have been identified in WDFW’s PHS and/or US Fish and Wildlife Services threatened and endangered species databases as occurring or potentially occurring at or near the site.
3. “The site is located on a property that contains at least ten acres of native vegetation within 500 feet of the site, not including vegetation beyond the property boundaries.” The site does not meet this criterion.
4. “The department determines that the site may present a risk to significant wildlife populations.” Ecology has not determined that the site may present a risk to significant wildlife populations.

The site does not qualify for a simplified TEE because two of the four criteria above were met. Therefore, a site-specific TEE is required and is provided in the following sections.

D2.2 Site-Specific TEE

MTCA⁴ outlines the process for completing a site-specific TEE. The first step involves completing a problem formulation that identifies the chemicals of concern based on comparison of characteristic site data to ecological screening levels, exposure pathways, receptors of concern and potential adverse effects associated with exposure.

D2.2.1 Problem Formulation

D2.2.1.1 Chemicals of Ecological Concern

Chemicals of concern (COCs) for ecological receptors include dioxins and furans (expressed as the toxicity equivalent [TEQ] of 2,3,7,8-tetrachloro-dibenzo-p-dioxin), pentachlorophenol and diesel-range petroleum hydrocarbons based on exceedances of the ecological indicator concentrations in MTCA Table 749-3.

³ WAC 173-340-7491(2)

⁴ WAC 173-340-7493

D2.2.1.2 Exposure Pathways

The habitat available at the site is a mix of disturbed upland, emergent wetland and riparian habitats. The disturbed upland habitat is poor quality, while the wetland and riparian habitat provide a variety of ecological functions. Plants growing in site soil may take up dissolved contaminants through their roots and soil invertebrates (e.g., worms), reptiles, small mammals and birds could directly contact site soil as part of their foraging or hunting behavior. Some animals (including reptiles and amphibians) could also burrow into site soil to den or seek refuge from predators or weather. Few ecological receptors, except for worms, deliberately ingest soil as part of their diet. Small mammal or birds preying on worms will ingest soil as part of their food. Other mammals and birds may accidentally ingest soil during foraging, feeding or grooming.

Aquatic (those living in the water column) or benthic (those living on or in sediment) invertebrates may directly ingest or burrow in sediment within the wetland and associated drainage channels. Animals preying on aquatic or benthic invertebrates may incidentally ingest sediment either on their prey or in their prey's gut.

No ecological receptors would be exposed to groundwater; however, groundwater may migrate through soil to surface water, particularly the Colville River. The river provides drinking water for animals; ponded water in the wetlands may provide water seasonally but tend to dry out in the summer. Amphibians that potentially occur in the area may use the wetland habitats for breeding and rearing of larvae when water is present. Surface water samples and seep samples collected near the river would suggest that the river does not represent an exposure pathway.

D2.2.1.3 Terrestrial Ecological Receptors of Concern

The site occurs along the Colville River and includes wetland and riparian habitat. The wetland and riparian habitats contain mature cottonwood, willow, pine and other trees and shrubs. No record of plant presence, animal or bird use was made during the 2016-2018 field efforts. However, many plant and wildlife species would be expected to occur in portions of the former facility based on the type of habitats present. Species occurrence likely ranges from insects to birds to large mammals such as moose and bear; however, only insects, small mammals and birds are likely to use the habitats for breeding and rearing. Several species that may use the site are classified as threatened under state or federal regulations.

GeoEngineers reviewed the U.S. Fish and Wildlife Service (USFWS) Planning and Conservation (IPaC) webpage⁵ to determine if any species protected under the Endangered Species Act (ESA) may be present. The IPaC database identified the grizzly bear (*Ursus arctos* spp.), wolverine (*Gulo gulo*), yellow-billed cuckoo (*Coccyzus americanus*), and bull trout (*Salvelinus confluentus*) as Threatened species that may occur in the area. The grizzly bear and wolverine have very large home ranges, typically in less disturbed, higher elevation areas where there is significant winter snow pack making it unlikely that the site is used by these species. The cuckoo relies on riparian habitat for foraging and nesting and may occur in this area. Bull trout are noted as historically migrating along this reach of the Colville River, but summer temperatures are too warm for this area to be spawning habitat.

Washington State considers the wolverine a sensitive species that may occur in this area, along with the golden eagle (*Aquila chrysaetos*), Northwest white-tailed deer (*Odocoileus virginianus*), rainbow trout (steelhead; *Oncorhynchus mykiss*), and Townsend's big-eared bat (*Corynorhinus townsendii*). Except for

⁵ U.S. FWS Information for Planning and Conservation accessed on 25 April 2018. <https://ecos.fws.gov/ipac/>

the wolverine, these state sensitive species could forage or hunt at the site, although it would only represent a small portion of their overall range.

A number of bird species that may occur in the area are protected by the Bald and Golden Eagle Protection Act (1940) and the Migratory Bird Treaty Act (1918), including burrowing owl, ferruginous hawk, greater sage grouse, and long-billed curlew.

Table D-1 provides a list of protected species that are known to occur in wetland or riparian habitats in the vicinity of the site; the list also includes those species that are state special concern⁶ and are known to occur in this area of Stevens County.

D2.2.1.4 Potential Ecological Effects

Exposure of plants and animals to contaminants can have a wide variety of effects at any life stage ranging from death, reduced growth to impaired reproduction (either by reduced production or increased mortality of offspring) in plants and animals and additional effects to animals such as immune system suppression or altered behavior affecting ability to survive or reproduce. Most populations of a given species experience stressors of many types that cause loss of individuals but can survive as a species over time through modification of behaviors (e.g., increased fecundity, change in food source) or migration. However, some species already experience a wide range of stressors on a scale that is difficult to adapt to such that loss of a small number of individuals has a greater impact on survival of the population. These species are often identified through the ESA process or similar state programs. COCs identified at the CPPI site have the potential to affect survival, growth and reproduction of a variety of ecological receptors. A brief description of potential effects from exposure to the site COCs is provided in the following sections.

Effects from potential ecological exposure to site contaminants were assessed by comparing COC concentrations to soil screening levels protective of plants, invertebrates, fish and wildlife; the groundwater exposure pathway is minor or incomplete for ecological receptors. Tables 5-1 and 5-2 of the Remedial Investigation Report present the screening levels selected for the site; results of the comparisons of soil concentrations to screening levels are provided in RI Tables 6-1 and 6-2.

Dioxin/furans. Dioxins and furans are a group of persistent, toxic chemicals that form during the manufacture, use or destruction of other chemicals. They are widely distributed in all environmental media, with air emissions from combustion of wood, coal and other organic materials being the predominant transport mechanism. They do not readily dissolve in water but bind tightly to solid matrices (e.g., soil or sediment). Incidental ingestion of soil or sediment by an animal can result in uptake into organs and tissues. Dioxins and furans can be transferred through the food chain via ingestion of contaminated food/prey. When an animal is exposed to contaminated food over time, chronic effects can include suppressed immune system function, impaired reproduction or development, and endocrine/hormonal disruption. Individual dioxins and furans may also be carcinogenic. Acute toxicity is rarely observed.

Pentachlorophenol (PCP). PCP is a highly toxic compound historically used as a biocide (e.g., wood preservation). PCP can either bind to a solid matrix or dissolve in water, depending on environmental conditions and method of release. Both bacteria and sunlight can degrade PCP, making it less persistent in shallow soil and surface water. Biodegradation of PCP in groundwater is also possible due to the

⁶ Washington Department of Fish and Wildlife Priority Habitats and Sensitive Species. Accessed 25 April 2018. <https://wdfw.wa.gov/mapping/phs/>

presence of soil bacteria and other microbes. Exposure to PCP in water can harm the liver and kidney function and impair cardiovascular, immune and central nervous systems in many organisms. PCP is acutely toxic to soil and aquatic invertebrates.

Diesel petroleum. Diesel is a petroleum distillate that contains many different chemicals, including polycyclic aromatic hydrocarbons (PAHs), naphthalene, benzene, and toluene. The individual constituents have different effects ranging from death of an organism (plant or animal) to cancer (in mammals). In general, exposure to diesel via drinking water can damage the liver, kidneys, heart, lungs and central nervous system. Exposure can also impair immune and reproductive system function and fetal survival.

TABLE D-1. POTENTIAL SPECIES OCCURRENCE--CPPI SITE

Species Name	Scientific Name	Status	Potential Use of Site
Grizzly bear	<i>Ursus arctos</i> spp.	Federal Threatened	Low
Wolverine	<i>Gulo gulo luscus</i>	Federal Proposed Threatened; State Sensitive	Low
Northwest white-tailed deer	<i>Odocoileus virginianus</i>	State sensitive	High--foraging/refuge
Townsend big-eared bat	<i>Corynorhinus townsendii</i>	State sensitive	Moderate--foraging
Yellow-billed cuckoo	<i>Coccyzus americanus</i>	Federal Threatened	High--nesting/foraging
Bald eagle	<i>Haliaeetus leucocephalus</i>	USFWS BCC	Moderate--foraging
Golden eagle	<i>Aquila chrysaetos</i>	State sensitive; also protected under BGEPA and MBTA	Moderate--foraging
Cassin's finch	<i>Carpodacus cassinii</i>	USFWS BCC	Moderate--nesting/foraging
Rufous hummingbird	<i>Selasphorus rufus</i>	USFWS BCC	High--nesting/foraging
Lesser Yellowlegs	<i>Tringa flavipes</i>	Protected under BGEPA and MBTA	Low
Bull trout	<i>Salvelinus confluentus</i>	Federal Threatened	Low--migration
Rainbow trout (steelhead)	<i>Oncorhynchus mykiss</i>	State sensitive	Low--migration

Notes:

BGEPA = Bald and Golden Eagle Protection Act

MBTA = Migratory Bird Treaty Act

USFWS BCC = US Fish and Wildlife Service Bird of Conservation Concern

APPENDIX E
Laboratory Results and Data Validation

Project:	Colville Post and Pole November and December 2016; March, May, and October 2017 Soil Samples and December 2016; January, March, April, May, June, August, and November 2017 Groundwater Samples
GEI File No:	00504-098-01
Date:	February 15, 2018

This report documents the results of a United States Environmental Protection Agency (EPA)-defined Stage 2A data validation (EPA Document 540-R-08-005; EPA, 2009) of analytical data from the analyses of soil and groundwater samples collected as part of the November and December 2016; and the January, March, April, May, June, August, October, and November 2017 sampling events, and the associated laboratory and field quality control (QC) samples. The samples were obtained from the former Colville Post and Poles, Inc. (CPPI) Site located at 396 Highway 395 North near Colville in Stevens County, Washington.

Note the data were originally validated on February 15, 2018. The November 2016 (SDG 590-5009-1), December 2016 (SDG 590-5185-1), and May 2017 (SDG 590-6217-1) pentachlorophenol soil data were re-validated on May 11, 2018 because the data were revised by the laboratory to be reported down to the method detection limit at the request of GeoEngineers.

Objective and Quality Control Elements

GeoEngineers completed the data validation consistent with the EPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (EPA 2016a), Inorganic Superfund Data Review (EPA 2016b), and Chlorinated Dioxin/Furan Data Review (EPA 2011) (National Functional Guidelines) to determine if the laboratory analytical results meet the project objectives and are usable for their intended purpose. Data usability was assessed by determining if:

- The samples were analyzed using well-defined and acceptable methods that provide reporting limits below applicable regulatory criteria;
- The precision and accuracy of the data are well-defined and sufficient to provide defensible data; and
- The quality assurance/quality control (QA/QC) procedures utilized by the laboratory meet acceptable industry practices and standards.

In accordance with Quality Assurance Project Plan (Appendix C of the Final Remedial Investigation/Feasibility Study Work Plan; GeoEngineers 2016), the data validation included review of the following QC elements:

- Data Package Completeness
- Chain-of-Custody Documentation
- Holding Times and Sample Preservation
- Surrogate/Labelled Compounds (Dioxins and Furans) Recoveries
- Method Blanks

- Matrix Spikes/Matrix Spike Duplicates
- Laboratory Control Samples/Laboratory Control Sample Duplicates
- Laboratory/Field Duplicates
- Reporting Limits
- Miscellaneous

Validated Sample Delivery Groups

This data validation included review of the sample delivery groups (SDGs) listed below in Table 1.

TABLE 1: SUMMARY OF VALIDATED SAMPLE DELIVERY GROUPS

Laboratory SDG	Samples Validated
590-5009-1	MW-28-1 (1), MW28-2 (18.5), MW27-2 (12-13), MW27-3 (16-17), MW26-5 (25.5-26), MW25-1 (5.5-6.5), MW25-2 (9.5-10), MW24-2 (6.5-7), MW24-3 (11.5-12), MW20-1 (2-3), MW20-3 (13-14), MW26-6 (8-9), MW21-2 (7-8), MW21-3 (16-17), MW22-1 (6.5-7), MW22-2 (15.5-16), MW23-1 (2-3), MW23-3 (12.5-13), MW29-3 (13-13.5), MW29-5 (4-5)
590-5184-1	MW-20:120816, MW-21:120816, MW-22:120816, MW-23:120816, MW-24:120816, MW-25:120816, MW-26:120816, MW-27:120816, MW-Dup:120816, MW-28:120816, MW-29:120816
590-5185-1	HA-4 (0-6"), HA-3 (0-6"), HA-2 (0-6"), HA-1 (0-6"), HA-36 (0-6"), HA-37 (0-6"), HA-14 (0-6"), HA-13 (0-6"), HA-32 (0-6"), HA-8 (0-6"), HA-6 (0-6"), HA-5 (0-6"), HA-7 (0-6"), HA-9 (0-6"), HA-15 (0-6"), HA-16 (0-6"), HA-17 (0-6"), HA-35 (0-6"), HA-24 (0-6"), HA-25 (0-6"), HA-12 (0-6"), HA-38 (0-6"), HA-11 (0-6"), HA-22 (0-6"), HA-20 (0-6"), HA-18 (0-6"), HA-10 (0-6"), HA-19 (0-6"), HA-21 (0-6"), HA-23 (0-6"), HA-26 (0-6"), Seep-1:GW:120716, Seep-2:GW:120716, HA-27 (0-6"), HA-28 (0-6"), HA-30 (0-6"), HA-29 (0-6"), Seep-1 (6-12"), Seep-2 (6-12")
590-5187-1	BG-1 (0-6"), BG-2 (0-6"), BG-3 (0-6"), BG-4 (0-6"), BG-5 (0-6"), BG-6 (0-6"), BG-7 (0-6"), BG-8 (0-6"), BG-9 (0-6"), BG-10 (0-6")
590-5370-1	MW-28:011317
590-5614-1	MW-20:030217, MW-21:030217, MW-22:030217, MW-23:030317, MW-24:030217, MW-25:030217, MW-26:030217, MW-27:030217, Dup:030217, MW-28:030217, MW-29:030317
590-5615-1	HA-3A (6-12), HA-4A (6-12), HA-6A (6-12), HA-11A (6-12), HA-13A (6-12), HA-17A (6-12), HA-20A (6-12), HA-25A (6-12), HA-39 (0-6), HA-40 (0-6), HA-41 (0-6), HA-42 (0-6), HA-43 (0-6), HA-44 (0-6), HA-45 (0-6), HA-46 (0-6), HA-47 (0-6), HA-48 (0-6), HA-49 (0-6), HA-50 (0-6), HA-51 (0-6), HA-52 (0-6), HA-53 (0-6), HA-54 (0-6), HA-55 (0-6), HA-56 (0-6), HA-57 (0-6), HA-58 (0-6), HA-59 (0-6)
590-5615-3	HA-3A (12-18), HA-4A (12-18), HA-6A (12-18), HA-13A (12-18), HA-20A (12-18), HA-40 (12-18), HA-41 (12-18), HA-42 (12-18), HA-43 (12-18), HA-44 (12-18), HA-46 (12-18), HA-47 (12-18), HA-49 (12-18), HA-51 (12-18), HA-53 (12-18)
590-5863-1	MW-30:040617, MW-31:040617, MW-32:040617
590-6107-1	MW-20:050917, MW-21:050917, MW-22:050917, MW-23:050917, MW-24:050917, MW-25:050917, MW-26:050917, MW-27:050917, DUP:050917, MW-28:050917, MW-29:050917, MW-30:050917, MW-31:050917, MW-32:050917
590-6217-1	MW-33 (5.0-5.5), MW-33 (16.5-17.0), MW-34 (2.0-2.5), MW-34 (15.5-16.0), MW-35 (1.5-2.0), MW-35 (14.5-15.0)
590-6410-1	MW-33:062117, MW-34:062117, MW-35:062117

Laboratory SDG	Samples Validated
590-6963-1	MW-20:083017, MW-21:083017, MW-22:083017, MW-23:083017, MW-24:083117, MW-25:083017, MW-26:083117, MW-27:083117, DUP:083117, MW-28:083117, MW-29:083017, MW-30:083117, MW-31:083117, MW-32:083017, MW-33:083017, MW-34:083117, MW-35:083117
590-7320-1	SS-1-1(0-6"), SS-2-1(0-6"), SS-3-1(0-6"), SS-4-1(0-6"), SS-5-1(0-6"), SS-6-1(0-6"), SS-7-1(0-6"), Row-1-1(0-6"), Row-2-1(0-6"), Row-3-1(0-6"), Row-4-1(0-6")
590-7490-1	MW-20:110717, MW-21:110717, MW-22:110717, MW-23:110717, MW-24:110817, MW-25:110717, MW-26:110817, MW-27:110817, DUP:110817, MW-28:110817, MW-29:110717, MW-30:110817, MW-31:110817, MW-32:110717, MW-33:110717, MW-34:110817, MW-35:110817, TP-3 (1.5'-2.0'), TP-4 (1.5'-2.0'), TP-6 (1.5'-2.0'), TP-20 (1.5'-2.0'), TP-25 (1.5'-2.0'), TP-40 (1.5'-2.0'), TP-41 (1.5'-2.0'), TP-42 (1.5'-2.0'), TP-46 (1.5'-2.0'), TP-53 (1.5'-2.0')
590-7493-1	SS-1-2 (6-12"), SS-3-2 (6-12"), SS-5-2 (6-12"), SS-4-2 (6-12"), SS-6-2 (6-12"), ROW-3-3 (12-18"), ROW-4-3 (12-18")

Chemical Analysis Performed

TestAmerica Laboratories, Inc. (TestAmerica), located in Spokane, Washington, performed laboratory analyses on the soil and groundwater samples using one or more of the following methods:

- Petroleum Hydrocarbons (NWTPH-Dx) by Method NWTPH-Dx;
- Pentachlorophenol (SVOCs) by Method SW8270D-SIM;
- Total Metals by Methods EPA6010C/EPA7471A; and
- Dioxins and Furans by Method SW8290A

Data Validation Summary

The results for each of the QC elements are summarized below.

Data Package Completeness

TestAmerica provided the required deliverables for the data validation according to the National Functional Guidelines. The laboratory followed adequate corrective action processes and the identified anomalies were discussed in the relevant laboratory case narrative.

Chain-of-Custody Documentation

Chain-of-custody (COC) forms were provided with the laboratory analytical report. The COCs were accurate and complete when submitted to the laboratory, with the following exceptions:

SDG 590-5184-1: The laboratory noted that the COC listed the matrix of the samples as solid; however, the samples were water.

SDG 590-5185-1: The laboratory noted that Samples Seep-1:GW:120716 and Seep-2:GW:120716 were received at the laboratory; however, these samples were not listed on the COC. The samples were logged for SVOCs and NWTPH-Dx analyses.

The laboratory noted that the analyses for total metals as requested on the COC were cancelled by GeoEngineers on 12/12/2016 for Samples HA-15 (0-6"), HA-16 (0-6"), HA-17 (0-6"), Seep-1 (6-12"), and Seep-2 (6-12").

The laboratory noted that the analysis of NWTPH-Dx, which was not listed on the COC, was requested by GeoEngineers on 12/12/2016 for Samples HA-15 (0-6"), HA-16 (0-6"), and HA-17 (0-6").

SDG 590-5187-1: The laboratory noted that the sample collection date and time listed on the COC for Samples BG-1 (0-6"), BG-4 (0-6"), BG-5 (0-6"), BG-6 (0-6"), BG-7 (0-6"), BG-8 (0-6"), and BG-9 (0-6") were after the date and time the samples were received at the laboratory. The sample collection date and time were logged according to the revised COC received from GeoEngineers on 12/12/2016.

Holding Times and Sample Preservation

The sample holding time is defined as the time that elapses between sample collection and sample analysis. Maximum holding time criteria exist for each analysis to help ensure that the analyte concentrations found at the time of analysis reflect the concentration present at the time of sample collection. Established holding times were met for the requested analyses. The sample coolers arrived at the laboratory within the appropriate temperatures of between 2 and 6 degrees Celsius, with the exceptions noted below.

SDGs 590-5184-1 and 590-5185-1: One sample cooler temperature recorded at the laboratory was 1.8 degrees Celsius. It was determined through professional judgment that since the samples were not frozen, this temperature should not affect the sample analytical results.

SDGs 590-5614-1, 590-5615-1, and 590-5615-3: Two sample cooler temperatures recorded at the laboratory were 1.3 and 1.7 degrees Celsius. It was determined through professional judgment that since the samples were not frozen, these temperatures should not affect the sample analytical results.

SDG 590-7320-1: One sample cooler temperature recorded at the laboratory was 1.2 degrees Celsius. It was determined through professional judgment that since the samples were not frozen, this temperature should not affect the sample analytical results.

SDG 590-7490-1: Five sample cooler temperatures recorded at the laboratory were -3.2, -2.2, -0.9, -0.9, and -0.1 degrees Celsius. It was determined through professional judgment that since the samples were not frozen, these temperatures should not affect the sample analytical results.

Surrogate/Labelled Compounds (Dioxins and Furans) Recoveries

A surrogate compound is a compound that is chemically similar to the organic analytes of interest, but unlikely to be found in an environmental sample. Surrogates are used for organic analyses and are added to the samples, standards, and blanks to serve as an accuracy and specificity check of each analysis. The surrogates are added to the samples at a known concentration and percent recoveries are calculated following analysis. The surrogate percent recoveries for field samples were within the laboratory control limits, with the following exceptions:

SDG 590-5009-1: (NWTPH-Dx) The percent recovery for surrogate o-Terphenyl was greater than the control limits in Sample MW27-2 (12-13). The positive results for diesel- and lube oil-range hydrocarbons were qualified as estimated (J) in this sample.

SDG 590-5614-1: (SVOCs) The percent recovery for surrogate 2,4,6-Tribromophenol was outside the control limits in Sample MW-24:030217, because of sample dilution (100X). The surrogates are added

to the sample when it is extracted. If the sample is diluted 10X or more, recovery of the surrogates is often not possible because it is also diluted below the linear calibration range of the instrument. No action was required for this outlier.

The percent recoveries for surrogate 2,4,6-Tribromophenol were less than the control limits in Samples MW-27:030217, Dup:030217, and MW-29:030317. The positive results and reporting limits for pentachlorophenol were qualified as estimated (J and UJ, accordingly) in these samples.

SDG 590-6217-1: (NWTPH-Dx) The percent recoveries for surrogates o-Terphenyl and n-Triacontane-d62 were greater than the control limits in Sample MW-35 (14.5-15.0). There were no positive results for diesel- and lube oil-range hydrocarbons in this sample; therefore, no qualifications were required for these outliers.

SDG 590-6410-1: (NWTPH-Dx) The percent recovery for surrogate o-Terphenyl was less than the control limits in Sample MW-35:062117. The reporting limits for diesel- and lube oil-range hydrocarbons were qualified as estimated (UJ) in this sample.

SDG 590-7490-1: (Dioxins and Furans) The percent recoveries for labelled compound 13C-1,2,3,4,6,7,8-HpCDF were less than the control limits in Samples TP-3 (1.5'-2.0') and TP-53 (1.5'-2.0'). The positive result and reporting limit for 1,2,3,4,6,7,8-HpCDF were qualified as estimated (J and UJ, respectively) in these samples.

The percent recovery for labelled compound 13C-OCDD was less than the control limits in Sample TP-6 (1.5'-2.0'). The positive result for OCDD was qualified as estimated (J) in this sample.

The percent recoveries for labelled compounds 13C-1,2,3,4,6,7,8-HpCDD and 13C-1,2,3,4,6,7,8-HpCDF were less than the control limits in Sample TP-46 (1.5'-2.0'). The positive result and reporting limit for 1,2,3,4,6,7,8-HpCDD and 1,2,3,4,6,7,8-HpCDF, respectively, were qualified as estimated (J and UJ) in this sample.

SDG 590-7493-1: (Dioxins and Furans) The percent recovery for labelled compound 13C-OCDD was less than the control limits in Sample ROW-3-3 (12-18"). The positive result for OCDD was qualified as estimated (J) in this sample.

Method Blanks

Method blanks are analyzed to ensure that laboratory procedures and reagents do not introduce measurable concentrations of the analytes of interest. A method blank was analyzed with each batch of samples, at a frequency of 1 per 20 samples. For each sample batch, method blanks for the applicable methods were analyzed at the required frequency. None of the analytes of interest were detected in the method blanks, with the following exceptions:

SDG 590-5009-1: (SVOCs) There was a positive result for pentachlorophenol detected above the method detection limit, but below the reporting limit in the method blank extracted on 11/21/2016. The positive results for pentachlorophenol were qualified as non-detected (U) in Samples MW20-1 (2-3), MW20-3 (13-14), MW21-2 (7-8), MW21-3 (16-17), MW24-3 (11.5-12), MW25-1 (5.5-6.5), MW25-2 (9.5-10), MW26-5 (25.5-26), MW27-3 (16-17), MW-28-1 (1), MW28-2 (18.5), and MW29-5 (4-5). There were no positive results for pentachlorophenol in Samples MW22-1 (6.5-7), MW22-2 (15.5-16), MW23-1 (2-3), MW23-3 (12.5-13), MW24-2 (6.5-7), MW26-6 (8-9), and MW29-3 (13-13.5); and the positive result for pentachlorophenol was detected above the reporting limit greater than 5X the concentration in the method blank in Sample MW27-2 (12-13); therefore, no qualifications were required.

SDG 590-5614-1: (SVOCs) There was a positive result for pentachlorophenol detected above the reporting limit in the method blank extracted on 3/9/2017. The reported results for this target analyte were greater than 5X the concentration in the method blank in the associated field samples; therefore, no qualifications were required.

Matrix Spikes/Matrix Spike Duplicates

Since the actual analyte concentration in an environmental sample is not known, the accuracy of a particular analysis is usually inferred by performing a matrix spike (MS) analysis on one sample from the associated batch, known as the parent sample. One aliquot of the sample is analyzed in the normal manner and then a second aliquot of the sample is spiked with a known amount of analyte concentration and analyzed. From these analyses, a percent recovery is calculated. Matrix spike duplicate (MSD) analyses are generally performed for organic analyses as a precision check and analyzed in the same sequence as a matrix spike. Using the result values from the MS and MSD, the relative percent difference (RPD) is calculated. The percent recovery control limits for MS and MSD analyses are specified in the laboratory documents, as are the RPD control limits for MS/MSD sample sets.

One MS/MSD analysis should be performed for every analytical batch or every 20 field samples, whichever is more frequent. The frequency requirements were met for each analytical batch and the percent recovery and RPD values were within the proper control limits, with the following exceptions:

SDG 590-5185-1: (SVOCs) The laboratory performed an MS/MSD sample set on Sample HA-37 (0-6"). The percent recovery for pentachlorophenol was greater than the control limits in the MS extracted on 12/15/2016; however, the percent recovery for this target analyte was within the control limits in the corresponding MSD. No action was required for this outlier.

SDG 590-5615-1: (SVOCs) The laboratory performed an MS/MSD sample set on Sample HA-54 (0-6). The RPD for pentachlorophenol was greater than the control limit in the MS/MSD sample set extracted on 3/14/2017. The positive result for this target analyte was qualified as estimated (J) in Sample HA-54 (0-6).

Additionally, in the same MS/MSD sample set, the percent recovery for pentachlorophenol was greater than the control limits in the MS; however, the percent recovery for this target analyte was within the control limits in the corresponding MSD. No action was required for this outlier.

Laboratory Control Samples/Laboratory Control Sample Duplicates

A laboratory control sample (LCS) is a blank sample that is spiked with a known amount of analyte and then analyzed. An LCS is similar to an MS, but without the possibility of matrix interference. Given that matrix interference is not an issue, the LCS/LCSD control limits for accuracy and precision are usually more rigorous than for MS/MSD analyses. Additionally, data qualification based on LCS/LCSD analyses would apply to each sample in the associated batch, instead of just the parent sample. The percent recovery control limits for LCS and LCSD analyses are specified in the laboratory documents, as are the RPD control limits for LCS/LCSD sample sets.

One LCS/LCSD analysis should be performed for every analytical batch or every 20 field samples, whichever is more frequent. The frequency requirements were met for each analytical batch and the percent recovery and RPD values were within the proper control limits, with the following exception:

SDG 590-7490-1: (Dioxins and Furans) The percent recovery for OCDD was less than the control limits in the LCS extracted on 11/14/2017; however, the percent recovery for this target analyte was within the control limits in the corresponding LCSD. No action was required for this outlier.

Laboratory Duplicates

Internal laboratory duplicate analyses are performed to monitor the precision of the analyses. Two separate aliquots of a sample are analyzed as distinct samples in the laboratory and the RPD between the two results is calculated. Duplicate analyses should be performed once per analytical batch. If one or more of the samples used has a concentration less than five times the reporting limit for that sample, the absolute difference is used instead of the RPD. The RPD control limits are specified in the laboratory documents. Laboratory duplicates were analyzed at the proper frequency and the specified acceptance criteria were met, with the following exception:

SDG 590-5009-1: (NWTPH-Dx) The laboratory performed a laboratory duplicate sample set on Sample MW21-3 (16-17). The RPD for lube oil-range hydrocarbons was greater than the control limit in the laboratory duplicate sample set extracted on 11/21/2016. There were no positive results for this target analyte in Sample MW21-3 (16-17); therefore, no qualification was required.

Field Duplicates

In order to assess precision, field duplicate samples are collected and analyzed along with the reviewed sample batches. The duplicate samples are analyzed for the same parameters as the associated parent samples. Precision is determined by calculating the RPD between each pair of samples. If one or more of the sample analytes has a concentration greater than five times the reporting limit for that sample, then the absolute difference is used instead of the RPD. The RPD control for water is 20 percent.

SDG 590-5184-1: One field duplicate sample pair, MW-27:120816 and MW-Dup:120816, was submitted with this SDG. The precision criteria for the target analytes were met for this sample pair, with the exception of pentachlorophenol. The positive results for this target analyte were qualified as estimated (J) in this sample pair.

SDG 590-5614-1: One field duplicate sample pair, MW-27:030217 and Dup:030217, was submitted with this SDG. The precision criteria for the target analytes were met for this sample pair.

SDG 590-6107-1: One field duplicate sample pair, MW-27:050917 and DUP:050917, was submitted with this SDG. The precision criteria for the target analytes were met for this sample pair.

SDG 590-6963-1: One field duplicate sample pair, MW-27:083117 and DUP:083117, was submitted with this SDG. The precision criteria for the target analytes were met for this sample pair, with the exception of OCDD. The positive results for this target analyte were qualified as estimated (J) in this sample pair.

SDG 590-7490-1: One field duplicate sample pair, MW-27:110817 and DUP:110817, was submitted with this SDG. The precision criteria for the target analytes were met for this sample pair, with the exception of OCDD. The positive results for this target analyte were qualified as estimated (J) in this sample pair.

Reporting Limits

The contract required quantitation limits (CRQL) were met by the laboratory for the target analytes throughout this sampling event, with exceptions where the CRQL was elevated due to correction for dry weight in the soil samples and required dilution in water samples.

Miscellaneous

SDG 590-5185-1: (NWTPH-Dx) The positive results for diesel-range and lube oil-range hydrocarbons in Samples HA-1 (0-6"), HA-17 (0-6"), HA-36 (0-6"), and HA-37 (0-6") and the positive result for lube oil-range hydrocarbons in Sample HA-15 (0-6") may be due to biogenic interference. For this reason, the positive results for diesel-range and lube oil-range hydrocarbons were qualified as estimated (J) in these samples, accordingly.

(Dioxins and Furans) The positive result for OCDD exceeded the instrument calibration range in Samples HA-2 (0-6"), HA-11 (0-6"), HA-21 (0-6), and HA-32 (0-6"). For this reason, the positive results for this target analyte were qualified as estimated (J) in these samples.

SDG 590-5615-1: (Dioxins and Furans) The positive result for OCDD exceeded the instrument calibration range in Samples HA-25A (6-12) and HA-49 (0-6). For this reason, the positive results for this target analyte were qualified as estimated (J) in these samples.

SDG 590-7320-1: (Dioxins and Furans) The positive result for OCDD exceeded the instrument calibration range in Samples SS-3-1(0-6"), SS-4-1(0-6"), SS-5-1(0-6"), SS-6-1(0-6"), and Row-4-1(0-6"). For this reason, the positive results for this target analyte were qualified as estimated (J) in these samples.

The positive results for 1,2,3,6,7,8-HxCDF, total HxCDF, and total TCDD in Sample SS-3-1(0-6") were noted by the laboratory to represent the Estimated Maximum Possible Concentration for these compounds. This is typically due to the compound exhibiting ion abundance ratios that are outside of the allowable control limits set forth in the EPA method and the National Functional Guidelines. The results for these target analytes were qualified as estimated (J) in this sample.

SDG 590-7493-1: (Dioxins/Furans) The positive result for total HxCDD in Sample ROW-3-3 (12-18") was noted by the laboratory to represent the Estimated Maximum Possible Concentration for this compound. This is typically due to the compound exhibiting ion abundance ratios that are outside of the allowable control limits set forth in the EPA method and the National Functional Guidelines. The result for this target analyte was qualified as estimated (J) in this sample.

Overall Assessment

As was determined by this data validation, the laboratory followed the specified analytical methods. Accuracy was acceptable, as demonstrated by the surrogate, LCS/LSCD, and MS/MSD percent recovery values, with the exceptions noted above. Precision was acceptable, as demonstrated by the LCS/LSCD, MS/MSD, and laboratory/field duplicate RPD values, with the exceptions noted above.

The data are acceptable for the intended use, with the following qualifications listed below in Table 2.

TABLE 2: SUMMARY OF QUALIFIED SAMPLES

Sample ID	Analyte	Qualifier	Reason
HA-1 (0-6")	Diesel-range Hydrocarbons	J	See Miscellaneous
	Lube oil-range Hydrocarbons	J	See Miscellaneous
HA-2 (0-6")	OCDD	J	See Miscellaneous
HA-11 (0-6")	OCDD	J	See Miscellaneous
HA-15 (0-6")	Lube oil-range Hydrocarbons	J	See Miscellaneous
HA-17 (0-6")	Diesel-range Hydrocarbons	J	See Miscellaneous
	Lube oil-range Hydrocarbons	J	See Miscellaneous

Sample ID	Analyte	Qualifier	Reason
HA-21 (0-6)	OCDD	J	See Miscellaneous
HA-25A (6-12)	OCDD	J	See Miscellaneous
HA-32 (0-6")	OCDD	J	See Miscellaneous
HA-36 (0-6")	Diesel-range Hydrocarbons	J	See Miscellaneous
	Lube oil-range Hydrocarbons	J	See Miscellaneous
HA-37 (0-6")	Diesel-range Hydrocarbons	J	See Miscellaneous
	Lube oil-range Hydrocarbons	J	See Miscellaneous
HA-49 (0-6)	OCDD	J	See Miscellaneous
HA-54 (0-6)	Pentachlorophenol	J	MS/MSD RPD
MW20-1 (2-3)	Pentachlorophenol	U	Method Blank Contamination
MW20-3 (13-14)	Pentachlorophenol	U	Method Blank Contamination
MW21-2 (7-8)	Pentachlorophenol	U	Method Blank Contamination
MW21-3 (16-17)	Pentachlorophenol	U	Method Blank Contamination
MW24-3 (11.5-12)	Pentachlorophenol	U	Method Blank Contamination
MW25-1 (5.5-6.5)	Pentachlorophenol	U	Method Blank Contamination
MW25-2 (9.5-10)	Pentachlorophenol	U	Method Blank Contamination
MW26-5 (25.5-26)	Pentachlorophenol	U	Method Blank Contamination
MW27-2 (12-13)	Diesel-range Hydrocarbons	J	Surrogate Recovery
	Lube oil-range Hydrocarbons	J	Surrogate Recovery
MW27-3 (16-17)	Pentachlorophenol	U	Method Blank Contamination
MW-27:120816	Pentachlorophenol	J	Field Duplicate RPD
MW-Dup:120816	Pentachlorophenol	J	Field Duplicate RPD
MW-27:030217	Pentachlorophenol	J	Surrogate Recovery
Dup:030217	Pentachlorophenol	J	Surrogate Recovery
MW-27:083117	OCDD	J	Field Duplicate RPD
DUP:083117	OCDD	J	Field Duplicate RPD
MW-27:110817	OCDD	J	Field Duplicate RPD
DUP:110817	OCDD	J	Field Duplicate RPD
MW-28-1 (1)	Pentachlorophenol	U	Method Blank Contamination
MW28-2 (18.5)	Pentachlorophenol	U	Method Blank Contamination
MW29-5 (4-5)	Pentachlorophenol	U	Method Blank Contamination
MW-29:030317	Pentachlorophenol	UJ	Surrogate Recovery
MW-35:062117	Diesel-range Hydrocarbons	UJ	Surrogate Recovery
	Lube oil-range Hydrocarbons	UJ	Surrogate Recovery
ROW-3-3 (12-18")	OCDD	J	Labelled Compound Recovery
	Total HxCDD	J	See Miscellaneous
Row-4-1(0-6")	OCDD	J	See Miscellaneous

Sample ID	Analyte	Qualifier	Reason
SS-3-1(0-6")	1,2,3,6,7,8-HxCDF	J	See Miscellaneous
	OCDD	J	See Miscellaneous
	Total HxCDF	J	See Miscellaneous
	Total TCDD	J	See Miscellaneous
SS-4-1(0-6")	OCDD	J	See Miscellaneous
SS-5-1(0-6")	OCDD	J	See Miscellaneous
SS-6-1(0-6")	OCDD	J	See Miscellaneous
TP-3 (1.5'-2.0')	1,2,3,4,6,7,8-HpCDF	J	Labelled Compound Recovery
TP-6 (1.5'-2.0')	OCDD	J	Labelled Compound Recovery
TP-46 (1.5'-2.0')	1,2,3,4,6,7,8-HpCDD	J	Labelled Compound Recovery
	1,2,3,4,6,7,8-HpCDF	UJ	Labelled Compound Recovery
TP-53 (1.5'-2.0')	1,2,3,4,6,7,8-HpCDF	UJ	Labelled Compound Recovery

REFERENCES

GeoEngineers, Inc., "Final Remedial Investigation/Feasibility Study Work Plan", prepared for Washington State Department of Ecology, GEI File No. 0504-098-01. November 3, 2016.

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U.S. Environmental Protection Agency (EPA), 2016a. "Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review," EPA-540-R-2016-002. September 2016.

U.S. Environmental Protection Agency (EPA), 2016b. "Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review," EPA-540-R-2016-001. September 2016.

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TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Spokane

11922 East 1st Ave

Spokane, WA 99206

Tel: (509)924-9200

TestAmerica Job ID: 590-5009-1

Client Project/Site: Colville Post and Pole/0504-098-01

Revision: 1

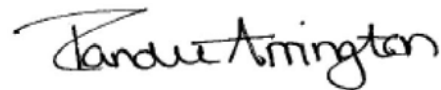
For:

GeoEngineers Inc

523 East Second Ave

Spokane, Washington 99202

Attn: Scott Lathen



Authorized for release by:

5/9/2018 1:09:38 PM

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Case Narrative

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5009-1

Job ID: 590-5009-1

Laboratory: TestAmerica Spokane

Narrative

Revision

The 8270D data was re-evaluated down to the MDL per the clients request.

Receipt

The samples were received on 11/14/2016 3:15 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 5.9° C.

GC/MS Semi VOA

Method 8270D SIM: The method blank for preparation batch 590-9701 and analytical batch 590-9738 contained Pentachlorophenol above the method detection limit. This target analyte concentration was about 1/2 the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA

Method NWTPH-Dx: Surrogate recovery for the following sample was outside control limits: MW27-2 (12-13) (590-5009-4). Evidence of matrix interference due to high target analytes is present; therefore, re-extraction and/or re-analysis was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Sample Summary

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5009-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
590-5009-1	MW-28-1 (1)	Solid	11/07/16 12:35	11/14/16 15:15
590-5009-2	MW28-2 (18.5)	Solid	11/07/16 12:50	11/14/16 15:15
590-5009-4	MW27-2 (12-13)	Solid	11/07/16 14:45	11/14/16 15:15
590-5009-5	MW27-3 (16-17)	Solid	11/07/16 14:55	11/14/16 15:15
590-5009-11	MW26-5 (25.5-26)	Solid	11/08/16 08:40	11/14/16 15:15
590-5009-12	MW25-1 (5.5-6.5)	Solid	11/08/16 09:55	11/14/16 15:15
590-5009-13	MW25-2 (9.5-10)	Solid	11/08/16 10:05	11/14/16 15:15
590-5009-15	MW24-2 (6.5-7)	Solid	11/08/16 12:25	11/14/16 15:15
590-5009-16	MW24-3 (11.5-12)	Solid	11/08/16 12:35	11/14/16 15:15
590-5009-17	MW20-1 (2-3)	Solid	11/08/16 13:50	11/14/16 15:15
590-5009-19	MW20-3 (13-14)	Solid	11/08/16 14:00	11/14/16 15:15
590-5009-21	MW26-6 (8-9)	Solid	11/08/16 09:20	11/14/16 15:15
590-5009-23	MW21-2 (7-8)	Solid	11/09/16 07:55	11/14/16 15:15
590-5009-24	MW21-3 (16-17)	Solid	11/09/16 08:00	11/14/16 15:15
590-5009-27	MW22-1 (6.5-7)	Solid	11/09/16 09:10	11/14/16 15:15
590-5009-28	MW22-2 (15.5-16)	Solid	11/09/16 09:30	11/14/16 15:15
590-5009-31	MW23-1 (2-3)	Solid	11/09/16 12:30	11/14/16 15:15
590-5009-33	MW23-3 (12.5-13)	Solid	11/09/16 12:40	11/14/16 15:15
590-5009-37	MW29-3 (13-13.5)	Solid	11/09/16 13:55	11/14/16 15:15
590-5009-39	MW29-5 (4-5)	Solid	11/09/16 14:35	11/14/16 15:15

Definitions/Glossary

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5009-1

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC Semi VOA

Qualifier	Qualifier Description
F5	Duplicate RPD exceeds limit, and one or both sample results are less than 5 times RL. The data are considered valid because the absolute difference is less than the RL.
X	Surrogate is outside control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5009-1

Client Sample ID: MW-28-1 (1)

Date Collected: 11/07/16 12:35

Date Received: 11/14/16 15:15

Lab Sample ID: 590-5009-1

Matrix: Solid

Percent Solids: 75.9

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	31	J B	64	10	ug/Kg	☼	11/21/16 09:48	11/23/16 18:57	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	59		38 - 123				11/21/16 09:48	11/23/16 18:57	1
Nitrobenzene-d5	58		23 - 120				11/21/16 09:48	11/23/16 18:57	1
p-Terphenyl-d14	84		68 - 136				11/21/16 09:48	11/23/16 18:57	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		13		mg/Kg	☼	11/17/16 11:11	11/17/16 14:18	1
Residual Range Organics (RRO) (C25-C36)	ND		32		mg/Kg	☼	11/17/16 11:11	11/17/16 14:18	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	91		50 - 150				11/17/16 11:11	11/17/16 14:18	1
n-Triacontane-d62	90		50 - 150				11/17/16 11:11	11/17/16 14:18	1

Client Sample ID: MW28-2 (18.5)

Date Collected: 11/07/16 12:50

Date Received: 11/14/16 15:15

Lab Sample ID: 590-5009-2

Matrix: Solid

Percent Solids: 89.7

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	20	J B	54	8.7	ug/Kg	☼	11/21/16 09:48	11/23/16 19:23	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	74		38 - 123				11/21/16 09:48	11/23/16 19:23	1
Nitrobenzene-d5	64		23 - 120				11/21/16 09:48	11/23/16 19:23	1
p-Terphenyl-d14	88		68 - 136				11/21/16 09:48	11/23/16 19:23	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		11		mg/Kg	☼	11/17/16 11:11	11/17/16 14:36	1
Residual Range Organics (RRO) (C25-C36)	ND		26		mg/Kg	☼	11/17/16 11:11	11/17/16 14:36	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	96		50 - 150				11/17/16 11:11	11/17/16 14:36	1
n-Triacontane-d62	98		50 - 150				11/17/16 11:11	11/17/16 14:36	1

Client Sample ID: MW27-2 (12-13)

Date Collected: 11/07/16 14:45

Date Received: 11/14/16 15:15

Lab Sample ID: 590-5009-4

Matrix: Solid

Percent Solids: 77.6

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	14000	B	640	110	ug/Kg	☼	11/21/16 09:48	11/23/16 19:50	10
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	122		38 - 123				11/21/16 09:48	11/23/16 19:50	10

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5009-1

Client Sample ID: MW27-2 (12-13)

Date Collected: 11/07/16 14:45

Date Received: 11/14/16 15:15

Lab Sample ID: 590-5009-4

Matrix: Solid

Percent Solids: 77.6

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	91		23 - 120	11/21/16 09:48	11/23/16 19:50	10
p-Terphenyl-d14	89		68 - 136	11/21/16 09:48	11/23/16 19:50	10

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	20000		170		mg/Kg	☼	11/17/16 11:11	11/17/16 14:53	1
Residual Range Organics (RRO) (C25-C36)	900		420		mg/Kg	☼	11/17/16 11:11	11/17/16 14:53	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	310	X	50 - 150	11/17/16 11:11	11/17/16 14:53	1
n-Triacontane-d62	94		50 - 150	11/17/16 11:11	11/17/16 14:53	1

Client Sample ID: MW27-3 (16-17)

Date Collected: 11/07/16 14:55

Date Received: 11/14/16 15:15

Lab Sample ID: 590-5009-5

Matrix: Solid

Percent Solids: 87.8

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	26	J B	54	8.8	ug/Kg	☼	11/21/16 09:48	11/23/16 20:16	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	76		38 - 123	11/21/16 09:48	11/23/16 20:16	1
Nitrobenzene-d5	67		23 - 120	11/21/16 09:48	11/23/16 20:16	1
p-Terphenyl-d14	96		68 - 136	11/21/16 09:48	11/23/16 20:16	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		11		mg/Kg	☼	11/17/16 11:11	11/17/16 15:11	1
Residual Range Organics (RRO) (C25-C36)	ND		28		mg/Kg	☼	11/17/16 11:11	11/17/16 15:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	96		50 - 150	11/17/16 11:11	11/17/16 15:11	1
n-Triacontane-d62	94		50 - 150	11/17/16 11:11	11/17/16 15:11	1

Client Sample ID: MW26-5 (25.5-26)

Date Collected: 11/08/16 08:40

Date Received: 11/14/16 15:15

Lab Sample ID: 590-5009-11

Matrix: Solid

Percent Solids: 87.1

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	41	J B	56	9.1	ug/Kg	☼	11/21/16 09:48	11/23/16 20:42	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	77		38 - 123	11/21/16 09:48	11/23/16 20:42	1
Nitrobenzene-d5	71		23 - 120	11/21/16 09:48	11/23/16 20:42	1
p-Terphenyl-d14	87		68 - 136	11/21/16 09:48	11/23/16 20:42	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5009-1

Client Sample ID: MW26-5 (25.5-26)

Date Collected: 11/08/16 08:40

Date Received: 11/14/16 15:15

Lab Sample ID: 590-5009-11

Matrix: Solid

Percent Solids: 87.1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		11		mg/Kg	☼	11/17/16 11:11	11/17/16 15:29	1
Residual Range Organics (RRO) (C25-C36)	ND		28		mg/Kg	☼	11/17/16 11:11	11/17/16 15:29	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl	90		50 - 150				11/17/16 11:11	11/17/16 15:29	1
<i>n</i> -Triacontane-d62	92		50 - 150				11/17/16 11:11	11/17/16 15:29	1

Client Sample ID: MW25-1 (5.5-6.5)

Date Collected: 11/08/16 09:55

Date Received: 11/14/16 15:15

Lab Sample ID: 590-5009-12

Matrix: Solid

Percent Solids: 87.5

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	45	J B	56	9.2	ug/Kg	☼	11/21/16 09:48	11/23/16 21:09	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>2</i> -Fluorobiphenyl (Surr)	68		38 - 123				11/21/16 09:48	11/23/16 21:09	1
Nitrobenzene-d5	56		23 - 120				11/21/16 09:48	11/23/16 21:09	1
<i>p</i> -Terphenyl-d14	88		68 - 136				11/21/16 09:48	11/23/16 21:09	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		11		mg/Kg	☼	11/17/16 11:11	11/17/16 15:47	1
Residual Range Organics (RRO) (C25-C36)	ND		27		mg/Kg	☼	11/17/16 11:11	11/17/16 15:47	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl	91		50 - 150				11/17/16 11:11	11/17/16 15:47	1
<i>n</i> -Triacontane-d62	96		50 - 150				11/17/16 11:11	11/17/16 15:47	1

Client Sample ID: MW25-2 (9.5-10)

Date Collected: 11/08/16 10:05

Date Received: 11/14/16 15:15

Lab Sample ID: 590-5009-13

Matrix: Solid

Percent Solids: 89.4

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	25	J B	53	8.7	ug/Kg	☼	11/21/16 09:48	11/23/16 21:35	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>2</i> -Fluorobiphenyl (Surr)	84		38 - 123				11/21/16 09:48	11/23/16 21:35	1
Nitrobenzene-d5	74		23 - 120				11/21/16 09:48	11/23/16 21:35	1
<i>p</i> -Terphenyl-d14	94		68 - 136				11/21/16 09:48	11/23/16 21:35	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		11		mg/Kg	☼	11/17/16 11:11	11/17/16 16:05	1
Residual Range Organics (RRO) (C25-C36)	ND		27		mg/Kg	☼	11/17/16 11:11	11/17/16 16:05	1

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Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5009-1

Client Sample ID: MW25-2 (9.5-10)

Date Collected: 11/08/16 10:05

Date Received: 11/14/16 15:15

Lab Sample ID: 590-5009-13

Matrix: Solid

Percent Solids: 89.4

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl	97		50 - 150	11/17/16 11:11	11/17/16 16:05	1
<i>n</i> -Triacontane-d62	91		50 - 150	11/17/16 11:11	11/17/16 16:05	1

Client Sample ID: MW24-2 (6.5-7)

Date Collected: 11/08/16 12:25

Date Received: 11/14/16 15:15

Lab Sample ID: 590-5009-15

Matrix: Solid

Percent Solids: 92.5

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		51	8.3	ug/Kg	☼	11/21/16 09:48	11/23/16 22:01	1
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac			
<i>2</i> -Fluorobiphenyl (Surr)	63		38 - 123	11/21/16 09:48	11/23/16 22:01	1			
Nitrobenzene-d5	52		23 - 120	11/21/16 09:48	11/23/16 22:01	1			
<i>p</i> -Terphenyl-d14	83		68 - 136	11/21/16 09:48	11/23/16 22:01	1			

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		11		mg/Kg	☼	11/17/16 11:11	11/17/16 16:23	1
Residual Range Organics (RRO) (C25-C36)	ND		26		mg/Kg	☼	11/17/16 11:11	11/17/16 16:23	1
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac			
<i>o</i> -Terphenyl	100		50 - 150	11/17/16 11:11	11/17/16 16:23	1			
<i>n</i> -Triacontane-d62	105		50 - 150	11/17/16 11:11	11/17/16 16:23	1			

Client Sample ID: MW24-3 (11.5-12)

Date Collected: 11/08/16 12:35

Date Received: 11/14/16 15:15

Lab Sample ID: 590-5009-16

Matrix: Solid

Percent Solids: 89.4

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	23	J B	54	8.7	ug/Kg	☼	11/21/16 09:48	11/23/16 22:27	1
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac			
<i>2</i> -Fluorobiphenyl (Surr)	70		38 - 123	11/21/16 09:48	11/23/16 22:27	1			
Nitrobenzene-d5	61		23 - 120	11/21/16 09:48	11/23/16 22:27	1			
<i>p</i> -Terphenyl-d14	87		68 - 136	11/21/16 09:48	11/23/16 22:27	1			

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		11		mg/Kg	☼	11/17/16 11:11	11/17/16 16:41	1
Residual Range Organics (RRO) (C25-C36)	ND		27		mg/Kg	☼	11/17/16 11:11	11/17/16 16:41	1
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac			
<i>o</i> -Terphenyl	96		50 - 150	11/17/16 11:11	11/17/16 16:41	1			
<i>n</i> -Triacontane-d62	93		50 - 150	11/17/16 11:11	11/17/16 16:41	1			

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5009-1

Client Sample ID: MW20-1 (2-3)

Date Collected: 11/08/16 13:50

Date Received: 11/14/16 15:15

Lab Sample ID: 590-5009-17

Matrix: Solid

Percent Solids: 74.7

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	28	J B	64	10	ug/Kg	☼	11/21/16 09:48	11/23/16 22:54	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	81		38 - 123				11/21/16 09:48	11/23/16 22:54	1
Nitrobenzene-d5	73		23 - 120				11/21/16 09:48	11/23/16 22:54	1
p-Terphenyl-d14	92		68 - 136				11/21/16 09:48	11/23/16 22:54	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		13		mg/Kg	☼	11/17/16 11:11	11/18/16 10:18	1
Residual Range Organics (RRO) (C25-C36)	ND		33		mg/Kg	☼	11/17/16 11:11	11/18/16 10:18	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	91		50 - 150				11/17/16 11:11	11/18/16 10:18	1
n-Triacontane-d62	93		50 - 150				11/17/16 11:11	11/18/16 10:18	1

Client Sample ID: MW20-3 (13-14)

Date Collected: 11/08/16 14:00

Date Received: 11/14/16 15:15

Lab Sample ID: 590-5009-19

Matrix: Solid

Percent Solids: 84.8

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	23	J B	55	9.0	ug/Kg	☼	11/21/16 09:48	11/23/16 23:20	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	70		38 - 123				11/21/16 09:48	11/23/16 23:20	1
Nitrobenzene-d5	61		23 - 120				11/21/16 09:48	11/23/16 23:20	1
p-Terphenyl-d14	91		68 - 136				11/21/16 09:48	11/23/16 23:20	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		12		mg/Kg	☼	11/17/16 11:11	11/17/16 17:34	1
Residual Range Organics (RRO) (C25-C36)	ND		29		mg/Kg	☼	11/17/16 11:11	11/17/16 17:34	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	100		50 - 150				11/17/16 11:11	11/17/16 17:34	1
n-Triacontane-d62	101		50 - 150				11/17/16 11:11	11/17/16 17:34	1

Client Sample ID: MW26-6 (8-9)

Date Collected: 11/08/16 09:20

Date Received: 11/14/16 15:15

Lab Sample ID: 590-5009-21

Matrix: Solid

Percent Solids: 80.9

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		61	10	ug/Kg	☼	11/21/16 09:48	11/23/16 23:46	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	69		38 - 123				11/21/16 09:48	11/23/16 23:46	1
Nitrobenzene-d5	61		23 - 120				11/21/16 09:48	11/23/16 23:46	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5009-1

Client Sample ID: MW26-6 (8-9)

Date Collected: 11/08/16 09:20

Date Received: 11/14/16 15:15

Lab Sample ID: 590-5009-21

Matrix: Solid

Percent Solids: 80.9

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>p</i> -Terphenyl-d14	84		68 - 136	11/21/16 09:48	11/23/16 23:46	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		12		mg/Kg	☼	11/17/16 11:11	11/17/16 17:51	1
Residual Range Organics (RRO) (C25-C36)	ND		30		mg/Kg	☼	11/17/16 11:11	11/17/16 17:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl	94		50 - 150	11/17/16 11:11	11/17/16 17:51	1
<i>n</i> -Triacontane-d62	98		50 - 150	11/17/16 11:11	11/17/16 17:51	1

Client Sample ID: MW21-2 (7-8)

Date Collected: 11/09/16 07:55

Date Received: 11/14/16 15:15

Lab Sample ID: 590-5009-23

Matrix: Solid

Percent Solids: 84.0

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	25	J B	58	9.5	ug/Kg	☼	11/21/16 09:48	11/24/16 00:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	74		38 - 123	11/21/16 09:48	11/24/16 00:12	1
Nitrobenzene-d5	61		23 - 120	11/21/16 09:48	11/24/16 00:12	1
<i>p</i> -Terphenyl-d14	87		68 - 136	11/21/16 09:48	11/24/16 00:12	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		11		mg/Kg	☼	11/17/16 11:11	11/17/16 18:09	1
Residual Range Organics (RRO) (C25-C36)	ND		28		mg/Kg	☼	11/17/16 11:11	11/17/16 18:09	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl	98		50 - 150	11/17/16 11:11	11/17/16 18:09	1
<i>n</i> -Triacontane-d62	97		50 - 150	11/17/16 11:11	11/17/16 18:09	1

Client Sample ID: MW21-3 (16-17)

Date Collected: 11/09/16 08:00

Date Received: 11/14/16 15:15

Lab Sample ID: 590-5009-24

Matrix: Solid

Percent Solids: 91.4

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	26	J B	53	8.6	ug/Kg	☼	11/21/16 09:48	11/24/16 00:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	73		38 - 123	11/21/16 09:48	11/24/16 00:39	1
Nitrobenzene-d5	66		23 - 120	11/21/16 09:48	11/24/16 00:39	1
<i>p</i> -Terphenyl-d14	88		68 - 136	11/21/16 09:48	11/24/16 00:39	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5009-1

Client Sample ID: MW21-3 (16-17)

Date Collected: 11/09/16 08:00

Date Received: 11/14/16 15:15

Lab Sample ID: 590-5009-24

Matrix: Solid

Percent Solids: 91.4

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		11		mg/Kg	☼	11/21/16 08:35	11/21/16 12:26	1
Residual Range Organics (RRO) (C25-C36)	ND		27		mg/Kg	☼	11/21/16 08:35	11/21/16 12:26	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl	89		50 - 150				11/21/16 08:35	11/21/16 12:26	1
<i>n</i> -Triacontane-d62	86		50 - 150				11/21/16 08:35	11/21/16 12:26	1

Client Sample ID: MW22-1 (6.5-7)

Date Collected: 11/09/16 09:10

Date Received: 11/14/16 15:15

Lab Sample ID: 590-5009-27

Matrix: Solid

Percent Solids: 90.5

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		53	8.6	ug/Kg	☼	11/21/16 09:48	11/24/16 01:05	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>2</i> -Fluorobiphenyl (Surr)	74		38 - 123				11/21/16 09:48	11/24/16 01:05	1
Nitrobenzene-d5	64		23 - 120				11/21/16 09:48	11/24/16 01:05	1
<i>p</i> -Terphenyl-d14	85		68 - 136				11/21/16 09:48	11/24/16 01:05	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		11		mg/Kg	☼	11/21/16 08:35	11/21/16 13:02	1
Residual Range Organics (RRO) (C25-C36)	ND		27		mg/Kg	☼	11/21/16 08:35	11/21/16 13:02	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl	93		50 - 150				11/21/16 08:35	11/21/16 13:02	1
<i>n</i> -Triacontane-d62	99		50 - 150				11/21/16 08:35	11/21/16 13:02	1

Client Sample ID: MW22-2 (15.5-16)

Date Collected: 11/09/16 09:30

Date Received: 11/14/16 15:15

Lab Sample ID: 590-5009-28

Matrix: Solid

Percent Solids: 84.8

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		57	9.2	ug/Kg	☼	11/21/16 09:48	11/24/16 01:31	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>2</i> -Fluorobiphenyl (Surr)	84		38 - 123				11/21/16 09:48	11/24/16 01:31	1
Nitrobenzene-d5	77		23 - 120				11/21/16 09:48	11/24/16 01:31	1
<i>p</i> -Terphenyl-d14	98		68 - 136				11/21/16 09:48	11/24/16 01:31	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		12		mg/Kg	☼	11/21/16 08:35	11/21/16 13:20	1
Residual Range Organics (RRO) (C25-C36)	ND		29		mg/Kg	☼	11/21/16 08:35	11/21/16 13:20	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5009-1

Client Sample ID: MW22-2 (15.5-16)

Date Collected: 11/09/16 09:30

Date Received: 11/14/16 15:15

Lab Sample ID: 590-5009-28

Matrix: Solid

Percent Solids: 84.8

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl	102		50 - 150	11/21/16 08:35	11/21/16 13:20	1
<i>n</i> -Triacontane-d62	106		50 - 150	11/21/16 08:35	11/21/16 13:20	1

Client Sample ID: MW23-1 (2-3)

Date Collected: 11/09/16 12:30

Date Received: 11/14/16 15:15

Lab Sample ID: 590-5009-31

Matrix: Solid

Percent Solids: 84.0

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		57	9.3	ug/Kg	☼	11/21/16 09:48	11/24/16 01:57	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>2</i> -Fluorobiphenyl (Surr)	81		38 - 123	11/21/16 09:48	11/24/16 01:57	1
Nitrobenzene-d5	69		23 - 120	11/21/16 09:48	11/24/16 01:57	1
<i>p</i> -Terphenyl-d14	88		68 - 136	11/21/16 09:48	11/24/16 01:57	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		12		mg/Kg	☼	11/21/16 08:35	11/21/16 13:38	1
Residual Range Organics (RRO) (C25-C36)	ND		30		mg/Kg	☼	11/21/16 08:35	11/21/16 13:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl	95		50 - 150	11/21/16 08:35	11/21/16 13:38	1
<i>n</i> -Triacontane-d62	95		50 - 150	11/21/16 08:35	11/21/16 13:38	1

Client Sample ID: MW23-3 (12.5-13)

Date Collected: 11/09/16 12:40

Date Received: 11/14/16 15:15

Lab Sample ID: 590-5009-33

Matrix: Solid

Percent Solids: 88.1

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		55	8.9	ug/Kg	☼	11/21/16 09:48	11/24/16 02:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>2</i> -Fluorobiphenyl (Surr)	87		38 - 123	11/21/16 09:48	11/24/16 02:24	1
Nitrobenzene-d5	78		23 - 120	11/21/16 09:48	11/24/16 02:24	1
<i>p</i> -Terphenyl-d14	86		68 - 136	11/21/16 09:48	11/24/16 02:24	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		11		mg/Kg	☼	11/21/16 08:35	11/21/16 13:52	1
Residual Range Organics (RRO) (C25-C36)	ND		28		mg/Kg	☼	11/21/16 08:35	11/21/16 13:52	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl	94		50 - 150	11/21/16 08:35	11/21/16 13:52	1
<i>n</i> -Triacontane-d62	90		50 - 150	11/21/16 08:35	11/21/16 13:52	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5009-1

Client Sample ID: MW29-3 (13-13.5)

Date Collected: 11/09/16 13:55

Date Received: 11/14/16 15:15

Lab Sample ID: 590-5009-37

Matrix: Solid

Percent Solids: 90.9

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		55	8.9	ug/Kg	☼	11/21/16 09:48	11/24/16 02:50	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	71		38 - 123				11/21/16 09:48	11/24/16 02:50	1
Nitrobenzene-d5	67		23 - 120				11/21/16 09:48	11/24/16 02:50	1
p-Terphenyl-d14	90		68 - 136				11/21/16 09:48	11/24/16 02:50	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		10		mg/Kg	☼	11/21/16 08:35	11/21/16 14:09	1
Residual Range Organics (RRO) (C25-C36)	ND		26		mg/Kg	☼	11/21/16 08:35	11/21/16 14:09	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	93		50 - 150				11/21/16 08:35	11/21/16 14:09	1
n-Triacontane-d62	91		50 - 150				11/21/16 08:35	11/21/16 14:09	1

Client Sample ID: MW29-5 (4-5)

Date Collected: 11/09/16 14:35

Date Received: 11/14/16 15:15

Lab Sample ID: 590-5009-39

Matrix: Solid

Percent Solids: 81.8

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	23	J B	61	9.9	ug/Kg	☼	11/21/16 09:48	11/24/16 03:16	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	60		38 - 123				11/21/16 09:48	11/24/16 03:16	1
Nitrobenzene-d5	48		23 - 120				11/21/16 09:48	11/24/16 03:16	1
p-Terphenyl-d14	88		68 - 136				11/21/16 09:48	11/24/16 03:16	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		12		mg/Kg	☼	11/21/16 08:35	11/21/16 14:23	1
Residual Range Organics (RRO) (C25-C36)	ND		29		mg/Kg	☼	11/21/16 08:35	11/21/16 14:23	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	92		50 - 150				11/21/16 08:35	11/21/16 14:23	1
n-Triacontane-d62	93		50 - 150				11/21/16 08:35	11/21/16 14:23	1

TestAmerica Spokane

QC Sample Results

Client: GeoEngineers Inc
 Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5009-1

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Lab Sample ID: MB 590-9701/1-A
Matrix: Solid
Analysis Batch: 9738

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 9701

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	25.1	J	50	8.2	ug/Kg		11/21/16 09:48	11/23/16 17:12	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	75		38 - 123	11/21/16 09:48	11/23/16 17:12	1
Nitrobenzene-d5	69		23 - 120	11/21/16 09:48	11/23/16 17:12	1
p-Terphenyl-d14	107		68 - 136	11/21/16 09:48	11/23/16 17:12	1

Lab Sample ID: LCS 590-9701/2-A
Matrix: Solid
Analysis Batch: 9738

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 9701

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Pentachlorophenol	533	580		ug/Kg		109	50 - 150

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Fluorobiphenyl (Surr)	69		38 - 123
Nitrobenzene-d5	66		23 - 120
p-Terphenyl-d14	84		68 - 136

Lab Sample ID: 590-5009-1 MS
Matrix: Solid
Analysis Batch: 9738

Client Sample ID: MW-28-1 (1)
Prep Type: Total/NA
Prep Batch: 9701

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Pentachlorophenol	31	J B	699	808		ug/Kg	☼	111	50 - 150

Surrogate	MS %Recovery	MS Qualifier	Limits
2-Fluorobiphenyl (Surr)	53		38 - 123
Nitrobenzene-d5	55		23 - 120
p-Terphenyl-d14	78		68 - 136

Lab Sample ID: 590-5009-1 MSD
Matrix: Solid
Analysis Batch: 9738

Client Sample ID: MW-28-1 (1)
Prep Type: Total/NA
Prep Batch: 9701

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Pentachlorophenol	31	J B	660	784		ug/Kg	☼	114	50 - 150	3	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
2-Fluorobiphenyl (Surr)	59		38 - 123
Nitrobenzene-d5	61		23 - 120
p-Terphenyl-d14	85		68 - 136

TestAmerica Spokane

QC Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5009-1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Lab Sample ID: MB 590-9652/1-A
Matrix: Solid
Analysis Batch: 9653

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 9652

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		10		mg/Kg		11/17/16 09:21	11/17/16 10:43	1
Residual Range Organics (RRO) (C25-C36)	ND		25		mg/Kg		11/17/16 09:21	11/17/16 10:43	1
Surrogate	%Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl	98		50 - 150				11/17/16 09:21	11/17/16 10:43	1
<i>n</i> -Triacontane-d62	88		50 - 150				11/17/16 09:21	11/17/16 10:43	1

Lab Sample ID: MB 590-9652/1-A
Matrix: Solid
Analysis Batch: 9653

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 9652

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		10		mg/Kg		11/17/16 09:21	11/17/16 18:43	1
Residual Range Organics (RRO) (C25-C36)	ND		25		mg/Kg		11/17/16 09:21	11/17/16 18:43	1
Surrogate	%Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl	103		50 - 150				11/17/16 09:21	11/17/16 18:43	1
<i>n</i> -Triacontane-d62	101		50 - 150				11/17/16 09:21	11/17/16 18:43	1

Lab Sample ID: LCS 590-9652/2-A
Matrix: Solid
Analysis Batch: 9653

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 9652

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Diesel Range Organics (DRO) (C10-C25)	67.1	62.6		mg/Kg		93	50 - 150
Residual Range Organics (RRO) (C25-C36)	66.8	64.4		mg/Kg		96	50 - 150
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
<i>o</i> -Terphenyl	92		50 - 150				
<i>n</i> -Triacontane-d62	98		50 - 150				

Lab Sample ID: LCS 590-9652/2-A
Matrix: Solid
Analysis Batch: 9670

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 9652

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Diesel Range Organics (DRO) (C10-C25)	67.1	64.5		mg/Kg		96	50 - 150
Residual Range Organics (RRO) (C25-C36)	66.8	66.6		mg/Kg		100	50 - 150
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
<i>o</i> -Terphenyl	99		50 - 150				

TestAmerica Spokane

QC Sample Results

Client: GeoEngineers Inc
 Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5009-1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) (Continued)

Lab Sample ID: LCS 590-9652/2-A
Matrix: Solid
Analysis Batch: 9670

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 9652

Surrogate	LCS %Recovery	LCS Qualifier	Limits
<i>n-Triacontane-d62</i>	105		50 - 150

Lab Sample ID: MB 590-9695/1-A
Matrix: Solid
Analysis Batch: 9698

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 9695

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		10		mg/Kg		11/21/16 08:35	11/21/16 10:05	1
Residual Range Organics (RRO) (C25-C36)	ND		25		mg/Kg		11/21/16 08:35	11/21/16 10:05	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o-Terphenyl</i>	102		50 - 150	11/21/16 08:35	11/21/16 10:05	1
<i>n-Triacontane-d62</i>	93		50 - 150	11/21/16 08:35	11/21/16 10:05	1

Lab Sample ID: LCS 590-9695/2-A
Matrix: Solid
Analysis Batch: 9698

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 9695

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Diesel Range Organics (DRO) (C10-C25)	67.1	67.8		mg/Kg		101	50 - 150
Residual Range Organics (RRO) (C25-C36)	66.8	68.0		mg/Kg		102	50 - 150

Surrogate	LCS %Recovery	LCS Qualifier	Limits
<i>o-Terphenyl</i>	104		50 - 150
<i>n-Triacontane-d62</i>	104		50 - 150

Lab Sample ID: LCSD 590-9695/3-A
Matrix: Solid
Analysis Batch: 9698

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 9695

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics (DRO) (C10-C25)	67.1	63.2		mg/Kg		94	50 - 150	7	25
Residual Range Organics (RRO) (C25-C36)	66.8	64.3		mg/Kg		96	50 - 150	6	25

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
<i>o-Terphenyl</i>	100		50 - 150
<i>n-Triacontane-d62</i>	97		50 - 150

TestAmerica Spokane

QC Sample Results

Client: GeoEngineers Inc
 Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5009-1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) (Continued)

Lab Sample ID: 590-5009-24 DU

Matrix: Solid

Analysis Batch: 9698

Client Sample ID: MW21-3 (16-17)

Prep Type: Total/NA

Prep Batch: 9695

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Diesel Range Organics (DRO) (C10-C25)	ND		ND		mg/Kg	☼	29	40
Residual Range Organics (RRO) (C25-C36)	ND		ND	F5	mg/Kg	☼	68	40

Surrogate	DU %Recovery	DU Qualifier	Limits
<i>o</i> -Terphenyl	91		50 - 150
<i>n</i> -Triacotane-d62	98		50 - 150

Lab Chronicle

Client: GeoEngineers Inc
 Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5009-1

Client Sample ID: MW-28-1 (1)
Date Collected: 11/07/16 12:35
Date Received: 11/14/16 15:15

Lab Sample ID: 590-5009-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			9637	11/16/16 11:00	NMI	TAL SPK

Client Sample ID: MW-28-1 (1)
Date Collected: 11/07/16 12:35
Date Received: 11/14/16 15:15

Lab Sample ID: 590-5009-1
Matrix: Solid
Percent Solids: 75.9

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.43 g	2 mL	9701	11/21/16 09:48	NMI	TAL SPK
Total/NA	Analysis	8270D SIM		1			9738	11/23/16 18:57	NMI	TAL SPK
Total/NA	Prep	3550C			15.40 g	5 mL	9652	11/17/16 11:11	EAF	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			9653	11/17/16 14:18	NMI	TAL SPK

Client Sample ID: MW28-2 (18.5)
Date Collected: 11/07/16 12:50
Date Received: 11/14/16 15:15

Lab Sample ID: 590-5009-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			9637	11/16/16 11:00	NMI	TAL SPK

Client Sample ID: MW28-2 (18.5)
Date Collected: 11/07/16 12:50
Date Received: 11/14/16 15:15

Lab Sample ID: 590-5009-2
Matrix: Solid
Percent Solids: 89.7

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.60 g	2 mL	9701	11/21/16 09:48	NMI	TAL SPK
Total/NA	Analysis	8270D SIM		1			9738	11/23/16 19:23	NMI	TAL SPK
Total/NA	Prep	3550C			15.85 g	5 mL	9652	11/17/16 11:11	EAF	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			9653	11/17/16 14:36	NMI	TAL SPK

Client Sample ID: MW27-2 (12-13)
Date Collected: 11/07/16 14:45
Date Received: 11/14/16 15:15

Lab Sample ID: 590-5009-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			9637	11/16/16 11:00	NMI	TAL SPK

Client Sample ID: MW27-2 (12-13)
Date Collected: 11/07/16 14:45
Date Received: 11/14/16 15:15

Lab Sample ID: 590-5009-4
Matrix: Solid
Percent Solids: 77.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			14.99 g	2 mL	9701	11/21/16 09:48	NMI	TAL SPK

TestAmerica Spokane

Lab Chronicle

Client: GeoEngineers Inc
 Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5009-1

Client Sample ID: MW27-2 (12-13)

Lab Sample ID: 590-5009-4

Date Collected: 11/07/16 14:45

Matrix: Solid

Date Received: 11/14/16 15:15

Percent Solids: 77.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8270D SIM		10			9738	11/23/16 19:50	NMI	TAL SPK
Total/NA	Prep	3550C			1.15 g	5 mL	9652	11/17/16 11:11	EAF	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			9653	11/17/16 14:53	NMI	TAL SPK

Client Sample ID: MW27-3 (16-17)

Lab Sample ID: 590-5009-5

Date Collected: 11/07/16 14:55

Matrix: Solid

Date Received: 11/14/16 15:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			9637	11/16/16 11:00	NMI	TAL SPK

Client Sample ID: MW27-3 (16-17)

Lab Sample ID: 590-5009-5

Date Collected: 11/07/16 14:55

Matrix: Solid

Date Received: 11/14/16 15:15

Percent Solids: 87.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.88 g	2 mL	9701	11/21/16 09:48	NMI	TAL SPK
Total/NA	Analysis	8270D SIM		1			9738	11/23/16 20:16	NMI	TAL SPK
Total/NA	Prep	3550C			15.09 g	5 mL	9652	11/17/16 11:11	EAF	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			9653	11/17/16 15:11	NMI	TAL SPK

Client Sample ID: MW26-5 (25.5-26)

Lab Sample ID: 590-5009-11

Date Collected: 11/08/16 08:40

Matrix: Solid

Date Received: 11/14/16 15:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			9637	11/16/16 11:00	NMI	TAL SPK

Client Sample ID: MW26-5 (25.5-26)

Lab Sample ID: 590-5009-11

Date Collected: 11/08/16 08:40

Matrix: Solid

Date Received: 11/14/16 15:15

Percent Solids: 87.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.47 g	2 mL	9701	11/21/16 09:48	NMI	TAL SPK
Total/NA	Analysis	8270D SIM		1			9738	11/23/16 20:42	NMI	TAL SPK
Total/NA	Prep	3550C			15.14 g	5 mL	9652	11/17/16 11:11	EAF	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			9653	11/17/16 15:29	NMI	TAL SPK

TestAmerica Spokane

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5009-1

Client Sample ID: MW25-1 (5.5-6.5)

Lab Sample ID: 590-5009-12

Date Collected: 11/08/16 09:55

Matrix: Solid

Date Received: 11/14/16 15:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			9637	11/16/16 11:00	NMI	TAL SPK

Client Sample ID: MW25-1 (5.5-6.5)

Lab Sample ID: 590-5009-12

Date Collected: 11/08/16 09:55

Matrix: Solid

Date Received: 11/14/16 15:15

Percent Solids: 87.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.17 g	2 mL	9701	11/21/16 09:48	NMI	TAL SPK
Total/NA	Analysis	8270D SIM		1			9738	11/23/16 21:09	NMI	TAL SPK
Total/NA	Prep	3550C			15.68 g	5 mL	9652	11/17/16 11:11	EAF	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			9653	11/17/16 15:47	NMI	TAL SPK

Client Sample ID: MW25-2 (9.5-10)

Lab Sample ID: 590-5009-13

Date Collected: 11/08/16 10:05

Matrix: Solid

Date Received: 11/14/16 15:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			9637	11/16/16 11:00	NMI	TAL SPK

Client Sample ID: MW25-2 (9.5-10)

Lab Sample ID: 590-5009-13

Date Collected: 11/08/16 10:05

Matrix: Solid

Date Received: 11/14/16 15:15

Percent Solids: 89.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.74 g	2 mL	9701	11/21/16 09:48	NMI	TAL SPK
Total/NA	Analysis	8270D SIM		1			9738	11/23/16 21:35	NMI	TAL SPK
Total/NA	Prep	3550C			15.78 g	5 mL	9652	11/17/16 11:11	EAF	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			9653	11/17/16 16:05	NMI	TAL SPK

Client Sample ID: MW24-2 (6.5-7)

Lab Sample ID: 590-5009-15

Date Collected: 11/08/16 12:25

Matrix: Solid

Date Received: 11/14/16 15:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			9637	11/16/16 11:00	NMI	TAL SPK

Client Sample ID: MW24-2 (6.5-7)

Lab Sample ID: 590-5009-15

Date Collected: 11/08/16 12:25

Matrix: Solid

Date Received: 11/14/16 15:15

Percent Solids: 92.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.85 g	2 mL	9701	11/21/16 09:48	NMI	TAL SPK

TestAmerica Spokane

Lab Chronicle

Client: GeoEngineers Inc
 Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5009-1

Client Sample ID: MW24-2 (6.5-7)

Lab Sample ID: 590-5009-15

Date Collected: 11/08/16 12:25

Matrix: Solid

Date Received: 11/14/16 15:15

Percent Solids: 92.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8270D SIM		1			9738	11/23/16 22:01	NMI	TAL SPK
Total/NA	Prep	3550C			15.34 g	5 mL	9652	11/17/16 11:11	EAF	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			9653	11/17/16 16:23	NMI	TAL SPK

Client Sample ID: MW24-3 (11.5-12)

Lab Sample ID: 590-5009-16

Date Collected: 11/08/16 12:35

Matrix: Solid

Date Received: 11/14/16 15:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			9637	11/16/16 11:00	NMI	TAL SPK

Client Sample ID: MW24-3 (11.5-12)

Lab Sample ID: 590-5009-16

Date Collected: 11/08/16 12:35

Matrix: Solid

Date Received: 11/14/16 15:15

Percent Solids: 89.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.66 g	2 mL	9701	11/21/16 09:48	NMI	TAL SPK
Total/NA	Analysis	8270D SIM		1			9738	11/23/16 22:27	NMI	TAL SPK
Total/NA	Prep	3550C			15.44 g	5 mL	9652	11/17/16 11:11	EAF	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			9653	11/17/16 16:41	NMI	TAL SPK

Client Sample ID: MW20-1 (2-3)

Lab Sample ID: 590-5009-17

Date Collected: 11/08/16 13:50

Matrix: Solid

Date Received: 11/14/16 15:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			9637	11/16/16 11:00	NMI	TAL SPK

Client Sample ID: MW20-1 (2-3)

Lab Sample ID: 590-5009-17

Date Collected: 11/08/16 13:50

Matrix: Solid

Date Received: 11/14/16 15:15

Percent Solids: 74.7

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.79 g	2 mL	9701	11/21/16 09:48	NMI	TAL SPK
Total/NA	Analysis	8270D SIM		1			9738	11/23/16 22:54	NMI	TAL SPK
Total/NA	Prep	3550C			15.12 g	5 mL	9652	11/17/16 11:11	EAF	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			9670	11/18/16 10:18	NMI	TAL SPK

TestAmerica Spokane

Lab Chronicle

Client: GeoEngineers Inc
 Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5009-1

Client Sample ID: MW20-3 (13-14)

Lab Sample ID: 590-5009-19

Date Collected: 11/08/16 14:00

Matrix: Solid

Date Received: 11/14/16 15:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			9637	11/16/16 11:00	NMI	TAL SPK

Client Sample ID: MW20-3 (13-14)

Lab Sample ID: 590-5009-19

Date Collected: 11/08/16 14:00

Matrix: Solid

Date Received: 11/14/16 15:15

Percent Solids: 84.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.95 g	2 mL	9701	11/21/16 09:48	NMI	TAL SPK
Total/NA	Analysis	8270D SIM		1			9738	11/23/16 23:20	NMI	TAL SPK
Total/NA	Prep	3550C			15.17 g	5 mL	9652	11/17/16 11:11	EAF	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			9653	11/17/16 17:34	NMI	TAL SPK

Client Sample ID: MW26-6 (8-9)

Lab Sample ID: 590-5009-21

Date Collected: 11/08/16 09:20

Matrix: Solid

Date Received: 11/14/16 15:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			9637	11/16/16 11:00	NMI	TAL SPK

Client Sample ID: MW26-6 (8-9)

Lab Sample ID: 590-5009-21

Date Collected: 11/08/16 09:20

Matrix: Solid

Date Received: 11/14/16 15:15

Percent Solids: 80.9

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.14 g	2 mL	9701	11/21/16 09:48	NMI	TAL SPK
Total/NA	Analysis	8270D SIM		1			9738	11/23/16 23:46	NMI	TAL SPK
Total/NA	Prep	3550C			15.30 g	5 mL	9652	11/17/16 11:11	EAF	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			9653	11/17/16 17:51	NMI	TAL SPK

Client Sample ID: MW21-2 (7-8)

Lab Sample ID: 590-5009-23

Date Collected: 11/09/16 07:55

Matrix: Solid

Date Received: 11/14/16 15:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			9637	11/16/16 11:00	NMI	TAL SPK

Client Sample ID: MW21-2 (7-8)

Lab Sample ID: 590-5009-23

Date Collected: 11/09/16 07:55

Matrix: Solid

Date Received: 11/14/16 15:15

Percent Solids: 84.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.39 g	2 mL	9701	11/21/16 09:48	NMI	TAL SPK

TestAmerica Spokane

Lab Chronicle

Client: GeoEngineers Inc
 Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5009-1

Client Sample ID: MW21-2 (7-8)

Lab Sample ID: 590-5009-23

Date Collected: 11/09/16 07:55

Matrix: Solid

Date Received: 11/14/16 15:15

Percent Solids: 84.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8270D SIM		1			9738	11/24/16 00:12	NMI	TAL SPK
Total/NA	Prep	3550C			15.91 g	5 mL	9652	11/17/16 11:11	EAF	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			9653	11/17/16 18:09	NMI	TAL SPK

Client Sample ID: MW21-3 (16-17)

Lab Sample ID: 590-5009-24

Date Collected: 11/09/16 08:00

Matrix: Solid

Date Received: 11/14/16 15:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			9637	11/16/16 11:00	NMI	TAL SPK

Client Sample ID: MW21-3 (16-17)

Lab Sample ID: 590-5009-24

Date Collected: 11/09/16 08:00

Matrix: Solid

Date Received: 11/14/16 15:15

Percent Solids: 91.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.57 g	2 mL	9701	11/21/16 09:48	NMI	TAL SPK
Total/NA	Analysis	8270D SIM		1			9738	11/24/16 00:39	NMI	TAL SPK
Total/NA	Prep	3550C			15.42 g	5 mL	9695	11/21/16 08:35	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			9698	11/21/16 12:26	NMI	TAL SPK

Client Sample ID: MW22-1 (6.5-7)

Lab Sample ID: 590-5009-27

Date Collected: 11/09/16 09:10

Matrix: Solid

Date Received: 11/14/16 15:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			9637	11/16/16 11:00	NMI	TAL SPK

Client Sample ID: MW22-1 (6.5-7)

Lab Sample ID: 590-5009-27

Date Collected: 11/09/16 09:10

Matrix: Solid

Date Received: 11/14/16 15:15

Percent Solids: 90.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.77 g	2 mL	9701	11/21/16 09:48	NMI	TAL SPK
Total/NA	Analysis	8270D SIM		1			9738	11/24/16 01:05	NMI	TAL SPK
Total/NA	Prep	3550C			15.21 g	5 mL	9695	11/21/16 08:35	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			9698	11/21/16 13:02	NMI	TAL SPK

TestAmerica Spokane

Lab Chronicle

Client: GeoEngineers Inc
 Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5009-1

Client Sample ID: MW22-2 (15.5-16)

Lab Sample ID: 590-5009-28

Date Collected: 11/09/16 09:30

Matrix: Solid

Date Received: 11/14/16 15:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			9637	11/16/16 11:00	NMI	TAL SPK

Client Sample ID: MW22-2 (15.5-16)

Lab Sample ID: 590-5009-28

Date Collected: 11/09/16 09:30

Matrix: Solid

Date Received: 11/14/16 15:15

Percent Solids: 84.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.61 g	2 mL	9701	11/21/16 09:48	NMI	TAL SPK
Total/NA	Analysis	8270D SIM		1			9738	11/24/16 01:31	NMI	TAL SPK
Total/NA	Prep	3550C			15.08 g	5 mL	9695	11/21/16 08:35	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			9698	11/21/16 13:20	NMI	TAL SPK

Client Sample ID: MW23-1 (2-3)

Lab Sample ID: 590-5009-31

Date Collected: 11/09/16 12:30

Matrix: Solid

Date Received: 11/14/16 15:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			9637	11/16/16 11:00	NMI	TAL SPK

Client Sample ID: MW23-1 (2-3)

Lab Sample ID: 590-5009-31

Date Collected: 11/09/16 12:30

Matrix: Solid

Date Received: 11/14/16 15:15

Percent Solids: 84.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.59 g	2 mL	9701	11/21/16 09:48	NMI	TAL SPK
Total/NA	Analysis	8270D SIM		1			9738	11/24/16 01:57	NMI	TAL SPK
Total/NA	Prep	3550C			15.01 g	5 mL	9695	11/21/16 08:35	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			9698	11/21/16 13:38	NMI	TAL SPK

Client Sample ID: MW23-3 (12.5-13)

Lab Sample ID: 590-5009-33

Date Collected: 11/09/16 12:40

Matrix: Solid

Date Received: 11/14/16 15:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			9637	11/16/16 11:00	NMI	TAL SPK

Client Sample ID: MW23-3 (12.5-13)

Lab Sample ID: 590-5009-33

Date Collected: 11/09/16 12:40

Matrix: Solid

Date Received: 11/14/16 15:15

Percent Solids: 88.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.60 g	2 mL	9701	11/21/16 09:48	NMI	TAL SPK

TestAmerica Spokane

Lab Chronicle

Client: GeoEngineers Inc
 Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5009-1

Client Sample ID: MW23-3 (12.5-13)

Lab Sample ID: 590-5009-33

Date Collected: 11/09/16 12:40

Matrix: Solid

Date Received: 11/14/16 15:15

Percent Solids: 88.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8270D SIM		1			9738	11/24/16 02:24	NMI	TAL SPK
Total/NA	Prep	3550C			15.40 g	5 mL	9695	11/21/16 08:35	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			9698	11/21/16 13:52	NMI	TAL SPK

Client Sample ID: MW29-3 (13-13.5)

Lab Sample ID: 590-5009-37

Date Collected: 11/09/16 13:55

Matrix: Solid

Date Received: 11/14/16 15:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			9637	11/16/16 11:00	NMI	TAL SPK

Client Sample ID: MW29-3 (13-13.5)

Lab Sample ID: 590-5009-37

Date Collected: 11/09/16 13:55

Matrix: Solid

Date Received: 11/14/16 15:15

Percent Solids: 90.9

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.13 g	2 mL	9701	11/21/16 09:48	NMI	TAL SPK
Total/NA	Analysis	8270D SIM		1			9738	11/24/16 02:50	NMI	TAL SPK
Total/NA	Prep	3550C			15.92 g	5 mL	9695	11/21/16 08:35	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			9698	11/21/16 14:09	NMI	TAL SPK

Client Sample ID: MW29-5 (4-5)

Lab Sample ID: 590-5009-39

Date Collected: 11/09/16 14:35

Matrix: Solid

Date Received: 11/14/16 15:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			9637	11/16/16 11:00	NMI	TAL SPK

Client Sample ID: MW29-5 (4-5)

Lab Sample ID: 590-5009-39

Date Collected: 11/09/16 14:35

Matrix: Solid

Date Received: 11/14/16 15:15

Percent Solids: 81.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.03 g	2 mL	9701	11/21/16 09:48	NMI	TAL SPK
Total/NA	Analysis	8270D SIM		1			9738	11/24/16 03:16	NMI	TAL SPK
Total/NA	Prep	3550C			15.83 g	5 mL	9695	11/21/16 08:35	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			9698	11/21/16 14:23	NMI	TAL SPK

Laboratory References:

TAL SPK = TestAmerica Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

TestAmerica Spokane

Accreditation/Certification Summary

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5009-1

Laboratory: TestAmerica Spokane

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
Washington	State Program	10	C569	01-06-19

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12

Method Summary

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5009-1

Method	Method Description	Protocol	Laboratory
8270D SIM	Semivolatile Organic Compounds (GC/MS SIM)	SW846	TAL SPK
NWTPH-Dx	Northwest - Semi-Volatile Petroleum Products (GC)	NWTPH	TAL SPK
Moisture	Percent Moisture	EPA	TAL SPK
3550C	Ultrasonic Extraction	SW846	TAL SPK

Protocol References:

EPA = US Environmental Protection Agency

NWTPH = Northwest Total Petroleum Hydrocarbon

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL SPK = TestAmerica Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

CHAIN OF CUSTODY RECORD

GeoEngineers
523 EAST SECOND AVE.
SPOKANE, WASHINGTON 99202
(509) 363-3125

DATE _____
 PAGE 1 OF 4
 LAB _____
 LAB NO. _____

PROJECT NAME/LOCATION <u>Colville Postle and Poles (CPPI)</u>				ANALYSIS REQUIRED						NOTES/COMMENTS (Preserved, filtered, etc.)	
PROJECT NUMBER <u>0504-098-01</u>											
PROJECT MANAGER <u>Scott Lathen</u>											
SAMPLED BY <u>JTB</u>											

SAMPLE IDENTIFICATION		SAMPLE COLLECTION			# OF JARS	NWTPH-DX	PCP	ANALYSIS REQUIRED										NOTES/COMMENTS		
LAB	GEOENGINEERS	DATE	TIME	MATRIX																
	MW28-1(1)	11/07/16	12:35	S	1	X	X													Location: CPPI (12-13)
	MW28-2(18.5)		12:50			X	X													
	MW27-1(2-25)		14:35																	
	MW27-2(9-10)		14:45			X	X													
	MW27-3(16-17)		14:55			X	X													
	MW27-4(8.5-9)		15:10																	
	MW26-1(3-4)	11/8/16	7:35																	
	MW26-2(125-13)		8:00																	
	MW26-3(16-17)		8:05																	
	MW26-4(20-21)		8:15																	

RELINQUISHED BY SIGNATURE <u>[Signature]</u> PRINTED NAME <u>Juan Besenhofer</u> DATE <u>11/14/16</u> TIME <u>1515</u>	RELINQUISHED BY SIGNATURE _____ PRINTED NAME _____ DATE _____ TIME _____	RELINQUISHED BY SIGNATURE _____ PRINTED NAME _____ DATE _____ TIME _____
RECEIVED BY SIGNATURE <u>[Signature]</u> PRINTED NAME <u>Sheila Kiper</u> DATE <u>11/14/16</u> TIME <u>1515</u>	RECEIVED BY SIGNATURE _____ PRINTED NAME _____ DATE _____ TIME _____	RECEIVED BY SIGNATURE _____ PRINTED NAME _____ DATE _____ TIME _____

ADDITIONAL COMMENTS: 5.9°C JPC003



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

11922 E. First Ave., Spokane WA 99206-5302
 9405 SW Nimbus Ave., Beaverton, OR 97008-7145
 2000 W International Airport Rd Ste A10, Anchorage, AK 99502-1119

509-924-9200 FAX 924-9290
 503-906-9200 FAX 906-9210
 907-563-9200 FAX 563-9210

CHAIN OF CUSTODY REPORT

Work Order #:

CLIENT:		INVOICE TO:		TURNAROUND REQUEST in Business Days * Organic & Inorganic Analyses <input type="checkbox"/> 7 <input type="checkbox"/> 5 <input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1 <input type="checkbox"/> <1 Petroleum Hydrocarbon Analyses <input checked="" type="checkbox"/> 5 <input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1 <input type="checkbox"/> <1 OTHER Specify: <small>* Turnaround Requests less than standard may incur Rush Charges</small>							
REPORT TO: ADDRESS:		P.O. NUMBER:									
PHONE:	FAX:										
PROJECT NAME: Colville Post and Poles (CPEI)		PRESERVATIVE									
PROJECT NUMBER: 0504-098-01		REQUESTED ANALYSES									
SAMPLED BY: JJB											
CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	NMPH-DX	PCP					MATRIX (W, S, O)	# OF CONT.	LOCATION/ COMMENTS	TA WO ID
1 MW26-6(8-9')	110816/9:20	X	X					S	1	CPEI	
2 MW21-1(6.5-7)	110916/7:45										
3 MW21-2(7-8)	110916/7:55	X	X								
4 MW21-3(16-17)	110916/8:00	X	X								
5 MW21-4(11-12)	110916/8:10										
6 MW21-5(3.5-4.5)	110916/8:45										
7 MW21-6	110916 JJB										
8 MW22-1(6.5-7)	110916/9:10	X	X								
9 MW22-2(15.5-16)	110916/9:30	X	X								
10 MW22-3(9-10)	110916/9:45										
RELEASED BY: <i>Jason Besendorfer</i>	FIRM: <i>GeoEngineers</i>	DATE: 11/14/16	TIME: 1515	RECEIVED BY: <i>Sheila Krotz</i>	FIRM: <i>TAC/pak</i>	DATE: 11/14/16	TIME: 1515				
PRINT NAME: <i>Jason Besendorfer</i>				PRINT NAME: <i>Sheila Krotz</i>							
ADDITIONAL REMARKS:											

TEMP: 5.9°C
 PAGE 3 OF 4
 JRC003 L-1000 (0714)

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

11922 E. First Ave., Spokane WA 99206-5302
 9405 SW Nimbus Ave., Beaverton, OR 97008-7145
 2000 W International Airport Rd Ste A10, Anchorage, AK 99502-1119

509-924-9200 FAX 924-9290
 503-906-9200 FAX 906-9210
 907-563-9200 FAX 563-9210

CHAIN OF CUSTODY REPORT

Work Order #:

CLIENT:		INVOICE TO:		TURNAROUND REQUEST in Business Days * Organic & Inorganic Analyses <input type="checkbox"/> 10 <input type="checkbox"/> 7 <input type="checkbox"/> 5 <input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1 <input type="checkbox"/> <1 Petroleum Hydrocarbon Analyses <input checked="" type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1 <input type="checkbox"/> <1 STD. <input type="checkbox"/> OTHER Specify: _____ * Turnaround Requests less than standard may incur Rush Charges.					
REPORT TO: ADDRESS:		P.O. NUMBER:							
PHONE: _____ FAX: _____		PRESERVATIVE							
PROJECT NAME: <u>Colville Post and Poles (CPPI)</u>		REQUESTED ANALYSES							
PROJECT NUMBER: <u>0504-098-01</u>									
SAMPLED BY: <u>JJB</u>									
CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	NWTPH -DX	PCP			MATRIX (W, S, O)	# OF CONT.	LOCATION/ COMMENTS	TA WO ID
<u>1 MW22-4(3-4)</u>	<u>110916 / 11:00</u>					<u>S</u>	<u>1</u>	<u>CPPI</u>	
<u>2 MW23-1(2-3')</u>	<u>110916 / 12:30</u>	<u>X</u>	<u>X</u>						
<u>3 MW23-2(5-6)</u>	<u>110916 / 12:32</u>								
<u>4 MW23-3(12.5-13)</u>	<u>110916 / 12:40</u>	<u>X</u>	<u>X</u>						
<u>5 MW23-4(9-10)</u>	<u>110916 / 13:15</u>								
<u>6 MW29-1(0.5-1.5)</u>	<u>110916 / 13:50</u>								
<u>7 MW29-2(12-12.5)</u>	<u>110916 / 13:55</u>								
<u>8 MW29-3(13-13.5)</u>	<u>110916 / 13:55</u>	<u>X</u>	<u>X</u>						
<u>9 MW29-4(15-17')</u>	<u>110916 / 14:10</u>							<u>(5-7')</u>	
<u>10 MW29-5(4-5)</u>	<u>110916 / 14:35</u>	<u>X</u>	<u>X</u>						
RELEASED BY: <u>Juan Besenbacher</u>	DATE: <u>11/14/16</u>	RECEIVED BY: <u>Sheila Kraz</u>	DATE: <u>11/14/16</u>						
PRINT NAME: <u>Susan Besenbacher</u>	TIME: <u>15:15</u>	PRINT NAME: <u>Sheila Kraz</u>	TIME: <u>15:15</u>	FIRM: <u>GeoEngineers</u>	FIRM: <u>TACBOOK</u>				
RELEASED BY:	DATE:	RECEIVED BY:	DATE:						
PRINT NAME:	TIME:	PRINT NAME:	TIME:	FIRM:	FIRM:				
ADDITIONAL REMARKS:									

TEMP: 59C
 PAGE OF
 TAC-1000 (0714)

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-5009-1

Login Number: 5009

List Source: TestAmerica Spokane

List Number: 1

Creator: Kratz, Sheila J

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Spokane

11922 East 1st Ave

Spokane, WA 99206

Tel: (509)924-9200

TestAmerica Job ID: 590-5185-1

Client Project/Site: Colville Post and Pole/0504-098-01

Revision: 1

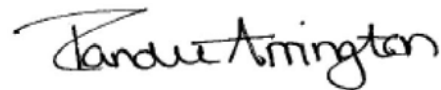
For:

GeoEngineers Inc

523 East Second Ave

Spokane, Washington 99202

Attn: Scott Lathen



Authorized for release by:

5/9/2018 1:15:01 PM

Randee Arrington, Project Manager II

(509)924-9200

randee.arrington@testamericainc.com

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Method Summary	58
Chain of Custody	59
Receipt Checklists	77
Isotope Dilution Summary	80

Case Narrative

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5185-1

Job ID: 590-5185-1

Laboratory: TestAmerica Spokane

Narrative

Revision

The 8270D data was re-evaluated down to the MDL per the clients request.

Receipt

The samples were received on 12/9/2016 12:10 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 5 coolers at receipt time were 1.8° C, 2.2° C, 2.3° C, 3.0° C and 4.6° C.

Receipt Exceptions

The following sample was submitted for analysis; however, it was not listed on the Chain-of-Custody (COC): Seep-1:GW:120716 (590-5185-94) and Seep-2:GW:120716 (590-5185-95)

The following samples were canceled for 6010C Cadmium and 7471A Mercury by the client on 12/12/2016: HA-15 (0-6") (590-5185-43), HA-16 (0-6") (590-5185-46) and HA-17 (0-6") (590-5185-49).

The following samples were activated for NWTPH-Dx analysis by the client on 12/12/2016: HA-15 (0-6") (590-5185-43), HA-16 (0-6") (590-5185-46) and HA-17 (0-6") (590-5185-49). This analysis was not originally requested on the chain-of-custody (COC).

The following sample was canceled for 6010C Cadmium and 7471A Mercury by the client on 12/12/2016: Seep-1 (6-12") (590-5185-108) and Seep-2 (6-12") (590-5185-109).

GC/MS Semi VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

GC Semi VOA

Method NWTPH-Dx: Detected hydrocarbons appear to be due to oil as well as biogenic interference in the following samples: HA-1 (0-6") (590-5185-10), HA-36 (0-6") (590-5185-13), HA-37 (0-6") (590-5185-16), HA-15 (0-6") (590-5185-43) and HA-17 (0-6") (590-5185-49).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Dioxin

Method 8290A: The concentration of OCDD associated with the following samples exceeded the instrument calibration range: HA-32 (0-6") (590-5185-25), HA-2 (0-6") (590-5185-7), HA-21 (0-6") (590-5185-85) and HA-11 (0-6") (590-5185-67). These analytes have been qualified; however, the peak did not saturate the instrument detector. Historical data indicate that for the isotope dilution method, dilution and re-analysis will not produce significantly different results from those reported above the calibration range.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Dioxin Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Sample Summary

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5185-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
590-5185-1	HA-4 (0-6')	Solid	12/06/16 11:40	12/09/16 12:10
590-5185-4	HA-3 (0-6")	Solid	12/06/16 12:05	12/09/16 12:10
590-5185-7	HA-2 (0-6")	Solid	12/06/16 12:25	12/09/16 12:10
590-5185-10	HA-1 (0-6")	Solid	12/06/16 12:45	12/09/16 12:10
590-5185-13	HA-36 (0-6")	Solid	12/06/16 13:05	12/09/16 12:10
590-5185-16	HA-37 (0-6")	Solid	12/06/16 13:25	12/09/16 12:10
590-5185-19	HA-14 (0-6")	Solid	12/06/16 14:00	12/09/16 12:10
590-5185-22	HA-13 (0-6")	Solid	12/06/16 14:35	12/09/16 12:10
590-5185-25	HA-32 (0-6")	Solid	12/06/16 15:00	12/09/16 12:10
590-5185-28	HA-8 (0-6")	Solid	12/06/16 15:30	12/09/16 12:10
590-5185-31	HA-6 (0-6")	Solid	12/06/16 15:45	12/09/16 12:10
590-5185-34	HA-5 (0-6")	Solid	12/06/16 16:05	12/09/16 12:10
590-5185-37	HA-7 (0-6")	Solid	12/06/16 16:20	12/09/16 12:10
590-5185-40	HA-9 (0-6")	Solid	12/07/16 08:30	12/09/16 12:10
590-5185-43	HA-15 (0-6")	Solid	12/07/16 09:10	12/09/16 12:10
590-5185-46	HA-16 (0-6")	Solid	12/07/16 09:30	12/09/16 12:10
590-5185-49	HA-17 (0-6")	Solid	12/07/16 09:50	12/09/16 12:10
590-5185-52	HA-35 (0-6")	Solid	12/07/16 10:10	12/09/16 12:10
590-5185-55	HA-24 (0-6")	Solid	12/07/16 10:35	12/09/16 12:10
590-5185-58	HA-25 (0-6")	Solid	12/07/16 10:50	12/09/16 12:10
590-5185-61	HA-12 (0-6")	Solid	12/07/16 11:55	12/09/16 12:10
590-5185-64	HA-38 (0-6")	Solid	12/07/16 12:10	12/09/16 12:10
590-5185-67	HA-11 (0-6")	Solid	12/07/16 12:35	12/09/16 12:10
590-5185-70	HA-22 (0-6")	Solid	12/07/16 13:35	12/09/16 12:10
590-5185-73	HA-20 (0-6")	Solid	12/07/16 13:50	12/09/16 12:10
590-5185-76	HA-18 (0-6")	Solid	12/07/16 14:20	12/09/16 12:10
590-5185-79	HA-10 (0-6")	Solid	12/07/16 14:05	12/09/16 12:10
590-5185-82	HA-19 (0-6")	Solid	12/07/16 14:45	12/09/16 12:10
590-5185-85	HA-21 (0-6")	Solid	12/07/16 15:05	12/09/16 12:10
590-5185-88	HA-23 (0-6")	Solid	12/07/16 15:30	12/09/16 12:10
590-5185-91	HA-26 (0-6")	Solid	12/07/16 11:05	12/09/16 12:10
590-5185-94	Seep-1:GW:120716	Water	12/07/16 14:06	12/09/16 12:10
590-5185-95	Seep-2:GW:120716	Water	12/07/16 14:57	12/09/16 12:10
590-5185-96	HA-27 (0-6")	Solid	12/07/16 15:45	12/09/16 12:10
590-5185-99	HA-28 (0-6")	Solid	12/07/16 16:00	12/09/16 12:10
590-5185-102	HA-30 (0-6")	Solid	12/07/16 16:20	12/09/16 12:10
590-5185-105	HA-29 (0-6")	Solid	12/07/16 16:35	12/09/16 12:10
590-5185-108	Seep-1 (6-12")	Solid	12/07/16 12:00	12/09/16 12:10
590-5185-109	Seep-2 (6-12")	Solid	12/07/16 12:05	12/09/16 12:10

TestAmerica Spokane

Definitions/Glossary

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5185-1

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F1	MS and/or MSD Recovery is outside acceptance limits.

Dioxin

Qualifier	Qualifier Description
E	Result exceeded calibration range.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5185-1

Client Sample ID: HA-4 (0-6')

Date Collected: 12/06/16 11:40

Date Received: 12/09/16 12:10

Lab Sample ID: 590-5185-1

Matrix: Solid

Percent Solids: 75.7

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		130		pg/g	☼	12/15/16 06:24	12/23/16 23:26	1
2,3,7,8-TCDF	ND		130		pg/g	☼	12/15/16 06:24	12/23/16 23:26	1
1,2,3,7,8-PeCDD	ND		660		pg/g	☼	12/15/16 06:24	12/23/16 23:26	1
1,2,3,7,8-PeCDF	ND		660		pg/g	☼	12/15/16 06:24	12/23/16 23:26	1
2,3,4,7,8-PeCDF	ND		660		pg/g	☼	12/15/16 06:24	12/23/16 23:26	1
1,2,3,4,7,8-HxCDD	ND		660		pg/g	☼	12/15/16 06:24	12/23/16 23:26	1
1,2,3,6,7,8-HxCDD	780		660		pg/g	☼	12/15/16 06:24	12/23/16 23:26	1
1,2,3,7,8,9-HxCDD	ND		660		pg/g	☼	12/15/16 06:24	12/23/16 23:26	1
1,2,3,4,7,8-HxCDF	ND		660		pg/g	☼	12/15/16 06:24	12/23/16 23:26	1
1,2,3,6,7,8-HxCDF	ND		660		pg/g	☼	12/15/16 06:24	12/23/16 23:26	1
1,2,3,7,8,9-HxCDF	ND		660		pg/g	☼	12/15/16 06:24	12/23/16 23:26	1
2,3,4,6,7,8-HxCDF	ND		660		pg/g	☼	12/15/16 06:24	12/23/16 23:26	1
1,2,3,4,6,7,8-HpCDD	24000		660		pg/g	☼	12/15/16 06:24	12/23/16 23:26	1
1,2,3,4,6,7,8-HpCDF	5500		660		pg/g	☼	12/15/16 06:24	12/23/16 23:26	1
1,2,3,4,7,8,9-HpCDF	ND		660		pg/g	☼	12/15/16 06:24	12/23/16 23:26	1
OCDD	220000		1300		pg/g	☼	12/15/16 06:24	12/23/16 23:26	1
OCDF	18000		1300		pg/g	☼	12/15/16 06:24	12/23/16 23:26	1
Total TCDD	ND		130		pg/g	☼	12/15/16 06:24	12/23/16 23:26	1
Total TCDF	ND		130		pg/g	☼	12/15/16 06:24	12/23/16 23:26	1
Total PeCDD	ND		660		pg/g	☼	12/15/16 06:24	12/23/16 23:26	1
Total PeCDF	ND		660		pg/g	☼	12/15/16 06:24	12/23/16 23:26	1
Total HxCDD	3300		660		pg/g	☼	12/15/16 06:24	12/23/16 23:26	1
Total HxCDF	3300		660		pg/g	☼	12/15/16 06:24	12/23/16 23:26	1
Total HpCDD	40000		660		pg/g	☼	12/15/16 06:24	12/23/16 23:26	1
Total HpCDF	16000		660		pg/g	☼	12/15/16 06:24	12/23/16 23:26	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	102		40 - 135				12/15/16 06:24	12/23/16 23:26	1
13C-2,3,7,8-TCDF	89		40 - 135				12/15/16 06:24	12/23/16 23:26	1
13C-1,2,3,7,8-PeCDD	102		40 - 135				12/15/16 06:24	12/23/16 23:26	1
13C-1,2,3,7,8-PeCDF	93		40 - 135				12/15/16 06:24	12/23/16 23:26	1
13C-1,2,3,6,7,8-HxCDD	102		40 - 135				12/15/16 06:24	12/23/16 23:26	1
13C-1,2,3,4,7,8-HxCDF	95		40 - 135				12/15/16 06:24	12/23/16 23:26	1
13C-1,2,3,4,6,7,8-HpCDD	119		40 - 135				12/15/16 06:24	12/23/16 23:26	1
13C-1,2,3,4,6,7,8-HpCDF	103		40 - 135				12/15/16 06:24	12/23/16 23:26	1
13C-OCDD	128		40 - 135				12/15/16 06:24	12/23/16 23:26	1

Client Sample ID: HA-3 (0-6")

Date Collected: 12/06/16 12:05

Date Received: 12/09/16 12:10

Lab Sample ID: 590-5185-4

Matrix: Solid

Percent Solids: 71.7

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		280		pg/g	☼	12/15/16 06:24	12/24/16 00:12	1
2,3,7,8-TCDF	ND		280		pg/g	☼	12/15/16 06:24	12/24/16 00:12	1
1,2,3,7,8-PeCDD	ND		1400		pg/g	☼	12/15/16 06:24	12/24/16 00:12	1
1,2,3,7,8-PeCDF	ND		1400		pg/g	☼	12/15/16 06:24	12/24/16 00:12	1
2,3,4,7,8-PeCDF	ND		1400		pg/g	☼	12/15/16 06:24	12/24/16 00:12	1
1,2,3,4,7,8-HxCDD	ND		1400		pg/g	☼	12/15/16 06:24	12/24/16 00:12	1
1,2,3,6,7,8-HxCDD	2900		1400		pg/g	☼	12/15/16 06:24	12/24/16 00:12	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5185-1

Client Sample ID: HA-3 (0-6")

Lab Sample ID: 590-5185-4

Date Collected: 12/06/16 12:05

Matrix: Solid

Date Received: 12/09/16 12:10

Percent Solids: 71.7

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,7,8,9-HxCDD	ND		1400		pg/g	☼	12/15/16 06:24	12/24/16 00:12	1
1,2,3,4,7,8-HxCDF	ND		1400		pg/g	☼	12/15/16 06:24	12/24/16 00:12	1
1,2,3,6,7,8-HxCDF	ND		1400		pg/g	☼	12/15/16 06:24	12/24/16 00:12	1
1,2,3,7,8,9-HxCDF	ND		1400		pg/g	☼	12/15/16 06:24	12/24/16 00:12	1
2,3,4,6,7,8-HxCDF	ND		1400		pg/g	☼	12/15/16 06:24	12/24/16 00:12	1
1,2,3,4,6,7,8-HpCDD	73000		1400		pg/g	☼	12/15/16 06:24	12/24/16 00:12	1
1,2,3,4,6,7,8-HpCDF	5400		1400		pg/g	☼	12/15/16 06:24	12/24/16 00:12	1
1,2,3,4,7,8,9-HpCDF	ND		1400		pg/g	☼	12/15/16 06:24	12/24/16 00:12	1
OCDD	650000		2800		pg/g	☼	12/15/16 06:24	12/24/16 00:12	1
OCDF	15000		2800		pg/g	☼	12/15/16 06:24	12/24/16 00:12	1
Total TCDD	ND		280		pg/g	☼	12/15/16 06:24	12/24/16 00:12	1
Total TCDF	ND		280		pg/g	☼	12/15/16 06:24	12/24/16 00:12	1
Total PeCDD	ND		1400		pg/g	☼	12/15/16 06:24	12/24/16 00:12	1
Total PeCDF	ND		1400		pg/g	☼	12/15/16 06:24	12/24/16 00:12	1
Total HxCDD	9200		1400		pg/g	☼	12/15/16 06:24	12/24/16 00:12	1
Total HxCDF	6200		1400		pg/g	☼	12/15/16 06:24	12/24/16 00:12	1
Total HpCDD	130000		1400		pg/g	☼	12/15/16 06:24	12/24/16 00:12	1
Total HpCDF	20000		1400		pg/g	☼	12/15/16 06:24	12/24/16 00:12	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	100		40 - 135	12/15/16 06:24	12/24/16 00:12	1
13C-2,3,7,8-TCDF	86		40 - 135	12/15/16 06:24	12/24/16 00:12	1
13C-1,2,3,7,8-PeCDD	101		40 - 135	12/15/16 06:24	12/24/16 00:12	1
13C-1,2,3,7,8-PeCDF	93		40 - 135	12/15/16 06:24	12/24/16 00:12	1
13C-1,2,3,6,7,8-HxCDD	101		40 - 135	12/15/16 06:24	12/24/16 00:12	1
13C-1,2,3,4,7,8-HxCDF	94		40 - 135	12/15/16 06:24	12/24/16 00:12	1
13C-1,2,3,4,6,7,8-HpCDD	118		40 - 135	12/15/16 06:24	12/24/16 00:12	1
13C-1,2,3,4,6,7,8-HpCDF	100		40 - 135	12/15/16 06:24	12/24/16 00:12	1
13C-OCDD	126		40 - 135	12/15/16 06:24	12/24/16 00:12	1

Client Sample ID: HA-2 (0-6")

Lab Sample ID: 590-5185-7

Date Collected: 12/06/16 12:25

Matrix: Solid

Date Received: 12/09/16 12:10

Percent Solids: 88.7

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		4.7		pg/g	☼	12/15/16 08:58	12/23/16 07:10	1
2,3,7,8-TCDF	ND		4.7		pg/g	☼	12/15/16 08:58	12/23/16 07:10	1
1,2,3,7,8-PeCDD	ND		23		pg/g	☼	12/15/16 08:58	12/23/16 07:10	1
1,2,3,7,8-PeCDF	ND		23		pg/g	☼	12/15/16 08:58	12/23/16 07:10	1
2,3,4,7,8-PeCDF	ND		23		pg/g	☼	12/15/16 08:58	12/23/16 07:10	1
1,2,3,4,7,8-HxCDD	ND		23		pg/g	☼	12/15/16 08:58	12/23/16 07:10	1
1,2,3,6,7,8-HxCDD	97		23		pg/g	☼	12/15/16 08:58	12/23/16 07:10	1
1,2,3,7,8,9-HxCDD	49		23		pg/g	☼	12/15/16 08:58	12/23/16 07:10	1
1,2,3,4,7,8-HxCDF	ND		23		pg/g	☼	12/15/16 08:58	12/23/16 07:10	1
1,2,3,6,7,8-HxCDF	ND		23		pg/g	☼	12/15/16 08:58	12/23/16 07:10	1
1,2,3,7,8,9-HxCDF	ND		23		pg/g	☼	12/15/16 08:58	12/23/16 07:10	1
2,3,4,6,7,8-HxCDF	ND		23		pg/g	☼	12/15/16 08:58	12/23/16 07:10	1
1,2,3,4,6,7,8-HpCDD	2400		23		pg/g	☼	12/15/16 08:58	12/23/16 07:10	1
1,2,3,4,6,7,8-HpCDF	230		23		pg/g	☼	12/15/16 08:58	12/23/16 07:10	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5185-1

Client Sample ID: HA-2 (0-6")

Date Collected: 12/06/16 12:25

Date Received: 12/09/16 12:10

Lab Sample ID: 590-5185-7

Matrix: Solid

Percent Solids: 88.7

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,7,8,9-HpCDF	ND		23		pg/g	☼	12/15/16 08:58	12/23/16 07:10	1
OCDD	21000	E	47		pg/g	☼	12/15/16 08:58	12/23/16 07:10	1
OCDF	670		47		pg/g	☼	12/15/16 08:58	12/23/16 07:10	1
Total TCDD	ND		4.7		pg/g	☼	12/15/16 08:58	12/23/16 07:10	1
Total TCDF	ND		4.7		pg/g	☼	12/15/16 08:58	12/23/16 07:10	1
Total PeCDD	ND		23		pg/g	☼	12/15/16 08:58	12/23/16 07:10	1
Total PeCDF	ND		23		pg/g	☼	12/15/16 08:58	12/23/16 07:10	1
Total HxCDD	400		23		pg/g	☼	12/15/16 08:58	12/23/16 07:10	1
Total HxCDF	220		23		pg/g	☼	12/15/16 08:58	12/23/16 07:10	1
Total HpCDD	4300		23		pg/g	☼	12/15/16 08:58	12/23/16 07:10	1
Total HpCDF	720		23		pg/g	☼	12/15/16 08:58	12/23/16 07:10	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	82		40 - 135				12/15/16 08:58	12/23/16 07:10	1
13C-2,3,7,8-TCDF	70		40 - 135				12/15/16 08:58	12/23/16 07:10	1
13C-1,2,3,7,8-PeCDD	64		40 - 135				12/15/16 08:58	12/23/16 07:10	1
13C-1,2,3,7,8-PeCDF	70		40 - 135				12/15/16 08:58	12/23/16 07:10	1
13C-1,2,3,6,7,8-HxCDD	80		40 - 135				12/15/16 08:58	12/23/16 07:10	1
13C-1,2,3,4,7,8-HxCDF	80		40 - 135				12/15/16 08:58	12/23/16 07:10	1
13C-1,2,3,4,6,7,8-HpCDD	92		40 - 135				12/15/16 08:58	12/23/16 07:10	1
13C-1,2,3,4,6,7,8-HpCDF	90		40 - 135				12/15/16 08:58	12/23/16 07:10	1
13C-OCDD	103		40 - 135				12/15/16 08:58	12/23/16 07:10	1

Client Sample ID: HA-1 (0-6")

Date Collected: 12/06/16 12:45

Date Received: 12/09/16 12:10

Lab Sample ID: 590-5185-10

Matrix: Solid

Percent Solids: 61.1

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	680		80	13	ug/Kg	☼	12/15/16 09:22	12/15/16 15:09	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	75		38 - 123				12/15/16 09:22	12/15/16 15:09	1
Nitrobenzene-d5	63		23 - 120				12/15/16 09:22	12/15/16 15:09	1
p-Terphenyl-d14	92		68 - 136				12/15/16 09:22	12/15/16 15:09	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	72		16		mg/Kg	☼	12/13/16 10:05	12/13/16 11:01	1
Residual Range Organics (RRO) (C25-C36)	270		39		mg/Kg	☼	12/13/16 10:05	12/13/16 11:01	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	98		50 - 150				12/13/16 10:05	12/13/16 11:01	1
n-Triacontane-d62	95		50 - 150				12/13/16 10:05	12/13/16 11:01	1

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		41		pg/g	☼	12/15/16 06:24	12/24/16 00:59	1
2,3,7,8-TCDF	ND		41		pg/g	☼	12/15/16 06:24	12/24/16 00:59	1
1,2,3,7,8-PeCDD	ND		200		pg/g	☼	12/15/16 06:24	12/24/16 00:59	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5185-1

Client Sample ID: HA-1 (0-6")

Lab Sample ID: 590-5185-10

Date Collected: 12/06/16 12:45

Matrix: Solid

Date Received: 12/09/16 12:10

Percent Solids: 61.1

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,7,8-PeCDF	ND		200		pg/g	☼	12/15/16 06:24	12/24/16 00:59	1
2,3,4,7,8-PeCDF	ND		200		pg/g	☼	12/15/16 06:24	12/24/16 00:59	1
1,2,3,4,7,8-HxCDD	ND		200		pg/g	☼	12/15/16 06:24	12/24/16 00:59	1
1,2,3,6,7,8-HxCDD	390		200		pg/g	☼	12/15/16 06:24	12/24/16 00:59	1
1,2,3,7,8,9-HxCDD	ND		200		pg/g	☼	12/15/16 06:24	12/24/16 00:59	1
1,2,3,4,7,8-HxCDF	ND		200		pg/g	☼	12/15/16 06:24	12/24/16 00:59	1
1,2,3,6,7,8-HxCDF	ND		200		pg/g	☼	12/15/16 06:24	12/24/16 00:59	1
1,2,3,7,8,9-HxCDF	ND		200		pg/g	☼	12/15/16 06:24	12/24/16 00:59	1
2,3,4,6,7,8-HxCDF	ND		200		pg/g	☼	12/15/16 06:24	12/24/16 00:59	1
1,2,3,4,6,7,8-HpCDD	9900		200		pg/g	☼	12/15/16 06:24	12/24/16 00:59	1
1,2,3,4,6,7,8-HpCDF	950		200		pg/g	☼	12/15/16 06:24	12/24/16 00:59	1
1,2,3,4,7,8,9-HpCDF	ND		200		pg/g	☼	12/15/16 06:24	12/24/16 00:59	1
OCDD	87000		410		pg/g	☼	12/15/16 06:24	12/24/16 00:59	1
OCDF	3500		410		pg/g	☼	12/15/16 06:24	12/24/16 00:59	1
Total TCDD	ND		41		pg/g	☼	12/15/16 06:24	12/24/16 00:59	1
Total TCDF	ND		41		pg/g	☼	12/15/16 06:24	12/24/16 00:59	1
Total PeCDD	ND		200		pg/g	☼	12/15/16 06:24	12/24/16 00:59	1
Total PeCDF	ND		200		pg/g	☼	12/15/16 06:24	12/24/16 00:59	1
Total HxCDD	1400		200		pg/g	☼	12/15/16 06:24	12/24/16 00:59	1
Total HxCDF	930		200		pg/g	☼	12/15/16 06:24	12/24/16 00:59	1
Total HpCDD	17000		200		pg/g	☼	12/15/16 06:24	12/24/16 00:59	1
Total HpCDF	3300		200		pg/g	☼	12/15/16 06:24	12/24/16 00:59	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	96		40 - 135	12/15/16 06:24	12/24/16 00:59	1
13C-2,3,7,8-TCDF	85		40 - 135	12/15/16 06:24	12/24/16 00:59	1
13C-1,2,3,7,8-PeCDD	96		40 - 135	12/15/16 06:24	12/24/16 00:59	1
13C-1,2,3,7,8-PeCDF	90		40 - 135	12/15/16 06:24	12/24/16 00:59	1
13C-1,2,3,6,7,8-HxCDD	99		40 - 135	12/15/16 06:24	12/24/16 00:59	1
13C-1,2,3,4,7,8-HxCDF	86		40 - 135	12/15/16 06:24	12/24/16 00:59	1
13C-1,2,3,4,6,7,8-HpCDD	117		40 - 135	12/15/16 06:24	12/24/16 00:59	1
13C-1,2,3,4,6,7,8-HpCDF	101		40 - 135	12/15/16 06:24	12/24/16 00:59	1
13C-OCDD	125		40 - 135	12/15/16 06:24	12/24/16 00:59	1

Client Sample ID: HA-36 (0-6")

Lab Sample ID: 590-5185-13

Date Collected: 12/06/16 13:05

Matrix: Solid

Date Received: 12/09/16 12:10

Percent Solids: 45.9

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	310		100	17	ug/Kg	☼	12/15/16 09:22	12/15/16 15:35	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	78		38 - 123	12/15/16 09:22	12/15/16 15:35	1
Nitrobenzene-d5	70		23 - 120	12/15/16 09:22	12/15/16 15:35	1
p-Terphenyl-d14	96		68 - 136	12/15/16 09:22	12/15/16 15:35	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	59		21		mg/Kg	☼	12/13/16 10:05	12/13/16 11:18	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5185-1

Client Sample ID: HA-36 (0-6")

Date Collected: 12/06/16 13:05

Date Received: 12/09/16 12:10

Lab Sample ID: 590-5185-13

Matrix: Solid

Percent Solids: 45.9

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Residual Range Organics (RRO) (C25-C36)	230		52		mg/Kg	☼	12/13/16 10:05	12/13/16 11:18	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl	97		50 - 150				12/13/16 10:05	12/13/16 11:18	1
<i>n</i> -Triacontane-d62	101		50 - 150				12/13/16 10:05	12/13/16 11:18	1

Client Sample ID: HA-37 (0-6")

Date Collected: 12/06/16 13:25

Date Received: 12/09/16 12:10

Lab Sample ID: 590-5185-16

Matrix: Solid

Percent Solids: 85.3

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	120	F1	57	9.3	ug/Kg	☼	12/15/16 09:22	12/15/16 16:53	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>2</i> -Fluorobiphenyl (Surr)	76		38 - 123				12/15/16 09:22	12/15/16 16:53	1
Nitrobenzene-d5	63		23 - 120				12/15/16 09:22	12/15/16 16:53	1
<i>p</i> -Terphenyl-d14	96		68 - 136				12/15/16 09:22	12/15/16 16:53	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	25		11		mg/Kg	☼	12/13/16 10:05	12/13/16 11:53	1
Residual Range Organics (RRO) (C25-C36)	97		29		mg/Kg	☼	12/13/16 10:05	12/13/16 11:53	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl	101		50 - 150				12/13/16 10:05	12/13/16 11:53	1
<i>n</i> -Triacontane-d62	103		50 - 150				12/13/16 10:05	12/13/16 11:53	1

Client Sample ID: HA-14 (0-6")

Date Collected: 12/06/16 14:00

Date Received: 12/09/16 12:10

Lab Sample ID: 590-5185-19

Matrix: Solid

Percent Solids: 85.5

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		13		pg/g	☼	12/15/16 06:24	12/24/16 01:45	1
2,3,7,8-TCDF	ND		13		pg/g	☼	12/15/16 06:24	12/24/16 01:45	1
1,2,3,7,8-PeCDD	ND		65		pg/g	☼	12/15/16 06:24	12/24/16 01:45	1
1,2,3,7,8-PeCDF	ND		65		pg/g	☼	12/15/16 06:24	12/24/16 01:45	1
2,3,4,7,8-PeCDF	ND		65		pg/g	☼	12/15/16 06:24	12/24/16 01:45	1
1,2,3,4,7,8-HxCDD	ND		65		pg/g	☼	12/15/16 06:24	12/24/16 01:45	1
1,2,3,6,7,8-HxCDD	210		65		pg/g	☼	12/15/16 06:24	12/24/16 01:45	1
1,2,3,7,8,9-HxCDD	150		65		pg/g	☼	12/15/16 06:24	12/24/16 01:45	1
1,2,3,4,7,8-HxCDF	ND		65		pg/g	☼	12/15/16 06:24	12/24/16 01:45	1
1,2,3,6,7,8-HxCDF	ND		65		pg/g	☼	12/15/16 06:24	12/24/16 01:45	1
1,2,3,7,8,9-HxCDF	ND		65		pg/g	☼	12/15/16 06:24	12/24/16 01:45	1
2,3,4,6,7,8-HxCDF	ND		65		pg/g	☼	12/15/16 06:24	12/24/16 01:45	1
1,2,3,4,6,7,8-HpCDD	5300		65		pg/g	☼	12/15/16 06:24	12/24/16 01:45	1
1,2,3,4,6,7,8-HpCDF	1000		65		pg/g	☼	12/15/16 06:24	12/24/16 01:45	1
1,2,3,4,7,8,9-HpCDF	ND		65		pg/g	☼	12/15/16 06:24	12/24/16 01:45	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5185-1

Client Sample ID: HA-14 (0-6")

Lab Sample ID: 590-5185-19

Date Collected: 12/06/16 14:00

Matrix: Solid

Date Received: 12/09/16 12:10

Percent Solids: 85.5

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
OCDD	51000		130		pg/g	☼	12/15/16 06:24	12/24/16 01:45	1
OCDF	3000		130		pg/g	☼	12/15/16 06:24	12/24/16 01:45	1
Total TCDD	ND		13		pg/g	☼	12/15/16 06:24	12/24/16 01:45	1
Total TCDF	ND		13		pg/g	☼	12/15/16 06:24	12/24/16 01:45	1
Total PeCDD	ND		65		pg/g	☼	12/15/16 06:24	12/24/16 01:45	1
Total PeCDF	ND		65		pg/g	☼	12/15/16 06:24	12/24/16 01:45	1
Total HxCDD	980		65		pg/g	☼	12/15/16 06:24	12/24/16 01:45	1
Total HxCDF	960		65		pg/g	☼	12/15/16 06:24	12/24/16 01:45	1
Total HpCDD	9000		65		pg/g	☼	12/15/16 06:24	12/24/16 01:45	1
Total HpCDF	3100		65		pg/g	☼	12/15/16 06:24	12/24/16 01:45	1
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C-2,3,7,8-TCDD	121		40 - 135				12/15/16 06:24	12/24/16 01:45	1
13C-2,3,7,8-TCDF	63		40 - 135				12/15/16 06:24	12/24/16 01:45	1
13C-1,2,3,7,8-PeCDD	73		40 - 135				12/15/16 06:24	12/24/16 01:45	1
13C-1,2,3,7,8-PeCDF	66		40 - 135				12/15/16 06:24	12/24/16 01:45	1
13C-1,2,3,6,7,8-HxCDD	79		40 - 135				12/15/16 06:24	12/24/16 01:45	1
13C-1,2,3,4,7,8-HxCDF	62		40 - 135				12/15/16 06:24	12/24/16 01:45	1
13C-1,2,3,4,6,7,8-HpCDD	101		40 - 135				12/15/16 06:24	12/24/16 01:45	1
13C-1,2,3,4,6,7,8-HpCDF	83		40 - 135				12/15/16 06:24	12/24/16 01:45	1
13C-OCDD	114		40 - 135				12/15/16 06:24	12/24/16 01:45	1

Client Sample ID: HA-13 (0-6")

Lab Sample ID: 590-5185-22

Date Collected: 12/06/16 14:35

Matrix: Solid

Date Received: 12/09/16 12:10

Percent Solids: 82.1

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		170		pg/g	☼	12/15/16 06:24	12/24/16 02:31	1
2,3,7,8-TCDF	ND		170		pg/g	☼	12/15/16 06:24	12/24/16 02:31	1
1,2,3,7,8-PeCDD	ND		870		pg/g	☼	12/15/16 06:24	12/24/16 02:31	1
1,2,3,7,8-PeCDF	ND		870		pg/g	☼	12/15/16 06:24	12/24/16 02:31	1
2,3,4,7,8-PeCDF	ND		870		pg/g	☼	12/15/16 06:24	12/24/16 02:31	1
1,2,3,4,7,8-HxCDD	ND		870		pg/g	☼	12/15/16 06:24	12/24/16 02:31	1
1,2,3,6,7,8-HxCDD	970		870		pg/g	☼	12/15/16 06:24	12/24/16 02:31	1
1,2,3,7,8,9-HxCDD	990		870		pg/g	☼	12/15/16 06:24	12/24/16 02:31	1
1,2,3,4,7,8-HxCDF	ND		870		pg/g	☼	12/15/16 06:24	12/24/16 02:31	1
1,2,3,6,7,8-HxCDF	ND		870		pg/g	☼	12/15/16 06:24	12/24/16 02:31	1
1,2,3,7,8,9-HxCDF	ND		870		pg/g	☼	12/15/16 06:24	12/24/16 02:31	1
2,3,4,6,7,8-HxCDF	ND		870		pg/g	☼	12/15/16 06:24	12/24/16 02:31	1
1,2,3,4,6,7,8-HpCDD	37000		870		pg/g	☼	12/15/16 06:24	12/24/16 02:31	1
1,2,3,4,6,7,8-HpCDF	8600		870		pg/g	☼	12/15/16 06:24	12/24/16 02:31	1
1,2,3,4,7,8,9-HpCDF	ND		870		pg/g	☼	12/15/16 06:24	12/24/16 02:31	1
OCDD	330000		1700		pg/g	☼	12/15/16 06:24	12/24/16 02:31	1
OCDF	36000		1700		pg/g	☼	12/15/16 06:24	12/24/16 02:31	1
Total TCDD	ND		170		pg/g	☼	12/15/16 06:24	12/24/16 02:31	1
Total TCDF	ND		170		pg/g	☼	12/15/16 06:24	12/24/16 02:31	1
Total PeCDD	ND		870		pg/g	☼	12/15/16 06:24	12/24/16 02:31	1
Total PeCDF	ND		870		pg/g	☼	12/15/16 06:24	12/24/16 02:31	1
Total HxCDD	4900		870		pg/g	☼	12/15/16 06:24	12/24/16 02:31	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5185-1

Client Sample ID: HA-13 (0-6")

Lab Sample ID: 590-5185-22

Date Collected: 12/06/16 14:35

Matrix: Solid

Date Received: 12/09/16 12:10

Percent Solids: 82.1

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
Total HxCDF	4500		870		pg/g	☼	12/15/16 06:24	12/24/16 02:31	1
Total HpCDD	57000		870		pg/g	☼	12/15/16 06:24	12/24/16 02:31	1
Total HpCDF	25000		870		pg/g	☼	12/15/16 06:24	12/24/16 02:31	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	91		40 - 135				12/15/16 06:24	12/24/16 02:31	1
13C-2,3,7,8-TCDF	82		40 - 135				12/15/16 06:24	12/24/16 02:31	1
13C-1,2,3,7,8-PeCDD	98		40 - 135				12/15/16 06:24	12/24/16 02:31	1
13C-1,2,3,7,8-PeCDF	89		40 - 135				12/15/16 06:24	12/24/16 02:31	1
13C-1,2,3,6,7,8-HxCDD	95		40 - 135				12/15/16 06:24	12/24/16 02:31	1
13C-1,2,3,4,7,8-HxCDF	79		40 - 135				12/15/16 06:24	12/24/16 02:31	1
13C-1,2,3,4,6,7,8-HpCDD	111		40 - 135				12/15/16 06:24	12/24/16 02:31	1
13C-1,2,3,4,6,7,8-HpCDF	96		40 - 135				12/15/16 06:24	12/24/16 02:31	1
13C-OCDD	122		40 - 135				12/15/16 06:24	12/24/16 02:31	1

Client Sample ID: HA-32 (0-6")

Lab Sample ID: 590-5185-25

Date Collected: 12/06/16 15:00

Matrix: Solid

Date Received: 12/09/16 12:10

Percent Solids: 91.4

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		3.6		pg/g	☼	12/15/16 06:24	12/24/16 03:17	1
2,3,7,8-TCDF	ND		3.6		pg/g	☼	12/15/16 06:24	12/24/16 03:17	1
1,2,3,7,8-PeCDD	ND		18		pg/g	☼	12/15/16 06:24	12/24/16 03:17	1
1,2,3,7,8-PeCDF	ND		18		pg/g	☼	12/15/16 06:24	12/24/16 03:17	1
2,3,4,7,8-PeCDF	ND		18		pg/g	☼	12/15/16 06:24	12/24/16 03:17	1
1,2,3,4,7,8-HxCDD	ND		18		pg/g	☼	12/15/16 06:24	12/24/16 03:17	1
1,2,3,6,7,8-HxCDD	82		18		pg/g	☼	12/15/16 06:24	12/24/16 03:17	1
1,2,3,7,8,9-HxCDD	44		18		pg/g	☼	12/15/16 06:24	12/24/16 03:17	1
1,2,3,4,7,8-HxCDF	ND		18		pg/g	☼	12/15/16 06:24	12/24/16 03:17	1
1,2,3,6,7,8-HxCDF	ND		18		pg/g	☼	12/15/16 06:24	12/24/16 03:17	1
1,2,3,7,8,9-HxCDF	ND		18		pg/g	☼	12/15/16 06:24	12/24/16 03:17	1
2,3,4,6,7,8-HxCDF	ND		18		pg/g	☼	12/15/16 06:24	12/24/16 03:17	1
1,2,3,4,6,7,8-HpCDD	1900		18		pg/g	☼	12/15/16 06:24	12/24/16 03:17	1
1,2,3,4,6,7,8-HpCDF	250		18		pg/g	☼	12/15/16 06:24	12/24/16 03:17	1
1,2,3,4,7,8,9-HpCDF	ND		18		pg/g	☼	12/15/16 06:24	12/24/16 03:17	1
OCDD	15000	E	36		pg/g	☼	12/15/16 06:24	12/24/16 03:17	1
OCDF	670		36		pg/g	☼	12/15/16 06:24	12/24/16 03:17	1
Total TCDD	ND		3.6		pg/g	☼	12/15/16 06:24	12/24/16 03:17	1
Total TCDF	ND		3.6		pg/g	☼	12/15/16 06:24	12/24/16 03:17	1
Total PeCDD	ND		18		pg/g	☼	12/15/16 06:24	12/24/16 03:17	1
Total PeCDF	ND		18		pg/g	☼	12/15/16 06:24	12/24/16 03:17	1
Total HxCDD	380		18		pg/g	☼	12/15/16 06:24	12/24/16 03:17	1
Total HxCDF	240		18		pg/g	☼	12/15/16 06:24	12/24/16 03:17	1
Total HpCDD	3300		18		pg/g	☼	12/15/16 06:24	12/24/16 03:17	1
Total HpCDF	770		18		pg/g	☼	12/15/16 06:24	12/24/16 03:17	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	83		40 - 135				12/15/16 06:24	12/24/16 03:17	1
13C-2,3,7,8-TCDF	63		40 - 135				12/15/16 06:24	12/24/16 03:17	1
13C-1,2,3,7,8-PeCDD	72		40 - 135				12/15/16 06:24	12/24/16 03:17	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5185-1

Client Sample ID: HA-32 (0-6")

Date Collected: 12/06/16 15:00

Date Received: 12/09/16 12:10

Lab Sample ID: 590-5185-25

Matrix: Solid

Percent Solids: 91.4

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-1,2,3,7,8-PeCDF	66		40 - 135	12/15/16 06:24	12/24/16 03:17	1
13C-1,2,3,6,7,8-HxCDD	78		40 - 135	12/15/16 06:24	12/24/16 03:17	1
13C-1,2,3,4,7,8-HxCDF	61		40 - 135	12/15/16 06:24	12/24/16 03:17	1
13C-1,2,3,4,6,7,8-HpCDD	89		40 - 135	12/15/16 06:24	12/24/16 03:17	1
13C-1,2,3,4,6,7,8-HpCDF	74		40 - 135	12/15/16 06:24	12/24/16 03:17	1
13C-OCDD	102		40 - 135	12/15/16 06:24	12/24/16 03:17	1

Client Sample ID: HA-8 (0-6")

Date Collected: 12/06/16 15:30

Date Received: 12/09/16 12:10

Lab Sample ID: 590-5185-28

Matrix: Solid

Percent Solids: 85.9

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		15		pg/g	☼	12/15/16 06:24	12/23/16 23:28	1
2,3,7,8-TCDF	ND		15		pg/g	☼	12/15/16 06:24	12/23/16 23:28	1
1,2,3,7,8-PeCDD	ND		73		pg/g	☼	12/15/16 06:24	12/23/16 23:28	1
1,2,3,7,8-PeCDF	ND		73		pg/g	☼	12/15/16 06:24	12/23/16 23:28	1
2,3,4,7,8-PeCDF	ND		73		pg/g	☼	12/15/16 06:24	12/23/16 23:28	1
1,2,3,4,7,8-HxCDD	ND		73		pg/g	☼	12/15/16 06:24	12/23/16 23:28	1
1,2,3,6,7,8-HxCDD	120		73		pg/g	☼	12/15/16 06:24	12/23/16 23:28	1
1,2,3,7,8,9-HxCDD	ND		73		pg/g	☼	12/15/16 06:24	12/23/16 23:28	1
1,2,3,4,7,8-HxCDF	ND		73		pg/g	☼	12/15/16 06:24	12/23/16 23:28	1
1,2,3,6,7,8-HxCDF	ND		73		pg/g	☼	12/15/16 06:24	12/23/16 23:28	1
1,2,3,7,8,9-HxCDF	ND		73		pg/g	☼	12/15/16 06:24	12/23/16 23:28	1
2,3,4,6,7,8-HxCDF	ND		73		pg/g	☼	12/15/16 06:24	12/23/16 23:28	1
1,2,3,4,6,7,8-HpCDD	3400		73		pg/g	☼	12/15/16 06:24	12/23/16 23:28	1
1,2,3,4,6,7,8-HpCDF	530		73		pg/g	☼	12/15/16 06:24	12/23/16 23:28	1
1,2,3,4,7,8,9-HpCDF	ND		73		pg/g	☼	12/15/16 06:24	12/23/16 23:28	1
OCDD	36000		150		pg/g	☼	12/15/16 06:24	12/23/16 23:28	1
OCDF	2100		150		pg/g	☼	12/15/16 06:24	12/23/16 23:28	1
Total TCDD	ND		15		pg/g	☼	12/15/16 06:24	12/23/16 23:28	1
Total TCDF	ND		15		pg/g	☼	12/15/16 06:24	12/23/16 23:28	1
Total PeCDD	ND		73		pg/g	☼	12/15/16 06:24	12/23/16 23:28	1
Total PeCDF	ND		73		pg/g	☼	12/15/16 06:24	12/23/16 23:28	1
Total HxCDD	410		73		pg/g	☼	12/15/16 06:24	12/23/16 23:28	1
Total HxCDF	400		73		pg/g	☼	12/15/16 06:24	12/23/16 23:28	1
Total HpCDD	5800		73		pg/g	☼	12/15/16 06:24	12/23/16 23:28	1
Total HpCDF	1800		73		pg/g	☼	12/15/16 06:24	12/23/16 23:28	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	81		40 - 135	12/15/16 06:24	12/23/16 23:28	1
13C-2,3,7,8-TCDF	62		40 - 135	12/15/16 06:24	12/23/16 23:28	1
13C-1,2,3,7,8-PeCDD	76		40 - 135	12/15/16 06:24	12/23/16 23:28	1
13C-1,2,3,7,8-PeCDF	70		40 - 135	12/15/16 06:24	12/23/16 23:28	1
13C-1,2,3,6,7,8-HxCDD	74		40 - 135	12/15/16 06:24	12/23/16 23:28	1
13C-1,2,3,4,7,8-HxCDF	67		40 - 135	12/15/16 06:24	12/23/16 23:28	1
13C-1,2,3,4,6,7,8-HpCDD	83		40 - 135	12/15/16 06:24	12/23/16 23:28	1
13C-1,2,3,4,6,7,8-HpCDF	79		40 - 135	12/15/16 06:24	12/23/16 23:28	1
13C-OCDD	86		40 - 135	12/15/16 06:24	12/23/16 23:28	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5185-1

Client Sample ID: HA-6 (0-6")

Lab Sample ID: 590-5185-31

Date Collected: 12/06/16 15:45

Matrix: Solid

Date Received: 12/09/16 12:10

Percent Solids: 87.4

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		110		pg/g	☼	12/15/16 06:24	12/24/16 00:14	1
2,3,7,8-TCDF	ND		110		pg/g	☼	12/15/16 06:24	12/24/16 00:14	1
1,2,3,7,8-PeCDD	ND		570		pg/g	☼	12/15/16 06:24	12/24/16 00:14	1
1,2,3,7,8-PeCDF	ND		570		pg/g	☼	12/15/16 06:24	12/24/16 00:14	1
2,3,4,7,8-PeCDF	ND		570		pg/g	☼	12/15/16 06:24	12/24/16 00:14	1
1,2,3,4,7,8-HxCDD	ND		570		pg/g	☼	12/15/16 06:24	12/24/16 00:14	1
1,2,3,6,7,8-HxCDD	1200		570		pg/g	☼	12/15/16 06:24	12/24/16 00:14	1
1,2,3,7,8,9-HxCDD	ND		570		pg/g	☼	12/15/16 06:24	12/24/16 00:14	1
1,2,3,4,7,8-HxCDF	ND		570		pg/g	☼	12/15/16 06:24	12/24/16 00:14	1
1,2,3,6,7,8-HxCDF	ND		570		pg/g	☼	12/15/16 06:24	12/24/16 00:14	1
1,2,3,7,8,9-HxCDF	ND		570		pg/g	☼	12/15/16 06:24	12/24/16 00:14	1
2,3,4,6,7,8-HxCDF	ND		570		pg/g	☼	12/15/16 06:24	12/24/16 00:14	1
1,2,3,4,6,7,8-HpCDD	33000		570		pg/g	☼	12/15/16 06:24	12/24/16 00:14	1
1,2,3,4,6,7,8-HpCDF	3300		570		pg/g	☼	12/15/16 06:24	12/24/16 00:14	1
1,2,3,4,7,8,9-HpCDF	ND		570		pg/g	☼	12/15/16 06:24	12/24/16 00:14	1
OCDD	310000		1100		pg/g	☼	12/15/16 06:24	12/24/16 00:14	1
OCDF	11000		1100		pg/g	☼	12/15/16 06:24	12/24/16 00:14	1
Total TCDD	ND		110		pg/g	☼	12/15/16 06:24	12/24/16 00:14	1
Total TCDF	ND		110		pg/g	☼	12/15/16 06:24	12/24/16 00:14	1
Total PeCDD	ND		570		pg/g	☼	12/15/16 06:24	12/24/16 00:14	1
Total PeCDF	ND		570		pg/g	☼	12/15/16 06:24	12/24/16 00:14	1
Total HxCDD	4100		570		pg/g	☼	12/15/16 06:24	12/24/16 00:14	1
Total HxCDF	2900		570		pg/g	☼	12/15/16 06:24	12/24/16 00:14	1
Total HpCDD	57000		570		pg/g	☼	12/15/16 06:24	12/24/16 00:14	1
Total HpCDF	11000		570		pg/g	☼	12/15/16 06:24	12/24/16 00:14	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	97		40 - 135	12/15/16 06:24	12/24/16 00:14	1
13C-2,3,7,8-TCDF	92		40 - 135	12/15/16 06:24	12/24/16 00:14	1
13C-1,2,3,7,8-PeCDD	111		40 - 135	12/15/16 06:24	12/24/16 00:14	1
13C-1,2,3,7,8-PeCDF	98		40 - 135	12/15/16 06:24	12/24/16 00:14	1
13C-1,2,3,6,7,8-HxCDD	101		40 - 135	12/15/16 06:24	12/24/16 00:14	1
13C-1,2,3,4,7,8-HxCDF	101		40 - 135	12/15/16 06:24	12/24/16 00:14	1
13C-1,2,3,4,6,7,8-HpCDD	107		40 - 135	12/15/16 06:24	12/24/16 00:14	1
13C-1,2,3,4,6,7,8-HpCDF	108		40 - 135	12/15/16 06:24	12/24/16 00:14	1
13C-OCDD	115		40 - 135	12/15/16 06:24	12/24/16 00:14	1

Client Sample ID: HA-5 (0-6")

Lab Sample ID: 590-5185-34

Date Collected: 12/06/16 16:05

Matrix: Solid

Date Received: 12/09/16 12:10

Percent Solids: 85.6

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		19		pg/g	☼	12/15/16 06:24	12/24/16 01:00	1
2,3,7,8-TCDF	ND		19		pg/g	☼	12/15/16 06:24	12/24/16 01:00	1
1,2,3,7,8-PeCDD	ND		97		pg/g	☼	12/15/16 06:24	12/24/16 01:00	1
1,2,3,7,8-PeCDF	ND		97		pg/g	☼	12/15/16 06:24	12/24/16 01:00	1
2,3,4,7,8-PeCDF	ND		97		pg/g	☼	12/15/16 06:24	12/24/16 01:00	1
1,2,3,4,7,8-HxCDD	ND		97		pg/g	☼	12/15/16 06:24	12/24/16 01:00	1
1,2,3,6,7,8-HxCDD	280		97		pg/g	☼	12/15/16 06:24	12/24/16 01:00	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5185-1

Client Sample ID: HA-5 (0-6")

Lab Sample ID: 590-5185-34

Date Collected: 12/06/16 16:05

Matrix: Solid

Date Received: 12/09/16 12:10

Percent Solids: 85.6

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,7,8,9-HxCDD	150		97		pg/g	☼	12/15/16 06:24	12/24/16 01:00	1
1,2,3,4,7,8-HxCDF	ND		97		pg/g	☼	12/15/16 06:24	12/24/16 01:00	1
1,2,3,6,7,8-HxCDF	ND		97		pg/g	☼	12/15/16 06:24	12/24/16 01:00	1
1,2,3,7,8,9-HxCDF	ND		97		pg/g	☼	12/15/16 06:24	12/24/16 01:00	1
2,3,4,6,7,8-HxCDF	ND		97		pg/g	☼	12/15/16 06:24	12/24/16 01:00	1
1,2,3,4,6,7,8-HpCDD	7000		97		pg/g	☼	12/15/16 06:24	12/24/16 01:00	1
1,2,3,4,6,7,8-HpCDF	880		97		pg/g	☼	12/15/16 06:24	12/24/16 01:00	1
1,2,3,4,7,8,9-HpCDF	ND		97		pg/g	☼	12/15/16 06:24	12/24/16 01:00	1
OCDD	64000		190		pg/g	☼	12/15/16 06:24	12/24/16 01:00	1
OCDF	2800		190		pg/g	☼	12/15/16 06:24	12/24/16 01:00	1
Total TCDD	ND		19		pg/g	☼	12/15/16 06:24	12/24/16 01:00	1
Total TCDF	ND		19		pg/g	☼	12/15/16 06:24	12/24/16 01:00	1
Total PeCDD	ND		97		pg/g	☼	12/15/16 06:24	12/24/16 01:00	1
Total PeCDF	ND		97		pg/g	☼	12/15/16 06:24	12/24/16 01:00	1
Total HxCDD	1200		97		pg/g	☼	12/15/16 06:24	12/24/16 01:00	1
Total HxCDF	830		97		pg/g	☼	12/15/16 06:24	12/24/16 01:00	1
Total HpCDD	12000		97		pg/g	☼	12/15/16 06:24	12/24/16 01:00	1
Total HpCDF	2800		97		pg/g	☼	12/15/16 06:24	12/24/16 01:00	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	81		40 - 135				12/15/16 06:24	12/24/16 01:00	1
13C-2,3,7,8-TCDF	58		40 - 135				12/15/16 06:24	12/24/16 01:00	1
13C-1,2,3,7,8-PeCDD	65		40 - 135				12/15/16 06:24	12/24/16 01:00	1
13C-1,2,3,7,8-PeCDF	60		40 - 135				12/15/16 06:24	12/24/16 01:00	1
13C-1,2,3,6,7,8-HxCDD	62		40 - 135				12/15/16 06:24	12/24/16 01:00	1
13C-1,2,3,4,7,8-HxCDF	62		40 - 135				12/15/16 06:24	12/24/16 01:00	1
13C-1,2,3,4,6,7,8-HpCDD	74		40 - 135				12/15/16 06:24	12/24/16 01:00	1
13C-1,2,3,4,6,7,8-HpCDF	67		40 - 135				12/15/16 06:24	12/24/16 01:00	1
13C-OCDD	75		40 - 135				12/15/16 06:24	12/24/16 01:00	1

Client Sample ID: HA-7 (0-6")

Lab Sample ID: 590-5185-37

Date Collected: 12/06/16 16:20

Matrix: Solid

Date Received: 12/09/16 12:10

Percent Solids: 76.1

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		26		pg/g	☼	12/15/16 06:24	12/24/16 01:46	1
2,3,7,8-TCDF	ND		26		pg/g	☼	12/15/16 06:24	12/24/16 01:46	1
1,2,3,7,8-PeCDD	ND		130		pg/g	☼	12/15/16 06:24	12/24/16 01:46	1
1,2,3,7,8-PeCDF	ND		130		pg/g	☼	12/15/16 06:24	12/24/16 01:46	1
2,3,4,7,8-PeCDF	ND		130		pg/g	☼	12/15/16 06:24	12/24/16 01:46	1
1,2,3,4,7,8-HxCDD	ND		130		pg/g	☼	12/15/16 06:24	12/24/16 01:46	1
1,2,3,6,7,8-HxCDD	220		130		pg/g	☼	12/15/16 06:24	12/24/16 01:46	1
1,2,3,7,8,9-HxCDD	ND		130		pg/g	☼	12/15/16 06:24	12/24/16 01:46	1
1,2,3,4,7,8-HxCDF	ND		130		pg/g	☼	12/15/16 06:24	12/24/16 01:46	1
1,2,3,6,7,8-HxCDF	ND		130		pg/g	☼	12/15/16 06:24	12/24/16 01:46	1
1,2,3,7,8,9-HxCDF	ND		130		pg/g	☼	12/15/16 06:24	12/24/16 01:46	1
2,3,4,6,7,8-HxCDF	ND		130		pg/g	☼	12/15/16 06:24	12/24/16 01:46	1
1,2,3,4,6,7,8-HpCDD	6300		130		pg/g	☼	12/15/16 06:24	12/24/16 01:46	1
1,2,3,4,6,7,8-HpCDF	710		130		pg/g	☼	12/15/16 06:24	12/24/16 01:46	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5185-1

Client Sample ID: HA-7 (0-6")

Lab Sample ID: 590-5185-37

Date Collected: 12/06/16 16:20

Matrix: Solid

Date Received: 12/09/16 12:10

Percent Solids: 76.1

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,7,8,9-HpCDF	ND		130		pg/g	☼	12/15/16 06:24	12/24/16 01:46	1
OCDD	61000		260		pg/g	☼	12/15/16 06:24	12/24/16 01:46	1
OCDF	2600		260		pg/g	☼	12/15/16 06:24	12/24/16 01:46	1
Total TCDD	ND		26		pg/g	☼	12/15/16 06:24	12/24/16 01:46	1
Total TCDF	ND		26		pg/g	☼	12/15/16 06:24	12/24/16 01:46	1
Total PeCDD	ND		130		pg/g	☼	12/15/16 06:24	12/24/16 01:46	1
Total PeCDF	ND		130		pg/g	☼	12/15/16 06:24	12/24/16 01:46	1
Total HxCDD	790		130		pg/g	☼	12/15/16 06:24	12/24/16 01:46	1
Total HxCDF	580		130		pg/g	☼	12/15/16 06:24	12/24/16 01:46	1
Total HpCDD	11000		130		pg/g	☼	12/15/16 06:24	12/24/16 01:46	1
Total HpCDF	2400		130		pg/g	☼	12/15/16 06:24	12/24/16 01:46	1
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C-2,3,7,8-TCDD	93		40 - 135				12/15/16 06:24	12/24/16 01:46	1
13C-2,3,7,8-TCDF	90		40 - 135				12/15/16 06:24	12/24/16 01:46	1
13C-1,2,3,7,8-PeCDD	102		40 - 135				12/15/16 06:24	12/24/16 01:46	1
13C-1,2,3,7,8-PeCDF	96		40 - 135				12/15/16 06:24	12/24/16 01:46	1
13C-1,2,3,6,7,8-HxCDD	99		40 - 135				12/15/16 06:24	12/24/16 01:46	1
13C-1,2,3,4,7,8-HxCDF	99		40 - 135				12/15/16 06:24	12/24/16 01:46	1
13C-1,2,3,4,6,7,8-HpCDD	103		40 - 135				12/15/16 06:24	12/24/16 01:46	1
13C-1,2,3,4,6,7,8-HpCDF	104		40 - 135				12/15/16 06:24	12/24/16 01:46	1
13C-OCDD	110		40 - 135				12/15/16 06:24	12/24/16 01:46	1

Client Sample ID: HA-9 (0-6")

Lab Sample ID: 590-5185-40

Date Collected: 12/07/16 08:30

Matrix: Solid

Date Received: 12/09/16 12:10

Percent Solids: 83.6

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		30		pg/g	☼	12/15/16 06:24	12/24/16 02:32	1
2,3,7,8-TCDF	ND		30		pg/g	☼	12/15/16 06:24	12/24/16 02:32	1
1,2,3,7,8-PeCDD	ND		150		pg/g	☼	12/15/16 06:24	12/24/16 02:32	1
1,2,3,7,8-PeCDF	ND		150		pg/g	☼	12/15/16 06:24	12/24/16 02:32	1
2,3,4,7,8-PeCDF	ND		150		pg/g	☼	12/15/16 06:24	12/24/16 02:32	1
1,2,3,4,7,8-HxCDD	ND		150		pg/g	☼	12/15/16 06:24	12/24/16 02:32	1
1,2,3,6,7,8-HxCDD	390		150		pg/g	☼	12/15/16 06:24	12/24/16 02:32	1
1,2,3,7,8,9-HxCDD	180		150		pg/g	☼	12/15/16 06:24	12/24/16 02:32	1
1,2,3,4,7,8-HxCDF	ND		150		pg/g	☼	12/15/16 06:24	12/24/16 02:32	1
1,2,3,6,7,8-HxCDF	ND		150		pg/g	☼	12/15/16 06:24	12/24/16 02:32	1
1,2,3,7,8,9-HxCDF	ND		150		pg/g	☼	12/15/16 06:24	12/24/16 02:32	1
2,3,4,6,7,8-HxCDF	ND		150		pg/g	☼	12/15/16 06:24	12/24/16 02:32	1
1,2,3,4,6,7,8-HpCDD	10000		150		pg/g	☼	12/15/16 06:24	12/24/16 02:32	1
1,2,3,4,6,7,8-HpCDF	1100		150		pg/g	☼	12/15/16 06:24	12/24/16 02:32	1
1,2,3,4,7,8,9-HpCDF	ND		150		pg/g	☼	12/15/16 06:24	12/24/16 02:32	1
OCDD	91000		300		pg/g	☼	12/15/16 06:24	12/24/16 02:32	1
OCDF	3500		300		pg/g	☼	12/15/16 06:24	12/24/16 02:32	1
Total TCDD	ND		30		pg/g	☼	12/15/16 06:24	12/24/16 02:32	1
Total TCDF	ND		30		pg/g	☼	12/15/16 06:24	12/24/16 02:32	1
Total PeCDD	ND		150		pg/g	☼	12/15/16 06:24	12/24/16 02:32	1
Total PeCDF	ND		150		pg/g	☼	12/15/16 06:24	12/24/16 02:32	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5185-1

Client Sample ID: HA-9 (0-6")

Date Collected: 12/07/16 08:30

Date Received: 12/09/16 12:10

Lab Sample ID: 590-5185-40

Matrix: Solid

Percent Solids: 83.6

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
Total HxCDD	1500		150		pg/g	☼	12/15/16 06:24	12/24/16 02:32	1
Total HxCDF	940		150		pg/g	☼	12/15/16 06:24	12/24/16 02:32	1
Total HpCDD	18000		150		pg/g	☼	12/15/16 06:24	12/24/16 02:32	1
Total HpCDF	3600		150		pg/g	☼	12/15/16 06:24	12/24/16 02:32	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	96		40 - 135				12/15/16 06:24	12/24/16 02:32	1
13C-2,3,7,8-TCDF	95		40 - 135				12/15/16 06:24	12/24/16 02:32	1
13C-1,2,3,7,8-PeCDD	108		40 - 135				12/15/16 06:24	12/24/16 02:32	1
13C-1,2,3,7,8-PeCDF	100		40 - 135				12/15/16 06:24	12/24/16 02:32	1
13C-1,2,3,6,7,8-HxCDD	105		40 - 135				12/15/16 06:24	12/24/16 02:32	1
13C-1,2,3,4,7,8-HxCDF	105		40 - 135				12/15/16 06:24	12/24/16 02:32	1
13C-1,2,3,4,6,7,8-HpCDD	113		40 - 135				12/15/16 06:24	12/24/16 02:32	1
13C-1,2,3,4,6,7,8-HpCDF	113		40 - 135				12/15/16 06:24	12/24/16 02:32	1
13C-OCDD	123		40 - 135				12/15/16 06:24	12/24/16 02:32	1

Client Sample ID: HA-15 (0-6")

Date Collected: 12/07/16 09:10

Date Received: 12/09/16 12:10

Lab Sample ID: 590-5185-43

Matrix: Solid

Percent Solids: 70.9

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		14		mg/Kg	☼	12/13/16 10:05	12/13/16 12:10	1
Residual Range Organics (RRO) (C25-C36)	66		35		mg/Kg	☼	12/13/16 10:05	12/13/16 12:10	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	102		50 - 150				12/13/16 10:05	12/13/16 12:10	1
n-Triacontane-d62	103		50 - 150				12/13/16 10:05	12/13/16 12:10	1

Client Sample ID: HA-16 (0-6")

Date Collected: 12/07/16 09:30

Date Received: 12/09/16 12:10

Lab Sample ID: 590-5185-46

Matrix: Solid

Percent Solids: 77.5

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		13		mg/Kg	☼	12/13/16 10:05	12/13/16 12:28	1
Residual Range Organics (RRO) (C25-C36)	ND		32		mg/Kg	☼	12/13/16 10:05	12/13/16 12:28	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	95		50 - 150				12/13/16 10:05	12/13/16 12:28	1
n-Triacontane-d62	98		50 - 150				12/13/16 10:05	12/13/16 12:28	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5185-1

Client Sample ID: HA-17 (0-6")

Lab Sample ID: 590-5185-49

Date Collected: 12/07/16 09:50

Matrix: Solid

Date Received: 12/09/16 12:10

Percent Solids: 70.8

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	51		14		mg/Kg	☼	12/13/16 10:05	12/13/16 12:45	1
Residual Range Organics (RRO) (C25-C36)	330		35		mg/Kg	☼	12/13/16 10:05	12/13/16 12:45	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o-Terphenyl</i>	96		50 - 150				12/13/16 10:05	12/13/16 12:45	1
<i>n-Triacontane-d62</i>	97		50 - 150				12/13/16 10:05	12/13/16 12:45	1

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		47		pg/g	☼	12/15/16 06:24	12/24/16 03:18	1
2,3,7,8-TCDF	ND		47		pg/g	☼	12/15/16 06:24	12/24/16 03:18	1
1,2,3,7,8-PeCDD	ND		230		pg/g	☼	12/15/16 06:24	12/24/16 03:18	1
1,2,3,7,8-PeCDF	ND		230		pg/g	☼	12/15/16 06:24	12/24/16 03:18	1
2,3,4,7,8-PeCDF	ND		230		pg/g	☼	12/15/16 06:24	12/24/16 03:18	1
1,2,3,4,7,8-HxCDD	ND		230		pg/g	☼	12/15/16 06:24	12/24/16 03:18	1
1,2,3,6,7,8-HxCDD	850		230		pg/g	☼	12/15/16 06:24	12/24/16 03:18	1
1,2,3,7,8,9-HxCDD	510		230		pg/g	☼	12/15/16 06:24	12/24/16 03:18	1
1,2,3,4,7,8-HxCDF	ND		230		pg/g	☼	12/15/16 06:24	12/24/16 03:18	1
1,2,3,6,7,8-HxCDF	ND		230		pg/g	☼	12/15/16 06:24	12/24/16 03:18	1
1,2,3,7,8,9-HxCDF	ND		230		pg/g	☼	12/15/16 06:24	12/24/16 03:18	1
2,3,4,6,7,8-HxCDF	ND		230		pg/g	☼	12/15/16 06:24	12/24/16 03:18	1
1,2,3,4,6,7,8-HpCDD	21000		230		pg/g	☼	12/15/16 06:24	12/24/16 03:18	1
1,2,3,4,6,7,8-HpCDF	2300		230		pg/g	☼	12/15/16 06:24	12/24/16 03:18	1
1,2,3,4,7,8,9-HpCDF	ND		230		pg/g	☼	12/15/16 06:24	12/24/16 03:18	1
OCDD	160000		470		pg/g	☼	12/15/16 06:24	12/24/16 03:18	1
OCDF	5800		470		pg/g	☼	12/15/16 06:24	12/24/16 03:18	1
Total TCDD	ND		47		pg/g	☼	12/15/16 06:24	12/24/16 03:18	1
Total TCDF	ND		47		pg/g	☼	12/15/16 06:24	12/24/16 03:18	1
Total PeCDD	ND		230		pg/g	☼	12/15/16 06:24	12/24/16 03:18	1
Total PeCDF	ND		230		pg/g	☼	12/15/16 06:24	12/24/16 03:18	1
Total HxCDD	3600		230		pg/g	☼	12/15/16 06:24	12/24/16 03:18	1
Total HxCDF	2300		230		pg/g	☼	12/15/16 06:24	12/24/16 03:18	1
Total HpCDD	35000		230		pg/g	☼	12/15/16 06:24	12/24/16 03:18	1
Total HpCDF	6500		230		pg/g	☼	12/15/16 06:24	12/24/16 03:18	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>13C-2,3,7,8-TCDD</i>	94		40 - 135				12/15/16 06:24	12/24/16 03:18	1
<i>13C-2,3,7,8-TCDF</i>	92		40 - 135				12/15/16 06:24	12/24/16 03:18	1
<i>13C-1,2,3,7,8-PeCDD</i>	104		40 - 135				12/15/16 06:24	12/24/16 03:18	1
<i>13C-1,2,3,7,8-PeCDF</i>	95		40 - 135				12/15/16 06:24	12/24/16 03:18	1
<i>13C-1,2,3,6,7,8-HxCDD</i>	100		40 - 135				12/15/16 06:24	12/24/16 03:18	1
<i>13C-1,2,3,4,7,8-HxCDF</i>	99		40 - 135				12/15/16 06:24	12/24/16 03:18	1
<i>13C-1,2,3,4,6,7,8-HpCDD</i>	106		40 - 135				12/15/16 06:24	12/24/16 03:18	1
<i>13C-1,2,3,4,6,7,8-HpCDF</i>	105		40 - 135				12/15/16 06:24	12/24/16 03:18	1
<i>13C-OCDD</i>	115		40 - 135				12/15/16 06:24	12/24/16 03:18	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5185-1

Client Sample ID: HA-35 (0-6")

Date Collected: 12/07/16 10:10

Date Received: 12/09/16 12:10

Lab Sample ID: 590-5185-52

Matrix: Solid

Percent Solids: 46.9

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	480		150	24	ug/Kg	☼	12/15/16 09:22	12/15/16 17:19	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	74		38 - 123				12/15/16 09:22	12/15/16 17:19	1
Nitrobenzene-d5	63		23 - 120				12/15/16 09:22	12/15/16 17:19	1
p-Terphenyl-d14	101		68 - 136				12/15/16 09:22	12/15/16 17:19	1

Client Sample ID: HA-24 (0-6")

Date Collected: 12/07/16 10:35

Date Received: 12/09/16 12:10

Lab Sample ID: 590-5185-55

Matrix: Solid

Percent Solids: 72.8

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	3700		65	11	ug/Kg	☼	12/15/16 09:22	12/15/16 17:46	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	66		38 - 123				12/15/16 09:22	12/15/16 17:46	1
Nitrobenzene-d5	55		23 - 120				12/15/16 09:22	12/15/16 17:46	1
p-Terphenyl-d14	88		68 - 136				12/15/16 09:22	12/15/16 17:46	1

Client Sample ID: HA-25 (0-6")

Date Collected: 12/07/16 10:50

Date Received: 12/09/16 12:10

Lab Sample ID: 590-5185-58

Matrix: Solid

Percent Solids: 87.5

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	2000		56	9.1	ug/Kg	☼	12/15/16 09:22	12/15/16 18:12	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	57		38 - 123				12/15/16 09:22	12/15/16 18:12	1
Nitrobenzene-d5	39		23 - 120				12/15/16 09:22	12/15/16 18:12	1
p-Terphenyl-d14	86		68 - 136				12/15/16 09:22	12/15/16 18:12	1

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		57		pg/g	☼	12/15/16 06:24	12/24/16 04:04	1
2,3,7,8-TCDF	ND		57		pg/g	☼	12/15/16 06:24	12/24/16 04:04	1
1,2,3,7,8-PeCDD	ND		280		pg/g	☼	12/15/16 06:24	12/24/16 04:04	1
1,2,3,7,8-PeCDF	ND		280		pg/g	☼	12/15/16 06:24	12/24/16 04:04	1
2,3,4,7,8-PeCDF	ND		280		pg/g	☼	12/15/16 06:24	12/24/16 04:04	1
1,2,3,4,7,8-HxCDD	ND		280		pg/g	☼	12/15/16 06:24	12/24/16 04:04	1
1,2,3,6,7,8-HxCDD	490		280		pg/g	☼	12/15/16 06:24	12/24/16 04:04	1
1,2,3,7,8,9-HxCDD	320		280		pg/g	☼	12/15/16 06:24	12/24/16 04:04	1
1,2,3,4,7,8-HxCDF	ND		280		pg/g	☼	12/15/16 06:24	12/24/16 04:04	1
1,2,3,6,7,8-HxCDF	ND		280		pg/g	☼	12/15/16 06:24	12/24/16 04:04	1
1,2,3,7,8,9-HxCDF	ND		280		pg/g	☼	12/15/16 06:24	12/24/16 04:04	1
2,3,4,6,7,8-HxCDF	ND		280		pg/g	☼	12/15/16 06:24	12/24/16 04:04	1
1,2,3,4,6,7,8-HpCDD	17000		280		pg/g	☼	12/15/16 06:24	12/24/16 04:04	1
1,2,3,4,6,7,8-HpCDF	2700		280		pg/g	☼	12/15/16 06:24	12/24/16 04:04	1
1,2,3,4,7,8,9-HpCDF	ND		280		pg/g	☼	12/15/16 06:24	12/24/16 04:04	1
OCDD	180000		570		pg/g	☼	12/15/16 06:24	12/24/16 04:04	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5185-1

Client Sample ID: HA-25 (0-6")

Lab Sample ID: 590-5185-58

Date Collected: 12/07/16 10:50

Matrix: Solid

Date Received: 12/09/16 12:10

Percent Solids: 87.5

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
OCDF	13000		570		pg/g	☼	12/15/16 06:24	12/24/16 04:04	1
Total TCDD	ND		57		pg/g	☼	12/15/16 06:24	12/24/16 04:04	1
Total TCDF	ND		57		pg/g	☼	12/15/16 06:24	12/24/16 04:04	1
Total PeCDD	ND		280		pg/g	☼	12/15/16 06:24	12/24/16 04:04	1
Total PeCDF	ND		280		pg/g	☼	12/15/16 06:24	12/24/16 04:04	1
Total HxCDD	2200		280		pg/g	☼	12/15/16 06:24	12/24/16 04:04	1
Total HxCDF	1500		280		pg/g	☼	12/15/16 06:24	12/24/16 04:04	1
Total HpCDD	28000		280		pg/g	☼	12/15/16 06:24	12/24/16 04:04	1
Total HpCDF	8800		280		pg/g	☼	12/15/16 06:24	12/24/16 04:04	1
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C-2,3,7,8-TCDD	94		40 - 135				12/15/16 06:24	12/24/16 04:04	1
13C-2,3,7,8-TCDF	92		40 - 135				12/15/16 06:24	12/24/16 04:04	1
13C-1,2,3,7,8-PeCDD	104		40 - 135				12/15/16 06:24	12/24/16 04:04	1
13C-1,2,3,7,8-PeCDF	97		40 - 135				12/15/16 06:24	12/24/16 04:04	1
13C-1,2,3,6,7,8-HxCDD	105		40 - 135				12/15/16 06:24	12/24/16 04:04	1
13C-1,2,3,4,7,8-HxCDF	104		40 - 135				12/15/16 06:24	12/24/16 04:04	1
13C-1,2,3,4,6,7,8-HpCDD	107		40 - 135				12/15/16 06:24	12/24/16 04:04	1
13C-1,2,3,4,6,7,8-HpCDF	109		40 - 135				12/15/16 06:24	12/24/16 04:04	1
13C-OCDD	117		40 - 135				12/15/16 06:24	12/24/16 04:04	1

Client Sample ID: HA-12 (0-6")

Lab Sample ID: 590-5185-61

Date Collected: 12/07/16 11:55

Matrix: Solid

Date Received: 12/09/16 12:10

Percent Solids: 24.5

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		4.5		pg/g	☼	12/15/16 06:24	12/24/16 04:50	1
2,3,7,8-TCDF	ND		4.5		pg/g	☼	12/15/16 06:24	12/24/16 04:50	1
1,2,3,7,8-PeCDD	ND		23		pg/g	☼	12/15/16 06:24	12/24/16 04:50	1
1,2,3,7,8-PeCDF	ND		23		pg/g	☼	12/15/16 06:24	12/24/16 04:50	1
2,3,4,7,8-PeCDF	ND		23		pg/g	☼	12/15/16 06:24	12/24/16 04:50	1
1,2,3,4,7,8-HxCDD	ND		23		pg/g	☼	12/15/16 06:24	12/24/16 04:50	1
1,2,3,6,7,8-HxCDD	89		23		pg/g	☼	12/15/16 06:24	12/24/16 04:50	1
1,2,3,7,8,9-HxCDD	46		23		pg/g	☼	12/15/16 06:24	12/24/16 04:50	1
1,2,3,4,7,8-HxCDF	ND		23		pg/g	☼	12/15/16 06:24	12/24/16 04:50	1
1,2,3,6,7,8-HxCDF	ND		23		pg/g	☼	12/15/16 06:24	12/24/16 04:50	1
1,2,3,7,8,9-HxCDF	ND		23		pg/g	☼	12/15/16 06:24	12/24/16 04:50	1
2,3,4,6,7,8-HxCDF	ND		23		pg/g	☼	12/15/16 06:24	12/24/16 04:50	1
1,2,3,4,6,7,8-HpCDD	2200		23		pg/g	☼	12/15/16 06:24	12/24/16 04:50	1
1,2,3,4,6,7,8-HpCDF	320		23		pg/g	☼	12/15/16 06:24	12/24/16 04:50	1
1,2,3,4,7,8,9-HpCDF	ND		23		pg/g	☼	12/15/16 06:24	12/24/16 04:50	1
OCDD	17000		45		pg/g	☼	12/15/16 06:24	12/24/16 04:50	1
OCDF	1000		45		pg/g	☼	12/15/16 06:24	12/24/16 04:50	1
Total TCDD	ND		4.5		pg/g	☼	12/15/16 06:24	12/24/16 04:50	1
Total TCDF	ND		4.5		pg/g	☼	12/15/16 06:24	12/24/16 04:50	1
Total PeCDD	ND		23		pg/g	☼	12/15/16 06:24	12/24/16 04:50	1
Total PeCDF	23		23		pg/g	☼	12/15/16 06:24	12/24/16 04:50	1
Total HxCDD	450		23		pg/g	☼	12/15/16 06:24	12/24/16 04:50	1
Total HxCDF	270		23		pg/g	☼	12/15/16 06:24	12/24/16 04:50	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5185-1

Client Sample ID: HA-12 (0-6")

Lab Sample ID: 590-5185-61

Date Collected: 12/07/16 11:55

Matrix: Solid

Date Received: 12/09/16 12:10

Percent Solids: 24.5

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
Total HpCDD	3700		23		pg/g	☼	12/15/16 06:24	12/24/16 04:50	1
Total HpCDF	920		23		pg/g	☼	12/15/16 06:24	12/24/16 04:50	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	78		40 - 135				12/15/16 06:24	12/24/16 04:50	1
13C-2,3,7,8-TCDF	75		40 - 135				12/15/16 06:24	12/24/16 04:50	1
13C-1,2,3,7,8-PeCDD	82		40 - 135				12/15/16 06:24	12/24/16 04:50	1
13C-1,2,3,7,8-PeCDF	76		40 - 135				12/15/16 06:24	12/24/16 04:50	1
13C-1,2,3,6,7,8-HxCDD	83		40 - 135				12/15/16 06:24	12/24/16 04:50	1
13C-1,2,3,4,7,8-HxCDF	87		40 - 135				12/15/16 06:24	12/24/16 04:50	1
13C-1,2,3,4,6,7,8-HpCDD	91		40 - 135				12/15/16 06:24	12/24/16 04:50	1
13C-1,2,3,4,6,7,8-HpCDF	93		40 - 135				12/15/16 06:24	12/24/16 04:50	1
13C-OCDD	96		40 - 135				12/15/16 06:24	12/24/16 04:50	1

Client Sample ID: HA-38 (0-6")

Lab Sample ID: 590-5185-64

Date Collected: 12/07/16 12:10

Matrix: Solid

Date Received: 12/09/16 12:10

Percent Solids: 22.5

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		4.4		pg/g	☼	12/15/16 06:24	12/24/16 05:36	1
2,3,7,8-TCDF	ND		4.4		pg/g	☼	12/15/16 06:24	12/24/16 05:36	1
1,2,3,7,8-PeCDD	ND		22		pg/g	☼	12/15/16 06:24	12/24/16 05:36	1
1,2,3,7,8-PeCDF	ND		22		pg/g	☼	12/15/16 06:24	12/24/16 05:36	1
2,3,4,7,8-PeCDF	ND		22		pg/g	☼	12/15/16 06:24	12/24/16 05:36	1
1,2,3,4,7,8-HxCDD	ND		22		pg/g	☼	12/15/16 06:24	12/24/16 05:36	1
1,2,3,6,7,8-HxCDD	64		22		pg/g	☼	12/15/16 06:24	12/24/16 05:36	1
1,2,3,7,8,9-HxCDD	44		22		pg/g	☼	12/15/16 06:24	12/24/16 05:36	1
1,2,3,4,7,8-HxCDF	ND		22		pg/g	☼	12/15/16 06:24	12/24/16 05:36	1
1,2,3,6,7,8-HxCDF	ND		22		pg/g	☼	12/15/16 06:24	12/24/16 05:36	1
1,2,3,7,8,9-HxCDF	ND		22		pg/g	☼	12/15/16 06:24	12/24/16 05:36	1
2,3,4,6,7,8-HxCDF	ND		22		pg/g	☼	12/15/16 06:24	12/24/16 05:36	1
1,2,3,4,6,7,8-HpCDD	1700		22		pg/g	☼	12/15/16 06:24	12/24/16 05:36	1
1,2,3,4,6,7,8-HpCDF	500		22		pg/g	☼	12/15/16 06:24	12/24/16 05:36	1
1,2,3,4,7,8,9-HpCDF	ND		22		pg/g	☼	12/15/16 06:24	12/24/16 05:36	1
OCDD	13000		44		pg/g	☼	12/15/16 06:24	12/24/16 05:36	1
OCDF	1800		44		pg/g	☼	12/15/16 06:24	12/24/16 05:36	1
Total TCDD	ND		4.4		pg/g	☼	12/15/16 06:24	12/24/16 05:36	1
Total TCDF	ND		4.4		pg/g	☼	12/15/16 06:24	12/24/16 05:36	1
Total PeCDD	ND		22		pg/g	☼	12/15/16 06:24	12/24/16 05:36	1
Total PeCDF	23		22		pg/g	☼	12/15/16 06:24	12/24/16 05:36	1
Total HxCDD	380		22		pg/g	☼	12/15/16 06:24	12/24/16 05:36	1
Total HxCDF	290		22		pg/g	☼	12/15/16 06:24	12/24/16 05:36	1
Total HpCDD	3100		22		pg/g	☼	12/15/16 06:24	12/24/16 05:36	1
Total HpCDF	1300		22		pg/g	☼	12/15/16 06:24	12/24/16 05:36	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	54		40 - 135				12/15/16 06:24	12/24/16 05:36	1
13C-2,3,7,8-TCDF	51		40 - 135				12/15/16 06:24	12/24/16 05:36	1
13C-1,2,3,7,8-PeCDD	58		40 - 135				12/15/16 06:24	12/24/16 05:36	1
13C-1,2,3,7,8-PeCDF	57		40 - 135				12/15/16 06:24	12/24/16 05:36	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5185-1

Client Sample ID: HA-38 (0-6")

Lab Sample ID: 590-5185-64

Date Collected: 12/07/16 12:10

Matrix: Solid

Date Received: 12/09/16 12:10

Percent Solids: 22.5

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-1,2,3,6,7,8-HxCDD	59		40 - 135	12/15/16 06:24	12/24/16 05:36	1
13C-1,2,3,4,7,8-HxCDF	59		40 - 135	12/15/16 06:24	12/24/16 05:36	1
13C-1,2,3,4,6,7,8-HpCDD	66		40 - 135	12/15/16 06:24	12/24/16 05:36	1
13C-1,2,3,4,6,7,8-HpCDF	66		40 - 135	12/15/16 06:24	12/24/16 05:36	1
13C-OCDD	70		40 - 135	12/15/16 06:24	12/24/16 05:36	1

Client Sample ID: HA-11 (0-6")

Lab Sample ID: 590-5185-67

Date Collected: 12/07/16 12:35

Matrix: Solid

Date Received: 12/09/16 12:10

Percent Solids: 36.2

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		9.1		pg/g	☼	12/15/16 06:24	12/24/16 09:57	1
2,3,7,8-TCDF	ND		9.1		pg/g	☼	12/15/16 06:24	12/24/16 09:57	1
1,2,3,7,8-PeCDD	ND		46		pg/g	☼	12/15/16 06:24	12/24/16 09:57	1
1,2,3,7,8-PeCDF	ND		46		pg/g	☼	12/15/16 06:24	12/24/16 09:57	1
2,3,4,7,8-PeCDF	ND		46		pg/g	☼	12/15/16 06:24	12/24/16 09:57	1
1,2,3,4,7,8-HxCDD	ND		46		pg/g	☼	12/15/16 06:24	12/24/16 09:57	1
1,2,3,6,7,8-HxCDD	150		46		pg/g	☼	12/15/16 06:24	12/24/16 09:57	1
1,2,3,7,8,9-HxCDD	90		46		pg/g	☼	12/15/16 06:24	12/24/16 09:57	1
1,2,3,4,7,8-HxCDF	ND		46		pg/g	☼	12/15/16 06:24	12/24/16 09:57	1
1,2,3,6,7,8-HxCDF	ND		46		pg/g	☼	12/15/16 06:24	12/24/16 09:57	1
1,2,3,7,8,9-HxCDF	ND		46		pg/g	☼	12/15/16 06:24	12/24/16 09:57	1
2,3,4,6,7,8-HxCDF	ND		46		pg/g	☼	12/15/16 06:24	12/24/16 09:57	1
1,2,3,4,6,7,8-HpCDD	4200		46		pg/g	☼	12/15/16 06:24	12/24/16 09:57	1
1,2,3,4,6,7,8-HpCDF	830		46		pg/g	☼	12/15/16 06:24	12/24/16 09:57	1
1,2,3,4,7,8,9-HpCDF	ND		46		pg/g	☼	12/15/16 06:24	12/24/16 09:57	1
OCDD	38000	E	91		pg/g	☼	12/15/16 06:24	12/24/16 09:57	1
OCDF	2800		91		pg/g	☼	12/15/16 06:24	12/24/16 09:57	1
Total TCDD	ND		9.1		pg/g	☼	12/15/16 06:24	12/24/16 09:57	1
Total TCDF	ND		9.1		pg/g	☼	12/15/16 06:24	12/24/16 09:57	1
Total PeCDD	ND		46		pg/g	☼	12/15/16 06:24	12/24/16 09:57	1
Total PeCDF	54		46		pg/g	☼	12/15/16 06:24	12/24/16 09:57	1
Total HxCDD	970		46		pg/g	☼	12/15/16 06:24	12/24/16 09:57	1
Total HxCDF	630		46		pg/g	☼	12/15/16 06:24	12/24/16 09:57	1
Total HpCDD	7700		46		pg/g	☼	12/15/16 06:24	12/24/16 09:57	1
Total HpCDF	2200		46		pg/g	☼	12/15/16 06:24	12/24/16 09:57	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	59		40 - 135	12/15/16 06:24	12/24/16 09:57	1
13C-2,3,7,8-TCDF	53		40 - 135	12/15/16 06:24	12/24/16 09:57	1
13C-1,2,3,7,8-PeCDD	57		40 - 135	12/15/16 06:24	12/24/16 09:57	1
13C-1,2,3,7,8-PeCDF	55		40 - 135	12/15/16 06:24	12/24/16 09:57	1
13C-1,2,3,6,7,8-HxCDD	63		40 - 135	12/15/16 06:24	12/24/16 09:57	1
13C-1,2,3,4,7,8-HxCDF	62		40 - 135	12/15/16 06:24	12/24/16 09:57	1
13C-1,2,3,4,6,7,8-HpCDD	70		40 - 135	12/15/16 06:24	12/24/16 09:57	1
13C-1,2,3,4,6,7,8-HpCDF	72		40 - 135	12/15/16 06:24	12/24/16 09:57	1
13C-OCDD	74		40 - 135	12/15/16 06:24	12/24/16 09:57	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5185-1

Client Sample ID: HA-22 (0-6")

Lab Sample ID: 590-5185-70

Date Collected: 12/07/16 13:35

Matrix: Solid

Date Received: 12/09/16 12:10

Percent Solids: 86.8

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		1.4		pg/g	☼	12/15/16 06:24	12/24/16 10:43	1
2,3,7,8-TCDF	ND		1.4		pg/g	☼	12/15/16 06:24	12/24/16 10:43	1
1,2,3,7,8-PeCDD	ND		7.1		pg/g	☼	12/15/16 06:24	12/24/16 10:43	1
1,2,3,7,8-PeCDF	ND		7.1		pg/g	☼	12/15/16 06:24	12/24/16 10:43	1
2,3,4,7,8-PeCDF	ND		7.1		pg/g	☼	12/15/16 06:24	12/24/16 10:43	1
1,2,3,4,7,8-HxCDD	ND		7.1		pg/g	☼	12/15/16 06:24	12/24/16 10:43	1
1,2,3,6,7,8-HxCDD	14		7.1		pg/g	☼	12/15/16 06:24	12/24/16 10:43	1
1,2,3,7,8,9-HxCDD	9.1		7.1		pg/g	☼	12/15/16 06:24	12/24/16 10:43	1
1,2,3,4,7,8-HxCDF	ND		7.1		pg/g	☼	12/15/16 06:24	12/24/16 10:43	1
1,2,3,6,7,8-HxCDF	ND		7.1		pg/g	☼	12/15/16 06:24	12/24/16 10:43	1
1,2,3,7,8,9-HxCDF	ND		7.1		pg/g	☼	12/15/16 06:24	12/24/16 10:43	1
2,3,4,6,7,8-HxCDF	ND		7.1		pg/g	☼	12/15/16 06:24	12/24/16 10:43	1
1,2,3,4,6,7,8-HpCDD	400		7.1		pg/g	☼	12/15/16 06:24	12/24/16 10:43	1
1,2,3,4,6,7,8-HpCDF	57		7.1		pg/g	☼	12/15/16 06:24	12/24/16 10:43	1
1,2,3,4,7,8,9-HpCDF	ND		7.1		pg/g	☼	12/15/16 06:24	12/24/16 10:43	1
OCDD	3600		14		pg/g	☼	12/15/16 06:24	12/24/16 10:43	1
OCDF	240		14		pg/g	☼	12/15/16 06:24	12/24/16 10:43	1
Total TCDD	ND		1.4		pg/g	☼	12/15/16 06:24	12/24/16 10:43	1
Total TCDF	ND		1.4		pg/g	☼	12/15/16 06:24	12/24/16 10:43	1
Total PeCDD	ND		7.1		pg/g	☼	12/15/16 06:24	12/24/16 10:43	1
Total PeCDF	ND		7.1		pg/g	☼	12/15/16 06:24	12/24/16 10:43	1
Total HxCDD	62		7.1		pg/g	☼	12/15/16 06:24	12/24/16 10:43	1
Total HxCDF	39		7.1		pg/g	☼	12/15/16 06:24	12/24/16 10:43	1
Total HpCDD	680		7.1		pg/g	☼	12/15/16 06:24	12/24/16 10:43	1
Total HpCDF	180		7.1		pg/g	☼	12/15/16 06:24	12/24/16 10:43	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	83		40 - 135	12/15/16 06:24	12/24/16 10:43	1
13C-2,3,7,8-TCDF	82		40 - 135	12/15/16 06:24	12/24/16 10:43	1
13C-1,2,3,7,8-PeCDD	92		40 - 135	12/15/16 06:24	12/24/16 10:43	1
13C-1,2,3,7,8-PeCDF	88		40 - 135	12/15/16 06:24	12/24/16 10:43	1
13C-1,2,3,6,7,8-HxCDD	90		40 - 135	12/15/16 06:24	12/24/16 10:43	1
13C-1,2,3,4,7,8-HxCDF	89		40 - 135	12/15/16 06:24	12/24/16 10:43	1
13C-1,2,3,4,6,7,8-HpCDD	96		40 - 135	12/15/16 06:24	12/24/16 10:43	1
13C-1,2,3,4,6,7,8-HpCDF	100		40 - 135	12/15/16 06:24	12/24/16 10:43	1
13C-OCDD	102		40 - 135	12/15/16 06:24	12/24/16 10:43	1

Client Sample ID: HA-20 (0-6")

Lab Sample ID: 590-5185-73

Date Collected: 12/07/16 13:50

Matrix: Solid

Date Received: 12/09/16 12:10

Percent Solids: 47.8

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		30		pg/g	☼	12/15/16 06:24	12/24/16 11:29	1
2,3,7,8-TCDF	ND		30		pg/g	☼	12/15/16 06:24	12/24/16 11:29	1
1,2,3,7,8-PeCDD	ND		150		pg/g	☼	12/15/16 06:24	12/24/16 11:29	1
1,2,3,7,8-PeCDF	ND		150		pg/g	☼	12/15/16 06:24	12/24/16 11:29	1
2,3,4,7,8-PeCDF	ND		150		pg/g	☼	12/15/16 06:24	12/24/16 11:29	1
1,2,3,4,7,8-HxCDD	ND		150		pg/g	☼	12/15/16 06:24	12/24/16 11:29	1
1,2,3,6,7,8-HxCDD	490		150		pg/g	☼	12/15/16 06:24	12/24/16 11:29	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5185-1

Client Sample ID: HA-20 (0-6")

Lab Sample ID: 590-5185-73

Date Collected: 12/07/16 13:50

Matrix: Solid

Date Received: 12/09/16 12:10

Percent Solids: 47.8

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,7,8,9-HxCDD	200		150		pg/g	☼	12/15/16 06:24	12/24/16 11:29	1
1,2,3,4,7,8-HxCDF	ND		150		pg/g	☼	12/15/16 06:24	12/24/16 11:29	1
1,2,3,6,7,8-HxCDF	ND		150		pg/g	☼	12/15/16 06:24	12/24/16 11:29	1
1,2,3,7,8,9-HxCDF	ND		150		pg/g	☼	12/15/16 06:24	12/24/16 11:29	1
2,3,4,6,7,8-HxCDF	ND		150		pg/g	☼	12/15/16 06:24	12/24/16 11:29	1
1,2,3,4,6,7,8-HpCDD	11000		150		pg/g	☼	12/15/16 06:24	12/24/16 11:29	1
1,2,3,4,6,7,8-HpCDF	1300		150		pg/g	☼	12/15/16 06:24	12/24/16 11:29	1
1,2,3,4,7,8,9-HpCDF	ND		150		pg/g	☼	12/15/16 06:24	12/24/16 11:29	1
OCDD	90000		300		pg/g	☼	12/15/16 06:24	12/24/16 11:29	1
OCDF	4800		300		pg/g	☼	12/15/16 06:24	12/24/16 11:29	1
Total TCDD	ND		30		pg/g	☼	12/15/16 06:24	12/24/16 11:29	1
Total TCDF	ND		30		pg/g	☼	12/15/16 06:24	12/24/16 11:29	1
Total PeCDD	ND		150		pg/g	☼	12/15/16 06:24	12/24/16 11:29	1
Total PeCDF	ND		150		pg/g	☼	12/15/16 06:24	12/24/16 11:29	1
Total HxCDD	1700		150		pg/g	☼	12/15/16 06:24	12/24/16 11:29	1
Total HxCDF	1200		150		pg/g	☼	12/15/16 06:24	12/24/16 11:29	1
Total HpCDD	18000		150		pg/g	☼	12/15/16 06:24	12/24/16 11:29	1
Total HpCDF	4600		150		pg/g	☼	12/15/16 06:24	12/24/16 11:29	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
¹³ C-2,3,7,8-TCDD	85		40 - 135				12/15/16 06:24	12/24/16 11:29	1
¹³ C-2,3,7,8-TCDF	70		40 - 135				12/15/16 06:24	12/24/16 11:29	1
¹³ C-1,2,3,7,8-PeCDD	72		40 - 135				12/15/16 06:24	12/24/16 11:29	1
¹³ C-1,2,3,7,8-PeCDF	70		40 - 135				12/15/16 06:24	12/24/16 11:29	1
¹³ C-1,2,3,6,7,8-HxCDD	71		40 - 135				12/15/16 06:24	12/24/16 11:29	1
¹³ C-1,2,3,4,7,8-HxCDF	74		40 - 135				12/15/16 06:24	12/24/16 11:29	1
¹³ C-1,2,3,4,6,7,8-HpCDD	91		40 - 135				12/15/16 06:24	12/24/16 11:29	1
¹³ C-1,2,3,4,6,7,8-HpCDF	90		40 - 135				12/15/16 06:24	12/24/16 11:29	1
¹³ C-OCDD	93		40 - 135				12/15/16 06:24	12/24/16 11:29	1

Client Sample ID: HA-18 (0-6")

Lab Sample ID: 590-5185-76

Date Collected: 12/07/16 14:20

Matrix: Solid

Date Received: 12/09/16 12:10

Percent Solids: 69.3

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		1.4		pg/g	☼	12/15/16 06:24	12/24/16 12:15	1
2,3,7,8-TCDF	ND		1.4		pg/g	☼	12/15/16 06:24	12/24/16 12:15	1
1,2,3,7,8-PeCDD	ND		7.2		pg/g	☼	12/15/16 06:24	12/24/16 12:15	1
1,2,3,7,8-PeCDF	ND		7.2		pg/g	☼	12/15/16 06:24	12/24/16 12:15	1
2,3,4,7,8-PeCDF	ND		7.2		pg/g	☼	12/15/16 06:24	12/24/16 12:15	1
1,2,3,4,7,8-HxCDD	ND		7.2		pg/g	☼	12/15/16 06:24	12/24/16 12:15	1
1,2,3,6,7,8-HxCDD	22		7.2		pg/g	☼	12/15/16 06:24	12/24/16 12:15	1
1,2,3,7,8,9-HxCDD	7.7		7.2		pg/g	☼	12/15/16 06:24	12/24/16 12:15	1
1,2,3,4,7,8-HxCDF	ND		7.2		pg/g	☼	12/15/16 06:24	12/24/16 12:15	1
1,2,3,6,7,8-HxCDF	ND		7.2		pg/g	☼	12/15/16 06:24	12/24/16 12:15	1
1,2,3,7,8,9-HxCDF	ND		7.2		pg/g	☼	12/15/16 06:24	12/24/16 12:15	1
2,3,4,6,7,8-HxCDF	ND		7.2		pg/g	☼	12/15/16 06:24	12/24/16 12:15	1
1,2,3,4,6,7,8-HpCDD	440		7.2		pg/g	☼	12/15/16 06:24	12/24/16 12:15	1
1,2,3,4,6,7,8-HpCDF	35		7.2		pg/g	☼	12/15/16 06:24	12/24/16 12:15	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5185-1

Client Sample ID: HA-18 (0-6")

Lab Sample ID: 590-5185-76

Date Collected: 12/07/16 14:20

Matrix: Solid

Date Received: 12/09/16 12:10

Percent Solids: 69.3

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,7,8,9-HpCDF	ND		7.2		pg/g	☼	12/15/16 06:24	12/24/16 12:15	1
OCDD	3000		14		pg/g	☼	12/15/16 06:24	12/24/16 12:15	1
OCDF	74		14		pg/g	☼	12/15/16 06:24	12/24/16 12:15	1
Total TCDD	ND		1.4		pg/g	☼	12/15/16 06:24	12/24/16 12:15	1
Total TCDF	ND		1.4		pg/g	☼	12/15/16 06:24	12/24/16 12:15	1
Total PeCDD	ND		7.2		pg/g	☼	12/15/16 06:24	12/24/16 12:15	1
Total PeCDF	ND		7.2		pg/g	☼	12/15/16 06:24	12/24/16 12:15	1
Total HxCDD	130		7.2		pg/g	☼	12/15/16 06:24	12/24/16 12:15	1
Total HxCDF	35		7.2		pg/g	☼	12/15/16 06:24	12/24/16 12:15	1
Total HpCDD	770		7.2		pg/g	☼	12/15/16 06:24	12/24/16 12:15	1
Total HpCDF	100		7.2		pg/g	☼	12/15/16 06:24	12/24/16 12:15	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	83		40 - 135				12/15/16 06:24	12/24/16 12:15	1
13C-2,3,7,8-TCDF	83		40 - 135				12/15/16 06:24	12/24/16 12:15	1
13C-1,2,3,7,8-PeCDD	89		40 - 135				12/15/16 06:24	12/24/16 12:15	1
13C-1,2,3,7,8-PeCDF	83		40 - 135				12/15/16 06:24	12/24/16 12:15	1
13C-1,2,3,6,7,8-HxCDD	95		40 - 135				12/15/16 06:24	12/24/16 12:15	1
13C-1,2,3,4,7,8-HxCDF	95		40 - 135				12/15/16 06:24	12/24/16 12:15	1
13C-1,2,3,4,6,7,8-HpCDD	113		40 - 135				12/15/16 06:24	12/24/16 12:15	1
13C-1,2,3,4,6,7,8-HpCDF	113		40 - 135				12/15/16 06:24	12/24/16 12:15	1
13C-OCDD	119		40 - 135				12/15/16 06:24	12/24/16 12:15	1

Client Sample ID: HA-10 (0-6")

Lab Sample ID: 590-5185-79

Date Collected: 12/07/16 14:05

Matrix: Solid

Date Received: 12/09/16 12:10

Percent Solids: 77.5

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	25	J	62	10	ug/Kg	☼	12/15/16 09:22	12/15/16 18:38	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	88		38 - 123				12/15/16 09:22	12/15/16 18:38	1
Nitrobenzene-d5	78		23 - 120				12/15/16 09:22	12/15/16 18:38	1
p-Terphenyl-d14	107		68 - 136				12/15/16 09:22	12/15/16 18:38	1

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		1.3		pg/g	☼	12/15/16 06:24	12/24/16 13:01	1
2,3,7,8-TCDF	ND		1.3		pg/g	☼	12/15/16 06:24	12/24/16 13:01	1
1,2,3,7,8-PeCDD	ND		6.4		pg/g	☼	12/15/16 06:24	12/24/16 13:01	1
1,2,3,7,8-PeCDF	ND		6.4		pg/g	☼	12/15/16 06:24	12/24/16 13:01	1
2,3,4,7,8-PeCDF	ND		6.4		pg/g	☼	12/15/16 06:24	12/24/16 13:01	1
1,2,3,4,7,8-HxCDD	ND		6.4		pg/g	☼	12/15/16 06:24	12/24/16 13:01	1
1,2,3,6,7,8-HxCDD	ND		6.4		pg/g	☼	12/15/16 06:24	12/24/16 13:01	1
1,2,3,7,8,9-HxCDD	ND		6.4		pg/g	☼	12/15/16 06:24	12/24/16 13:01	1
1,2,3,4,7,8-HxCDF	ND		6.4		pg/g	☼	12/15/16 06:24	12/24/16 13:01	1
1,2,3,6,7,8-HxCDF	ND		6.4		pg/g	☼	12/15/16 06:24	12/24/16 13:01	1
1,2,3,7,8,9-HxCDF	ND		6.4		pg/g	☼	12/15/16 06:24	12/24/16 13:01	1
2,3,4,6,7,8-HxCDF	ND		6.4		pg/g	☼	12/15/16 06:24	12/24/16 13:01	1
1,2,3,4,6,7,8-HpCDD	130		6.4		pg/g	☼	12/15/16 06:24	12/24/16 13:01	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5185-1

Client Sample ID: HA-10 (0-6")

Lab Sample ID: 590-5185-79

Date Collected: 12/07/16 14:05

Matrix: Solid

Date Received: 12/09/16 12:10

Percent Solids: 77.5

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,6,7,8-HpCDF	22		6.4		pg/g	☼	12/15/16 06:24	12/24/16 13:01	1
1,2,3,4,7,8,9-HpCDF	ND		6.4		pg/g	☼	12/15/16 06:24	12/24/16 13:01	1
OCDD	1000		13		pg/g	☼	12/15/16 06:24	12/24/16 13:01	1
OCDF	67		13		pg/g	☼	12/15/16 06:24	12/24/16 13:01	1
Total TCDD	ND		1.3		pg/g	☼	12/15/16 06:24	12/24/16 13:01	1
Total TCDF	ND		1.3		pg/g	☼	12/15/16 06:24	12/24/16 13:01	1
Total PeCDD	ND		6.4		pg/g	☼	12/15/16 06:24	12/24/16 13:01	1
Total PeCDF	ND		6.4		pg/g	☼	12/15/16 06:24	12/24/16 13:01	1
Total HxCDD	39		6.4		pg/g	☼	12/15/16 06:24	12/24/16 13:01	1
Total HxCDF	ND		6.4		pg/g	☼	12/15/16 06:24	12/24/16 13:01	1
Total HpCDD	260		6.4		pg/g	☼	12/15/16 06:24	12/24/16 13:01	1
Total HpCDF	55		6.4		pg/g	☼	12/15/16 06:24	12/24/16 13:01	1
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C-2,3,7,8-TCDD	79		40 - 135				12/15/16 06:24	12/24/16 13:01	1
13C-2,3,7,8-TCDF	76		40 - 135				12/15/16 06:24	12/24/16 13:01	1
13C-1,2,3,7,8-PeCDD	80		40 - 135				12/15/16 06:24	12/24/16 13:01	1
13C-1,2,3,7,8-PeCDF	79		40 - 135				12/15/16 06:24	12/24/16 13:01	1
13C-1,2,3,6,7,8-HxCDD	82		40 - 135				12/15/16 06:24	12/24/16 13:01	1
13C-1,2,3,4,7,8-HxCDF	81		40 - 135				12/15/16 06:24	12/24/16 13:01	1
13C-1,2,3,4,6,7,8-HpCDD	93		40 - 135				12/15/16 06:24	12/24/16 13:01	1
13C-1,2,3,4,6,7,8-HpCDF	97		40 - 135				12/15/16 06:24	12/24/16 13:01	1
13C-OCDD	97		40 - 135				12/15/16 06:24	12/24/16 13:01	1

Client Sample ID: HA-19 (0-6")

Lab Sample ID: 590-5185-82

Date Collected: 12/07/16 14:45

Matrix: Solid

Date Received: 12/09/16 12:10

Percent Solids: 76.0

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		1.3		pg/g	☼	12/15/16 08:39	12/22/16 16:46	1
2,3,7,8-TCDF	ND		1.3		pg/g	☼	12/15/16 08:39	12/22/16 16:46	1
1,2,3,7,8-PeCDD	ND		6.5		pg/g	☼	12/15/16 08:39	12/22/16 16:46	1
1,2,3,7,8-PeCDF	ND		6.5		pg/g	☼	12/15/16 08:39	12/22/16 16:46	1
2,3,4,7,8-PeCDF	ND		6.5		pg/g	☼	12/15/16 08:39	12/22/16 16:46	1
1,2,3,4,7,8-HxCDD	ND		6.5		pg/g	☼	12/15/16 08:39	12/22/16 16:46	1
1,2,3,6,7,8-HxCDD	ND		6.5		pg/g	☼	12/15/16 08:39	12/22/16 16:46	1
1,2,3,7,8,9-HxCDD	ND		6.5		pg/g	☼	12/15/16 08:39	12/22/16 16:46	1
1,2,3,4,7,8-HxCDF	ND		6.5		pg/g	☼	12/15/16 08:39	12/22/16 16:46	1
1,2,3,6,7,8-HxCDF	ND		6.5		pg/g	☼	12/15/16 08:39	12/22/16 16:46	1
1,2,3,7,8,9-HxCDF	ND		6.5		pg/g	☼	12/15/16 08:39	12/22/16 16:46	1
2,3,4,6,7,8-HxCDF	ND		6.5		pg/g	☼	12/15/16 08:39	12/22/16 16:46	1
1,2,3,4,6,7,8-HpCDD	24		6.5		pg/g	☼	12/15/16 08:39	12/22/16 16:46	1
1,2,3,4,6,7,8-HpCDF	ND		6.5		pg/g	☼	12/15/16 08:39	12/22/16 16:46	1
1,2,3,4,7,8,9-HpCDF	ND		6.5		pg/g	☼	12/15/16 08:39	12/22/16 16:46	1
OCDD	190		13		pg/g	☼	12/15/16 08:39	12/22/16 16:46	1
OCDF	13		13		pg/g	☼	12/15/16 08:39	12/22/16 16:46	1
Total TCDD	ND		1.3		pg/g	☼	12/15/16 08:39	12/22/16 16:46	1
Total TCDF	ND		1.3		pg/g	☼	12/15/16 08:39	12/22/16 16:46	1
Total PeCDD	ND		6.5		pg/g	☼	12/15/16 08:39	12/22/16 16:46	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5185-1

Client Sample ID: HA-19 (0-6")

Lab Sample ID: 590-5185-82

Date Collected: 12/07/16 14:45

Matrix: Solid

Date Received: 12/09/16 12:10

Percent Solids: 76.0

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
Total PeCDF	ND		6.5		pg/g	☼	12/15/16 08:39	12/22/16 16:46	1
Total HxCDD	ND		6.5		pg/g	☼	12/15/16 08:39	12/22/16 16:46	1
Total HxCDF	ND		6.5		pg/g	☼	12/15/16 08:39	12/22/16 16:46	1
Total HpCDD	48		6.5		pg/g	☼	12/15/16 08:39	12/22/16 16:46	1
Total HpCDF	6.6		6.5		pg/g	☼	12/15/16 08:39	12/22/16 16:46	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	67		40 - 135				12/15/16 08:39	12/22/16 16:46	1
13C-2,3,7,8-TCDF	71		40 - 135				12/15/16 08:39	12/22/16 16:46	1
13C-1,2,3,7,8-PeCDD	58		40 - 135				12/15/16 08:39	12/22/16 16:46	1
13C-1,2,3,7,8-PeCDF	65		40 - 135				12/15/16 08:39	12/22/16 16:46	1
13C-1,2,3,6,7,8-HxCDD	75		40 - 135				12/15/16 08:39	12/22/16 16:46	1
13C-1,2,3,4,7,8-HxCDF	74		40 - 135				12/15/16 08:39	12/22/16 16:46	1
13C-1,2,3,4,6,7,8-HpCDD	73		40 - 135				12/15/16 08:39	12/22/16 16:46	1
13C-1,2,3,4,6,7,8-HpCDF	76		40 - 135				12/15/16 08:39	12/22/16 16:46	1
13C-OCDD	72		40 - 135				12/15/16 08:39	12/22/16 16:46	1

Client Sample ID: HA-21 (0-6")

Lab Sample ID: 590-5185-85

Date Collected: 12/07/16 15:05

Matrix: Solid

Date Received: 12/09/16 12:10

Percent Solids: 71.2

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		1.4		pg/g	☼	12/15/16 08:39	12/22/16 17:32	1
2,3,7,8-TCDF	ND		1.4		pg/g	☼	12/15/16 08:39	12/22/16 17:32	1
1,2,3,7,8-PeCDD	ND		7.0		pg/g	☼	12/15/16 08:39	12/22/16 17:32	1
1,2,3,7,8-PeCDF	ND		7.0		pg/g	☼	12/15/16 08:39	12/22/16 17:32	1
2,3,4,7,8-PeCDF	ND		7.0		pg/g	☼	12/15/16 08:39	12/22/16 17:32	1
1,2,3,4,7,8-HxCDD	ND		7.0		pg/g	☼	12/15/16 08:39	12/22/16 17:32	1
1,2,3,6,7,8-HxCDD	46		7.0		pg/g	☼	12/15/16 08:39	12/22/16 17:32	1
1,2,3,7,8,9-HxCDD	14		7.0		pg/g	☼	12/15/16 08:39	12/22/16 17:32	1
1,2,3,4,7,8-HxCDF	ND		7.0		pg/g	☼	12/15/16 08:39	12/22/16 17:32	1
1,2,3,6,7,8-HxCDF	ND		7.0		pg/g	☼	12/15/16 08:39	12/22/16 17:32	1
1,2,3,7,8,9-HxCDF	ND		7.0		pg/g	☼	12/15/16 08:39	12/22/16 17:32	1
2,3,4,6,7,8-HxCDF	ND		7.0		pg/g	☼	12/15/16 08:39	12/22/16 17:32	1
1,2,3,4,6,7,8-HpCDD	1000		7.0		pg/g	☼	12/15/16 08:39	12/22/16 17:32	1
1,2,3,4,6,7,8-HpCDF	93		7.0		pg/g	☼	12/15/16 08:39	12/22/16 17:32	1
1,2,3,4,7,8,9-HpCDF	ND		7.0		pg/g	☼	12/15/16 08:39	12/22/16 17:32	1
OCDD	6900	E	14		pg/g	☼	12/15/16 08:39	12/22/16 17:32	1
OCDF	350		14		pg/g	☼	12/15/16 08:39	12/22/16 17:32	1
Total TCDD	ND		1.4		pg/g	☼	12/15/16 08:39	12/22/16 17:32	1
Total TCDF	ND		1.4		pg/g	☼	12/15/16 08:39	12/22/16 17:32	1
Total PeCDD	ND		7.0		pg/g	☼	12/15/16 08:39	12/22/16 17:32	1
Total PeCDF	ND		7.0		pg/g	☼	12/15/16 08:39	12/22/16 17:32	1
Total HxCDD	140		7.0		pg/g	☼	12/15/16 08:39	12/22/16 17:32	1
Total HxCDF	93		7.0		pg/g	☼	12/15/16 08:39	12/22/16 17:32	1
Total HpCDD	1600		7.0		pg/g	☼	12/15/16 08:39	12/22/16 17:32	1
Total HpCDF	340		7.0		pg/g	☼	12/15/16 08:39	12/22/16 17:32	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	55		40 - 135				12/15/16 08:39	12/22/16 17:32	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5185-1

Client Sample ID: HA-21 (0-6")

Date Collected: 12/07/16 15:05

Date Received: 12/09/16 12:10

Lab Sample ID: 590-5185-85

Matrix: Solid

Percent Solids: 71.2

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDF	60		40 - 135	12/15/16 08:39	12/22/16 17:32	1
13C-1,2,3,7,8-PeCDD	49		40 - 135	12/15/16 08:39	12/22/16 17:32	1
13C-1,2,3,7,8-PeCDF	55		40 - 135	12/15/16 08:39	12/22/16 17:32	1
13C-1,2,3,6,7,8-HxCDD	58		40 - 135	12/15/16 08:39	12/22/16 17:32	1
13C-1,2,3,4,7,8-HxCDF	57		40 - 135	12/15/16 08:39	12/22/16 17:32	1
13C-1,2,3,4,6,7,8-HpCDD	60		40 - 135	12/15/16 08:39	12/22/16 17:32	1
13C-1,2,3,4,6,7,8-HpCDF	60		40 - 135	12/15/16 08:39	12/22/16 17:32	1
13C-OCDD	64		40 - 135	12/15/16 08:39	12/22/16 17:32	1

Client Sample ID: HA-23 (0-6")

Date Collected: 12/07/16 15:30

Date Received: 12/09/16 12:10

Lab Sample ID: 590-5185-88

Matrix: Solid

Percent Solids: 64.5

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		52		pg/g	☼	12/15/16 08:39	12/22/16 18:18	1
2,3,7,8-TCDF	ND		52		pg/g	☼	12/15/16 08:39	12/22/16 18:18	1
1,2,3,7,8-PeCDD	ND		260		pg/g	☼	12/15/16 08:39	12/22/16 18:18	1
1,2,3,7,8-PeCDF	ND		260		pg/g	☼	12/15/16 08:39	12/22/16 18:18	1
2,3,4,7,8-PeCDF	ND		260		pg/g	☼	12/15/16 08:39	12/22/16 18:18	1
1,2,3,4,7,8-HxCDD	ND		260		pg/g	☼	12/15/16 08:39	12/22/16 18:18	1
1,2,3,6,7,8-HxCDD	620		260		pg/g	☼	12/15/16 08:39	12/22/16 18:18	1
1,2,3,7,8,9-HxCDD	270		260		pg/g	☼	12/15/16 08:39	12/22/16 18:18	1
1,2,3,4,7,8-HxCDF	ND		260		pg/g	☼	12/15/16 08:39	12/22/16 18:18	1
1,2,3,6,7,8-HxCDF	ND		260		pg/g	☼	12/15/16 08:39	12/22/16 18:18	1
1,2,3,7,8,9-HxCDF	ND		260		pg/g	☼	12/15/16 08:39	12/22/16 18:18	1
2,3,4,6,7,8-HxCDF	ND		260		pg/g	☼	12/15/16 08:39	12/22/16 18:18	1
1,2,3,4,6,7,8-HpCDD	15000		260		pg/g	☼	12/15/16 08:39	12/22/16 18:18	1
1,2,3,4,6,7,8-HpCDF	1200		260		pg/g	☼	12/15/16 08:39	12/22/16 18:18	1
1,2,3,4,7,8,9-HpCDF	ND		260		pg/g	☼	12/15/16 08:39	12/22/16 18:18	1
OCDD	140000		520		pg/g	☼	12/15/16 08:39	12/22/16 18:18	1
OCDF	7400		520		pg/g	☼	12/15/16 08:39	12/22/16 18:18	1
Total TCDD	ND		52		pg/g	☼	12/15/16 08:39	12/22/16 18:18	1
Total TCDF	ND		52		pg/g	☼	12/15/16 08:39	12/22/16 18:18	1
Total PeCDD	ND		260		pg/g	☼	12/15/16 08:39	12/22/16 18:18	1
Total PeCDF	ND		260		pg/g	☼	12/15/16 08:39	12/22/16 18:18	1
Total HxCDD	2200		260		pg/g	☼	12/15/16 08:39	12/22/16 18:18	1
Total HxCDF	1100		260		pg/g	☼	12/15/16 08:39	12/22/16 18:18	1
Total HpCDD	26000		260		pg/g	☼	12/15/16 08:39	12/22/16 18:18	1
Total HpCDF	5000		260		pg/g	☼	12/15/16 08:39	12/22/16 18:18	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	98		40 - 135	12/15/16 08:39	12/22/16 18:18	1
13C-2,3,7,8-TCDF	104		40 - 135	12/15/16 08:39	12/22/16 18:18	1
13C-1,2,3,7,8-PeCDD	97		40 - 135	12/15/16 08:39	12/22/16 18:18	1
13C-1,2,3,7,8-PeCDF	101		40 - 135	12/15/16 08:39	12/22/16 18:18	1
13C-1,2,3,6,7,8-HxCDD	116		40 - 135	12/15/16 08:39	12/22/16 18:18	1
13C-1,2,3,4,7,8-HxCDF	117		40 - 135	12/15/16 08:39	12/22/16 18:18	1
13C-1,2,3,4,6,7,8-HpCDD	113		40 - 135	12/15/16 08:39	12/22/16 18:18	1
13C-1,2,3,4,6,7,8-HpCDF	115		40 - 135	12/15/16 08:39	12/22/16 18:18	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5185-1

Client Sample ID: HA-23 (0-6")

Date Collected: 12/07/16 15:30

Date Received: 12/09/16 12:10

Lab Sample ID: 590-5185-88

Matrix: Solid

Percent Solids: 64.5

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
¹³ C-OCDD	128		40 - 135	12/15/16 08:39	12/22/16 18:18	1

Client Sample ID: HA-26 (0-6")

Date Collected: 12/07/16 11:05

Date Received: 12/09/16 12:10

Lab Sample ID: 590-5185-91

Matrix: Solid

Percent Solids: 77.8

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	3700		62	10	ug/Kg	☒	12/15/16 09:22	12/15/16 19:04	1
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac			
2-Fluorobiphenyl (Surr)	91		38 - 123	12/15/16 09:22	12/15/16 19:04	1			
Nitrobenzene-d5	71		23 - 120	12/15/16 09:22	12/15/16 19:04	1			
p-Terphenyl-d14	103		68 - 136	12/15/16 09:22	12/15/16 19:04	1			

Client Sample ID: Seep-1:GW:120716

Date Collected: 12/07/16 14:06

Date Received: 12/09/16 12:10

Lab Sample ID: 590-5185-94

Matrix: Water

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		0.078		ug/L		12/13/16 17:46	12/17/16 23:26	1
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac			
2,4,6-Tribromophenol	97		44 - 125	12/13/16 17:46	12/17/16 23:26	1			

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.14		mg/L		12/14/16 14:24	12/15/16 02:02	1
Residual Range Organics (RRO) (C25-C36)	ND		0.23		mg/L		12/14/16 14:24	12/15/16 02:02	1
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac			
o-Terphenyl	90		50 - 150	12/14/16 14:24	12/15/16 02:02	1			
n-Triacontane-d62	90		50 - 150	12/14/16 14:24	12/15/16 02:02	1			

Client Sample ID: Seep-2:GW:120716

Date Collected: 12/07/16 14:57

Date Received: 12/09/16 12:10

Lab Sample ID: 590-5185-95

Matrix: Water

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		0.083		ug/L		12/13/16 17:46	12/17/16 23:48	1
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac			
2,4,6-Tribromophenol	82		44 - 125	12/13/16 17:46	12/17/16 23:48	1			

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.13		mg/L		12/14/16 14:24	12/15/16 02:18	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5185-1

Client Sample ID: Seep-2:GW:120716

Date Collected: 12/07/16 14:57

Date Received: 12/09/16 12:10

Lab Sample ID: 590-5185-95

Matrix: Water

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Residual Range Organics (RRO) (C25-C36)	ND		0.22		mg/L		12/14/16 14:24	12/15/16 02:18	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl	87		50 - 150				12/14/16 14:24	12/15/16 02:18	1
<i>n</i> -Triacontane-d62	86		50 - 150				12/14/16 14:24	12/15/16 02:18	1

Client Sample ID: HA-27 (0-6")

Date Collected: 12/07/16 15:45

Date Received: 12/09/16 12:10

Lab Sample ID: 590-5185-96

Matrix: Solid

Percent Solids: 74.0

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		0.56		mg/Kg	☼	12/12/16 13:58	12/13/16 14:17	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	ND		38		ug/Kg	☼	12/20/16 09:43	12/21/16 15:36	1

Client Sample ID: HA-28 (0-6")

Date Collected: 12/07/16 16:00

Date Received: 12/09/16 12:10

Lab Sample ID: 590-5185-99

Matrix: Solid

Percent Solids: 66.7

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		0.61		mg/Kg	☼	12/12/16 13:58	12/13/16 14:21	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	42		33		ug/Kg	☼	12/20/16 09:43	12/21/16 15:45	1

Client Sample ID: HA-30 (0-6")

Date Collected: 12/07/16 16:20

Date Received: 12/09/16 12:10

Lab Sample ID: 590-5185-102

Matrix: Solid

Percent Solids: 81.4

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		59	9.6	ug/Kg	☼	12/15/16 09:22	12/15/16 19:30	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>2</i> -Fluorobiphenyl (Surr)	84		38 - 123				12/15/16 09:22	12/15/16 19:30	1
Nitrobenzene-d5	71		23 - 120				12/15/16 09:22	12/15/16 19:30	1
<i>p</i> -Terphenyl-d14	96		68 - 136				12/15/16 09:22	12/15/16 19:30	1

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		1.2		pg/g	☼	12/15/16 08:39	12/22/16 19:04	1
2,3,7,8-TCDF	ND		1.2		pg/g	☼	12/15/16 08:39	12/22/16 19:04	1
1,2,3,7,8-PeCDD	ND		6.1		pg/g	☼	12/15/16 08:39	12/22/16 19:04	1
1,2,3,7,8-PeCDF	ND		6.1		pg/g	☼	12/15/16 08:39	12/22/16 19:04	1
2,3,4,7,8-PeCDF	ND		6.1		pg/g	☼	12/15/16 08:39	12/22/16 19:04	1
1,2,3,4,7,8-HxCDD	ND		6.1		pg/g	☼	12/15/16 08:39	12/22/16 19:04	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5185-1

Client Sample ID: HA-30 (0-6")

Lab Sample ID: 590-5185-102

Date Collected: 12/07/16 16:20

Matrix: Solid

Date Received: 12/09/16 12:10

Percent Solids: 81.4

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,6,7,8-HxCDD	ND		6.1		pg/g	☼	12/15/16 08:39	12/22/16 19:04	1
1,2,3,7,8,9-HxCDD	ND		6.1		pg/g	☼	12/15/16 08:39	12/22/16 19:04	1
1,2,3,4,7,8-HxCDF	ND		6.1		pg/g	☼	12/15/16 08:39	12/22/16 19:04	1
1,2,3,6,7,8-HxCDF	ND		6.1		pg/g	☼	12/15/16 08:39	12/22/16 19:04	1
1,2,3,7,8,9-HxCDF	ND		6.1		pg/g	☼	12/15/16 08:39	12/22/16 19:04	1
2,3,4,6,7,8-HxCDF	ND		6.1		pg/g	☼	12/15/16 08:39	12/22/16 19:04	1
1,2,3,4,6,7,8-HpCDD	44		6.1		pg/g	☼	12/15/16 08:39	12/22/16 19:04	1
1,2,3,4,6,7,8-HpCDF	ND		6.1		pg/g	☼	12/15/16 08:39	12/22/16 19:04	1
1,2,3,4,7,8,9-HpCDF	ND		6.1		pg/g	☼	12/15/16 08:39	12/22/16 19:04	1
OCDD	560		12		pg/g	☼	12/15/16 08:39	12/22/16 19:04	1
OCDF	27		12		pg/g	☼	12/15/16 08:39	12/22/16 19:04	1
Total TCDD	ND		1.2		pg/g	☼	12/15/16 08:39	12/22/16 19:04	1
Total TCDF	ND		1.2		pg/g	☼	12/15/16 08:39	12/22/16 19:04	1
Total PeCDD	ND		6.1		pg/g	☼	12/15/16 08:39	12/22/16 19:04	1
Total PeCDF	ND		6.1		pg/g	☼	12/15/16 08:39	12/22/16 19:04	1
Total HxCDD	ND		6.1		pg/g	☼	12/15/16 08:39	12/22/16 19:04	1
Total HxCDF	ND		6.1		pg/g	☼	12/15/16 08:39	12/22/16 19:04	1
Total HpCDD	78		6.1		pg/g	☼	12/15/16 08:39	12/22/16 19:04	1
Total HpCDF	14		6.1		pg/g	☼	12/15/16 08:39	12/22/16 19:04	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	82		40 - 135				12/15/16 08:39	12/22/16 19:04	1
13C-2,3,7,8-TCDF	84		40 - 135				12/15/16 08:39	12/22/16 19:04	1
13C-1,2,3,7,8-PeCDD	75		40 - 135				12/15/16 08:39	12/22/16 19:04	1
13C-1,2,3,7,8-PeCDF	81		40 - 135				12/15/16 08:39	12/22/16 19:04	1
13C-1,2,3,6,7,8-HxCDD	89		40 - 135				12/15/16 08:39	12/22/16 19:04	1
13C-1,2,3,4,7,8-HxCDF	90		40 - 135				12/15/16 08:39	12/22/16 19:04	1
13C-1,2,3,4,6,7,8-HpCDD	89		40 - 135				12/15/16 08:39	12/22/16 19:04	1
13C-1,2,3,4,6,7,8-HpCDF	93		40 - 135				12/15/16 08:39	12/22/16 19:04	1
13C-OCDD	94		40 - 135				12/15/16 08:39	12/22/16 19:04	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		0.52		mg/Kg	☼	12/12/16 13:58	12/13/16 14:24	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	25		25		ug/Kg	☼	12/20/16 09:43	12/21/16 15:47	1

Client Sample ID: HA-29 (0-6")

Lab Sample ID: 590-5185-105

Date Collected: 12/07/16 16:35

Matrix: Solid

Date Received: 12/09/16 12:10

Percent Solids: 73.4

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	15000		660	110	ug/Kg	☼	12/15/16 09:22	12/16/16 09:44	10
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	89		38 - 123				12/15/16 09:22	12/16/16 09:44	10
Nitrobenzene-d5	77		23 - 120				12/15/16 09:22	12/16/16 09:44	10
p-Terphenyl-d14	99		68 - 136				12/15/16 09:22	12/16/16 09:44	10

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5185-1

Client Sample ID: Seep-1 (6-12")

Date Collected: 12/07/16 12:00

Date Received: 12/09/16 12:10

Lab Sample ID: 590-5185-108

Matrix: Solid

Percent Solids: 72.6

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	51	J	65	11	ug/Kg	☼	12/15/16 09:22	12/15/16 20:22	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	77		38 - 123				12/15/16 09:22	12/15/16 20:22	1
Nitrobenzene-d5	62		23 - 120				12/15/16 09:22	12/15/16 20:22	1
p-Terphenyl-d14	95		68 - 136				12/15/16 09:22	12/15/16 20:22	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		14		mg/Kg	☼	12/13/16 10:05	12/13/16 13:02	1
Residual Range Organics (RRO) (C25-C36)	ND		34		mg/Kg	☼	12/13/16 10:05	12/13/16 13:02	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	101		50 - 150				12/13/16 10:05	12/13/16 13:02	1
n-Triacontane-d62	109		50 - 150				12/13/16 10:05	12/13/16 13:02	1

Client Sample ID: Seep-2 (6-12")

Date Collected: 12/07/16 12:05

Date Received: 12/09/16 12:10

Lab Sample ID: 590-5185-109

Matrix: Solid

Percent Solids: 63.9

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	38	J	77	12	ug/Kg	☼	12/15/16 09:22	12/15/16 20:48	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	63		38 - 123				12/15/16 09:22	12/15/16 20:48	1
Nitrobenzene-d5	60		23 - 120				12/15/16 09:22	12/15/16 20:48	1
p-Terphenyl-d14	92		68 - 136				12/15/16 09:22	12/15/16 20:48	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		15		mg/Kg	☼	12/13/16 10:05	12/13/16 13:19	1
Residual Range Organics (RRO) (C25-C36)	ND		37		mg/Kg	☼	12/13/16 10:05	12/13/16 13:19	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	93		50 - 150				12/13/16 10:05	12/13/16 13:19	1
n-Triacontane-d62	100		50 - 150				12/13/16 10:05	12/13/16 13:19	1

TestAmerica Spokane

QC Sample Results

Client: GeoEngineers Inc
 Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5185-1

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Lab Sample ID: MB 590-10041/1-A
Matrix: Solid
Analysis Batch: 10044

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 10041

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		50	8.2	ug/Kg		12/15/16 09:22	12/15/16 14:16	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	89		38 - 123	12/15/16 09:22	12/15/16 14:16	1
Nitrobenzene-d5	73		23 - 120	12/15/16 09:22	12/15/16 14:16	1
p-Terphenyl-d14	121		68 - 136	12/15/16 09:22	12/15/16 14:16	1

Lab Sample ID: LCS 590-10041/2-A
Matrix: Solid
Analysis Batch: 10044

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 10041

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Pentachlorophenol	533	591		ug/Kg		111	50 - 150

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Fluorobiphenyl (Surr)	77		38 - 123
Nitrobenzene-d5	60		23 - 120
p-Terphenyl-d14	101		68 - 136

Lab Sample ID: 590-5185-16 MS
Matrix: Solid
Analysis Batch: 10044

Client Sample ID: HA-37 (0-6")
Prep Type: Total/NA
Prep Batch: 10041

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Pentachlorophenol	120	F1	613	1090	F1	ug/Kg	☼	158	50 - 150

Surrogate	MS %Recovery	MS Qualifier	Limits
2-Fluorobiphenyl (Surr)	64		38 - 123
Nitrobenzene-d5	43		23 - 120
p-Terphenyl-d14	97		68 - 136

Lab Sample ID: 590-5185-16 MSD
Matrix: Solid
Analysis Batch: 10044

Client Sample ID: HA-37 (0-6")
Prep Type: Total/NA
Prep Batch: 10041

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Pentachlorophenol	120	F1	601	990		ug/Kg	☼	145	50 - 150	10	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
2-Fluorobiphenyl (Surr)	76		38 - 123
Nitrobenzene-d5	58		23 - 120
p-Terphenyl-d14	93		68 - 136

TestAmerica Spokane

QC Sample Results

Client: GeoEngineers Inc
 Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5185-1

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Lab Sample ID: MB 580-234444/1-A
Matrix: Water
Analysis Batch: 234802

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 234444

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		0.080		ug/L		12/13/16 17:46	12/17/16 17:58	1
Surrogate	%Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol	73		44 - 125				12/13/16 17:46	12/17/16 17:58	1

Lab Sample ID: LCS 580-234444/2-A
Matrix: Water
Analysis Batch: 234802

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 234444

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits		
Pentachlorophenol	4.00	2.90		ug/L		73	20 - 134		
Surrogate	%Recovery	LCS Qualifier	Limits						
2,4,6-Tribromophenol	95		44 - 125						

Lab Sample ID: LCSD 580-234444/3-A
Matrix: Water
Analysis Batch: 234802

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 234444

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Pentachlorophenol	4.00	2.51		ug/L		63	20 - 134	14	35
Surrogate	%Recovery	LCSD Qualifier	Limits						
2,4,6-Tribromophenol	96		44 - 125						

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Lab Sample ID: MB 590-10031/1-A
Matrix: Water
Analysis Batch: 10020

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 10031

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.12		mg/L		12/14/16 14:24	12/14/16 21:55	1
Residual Range Organics (RRO) (C25-C36)	ND		0.20		mg/L		12/14/16 14:24	12/14/16 21:55	1
Surrogate	%Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl	95		50 - 150				12/14/16 14:24	12/14/16 21:55	1
<i>n</i> -Triacontane-d62	95		50 - 150				12/14/16 14:24	12/14/16 21:55	1

TestAmerica Spokane

QC Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5185-1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) (Continued)

Lab Sample ID: LCS 590-10031/2-A
Matrix: Water
Analysis Batch: 10020

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 10031

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Diesel Range Organics (DRO) (C10-C25)	1.61	1.42		mg/L		88	50 - 150
Residual Range Organics (RRO) (C25-C36)	1.60	1.57		mg/L		98	50 - 150

Surrogate	LCS %Recovery	LCS Qualifier	Limits
<i>o</i> -Terphenyl	85		50 - 150
<i>n</i> -Triacontane-d62	89		50 - 150

Lab Sample ID: LCSD 590-10031/3-A
Matrix: Water
Analysis Batch: 10020

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 10031

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics (DRO) (C10-C25)	1.61	1.34		mg/L		83	50 - 150	5	25
Residual Range Organics (RRO) (C25-C36)	1.60	1.52		mg/L		95	50 - 150	3	25

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
<i>o</i> -Terphenyl	82		50 - 150
<i>n</i> -Triacontane-d62	87		50 - 150

Lab Sample ID: MB 590-9993/1-A
Matrix: Solid
Analysis Batch: 9994

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 9993

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		10		mg/Kg		12/13/16 07:00	12/13/16 07:45	1
Residual Range Organics (RRO) (C25-C36)	ND		25		mg/Kg		12/13/16 07:00	12/13/16 07:45	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl	97		50 - 150	12/13/16 07:00	12/13/16 07:45	1
<i>n</i> -Triacontane-d62	94		50 - 150	12/13/16 07:00	12/13/16 07:45	1

Lab Sample ID: LCS 590-9993/2-A
Matrix: Solid
Analysis Batch: 9994

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 9993

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Diesel Range Organics (DRO) (C10-C25)	67.1	62.4		mg/Kg		93	50 - 150
Residual Range Organics (RRO) (C25-C36)	66.8	64.7		mg/Kg		97	50 - 150

Surrogate	LCS %Recovery	LCS Qualifier	Limits
<i>o</i> -Terphenyl	97		50 - 150

TestAmerica Spokane

QC Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5185-1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) (Continued)

Lab Sample ID: LCS 590-9993/2-A
Matrix: Solid
Analysis Batch: 9994

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 9993

Surrogate	LCS %Recovery	LCS Qualifier	Limits
<i>n</i> -Triacontane-d62	98		50 - 150

Lab Sample ID: 590-5185-16 DU
Matrix: Solid
Analysis Batch: 9994

Client Sample ID: HA-37 (0-6")
Prep Type: Total/NA
Prep Batch: 9993

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Diesel Range Organics (DRO) (C10-C25)	25		25.1		mg/Kg	☼	0.8	40
Residual Range Organics (RRO) (C25-C36)	97		87.2		mg/Kg	☼	10	40

Surrogate	DU %Recovery	DU Qualifier	Limits
<i>o</i> -Terphenyl	96		50 - 150
<i>n</i> -Triacontane-d62	99		50 - 150

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Lab Sample ID: MB 320-142254/1-A
Matrix: Solid
Analysis Batch: 143787

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 142254

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		1.0		pg/g		12/15/16 06:24	12/23/16 21:08	1
2,3,7,8-TCDF	ND		1.0		pg/g		12/15/16 06:24	12/23/16 21:08	1
1,2,3,7,8-PeCDD	ND		5.0		pg/g		12/15/16 06:24	12/23/16 21:08	1
1,2,3,7,8-PeCDF	ND		5.0		pg/g		12/15/16 06:24	12/23/16 21:08	1
2,3,4,7,8-PeCDF	ND		5.0		pg/g		12/15/16 06:24	12/23/16 21:08	1
1,2,3,4,7,8-HxCDD	ND		5.0		pg/g		12/15/16 06:24	12/23/16 21:08	1
1,2,3,6,7,8-HxCDD	ND		5.0		pg/g		12/15/16 06:24	12/23/16 21:08	1
1,2,3,7,8,9-HxCDD	ND		5.0		pg/g		12/15/16 06:24	12/23/16 21:08	1
1,2,3,4,7,8-HxCDF	ND		5.0		pg/g		12/15/16 06:24	12/23/16 21:08	1
1,2,3,6,7,8-HxCDF	ND		5.0		pg/g		12/15/16 06:24	12/23/16 21:08	1
1,2,3,7,8,9-HxCDF	ND		5.0		pg/g		12/15/16 06:24	12/23/16 21:08	1
2,3,4,6,7,8-HxCDF	ND		5.0		pg/g		12/15/16 06:24	12/23/16 21:08	1
1,2,3,4,6,7,8-HpCDD	ND		5.0		pg/g		12/15/16 06:24	12/23/16 21:08	1
1,2,3,4,6,7,8-HpCDF	ND		5.0		pg/g		12/15/16 06:24	12/23/16 21:08	1
1,2,3,4,7,8,9-HpCDF	ND		5.0		pg/g		12/15/16 06:24	12/23/16 21:08	1
OCDD	ND		10		pg/g		12/15/16 06:24	12/23/16 21:08	1
OCDF	ND		10		pg/g		12/15/16 06:24	12/23/16 21:08	1
Total TCDD	ND		1.0		pg/g		12/15/16 06:24	12/23/16 21:08	1
Total TCDF	ND		1.0		pg/g		12/15/16 06:24	12/23/16 21:08	1
Total PeCDD	ND		5.0		pg/g		12/15/16 06:24	12/23/16 21:08	1
Total PeCDF	ND		5.0		pg/g		12/15/16 06:24	12/23/16 21:08	1
Total HxCDD	ND		5.0		pg/g		12/15/16 06:24	12/23/16 21:08	1
Total HxCDF	ND		5.0		pg/g		12/15/16 06:24	12/23/16 21:08	1
Total HpCDD	ND		5.0		pg/g		12/15/16 06:24	12/23/16 21:08	1
Total HpCDF	ND		5.0		pg/g		12/15/16 06:24	12/23/16 21:08	1

TestAmerica Spokane

QC Sample Results

Client: GeoEngineers Inc
 Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5185-1

Isotope Dilution	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
13C-2,3,7,8-TCDD	82		40 - 135	12/15/16 06:24	12/23/16 21:08	1
13C-2,3,7,8-TCDF	71		40 - 135	12/15/16 06:24	12/23/16 21:08	1
13C-1,2,3,7,8-PeCDD	84		40 - 135	12/15/16 06:24	12/23/16 21:08	1
13C-1,2,3,7,8-PeCDF	74		40 - 135	12/15/16 06:24	12/23/16 21:08	1
13C-1,2,3,6,7,8-HxCDD	88		40 - 135	12/15/16 06:24	12/23/16 21:08	1
13C-1,2,3,4,7,8-HxCDF	75		40 - 135	12/15/16 06:24	12/23/16 21:08	1
13C-1,2,3,4,6,7,8-HpCDD	88		40 - 135	12/15/16 06:24	12/23/16 21:08	1
13C-1,2,3,4,6,7,8-HpCDF	80		40 - 135	12/15/16 06:24	12/23/16 21:08	1
13C-OCDD	87		40 - 135	12/15/16 06:24	12/23/16 21:08	1

Lab Sample ID: LCS 320-142254/2-A
Matrix: Solid
Analysis Batch: 143787

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 142254
%Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
2,3,7,8-TCDD	20.0	18.7		pg/g		93	77 - 130
2,3,7,8-TCDF	20.0	20.2		pg/g		101	79 - 137
1,2,3,7,8-PeCDD	100	112		pg/g		112	79 - 134
1,2,3,7,8-PeCDF	100	105		pg/g		105	81 - 134
2,3,4,7,8-PeCDF	100	108		pg/g		108	76 - 132
1,2,3,4,7,8-HxCDD	100	95.8		pg/g		96	65 - 144
1,2,3,6,7,8-HxCDD	100	111		pg/g		111	73 - 147
1,2,3,7,8,9-HxCDD	100	102		pg/g		102	80 - 143
1,2,3,4,7,8-HxCDF	100	102		pg/g		102	72 - 140
1,2,3,6,7,8-HxCDF	100	109		pg/g		109	63 - 152
1,2,3,7,8,9-HxCDF	100	104		pg/g		104	72 - 152
2,3,4,6,7,8-HxCDF	100	107		pg/g		107	72 - 151
1,2,3,4,6,7,8-HpCDD	100	108		pg/g		108	86 - 134
1,2,3,4,6,7,8-HpCDF	100	109		pg/g		109	81 - 137
1,2,3,4,7,8,9-HpCDF	100	104		pg/g		104	79 - 139
OCDD	200	214		pg/g		107	80 - 137
OCDF	200	203		pg/g		102	75 - 141

Isotope Dilution	LCS LCS		Limits
	%Recovery	Qualifier	
13C-2,3,7,8-TCDD	91		40 - 135
13C-2,3,7,8-TCDF	78		40 - 135
13C-1,2,3,7,8-PeCDD	94		40 - 135
13C-1,2,3,7,8-PeCDF	86		40 - 135
13C-1,2,3,6,7,8-HxCDD	94		40 - 135
13C-1,2,3,4,7,8-HxCDF	81		40 - 135
13C-1,2,3,4,6,7,8-HpCDD	96		40 - 135
13C-1,2,3,4,6,7,8-HpCDF	88		40 - 135
13C-OCDD	97		40 - 135

Lab Sample ID: LCSD 320-142254/3-A
Matrix: Solid
Analysis Batch: 143787

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 142254
%Rec.

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	
								RPD	Limit
2,3,7,8-TCDD	20.0	18.0		pg/g		90	77 - 130	4	20
2,3,7,8-TCDF	20.0	20.2		pg/g		101	79 - 137	0	20
1,2,3,7,8-PeCDD	100	113		pg/g		113	79 - 134	1	20
1,2,3,7,8-PeCDF	100	106		pg/g		106	81 - 134	1	20
2,3,4,7,8-PeCDF	100	110		pg/g		110	76 - 132	2	20

TestAmerica Spokane

QC Sample Results

Client: GeoEngineers Inc
 Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5185-1

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCSD 320-142254/3-A
Matrix: Solid
Analysis Batch: 143787

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 142254

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,3,4,7,8-HxCDD	100	92.7		pg/g		93	65 - 144	3	20
1,2,3,6,7,8-HxCDD	100	107		pg/g		107	73 - 147	3	20
1,2,3,7,8,9-HxCDD	100	98.2		pg/g		98	80 - 143	4	20
1,2,3,4,7,8-HxCDF	100	99.4		pg/g		99	72 - 140	3	20
1,2,3,6,7,8-HxCDF	100	106		pg/g		106	63 - 152	2	20
1,2,3,7,8,9-HxCDF	100	95.2		pg/g		95	72 - 152	9	20
2,3,4,6,7,8-HxCDF	100	104		pg/g		104	72 - 151	3	20
1,2,3,4,6,7,8-HpCDD	100	110		pg/g		110	86 - 134	2	20
1,2,3,4,6,7,8-HpCDF	100	110		pg/g		110	81 - 137	0	20
1,2,3,4,7,8,9-HpCDF	100	111		pg/g		111	79 - 139	7	20
OCDD	200	246		pg/g		123	80 - 137	14	20
OCDF	200	207		pg/g		104	75 - 141	2	20

Isotope Dilution	LCSD %Recovery	LCSD Qualifier	LCSD Limits
13C-2,3,7,8-TCDD	61		40 - 135
13C-2,3,7,8-TCDF	51		40 - 135
13C-1,2,3,7,8-PeCDD	59		40 - 135
13C-1,2,3,7,8-PeCDF	55		40 - 135
13C-1,2,3,6,7,8-HxCDD	62		40 - 135
13C-1,2,3,4,7,8-HxCDF	54		40 - 135
13C-1,2,3,4,6,7,8-HpCDD	64		40 - 135
13C-1,2,3,4,6,7,8-HpCDF	55		40 - 135
13C-OCDD	65		40 - 135

Lab Sample ID: MB 320-142262/1-A
Matrix: Solid
Analysis Batch: 143636

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 142262

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		1.0		pg/g		12/15/16 08:39	12/22/16 14:28	1
2,3,7,8-TCDF	ND		1.0		pg/g		12/15/16 08:39	12/22/16 14:28	1
1,2,3,7,8-PeCDD	ND		5.0		pg/g		12/15/16 08:39	12/22/16 14:28	1
1,2,3,7,8-PeCDF	ND		5.0		pg/g		12/15/16 08:39	12/22/16 14:28	1
2,3,4,7,8-PeCDF	ND		5.0		pg/g		12/15/16 08:39	12/22/16 14:28	1
1,2,3,4,7,8-HxCDD	ND		5.0		pg/g		12/15/16 08:39	12/22/16 14:28	1
1,2,3,6,7,8-HxCDD	ND		5.0		pg/g		12/15/16 08:39	12/22/16 14:28	1
1,2,3,7,8,9-HxCDD	ND		5.0		pg/g		12/15/16 08:39	12/22/16 14:28	1
1,2,3,4,7,8-HxCDF	ND		5.0		pg/g		12/15/16 08:39	12/22/16 14:28	1
1,2,3,6,7,8-HxCDF	ND		5.0		pg/g		12/15/16 08:39	12/22/16 14:28	1
1,2,3,7,8,9-HxCDF	ND		5.0		pg/g		12/15/16 08:39	12/22/16 14:28	1
2,3,4,6,7,8-HxCDF	ND		5.0		pg/g		12/15/16 08:39	12/22/16 14:28	1
1,2,3,4,6,7,8-HpCDD	ND		5.0		pg/g		12/15/16 08:39	12/22/16 14:28	1
1,2,3,4,6,7,8-HpCDF	ND		5.0		pg/g		12/15/16 08:39	12/22/16 14:28	1
1,2,3,4,7,8,9-HpCDF	ND		5.0		pg/g		12/15/16 08:39	12/22/16 14:28	1
OCDD	ND		10		pg/g		12/15/16 08:39	12/22/16 14:28	1
OCDF	ND		10		pg/g		12/15/16 08:39	12/22/16 14:28	1
Total TCDD	ND		1.0		pg/g		12/15/16 08:39	12/22/16 14:28	1
Total TCDF	ND		1.0		pg/g		12/15/16 08:39	12/22/16 14:28	1

TestAmerica Spokane

QC Sample Results

Client: GeoEngineers Inc
 Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5185-1

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: MB 320-142262/1-A
Matrix: Solid
Analysis Batch: 143636

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 142262

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
Total PeCDD	ND		5.0		pg/g		12/15/16 08:39	12/22/16 14:28	1
Total PeCDF	ND		5.0		pg/g		12/15/16 08:39	12/22/16 14:28	1
Total HxCDD	ND		5.0		pg/g		12/15/16 08:39	12/22/16 14:28	1
Total HxCDF	ND		5.0		pg/g		12/15/16 08:39	12/22/16 14:28	1
Total HpCDD	ND		5.0		pg/g		12/15/16 08:39	12/22/16 14:28	1
Total HpCDF	ND		5.0		pg/g		12/15/16 08:39	12/22/16 14:28	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	59		40 - 135	12/15/16 08:39	12/22/16 14:28	1
13C-2,3,7,8-TCDF	61		40 - 135	12/15/16 08:39	12/22/16 14:28	1
13C-1,2,3,7,8-PeCDD	56		40 - 135	12/15/16 08:39	12/22/16 14:28	1
13C-1,2,3,7,8-PeCDF	60		40 - 135	12/15/16 08:39	12/22/16 14:28	1
13C-1,2,3,6,7,8-HxCDD	66		40 - 135	12/15/16 08:39	12/22/16 14:28	1
13C-1,2,3,4,7,8-HxCDF	64		40 - 135	12/15/16 08:39	12/22/16 14:28	1
13C-1,2,3,4,6,7,8-HpCDD	68		40 - 135	12/15/16 08:39	12/22/16 14:28	1
13C-1,2,3,4,6,7,8-HpCDF	67		40 - 135	12/15/16 08:39	12/22/16 14:28	1
13C-OCDD	70		40 - 135	12/15/16 08:39	12/22/16 14:28	1

Lab Sample ID: LCS 320-142262/2-A
Matrix: Solid
Analysis Batch: 143636

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 142262

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
2,3,7,8-TCDD	20.0	22.2		pg/g		111	77 - 130
2,3,7,8-TCDF	20.0	21.3		pg/g		106	79 - 137
1,2,3,7,8-PeCDD	100	116		pg/g		116	79 - 134
1,2,3,7,8-PeCDF	100	115		pg/g		115	81 - 134
2,3,4,7,8-PeCDF	100	115		pg/g		115	76 - 132
1,2,3,4,7,8-HxCDD	100	109		pg/g		109	65 - 144
1,2,3,6,7,8-HxCDD	100	115		pg/g		115	73 - 147
1,2,3,7,8,9-HxCDD	100	101		pg/g		101	80 - 143
1,2,3,4,7,8-HxCDF	100	109		pg/g		109	72 - 140
1,2,3,6,7,8-HxCDF	100	111		pg/g		111	63 - 152
1,2,3,7,8,9-HxCDF	100	102		pg/g		102	72 - 152
2,3,4,6,7,8-HxCDF	100	111		pg/g		111	72 - 151
1,2,3,4,6,7,8-HpCDD	100	113		pg/g		113	86 - 134
1,2,3,4,6,7,8-HpCDF	100	112		pg/g		112	81 - 137
1,2,3,4,7,8,9-HpCDF	100	107		pg/g		107	79 - 139
OCDD	200	223		pg/g		111	80 - 137
OCDF	200	220		pg/g		110	75 - 141

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C-2,3,7,8-TCDD	82		40 - 135
13C-2,3,7,8-TCDF	85		40 - 135
13C-1,2,3,7,8-PeCDD	78		40 - 135
13C-1,2,3,7,8-PeCDF	84		40 - 135
13C-1,2,3,6,7,8-HxCDD	94		40 - 135
13C-1,2,3,4,7,8-HxCDF	94		40 - 135

TestAmerica Spokane

QC Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5185-1

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCS 320-142262/2-A
Matrix: Solid
Analysis Batch: 143636

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 142262

Isotope Dilution	LCS		Limits
	%Recovery	Qualifier	
13C-1,2,3,4,6,7,8-HpCDD	91		40 - 135
13C-1,2,3,4,6,7,8-HpCDF	94		40 - 135
13C-OCDD	95		40 - 135

Lab Sample ID: LCSD 320-142262/3-A
Matrix: Solid
Analysis Batch: 143636

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 142262

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits		RPD	Limit
							%Rec.	RPD		
2,3,7,8-TCDD	20.0	20.7		pg/g		104	77 - 130	7	20	
2,3,7,8-TCDF	20.0	20.1		pg/g		100	79 - 137	6	20	
1,2,3,7,8-PeCDD	100	111		pg/g		111	79 - 134	4	20	
1,2,3,7,8-PeCDF	100	110		pg/g		110	81 - 134	4	20	
2,3,4,7,8-PeCDF	100	110		pg/g		110	76 - 132	4	20	
1,2,3,4,7,8-HxCDD	100	101		pg/g		101	65 - 144	7	20	
1,2,3,6,7,8-HxCDD	100	109		pg/g		109	73 - 147	5	20	
1,2,3,7,8,9-HxCDD	100	97.1		pg/g		97	80 - 143	4	20	
1,2,3,4,7,8-HxCDF	100	107		pg/g		107	72 - 140	2	20	
1,2,3,6,7,8-HxCDF	100	109		pg/g		109	63 - 152	2	20	
1,2,3,7,8,9-HxCDF	100	101		pg/g		101	72 - 152	1	20	
2,3,4,6,7,8-HxCDF	100	108		pg/g		108	72 - 151	3	20	
1,2,3,4,6,7,8-HpCDD	100	107		pg/g		107	86 - 134	5	20	
1,2,3,4,6,7,8-HpCDF	100	107		pg/g		107	81 - 137	5	20	
1,2,3,4,7,8,9-HpCDF	100	101		pg/g		101	79 - 139	7	20	
OCDD	200	209		pg/g		104	80 - 137	6	20	
OCDF	200	204		pg/g		102	75 - 141	8	20	

Isotope Dilution	LCSD		Limits
	%Recovery	Qualifier	
13C-2,3,7,8-TCDD	57		40 - 135
13C-2,3,7,8-TCDF	60		40 - 135
13C-1,2,3,7,8-PeCDD	55		40 - 135
13C-1,2,3,7,8-PeCDF	58		40 - 135
13C-1,2,3,6,7,8-HxCDD	68		40 - 135
13C-1,2,3,4,7,8-HxCDF	67		40 - 135
13C-1,2,3,4,6,7,8-HpCDD	66		40 - 135
13C-1,2,3,4,6,7,8-HpCDF	68		40 - 135
13C-OCDD	69		40 - 135

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 590-9988/2-A
Matrix: Solid
Analysis Batch: 10012

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 9988

Analyte	MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Cadmium	ND		0.63		mg/Kg		12/12/16 13:58	12/13/16 14:10	1

TestAmerica Spokane

QC Sample Results

Client: GeoEngineers Inc
 Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5185-1

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: LCS 590-9988/1-A
Matrix: Solid
Analysis Batch: 10012

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 9988

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cadmium	50.0	49.5		mg/Kg		99	80 - 120

Method: 7471B - Mercury (CVAA)

Lab Sample ID: MB 590-10106/9-A
Matrix: Solid
Analysis Batch: 10139

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 10106

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	ND		50		ug/Kg		12/20/16 09:43	12/21/16 15:33	1

Lab Sample ID: LCS 590-10106/8-A
Matrix: Solid
Analysis Batch: 10139

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 10106

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Hg	200	199		ug/Kg		100	80 - 120

Lab Sample ID: 590-5185-96 MS
Matrix: Solid
Analysis Batch: 10139

Client Sample ID: HA-27 (0-6")
Prep Type: Total/NA
Prep Batch: 10106

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Hg	ND		218	240		ug/Kg	☼	99	80 - 120

Lab Sample ID: 590-5185-96 MSD
Matrix: Solid
Analysis Batch: 10139

Client Sample ID: HA-27 (0-6")
Prep Type: Total/NA
Prep Batch: 10106

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Hg	ND		222	245		ug/Kg	☼	100	80 - 120	2	20

Lab Sample ID: 590-5185-96 DU
Matrix: Solid
Analysis Batch: 10139

Client Sample ID: HA-27 (0-6")
Prep Type: Total/NA
Prep Batch: 10106

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Hg	ND		ND		ug/Kg	☼	NC	20

TestAmerica Spokane

Lab Chronicle

Client: GeoEngineers Inc
 Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5185-1

Client Sample ID: HA-4 (0-6')

Date Collected: 12/06/16 11:40

Date Received: 12/09/16 12:10

Lab Sample ID: 590-5185-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			142206	12/14/16 15:28	CFR	TAL SAC

Client Sample ID: HA-4 (0-6')

Date Collected: 12/06/16 11:40

Date Received: 12/09/16 12:10

Lab Sample ID: 590-5185-1

Matrix: Solid

Percent Solids: 75.7

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			10.02 g	2000 uL	142254	12/15/16 06:24	GLB	TAL SAC
Total/NA	Analysis	8290A		1			143787	12/23/16 23:26	KSS	TAL SAC

Client Sample ID: HA-3 (0-6")

Date Collected: 12/06/16 12:05

Date Received: 12/09/16 12:10

Lab Sample ID: 590-5185-4

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			142206	12/14/16 15:28	CFR	TAL SAC

Client Sample ID: HA-3 (0-6")

Date Collected: 12/06/16 12:05

Date Received: 12/09/16 12:10

Lab Sample ID: 590-5185-4

Matrix: Solid

Percent Solids: 71.7

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			10.05 g	4000 uL	142254	12/15/16 06:24	GLB	TAL SAC
Total/NA	Analysis	8290A		1			143787	12/24/16 00:12	KSS	TAL SAC

Client Sample ID: HA-2 (0-6")

Date Collected: 12/06/16 12:25

Date Received: 12/09/16 12:10

Lab Sample ID: 590-5185-7

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			143223	12/21/16 07:04	EP1	TAL SAC

Client Sample ID: HA-2 (0-6")

Date Collected: 12/06/16 12:25

Date Received: 12/09/16 12:10

Lab Sample ID: 590-5185-7

Matrix: Solid

Percent Solids: 88.7

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			10.01 g	83.3 uL	142262	12/15/16 08:58	GLB	TAL SAC
Total/NA	Analysis	8290A		1			143637	12/23/16 07:10	SMA	TAL SAC

TestAmerica Spokane

Lab Chronicle

Client: GeoEngineers Inc
 Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5185-1

Client Sample ID: HA-1 (0-6")

Lab Sample ID: 590-5185-10

Date Collected: 12/06/16 12:45

Matrix: Solid

Date Received: 12/09/16 12:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			9990	12/12/16 15:10	NMI	TAL SPK

Client Sample ID: HA-1 (0-6")

Lab Sample ID: 590-5185-10

Date Collected: 12/06/16 12:45

Matrix: Solid

Date Received: 12/09/16 12:10

Percent Solids: 61.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.29 g	2 mL	10041	12/15/16 09:22	NMI	TAL SPK
Total/NA	Analysis	8270D SIM		1			10044	12/15/16 15:09	NMI	TAL SPK
Total/NA	Prep	3550C			15.69 g	5 mL	9993	12/13/16 10:05	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			9994	12/13/16 11:01	NMI	TAL SPK
Total/NA	Prep	8290			9.99 g	500 uL	142254	12/15/16 06:24	GLB	TAL SAC
Total/NA	Analysis	8290A		1			143787	12/24/16 00:59	KSS	TAL SAC

Client Sample ID: HA-36 (0-6")

Lab Sample ID: 590-5185-13

Date Collected: 12/06/16 13:05

Matrix: Solid

Date Received: 12/09/16 12:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			9990	12/12/16 15:10	NMI	TAL SPK

Client Sample ID: HA-36 (0-6")

Lab Sample ID: 590-5185-13

Date Collected: 12/06/16 13:05

Matrix: Solid

Date Received: 12/09/16 12:10

Percent Solids: 45.9

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.77 g	2 mL	10041	12/15/16 09:22	NMI	TAL SPK
Total/NA	Analysis	8270D SIM		1			10044	12/15/16 15:35	NMI	TAL SPK
Total/NA	Prep	3550C			15.75 g	5 mL	9993	12/13/16 10:05	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			9994	12/13/16 11:18	NMI	TAL SPK

Client Sample ID: HA-37 (0-6")

Lab Sample ID: 590-5185-16

Date Collected: 12/06/16 13:25

Matrix: Solid

Date Received: 12/09/16 12:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			9990	12/12/16 15:10	NMI	TAL SPK

TestAmerica Spokane

Lab Chronicle

Client: GeoEngineers Inc
 Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5185-1

Client Sample ID: HA-37 (0-6")

Lab Sample ID: 590-5185-16

Date Collected: 12/06/16 13:25

Matrix: Solid

Date Received: 12/09/16 12:10

Percent Solids: 85.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.40 g	2 mL	10041	12/15/16 09:22	NMI	TAL SPK
Total/NA	Analysis	8270D SIM		1			10044	12/15/16 16:53	NMI	TAL SPK
Total/NA	Prep	3550C			15.30 g	5 mL	9993	12/13/16 10:05	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			9994	12/13/16 11:53	NMI	TAL SPK

Client Sample ID: HA-14 (0-6")

Lab Sample ID: 590-5185-19

Date Collected: 12/06/16 14:00

Matrix: Solid

Date Received: 12/09/16 12:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			142206	12/14/16 15:28	CFR	TAL SAC

Client Sample ID: HA-14 (0-6")

Lab Sample ID: 590-5185-19

Date Collected: 12/06/16 14:00

Matrix: Solid

Date Received: 12/09/16 12:10

Percent Solids: 85.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			10.05 g	222.2 uL	142254	12/15/16 06:24	GLB	TAL SAC
Total/NA	Analysis	8290A		1			143787	12/24/16 01:45	KSS	TAL SAC

Client Sample ID: HA-13 (0-6")

Lab Sample ID: 590-5185-22

Date Collected: 12/06/16 14:35

Matrix: Solid

Date Received: 12/09/16 12:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			142206	12/14/16 15:28	CFR	TAL SAC

Client Sample ID: HA-13 (0-6")

Lab Sample ID: 590-5185-22

Date Collected: 12/06/16 14:35

Matrix: Solid

Date Received: 12/09/16 12:10

Percent Solids: 82.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			10.04 g	2857 uL	142254	12/15/16 06:24	GLB	TAL SAC
Total/NA	Analysis	8290A		1			143787	12/24/16 02:31	KSS	TAL SAC

Client Sample ID: HA-32 (0-6")

Lab Sample ID: 590-5185-25

Date Collected: 12/06/16 15:00

Matrix: Solid

Date Received: 12/09/16 12:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			142206	12/14/16 15:28	CFR	TAL SAC

TestAmerica Spokane

Lab Chronicle

Client: GeoEngineers Inc
 Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5185-1

Client Sample ID: HA-32 (0-6")

Lab Sample ID: 590-5185-25

Date Collected: 12/06/16 15:00

Matrix: Solid

Date Received: 12/09/16 12:10

Percent Solids: 91.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			10.08 g	66.7 uL	142254	12/15/16 06:24	GLB	TAL SAC
Total/NA	Analysis	8290A		1			143787	12/24/16 03:17	KSS	TAL SAC

Client Sample ID: HA-8 (0-6")

Lab Sample ID: 590-5185-28

Date Collected: 12/06/16 15:30

Matrix: Solid

Date Received: 12/09/16 12:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			142219	12/14/16 15:56	CFR	TAL SAC

Client Sample ID: HA-8 (0-6")

Lab Sample ID: 590-5185-28

Date Collected: 12/06/16 15:30

Matrix: Solid

Date Received: 12/09/16 12:10

Percent Solids: 85.9

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			10.00 g	250 uL	142254	12/15/16 06:24	GLB	TAL SAC
Total/NA	Analysis	8290A		1			143785	12/23/16 23:28	KSS	TAL SAC

Client Sample ID: HA-6 (0-6")

Lab Sample ID: 590-5185-31

Date Collected: 12/06/16 15:45

Matrix: Solid

Date Received: 12/09/16 12:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			142219	12/14/16 15:56	CFR	TAL SAC

Client Sample ID: HA-6 (0-6")

Lab Sample ID: 590-5185-31

Date Collected: 12/06/16 15:45

Matrix: Solid

Date Received: 12/09/16 12:10

Percent Solids: 87.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			10.03 g	2000 uL	142254	12/15/16 06:24	GLB	TAL SAC
Total/NA	Analysis	8290A		1			143785	12/24/16 00:14	KSS	TAL SAC

Client Sample ID: HA-5 (0-6")

Lab Sample ID: 590-5185-34

Date Collected: 12/06/16 16:05

Matrix: Solid

Date Received: 12/09/16 12:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			142219	12/14/16 15:56	CFR	TAL SAC

TestAmerica Spokane

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5185-1

Client Sample ID: HA-5 (0-6")

Lab Sample ID: 590-5185-34

Date Collected: 12/06/16 16:05

Matrix: Solid

Date Received: 12/09/16 12:10

Percent Solids: 85.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			10.05 g	333.3 uL	142254	12/15/16 06:24	GLB	TAL SAC
Total/NA	Analysis	8290A		1			143785	12/24/16 01:00	KSS	TAL SAC

Client Sample ID: HA-7 (0-6")

Lab Sample ID: 590-5185-37

Date Collected: 12/06/16 16:20

Matrix: Solid

Date Received: 12/09/16 12:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			142219	12/14/16 15:56	CFR	TAL SAC

Client Sample ID: HA-7 (0-6")

Lab Sample ID: 590-5185-37

Date Collected: 12/06/16 16:20

Matrix: Solid

Date Received: 12/09/16 12:10

Percent Solids: 76.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			10.00 g	400 uL	142254	12/15/16 06:24	GLB	TAL SAC
Total/NA	Analysis	8290A		1			143785	12/24/16 01:46	KSS	TAL SAC

Client Sample ID: HA-9 (0-6")

Lab Sample ID: 590-5185-40

Date Collected: 12/07/16 08:30

Matrix: Solid

Date Received: 12/09/16 12:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			142219	12/14/16 15:56	CFR	TAL SAC

Client Sample ID: HA-9 (0-6")

Lab Sample ID: 590-5185-40

Date Collected: 12/07/16 08:30

Matrix: Solid

Date Received: 12/09/16 12:10

Percent Solids: 83.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			10.00 g	500 uL	142254	12/15/16 06:24	GLB	TAL SAC
Total/NA	Analysis	8290A		1			143785	12/24/16 02:32	KSS	TAL SAC

Client Sample ID: HA-15 (0-6")

Lab Sample ID: 590-5185-43

Date Collected: 12/07/16 09:10

Matrix: Solid

Date Received: 12/09/16 12:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			9990	12/12/16 15:10	NMI	TAL SPK

TestAmerica Spokane

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5185-1

Client Sample ID: HA-15 (0-6")

Lab Sample ID: 590-5185-43

Date Collected: 12/07/16 09:10

Matrix: Solid

Date Received: 12/09/16 12:10

Percent Solids: 70.9

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.21 g	5 mL	9993	12/13/16 10:05	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			9994	12/13/16 12:10	NMI	TAL SPK

Client Sample ID: HA-16 (0-6")

Lab Sample ID: 590-5185-46

Date Collected: 12/07/16 09:30

Matrix: Solid

Date Received: 12/09/16 12:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			9990	12/12/16 15:10	NMI	TAL SPK

Client Sample ID: HA-16 (0-6")

Lab Sample ID: 590-5185-46

Date Collected: 12/07/16 09:30

Matrix: Solid

Date Received: 12/09/16 12:10

Percent Solids: 77.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.22 g	5 mL	9993	12/13/16 10:05	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			9994	12/13/16 12:28	NMI	TAL SPK

Client Sample ID: HA-17 (0-6")

Lab Sample ID: 590-5185-49

Date Collected: 12/07/16 09:50

Matrix: Solid

Date Received: 12/09/16 12:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			9990	12/12/16 15:10	NMI	TAL SPK

Client Sample ID: HA-17 (0-6")

Lab Sample ID: 590-5185-49

Date Collected: 12/07/16 09:50

Matrix: Solid

Date Received: 12/09/16 12:10

Percent Solids: 70.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.10 g	5 mL	9993	12/13/16 10:05	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			9994	12/13/16 12:45	NMI	TAL SPK
Total/NA	Prep	8290			10.08 g	666.7 uL	142254	12/15/16 06:24	GLB	TAL SAC
Total/NA	Analysis	8290A		1			143785	12/24/16 03:18	KSS	TAL SAC

Client Sample ID: HA-35 (0-6")

Lab Sample ID: 590-5185-52

Date Collected: 12/07/16 10:10

Matrix: Solid

Date Received: 12/09/16 12:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			9990	12/12/16 15:10	NMI	TAL SPK

TestAmerica Spokane

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5185-1

Client Sample ID: HA-35 (0-6")

Date Collected: 12/07/16 10:10

Date Received: 12/09/16 12:10

Lab Sample ID: 590-5185-52

Matrix: Solid

Percent Solids: 46.9

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			10.89 g	2 mL	10041	12/15/16 09:22	NMI	TAL SPK
Total/NA	Analysis	8270D SIM		1			10044	12/15/16 17:19	NMI	TAL SPK

Client Sample ID: HA-24 (0-6")

Date Collected: 12/07/16 10:35

Date Received: 12/09/16 12:10

Lab Sample ID: 590-5185-55

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			9990	12/12/16 15:10	NMI	TAL SPK

Client Sample ID: HA-24 (0-6")

Date Collected: 12/07/16 10:35

Date Received: 12/09/16 12:10

Lab Sample ID: 590-5185-55

Matrix: Solid

Percent Solids: 72.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.79 g	2 mL	10041	12/15/16 09:22	NMI	TAL SPK
Total/NA	Analysis	8270D SIM		1			10044	12/15/16 17:46	NMI	TAL SPK

Client Sample ID: HA-25 (0-6")

Date Collected: 12/07/16 10:50

Date Received: 12/09/16 12:10

Lab Sample ID: 590-5185-58

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			9990	12/12/16 15:10	NMI	TAL SPK

Client Sample ID: HA-25 (0-6")

Date Collected: 12/07/16 10:50

Date Received: 12/09/16 12:10

Lab Sample ID: 590-5185-58

Matrix: Solid

Percent Solids: 87.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.44 g	2 mL	10041	12/15/16 09:22	NMI	TAL SPK
Total/NA	Analysis	8270D SIM		1			10044	12/15/16 18:12	NMI	TAL SPK
Total/NA	Prep	8290			10.05 g	1000 uL	142254	12/15/16 06:24	GLB	TAL SAC
Total/NA	Analysis	8290A		1			143785	12/24/16 04:04	KSS	TAL SAC

Client Sample ID: HA-12 (0-6")

Date Collected: 12/07/16 11:55

Date Received: 12/09/16 12:10

Lab Sample ID: 590-5185-61

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			142219	12/14/16 15:56	CFR	TAL SAC

TestAmerica Spokane

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5185-1

Client Sample ID: HA-12 (0-6")

Lab Sample ID: 590-5185-61

Date Collected: 12/07/16 11:55

Matrix: Solid

Date Received: 12/09/16 12:10

Percent Solids: 24.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			10.05 g	22.2 uL	142254	12/15/16 06:24	GLB	TAL SAC
Total/NA	Analysis	8290A		1			143785	12/24/16 04:50	KSS	TAL SAC

Client Sample ID: HA-38 (0-6")

Lab Sample ID: 590-5185-64

Date Collected: 12/07/16 12:10

Matrix: Solid

Date Received: 12/09/16 12:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			142219	12/14/16 15:56	CFR	TAL SAC

Client Sample ID: HA-38 (0-6")

Lab Sample ID: 590-5185-64

Date Collected: 12/07/16 12:10

Matrix: Solid

Date Received: 12/09/16 12:10

Percent Solids: 22.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			10.01 g	20 uL	142254	12/15/16 06:24	GLB	TAL SAC
Total/NA	Analysis	8290A		1			143785	12/24/16 05:36	KSS	TAL SAC

Client Sample ID: HA-11 (0-6")

Lab Sample ID: 590-5185-67

Date Collected: 12/07/16 12:35

Matrix: Solid

Date Received: 12/09/16 12:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			142219	12/14/16 15:56	CFR	TAL SAC

Client Sample ID: HA-11 (0-6")

Lab Sample ID: 590-5185-67

Date Collected: 12/07/16 12:35

Matrix: Solid

Date Received: 12/09/16 12:10

Percent Solids: 36.2

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			10.06 g	66.7 uL	142254	12/15/16 06:24	GLB	TAL SAC
Total/NA	Analysis	8290A		1			143786	12/24/16 09:57	KSS	TAL SAC

Client Sample ID: HA-22 (0-6")

Lab Sample ID: 590-5185-70

Date Collected: 12/07/16 13:35

Matrix: Solid

Date Received: 12/09/16 12:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			142219	12/14/16 15:56	CFR	TAL SAC

TestAmerica Spokane

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5185-1

Client Sample ID: HA-22 (0-6")

Lab Sample ID: 590-5185-70

Date Collected: 12/07/16 13:35

Matrix: Solid

Date Received: 12/09/16 12:10

Percent Solids: 86.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			10.08 g	25 uL	142254	12/15/16 06:24	GLB	TAL SAC
Total/NA	Analysis	8290A		1			143786	12/24/16 10:43	KSS	TAL SAC

Client Sample ID: HA-20 (0-6")

Lab Sample ID: 590-5185-73

Date Collected: 12/07/16 13:50

Matrix: Solid

Date Received: 12/09/16 12:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			142219	12/14/16 15:56	CFR	TAL SAC

Client Sample ID: HA-20 (0-6")

Lab Sample ID: 590-5185-73

Date Collected: 12/07/16 13:50

Matrix: Solid

Date Received: 12/09/16 12:10

Percent Solids: 47.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			10.03 g	285.7 uL	142254	12/15/16 06:24	GLB	TAL SAC
Total/NA	Analysis	8290A		1			143786	12/24/16 11:29	KSS	TAL SAC

Client Sample ID: HA-18 (0-6")

Lab Sample ID: 590-5185-76

Date Collected: 12/07/16 14:20

Matrix: Solid

Date Received: 12/09/16 12:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			142219	12/14/16 15:56	CFR	TAL SAC

Client Sample ID: HA-18 (0-6")

Lab Sample ID: 590-5185-76

Date Collected: 12/07/16 14:20

Matrix: Solid

Date Received: 12/09/16 12:10

Percent Solids: 69.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			10.00 g	20 uL	142254	12/15/16 06:24	GLB	TAL SAC
Total/NA	Analysis	8290A		1			143786	12/24/16 12:15	KSS	TAL SAC

Client Sample ID: HA-10 (0-6")

Lab Sample ID: 590-5185-79

Date Collected: 12/07/16 14:05

Matrix: Solid

Date Received: 12/09/16 12:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			9990	12/12/16 15:10	NMI	TAL SPK

TestAmerica Spokane

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5185-1

Client Sample ID: HA-10 (0-6")

Lab Sample ID: 590-5185-79

Date Collected: 12/07/16 14:05

Matrix: Solid

Date Received: 12/09/16 12:10

Percent Solids: 77.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.64 g	2 mL	10041	12/15/16 09:22	NMI	TAL SPK
Total/NA	Analysis	8270D SIM		1			10044	12/15/16 18:38	NMI	TAL SPK
Total/NA	Prep	8290			10.05 g	20 uL	142254	12/15/16 06:24	GLB	TAL SAC
Total/NA	Analysis	8290A		1			143786	12/24/16 13:01	KSS	TAL SAC

Client Sample ID: HA-19 (0-6")

Lab Sample ID: 590-5185-82

Date Collected: 12/07/16 14:45

Matrix: Solid

Date Received: 12/09/16 12:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			142219	12/14/16 15:56	CFR	TAL SAC

Client Sample ID: HA-19 (0-6")

Lab Sample ID: 590-5185-82

Date Collected: 12/07/16 14:45

Matrix: Solid

Date Received: 12/09/16 12:10

Percent Solids: 76.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			10.05 g	20 uL	142262	12/15/16 08:39	GLB	TAL SAC
Total/NA	Analysis	8290A		1			143636	12/22/16 16:46	SMA	TAL SAC

Client Sample ID: HA-21 (0-6")

Lab Sample ID: 590-5185-85

Date Collected: 12/07/16 15:05

Matrix: Solid

Date Received: 12/09/16 12:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			142219	12/14/16 15:56	CFR	TAL SAC

Client Sample ID: HA-21 (0-6")

Lab Sample ID: 590-5185-85

Date Collected: 12/07/16 15:05

Matrix: Solid

Date Received: 12/09/16 12:10

Percent Solids: 71.2

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			10.00 g	20 uL	142262	12/15/16 08:39	GLB	TAL SAC
Total/NA	Analysis	8290A		1			143636	12/22/16 17:32	SMA	TAL SAC

Client Sample ID: HA-23 (0-6")

Lab Sample ID: 590-5185-88

Date Collected: 12/07/16 15:30

Matrix: Solid

Date Received: 12/09/16 12:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			142219	12/14/16 15:56	CFR	TAL SAC

TestAmerica Spokane

Lab Chronicle

Client: GeoEngineers Inc
 Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5185-1

Client Sample ID: HA-23 (0-6")

Lab Sample ID: 590-5185-88

Date Collected: 12/07/16 15:30

Matrix: Solid

Date Received: 12/09/16 12:10

Percent Solids: 64.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			10.02 g	666.6 uL	142262	12/15/16 08:39	GLB	TAL SAC
Total/NA	Analysis	8290A		1			143636	12/22/16 18:18	SMA	TAL SAC

Client Sample ID: HA-26 (0-6")

Lab Sample ID: 590-5185-91

Date Collected: 12/07/16 11:05

Matrix: Solid

Date Received: 12/09/16 12:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			9990	12/12/16 15:10	NMI	TAL SPK

Client Sample ID: HA-26 (0-6")

Lab Sample ID: 590-5185-91

Date Collected: 12/07/16 11:05

Matrix: Solid

Date Received: 12/09/16 12:10

Percent Solids: 77.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.66 g	2 mL	10041	12/15/16 09:22	NMI	TAL SPK
Total/NA	Analysis	8270D SIM		1			10044	12/15/16 19:04	NMI	TAL SPK

Client Sample ID: Seep-1:GW:120716

Lab Sample ID: 590-5185-94

Date Collected: 12/07/16 14:06

Matrix: Water

Date Received: 12/09/16 12:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1026 mL	2 mL	234444	12/13/16 17:46	JCV	TAL SEA
Total/NA	Analysis	8270D SIM		1			234802	12/17/16 23:26	D1R	TAL SEA
Total/NA	Prep	3510C			218.8 mL	2 mL	10031	12/14/16 14:24	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			10020	12/15/16 02:02	NMI	TAL SPK

Client Sample ID: Seep-2:GW:120716

Lab Sample ID: 590-5185-95

Date Collected: 12/07/16 14:57

Matrix: Water

Date Received: 12/09/16 12:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			961.1 mL	2 mL	234444	12/13/16 17:46	JCV	TAL SEA
Total/NA	Analysis	8270D SIM		1			234802	12/17/16 23:48	D1R	TAL SEA
Total/NA	Prep	3510C			227.6 mL	2 mL	10031	12/14/16 14:24	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			10020	12/15/16 02:18	NMI	TAL SPK

TestAmerica Spokane

Lab Chronicle

Client: GeoEngineers Inc
 Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5185-1

Client Sample ID: HA-27 (0-6")

Lab Sample ID: 590-5185-96

Date Collected: 12/07/16 15:45

Matrix: Solid

Date Received: 12/09/16 12:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			9989	12/12/16 14:45	JSP	TAL SPK

Client Sample ID: HA-27 (0-6")

Lab Sample ID: 590-5185-96

Date Collected: 12/07/16 15:45

Matrix: Solid

Date Received: 12/09/16 12:10

Percent Solids: 74.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.52 g	50 mL	9988	12/12/16 13:58	JSP	TAL SPK
Total/NA	Analysis	6010C		1			10012	12/13/16 14:17	JSP	TAL SPK
Total/NA	Prep	7471B			0.89 g	50 mL	10106	12/20/16 09:43	JSP	TAL SPK
Total/NA	Analysis	7471B		1			10139	12/21/16 15:36	JSP	TAL SPK

Client Sample ID: HA-28 (0-6")

Lab Sample ID: 590-5185-99

Date Collected: 12/07/16 16:00

Matrix: Solid

Date Received: 12/09/16 12:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			9989	12/12/16 14:45	JSP	TAL SPK

Client Sample ID: HA-28 (0-6")

Lab Sample ID: 590-5185-99

Date Collected: 12/07/16 16:00

Matrix: Solid

Date Received: 12/09/16 12:10

Percent Solids: 66.7

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.53 g	50 mL	9988	12/12/16 13:58	JSP	TAL SPK
Total/NA	Analysis	6010C		1			10012	12/13/16 14:21	JSP	TAL SPK
Total/NA	Prep	7471B			1.14 g	50 mL	10106	12/20/16 09:43	JSP	TAL SPK
Total/NA	Analysis	7471B		1			10139	12/21/16 15:45	JSP	TAL SPK

Client Sample ID: HA-30 (0-6")

Lab Sample ID: 590-5185-102

Date Collected: 12/07/16 16:20

Matrix: Solid

Date Received: 12/09/16 12:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			9989	12/12/16 14:45	JSP	TAL SPK

Client Sample ID: HA-30 (0-6")

Lab Sample ID: 590-5185-102

Date Collected: 12/07/16 16:20

Matrix: Solid

Date Received: 12/09/16 12:10

Percent Solids: 81.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.57 g	2 mL	10041	12/15/16 09:22	NMI	TAL SPK

TestAmerica Spokane

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5185-1

Client Sample ID: HA-30 (0-6")

Lab Sample ID: 590-5185-102

Date Collected: 12/07/16 16:20

Matrix: Solid

Date Received: 12/09/16 12:10

Percent Solids: 81.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8270D SIM		1			10044	12/15/16 19:30	NMI	TAL SPK
Total/NA	Prep	8290			10.04 g	20 uL	142262	12/15/16 08:39	GLB	TAL SAC
Total/NA	Analysis	8290A		1			143636	12/22/16 19:04	SMA	TAL SAC
Total/NA	Prep	3050B			1.47 g	50 mL	9988	12/12/16 13:58	JSP	TAL SPK
Total/NA	Analysis	6010C		1			10012	12/13/16 14:24	JSP	TAL SPK
Total/NA	Prep	7471B			1.21 g	50 mL	10106	12/20/16 09:43	JSP	TAL SPK
Total/NA	Analysis	7471B		1			10139	12/21/16 15:47	JSP	TAL SPK

Client Sample ID: HA-29 (0-6")

Lab Sample ID: 590-5185-105

Date Collected: 12/07/16 16:35

Matrix: Solid

Date Received: 12/09/16 12:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			9990	12/12/16 15:10	NMI	TAL SPK

Client Sample ID: HA-29 (0-6")

Lab Sample ID: 590-5185-105

Date Collected: 12/07/16 16:35

Matrix: Solid

Date Received: 12/09/16 12:10

Percent Solids: 73.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.50 g	2 mL	10041	12/15/16 09:22	NMI	TAL SPK
Total/NA	Analysis	8270D SIM		10			10051	12/16/16 09:44	NMI	TAL SPK

Client Sample ID: Seep-1 (6-12")

Lab Sample ID: 590-5185-108

Date Collected: 12/07/16 12:00

Matrix: Solid

Date Received: 12/09/16 12:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			9989	12/12/16 14:45	JSP	TAL SPK

Client Sample ID: Seep-1 (6-12")

Lab Sample ID: 590-5185-108

Date Collected: 12/07/16 12:00

Matrix: Solid

Date Received: 12/09/16 12:10

Percent Solids: 72.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.82 g	2 mL	10041	12/15/16 09:22	NMI	TAL SPK
Total/NA	Analysis	8270D SIM		1			10044	12/15/16 20:22	NMI	TAL SPK
Total/NA	Prep	3550C			15.29 g	5 mL	9993	12/13/16 10:05	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			9994	12/13/16 13:02	NMI	TAL SPK

TestAmerica Spokane

Lab Chronicle

Client: GeoEngineers Inc
 Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5185-1

Client Sample ID: Seep-2 (6-12")

Lab Sample ID: 590-5185-109

Date Collected: 12/07/16 12:05

Matrix: Solid

Date Received: 12/09/16 12:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			9989	12/12/16 14:45	JSP	TAL SPK

Client Sample ID: Seep-2 (6-12")

Lab Sample ID: 590-5185-109

Date Collected: 12/07/16 12:05

Matrix: Solid

Date Received: 12/09/16 12:10

Percent Solids: 63.9

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.31 g	2 mL	10041	12/15/16 09:22	NMI	TAL SPK
Total/NA	Analysis	8270D SIM		1			10044	12/15/16 20:48	NMI	TAL SPK
Total/NA	Prep	3550C			15.75 g	5 mL	9993	12/13/16 10:05	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			9994	12/13/16 13:19	NMI	TAL SPK

Laboratory References:

TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

TAL SPK = TestAmerica Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

Accreditation/Certification Summary

Client: GeoEngineers Inc
 Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5185-1

Laboratory: TestAmerica Spokane

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
Washington	State Program	10	C569	01-06-19

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

Laboratory: TestAmerica Sacramento

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska (UST)	State Program	10	17-020	01-20-21
Arizona	State Program	9	AZ0708	08-11-18
Arkansas DEQ	State Program	6	88-0691	06-17-19
California	State Program	9	2897	01-31-19
Colorado	State Program	8	CA00044	08-31-18
Connecticut	State Program	1	PH-0691	06-30-19
Florida	NELAP	4	E87570	06-30-18
Georgia	State Program	4	N/A	01-28-19
Hawaii	State Program	9	N/A	01-29-19
Illinois	NELAP	5	200060	03-17-19
Kansas	NELAP	7	E-10375	10-31-18
L-A-B	DoD ELAP		L2468	01-20-21
Louisiana	NELAP	6	30612	06-30-18
Maine	State Program	1	CA0004	04-14-20
Michigan	State Program	5	9947	01-31-20
Nevada	State Program	9	CA00044	07-31-18
New Hampshire	NELAP	1	2997	04-18-19
New Jersey	NELAP	2	CA005	06-30-18
New York	NELAP	2	11666	03-31-19
Oregon	NELAP	10	4040	01-29-19
Pennsylvania	NELAP	3	68-01272	03-31-19
Texas	NELAP	6	T104704399	05-31-19
US Fish & Wildlife	Federal		LE148388-0	07-31-18
USDA	Federal		P330-11-00436	01-17-21
USEPA UCMR	Federal	1	CA00044	11-06-18
Utah	NELAP	8	CA00044	02-28-19
Vermont	State Program	1	VT-4040	04-30-19
Virginia	NELAP	3	460278	03-14-19
Washington	State Program	10	C581	05-05-18
West Virginia (DW)	State Program	3	9930C	12-31-18
Wyoming	State Program	8	8TMS-L	01-28-19

Laboratory: TestAmerica Seattle

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska (UST)	State Program	10	17-024	01-19-19
ANAB	DoD ELAP		L2236	01-19-19
ANAB	ISO/IEC 17025		L2236	01-19-19
California	State Program	9	2901	11-05-18

Accreditation/Certification Summary

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5185-1

Laboratory: TestAmerica Seattle (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Montana (UST)	State Program	8	N/A	04-30-20
Oregon	NELAP	10	WA100007	11-05-18
US Fish & Wildlife	Federal		LE058448-0	10-31-18
USDA	Federal		P330-14-00126	02-10-20
Washington	State Program	10	C553	02-17-19

- 1
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- 3
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- 6
- 7
- 8
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- 11
- 12
- 13

Method Summary

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5185-1

Method	Method Description	Protocol	Laboratory
8270D SIM	Semivolatile Organic Compounds (GC/MS SIM)	SW846	TAL SEA
8270D SIM	Semivolatile Organic Compounds (GC/MS SIM)	SW846	TAL SPK
NWTPH-Dx	Northwest - Semi-Volatile Petroleum Products (GC)	NWTPH	TAL SPK
8290A	Dioxins and Furans (HRGC/HRMS)	SW846	TAL SAC
6010C	Metals (ICP)	SW846	TAL SPK
7471B	Mercury (CVAA)	SW846	TAL SPK
D 2216	Percent Moisture	ASTM	TAL SAC
Moisture	Percent Moisture	EPA	TAL SPK
3050B	Preparation, Metals	SW846	TAL SPK
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	TAL SPK
3520C	Liquid-Liquid Extraction (Continuous)	SW846	TAL SEA
3550C	Ultrasonic Extraction	SW846	TAL SPK
7471B	Preparation, Mercury	SW846	TAL SPK
8290	Soxhlet Extraction of Dioxins and Furans	SW846	TAL SAC

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

NWTPH = Northwest Total Petroleum Hydrocarbon

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

TAL SPK = TestAmerica Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

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THE LEADER IN ENVIRONMENTAL TESTING



590-5185 Chain of Custody

11922 E. First Ave., Spokane WA 99206-5302
 105 SW Nimbus Ave., Beaverton, OR 97008-7145
 Airport Rd Ste A10, Anchorage, AK 99502-1119

509-924-9200 FAX 924-9290
 503-906-9200 FAX 906-9210
 907-563-9200 FAX 563-9210

5/9/2018 (Rev. 1)

CHAIN OF CUSTODY REPORT

Work Order #:

CLIENT: <u>GeoEngineers</u>		INVOICE TO:		TURNAROUND REQUEST in Business Days * Organic & Inorganic Analyses <input checked="" type="checkbox"/> 7 <input type="checkbox"/> 5 <input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1 <input type="checkbox"/> <1 Petroleum Hydrocarbon Analyses <input checked="" type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1 <input type="checkbox"/> <1 OTHER Specify: * Turnaround Requests less than standard may incur Rush Charges.						
REPORT TO: <u>Skatzen@geoengineers.com</u>		P.O. NUMBER:								
ADDRESS: <u>523 E. Second Ave Spokane, WA 99202</u>		PRESERVATIVE								
PHONE: <u>509-363-3125</u> FAX: <u>509-265-3126</u>		REQUESTED ANALYSES								
PROJECT NAME: <u>Cornille Pool and Pole</u>		DRPH								
PROJECT NUMBER: <u>0506-098-01</u>		Dioxin/ PAHs								
SAMPLED BY: <u>JMC / CMD</u>		PCP								
		Cd, Hg								
CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	DRPH	Dioxin/ PAHs	PCP	Cd, Hg	MATRIX (W, S, O)	# OF CONT.	LOCATION/ COMMENTS	TA WO ID	
1 HA-4 (0-6")	12/6/2016 1140		X			S	1			
2 HA-4 (6-12")	1145									
3 HA-4 (12-18")	1150									
4 HA-3 (0-6")	1205		X							
5 HA-3 (6-12")	1210									
6 HA-3 (12-18")	1215									
7 HA-2 (0-6")	1225		X							
8 HA-2 (6-12")	1230									
9 HA-2 (12-18")	1235									
10 HA-1 (0-6")	1245	X	X	X			Z			
RELEASED BY: <u>Callan Driscoll</u>	FIRM: <u>GEL</u>	DATE: <u>12/9/16</u>	TIME: <u>1210</u>	RECEIVED BY: <u>Sheila Krate</u>	FIRM: <u>TH epac</u>	DATE: <u>12/9/16</u>	TIME: <u>12:10</u>			
ADDITIONAL REMARKS:	<u>2.3^c, 1.8^c, 4.1^c, 3.0^c, 2.2^c FPCC3</u>						TEMP:			

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THE LEADER IN ENVIRONMENTAL TESTING

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 9405 SW Nimbus Ave., Beaverton, OR 97008-7145
 2000 W International Airport Rd Ste A10, Anchorage, AK 99502-1119

509-924-9200 FAX 924-9290
 503-906-9200 FAX 906-9210
 907-563-9200 FAX 563-9210

5/9/2018 (Rev. 1)

CHAIN OF CUSTODY REPORT

Work Order #:

CLIENT: <i>Geoengineers</i>		INVOICE TO:				TURNAROUND REQUEST in Business Days * Organic & Inorganic Analyses <input checked="" type="checkbox"/> 7 <input type="checkbox"/> 5 <input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1 <input type="checkbox"/> <1 Petroleum Hydrocarbon Analyses <input checked="" type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1 <input type="checkbox"/> <1 OTHER Specify:			
REPORT TO: <i>slaf@geoengineers.com</i>		P.O. NUMBER:							
ADDRESS: <i>523 E. Second Ave. Spokane, WA 99202</i>		PRESERVATIVE				* Turnaround Requests less than standard may incur Rush Charges.			
PHONE: <i>509-365-3125</i> FAX: <i>509-363-3126</i>		REQUESTED ANALYSES				MATRIX (W, S, O)			
PROJECT NAME: <i>CPII</i>						# OF CONT.			
PROJECT NUMBER: <i>0504-098-01</i>						LOCATION/ COMMENTS			
SAMPLED BY: <i>JML/CMB</i>						TA WO ID			
CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	DRPH	Dienvy Fuels	PCP	Col. H ₂				
<i>HA-1 (6-12)</i>	<i>12/6/2016 1250</i>							<i>S</i>	<i>2</i>
<i>HA-1 (12-18)</i>	<i>1255</i>							<i>|</i>	<i>2</i>
<i>HA-36 (0-6)</i>	<i>1305</i>	<i>X</i>		<i>X</i>				<i>|</i>	<i>2</i>
<i>HA-36 (6-12)</i>	<i>1310</i>							<i>|</i>	<i>2</i>
<i>HA-36 (12-18)</i>	<i>1315</i>							<i>|</i>	<i>2</i>
<i>HA-37 (0-6)</i>	<i>1325</i>	<i>X</i>		<i>X</i>				<i>|</i>	<i>2</i>
<i>HA-37 (6-12)</i>	<i>1330</i>							<i>|</i>	<i>2</i>
<i>HA-37 (12-18)</i>	<i>1335</i>							<i>|</i>	<i>2</i>
<i>HA-14 (0-6)</i>	<i>1400</i>		<i>X</i>					<i>|</i>	<i>1</i>
<i>HA-14 (6-12)</i>	<i>1405</i>							<i>|</i>	<i>1</i>
RELEASED BY: <i>Callen Driscoll</i>	DATE: <i>12/9/16</i>	RECEIVED BY: <i>Sheila Kratz</i>				DATE: <i>12/9/16</i>			
PRINT NAME: <i>Callen Driscoll</i>	TIME: <i>1216</i>	PRINT NAME: <i>Sheila Kratz</i>				TIME: <i>12:10</i>			
RELEASED BY:	DATE:	RECEIVED BY:				DATE:			
PRINT NAME:	TIME:	PRINT NAME:				TIME:			
ADDITIONAL REMARKS:						TEMP: <i>2.3, 1.8, 4.6, 3.0, 2.2</i>			
						PAGE 2 OF 11			

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TAL-1000 (07/14)

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 503-906-9200 FAX 906-9210
 907-563-9200 FAX 563-9210

5/9/2018 (Rev. 1)

CHAIN OF CUSTODY REPORT

Work Order #:

CLIENT: <i>GeoEngineers</i>		INVOICE TO:				TURNAROUND REQUEST in Business Days * Organic & Inorganic Analyses <input checked="" type="checkbox"/> 7 <input type="checkbox"/> 5 <input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1 <input type="checkbox"/> <1 Petroleum Hydrocarbon Analyses <input checked="" type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1 <input type="checkbox"/> <1 OTHER Specify: * Turnaround Requests less than standard may incur Rush Charges.			
REPORT TO: <i>S/Author @ geoengineers.com</i>		P.O. NUMBER:							
ADDRESS: <i>523 E. Second Ave Spokane WA 99202</i>		PRESERVATIVE							
PHONE: <i>509-367-3122</i> FAX: <i>509-367-5126</i>		REQUESTED ANALYSES							
PROJECT NAME: <i>CPPI</i>		DRPH	Dioxin/furans	PCP	Col/H ₂				
PROJECT NUMBER: <i>0504-098-01</i>									
SAMPLED BY: <i>JML/CMS</i>									
CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	DRPH	Dioxin/furans	PCP	Col, H ₂	MATRIX (W, S, O)	# OF CONT.	LOCATION/ COMMENTS	TA WO ID
1 HA-14 (12-18)	12/6/2016 1410					S	1		
2 HA-13 (0-6)	1435		X						
3 HA-13 (6-12)	1440								
4 HA-13 (12-18)	1445								
5 HA-32 (0-6)	1500		X						
6 HA-32 (6-12)	1505								
7 HA-32 (12-18)	1510								
8 HA-8 (0-6)	1530		X						
9 HA-8 (6-12)	1535								
10 HA-8 (12-18)	1540								
RELEASED BY: <i>Collin Driscoll</i>	FIRM: <i>GEL</i>	DATE: <i>12/6/16</i>	TIME: <i>1210</i>	RECEIVED BY: <i>Sheila Kratz</i>	FIRM: <i>TASPOK</i>	DATE: <i>12/6/16</i>	TIME: <i>12:10</i>		
ADDITIONAL REMARKS:	2.3, 1.8, 4.6, 3.0, 2.2°C PROC3								

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THE LEADER IN ENVIRONMENTAL TESTING

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509-924-9200 FAX 924-9290
 503-906-9200 FAX 906-9210
 907-563-9200 FAX 563-9210

5/9/2018 (Rev. 1)

CHAIN OF CUSTODY REPORT

Work Order #:

CLIENT: GEO Engineers		INVOICE TO:		TURNAROUND REQUEST in Business Days * Organic & Inorganic Analyses <input checked="" type="checkbox"/> 7 <input type="checkbox"/> 5 <input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1 <input type="checkbox"/> <1 STD. Petroleum Hydrocarbon Analyses <input checked="" type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1 <input type="checkbox"/> <1 STD. OTHER Specify: * Turnaround Requests less than standard may incur Rush Charges.						
REPORT TO: Slathin @ geoenhancers.com		P.O. NUMBER:								
ADDRESS: 523 E. 2nd Ave										
PHONE: Spokane WA: 49202										
PROJECT NAME: CPPZ		PRESERVATIVE								
PROJECT NUMBER: 0504-098-01		REQUESTED ANALYSES								
SAMPLED BY: JMK/cmp										
CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	DRPH	Picnic Furnace	PLP	Col, Pb	MATRIX (W, S, O)	# OF CONT.	LOCATION/ COMMENTS	TA WO ID	
1 HA-6 (0-6)	12/6/2016 1545		X			S	1			
2 HA-6 (6-12)	↓									
3 HA-6 (12-18)		1555								
4 HA-5 (0-6)		1605		X						
5 HA-5 (6-12)		1610								
6 HA-5 (12-18)		1615								
7 HA-7 (0-6")		1625		X						
8 HA-7 (6-12")		1625								
9 HA-7 (12-18")	1638									
10 HA-9 (0-6")	12/7/2016 0830		X							
RELEASED BY: Callan Driscoll	FIRM: GEC	DATE: 12/9/16	TIME: 12:10	RECEIVED BY: Sheela Khat	FIRM: THE JPOK	DATE: 12/9/16	TIME: 12:10			
PRINT NAME: Callan Driscoll		DATE:	TIME:	PRINT NAME: Sheela Khat		DATE:	TIME:			
ADDITIONAL REMARKS:	2.3, 1.8, 4.6, 3.0, 2.2C JPOK3						TEMP: 40	PAGE 11 OF 11		

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

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 503-906-9200 FAX 906-9210
 907-563-9200 FAX 563-9210

5/9/2018 (Rev. 1)

CHAIN OF CUSTODY REPORT

Work Order #:

CLIENT: GEI		INVOICE TO:		TURNAROUND REQUEST in Business Days * Organic & Inorganic Analyses <input checked="" type="checkbox"/> 7 <input type="checkbox"/> 5 <input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1 <input type="checkbox"/> <1 Petroleum Hydrocarbon Analyses <input checked="" type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1 <input type="checkbox"/> <1 STD. OTHER Specify: * Turnaround Requests less than standard may incur Rush Charges.			
REPORT TO: Scott Lathen		P.O. NUMBER:					
ADDRESS: slathen@geoengineers.com		PRESERVATIVE					
523 E 2nd Ave Spokane, WA 99202		REQUESTED ANALYSES					
PHONE: Spokane, WA FAX: 99202		DRPH					
PROJECT NAME: CPP1		Dioxins					
PROJECT NUMBER: 0504-098-01		Furan					
SAMPLED BY: JML/UMD		PCP					
		Col, Hg					
CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME						
1 HA-9(6-12")	12/7/16 835						5 1
2 HA-9(12-18")	12/7/16 840						
3 HA-15(0-6")	0910			X			
4 HA-15(6-12")	0915						
5 HA-15(12-18")	0920						
6 HA-16(0-6")	0930				X		
7 HA-16(6-12")	0935						
8 HA-16(12-18")	0940						
9 HA-17(0-6")	0950	X		X			2
10 HA-17(6-12")	0955						2
RELEASED BY: Callan Driscoll	FIRM: GEI	DATE: 12/9/16	RECEIVED BY: Sheila Kater	DATE: 12/9/16			
PRINT NAME: Callan Driscoll		TIME: 12:10	PRINT NAME: Sheila Kater	TIME: 12:10			
RELEASED BY:	FIRM:	DATE:	RECEIVED BY:	DATE:			
PRINT NAME:		TIME:	PRINT NAME:	TIME:			
ADDITIONAL REMARKS:				TEMP: 5	PAGE 5 OF 11		
				2.3, 1.8, 1.1, 3.0, 2.2 PROC			

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

11922 E. First Ave., Spokane WA 99206-5302
 9405 SW Nimbus Ave., Beaverton, OR 97008-7145
 2000 W International Airport Rd Ste A10, Anchorage, AK 99502-1119

509-924-9200 FAX 924-9290
 503-906-9200 FAX 906-9210
 907-563-9200 FAX 563-9210

CHAIN OF CUSTODY REPORT

Work Order #:

CLIENT: GEL		INVOICE TO:				TURNAROUND REQUEST in Business Days * Organic & Inorganic Analyses <input checked="" type="checkbox"/> STD. 7 5 4 3 2 1 <1 Petroleum Hydrocarbon Analyses <input checked="" type="checkbox"/> STD. 4 3 2 1 <1 OTHER Specify: * Turnaround Requests less than standard may incur Rush Charges.			
REPORT TO: <i>Scott Lathan</i> ADDRESS: <i>s.lathan@geoengineers.com</i> <i>523 E. 2nd Ave</i> PHONE: <i>Spokane WA</i> FAX: <i>99202</i>		P.O. NUMBER:							
PROJECT NAME: <i>CPP I</i>		PRESERVATIVE							
PROJECT NUMBER: <i>0504-098-01</i>		REQUESTED ANALYSES							
SAMPLED BY: <i>JML/cmp</i>									
CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	DRPH	Dioxins Furans	PCP	Co, Hg	MATRIX (W, S, O)	# OF CONT.	LOCATION/ COMMENTS	TA WO ID
<i>1 HA-17(12-18")</i>	<i>12/7/2016 1000</i>					<i>S</i>	<i>2</i>		
<i>2 HA-35(0-6")</i>	<i>1010</i>			<i>X</i>		<i>1</i>	<i>1</i>		
<i>3 HA-35(6-12")</i>	<i>1015</i>					<i>1</i>	<i>1</i>		
<i>4 HA-35(12-18")</i>	<i>1020</i>					<i>1</i>	<i>1</i>		
<i>5 HA-24(0-6")</i>	<i>1035</i>			<i>X</i>		<i>1</i>	<i>1</i>		
<i>6 HA-24(6-12")</i>	<i>1040</i>					<i>1</i>	<i>1</i>		
<i>7 HA-24(12-18")</i>	<i>1045</i>					<i>1</i>	<i>1</i>		
<i>8 HA-25(0-6")</i>	<i>1050</i>		<i>X</i>	<i>X</i>		<i>1</i>	<i>2</i>		
<i>9 HA-25(6-12")</i>	<i>1055</i>					<i>1</i>	<i>2</i>		
<i>10 HA-25(12-18")</i>	<i>1000</i>					<i>1</i>	<i>2</i>		
RELEASED BY: <i>Callan Driscoll</i>		DATE: <i>12/9/16</i>		RECEIVED BY: <i>Sheila Kratz</i>		DATE: <i>12/9/16</i>			
PRINT NAME: <i>Callan Driscoll</i>		FIRM: <i>GEL</i>		TIME: <i>1210</i>		PRINT NAME: <i>Sheila Kratz</i>		FIRM: <i>TA Jack</i>	
RELEASED BY:		DATE:		RECEIVED BY:		DATE:			
PRINT NAME:		FIRM:		PRINT NAME:		FIRM:			
ADDITIONAL REMARKS:									

2.3, 1.8, 4.6, 3.0, 2.2

TR003

TEMP: *67*
 PAGE 67 OF 11
 TAL-1000 (0714)

CHAIN OF CUSTODY RECORD

GeoEngineers
523 EAST SECOND AVE.
SPOKANE, WASHINGTON 99202
(509) 363-3125

DATE 12/7/2016
 PAGE 7 OF 11
 LAB Test America
 LAB NO. Spokane Valley, WA

PROJECT NAME/LOCATION <u>CPP1</u>	ANALYSIS REQUIRED	NOTES/COMMENTS																																																																
PROJECT NUMBER <u>0504-098-01</u>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%; text-align: center;">DRPH</td> <td style="width: 15%; text-align: center;">Distills/Furns</td> <td style="width: 15%; text-align: center;">PCP</td> <td style="width: 15%; text-align: center;">Cd, Hg</td> <td style="width: 15%;"></td> <td style="width: 15%;"></td> <td style="width: 15%;"></td> <td style="width: 15%;"></td> <td style="width: 15%;"></td> <td style="width: 15%;"></td> <td style="width: 15%;"></td> <td style="width: 15%;"></td> <td style="width: 15%;"></td> <td style="width: 15%;"></td> <td style="width: 15%;"></td> <td style="width: 15%;"></td> <td style="width: 15%;"></td> <td style="width: 15%;"></td> <td style="width: 15%;"></td> <td style="width: 15%;"></td> </tr> <tr> <td style="text-align: center;">X</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td style="text-align: center;">X</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>	DRPH	Distills/Furns	PCP	Cd, Hg																	X																						X																						(Preserved, filtered, etc.)
DRPH		Distills/Furns	PCP	Cd, Hg																																																														
X																																																																		
X																																																																		
PROJECT MANAGER <u>Scott Lather</u>																																																																		
SAMPLED BY <u>JML/CMD</u>																																																																		

SAMPLE IDENTIFICATION		SAMPLE COLLECTION			# OF JARS	DRPH	Distills/Furns	PCP	Cd, Hg											
LAB	GEOENGINEERS	DATE	TIME	MATRIX																
	HA-12 (0-6)	12/7/16	1155	S	1		X													
	HA-12 (6-12)	12/7/16	1200	S	1															
	HA-12 (12-18)	12/7/16	1205	S	1															
	HA-38 (0-6)	12/7/16	1210	S	1		X													
	HA-38 (6-12)	12/7/16	1215	S	1															
	HA-38 (12-18)	12/7/16	1220	S	1															
	HA-11 (0-6)	12/7/16	1235	S	1		X													
	HA-11 (6-12)	12/7/16	1240	S	1															
	HA-11 (12-18)	12/7/16	1245	S	1															
	HA-22 (0-6)	12/7/16	1335	S	1		X													
	HA-22 (6-12)	12/7/16	1340	S	1															

RELINQUISHED BY SIGNATURE <u>Callan Driscoll</u> PRINTED NAME <u>Callan Driscoll</u> DATE <u>12/9/16</u> TIME <u>1216</u>	RELINQUISHED BY SIGNATURE _____ PRINTED NAME _____ DATE _____ TIME _____	RELINQUISHED BY SIGNATURE _____ PRINTED NAME _____ DATE _____ TIME _____
RECEIVED BY SIGNATURE <u>Sheila Katz</u> PRINTED NAME <u>Sheila Katz</u> DATE <u>12/9/16</u> TIME <u>1210</u>	RECEIVED BY SIGNATURE _____ PRINTED NAME _____ DATE _____ TIME _____	RECEIVED BY SIGNATURE _____ PRINTED NAME _____ DATE _____ TIME _____

ADDITIONAL COMMENTS: 2.3, 1.8, 4.6, 3.0, 2.2 CTR003

CHAIN OF CUSTODY RECORD

GeoEngineers
523 EAST SECOND AVE.
SPOKANE, WASHINGTON 99202
(509) 363-3125

DATE 12/7/2016
 PAGE 8 OF 11
 LAB Test America
 LAB NO. Spokane Valley, WA

PROJECT NAME/LOCATION <u>CPPI</u>				ANALYSIS REQUIRED								NOTES/COMMENTS (Preserved, filtered, etc.)									
PROJECT NUMBER <u>0504-098-01</u>				DRPH	Dioxins/Furans	PCP	Cob, Hg														
PROJECT MANAGER <u>Scott Lathen</u>																					
SAMPLED BY <u>JNL/cm1</u>																					

SAMPLE IDENTIFICATION		SAMPLE COLLECTION			# OF JARS	DRPH	Dioxins/Furans	PCP	Cob, Hg								
LAB	GEOENGINEERS	DATE	TIME	MATRIX													
	HA-22(12-18)	12/7/16	1345	S	1												
	HA-20(0-6)	12/7/16	1350	S	1	X											
	HA-20(6-12)	12/7/16	1355	S	1												
	HA-20(12-18)	12/7/16	1400	S	1												
	HA-18(0-6)	12/7/16	1420	S	1	X											
	HA-18(6-12)	12/7/16	1425	S	1												
	HA-18(12-18)	12/7/16	1430	S	1												
	HA-10(0-6)	12/7/16	1405	S	2	X	X										
	HA-10(6-12)	12/7/16	1410	S	2												
	HA-10(12-18)	12/7/16	1415	S	2												
	HA-19(0-6)	12/7/16	1445	S	1	X											

RELINQUISHED BY SIGNATURE <u>Callan Driscoll</u> PRINTED NAME <u>Callan Driscoll</u> DATE <u>12/9/16</u> TIME <u>12:10</u>	FIRM	RELINQUISHED BY SIGNATURE _____ PRINTED NAME _____ DATE _____ TIME _____	FIRM	RELINQUISHED BY SIGNATURE _____ PRINTED NAME _____ DATE _____ TIME _____	FIRM
RECEIVED BY SIGNATURE <u>Sheila Kratz</u> PRINTED NAME <u>Sheila Kratz</u> DATE <u>12/9/16</u> TIME <u>12:10</u>	FIRM <u>JACOBS</u>	RECEIVED BY SIGNATURE _____ PRINTED NAME _____ DATE _____ TIME _____	FIRM	RECEIVED BY SIGNATURE _____ PRINTED NAME _____ DATE _____ TIME _____	FIRM

ADDITIONAL COMMENTS: 2.3, 1.8, 4.6, 3.0, 2.2 °IP003

TestAmerica Spokane

11922 East 1st Ave
 Spokane, WA 99206
 Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Client Information		Sampler: JML/LMD		Lab PM: Arrington, Randee E		Carrier Tracking No(s)		COC No: 590-2097-753.2			
Client Contact: Scott Lathen		Phone: 406-239-7810		E-Mail: randee.arrington@testamericainc.com				Page: 2 of 2 9 of 11			
Company: GeoEngineers Inc		Due Date Requested: Stol.		Analysis Requested						Job #:	
Address: 523 East Second Ave		TAT Requested (days): Stol.								Field Filtered Sample (Yes or No) Perform MS/MSD (Yes or No) DRPH Dioxins, Furans PCP Cd, Hg	
City: Spokane		PO #: Purchase Order not required									
State, Zip: WA, 99202		WO #:									
Phone: 509-251-5239(Tel)		Project #: 0504-099-01									
Email: slathen@geoengineers.com		SSOW#:									
Project Name: CPPI											
Site: CPPI											
Sample Identification		Sample Date		Sample Time		Sample Type (C=comp, G=grab)		Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)			
								Preservation Code:			
HA-19 (6-12)		12/7/16		1450		G		Solid			
HA-19 (12-18)		12/7/16		1455				Solid			
HA-21 (0-6)		12/7/16		1505				X			
HA-21 (6-12)		12/7/16		1510							
HA-21 (12-18)		12/7/16		1515							
HA-23 (0-6)				1530				X			
HA-23 (6-12)				1535							
HA-23 (12-18)				1540							
HA-26 (0-6)				1105				X			
HA-26 (6-12)				1110							
HA-26 (12-18)				1115							
Possible Hazard Identification					Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)						
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological					<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months						
Deliverable Requested: I, II, III, IV, Other (specify)					Special Instructions/QC Requirements:						
Empty Kit Relinquished by:			Date:		Time:		Method of Shipment:				
Relinquished by: Colleen Driscoll			Date/Time: 12/9/16 1210		Company:		Received by: Sheela Praty				
Relinquished by:			Date/Time:		Company:		Received by:				
Relinquished by:			Date/Time:		Company:		Received by:				
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:			Cooler Temperature(s) °C and Other Remarks: 2.3°C, 1.8, -1.4, 3.0, 2.2°C (10/23)						

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

11922 E. First Ave., Spokane WA 99206-5302 509-924-9200 FAX 924-9290
 9405 SW Nimbus Ave., Beaverton, OR 97008-7145 503-906-9200 FAX 906-9210
 2000 W International Airport Rd Ste A10, Anchorage, AK 99502-1119 907-563-9200 FAX 563-9210

CHAIN OF CUSTODY REPORT

Work Order #:

CLIENT: <u>681</u>		INVOICE TO:		TURNAROUND REQUEST in Business Days * Organic & Inorganic Analyses <input type="checkbox"/> 10 <input type="checkbox"/> 7 <input type="checkbox"/> 5 <input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1 <input type="checkbox"/> <1 STD. Petroleum Hydrocarbon Analyses <input type="checkbox"/> 5 <input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1 <input type="checkbox"/> <1 STD. <input type="checkbox"/> OTHER Specify:					
REPORT TO: <u>Scott Walker</u>		ADDRESS: <u>503 E 2nd Ave</u>						P.O. NUMBER:	
PHONE: <u>Spokane WA</u> FAX: <u>99107</u>		PROJECT NAME: <u>CRPZ</u>		PRESERVATIVE REQUESTED ANALYSES					
PROJECT NUMBER: <u>0504-098-01</u>		SAMPLED BY: <u>JML/CMD</u>							
CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	DATE	TIME	DATE	TIME	MATRIX (W, S, O)	# OF CONT.	LOCATION/ COMMENTS	TA WO ID
1 HA-9(6-12)	12/7/16 835								
2 HA-9(12-18)	12/7/16 840								
3 HA-15(10-12)	12/7/16 840	X							
4 HA-15(12-18)	12/7/16 840								
5 HA-15(18-24)	12/7/16 840								
6 HA-15(24-30)	12/7/16 840	X							
7 HA-15(30-36)	12/7/16 840								
8 HA-15(36-42)	12/7/16 840								
9 HA-15(42-48)	12/7/16 840	X	X						
10 HA-15(48-54)	12/7/16 840								
RELEASED BY: <u>Colleen Duvall</u>	FIRM: <u>(681)</u>	DATE: <u>12/16/16</u>	TIME: <u>1110</u>	RECEIVED BY: <u>Shirley K...</u>	FIRM: <u>TAC/loop</u>	DATE: <u>12/16/16</u>	TIME: <u>1510</u>		
ADDITIONAL RE:							TEMP: <u>5</u>	PAGE <u>6</u> OF <u>11</u>	



590-5185-02 Chain of Custody

*Revised CoC,
 Received 12/16/16
 PA*

23, 18, 46, 30, 22, 50003

TAL-1000 (0714)

TestAmerica Spokane

11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)		Sampler:		Lab PM:		Carrier Tracking No(s):		COC No:	
Client Contact: Shipping/Receiving		Phone:		Arrington, Randee E		E-Mail: randee_arrington@testamericainc.com		State of Origin: Washington	
Company: TestAmerica Laboratories, Inc.		Due Date Requested: 12/21/2016		Accreditations Required (See note): State Program - Washington		Job #: 590-5185-1		Page: Page 1 of 3	
Address: 880 Riverside Parkway, City: West Sacramento State, Zip: CA, 95605		TAT Requested (days):		Analysis Requested		Preservation Codes:		Other:	
Phone: 916-373-5600(Tel) 916-372-1059(Fax)		PO #:		Field Filtered Sample (Yes or No)		Moisture		8290A/8290_P_Sox 17 Isomers & Totals	
Email:		WO #:		Perform MS/MSD (Yes or No)		Total Number of containers		A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA	
Project Name: Colville Post and Pole/0504-098-01		Project #: 59001108		Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)		M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)		Special Instructions/Note:	
Site:		SSOW#:		Sample Type (C=comp, G=grab)		Sample Time		Sample Date	
Sample Identification - Client ID (Lab ID)		Sample Date		Sample Time		Sample Type (C=comp, G=grab)		Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	
HA-4 (0-6") (590-5185-1)		12/6/16		11:40 Pacific		Solid		X X	
HA-3 (0-6") (590-5185-4)		12/6/16		12:05 Pacific		Solid		X X	
HA-1 (0-6") (590-5185-10)		12/6/16		12:45 Pacific		Solid		X	
HA-14 (0-6") (590-5185-19)		12/6/16		14:00 Pacific		Solid		X X	
HA-13 (0-6") (590-5185-22)		12/6/16		14:35 Pacific		Solid		X X	
HA-32 (0-6") (590-5185-25)		12/6/16		15:00 Pacific		Solid		X X	
HA-8 (0-6") (590-5185-28)		12/6/16		15:30 Pacific		Solid		X X	
HA-6 (0-6") (590-5185-31)		12/6/16		15:45 Pacific		Solid		X X	
HA-5 (0-6") (590-5185-34)		12/6/16		16:05 Pacific		Solid		X X	
<p>Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to TestAmerica Laboratories, Inc.</p>									
Possible Hazard Identification					Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)				
Unconfirmed					<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months				
Deliverable Requested: I, II, III, IV, Other (specify)					Primary Deliverable Rank: 2				
Empty Kit Relinquished by:					Special Instructions/QC Requirements:				
Date:		Time:		Method of Shipment:		Date/Time:		Company:	
Relinquished by: <i>Sheela Fry</i>		Date/Time: 12/12/16 1005		Company: <i>TAWS</i>		Received by: <i>W. E. L.</i>		Date/Time: 12/13/16 1005	
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:	
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:	
Custody Seals Intact: Δ Yes Δ No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: <i>2.9</i>					

Page 71 of 81

5/9/2018 (Rev. 1)



TestAmerica Spokane

11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record



THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)		Sampler:		Lab PM:		Carrier Tracking No(s):		COC No:																																																																																																										
Client Contact		Phone:		E-Mail:		State of Origin:		Page:																																																																																																										
Shipping/Receiving				randee.arrington@testamericainc.com		Washington		Page 3 of 3																																																																																																										
Company: TestAmerica Laboratories, Inc.				Accreditations Required (See note): State Program - Washington				Job #: 590-5185-1																																																																																																										
Address: 880 Riverside Parkway, City: West Sacramento State, Zip: CA, 95605 Phone: 916-373-5600(Tel) 916-372-1059(Fax) Email:		Due Date Requested: 12/21/2016 TAT Requested (days):		<table border="1"> <thead> <tr> <th colspan="12">Analysis Requested</th> <th rowspan="4">Total Number of containers</th> </tr> <tr> <th>Field Filtered Sample (Yes or No)</th> <th>Perform MS/MSD (Yes or No)</th> <th>Moisture</th> <th>8290A/8290_P_Sox 17 Isomers & Totals</th> <th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th> </tr> </thead> <tbody> <tr> <td>X</td><td>X</td><td>X</td><td>X</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>1</td> </tr> <tr> <td></td><td></td><td></td><td>X</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>1</td> </tr> <tr> <td></td><td></td><td>X</td><td>X</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>1</td> </tr> <tr> <td></td><td></td><td>X</td><td>X</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>1</td> </tr> <tr> <td></td><td></td><td>X</td><td>X</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>1</td> </tr> <tr> <td></td><td></td><td></td><td>X</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>1</td> </tr> </tbody> </table>						Analysis Requested												Total Number of containers	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Moisture	8290A/8290_P_Sox 17 Isomers & Totals									X	X	X	X									1				X									1			X	X									1			X	X									1			X	X									1				X									1	Preservation Codes: A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2O4S E - NaHSO4 Q - Na2SO3 F - MeOH R - Na2S2O3 G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone J - DI Water V - MCAA K - EDTA W - pH 4-5 L - EDA Z - other (specify)	
Analysis Requested												Total Number of containers																																																																																																						
Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Moisture	8290A/8290_P_Sox 17 Isomers & Totals																																																																																																															
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			X									1																																																																																																						
Project Name: Colville Post and Pole/0504-098-01 Site:		Project #: 59001108 SSOW#:								Other:																																																																																																								
Sample Identification - Client ID (Lab ID)		Sample Date		Sample Time		Sample Type (C=comp, G=grab)		Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)		Preservation Code:		Special Instructions/Note:																																																																																																						
HA-18 (0-6") (590-5185-76)		12/7/16		14:20 Pacific				Solid				1 Former Post and Pole manufacturing site - could be high, please isolate glassware and																																																																																																						
HA-10 (0-6") (590-5185-79)		12/7/16		14:05 Pacific				Solid				1 Former Post and Pole manufacturing site - could be high, please isolate glassware and																																																																																																						
HA-19 (0-6") (590-5185-82)		12/7/16		14:45 Pacific				Solid				1 Former Post and Pole manufacturing site - could be high, please isolate glassware and																																																																																																						
HA-21 (0-6") (590-5185-85)		12/7/16		15:05 Pacific				Solid				1 Former Post and Pole manufacturing site - could be high, please isolate glassware and																																																																																																						
HA-23 (0-6") (590-5185-88)		12/7/16		15:30 Pacific				Solid				1 Former Post and Pole manufacturing site - could be high, please isolate glassware and																																																																																																						
HA-30 (0-6") (590-5185-102)		12/7/16		16:20 Pacific				Solid				1 Former Post and Pole manufacturing site - could be high, please isolate glassware and																																																																																																						
<p>Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody.</p>																																																																																																																		
Possible Hazard Identification						Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)																																																																																																												
Unconfirmed						<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months																																																																																																												
Deliverable Requested: I, II, III, IV, Other (specify)						Primary Deliverable Rank: 2						Special Instructions/QC Requirements:																																																																																																						
Empty Kit Relinquished by:				Date:		Time:		Method of Shipment:																																																																																																										
Relinquished by: <i>Sheela Gray</i>				Date/Time: 12/12/16 1600		Company: THA/POK		Received by: <i>Lois T. Ehl</i>				Date/Time: 12/13/16 1005		Company: TIAWS																																																																																																				
Relinquished by:				Date/Time:		Company:		Received by:				Date/Time:		Company:																																																																																																				
Relinquished by:				Date/Time:		Company:		Received by:				Date/Time:		Company:																																																																																																				
Custody Seals Intact: Δ Yes Δ No		Custody Seal No.:				Cooler Temperature(s) °C and Other Remarks: 3.9																																																																																																												

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TestAmerica Spokane

11922 East 1st Ave
 Spokane, WA 99206
 Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)		Sampler:		Lab PM:		Carrier Tracking No(s):		COC No:							
Shipping/Receiving		Phone:		E-Mail:		State of Origin:		Page:							
Company:		Due Date Requested:		Accreditations Required (See note):		Job #		590-2362.1							
TestAmerica Laboratories, Inc.		12/21/2016		State Program - Washington		590-5185-1		Page 1 of 1							
Address:		TAT Requested (days):		Analysis Requested						Preservation Codes:					
880 Riverside Parkway,															
City:		PO #:		Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)		Moisture		8290A/8290_P_Sox 17 Isomers & Totals		Total Number of containers		Other:	
West Sacramento		WO #:													
State, Zip:		Project #:		Sample Type (C=comp, G=grab)		Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)		Preservation Code:		Special Instructions/Note:		A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2O4S E - NaHSO4 Q - Na2SO3 F - MeOH R - Na2S2O3 G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone J - DI Water V - MCAA K - EDTA W - pH 4-5 L - EDA Z - other (specify)			
CA, 95605		59001108													
Phone:		SSOW#:		Sample Date		Sample Time		Sample Type		Matrix		Preservation Code		Special Instructions/Note	
916-373-5600(Tel) 916-372-1059(Fax)															
Email:		Project Name:		Sample Date		Sample Time		Sample Type		Matrix		Preservation Code		Special Instructions/Note	
		Colville Post and Pole/0504-098-01													
Site:		SSOW#:		Sample Date		Sample Time		Sample Type		Matrix		Preservation Code		Special Instructions/Note	
Sample Identification - Client ID (Lab ID)		Sample Date		Sample Time		Sample Type		Matrix		Preservation Code		Special Instructions/Note:			
HA-2 (0-6") (590-5185-7)		12/6/16		12.25 Pacific		Solid						1, Former Post and Pole manufacturing site - could be high, please isolate glassware and			

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to TestAmerica Laboratories, Inc.

Possible Hazard Identification		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)	
Unconfirmed		<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months	
Deliverable Requested: I, II, III, IV, Other (specify)		Primary Deliverable Rank: 2	
		Special Instructions/QC Requirements:	

Empty Kit Relinquished by:		Date:		Time:		Method of Shipment:	
Relinquished by: <i>Sheila Tracy</i>		Date/Time: 12/13/16 1340		Company: <i>HA Spokane</i>		Received by: <i>Tony G. Turner</i>	
Relinquished by:		Date/Time:		Company:		Date/Time: 12/14/16 12:05	
Relinquished by:		Date/Time:		Company:		Date/Time:	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: 2.90C gel rec			

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TestAmerica Spokane

11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)		Sampler:		Lab PM: Arrington, Randee E		Carrier Tracking No(s):		COC No: 590-2354.1	
Client Contact: Shipping/Receiving		Phone:		E-Mail: randee.arrington@testamericainc.com		State of Origin: Washington		Page: Page 1 of 1	
Company: TestAmerica Laboratories, Inc.				Accreditations Required (See note): State Program - Washington				Job #: 590-5185-1	
Address: 5755 8th Street East.		Due Date Requested: 12/21/2016		Analysis Requested				Preservation Codes: A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2O4S E - NaHSO4 Q - Na2SO3 F - MeOH R - Na2S2O3 G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone J - DI Water V - MCAA K - EDTA W - pH 4-5 L - EDA Z - other (specify)	
City: Tacoma		TAT Requested (days):							
State, Zip: WA, 98424		PO #:		Field Filtered Sample (Yes or No) Perform MS/MS (Yes or No) 82100 SIM13500 PCP		Total Number of containers		Other:	
Phone: 253-922-2310(Tel) 253-922-5047(Fax)		WO #:							
Email:		Project #: 59001108		Project Name: Colville Post and Pole		SSOW#:		Site:	
Sample Identification - Client ID (Lab ID)		Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oli, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MS (Yes or No)	Total Number of containers	Special Instructions/Note:
Seep-1 (6-12) (590-5185-94)		12/7/16	12:00 Pacific	Water	Water	XX	XX	1	
Seep-2 (6-12) (590-5185-95)		12/7/16	12:05 Pacific	Water	Water	XX	XX	1	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to TestAmerica Laboratories, Inc.

Possible Hazard Identification		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)	
Unconfirmed		<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months	
Deliverable Requested: I, II, III, IV, Other (specify)		Special Instructions/QC Requirements:	
Primary Deliverable Rank: 2			

Empty Kit Relinquished by:		Date:		Time:		Method of Shipment:	
Relinquished by: <i>Randee Arrington</i>		Date/Time: 12/9/16 1445		Company: TestAmerica		Received by: B. Gell	
Relinquished by:		Date/Time:		Company:		Date/Time: 12.10.16 1125	
Relinquished by:		Date/Time:		Company:		Date/Time:	
Relinquished by:		Date/Time:		Company:		Date/Time:	

Custody Seals Intact: Δ Yes Δ No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: IRZ = 2.6/2.2 W/C.S 5/9/2018 (Rev. 1)	
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Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-5185-1

Login Number: 5185

List Source: TestAmerica Spokane

List Number: 1

Creator: Kratz, Sheila J

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	False	Refer to Job Narrative for details.
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-5185-1

Login Number: 5185
List Number: 2
Creator: Edman, Connor M

List Source: TestAmerica Sacramento
List Creation: 12/14/16 11:10 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	217510
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	False	Received extra samples not listed on COC.
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-5185-1

Login Number: 5185

List Number: 3

Creator: Edman, Connor M

List Source: TestAmerica Sacramento

List Creation: 12/14/16 05:21 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	217612
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Isotope Dilution Summary

Client: GeoEngineers Inc
 Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5185-1

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Matrix: Solid

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	TCDD (40-135)	TCDF (40-135)	PeCDD (40-135)	PeCDF (40-135)	HxDD (40-135)	HxCDF (40-135)	HpCDD (40-135)	HpCDF (40-135)
590-5185-1	HA-4 (0-6')	102	89	102	93	102	95	119	103
590-5185-4	HA-3 (0-6")	100	86	101	93	101	94	118	100
590-5185-7	HA-2 (0-6")	82	70	64	70	80	80	92	90
590-5185-10	HA-1 (0-6")	96	85	96	90	99	86	117	101
590-5185-19	HA-14 (0-6")	121	63	73	66	79	62	101	83
590-5185-22	HA-13 (0-6")	91	82	98	89	95	79	111	96
590-5185-25	HA-32 (0-6")	83	63	72	66	78	61	89	74
590-5185-28	HA-8 (0-6")	81	62	76	70	74	67	83	79
590-5185-31	HA-6 (0-6")	97	92	111	98	101	101	107	108
590-5185-34	HA-5 (0-6")	81	58	65	60	62	62	74	67
590-5185-37	HA-7 (0-6")	93	90	102	96	99	99	103	104
590-5185-40	HA-9 (0-6")	96	95	108	100	105	105	113	113
590-5185-49	HA-17 (0-6")	94	92	104	95	100	99	106	105
590-5185-58	HA-25 (0-6")	94	92	104	97	105	104	107	109
590-5185-61	HA-12 (0-6")	78	75	82	76	83	87	91	93
590-5185-64	HA-38 (0-6")	54	51	58	57	59	59	66	66
590-5185-67	HA-11 (0-6")	59	53	57	55	63	62	70	72
590-5185-70	HA-22 (0-6")	83	82	92	88	90	89	96	100
590-5185-73	HA-20 (0-6")	85	70	72	70	71	74	91	90
590-5185-76	HA-18 (0-6")	83	83	89	83	95	95	113	113
590-5185-79	HA-10 (0-6")	79	76	80	79	82	81	93	97
590-5185-82	HA-19 (0-6")	67	71	58	65	75	74	73	76
590-5185-85	HA-21 (0-6")	55	60	49	55	58	57	60	60
590-5185-88	HA-23 (0-6")	98	104	97	101	116	117	113	115
590-5185-102	HA-30 (0-6")	82	84	75	81	89	90	89	93
LCS 320-142254/2-A	Lab Control Sample	91	78	94	86	94	81	96	88
LCS 320-142262/2-A	Lab Control Sample	82	85	78	84	94	94	91	94
LCSD 320-142254/3-A	Lab Control Sample Dup	61	51	59	55	62	54	64	55
LCSD 320-142262/3-A	Lab Control Sample Dup	57	60	55	58	68	67	66	68
MB 320-142254/1-A	Method Blank	82	71	84	74	88	75	88	80
MB 320-142262/1-A	Method Blank	59	61	56	60	66	64	68	67

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	OCDD (40-135)
590-5185-1	HA-4 (0-6')	128
590-5185-4	HA-3 (0-6")	126
590-5185-7	HA-2 (0-6")	103
590-5185-10	HA-1 (0-6")	125
590-5185-19	HA-14 (0-6")	114
590-5185-22	HA-13 (0-6")	122
590-5185-25	HA-32 (0-6")	102
590-5185-28	HA-8 (0-6")	86
590-5185-31	HA-6 (0-6")	115
590-5185-34	HA-5 (0-6")	75
590-5185-37	HA-7 (0-6")	110
590-5185-40	HA-9 (0-6")	123
590-5185-49	HA-17 (0-6")	115
590-5185-58	HA-25 (0-6")	117
590-5185-61	HA-12 (0-6")	96

TestAmerica Spokane

Isotope Dilution Summary

Client: GeoEngineers Inc
 Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5185-1

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Matrix: Solid

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	OCDD (40-135)
590-5185-64	HA-38 (0-6")	70
590-5185-67	HA-11 (0-6")	74
590-5185-70	HA-22 (0-6")	102
590-5185-73	HA-20 (0-6")	93
590-5185-76	HA-18 (0-6")	119
590-5185-79	HA-10 (0-6")	97
590-5185-82	HA-19 (0-6")	72
590-5185-85	HA-21 (0-6")	64
590-5185-88	HA-23 (0-6")	128
590-5185-102	HA-30 (0-6")	94
LCS 320-142254/2-A	Lab Control Sample	97
LCS 320-142262/2-A	Lab Control Sample	95
LCSD 320-142254/3-A	Lab Control Sample Dup	65
LCSD 320-142262/3-A	Lab Control Sample Dup	69
MB 320-142254/1-A	Method Blank	87
MB 320-142262/1-A	Method Blank	70

Surrogate Legend

TCDD = 13C-2,3,7,8-TCDD
 TCDF = 13C-2,3,7,8-TCDF
 PeCDD = 13C-1,2,3,7,8-PeCDD
 PeCDF = 13C-1,2,3,7,8-PeCDF
 HxCDD = 13C-1,2,3,6,7,8-HxCDD
 HxCDF = 13C-1,2,3,4,7,8-HxCDF
 HpCDD = 13C-1,2,3,4,6,7,8-HpCDD
 HpCDF = 13C-1,2,3,4,6,7,8-HpCDF
 OCDD = 13C-OCDD

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

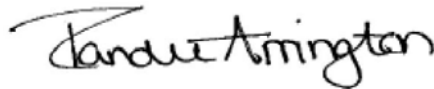
TestAmerica Laboratories, Inc.
TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Tel: (509)924-9200

TestAmerica Job ID: 590-5187-1

Client Project/Site: Colville Post and Pole/0504-098-01

For:
GeoEngineers Inc
523 East Second Ave
Spokane, Washington 99202

Attn: Scott Lathen



Authorized for release by:
12/29/2016 4:26:59 PM

Randee Arrington, Project Manager II
(509)924-9200
randee.arrington@testamericainc.com

LINKS

Review your project
results through
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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Case Narrative

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5187-1

Job ID: 590-5187-1

Laboratory: TestAmerica Spokane

Narrative

Receipt

The samples were received on 12/9/2016 12:10 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 4.6° C.

Receipt Exceptions

The collection time listed on the COC for samples BG-1 (0-6") (590-5187-1), BG-4 (0-6") (590-5187-4), BG-5 (0-6") (590-5187-5), BG-6 (0-6") (590-5187-6), BG-7 (0-6") (590-5187-7), BG-8 (0-6") (590-5187-8) and BG-9 (0-6") (590-5187-9) was chronologically later than the laboratory receipt time for the samples. The client was notified and sample collection dates were logged in according to the revised CoC received from the client on 12/12/2016.

Dioxin

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Dioxin Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.



Sample Summary

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5187-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
590-5187-1	BG-1 (0-6")	Solid	12/08/16 15:20	12/09/16 12:10
590-5187-2	BG-2 (0-6")	Solid	12/09/16 08:50	12/09/16 12:10
590-5187-3	BG-3 (0-6")	Solid	12/09/16 09:10	12/09/16 12:10
590-5187-4	BG-4 (0-6")	Solid	12/08/16 14:45	12/09/16 12:10
590-5187-5	BG-5 (0-6")	Solid	12/08/16 15:35	12/09/16 12:10
590-5187-6	BG-6 (0-6")	Solid	12/08/16 14:25	12/09/16 12:10
590-5187-7	BG-7 (0-6")	Solid	12/08/16 15:05	12/09/16 12:10
590-5187-8	BG-8 (0-6")	Solid	12/08/16 14:05	12/09/16 12:10
590-5187-9	BG-9 (0-6")	Solid	12/08/16 15:45	12/09/16 12:10
590-5187-10	BG-10 (0-6")	Solid	12/09/16 09:25	12/09/16 12:10



Definitions/Glossary

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5187-1

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5187-1

Client Sample ID: BG-1 (0-6")

Date Collected: 12/08/16 15:20

Date Received: 12/09/16 12:10

Lab Sample ID: 590-5187-1

Matrix: Solid

Percent Solids: 68.6

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		1.5		pg/g	☼	12/15/16 08:39	12/22/16 19:50	1
2,3,7,8-TCDF	ND		1.5		pg/g	☼	12/15/16 08:39	12/22/16 19:50	1
1,2,3,7,8-PeCDD	ND		7.3		pg/g	☼	12/15/16 08:39	12/22/16 19:50	1
1,2,3,7,8-PeCDF	ND		7.3		pg/g	☼	12/15/16 08:39	12/22/16 19:50	1
2,3,4,7,8-PeCDF	ND		7.3		pg/g	☼	12/15/16 08:39	12/22/16 19:50	1
1,2,3,4,7,8-HxCDD	ND		7.3		pg/g	☼	12/15/16 08:39	12/22/16 19:50	1
1,2,3,6,7,8-HxCDD	16		7.3		pg/g	☼	12/15/16 08:39	12/22/16 19:50	1
1,2,3,7,8,9-HxCDD	10		7.3		pg/g	☼	12/15/16 08:39	12/22/16 19:50	1
1,2,3,4,7,8-HxCDF	ND		7.3		pg/g	☼	12/15/16 08:39	12/22/16 19:50	1
1,2,3,6,7,8-HxCDF	ND		7.3		pg/g	☼	12/15/16 08:39	12/22/16 19:50	1
1,2,3,7,8,9-HxCDF	ND		7.3		pg/g	☼	12/15/16 08:39	12/22/16 19:50	1
2,3,4,6,7,8-HxCDF	ND		7.3		pg/g	☼	12/15/16 08:39	12/22/16 19:50	1
1,2,3,4,6,7,8-HpCDD	530		7.3		pg/g	☼	12/15/16 08:39	12/22/16 19:50	1
1,2,3,4,6,7,8-HpCDF	93		7.3		pg/g	☼	12/15/16 08:39	12/22/16 19:50	1
1,2,3,4,7,8,9-HpCDF	ND		7.3		pg/g	☼	12/15/16 08:39	12/22/16 19:50	1
OCDD	4600		15		pg/g	☼	12/15/16 08:39	12/22/16 19:50	1
OCDF	520		15		pg/g	☼	12/15/16 08:39	12/22/16 19:50	1
Total TCDD	ND		1.5		pg/g	☼	12/15/16 08:39	12/22/16 19:50	1
Total TCDF	ND		1.5		pg/g	☼	12/15/16 08:39	12/22/16 19:50	1
Total PeCDD	ND		7.3		pg/g	☼	12/15/16 08:39	12/22/16 19:50	1
Total PeCDF	ND		7.3		pg/g	☼	12/15/16 08:39	12/22/16 19:50	1
Total HxCDD	77		7.3		pg/g	☼	12/15/16 08:39	12/22/16 19:50	1
Total HxCDF	40		7.3		pg/g	☼	12/15/16 08:39	12/22/16 19:50	1
Total HpCDD	870		7.3		pg/g	☼	12/15/16 08:39	12/22/16 19:50	1
Total HpCDF	320		7.3		pg/g	☼	12/15/16 08:39	12/22/16 19:50	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	78		40 - 135				12/15/16 08:39	12/22/16 19:50	1
13C-2,3,7,8-TCDF	80		40 - 135				12/15/16 08:39	12/22/16 19:50	1
13C-1,2,3,7,8-PeCDD	72		40 - 135				12/15/16 08:39	12/22/16 19:50	1
13C-1,2,3,7,8-PeCDF	80		40 - 135				12/15/16 08:39	12/22/16 19:50	1
13C-1,2,3,6,7,8-HxCDD	90		40 - 135				12/15/16 08:39	12/22/16 19:50	1
13C-1,2,3,4,7,8-HxCDF	89		40 - 135				12/15/16 08:39	12/22/16 19:50	1
13C-1,2,3,4,6,7,8-HpCDD	94		40 - 135				12/15/16 08:39	12/22/16 19:50	1
13C-1,2,3,4,6,7,8-HpCDF	97		40 - 135				12/15/16 08:39	12/22/16 19:50	1
13C-OCDD	102		40 - 135				12/15/16 08:39	12/22/16 19:50	1

Client Sample ID: BG-2 (0-6")

Date Collected: 12/09/16 08:50

Date Received: 12/09/16 12:10

Lab Sample ID: 590-5187-2

Matrix: Solid

Percent Solids: 82.7

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		1.2		pg/g	☼	12/15/16 08:39	12/22/16 20:36	1
2,3,7,8-TCDF	ND		1.2		pg/g	☼	12/15/16 08:39	12/22/16 20:36	1
1,2,3,7,8-PeCDD	ND		6.0		pg/g	☼	12/15/16 08:39	12/22/16 20:36	1
1,2,3,7,8-PeCDF	ND		6.0		pg/g	☼	12/15/16 08:39	12/22/16 20:36	1
2,3,4,7,8-PeCDF	ND		6.0		pg/g	☼	12/15/16 08:39	12/22/16 20:36	1
1,2,3,4,7,8-HxCDD	ND		6.0		pg/g	☼	12/15/16 08:39	12/22/16 20:36	1
1,2,3,6,7,8-HxCDD	ND		6.0		pg/g	☼	12/15/16 08:39	12/22/16 20:36	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5187-1

Client Sample ID: BG-2 (0-6")

Lab Sample ID: 590-5187-2

Date Collected: 12/09/16 08:50

Matrix: Solid

Date Received: 12/09/16 12:10

Percent Solids: 82.7

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,7,8,9-HxCDD	ND		6.0		pg/g	☼	12/15/16 08:39	12/22/16 20:36	1
1,2,3,4,7,8-HxCDF	ND		6.0		pg/g	☼	12/15/16 08:39	12/22/16 20:36	1
1,2,3,6,7,8-HxCDF	ND		6.0		pg/g	☼	12/15/16 08:39	12/22/16 20:36	1
1,2,3,7,8,9-HxCDF	ND		6.0		pg/g	☼	12/15/16 08:39	12/22/16 20:36	1
2,3,4,6,7,8-HxCDF	ND		6.0		pg/g	☼	12/15/16 08:39	12/22/16 20:36	1
1,2,3,4,6,7,8-HpCDD	19		6.0		pg/g	☼	12/15/16 08:39	12/22/16 20:36	1
1,2,3,4,6,7,8-HpCDF	ND		6.0		pg/g	☼	12/15/16 08:39	12/22/16 20:36	1
1,2,3,4,7,8,9-HpCDF	ND		6.0		pg/g	☼	12/15/16 08:39	12/22/16 20:36	1
OCDD	200		12		pg/g	☼	12/15/16 08:39	12/22/16 20:36	1
OCDF	13		12		pg/g	☼	12/15/16 08:39	12/22/16 20:36	1
Total TCDD	ND		1.2		pg/g	☼	12/15/16 08:39	12/22/16 20:36	1
Total TCDF	ND		1.2		pg/g	☼	12/15/16 08:39	12/22/16 20:36	1
Total PeCDD	ND		6.0		pg/g	☼	12/15/16 08:39	12/22/16 20:36	1
Total PeCDF	ND		6.0		pg/g	☼	12/15/16 08:39	12/22/16 20:36	1
Total HxCDD	ND		6.0		pg/g	☼	12/15/16 08:39	12/22/16 20:36	1
Total HxCDF	ND		6.0		pg/g	☼	12/15/16 08:39	12/22/16 20:36	1
Total HpCDD	33		6.0		pg/g	☼	12/15/16 08:39	12/22/16 20:36	1
Total HpCDF	7.5		6.0		pg/g	☼	12/15/16 08:39	12/22/16 20:36	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	66		40 - 135	12/15/16 08:39	12/22/16 20:36	1
13C-2,3,7,8-TCDF	68		40 - 135	12/15/16 08:39	12/22/16 20:36	1
13C-1,2,3,7,8-PeCDD	62		40 - 135	12/15/16 08:39	12/22/16 20:36	1
13C-1,2,3,7,8-PeCDF	67		40 - 135	12/15/16 08:39	12/22/16 20:36	1
13C-1,2,3,6,7,8-HxCDD	73		40 - 135	12/15/16 08:39	12/22/16 20:36	1
13C-1,2,3,4,7,8-HxCDF	73		40 - 135	12/15/16 08:39	12/22/16 20:36	1
13C-1,2,3,4,6,7,8-HpCDD	74		40 - 135	12/15/16 08:39	12/22/16 20:36	1
13C-1,2,3,4,6,7,8-HpCDF	76		40 - 135	12/15/16 08:39	12/22/16 20:36	1
13C-OCDD	79		40 - 135	12/15/16 08:39	12/22/16 20:36	1

Client Sample ID: BG-3 (0-6")

Lab Sample ID: 590-5187-3

Date Collected: 12/09/16 09:10

Matrix: Solid

Date Received: 12/09/16 12:10

Percent Solids: 68.2

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		1.5		pg/g	☼	12/15/16 08:39	12/23/16 01:01	1
2,3,7,8-TCDF	ND		1.5		pg/g	☼	12/15/16 08:39	12/23/16 01:01	1
1,2,3,7,8-PeCDD	ND		7.3		pg/g	☼	12/15/16 08:39	12/23/16 01:01	1
1,2,3,7,8-PeCDF	ND		7.3		pg/g	☼	12/15/16 08:39	12/23/16 01:01	1
2,3,4,7,8-PeCDF	ND		7.3		pg/g	☼	12/15/16 08:39	12/23/16 01:01	1
1,2,3,4,7,8-HxCDD	ND		7.3		pg/g	☼	12/15/16 08:39	12/23/16 01:01	1
1,2,3,6,7,8-HxCDD	ND		7.3		pg/g	☼	12/15/16 08:39	12/23/16 01:01	1
1,2,3,7,8,9-HxCDD	ND		7.3		pg/g	☼	12/15/16 08:39	12/23/16 01:01	1
1,2,3,4,7,8-HxCDF	ND		7.3		pg/g	☼	12/15/16 08:39	12/23/16 01:01	1
1,2,3,6,7,8-HxCDF	ND		7.3		pg/g	☼	12/15/16 08:39	12/23/16 01:01	1
1,2,3,7,8,9-HxCDF	ND		7.3		pg/g	☼	12/15/16 08:39	12/23/16 01:01	1
2,3,4,6,7,8-HxCDF	ND		7.3		pg/g	☼	12/15/16 08:39	12/23/16 01:01	1
1,2,3,4,6,7,8-HpCDD	40		7.3		pg/g	☼	12/15/16 08:39	12/23/16 01:01	1
1,2,3,4,6,7,8-HpCDF	ND		7.3		pg/g	☼	12/15/16 08:39	12/23/16 01:01	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5187-1

Client Sample ID: BG-3 (0-6")

Lab Sample ID: 590-5187-3

Date Collected: 12/09/16 09:10

Matrix: Solid

Date Received: 12/09/16 12:10

Percent Solids: 68.2

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,7,8,9-HpCDF	ND		7.3		pg/g	☼	12/15/16 08:39	12/23/16 01:01	1
OCDD	350		15		pg/g	☼	12/15/16 08:39	12/23/16 01:01	1
OCDF	17		15		pg/g	☼	12/15/16 08:39	12/23/16 01:01	1
Total TCDD	ND		1.5		pg/g	☼	12/15/16 08:39	12/23/16 01:01	1
Total TCDF	ND		1.5		pg/g	☼	12/15/16 08:39	12/23/16 01:01	1
Total PeCDD	ND		7.3		pg/g	☼	12/15/16 08:39	12/23/16 01:01	1
Total PeCDF	ND		7.3		pg/g	☼	12/15/16 08:39	12/23/16 01:01	1
Total HxCDD	ND		7.3		pg/g	☼	12/15/16 08:39	12/23/16 01:01	1
Total HxCDF	ND		7.3		pg/g	☼	12/15/16 08:39	12/23/16 01:01	1
Total HpCDD	66		7.3		pg/g	☼	12/15/16 08:39	12/23/16 01:01	1
Total HpCDF	11		7.3		pg/g	☼	12/15/16 08:39	12/23/16 01:01	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	68		40 - 135				12/15/16 08:39	12/23/16 01:01	1
13C-2,3,7,8-TCDF	65		40 - 135				12/15/16 08:39	12/23/16 01:01	1
13C-1,2,3,7,8-PeCDD	63		40 - 135				12/15/16 08:39	12/23/16 01:01	1
13C-1,2,3,7,8-PeCDF	67		40 - 135				12/15/16 08:39	12/23/16 01:01	1
13C-1,2,3,6,7,8-HxCDD	79		40 - 135				12/15/16 08:39	12/23/16 01:01	1
13C-1,2,3,4,7,8-HxCDF	77		40 - 135				12/15/16 08:39	12/23/16 01:01	1
13C-1,2,3,4,6,7,8-HpCDD	77		40 - 135				12/15/16 08:39	12/23/16 01:01	1
13C-1,2,3,4,6,7,8-HpCDF	81		40 - 135				12/15/16 08:39	12/23/16 01:01	1
13C-OCDD	78		40 - 135				12/15/16 08:39	12/23/16 01:01	1

Client Sample ID: BG-4 (0-6")

Lab Sample ID: 590-5187-4

Date Collected: 12/08/16 14:45

Matrix: Solid

Date Received: 12/09/16 12:10

Percent Solids: 82.9

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		1.2		pg/g	☼	12/15/16 08:39	12/23/16 01:47	1
2,3,7,8-TCDF	ND		1.2		pg/g	☼	12/15/16 08:39	12/23/16 01:47	1
1,2,3,7,8-PeCDD	ND		6.0		pg/g	☼	12/15/16 08:39	12/23/16 01:47	1
1,2,3,7,8-PeCDF	ND		6.0		pg/g	☼	12/15/16 08:39	12/23/16 01:47	1
2,3,4,7,8-PeCDF	ND		6.0		pg/g	☼	12/15/16 08:39	12/23/16 01:47	1
1,2,3,4,7,8-HxCDD	ND		6.0		pg/g	☼	12/15/16 08:39	12/23/16 01:47	1
1,2,3,6,7,8-HxCDD	ND		6.0		pg/g	☼	12/15/16 08:39	12/23/16 01:47	1
1,2,3,7,8,9-HxCDD	ND		6.0		pg/g	☼	12/15/16 08:39	12/23/16 01:47	1
1,2,3,4,7,8-HxCDF	ND		6.0		pg/g	☼	12/15/16 08:39	12/23/16 01:47	1
1,2,3,6,7,8-HxCDF	ND		6.0		pg/g	☼	12/15/16 08:39	12/23/16 01:47	1
1,2,3,7,8,9-HxCDF	ND		6.0		pg/g	☼	12/15/16 08:39	12/23/16 01:47	1
2,3,4,6,7,8-HxCDF	ND		6.0		pg/g	☼	12/15/16 08:39	12/23/16 01:47	1
1,2,3,4,6,7,8-HpCDD	22		6.0		pg/g	☼	12/15/16 08:39	12/23/16 01:47	1
1,2,3,4,6,7,8-HpCDF	ND		6.0		pg/g	☼	12/15/16 08:39	12/23/16 01:47	1
1,2,3,4,7,8,9-HpCDF	ND		6.0		pg/g	☼	12/15/16 08:39	12/23/16 01:47	1
OCDD	210		12		pg/g	☼	12/15/16 08:39	12/23/16 01:47	1
OCDF	ND		12		pg/g	☼	12/15/16 08:39	12/23/16 01:47	1
Total TCDD	ND		1.2		pg/g	☼	12/15/16 08:39	12/23/16 01:47	1
Total TCDF	ND		1.2		pg/g	☼	12/15/16 08:39	12/23/16 01:47	1
Total PeCDD	ND		6.0		pg/g	☼	12/15/16 08:39	12/23/16 01:47	1
Total PeCDF	ND		6.0		pg/g	☼	12/15/16 08:39	12/23/16 01:47	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5187-1

Client Sample ID: BG-4 (0-6")

Date Collected: 12/08/16 14:45

Date Received: 12/09/16 12:10

Lab Sample ID: 590-5187-4

Matrix: Solid

Percent Solids: 82.9

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
Total HxCDD	ND		6.0		pg/g	☼	12/15/16 08:39	12/23/16 01:47	1
Total HxCDF	ND		6.0		pg/g	☼	12/15/16 08:39	12/23/16 01:47	1
Total HpCDD	37		6.0		pg/g	☼	12/15/16 08:39	12/23/16 01:47	1
Total HpCDF	6.4		6.0		pg/g	☼	12/15/16 08:39	12/23/16 01:47	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	58		40 - 135				12/15/16 08:39	12/23/16 01:47	1
13C-2,3,7,8-TCDF	56		40 - 135				12/15/16 08:39	12/23/16 01:47	1
13C-1,2,3,7,8-PeCDD	55		40 - 135				12/15/16 08:39	12/23/16 01:47	1
13C-1,2,3,7,8-PeCDF	56		40 - 135				12/15/16 08:39	12/23/16 01:47	1
13C-1,2,3,6,7,8-HxCDD	64		40 - 135				12/15/16 08:39	12/23/16 01:47	1
13C-1,2,3,4,7,8-HxCDF	60		40 - 135				12/15/16 08:39	12/23/16 01:47	1
13C-1,2,3,4,6,7,8-HpCDD	61		40 - 135				12/15/16 08:39	12/23/16 01:47	1
13C-1,2,3,4,6,7,8-HpCDF	64		40 - 135				12/15/16 08:39	12/23/16 01:47	1
13C-OCDD	64		40 - 135				12/15/16 08:39	12/23/16 01:47	1

Client Sample ID: BG-5 (0-6")

Date Collected: 12/08/16 15:35

Date Received: 12/09/16 12:10

Lab Sample ID: 590-5187-5

Matrix: Solid

Percent Solids: 69.9

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		1.4		pg/g	☼	12/15/16 08:39	12/23/16 02:33	1
2,3,7,8-TCDF	ND		1.4		pg/g	☼	12/15/16 08:39	12/23/16 02:33	1
1,2,3,7,8-PeCDD	ND		7.1		pg/g	☼	12/15/16 08:39	12/23/16 02:33	1
1,2,3,7,8-PeCDF	ND		7.1		pg/g	☼	12/15/16 08:39	12/23/16 02:33	1
2,3,4,7,8-PeCDF	ND		7.1		pg/g	☼	12/15/16 08:39	12/23/16 02:33	1
1,2,3,4,7,8-HxCDD	ND		7.1		pg/g	☼	12/15/16 08:39	12/23/16 02:33	1
1,2,3,6,7,8-HxCDD	ND		7.1		pg/g	☼	12/15/16 08:39	12/23/16 02:33	1
1,2,3,7,8,9-HxCDD	ND		7.1		pg/g	☼	12/15/16 08:39	12/23/16 02:33	1
1,2,3,4,7,8-HxCDF	ND		7.1		pg/g	☼	12/15/16 08:39	12/23/16 02:33	1
1,2,3,6,7,8-HxCDF	ND		7.1		pg/g	☼	12/15/16 08:39	12/23/16 02:33	1
1,2,3,7,8,9-HxCDF	ND		7.1		pg/g	☼	12/15/16 08:39	12/23/16 02:33	1
2,3,4,6,7,8-HxCDF	ND		7.1		pg/g	☼	12/15/16 08:39	12/23/16 02:33	1
1,2,3,4,6,7,8-HpCDD	73		7.1		pg/g	☼	12/15/16 08:39	12/23/16 02:33	1
1,2,3,4,6,7,8-HpCDF	11		7.1		pg/g	☼	12/15/16 08:39	12/23/16 02:33	1
1,2,3,4,7,8,9-HpCDF	ND		7.1		pg/g	☼	12/15/16 08:39	12/23/16 02:33	1
OCDD	580		14		pg/g	☼	12/15/16 08:39	12/23/16 02:33	1
OCDF	18		14		pg/g	☼	12/15/16 08:39	12/23/16 02:33	1
Total TCDD	ND		1.4		pg/g	☼	12/15/16 08:39	12/23/16 02:33	1
Total TCDF	ND		1.4		pg/g	☼	12/15/16 08:39	12/23/16 02:33	1
Total PeCDD	ND		7.1		pg/g	☼	12/15/16 08:39	12/23/16 02:33	1
Total PeCDF	ND		7.1		pg/g	☼	12/15/16 08:39	12/23/16 02:33	1
Total HxCDD	7.7		7.1		pg/g	☼	12/15/16 08:39	12/23/16 02:33	1
Total HxCDF	ND		7.1		pg/g	☼	12/15/16 08:39	12/23/16 02:33	1
Total HpCDD	130		7.1		pg/g	☼	12/15/16 08:39	12/23/16 02:33	1
Total HpCDF	24		7.1		pg/g	☼	12/15/16 08:39	12/23/16 02:33	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	61		40 - 135				12/15/16 08:39	12/23/16 02:33	1
13C-2,3,7,8-TCDF	60		40 - 135				12/15/16 08:39	12/23/16 02:33	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5187-1

Client Sample ID: BG-5 (0-6")

Date Collected: 12/08/16 15:35

Date Received: 12/09/16 12:10

Lab Sample ID: 590-5187-5

Matrix: Solid

Percent Solids: 69.9

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-1,2,3,7,8-PeCDD	57		40 - 135	12/15/16 08:39	12/23/16 02:33	1
13C-1,2,3,7,8-PeCDF	60		40 - 135	12/15/16 08:39	12/23/16 02:33	1
13C-1,2,3,6,7,8-HxCDD	66		40 - 135	12/15/16 08:39	12/23/16 02:33	1
13C-1,2,3,4,7,8-HxCDF	66		40 - 135	12/15/16 08:39	12/23/16 02:33	1
13C-1,2,3,4,6,7,8-HpCDD	67		40 - 135	12/15/16 08:39	12/23/16 02:33	1
13C-1,2,3,4,6,7,8-HpCDF	71		40 - 135	12/15/16 08:39	12/23/16 02:33	1
13C-OCDD	69		40 - 135	12/15/16 08:39	12/23/16 02:33	1

Client Sample ID: BG-6 (0-6")

Date Collected: 12/08/16 14:25

Date Received: 12/09/16 12:10

Lab Sample ID: 590-5187-6

Matrix: Solid

Percent Solids: 79.5

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		1.3		pg/g	☼	12/15/16 08:39	12/23/16 03:20	1
2,3,7,8-TCDF	ND		1.3		pg/g	☼	12/15/16 08:39	12/23/16 03:20	1
1,2,3,7,8-PeCDD	ND		6.3		pg/g	☼	12/15/16 08:39	12/23/16 03:20	1
1,2,3,7,8-PeCDF	ND		6.3		pg/g	☼	12/15/16 08:39	12/23/16 03:20	1
2,3,4,7,8-PeCDF	ND		6.3		pg/g	☼	12/15/16 08:39	12/23/16 03:20	1
1,2,3,4,7,8-HxCDD	ND		6.3		pg/g	☼	12/15/16 08:39	12/23/16 03:20	1
1,2,3,6,7,8-HxCDD	ND		6.3		pg/g	☼	12/15/16 08:39	12/23/16 03:20	1
1,2,3,7,8,9-HxCDD	ND		6.3		pg/g	☼	12/15/16 08:39	12/23/16 03:20	1
1,2,3,4,7,8-HxCDF	ND		6.3		pg/g	☼	12/15/16 08:39	12/23/16 03:20	1
1,2,3,6,7,8-HxCDF	ND		6.3		pg/g	☼	12/15/16 08:39	12/23/16 03:20	1
1,2,3,7,8,9-HxCDF	ND		6.3		pg/g	☼	12/15/16 08:39	12/23/16 03:20	1
2,3,4,6,7,8-HxCDF	ND		6.3		pg/g	☼	12/15/16 08:39	12/23/16 03:20	1
1,2,3,4,6,7,8-HpCDD	15		6.3		pg/g	☼	12/15/16 08:39	12/23/16 03:20	1
1,2,3,4,6,7,8-HpCDF	ND		6.3		pg/g	☼	12/15/16 08:39	12/23/16 03:20	1
1,2,3,4,7,8,9-HpCDF	ND		6.3		pg/g	☼	12/15/16 08:39	12/23/16 03:20	1
OCDD	110		13		pg/g	☼	12/15/16 08:39	12/23/16 03:20	1
OCDF	ND		13		pg/g	☼	12/15/16 08:39	12/23/16 03:20	1
Total TCDD	ND		1.3		pg/g	☼	12/15/16 08:39	12/23/16 03:20	1
Total TCDF	ND		1.3		pg/g	☼	12/15/16 08:39	12/23/16 03:20	1
Total PeCDD	ND		6.3		pg/g	☼	12/15/16 08:39	12/23/16 03:20	1
Total PeCDF	ND		6.3		pg/g	☼	12/15/16 08:39	12/23/16 03:20	1
Total HxCDD	ND		6.3		pg/g	☼	12/15/16 08:39	12/23/16 03:20	1
Total HxCDF	ND		6.3		pg/g	☼	12/15/16 08:39	12/23/16 03:20	1
Total HpCDD	26		6.3		pg/g	☼	12/15/16 08:39	12/23/16 03:20	1
Total HpCDF	ND		6.3		pg/g	☼	12/15/16 08:39	12/23/16 03:20	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	81		40 - 135	12/15/16 08:39	12/23/16 03:20	1
13C-2,3,7,8-TCDF	80		40 - 135	12/15/16 08:39	12/23/16 03:20	1
13C-1,2,3,7,8-PeCDD	78		40 - 135	12/15/16 08:39	12/23/16 03:20	1
13C-1,2,3,7,8-PeCDF	82		40 - 135	12/15/16 08:39	12/23/16 03:20	1
13C-1,2,3,6,7,8-HxCDD	91		40 - 135	12/15/16 08:39	12/23/16 03:20	1
13C-1,2,3,4,7,8-HxCDF	89		40 - 135	12/15/16 08:39	12/23/16 03:20	1
13C-1,2,3,4,6,7,8-HpCDD	90		40 - 135	12/15/16 08:39	12/23/16 03:20	1
13C-1,2,3,4,6,7,8-HpCDF	96		40 - 135	12/15/16 08:39	12/23/16 03:20	1
13C-OCDD	95		40 - 135	12/15/16 08:39	12/23/16 03:20	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5187-1

Client Sample ID: BG-7 (0-6")

Lab Sample ID: 590-5187-7

Date Collected: 12/08/16 15:05

Matrix: Solid

Date Received: 12/09/16 12:10

Percent Solids: 80.2

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		1.2		pg/g	☼	12/15/16 08:39	12/23/16 04:06	1
2,3,7,8-TCDF	ND		1.2		pg/g	☼	12/15/16 08:39	12/23/16 04:06	1
1,2,3,7,8-PeCDD	ND		6.2		pg/g	☼	12/15/16 08:39	12/23/16 04:06	1
1,2,3,7,8-PeCDF	ND		6.2		pg/g	☼	12/15/16 08:39	12/23/16 04:06	1
2,3,4,7,8-PeCDF	ND		6.2		pg/g	☼	12/15/16 08:39	12/23/16 04:06	1
1,2,3,4,7,8-HxCDD	ND		6.2		pg/g	☼	12/15/16 08:39	12/23/16 04:06	1
1,2,3,6,7,8-HxCDD	ND		6.2		pg/g	☼	12/15/16 08:39	12/23/16 04:06	1
1,2,3,7,8,9-HxCDD	ND		6.2		pg/g	☼	12/15/16 08:39	12/23/16 04:06	1
1,2,3,4,7,8-HxCDF	ND		6.2		pg/g	☼	12/15/16 08:39	12/23/16 04:06	1
1,2,3,6,7,8-HxCDF	ND		6.2		pg/g	☼	12/15/16 08:39	12/23/16 04:06	1
1,2,3,7,8,9-HxCDF	ND		6.2		pg/g	☼	12/15/16 08:39	12/23/16 04:06	1
2,3,4,6,7,8-HxCDF	ND		6.2		pg/g	☼	12/15/16 08:39	12/23/16 04:06	1
1,2,3,4,6,7,8-HpCDD	ND		6.2		pg/g	☼	12/15/16 08:39	12/23/16 04:06	1
1,2,3,4,6,7,8-HpCDF	ND		6.2		pg/g	☼	12/15/16 08:39	12/23/16 04:06	1
1,2,3,4,7,8,9-HpCDF	ND		6.2		pg/g	☼	12/15/16 08:39	12/23/16 04:06	1
OCDD	18		12		pg/g	☼	12/15/16 08:39	12/23/16 04:06	1
OCDF	ND		12		pg/g	☼	12/15/16 08:39	12/23/16 04:06	1
Total TCDD	ND		1.2		pg/g	☼	12/15/16 08:39	12/23/16 04:06	1
Total TCDF	ND		1.2		pg/g	☼	12/15/16 08:39	12/23/16 04:06	1
Total PeCDD	ND		6.2		pg/g	☼	12/15/16 08:39	12/23/16 04:06	1
Total PeCDF	ND		6.2		pg/g	☼	12/15/16 08:39	12/23/16 04:06	1
Total HxCDD	ND		6.2		pg/g	☼	12/15/16 08:39	12/23/16 04:06	1
Total HxCDF	ND		6.2		pg/g	☼	12/15/16 08:39	12/23/16 04:06	1
Total HpCDD	ND		6.2		pg/g	☼	12/15/16 08:39	12/23/16 04:06	1
Total HpCDF	ND		6.2		pg/g	☼	12/15/16 08:39	12/23/16 04:06	1
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C-2,3,7,8-TCDD	78		40 - 135				12/15/16 08:39	12/23/16 04:06	1
13C-2,3,7,8-TCDF	74		40 - 135				12/15/16 08:39	12/23/16 04:06	1
13C-1,2,3,7,8-PeCDD	72		40 - 135				12/15/16 08:39	12/23/16 04:06	1
13C-1,2,3,7,8-PeCDF	76		40 - 135				12/15/16 08:39	12/23/16 04:06	1
13C-1,2,3,6,7,8-HxCDD	84		40 - 135				12/15/16 08:39	12/23/16 04:06	1
13C-1,2,3,4,7,8-HxCDF	84		40 - 135				12/15/16 08:39	12/23/16 04:06	1
13C-1,2,3,4,6,7,8-HpCDD	85		40 - 135				12/15/16 08:39	12/23/16 04:06	1
13C-1,2,3,4,6,7,8-HpCDF	90		40 - 135				12/15/16 08:39	12/23/16 04:06	1
13C-OCDD	89		40 - 135				12/15/16 08:39	12/23/16 04:06	1

Client Sample ID: BG-8 (0-6")

Lab Sample ID: 590-5187-8

Date Collected: 12/08/16 14:05

Matrix: Solid

Date Received: 12/09/16 12:10

Percent Solids: 83.3

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		1.2		pg/g	☼	12/15/16 08:39	12/23/16 04:52	1
2,3,7,8-TCDF	ND		1.2		pg/g	☼	12/15/16 08:39	12/23/16 04:52	1
1,2,3,7,8-PeCDD	ND		6.0		pg/g	☼	12/15/16 08:39	12/23/16 04:52	1
1,2,3,7,8-PeCDF	ND		6.0		pg/g	☼	12/15/16 08:39	12/23/16 04:52	1
2,3,4,7,8-PeCDF	ND		6.0		pg/g	☼	12/15/16 08:39	12/23/16 04:52	1
1,2,3,4,7,8-HxCDD	ND		6.0		pg/g	☼	12/15/16 08:39	12/23/16 04:52	1
1,2,3,6,7,8-HxCDD	ND		6.0		pg/g	☼	12/15/16 08:39	12/23/16 04:52	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5187-1

Client Sample ID: BG-8 (0-6")

Lab Sample ID: 590-5187-8

Date Collected: 12/08/16 14:05

Matrix: Solid

Date Received: 12/09/16 12:10

Percent Solids: 83.3

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,7,8,9-HxCDD	ND		6.0		pg/g	☼	12/15/16 08:39	12/23/16 04:52	1
1,2,3,4,7,8-HxCDF	ND		6.0		pg/g	☼	12/15/16 08:39	12/23/16 04:52	1
1,2,3,6,7,8-HxCDF	ND		6.0		pg/g	☼	12/15/16 08:39	12/23/16 04:52	1
1,2,3,7,8,9-HxCDF	ND		6.0		pg/g	☼	12/15/16 08:39	12/23/16 04:52	1
2,3,4,6,7,8-HxCDF	ND		6.0		pg/g	☼	12/15/16 08:39	12/23/16 04:52	1
1,2,3,4,6,7,8-HpCDD	150		6.0		pg/g	☼	12/15/16 08:39	12/23/16 04:52	1
1,2,3,4,6,7,8-HpCDF	28		6.0		pg/g	☼	12/15/16 08:39	12/23/16 04:52	1
1,2,3,4,7,8,9-HpCDF	ND		6.0		pg/g	☼	12/15/16 08:39	12/23/16 04:52	1
OCDD	2100		12		pg/g	☼	12/15/16 08:39	12/23/16 04:52	1
OCDF	210		12		pg/g	☼	12/15/16 08:39	12/23/16 04:52	1
Total TCDD	ND		1.2		pg/g	☼	12/15/16 08:39	12/23/16 04:52	1
Total TCDF	ND		1.2		pg/g	☼	12/15/16 08:39	12/23/16 04:52	1
Total PeCDD	ND		6.0		pg/g	☼	12/15/16 08:39	12/23/16 04:52	1
Total PeCDF	ND		6.0		pg/g	☼	12/15/16 08:39	12/23/16 04:52	1
Total HxCDD	ND		6.0		pg/g	☼	12/15/16 08:39	12/23/16 04:52	1
Total HxCDF	9.1		6.0		pg/g	☼	12/15/16 08:39	12/23/16 04:52	1
Total HpCDD	240		6.0		pg/g	☼	12/15/16 08:39	12/23/16 04:52	1
Total HpCDF	120		6.0		pg/g	☼	12/15/16 08:39	12/23/16 04:52	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	85		40 - 135	12/15/16 08:39	12/23/16 04:52	1
13C-2,3,7,8-TCDF	79		40 - 135	12/15/16 08:39	12/23/16 04:52	1
13C-1,2,3,7,8-PeCDD	79		40 - 135	12/15/16 08:39	12/23/16 04:52	1
13C-1,2,3,7,8-PeCDF	82		40 - 135	12/15/16 08:39	12/23/16 04:52	1
13C-1,2,3,6,7,8-HxCDD	98		40 - 135	12/15/16 08:39	12/23/16 04:52	1
13C-1,2,3,4,7,8-HxCDF	100		40 - 135	12/15/16 08:39	12/23/16 04:52	1
13C-1,2,3,4,6,7,8-HpCDD	102		40 - 135	12/15/16 08:39	12/23/16 04:52	1
13C-1,2,3,4,6,7,8-HpCDF	109		40 - 135	12/15/16 08:39	12/23/16 04:52	1
13C-OCDD	111		40 - 135	12/15/16 08:39	12/23/16 04:52	1

Client Sample ID: BG-9 (0-6")

Lab Sample ID: 590-5187-9

Date Collected: 12/08/16 15:45

Matrix: Solid

Date Received: 12/09/16 12:10

Percent Solids: 77.7

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		1.3		pg/g	☼	12/15/16 08:39	12/23/16 05:38	1
2,3,7,8-TCDF	ND		1.3		pg/g	☼	12/15/16 08:39	12/23/16 05:38	1
1,2,3,7,8-PeCDD	ND		6.4		pg/g	☼	12/15/16 08:39	12/23/16 05:38	1
1,2,3,7,8-PeCDF	ND		6.4		pg/g	☼	12/15/16 08:39	12/23/16 05:38	1
2,3,4,7,8-PeCDF	ND		6.4		pg/g	☼	12/15/16 08:39	12/23/16 05:38	1
1,2,3,4,7,8-HxCDD	ND		6.4		pg/g	☼	12/15/16 08:39	12/23/16 05:38	1
1,2,3,6,7,8-HxCDD	ND		6.4		pg/g	☼	12/15/16 08:39	12/23/16 05:38	1
1,2,3,7,8,9-HxCDD	ND		6.4		pg/g	☼	12/15/16 08:39	12/23/16 05:38	1
1,2,3,4,7,8-HxCDF	ND		6.4		pg/g	☼	12/15/16 08:39	12/23/16 05:38	1
1,2,3,6,7,8-HxCDF	ND		6.4		pg/g	☼	12/15/16 08:39	12/23/16 05:38	1
1,2,3,7,8,9-HxCDF	ND		6.4		pg/g	☼	12/15/16 08:39	12/23/16 05:38	1
2,3,4,6,7,8-HxCDF	ND		6.4		pg/g	☼	12/15/16 08:39	12/23/16 05:38	1
1,2,3,4,6,7,8-HpCDD	8.0		6.4		pg/g	☼	12/15/16 08:39	12/23/16 05:38	1
1,2,3,4,6,7,8-HpCDF	ND		6.4		pg/g	☼	12/15/16 08:39	12/23/16 05:38	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5187-1

Client Sample ID: BG-9 (0-6")

Lab Sample ID: 590-5187-9

Date Collected: 12/08/16 15:45

Matrix: Solid

Date Received: 12/09/16 12:10

Percent Solids: 77.7

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,7,8,9-HpCDF	ND		6.4		pg/g	☼	12/15/16 08:39	12/23/16 05:38	1
OCDD	66		13		pg/g	☼	12/15/16 08:39	12/23/16 05:38	1
OCDF	ND		13		pg/g	☼	12/15/16 08:39	12/23/16 05:38	1
Total TCDD	ND		1.3		pg/g	☼	12/15/16 08:39	12/23/16 05:38	1
Total TCDF	ND		1.3		pg/g	☼	12/15/16 08:39	12/23/16 05:38	1
Total PeCDD	ND		6.4		pg/g	☼	12/15/16 08:39	12/23/16 05:38	1
Total PeCDF	ND		6.4		pg/g	☼	12/15/16 08:39	12/23/16 05:38	1
Total HxCDD	ND		6.4		pg/g	☼	12/15/16 08:39	12/23/16 05:38	1
Total HxCDF	ND		6.4		pg/g	☼	12/15/16 08:39	12/23/16 05:38	1
Total HpCDD	8.0		6.4		pg/g	☼	12/15/16 08:39	12/23/16 05:38	1
Total HpCDF	ND		6.4		pg/g	☼	12/15/16 08:39	12/23/16 05:38	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	73		40 - 135				12/15/16 08:39	12/23/16 05:38	1
13C-2,3,7,8-TCDF	70		40 - 135				12/15/16 08:39	12/23/16 05:38	1
13C-1,2,3,7,8-PeCDD	70		40 - 135				12/15/16 08:39	12/23/16 05:38	1
13C-1,2,3,7,8-PeCDF	74		40 - 135				12/15/16 08:39	12/23/16 05:38	1
13C-1,2,3,6,7,8-HxCDD	89		40 - 135				12/15/16 08:39	12/23/16 05:38	1
13C-1,2,3,4,7,8-HxCDF	86		40 - 135				12/15/16 08:39	12/23/16 05:38	1
13C-1,2,3,4,6,7,8-HpCDD	89		40 - 135				12/15/16 08:39	12/23/16 05:38	1
13C-1,2,3,4,6,7,8-HpCDF	94		40 - 135				12/15/16 08:39	12/23/16 05:38	1
13C-OCDD	94		40 - 135				12/15/16 08:39	12/23/16 05:38	1

Client Sample ID: BG-10 (0-6")

Lab Sample ID: 590-5187-10

Date Collected: 12/09/16 09:25

Matrix: Solid

Date Received: 12/09/16 12:10

Percent Solids: 77.3

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		1.3		pg/g	☼	12/15/16 08:39	12/23/16 06:24	1
2,3,7,8-TCDF	ND		1.3		pg/g	☼	12/15/16 08:39	12/23/16 06:24	1
1,2,3,7,8-PeCDD	ND		6.5		pg/g	☼	12/15/16 08:39	12/23/16 06:24	1
1,2,3,7,8-PeCDF	ND		6.5		pg/g	☼	12/15/16 08:39	12/23/16 06:24	1
2,3,4,7,8-PeCDF	ND		6.5		pg/g	☼	12/15/16 08:39	12/23/16 06:24	1
1,2,3,4,7,8-HxCDD	ND		6.5		pg/g	☼	12/15/16 08:39	12/23/16 06:24	1
1,2,3,6,7,8-HxCDD	ND		6.5		pg/g	☼	12/15/16 08:39	12/23/16 06:24	1
1,2,3,7,8,9-HxCDD	ND		6.5		pg/g	☼	12/15/16 08:39	12/23/16 06:24	1
1,2,3,4,7,8-HxCDF	ND		6.5		pg/g	☼	12/15/16 08:39	12/23/16 06:24	1
1,2,3,6,7,8-HxCDF	ND		6.5		pg/g	☼	12/15/16 08:39	12/23/16 06:24	1
1,2,3,7,8,9-HxCDF	ND		6.5		pg/g	☼	12/15/16 08:39	12/23/16 06:24	1
2,3,4,6,7,8-HxCDF	ND		6.5		pg/g	☼	12/15/16 08:39	12/23/16 06:24	1
1,2,3,4,6,7,8-HpCDD	ND		6.5		pg/g	☼	12/15/16 08:39	12/23/16 06:24	1
1,2,3,4,6,7,8-HpCDF	ND		6.5		pg/g	☼	12/15/16 08:39	12/23/16 06:24	1
1,2,3,4,7,8,9-HpCDF	ND		6.5		pg/g	☼	12/15/16 08:39	12/23/16 06:24	1
OCDD	29		13		pg/g	☼	12/15/16 08:39	12/23/16 06:24	1
OCDF	ND		13		pg/g	☼	12/15/16 08:39	12/23/16 06:24	1
Total TCDD	ND		1.3		pg/g	☼	12/15/16 08:39	12/23/16 06:24	1
Total TCDF	ND		1.3		pg/g	☼	12/15/16 08:39	12/23/16 06:24	1
Total PeCDD	ND		6.5		pg/g	☼	12/15/16 08:39	12/23/16 06:24	1
Total PeCDF	ND		6.5		pg/g	☼	12/15/16 08:39	12/23/16 06:24	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
 Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5187-1

Client Sample ID: BG-10 (0-6")

Lab Sample ID: 590-5187-10

Date Collected: 12/09/16 09:25

Matrix: Solid

Date Received: 12/09/16 12:10

Percent Solids: 77.3

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
Total HxCDD	ND		6.5		pg/g	☼	12/15/16 08:39	12/23/16 06:24	1
Total HxCDF	ND		6.5		pg/g	☼	12/15/16 08:39	12/23/16 06:24	1
Total HpCDD	ND		6.5		pg/g	☼	12/15/16 08:39	12/23/16 06:24	1
Total HpCDF	ND		6.5		pg/g	☼	12/15/16 08:39	12/23/16 06:24	1
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C-2,3,7,8-TCDD	81		40 - 135				12/15/16 08:39	12/23/16 06:24	1
13C-2,3,7,8-TCDF	78		40 - 135				12/15/16 08:39	12/23/16 06:24	1
13C-1,2,3,7,8-PeCDD	77		40 - 135				12/15/16 08:39	12/23/16 06:24	1
13C-1,2,3,7,8-PeCDF	81		40 - 135				12/15/16 08:39	12/23/16 06:24	1
13C-1,2,3,6,7,8-HxCDD	94		40 - 135				12/15/16 08:39	12/23/16 06:24	1
13C-1,2,3,4,7,8-HxCDF	95		40 - 135				12/15/16 08:39	12/23/16 06:24	1
13C-1,2,3,4,6,7,8-HpCDD	96		40 - 135				12/15/16 08:39	12/23/16 06:24	1
13C-1,2,3,4,6,7,8-HpCDF	104		40 - 135				12/15/16 08:39	12/23/16 06:24	1
13C-OCDD	97		40 - 135				12/15/16 08:39	12/23/16 06:24	1

QC Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5187-1

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Lab Sample ID: MB 320-142262/1-A

Matrix: Solid

Analysis Batch: 143636

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 142262

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		1.0		pg/g		12/15/16 08:39	12/22/16 14:28	1
2,3,7,8-TCDF	ND		1.0		pg/g		12/15/16 08:39	12/22/16 14:28	1
1,2,3,7,8-PeCDD	ND		5.0		pg/g		12/15/16 08:39	12/22/16 14:28	1
1,2,3,7,8-PeCDF	ND		5.0		pg/g		12/15/16 08:39	12/22/16 14:28	1
2,3,4,7,8-PeCDF	ND		5.0		pg/g		12/15/16 08:39	12/22/16 14:28	1
1,2,3,4,7,8-HxCDD	ND		5.0		pg/g		12/15/16 08:39	12/22/16 14:28	1
1,2,3,6,7,8-HxCDD	ND		5.0		pg/g		12/15/16 08:39	12/22/16 14:28	1
1,2,3,7,8,9-HxCDD	ND		5.0		pg/g		12/15/16 08:39	12/22/16 14:28	1
1,2,3,4,7,8-HxCDF	ND		5.0		pg/g		12/15/16 08:39	12/22/16 14:28	1
1,2,3,6,7,8-HxCDF	ND		5.0		pg/g		12/15/16 08:39	12/22/16 14:28	1
1,2,3,7,8,9-HxCDF	ND		5.0		pg/g		12/15/16 08:39	12/22/16 14:28	1
2,3,4,6,7,8-HxCDF	ND		5.0		pg/g		12/15/16 08:39	12/22/16 14:28	1
1,2,3,4,6,7,8-HpCDD	ND		5.0		pg/g		12/15/16 08:39	12/22/16 14:28	1
1,2,3,4,6,7,8-HpCDF	ND		5.0		pg/g		12/15/16 08:39	12/22/16 14:28	1
1,2,3,4,7,8,9-HpCDF	ND		5.0		pg/g		12/15/16 08:39	12/22/16 14:28	1
OCDD	ND		10		pg/g		12/15/16 08:39	12/22/16 14:28	1
OCDF	ND		10		pg/g		12/15/16 08:39	12/22/16 14:28	1
Total TCDD	ND		1.0		pg/g		12/15/16 08:39	12/22/16 14:28	1
Total TCDF	ND		1.0		pg/g		12/15/16 08:39	12/22/16 14:28	1
Total PeCDD	ND		5.0		pg/g		12/15/16 08:39	12/22/16 14:28	1
Total PeCDF	ND		5.0		pg/g		12/15/16 08:39	12/22/16 14:28	1
Total HxCDD	ND		5.0		pg/g		12/15/16 08:39	12/22/16 14:28	1
Total HxCDF	ND		5.0		pg/g		12/15/16 08:39	12/22/16 14:28	1
Total HpCDD	ND		5.0		pg/g		12/15/16 08:39	12/22/16 14:28	1
Total HpCDF	ND		5.0		pg/g		12/15/16 08:39	12/22/16 14:28	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	59		40 - 135	12/15/16 08:39	12/22/16 14:28	1
13C-2,3,7,8-TCDF	61		40 - 135	12/15/16 08:39	12/22/16 14:28	1
13C-1,2,3,7,8-PeCDD	56		40 - 135	12/15/16 08:39	12/22/16 14:28	1
13C-1,2,3,7,8-PeCDF	60		40 - 135	12/15/16 08:39	12/22/16 14:28	1
13C-1,2,3,6,7,8-HxCDD	66		40 - 135	12/15/16 08:39	12/22/16 14:28	1
13C-1,2,3,4,7,8-HxCDF	64		40 - 135	12/15/16 08:39	12/22/16 14:28	1
13C-1,2,3,4,6,7,8-HpCDD	68		40 - 135	12/15/16 08:39	12/22/16 14:28	1
13C-1,2,3,4,6,7,8-HpCDF	67		40 - 135	12/15/16 08:39	12/22/16 14:28	1
13C-OCDD	70		40 - 135	12/15/16 08:39	12/22/16 14:28	1

Lab Sample ID: LCS 320-142262/2-A

Matrix: Solid

Analysis Batch: 143636

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 142262

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
2,3,7,8-TCDD	20.0	22.2		pg/g		111	77 - 130
2,3,7,8-TCDF	20.0	21.3		pg/g		106	79 - 137
1,2,3,7,8-PeCDD	100	116		pg/g		116	79 - 134
1,2,3,7,8-PeCDF	100	115		pg/g		115	81 - 134
2,3,4,7,8-PeCDF	100	115		pg/g		115	76 - 132
1,2,3,4,7,8-HxCDD	100	109		pg/g		109	65 - 144

TestAmerica Spokane

QC Sample Results

Client: GeoEngineers Inc
 Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5187-1

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCS 320-142262/2-A
Matrix: Solid
Analysis Batch: 143636

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 142262

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
1,2,3,6,7,8-HxCDD	100	115		pg/g		115	73 - 147
1,2,3,7,8,9-HxCDD	100	101		pg/g		101	80 - 143
1,2,3,4,7,8-HxCDF	100	109		pg/g		109	72 - 140
1,2,3,6,7,8-HxCDF	100	111		pg/g		111	63 - 152
1,2,3,7,8,9-HxCDF	100	102		pg/g		102	72 - 152
2,3,4,6,7,8-HxCDF	100	111		pg/g		111	72 - 151
1,2,3,4,6,7,8-HpCDD	100	113		pg/g		113	86 - 134
1,2,3,4,6,7,8-HpCDF	100	112		pg/g		112	81 - 137
1,2,3,4,7,8,9-HpCDF	100	107		pg/g		107	79 - 139
OCDD	200	223		pg/g		111	80 - 137
OCDF	200	220		pg/g		110	75 - 141

Isotope Dilution	LCS LCS		Limits
	%Recovery	Qualifier	
13C-2,3,7,8-TCDD	82		40 - 135
13C-2,3,7,8-TCDF	85		40 - 135
13C-1,2,3,7,8-PeCDD	78		40 - 135
13C-1,2,3,7,8-PeCDF	84		40 - 135
13C-1,2,3,6,7,8-HxCDD	94		40 - 135
13C-1,2,3,4,7,8-HxCDF	94		40 - 135
13C-1,2,3,4,6,7,8-HpCDD	91		40 - 135
13C-1,2,3,4,6,7,8-HpCDF	94		40 - 135
13C-OCDD	95		40 - 135

Lab Sample ID: LCSD 320-142262/3-A
Matrix: Solid
Analysis Batch: 143636

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 142262

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
2,3,7,8-TCDD	20.0	20.7		pg/g		104	77 - 130	7	20
2,3,7,8-TCDF	20.0	20.1		pg/g		100	79 - 137	6	20
1,2,3,7,8-PeCDD	100	111		pg/g		111	79 - 134	4	20
1,2,3,7,8-PeCDF	100	110		pg/g		110	81 - 134	4	20
2,3,4,7,8-PeCDF	100	110		pg/g		110	76 - 132	4	20
1,2,3,4,7,8-HxCDD	100	101		pg/g		101	65 - 144	7	20
1,2,3,6,7,8-HxCDD	100	109		pg/g		109	73 - 147	5	20
1,2,3,7,8,9-HxCDD	100	97.1		pg/g		97	80 - 143	4	20
1,2,3,4,7,8-HxCDF	100	107		pg/g		107	72 - 140	2	20
1,2,3,6,7,8-HxCDF	100	109		pg/g		109	63 - 152	2	20
1,2,3,7,8,9-HxCDF	100	101		pg/g		101	72 - 152	1	20
2,3,4,6,7,8-HxCDF	100	108		pg/g		108	72 - 151	3	20
1,2,3,4,6,7,8-HpCDD	100	107		pg/g		107	86 - 134	5	20
1,2,3,4,6,7,8-HpCDF	100	107		pg/g		107	81 - 137	5	20
1,2,3,4,7,8,9-HpCDF	100	101		pg/g		101	79 - 139	7	20
OCDD	200	209		pg/g		104	80 - 137	6	20
OCDF	200	204		pg/g		102	75 - 141	8	20

Isotope Dilution	LCSD LCSD		Limits
	%Recovery	Qualifier	
13C-2,3,7,8-TCDD	57		40 - 135

TestAmerica Spokane

QC Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5187-1

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCSD 320-142262/3-A
Matrix: Solid
Analysis Batch: 143636

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 142262

<i>Isotope Dilution</i>	<i>LCSD %Recovery</i>	<i>LCSD Qualifier</i>	<i>Limits</i>
13C-2,3,7,8-TCDF	60		40 - 135
13C-1,2,3,7,8-PeCDD	55		40 - 135
13C-1,2,3,7,8-PeCDF	58		40 - 135
13C-1,2,3,6,7,8-HxCDD	68		40 - 135
13C-1,2,3,4,7,8-HxCDF	67		40 - 135
13C-1,2,3,4,6,7,8-HpCDD	66		40 - 135
13C-1,2,3,4,6,7,8-HpCDF	68		40 - 135
13C-OCDD	69		40 - 135

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5187-1

Client Sample ID: BG-1 (0-6")

Date Collected: 12/08/16 15:20

Date Received: 12/09/16 12:10

Lab Sample ID: 590-5187-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			142206	12/14/16 15:28	CFR	TAL SAC

Client Sample ID: BG-1 (0-6")

Date Collected: 12/08/16 15:20

Date Received: 12/09/16 12:10

Lab Sample ID: 590-5187-1

Matrix: Solid

Percent Solids: 68.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			10.00 g	20 uL	142262	12/15/16 08:39	GLB	TAL SAC
Total/NA	Analysis	8290A		1			143636	12/22/16 19:50	SMA	TAL SAC

Client Sample ID: BG-2 (0-6")

Date Collected: 12/09/16 08:50

Date Received: 12/09/16 12:10

Lab Sample ID: 590-5187-2

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			142206	12/14/16 15:28	CFR	TAL SAC

Client Sample ID: BG-2 (0-6")

Date Collected: 12/09/16 08:50

Date Received: 12/09/16 12:10

Lab Sample ID: 590-5187-2

Matrix: Solid

Percent Solids: 82.7

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			10.04 g	20 uL	142262	12/15/16 08:39	GLB	TAL SAC
Total/NA	Analysis	8290A		1			143636	12/22/16 20:36	SMA	TAL SAC

Client Sample ID: BG-3 (0-6")

Date Collected: 12/09/16 09:10

Date Received: 12/09/16 12:10

Lab Sample ID: 590-5187-3

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			142206	12/14/16 15:28	CFR	TAL SAC

Client Sample ID: BG-3 (0-6")

Date Collected: 12/09/16 09:10

Date Received: 12/09/16 12:10

Lab Sample ID: 590-5187-3

Matrix: Solid

Percent Solids: 68.2

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			10.02 g	20 uL	142262	12/15/16 08:39	GLB	TAL SAC
Total/NA	Analysis	8290A		1			143637	12/23/16 01:01	SMA	TAL SAC

TestAmerica Spokane

Lab Chronicle

Client: GeoEngineers Inc
 Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5187-1

Client Sample ID: BG-4 (0-6")

Date Collected: 12/08/16 14:45

Date Received: 12/09/16 12:10

Lab Sample ID: 590-5187-4

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			142206	12/14/16 15:28	CFR	TAL SAC

Client Sample ID: BG-4 (0-6")

Date Collected: 12/08/16 14:45

Date Received: 12/09/16 12:10

Lab Sample ID: 590-5187-4

Matrix: Solid

Percent Solids: 82.9

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			10.04 g	20 uL	142262	12/15/16 08:39	GLB	TAL SAC
Total/NA	Analysis	8290A		1			143637	12/23/16 01:47	SMA	TAL SAC

Client Sample ID: BG-5 (0-6")

Date Collected: 12/08/16 15:35

Date Received: 12/09/16 12:10

Lab Sample ID: 590-5187-5

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			142206	12/14/16 15:28	CFR	TAL SAC

Client Sample ID: BG-5 (0-6")

Date Collected: 12/08/16 15:35

Date Received: 12/09/16 12:10

Lab Sample ID: 590-5187-5

Matrix: Solid

Percent Solids: 69.9

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			10.07 g	20 uL	142262	12/15/16 08:39	GLB	TAL SAC
Total/NA	Analysis	8290A		1			143637	12/23/16 02:33	SMA	TAL SAC

Client Sample ID: BG-6 (0-6")

Date Collected: 12/08/16 14:25

Date Received: 12/09/16 12:10

Lab Sample ID: 590-5187-6

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			142206	12/14/16 15:28	CFR	TAL SAC

Client Sample ID: BG-6 (0-6")

Date Collected: 12/08/16 14:25

Date Received: 12/09/16 12:10

Lab Sample ID: 590-5187-6

Matrix: Solid

Percent Solids: 79.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			10.00 g	20 uL	142262	12/15/16 08:39	GLB	TAL SAC
Total/NA	Analysis	8290A		1			143637	12/23/16 03:20	SMA	TAL SAC

TestAmerica Spokane

Lab Chronicle

Client: GeoEngineers Inc
 Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5187-1

Client Sample ID: BG-7 (0-6")

Lab Sample ID: 590-5187-7

Date Collected: 12/08/16 15:05

Matrix: Solid

Date Received: 12/09/16 12:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			142206	12/14/16 15:28	CFR	TAL SAC

Client Sample ID: BG-7 (0-6")

Lab Sample ID: 590-5187-7

Date Collected: 12/08/16 15:05

Matrix: Solid

Date Received: 12/09/16 12:10

Percent Solids: 80.2

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			10.05 g	20 uL	142262	12/15/16 08:39	GLB	TAL SAC
Total/NA	Analysis	8290A		1			143637	12/23/16 04:06	SMA	TAL SAC

Client Sample ID: BG-8 (0-6")

Lab Sample ID: 590-5187-8

Date Collected: 12/08/16 14:05

Matrix: Solid

Date Received: 12/09/16 12:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			142206	12/14/16 15:28	CFR	TAL SAC

Client Sample ID: BG-8 (0-6")

Lab Sample ID: 590-5187-8

Date Collected: 12/08/16 14:05

Matrix: Solid

Date Received: 12/09/16 12:10

Percent Solids: 83.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			10.03 g	20 uL	142262	12/15/16 08:39	GLB	TAL SAC
Total/NA	Analysis	8290A		1			143637	12/23/16 04:52	SMA	TAL SAC

Client Sample ID: BG-9 (0-6")

Lab Sample ID: 590-5187-9

Date Collected: 12/08/16 15:45

Matrix: Solid

Date Received: 12/09/16 12:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			142206	12/14/16 15:28	CFR	TAL SAC

Client Sample ID: BG-9 (0-6")

Lab Sample ID: 590-5187-9

Date Collected: 12/08/16 15:45

Matrix: Solid

Date Received: 12/09/16 12:10

Percent Solids: 77.7

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			10.05 g	20 uL	142262	12/15/16 08:39	GLB	TAL SAC
Total/NA	Analysis	8290A		1			143637	12/23/16 05:38	SMA	TAL SAC

TestAmerica Spokane

Lab Chronicle

Client: GeoEngineers Inc
 Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5187-1

Client Sample ID: BG-10 (0-6")

Lab Sample ID: 590-5187-10

Date Collected: 12/09/16 09:25

Matrix: Solid

Date Received: 12/09/16 12:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			142206	12/14/16 15:28	CFR	TAL SAC

Client Sample ID: BG-10 (0-6")

Lab Sample ID: 590-5187-10

Date Collected: 12/09/16 09:25

Matrix: Solid

Date Received: 12/09/16 12:10

Percent Solids: 77.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			10.01 g	20 uL	142262	12/15/16 08:39	GLB	TAL SAC
Total/NA	Analysis	8290A		1			143637	12/23/16 06:24	SMA	TAL SAC

Laboratory References:

TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Certification Summary

Client: GeoEngineers Inc
 Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5187-1

Laboratory: TestAmerica Spokane

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Washington	State Program	10	C569	01-06-17

Laboratory: TestAmerica Sacramento

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
A2LA	DoD ELAP		2928-01	01-31-17
Alaska (UST)	State Program	10	UST-055	12-18-17
Arizona	State Program	9	AZ0708	08-11-17
Arkansas DEQ	State Program	6	88-0691	06-17-17
California	State Program	9	2897	01-31-18
Colorado	State Program	8	CA00044	08-31-17
Connecticut	State Program	1	PH-0691	06-30-17
Florida	NELAP	4	E87570	06-30-17
Hawaii	State Program	9	N/A	01-31-17
Illinois	NELAP	5	200060	03-17-17
Kansas	NELAP	7	E-10375	10-31-17
Louisiana	NELAP	6	30612	06-30-17
Maine	State Program	1	CA0004	04-18-18
Michigan	State Program	5	9947	01-31-18
Nevada	State Program	9	CA00044	07-31-17
New Jersey	NELAP	2	CA005	06-30-17
New York	NELAP	2	11666	04-01-17
Oregon	NELAP	10	4040	01-29-17
Pennsylvania	NELAP	3	68-01272	03-31-17
Texas	NELAP	6	T104704399	07-31-17
US Fish & Wildlife	Federal		LE148388-0	10-31-17
USDA	Federal		P330-11-00436	12-30-17
USEPA UCMR	Federal	1	CA00044	11-06-18
Utah	NELAP	8	CA00044	02-28-17
Virginia	NELAP	3	460278	03-14-17
Washington	State Program	10	C581	05-05-17
West Virginia (DW)	State Program	3	9930C	12-31-16 *
Wyoming	State Program	8	8TMS-L	01-29-17

* Certification renewal pending - certification considered valid.

Method Summary

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5187-1

Method	Method Description	Protocol	Laboratory
8290A	Dioxins and Furans (HRGC/HRMS)	SW846	TAL SAC
D 2216	Percent Moisture	ASTM	TAL SAC

Protocol References:

ASTM = ASTM International

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

11922 E. First Ave., Spokane WA 99206-5302
 9405 SW Nimbus Ave., Beaverton, OR 97008-7145
 2000 W International Airport Rd Ste A10, Anchorage, AK 99502-1119

509-924-9200 FAX 924-9290
 503-906-9200 FAX 906-9210
 907-563-9200 FAX 563-9210

CHAIN OF CUSTODY REPORT

Work Order #:

CLIENT: GEL		INVOICE TO:		TURNAROUND REQUEST in Business Days * Organic & Inorganic Analyses <input type="checkbox"/> 10 <input type="checkbox"/> 7 <input type="checkbox"/> 5 <input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1 <input type="checkbox"/> <1 STD. Petroleum Hydrocarbon Analyses <input type="checkbox"/> 5 <input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1 <input type="checkbox"/> <1 STD. <input type="checkbox"/> OTHER Specify: STD * Turnaround Requests less than standard may incur Rush Charges							
REPORT TO: 523 E 2nd Ave ADDRESS: Spokane, WA 99202		Scott Lathen slathen@gensines.com						P.O. NUMBER:			
PHONE: FAX:		PRESERVATIVE									
PROJECT NAME: C991		REQUESTED ANALYSES									
PROJECT NUMBER: 0504-098-01											
SAMPLED BY: JML/cmp											
CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	Dioxins						MATRIX (W, S, O)	# OF CONT.	LOCATION/ COMMENTS	TA WO ID
1 BG-1(0-6")	12/9/16 1520	X						S	1		
2 BG-2(0-6")	0850	X									
3 BG-3(0-6")	0910	X									
4 BG-4(0-6")	1445	X									
5 BG-5(0-6")	1535	X									
6 BG-6(0-6")	1425	X									
7 BG-7(0-6")	1505	X									
8 BG-8(0-6")	1405	X									
9 BG-9(0-6")	1545	X									
10 BG-10(0-6")	0925	X									
RELEASED BY: Callan Driscoll	FIRM: GEL	DATE: 12/9/16	TIME: 1210	RECEIVED BY: Sheila Krate	FIRM: TACPOK	DATE: 12/9/16	TIME: 1210				
RELEASED BY:	FIRM:	DATE:	TIME:	RECEIVED BY:	FIRM:	DATE:	TIME:				
PRINT NAME:	FIRM:	DATE:	TIME:	PRINT NAME:	FIRM:	DATE:	TIME:				
ADDITIONAL REMARKS:								TEMP: 41.64	PAGE: 1	OF: 1	



590-5187 Chain of Custody

TAC-1000 (0714)

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12/29/2016



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

11922 E. First Ave., Spokane WA 99206-5302
 9405 SW Nimbus Ave., Beaverton, OR 97008-7145
 2000 W International Airport Rd Ste A10, Anchorage, AK 99502-1119

509-924-9200 FAX 924-9290
 503-906-9200 FAX 906-9210
 907-563-9200 FAX 563-9210

CHAIN OF CUSTODY REPORT

Work Order #:

CLIENT: GSI		INVOICE TO:		TURNAROUND REQUEST in Business Days * Organic & Inorganic Analyses <input type="checkbox"/> 10 <input type="checkbox"/> 7 <input type="checkbox"/> 5 <input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1 <input type="checkbox"/> <1 <small>STD.</small> Petroleum Hydrocarbon Analyses <input type="checkbox"/> 5 <input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1 <input type="checkbox"/> <1 <small>STD.</small> <input type="checkbox"/> OTHER Specify: STD <small>* Turnaround Requests less than standard may incur Rush Charges.</small>							
REPORT TO: 573 E 2nd Ave ADDRESS: Spokane, WA 99202		Scott Lathen slathen@ggsinc.com						P.O. NUMBER:			
PHONE: FAX:		PRESERVATIVE									
PROJECT NAME: CPP		REQUESTED ANALYSES									
PROJECT NUMBER: 0504-098-01											
SAMPLED BY: JML/cmp											
CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	Matrix						MATRIX (W, S, O)	# OF CONT.	LOCATION/ COMMENTS	TA WO ID
1 BG-1(0-6")	12/8/16 1520	X						S	1		
2 BG-2(0-6")	12/9/16 0850	X									
3 BG-3(0-6")	12/9/16 0910	X									
4 BG-4(0-6")	12/8/16 1445	X									
5 BG-5(0-6")	12/8/16 1535	X									
6 BG-6(0-6")	12/8/16 1425	X									
7 BG-7(0-6")	12/8/16 1505	X									
8 BG-8(0-6")	12/8/16 1405	X									
9 BG-9(0-6")	12/8/16 1545	X									
10 BG-10(0-6")	12/9/16 0925	X									
RELEASED BY: Colleen Driscoll		DATE: 12/9/16		RECEIVED BY: Sheila Keate		DATE: 12/14/16					
PRINT NAME: Colleen Driscoll		FIRM: GSI		PRINT NAME: Sheila Keate		FIRM: TestAmerica					
RELEASED BY:		DATE:		RECEIVED BY:		DATE:					
PRINT NAME:		FIRM:		PRINT NAME:		FIRM:					
ADDITIONAL REMARKS:		TEMP:		PAGE		OF					

TestAmerica Spokane

11922 East 1st Ave
 Spokane, WA 99206
 Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)		Sampler: Arrington, Randee E		Lab PM: Arrington, Randee E		Carrier Tracking No(s):		COC No: 590-2360.1	
Client Contact: Shipping/Receiving		Phone:		E-Mail: randee.arrington@testamericainc.com		State of Origin: Washington		Page: Page 1 of 2	
Company: TestAmerica Laboratories, Inc.		Due Date Requested: 12/21/2016		Accreditations Required (See note): State Program - Washington		Job #:		590-5187-1	
Address: 880 Riverside Parkway, West Sacramento, CA, 95605		TAT Requested (days):		Analysis Requested		Preservation Codes:		A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2O4S E - NaHSO4 Q - Na2SO3 F - MeOH R - Na2S2O3 G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone J - DI Water V - MCAA K - EDTA W - pH 4-5 L - EDA Z - other (specify)	
Project Name: Colville Post and Pole/0504-098-01		Project #: 59001108		Field Filtered Sample (Yes or No)		Moisture		Total Number of containers	
Site:		SSOW#:		Perform MS/MSD (Yes or No)		8290A/8290_P_Sox 17 Isomers & Totals		Other:	
Sample Identification - Client ID (Lab ID)		Sample Date		Sample Time		Sample Type (C=comp, G=grab)		Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	
						Preservation Code:			
BG-1 (0-6") (590-5187-1)		12/9/16		15:20 Pacific		Solid		X X	
BG-2 (0-6") (590-5187-2)		12/9/16		08:50 Pacific		Solid		X X	
BG-3 (0-6") (590-5187-3)		12/9/16		09:10 Pacific		Solid		X X	
BG-4 (0-6") (590-5187-4)		12/9/16		14:45 Pacific		Solid		X X	
BG-5 (0-6") (590-5187-5)		12/9/16		15:35 Pacific		Solid		X X	
BG-6 (0-6") (590-5187-6)		12/9/16		14:25 Pacific		Solid		X X	
BG-7 (0-6") (590-5187-7)		12/9/16		15:05 Pacific		Solid		X X	
BG-8 (0-6") (590-5187-8)		12/9/16		14:05 Pacific		Solid		X X	
BG-9 (0-6") (590-5187-9)		12/9/16		15:45 Pacific		Solid		X X	
<p>Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to TestAmerica Laboratories, Inc.</p>									
Possible Hazard Identification					Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)				
Unconfirmed					<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months				
Deliverable Requested: I, II, III, IV, Other (specify)			Primary Deliverable Rank: 2		Special Instructions/QC Requirements:				
Empty Kit Relinquished by:			Date:		Time:		Method of Shipment:		
Relinquished by: <i>Shelia [Signature]</i>			Date/Time: 12/12/16 1600		Company: [Signature]		Date/Time: 12/13/16 1605		Company: JAWB
Relinquished by:			Date/Time:		Company:		Date/Time:		Company:
Relinquished by:			Date/Time:		Company:		Date/Time:		Company:
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:			Cooler Temperature(s) °C and Other Remarks: 3.9				

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12/29/2016



Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-5187-1

Login Number: 5187

List Source: TestAmerica Spokane

List Number: 1

Creator: Kratz, Sheila J

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-5187-1

Login Number: 5187

List Number: 2

Creator: Edman, Connor M

List Source: TestAmerica Sacramento

List Creation: 12/14/16 11:10 AM

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	217510
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Isotope Dilution Summary

Client: GeoEngineers Inc
 Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5187-1

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Isotope Dilution Recovery (Acceptance Limits)							
		TCDD (40-135)	TCDF (40-135)	PeCDD (40-135)	PeCDF1 (40-135)	HxCDD2 (40-135)	HxCDF1 (40-135)	HpCDD (40-135)	HpCDF1 (40-135)
590-5187-1	BG-1 (0-6")	78	80	72	80	90	89	94	97
590-5187-2	BG-2 (0-6")	66	68	62	67	73	73	74	76
590-5187-3	BG-3 (0-6")	68	65	63	67	79	77	77	81
590-5187-4	BG-4 (0-6")	58	56	55	56	64	60	61	64
590-5187-5	BG-5 (0-6")	61	60	57	60	66	66	67	71
590-5187-6	BG-6 (0-6")	81	80	78	82	91	89	90	96
590-5187-7	BG-7 (0-6")	78	74	72	76	84	84	85	90
590-5187-8	BG-8 (0-6")	85	79	79	82	98	100	102	109
590-5187-9	BG-9 (0-6")	73	70	70	74	89	86	89	94
590-5187-10	BG-10 (0-6")	81	78	77	81	94	95	96	104
LCS 320-142262/2-A	Lab Control Sample	82	85	78	84	94	94	91	94
LCSD 320-142262/3-A	Lab Control Sample Dup	57	60	55	58	68	67	66	68
MB 320-142262/1-A	Method Blank	59	61	56	60	66	64	68	67

Lab Sample ID	Client Sample ID	Percent Isotope Dilution Recovery (Acceptance Limits)
		OCDD (40-135)
590-5187-1	BG-1 (0-6")	102
590-5187-2	BG-2 (0-6")	79
590-5187-3	BG-3 (0-6")	78
590-5187-4	BG-4 (0-6")	64
590-5187-5	BG-5 (0-6")	69
590-5187-6	BG-6 (0-6")	95
590-5187-7	BG-7 (0-6")	89
590-5187-8	BG-8 (0-6")	111
590-5187-9	BG-9 (0-6")	94
590-5187-10	BG-10 (0-6")	97
LCS 320-142262/2-A	Lab Control Sample	95
LCSD 320-142262/3-A	Lab Control Sample Dup	69
MB 320-142262/1-A	Method Blank	70

Surrogate Legend

- TCDD = 13C-2,3,7,8-TCDD
- TCDF = 13C-2,3,7,8-TCDF
- PeCDD = 13C-1,2,3,7,8-PeCDD
- PeCDF1 = 13C-1,2,3,7,8-PeCDF
- HxCDD2 = 13C-1,2,3,6,7,8-HxCDD
- HxCDF1 = 13C-1,2,3,4,7,8-HxCDF
- HpCDD = 13C-1,2,3,4,6,7,8-HpCDD
- HpCDF1 = 13C-1,2,3,4,6,7,8-HpCDF
- OCDD = 13C-OCDD

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

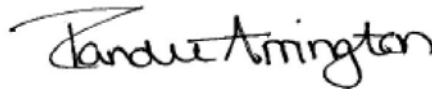
TestAmerica Laboratories, Inc.
TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Tel: (509)924-9200

TestAmerica Job ID: 590-5615-1

Client Project/Site: Colville Post and Pole/0504-098-01

For:
GeoEngineers Inc
523 East Second Ave
Spokane, Washington 99202

Attn: Scott Lathen



Authorized for release by:
3/29/2017 10:51:49 AM

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Case Narrative

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5615-1

Job ID: 590-5615-1

Laboratory: TestAmerica Spokane

Narrative

Receipt

The samples were received on 3/3/2017 4:15 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 1.3° C and 1.7° C.

GC/MS Semi VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Dioxin

Method 8290A: The following samples exhibited elevated noise or matrix interferences for one or more analytes causing elevation of the detection limit (EDL): HA-25A (6-12) (590-5615-17), HA-41 (0-6) (590-5615-25), HA-46 (0-6) (590-5615-40), HA-48 (0-6) (590-5615-46), HA-49 (0-6) (590-5615-49) and HA-52 (0-6) (590-5615-58). The reporting limit (RL) for the affected analytes has been raised to be equal to the EDL, and a "G" qualifier applied.

Method 8290A: The concentration of analyte OCDD associated with the following samples exceeded the instrument calibration range: HA-25A (6-12) (590-5615-17) and HA-49 (0-6) (590-5615-49). The analyte has been qualified; however, the peak did not saturate the instrument detector. Historical data indicate that for the isotope dilution method, dilution and re-analysis will not produce significantly different results from those reported above the calibration range.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Dioxin Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Sample Summary

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5615-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
590-5615-2	HA-3A (6-12)	Solid	03/01/17 10:30	03/03/17 16:15
590-5615-5	HA-4A (6-12)	Solid	03/01/17 09:55	03/03/17 16:15
590-5615-7	HA-6A (6-12)	Solid	03/01/17 11:40	03/03/17 16:15
590-5615-9	HA-11A (6-12)	Solid	03/01/17 14:45	03/03/17 16:15
590-5615-11	HA-13A (6-12)	Solid	03/01/17 12:55	03/03/17 16:15
590-5615-13	HA-17A (6-12)	Solid	03/01/17 12:10	03/03/17 16:15
590-5615-15	HA-20A (6-12)	Solid	03/01/17 15:00	03/03/17 16:15
590-5615-17	HA-25A (6-12)	Solid	03/01/17 16:05	03/03/17 16:15
590-5615-19	HA-39 (0-6)	Solid	03/01/17 13:30	03/03/17 16:15
590-5615-22	HA-40 (0-6)	Solid	03/01/17 14:10	03/03/17 16:15
590-5615-25	HA-41 (0-6)	Solid	03/01/17 14:25	03/03/17 16:15
590-5615-28	HA-42 (0-6)	Solid	03/01/17 12:30	03/03/17 16:15
590-5615-31	HA-43 (0-6)	Solid	03/01/17 09:30	03/03/17 16:15
590-5615-34	HA-44 (0-6)	Solid	03/01/17 09:50	03/03/17 16:15
590-5615-37	HA-45 (0-6)	Solid	03/01/17 10:25	03/03/17 16:15
590-5615-40	HA-46 (0-6)	Solid	03/01/17 11:00	03/03/17 16:15
590-5615-43	HA-47 (0-6)	Solid	03/01/17 11:00	03/03/17 16:15
590-5615-46	HA-48 (0-6)	Solid	03/01/17 11:20	03/03/17 16:15
590-5615-49	HA-49 (0-6)	Solid	03/01/17 11:30	03/03/17 16:15
590-5615-52	HA-50 (0-6)	Solid	03/01/17 11:55	03/03/17 16:15
590-5615-55	HA-51 (0-6)	Solid	03/01/17 14:50	03/03/17 16:15
590-5615-58	HA-52 (0-6)	Solid	03/01/17 15:15	03/03/17 16:15
590-5615-61	HA-53 (0-6)	Solid	03/01/17 15:20	03/03/17 16:15
590-5615-64	HA-54 (0-6)	Solid	03/01/17 15:40	03/03/17 16:15
590-5615-67	HA-55 (0-6)	Solid	03/01/17 16:00	03/03/17 16:15
590-5615-70	HA-56 (0-6)	Solid	03/01/17 15:35	03/03/17 16:15
590-5615-73	HA-57 (0-6)	Solid	03/01/17 13:30	03/03/17 16:15
590-5615-76	HA-58 (0-6)	Solid	03/01/17 13:50	03/03/17 16:15
590-5615-79	HA-59 (0-6)	Solid	03/01/17 13:45	03/03/17 16:15

Definitions/Glossary

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5615-1

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.
F2	MS/MSD RPD exceeds control limits

Dioxin

Qualifier	Qualifier Description
G	The reported quantitation limit has been raised due to an exhibited elevated noise or matrix interference
E	Result exceeded calibration range.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5615-1

Client Sample ID: HA-3A (6-12)

Date Collected: 03/01/17 10:30

Date Received: 03/03/17 16:15

Lab Sample ID: 590-5615-2

Matrix: Solid

Percent Solids: 56.5

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		1800		pg/g	☼	03/09/17 16:55	03/18/17 12:54	1
2,3,7,8-TCDF	ND		1800		pg/g	☼	03/09/17 16:55	03/18/17 12:54	1
1,2,3,7,8-PeCDD	ND		8800		pg/g	☼	03/09/17 16:55	03/18/17 12:54	1
1,2,3,7,8-PeCDF	ND		8800		pg/g	☼	03/09/17 16:55	03/18/17 12:54	1
2,3,4,7,8-PeCDF	ND		8800		pg/g	☼	03/09/17 16:55	03/18/17 12:54	1
1,2,3,4,7,8-HxCDD	ND		8800		pg/g	☼	03/09/17 16:55	03/18/17 12:54	1
1,2,3,6,7,8-HxCDD	ND		8800		pg/g	☼	03/09/17 16:55	03/18/17 12:54	1
1,2,3,7,8,9-HxCDD	ND		8800		pg/g	☼	03/09/17 16:55	03/18/17 12:54	1
1,2,3,4,7,8-HxCDF	ND		8800		pg/g	☼	03/09/17 16:55	03/18/17 12:54	1
1,2,3,6,7,8-HxCDF	ND		8800		pg/g	☼	03/09/17 16:55	03/18/17 12:54	1
1,2,3,7,8,9-HxCDF	ND		8800		pg/g	☼	03/09/17 16:55	03/18/17 12:54	1
2,3,4,6,7,8-HxCDF	ND		8800		pg/g	☼	03/09/17 16:55	03/18/17 12:54	1
1,2,3,4,6,7,8-HpCDD	190000		8800		pg/g	☼	03/09/17 16:55	03/18/17 12:54	1
1,2,3,4,6,7,8-HpCDF	10000		8800		pg/g	☼	03/09/17 16:55	03/18/17 12:54	1
1,2,3,4,7,8,9-HpCDF	ND		8800		pg/g	☼	03/09/17 16:55	03/18/17 12:54	1
OCDD	1600000		18000		pg/g	☼	03/09/17 16:55	03/18/17 12:54	1
OCDF	28000		18000		pg/g	☼	03/09/17 16:55	03/18/17 12:54	1
Total TCDD	ND		1800		pg/g	☼	03/09/17 16:55	03/18/17 12:54	1
Total TCDF	ND		1800		pg/g	☼	03/09/17 16:55	03/18/17 12:54	1
Total PeCDD	ND		8800		pg/g	☼	03/09/17 16:55	03/18/17 12:54	1
Total PeCDF	ND		8800		pg/g	☼	03/09/17 16:55	03/18/17 12:54	1
Total HxCDD	9400		8800		pg/g	☼	03/09/17 16:55	03/18/17 12:54	1
Total HxCDF	9400		8800		pg/g	☼	03/09/17 16:55	03/18/17 12:54	1
Total HpCDD	320000		8800		pg/g	☼	03/09/17 16:55	03/18/17 12:54	1
Total HpCDF	38000		8800		pg/g	☼	03/09/17 16:55	03/18/17 12:54	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	89		40 - 135				03/09/17 16:55	03/18/17 12:54	1
13C-2,3,7,8-TCDF	89		40 - 135				03/09/17 16:55	03/18/17 12:54	1
13C-1,2,3,7,8-PeCDD	95		40 - 135				03/09/17 16:55	03/18/17 12:54	1
13C-1,2,3,7,8-PeCDF	95		40 - 135				03/09/17 16:55	03/18/17 12:54	1
13C-1,2,3,6,7,8-HxCDD	97		40 - 135				03/09/17 16:55	03/18/17 12:54	1
13C-1,2,3,4,7,8-HxCDF	100		40 - 135				03/09/17 16:55	03/18/17 12:54	1
13C-1,2,3,4,6,7,8-HpCDD	106		40 - 135				03/09/17 16:55	03/18/17 12:54	1
13C-1,2,3,4,6,7,8-HpCDF	109		40 - 135				03/09/17 16:55	03/18/17 12:54	1
13C-OCDD	109		40 - 135				03/09/17 16:55	03/18/17 12:54	1

Client Sample ID: HA-4A (6-12)

Date Collected: 03/01/17 09:55

Date Received: 03/03/17 16:15

Lab Sample ID: 590-5615-5

Matrix: Solid

Percent Solids: 83.8

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		44		pg/g	☼	03/09/17 16:55	03/18/17 13:40	1
2,3,7,8-TCDF	ND		44		pg/g	☼	03/09/17 16:55	03/18/17 13:40	1
1,2,3,7,8-PeCDD	ND		220		pg/g	☼	03/09/17 16:55	03/18/17 13:40	1
1,2,3,7,8-PeCDF	ND		220		pg/g	☼	03/09/17 16:55	03/18/17 13:40	1
2,3,4,7,8-PeCDF	ND		220		pg/g	☼	03/09/17 16:55	03/18/17 13:40	1
1,2,3,4,7,8-HxCDD	ND		220		pg/g	☼	03/09/17 16:55	03/18/17 13:40	1
1,2,3,6,7,8-HxCDD	ND		220		pg/g	☼	03/09/17 16:55	03/18/17 13:40	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5615-1

Client Sample ID: HA-4A (6-12)

Lab Sample ID: 590-5615-5

Date Collected: 03/01/17 09:55

Matrix: Solid

Date Received: 03/03/17 16:15

Percent Solids: 83.8

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,7,8,9-HxCDD	ND		220		pg/g	☼	03/09/17 16:55	03/18/17 13:40	1
1,2,3,4,7,8-HxCDF	ND		220		pg/g	☼	03/09/17 16:55	03/18/17 13:40	1
1,2,3,6,7,8-HxCDF	ND		220		pg/g	☼	03/09/17 16:55	03/18/17 13:40	1
1,2,3,7,8,9-HxCDF	ND		220		pg/g	☼	03/09/17 16:55	03/18/17 13:40	1
2,3,4,6,7,8-HxCDF	ND		220		pg/g	☼	03/09/17 16:55	03/18/17 13:40	1
1,2,3,4,6,7,8-HpCDD	7700		220		pg/g	☼	03/09/17 16:55	03/18/17 13:40	1
1,2,3,4,6,7,8-HpCDF	1600		220		pg/g	☼	03/09/17 16:55	03/18/17 13:40	1
1,2,3,4,7,8,9-HpCDF	ND		220		pg/g	☼	03/09/17 16:55	03/18/17 13:40	1
OCDD	70000		440		pg/g	☼	03/09/17 16:55	03/18/17 13:40	1
OCDF	3900		440		pg/g	☼	03/09/17 16:55	03/18/17 13:40	1
Total TCDD	ND		44		pg/g	☼	03/09/17 16:55	03/18/17 13:40	1
Total TCDF	ND		44		pg/g	☼	03/09/17 16:55	03/18/17 13:40	1
Total PeCDD	ND		220		pg/g	☼	03/09/17 16:55	03/18/17 13:40	1
Total PeCDF	ND		220		pg/g	☼	03/09/17 16:55	03/18/17 13:40	1
Total HxCDD	780		220		pg/g	☼	03/09/17 16:55	03/18/17 13:40	1
Total HxCDF	950		220		pg/g	☼	03/09/17 16:55	03/18/17 13:40	1
Total HpCDD	13000		220		pg/g	☼	03/09/17 16:55	03/18/17 13:40	1
Total HpCDF	4100		220		pg/g	☼	03/09/17 16:55	03/18/17 13:40	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	89		40 - 135				03/09/17 16:55	03/18/17 13:40	1
13C-2,3,7,8-TCDF	91		40 - 135				03/09/17 16:55	03/18/17 13:40	1
13C-1,2,3,7,8-PeCDD	96		40 - 135				03/09/17 16:55	03/18/17 13:40	1
13C-1,2,3,7,8-PeCDF	91		40 - 135				03/09/17 16:55	03/18/17 13:40	1
13C-1,2,3,6,7,8-HxCDD	101		40 - 135				03/09/17 16:55	03/18/17 13:40	1
13C-1,2,3,4,7,8-HxCDF	99		40 - 135				03/09/17 16:55	03/18/17 13:40	1
13C-1,2,3,4,6,7,8-HpCDD	107		40 - 135				03/09/17 16:55	03/18/17 13:40	1
13C-1,2,3,4,6,7,8-HpCDF	108		40 - 135				03/09/17 16:55	03/18/17 13:40	1
13C-OCDD	112		40 - 135				03/09/17 16:55	03/18/17 13:40	1

Client Sample ID: HA-6A (6-12)

Lab Sample ID: 590-5615-7

Date Collected: 03/01/17 11:40

Matrix: Solid

Date Received: 03/03/17 16:15

Percent Solids: 91.1

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		17		pg/g	☼	03/09/17 16:55	03/18/17 14:26	1
2,3,7,8-TCDF	ND		17		pg/g	☼	03/09/17 16:55	03/18/17 14:26	1
1,2,3,7,8-PeCDD	ND		83		pg/g	☼	03/09/17 16:55	03/18/17 14:26	1
1,2,3,7,8-PeCDF	ND		83		pg/g	☼	03/09/17 16:55	03/18/17 14:26	1
2,3,4,7,8-PeCDF	ND		83		pg/g	☼	03/09/17 16:55	03/18/17 14:26	1
1,2,3,4,7,8-HxCDD	ND		83		pg/g	☼	03/09/17 16:55	03/18/17 14:26	1
1,2,3,6,7,8-HxCDD	240		83		pg/g	☼	03/09/17 16:55	03/18/17 14:26	1
1,2,3,7,8,9-HxCDD	120		83		pg/g	☼	03/09/17 16:55	03/18/17 14:26	1
1,2,3,4,7,8-HxCDF	ND		83		pg/g	☼	03/09/17 16:55	03/18/17 14:26	1
1,2,3,6,7,8-HxCDF	ND		83		pg/g	☼	03/09/17 16:55	03/18/17 14:26	1
1,2,3,7,8,9-HxCDF	ND		83		pg/g	☼	03/09/17 16:55	03/18/17 14:26	1
2,3,4,6,7,8-HxCDF	ND		83		pg/g	☼	03/09/17 16:55	03/18/17 14:26	1
1,2,3,4,6,7,8-HpCDD	5900		83		pg/g	☼	03/09/17 16:55	03/18/17 14:26	1
1,2,3,4,6,7,8-HpCDF	690		83		pg/g	☼	03/09/17 16:55	03/18/17 14:26	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5615-1

Client Sample ID: HA-6A (6-12)

Lab Sample ID: 590-5615-7

Date Collected: 03/01/17 11:40

Matrix: Solid

Date Received: 03/03/17 16:15

Percent Solids: 91.1

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,7,8,9-HpCDF	ND		83		pg/g	☼	03/09/17 16:55	03/18/17 14:26	1
OCDD	62000		170		pg/g	☼	03/09/17 16:55	03/18/17 14:26	1
OCDF	2000		170		pg/g	☼	03/09/17 16:55	03/18/17 14:26	1
Total TCDD	ND		17		pg/g	☼	03/09/17 16:55	03/18/17 14:26	1
Total TCDF	ND		17		pg/g	☼	03/09/17 16:55	03/18/17 14:26	1
Total PeCDD	ND		83		pg/g	☼	03/09/17 16:55	03/18/17 14:26	1
Total PeCDF	ND		83		pg/g	☼	03/09/17 16:55	03/18/17 14:26	1
Total HxCDD	990		83		pg/g	☼	03/09/17 16:55	03/18/17 14:26	1
Total HxCDF	830		83		pg/g	☼	03/09/17 16:55	03/18/17 14:26	1
Total HpCDD	10000		83		pg/g	☼	03/09/17 16:55	03/18/17 14:26	1
Total HpCDF	2300		83		pg/g	☼	03/09/17 16:55	03/18/17 14:26	1
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C-2,3,7,8-TCDD	61		40 - 135				03/09/17 16:55	03/18/17 14:26	1
13C-2,3,7,8-TCDF	50		40 - 135				03/09/17 16:55	03/18/17 14:26	1
13C-1,2,3,7,8-PeCDD	51		40 - 135				03/09/17 16:55	03/18/17 14:26	1
13C-1,2,3,7,8-PeCDF	51		40 - 135				03/09/17 16:55	03/18/17 14:26	1
13C-1,2,3,6,7,8-HxCDD	55		40 - 135				03/09/17 16:55	03/18/17 14:26	1
13C-1,2,3,4,7,8-HxCDF	57		40 - 135				03/09/17 16:55	03/18/17 14:26	1
13C-1,2,3,4,6,7,8-HpCDD	71		40 - 135				03/09/17 16:55	03/18/17 14:26	1
13C-1,2,3,4,6,7,8-HpCDF	60		40 - 135				03/09/17 16:55	03/18/17 14:26	1
13C-OCDD	63		40 - 135				03/09/17 16:55	03/18/17 14:26	1

Client Sample ID: HA-11A (6-12)

Lab Sample ID: 590-5615-9

Date Collected: 03/01/17 14:45

Matrix: Solid

Date Received: 03/03/17 16:15

Percent Solids: 73.5

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		5.4		pg/g	☼	03/09/17 16:55	03/18/17 15:12	1
2,3,7,8-TCDF	ND		5.4		pg/g	☼	03/09/17 16:55	03/18/17 15:12	1
1,2,3,7,8-PeCDD	ND		27		pg/g	☼	03/09/17 16:55	03/18/17 15:12	1
1,2,3,7,8-PeCDF	ND		27		pg/g	☼	03/09/17 16:55	03/18/17 15:12	1
2,3,4,7,8-PeCDF	ND		27		pg/g	☼	03/09/17 16:55	03/18/17 15:12	1
1,2,3,4,7,8-HxCDD	ND		27		pg/g	☼	03/09/17 16:55	03/18/17 15:12	1
1,2,3,6,7,8-HxCDD	52		27		pg/g	☼	03/09/17 16:55	03/18/17 15:12	1
1,2,3,7,8,9-HxCDD	ND		27		pg/g	☼	03/09/17 16:55	03/18/17 15:12	1
1,2,3,4,7,8-HxCDF	ND		27		pg/g	☼	03/09/17 16:55	03/18/17 15:12	1
1,2,3,6,7,8-HxCDF	ND		27		pg/g	☼	03/09/17 16:55	03/18/17 15:12	1
1,2,3,7,8,9-HxCDF	ND		27		pg/g	☼	03/09/17 16:55	03/18/17 15:12	1
2,3,4,6,7,8-HxCDF	ND		27		pg/g	☼	03/09/17 16:55	03/18/17 15:12	1
1,2,3,4,6,7,8-HpCDD	1900		27		pg/g	☼	03/09/17 16:55	03/18/17 15:12	1
1,2,3,4,6,7,8-HpCDF	230		27		pg/g	☼	03/09/17 16:55	03/18/17 15:12	1
1,2,3,4,7,8,9-HpCDF	ND		27		pg/g	☼	03/09/17 16:55	03/18/17 15:12	1
OCDD	19000		54		pg/g	☼	03/09/17 16:55	03/18/17 15:12	1
OCDF	1500		54		pg/g	☼	03/09/17 16:55	03/18/17 15:12	1
Total TCDD	ND		5.4		pg/g	☼	03/09/17 16:55	03/18/17 15:12	1
Total TCDF	ND		5.4		pg/g	☼	03/09/17 16:55	03/18/17 15:12	1
Total PeCDD	ND		27		pg/g	☼	03/09/17 16:55	03/18/17 15:12	1
Total PeCDF	ND		27		pg/g	☼	03/09/17 16:55	03/18/17 15:12	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5615-1

Client Sample ID: HA-11A (6-12)

Lab Sample ID: 590-5615-9

Date Collected: 03/01/17 14:45

Matrix: Solid

Date Received: 03/03/17 16:15

Percent Solids: 73.5

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
Total HxCDD	110		27		pg/g	☼	03/09/17 16:55	03/18/17 15:12	1
Total HxCDF	190		27		pg/g	☼	03/09/17 16:55	03/18/17 15:12	1
Total HpCDD	3200		27		pg/g	☼	03/09/17 16:55	03/18/17 15:12	1
Total HpCDF	1200		27		pg/g	☼	03/09/17 16:55	03/18/17 15:12	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	51		40 - 135				03/09/17 16:55	03/18/17 15:12	1
13C-2,3,7,8-TCDF	49		40 - 135				03/09/17 16:55	03/18/17 15:12	1
13C-1,2,3,7,8-PeCDD	46		40 - 135				03/09/17 16:55	03/18/17 15:12	1
13C-1,2,3,7,8-PeCDF	47		40 - 135				03/09/17 16:55	03/18/17 15:12	1
13C-1,2,3,6,7,8-HxCDD	52		40 - 135				03/09/17 16:55	03/18/17 15:12	1
13C-1,2,3,4,7,8-HxCDF	54		40 - 135				03/09/17 16:55	03/18/17 15:12	1
13C-1,2,3,4,6,7,8-HpCDD	59		40 - 135				03/09/17 16:55	03/18/17 15:12	1
13C-1,2,3,4,6,7,8-HpCDF	58		40 - 135				03/09/17 16:55	03/18/17 15:12	1
13C-OCDD	63		40 - 135				03/09/17 16:55	03/18/17 15:12	1

Client Sample ID: HA-13A (6-12)

Lab Sample ID: 590-5615-11

Date Collected: 03/01/17 12:55

Matrix: Solid

Date Received: 03/03/17 16:15

Percent Solids: 84.6

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		2.0		pg/g	☼	03/09/17 16:55	03/18/17 15:58	1
2,3,7,8-TCDF	ND		2.0		pg/g	☼	03/09/17 16:55	03/18/17 15:58	1
1,2,3,7,8-PeCDD	ND		9.8		pg/g	☼	03/09/17 16:55	03/18/17 15:58	1
1,2,3,7,8-PeCDF	ND		9.8		pg/g	☼	03/09/17 16:55	03/18/17 15:58	1
2,3,4,7,8-PeCDF	ND		9.8		pg/g	☼	03/09/17 16:55	03/18/17 15:58	1
1,2,3,4,7,8-HxCDD	ND		9.8		pg/g	☼	03/09/17 16:55	03/18/17 15:58	1
1,2,3,6,7,8-HxCDD	21		9.8		pg/g	☼	03/09/17 16:55	03/18/17 15:58	1
1,2,3,7,8,9-HxCDD	15		9.8		pg/g	☼	03/09/17 16:55	03/18/17 15:58	1
1,2,3,4,7,8-HxCDF	ND		9.8		pg/g	☼	03/09/17 16:55	03/18/17 15:58	1
1,2,3,6,7,8-HxCDF	ND		9.8		pg/g	☼	03/09/17 16:55	03/18/17 15:58	1
1,2,3,7,8,9-HxCDF	ND		9.8		pg/g	☼	03/09/17 16:55	03/18/17 15:58	1
2,3,4,6,7,8-HxCDF	ND		9.8		pg/g	☼	03/09/17 16:55	03/18/17 15:58	1
1,2,3,4,6,7,8-HpCDD	700		9.8		pg/g	☼	03/09/17 16:55	03/18/17 15:58	1
1,2,3,4,6,7,8-HpCDF	130		9.8		pg/g	☼	03/09/17 16:55	03/18/17 15:58	1
1,2,3,4,7,8,9-HpCDF	ND		9.8		pg/g	☼	03/09/17 16:55	03/18/17 15:58	1
OCDD	6600		20		pg/g	☼	03/09/17 16:55	03/18/17 15:58	1
OCDF	410		20		pg/g	☼	03/09/17 16:55	03/18/17 15:58	1
Total TCDD	ND		2.0		pg/g	☼	03/09/17 16:55	03/18/17 15:58	1
Total TCDF	ND		2.0		pg/g	☼	03/09/17 16:55	03/18/17 15:58	1
Total PeCDD	ND		9.8		pg/g	☼	03/09/17 16:55	03/18/17 15:58	1
Total PeCDF	ND		9.8		pg/g	☼	03/09/17 16:55	03/18/17 15:58	1
Total HxCDD	110		9.8		pg/g	☼	03/09/17 16:55	03/18/17 15:58	1
Total HxCDF	110		9.8		pg/g	☼	03/09/17 16:55	03/18/17 15:58	1
Total HpCDD	1200		9.8		pg/g	☼	03/09/17 16:55	03/18/17 15:58	1
Total HpCDF	390		9.8		pg/g	☼	03/09/17 16:55	03/18/17 15:58	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	56		40 - 135				03/09/17 16:55	03/18/17 15:58	1
13C-2,3,7,8-TCDF	57		40 - 135				03/09/17 16:55	03/18/17 15:58	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5615-1

Client Sample ID: HA-13A (6-12)

Date Collected: 03/01/17 12:55

Date Received: 03/03/17 16:15

Lab Sample ID: 590-5615-11

Matrix: Solid

Percent Solids: 84.6

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-1,2,3,7,8-PeCDD	56		40 - 135	03/09/17 16:55	03/18/17 15:58	1
13C-1,2,3,7,8-PeCDF	56		40 - 135	03/09/17 16:55	03/18/17 15:58	1
13C-1,2,3,6,7,8-HxCDD	62		40 - 135	03/09/17 16:55	03/18/17 15:58	1
13C-1,2,3,4,7,8-HxCDF	60		40 - 135	03/09/17 16:55	03/18/17 15:58	1
13C-1,2,3,4,6,7,8-HpCDD	71		40 - 135	03/09/17 16:55	03/18/17 15:58	1
13C-1,2,3,4,6,7,8-HpCDF	68		40 - 135	03/09/17 16:55	03/18/17 15:58	1
13C-OCDD	78		40 - 135	03/09/17 16:55	03/18/17 15:58	1

Client Sample ID: HA-17A (6-12)

Date Collected: 03/01/17 12:10

Date Received: 03/03/17 16:15

Lab Sample ID: 590-5615-13

Matrix: Solid

Percent Solids: 67.7

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		1.4		pg/g	☼	03/09/17 16:55	03/18/17 16:44	1
2,3,7,8-TCDF	ND		1.4		pg/g	☼	03/09/17 16:55	03/18/17 16:44	1
1,2,3,7,8-PeCDD	ND		7.1		pg/g	☼	03/09/17 16:55	03/18/17 16:44	1
1,2,3,7,8-PeCDF	ND		7.1		pg/g	☼	03/09/17 16:55	03/18/17 16:44	1
2,3,4,7,8-PeCDF	ND		7.1		pg/g	☼	03/09/17 16:55	03/18/17 16:44	1
1,2,3,4,7,8-HxCDD	ND		7.1		pg/g	☼	03/09/17 16:55	03/18/17 16:44	1
1,2,3,6,7,8-HxCDD	10		7.1		pg/g	☼	03/09/17 16:55	03/18/17 16:44	1
1,2,3,7,8,9-HxCDD	7.3		7.1		pg/g	☼	03/09/17 16:55	03/18/17 16:44	1
1,2,3,4,7,8-HxCDF	ND		7.1		pg/g	☼	03/09/17 16:55	03/18/17 16:44	1
1,2,3,6,7,8-HxCDF	ND		7.1		pg/g	☼	03/09/17 16:55	03/18/17 16:44	1
1,2,3,7,8,9-HxCDF	ND		7.1		pg/g	☼	03/09/17 16:55	03/18/17 16:44	1
2,3,4,6,7,8-HxCDF	ND		7.1		pg/g	☼	03/09/17 16:55	03/18/17 16:44	1
1,2,3,4,6,7,8-HpCDD	290		7.1		pg/g	☼	03/09/17 16:55	03/18/17 16:44	1
1,2,3,4,6,7,8-HpCDF	37		7.1		pg/g	☼	03/09/17 16:55	03/18/17 16:44	1
1,2,3,4,7,8,9-HpCDF	ND		7.1		pg/g	☼	03/09/17 16:55	03/18/17 16:44	1
OCDD	2100		14		pg/g	☼	03/09/17 16:55	03/18/17 16:44	1
OCDF	100		14		pg/g	☼	03/09/17 16:55	03/18/17 16:44	1
Total TCDD	ND		1.4		pg/g	☼	03/09/17 16:55	03/18/17 16:44	1
Total TCDF	ND		1.4		pg/g	☼	03/09/17 16:55	03/18/17 16:44	1
Total PeCDD	ND		7.1		pg/g	☼	03/09/17 16:55	03/18/17 16:44	1
Total PeCDF	ND		7.1		pg/g	☼	03/09/17 16:55	03/18/17 16:44	1
Total HxCDD	64		7.1		pg/g	☼	03/09/17 16:55	03/18/17 16:44	1
Total HxCDF	31		7.1		pg/g	☼	03/09/17 16:55	03/18/17 16:44	1
Total HpCDD	510		7.1		pg/g	☼	03/09/17 16:55	03/18/17 16:44	1
Total HpCDF	100		7.1		pg/g	☼	03/09/17 16:55	03/18/17 16:44	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	50		40 - 135	03/09/17 16:55	03/18/17 16:44	1
13C-2,3,7,8-TCDF	51		40 - 135	03/09/17 16:55	03/18/17 16:44	1
13C-1,2,3,7,8-PeCDD	54		40 - 135	03/09/17 16:55	03/18/17 16:44	1
13C-1,2,3,7,8-PeCDF	53		40 - 135	03/09/17 16:55	03/18/17 16:44	1
13C-1,2,3,6,7,8-HxCDD	62		40 - 135	03/09/17 16:55	03/18/17 16:44	1
13C-1,2,3,4,7,8-HxCDF	57		40 - 135	03/09/17 16:55	03/18/17 16:44	1
13C-1,2,3,4,6,7,8-HpCDD	68		40 - 135	03/09/17 16:55	03/18/17 16:44	1
13C-1,2,3,4,6,7,8-HpCDF	67		40 - 135	03/09/17 16:55	03/18/17 16:44	1
13C-OCDD	69		40 - 135	03/09/17 16:55	03/18/17 16:44	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5615-1

Client Sample ID: HA-20A (6-12)

Lab Sample ID: 590-5615-15

Date Collected: 03/01/17 15:00

Matrix: Solid

Date Received: 03/03/17 16:15

Percent Solids: 66.6

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		5.5		pg/g	☼	03/09/17 16:55	03/18/17 21:05	1
2,3,7,8-TCDF	ND		5.5		pg/g	☼	03/09/17 16:55	03/18/17 21:05	1
1,2,3,7,8-PeCDD	ND		27		pg/g	☼	03/09/17 16:55	03/18/17 21:05	1
1,2,3,7,8-PeCDF	ND		27		pg/g	☼	03/09/17 16:55	03/18/17 21:05	1
2,3,4,7,8-PeCDF	ND		27		pg/g	☼	03/09/17 16:55	03/18/17 21:05	1
1,2,3,4,7,8-HxCDD	ND		27		pg/g	☼	03/09/17 16:55	03/18/17 21:05	1
1,2,3,6,7,8-HxCDD	53		27		pg/g	☼	03/09/17 16:55	03/18/17 21:05	1
1,2,3,7,8,9-HxCDD	30		27		pg/g	☼	03/09/17 16:55	03/18/17 21:05	1
1,2,3,4,7,8-HxCDF	ND		27		pg/g	☼	03/09/17 16:55	03/18/17 21:05	1
1,2,3,6,7,8-HxCDF	ND		27		pg/g	☼	03/09/17 16:55	03/18/17 21:05	1
1,2,3,7,8,9-HxCDF	ND		27		pg/g	☼	03/09/17 16:55	03/18/17 21:05	1
2,3,4,6,7,8-HxCDF	ND		27		pg/g	☼	03/09/17 16:55	03/18/17 21:05	1
1,2,3,4,6,7,8-HpCDD	2000		27		pg/g	☼	03/09/17 16:55	03/18/17 21:05	1
1,2,3,4,6,7,8-HpCDF	330		27		pg/g	☼	03/09/17 16:55	03/18/17 21:05	1
1,2,3,4,7,8,9-HpCDF	ND		27		pg/g	☼	03/09/17 16:55	03/18/17 21:05	1
OCDD	17000		55		pg/g	☼	03/09/17 16:55	03/18/17 21:05	1
OCDF	2000		55		pg/g	☼	03/09/17 16:55	03/18/17 21:05	1
Total TCDD	ND		5.5		pg/g	☼	03/09/17 16:55	03/18/17 21:05	1
Total TCDF	ND		5.5		pg/g	☼	03/09/17 16:55	03/18/17 21:05	1
Total PeCDD	ND		27		pg/g	☼	03/09/17 16:55	03/18/17 21:05	1
Total PeCDF	ND		27		pg/g	☼	03/09/17 16:55	03/18/17 21:05	1
Total HxCDD	230		27		pg/g	☼	03/09/17 16:55	03/18/17 21:05	1
Total HxCDF	240		27		pg/g	☼	03/09/17 16:55	03/18/17 21:05	1
Total HpCDD	3200		27		pg/g	☼	03/09/17 16:55	03/18/17 21:05	1
Total HpCDF	1400		27		pg/g	☼	03/09/17 16:55	03/18/17 21:05	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	61		40 - 135	03/09/17 16:55	03/18/17 21:05	1
13C-2,3,7,8-TCDF	60		40 - 135	03/09/17 16:55	03/18/17 21:05	1
13C-1,2,3,7,8-PeCDD	57		40 - 135	03/09/17 16:55	03/18/17 21:05	1
13C-1,2,3,7,8-PeCDF	57		40 - 135	03/09/17 16:55	03/18/17 21:05	1
13C-1,2,3,6,7,8-HxCDD	67		40 - 135	03/09/17 16:55	03/18/17 21:05	1
13C-1,2,3,4,7,8-HxCDF	63		40 - 135	03/09/17 16:55	03/18/17 21:05	1
13C-1,2,3,4,6,7,8-HpCDD	75		40 - 135	03/09/17 16:55	03/18/17 21:05	1
13C-1,2,3,4,6,7,8-HpCDF	73		40 - 135	03/09/17 16:55	03/18/17 21:05	1
13C-OCDD	76		40 - 135	03/09/17 16:55	03/18/17 21:05	1

Client Sample ID: HA-25A (6-12)

Lab Sample ID: 590-5615-17

Date Collected: 03/01/17 16:05

Matrix: Solid

Date Received: 03/03/17 16:15

Percent Solids: 83.3

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		4.6		pg/g	☼	03/09/17 16:55	03/18/17 21:51	1
2,3,7,8-TCDF	ND		4.6		pg/g	☼	03/09/17 16:55	03/18/17 21:51	1
1,2,3,7,8-PeCDD	ND		23		pg/g	☼	03/09/17 16:55	03/18/17 21:51	1
1,2,3,7,8-PeCDF	ND		23		pg/g	☼	03/09/17 16:55	03/18/17 21:51	1
2,3,4,7,8-PeCDF	ND		23		pg/g	☼	03/09/17 16:55	03/18/17 21:51	1
1,2,3,4,7,8-HxCDD	ND		23		pg/g	☼	03/09/17 16:55	03/18/17 21:51	1
1,2,3,6,7,8-HxCDD	51		23		pg/g	☼	03/09/17 16:55	03/18/17 21:51	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5615-1

Client Sample ID: HA-25A (6-12)

Lab Sample ID: 590-5615-17

Date Collected: 03/01/17 16:05

Matrix: Solid

Date Received: 03/03/17 16:15

Percent Solids: 83.3

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,7,8,9-HxCDD	ND		23		pg/g	☼	03/09/17 16:55	03/18/17 21:51	1
1,2,3,4,7,8-HxCDF	ND		23		pg/g	☼	03/09/17 16:55	03/18/17 21:51	1
1,2,3,6,7,8-HxCDF	ND		23		pg/g	☼	03/09/17 16:55	03/18/17 21:51	1
1,2,3,7,8,9-HxCDF	ND		23		pg/g	☼	03/09/17 16:55	03/18/17 21:51	1
2,3,4,6,7,8-HxCDF	ND		23		pg/g	☼	03/09/17 16:55	03/18/17 21:51	1
1,2,3,4,6,7,8-HpCDD	1800	G	25		pg/g	☼	03/09/17 16:55	03/18/17 21:51	1
1,2,3,4,6,7,8-HpCDF	210		23		pg/g	☼	03/09/17 16:55	03/18/17 21:51	1
1,2,3,4,7,8,9-HpCDF	ND		23		pg/g	☼	03/09/17 16:55	03/18/17 21:51	1
OCDD	21000	E	46		pg/g	☼	03/09/17 16:55	03/18/17 21:51	1
OCDF	940		46		pg/g	☼	03/09/17 16:55	03/18/17 21:51	1
Total TCDD	ND		4.6		pg/g	☼	03/09/17 16:55	03/18/17 21:51	1
Total TCDF	ND		4.6		pg/g	☼	03/09/17 16:55	03/18/17 21:51	1
Total PeCDD	ND		23		pg/g	☼	03/09/17 16:55	03/18/17 21:51	1
Total PeCDF	ND		23		pg/g	☼	03/09/17 16:55	03/18/17 21:51	1
Total HxCDD	150		23		pg/g	☼	03/09/17 16:55	03/18/17 21:51	1
Total HxCDF	190		23		pg/g	☼	03/09/17 16:55	03/18/17 21:51	1
Total HpCDD	3000	G	25		pg/g	☼	03/09/17 16:55	03/18/17 21:51	1
Total HpCDF	800		23		pg/g	☼	03/09/17 16:55	03/18/17 21:51	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	50		40 - 135				03/09/17 16:55	03/18/17 21:51	1
13C-2,3,7,8-TCDF	49		40 - 135				03/09/17 16:55	03/18/17 21:51	1
13C-1,2,3,7,8-PeCDD	46		40 - 135				03/09/17 16:55	03/18/17 21:51	1
13C-1,2,3,7,8-PeCDF	48		40 - 135				03/09/17 16:55	03/18/17 21:51	1
13C-1,2,3,6,7,8-HxCDD	54		40 - 135				03/09/17 16:55	03/18/17 21:51	1
13C-1,2,3,4,7,8-HxCDF	51		40 - 135				03/09/17 16:55	03/18/17 21:51	1
13C-1,2,3,4,6,7,8-HpCDD	63		40 - 135				03/09/17 16:55	03/18/17 21:51	1
13C-1,2,3,4,6,7,8-HpCDF	58		40 - 135				03/09/17 16:55	03/18/17 21:51	1
13C-OCDD	67		40 - 135				03/09/17 16:55	03/18/17 21:51	1

Client Sample ID: HA-39 (0-6)

Lab Sample ID: 590-5615-19

Date Collected: 03/01/17 13:30

Matrix: Solid

Date Received: 03/03/17 16:15

Percent Solids: 80.3

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		1.6		pg/g	☼	03/09/17 16:55	03/18/17 22:37	1
2,3,7,8-TCDF	ND		1.6		pg/g	☼	03/09/17 16:55	03/18/17 22:37	1
1,2,3,7,8-PeCDD	ND		8.2		pg/g	☼	03/09/17 16:55	03/18/17 22:37	1
1,2,3,7,8-PeCDF	ND		8.2		pg/g	☼	03/09/17 16:55	03/18/17 22:37	1
2,3,4,7,8-PeCDF	ND		8.2		pg/g	☼	03/09/17 16:55	03/18/17 22:37	1
1,2,3,4,7,8-HxCDD	ND		8.2		pg/g	☼	03/09/17 16:55	03/18/17 22:37	1
1,2,3,6,7,8-HxCDD	13		8.2		pg/g	☼	03/09/17 16:55	03/18/17 22:37	1
1,2,3,7,8,9-HxCDD	9.4		8.2		pg/g	☼	03/09/17 16:55	03/18/17 22:37	1
1,2,3,4,7,8-HxCDF	ND		8.2		pg/g	☼	03/09/17 16:55	03/18/17 22:37	1
1,2,3,6,7,8-HxCDF	ND		8.2		pg/g	☼	03/09/17 16:55	03/18/17 22:37	1
1,2,3,7,8,9-HxCDF	ND		8.2		pg/g	☼	03/09/17 16:55	03/18/17 22:37	1
2,3,4,6,7,8-HxCDF	ND		8.2		pg/g	☼	03/09/17 16:55	03/18/17 22:37	1
1,2,3,4,6,7,8-HpCDD	440		8.2		pg/g	☼	03/09/17 16:55	03/18/17 22:37	1
1,2,3,4,6,7,8-HpCDF	43		8.2		pg/g	☼	03/09/17 16:55	03/18/17 22:37	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
 Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5615-1

Client Sample ID: HA-39 (0-6)

Lab Sample ID: 590-5615-19

Date Collected: 03/01/17 13:30

Matrix: Solid

Date Received: 03/03/17 16:15

Percent Solids: 80.3

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,7,8,9-HpCDF	ND		8.2		pg/g	☼	03/09/17 16:55	03/18/17 22:37	1
OCDD	3300		16		pg/g	☼	03/09/17 16:55	03/18/17 22:37	1
OCDF	190		16		pg/g	☼	03/09/17 16:55	03/18/17 22:37	1
Total TCDD	ND		1.6		pg/g	☼	03/09/17 16:55	03/18/17 22:37	1
Total TCDF	ND		1.6		pg/g	☼	03/09/17 16:55	03/18/17 22:37	1
Total PeCDD	ND		8.2		pg/g	☼	03/09/17 16:55	03/18/17 22:37	1
Total PeCDF	ND		8.2		pg/g	☼	03/09/17 16:55	03/18/17 22:37	1
Total HxCDD	110		8.2		pg/g	☼	03/09/17 16:55	03/18/17 22:37	1
Total HxCDF	33		8.2		pg/g	☼	03/09/17 16:55	03/18/17 22:37	1
Total HpCDD	900		8.2		pg/g	☼	03/09/17 16:55	03/18/17 22:37	1
Total HpCDF	150		8.2		pg/g	☼	03/09/17 16:55	03/18/17 22:37	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	55		40 - 135				03/09/17 16:55	03/18/17 22:37	1
13C-2,3,7,8-TCDF	57		40 - 135				03/09/17 16:55	03/18/17 22:37	1
13C-1,2,3,7,8-PeCDD	59		40 - 135				03/09/17 16:55	03/18/17 22:37	1
13C-1,2,3,7,8-PeCDF	58		40 - 135				03/09/17 16:55	03/18/17 22:37	1
13C-1,2,3,6,7,8-HxCDD	69		40 - 135				03/09/17 16:55	03/18/17 22:37	1
13C-1,2,3,4,7,8-HxCDF	66		40 - 135				03/09/17 16:55	03/18/17 22:37	1
13C-1,2,3,4,6,7,8-HpCDD	74		40 - 135				03/09/17 16:55	03/18/17 22:37	1
13C-1,2,3,4,6,7,8-HpCDF	75		40 - 135				03/09/17 16:55	03/18/17 22:37	1
13C-OCDD	78		40 - 135				03/09/17 16:55	03/18/17 22:37	1

Client Sample ID: HA-40 (0-6)

Lab Sample ID: 590-5615-22

Date Collected: 03/01/17 14:10

Matrix: Solid

Date Received: 03/03/17 16:15

Percent Solids: 67.9

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		21		pg/g	☼	03/09/17 16:55	03/18/17 23:23	1
2,3,7,8-TCDF	ND		21		pg/g	☼	03/09/17 16:55	03/18/17 23:23	1
1,2,3,7,8-PeCDD	ND		100		pg/g	☼	03/09/17 16:55	03/18/17 23:23	1
1,2,3,7,8-PeCDF	ND		100		pg/g	☼	03/09/17 16:55	03/18/17 23:23	1
2,3,4,7,8-PeCDF	ND		100		pg/g	☼	03/09/17 16:55	03/18/17 23:23	1
1,2,3,4,7,8-HxCDD	ND		100		pg/g	☼	03/09/17 16:55	03/18/17 23:23	1
1,2,3,6,7,8-HxCDD	310		100		pg/g	☼	03/09/17 16:55	03/18/17 23:23	1
1,2,3,7,8,9-HxCDD	140		100		pg/g	☼	03/09/17 16:55	03/18/17 23:23	1
1,2,3,4,7,8-HxCDF	ND		100		pg/g	☼	03/09/17 16:55	03/18/17 23:23	1
1,2,3,6,7,8-HxCDF	ND		100		pg/g	☼	03/09/17 16:55	03/18/17 23:23	1
1,2,3,7,8,9-HxCDF	ND		100		pg/g	☼	03/09/17 16:55	03/18/17 23:23	1
2,3,4,6,7,8-HxCDF	ND		100		pg/g	☼	03/09/17 16:55	03/18/17 23:23	1
1,2,3,4,6,7,8-HpCDD	7600		100		pg/g	☼	03/09/17 16:55	03/18/17 23:23	1
1,2,3,4,6,7,8-HpCDF	1100		100		pg/g	☼	03/09/17 16:55	03/18/17 23:23	1
1,2,3,4,7,8,9-HpCDF	ND		100		pg/g	☼	03/09/17 16:55	03/18/17 23:23	1
OCDD	66000		210		pg/g	☼	03/09/17 16:55	03/18/17 23:23	1
OCDF	2000		210		pg/g	☼	03/09/17 16:55	03/18/17 23:23	1
Total TCDD	ND		21		pg/g	☼	03/09/17 16:55	03/18/17 23:23	1
Total TCDF	ND		21		pg/g	☼	03/09/17 16:55	03/18/17 23:23	1
Total PeCDD	ND		100		pg/g	☼	03/09/17 16:55	03/18/17 23:23	1
Total PeCDF	ND		100		pg/g	☼	03/09/17 16:55	03/18/17 23:23	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5615-1

Client Sample ID: HA-40 (0-6)

Lab Sample ID: 590-5615-22

Date Collected: 03/01/17 14:10

Matrix: Solid

Date Received: 03/03/17 16:15

Percent Solids: 67.9

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
Total HxCDD	1400		100		pg/g	☼	03/09/17 16:55	03/18/17 23:23	1
Total HxCDF	1300		100		pg/g	☼	03/09/17 16:55	03/18/17 23:23	1
Total HpCDD	13000		100		pg/g	☼	03/09/17 16:55	03/18/17 23:23	1
Total HpCDF	3100		100		pg/g	☼	03/09/17 16:55	03/18/17 23:23	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	62		40 - 135				03/09/17 16:55	03/18/17 23:23	1
13C-2,3,7,8-TCDF	49		40 - 135				03/09/17 16:55	03/18/17 23:23	1
13C-1,2,3,7,8-PeCDD	48		40 - 135				03/09/17 16:55	03/18/17 23:23	1
13C-1,2,3,7,8-PeCDF	51		40 - 135				03/09/17 16:55	03/18/17 23:23	1
13C-1,2,3,6,7,8-HxCDD	51		40 - 135				03/09/17 16:55	03/18/17 23:23	1
13C-1,2,3,4,7,8-HxCDF	55		40 - 135				03/09/17 16:55	03/18/17 23:23	1
13C-1,2,3,4,6,7,8-HpCDD	72		40 - 135				03/09/17 16:55	03/18/17 23:23	1
13C-1,2,3,4,6,7,8-HpCDF	62		40 - 135				03/09/17 16:55	03/18/17 23:23	1
13C-OCDD	71		40 - 135				03/09/17 16:55	03/18/17 23:23	1

Client Sample ID: HA-41 (0-6)

Lab Sample ID: 590-5615-25

Date Collected: 03/01/17 14:25

Matrix: Solid

Date Received: 03/03/17 16:15

Percent Solids: 87.8

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		8.5		pg/g	☼	03/09/17 16:55	03/19/17 00:09	1
2,3,7,8-TCDF	ND		8.5		pg/g	☼	03/09/17 16:55	03/19/17 00:09	1
1,2,3,7,8-PeCDD	ND		42		pg/g	☼	03/09/17 16:55	03/19/17 00:09	1
1,2,3,7,8-PeCDF	ND		42		pg/g	☼	03/09/17 16:55	03/19/17 00:09	1
2,3,4,7,8-PeCDF	ND		42		pg/g	☼	03/09/17 16:55	03/19/17 00:09	1
1,2,3,4,7,8-HxCDD	ND		42		pg/g	☼	03/09/17 16:55	03/19/17 00:09	1
1,2,3,6,7,8-HxCDD	140		42		pg/g	☼	03/09/17 16:55	03/19/17 00:09	1
1,2,3,7,8,9-HxCDD	83		42		pg/g	☼	03/09/17 16:55	03/19/17 00:09	1
1,2,3,4,7,8-HxCDF	68		42		pg/g	☼	03/09/17 16:55	03/19/17 00:09	1
1,2,3,6,7,8-HxCDF	ND		42		pg/g	☼	03/09/17 16:55	03/19/17 00:09	1
1,2,3,7,8,9-HxCDF	ND		42		pg/g	☼	03/09/17 16:55	03/19/17 00:09	1
2,3,4,6,7,8-HxCDF	ND		42		pg/g	☼	03/09/17 16:55	03/19/17 00:09	1
1,2,3,4,6,7,8-HpCDD	3900	G	52		pg/g	☼	03/09/17 16:55	03/19/17 00:09	1
1,2,3,4,6,7,8-HpCDF	550		42		pg/g	☼	03/09/17 16:55	03/19/17 00:09	1
1,2,3,4,7,8,9-HpCDF	ND		42		pg/g	☼	03/09/17 16:55	03/19/17 00:09	1
OCDD	33000		85		pg/g	☼	03/09/17 16:55	03/19/17 00:09	1
OCDF	980		85		pg/g	☼	03/09/17 16:55	03/19/17 00:09	1
Total TCDD	ND		8.5		pg/g	☼	03/09/17 16:55	03/19/17 00:09	1
Total TCDF	ND		8.5		pg/g	☼	03/09/17 16:55	03/19/17 00:09	1
Total PeCDD	ND		42		pg/g	☼	03/09/17 16:55	03/19/17 00:09	1
Total PeCDF	90		42		pg/g	☼	03/09/17 16:55	03/19/17 00:09	1
Total HxCDD	660		42		pg/g	☼	03/09/17 16:55	03/19/17 00:09	1
Total HxCDF	800		42		pg/g	☼	03/09/17 16:55	03/19/17 00:09	1
Total HpCDD	6600	G	52		pg/g	☼	03/09/17 16:55	03/19/17 00:09	1
Total HpCDF	1600		42		pg/g	☼	03/09/17 16:55	03/19/17 00:09	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	61		40 - 135				03/09/17 16:55	03/19/17 00:09	1
13C-2,3,7,8-TCDF	52		40 - 135				03/09/17 16:55	03/19/17 00:09	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5615-1

Client Sample ID: HA-41 (0-6)

Date Collected: 03/01/17 14:25

Date Received: 03/03/17 16:15

Lab Sample ID: 590-5615-25

Matrix: Solid

Percent Solids: 87.8

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

<u>Isotope Dilution</u>	<u>%Recovery</u>	<u>Qualifier</u>	<u>Limits</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Dil Fac</u>
13C-1,2,3,7,8-PeCDD	52		40 - 135	03/09/17 16:55	03/19/17 00:09	1
13C-1,2,3,7,8-PeCDF	51		40 - 135	03/09/17 16:55	03/19/17 00:09	1
13C-1,2,3,6,7,8-HxCDD	58		40 - 135	03/09/17 16:55	03/19/17 00:09	1
13C-1,2,3,4,7,8-HxCDF	55		40 - 135	03/09/17 16:55	03/19/17 00:09	1
13C-1,2,3,4,6,7,8-HpCDD	75		40 - 135	03/09/17 16:55	03/19/17 00:09	1
13C-1,2,3,4,6,7,8-HpCDF	66		40 - 135	03/09/17 16:55	03/19/17 00:09	1
13C-OCDD	74		40 - 135	03/09/17 16:55	03/19/17 00:09	1

Client Sample ID: HA-42 (0-6)

Date Collected: 03/01/17 12:30

Date Received: 03/03/17 16:15

Lab Sample ID: 590-5615-28

Matrix: Solid

Percent Solids: 84.4

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>RL</u>	<u>EDL</u>	<u>Unit</u>	<u>D</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Dil Fac</u>
2,3,7,8-TCDD	ND		30		pg/g	☼	03/09/17 16:55	03/19/17 00:55	1
2,3,7,8-TCDF	ND		30		pg/g	☼	03/09/17 16:55	03/19/17 00:55	1
1,2,3,7,8-PeCDD	ND		150		pg/g	☼	03/09/17 16:55	03/19/17 00:55	1
1,2,3,7,8-PeCDF	ND		150		pg/g	☼	03/09/17 16:55	03/19/17 00:55	1
2,3,4,7,8-PeCDF	ND		150		pg/g	☼	03/09/17 16:55	03/19/17 00:55	1
1,2,3,4,7,8-HxCDD	ND		150		pg/g	☼	03/09/17 16:55	03/19/17 00:55	1
1,2,3,6,7,8-HxCDD	270		150		pg/g	☼	03/09/17 16:55	03/19/17 00:55	1
1,2,3,7,8,9-HxCDD	220		150		pg/g	☼	03/09/17 16:55	03/19/17 00:55	1
1,2,3,4,7,8-HxCDF	ND		150		pg/g	☼	03/09/17 16:55	03/19/17 00:55	1
1,2,3,6,7,8-HxCDF	ND		150		pg/g	☼	03/09/17 16:55	03/19/17 00:55	1
1,2,3,7,8,9-HxCDF	ND		150		pg/g	☼	03/09/17 16:55	03/19/17 00:55	1
2,3,4,6,7,8-HxCDF	ND		150		pg/g	☼	03/09/17 16:55	03/19/17 00:55	1
1,2,3,4,6,7,8-HpCDD	8000		150		pg/g	☼	03/09/17 16:55	03/19/17 00:55	1
1,2,3,4,6,7,8-HpCDF	1500		150		pg/g	☼	03/09/17 16:55	03/19/17 00:55	1
1,2,3,4,7,8,9-HpCDF	ND		150		pg/g	☼	03/09/17 16:55	03/19/17 00:55	1
OCDD	64000		300		pg/g	☼	03/09/17 16:55	03/19/17 00:55	1
OCDF	8200		300		pg/g	☼	03/09/17 16:55	03/19/17 00:55	1
Total TCDD	ND		30		pg/g	☼	03/09/17 16:55	03/19/17 00:55	1
Total TCDF	ND		30		pg/g	☼	03/09/17 16:55	03/19/17 00:55	1
Total PeCDD	ND		150		pg/g	☼	03/09/17 16:55	03/19/17 00:55	1
Total PeCDF	ND		150		pg/g	☼	03/09/17 16:55	03/19/17 00:55	1
Total HxCDD	1200		150		pg/g	☼	03/09/17 16:55	03/19/17 00:55	1
Total HxCDF	1200		150		pg/g	☼	03/09/17 16:55	03/19/17 00:55	1
Total HpCDD	13000		150		pg/g	☼	03/09/17 16:55	03/19/17 00:55	1
Total HpCDF	5500		150		pg/g	☼	03/09/17 16:55	03/19/17 00:55	1

<u>Isotope Dilution</u>	<u>%Recovery</u>	<u>Qualifier</u>	<u>Limits</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Dil Fac</u>
13C-2,3,7,8-TCDD	88		40 - 135	03/09/17 16:55	03/19/17 00:55	1
13C-2,3,7,8-TCDF	91		40 - 135	03/09/17 16:55	03/19/17 00:55	1
13C-1,2,3,7,8-PeCDD	92		40 - 135	03/09/17 16:55	03/19/17 00:55	1
13C-1,2,3,7,8-PeCDF	89		40 - 135	03/09/17 16:55	03/19/17 00:55	1
13C-1,2,3,6,7,8-HxCDD	97		40 - 135	03/09/17 16:55	03/19/17 00:55	1
13C-1,2,3,4,7,8-HxCDF	98		40 - 135	03/09/17 16:55	03/19/17 00:55	1
13C-1,2,3,4,6,7,8-HpCDD	113		40 - 135	03/09/17 16:55	03/19/17 00:55	1
13C-1,2,3,4,6,7,8-HpCDF	113		40 - 135	03/09/17 16:55	03/19/17 00:55	1
13C-OCDD	122		40 - 135	03/09/17 16:55	03/19/17 00:55	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5615-1

Client Sample ID: HA-43 (0-6)

Lab Sample ID: 590-5615-31

Date Collected: 03/01/17 09:30

Matrix: Solid

Date Received: 03/03/17 16:15

Percent Solids: 91.0

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		36		pg/g	☼	03/09/17 16:55	03/19/17 01:41	1
2,3,7,8-TCDF	ND		36		pg/g	☼	03/09/17 16:55	03/19/17 01:41	1
1,2,3,7,8-PeCDD	ND		180		pg/g	☼	03/09/17 16:55	03/19/17 01:41	1
1,2,3,7,8-PeCDF	ND		180		pg/g	☼	03/09/17 16:55	03/19/17 01:41	1
2,3,4,7,8-PeCDF	ND		180		pg/g	☼	03/09/17 16:55	03/19/17 01:41	1
1,2,3,4,7,8-HxCDD	ND		180		pg/g	☼	03/09/17 16:55	03/19/17 01:41	1
1,2,3,6,7,8-HxCDD	230		180		pg/g	☼	03/09/17 16:55	03/19/17 01:41	1
1,2,3,7,8,9-HxCDD	ND		180		pg/g	☼	03/09/17 16:55	03/19/17 01:41	1
1,2,3,4,7,8-HxCDF	ND		180		pg/g	☼	03/09/17 16:55	03/19/17 01:41	1
1,2,3,6,7,8-HxCDF	ND		180		pg/g	☼	03/09/17 16:55	03/19/17 01:41	1
1,2,3,7,8,9-HxCDF	ND		180		pg/g	☼	03/09/17 16:55	03/19/17 01:41	1
2,3,4,6,7,8-HxCDF	ND		180		pg/g	☼	03/09/17 16:55	03/19/17 01:41	1
1,2,3,4,6,7,8-HpCDD	8600		180		pg/g	☼	03/09/17 16:55	03/19/17 01:41	1
1,2,3,4,6,7,8-HpCDF	1700		180		pg/g	☼	03/09/17 16:55	03/19/17 01:41	1
1,2,3,4,7,8,9-HpCDF	ND		180		pg/g	☼	03/09/17 16:55	03/19/17 01:41	1
OCDD	92000		360		pg/g	☼	03/09/17 16:55	03/19/17 01:41	1
OCDF	8700		360		pg/g	☼	03/09/17 16:55	03/19/17 01:41	1
Total TCDD	ND		36		pg/g	☼	03/09/17 16:55	03/19/17 01:41	1
Total TCDF	ND		36		pg/g	☼	03/09/17 16:55	03/19/17 01:41	1
Total PeCDD	ND		180		pg/g	☼	03/09/17 16:55	03/19/17 01:41	1
Total PeCDF	ND		180		pg/g	☼	03/09/17 16:55	03/19/17 01:41	1
Total HxCDD	840		180		pg/g	☼	03/09/17 16:55	03/19/17 01:41	1
Total HxCDF	1100		180		pg/g	☼	03/09/17 16:55	03/19/17 01:41	1
Total HpCDD	14000		180		pg/g	☼	03/09/17 16:55	03/19/17 01:41	1
Total HpCDF	6100		180		pg/g	☼	03/09/17 16:55	03/19/17 01:41	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	87		40 - 135	03/09/17 16:55	03/19/17 01:41	1
13C-2,3,7,8-TCDF	89		40 - 135	03/09/17 16:55	03/19/17 01:41	1
13C-1,2,3,7,8-PeCDD	90		40 - 135	03/09/17 16:55	03/19/17 01:41	1
13C-1,2,3,7,8-PeCDF	89		40 - 135	03/09/17 16:55	03/19/17 01:41	1
13C-1,2,3,6,7,8-HxCDD	100		40 - 135	03/09/17 16:55	03/19/17 01:41	1
13C-1,2,3,4,7,8-HxCDF	98		40 - 135	03/09/17 16:55	03/19/17 01:41	1
13C-1,2,3,4,6,7,8-HpCDD	119		40 - 135	03/09/17 16:55	03/19/17 01:41	1
13C-1,2,3,4,6,7,8-HpCDF	116		40 - 135	03/09/17 16:55	03/19/17 01:41	1
13C-OCDD	124		40 - 135	03/09/17 16:55	03/19/17 01:41	1

Client Sample ID: HA-44 (0-6)

Lab Sample ID: 590-5615-34

Date Collected: 03/01/17 09:50

Matrix: Solid

Date Received: 03/03/17 16:15

Percent Solids: 64.9

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		80		pg/g	☼	03/09/17 16:55	03/19/17 02:28	1
2,3,7,8-TCDF	ND		80		pg/g	☼	03/09/17 16:55	03/19/17 02:28	1
1,2,3,7,8-PeCDD	ND		400		pg/g	☼	03/09/17 16:55	03/19/17 02:28	1
1,2,3,7,8-PeCDF	ND		400		pg/g	☼	03/09/17 16:55	03/19/17 02:28	1
2,3,4,7,8-PeCDF	ND		400		pg/g	☼	03/09/17 16:55	03/19/17 02:28	1
1,2,3,4,7,8-HxCDD	ND		400		pg/g	☼	03/09/17 16:55	03/19/17 02:28	1
1,2,3,6,7,8-HxCDD	840		400		pg/g	☼	03/09/17 16:55	03/19/17 02:28	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5615-1

Client Sample ID: HA-44 (0-6)

Lab Sample ID: 590-5615-34

Date Collected: 03/01/17 09:50

Matrix: Solid

Date Received: 03/03/17 16:15

Percent Solids: 64.9

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,7,8,9-HxCDD	440		400		pg/g	☼	03/09/17 16:55	03/19/17 02:28	1
1,2,3,4,7,8-HxCDF	ND		400		pg/g	☼	03/09/17 16:55	03/19/17 02:28	1
1,2,3,6,7,8-HxCDF	ND		400		pg/g	☼	03/09/17 16:55	03/19/17 02:28	1
1,2,3,7,8,9-HxCDF	ND		400		pg/g	☼	03/09/17 16:55	03/19/17 02:28	1
2,3,4,6,7,8-HxCDF	ND		400		pg/g	☼	03/09/17 16:55	03/19/17 02:28	1
1,2,3,4,6,7,8-HpCDD	23000		400		pg/g	☼	03/09/17 16:55	03/19/17 02:28	1
1,2,3,4,6,7,8-HpCDF	2600		400		pg/g	☼	03/09/17 16:55	03/19/17 02:28	1
1,2,3,4,7,8,9-HpCDF	ND		400		pg/g	☼	03/09/17 16:55	03/19/17 02:28	1
OCDD	170000		800		pg/g	☼	03/09/17 16:55	03/19/17 02:28	1
OCDF	5800		800		pg/g	☼	03/09/17 16:55	03/19/17 02:28	1
Total TCDD	ND		80		pg/g	☼	03/09/17 16:55	03/19/17 02:28	1
Total TCDF	ND		80		pg/g	☼	03/09/17 16:55	03/19/17 02:28	1
Total PeCDD	ND		400		pg/g	☼	03/09/17 16:55	03/19/17 02:28	1
Total PeCDF	ND		400		pg/g	☼	03/09/17 16:55	03/19/17 02:28	1
Total HxCDD	3700		400		pg/g	☼	03/09/17 16:55	03/19/17 02:28	1
Total HxCDF	2700		400		pg/g	☼	03/09/17 16:55	03/19/17 02:28	1
Total HpCDD	39000		400		pg/g	☼	03/09/17 16:55	03/19/17 02:28	1
Total HpCDF	8000		400		pg/g	☼	03/09/17 16:55	03/19/17 02:28	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	92		40 - 135				03/09/17 16:55	03/19/17 02:28	1
13C-2,3,7,8-TCDF	94		40 - 135				03/09/17 16:55	03/19/17 02:28	1
13C-1,2,3,7,8-PeCDD	96		40 - 135				03/09/17 16:55	03/19/17 02:28	1
13C-1,2,3,7,8-PeCDF	93		40 - 135				03/09/17 16:55	03/19/17 02:28	1
13C-1,2,3,6,7,8-HxCDD	106		40 - 135				03/09/17 16:55	03/19/17 02:28	1
13C-1,2,3,4,7,8-HxCDF	100		40 - 135				03/09/17 16:55	03/19/17 02:28	1
13C-1,2,3,4,6,7,8-HpCDD	123		40 - 135				03/09/17 16:55	03/19/17 02:28	1
13C-1,2,3,4,6,7,8-HpCDF	118		40 - 135				03/09/17 16:55	03/19/17 02:28	1
13C-OCDD	125		40 - 135				03/09/17 16:55	03/19/17 02:28	1

Client Sample ID: HA-45 (0-6)

Lab Sample ID: 590-5615-37

Date Collected: 03/01/17 10:25

Matrix: Solid

Date Received: 03/03/17 16:15

Percent Solids: 79.8

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		47		pg/g	☼	03/09/17 16:55	03/19/17 03:14	1
2,3,7,8-TCDF	ND		47		pg/g	☼	03/09/17 16:55	03/19/17 03:14	1
1,2,3,7,8-PeCDD	ND		230		pg/g	☼	03/09/17 16:55	03/19/17 03:14	1
1,2,3,7,8-PeCDF	ND		230		pg/g	☼	03/09/17 16:55	03/19/17 03:14	1
2,3,4,7,8-PeCDF	ND		230		pg/g	☼	03/09/17 16:55	03/19/17 03:14	1
1,2,3,4,7,8-HxCDD	ND		230		pg/g	☼	03/09/17 16:55	03/19/17 03:14	1
1,2,3,6,7,8-HxCDD	240		230		pg/g	☼	03/09/17 16:55	03/19/17 03:14	1
1,2,3,7,8,9-HxCDD	ND		230		pg/g	☼	03/09/17 16:55	03/19/17 03:14	1
1,2,3,4,7,8-HxCDF	ND		230		pg/g	☼	03/09/17 16:55	03/19/17 03:14	1
1,2,3,6,7,8-HxCDF	ND		230		pg/g	☼	03/09/17 16:55	03/19/17 03:14	1
1,2,3,7,8,9-HxCDF	ND		230		pg/g	☼	03/09/17 16:55	03/19/17 03:14	1
2,3,4,6,7,8-HxCDF	ND		230		pg/g	☼	03/09/17 16:55	03/19/17 03:14	1
1,2,3,4,6,7,8-HpCDD	7200		230		pg/g	☼	03/09/17 16:55	03/19/17 03:14	1
1,2,3,4,6,7,8-HpCDF	500		230		pg/g	☼	03/09/17 16:55	03/19/17 03:14	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5615-1

Client Sample ID: HA-45 (0-6)

Lab Sample ID: 590-5615-37

Date Collected: 03/01/17 10:25

Matrix: Solid

Date Received: 03/03/17 16:15

Percent Solids: 79.8

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,7,8,9-HpCDF	ND		230		pg/g	☼	03/09/17 16:55	03/19/17 03:14	1
OCDD	75000		470		pg/g	☼	03/09/17 16:55	03/19/17 03:14	1
OCDF	2300		470		pg/g	☼	03/09/17 16:55	03/19/17 03:14	1
Total TCDD	ND		47		pg/g	☼	03/09/17 16:55	03/19/17 03:14	1
Total TCDF	ND		47		pg/g	☼	03/09/17 16:55	03/19/17 03:14	1
Total PeCDD	ND		230		pg/g	☼	03/09/17 16:55	03/19/17 03:14	1
Total PeCDF	ND		230		pg/g	☼	03/09/17 16:55	03/19/17 03:14	1
Total HxCDD	540		230		pg/g	☼	03/09/17 16:55	03/19/17 03:14	1
Total HxCDF	410		230		pg/g	☼	03/09/17 16:55	03/19/17 03:14	1
Total HpCDD	12000		230		pg/g	☼	03/09/17 16:55	03/19/17 03:14	1
Total HpCDF	2200		230		pg/g	☼	03/09/17 16:55	03/19/17 03:14	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	88		40 - 135				03/09/17 16:55	03/19/17 03:14	1
13C-2,3,7,8-TCDF	91		40 - 135				03/09/17 16:55	03/19/17 03:14	1
13C-1,2,3,7,8-PeCDD	94		40 - 135				03/09/17 16:55	03/19/17 03:14	1
13C-1,2,3,7,8-PeCDF	91		40 - 135				03/09/17 16:55	03/19/17 03:14	1
13C-1,2,3,6,7,8-HxCDD	102		40 - 135				03/09/17 16:55	03/19/17 03:14	1
13C-1,2,3,4,7,8-HxCDF	98		40 - 135				03/09/17 16:55	03/19/17 03:14	1
13C-1,2,3,4,6,7,8-HpCDD	117		40 - 135				03/09/17 16:55	03/19/17 03:14	1
13C-1,2,3,4,6,7,8-HpCDF	114		40 - 135				03/09/17 16:55	03/19/17 03:14	1
13C-OCDD	118		40 - 135				03/09/17 16:55	03/19/17 03:14	1

Client Sample ID: HA-46 (0-6)

Lab Sample ID: 590-5615-40

Date Collected: 03/01/17 11:00

Matrix: Solid

Date Received: 03/03/17 16:15

Percent Solids: 72.9

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		1.4		pg/g	☼	03/09/17 16:55	03/19/17 07:34	1
2,3,7,8-TCDF	ND		1.4		pg/g	☼	03/09/17 16:55	03/19/17 07:34	1
1,2,3,7,8-PeCDD	ND		6.8		pg/g	☼	03/09/17 16:55	03/19/17 07:34	1
1,2,3,7,8-PeCDF	ND		6.8		pg/g	☼	03/09/17 16:55	03/19/17 07:34	1
2,3,4,7,8-PeCDF	ND		6.8		pg/g	☼	03/09/17 16:55	03/19/17 07:34	1
1,2,3,4,7,8-HxCDD	ND		6.8		pg/g	☼	03/09/17 16:55	03/19/17 07:34	1
1,2,3,6,7,8-HxCDD	18		6.8		pg/g	☼	03/09/17 16:55	03/19/17 07:34	1
1,2,3,7,8,9-HxCDD	8.8		6.8		pg/g	☼	03/09/17 16:55	03/19/17 07:34	1
1,2,3,4,7,8-HxCDF	ND		6.8		pg/g	☼	03/09/17 16:55	03/19/17 07:34	1
1,2,3,6,7,8-HxCDF	ND		6.8		pg/g	☼	03/09/17 16:55	03/19/17 07:34	1
1,2,3,7,8,9-HxCDF	ND		6.8		pg/g	☼	03/09/17 16:55	03/19/17 07:34	1
2,3,4,6,7,8-HxCDF	ND		6.8		pg/g	☼	03/09/17 16:55	03/19/17 07:34	1
1,2,3,4,6,7,8-HpCDD	590	G	8.3		pg/g	☼	03/09/17 16:55	03/19/17 07:34	1
1,2,3,4,6,7,8-HpCDF	54		6.8		pg/g	☼	03/09/17 16:55	03/19/17 07:34	1
1,2,3,4,7,8,9-HpCDF	ND		6.8		pg/g	☼	03/09/17 16:55	03/19/17 07:34	1
OCDD	4800		14		pg/g	☼	03/09/17 16:55	03/19/17 07:34	1
OCDF	180		14		pg/g	☼	03/09/17 16:55	03/19/17 07:34	1
Total TCDD	ND		1.4		pg/g	☼	03/09/17 16:55	03/19/17 07:34	1
Total TCDF	ND		1.4		pg/g	☼	03/09/17 16:55	03/19/17 07:34	1
Total PeCDD	ND		6.8		pg/g	☼	03/09/17 16:55	03/19/17 07:34	1
Total PeCDF	ND		6.8		pg/g	☼	03/09/17 16:55	03/19/17 07:34	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5615-1

Client Sample ID: HA-46 (0-6)

Lab Sample ID: 590-5615-40

Date Collected: 03/01/17 11:00

Matrix: Solid

Date Received: 03/03/17 16:15

Percent Solids: 72.9

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
Total HxCDD	90		6.8		pg/g	☼	03/09/17 16:55	03/19/17 07:34	1
Total HxCDF	61		6.8		pg/g	☼	03/09/17 16:55	03/19/17 07:34	1
Total HpCDD	1100	G	8.3		pg/g	☼	03/09/17 16:55	03/19/17 07:34	1
Total HpCDF	180		6.8		pg/g	☼	03/09/17 16:55	03/19/17 07:34	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	56		40 - 135				03/09/17 16:55	03/19/17 07:34	1
13C-2,3,7,8-TCDF	56		40 - 135				03/09/17 16:55	03/19/17 07:34	1
13C-1,2,3,7,8-PeCDD	61		40 - 135				03/09/17 16:55	03/19/17 07:34	1
13C-1,2,3,7,8-PeCDF	59		40 - 135				03/09/17 16:55	03/19/17 07:34	1
13C-1,2,3,6,7,8-HxCDD	71		40 - 135				03/09/17 16:55	03/19/17 07:34	1
13C-1,2,3,4,7,8-HxCDF	65		40 - 135				03/09/17 16:55	03/19/17 07:34	1
13C-1,2,3,4,6,7,8-HpCDD	74		40 - 135				03/09/17 16:55	03/19/17 07:34	1
13C-1,2,3,4,6,7,8-HpCDF	75		40 - 135				03/09/17 16:55	03/19/17 07:34	1
13C-OCDD	80		40 - 135				03/09/17 16:55	03/19/17 07:34	1

Client Sample ID: HA-47 (0-6)

Lab Sample ID: 590-5615-43

Date Collected: 03/01/17 11:00

Matrix: Solid

Date Received: 03/03/17 16:15

Percent Solids: 70.3

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		1.4		pg/g	☼	03/09/17 16:55	03/19/17 08:20	1
2,3,7,8-TCDF	ND		1.4		pg/g	☼	03/09/17 16:55	03/19/17 08:20	1
1,2,3,7,8-PeCDD	ND		7.0		pg/g	☼	03/09/17 16:55	03/19/17 08:20	1
1,2,3,7,8-PeCDF	ND		7.0		pg/g	☼	03/09/17 16:55	03/19/17 08:20	1
2,3,4,7,8-PeCDF	ND		7.0		pg/g	☼	03/09/17 16:55	03/19/17 08:20	1
1,2,3,4,7,8-HxCDD	ND		7.0		pg/g	☼	03/09/17 16:55	03/19/17 08:20	1
1,2,3,6,7,8-HxCDD	8.9		7.0		pg/g	☼	03/09/17 16:55	03/19/17 08:20	1
1,2,3,7,8,9-HxCDD	ND		7.0		pg/g	☼	03/09/17 16:55	03/19/17 08:20	1
1,2,3,4,7,8-HxCDF	ND		7.0		pg/g	☼	03/09/17 16:55	03/19/17 08:20	1
1,2,3,6,7,8-HxCDF	ND		7.0		pg/g	☼	03/09/17 16:55	03/19/17 08:20	1
1,2,3,7,8,9-HxCDF	ND		7.0		pg/g	☼	03/09/17 16:55	03/19/17 08:20	1
2,3,4,6,7,8-HxCDF	ND		7.0		pg/g	☼	03/09/17 16:55	03/19/17 08:20	1
1,2,3,4,6,7,8-HpCDD	330		7.0		pg/g	☼	03/09/17 16:55	03/19/17 08:20	1
1,2,3,4,6,7,8-HpCDF	45		7.0		pg/g	☼	03/09/17 16:55	03/19/17 08:20	1
1,2,3,4,7,8,9-HpCDF	ND		7.0		pg/g	☼	03/09/17 16:55	03/19/17 08:20	1
OCDD	3400		14		pg/g	☼	03/09/17 16:55	03/19/17 08:20	1
OCDF	210		14		pg/g	☼	03/09/17 16:55	03/19/17 08:20	1
Total TCDD	ND		1.4		pg/g	☼	03/09/17 16:55	03/19/17 08:20	1
Total TCDF	ND		1.4		pg/g	☼	03/09/17 16:55	03/19/17 08:20	1
Total PeCDD	ND		7.0		pg/g	☼	03/09/17 16:55	03/19/17 08:20	1
Total PeCDF	ND		7.0		pg/g	☼	03/09/17 16:55	03/19/17 08:20	1
Total HxCDD	47		7.0		pg/g	☼	03/09/17 16:55	03/19/17 08:20	1
Total HxCDF	30		7.0		pg/g	☼	03/09/17 16:55	03/19/17 08:20	1
Total HpCDD	590		7.0		pg/g	☼	03/09/17 16:55	03/19/17 08:20	1
Total HpCDF	160		7.0		pg/g	☼	03/09/17 16:55	03/19/17 08:20	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	62		40 - 135				03/09/17 16:55	03/19/17 08:20	1
13C-2,3,7,8-TCDF	61		40 - 135				03/09/17 16:55	03/19/17 08:20	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5615-1

Client Sample ID: HA-47 (0-6)

Date Collected: 03/01/17 11:00

Date Received: 03/03/17 16:15

Lab Sample ID: 590-5615-43

Matrix: Solid

Percent Solids: 70.3

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-1,2,3,7,8-PeCDD	66		40 - 135	03/09/17 16:55	03/19/17 08:20	1
13C-1,2,3,7,8-PeCDF	65		40 - 135	03/09/17 16:55	03/19/17 08:20	1
13C-1,2,3,6,7,8-HxCDD	75		40 - 135	03/09/17 16:55	03/19/17 08:20	1
13C-1,2,3,4,7,8-HxCDF	75		40 - 135	03/09/17 16:55	03/19/17 08:20	1
13C-1,2,3,4,6,7,8-HpCDD	84		40 - 135	03/09/17 16:55	03/19/17 08:20	1
13C-1,2,3,4,6,7,8-HpCDF	84		40 - 135	03/09/17 16:55	03/19/17 08:20	1
13C-OCDD	88		40 - 135	03/09/17 16:55	03/19/17 08:20	1

Client Sample ID: HA-48 (0-6)

Date Collected: 03/01/17 11:20

Date Received: 03/03/17 16:15

Lab Sample ID: 590-5615-46

Matrix: Solid

Percent Solids: 68.5

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		1.5		pg/g	☼	03/09/17 16:55	03/19/17 09:07	1
2,3,7,8-TCDF	ND		1.5		pg/g	☼	03/09/17 16:55	03/19/17 09:07	1
1,2,3,7,8-PeCDD	ND		7.6		pg/g	☼	03/09/17 16:55	03/19/17 09:07	1
1,2,3,7,8-PeCDF	ND		7.6		pg/g	☼	03/09/17 16:55	03/19/17 09:07	1
2,3,4,7,8-PeCDF	ND		7.6		pg/g	☼	03/09/17 16:55	03/19/17 09:07	1
1,2,3,4,7,8-HxCDD	ND		7.6		pg/g	☼	03/09/17 16:55	03/19/17 09:07	1
1,2,3,6,7,8-HxCDD	34		7.6		pg/g	☼	03/09/17 16:55	03/19/17 09:07	1
1,2,3,7,8,9-HxCDD	13		7.6		pg/g	☼	03/09/17 16:55	03/19/17 09:07	1
1,2,3,4,7,8-HxCDF	ND		7.6		pg/g	☼	03/09/17 16:55	03/19/17 09:07	1
1,2,3,6,7,8-HxCDF	ND		7.6		pg/g	☼	03/09/17 16:55	03/19/17 09:07	1
1,2,3,7,8,9-HxCDF	ND		7.6		pg/g	☼	03/09/17 16:55	03/19/17 09:07	1
2,3,4,6,7,8-HxCDF	ND		7.6		pg/g	☼	03/09/17 16:55	03/19/17 09:07	1
1,2,3,4,6,7,8-HpCDD	660	G	9.2		pg/g	☼	03/09/17 16:55	03/19/17 09:07	1
1,2,3,4,6,7,8-HpCDF	53		7.6		pg/g	☼	03/09/17 16:55	03/19/17 09:07	1
1,2,3,4,7,8,9-HpCDF	ND		7.6		pg/g	☼	03/09/17 16:55	03/19/17 09:07	1
OCDD	3800		15		pg/g	☼	03/09/17 16:55	03/19/17 09:07	1
OCDF	81		15		pg/g	☼	03/09/17 16:55	03/19/17 09:07	1
Total TCDD	ND		1.5		pg/g	☼	03/09/17 16:55	03/19/17 09:07	1
Total TCDF	ND		1.5		pg/g	☼	03/09/17 16:55	03/19/17 09:07	1
Total PeCDD	ND		7.6		pg/g	☼	03/09/17 16:55	03/19/17 09:07	1
Total PeCDF	ND		7.6		pg/g	☼	03/09/17 16:55	03/19/17 09:07	1
Total HxCDD	130		7.6		pg/g	☼	03/09/17 16:55	03/19/17 09:07	1
Total HxCDF	100		7.6		pg/g	☼	03/09/17 16:55	03/19/17 09:07	1
Total HpCDD	1100	G	9.2		pg/g	☼	03/09/17 16:55	03/19/17 09:07	1
Total HpCDF	160		7.6		pg/g	☼	03/09/17 16:55	03/19/17 09:07	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	46		40 - 135	03/09/17 16:55	03/19/17 09:07	1
13C-2,3,7,8-TCDF	46		40 - 135	03/09/17 16:55	03/19/17 09:07	1
13C-1,2,3,7,8-PeCDD	47		40 - 135	03/09/17 16:55	03/19/17 09:07	1
13C-1,2,3,7,8-PeCDF	46		40 - 135	03/09/17 16:55	03/19/17 09:07	1
13C-1,2,3,6,7,8-HxCDD	54		40 - 135	03/09/17 16:55	03/19/17 09:07	1
13C-1,2,3,4,7,8-HxCDF	53		40 - 135	03/09/17 16:55	03/19/17 09:07	1
13C-1,2,3,4,6,7,8-HpCDD	61		40 - 135	03/09/17 16:55	03/19/17 09:07	1
13C-1,2,3,4,6,7,8-HpCDF	60		40 - 135	03/09/17 16:55	03/19/17 09:07	1
13C-OCDD	65		40 - 135	03/09/17 16:55	03/19/17 09:07	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5615-1

Client Sample ID: HA-49 (0-6)

Lab Sample ID: 590-5615-49

Date Collected: 03/01/17 11:30

Matrix: Solid

Date Received: 03/03/17 16:15

Percent Solids: 92.2

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		12		pg/g	☼	03/09/17 16:55	03/19/17 09:53	1
2,3,7,8-TCDF	ND		12		pg/g	☼	03/09/17 16:55	03/19/17 09:53	1
1,2,3,7,8-PeCDD	ND		61		pg/g	☼	03/09/17 16:55	03/19/17 09:53	1
1,2,3,7,8-PeCDF	ND		61		pg/g	☼	03/09/17 16:55	03/19/17 09:53	1
2,3,4,7,8-PeCDF	ND		61		pg/g	☼	03/09/17 16:55	03/19/17 09:53	1
1,2,3,4,7,8-HxCDD	ND		61		pg/g	☼	03/09/17 16:55	03/19/17 09:53	1
1,2,3,6,7,8-HxCDD	210		61		pg/g	☼	03/09/17 16:55	03/19/17 09:53	1
1,2,3,7,8,9-HxCDD	89		61		pg/g	☼	03/09/17 16:55	03/19/17 09:53	1
1,2,3,4,7,8-HxCDF	77		61		pg/g	☼	03/09/17 16:55	03/19/17 09:53	1
1,2,3,6,7,8-HxCDF	ND		61		pg/g	☼	03/09/17 16:55	03/19/17 09:53	1
1,2,3,7,8,9-HxCDF	ND		61		pg/g	☼	03/09/17 16:55	03/19/17 09:53	1
2,3,4,6,7,8-HxCDF	ND		61		pg/g	☼	03/09/17 16:55	03/19/17 09:53	1
1,2,3,4,6,7,8-HpCDD	5500	G	83		pg/g	☼	03/09/17 16:55	03/19/17 09:53	1
1,2,3,4,6,7,8-HpCDF	820		61		pg/g	☼	03/09/17 16:55	03/19/17 09:53	1
1,2,3,4,7,8,9-HpCDF	ND		61		pg/g	☼	03/09/17 16:55	03/19/17 09:53	1
OCDD	49000	E	120		pg/g	☼	03/09/17 16:55	03/19/17 09:53	1
OCDF	1500		120		pg/g	☼	03/09/17 16:55	03/19/17 09:53	1
Total TCDD	ND		12		pg/g	☼	03/09/17 16:55	03/19/17 09:53	1
Total TCDF	ND		12		pg/g	☼	03/09/17 16:55	03/19/17 09:53	1
Total PeCDD	ND		61		pg/g	☼	03/09/17 16:55	03/19/17 09:53	1
Total PeCDF	ND		61		pg/g	☼	03/09/17 16:55	03/19/17 09:53	1
Total HxCDD	870		61		pg/g	☼	03/09/17 16:55	03/19/17 09:53	1
Total HxCDF	1100		61		pg/g	☼	03/09/17 16:55	03/19/17 09:53	1
Total HpCDD	9400	G	83		pg/g	☼	03/09/17 16:55	03/19/17 09:53	1
Total HpCDF	2800		61		pg/g	☼	03/09/17 16:55	03/19/17 09:53	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	63		40 - 135	03/09/17 16:55	03/19/17 09:53	1
13C-2,3,7,8-TCDF	48		40 - 135	03/09/17 16:55	03/19/17 09:53	1
13C-1,2,3,7,8-PeCDD	49		40 - 135	03/09/17 16:55	03/19/17 09:53	1
13C-1,2,3,7,8-PeCDF	50		40 - 135	03/09/17 16:55	03/19/17 09:53	1
13C-1,2,3,6,7,8-HxCDD	56		40 - 135	03/09/17 16:55	03/19/17 09:53	1
13C-1,2,3,4,7,8-HxCDF	56		40 - 135	03/09/17 16:55	03/19/17 09:53	1
13C-1,2,3,4,6,7,8-HpCDD	68		40 - 135	03/09/17 16:55	03/19/17 09:53	1
13C-1,2,3,4,6,7,8-HpCDF	61		40 - 135	03/09/17 16:55	03/19/17 09:53	1
13C-OCDD	71		40 - 135	03/09/17 16:55	03/19/17 09:53	1

Client Sample ID: HA-50 (0-6)

Lab Sample ID: 590-5615-52

Date Collected: 03/01/17 11:55

Matrix: Solid

Date Received: 03/03/17 16:15

Percent Solids: 92.7

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		1.1		pg/g	☼	03/09/17 16:55	03/19/17 10:39	1
2,3,7,8-TCDF	ND		1.1		pg/g	☼	03/09/17 16:55	03/19/17 10:39	1
1,2,3,7,8-PeCDD	ND		5.5		pg/g	☼	03/09/17 16:55	03/19/17 10:39	1
1,2,3,7,8-PeCDF	ND		5.5		pg/g	☼	03/09/17 16:55	03/19/17 10:39	1
2,3,4,7,8-PeCDF	ND		5.5		pg/g	☼	03/09/17 16:55	03/19/17 10:39	1
1,2,3,4,7,8-HxCDD	ND		5.5		pg/g	☼	03/09/17 16:55	03/19/17 10:39	1
1,2,3,6,7,8-HxCDD	8.1		5.5		pg/g	☼	03/09/17 16:55	03/19/17 10:39	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5615-1

Client Sample ID: HA-50 (0-6)

Lab Sample ID: 590-5615-52

Date Collected: 03/01/17 11:55

Matrix: Solid

Date Received: 03/03/17 16:15

Percent Solids: 92.7

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,7,8,9-HxCDD	ND		5.5		pg/g	☼	03/09/17 16:55	03/19/17 10:39	1
1,2,3,4,7,8-HxCDF	ND		5.5		pg/g	☼	03/09/17 16:55	03/19/17 10:39	1
1,2,3,6,7,8-HxCDF	ND		5.5		pg/g	☼	03/09/17 16:55	03/19/17 10:39	1
1,2,3,7,8,9-HxCDF	ND		5.5		pg/g	☼	03/09/17 16:55	03/19/17 10:39	1
2,3,4,6,7,8-HxCDF	ND		5.5		pg/g	☼	03/09/17 16:55	03/19/17 10:39	1
1,2,3,4,6,7,8-HpCDD	230		5.5		pg/g	☼	03/09/17 16:55	03/19/17 10:39	1
1,2,3,4,6,7,8-HpCDF	27		5.5		pg/g	☼	03/09/17 16:55	03/19/17 10:39	1
1,2,3,4,7,8,9-HpCDF	ND		5.5		pg/g	☼	03/09/17 16:55	03/19/17 10:39	1
OCDD	1900		11		pg/g	☼	03/09/17 16:55	03/19/17 10:39	1
OCDF	64		11		pg/g	☼	03/09/17 16:55	03/19/17 10:39	1
Total TCDD	ND		1.1		pg/g	☼	03/09/17 16:55	03/19/17 10:39	1
Total TCDF	ND		1.1		pg/g	☼	03/09/17 16:55	03/19/17 10:39	1
Total PeCDD	ND		5.5		pg/g	☼	03/09/17 16:55	03/19/17 10:39	1
Total PeCDF	ND		5.5		pg/g	☼	03/09/17 16:55	03/19/17 10:39	1
Total HxCDD	39		5.5		pg/g	☼	03/09/17 16:55	03/19/17 10:39	1
Total HxCDF	28		5.5		pg/g	☼	03/09/17 16:55	03/19/17 10:39	1
Total HpCDD	430		5.5		pg/g	☼	03/09/17 16:55	03/19/17 10:39	1
Total HpCDF	84		5.5		pg/g	☼	03/09/17 16:55	03/19/17 10:39	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	50		40 - 135	03/09/17 16:55	03/19/17 10:39	1
13C-2,3,7,8-TCDF	52		40 - 135	03/09/17 16:55	03/19/17 10:39	1
13C-1,2,3,7,8-PeCDD	55		40 - 135	03/09/17 16:55	03/19/17 10:39	1
13C-1,2,3,7,8-PeCDF	55		40 - 135	03/09/17 16:55	03/19/17 10:39	1
13C-1,2,3,6,7,8-HxCDD	61		40 - 135	03/09/17 16:55	03/19/17 10:39	1
13C-1,2,3,4,7,8-HxCDF	57		40 - 135	03/09/17 16:55	03/19/17 10:39	1
13C-1,2,3,4,6,7,8-HpCDD	65		40 - 135	03/09/17 16:55	03/19/17 10:39	1
13C-1,2,3,4,6,7,8-HpCDF	65		40 - 135	03/09/17 16:55	03/19/17 10:39	1
13C-OCDD	67		40 - 135	03/09/17 16:55	03/19/17 10:39	1

Client Sample ID: HA-51 (0-6)

Lab Sample ID: 590-5615-55

Date Collected: 03/01/17 14:50

Matrix: Solid

Date Received: 03/03/17 16:15

Percent Solids: 57.3

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		25		pg/g	☼	03/11/17 10:19	03/23/17 14:13	1
2,3,7,8-TCDF	ND		25		pg/g	☼	03/11/17 10:19	03/23/17 14:13	1
1,2,3,7,8-PeCDD	ND		120		pg/g	☼	03/11/17 10:19	03/23/17 14:13	1
1,2,3,7,8-PeCDF	ND		120		pg/g	☼	03/11/17 10:19	03/23/17 14:13	1
2,3,4,7,8-PeCDF	ND		120		pg/g	☼	03/11/17 10:19	03/23/17 14:13	1
1,2,3,4,7,8-HxCDD	ND		120		pg/g	☼	03/11/17 10:19	03/23/17 14:13	1
1,2,3,6,7,8-HxCDD	250		120		pg/g	☼	03/11/17 10:19	03/23/17 14:13	1
1,2,3,7,8,9-HxCDD	ND		120		pg/g	☼	03/11/17 10:19	03/23/17 14:13	1
1,2,3,4,7,8-HxCDF	ND		120		pg/g	☼	03/11/17 10:19	03/23/17 14:13	1
1,2,3,6,7,8-HxCDF	ND		120		pg/g	☼	03/11/17 10:19	03/23/17 14:13	1
1,2,3,7,8,9-HxCDF	ND		120		pg/g	☼	03/11/17 10:19	03/23/17 14:13	1
2,3,4,6,7,8-HxCDF	ND		120		pg/g	☼	03/11/17 10:19	03/23/17 14:13	1
1,2,3,4,6,7,8-HpCDD	5900		120		pg/g	☼	03/11/17 10:19	03/23/17 14:13	1
1,2,3,4,6,7,8-HpCDF	740		120		pg/g	☼	03/11/17 10:19	03/23/17 14:13	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5615-1

Client Sample ID: HA-51 (0-6)

Lab Sample ID: 590-5615-55

Date Collected: 03/01/17 14:50

Matrix: Solid

Date Received: 03/03/17 16:15

Percent Solids: 57.3

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,7,8,9-HpCDF	ND		120		pg/g	☼	03/11/17 10:19	03/23/17 14:13	1
OCDD	65000		250		pg/g	☼	03/11/17 10:19	03/23/17 14:13	1
OCDF	3800		250		pg/g	☼	03/11/17 10:19	03/23/17 14:13	1
Total TCDD	ND		25		pg/g	☼	03/11/17 10:19	03/23/17 14:13	1
Total TCDF	ND		25		pg/g	☼	03/11/17 10:19	03/23/17 14:13	1
Total PeCDD	ND		120		pg/g	☼	03/11/17 10:19	03/23/17 14:13	1
Total PeCDF	ND		120		pg/g	☼	03/11/17 10:19	03/23/17 14:13	1
Total HxCDD	530		120		pg/g	☼	03/11/17 10:19	03/23/17 14:13	1
Total HxCDF	740		120		pg/g	☼	03/11/17 10:19	03/23/17 14:13	1
Total HpCDD	10000		120		pg/g	☼	03/11/17 10:19	03/23/17 14:13	1
Total HpCDF	3400		120		pg/g	☼	03/11/17 10:19	03/23/17 14:13	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	80		40 - 135				03/11/17 10:19	03/23/17 14:13	1
13C-2,3,7,8-TCDF	65		40 - 135				03/11/17 10:19	03/23/17 14:13	1
13C-1,2,3,7,8-PeCDD	67		40 - 135				03/11/17 10:19	03/23/17 14:13	1
13C-1,2,3,7,8-PeCDF	67		40 - 135				03/11/17 10:19	03/23/17 14:13	1
13C-1,2,3,6,7,8-HxCDD	74		40 - 135				03/11/17 10:19	03/23/17 14:13	1
13C-1,2,3,4,7,8-HxCDF	73		40 - 135				03/11/17 10:19	03/23/17 14:13	1
13C-1,2,3,4,6,7,8-HpCDD	96		40 - 135				03/11/17 10:19	03/23/17 14:13	1
13C-1,2,3,4,6,7,8-HpCDF	85		40 - 135				03/11/17 10:19	03/23/17 14:13	1
13C-OCDD	100		40 - 135				03/11/17 10:19	03/23/17 14:13	1

Client Sample ID: HA-52 (0-6)

Lab Sample ID: 590-5615-58

Date Collected: 03/01/17 15:15

Matrix: Solid

Date Received: 03/03/17 16:15

Percent Solids: 60.0

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		5.4		pg/g	☼	03/11/17 10:19	03/23/17 14:59	1
2,3,7,8-TCDF	ND		5.4		pg/g	☼	03/11/17 10:19	03/23/17 14:59	1
1,2,3,7,8-PeCDD	ND		27		pg/g	☼	03/11/17 10:19	03/23/17 14:59	1
1,2,3,7,8-PeCDF	ND		27		pg/g	☼	03/11/17 10:19	03/23/17 14:59	1
2,3,4,7,8-PeCDF	ND		27		pg/g	☼	03/11/17 10:19	03/23/17 14:59	1
1,2,3,4,7,8-HxCDD	ND		27		pg/g	☼	03/11/17 10:19	03/23/17 14:59	1
1,2,3,6,7,8-HxCDD	99		27		pg/g	☼	03/11/17 10:19	03/23/17 14:59	1
1,2,3,7,8,9-HxCDD	45		27		pg/g	☼	03/11/17 10:19	03/23/17 14:59	1
1,2,3,4,7,8-HxCDF	56		27		pg/g	☼	03/11/17 10:19	03/23/17 14:59	1
1,2,3,6,7,8-HxCDF	ND		27		pg/g	☼	03/11/17 10:19	03/23/17 14:59	1
1,2,3,7,8,9-HxCDF	ND		27		pg/g	☼	03/11/17 10:19	03/23/17 14:59	1
2,3,4,6,7,8-HxCDF	ND		27		pg/g	☼	03/11/17 10:19	03/23/17 14:59	1
1,2,3,4,6,7,8-HpCDD	2300	G	28		pg/g	☼	03/11/17 10:19	03/23/17 14:59	1
1,2,3,4,6,7,8-HpCDF	350		27		pg/g	☼	03/11/17 10:19	03/23/17 14:59	1
1,2,3,4,7,8,9-HpCDF	ND		27		pg/g	☼	03/11/17 10:19	03/23/17 14:59	1
OCDD	15000		54		pg/g	☼	03/11/17 10:19	03/23/17 14:59	1
OCDF	500		54		pg/g	☼	03/11/17 10:19	03/23/17 14:59	1
Total TCDD	ND		5.4		pg/g	☼	03/11/17 10:19	03/23/17 14:59	1
Total TCDF	ND		5.4		pg/g	☼	03/11/17 10:19	03/23/17 14:59	1
Total PeCDD	ND		27		pg/g	☼	03/11/17 10:19	03/23/17 14:59	1
Total PeCDF	33		27		pg/g	☼	03/11/17 10:19	03/23/17 14:59	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5615-1

Client Sample ID: HA-52 (0-6)

Date Collected: 03/01/17 15:15

Date Received: 03/03/17 16:15

Lab Sample ID: 590-5615-58

Matrix: Solid

Percent Solids: 60.0

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
Total HxCDD	380		27		pg/g	☼	03/11/17 10:19	03/23/17 14:59	1
Total HxCDF	600		27		pg/g	☼	03/11/17 10:19	03/23/17 14:59	1
Total HpCDD	3600	G	28		pg/g	☼	03/11/17 10:19	03/23/17 14:59	1
Total HpCDF	1100		27		pg/g	☼	03/11/17 10:19	03/23/17 14:59	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	64		40 - 135				03/11/17 10:19	03/23/17 14:59	1
13C-2,3,7,8-TCDF	60		40 - 135				03/11/17 10:19	03/23/17 14:59	1
13C-1,2,3,7,8-PeCDD	61		40 - 135				03/11/17 10:19	03/23/17 14:59	1
13C-1,2,3,7,8-PeCDF	61		40 - 135				03/11/17 10:19	03/23/17 14:59	1
13C-1,2,3,6,7,8-HxCDD	71		40 - 135				03/11/17 10:19	03/23/17 14:59	1
13C-1,2,3,4,7,8-HxCDF	68		40 - 135				03/11/17 10:19	03/23/17 14:59	1
13C-1,2,3,4,6,7,8-HpCDD	83		40 - 135				03/11/17 10:19	03/23/17 14:59	1
13C-1,2,3,4,6,7,8-HpCDF	75		40 - 135				03/11/17 10:19	03/23/17 14:59	1
13C-OCDD	91		40 - 135				03/11/17 10:19	03/23/17 14:59	1

Client Sample ID: HA-53 (0-6)

Date Collected: 03/01/17 15:20

Date Received: 03/03/17 16:15

Lab Sample ID: 590-5615-61

Matrix: Solid

Percent Solids: 56.5

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		25		pg/g	☼	03/11/17 10:19	03/23/17 15:45	1
2,3,7,8-TCDF	ND		25		pg/g	☼	03/11/17 10:19	03/23/17 15:45	1
1,2,3,7,8-PeCDD	ND		130		pg/g	☼	03/11/17 10:19	03/23/17 15:45	1
1,2,3,7,8-PeCDF	ND		130		pg/g	☼	03/11/17 10:19	03/23/17 15:45	1
2,3,4,7,8-PeCDF	ND		130		pg/g	☼	03/11/17 10:19	03/23/17 15:45	1
1,2,3,4,7,8-HxCDD	ND		130		pg/g	☼	03/11/17 10:19	03/23/17 15:45	1
1,2,3,6,7,8-HxCDD	320		130		pg/g	☼	03/11/17 10:19	03/23/17 15:45	1
1,2,3,7,8,9-HxCDD	130		130		pg/g	☼	03/11/17 10:19	03/23/17 15:45	1
1,2,3,4,7,8-HxCDF	ND		130		pg/g	☼	03/11/17 10:19	03/23/17 15:45	1
1,2,3,6,7,8-HxCDF	ND		130		pg/g	☼	03/11/17 10:19	03/23/17 15:45	1
1,2,3,7,8,9-HxCDF	ND		130		pg/g	☼	03/11/17 10:19	03/23/17 15:45	1
2,3,4,6,7,8-HxCDF	ND		130		pg/g	☼	03/11/17 10:19	03/23/17 15:45	1
1,2,3,4,6,7,8-HpCDD	7400		130		pg/g	☼	03/11/17 10:19	03/23/17 15:45	1
1,2,3,4,6,7,8-HpCDF	600		130		pg/g	☼	03/11/17 10:19	03/23/17 15:45	1
1,2,3,4,7,8,9-HpCDF	ND		130		pg/g	☼	03/11/17 10:19	03/23/17 15:45	1
OCDD	66000		250		pg/g	☼	03/11/17 10:19	03/23/17 15:45	1
OCDF	2300		250		pg/g	☼	03/11/17 10:19	03/23/17 15:45	1
Total TCDD	ND		25		pg/g	☼	03/11/17 10:19	03/23/17 15:45	1
Total TCDF	ND		25		pg/g	☼	03/11/17 10:19	03/23/17 15:45	1
Total PeCDD	ND		130		pg/g	☼	03/11/17 10:19	03/23/17 15:45	1
Total PeCDF	ND		130		pg/g	☼	03/11/17 10:19	03/23/17 15:45	1
Total HxCDD	1400		130		pg/g	☼	03/11/17 10:19	03/23/17 15:45	1
Total HxCDF	650		130		pg/g	☼	03/11/17 10:19	03/23/17 15:45	1
Total HpCDD	13000		130		pg/g	☼	03/11/17 10:19	03/23/17 15:45	1
Total HpCDF	2300		130		pg/g	☼	03/11/17 10:19	03/23/17 15:45	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	79		40 - 135				03/11/17 10:19	03/23/17 15:45	1
13C-2,3,7,8-TCDF	62		40 - 135				03/11/17 10:19	03/23/17 15:45	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5615-1

Client Sample ID: HA-53 (0-6)

Date Collected: 03/01/17 15:20

Date Received: 03/03/17 16:15

Lab Sample ID: 590-5615-61

Matrix: Solid

Percent Solids: 56.5

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-1,2,3,7,8-PeCDD	67		40 - 135	03/11/17 10:19	03/23/17 15:45	1
13C-1,2,3,7,8-PeCDF	62		40 - 135	03/11/17 10:19	03/23/17 15:45	1
13C-1,2,3,6,7,8-HxCDD	74		40 - 135	03/11/17 10:19	03/23/17 15:45	1
13C-1,2,3,4,7,8-HxCDF	69		40 - 135	03/11/17 10:19	03/23/17 15:45	1
13C-1,2,3,4,6,7,8-HpCDD	92		40 - 135	03/11/17 10:19	03/23/17 15:45	1
13C-1,2,3,4,6,7,8-HpCDF	77		40 - 135	03/11/17 10:19	03/23/17 15:45	1
13C-OCDD	92		40 - 135	03/11/17 10:19	03/23/17 15:45	1

Client Sample ID: HA-54 (0-6)

Date Collected: 03/01/17 15:40

Date Received: 03/03/17 16:15

Lab Sample ID: 590-5615-64

Matrix: Solid

Percent Solids: 62.8

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	1100	F2 F1	77		ug/Kg	☼	03/14/17 10:09	03/14/17 15:27	1
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac			
2-Fluorobiphenyl (Surr)	72		38 - 123	03/14/17 10:09	03/14/17 15:27	1			
Nitrobenzene-d5	54		23 - 120	03/14/17 10:09	03/14/17 15:27	1			
p-Terphenyl-d14	107		68 - 136	03/14/17 10:09	03/14/17 15:27	1			

Client Sample ID: HA-55 (0-6)

Date Collected: 03/01/17 16:00

Date Received: 03/03/17 16:15

Lab Sample ID: 590-5615-67

Matrix: Solid

Percent Solids: 72.4

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	2100		65		ug/Kg	☼	03/14/17 10:09	03/14/17 15:54	1
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac			
2-Fluorobiphenyl (Surr)	63		38 - 123	03/14/17 10:09	03/14/17 15:54	1			
Nitrobenzene-d5	62		23 - 120	03/14/17 10:09	03/14/17 15:54	1			
p-Terphenyl-d14	109		68 - 136	03/14/17 10:09	03/14/17 15:54	1			

Client Sample ID: HA-56 (0-6)

Date Collected: 03/01/17 15:35

Date Received: 03/03/17 16:15

Lab Sample ID: 590-5615-70

Matrix: Solid

Percent Solids: 76.3

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	350		62		ug/Kg	☼	03/14/17 10:09	03/14/17 16:20	1
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac			
2-Fluorobiphenyl (Surr)	73		38 - 123	03/14/17 10:09	03/14/17 16:20	1			
Nitrobenzene-d5	66		23 - 120	03/14/17 10:09	03/14/17 16:20	1			
p-Terphenyl-d14	112		68 - 136	03/14/17 10:09	03/14/17 16:20	1			

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
 Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5615-1

Client Sample ID: HA-57 (0-6)

Date Collected: 03/01/17 13:30

Date Received: 03/03/17 16:15

Lab Sample ID: 590-5615-73

Matrix: Solid

Percent Solids: 79.1

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	14000		600		ug/Kg	☼	03/14/17 10:09	03/15/17 09:37	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	73		38 - 123	03/14/17 10:09	03/15/17 09:37	10
Nitrobenzene-d5	60		23 - 120	03/14/17 10:09	03/15/17 09:37	10
p-Terphenyl-d14	106		68 - 136	03/14/17 10:09	03/15/17 09:37	10

Client Sample ID: HA-58 (0-6)

Date Collected: 03/01/17 13:50

Date Received: 03/03/17 16:15

Lab Sample ID: 590-5615-76

Matrix: Solid

Percent Solids: 84.9

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	97000		5900		ug/Kg	☼	03/14/17 10:09	03/15/17 10:03	100

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	82		38 - 123	03/14/17 10:09	03/15/17 10:03	100
Nitrobenzene-d5	82		23 - 120	03/14/17 10:09	03/15/17 10:03	100
p-Terphenyl-d14	118		68 - 136	03/14/17 10:09	03/15/17 10:03	100

Client Sample ID: HA-59 (0-6)

Date Collected: 03/01/17 13:45

Date Received: 03/03/17 16:15

Lab Sample ID: 590-5615-79

Matrix: Solid

Percent Solids: 77.8

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	4700		630		ug/Kg	☼	03/14/17 10:09	03/15/17 10:30	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	67		38 - 123	03/14/17 10:09	03/15/17 10:30	10
Nitrobenzene-d5	62		23 - 120	03/14/17 10:09	03/15/17 10:30	10
p-Terphenyl-d14	99		68 - 136	03/14/17 10:09	03/15/17 10:30	10

QC Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5615-1

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Lab Sample ID: MB 590-11067/1-A
Matrix: Solid
Analysis Batch: 11062

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 11067

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		50		ug/Kg		03/14/17 10:09	03/14/17 13:42	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	84		38 - 123	03/14/17 10:09	03/14/17 13:42	1
Nitrobenzene-d5	67		23 - 120	03/14/17 10:09	03/14/17 13:42	1
p-Terphenyl-d14	133		68 - 136	03/14/17 10:09	03/14/17 13:42	1

Lab Sample ID: LCS 590-11067/2-A
Matrix: Solid
Analysis Batch: 11062

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 11067

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Pentachlorophenol	533	537		ug/Kg		101	50 - 150

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Fluorobiphenyl (Surr)	80		38 - 123
Nitrobenzene-d5	54		23 - 120
p-Terphenyl-d14	124		68 - 136

Lab Sample ID: 590-5615-64 MS
Matrix: Solid
Analysis Batch: 11062

Client Sample ID: HA-54 (0-6)
Prep Type: Total/NA
Prep Batch: 11067

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Pentachlorophenol	1100	F2 F1	817	3310	F1	ug/Kg	☼	268	50 - 150

Surrogate	MS %Recovery	MS Qualifier	Limits
2-Fluorobiphenyl (Surr)	71		38 - 123
Nitrobenzene-d5	60		23 - 120
p-Terphenyl-d14	112		68 - 136

Lab Sample ID: 590-5615-64 MSD
Matrix: Solid
Analysis Batch: 11062

Client Sample ID: HA-54 (0-6)
Prep Type: Total/NA
Prep Batch: 11067

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Pentachlorophenol	1100	F2 F1	818	1890	F2	ug/Kg	☼	93	50 - 150	55	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
2-Fluorobiphenyl (Surr)	63		38 - 123
Nitrobenzene-d5	66		23 - 120
p-Terphenyl-d14	105		68 - 136

TestAmerica Spokane

QC Sample Results

Client: GeoEngineers Inc
 Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5615-1

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Lab Sample ID: MB 320-154207/1-A
Matrix: Solid
Analysis Batch: 155581

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 154207

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		1.0		pg/g		03/09/17 16:55	03/18/17 10:35	1
2,3,7,8-TCDF	ND		1.0		pg/g		03/09/17 16:55	03/18/17 10:35	1
1,2,3,7,8-PeCDD	ND		5.0		pg/g		03/09/17 16:55	03/18/17 10:35	1
1,2,3,7,8-PeCDF	ND		5.0		pg/g		03/09/17 16:55	03/18/17 10:35	1
2,3,4,7,8-PeCDF	ND		5.0		pg/g		03/09/17 16:55	03/18/17 10:35	1
1,2,3,4,7,8-HxCDD	ND		5.0		pg/g		03/09/17 16:55	03/18/17 10:35	1
1,2,3,6,7,8-HxCDD	ND		5.0		pg/g		03/09/17 16:55	03/18/17 10:35	1
1,2,3,7,8,9-HxCDD	ND		5.0		pg/g		03/09/17 16:55	03/18/17 10:35	1
1,2,3,4,7,8-HxCDF	ND		5.0		pg/g		03/09/17 16:55	03/18/17 10:35	1
1,2,3,6,7,8-HxCDF	ND		5.0		pg/g		03/09/17 16:55	03/18/17 10:35	1
1,2,3,7,8,9-HxCDF	ND		5.0		pg/g		03/09/17 16:55	03/18/17 10:35	1
2,3,4,6,7,8-HxCDF	ND		5.0		pg/g		03/09/17 16:55	03/18/17 10:35	1
1,2,3,4,6,7,8-HpCDD	ND		5.0		pg/g		03/09/17 16:55	03/18/17 10:35	1
1,2,3,4,6,7,8-HpCDF	ND		5.0		pg/g		03/09/17 16:55	03/18/17 10:35	1
1,2,3,4,7,8,9-HpCDF	ND		5.0		pg/g		03/09/17 16:55	03/18/17 10:35	1
OCDD	ND		10		pg/g		03/09/17 16:55	03/18/17 10:35	1
OCDF	ND		10		pg/g		03/09/17 16:55	03/18/17 10:35	1
Total TCDD	ND		1.0		pg/g		03/09/17 16:55	03/18/17 10:35	1
Total TCDF	ND		1.0		pg/g		03/09/17 16:55	03/18/17 10:35	1
Total PeCDD	ND		5.0		pg/g		03/09/17 16:55	03/18/17 10:35	1
Total PeCDF	ND		5.0		pg/g		03/09/17 16:55	03/18/17 10:35	1
Total HxCDD	ND		5.0		pg/g		03/09/17 16:55	03/18/17 10:35	1
Total HxCDF	ND		5.0		pg/g		03/09/17 16:55	03/18/17 10:35	1
Total HpCDD	ND		5.0		pg/g		03/09/17 16:55	03/18/17 10:35	1
Total HpCDF	ND		5.0		pg/g		03/09/17 16:55	03/18/17 10:35	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	68		40 - 135	03/09/17 16:55	03/18/17 10:35	1
13C-2,3,7,8-TCDF	66		40 - 135	03/09/17 16:55	03/18/17 10:35	1
13C-1,2,3,7,8-PeCDD	73		40 - 135	03/09/17 16:55	03/18/17 10:35	1
13C-1,2,3,7,8-PeCDF	70		40 - 135	03/09/17 16:55	03/18/17 10:35	1
13C-1,2,3,6,7,8-HxCDD	80		40 - 135	03/09/17 16:55	03/18/17 10:35	1
13C-1,2,3,4,7,8-HxCDF	78		40 - 135	03/09/17 16:55	03/18/17 10:35	1
13C-1,2,3,4,6,7,8-HpCDD	83		40 - 135	03/09/17 16:55	03/18/17 10:35	1
13C-1,2,3,4,6,7,8-HpCDF	87		40 - 135	03/09/17 16:55	03/18/17 10:35	1
13C-OCDD	82		40 - 135	03/09/17 16:55	03/18/17 10:35	1

Lab Sample ID: LCS 320-154207/2-A
Matrix: Solid
Analysis Batch: 155581

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 154207

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
2,3,7,8-TCDD	20.0	21.2		pg/g		106	77 - 130
2,3,7,8-TCDF	20.0	21.0		pg/g		105	79 - 137
1,2,3,7,8-PeCDD	100	107		pg/g		107	79 - 134
1,2,3,7,8-PeCDF	100	109		pg/g		109	81 - 134
2,3,4,7,8-PeCDF	100	112		pg/g		112	76 - 132
1,2,3,4,7,8-HxCDD	100	104		pg/g		104	65 - 144

TestAmerica Spokane

QC Sample Results

Client: GeoEngineers Inc
 Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5615-1

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCS 320-154207/2-A
Matrix: Solid
Analysis Batch: 155581

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 154207

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
1,2,3,6,7,8-HxCDD	100	105		pg/g		105	73 - 147
1,2,3,7,8,9-HxCDD	100	98.1		pg/g		98	80 - 143
1,2,3,4,7,8-HxCDF	100	110		pg/g		110	72 - 140
1,2,3,6,7,8-HxCDF	100	106		pg/g		106	63 - 152
1,2,3,7,8,9-HxCDF	100	108		pg/g		108	72 - 152
2,3,4,6,7,8-HxCDF	100	113		pg/g		113	72 - 151
1,2,3,4,6,7,8-HpCDD	100	113		pg/g		113	86 - 134
1,2,3,4,6,7,8-HpCDF	100	105		pg/g		105	81 - 137
1,2,3,4,7,8,9-HpCDF	100	106		pg/g		106	79 - 139
OCDD	200	211		pg/g		105	80 - 137
OCDF	200	203		pg/g		101	75 - 141

Isotope Dilution	LCS LCS		Limits
	%Recovery	Qualifier	
13C-2,3,7,8-TCDD	67		40 - 135
13C-2,3,7,8-TCDF	68		40 - 135
13C-1,2,3,7,8-PeCDD	75		40 - 135
13C-1,2,3,7,8-PeCDF	69		40 - 135
13C-1,2,3,6,7,8-HxCDD	84		40 - 135
13C-1,2,3,4,7,8-HxCDF	81		40 - 135
13C-1,2,3,4,6,7,8-HpCDD	89		40 - 135
13C-1,2,3,4,6,7,8-HpCDF	92		40 - 135
13C-OCDD	92		40 - 135

Lab Sample ID: LCSD 320-154207/3-A
Matrix: Solid
Analysis Batch: 155581

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 154207

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
2,3,7,8-TCDD	20.0	21.1		pg/g		106	77 - 130	0	20
2,3,7,8-TCDF	20.0	20.4		pg/g		102	79 - 137	3	20
1,2,3,7,8-PeCDD	100	105		pg/g		105	79 - 134	2	20
1,2,3,7,8-PeCDF	100	104		pg/g		104	81 - 134	5	20
2,3,4,7,8-PeCDF	100	104		pg/g		104	76 - 132	7	20
1,2,3,4,7,8-HxCDD	100	102		pg/g		102	65 - 144	2	20
1,2,3,6,7,8-HxCDD	100	102		pg/g		102	73 - 147	3	20
1,2,3,7,8,9-HxCDD	100	92.5		pg/g		92	80 - 143	6	20
1,2,3,4,7,8-HxCDF	100	109		pg/g		109	72 - 140	1	20
1,2,3,6,7,8-HxCDF	100	105		pg/g		105	63 - 152	1	20
1,2,3,7,8,9-HxCDF	100	103		pg/g		103	72 - 152	5	20
2,3,4,6,7,8-HxCDF	100	110		pg/g		110	72 - 151	3	20
1,2,3,4,6,7,8-HpCDD	100	114		pg/g		114	86 - 134	1	20
1,2,3,4,6,7,8-HpCDF	100	106		pg/g		106	81 - 137	1	20
1,2,3,4,7,8,9-HpCDF	100	107		pg/g		107	79 - 139	2	20
OCDD	200	208		pg/g		104	80 - 137	1	20
OCDF	200	203		pg/g		102	75 - 141	0	20

Isotope Dilution	LCSD LCSD		Limits
	%Recovery	Qualifier	
13C-2,3,7,8-TCDD	64		40 - 135

TestAmerica Spokane

QC Sample Results

Client: GeoEngineers Inc
 Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5615-1

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCSD 320-154207/3-A
Matrix: Solid
Analysis Batch: 155581

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 154207

<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>LCSD Qualifier</i>	<i>Limits</i>
13C-2,3,7,8-TCDF	64		40 - 135
13C-1,2,3,7,8-PeCDD	68		40 - 135
13C-1,2,3,7,8-PeCDF	68		40 - 135
13C-1,2,3,6,7,8-HxCDD	77		40 - 135
13C-1,2,3,4,7,8-HxCDF	73		40 - 135
13C-1,2,3,4,6,7,8-HpCDD	77		40 - 135
13C-1,2,3,4,6,7,8-HpCDF	80		40 - 135
13C-OCDD	80		40 - 135

Lab Sample ID: MB 320-154485/1-A
Matrix: Solid
Analysis Batch: 156296

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 154485

<i>Analyte</i>	<i>MB Result</i>	<i>MB Qualifier</i>	<i>RL</i>	<i>EDL</i>	<i>Unit</i>	<i>D</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
2,3,7,8-TCDD	ND		1.0		pg/g		03/11/17 10:19	03/22/17 23:45	1
2,3,7,8-TCDF	ND		1.0		pg/g		03/11/17 10:19	03/22/17 23:45	1
1,2,3,7,8-PeCDD	ND		5.0		pg/g		03/11/17 10:19	03/22/17 23:45	1
1,2,3,7,8-PeCDF	ND		5.0		pg/g		03/11/17 10:19	03/22/17 23:45	1
2,3,4,7,8-PeCDF	ND		5.0		pg/g		03/11/17 10:19	03/22/17 23:45	1
1,2,3,4,7,8-HxCDD	ND		5.0		pg/g		03/11/17 10:19	03/22/17 23:45	1
1,2,3,6,7,8-HxCDD	ND		5.0		pg/g		03/11/17 10:19	03/22/17 23:45	1
1,2,3,7,8,9-HxCDD	ND		5.0		pg/g		03/11/17 10:19	03/22/17 23:45	1
1,2,3,4,7,8-HxCDF	ND		5.0		pg/g		03/11/17 10:19	03/22/17 23:45	1
1,2,3,6,7,8-HxCDF	ND		5.0		pg/g		03/11/17 10:19	03/22/17 23:45	1
1,2,3,7,8,9-HxCDF	ND		5.0		pg/g		03/11/17 10:19	03/22/17 23:45	1
2,3,4,6,7,8-HxCDF	ND		5.0		pg/g		03/11/17 10:19	03/22/17 23:45	1
1,2,3,4,6,7,8-HpCDD	ND		5.0		pg/g		03/11/17 10:19	03/22/17 23:45	1
1,2,3,4,6,7,8-HpCDF	ND		5.0		pg/g		03/11/17 10:19	03/22/17 23:45	1
1,2,3,4,7,8,9-HpCDF	ND		5.0		pg/g		03/11/17 10:19	03/22/17 23:45	1
OCDD	ND		10		pg/g		03/11/17 10:19	03/22/17 23:45	1
OCDF	ND		10		pg/g		03/11/17 10:19	03/22/17 23:45	1
Total TCDD	ND		1.0		pg/g		03/11/17 10:19	03/22/17 23:45	1
Total TCDF	ND		1.0		pg/g		03/11/17 10:19	03/22/17 23:45	1
Total PeCDD	ND		5.0		pg/g		03/11/17 10:19	03/22/17 23:45	1
Total PeCDF	ND		5.0		pg/g		03/11/17 10:19	03/22/17 23:45	1
Total HxCDD	ND		5.0		pg/g		03/11/17 10:19	03/22/17 23:45	1
Total HxCDF	ND		5.0		pg/g		03/11/17 10:19	03/22/17 23:45	1
Total HpCDD	ND		5.0		pg/g		03/11/17 10:19	03/22/17 23:45	1
Total HpCDF	ND		5.0		pg/g		03/11/17 10:19	03/22/17 23:45	1

<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>MB Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C-2,3,7,8-TCDD	80		40 - 135	03/11/17 10:19	03/22/17 23:45	1
13C-2,3,7,8-TCDF	76		40 - 135	03/11/17 10:19	03/22/17 23:45	1
13C-1,2,3,7,8-PeCDD	84		40 - 135	03/11/17 10:19	03/22/17 23:45	1
13C-1,2,3,7,8-PeCDF	78		40 - 135	03/11/17 10:19	03/22/17 23:45	1
13C-1,2,3,6,7,8-HxCDD	87		40 - 135	03/11/17 10:19	03/22/17 23:45	1
13C-1,2,3,4,7,8-HxCDF	83		40 - 135	03/11/17 10:19	03/22/17 23:45	1
13C-1,2,3,4,6,7,8-HpCDD	94		40 - 135	03/11/17 10:19	03/22/17 23:45	1

TestAmerica Spokane

QC Sample Results

Client: GeoEngineers Inc
 Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5615-1

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: MB 320-154485/1-A
Matrix: Solid
Analysis Batch: 156296

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 154485

Isotope Dilution	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
13C-1,2,3,4,6,7,8-HpCDF	92		40 - 135	03/11/17 10:19	03/22/17 23:45	1
13C-OCDD	89		40 - 135	03/11/17 10:19	03/22/17 23:45	1

Lab Sample ID: LCS 320-154485/2-A
Matrix: Solid
Analysis Batch: 156296

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 154485

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits	%Rec.
2,3,7,8-TCDF	20.0	18.9		pg/g		94	79 - 137	
1,2,3,7,8-PeCDD	100	98.4		pg/g		98	79 - 134	
1,2,3,7,8-PeCDF	100	98.7		pg/g		99	81 - 134	
2,3,4,7,8-PeCDF	100	98.2		pg/g		98	76 - 132	
1,2,3,4,7,8-HxCDD	100	96.3		pg/g		96	65 - 144	
1,2,3,6,7,8-HxCDD	100	97.6		pg/g		98	73 - 147	
1,2,3,7,8,9-HxCDD	100	90.5		pg/g		91	80 - 143	
1,2,3,4,7,8-HxCDF	100	101		pg/g		101	72 - 140	
1,2,3,6,7,8-HxCDF	100	98.8		pg/g		99	63 - 152	
1,2,3,7,8,9-HxCDF	100	96.9		pg/g		97	72 - 152	
2,3,4,6,7,8-HxCDF	100	101		pg/g		101	72 - 151	
1,2,3,4,6,7,8-HpCDD	100	98.8		pg/g		99	86 - 134	
1,2,3,4,6,7,8-HpCDF	100	98.9		pg/g		99	81 - 137	
1,2,3,4,7,8,9-HpCDF	100	99.9		pg/g		100	79 - 139	
OCDD	200	199		pg/g		100	80 - 137	
OCDF	200	189		pg/g		95	75 - 141	

Isotope Dilution	LCS LCS		Limits
	%Recovery	Qualifier	
13C-2,3,7,8-TCDD	78		40 - 135
13C-2,3,7,8-TCDF	74		40 - 135
13C-1,2,3,7,8-PeCDD	83		40 - 135
13C-1,2,3,7,8-PeCDF	79		40 - 135
13C-1,2,3,6,7,8-HxCDD	89		40 - 135
13C-1,2,3,4,7,8-HxCDF	83		40 - 135
13C-1,2,3,4,6,7,8-HpCDD	95		40 - 135
13C-1,2,3,4,6,7,8-HpCDF	91		40 - 135
13C-OCDD	90		40 - 135

Lab Sample ID: LCSD 320-154485/3-A
Matrix: Solid
Analysis Batch: 156296

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 154485

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
2,3,7,8-TCDF	20.0	19.1		pg/g		95	79 - 137	1	20
1,2,3,7,8-PeCDD	100	99.4		pg/g		99	79 - 134	1	20
1,2,3,7,8-PeCDF	100	96.3		pg/g		96	81 - 134	2	20
2,3,4,7,8-PeCDF	100	96.5		pg/g		97	76 - 132	2	20
1,2,3,4,7,8-HxCDD	100	95.1		pg/g		95	65 - 144	1	20
1,2,3,6,7,8-HxCDD	100	96.9		pg/g		97	73 - 147	1	20

TestAmerica Spokane

QC Sample Results

Client: GeoEngineers Inc
 Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5615-1

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCSD 320-154485/3-A
Matrix: Solid
Analysis Batch: 156296

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 154485

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,3,7,8,9-HxCDD	100	90.2		pg/g		90	80 - 143	0	20
1,2,3,4,7,8-HxCDF	100	101		pg/g		101	72 - 140	0	20
1,2,3,6,7,8-HxCDF	100	98.3		pg/g		98	63 - 152	0	20
1,2,3,7,8,9-HxCDF	100	97.1		pg/g		97	72 - 152	0	20
2,3,4,6,7,8-HxCDF	100	99.8		pg/g		100	72 - 151	1	20
1,2,3,4,6,7,8-HpCDD	100	100		pg/g		100	86 - 134	1	20
1,2,3,4,6,7,8-HpCDF	100	101		pg/g		101	81 - 137	2	20
1,2,3,4,7,8,9-HpCDF	100	101		pg/g		101	79 - 139	1	20
OCDD	200	199		pg/g		100	80 - 137	0	20
OCDF	200	190		pg/g		95	75 - 141	0	20

Isotope Dilution	LCSD		Limits
	%Recovery	Qualifier	
13C-2,3,7,8-TCDD	82		40 - 135
13C-2,3,7,8-TCDF	78		40 - 135
13C-1,2,3,7,8-PeCDD	85		40 - 135
13C-1,2,3,7,8-PeCDF	83		40 - 135
13C-1,2,3,6,7,8-HxCDD	94		40 - 135
13C-1,2,3,4,7,8-HxCDF	87		40 - 135
13C-1,2,3,4,6,7,8-HpCDD	99		40 - 135
13C-1,2,3,4,6,7,8-HpCDF	96		40 - 135
13C-OCDD	96		40 - 135

Lab Chronicle

Client: GeoEngineers Inc
 Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5615-1

Client Sample ID: HA-3A (6-12)

Date Collected: 03/01/17 10:30

Date Received: 03/03/17 16:15

Lab Sample ID: 590-5615-2

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			154871	03/14/17 14:00	JCB	TAL SAC

Client Sample ID: HA-3A (6-12)

Date Collected: 03/01/17 10:30

Date Received: 03/03/17 16:15

Lab Sample ID: 590-5615-2

Matrix: Solid

Percent Solids: 56.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			10.04 g	20000 uL	154207	03/09/17 16:55	ERW	TAL SAC
Total/NA	Analysis	8290A		1			155581	03/18/17 12:54	SMA	TAL SAC

Client Sample ID: HA-4A (6-12)

Date Collected: 03/01/17 09:55

Date Received: 03/03/17 16:15

Lab Sample ID: 590-5615-5

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			154871	03/14/17 14:00	JCB	TAL SAC

Client Sample ID: HA-4A (6-12)

Date Collected: 03/01/17 09:55

Date Received: 03/03/17 16:15

Lab Sample ID: 590-5615-5

Matrix: Solid

Percent Solids: 83.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			9.94 g	741 uL	154207	03/09/17 16:55	ERW	TAL SAC
Total/NA	Analysis	8290A		1			155581	03/18/17 13:40	SMA	TAL SAC

Client Sample ID: HA-6A (6-12)

Date Collected: 03/01/17 11:40

Date Received: 03/03/17 16:15

Lab Sample ID: 590-5615-7

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			154871	03/14/17 14:00	JCB	TAL SAC

Client Sample ID: HA-6A (6-12)

Date Collected: 03/01/17 11:40

Date Received: 03/03/17 16:15

Lab Sample ID: 590-5615-7

Matrix: Solid

Percent Solids: 91.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			10.19 g	310 uL	154207	03/09/17 16:55	ERW	TAL SAC
Total/NA	Analysis	8290A		1			155581	03/18/17 14:26	SMA	TAL SAC

TestAmerica Spokane

Lab Chronicle

Client: GeoEngineers Inc
 Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5615-1

Client Sample ID: HA-11A (6-12)

Lab Sample ID: 590-5615-9

Date Collected: 03/01/17 14:45

Matrix: Solid

Date Received: 03/03/17 16:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			154871	03/14/17 14:00	JCB	TAL SAC

Client Sample ID: HA-11A (6-12)

Lab Sample ID: 590-5615-9

Date Collected: 03/01/17 14:45

Matrix: Solid

Date Received: 03/03/17 16:15

Percent Solids: 73.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			10.05 g	80 uL	154207	03/09/17 16:55	ERW	TAL SAC
Total/NA	Analysis	8290A		1			155581	03/18/17 15:12	SMA	TAL SAC

Client Sample ID: HA-13A (6-12)

Lab Sample ID: 590-5615-11

Date Collected: 03/01/17 12:55

Matrix: Solid

Date Received: 03/03/17 16:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			154871	03/14/17 14:00	JCB	TAL SAC

Client Sample ID: HA-13A (6-12)

Lab Sample ID: 590-5615-11

Date Collected: 03/01/17 12:55

Matrix: Solid

Date Received: 03/03/17 16:15

Percent Solids: 84.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			10.04 g	33.3 uL	154207	03/09/17 16:55	ERW	TAL SAC
Total/NA	Analysis	8290A		1			155581	03/18/17 15:58	SMA	TAL SAC

Client Sample ID: HA-17A (6-12)

Lab Sample ID: 590-5615-13

Date Collected: 03/01/17 12:10

Matrix: Solid

Date Received: 03/03/17 16:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			154871	03/14/17 14:00	JCB	TAL SAC

Client Sample ID: HA-17A (6-12)

Lab Sample ID: 590-5615-13

Date Collected: 03/01/17 12:10

Matrix: Solid

Date Received: 03/03/17 16:15

Percent Solids: 67.7

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			10.35 g	20 uL	154207	03/09/17 16:55	ERW	TAL SAC
Total/NA	Analysis	8290A		1			155581	03/18/17 16:44	SMA	TAL SAC

TestAmerica Spokane

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5615-1

Client Sample ID: HA-20A (6-12)

Date Collected: 03/01/17 15:00

Date Received: 03/03/17 16:15

Lab Sample ID: 590-5615-15

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			154871	03/14/17 14:00	JCB	TAL SAC

Client Sample ID: HA-20A (6-12)

Date Collected: 03/01/17 15:00

Date Received: 03/03/17 16:15

Lab Sample ID: 590-5615-15

Matrix: Solid

Percent Solids: 66.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			10.12 g	74 uL	154207	03/09/17 16:55	ERW	TAL SAC
Total/NA	Analysis	8290A		1			155582	03/18/17 21:05	SMA	TAL SAC

Client Sample ID: HA-25A (6-12)

Date Collected: 03/01/17 16:05

Date Received: 03/03/17 16:15

Lab Sample ID: 590-5615-17

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			154871	03/14/17 14:00	JCB	TAL SAC

Client Sample ID: HA-25A (6-12)

Date Collected: 03/01/17 16:05

Date Received: 03/03/17 16:15

Lab Sample ID: 590-5615-17

Matrix: Solid

Percent Solids: 83.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			9.68 g	74 uL	154207	03/09/17 16:55	ERW	TAL SAC
Total/NA	Analysis	8290A		1			155582	03/18/17 21:51	SMA	TAL SAC

Client Sample ID: HA-39 (0-6)

Date Collected: 03/01/17 13:30

Date Received: 03/03/17 16:15

Lab Sample ID: 590-5615-19

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			154871	03/14/17 14:00	JCB	TAL SAC

Client Sample ID: HA-39 (0-6)

Date Collected: 03/01/17 13:30

Date Received: 03/03/17 16:15

Lab Sample ID: 590-5615-19

Matrix: Solid

Percent Solids: 80.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			9.82 g	26 uL	154207	03/09/17 16:55	ERW	TAL SAC
Total/NA	Analysis	8290A		1			155582	03/18/17 22:37	SMA	TAL SAC

TestAmerica Spokane

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5615-1

Client Sample ID: HA-40 (0-6)

Date Collected: 03/01/17 14:10

Date Received: 03/03/17 16:15

Lab Sample ID: 590-5615-22

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			154871	03/14/17 14:00	JCB	TAL SAC

Client Sample ID: HA-40 (0-6)

Date Collected: 03/01/17 14:10

Date Received: 03/03/17 16:15

Lab Sample ID: 590-5615-22

Matrix: Solid

Percent Solids: 67.9

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			10.09 g	286 uL	154207	03/09/17 16:55	ERW	TAL SAC
Total/NA	Analysis	8290A		1			155582	03/18/17 23:23	SMA	TAL SAC

Client Sample ID: HA-41 (0-6)

Date Collected: 03/01/17 14:25

Date Received: 03/03/17 16:15

Lab Sample ID: 590-5615-25

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			154871	03/14/17 14:00	JCB	TAL SAC

Client Sample ID: HA-41 (0-6)

Date Collected: 03/01/17 14:25

Date Received: 03/03/17 16:15

Lab Sample ID: 590-5615-25

Matrix: Solid

Percent Solids: 87.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			10.34 g	154 uL	154207	03/09/17 16:55	ERW	TAL SAC
Total/NA	Analysis	8290A		1			155582	03/19/17 00:09	SMA	TAL SAC

Client Sample ID: HA-42 (0-6)

Date Collected: 03/01/17 12:30

Date Received: 03/03/17 16:15

Lab Sample ID: 590-5615-28

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			154871	03/14/17 14:00	JCB	TAL SAC

Client Sample ID: HA-42 (0-6)

Date Collected: 03/01/17 12:30

Date Received: 03/03/17 16:15

Lab Sample ID: 590-5615-28

Matrix: Solid

Percent Solids: 84.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			10.00 g	500 uL	154207	03/09/17 16:55	ERW	TAL SAC
Total/NA	Analysis	8290A		1			155582	03/19/17 00:55	SMA	TAL SAC

TestAmerica Spokane

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5615-1

Client Sample ID: HA-43 (0-6)

Date Collected: 03/01/17 09:30

Date Received: 03/03/17 16:15

Lab Sample ID: 590-5615-31

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			154871	03/14/17 14:00	JCB	TAL SAC

Client Sample ID: HA-43 (0-6)

Date Collected: 03/01/17 09:30

Date Received: 03/03/17 16:15

Lab Sample ID: 590-5615-31

Matrix: Solid

Percent Solids: 91.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			10.08 g	667 uL	154207	03/09/17 16:55	ERW	TAL SAC
Total/NA	Analysis	8290A		1			155582	03/19/17 01:41	SMA	TAL SAC

Client Sample ID: HA-44 (0-6)

Date Collected: 03/01/17 09:50

Date Received: 03/03/17 16:15

Lab Sample ID: 590-5615-34

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			154871	03/14/17 14:00	JCB	TAL SAC

Client Sample ID: HA-44 (0-6)

Date Collected: 03/01/17 09:50

Date Received: 03/03/17 16:15

Lab Sample ID: 590-5615-34

Matrix: Solid

Percent Solids: 64.9

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			9.63 g	1000 uL	154207	03/09/17 16:55	ERW	TAL SAC
Total/NA	Analysis	8290A		1			155582	03/19/17 02:28	SMA	TAL SAC

Client Sample ID: HA-45 (0-6)

Date Collected: 03/01/17 10:25

Date Received: 03/03/17 16:15

Lab Sample ID: 590-5615-37

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			154871	03/14/17 14:00	JCB	TAL SAC

Client Sample ID: HA-45 (0-6)

Date Collected: 03/01/17 10:25

Date Received: 03/03/17 16:15

Lab Sample ID: 590-5615-37

Matrix: Solid

Percent Solids: 79.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			9.90 g	741 uL	154207	03/09/17 16:55	ERW	TAL SAC
Total/NA	Analysis	8290A		1			155582	03/19/17 03:14	SMA	TAL SAC

TestAmerica Spokane

Lab Chronicle

Client: GeoEngineers Inc
 Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5615-1

Client Sample ID: HA-46 (0-6)

Date Collected: 03/01/17 11:00

Date Received: 03/03/17 16:15

Lab Sample ID: 590-5615-40

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			154871	03/14/17 14:00	JCB	TAL SAC

Client Sample ID: HA-46 (0-6)

Date Collected: 03/01/17 11:00

Date Received: 03/03/17 16:15

Lab Sample ID: 590-5615-40

Matrix: Solid

Percent Solids: 72.9

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			10.14 g	20 uL	154207	03/09/17 16:55	ERW	TAL SAC
Total/NA	Analysis	8290A		1			155583	03/19/17 07:34	SMA	TAL SAC

Client Sample ID: HA-47 (0-6)

Date Collected: 03/01/17 11:00

Date Received: 03/03/17 16:15

Lab Sample ID: 590-5615-43

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			154871	03/14/17 14:00	JCB	TAL SAC

Client Sample ID: HA-47 (0-6)

Date Collected: 03/01/17 11:00

Date Received: 03/03/17 16:15

Lab Sample ID: 590-5615-43

Matrix: Solid

Percent Solids: 70.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			10.10 g	20 uL	154207	03/09/17 16:55	ERW	TAL SAC
Total/NA	Analysis	8290A		1			155583	03/19/17 08:20	SMA	TAL SAC

Client Sample ID: HA-48 (0-6)

Date Collected: 03/01/17 11:20

Date Received: 03/03/17 16:15

Lab Sample ID: 590-5615-46

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			154871	03/14/17 14:00	JCB	TAL SAC

Client Sample ID: HA-48 (0-6)

Date Collected: 03/01/17 11:20

Date Received: 03/03/17 16:15

Lab Sample ID: 590-5615-46

Matrix: Solid

Percent Solids: 68.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			9.62 g	20 uL	154207	03/09/17 16:55	ERW	TAL SAC
Total/NA	Analysis	8290A		1			155583	03/19/17 09:07	SMA	TAL SAC

TestAmerica Spokane

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5615-1

Client Sample ID: HA-49 (0-6)

Date Collected: 03/01/17 11:30

Date Received: 03/03/17 16:15

Lab Sample ID: 590-5615-49

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			154871	03/14/17 14:00	JCB	TAL SAC

Client Sample ID: HA-49 (0-6)

Date Collected: 03/01/17 11:30

Date Received: 03/03/17 16:15

Lab Sample ID: 590-5615-49

Matrix: Solid

Percent Solids: 92.2

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			9.79 g	222 uL	154207	03/09/17 16:55	ERW	TAL SAC
Total/NA	Analysis	8290A		1			155583	03/19/17 09:53	SMA	TAL SAC

Client Sample ID: HA-50 (0-6)

Date Collected: 03/01/17 11:55

Date Received: 03/03/17 16:15

Lab Sample ID: 590-5615-52

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			154874	03/14/17 14:16	JCB	TAL SAC

Client Sample ID: HA-50 (0-6)

Date Collected: 03/01/17 11:55

Date Received: 03/03/17 16:15

Lab Sample ID: 590-5615-52

Matrix: Solid

Percent Solids: 92.7

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			9.85 g	20 uL	154207	03/09/17 16:55	ERW	TAL SAC
Total/NA	Analysis	8290A		1			155583	03/19/17 10:39	SMA	TAL SAC

Client Sample ID: HA-51 (0-6)

Date Collected: 03/01/17 14:50

Date Received: 03/03/17 16:15

Lab Sample ID: 590-5615-55

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			154874	03/14/17 14:16	JCB	TAL SAC

Client Sample ID: HA-51 (0-6)

Date Collected: 03/01/17 14:50

Date Received: 03/03/17 16:15

Lab Sample ID: 590-5615-55

Matrix: Solid

Percent Solids: 57.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			10.03 g	286 uL	154485	03/11/17 10:19	ERW	TAL SAC
Total/NA	Analysis	8290A		1			156300	03/23/17 14:13	ALM	TAL SAC

TestAmerica Spokane

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5615-1

Client Sample ID: HA-52 (0-6)

Date Collected: 03/01/17 15:15

Date Received: 03/03/17 16:15

Lab Sample ID: 590-5615-58

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			154874	03/14/17 14:16	JCB	TAL SAC

Client Sample ID: HA-52 (0-6)

Date Collected: 03/01/17 15:15

Date Received: 03/03/17 16:15

Lab Sample ID: 590-5615-58

Matrix: Solid

Percent Solids: 60.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			10.25 g	66.7 uL	154485	03/11/17 10:19	ERW	TAL SAC
Total/NA	Analysis	8290A		1			156300	03/23/17 14:59	ALM	TAL SAC

Client Sample ID: HA-53 (0-6)

Date Collected: 03/01/17 15:20

Date Received: 03/03/17 16:15

Lab Sample ID: 590-5615-61

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			154874	03/14/17 14:16	JCB	TAL SAC

Client Sample ID: HA-53 (0-6)

Date Collected: 03/01/17 15:20

Date Received: 03/03/17 16:15

Lab Sample ID: 590-5615-61

Matrix: Solid

Percent Solids: 56.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			10.06 g	286 uL	154485	03/11/17 10:19	ERW	TAL SAC
Total/NA	Analysis	8290A		1			156300	03/23/17 15:45	ALM	TAL SAC

Client Sample ID: HA-54 (0-6)

Date Collected: 03/01/17 15:40

Date Received: 03/03/17 16:15

Lab Sample ID: 590-5615-64

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			11006	03/08/17 14:14	NMI	TAL SPK

Client Sample ID: HA-54 (0-6)

Date Collected: 03/01/17 15:40

Date Received: 03/03/17 16:15

Lab Sample ID: 590-5615-64

Matrix: Solid

Percent Solids: 62.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.60 g	2 mL	11067	03/14/17 10:09	NMI	TAL SPK
Total/NA	Analysis	8270D SIM		1			11062	03/14/17 15:27	NMI	TAL SPK

TestAmerica Spokane

Lab Chronicle

Client: GeoEngineers Inc
 Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5615-1

Client Sample ID: HA-55 (0-6)

Lab Sample ID: 590-5615-67

Date Collected: 03/01/17 16:00

Matrix: Solid

Date Received: 03/03/17 16:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			11006	03/08/17 14:14	NMI	TAL SPK

Client Sample ID: HA-55 (0-6)

Lab Sample ID: 590-5615-67

Date Collected: 03/01/17 16:00

Matrix: Solid

Date Received: 03/03/17 16:15

Percent Solids: 72.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.84 g	2 mL	11067	03/14/17 10:09	NMI	TAL SPK
Total/NA	Analysis	8270D SIM		1			11062	03/14/17 15:54	NMI	TAL SPK

Client Sample ID: HA-56 (0-6)

Lab Sample ID: 590-5615-70

Date Collected: 03/01/17 15:35

Matrix: Solid

Date Received: 03/03/17 16:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			11006	03/08/17 14:14	NMI	TAL SPK

Client Sample ID: HA-56 (0-6)

Lab Sample ID: 590-5615-70

Date Collected: 03/01/17 15:35

Matrix: Solid

Date Received: 03/03/17 16:15

Percent Solids: 76.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.92 g	2 mL	11067	03/14/17 10:09	NMI	TAL SPK
Total/NA	Analysis	8270D SIM		1			11062	03/14/17 16:20	NMI	TAL SPK

Client Sample ID: HA-57 (0-6)

Lab Sample ID: 590-5615-73

Date Collected: 03/01/17 13:30

Matrix: Solid

Date Received: 03/03/17 16:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			11006	03/08/17 14:14	NMI	TAL SPK

Client Sample ID: HA-57 (0-6)

Lab Sample ID: 590-5615-73

Date Collected: 03/01/17 13:30

Matrix: Solid

Date Received: 03/03/17 16:15

Percent Solids: 79.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.76 g	2 mL	11067	03/14/17 10:09	NMI	TAL SPK
Total/NA	Analysis	8270D SIM		10			11076	03/15/17 09:37	NMI	TAL SPK

TestAmerica Spokane

Lab Chronicle

Client: GeoEngineers Inc
 Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5615-1

Client Sample ID: HA-58 (0-6)

Date Collected: 03/01/17 13:50

Date Received: 03/03/17 16:15

Lab Sample ID: 590-5615-76

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			11006	03/08/17 14:14	NMI	TAL SPK

Client Sample ID: HA-58 (0-6)

Date Collected: 03/01/17 13:50

Date Received: 03/03/17 16:15

Lab Sample ID: 590-5615-76

Matrix: Solid

Percent Solids: 84.9

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.04 g	2 mL	11067	03/14/17 10:09	NMI	TAL SPK
Total/NA	Analysis	8270D SIM		100			11076	03/15/17 10:03	NMI	TAL SPK

Client Sample ID: HA-59 (0-6)

Date Collected: 03/01/17 13:45

Date Received: 03/03/17 16:15

Lab Sample ID: 590-5615-79

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			11006	03/08/17 14:14	NMI	TAL SPK

Client Sample ID: HA-59 (0-6)

Date Collected: 03/01/17 13:45

Date Received: 03/03/17 16:15

Lab Sample ID: 590-5615-79

Matrix: Solid

Percent Solids: 77.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.25 g	2 mL	11067	03/14/17 10:09	NMI	TAL SPK
Total/NA	Analysis	8270D SIM		10			11076	03/15/17 10:30	NMI	TAL SPK

Laboratory References:

TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

TAL SPK = TestAmerica Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

Certification Summary

Client: GeoEngineers Inc
 Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5615-1

Laboratory: TestAmerica Spokane

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Washington	State Program	10	C569	01-06-18

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

Laboratory: TestAmerica Sacramento

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska (UST)	State Program	10	UST-055	12-18-17
Arizona	State Program	9	AZ0708	08-11-17
Arkansas DEQ	State Program	6	88-0691	06-17-17
California	State Program	9	2897	01-31-18
Colorado	State Program	8	CA00044	08-31-17
Connecticut	State Program	1	PH-0691	06-30-17
Florida	NELAP	4	E87570	06-30-17
Hawaii	State Program	9	N/A	01-29-18
Illinois	NELAP	5	200060	03-17-18
Kansas	NELAP	7	E-10375	10-31-17
L-A-B	DoD ELAP		L2468	01-20-18
Louisiana	NELAP	6	30612	06-30-17
Maine	State Program	1	CA0004	04-18-18
Michigan	State Program	5	9947	01-31-18
Nevada	State Program	9	CA00044	07-31-17
New Jersey	NELAP	2	CA005	06-30-17
New York	NELAP	2	11666	04-01-17 *
Oregon	NELAP	10	4040	01-28-18
Pennsylvania	NELAP	3	68-01272	03-31-17 *
Texas	NELAP	6	T104704399	07-31-17
US Fish & Wildlife	Federal		LE148388-0	10-31-17
USDA	Federal		P330-11-00436	12-30-17
USEPA UCMR	Federal	1	CA00044	11-06-18
Utah	NELAP	8	CA00044	02-28-18
Virginia	NELAP	3	460278	03-14-18
Washington	State Program	10	C581	05-05-17
West Virginia (DW)	State Program	3	9930C	12-31-17
Wyoming	State Program	8	8TMS-L	01-29-17 *

* Certification renewal pending - certification considered valid.

Method Summary

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5615-1

Method	Method Description	Protocol	Laboratory
8270D SIM	Semivolatile Organic Compounds (GC/MS SIM)	SW846	TAL SPK
8290A	Dioxins and Furans (HRGC/HRMS)	SW846	TAL SAC
D 2216	Percent Moisture	ASTM	TAL SAC
Moisture	Percent Moisture	EPA	TAL SPK

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

TAL SPK = TestAmerica Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200



TestAmerica Spokane

11922 East 1st Ave
 Spokane, WA 99206
 Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Client Information		Sampler: <i>MJP/JWR</i>		Lab PM: Arrington, Randee E		Carrier Tracking No(s):		COC No: 590-2353-810.4	
Client Contact: Scott Lathen		Phone: <i>425-293-9560</i>		E-Mail: randee.arrington@testamericainc.com				Page: Page 4 of 10	
Company: GeoEngineers Inc								Job #:	
Address: 523 East Second Ave		Due Date Requested: <i>STD</i>		Field Filtered Sample (Yes or No) Perform MS/MSD (Yes or No) <i>Dioxin Furans EPA 8290A</i> <i>PCPs EPA 8270 SIM</i>		Total Number of containers		Analysis Requested Preservation Codes: A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2O4S E - NaHSO4 Q - Na2SO3 F - MeOH R - Na2S2O3 G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone J - DI Water V - MCAA K - EDTA W - pH 4-5 L - EDA Z - other (specify) Other:	
City: Spokane		TAT Requested (days): <i>STD - Need enough time to run follow-up</i>							
State, Zip: WA, 99202		PO #: Purchase Order not required							
Phone: 509-251-5239(Tel)		WO #:							
Email: slathen@geoengineers.com		Project #: 59001108							
Project Name: Colville Post and Pole/0504-098-01		SSOW#:							
Site:									
Sample Identification		Sample Date		Sample Time		Sample Type (C=comp, G=grab)		Matrix (W=water, S=solid, O=wastewater, ST=Tissue, A=Air)	
								Preservation Code:	
								Special Instructions/Note:	
<i>HA-44 (0-6)</i>		<i>3-1-17</i>		<i>0950</i>		<i>G</i>		<i>Solid</i>	
<i>HA-44 (6-12)</i>				<i>0955</i>				<i>Solid</i>	
<i>HA-44 (12-18)</i>				<i>1000</i>				<i>Solid</i>	
<i>HA-45 (0-6)</i>				<i>1025</i>				<i>Solid</i>	
<i>HA-45 (6-12)</i>				<i>1027</i>				<i>Solid</i>	
<i>HA-45 (12-18)</i>				<i>1030</i>				<i>Solid</i>	
<i>HA-46 (0-6)</i>				<i>1100</i>				<i>Solid</i>	
<i>HA-46 (6-12)</i>				<i>1105</i>				<i>Solid</i>	
<i>HA-46 (12-18)</i>				<i>1110</i>				<i>Solid</i>	
<i>HA-47 (0-6)</i>				<i>1100</i>				<i>Solid</i>	
<i>HA-47 (6-12)</i>				<i>1102</i>				<i>Solid</i>	
Possible Hazard Identification					Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)				
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological					<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months				
Deliverable Requested: I, II, III, IV, Other (specify)					Special Instructions/QC Requirements:				
Empty Kit Relinquished by:			Date:		Time:		Method of Shipment:		
Relinquished by: <i>Mark Peterson</i>			Date/Time: <i>3-3-17 1615</i>		Company:		Received by: <i>Sheela Gray</i>		
Relinquished by:			Date/Time:		Company:		Date/Time: <i>3/3/17 1405</i>		
Relinquished by:			Date/Time:		Company:		Date/Time:		
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:			Cooler Temperature(s) °C and Other Remarks: <i>1.3°C, 1.7°C IR004</i>				

TestAmerica Spokane

11922 East 1st Ave
 Spokane, WA 99206
 Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Client Information		Sampler: <i>MJP/JWR</i>		Lab PM: Arrington, Randee E		Carrier Tracking No(s):		COC No: 590-2353-810.5	
Client Contact: Scott Lathen		Phone: <i>425-293-9560</i>		E-Mail: randee.arrington@testamericainc.com				Page: Page 5 of 10	
Company: GeoEngineers Inc				Analysis Requested				Job #:	
Address: 523 East Second Ave		Due Date Requested: <i>STD</i>		Field Filtered Sample (Yes or No) <input checked="" type="checkbox"/> Perform MS/MSD (Yes or No) <input checked="" type="checkbox"/> <i>Dioxins Furans EPA 8250A</i> <i>PCRs 8270 Six</i>				Total Number of containers Preservation Codes: A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2O4S E - NaHSO4 Q - Na2SO3 F - MeOH R - Na2S2O3 G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone J - DI Water V - MCAA K - EDTA W - pH 4-5 L - EDA Z - other (specify)	
City: Spokane		TAT Requested (days): <i>STD-Need enough time to run follow-up</i>							
State, Zip: WA, 99202		PO #							
Phone: 509-251-5239(Tel)		Purchase Order not required							
Email: slathen@geoengineers.com		WO #							
Project Name: Colville Post and Pole/0504-098-01		Project #: 59001108							
Site:		SSOW#:							
Sample Identification		Sample Date		Sample Time		Sample Type (C=comp, G=grab)		Matrix (W=water, S=solid, O=wastewater, BT=Tissue, A=Air)	
								Special Instructions/Note:	
<i>HA-47(12-18)</i>		<i>3-1-17</i>		<i>1104</i>		<i>G</i>		<i>Solid</i>	
<i>HA-48(0-6)</i>		<i>|</i>		<i>1120</i>		<i>|</i>		<i>Solid</i>	
<i>HA-48(6-12)</i>		<i>|</i>		<i>1122</i>		<i>|</i>		<i>Solid</i>	
<i>HA-48(12-18)</i>		<i>|</i>		<i>1124</i>		<i>|</i>		<i>Solid</i>	
<i>HA-49(0-6)</i>		<i>|</i>		<i>1130</i>		<i>|</i>		<i>Solid</i>	
<i>HA-49(6-12)</i>		<i>|</i>		<i>1135</i>		<i>|</i>		<i>Solid</i>	
<i>HA-49(12-18)</i>		<i>|</i>		<i>1140</i>		<i>|</i>		<i>Solid</i>	
<i>HA-50(0-6)</i>		<i>|</i>		<i>1155</i>		<i>|</i>		<i>Solid</i>	
<i>HA-50(6-12)</i>		<i>|</i>		<i>1200</i>		<i>|</i>		<i>Solid</i>	
<i>HA-50(12-18)</i>		<i>|</i>		<i>1205</i>		<i>|</i>		<i>Solid</i>	
<i>HA-51(0-6)</i>		<i>↓</i>		<i>1450</i>		<i>↓</i>		<i>Solid</i>	
Possible Hazard Identification				Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)					
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological				<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months					
Deliverable Requested: I, II, III, IV, Other (specify)				Special Instructions/QC Requirements:					
Empty Kit Relinquished by:		Date:		Time:		Method of Shipment:			
Relinquished by: <i>Max Peterson</i>		Date/Time: <i>3-3-17 1615</i>		Company:		Received by: <i>Sheela Prady</i>		Date/Time: <i>3/3/17 1615</i>	
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:	
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: <i>1.3°C, 1.7°C IR004</i>					

TestAmerica Spokane

11922 East 1st Ave
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Chain of Custody Record

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

3/29/2017

Client Information		Sampler: <u>MJP/JWR</u>		Lab PM: Arrington, Randee E		Carrier Tracking No(s):		COC No: 590-2353-810.6			
Client Contact: Scott Lathen		Phone: <u>425-293-9560</u>		E-Mail: randee.arrington@testamericainc.com				Page: Page 6 of 10			
Company: GeoEngineers Inc				Analysis Requested				Job #:			
Address: 523 East Second Ave		Due Date Requested: <u>STD</u>		Field Filtered Sample (Yes or No) <input type="checkbox"/> Perform MS/MSD (Yes or No) <input type="checkbox"/> <u>Dioxin/Furans EPA 8290A</u> <u>PCPs 8270 SIM</u>				Total Number of containers:		Preservation Codes: A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2O4S E - NaHSO4 Q - Na2SO3 F - MeOH R - Na2S2O3 G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone J - DI Water V - MCAA K - EDTA W - pH 4-5 L - EDA Z - other (specify)	
City: Spokane		TAT Requested (days): <u>STD-Need enough time to run follow-up</u>									
State, Zip: WA, 99202		PO #: Purchase Order not required									
Phone: 509-251-5239(Tel)		WO #:									
Email: slathen@geoengineers.com		Project #: 59001108									
Project Name: Colville Post and Pole/0504-098-01		SSOW#:									
Site:											
Sample Identification		Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=wastewater, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Total Number of containers	Special Instructions/Note:		
				Preservation Code:							
<u>HA-51(6-12)</u>		<u>3-1-17</u>	<u>1455</u>	<u>G</u>	<u>Solid</u>						
<u>HA-51(12-18)</u>		↓	<u>1500</u>	↓	<u>Solid</u>						
<u>HA-52(0-6)</u>		↓	<u>1515</u>	↓	<u>Solid</u>	<u>X</u>					
<u>HA-52(6-12)</u>		↓	<u>1520</u>	↓	<u>Solid</u>						
<u>HA-52(12-18)</u>		↓	<u>1525</u>	↓	<u>Solid</u>						
<u>HA-53(0-6)</u>		↓	<u>1520</u>	↓	<u>Solid</u>	<u>X</u>					
<u>HA-53(6-12)</u>		↓	<u>1522</u>	↓	<u>Solid</u>						
<u>HA-53(12-18)</u>		↓	<u>1524</u>	↓	<u>Solid</u>						
<u>HA-54(0-6)</u>		↓	<u>1540</u>	↓	<u>Solid</u>	<u>X</u>					
<u>HA-54(6-12)</u>		↓	<u>1542</u>	↓	<u>Solid</u>						
<u>HA-54(12-18)</u>		↓	<u>1545</u>	↓	<u>Solid</u>						
Possible Hazard Identification				Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)							
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological				<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months							
Deliverable Requested: I, II, III, IV, Other (specify)				Special Instructions/QC Requirements:							
Empty Kit Relinquished by:		Date:		Time:		Method of Shipment:					
Relinquished by: <u>[Signature]</u>		Date/Time: <u>3-3-17 1615</u>		Company:		Received by: <u>[Signature]</u>		Date/Time: <u>3/3/17 1615</u>			
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:			
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:			
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: <u>1.3°C, 1.7°C IR004</u>							

Page 50 of 59

TestAmerica Spokane

11922 East 1st Ave
 Spokane, WA 99206
 Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Client Information		Sampler: MSP/SWR	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-2353-810.7	
Client Contact: Scott Lathen		Phone: 425-293-9560	E-Mail: randee.arrington@testamericainc.com		Page: Page 7 of 10	
Company: GeoEngineers Inc		Analysis Requested			Job #:	
Address: 523 East Second Ave		Due Date Requested: STD	Field Filtered Sample (Yes or No) <input checked="" type="checkbox"/> Perform MS/MSD (Yes or No) <input checked="" type="checkbox"/> Dioxins/Furans EPA 8290A PCBs 8270 sum		Total Number of containers	
City: Spokane		TAT Requested (days): STD - Need enough time to run follow-up				
State, Zip: WA, 99202		PO #: Purchase Order not required				
Phone: 509-251-5239(Tel)		WO #:				
Email: slathen@geoengineers.com		Project #: 59001108				
Project Name: Colville Post and Pole/0504-098-01		SSOW#:			Preservation Codes: A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2O4S E - NaHSO4 Q - Na2SO3 F - MeOH R - Na2S2O3 G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone J - DI Water V - MCAA K - EDTA W - pH 4-5 L - EDA Z - other (specify)	
Site:				Other:		
Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/Oil, BT=Tissue, A=Air)	Preservation Code:	Special Instructions/Note:
HA-55(0-6)	3-1-17	1600	G	Solid		
HA-55(6-12)		1602		Solid		
HA-55(12-18)		1604		Solid		
HA-56(0-6)		1535		Solid		
HA-56(6-12)		1540		Solid		
HA-56(12-18)		1545		Solid		
HA-57(0-6)		1330		Solid		
HA-57(6-12)		1335		Solid		
HA-57(12-18)		1340		Solid		
HA-58(0-6)		1350		Solid		
HA-58(6-12)		1355		Solid		
Possible Hazard Identification			Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)			
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological			<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months			
Deliverable Requested: I, II, III, IV, Other (specify)			Special Instructions/QC Requirements:			
Empty Kit Relinquished by:		Date:	Time:	Method of Shipment:		
Relinquished by: <i>Matt Peterson</i>		Date/Time: 3-3-17 1615	Company:	Received by: <i>Sheela Prady</i>		Date/Time: 3/3/17 11:05
Relinquished by:		Date/Time:	Company:	Received by:		Date/Time:
Relinquished by:		Date/Time:	Company:	Received by:		Date/Time:
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 1.3, 1.7 °C IPOOH				

TestAmerica Spokane

11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)		Sampler:	Lab PM	Carrier Tracking No(s)	COC No:					
Client Contact: Shipping/Receiving		Phone:	Arrington, Randee E		590-2515.1					
Company: TestAmerica Laboratories, Inc.		E-Mail:	randee.arrington@testamericainc.com	State of Origin: Washington	Page: Page 1 of 3					
Address: 880 Riverside Parkway, City: West Sacramento State, Zip: CA, 95605		Due Date Requested: 3/16/2017	Accreditations Required (See note): State Program - Washington		Job #: 590-5615-1					
Phone: 916-373-5600(Tel) 916-372-1059(Fax)		TAT Requested (days):	Analysis Requested		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)					
Email:		PO #:	Total Number of containers							
Project Name: Colville Post and Pole/0504-098-01		WO #:	Field Filtered Sample (Yes or No)		Special Instructions/Note:					
Site:		SSOW#:	Perform MS/MISD (Yes or No)							
Sample Identification - Client ID (Lab ID)		Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Moisture	8290A/8290_P_Sox 17 Isomers & Totals	Other:		
HA-3A (6-12) (590-5615-2)		3/1/17	10:30 Pacific	Solid	Solid	X	X	1. Former Post and Pole manufacturing site - could be high, please isolate glassware and		
HA-4A (6-12) (590-5615-5)		3/1/17	09:55 Pacific	Solid	Solid	X	X	1. Former Post and Pole manufacturing site - could be high, please isolate glassware and		
HA-6A (6-12) (590-5615-7)		3/1/17	11:40 Pacific	Solid	Solid	X	X	1. Former Post and Pole manufacturing site - could be high, please isolate glassware and		
HA-11A (6-12) (590-5615-9)		3/1/17	14:45 Pacific	Solid	Solid	X	X	1. Former Post and Pole manufacturing site - could be high, please isolate glassware and		
HA-13A (6-12) (590-5615-11)		3/1/17	12:55 Pacific	Solid	Solid	X	X	1. Former Post and Pole manufacturing site - could be high, please isolate glassware and		
HA-17A (6-12) (590-5615-13)		3/1/17	12:10 Pacific	Solid	Solid	X	X	1. Former Post and Pole manufacturing site - could be high, please isolate glassware and		
HA-20A (6-12) (590-5615-15)		3/1/17	15:00 Pacific	Solid	Solid	X	X	1. Former Post and Pole manufacturing site - could be high, please isolate glassware and		
HA-25A (6-12) (590-5615-17)		3/1/17	16:05 Pacific	Solid	Solid	X	X	1. Former Post and Pole manufacturing site - could be high, please isolate glassware and		
HA-39 (0-6) (590-5615-19)		3/1/17	13:30 Pacific	Solid	Solid	X	X	1. Former Post and Pole manufacturing site - could be high, please isolate glassware and		
<p>Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to TestAmerica Laboratories, Inc.</p>										
Possible Hazard Identification					Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)					
Unconfirmed					<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months					
Deliverable Requested: I, II, III, IV, Other (specify)			Primary Deliverable Rank: 2		Special Instructions/QC Requirements:					
Empty Kit Relinquished by:		Date:		Time:		Method of Shipment:				
Relinquished by: <i>[Signature]</i>		Date/Time: 3/6/17		Company: KNO		Received by: <i>[Signature]</i>		Date/Time: 3-7-17		Company: <i>[Signature]</i>
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:		Company:
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:		Company:
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: 34						

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3/29/2017



TestAmerica Spokane

11922 East 1st Ave
 Spokane, WA 99206
 Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record



THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)		Sampler:		Lab PM: Arrington, Randee E		Carrier Tracking No(s):		COC No: 590-2515.2					
Client Contact: Shipping/Receiving		Phone:		E-Mail: randee.arrington@testamericainc.com		State of Origin: Washington		Page: Page 2 of 3					
Company: TestAmerica Laboratories, Inc.				Accreditations Required (See note): State Program - Washington				Job #: 590-5615-1					
Address: 880 Riverside Parkway,		Due Date Requested: 3/16/2017		Analysis Requested						Preservation Codes: A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2O4S E - NaHSO4 Q - Na2SO3 F - MeOH R - Na2S2O3 G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone J - DI Water V - MCAA K - EDTA W - pH 4-5 L - EDA Z - other (specify)			
City: West Sacramento		TAT Requested (days):											
State, Zip: CA, 95605		PO #:		Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)		Moisture		8290A8290_P_Sox 17 Isomers & Totals		Total Number of containers	
Phone: 916-373-5600(Tel) 916-372-1059(Fax)		WO #:											
Email:		Project #: 59001108		Sample Type (C=Comp, G=grab)		Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)		Preservation Code:		Special In. tructions/Note:			
Project Name: Colville Post and Pole/0504-098-01		SSOW#:											
Site:		Sample Date		Sample Time		Sample Type (C=Comp, G=grab)		Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)		Preservation Code:		Special In. tructions/Note:	
HA-40 (0-6) (590-5615-22)		3/1/17		14:10 Pacific		Solid		Solid		X X		1 Former Post and Pole manufacturing site - could be high, please isolate glassware and	
HA-41 (0-6) (590-5615-25)		3/1/17		14:25 Pacific		Solid		Solid		X X		1 Former Post and Pole manufacturing site - could be high, please isolate glassware and	
HA-42 (0-6) (590-5615-28)		3/1/17		12:30 Pacific		Solid		Solid		X X		1 Former Post and Pole manufacturing site - could be high, please isolate glassware and	
HA-43 (0-6) (590-5615-31)		3/1/17		09:30 Pacific		Solid		Solid		X X		1 Former Post and Pole manufacturing site - could be high, please isolate glassware and	
HA-44 (0-6) (590-5615-34)		3/1/17		09:50 Pacific		Solid		Solid		X X		1 Former Post and Pole manufacturing site - could be high, please isolate glassware and	
HA-45 (0-6) (590-5615-37)		3/1/17		10:25 Pacific		Solid		Solid		X X		1 Former Post and Pole manufacturing site - could be high, please isolate glassware and	
HA-46 (0-6) (590-5615-40)		3/1/17		11:00 Pacific		Solid		Solid		X X		1 Former Post and Pole manufacturing site - could be high, please isolate glassware and	
HA-47 (0-6) (590-5615-43)		3/1/17		11:00 Pacific		Solid		Solid		X X		1 Former Post and Pole manufacturing site - could be high, please isolate glassware and	
HA-48 (0-6) (590-5615-46)		3/1/17		11:20 Pacific		Solid		Solid		X X		1 Former Post and Pole manufacturing site - could be high, please isolate glassware and	
Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody.													
Possible Hazard Identification						Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)							
Unconfirmed						<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months							
Deliverable Requested: I, II, III, IV, Other (specify)				Primary Deliverable Rank: 2		Special Instructions/QC Requirements:							
Empty Kit Relinquished by:				Date:		Time:		Method of Shipment:					
Relinquished by: <i>Sheela K...</i>		Date/Time: 3/16/17 14:10		Company: JACOPO		Received by: <i>CMH</i>		Date/Time: 3-7-17 11:05		Company: JACOPO			
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:		Company:			
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:		Company:			
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:		3-							

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3/29/2017



Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-5615-1

Login Number: 5615

List Source: TestAmerica Spokane

List Number: 1

Creator: Kratz, Sheila J

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-5615-1

Login Number: 5615
List Number: 2
Creator: Hytrek, Cheryl

List Source: TestAmerica Sacramento
List Creation: 03/08/17 01:18 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Isotope Dilution Summary

Client: GeoEngineers Inc
 Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5615-1

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Matrix: Solid

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	Percent Isotope Dilution Recovery (Acceptance Limits)							
		TCDD (40-135)	TCDF (40-135)	PeCDD (40-135)	PeCDF1 (40-135)	HxCDD2 (40-135)	HxCDF1 (40-135)	HpCDD (40-135)	HpCDF1 (40-135)
590-5615-2	HA-3A (6-12)	89	89	95	95	97	100	106	109
590-5615-5	HA-4A (6-12)	89	91	96	91	101	99	107	108
590-5615-7	HA-6A (6-12)	61	50	51	51	55	57	71	60
590-5615-9	HA-11A (6-12)	51	49	46	47	52	54	59	58
590-5615-11	HA-13A (6-12)	56	57	56	56	62	60	71	68
590-5615-13	HA-17A (6-12)	50	51	54	53	62	57	68	67
590-5615-15	HA-20A (6-12)	61	60	57	57	67	63	75	73
590-5615-17	HA-25A (6-12)	50	49	46	48	54	51	63	58
590-5615-19	HA-39 (0-6)	55	57	59	58	69	66	74	75
590-5615-22	HA-40 (0-6)	62	49	48	51	51	55	72	62
590-5615-25	HA-41 (0-6)	61	52	52	51	58	55	75	66
590-5615-28	HA-42 (0-6)	88	91	92	89	97	98	113	113
590-5615-31	HA-43 (0-6)	87	89	90	89	100	98	119	116
590-5615-34	HA-44 (0-6)	92	94	96	93	106	100	123	118
590-5615-37	HA-45 (0-6)	88	91	94	91	102	98	117	114
590-5615-40	HA-46 (0-6)	56	56	61	59	71	65	74	75
590-5615-43	HA-47 (0-6)	62	61	66	65	75	75	84	84
590-5615-46	HA-48 (0-6)	46	46	47	46	54	53	61	60
590-5615-49	HA-49 (0-6)	63	48	49	50	56	56	68	61
590-5615-52	HA-50 (0-6)	50	52	55	55	61	57	65	65
590-5615-55	HA-51 (0-6)	80	65	67	67	74	73	96	85
590-5615-58	HA-52 (0-6)	64	60	61	61	71	68	83	75
590-5615-61	HA-53 (0-6)	79	62	67	62	74	69	92	77
LCS 320-154207/2-A	Lab Control Sample	67	68	75	69	84	81	89	92
LCS 320-154485/2-A	Lab Control Sample	78	74	83	79	89	83	95	91
LCSD 320-154207/3-A	Lab Control Sample Dup	64	64	68	68	77	73	77	80
LCSD 320-154485/3-A	Lab Control Sample Dup	82	78	85	83	94	87	99	96
MB 320-154207/1-A	Method Blank	68	66	73	70	80	78	83	87
MB 320-154485/1-A	Method Blank	80	76	84	78	87	83	94	92

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	OCDD
		(40-135)
590-5615-2	HA-3A (6-12)	109
590-5615-5	HA-4A (6-12)	112
590-5615-7	HA-6A (6-12)	63
590-5615-9	HA-11A (6-12)	63
590-5615-11	HA-13A (6-12)	78
590-5615-13	HA-17A (6-12)	69
590-5615-15	HA-20A (6-12)	76
590-5615-17	HA-25A (6-12)	67
590-5615-19	HA-39 (0-6)	78
590-5615-22	HA-40 (0-6)	71
590-5615-25	HA-41 (0-6)	74
590-5615-28	HA-42 (0-6)	122
590-5615-31	HA-43 (0-6)	124
590-5615-34	HA-44 (0-6)	125
590-5615-37	HA-45 (0-6)	118
590-5615-40	HA-46 (0-6)	80
590-5615-43	HA-47 (0-6)	88

TestAmerica Spokane

Isotope Dilution Summary

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5615-1

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Matrix: Solid

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	OCDD (40-135)
590-5615-46	HA-48 (0-6)	65
590-5615-49	HA-49 (0-6)	71
590-5615-52	HA-50 (0-6)	67
590-5615-55	HA-51 (0-6)	100
590-5615-58	HA-52 (0-6)	91
590-5615-61	HA-53 (0-6)	92
LCS 320-154207/2-A	Lab Control Sample	92
LCS 320-154485/2-A	Lab Control Sample	90
LCSD 320-154207/3-A	Lab Control Sample Dup	80
LCSD 320-154485/3-A	Lab Control Sample Dup	96
MB 320-154207/1-A	Method Blank	82
MB 320-154485/1-A	Method Blank	89

Surrogate Legend

TCDD = 13C-2,3,7,8-TCDD

TCDF = 13C-2,3,7,8-TCDF

PeCDD = 13C-1,2,3,7,8-PeCDD

PeCDF1 = 13C-1,2,3,7,8-PeCDF

HxCDD2 = 13C-1,2,3,6,7,8-HxCDD

HxCDF1 = 13C-1,2,3,4,7,8-HxCDF

HpCDD = 13C-1,2,3,4,6,7,8-HpCDD

HpCDF1 = 13C-1,2,3,4,6,7,8-HpCDF

OCDD = 13C-OCDD

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

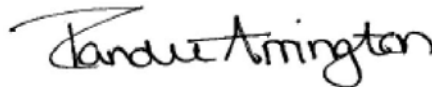
ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Tel: (509)924-9200

TestAmerica Job ID: 590-5615-3
Client Project/Site: Colville Post and Pole/0504-098-01

For:
GeoEngineers Inc
523 East Second Ave
Spokane, Washington 99202

Attn: Scott Lathen



Authorized for release by:
4/21/2017 10:23:43 AM

Randee Arrington, Project Manager II
(509)924-9200
randee.arrington@testamericainc.com

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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- 2
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Case Narrative

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5615-3

Job ID: 590-5615-3

Laboratory: TestAmerica Spokane

Narrative

Receipt

The samples were received on 3/3/2017 4:15 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 1.3° C and 1.7° C.

Receipt Exceptions

The following samples were activated for 8290A analysis by the client on 03/30/2017: HA-3A (12-18) (590-5615-3), HA-4A (12-18) (590-5615-6), HA-6A (12-18) (590-5615-8), HA-13A (12-18) (590-5615-12), HA-20A (12-18) (590-5615-16), HA-40 (12-18) (590-5615-24), HA-41 (12-18) (590-5615-27), HA-42 (12-18) (590-5615-30), HA-43 (12-18) (590-5615-33), HA-44 (12-18) (590-5615-36), HA-46 (12-18) (590-5615-42), HA-47 (12-18) (590-5615-45), HA-49 (12-18) (590-5615-51), HA-51 (12-18) (590-5615-57) and HA-53 (12-18) (590-5615-63).

Dioxin

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Dioxin Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.



Sample Summary

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5615-3

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
590-5615-3	HA-3A (12-18)	Solid	03/01/17 10:35	03/03/17 16:15
590-5615-6	HA-4A (12-18)	Solid	03/01/17 10:00	03/03/17 16:15
590-5615-8	HA-6A (12-18)	Solid	03/01/17 11:42	03/03/17 16:15
590-5615-12	HA-13A (12-18)	Solid	03/01/17 13:00	03/03/17 16:15
590-5615-16	HA-20A (12-18)	Solid	03/01/17 15:05	03/03/17 16:15
590-5615-24	HA-40 (12-18)	Solid	03/01/17 14:20	03/03/17 16:15
590-5615-27	HA-41 (12-18)	Solid	03/01/17 14:35	03/03/17 16:15
590-5615-30	HA-42 (12-18)	Solid	03/01/17 12:34	03/03/17 16:15
590-5615-33	HA-43 (12-18)	Solid	03/01/17 09:40	03/03/17 16:15
590-5615-36	HA-44 (12-18)	Solid	03/01/17 10:00	03/03/17 16:15
590-5615-42	HA-46 (12-18)	Solid	03/01/17 11:10	03/03/17 16:15
590-5615-45	HA-47 (12-18)	Solid	03/01/17 11:04	03/03/17 16:15
590-5615-51	HA-49 (12-18)	Solid	03/01/17 11:40	03/03/17 16:15
590-5615-57	HA-51 (12-18)	Solid	03/01/17 15:00	03/03/17 16:15
590-5615-63	HA-53 (12-18)	Solid	03/01/17 15:24	03/03/17 16:15

Definitions/Glossary

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5615-3

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5615-3

Client Sample ID: HA-3A (12-18)

Lab Sample ID: 590-5615-3

Date Collected: 03/01/17 10:35

Matrix: Solid

Date Received: 03/03/17 16:15

Percent Solids: 67.5

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		290		pg/g	☼	03/31/17 10:38	04/17/17 17:25	1
2,3,7,8-TCDF	ND		290		pg/g	☼	03/31/17 10:38	04/17/17 17:25	1
1,2,3,7,8-PeCDD	ND		1400		pg/g	☼	03/31/17 10:38	04/17/17 17:25	1
1,2,3,7,8-PeCDF	ND		1400		pg/g	☼	03/31/17 10:38	04/17/17 17:25	1
2,3,4,7,8-PeCDF	ND		1400		pg/g	☼	03/31/17 10:38	04/17/17 17:25	1
1,2,3,4,7,8-HxCDD	ND		1400		pg/g	☼	03/31/17 10:38	04/17/17 17:25	1
1,2,3,6,7,8-HxCDD	1700		1400		pg/g	☼	03/31/17 10:38	04/17/17 17:25	1
1,2,3,7,8,9-HxCDD	ND		1400		pg/g	☼	03/31/17 10:38	04/17/17 17:25	1
1,2,3,4,7,8-HxCDF	ND		1400		pg/g	☼	03/31/17 10:38	04/17/17 17:25	1
1,2,3,6,7,8-HxCDF	ND		1400		pg/g	☼	03/31/17 10:38	04/17/17 17:25	1
1,2,3,7,8,9-HxCDF	ND		1400		pg/g	☼	03/31/17 10:38	04/17/17 17:25	1
2,3,4,6,7,8-HxCDF	ND		1400		pg/g	☼	03/31/17 10:38	04/17/17 17:25	1
1,2,3,4,6,7,8-HpCDD	45000		1400		pg/g	☼	03/31/17 10:38	04/17/17 17:25	1
1,2,3,4,6,7,8-HpCDF	2800		1400		pg/g	☼	03/31/17 10:38	04/17/17 17:25	1
1,2,3,4,7,8,9-HpCDF	ND		1400		pg/g	☼	03/31/17 10:38	04/17/17 17:25	1
OCDD	380000		2900		pg/g	☼	03/31/17 10:38	04/17/17 17:25	1
OCDF	7900		2900		pg/g	☼	03/31/17 10:38	04/17/17 17:25	1
Total TCDD	ND		290		pg/g	☼	03/31/17 10:38	04/17/17 17:25	1
Total TCDF	ND		290		pg/g	☼	03/31/17 10:38	04/17/17 17:25	1
Total PeCDD	ND		1400		pg/g	☼	03/31/17 10:38	04/17/17 17:25	1
Total PeCDF	ND		1400		pg/g	☼	03/31/17 10:38	04/17/17 17:25	1
Total HxCDD	4300		1400		pg/g	☼	03/31/17 10:38	04/17/17 17:25	1
Total HxCDF	2500		1400		pg/g	☼	03/31/17 10:38	04/17/17 17:25	1
Total HpCDD	77000		1400		pg/g	☼	03/31/17 10:38	04/17/17 17:25	1
Total HpCDF	10000		1400		pg/g	☼	03/31/17 10:38	04/17/17 17:25	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	107		40 - 135				03/31/17 10:38	04/17/17 17:25	1
13C-2,3,7,8-TCDF	107		40 - 135				03/31/17 10:38	04/17/17 17:25	1
13C-1,2,3,7,8-PeCDD	113		40 - 135				03/31/17 10:38	04/17/17 17:25	1
13C-1,2,3,7,8-PeCDF	112		40 - 135				03/31/17 10:38	04/17/17 17:25	1
13C-1,2,3,6,7,8-HxCDD	105		40 - 135				03/31/17 10:38	04/17/17 17:25	1
13C-1,2,3,4,7,8-HxCDF	108		40 - 135				03/31/17 10:38	04/17/17 17:25	1
13C-1,2,3,4,6,7,8-HpCDD	104		40 - 135				03/31/17 10:38	04/17/17 17:25	1
13C-1,2,3,4,6,7,8-HpCDF	106		40 - 135				03/31/17 10:38	04/17/17 17:25	1
13C-OCDD	123		40 - 135				03/31/17 10:38	04/17/17 17:25	1

Client Sample ID: HA-4A (12-18)

Lab Sample ID: 590-5615-6

Date Collected: 03/01/17 10:00

Matrix: Solid

Date Received: 03/03/17 16:15

Percent Solids: 79.2

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		98		pg/g	☼	03/31/17 10:38	04/17/17 18:11	1
2,3,7,8-TCDF	ND		98		pg/g	☼	03/31/17 10:38	04/17/17 18:11	1
1,2,3,7,8-PeCDD	ND		490		pg/g	☼	03/31/17 10:38	04/17/17 18:11	1
1,2,3,7,8-PeCDF	ND		490		pg/g	☼	03/31/17 10:38	04/17/17 18:11	1
2,3,4,7,8-PeCDF	ND		490		pg/g	☼	03/31/17 10:38	04/17/17 18:11	1
1,2,3,4,7,8-HxCDD	ND		490		pg/g	☼	03/31/17 10:38	04/17/17 18:11	1
1,2,3,6,7,8-HxCDD	ND		490		pg/g	☼	03/31/17 10:38	04/17/17 18:11	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5615-3

Client Sample ID: HA-4A (12-18)

Lab Sample ID: 590-5615-6

Date Collected: 03/01/17 10:00

Matrix: Solid

Date Received: 03/03/17 16:15

Percent Solids: 79.2

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,7,8,9-HxCDD	ND		490		pg/g	☼	03/31/17 10:38	04/17/17 18:11	1
1,2,3,4,7,8-HxCDF	ND		490		pg/g	☼	03/31/17 10:38	04/17/17 18:11	1
1,2,3,6,7,8-HxCDF	ND		490		pg/g	☼	03/31/17 10:38	04/17/17 18:11	1
1,2,3,7,8,9-HxCDF	ND		490		pg/g	☼	03/31/17 10:38	04/17/17 18:11	1
2,3,4,6,7,8-HxCDF	ND		490		pg/g	☼	03/31/17 10:38	04/17/17 18:11	1
1,2,3,4,6,7,8-HpCDD	13000		490		pg/g	☼	03/31/17 10:38	04/17/17 18:11	1
1,2,3,4,6,7,8-HpCDF	3000		490		pg/g	☼	03/31/17 10:38	04/17/17 18:11	1
1,2,3,4,7,8,9-HpCDF	ND		490		pg/g	☼	03/31/17 10:38	04/17/17 18:11	1
OCDD	110000		980		pg/g	☼	03/31/17 10:38	04/17/17 18:11	1
OCDF	7400		980		pg/g	☼	03/31/17 10:38	04/17/17 18:11	1
Total TCDD	ND		98		pg/g	☼	03/31/17 10:38	04/17/17 18:11	1
Total TCDF	ND		98		pg/g	☼	03/31/17 10:38	04/17/17 18:11	1
Total PeCDD	ND		490		pg/g	☼	03/31/17 10:38	04/17/17 18:11	1
Total PeCDF	ND		490		pg/g	☼	03/31/17 10:38	04/17/17 18:11	1
Total HxCDD	1600		490		pg/g	☼	03/31/17 10:38	04/17/17 18:11	1
Total HxCDF	1900		490		pg/g	☼	03/31/17 10:38	04/17/17 18:11	1
Total HpCDD	22000		490		pg/g	☼	03/31/17 10:38	04/17/17 18:11	1
Total HpCDF	7200		490		pg/g	☼	03/31/17 10:38	04/17/17 18:11	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	106		40 - 135	03/31/17 10:38	04/17/17 18:11	1
13C-2,3,7,8-TCDF	105		40 - 135	03/31/17 10:38	04/17/17 18:11	1
13C-1,2,3,7,8-PeCDD	108		40 - 135	03/31/17 10:38	04/17/17 18:11	1
13C-1,2,3,7,8-PeCDF	111		40 - 135	03/31/17 10:38	04/17/17 18:11	1
13C-1,2,3,6,7,8-HxCDD	104		40 - 135	03/31/17 10:38	04/17/17 18:11	1
13C-1,2,3,4,7,8-HxCDF	107		40 - 135	03/31/17 10:38	04/17/17 18:11	1
13C-1,2,3,4,6,7,8-HpCDD	102		40 - 135	03/31/17 10:38	04/17/17 18:11	1
13C-1,2,3,4,6,7,8-HpCDF	105		40 - 135	03/31/17 10:38	04/17/17 18:11	1
13C-OCDD	121		40 - 135	03/31/17 10:38	04/17/17 18:11	1

Client Sample ID: HA-6A (12-18)

Lab Sample ID: 590-5615-8

Date Collected: 03/01/17 11:42

Matrix: Solid

Date Received: 03/03/17 16:15

Percent Solids: 84.9

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		33		pg/g	☼	03/31/17 10:38	04/17/17 18:57	1
2,3,7,8-TCDF	ND		33		pg/g	☼	03/31/17 10:38	04/17/17 18:57	1
1,2,3,7,8-PeCDD	ND		160		pg/g	☼	03/31/17 10:38	04/17/17 18:57	1
1,2,3,7,8-PeCDF	ND		160		pg/g	☼	03/31/17 10:38	04/17/17 18:57	1
2,3,4,7,8-PeCDF	ND		160		pg/g	☼	03/31/17 10:38	04/17/17 18:57	1
1,2,3,4,7,8-HxCDD	ND		160		pg/g	☼	03/31/17 10:38	04/17/17 18:57	1
1,2,3,6,7,8-HxCDD	340		160		pg/g	☼	03/31/17 10:38	04/17/17 18:57	1
1,2,3,7,8,9-HxCDD	ND		160		pg/g	☼	03/31/17 10:38	04/17/17 18:57	1
1,2,3,4,7,8-HxCDF	ND		160		pg/g	☼	03/31/17 10:38	04/17/17 18:57	1
1,2,3,6,7,8-HxCDF	ND		160		pg/g	☼	03/31/17 10:38	04/17/17 18:57	1
1,2,3,7,8,9-HxCDF	ND		160		pg/g	☼	03/31/17 10:38	04/17/17 18:57	1
2,3,4,6,7,8-HxCDF	ND		160		pg/g	☼	03/31/17 10:38	04/17/17 18:57	1
1,2,3,4,6,7,8-HpCDD	6800		160		pg/g	☼	03/31/17 10:38	04/17/17 18:57	1
1,2,3,4,6,7,8-HpCDF	620		160		pg/g	☼	03/31/17 10:38	04/17/17 18:57	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5615-3

Client Sample ID: HA-6A (12-18)

Lab Sample ID: 590-5615-8

Date Collected: 03/01/17 11:42

Matrix: Solid

Date Received: 03/03/17 16:15

Percent Solids: 84.9

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,7,8,9-HpCDF	ND		160		pg/g	☼	03/31/17 10:38	04/17/17 18:57	1
OCDD	50000		330		pg/g	☼	03/31/17 10:38	04/17/17 18:57	1
OCDF	1100		330		pg/g	☼	03/31/17 10:38	04/17/17 18:57	1
Total TCDD	ND		33		pg/g	☼	03/31/17 10:38	04/17/17 18:57	1
Total TCDF	ND		33		pg/g	☼	03/31/17 10:38	04/17/17 18:57	1
Total PeCDD	ND		160		pg/g	☼	03/31/17 10:38	04/17/17 18:57	1
Total PeCDF	ND		160		pg/g	☼	03/31/17 10:38	04/17/17 18:57	1
Total HxCDD	1100		160		pg/g	☼	03/31/17 10:38	04/17/17 18:57	1
Total HxCDF	890		160		pg/g	☼	03/31/17 10:38	04/17/17 18:57	1
Total HpCDD	11000		160		pg/g	☼	03/31/17 10:38	04/17/17 18:57	1
Total HpCDF	1900		160		pg/g	☼	03/31/17 10:38	04/17/17 18:57	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	111		40 - 135				03/31/17 10:38	04/17/17 18:57	1
13C-2,3,7,8-TCDF	110		40 - 135				03/31/17 10:38	04/17/17 18:57	1
13C-1,2,3,7,8-PeCDD	110		40 - 135				03/31/17 10:38	04/17/17 18:57	1
13C-1,2,3,7,8-PeCDF	115		40 - 135				03/31/17 10:38	04/17/17 18:57	1
13C-1,2,3,6,7,8-HxCDD	107		40 - 135				03/31/17 10:38	04/17/17 18:57	1
13C-1,2,3,4,7,8-HxCDF	112		40 - 135				03/31/17 10:38	04/17/17 18:57	1
13C-1,2,3,4,6,7,8-HpCDD	106		40 - 135				03/31/17 10:38	04/17/17 18:57	1
13C-1,2,3,4,6,7,8-HpCDF	110		40 - 135				03/31/17 10:38	04/17/17 18:57	1
13C-OCDD	127		40 - 135				03/31/17 10:38	04/17/17 18:57	1

Client Sample ID: HA-13A (12-18)

Lab Sample ID: 590-5615-12

Date Collected: 03/01/17 13:00

Matrix: Solid

Date Received: 03/03/17 16:15

Percent Solids: 82.2

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		1.2		pg/g	☼	03/31/17 10:38	04/17/17 19:43	1
2,3,7,8-TCDF	ND		1.2		pg/g	☼	03/31/17 10:38	04/17/17 19:43	1
1,2,3,7,8-PeCDD	ND		5.8		pg/g	☼	03/31/17 10:38	04/17/17 19:43	1
1,2,3,7,8-PeCDF	ND		5.8		pg/g	☼	03/31/17 10:38	04/17/17 19:43	1
2,3,4,7,8-PeCDF	ND		5.8		pg/g	☼	03/31/17 10:38	04/17/17 19:43	1
1,2,3,4,7,8-HxCDD	ND		5.8		pg/g	☼	03/31/17 10:38	04/17/17 19:43	1
1,2,3,6,7,8-HxCDD	ND		5.8		pg/g	☼	03/31/17 10:38	04/17/17 19:43	1
1,2,3,7,8,9-HxCDD	ND		5.8		pg/g	☼	03/31/17 10:38	04/17/17 19:43	1
1,2,3,4,7,8-HxCDF	ND		5.8		pg/g	☼	03/31/17 10:38	04/17/17 19:43	1
1,2,3,6,7,8-HxCDF	ND		5.8		pg/g	☼	03/31/17 10:38	04/17/17 19:43	1
1,2,3,7,8,9-HxCDF	ND		5.8		pg/g	☼	03/31/17 10:38	04/17/17 19:43	1
2,3,4,6,7,8-HxCDF	ND		5.8		pg/g	☼	03/31/17 10:38	04/17/17 19:43	1
1,2,3,4,6,7,8-HpCDD	19		5.8		pg/g	☼	03/31/17 10:38	04/17/17 19:43	1
1,2,3,4,6,7,8-HpCDF	ND		5.8		pg/g	☼	03/31/17 10:38	04/17/17 19:43	1
1,2,3,4,7,8,9-HpCDF	ND		5.8		pg/g	☼	03/31/17 10:38	04/17/17 19:43	1
OCDD	200		12		pg/g	☼	03/31/17 10:38	04/17/17 19:43	1
OCDF	12		12		pg/g	☼	03/31/17 10:38	04/17/17 19:43	1
Total TCDD	ND		1.2		pg/g	☼	03/31/17 10:38	04/17/17 19:43	1
Total TCDF	ND		1.2		pg/g	☼	03/31/17 10:38	04/17/17 19:43	1
Total PeCDD	ND		5.8		pg/g	☼	03/31/17 10:38	04/17/17 19:43	1
Total PeCDF	ND		5.8		pg/g	☼	03/31/17 10:38	04/17/17 19:43	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5615-3

Client Sample ID: HA-13A (12-18)

Lab Sample ID: 590-5615-12

Date Collected: 03/01/17 13:00

Matrix: Solid

Date Received: 03/03/17 16:15

Percent Solids: 82.2

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
Total HxCDD	ND		5.8		pg/g	☼	03/31/17 10:38	04/17/17 19:43	1
Total HxCDF	ND		5.8		pg/g	☼	03/31/17 10:38	04/17/17 19:43	1
Total HpCDD	32		5.8		pg/g	☼	03/31/17 10:38	04/17/17 19:43	1
Total HpCDF	6.6		5.8		pg/g	☼	03/31/17 10:38	04/17/17 19:43	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	101		40 - 135				03/31/17 10:38	04/17/17 19:43	1
13C-2,3,7,8-TCDF	99		40 - 135				03/31/17 10:38	04/17/17 19:43	1
13C-1,2,3,7,8-PeCDD	100		40 - 135				03/31/17 10:38	04/17/17 19:43	1
13C-1,2,3,7,8-PeCDF	105		40 - 135				03/31/17 10:38	04/17/17 19:43	1
13C-1,2,3,6,7,8-HxCDD	98		40 - 135				03/31/17 10:38	04/17/17 19:43	1
13C-1,2,3,4,7,8-HxCDF	101		40 - 135				03/31/17 10:38	04/17/17 19:43	1
13C-1,2,3,4,6,7,8-HpCDD	99		40 - 135				03/31/17 10:38	04/17/17 19:43	1
13C-1,2,3,4,6,7,8-HpCDF	103		40 - 135				03/31/17 10:38	04/17/17 19:43	1
13C-OCDD	118		40 - 135				03/31/17 10:38	04/17/17 19:43	1

Client Sample ID: HA-20A (12-18)

Lab Sample ID: 590-5615-16

Date Collected: 03/01/17 15:05

Matrix: Solid

Date Received: 03/03/17 16:15

Percent Solids: 71.8

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		6.0		pg/g	☼	03/31/17 10:38	04/18/17 00:08	1
2,3,7,8-TCDF	ND		6.0		pg/g	☼	03/31/17 10:38	04/18/17 00:08	1
1,2,3,7,8-PeCDD	ND		30		pg/g	☼	03/31/17 10:38	04/18/17 00:08	1
1,2,3,7,8-PeCDF	ND		30		pg/g	☼	03/31/17 10:38	04/18/17 00:08	1
2,3,4,7,8-PeCDF	ND		30		pg/g	☼	03/31/17 10:38	04/18/17 00:08	1
1,2,3,4,7,8-HxCDD	ND		30		pg/g	☼	03/31/17 10:38	04/18/17 00:08	1
1,2,3,6,7,8-HxCDD	35		30		pg/g	☼	03/31/17 10:38	04/18/17 00:08	1
1,2,3,7,8,9-HxCDD	ND		30		pg/g	☼	03/31/17 10:38	04/18/17 00:08	1
1,2,3,4,7,8-HxCDF	ND		30		pg/g	☼	03/31/17 10:38	04/18/17 00:08	1
1,2,3,6,7,8-HxCDF	ND		30		pg/g	☼	03/31/17 10:38	04/18/17 00:08	1
1,2,3,7,8,9-HxCDF	ND		30		pg/g	☼	03/31/17 10:38	04/18/17 00:08	1
2,3,4,6,7,8-HxCDF	ND		30		pg/g	☼	03/31/17 10:38	04/18/17 00:08	1
1,2,3,4,6,7,8-HpCDD	1100		30		pg/g	☼	03/31/17 10:38	04/18/17 00:08	1
1,2,3,4,6,7,8-HpCDF	190		30		pg/g	☼	03/31/17 10:38	04/18/17 00:08	1
1,2,3,4,7,8,9-HpCDF	ND		30		pg/g	☼	03/31/17 10:38	04/18/17 00:08	1
OCDD	9600		60		pg/g	☼	03/31/17 10:38	04/18/17 00:08	1
OCDF	1200		60		pg/g	☼	03/31/17 10:38	04/18/17 00:08	1
Total TCDD	ND		6.0		pg/g	☼	03/31/17 10:38	04/18/17 00:08	1
Total TCDF	ND		6.0		pg/g	☼	03/31/17 10:38	04/18/17 00:08	1
Total PeCDD	ND		30		pg/g	☼	03/31/17 10:38	04/18/17 00:08	1
Total PeCDF	ND		30		pg/g	☼	03/31/17 10:38	04/18/17 00:08	1
Total HxCDD	94		30		pg/g	☼	03/31/17 10:38	04/18/17 00:08	1
Total HxCDF	140		30		pg/g	☼	03/31/17 10:38	04/18/17 00:08	1
Total HpCDD	1700		30		pg/g	☼	03/31/17 10:38	04/18/17 00:08	1
Total HpCDF	820		30		pg/g	☼	03/31/17 10:38	04/18/17 00:08	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	95		40 - 135				03/31/17 10:38	04/18/17 00:08	1
13C-2,3,7,8-TCDF	99		40 - 135				03/31/17 10:38	04/18/17 00:08	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5615-3

Client Sample ID: HA-20A (12-18)

Date Collected: 03/01/17 15:05

Date Received: 03/03/17 16:15

Lab Sample ID: 590-5615-16

Matrix: Solid

Percent Solids: 71.8

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-1,2,3,7,8-PeCDD	95		40 - 135	03/31/17 10:38	04/18/17 00:08	1
13C-1,2,3,7,8-PeCDF	98		40 - 135	03/31/17 10:38	04/18/17 00:08	1
13C-1,2,3,6,7,8-HxCDD	96		40 - 135	03/31/17 10:38	04/18/17 00:08	1
13C-1,2,3,4,7,8-HxCDF	102		40 - 135	03/31/17 10:38	04/18/17 00:08	1
13C-1,2,3,4,6,7,8-HpCDD	105		40 - 135	03/31/17 10:38	04/18/17 00:08	1
13C-1,2,3,4,6,7,8-HpCDF	105		40 - 135	03/31/17 10:38	04/18/17 00:08	1
13C-OCDD	127		40 - 135	03/31/17 10:38	04/18/17 00:08	1

Client Sample ID: HA-40 (12-18)

Date Collected: 03/01/17 14:20

Date Received: 03/03/17 16:15

Lab Sample ID: 590-5615-24

Matrix: Solid

Percent Solids: 84.3

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		6.9		pg/g	☼	03/31/17 10:38	04/18/17 00:55	1
2,3,7,8-TCDF	ND		6.9		pg/g	☼	03/31/17 10:38	04/18/17 00:55	1
1,2,3,7,8-PeCDD	ND		35		pg/g	☼	03/31/17 10:38	04/18/17 00:55	1
1,2,3,7,8-PeCDF	ND		35		pg/g	☼	03/31/17 10:38	04/18/17 00:55	1
2,3,4,7,8-PeCDF	ND		35		pg/g	☼	03/31/17 10:38	04/18/17 00:55	1
1,2,3,4,7,8-HxCDD	ND		35		pg/g	☼	03/31/17 10:38	04/18/17 00:55	1
1,2,3,6,7,8-HxCDD	61		35		pg/g	☼	03/31/17 10:38	04/18/17 00:55	1
1,2,3,7,8,9-HxCDD	ND		35		pg/g	☼	03/31/17 10:38	04/18/17 00:55	1
1,2,3,4,7,8-HxCDF	ND		35		pg/g	☼	03/31/17 10:38	04/18/17 00:55	1
1,2,3,6,7,8-HxCDF	ND		35		pg/g	☼	03/31/17 10:38	04/18/17 00:55	1
1,2,3,7,8,9-HxCDF	ND		35		pg/g	☼	03/31/17 10:38	04/18/17 00:55	1
2,3,4,6,7,8-HxCDF	ND		35		pg/g	☼	03/31/17 10:38	04/18/17 00:55	1
1,2,3,4,6,7,8-HpCDD	1400		35		pg/g	☼	03/31/17 10:38	04/18/17 00:55	1
1,2,3,4,6,7,8-HpCDF	130		35		pg/g	☼	03/31/17 10:38	04/18/17 00:55	1
1,2,3,4,7,8,9-HpCDF	ND		35		pg/g	☼	03/31/17 10:38	04/18/17 00:55	1
OCDD	11000		69		pg/g	☼	03/31/17 10:38	04/18/17 00:55	1
OCDF	310		69		pg/g	☼	03/31/17 10:38	04/18/17 00:55	1
Total TCDD	ND		6.9		pg/g	☼	03/31/17 10:38	04/18/17 00:55	1
Total TCDF	ND		6.9		pg/g	☼	03/31/17 10:38	04/18/17 00:55	1
Total PeCDD	ND		35		pg/g	☼	03/31/17 10:38	04/18/17 00:55	1
Total PeCDF	ND		35		pg/g	☼	03/31/17 10:38	04/18/17 00:55	1
Total HxCDD	190		35		pg/g	☼	03/31/17 10:38	04/18/17 00:55	1
Total HxCDF	160		35		pg/g	☼	03/31/17 10:38	04/18/17 00:55	1
Total HpCDD	2300		35		pg/g	☼	03/31/17 10:38	04/18/17 00:55	1
Total HpCDF	410		35		pg/g	☼	03/31/17 10:38	04/18/17 00:55	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	111		40 - 135	03/31/17 10:38	04/18/17 00:55	1
13C-2,3,7,8-TCDF	99		40 - 135	03/31/17 10:38	04/18/17 00:55	1
13C-1,2,3,7,8-PeCDD	95		40 - 135	03/31/17 10:38	04/18/17 00:55	1
13C-1,2,3,7,8-PeCDF	96		40 - 135	03/31/17 10:38	04/18/17 00:55	1
13C-1,2,3,6,7,8-HxCDD	95		40 - 135	03/31/17 10:38	04/18/17 00:55	1
13C-1,2,3,4,7,8-HxCDF	97		40 - 135	03/31/17 10:38	04/18/17 00:55	1
13C-1,2,3,4,6,7,8-HpCDD	101		40 - 135	03/31/17 10:38	04/18/17 00:55	1
13C-1,2,3,4,6,7,8-HpCDF	102		40 - 135	03/31/17 10:38	04/18/17 00:55	1
13C-OCDD	119		40 - 135	03/31/17 10:38	04/18/17 00:55	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5615-3

Client Sample ID: HA-41 (12-18)

Lab Sample ID: 590-5615-27

Date Collected: 03/01/17 14:35

Matrix: Solid

Date Received: 03/03/17 16:15

Percent Solids: 83.7

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		8.9		pg/g	☼	03/31/17 10:38	04/18/17 01:41	1
2,3,7,8-TCDF	ND		8.9		pg/g	☼	03/31/17 10:38	04/18/17 01:41	1
1,2,3,7,8-PeCDD	ND		44		pg/g	☼	03/31/17 10:38	04/18/17 01:41	1
1,2,3,7,8-PeCDF	ND		44		pg/g	☼	03/31/17 10:38	04/18/17 01:41	1
2,3,4,7,8-PeCDF	ND		44		pg/g	☼	03/31/17 10:38	04/18/17 01:41	1
1,2,3,4,7,8-HxCDD	ND		44		pg/g	☼	03/31/17 10:38	04/18/17 01:41	1
1,2,3,6,7,8-HxCDD	71		44		pg/g	☼	03/31/17 10:38	04/18/17 01:41	1
1,2,3,7,8,9-HxCDD	ND		44		pg/g	☼	03/31/17 10:38	04/18/17 01:41	1
1,2,3,4,7,8-HxCDF	ND		44		pg/g	☼	03/31/17 10:38	04/18/17 01:41	1
1,2,3,6,7,8-HxCDF	ND		44		pg/g	☼	03/31/17 10:38	04/18/17 01:41	1
1,2,3,7,8,9-HxCDF	ND		44		pg/g	☼	03/31/17 10:38	04/18/17 01:41	1
2,3,4,6,7,8-HxCDF	ND		44		pg/g	☼	03/31/17 10:38	04/18/17 01:41	1
1,2,3,4,6,7,8-HpCDD	1700		44		pg/g	☼	03/31/17 10:38	04/18/17 01:41	1
1,2,3,4,6,7,8-HpCDF	220		44		pg/g	☼	03/31/17 10:38	04/18/17 01:41	1
1,2,3,4,7,8,9-HpCDF	ND		44		pg/g	☼	03/31/17 10:38	04/18/17 01:41	1
OCDD	14000		89		pg/g	☼	03/31/17 10:38	04/18/17 01:41	1
OCDF	410		89		pg/g	☼	03/31/17 10:38	04/18/17 01:41	1
Total TCDD	ND		8.9		pg/g	☼	03/31/17 10:38	04/18/17 01:41	1
Total TCDF	ND		8.9		pg/g	☼	03/31/17 10:38	04/18/17 01:41	1
Total PeCDD	ND		44		pg/g	☼	03/31/17 10:38	04/18/17 01:41	1
Total PeCDF	ND		44		pg/g	☼	03/31/17 10:38	04/18/17 01:41	1
Total HxCDD	270		44		pg/g	☼	03/31/17 10:38	04/18/17 01:41	1
Total HxCDF	250		44		pg/g	☼	03/31/17 10:38	04/18/17 01:41	1
Total HpCDD	2700		44		pg/g	☼	03/31/17 10:38	04/18/17 01:41	1
Total HpCDF	630		44		pg/g	☼	03/31/17 10:38	04/18/17 01:41	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	98		40 - 135	03/31/17 10:38	04/18/17 01:41	1
13C-2,3,7,8-TCDF	95		40 - 135	03/31/17 10:38	04/18/17 01:41	1
13C-1,2,3,7,8-PeCDD	97		40 - 135	03/31/17 10:38	04/18/17 01:41	1
13C-1,2,3,7,8-PeCDF	94		40 - 135	03/31/17 10:38	04/18/17 01:41	1
13C-1,2,3,6,7,8-HxCDD	90		40 - 135	03/31/17 10:38	04/18/17 01:41	1
13C-1,2,3,4,7,8-HxCDF	97		40 - 135	03/31/17 10:38	04/18/17 01:41	1
13C-1,2,3,4,6,7,8-HpCDD	101		40 - 135	03/31/17 10:38	04/18/17 01:41	1
13C-1,2,3,4,6,7,8-HpCDF	95		40 - 135	03/31/17 10:38	04/18/17 01:41	1
13C-OCDD	117		40 - 135	03/31/17 10:38	04/18/17 01:41	1

Client Sample ID: HA-42 (12-18)

Lab Sample ID: 590-5615-30

Date Collected: 03/01/17 12:34

Matrix: Solid

Date Received: 03/03/17 16:15

Percent Solids: 90.2

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		220		pg/g	☼	03/31/17 10:38	04/18/17 02:27	1
2,3,7,8-TCDF	ND		220		pg/g	☼	03/31/17 10:38	04/18/17 02:27	1
1,2,3,7,8-PeCDD	ND		1100		pg/g	☼	03/31/17 10:38	04/18/17 02:27	1
1,2,3,7,8-PeCDF	ND		1100		pg/g	☼	03/31/17 10:38	04/18/17 02:27	1
2,3,4,7,8-PeCDF	ND		1100		pg/g	☼	03/31/17 10:38	04/18/17 02:27	1
1,2,3,4,7,8-HxCDD	ND		1100		pg/g	☼	03/31/17 10:38	04/18/17 02:27	1
1,2,3,6,7,8-HxCDD	2800		1100		pg/g	☼	03/31/17 10:38	04/18/17 02:27	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5615-3

Client Sample ID: HA-42 (12-18)

Lab Sample ID: 590-5615-30

Date Collected: 03/01/17 12:34

Matrix: Solid

Date Received: 03/03/17 16:15

Percent Solids: 90.2

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,7,8,9-HxCDD	1800		1100		pg/g	☼	03/31/17 10:38	04/18/17 02:27	1
1,2,3,4,7,8-HxCDF	ND		1100		pg/g	☼	03/31/17 10:38	04/18/17 02:27	1
1,2,3,6,7,8-HxCDF	ND		1100		pg/g	☼	03/31/17 10:38	04/18/17 02:27	1
1,2,3,7,8,9-HxCDF	ND		1100		pg/g	☼	03/31/17 10:38	04/18/17 02:27	1
2,3,4,6,7,8-HxCDF	ND		1100		pg/g	☼	03/31/17 10:38	04/18/17 02:27	1
1,2,3,4,6,7,8-HpCDD	55000		1100		pg/g	☼	03/31/17 10:38	04/18/17 02:27	1
1,2,3,4,6,7,8-HpCDF	5700		1100		pg/g	☼	03/31/17 10:38	04/18/17 02:27	1
1,2,3,4,7,8,9-HpCDF	ND		1100		pg/g	☼	03/31/17 10:38	04/18/17 02:27	1
OCDD	330000		2200		pg/g	☼	03/31/17 10:38	04/18/17 02:27	1
OCDF	18000		2200		pg/g	☼	03/31/17 10:38	04/18/17 02:27	1
Total TCDD	ND		220		pg/g	☼	03/31/17 10:38	04/18/17 02:27	1
Total TCDF	ND		220		pg/g	☼	03/31/17 10:38	04/18/17 02:27	1
Total PeCDD	ND		1100		pg/g	☼	03/31/17 10:38	04/18/17 02:27	1
Total PeCDF	ND		1100		pg/g	☼	03/31/17 10:38	04/18/17 02:27	1
Total HxCDD	12000		1100		pg/g	☼	03/31/17 10:38	04/18/17 02:27	1
Total HxCDF	7900		1100		pg/g	☼	03/31/17 10:38	04/18/17 02:27	1
Total HpCDD	90000		1100		pg/g	☼	03/31/17 10:38	04/18/17 02:27	1
Total HpCDF	18000		1100		pg/g	☼	03/31/17 10:38	04/18/17 02:27	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	104		40 - 135				03/31/17 10:38	04/18/17 02:27	1
13C-2,3,7,8-TCDF	107		40 - 135				03/31/17 10:38	04/18/17 02:27	1
13C-1,2,3,7,8-PeCDD	109		40 - 135				03/31/17 10:38	04/18/17 02:27	1
13C-1,2,3,7,8-PeCDF	108		40 - 135				03/31/17 10:38	04/18/17 02:27	1
13C-1,2,3,6,7,8-HxCDD	104		40 - 135				03/31/17 10:38	04/18/17 02:27	1
13C-1,2,3,4,7,8-HxCDF	110		40 - 135				03/31/17 10:38	04/18/17 02:27	1
13C-1,2,3,4,6,7,8-HpCDD	104		40 - 135				03/31/17 10:38	04/18/17 02:27	1
13C-1,2,3,4,6,7,8-HpCDF	107		40 - 135				03/31/17 10:38	04/18/17 02:27	1
13C-OCDD	121		40 - 135				03/31/17 10:38	04/18/17 02:27	1

Client Sample ID: HA-43 (12-18)

Lab Sample ID: 590-5615-33

Date Collected: 03/01/17 09:40

Matrix: Solid

Date Received: 03/03/17 16:15

Percent Solids: 80.5

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		310		pg/g	☼	03/31/17 10:38	04/18/17 03:13	1
2,3,7,8-TCDF	ND		310		pg/g	☼	03/31/17 10:38	04/18/17 03:13	1
1,2,3,7,8-PeCDD	ND		1600		pg/g	☼	03/31/17 10:38	04/18/17 03:13	1
1,2,3,7,8-PeCDF	ND		1600		pg/g	☼	03/31/17 10:38	04/18/17 03:13	1
2,3,4,7,8-PeCDF	ND		1600		pg/g	☼	03/31/17 10:38	04/18/17 03:13	1
1,2,3,4,7,8-HxCDD	ND		1600		pg/g	☼	03/31/17 10:38	04/18/17 03:13	1
1,2,3,6,7,8-HxCDD	ND		1600		pg/g	☼	03/31/17 10:38	04/18/17 03:13	1
1,2,3,7,8,9-HxCDD	ND		1600		pg/g	☼	03/31/17 10:38	04/18/17 03:13	1
1,2,3,4,7,8-HxCDF	ND		1600		pg/g	☼	03/31/17 10:38	04/18/17 03:13	1
1,2,3,6,7,8-HxCDF	ND		1600		pg/g	☼	03/31/17 10:38	04/18/17 03:13	1
1,2,3,7,8,9-HxCDF	ND		1600		pg/g	☼	03/31/17 10:38	04/18/17 03:13	1
2,3,4,6,7,8-HxCDF	ND		1600		pg/g	☼	03/31/17 10:38	04/18/17 03:13	1
1,2,3,4,6,7,8-HpCDD	17000		1600		pg/g	☼	03/31/17 10:38	04/18/17 03:13	1
1,2,3,4,6,7,8-HpCDF	3100		1600		pg/g	☼	03/31/17 10:38	04/18/17 03:13	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5615-3

Client Sample ID: HA-43 (12-18)

Lab Sample ID: 590-5615-33

Date Collected: 03/01/17 09:40

Matrix: Solid

Date Received: 03/03/17 16:15

Percent Solids: 80.5

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,7,8,9-HpCDF	ND		1600		pg/g	☼	03/31/17 10:38	04/18/17 03:13	1
OCDD	230000		3100		pg/g	☼	03/31/17 10:38	04/18/17 03:13	1
OCDF	20000		3100		pg/g	☼	03/31/17 10:38	04/18/17 03:13	1
Total TCDD	ND		310		pg/g	☼	03/31/17 10:38	04/18/17 03:13	1
Total TCDF	ND		310		pg/g	☼	03/31/17 10:38	04/18/17 03:13	1
Total PeCDD	ND		1600		pg/g	☼	03/31/17 10:38	04/18/17 03:13	1
Total PeCDF	ND		1600		pg/g	☼	03/31/17 10:38	04/18/17 03:13	1
Total HxCDD	ND		1600		pg/g	☼	03/31/17 10:38	04/18/17 03:13	1
Total HxCDF	ND		1600		pg/g	☼	03/31/17 10:38	04/18/17 03:13	1
Total HpCDD	26000		1600		pg/g	☼	03/31/17 10:38	04/18/17 03:13	1
Total HpCDF	13000		1600		pg/g	☼	03/31/17 10:38	04/18/17 03:13	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	107		40 - 135				03/31/17 10:38	04/18/17 03:13	1
13C-2,3,7,8-TCDF	108		40 - 135				03/31/17 10:38	04/18/17 03:13	1
13C-1,2,3,7,8-PeCDD	112		40 - 135				03/31/17 10:38	04/18/17 03:13	1
13C-1,2,3,7,8-PeCDF	109		40 - 135				03/31/17 10:38	04/18/17 03:13	1
13C-1,2,3,6,7,8-HxCDD	103		40 - 135				03/31/17 10:38	04/18/17 03:13	1
13C-1,2,3,4,7,8-HxCDF	109		40 - 135				03/31/17 10:38	04/18/17 03:13	1
13C-1,2,3,4,6,7,8-HpCDD	105		40 - 135				03/31/17 10:38	04/18/17 03:13	1
13C-1,2,3,4,6,7,8-HpCDF	109		40 - 135				03/31/17 10:38	04/18/17 03:13	1
13C-OCDD	124		40 - 135				03/31/17 10:38	04/18/17 03:13	1

Client Sample ID: HA-44 (12-18)

Lab Sample ID: 590-5615-36

Date Collected: 03/01/17 10:00

Matrix: Solid

Date Received: 03/03/17 16:15

Percent Solids: 71.8

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		69		pg/g	☼	03/31/17 10:38	04/18/17 03:59	1
2,3,7,8-TCDF	ND		69		pg/g	☼	03/31/17 10:38	04/18/17 03:59	1
1,2,3,7,8-PeCDD	ND		350		pg/g	☼	03/31/17 10:38	04/18/17 03:59	1
1,2,3,7,8-PeCDF	ND		350		pg/g	☼	03/31/17 10:38	04/18/17 03:59	1
2,3,4,7,8-PeCDF	ND		350		pg/g	☼	03/31/17 10:38	04/18/17 03:59	1
1,2,3,4,7,8-HxCDD	ND		350		pg/g	☼	03/31/17 10:38	04/18/17 03:59	1
1,2,3,6,7,8-HxCDD	370		350		pg/g	☼	03/31/17 10:38	04/18/17 03:59	1
1,2,3,7,8,9-HxCDD	ND		350		pg/g	☼	03/31/17 10:38	04/18/17 03:59	1
1,2,3,4,7,8-HxCDF	ND		350		pg/g	☼	03/31/17 10:38	04/18/17 03:59	1
1,2,3,6,7,8-HxCDF	ND		350		pg/g	☼	03/31/17 10:38	04/18/17 03:59	1
1,2,3,7,8,9-HxCDF	ND		350		pg/g	☼	03/31/17 10:38	04/18/17 03:59	1
2,3,4,6,7,8-HxCDF	ND		350		pg/g	☼	03/31/17 10:38	04/18/17 03:59	1
1,2,3,4,6,7,8-HpCDD	8600		350		pg/g	☼	03/31/17 10:38	04/18/17 03:59	1
1,2,3,4,6,7,8-HpCDF	950		350		pg/g	☼	03/31/17 10:38	04/18/17 03:59	1
1,2,3,4,7,8,9-HpCDF	ND		350		pg/g	☼	03/31/17 10:38	04/18/17 03:59	1
OCDD	62000		690		pg/g	☼	03/31/17 10:38	04/18/17 03:59	1
OCDF	2300		690		pg/g	☼	03/31/17 10:38	04/18/17 03:59	1
Total TCDD	ND		69		pg/g	☼	03/31/17 10:38	04/18/17 03:59	1
Total TCDF	ND		69		pg/g	☼	03/31/17 10:38	04/18/17 03:59	1
Total PeCDD	ND		350		pg/g	☼	03/31/17 10:38	04/18/17 03:59	1
Total PeCDF	ND		350		pg/g	☼	03/31/17 10:38	04/18/17 03:59	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5615-3

Client Sample ID: HA-44 (12-18)

Lab Sample ID: 590-5615-36

Date Collected: 03/01/17 10:00

Matrix: Solid

Date Received: 03/03/17 16:15

Percent Solids: 71.8

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
Total HxCDD	1400		350		pg/g	☼	03/31/17 10:38	04/18/17 03:59	1
Total HxCDF	1100		350		pg/g	☼	03/31/17 10:38	04/18/17 03:59	1
Total HpCDD	14000		350		pg/g	☼	03/31/17 10:38	04/18/17 03:59	1
Total HpCDF	2900		350		pg/g	☼	03/31/17 10:38	04/18/17 03:59	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	107		40 - 135				03/31/17 10:38	04/18/17 03:59	1
13C-2,3,7,8-TCDF	106		40 - 135				03/31/17 10:38	04/18/17 03:59	1
13C-1,2,3,7,8-PeCDD	113		40 - 135				03/31/17 10:38	04/18/17 03:59	1
13C-1,2,3,7,8-PeCDF	113		40 - 135				03/31/17 10:38	04/18/17 03:59	1
13C-1,2,3,6,7,8-HxCDD	107		40 - 135				03/31/17 10:38	04/18/17 03:59	1
13C-1,2,3,4,7,8-HxCDF	115		40 - 135				03/31/17 10:38	04/18/17 03:59	1
13C-1,2,3,4,6,7,8-HpCDD	108		40 - 135				03/31/17 10:38	04/18/17 03:59	1
13C-1,2,3,4,6,7,8-HpCDF	113		40 - 135				03/31/17 10:38	04/18/17 03:59	1
13C-OCDD	124		40 - 135				03/31/17 10:38	04/18/17 03:59	1

Client Sample ID: HA-46 (12-18)

Lab Sample ID: 590-5615-42

Date Collected: 03/01/17 11:10

Matrix: Solid

Date Received: 03/03/17 16:15

Percent Solids: 71.6

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		1.3		pg/g	☼	03/31/17 10:38	04/18/17 04:45	1
2,3,7,8-TCDF	ND		1.3		pg/g	☼	03/31/17 10:38	04/18/17 04:45	1
1,2,3,7,8-PeCDD	ND		6.7		pg/g	☼	03/31/17 10:38	04/18/17 04:45	1
1,2,3,7,8-PeCDF	ND		6.7		pg/g	☼	03/31/17 10:38	04/18/17 04:45	1
2,3,4,7,8-PeCDF	ND		6.7		pg/g	☼	03/31/17 10:38	04/18/17 04:45	1
1,2,3,4,7,8-HxCDD	ND		6.7		pg/g	☼	03/31/17 10:38	04/18/17 04:45	1
1,2,3,6,7,8-HxCDD	ND		6.7		pg/g	☼	03/31/17 10:38	04/18/17 04:45	1
1,2,3,7,8,9-HxCDD	ND		6.7		pg/g	☼	03/31/17 10:38	04/18/17 04:45	1
1,2,3,4,7,8-HxCDF	ND		6.7		pg/g	☼	03/31/17 10:38	04/18/17 04:45	1
1,2,3,6,7,8-HxCDF	ND		6.7		pg/g	☼	03/31/17 10:38	04/18/17 04:45	1
1,2,3,7,8,9-HxCDF	ND		6.7		pg/g	☼	03/31/17 10:38	04/18/17 04:45	1
2,3,4,6,7,8-HxCDF	ND		6.7		pg/g	☼	03/31/17 10:38	04/18/17 04:45	1
1,2,3,4,6,7,8-HpCDD	42		6.7		pg/g	☼	03/31/17 10:38	04/18/17 04:45	1
1,2,3,4,6,7,8-HpCDF	ND		6.7		pg/g	☼	03/31/17 10:38	04/18/17 04:45	1
1,2,3,4,7,8,9-HpCDF	ND		6.7		pg/g	☼	03/31/17 10:38	04/18/17 04:45	1
OCDD	390		13		pg/g	☼	03/31/17 10:38	04/18/17 04:45	1
OCDF	15		13		pg/g	☼	03/31/17 10:38	04/18/17 04:45	1
Total TCDD	ND		1.3		pg/g	☼	03/31/17 10:38	04/18/17 04:45	1
Total TCDF	ND		1.3		pg/g	☼	03/31/17 10:38	04/18/17 04:45	1
Total PeCDD	ND		6.7		pg/g	☼	03/31/17 10:38	04/18/17 04:45	1
Total PeCDF	ND		6.7		pg/g	☼	03/31/17 10:38	04/18/17 04:45	1
Total HxCDD	ND		6.7		pg/g	☼	03/31/17 10:38	04/18/17 04:45	1
Total HxCDF	ND		6.7		pg/g	☼	03/31/17 10:38	04/18/17 04:45	1
Total HpCDD	74		6.7		pg/g	☼	03/31/17 10:38	04/18/17 04:45	1
Total HpCDF	8.4		6.7		pg/g	☼	03/31/17 10:38	04/18/17 04:45	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	102		40 - 135				03/31/17 10:38	04/18/17 04:45	1
13C-2,3,7,8-TCDF	102		40 - 135				03/31/17 10:38	04/18/17 04:45	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5615-3

Client Sample ID: HA-46 (12-18)

Date Collected: 03/01/17 11:10

Date Received: 03/03/17 16:15

Lab Sample ID: 590-5615-42

Matrix: Solid

Percent Solids: 71.6

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-1,2,3,7,8-PeCDD	103		40 - 135	03/31/17 10:38	04/18/17 04:45	1
13C-1,2,3,7,8-PeCDF	108		40 - 135	03/31/17 10:38	04/18/17 04:45	1
13C-1,2,3,6,7,8-HxCDD	100		40 - 135	03/31/17 10:38	04/18/17 04:45	1
13C-1,2,3,4,7,8-HxCDF	106		40 - 135	03/31/17 10:38	04/18/17 04:45	1
13C-1,2,3,4,6,7,8-HpCDD	101		40 - 135	03/31/17 10:38	04/18/17 04:45	1
13C-1,2,3,4,6,7,8-HpCDF	107		40 - 135	03/31/17 10:38	04/18/17 04:45	1
13C-OCDD	120		40 - 135	03/31/17 10:38	04/18/17 04:45	1

Client Sample ID: HA-47 (12-18)

Date Collected: 03/01/17 11:04

Date Received: 03/03/17 16:15

Lab Sample ID: 590-5615-45

Matrix: Solid

Percent Solids: 71.1

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		2.5		pg/g	☼	03/31/17 10:38	04/18/17 05:31	1
2,3,7,8-TCDF	ND		2.5		pg/g	☼	03/31/17 10:38	04/18/17 05:31	1
1,2,3,7,8-PeCDD	ND		13		pg/g	☼	03/31/17 10:38	04/18/17 05:31	1
1,2,3,7,8-PeCDF	ND		13		pg/g	☼	03/31/17 10:38	04/18/17 05:31	1
2,3,4,7,8-PeCDF	ND		13		pg/g	☼	03/31/17 10:38	04/18/17 05:31	1
1,2,3,4,7,8-HxCDD	ND		13		pg/g	☼	03/31/17 10:38	04/18/17 05:31	1
1,2,3,6,7,8-HxCDD	ND		13		pg/g	☼	03/31/17 10:38	04/18/17 05:31	1
1,2,3,7,8,9-HxCDD	ND		13		pg/g	☼	03/31/17 10:38	04/18/17 05:31	1
1,2,3,4,7,8-HxCDF	ND		13		pg/g	☼	03/31/17 10:38	04/18/17 05:31	1
1,2,3,6,7,8-HxCDF	ND		13		pg/g	☼	03/31/17 10:38	04/18/17 05:31	1
1,2,3,7,8,9-HxCDF	ND		13		pg/g	☼	03/31/17 10:38	04/18/17 05:31	1
2,3,4,6,7,8-HxCDF	ND		13		pg/g	☼	03/31/17 10:38	04/18/17 05:31	1
1,2,3,4,6,7,8-HpCDD	280		13		pg/g	☼	03/31/17 10:38	04/18/17 05:31	1
1,2,3,4,6,7,8-HpCDF	33		13		pg/g	☼	03/31/17 10:38	04/18/17 05:31	1
1,2,3,4,7,8,9-HpCDF	ND		13		pg/g	☼	03/31/17 10:38	04/18/17 05:31	1
OCDD	2900		25		pg/g	☼	03/31/17 10:38	04/18/17 05:31	1
OCDF	160		25		pg/g	☼	03/31/17 10:38	04/18/17 05:31	1
Total TCDD	ND		2.5		pg/g	☼	03/31/17 10:38	04/18/17 05:31	1
Total TCDF	ND		2.5		pg/g	☼	03/31/17 10:38	04/18/17 05:31	1
Total PeCDD	ND		13		pg/g	☼	03/31/17 10:38	04/18/17 05:31	1
Total PeCDF	ND		13		pg/g	☼	03/31/17 10:38	04/18/17 05:31	1
Total HxCDD	16		13		pg/g	☼	03/31/17 10:38	04/18/17 05:31	1
Total HxCDF	15		13		pg/g	☼	03/31/17 10:38	04/18/17 05:31	1
Total HpCDD	470		13		pg/g	☼	03/31/17 10:38	04/18/17 05:31	1
Total HpCDF	120		13		pg/g	☼	03/31/17 10:38	04/18/17 05:31	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	92		40 - 135	03/31/17 10:38	04/18/17 05:31	1
13C-2,3,7,8-TCDF	95		40 - 135	03/31/17 10:38	04/18/17 05:31	1
13C-1,2,3,7,8-PeCDD	100		40 - 135	03/31/17 10:38	04/18/17 05:31	1
13C-1,2,3,7,8-PeCDF	103		40 - 135	03/31/17 10:38	04/18/17 05:31	1
13C-1,2,3,6,7,8-HxCDD	95		40 - 135	03/31/17 10:38	04/18/17 05:31	1
13C-1,2,3,4,7,8-HxCDF	100		40 - 135	03/31/17 10:38	04/18/17 05:31	1
13C-1,2,3,4,6,7,8-HpCDD	99		40 - 135	03/31/17 10:38	04/18/17 05:31	1
13C-1,2,3,4,6,7,8-HpCDF	102		40 - 135	03/31/17 10:38	04/18/17 05:31	1
13C-OCDD	122		40 - 135	03/31/17 10:38	04/18/17 05:31	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5615-3

Client Sample ID: HA-49 (12-18)

Lab Sample ID: 590-5615-51

Date Collected: 03/01/17 11:40

Matrix: Solid

Date Received: 03/03/17 16:15

Percent Solids: 81.6

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		7.2		pg/g	☼	03/31/17 10:38	04/18/17 06:18	1
2,3,7,8-TCDF	ND		7.2		pg/g	☼	03/31/17 10:38	04/18/17 06:18	1
1,2,3,7,8-PeCDD	ND		36		pg/g	☼	03/31/17 10:38	04/18/17 06:18	1
1,2,3,7,8-PeCDF	ND		36		pg/g	☼	03/31/17 10:38	04/18/17 06:18	1
2,3,4,7,8-PeCDF	ND		36		pg/g	☼	03/31/17 10:38	04/18/17 06:18	1
1,2,3,4,7,8-HxCDD	ND		36		pg/g	☼	03/31/17 10:38	04/18/17 06:18	1
1,2,3,6,7,8-HxCDD	39		36		pg/g	☼	03/31/17 10:38	04/18/17 06:18	1
1,2,3,7,8,9-HxCDD	ND		36		pg/g	☼	03/31/17 10:38	04/18/17 06:18	1
1,2,3,4,7,8-HxCDF	ND		36		pg/g	☼	03/31/17 10:38	04/18/17 06:18	1
1,2,3,6,7,8-HxCDF	ND		36		pg/g	☼	03/31/17 10:38	04/18/17 06:18	1
1,2,3,7,8,9-HxCDF	ND		36		pg/g	☼	03/31/17 10:38	04/18/17 06:18	1
2,3,4,6,7,8-HxCDF	ND		36		pg/g	☼	03/31/17 10:38	04/18/17 06:18	1
1,2,3,4,6,7,8-HpCDD	990		36		pg/g	☼	03/31/17 10:38	04/18/17 06:18	1
1,2,3,4,6,7,8-HpCDF	160		36		pg/g	☼	03/31/17 10:38	04/18/17 06:18	1
1,2,3,4,7,8,9-HpCDF	ND		36		pg/g	☼	03/31/17 10:38	04/18/17 06:18	1
OCDD	8400		72		pg/g	☼	03/31/17 10:38	04/18/17 06:18	1
OCDF	500		72		pg/g	☼	03/31/17 10:38	04/18/17 06:18	1
Total TCDD	ND		7.2		pg/g	☼	03/31/17 10:38	04/18/17 06:18	1
Total TCDF	ND		7.2		pg/g	☼	03/31/17 10:38	04/18/17 06:18	1
Total PeCDD	ND		36		pg/g	☼	03/31/17 10:38	04/18/17 06:18	1
Total PeCDF	ND		36		pg/g	☼	03/31/17 10:38	04/18/17 06:18	1
Total HxCDD	98		36		pg/g	☼	03/31/17 10:38	04/18/17 06:18	1
Total HxCDF	170		36		pg/g	☼	03/31/17 10:38	04/18/17 06:18	1
Total HpCDD	1600		36		pg/g	☼	03/31/17 10:38	04/18/17 06:18	1
Total HpCDF	570		36		pg/g	☼	03/31/17 10:38	04/18/17 06:18	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	112		40 - 135	03/31/17 10:38	04/18/17 06:18	1
13C-2,3,7,8-TCDF	100		40 - 135	03/31/17 10:38	04/18/17 06:18	1
13C-1,2,3,7,8-PeCDD	96		40 - 135	03/31/17 10:38	04/18/17 06:18	1
13C-1,2,3,7,8-PeCDF	101		40 - 135	03/31/17 10:38	04/18/17 06:18	1
13C-1,2,3,6,7,8-HxCDD	100		40 - 135	03/31/17 10:38	04/18/17 06:18	1
13C-1,2,3,4,7,8-HxCDF	102		40 - 135	03/31/17 10:38	04/18/17 06:18	1
13C-1,2,3,4,6,7,8-HpCDD	107		40 - 135	03/31/17 10:38	04/18/17 06:18	1
13C-1,2,3,4,6,7,8-HpCDF	107		40 - 135	03/31/17 10:38	04/18/17 06:18	1
13C-OCDD	129		40 - 135	03/31/17 10:38	04/18/17 06:18	1

Client Sample ID: HA-51 (12-18)

Lab Sample ID: 590-5615-57

Date Collected: 03/01/17 15:00

Matrix: Solid

Date Received: 03/03/17 16:15

Percent Solids: 71.2

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		14		pg/g	☼	03/31/17 10:38	04/18/17 16:01	1
2,3,7,8-TCDF	ND		14		pg/g	☼	03/31/17 10:38	04/18/17 16:01	1
1,2,3,7,8-PeCDD	ND		72		pg/g	☼	03/31/17 10:38	04/18/17 16:01	1
1,2,3,7,8-PeCDF	ND		72		pg/g	☼	03/31/17 10:38	04/18/17 16:01	1
2,3,4,7,8-PeCDF	ND		72		pg/g	☼	03/31/17 10:38	04/18/17 16:01	1
1,2,3,4,7,8-HxCDD	ND		72		pg/g	☼	03/31/17 10:38	04/18/17 16:01	1
1,2,3,6,7,8-HxCDD	ND		72		pg/g	☼	03/31/17 10:38	04/18/17 16:01	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5615-3

Client Sample ID: HA-51 (12-18)

Lab Sample ID: 590-5615-57

Date Collected: 03/01/17 15:00

Matrix: Solid

Date Received: 03/03/17 16:15

Percent Solids: 71.2

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,7,8,9-HxCDD	ND		72		pg/g	☼	03/31/17 10:38	04/18/17 16:01	1
1,2,3,4,7,8-HxCDF	ND		72		pg/g	☼	03/31/17 10:38	04/18/17 16:01	1
1,2,3,6,7,8-HxCDF	ND		72		pg/g	☼	03/31/17 10:38	04/18/17 16:01	1
1,2,3,7,8,9-HxCDF	ND		72		pg/g	☼	03/31/17 10:38	04/18/17 16:01	1
2,3,4,6,7,8-HxCDF	ND		72		pg/g	☼	03/31/17 10:38	04/18/17 16:01	1
1,2,3,4,6,7,8-HpCDD	1700		72		pg/g	☼	03/31/17 10:38	04/18/17 16:01	1
1,2,3,4,6,7,8-HpCDF	170		72		pg/g	☼	03/31/17 10:38	04/18/17 16:01	1
1,2,3,4,7,8,9-HpCDF	ND		72		pg/g	☼	03/31/17 10:38	04/18/17 16:01	1
OCDD	16000		140		pg/g	☼	03/31/17 10:38	04/18/17 16:01	1
OCDF	1100		140		pg/g	☼	03/31/17 10:38	04/18/17 16:01	1
Total TCDD	ND		14		pg/g	☼	03/31/17 10:38	04/18/17 16:01	1
Total TCDF	ND		14		pg/g	☼	03/31/17 10:38	04/18/17 16:01	1
Total PeCDD	ND		72		pg/g	☼	03/31/17 10:38	04/18/17 16:01	1
Total PeCDF	ND		72		pg/g	☼	03/31/17 10:38	04/18/17 16:01	1
Total HxCDD	ND		72		pg/g	☼	03/31/17 10:38	04/18/17 16:01	1
Total HxCDF	130		72		pg/g	☼	03/31/17 10:38	04/18/17 16:01	1
Total HpCDD	2700		72		pg/g	☼	03/31/17 10:38	04/18/17 16:01	1
Total HpCDF	840		72		pg/g	☼	03/31/17 10:38	04/18/17 16:01	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	110		40 - 135	03/31/17 10:38	04/18/17 16:01	1
13C-2,3,7,8-TCDF	90		40 - 135	03/31/17 10:38	04/18/17 16:01	1
13C-1,2,3,7,8-PeCDD	88		40 - 135	03/31/17 10:38	04/18/17 16:01	1
13C-1,2,3,7,8-PeCDF	89		40 - 135	03/31/17 10:38	04/18/17 16:01	1
13C-1,2,3,6,7,8-HxCDD	90		40 - 135	03/31/17 10:38	04/18/17 16:01	1
13C-1,2,3,4,7,8-HxCDF	91		40 - 135	03/31/17 10:38	04/18/17 16:01	1
13C-1,2,3,4,6,7,8-HpCDD	93		40 - 135	03/31/17 10:38	04/18/17 16:01	1
13C-1,2,3,4,6,7,8-HpCDF	93		40 - 135	03/31/17 10:38	04/18/17 16:01	1
13C-OCDD	109		40 - 135	03/31/17 10:38	04/18/17 16:01	1

Client Sample ID: HA-53 (12-18)

Lab Sample ID: 590-5615-63

Date Collected: 03/01/17 15:24

Matrix: Solid

Date Received: 03/03/17 16:15

Percent Solids: 64.4

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		88		pg/g	☼	03/31/17 10:38	04/18/17 16:47	1
2,3,7,8-TCDF	ND		88		pg/g	☼	03/31/17 10:38	04/18/17 16:47	1
1,2,3,7,8-PeCDD	ND		440		pg/g	☼	03/31/17 10:38	04/18/17 16:47	1
1,2,3,7,8-PeCDF	ND		440		pg/g	☼	03/31/17 10:38	04/18/17 16:47	1
2,3,4,7,8-PeCDF	ND		440		pg/g	☼	03/31/17 10:38	04/18/17 16:47	1
1,2,3,4,7,8-HxCDD	ND		440		pg/g	☼	03/31/17 10:38	04/18/17 16:47	1
1,2,3,6,7,8-HxCDD	ND		440		pg/g	☼	03/31/17 10:38	04/18/17 16:47	1
1,2,3,7,8,9-HxCDD	ND		440		pg/g	☼	03/31/17 10:38	04/18/17 16:47	1
1,2,3,4,7,8-HxCDF	ND		440		pg/g	☼	03/31/17 10:38	04/18/17 16:47	1
1,2,3,6,7,8-HxCDF	ND		440		pg/g	☼	03/31/17 10:38	04/18/17 16:47	1
1,2,3,7,8,9-HxCDF	ND		440		pg/g	☼	03/31/17 10:38	04/18/17 16:47	1
2,3,4,6,7,8-HxCDF	ND		440		pg/g	☼	03/31/17 10:38	04/18/17 16:47	1
1,2,3,4,6,7,8-HpCDD	4400		440		pg/g	☼	03/31/17 10:38	04/18/17 16:47	1
1,2,3,4,6,7,8-HpCDF	ND		440		pg/g	☼	03/31/17 10:38	04/18/17 16:47	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
 Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5615-3

Client Sample ID: HA-53 (12-18)

Lab Sample ID: 590-5615-63

Date Collected: 03/01/17 15:24

Matrix: Solid

Date Received: 03/03/17 16:15

Percent Solids: 64.4

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,7,8,9-HpCDF	ND		440		pg/g	☼	03/31/17 10:38	04/18/17 16:47	1
OCDD	38000		880		pg/g	☼	03/31/17 10:38	04/18/17 16:47	1
OCDF	1600		880		pg/g	☼	03/31/17 10:38	04/18/17 16:47	1
Total TCDD	ND		88		pg/g	☼	03/31/17 10:38	04/18/17 16:47	1
Total TCDF	ND		88		pg/g	☼	03/31/17 10:38	04/18/17 16:47	1
Total PeCDD	ND		440		pg/g	☼	03/31/17 10:38	04/18/17 16:47	1
Total PeCDF	ND		440		pg/g	☼	03/31/17 10:38	04/18/17 16:47	1
Total HxCDD	ND		440		pg/g	☼	03/31/17 10:38	04/18/17 16:47	1
Total HxCDF	ND		440		pg/g	☼	03/31/17 10:38	04/18/17 16:47	1
Total HpCDD	8000		440		pg/g	☼	03/31/17 10:38	04/18/17 16:47	1
Total HpCDF	880		440		pg/g	☼	03/31/17 10:38	04/18/17 16:47	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	105		40 - 135				03/31/17 10:38	04/18/17 16:47	1
13C-2,3,7,8-TCDF	106		40 - 135				03/31/17 10:38	04/18/17 16:47	1
13C-1,2,3,7,8-PeCDD	109		40 - 135				03/31/17 10:38	04/18/17 16:47	1
13C-1,2,3,7,8-PeCDF	109		40 - 135				03/31/17 10:38	04/18/17 16:47	1
13C-1,2,3,6,7,8-HxCDD	105		40 - 135				03/31/17 10:38	04/18/17 16:47	1
13C-1,2,3,4,7,8-HxCDF	112		40 - 135				03/31/17 10:38	04/18/17 16:47	1
13C-1,2,3,4,6,7,8-HpCDD	107		40 - 135				03/31/17 10:38	04/18/17 16:47	1
13C-1,2,3,4,6,7,8-HpCDF	112		40 - 135				03/31/17 10:38	04/18/17 16:47	1
13C-OCDD	125		40 - 135				03/31/17 10:38	04/18/17 16:47	1

QC Sample Results

Client: GeoEngineers Inc
 Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5615-3

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Lab Sample ID: MB 320-157505/1-A
Matrix: Solid
Analysis Batch: 160062

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 157505

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		1.0		pg/g		03/31/17 10:38	04/17/17 14:20	1
2,3,7,8-TCDF	ND		1.0		pg/g		03/31/17 10:38	04/17/17 14:20	1
1,2,3,7,8-PeCDD	ND		5.0		pg/g		03/31/17 10:38	04/17/17 14:20	1
1,2,3,7,8-PeCDF	ND		5.0		pg/g		03/31/17 10:38	04/17/17 14:20	1
2,3,4,7,8-PeCDF	ND		5.0		pg/g		03/31/17 10:38	04/17/17 14:20	1
1,2,3,4,7,8-HxCDD	ND		5.0		pg/g		03/31/17 10:38	04/17/17 14:20	1
1,2,3,6,7,8-HxCDD	ND		5.0		pg/g		03/31/17 10:38	04/17/17 14:20	1
1,2,3,7,8,9-HxCDD	ND		5.0		pg/g		03/31/17 10:38	04/17/17 14:20	1
1,2,3,4,7,8-HxCDF	ND		5.0		pg/g		03/31/17 10:38	04/17/17 14:20	1
1,2,3,6,7,8-HxCDF	ND		5.0		pg/g		03/31/17 10:38	04/17/17 14:20	1
1,2,3,7,8,9-HxCDF	ND		5.0		pg/g		03/31/17 10:38	04/17/17 14:20	1
2,3,4,6,7,8-HxCDF	ND		5.0		pg/g		03/31/17 10:38	04/17/17 14:20	1
1,2,3,4,6,7,8-HpCDD	ND		5.0		pg/g		03/31/17 10:38	04/17/17 14:20	1
1,2,3,4,6,7,8-HpCDF	ND		5.0		pg/g		03/31/17 10:38	04/17/17 14:20	1
1,2,3,4,7,8,9-HpCDF	ND		5.0		pg/g		03/31/17 10:38	04/17/17 14:20	1
OCDD	ND		10		pg/g		03/31/17 10:38	04/17/17 14:20	1
OCDF	ND		10		pg/g		03/31/17 10:38	04/17/17 14:20	1
Total TCDD	ND		1.0		pg/g		03/31/17 10:38	04/17/17 14:20	1
Total TCDF	ND		1.0		pg/g		03/31/17 10:38	04/17/17 14:20	1
Total PeCDD	ND		5.0		pg/g		03/31/17 10:38	04/17/17 14:20	1
Total PeCDF	ND		5.0		pg/g		03/31/17 10:38	04/17/17 14:20	1
Total HxCDD	ND		5.0		pg/g		03/31/17 10:38	04/17/17 14:20	1
Total HxCDF	ND		5.0		pg/g		03/31/17 10:38	04/17/17 14:20	1
Total HpCDD	ND		5.0		pg/g		03/31/17 10:38	04/17/17 14:20	1
Total HpCDF	ND		5.0		pg/g		03/31/17 10:38	04/17/17 14:20	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	97		40 - 135	03/31/17 10:38	04/17/17 14:20	1
13C-2,3,7,8-TCDF	101		40 - 135	03/31/17 10:38	04/17/17 14:20	1
13C-1,2,3,7,8-PeCDD	105		40 - 135	03/31/17 10:38	04/17/17 14:20	1
13C-1,2,3,7,8-PeCDF	102		40 - 135	03/31/17 10:38	04/17/17 14:20	1
13C-1,2,3,6,7,8-HxCDD	102		40 - 135	03/31/17 10:38	04/17/17 14:20	1
13C-1,2,3,4,7,8-HxCDF	100		40 - 135	03/31/17 10:38	04/17/17 14:20	1
13C-1,2,3,4,6,7,8-HpCDD	95		40 - 135	03/31/17 10:38	04/17/17 14:20	1
13C-1,2,3,4,6,7,8-HpCDF	100		40 - 135	03/31/17 10:38	04/17/17 14:20	1
13C-OCDD	110		40 - 135	03/31/17 10:38	04/17/17 14:20	1

Lab Sample ID: LCS 320-157505/2-A
Matrix: Solid
Analysis Batch: 160062

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 157505

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
2,3,7,8-TCDD	20.0	20.8		pg/g		104	77 - 130
2,3,7,8-TCDF	20.0	21.7		pg/g		109	79 - 137
1,2,3,7,8-PeCDD	100	104		pg/g		104	79 - 134
1,2,3,7,8-PeCDF	100	108		pg/g		108	81 - 134
2,3,4,7,8-PeCDF	100	112		pg/g		112	76 - 132
1,2,3,4,7,8-HxCDD	100	102		pg/g		102	65 - 144

TestAmerica Spokane

QC Sample Results

Client: GeoEngineers Inc
 Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5615-3

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCS 320-157505/2-A
Matrix: Solid
Analysis Batch: 160062

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 157505

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
1,2,3,6,7,8-HxCDD	100	109		pg/g		109	73 - 147
1,2,3,7,8,9-HxCDD	100	104		pg/g		104	80 - 143
1,2,3,4,7,8-HxCDF	100	111		pg/g		111	72 - 140
1,2,3,6,7,8-HxCDF	100	116		pg/g		116	63 - 152
1,2,3,7,8,9-HxCDF	100	120		pg/g		120	72 - 152
2,3,4,6,7,8-HxCDF	100	117		pg/g		117	72 - 151
1,2,3,4,6,7,8-HpCDD	100	107		pg/g		107	86 - 134
1,2,3,4,6,7,8-HpCDF	100	104		pg/g		104	81 - 137
1,2,3,4,7,8,9-HpCDF	100	117		pg/g		117	79 - 139
OCDD	200	202		pg/g		101	80 - 137
OCDF	200	211		pg/g		106	75 - 141

Isotope Dilution	LCS LCS		Limits
	%Recovery	Qualifier	
13C-2,3,7,8-TCDD	93		40 - 135
13C-2,3,7,8-TCDF	94		40 - 135
13C-1,2,3,7,8-PeCDD	101		40 - 135
13C-1,2,3,7,8-PeCDF	97		40 - 135
13C-1,2,3,6,7,8-HxCDD	97		40 - 135
13C-1,2,3,4,7,8-HxCDF	97		40 - 135
13C-1,2,3,4,6,7,8-HpCDD	93		40 - 135
13C-1,2,3,4,6,7,8-HpCDF	94		40 - 135
13C-OCDD	109		40 - 135

Lab Sample ID: LCSD 320-157505/3-A
Matrix: Solid
Analysis Batch: 160062

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 157505

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
2,3,7,8-TCDD	20.0	20.4		pg/g		102	77 - 130	2	20
2,3,7,8-TCDF	20.0	21.7		pg/g		108	79 - 137	0	20
1,2,3,7,8-PeCDD	100	103		pg/g		103	79 - 134	1	20
1,2,3,7,8-PeCDF	100	108		pg/g		108	81 - 134	0	20
2,3,4,7,8-PeCDF	100	107		pg/g		107	76 - 132	4	20
1,2,3,4,7,8-HxCDD	100	105		pg/g		105	65 - 144	3	20
1,2,3,6,7,8-HxCDD	100	110		pg/g		110	73 - 147	0	20
1,2,3,7,8,9-HxCDD	100	107		pg/g		107	80 - 143	2	20
1,2,3,4,7,8-HxCDF	100	111		pg/g		111	72 - 140	0	20
1,2,3,6,7,8-HxCDF	100	116		pg/g		116	63 - 152	0	20
1,2,3,7,8,9-HxCDF	100	119		pg/g		119	72 - 152	1	20
2,3,4,6,7,8-HxCDF	100	117		pg/g		117	72 - 151	0	20
1,2,3,4,6,7,8-HpCDD	100	107		pg/g		107	86 - 134	0	20
1,2,3,4,6,7,8-HpCDF	100	102		pg/g		102	81 - 137	2	20
1,2,3,4,7,8,9-HpCDF	100	117		pg/g		117	79 - 139	0	20
OCDD	200	201		pg/g		101	80 - 137	0	20
OCDF	200	209		pg/g		105	75 - 141	1	20

Isotope Dilution	LCSD LCSD		Limits
	%Recovery	Qualifier	
13C-2,3,7,8-TCDD	99		40 - 135

TestAmerica Spokane

QC Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5615-3

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCSD 320-157505/3-A
Matrix: Solid
Analysis Batch: 160062

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 157505

<i>Isotope Dilution</i>	<i>LCSD LCSD</i>		<i>Limits</i>
	<i>%Recovery</i>	<i>Qualifier</i>	
13C-2,3,7,8-TCDF	97		40 - 135
13C-1,2,3,7,8-PeCDD	105		40 - 135
13C-1,2,3,7,8-PeCDF	102		40 - 135
13C-1,2,3,6,7,8-HxCDD	100		40 - 135
13C-1,2,3,4,7,8-HxCDF	101		40 - 135
13C-1,2,3,4,6,7,8-HpCDD	99		40 - 135
13C-1,2,3,4,6,7,8-HpCDF	101		40 - 135
13C-OCDD	116		40 - 135

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5615-3

Client Sample ID: HA-3A (12-18)

Date Collected: 03/01/17 10:35

Date Received: 03/03/17 16:15

Lab Sample ID: 590-5615-3

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			158060	04/04/17 17:03	CFR	TAL SAC

Client Sample ID: HA-3A (12-18)

Date Collected: 03/01/17 10:35

Date Received: 03/03/17 16:15

Lab Sample ID: 590-5615-3

Matrix: Solid

Percent Solids: 67.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			10.33 g	4000 uL	157505	03/31/17 10:38	DXD	TAL SAC
Total/NA	Analysis	8290A		1			160062	04/17/17 17:25	SMA	TAL SAC

Client Sample ID: HA-4A (12-18)

Date Collected: 03/01/17 10:00

Date Received: 03/03/17 16:15

Lab Sample ID: 590-5615-6

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			158060	04/04/17 17:03	CFR	TAL SAC

Client Sample ID: HA-4A (12-18)

Date Collected: 03/01/17 10:00

Date Received: 03/03/17 16:15

Lab Sample ID: 590-5615-6

Matrix: Solid

Percent Solids: 79.2

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			9.94 g	1538 uL	157505	03/31/17 10:38	DXD	TAL SAC
Total/NA	Analysis	8290A		1			160062	04/17/17 18:11	SMA	TAL SAC

Client Sample ID: HA-6A (12-18)

Date Collected: 03/01/17 11:42

Date Received: 03/03/17 16:15

Lab Sample ID: 590-5615-8

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			158064	04/04/17 17:34	CFR	TAL SAC

Client Sample ID: HA-6A (12-18)

Date Collected: 03/01/17 11:42

Date Received: 03/03/17 16:15

Lab Sample ID: 590-5615-8

Matrix: Solid

Percent Solids: 84.9

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			10.32 g	571 uL	157505	03/31/17 10:38	DXD	TAL SAC
Total/NA	Analysis	8290A		1			160062	04/17/17 18:57	SMA	TAL SAC

TestAmerica Spokane

Lab Chronicle

Client: GeoEngineers Inc
 Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5615-3

Client Sample ID: HA-13A (12-18)

Lab Sample ID: 590-5615-12

Date Collected: 03/01/17 13:00

Matrix: Solid

Date Received: 03/03/17 16:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			158064	04/04/17 17:34	CFR	TAL SAC

Client Sample ID: HA-13A (12-18)

Lab Sample ID: 590-5615-12

Date Collected: 03/01/17 13:00

Matrix: Solid

Date Received: 03/03/17 16:15

Percent Solids: 82.2

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			10.42 g	20 uL	157505	03/31/17 10:38	DXD	TAL SAC
Total/NA	Analysis	8290A		1			160062	04/17/17 19:43	SMA	TAL SAC

Client Sample ID: HA-20A (12-18)

Lab Sample ID: 590-5615-16

Date Collected: 03/01/17 15:05

Matrix: Solid

Date Received: 03/03/17 16:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			158064	04/04/17 17:34	CFR	TAL SAC

Client Sample ID: HA-20A (12-18)

Lab Sample ID: 590-5615-16

Date Collected: 03/01/17 15:05

Matrix: Solid

Date Received: 03/03/17 16:15

Percent Solids: 71.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			10.05 g	87 uL	157505	03/31/17 10:38	DXD	TAL SAC
Total/NA	Analysis	8290A		1			160064	04/18/17 00:08	SMA	TAL SAC

Client Sample ID: HA-40 (12-18)

Lab Sample ID: 590-5615-24

Date Collected: 03/01/17 14:20

Matrix: Solid

Date Received: 03/03/17 16:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			158064	04/04/17 17:34	CFR	TAL SAC

Client Sample ID: HA-40 (12-18)

Lab Sample ID: 590-5615-24

Date Collected: 03/01/17 14:20

Matrix: Solid

Date Received: 03/03/17 16:15

Percent Solids: 84.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			10.07 g	118 uL	157505	03/31/17 10:38	DXD	TAL SAC
Total/NA	Analysis	8290A		1			160064	04/18/17 00:55	SMA	TAL SAC

TestAmerica Spokane

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5615-3

Client Sample ID: HA-41 (12-18)

Date Collected: 03/01/17 14:35

Date Received: 03/03/17 16:15

Lab Sample ID: 590-5615-27

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			158064	04/04/17 17:34	CFR	TAL SAC

Client Sample ID: HA-41 (12-18)

Date Collected: 03/01/17 14:35

Date Received: 03/03/17 16:15

Lab Sample ID: 590-5615-27

Matrix: Solid

Percent Solids: 83.7

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			10.34 g	154 uL	157505	03/31/17 10:38	DXD	TAL SAC
Total/NA	Analysis	8290A		1			160064	04/18/17 01:41	SMA	TAL SAC

Client Sample ID: HA-42 (12-18)

Date Collected: 03/01/17 12:34

Date Received: 03/03/17 16:15

Lab Sample ID: 590-5615-30

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			158064	04/04/17 17:34	CFR	TAL SAC

Client Sample ID: HA-42 (12-18)

Date Collected: 03/01/17 12:34

Date Received: 03/03/17 16:15

Lab Sample ID: 590-5615-30

Matrix: Solid

Percent Solids: 90.2

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			10.10 g	4000 uL	157505	03/31/17 10:38	DXD	TAL SAC
Total/NA	Analysis	8290A		1			160064	04/18/17 02:27	SMA	TAL SAC

Client Sample ID: HA-43 (12-18)

Date Collected: 03/01/17 09:40

Date Received: 03/03/17 16:15

Lab Sample ID: 590-5615-33

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			158064	04/04/17 17:34	CFR	TAL SAC

Client Sample ID: HA-43 (12-18)

Date Collected: 03/01/17 09:40

Date Received: 03/03/17 16:15

Lab Sample ID: 590-5615-33

Matrix: Solid

Percent Solids: 80.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			9.94 g	5000 uL	157505	03/31/17 10:38	DXD	TAL SAC
Total/NA	Analysis	8290A		1			160064	04/18/17 03:13	SMA	TAL SAC

TestAmerica Spokane

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5615-3

Client Sample ID: HA-44 (12-18)

Date Collected: 03/01/17 10:00

Date Received: 03/03/17 16:15

Lab Sample ID: 590-5615-36

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			158064	04/04/17 17:34	CFR	TAL SAC

Client Sample ID: HA-44 (12-18)

Date Collected: 03/01/17 10:00

Date Received: 03/03/17 16:15

Lab Sample ID: 590-5615-36

Matrix: Solid

Percent Solids: 71.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			10.06 g	1000 uL	157505	03/31/17 10:38	DXD	TAL SAC
Total/NA	Analysis	8290A		1			160064	04/18/17 03:59	SMA	TAL SAC

Client Sample ID: HA-46 (12-18)

Date Collected: 03/01/17 11:10

Date Received: 03/03/17 16:15

Lab Sample ID: 590-5615-42

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			158064	04/04/17 17:34	CFR	TAL SAC

Client Sample ID: HA-46 (12-18)

Date Collected: 03/01/17 11:10

Date Received: 03/03/17 16:15

Lab Sample ID: 590-5615-42

Matrix: Solid

Percent Solids: 71.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			10.42 g	20 uL	157505	03/31/17 10:38	DXD	TAL SAC
Total/NA	Analysis	8290A		1			160064	04/18/17 04:45	SMA	TAL SAC

Client Sample ID: HA-47 (12-18)

Date Collected: 03/01/17 11:04

Date Received: 03/03/17 16:15

Lab Sample ID: 590-5615-45

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			158064	04/04/17 17:34	CFR	TAL SAC

Client Sample ID: HA-47 (12-18)

Date Collected: 03/01/17 11:04

Date Received: 03/03/17 16:15

Lab Sample ID: 590-5615-45

Matrix: Solid

Percent Solids: 71.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			9.99 g	36 uL	157505	03/31/17 10:38	DXD	TAL SAC
Total/NA	Analysis	8290A		1			160064	04/18/17 05:31	SMA	TAL SAC

TestAmerica Spokane

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5615-3

Client Sample ID: HA-49 (12-18)

Date Collected: 03/01/17 11:40

Date Received: 03/03/17 16:15

Lab Sample ID: 590-5615-51

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			158064	04/04/17 17:34	CFR	TAL SAC

Client Sample ID: HA-49 (12-18)

Date Collected: 03/01/17 11:40

Date Received: 03/03/17 16:15

Lab Sample ID: 590-5615-51

Matrix: Solid

Percent Solids: 81.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			10.07 g	118 uL	157505	03/31/17 10:38	DXD	TAL SAC
Total/NA	Analysis	8290A		1			160064	04/18/17 06:18	SMA	TAL SAC

Client Sample ID: HA-51 (12-18)

Date Collected: 03/01/17 15:00

Date Received: 03/03/17 16:15

Lab Sample ID: 590-5615-57

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			158064	04/04/17 17:34	CFR	TAL SAC

Client Sample ID: HA-51 (12-18)

Date Collected: 03/01/17 15:00

Date Received: 03/03/17 16:15

Lab Sample ID: 590-5615-57

Matrix: Solid

Percent Solids: 71.2

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			9.82 g	200 uL	157505	03/31/17 10:38	DXD	TAL SAC
Total/NA	Analysis	8290A		1			160066	04/18/17 16:01	ALM	TAL SAC

Client Sample ID: HA-53 (12-18)

Date Collected: 03/01/17 15:24

Date Received: 03/03/17 16:15

Lab Sample ID: 590-5615-63

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			158064	04/04/17 17:34	CFR	TAL SAC

Client Sample ID: HA-53 (12-18)

Date Collected: 03/01/17 15:24

Date Received: 03/03/17 16:15

Lab Sample ID: 590-5615-63

Matrix: Solid

Percent Solids: 64.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			9.78 g	1111 uL	157505	03/31/17 10:38	DXD	TAL SAC
Total/NA	Analysis	8290A		1			160066	04/18/17 16:47	ALM	TAL SAC

Laboratory References:

TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

TestAmerica Spokane

Accreditation/Certification Summary

Client: GeoEngineers Inc
 Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5615-3

Laboratory: TestAmerica Spokane

The accreditations/certifications listed below are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Washington	State Program	10	C569	01-06-18

Laboratory: TestAmerica Sacramento

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska (UST)	State Program	10	UST-055	12-18-17
Arizona	State Program	9	AZ0708	08-11-17
Arkansas DEQ	State Program	6	88-0691	06-17-17
California	State Program	9	2897	01-31-18
Colorado	State Program	8	CA00044	08-31-17
Connecticut	State Program	1	PH-0691	06-30-17
Florida	NELAP	4	E87570	06-30-17
Hawaii	State Program	9	N/A	01-29-18
Illinois	NELAP	5	200060	03-17-18
Kansas	NELAP	7	E-10375	10-31-17
L-A-B	DoD ELAP		L2468	01-20-18
Louisiana	NELAP	6	30612	06-30-17
Maine	State Program	1	CA0004	04-18-18
Michigan	State Program	5	9947	01-31-18
Nevada	State Program	9	CA00044	07-31-17
New Hampshire	NELAP	1	2997	04-18-18
New Jersey	NELAP	2	CA005	06-30-17
New York	NELAP	2	11666	04-01-18
Oregon	NELAP	10	4040	01-28-18
Pennsylvania	NELAP	3	68-01272	03-31-18
Texas	NELAP	6	T104704399	07-31-17
US Fish & Wildlife	Federal		LE148388-0	10-31-17
USDA	Federal		P330-11-00436	12-30-17
USEPA UCMR	Federal	1	CA00044	11-06-18
Utah	NELAP	8	CA00044	02-28-18
Virginia	NELAP	3	460278	03-14-18
Washington	State Program	10	C581	05-05-17
West Virginia (DW)	State Program	3	9930C	12-31-17
Wyoming	State Program	8	8TMS-L	01-29-17 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Method Summary

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5615-3

Method	Method Description	Protocol	Laboratory
8290A	Dioxins and Furans (HRGC/HRMS)	SW846	TAL SAC
D 2216	Percent Moisture	ASTM	TAL SAC

Protocol References:

ASTM = ASTM International

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600



TestAmerica Spokane

11922 East 1st Ave
 Spokane, WA 99206
 Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: <u>MJP/SWR</u>	LAB #	No(s):	GOC No: 590-2353-810.1
Client Contact: Scott Lathen	Phone: <u>425-293-9560</u>	RE		Page: Page 1 of 10
Company: GeoEngineers Inc				Job #:

Address: 523 East Second Ave	Due Date Requested: <u>STD</u>	Analysis Requested			Preservation Codes:
City: Spokane	TAT Requested (days): <u>STD</u> → <u>Need enough time to run follow-up</u>				
State, Zip: WA, 99202	PO #: Purchase Order not required				
Phone: 509-251-5239(Tel)	WO #:				
Email: slathen@geoengineers.com	Project #: 59001108	Field Filtered Sample (Yes or No) Perform MS/MSD (Yes or No) <u>Dioxins/Furans EPA 8290A</u> <u>PCP EPA 8270 SIM</u>	Total Number of containers		Other:
Project Name: Colville Post and Pole/0504-098-01	SSOW#:				
Site:					

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Total Number of containers	Special Instructions/Note:
HA-3A(0-6)	3-1-17	1025	G	Solid				- Run selected
HA-3A(6-12)	|	1030	|	Solid	X			samples for checked
HA-3A(12-18)	|	1035	|	Solid				analysis, hold
HA-4A(0-6)	|	0950	|	Solid				remainder for
HA-4A(6-12)	|	0955	|	Solid	X			possible follow-up
HA-4A(12-18)	|	1000	|	Solid				analysis.
HA-6A(6-12)	|	1140	|	Solid	X			- Std TATs - although
HA-6A(12-18)	|	1142	|	Solid				need results in time
HA-11A(6-12)	|	1445	|	Solid	X			to make decision on
HA-11A(12-18)	|	1447	|	Solid				follow up - without
HA-13A(6-12)	↓	1255	↓	Solid	X			exceeding hold time

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological	<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify)	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:
Relinquished by: <u>MSA Patton</u>	Date/Time: <u>3-3-17 1615</u>	Company:	Received by: <u>Sheela Kray</u>
Relinquished by:	Date/Time:	Company:	Date/Time: <u>3/3/17 1615</u>
Relinquished by:	Date/Time:	Company:	Date/Time:

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: <u>1.3°C, 1.7°C + PC04</u>
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TestAmerica Spokane
 11922 East 1st Ave
 Spokane, WA 99206
 Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica
 THE LEADER IN ENVIRONMENTAL TESTING

4/21/2017

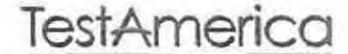
Client Information		Sampler: <i>MJP/JWR</i>		Lab PM: Arrington, Randee E		Carrier Tracking No(s):		COC No: 590-2353-810.3	
Client Contact: Scott Lathen		Phone: <i>425-293-9560</i>		E-Mail: randee.arrington@testamericainc.com				Page: Page 3 of 10	
Company: GeoEngineers Inc				Analysis Requested				Job #:	
Address: 523 East Second Ave									
City: Spokane		Due Date Requested: <i>STD</i>		Field Filtered Sample (Yes or No) Perform MS/MSD (Yes or No) <i>Dioxin Furans EPA 8290A</i> <i>PCPs EPA 8230.5</i>		Total Number of containers		Preservation Codes: A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2O4S E - NaHSO4 Q - Na2SO3 F - MeOH R - Na2S2O3 G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone J - DI Water V - MCAA K - EDTA W - pH 4-5 L - EDA Z - other (specify)	
State, Zip: WA, 99202		TAT Requested (days): <i>STD-Need enough time to run follow-up</i>							
Phone: 509-251-5239(Tel)		PO #: Purchase Order not required							
Email: slathen@geoengineers.com		WO #:							
Project Name: Colville Post and Pole/0504-098-01		Project #: 59001108							
Site:		SSOW#:						Other:	
Sample Identification		Sample Date		Sample Time		Sample Type (C=comp, G=grab)		Matrix (W=water, S=solid, O=waste/soil, BT=tissue, A=air)	
								Special Instructions/Note:	
<i>HA-40(6-12)</i>		<i>3-1-17</i>		<i>1415</i>		<i>G</i>		<i>Solid</i>	
<i>HA-40(12-18)</i>		<i>1</i>		<i>1420</i>		<i>1</i>		<i>Solid</i>	
<i>HA-41(0-6)</i>		<i>1</i>		<i>1425</i>		<i>1</i>		<i>Solid</i>	
<i>HA-41(6-12)</i>		<i>1</i>		<i>1430</i>		<i>1</i>		<i>Solid</i>	
<i>HA-41(12-18)</i>		<i>1</i>		<i>1435</i>		<i>1</i>		<i>Solid</i>	
<i>HA-42(0-6)</i>		<i>1</i>		<i>1230</i>		<i>1</i>		<i>Solid</i>	
<i>HA-42(6-12)</i>		<i>1</i>		<i>1232</i>		<i>1</i>		<i>Solid</i>	
<i>HA-42(12-18)</i>		<i>1</i>		<i>1234</i>		<i>1</i>		<i>Solid</i>	
<i>HA-43(0-6)</i>		<i>1</i>		<i>0930</i>		<i>1</i>		<i>Solid</i>	
<i>HA-43(6-12)</i>		<i>1</i>		<i>0935</i>		<i>1</i>		<i>Solid</i>	
<i>HA-43(12-18)</i>		<i>1</i>		<i>0940</i>		<i>1</i>		<i>Solid</i>	
Possible Hazard Identification				Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)					
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological				<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months					
Deliverable Requested: I, II, III, IV, Other (specify)				Special Instructions/QC Requirements:					
Empty Kit Relinquished by:		Date:		Time:		Method of Shipment:			
Relinquished by: <i>[Signature]</i>		Date/Time: <i>3-3-17 1615</i>		Company:		Received by: <i>Sheila Gray</i>		Date/Time: <i>3/3/17 1415</i>	
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:	
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: <i>1.3°C, 1.7°C IRO04</i>					

Page 31 of 51

TestAmerica Spokane

11922 East 1st Ave
 Spokane, WA 99206
 Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record



THE LEADER IN ENVIRONMENTAL TESTING

Client Information		Sampler: <i>MJP/JWR</i>		Lab PM: Arrington, Randee E		Carrier Tracking No(s):		COC No: 590-2353-810.4	
Client Contact: Scott Lathen		Phone: <i>425-293-9560</i>		E-Mail: randee.arrington@testamericainc.com				Page: Page 4 of 10	
Company: GeoEngineers Inc								Job #:	
Address: 523 East Second Ave		Due Date Requested: <i>STD</i>		Field Filtered Sample (Yes or No) <input checked="" type="checkbox"/> Perform MS/MSD (Yes or No) <input checked="" type="checkbox"/> Dioxin/Furans EPA 8290A PCBs EPA 8270 SIM		Total Number of containers		Analysis Requested	
City: Spokane		TAT Requested (days): <i>STD - Need enough time to run follow-up</i>						Preservation Codes: A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2O4S E - NaHSO4 Q - Na2SO3 F - MeOH R - Na2S2O3 G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone J - DI Water V - MCAA K - EDTA W - pH 4-5 L - EDA Z - other (specify)	
State, Zip: WA, 99202		PO #: Purchase Order not required							
Phone: 509-251-5239(Tel)		WO #:							
Email: slathen@geoengineers.com		Project #: 59001108							
Project Name: Colville Post and Pole/0504-098-01		SSOW#:						Other:	
Site:									
Sample Identification		Sample Date		Sample Time		Sample Type (C=comp, G=grab)		Matrix (W=water, S=solid, O=wastewater, ST=Tissue, A=Air)	
								Preservation Code:	
<i>HA-44 (0-6)</i>		<i>3-1-17</i>		<i>0950</i>		<i>G</i>		<i>Solid</i>	
<i>HA-44 (6-12)</i>				<i>0955</i>				<i>Solid</i>	
<i>HA-44 (12-18)</i>				<i>1000</i>				<i>Solid</i>	
<i>HA-45 (0-6)</i>				<i>1025</i>				<i>Solid</i>	
<i>HA-45 (6-12)</i>				<i>1027</i>				<i>Solid</i>	
<i>HA-45 (12-18)</i>				<i>1030</i>				<i>Solid</i>	
<i>HA-46 (0-6)</i>				<i>1100</i>				<i>Solid</i>	
<i>HA-46 (6-12)</i>				<i>1105</i>				<i>Solid</i>	
<i>HA-46 (12-18)</i>				<i>1110</i>				<i>Solid</i>	
<i>HA-47 (0-6)</i>				<i>1100</i>				<i>Solid</i>	
<i>HA-47 (6-12)</i>				<i>1102</i>				<i>Solid</i>	
Possible Hazard Identification		<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months					
Deliverable Requested: I, II, III, IV, Other (specify)				Special Instructions/QC Requirements:					
Empty Kit Relinquished by:		Date:		Time:		Method of Shipment:			
Relinquished by: <i>Mark Peterson</i>		Date/Time: <i>3-3-17 1615</i>		Company:		Received by: <i>Sheela Gray</i>			
Relinquished by:		Date/Time:		Company:		Date/Time: <i>3/3/17 1105</i>			
Relinquished by:		Date/Time:		Company:		Date/Time:			
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: <i>1.3°C, 1.7°C IRCOOL</i>					

TestAmerica Spokane

11922 East 1st Ave
 Spokane, WA 99206
 Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record



THE LEADER IN ENVIRONMENTAL TESTING

Client Information		Sampler: <i>MJP/JWR</i>		Lab PM: Arrington, Randee E		Carrier Tracking No(s):		COC No: 590-2353-810.5	
Client Contact: Scott Lathen		Phone: <i>425-293-9560</i>		E-Mail: randee.arrington@testamericainc.com				Page: Page 5 of 10	
Company: GeoEngineers Inc				Analysis Requested				Job #:	
Address: 523 East Second Ave		Due Date Requested: <i>STD</i>		Field Filtered Sample (Yes or No) <input checked="" type="checkbox"/> Perform MS/MSD (Yes or No) <input checked="" type="checkbox"/> <i>Dioxins Furans EPA 8250A</i> <i>PCRs 8270 Six</i>				Total Number of containers Preservation Codes: A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2O4S E - NaHSO4 Q - Na2SO3 F - MeOH R - Na2S2O3 G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone J - DI Water V - MCAA K - EDTA W - pH 4-5 L - EDA Z - other (specify)	
City: Spokane		TAT Requested (days): <i>STD-Need enough time to run follow-up</i>							
State, Zip: WA, 99202		PO #							
Phone: 509-251-5239(Tel)		Purchase Order not required							
Email: slathen@geoengineers.com		WO #							
Project Name: Colville Post and Pole/0504-098-01		Project #: 59001108							
Site:		SSOW#:							
Sample Identification		Sample Date		Sample Time		Sample Type (C=comp, G=grab)		Matrix (W=water, S=solid, O=wastewater, BT=Tissue, A=Air)	
								Preservation Code:	
								Special Instructions/Note:	
<i>HA-47(12-18)</i>		<i>3-1-17</i>		<i>1104</i>		<i>G</i>		<i>Solid</i>	
<i>HA-48(0-6)</i>		<i>|</i>		<i>1120</i>		<i>|</i>		<i>Solid</i>	
<i>HA-48(6-12)</i>		<i>|</i>		<i>1122</i>		<i>|</i>		<i>Solid</i>	
<i>HA-48(12-18)</i>		<i>|</i>		<i>1124</i>		<i>|</i>		<i>Solid</i>	
<i>HA-49(0-6)</i>		<i>|</i>		<i>1130</i>		<i>|</i>		<i>Solid</i>	
<i>HA-49(6-12)</i>		<i>|</i>		<i>1135</i>		<i>|</i>		<i>Solid</i>	
<i>HA-49(12-18)</i>		<i>|</i>		<i>1140</i>		<i>|</i>		<i>Solid</i>	
<i>HA-50(0-6)</i>		<i>|</i>		<i>1155</i>		<i>|</i>		<i>Solid</i>	
<i>HA-50(6-12)</i>		<i>|</i>		<i>1200</i>		<i>|</i>		<i>Solid</i>	
<i>HA-50(12-18)</i>		<i>|</i>		<i>1205</i>		<i>|</i>		<i>Solid</i>	
<i>HA-51(0-6)</i>		<i>↓</i>		<i>1450</i>		<i>↓</i>		<i>Solid</i>	
Possible Hazard Identification				Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)					
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological				<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months					
Deliverable Requested: I, II, III, IV, Other (specify)				Special Instructions/QC Requirements:					
Empty Kit Relinquished by:		Date:		Time:		Method of Shipment:			
Relinquished by: <i>Max Peterson</i>		Date/Time: <i>3-3-17 1615</i>		Company:		Received by: <i>Sheela Prady</i>		Date/Time: <i>3/3/17 1615</i>	
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:	
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: <i>1.3°C, 1.7°C IR004</i>					

TestAmerica Spokane

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 Spokane, WA 99206
 Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

Client Information		Sampler: <i>MJP/JWR</i>		Lab PM: Arrington, Randee E		Carrier Tracking No(s):		COC No: 590-2353-810.6			
Client Contact: Scott Lathen		Phone: <i>425-293-9560</i>		E-Mail: randee.arrington@testamericainc.com				Page: Page 6 of 10			
Company: GeoEngineers Inc				Analysis Requested				Job #:			
Address: 523 East Second Ave		Due Date Requested: <i>STD</i>		Field Filtered Sample (Yes or No) Perform MS/MSD (Yes or No) <i>Dioxin Furans EPA 8290A</i> <i>PCPs 8270 SIM</i>		Total Number of containers		Preservation Codes:			
City: Spokane		TAT Requested (days): <i>STD - Need enough time to run follow-up</i>						A - HCL		M - Hexane	
State, Zip: WA, 99202		PO #:						B - NaOH		N - None	
Phone: 509-251-5239(Tel)		Purchase Order not required						C - Zn Acetate		O - AsNaO2	
Email: slathen@geoengineers.com		WO #:						D - Nitric Acid		P - Na2O4S	
Project Name: Colville Post and Pole/0504-098-01		Project #: 59001108						E - NaHSO4		Q - Na2SO3	
Site:		SSOW#:		F - MeOH		R - Na2S2O3					
				G - Amchlor		S - H2SO4					
				H - Ascorbic Acid		T - TSP Dodecahydrate					
				I - Ice		U - Acetone					
				J - DI Water		V - MCAA					
				K - EDTA		W - pH 4-5					
				L - EDA		Z - other (specify)					
								Other:			
Sample Identification		Sample Date		Sample Time		Sample Type (C=comp, G=grab)		Matrix (W=water, S=solid, O=wastewater, BT=Tissue, A=Air)			
								Field Filtered Sample (Yes or No)			
								Perform MS/MSD (Yes or No)			
								Special Instructions/Note:			
<i>HA-51(6-12)</i>		<i>3-1-17</i>		<i>1455</i>		<i>G</i>		<i>Solid</i>			
<i>HA-51(12-18)</i>		<i>|</i>		<i>1500</i>		<i>|</i>		<i>Solid</i>			
<i>HA-52(0-6)</i>		<i>|</i>		<i>1515</i>		<i>|</i>		<i>Solid</i>			
<i>HA-52(6-12)</i>		<i>|</i>		<i>1520</i>		<i>|</i>		<i>Solid</i>			
<i>HA-52(12-18)</i>		<i>|</i>		<i>1525</i>		<i>|</i>		<i>Solid</i>			
<i>HA-53(0-6)</i>		<i>|</i>		<i>1520</i>		<i>|</i>		<i>Solid</i>			
<i>HA-53(6-12)</i>		<i>|</i>		<i>1522</i>		<i>|</i>		<i>Solid</i>			
<i>HA-53(12-18)</i>		<i>|</i>		<i>1524</i>		<i>|</i>		<i>Solid</i>			
<i>HA-54(0-6)</i>		<i>|</i>		<i>1540</i>		<i>|</i>		<i>Solid</i>			
<i>HA-54(6-12)</i>		<i>|</i>		<i>1542</i>		<i>|</i>		<i>Solid</i>			
<i>HA-54(12-18)</i>		<i>|</i>		<i>1545</i>		<i>|</i>		<i>Solid</i>			
Possible Hazard Identification				Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)							
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological				<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months							
Deliverable Requested: I, II, III, IV, Other (specify)				Special Instructions/QC Requirements:							
Empty Kit Relinquished by:		Date:		Time:		Method of Shipment:					
Relinquished by: <i>Scott Lathen</i>		Date/Time: <i>3-3-17 1615</i>		Company:		Received by: <i>Sheela Kraty</i>		Date/Time: <i>3/3/17 1615</i>			
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:			
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:			
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: <i>1.3°C, 1.7°C IR004</i>							

TestAmerica Spokane

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Chain of Custody Record

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Client Information		Sampler: MSP/SWR	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-2353-810.7		
Client Contact: Scott Lathen		Phone: 425-293-9560	E-Mail: randee.arrington@testamericainc.com		Page: Page 7 of 10		
Company: GeoEngineers Inc			Analysis Requested		Job #:		
Address: 523 East Second Ave		Due Date Requested: STD	Field Filtered Sample (Yes or No) <input checked="" type="checkbox"/> Perform MS/MSD (Yes or No) <input checked="" type="checkbox"/> Dioxins/Furans EPA 8290A PCBs 8270 sum		Total Number of containers		
City: Spokane		TAT Requested (days): STD - Need enough time to run follow-up					
State, Zip: WA, 99202		PO #: Purchase Order not required					
Phone: 509-251-5239(Tel)		WO #:					
Email: slathen@geoengineers.com		Project #: 59001108					
Project Name: Colville Post and Pole/0504-098-01		SSOW#:			Preservation Codes: A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2O4S E - NaHSO4 Q - Na2SO3 F - MeOH R - Na2S2O3 G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone J - DI Water V - MCAA K - EDTA W - pH 4-5 L - EDA Z - other (specify)		
Site:				Other:			
Sample Identification		Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/Oil, BT=Tissue, A=Air)	Preservation Code:	Special Instructions/Note:
HA-55(0-6)		3-1-17	1600	G	Solid		
HA-55(6-12)			1602		Solid		
HA-55(12-18)			1604		Solid		
HA-56(0-6)			1535		Solid		
HA-56(6-12)			1540		Solid		
HA-56(12-18)			1545		Solid		
HA-57(0-6)			1330		Solid		
HA-57(6-12)			1335		Solid		
HA-57(12-18)			1340		Solid		
HA-58(0-6)			1350		Solid		
HA-58(6-12)			1355		Solid		
Possible Hazard Identification			Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)				
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological			<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months				
Deliverable Requested: I, II, III, IV, Other (specify)			Special Instructions/QC Requirements:				
Empty Kit Relinquished by:		Date:	Time:	Method of Shipment:			
Relinquished by: <i>Matt Peterson</i>		Date/Time: 3-3-17 1615	Company:	Received by: <i>Sheela Prady</i>		Date/Time: 3/3/17 11:05	
Relinquished by:		Date/Time:	Company:	Received by:		Date/Time:	
Relinquished by:		Date/Time:	Company:	Received by:		Date/Time:	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: 1.3, 1.7 °C IPOOH			

TestAmerica Spokane

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Chain of Custody Record



THE LEADER IN ENVIRONMENTAL TESTING

Client Information		Sampler: MSP/SWR		Lab PM: Arrington, Randee E		Carrier Tracking No(s):		COC No: 590-2353-810.8																																																																																																																																																			
Client Contact: Scott Lathen		Phone: 425-293-9560		E-Mail: randee.arrington@testamericainc.com				Page: Page 8 of 10																																																																																																																																																			
Company: GeoEngineers Inc						Analysis Requested		Job #:																																																																																																																																																			
Address: 523 East Second Ave		Due Date Requested: STD						Field Filtered Sample (Yes or No) Perform MS/MSD (Yes or No) Dioxins/furans EPA 8290A PCBs 8270.5105		Preservation Codes: A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2O4S E - NaHSO4 Q - Na2SO3 F - MeOH R - Na2S2O3 G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone J - DI Water V - MCAA K - EDTA W - pH 4-5 L - EDA Z - other (specify) Other:																																																																																																																																																	
City: Spokane		TAT Requested (days): STD - Need enough time to run follow-up				<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>Sample Identification</th> <th>Sample Date</th> <th>Sample Time</th> <th>Sample Type (C=Comp, G=grab)</th> <th>Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)</th> <th>Field Filtered Sample (Yes or No)</th> <th>Perform MS/MSD (Yes or No)</th> <th>Total Number of containers</th> <th>Special Instructions/Note:</th> </tr> </thead> <tbody> <tr> <td>HA-58(12-18)</td> <td>3-1-17</td> <td>1400</td> <td>G</td> <td>Solid</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>HA-59(0-6)</td> <td>↓</td> <td>1345</td> <td>↓</td> <td>Solid</td> <td></td> <td>X</td> <td></td> <td></td> </tr> <tr> <td>HA-59(0-6-12)</td> <td>↓</td> <td>1347</td> <td>↓</td> <td>Solid</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>HA-59(12-18)</td> <td>↓</td> <td>1350</td> <td>↓</td> <td>Solid</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr><td> </td><td> </td><td> </td><td> </td><td>Solid</td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td>Solid</td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td>Solid</td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td>Solid</td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td>Solid</td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td>Solid</td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td>Solid</td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td>Solid</td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td>Solid</td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td>Solid</td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td>Solid</td><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>						Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Total Number of containers	Special Instructions/Note:	HA-58(12-18)	3-1-17	1400	G	Solid					HA-59(0-6)	↓	1345	↓	Solid		X			HA-59(0-6-12)	↓	1347	↓	Solid					HA-59(12-18)	↓	1350	↓	Solid									Solid									Solid									Solid									Solid									Solid									Solid									Solid									Solid									Solid									Solid									Solid				
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Chain of Custody



TestAmerica
 THE QUALITY OF YOUR TESTING MATTERS

Client Information		Sample: <u>ASP/JWR</u>		COC No: <u>590-2353-810 1</u>	
Client Contact: <u>Scott Lathren</u>		Phone: <u>425-293-9560</u>		Page: <u>Page 1 of 10</u>	
Company: <u>GeoEngineers Inc</u>		Analysis Requested:		Job #	
Address: <u>523 East Second Ave</u>		Due Date Requested: <u>STD</u>		Preservation Codes:	
City: <u>Spokane</u>		TAT Requested (days): <u>STD</u>		A - HCl C - Base/In	
State: <u>WA</u>		STP: <u>Need enough time to send following</u>		D - NH ₄ Cl H - H ₂ O ₂	
Zip: <u>99202</u>		EPA: <u>Diagnosis / Surveys EPA 8260A</u>		I - Filtered O - 20% H ₂ O ₂	
Phone: <u>509-251-8239(Tel)</u>		Purchase Order: <u>not required</u>		P - Time And R - NaOH	
Email: <u>slathren@geoengineers.com</u>		Project Name: <u>59001108</u>		S - NH ₄ SO ₄ Q - Na ₂ SO ₃	
Project Name: <u>Colville Post and Pole/0504-098-01</u>		SOP: <u>59001108</u>		T - Seach U - Na ₂ EDTA	
SOP: <u>59001108</u>		Field Filtered Sample (Yes or No): <u>X</u>		V - MS/MS W - H ₂ O ₂	
		Perform MS/MS (Yes or No): <u>X</u>		X - Other (specify)	
		Total Number of Containers: <u>10</u>		Other: <u>PP EPA 8270 SIM</u>	
Sample Identification		Sample Date		Sample Time	
				Sample Type (C=comp, G=grab)	
				Matrix (Prep, 3-100, 3-1000, 3-10000, 3-100000)	
				Preservation Code	
				Special Instructions/Note:	
<u>HA-3A(0-6)</u>		<u>3-1-17</u>		<u>1025</u>	
<u>HA-3A(6-12)</u>				<u>1030</u>	
<u>HA-3A(12-18)</u>				<u>1035</u>	
<u>HA-4A(0-6)</u>				<u>0950</u>	
<u>HA-4A(6-12)</u>				<u>0955</u>	
<u>HA-4A(12-18)</u>				<u>1000</u>	
<u>HA-6A(6-12)</u>				<u>1140</u>	
<u>HA-6A(12-18)</u>				<u>1142</u>	
<u>HA-11A(6-12)</u>				<u>1445</u>	
<u>HA-11A(12-18)</u>				<u>1447</u>	
<u>HA-13A(6-12)</u>				<u>1255</u>	
Possible Hazard Identification		<input type="checkbox"/> Non-Hazard		<input type="checkbox"/> Flammable	
		<input type="checkbox"/> Skin Irritant		<input type="checkbox"/> Poison B	
		<input type="checkbox"/> Unknown		<input type="checkbox"/> Radioactive	
Deliverable Requested: I, II, III, IV, Other (specify)		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)		<input type="checkbox"/> Return To Client	
				<input type="checkbox"/> Disposal By Lab	
				<input type="checkbox"/> Archive For Months	
Empty Kit Relinquished by		Date		Time	
Relinquished by: <u>Wesley Peterson</u>		Date/Time: <u>3-3-17 1615</u>		Method of Shipment:	
Received by: <u>Sheela Tracy</u>		Date/Time: <u>3/3/17 1615</u>		Company: <u>TA Spokane</u>	
Relinquished by:		Date/Time:		Company:	
Relinquished by:		Date/Time:		Company:	
Custody Seals Intact		Custody Seal No.		Cooler Temperature (°C and Other Remarks)	
<input type="checkbox"/> Yes <input type="checkbox"/> No				<u>1.3°C, 1.7°C 12004</u>	

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Chain of Custody Record



Client Information		Sample: MSP/SWR		Lab: ARRINGTON, RANDEE E		Carrier Tracking/Notes:		COC No: 590-2353-610 2		
Client Contact: Scott Lathen		Phone: 425-293-9500		E-Mail: randee.arrington@testamericainc.com				Page: Page 2 of 10		
Company: GeoEngineers Inc		Address: 623 East Second Ave		City: Spokane		State: WA		Zip: 99202		
Phone: 509-251-5239 Toll		Fax: 509-251-5239		E-mail: slathen@geoengineers.com		Project Name: Colville Post and Pile/5504-098-01		Site: 		
Due Date Requested: STP		YAT Requested (days): STP - Need enough time to run follow up		Purchase Order not required		Project ID: 59001106		Service: 		
								Analysis Requested A - HCL M - Metals B - Niobyl N - More C - Zn Acetate O - Asbestos D - Toluene Acid P - Niobyl E - NAPHOL Q - Niobyl F - MUSH R - Niobyl G - Arsenic S - Arsenic H - Asbestos To 1 T - Asbestos J - Li Water U - MCHA K - ELTA V - PH-5 L - SDA Z - Other (Specify)		
								Field Filtered Sample (Yes or No) Perform IAHMSD (Yes or No) Total Number of Containers		
								Special Instructions/Note: Diurnal, furcous EPA 8150A TCP EPA 8130 SLN		
Sample Identification		Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Water, Solid, Gas, Other)	Field Filtered Sample (Yes or No)	Perform IAHMSD (Yes or No)	Total Number of Containers	Special Instructions/Note:	
HA-13A (12-18)		3-1-17	1300	G	Solid	X	X			
HA-17A (6-12)			1210		Solid		X			
HA-17A (12-18)			1212		Solid		X			
HA-20A (6-12)			1500		Solid		X			
HA-20A (12-18)			1505		Solid		X			
HA-25A (6-12)			1605		Solid		X			
HA-25A (12-18)			1610		Solid		X			
HA-39 (0-6)			1330		Solid		X			
HA-39 (6-12)			1335		Solid		X			
HA-39 (12-18)			1340		Solid		X			
HA-40 (0-6)			1410		Solid		X			
Possible Hazard Identification		<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)						
Deliverable Requested: I, II, III, IV, Other (specify)				<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For Months						
Empty Kit Relinquished by:		Date:		Time:		Method of Disposal:				
Relinquished by: Mark Peterson		Date/Time: 3-3-17 1615		Company:		Received by: Sheela Krazy		Date/Time: 3/3/17 1615		Company: IAA/POK
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:		Company:
Custody Seals Intact		Custody Seal No		Cooler Temperature: 1.3°C, 1.7°C IR004						

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Chain of Custody Record

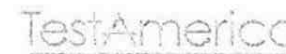


Client Information		Sample ID: 45P/JWR	Lab ID: Arrington, Randee E.	Client Tracking/Ref:	QC No: 560-2353-810-3			
Client Contact: Scott Lather		Phone: 425-293-9560	Email: randee.arrington@testamerica.com		Page: Page 3 of 10			
Company: GeoEngineers Inc.		Analysis Requested			Job #			
Address: 523 East Second Ave		Date Requested: STD	Preservation Codes: A - FCL M - Fluoride B - NaOH N - None C - Zn Acetate O - AsHClO ₄ D - Nitro Acid P - NaOHCl E - NaHSO ₄ Q - NaOHCl F - As ₂ O ₃ R - NaOHCl G - Arsenic S - H ₂ SO ₄ H - Acetic Acid T - TSP Dose Substrate I - Fe U - Zirconic J - Di Water V - MCAA K - EDTA W - 4845 L - BGA X - hold (specify)					
City: Spokane		TAT Requested (days): STD - Need enough time to run below cap						
State: WA, 99202		Field Filtered Sample (Yes or No): Yes						
Phone: 509-251-6239(Tel)		Perform MMSO (Yes or No): Yes						
Fax: 509-251-6239(Fax)		Project: 59001108	Total Number of Containers					
Email: slather@geoengineers.com		Purchase Order No: required	Special Instructions/Note:					
Project Name: Colville Forest and Fols 0504/09a-01		Job #						
Site:								
Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (As=arsenic, Se=lead, D=distillate, M=Mercury, A=As)	Field Filtered Sample (Yes or No)	Perform MMSO (Yes or No)	Total Number of Containers	Special Instructions/Note:
HA-40(6-12)	3-1-17	1415	G	Solid				
HA-40(12-18)		1420		Solid	X			
HA-41(0-6)		1425		Solid	X			
HA-41(6-12)		1430		Solid				
HA-41(12-18)		1435		Solid	X			
HA-42(0-6)		1230		Solid	X			
HA-42(6-12)		1232		Solid				
HA-42(12-18)		1234		Solid	X			
HA-43(0-6)		0930		Solid	X			
HA-43(6-12)		0935		Solid				
HA-43(12-18)		0940		Solid	X			
Possible Hazard Identification					Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)			
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Solid Inert <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radioactive					<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For Months			
Deliverable Requested I, II, III, IV, Other (specify)					Special Instructions/QC Requirements			
Empty Kit Relinquished by		Date	Time	Method of Shipment				
Relinquished by: <i>Scott Lather</i>		Date/Time: 3-3-17 1615	Company:	Received by: <i>Sarahella Fry</i>				
Relinquished by:		Date/Time:	Company:	Received by:				
Relinquished by:		Date/Time:	Company:	Received by:				
Custody Seals Intact	Custody Seal No.	Cooler Temperature: °C and Other Remarks: 1.3°C, 1.7°C IRCO4						

TestAmerica Spokane

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Spokane, WA 99208
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Chain of Custody Record



Client Information		Sampler: MSP/JWR		Lab ID: Airington Rangee E		Carrier Tracking No(s)		COC No: 590-2353 810-4	
Client Contact: Scott Lathen		Phone: 425-293-9560		E-Mail: randee.arington@testamerica.com				Page: Page 4 of 10	
Company: GeoEngineers Inc		Address: 523 East Second Ave		City: Spokane		State: WA		Zip: 99202	
Phone: 509-251-6229		Fax: 509-251-6229		E-Mail: slathen@geoenginc.com		Project Name: Colville Post and Pole/0504/086-01		Date: 8/30/17	
		Dur. Date Requested: STD		TAT Requested (days): STD - Need enough time to run follow-up		Analysis Requested		Preservation Codes:	
				Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)		Total Number of Containers	
				Dioxin/Furans EPA 8210A		PCPs EPA 8210.5-01		A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - Methanol, F - Acetone, G - Nitric Acid, H - Hydrochloric Acid, I - Se, J - Diethylamine, K - EDTA, L - EDTA	
				Matrix (Organic, Inorganic, or Analyte)				M - Nitrate, N - Nitrite, O - Aspartate, P - Nitrate, Q - Nitrite, R - Nitrate, S - Nitrite, T - Nitrate, U - Nitrite, V - Nitrate, W - Nitrite, X - Other (specify)	
Sample Identification		Sample Date		Sample Time		Sample Type (C=Comp, G=grab)		Matrix	
								Preservation Code	
HA-44 (0-6)		3-1-17		0950		G		Solid	
HA-44 (6-12)				0955				Solid	
HA-44 (12-18)				1000				Solid	
HA-45 (0-6)				1025				Solid	
HA-45 (6-12)				1027				Solid	
HA-45 (12-18)				1030				Solid	
HA-46 (0-6)				1100				Solid	
HA-46 (6-12)				1105				Solid	
HA-46 (12-18)				1110				Solid	
HA-47 (0-6)				1100				Solid	
HA-47 (6-12)				1102				Solid	
Possible Hazard Identification		<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)		<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months		Special Instructions/DC Requirements	
Deliverable Requested: I, II, III, IV, Other (specify)		Empty Kit Relinquished by: _____		Date: _____		Time: _____		Method of Shipment: _____	
Relinquished by: _____		Date/Time: 3-3-17 1615		Company: _____		Received by: _____		Date/Time: 3/3/17 1615	
Relinquished by: _____		Date/Time: _____		Company: _____		Received by: _____		Date/Time: _____	
Relinquished by: _____		Date/Time: _____		Company: _____		Received by: _____		Date/Time: _____	
Custody Seals Intact: Yes <input type="checkbox"/> No <input type="checkbox"/>		Custody Seal No: _____		Cocoon Temperature (°C) and Other Remarks: 1.3°C, 1.7°C IIRCO4					

TestAmerica Spokane
 11502 Bay Hill Ave
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Chain of Custody Record



Client Information		Sample: <u>MSP/SWR</u>		Lab #11: <u>Arrington Randee E</u>		Carrier Tracking Ref:		COC No: <u>540-2353-810 5</u>	
Client Contact: <u>Scott Lathen</u>		Phone: <u>425-293-9560</u>		E-Mail: <u>randee.arrington@testamericainc.com</u>				Page: <u>Page 5 of 10</u>	
Company: <u>GeoEnvironers Inc</u>		Due Date Requested: <u>STD</u>		Analysis Requested:				Job #:	
Address: <u>523 Last Second Ave</u>		TAT Requested (days): <u>STD</u>		Field Filled Sample (Yes or No):				Preservation Codes:	
City: <u>Spokane</u>		STP: <u>Need enough time to run follow up</u>		Perform MS/MSD (Yes or No):				A - HCl	
State: <u>WA 99205</u>		Purchase Order # required:		Dioxin/Furans: <u>EPA 8210-A</u>				B - NaOH	
Phone: <u>509-261-5250 (Tel)</u>		WQ #:		PCB: <u>8210-SM</u>				C - Zn Acetate	
E-Mail: <u>slathen@geoenvironers.com</u>		Project #:						D - Nitric Acid	
Project Name: <u>Coalite Post and Poles 504-768-01</u>		S600A						E - Hydrofluoric	
Site: <u>S600A</u>								F - Sulfuric	
								G - Acetic	
								H - Perchloric	
								I - Other	
								J - Other	
								K - EDTA	
								L - SDA	
								M - Other	
								N - Other	
								O - Other	
								P - Other	
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								HO - Other	
								HP - Other	
								HQ - Other	

TestAmerica Spokane
 1800 East 1st Ave
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 Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record



Client Information		Sampler: <u>MJP/JWR</u>		Lab #/Arrington, Randee E		Carrier Tracking No(s)		COC No 590-2353-810-6	
Client Contact Scott Lathen		Phone: <u>425-293-9560</u>		E-Mail: <u>randee.arrington@testamericainc.com</u>				Page Page 6 of 10	
Company GeoEngineers Inc		Address 923 East Second Ave Spokane WA 99202 Phone: 509-251-5238 (Ext) Email: <u>slathen@geoengineers.com</u>		Date Requested: <u>STD</u>		TAT Requested (days): <u>STD - Need enough time to run follow-up</u>		Analysis Requested	
Project Name Coville Post and Pole 0504-038-01		Project ID 59001108		Purchase Order no: required N/A		Field Filled Sample (Yes or No)		Preservation Codes	
						Perform MS/MSD (Yes or No)		A - HCL M - Fuming B - NaOH N - None C - Zn Acetate O - AsH3 D - Nitric Acid P - Na2CO3 E - Nitrous Oxide Q - Na2SO4 F - MeOH R - Na2S2O8 G - Acetone S - H2O2 H - Acetone / Acid T - TAP Code (see chart) I - Ice U - Zapon J - DI Water V - None K - EDTA W - Wet Pack L - EDA Z - Other (specify)	
Sample Identification		Sample Date		Sample Time		Sample Type (C=Comp, G=grab)		Matrix (see chart)	
								Total Number of containers	
								Special Instructions/Note:	
<u>HA-51(6-12)</u>		<u>3-1-17</u>		<u>1455</u>		<u>G</u>		<u>Solid</u>	
<u>HA-51(12-18)</u>				<u>1500</u>		<u>1</u>		<u>Solid</u>	
<u>HA-52(0-6)</u>				<u>1515</u>		<u>1</u>		<u>Solid</u>	
<u>HA-52(6-12)</u>				<u>1520</u>		<u>1</u>		<u>Solid</u>	
<u>HA-52(12-18)</u>				<u>1525</u>		<u>1</u>		<u>Solid</u>	
<u>HA-53(0-6)</u>				<u>1520</u>		<u>1</u>		<u>Solid</u>	
<u>HA-53(6-12)</u>				<u>1522</u>		<u>1</u>		<u>Solid</u>	
<u>HA-53(12-18)</u>				<u>1524</u>		<u>1</u>		<u>Solid</u>	
<u>HA-54(0-6)</u>				<u>1540</u>		<u>1</u>		<u>Solid</u>	
<u>HA-54(6-12)</u>				<u>1542</u>		<u>1</u>		<u>Solid</u>	
<u>HA-54(12-18)</u>				<u>1545</u>		<u>1</u>		<u>Solid</u>	
Possible Hazard Identification		<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)			
Deliverable Requested I, II, III, IV, Other (specify)								Special Instructions/OC Requirements	
Empty Kit Relinquished by		Date:		Time:		Method of Shipment:			
Relinquished by: <u>Mark Pittman</u>		Date/Time: <u>3-3-17 1615</u>		Company:		Received by: <u>Sheela Krady</u>		Date/Time: <u>3/3/17 1615</u>	
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:	
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:	
Custody Seal's Intact		Custody Seal No		Custody Temperature, °C and Other Remarks					
<input type="checkbox"/> Yes <input type="checkbox"/> No				<u>1.3°C, 1.7°C IRCOH</u>					

TestAmerica Spokane
 11922 East 1st Ave
 Spokane, WA 99206
 Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record



Client Information		Sample: MSP/JWR	Lab P/N: Arrington Randeo E	Carrier Tracking No(s):	COC No: 590-2353-810 7				
Client Contact: Scott Lathen		Phone: 425-293-9560	E-Mail: randee.arrington@testamericainc.com		Page: Page 7 of 10				
Company: GeoEngineers Inc Address: 523 East Second Ave City: Spokane State: WA Zip: 99202 Phone: 509-251-5230 (Tel) Email: slathen@geengineers.com		Due Date Requested: STD	Analysis Requested			Lab #			
Project Name: Colville Post and Pole/0504-096-01		TAT Requested (days): STD - Need enough time to run. Follow-up	Field Filtered Sample (Yes or No) Perform MS/MSD (Yes or No) Dioxin/Furans EPA 8160A PCBs 8270.51a			Preservation Codes: A - HCl M - Hexane B - NaOH N - None C - Zn Acetate O - AmNaOH D - Nitric Acid P - Na2CO3 E - NaHCO3 Q - NaOH F - MeOH R - Na2S2O3 G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Dehydrated I - Ice U - Acetone J - DI Water V - MCA K - EDTA W - pH 4.5 L - EDA Z - other (specify)			
Project # E9001109		Purchase Order not required				Total Number of Containers			
Site: SSO#		Project #	Special Instructions/Note:						
Sample Identification		Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (S=solid, L=liquid, G=grab)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Total Number of Containers	Special Instructions/Note:
HA-55(0-6)		3-1-17	1600	1g	Solid		X		
HA-55(6-12)			1602		Solid				
HA-55(12-18)			1604		Solid				
HA-56(0-6)			1535		Solid		X		
HA-56(6-12)			1540		Solid				
HA-56(12-18)			1545		Solid				
HA-57(0-6)			1330		Solid		X		
HA-57(6-12)			1335		Solid				
HA-57(12-18)			1340		Solid				
HA-58(0-6)			1350		Solid		X		
HA-58(6-12)			1355		Solid				
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological				Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months					
Deliverable Requested I, II, III, IV, Other (specify)				Special Instructions/QC Requirements					
Empty Kit Relinquished by: <i>Mark Peterson</i>		Date: 3-3-17	Time: 1615	Method of Shipment					
Relinquished by: <i>Sheela Frady</i>		Date/Time: 3/3/17 1615	Company: <i>THA-inc</i>	Received by: <i>Sheela Frady</i>		Date/Time: 3/3/17 1615	Company: <i>THA-inc</i>		
Relinquished by:		Date/Time:	Company:	Received by:		Date/Time:	Company:		
Custody Seals Intact <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No		Cooler Temperature(s) °C and Other Remarks 1.3, 1.7 °C IR004					

TestAmerica Spokane

11922 East 1st Ave
 Spokane, WA 99206
 Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record



Client Information		Sampler MSP/SWR		Lab PIA Arrington Randee E		Carrier Tracking No.		CDC No 590-2353-810.5			
Client Contact Scott Lathen		Phone 425-293-9560		E-Mail randee.arrington@testamericainc.com				Page Page 8 of 10			
Company GeoEngineers Inc		Due Date Requested STD		Analysis Requested EPA 8210A PCPs 8270.5.100		Total Number of Containers		Preservation Codes:			
Address 523 East Second Ave		TAT Requested (days): STD-Need enough time to run follow-up						A - HCL		S - Hexane	
City Spokane		PO # Purchase Order not required						E - NaOH		N - None	
State, Zip WA, 99202		KVO #						C - Zn Acetate		G - AsH9O2	
Phone 509-251-0239 (Tel)		Project # 59001108				D - 10% Acid		P - Na2S2O5			
Email slathen@geoengineers.com		SSOW #				E - NaHSO4		O - Na2S2O3			
Project Name Colville Post and Pole/0504-06E-01						F - MeOH		R - Na2S2O3			
Site						G - Acet. Nit		S - H2SO4			
						H - Ascorbic Acid		T - TSP Diacetate hydrate			
						I - Ice		U - Acetone			
						J - 10% Water		V - MCAA			
						K - EDTA		W - pH 4.5			
						L - LDA		Z - other (specify)			
								Other:			
								Special Instructions/Note:			
Sample Identification		Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (A=water, S=solid, O=soil)	Field Filtered Sample (Yes or No)	Perform N/S/MS? (Yes or No)				
HA-58(12-18)		3-1-17	1400	G	Solid						
HA-59(0-6)		↓	1345	↓	Solid		X				
HA-59(006-12)		↓	1347	↓	Solid						
HA-59(12-18)		↓	1350	↓	Solid						
					Solid						
					Solid						
					Solid						
					Solid						
					Solid						
					Solid						
					Solid						
					Solid						
Possible Hazard Identification		<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)							
Deliverable Requested: I, II, III, IV, Other (specify)				<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months							
				Special Instructions/CC Requirements							
Empty Kit Relinquished by		Date	Time	Method of Shipment							
Relinquished by <i>M.A. Peterson</i>		Date/Time 3-3-17 1615	Company	Received by <i>Sheriea Gray</i>							
Relinquished by		Date/Time	Company	Received by							
Relinquished by		Date/Time	Company	Received by							
Custody Seals Intact Δ Yes Δ No		Custody Seal No.		Carrier Temperature(s) °C and Other Parameters 1.3°C, 1.7°C TROO4							

TestAmerica Spokane

11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)				Sampler:		Lab PM:		Carrier Tracking No(s):		COC No:							
Client Contact				Phone:		E-Mail:		State of Origin:		Page:							
Shipping/Receiving				Company:		Accreditations Required (See note):		Washington		Page 1 of 2							
TestAmerica Laboratories, Inc.				Address:		State Program - Washington		Job #:		590-5615-3							
880 Riverside Parkway.				Due Date Requested:		Analysis Requested						Preservation Codes:					
City:				4/17/2017													
West Sacramento				TAT Requested (days):		Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)		Moisture		8290A/8290_P_Sox 17 Isomers & Totals		Total Number of containers		A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)	
State, Zip:				PO #:													
CA, 95605				WO #:		Other:											
Project Name:				Project #:													
Colville Post and Pole/0504-098-01				SSOW#:													
Site:																	
Sample Identification - Client ID (Lab ID)				Sample Date		Sample Time		Sample Type (C=comp, G=grab)		Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)		Preservation Code:		Special Instructions/Note:			
HA-3A (12-18) (590-5615-3)				3/1/17		10:35 Pacific		Solid				X X		1, Former Post and Pole manufacturing site - could be high, please isolate glassware and			
HA-4A (12-18) (590-5615-6)				3/1/17		10:00 Pacific		Solid				X X		1, Former Post and Pole manufacturing site - could be high, please isolate glassware and			
HA-6A (12-18) (590-5615-8)				3/1/17		11:42 Pacific		Solid				X X		1, Former Post and Pole manufacturing site - could be high, please isolate glassware and			
HA-13A (12-18) (590-5615-12)				3/1/17		13:00 Pacific		Solid				X X		1, Former Post and Pole manufacturing site - could be high, please isolate glassware and			
HA-20A (12-18) (590-5615-16)				3/1/17		15:05 Pacific		Solid				X X		1, Former Post and Pole manufacturing site - could be high, please isolate glassware and			
HA-40 (12-18) (590-5615-24)				3/1/17		14:20 Pacific		Solid				X X		1, Former Post and Pole manufacturing site - could be high, please isolate glassware and			
HA-41 (12-18) (590-5615-27)				3/1/17		14:35 Pacific		Solid				X X		1, Former Post and Pole manufacturing site - could be high, please isolate glassware and			
HA-42 (12-18) (590-5615-30)				3/1/17		12:34 Pacific		Solid				X X		1, Former Post and Pole manufacturing site - could be high, please isolate glassware and			
HA-43 (12-18) (590-5615-33)				3/1/17		09:40 Pacific		Solid				X X		1, Former Post and Pole manufacturing site - could be high, please isolate glassware and			
<p>Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to TestAmerica Laboratories, Inc.</p>																	
Possible Hazard Identification						Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)											
Unconfirmed						<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months											
Deliverable Requested: I, II, III, IV, Other (specify)				Primary Deliverable Rank: 2		Special Instructions/QC Requirements:											
Empty Kit Relinquished by:				Date:		Time:		Method of Shipment:									
Relinquished by: <i>Shelley Spady</i>		Date/Time: 3/30/17 15:35		Company: TAA Spok		Received by: <i>Tom Nelson</i>		Date/Time: 3/31/17 8:15		Company: <i>J. Adams</i>							
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:		Company:							
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:		Company:							
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: 6.0°C													

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4/21/2017



Chain of Custody Record

Client Information (Sub Contract Lab)		Sampler: Arrington, Randee E		Lab PM: Arrington, Randee E		Carrier Tracking No(s):		COC No: 590-2573.2			
Client Contact: Shipping/Receiving		Phone:		E-Mail: randee.arrington@testamericainc.com		State of Origin: Washington		Page: Page 2 of 2			
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): State Program - Washington				Job #: 590-5615-3					
Address: 880 Riverside Parkway, City: West Sacramento State, Zip: CA, 95605		Due Date Requested: 4/17/2017		Analysis Requested				Preservation Codes: A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2O4S E - NaHSO4 O - Na2SO3 F - MeOH R - Na2S2O8 G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone J - DI Water V - MCAA K - EDTA W - pH 4-5 L - EDA Z - other (specify)			
TAT Requested (days):		TAT Requested (days):									
Phone: 916-373-5600(Tel) 916-372-1059(Fax)		PO #:		Field Filtered Sample (Yes or No) Perform MS/MSD (Yes or No) Moisture 8290A/8290_P_Sox 17 Isomers & Totals				Total Number of containers			
Email:		WO #:									
Project Name: Colville Post and Pole/0504-098-01		Project #: 59001108									
Site:		SSOW#:		Preservation Code:				Special Instructions/Note:			
Sample Identification - Client ID (Lab ID)		Sample Date									
HA-44 (12-18) (590-5615-36)		3/1/17		10:00 Pacific		Solid		Solid			
HA-46 (12-18) (590-5615-42)		3/1/17		11:10 Pacific		Solid		Solid			
HA-47 (12-18) (590-5615-45)		3/1/17		11:04 Pacific		Solid		Solid			
HA-49 (12-18) (590-5615-51)		3/1/17		11:40 Pacific		Solid		Solid			
HA-51 (12-18) (590-5615-57)		3/1/17		15:00 Pacific		Solid		Solid			
HA-53 (12-18) (590-5615-63)		3/1/17		15:24 Pacific		Solid		Solid			
Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. I											
Possible Hazard Identification					Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)						
Unconfirmed					<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months						
Deliverable Requested: I, II, III, IV, Other (specify)					Special Instructions/QC Requirements:						
Primary Deliverable Rank: 2											
Empty Kit Relinquished by:			Date:		Time:		Method of Shipment:				
Relinquished by: <i>Sheela King</i>			Date/Time: 3/30/17 1535		Company: TMA/Spok		Received by: <i>Kym Nelson</i>		Date/Time: 3/31/17 8:15		
Relinquished by:			Date/Time:		Company:		Received by:		Date/Time:		
Relinquished by:			Date/Time:		Company:		Received by:		Date/Time:		
Custody Seals Intact:			Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:						
△ Yes △ No											

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4/21/2017

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-5615-3

Login Number: 5615

List Source: TestAmerica Spokane

List Number: 1

Creator: Kratz, Sheila J

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-5615-3

Login Number: 5615
List Number: 2
Creator: Hytrek, Cheryl

List Source: TestAmerica Sacramento
List Creation: 03/08/17 01:18 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-5615-3

Login Number: 5615
List Number: 3
Creator: Nelson, Kym D

List Source: TestAmerica Sacramento
List Creation: 03/31/17 08:25 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Isotope Dilution Summary

Client: GeoEngineers Inc
 Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5615-3

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Isotope Dilution Recovery (Acceptance Limits)							
		TCDD (40-135)	TCDF (40-135)	PeCDD (40-135)	PeCDF1 (40-135)	HxCDD2 (40-135)	HxCDF1 (40-135)	HpCDD (40-135)	HpCDF1 (40-135)
590-5615-3	HA-3A (12-18)	107	107	113	112	105	108	104	106
590-5615-6	HA-4A (12-18)	106	105	108	111	104	107	102	105
590-5615-8	HA-6A (12-18)	111	110	110	115	107	112	106	110
590-5615-12	HA-13A (12-18)	101	99	100	105	98	101	99	103
590-5615-16	HA-20A (12-18)	95	99	95	98	96	102	105	105
590-5615-24	HA-40 (12-18)	111	99	95	96	95	97	101	102
590-5615-27	HA-41 (12-18)	98	95	97	94	90	97	101	95
590-5615-30	HA-42 (12-18)	104	107	109	108	104	110	104	107
590-5615-33	HA-43 (12-18)	107	108	112	109	103	109	105	109
590-5615-36	HA-44 (12-18)	107	106	113	113	107	115	108	113
590-5615-42	HA-46 (12-18)	102	102	103	108	100	106	101	107
590-5615-45	HA-47 (12-18)	92	95	100	103	95	100	99	102
590-5615-51	HA-49 (12-18)	112	100	96	101	100	102	107	107
590-5615-57	HA-51 (12-18)	110	90	88	89	90	91	93	93
590-5615-63	HA-53 (12-18)	105	106	109	109	105	112	107	112
LCS 320-157505/2-A	Lab Control Sample	93	94	101	97	97	97	93	94
LCSD 320-157505/3-A	Lab Control Sample Dup	99	97	105	102	100	101	99	101
MB 320-157505/1-A	Method Blank	97	101	105	102	102	100	95	100

Lab Sample ID	Client Sample ID	OCDD
		(40-135)
590-5615-3	HA-3A (12-18)	123
590-5615-6	HA-4A (12-18)	121
590-5615-8	HA-6A (12-18)	127
590-5615-12	HA-13A (12-18)	118
590-5615-16	HA-20A (12-18)	127
590-5615-24	HA-40 (12-18)	119
590-5615-27	HA-41 (12-18)	117
590-5615-30	HA-42 (12-18)	121
590-5615-33	HA-43 (12-18)	124
590-5615-36	HA-44 (12-18)	124
590-5615-42	HA-46 (12-18)	120
590-5615-45	HA-47 (12-18)	122
590-5615-51	HA-49 (12-18)	129
590-5615-57	HA-51 (12-18)	109
590-5615-63	HA-53 (12-18)	125
LCS 320-157505/2-A	Lab Control Sample	109
LCSD 320-157505/3-A	Lab Control Sample Dup	116
MB 320-157505/1-A	Method Blank	110

Surrogate Legend

- TCDD = 13C-2,3,7,8-TCDD
- TCDF = 13C-2,3,7,8-TCDF
- PeCDD = 13C-1,2,3,7,8-PeCDD
- PeCDF1 = 13C-1,2,3,7,8-PeCDF
- HxCDD2 = 13C-1,2,3,6,7,8-HxCDD
- HxCDF1 = 13C-1,2,3,4,7,8-HxCDF
- HpCDD = 13C-1,2,3,4,6,7,8-HpCDD
- HpCDF1 = 13C-1,2,3,4,6,7,8-HpCDF

Isotope Dilution Summary

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-5615-3

OCDD = 13C-OCDD

1

2

3

4

5

6

7

8

9

10

11

12

13

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Spokane

11922 East 1st Ave

Spokane, WA 99206

Tel: (509)924-9200

TestAmerica Job ID: 590-6217-1

Client Project/Site: Colville Post and Pole/0504-098-01

Revision: 1

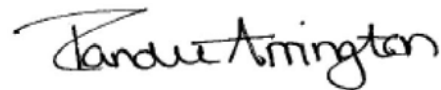
For:

GeoEngineers Inc

523 East Second Ave

Spokane, Washington 99202

Attn: Scott Lathen



Authorized for release by:

5/9/2018 1:18:50 PM

Randee Arrington, Project Manager II

(509)924-9200

randee.arrington@testamericainc.com

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Case Narrative

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-6217-1

Job ID: 590-6217-1

Laboratory: TestAmerica Spokane

Narrative

Revision

The 8270D data was re-evaluated down to the MDL per the clients request.

Receipt

The samples were received on 5/26/2017 9:25 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 4.1° C.

GC/MS Semi VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

GC Semi VOA

Method NWTPH-Dx: Surrogate recovery for the following sample was outside the upper control limit: MW-35 (14.5-15.0) (590-6217-6). This sample did not contain any target analytes; therefore, re-extraction and re-analysis was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep

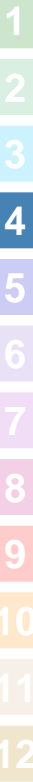
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Sample Summary

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-6217-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
590-6217-1	MW-33 (5.0-5.5)	Solid	05/25/17 10:35	05/26/17 09:25
590-6217-2	MW-33 (16.5-17.0)	Solid	05/25/17 10:55	05/26/17 09:25
590-6217-3	MW-34 (2.0-2.5)	Solid	05/25/17 12:20	05/26/17 09:25
590-6217-4	MW-34 (15.5-16.0)	Solid	05/25/17 12:30	05/26/17 09:25
590-6217-5	MW-35 (1.5-2.0)	Solid	05/25/17 08:55	05/26/17 09:25
590-6217-6	MW-35 (14.5-15.0)	Solid	05/25/17 09:15	05/26/17 09:25



Definitions/Glossary

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-6217-1

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC Semi VOA

Qualifier	Qualifier Description
X	Surrogate is outside control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-6217-1

Client Sample ID: MW-33 (5.0-5.5)

Date Collected: 05/25/17 10:35

Date Received: 05/26/17 09:25

Lab Sample ID: 590-6217-1

Matrix: Solid

Percent Solids: 81.2

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	21	J	59	9.7	ug/Kg	☼	05/31/17 13:31	06/07/17 20:38	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	93		38 - 123				05/31/17 13:31	06/07/17 20:38	1
Nitrobenzene-d5	105		23 - 120				05/31/17 13:31	06/07/17 20:38	1
p-Terphenyl-d14	114		68 - 136				05/31/17 13:31	06/07/17 20:38	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		12		mg/Kg	☼	06/05/17 10:41	06/05/17 14:16	1
Residual Range Organics (RRO) (C25-C36)	ND		29		mg/Kg	☼	06/05/17 10:41	06/05/17 14:16	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	101		50 - 150				06/05/17 10:41	06/05/17 14:16	1
n-Triacontane-d62	101		50 - 150				06/05/17 10:41	06/05/17 14:16	1

Client Sample ID: MW-33 (16.5-17.0)

Date Collected: 05/25/17 10:55

Date Received: 05/26/17 09:25

Lab Sample ID: 590-6217-2

Matrix: Solid

Percent Solids: 94.5

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		53	8.6	ug/Kg	☼	05/31/17 13:31	06/07/17 21:04	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	91		38 - 123				05/31/17 13:31	06/07/17 21:04	1
Nitrobenzene-d5	98		23 - 120				05/31/17 13:31	06/07/17 21:04	1
p-Terphenyl-d14	99		68 - 136				05/31/17 13:31	06/07/17 21:04	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		10		mg/Kg	☼	06/05/17 10:41	06/05/17 14:34	1
Residual Range Organics (RRO) (C25-C36)	ND		26		mg/Kg	☼	06/05/17 10:41	06/05/17 14:34	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	103		50 - 150				06/05/17 10:41	06/05/17 14:34	1
n-Triacontane-d62	100		50 - 150				06/05/17 10:41	06/05/17 14:34	1

Client Sample ID: MW-34 (2.0-2.5)

Date Collected: 05/25/17 12:20

Date Received: 05/26/17 09:25

Lab Sample ID: 590-6217-3

Matrix: Solid

Percent Solids: 79.1

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		63	10	ug/Kg	☼	05/31/17 13:31	06/07/17 21:31	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	90		38 - 123				05/31/17 13:31	06/07/17 21:31	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-6217-1

Client Sample ID: MW-34 (2.0-2.5)

Date Collected: 05/25/17 12:20

Date Received: 05/26/17 09:25

Lab Sample ID: 590-6217-3

Matrix: Solid

Percent Solids: 79.1

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	93		23 - 120	05/31/17 13:31	06/07/17 21:31	1
p-Terphenyl-d14	112		68 - 136	05/31/17 13:31	06/07/17 21:31	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		12		mg/Kg	☼	06/05/17 10:41	06/05/17 14:53	1
Residual Range Organics (RRO) (C25-C36)	ND		30		mg/Kg	☼	06/05/17 10:41	06/05/17 14:53	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	110		50 - 150	06/05/17 10:41	06/05/17 14:53	1
n-Triacontane-d62	106		50 - 150	06/05/17 10:41	06/05/17 14:53	1

Client Sample ID: MW-34 (15.5-16.0)

Date Collected: 05/25/17 12:30

Date Received: 05/26/17 09:25

Lab Sample ID: 590-6217-4

Matrix: Solid

Percent Solids: 86.8

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		57	9.2	ug/Kg	☼	05/31/17 13:31	06/07/17 21:57	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	96		38 - 123	05/31/17 13:31	06/07/17 21:57	1
Nitrobenzene-d5	100		23 - 120	05/31/17 13:31	06/07/17 21:57	1
p-Terphenyl-d14	121		68 - 136	05/31/17 13:31	06/07/17 21:57	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		11		mg/Kg	☼	06/05/17 10:41	06/05/17 15:11	1
Residual Range Organics (RRO) (C25-C36)	ND		28		mg/Kg	☼	06/05/17 10:41	06/05/17 15:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	111		50 - 150	06/05/17 10:41	06/05/17 15:11	1
n-Triacontane-d62	105		50 - 150	06/05/17 10:41	06/05/17 15:11	1

Client Sample ID: MW-35 (1.5-2.0)

Date Collected: 05/25/17 08:55

Date Received: 05/26/17 09:25

Lab Sample ID: 590-6217-5

Matrix: Solid

Percent Solids: 93.0

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	20	J	52	8.6	ug/Kg	☼	05/31/17 13:31	06/07/17 22:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	103		38 - 123	05/31/17 13:31	06/07/17 22:50	1
Nitrobenzene-d5	102		23 - 120	05/31/17 13:31	06/07/17 22:50	1
p-Terphenyl-d14	125		68 - 136	05/31/17 13:31	06/07/17 22:50	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
 Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-6217-1

Client Sample ID: MW-35 (1.5-2.0)

Date Collected: 05/25/17 08:55

Date Received: 05/26/17 09:25

Lab Sample ID: 590-6217-5

Matrix: Solid

Percent Solids: 93.0

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	20		11		mg/Kg	☼	06/05/17 10:41	06/05/17 15:29	1
Residual Range Organics (RRO) (C25-C36)	110		27		mg/Kg	☼	06/05/17 10:41	06/05/17 15:29	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl	100		50 - 150				06/05/17 10:41	06/05/17 15:29	1
<i>n</i> -Triacontane-d62	103		50 - 150				06/05/17 10:41	06/05/17 15:29	1

Client Sample ID: MW-35 (14.5-15.0)

Date Collected: 05/25/17 09:15

Date Received: 05/26/17 09:25

Lab Sample ID: 590-6217-6

Matrix: Solid

Percent Solids: 94.4

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		51	8.4	ug/Kg	☼	05/31/17 13:31	06/07/17 22:24	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>2</i> -Fluorobiphenyl (Surr)	99		38 - 123				05/31/17 13:31	06/07/17 22:24	1
<i>Nitro</i> benzene-d5	101		23 - 120				05/31/17 13:31	06/07/17 22:24	1
<i>p</i> -Terphenyl-d14	117		68 - 136				05/31/17 13:31	06/07/17 22:24	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		11		mg/Kg	☼	06/05/17 10:41	06/05/17 15:47	1
Residual Range Organics (RRO) (C25-C36)	ND		26		mg/Kg	☼	06/05/17 10:41	06/05/17 15:47	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl	152	X	50 - 150				06/05/17 10:41	06/05/17 15:47	1
<i>n</i> -Triacontane-d62	154	X	50 - 150				06/05/17 10:41	06/05/17 15:47	1

TestAmerica Spokane

QC Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-6217-1

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Lab Sample ID: MB 590-12310/1-A
Matrix: Solid
Analysis Batch: 12400

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 12310

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		50	8.2	ug/Kg		05/31/17 13:31	06/07/17 18:01	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	92		38 - 123	05/31/17 13:31	06/07/17 18:01	1
Nitrobenzene-d5	93		23 - 120	05/31/17 13:31	06/07/17 18:01	1
p-Terphenyl-d14	115		68 - 136	05/31/17 13:31	06/07/17 18:01	1

Lab Sample ID: LCS 590-12310/2-A
Matrix: Solid
Analysis Batch: 12400

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 12310

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Pentachlorophenol	533	614		ug/Kg		115	50 - 150

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Fluorobiphenyl (Surr)	98		38 - 123
Nitrobenzene-d5	98		23 - 120
p-Terphenyl-d14	110		68 - 136

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Lab Sample ID: MB 590-12360/1-A
Matrix: Solid
Analysis Batch: 12365

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 12360

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		10		mg/Kg		06/05/17 10:41	06/05/17 13:22	1
Residual Range Organics (RRO) (C25-C36)	ND		25		mg/Kg		06/05/17 10:41	06/05/17 13:22	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	111		50 - 150	06/05/17 10:41	06/05/17 13:22	1
n-Triacontane-d62	111		50 - 150	06/05/17 10:41	06/05/17 13:22	1

Lab Sample ID: LCS 590-12360/2-A
Matrix: Solid
Analysis Batch: 12365

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 12360

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Diesel Range Organics (DRO) (C10-C25)	66.7	68.4		mg/Kg		103	50 - 150
Residual Range Organics (RRO) (C25-C36)	66.7	79.4		mg/Kg		119	50 - 150

Surrogate	LCS %Recovery	LCS Qualifier	Limits
o-Terphenyl	102		50 - 150

TestAmerica Spokane

QC Sample Results

Client: GeoEngineers Inc
 Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-6217-1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) (Continued)

Lab Sample ID: LCS 590-12360/2-A
Matrix: Solid
Analysis Batch: 12365

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 12360

<i>Surrogate</i>	<i>%Recovery</i>	<i>LCS Qualifier</i>	<i>Limits</i>
<i>n-Triacontane-d62</i>	105		50 - 150

Lab Sample ID: 590-6217-1 DU
Matrix: Solid
Analysis Batch: 12365

Client Sample ID: MW-33 (5.0-5.5)
Prep Type: Total/NA
Prep Batch: 12360

<i>Analyte</i>	<i>Sample Result</i>	<i>Sample Qualifier</i>	<i>DU Result</i>	<i>DU Qualifier</i>	<i>Unit</i>	<i>D</i>	<i>RPD</i>	<i>Limit</i>
Diesel Range Organics (DRO) (C10-C25)	ND		ND		mg/Kg	☼	25	40
Residual Range Organics (RRO) (C25-C36)	ND		ND		mg/Kg	☼	25	40

<i>Surrogate</i>	<i>%Recovery</i>	<i>DU Qualifier</i>	<i>Limits</i>
<i>o-Terphenyl</i>	101		50 - 150
<i>n-Triacontane-d62</i>	100		50 - 150

Lab Chronicle

Client: GeoEngineers Inc
 Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-6217-1

Client Sample ID: MW-33 (5.0-5.5)

Date Collected: 05/25/17 10:35

Date Received: 05/26/17 09:25

Lab Sample ID: 590-6217-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			12267	05/26/17 12:36	NMI	TAL SPK

Client Sample ID: MW-33 (5.0-5.5)

Date Collected: 05/25/17 10:35

Date Received: 05/26/17 09:25

Lab Sample ID: 590-6217-1

Matrix: Solid

Percent Solids: 81.2

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.58 g	2 mL	12310	05/31/17 13:31	NMI	TAL SPK
Total/NA	Analysis	8270D SIM		1			12400	06/07/17 20:38	NMI	TAL SPK
Total/NA	Prep	3550C			15.76 g	5 mL	12360	06/05/17 10:41	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			12365	06/05/17 14:16	NMI	TAL SPK

Client Sample ID: MW-33 (16.5-17.0)

Date Collected: 05/25/17 10:55

Date Received: 05/26/17 09:25

Lab Sample ID: 590-6217-2

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			12267	05/26/17 12:36	NMI	TAL SPK

Client Sample ID: MW-33 (16.5-17.0)

Date Collected: 05/25/17 10:55

Date Received: 05/26/17 09:25

Lab Sample ID: 590-6217-2

Matrix: Solid

Percent Solids: 94.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.02 g	2 mL	12310	05/31/17 13:31	NMI	TAL SPK
Total/NA	Analysis	8270D SIM		1			12400	06/07/17 21:04	NMI	TAL SPK
Total/NA	Prep	3550C			15.16 g	5 mL	12360	06/05/17 10:41	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			12365	06/05/17 14:34	NMI	TAL SPK

Client Sample ID: MW-34 (2.0-2.5)

Date Collected: 05/25/17 12:20

Date Received: 05/26/17 09:25

Lab Sample ID: 590-6217-3

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			12267	05/26/17 12:36	NMI	TAL SPK

Client Sample ID: MW-34 (2.0-2.5)

Date Collected: 05/25/17 12:20

Date Received: 05/26/17 09:25

Lab Sample ID: 590-6217-3

Matrix: Solid

Percent Solids: 79.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.06 g	2 mL	12310	05/31/17 13:31	NMI	TAL SPK

TestAmerica Spokane

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-6217-1

Client Sample ID: MW-34 (2.0-2.5)

Date Collected: 05/25/17 12:20

Date Received: 05/26/17 09:25

Lab Sample ID: 590-6217-3

Matrix: Solid

Percent Solids: 79.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8270D SIM		1			12400	06/07/17 21:31	NMI	TAL SPK
Total/NA	Prep	3550C			15.61 g	5 mL	12360	06/05/17 10:41	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			12365	06/05/17 14:53	NMI	TAL SPK

Client Sample ID: MW-34 (15.5-16.0)

Date Collected: 05/25/17 12:30

Date Received: 05/26/17 09:25

Lab Sample ID: 590-6217-4

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			12267	05/26/17 12:36	NMI	TAL SPK

Client Sample ID: MW-34 (15.5-16.0)

Date Collected: 05/25/17 12:30

Date Received: 05/26/17 09:25

Lab Sample ID: 590-6217-4

Matrix: Solid

Percent Solids: 86.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.25 g	2 mL	12310	05/31/17 13:31	NMI	TAL SPK
Total/NA	Analysis	8270D SIM		1			12400	06/07/17 21:57	NMI	TAL SPK
Total/NA	Prep	3550C			15.57 g	5 mL	12360	06/05/17 10:41	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			12365	06/05/17 15:11	NMI	TAL SPK

Client Sample ID: MW-35 (1.5-2.0)

Date Collected: 05/25/17 08:55

Date Received: 05/26/17 09:25

Lab Sample ID: 590-6217-5

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			12267	05/26/17 12:36	NMI	TAL SPK

Client Sample ID: MW-35 (1.5-2.0)

Date Collected: 05/25/17 08:55

Date Received: 05/26/17 09:25

Lab Sample ID: 590-6217-5

Matrix: Solid

Percent Solids: 93.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.37 g	2 mL	12310	05/31/17 13:31	NMI	TAL SPK
Total/NA	Analysis	8270D SIM		1			12400	06/07/17 22:50	NMI	TAL SPK
Total/NA	Prep	3550C			15.16 g	5 mL	12360	06/05/17 10:41	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			12365	06/05/17 15:29	NMI	TAL SPK

TestAmerica Spokane

Lab Chronicle

Client: GeoEngineers Inc
 Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-6217-1

Client Sample ID: MW-35 (14.5-15.0)

Date Collected: 05/25/17 09:15

Date Received: 05/26/17 09:25

Lab Sample ID: 590-6217-6

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			12267	05/26/17 12:36	NMI	TAL SPK

Client Sample ID: MW-35 (14.5-15.0)

Date Collected: 05/25/17 09:15

Date Received: 05/26/17 09:25

Lab Sample ID: 590-6217-6

Matrix: Solid

Percent Solids: 94.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.48 g	2 mL	12310	05/31/17 13:31	NMI	TAL SPK
Total/NA	Analysis	8270D SIM		1			12400	06/07/17 22:24	NMI	TAL SPK
Total/NA	Prep	3550C			15.08 g	5 mL	12360	06/05/17 10:41	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			12365	06/05/17 15:47	NMI	TAL SPK

Laboratory References:

TAL SPK = TestAmerica Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

Accreditation/Certification Summary

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-6217-1

Laboratory: TestAmerica Spokane

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
Washington	State Program	10	C569	01-06-19

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12

Method Summary

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-6217-1

Method	Method Description	Protocol	Laboratory
8270D SIM	Semivolatile Organic Compounds (GC/MS SIM)	SW846	TAL SPK
NWTPH-Dx	Northwest - Semi-Volatile Petroleum Products (GC)	NWTPH	TAL SPK
Moisture	Percent Moisture	EPA	TAL SPK
3550C	Ultrasonic Extraction	SW846	TAL SPK

Protocol References:

EPA = US Environmental Protection Agency

NWTPH = Northwest Total Petroleum Hydrocarbon

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL SPK = TestAmerica Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

TestAmerica Spokane

11922 East 1st Ave
 Spokane, WA 99206
 Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

Client Information		Sampler: <u>Justin Rice</u>		Lab PM: <u>Arrington, Randee E</u>		Carrier Tracking No(s):		COC No: <u>590-2645-921.2</u>			
Client Contact: Scott Lathen		Phone: <u>509-209-2840</u>		E-Mail: <u>randee.arrington@testamericainc.com</u>				Page: Page 2 of 2			
Company: GeoEngineers Inc				Analysis Requested				Job #: <u>0504-098-01</u>			
Address: 523 East Second Ave		Due Date Requested:		Field Filtered Sample (Yes or No) Perform: MS/MSD (Yes or No) 8270D_SIM, NWTPH_DX		Total Number of containers		Preservation Codes:			
City: Spokane		TAT Requested (days): <u>std</u>						A - HCL		M - Hexane	
State, Zip: WA, 99202		PO #						B - NaOH		N - None	
Phone: 509-251-5239(Tel)		Purchase Order not required						C - Zn Acetate		O - AsNaO2	
Email: slathen@geoengineers.com		WO #						D - Nitric Acid		P - Na2O4S	
Project Name: Colville Post and Pole/0504-098-01		Project #: 59001108		E - NaHSO4		Q - Na2SO3		R - Na2S2O3			
Site:		SSOW#		F - MeOH		S - H2SO4		T - TSP Dodecahydrate			
				G - Amchlor		U - Acetone		V - MCAA			
				H - Ascorbic Acid		W - pH 4-5		Z - other (specify)			
				I - Ice		Other:					
				J - DI Water							
				K - EDTA							
				L - EDA							
Sample Identification		Sample Date		Sample Time		Sample Type (C=comp, G=grab)		Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)			
								Preservation Code:			
								N			
<u>MW-33 (5.0-5.5)</u>		<u>5/25/17</u>		<u>1035</u>		<u>G</u>		<u>Solid</u>			
<u>MW-33 (16.5-17.0)</u>		<u>|</u>		<u>1055</u>		<u>|</u>		<u>Solid</u>			
<u>MW-34 (2.0-2.5)</u>		<u>|</u>		<u>1220</u>		<u>|</u>		<u>Solid</u>			
<u>MW-34 (15.5-16.0)</u>		<u>|</u>		<u>1230</u>		<u>|</u>		<u>Solid</u>			
<u>MW-35 (1.5-2.0)</u>		<u>|</u>		<u>0855</u>		<u>|</u>		<u>Solid</u>			
<u>MW-35 (14.5-15.0)</u>		<u>|</u>		<u>0915</u>		<u>|</u>		<u>Solid</u>			
								<u>Solid</u>			
								<u>Solid</u>			
								<u>Solid</u>			



Possible Hazard Identification
 Non-Hazard Flammable Skin Irritant Poison B Unknown Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client Disposal By Lab Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:		Date:	Time:	Method of Shipment:	
Relinquished by: <u>[Signature]</u>	Date/Time: <u>5/26/17 920</u>	Company: <u>BET</u>	Received by: <u>[Signature]</u>	Date/Time: <u>5/26/17 925</u>	Company: <u>TACPOK</u>
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:

Custody Seals Intact: Yes No Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 4.1°C IR004

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-6217-1

Login Number: 6217

List Source: TestAmerica Spokane

List Number: 1

Creator: Kratz, Sheila J

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

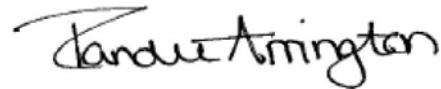
TestAmerica Laboratories, Inc.
TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Tel: (509)924-9200

TestAmerica Job ID: 590-7490-1

Client Project/Site: Colville Post and Pole/0504-098-01

For:
GeoEngineers Inc
523 East Second Ave
Spokane, Washington 99202

Attn: Scott Lathen



Authorized for release by:
12/11/2017 9:45:18 AM

Randee Arrington, Project Manager II
(509)924-9200
randee.arrington@testamericainc.com

LINKS

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results through
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www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Case Narrative

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-7490-1

Job ID: 590-7490-1

Laboratory: TestAmerica Spokane

Narrative

Receipt

The samples were received on 11/10/2017 9:40 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 5 coolers at receipt time were -3.2° C, -2.2° C, -0.9° C, -0.9° C and -0.1° C.

GC/MS Semi VOA

Method 8270D SIM: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-27:110817 (590-7490-8) and DUP:110817 (590-7490-17). Elevated reporting limits (RLs) are provided.

Method 8270D SIM: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-21:110717 (590-7490-2), MW-22:110717 (590-7490-3), MW-24:110817 (590-7490-5), MW-25:110717 (590-7490-6), MW-26:110817 (590-7490-7) and MW-30:110817 (590-7490-11) at 50.0, 5.0, 20.0, 10.0, 20.0 and 50.0. Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Dioxin

Method 8290A: The following samples exhibited elevated noise or matrix interferences for one or more analytes causing elevation of the detection limit (EDL): TP-3 (1.5'-2.0') (590-7490-18), TP-25 (1.5'-2.0') (590-7490-34), TP-41 (1.5'-2.0') (590-7490-42) and TP-46 (1.5'-2.0') (590-7490-50). The reporting limit (RL) for the affected analytes has been raised to be equal to the EDL, and a "G" qualifier applied.

Method 8290A: The Isotope Dilution Analyte (IDA) recovery associated with the following samples is below the method recommended limit: TP-3 (1.5'-2.0') (590-7490-18), TP-6 (1.5'-2.0') (590-7490-26) TP-46 (1.5'-2.0') (590-7490-50) and TP-53 (1.5'-2.0') (590-7490-53). Generally, data quality is not considered affected if the IDA signal-to-noise ratio is greater than 10:1, which is achieved for all IDA in the sample(s). All detection limits are below the lower calibration.

Method 8290A: The laboratory control sample (LCS) for 320-194570 recovered low outside acceptance limits for OCDD. There was insufficient sample to perform a re-extraction or re-analysis; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Dioxin Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Sample Summary

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-7490-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
590-7490-1	MW-20:110717	Water	11/07/17 09:48	11/10/17 09:40
590-7490-2	MW-21:110717	Water	11/07/17 10:25	11/10/17 09:40
590-7490-3	MW-22:110717	Water	11/07/17 11:01	11/10/17 09:40
590-7490-4	MW-23:110717	Water	11/07/17 11:49	11/10/17 09:40
590-7490-5	MW-24:110817	Water	11/08/17 09:24	11/10/17 09:40
590-7490-6	MW-25:110717	Water	11/07/17 13:42	11/10/17 09:40
590-7490-7	MW-26:110817	Water	11/08/17 10:58	11/10/17 09:40
590-7490-8	MW-27:110817	Water	11/08/17 15:36	11/10/17 09:40
590-7490-9	MW-28:110817	Water	11/08/17 11:55	11/10/17 09:40
590-7490-10	MW-29:110717	Water	11/07/17 12:47	11/10/17 09:40
590-7490-11	MW-30:110817	Water	11/08/17 14:52	11/10/17 09:40
590-7490-12	MW-31:110817	Water	11/08/17 10:11	11/10/17 09:40
590-7490-13	MW-32:110717	Water	11/07/17 15:58	11/10/17 09:40
590-7490-14	MW-33:110717	Water	11/07/17 14:31	11/10/17 09:40
590-7490-15	MW-34:110817	Water	11/08/17 13:13	11/10/17 09:40
590-7490-16	MW-35:110817	Water	11/08/17 14:05	11/10/17 09:40
590-7490-17	DUP:110817	Water	11/08/17 12:00	11/10/17 09:40
590-7490-18	TP-3 (1.5'-2.0')	Solid	11/09/17 10:05	11/10/17 09:40
590-7490-23	TP-4 (1.5'-2.0')	Solid	11/09/17 10:40	11/10/17 09:40
590-7490-26	TP-6 (1.5'-2.0')	Solid	11/09/17 11:05	11/10/17 09:40
590-7490-31	TP-20 (1.5'-2.0')	Solid	11/09/17 13:45	11/10/17 09:40
590-7490-34	TP-25 (1.5'-2.0')	Solid	11/09/17 13:00	11/10/17 09:40
590-7490-37	TP-40 (1.5'-2.0')	Solid	11/09/17 12:30	11/10/17 09:40
590-7490-42	TP-41 (1.5'-2.0')	Solid	11/09/17 12:05	11/10/17 09:40
590-7490-45	TP-42 (1.5'-2.0')	Solid	11/09/17 11:35	11/10/17 09:40
590-7490-50	TP-46 (1.5'-2.0')	Solid	11/09/17 09:35	11/10/17 09:40
590-7490-53	TP-53 (1.5'-2.0')	Solid	11/09/17 13:20	11/10/17 09:40

Definitions/Glossary

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-7490-1

Qualifiers

Dioxin

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
*	Isotope Dilution analyte is outside acceptance limits.
G	The reported quantitation limit has been raised due to an exhibited elevated noise or matrix interference

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-7490-1

Client Sample ID: MW-20:110717

Date Collected: 11/07/17 09:48

Date Received: 11/10/17 09:40

Lab Sample ID: 590-7490-1

Matrix: Water

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	1.4		0.96		ug/L		11/13/17 14:45	11/15/17 16:16	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol	76		43 - 122				11/13/17 14:45	11/15/17 16:16	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.25		mg/L		11/14/17 09:48	11/14/17 12:13	1
Residual Range Organics (RRO) (C25-C36)	ND		0.41		mg/L		11/14/17 09:48	11/14/17 12:13	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	99		50 - 150				11/14/17 09:48	11/14/17 12:13	1
n-Triacontane-d62	75		50 - 150				11/14/17 09:48	11/14/17 12:13	1

Client Sample ID: MW-21:110717

Date Collected: 11/07/17 10:25

Date Received: 11/10/17 09:40

Lab Sample ID: 590-7490-2

Matrix: Water

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	80		48		ug/L		11/13/17 14:45	11/16/17 11:55	50
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol	75		43 - 122				11/13/17 14:45	11/16/17 11:55	50

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.24		mg/L		11/14/17 09:48	11/14/17 12:30	1
Residual Range Organics (RRO) (C25-C36)	ND		0.41		mg/L		11/14/17 09:48	11/14/17 12:30	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	97		50 - 150				11/14/17 09:48	11/14/17 12:30	1
n-Triacontane-d62	74		50 - 150				11/14/17 09:48	11/14/17 12:30	1

Client Sample ID: MW-22:110717

Date Collected: 11/07/17 11:01

Date Received: 11/10/17 09:40

Lab Sample ID: 590-7490-3

Matrix: Water

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	7.5		4.9		ug/L		11/13/17 14:45	11/16/17 13:48	5
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol	98		43 - 122				11/13/17 14:45	11/16/17 13:48	5

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.24		mg/L		11/14/17 09:48	11/14/17 12:47	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-7490-1

Client Sample ID: MW-22:110717

Date Collected: 11/07/17 11:01

Date Received: 11/10/17 09:40

Lab Sample ID: 590-7490-3

Matrix: Water

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Residual Range Organics (RRO) (C25-C36)	ND		0.41		mg/L		11/14/17 09:48	11/14/17 12:47	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl	98		50 - 150				11/14/17 09:48	11/14/17 12:47	1
<i>n</i> -Triacontane-d62	75		50 - 150				11/14/17 09:48	11/14/17 12:47	1

Client Sample ID: MW-23:110717

Date Collected: 11/07/17 11:49

Date Received: 11/10/17 09:40

Lab Sample ID: 590-7490-4

Matrix: Water

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		0.97		ug/L		11/13/17 14:45	11/15/17 17:29	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>2,4,6-Tribromophenol</i>	81		43 - 122				11/13/17 14:45	11/15/17 17:29	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.24		mg/L		11/14/17 09:48	11/14/17 13:05	1
Residual Range Organics (RRO) (C25-C36)	ND		0.41		mg/L		11/14/17 09:48	11/14/17 13:05	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl	95		50 - 150				11/14/17 09:48	11/14/17 13:05	1
<i>n</i> -Triacontane-d62	73		50 - 150				11/14/17 09:48	11/14/17 13:05	1

Client Sample ID: MW-24:110817

Date Collected: 11/08/17 09:24

Date Received: 11/10/17 09:40

Lab Sample ID: 590-7490-5

Matrix: Water

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	38		19		ug/L		11/13/17 14:45	11/16/17 12:20	20
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>2,4,6-Tribromophenol</i>	84		43 - 122				11/13/17 14:45	11/16/17 12:20	20

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.25		mg/L		11/14/17 09:48	11/14/17 13:22	1
Residual Range Organics (RRO) (C25-C36)	ND		0.41		mg/L		11/14/17 09:48	11/14/17 13:22	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl	96		50 - 150				11/14/17 09:48	11/14/17 13:22	1
<i>n</i> -Triacontane-d62	71		50 - 150				11/14/17 09:48	11/14/17 13:22	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-7490-1

Client Sample ID: MW-25:110717

Lab Sample ID: 590-7490-6

Date Collected: 11/07/17 13:42

Matrix: Water

Date Received: 11/10/17 09:40

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	31		9.8		ug/L		11/13/17 14:45	11/16/17 10:42	10
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol	93		43 - 122				11/13/17 14:45	11/16/17 10:42	10

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.25		mg/L		11/14/17 09:48	11/14/17 13:39	1
Residual Range Organics (RRO) (C25-C36)	ND		0.41		mg/L		11/14/17 09:48	11/14/17 13:39	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	96		50 - 150				11/14/17 09:48	11/14/17 13:39	1
n-Triacontane-d62	72		50 - 150				11/14/17 09:48	11/14/17 13:39	1

Client Sample ID: MW-26:110817

Lab Sample ID: 590-7490-7

Date Collected: 11/08/17 10:58

Matrix: Water

Date Received: 11/10/17 09:40

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	69		19		ug/L		11/13/17 14:45	11/16/17 12:44	20
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol	79		43 - 122				11/13/17 14:45	11/16/17 12:44	20

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	0.38		0.25		mg/L		11/14/17 09:48	11/14/17 14:14	1
Residual Range Organics (RRO) (C25-C36)	ND		0.41		mg/L		11/14/17 09:48	11/14/17 14:14	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	100		50 - 150				11/14/17 09:48	11/14/17 14:14	1
n-Triacontane-d62	74		50 - 150				11/14/17 09:48	11/14/17 14:14	1

Client Sample ID: MW-27:110817

Lab Sample ID: 590-7490-8

Date Collected: 11/08/17 15:36

Matrix: Water

Date Received: 11/10/17 09:40

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	16		4.9		ug/L		11/13/17 14:45	11/15/17 19:07	5
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol	69		43 - 122				11/13/17 14:45	11/15/17 19:07	5

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	0.87		0.25		mg/L		11/14/17 09:48	11/14/17 14:31	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-7490-1

Client Sample ID: MW-27:110817

Lab Sample ID: 590-7490-8

Date Collected: 11/08/17 15:36

Matrix: Water

Date Received: 11/10/17 09:40

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Residual Range Organics (RRO) (C25-C36)	ND		0.41		mg/L		11/14/17 09:48	11/14/17 14:31	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl	105		50 - 150				11/14/17 09:48	11/14/17 14:31	1
<i>n</i> -Triacontane-d62	77		50 - 150				11/14/17 09:48	11/14/17 14:31	1

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		9.9		pg/L		11/14/17 11:39	11/21/17 08:47	1
2,3,7,8-TCDF	ND		9.9		pg/L		11/14/17 11:39	11/21/17 08:47	1
1,2,3,7,8-PeCDD	ND		49		pg/L		11/14/17 11:39	11/21/17 08:47	1
1,2,3,7,8-PeCDF	ND		49		pg/L		11/14/17 11:39	11/21/17 08:47	1
2,3,4,7,8-PeCDF	ND		49		pg/L		11/14/17 11:39	11/21/17 08:47	1
1,2,3,4,7,8-HxCDD	ND		49		pg/L		11/14/17 11:39	11/21/17 08:47	1
1,2,3,6,7,8-HxCDD	ND		49		pg/L		11/14/17 11:39	11/21/17 08:47	1
1,2,3,7,8,9-HxCDD	ND		49		pg/L		11/14/17 11:39	11/21/17 08:47	1
1,2,3,4,7,8-HxCDF	ND		49		pg/L		11/14/17 11:39	11/21/17 08:47	1
1,2,3,6,7,8-HxCDF	ND		49		pg/L		11/14/17 11:39	11/21/17 08:47	1
1,2,3,7,8,9-HxCDF	ND		49		pg/L		11/14/17 11:39	11/21/17 08:47	1
2,3,4,6,7,8-HxCDF	ND		49		pg/L		11/14/17 11:39	11/21/17 08:47	1
1,2,3,4,6,7,8-HpCDD	ND		49		pg/L		11/14/17 11:39	11/21/17 08:47	1
1,2,3,4,6,7,8-HpCDF	ND		49		pg/L		11/14/17 11:39	11/21/17 08:47	1
1,2,3,4,7,8,9-HpCDF	ND		49		pg/L		11/14/17 11:39	11/21/17 08:47	1
OCDD	370 *		99		pg/L		11/14/17 11:39	11/21/17 08:47	1
OCDF	ND		99		pg/L		11/14/17 11:39	11/21/17 08:47	1
Total TCDD	ND		9.9		pg/L		11/14/17 11:39	11/21/17 08:47	1
Total TCDF	ND		9.9		pg/L		11/14/17 11:39	11/21/17 08:47	1
Total PeCDD	ND		49		pg/L		11/14/17 11:39	11/21/17 08:47	1
Total PeCDF	ND		49		pg/L		11/14/17 11:39	11/21/17 08:47	1
Total HxCDD	ND		49		pg/L		11/14/17 11:39	11/21/17 08:47	1
Total HxCDF	ND		49		pg/L		11/14/17 11:39	11/21/17 08:47	1
Total HpCDD	ND		49		pg/L		11/14/17 11:39	11/21/17 08:47	1
Total HpCDF	ND		49		pg/L		11/14/17 11:39	11/21/17 08:47	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
¹³ C-2,3,7,8-TCDD	88		40 - 135				11/14/17 11:39	11/21/17 08:47	1
¹³ C-2,3,7,8-TCDF	87		40 - 135				11/14/17 11:39	11/21/17 08:47	1
¹³ C-1,2,3,7,8-PeCDD	86		40 - 135				11/14/17 11:39	11/21/17 08:47	1
¹³ C-1,2,3,7,8-PeCDF	87		40 - 135				11/14/17 11:39	11/21/17 08:47	1
¹³ C-1,2,3,6,7,8-HxCDD	65		40 - 135				11/14/17 11:39	11/21/17 08:47	1
¹³ C-1,2,3,4,7,8-HxCDF	58		40 - 135				11/14/17 11:39	11/21/17 08:47	1
¹³ C-1,2,3,4,6,7,8-HpCDD	96		40 - 135				11/14/17 11:39	11/21/17 08:47	1
¹³ C-1,2,3,4,6,7,8-HpCDF	74		40 - 135				11/14/17 11:39	11/21/17 08:47	1
¹³ C-OCDD	95		40 - 135				11/14/17 11:39	11/21/17 08:47	1

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-7490-1

Client Sample ID: MW-28:110817

Lab Sample ID: 590-7490-9

Date Collected: 11/08/17 11:55

Matrix: Water

Date Received: 11/10/17 09:40

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		0.98		ug/L		11/13/17 14:45	11/15/17 19:32	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol	87		43 - 122	11/13/17 14:45	11/15/17 19:32	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.25		mg/L		11/14/17 09:48	11/14/17 14:49	1

Residual Range Organics (RRO) (C25-C36)	ND		0.41		mg/L		11/14/17 09:48	11/14/17 14:49	1
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Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl	97		50 - 150	11/14/17 09:48	11/14/17 14:49	1
<i>n</i> -Triacontane-d62	75		50 - 150	11/14/17 09:48	11/14/17 14:49	1

Client Sample ID: MW-29:110717

Lab Sample ID: 590-7490-10

Date Collected: 11/07/17 12:47

Matrix: Water

Date Received: 11/10/17 09:40

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		0.98		ug/L		11/13/17 14:45	11/15/17 19:56	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol	84		43 - 122	11/13/17 14:45	11/15/17 19:56	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.25		mg/L		11/14/17 09:48	11/14/17 15:06	1

Residual Range Organics (RRO) (C25-C36)	ND		0.41		mg/L		11/14/17 09:48	11/14/17 15:06	1
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Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl	98		50 - 150	11/14/17 09:48	11/14/17 15:06	1
<i>n</i> -Triacontane-d62	74		50 - 150	11/14/17 09:48	11/14/17 15:06	1

Client Sample ID: MW-30:110817

Lab Sample ID: 590-7490-11

Date Collected: 11/08/17 14:52

Matrix: Water

Date Received: 11/10/17 09:40

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	120		49		ug/L		11/13/17 14:45	11/16/17 13:08	50

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol	61		43 - 122	11/13/17 14:45	11/16/17 13:08	50

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.25		mg/L		11/14/17 09:48	11/14/17 15:24	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-7490-1

Client Sample ID: MW-30:110817

Date Collected: 11/08/17 14:52

Date Received: 11/10/17 09:40

Lab Sample ID: 590-7490-11

Matrix: Water

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Residual Range Organics (RRO) (C25-C36)	ND		0.41		mg/L		11/14/17 09:48	11/14/17 15:24	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl	99		50 - 150				11/14/17 09:48	11/14/17 15:24	1
<i>n</i> -Triacontane-d62	75		50 - 150				11/14/17 09:48	11/14/17 15:24	1

Client Sample ID: MW-31:110817

Date Collected: 11/08/17 10:11

Date Received: 11/10/17 09:40

Lab Sample ID: 590-7490-12

Matrix: Water

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		0.98		ug/L		11/13/17 14:45	11/15/17 20:45	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>2,4,6-Tribromophenol</i>	79		43 - 122				11/13/17 14:45	11/15/17 20:45	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.25		mg/L		11/14/17 09:48	11/14/17 15:41	1
Residual Range Organics (RRO) (C25-C36)	ND		0.41		mg/L		11/14/17 09:48	11/14/17 15:41	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl	91		50 - 150				11/14/17 09:48	11/14/17 15:41	1
<i>n</i> -Triacontane-d62	67		50 - 150				11/14/17 09:48	11/14/17 15:41	1

Client Sample ID: MW-32:110717

Date Collected: 11/07/17 15:58

Date Received: 11/10/17 09:40

Lab Sample ID: 590-7490-13

Matrix: Water

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		0.97		ug/L		11/13/17 14:45	11/15/17 21:10	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>2,4,6-Tribromophenol</i>	78		43 - 122				11/13/17 14:45	11/15/17 21:10	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.25		mg/L		11/14/17 09:48	11/14/17 15:58	1
Residual Range Organics (RRO) (C25-C36)	ND		0.41		mg/L		11/14/17 09:48	11/14/17 15:58	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl	97		50 - 150				11/14/17 09:48	11/14/17 15:58	1
<i>n</i> -Triacontane-d62	71		50 - 150				11/14/17 09:48	11/14/17 15:58	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-7490-1

Client Sample ID: MW-33:110717

Date Collected: 11/07/17 14:31

Date Received: 11/10/17 09:40

Lab Sample ID: 590-7490-14

Matrix: Water

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		0.98		ug/L		11/13/17 14:45	11/15/17 21:34	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol	79		43 - 122				11/13/17 14:45	11/15/17 21:34	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.25		mg/L		11/14/17 09:48	11/14/17 16:16	1
Residual Range Organics (RRO) (C25-C36)	ND		0.41		mg/L		11/14/17 09:48	11/14/17 16:16	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl	96		50 - 150				11/14/17 09:48	11/14/17 16:16	1
<i>n</i> -Triacontane-d62	69		50 - 150				11/14/17 09:48	11/14/17 16:16	1

Client Sample ID: MW-34:110817

Date Collected: 11/08/17 13:13

Date Received: 11/10/17 09:40

Lab Sample ID: 590-7490-15

Matrix: Water

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		0.97		ug/L		11/13/17 14:45	11/15/17 21:59	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol	67		43 - 122				11/13/17 14:45	11/15/17 21:59	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.25		mg/L		11/14/17 09:48	11/14/17 16:33	1
Residual Range Organics (RRO) (C25-C36)	ND		0.41		mg/L		11/14/17 09:48	11/14/17 16:33	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl	93		50 - 150				11/14/17 09:48	11/14/17 16:33	1
<i>n</i> -Triacontane-d62	68		50 - 150				11/14/17 09:48	11/14/17 16:33	1

Client Sample ID: MW-35:110817

Date Collected: 11/08/17 14:05

Date Received: 11/10/17 09:40

Lab Sample ID: 590-7490-16

Matrix: Water

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		0.97		ug/L		11/13/17 14:45	11/15/17 22:23	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol	82		43 - 122				11/13/17 14:45	11/15/17 22:23	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.25		mg/L		11/14/17 09:48	11/14/17 16:50	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-7490-1

Client Sample ID: MW-35:110817

Date Collected: 11/08/17 14:05

Date Received: 11/10/17 09:40

Lab Sample ID: 590-7490-16

Matrix: Water

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Residual Range Organics (RRO) (C25-C36)	ND		0.41		mg/L		11/14/17 09:48	11/14/17 16:50	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl	99		50 - 150				11/14/17 09:48	11/14/17 16:50	1
<i>n</i> -Triacontane-d62	72		50 - 150				11/14/17 09:48	11/14/17 16:50	1

Client Sample ID: DUP:110817

Date Collected: 11/08/17 12:00

Date Received: 11/10/17 09:40

Lab Sample ID: 590-7490-17

Matrix: Water

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	16		4.9		ug/L		11/13/17 14:45	11/15/17 22:47	5
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol	70		43 - 122				11/13/17 14:45	11/15/17 22:47	5

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	0.92		0.25		mg/L		11/14/17 09:48	11/14/17 17:25	1
Residual Range Organics (RRO) (C25-C36)	ND		0.41		mg/L		11/14/17 09:48	11/14/17 17:25	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl	109		50 - 150				11/14/17 09:48	11/14/17 17:25	1
<i>n</i> -Triacontane-d62	79		50 - 150				11/14/17 09:48	11/14/17 17:25	1

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		19		pg/L		11/14/17 11:39	11/21/17 09:36	1
2,3,7,8-TCDF	ND		19		pg/L		11/14/17 11:39	11/21/17 09:36	1
1,2,3,7,8-PeCDD	ND		97		pg/L		11/14/17 11:39	11/21/17 09:36	1
1,2,3,7,8-PeCDF	ND		97		pg/L		11/14/17 11:39	11/21/17 09:36	1
2,3,4,7,8-PeCDF	ND		97		pg/L		11/14/17 11:39	11/21/17 09:36	1
1,2,3,4,7,8-HxCDD	ND		97		pg/L		11/14/17 11:39	11/21/17 09:36	1
1,2,3,6,7,8-HxCDD	ND		97		pg/L		11/14/17 11:39	11/21/17 09:36	1
1,2,3,7,8,9-HxCDD	ND		97		pg/L		11/14/17 11:39	11/21/17 09:36	1
1,2,3,4,7,8-HxCDF	ND		97		pg/L		11/14/17 11:39	11/21/17 09:36	1
1,2,3,6,7,8-HxCDF	ND		97		pg/L		11/14/17 11:39	11/21/17 09:36	1
1,2,3,7,8,9-HxCDF	ND		97		pg/L		11/14/17 11:39	11/21/17 09:36	1
2,3,4,6,7,8-HxCDF	ND		97		pg/L		11/14/17 11:39	11/21/17 09:36	1
1,2,3,4,6,7,8-HpCDD	ND		97		pg/L		11/14/17 11:39	11/21/17 09:36	1
1,2,3,4,6,7,8-HpCDF	ND		97		pg/L		11/14/17 11:39	11/21/17 09:36	1
1,2,3,4,7,8,9-HpCDF	ND		97		pg/L		11/14/17 11:39	11/21/17 09:36	1
OCDD	500 *		190		pg/L		11/14/17 11:39	11/21/17 09:36	1
OCDF	ND		190		pg/L		11/14/17 11:39	11/21/17 09:36	1
Total TCDD	ND		19		pg/L		11/14/17 11:39	11/21/17 09:36	1
Total TCDF	ND		19		pg/L		11/14/17 11:39	11/21/17 09:36	1
Total PeCDD	ND		97		pg/L		11/14/17 11:39	11/21/17 09:36	1
Total PeCDF	ND		97		pg/L		11/14/17 11:39	11/21/17 09:36	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-7490-1

Client Sample ID: DUP:110817

Lab Sample ID: 590-7490-17

Date Collected: 11/08/17 12:00

Matrix: Water

Date Received: 11/10/17 09:40

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
Total HxCDD	ND		97		pg/L		11/14/17 11:39	11/21/17 09:36	1
Total HxCDF	ND		97		pg/L		11/14/17 11:39	11/21/17 09:36	1
Total HpCDD	ND		97		pg/L		11/14/17 11:39	11/21/17 09:36	1
Total HpCDF	ND		97		pg/L		11/14/17 11:39	11/21/17 09:36	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	86		40 - 135				11/14/17 11:39	11/21/17 09:36	1
13C-2,3,7,8-TCDF	84		40 - 135				11/14/17 11:39	11/21/17 09:36	1
13C-1,2,3,7,8-PeCDD	83		40 - 135				11/14/17 11:39	11/21/17 09:36	1
13C-1,2,3,7,8-PeCDF	84		40 - 135				11/14/17 11:39	11/21/17 09:36	1
13C-1,2,3,6,7,8-HxCDD	83		40 - 135				11/14/17 11:39	11/21/17 09:36	1
13C-1,2,3,4,7,8-HxCDF	83		40 - 135				11/14/17 11:39	11/21/17 09:36	1
13C-1,2,3,4,6,7,8-HpCDD	101		40 - 135				11/14/17 11:39	11/21/17 09:36	1
13C-1,2,3,4,6,7,8-HpCDF	80		40 - 135				11/14/17 11:39	11/21/17 09:36	1
13C-OCDD	93		40 - 135				11/14/17 11:39	11/21/17 09:36	1

Client Sample ID: TP-3 (1.5'-2.0')

Lab Sample ID: 590-7490-18

Date Collected: 11/09/17 10:05

Matrix: Solid

Date Received: 11/10/17 09:40

Percent Solids: 72.6

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		2.5		pg/g	☼	11/28/17 08:53	12/06/17 14:56	1
2,3,7,8-TCDF	ND		2.5		pg/g	☼	11/28/17 08:53	12/06/17 14:56	1
1,2,3,7,8-PeCDD	ND		13		pg/g	☼	11/28/17 08:53	12/06/17 14:56	1
1,2,3,7,8-PeCDF	ND		13		pg/g	☼	11/28/17 08:53	12/06/17 14:56	1
2,3,4,7,8-PeCDF	ND		13		pg/g	☼	11/28/17 08:53	12/06/17 14:56	1
1,2,3,4,7,8-HxCDD	ND		13		pg/g	☼	11/28/17 08:53	12/06/17 14:56	1
1,2,3,6,7,8-HxCDD	20		13		pg/g	☼	11/28/17 08:53	12/06/17 14:56	1
1,2,3,7,8,9-HxCDD	ND		13		pg/g	☼	11/28/17 08:53	12/06/17 14:56	1
1,2,3,4,7,8-HxCDF	ND		13		pg/g	☼	11/28/17 08:53	12/06/17 14:56	1
1,2,3,6,7,8-HxCDF	ND		13		pg/g	☼	11/28/17 08:53	12/06/17 14:56	1
1,2,3,7,8,9-HxCDF	ND		13		pg/g	☼	11/28/17 08:53	12/06/17 14:56	1
2,3,4,6,7,8-HxCDF	ND		13		pg/g	☼	11/28/17 08:53	12/06/17 14:56	1
1,2,3,4,6,7,8-HpCDD	580		13		pg/g	☼	11/28/17 08:53	12/06/17 14:56	1
1,2,3,4,6,7,8-HpCDF	86		13		pg/g	☼	11/28/17 08:53	12/06/17 14:56	1
1,2,3,4,7,8,9-HpCDF	ND		13		pg/g	☼	11/28/17 08:53	12/06/17 14:56	1
OCDD	5300		25		pg/g	☼	11/28/17 08:53	12/06/17 14:56	1
OCDF	300		25		pg/g	☼	11/28/17 08:53	12/06/17 14:56	1
Total TCDD	ND		2.5		pg/g	☼	11/28/17 08:53	12/06/17 14:56	1
Total TCDF	ND	G	7.6		pg/g	☼	11/28/17 08:53	12/06/17 14:56	1
Total PeCDD	ND		13		pg/g	☼	11/28/17 08:53	12/06/17 14:56	1
Total PeCDF	ND	G	47		pg/g	☼	11/28/17 08:53	12/06/17 14:56	1
Total HxCDD	84		13		pg/g	☼	11/28/17 08:53	12/06/17 14:56	1
Total HxCDF	77		13		pg/g	☼	11/28/17 08:53	12/06/17 14:56	1
Total HpCDD	980		13		pg/g	☼	11/28/17 08:53	12/06/17 14:56	1
Total HpCDF	420		13		pg/g	☼	11/28/17 08:53	12/06/17 14:56	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	66		40 - 135				11/28/17 08:53	12/06/17 14:56	1
13C-2,3,7,8-TCDF	79		40 - 135				11/28/17 08:53	12/06/17 14:56	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
 Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-7490-1

Client Sample ID: TP-3 (1.5'-2.0')

Date Collected: 11/09/17 10:05

Date Received: 11/10/17 09:40

Lab Sample ID: 590-7490-18

Matrix: Solid

Percent Solids: 72.6

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-1,2,3,7,8-PeCDD	59		40 - 135	11/28/17 08:53	12/06/17 14:56	1
13C-1,2,3,7,8-PeCDF	59		40 - 135	11/28/17 08:53	12/06/17 14:56	1
13C-1,2,3,6,7,8-HxCDD	66		40 - 135	11/28/17 08:53	12/06/17 14:56	1
13C-1,2,3,4,7,8-HxCDF	80		40 - 135	11/28/17 08:53	12/06/17 14:56	1
13C-1,2,3,4,6,7,8-HpCDD	52		40 - 135	11/28/17 08:53	12/06/17 14:56	1
13C-1,2,3,4,6,7,8-HpCDF	38 *		40 - 135	11/28/17 08:53	12/06/17 14:56	1
13C-OCDD	52		40 - 135	11/28/17 08:53	12/06/17 14:56	1

Client Sample ID: TP-4 (1.5'-2.0')

Date Collected: 11/09/17 10:40

Date Received: 11/10/17 09:40

Lab Sample ID: 590-7490-23

Matrix: Solid

Percent Solids: 69.7

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		1.4		pg/g	☼	11/28/17 08:53	12/06/17 15:39	1
2,3,7,8-TCDF	ND		1.4		pg/g	☼	11/28/17 08:53	12/06/17 15:39	1
1,2,3,7,8-PeCDD	ND		7.2		pg/g	☼	11/28/17 08:53	12/06/17 15:39	1
1,2,3,7,8-PeCDF	ND		7.2		pg/g	☼	11/28/17 08:53	12/06/17 15:39	1
2,3,4,7,8-PeCDF	ND		7.2		pg/g	☼	11/28/17 08:53	12/06/17 15:39	1
1,2,3,4,7,8-HxCDD	ND		7.2		pg/g	☼	11/28/17 08:53	12/06/17 15:39	1
1,2,3,6,7,8-HxCDD	ND		7.2		pg/g	☼	11/28/17 08:53	12/06/17 15:39	1
1,2,3,7,8,9-HxCDD	ND		7.2		pg/g	☼	11/28/17 08:53	12/06/17 15:39	1
1,2,3,4,7,8-HxCDF	ND		7.2		pg/g	☼	11/28/17 08:53	12/06/17 15:39	1
1,2,3,6,7,8-HxCDF	ND		7.2		pg/g	☼	11/28/17 08:53	12/06/17 15:39	1
1,2,3,7,8,9-HxCDF	ND		7.2		pg/g	☼	11/28/17 08:53	12/06/17 15:39	1
2,3,4,6,7,8-HxCDF	ND		7.2		pg/g	☼	11/28/17 08:53	12/06/17 15:39	1
1,2,3,4,6,7,8-HpCDD	83		7.2		pg/g	☼	11/28/17 08:53	12/06/17 15:39	1
1,2,3,4,6,7,8-HpCDF	8.0		7.2		pg/g	☼	11/28/17 08:53	12/06/17 15:39	1
1,2,3,4,7,8,9-HpCDF	ND		7.2		pg/g	☼	11/28/17 08:53	12/06/17 15:39	1
OCDD	1000		14		pg/g	☼	11/28/17 08:53	12/06/17 15:39	1
OCDF	32		14		pg/g	☼	11/28/17 08:53	12/06/17 15:39	1
Total TCDD	ND		1.4		pg/g	☼	11/28/17 08:53	12/06/17 15:39	1
Total TCDF	ND		1.4		pg/g	☼	11/28/17 08:53	12/06/17 15:39	1
Total PeCDD	ND		7.2		pg/g	☼	11/28/17 08:53	12/06/17 15:39	1
Total PeCDF	ND		7.2		pg/g	☼	11/28/17 08:53	12/06/17 15:39	1
Total HxCDD	ND		7.2		pg/g	☼	11/28/17 08:53	12/06/17 15:39	1
Total HxCDF	ND		7.2		pg/g	☼	11/28/17 08:53	12/06/17 15:39	1
Total HpCDD	150		7.2		pg/g	☼	11/28/17 08:53	12/06/17 15:39	1
Total HpCDF	31		7.2		pg/g	☼	11/28/17 08:53	12/06/17 15:39	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	67		40 - 135	11/28/17 08:53	12/06/17 15:39	1
13C-2,3,7,8-TCDF	76		40 - 135	11/28/17 08:53	12/06/17 15:39	1
13C-1,2,3,7,8-PeCDD	60		40 - 135	11/28/17 08:53	12/06/17 15:39	1
13C-1,2,3,7,8-PeCDF	60		40 - 135	11/28/17 08:53	12/06/17 15:39	1
13C-1,2,3,6,7,8-HxCDD	66		40 - 135	11/28/17 08:53	12/06/17 15:39	1
13C-1,2,3,4,7,8-HxCDF	82		40 - 135	11/28/17 08:53	12/06/17 15:39	1
13C-1,2,3,4,6,7,8-HpCDD	57		40 - 135	11/28/17 08:53	12/06/17 15:39	1
13C-1,2,3,4,6,7,8-HpCDF	58		40 - 135	11/28/17 08:53	12/06/17 15:39	1
13C-OCDD	61		40 - 135	11/28/17 08:53	12/06/17 15:39	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-7490-1

Client Sample ID: TP-6 (1.5'-2.0')

Lab Sample ID: 590-7490-26

Date Collected: 11/09/17 11:05

Matrix: Solid

Date Received: 11/10/17 09:40

Percent Solids: 88.3

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		1.1		pg/g	☼	11/28/17 08:53	12/06/17 16:21	1
2,3,7,8-TCDF	ND		1.1		pg/g	☼	11/28/17 08:53	12/06/17 16:21	1
1,2,3,7,8-PeCDD	ND		5.6		pg/g	☼	11/28/17 08:53	12/06/17 16:21	1
1,2,3,7,8-PeCDF	ND		5.6		pg/g	☼	11/28/17 08:53	12/06/17 16:21	1
2,3,4,7,8-PeCDF	ND		5.6		pg/g	☼	11/28/17 08:53	12/06/17 16:21	1
1,2,3,4,7,8-HxCDD	ND		5.6		pg/g	☼	11/28/17 08:53	12/06/17 16:21	1
1,2,3,6,7,8-HxCDD	ND		5.6		pg/g	☼	11/28/17 08:53	12/06/17 16:21	1
1,2,3,7,8,9-HxCDD	ND		5.6		pg/g	☼	11/28/17 08:53	12/06/17 16:21	1
1,2,3,4,7,8-HxCDF	ND		5.6		pg/g	☼	11/28/17 08:53	12/06/17 16:21	1
1,2,3,6,7,8-HxCDF	ND		5.6		pg/g	☼	11/28/17 08:53	12/06/17 16:21	1
1,2,3,7,8,9-HxCDF	ND		5.6		pg/g	☼	11/28/17 08:53	12/06/17 16:21	1
2,3,4,6,7,8-HxCDF	ND		5.6		pg/g	☼	11/28/17 08:53	12/06/17 16:21	1
1,2,3,4,6,7,8-HpCDD	ND		5.6		pg/g	☼	11/28/17 08:53	12/06/17 16:21	1
1,2,3,4,6,7,8-HpCDF	ND		5.6		pg/g	☼	11/28/17 08:53	12/06/17 16:21	1
1,2,3,4,7,8,9-HpCDF	ND		5.6		pg/g	☼	11/28/17 08:53	12/06/17 16:21	1
OCDD	37		11		pg/g	☼	11/28/17 08:53	12/06/17 16:21	1
OCDF	ND		11		pg/g	☼	11/28/17 08:53	12/06/17 16:21	1
Total TCDD	ND		1.1		pg/g	☼	11/28/17 08:53	12/06/17 16:21	1
Total TCDF	ND		1.1		pg/g	☼	11/28/17 08:53	12/06/17 16:21	1
Total PeCDD	ND		5.6		pg/g	☼	11/28/17 08:53	12/06/17 16:21	1
Total PeCDF	ND		5.6		pg/g	☼	11/28/17 08:53	12/06/17 16:21	1
Total HxCDD	ND		5.6		pg/g	☼	11/28/17 08:53	12/06/17 16:21	1
Total HxCDF	ND		5.6		pg/g	☼	11/28/17 08:53	12/06/17 16:21	1
Total HpCDD	ND		5.6		pg/g	☼	11/28/17 08:53	12/06/17 16:21	1
Total HpCDF	ND		5.6		pg/g	☼	11/28/17 08:53	12/06/17 16:21	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	60		40 - 135	11/28/17 08:53	12/06/17 16:21	1
13C-2,3,7,8-TCDF	70		40 - 135	11/28/17 08:53	12/06/17 16:21	1
13C-1,2,3,7,8-PeCDD	51		40 - 135	11/28/17 08:53	12/06/17 16:21	1
13C-1,2,3,7,8-PeCDF	54		40 - 135	11/28/17 08:53	12/06/17 16:21	1
13C-1,2,3,6,7,8-HxCDD	60		40 - 135	11/28/17 08:53	12/06/17 16:21	1
13C-1,2,3,4,7,8-HxCDF	71		40 - 135	11/28/17 08:53	12/06/17 16:21	1
13C-1,2,3,4,6,7,8-HpCDD	45		40 - 135	11/28/17 08:53	12/06/17 16:21	1
13C-1,2,3,4,6,7,8-HpCDF	43		40 - 135	11/28/17 08:53	12/06/17 16:21	1
13C-OCDD	39 *		40 - 135	11/28/17 08:53	12/06/17 16:21	1

Client Sample ID: TP-20 (1.5'-2.0')

Lab Sample ID: 590-7490-31

Date Collected: 11/09/17 13:45

Matrix: Solid

Date Received: 11/10/17 09:40

Percent Solids: 75.4

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		1.3		pg/g	☼	11/28/17 08:53	12/06/17 17:04	1
2,3,7,8-TCDF	ND		1.3		pg/g	☼	11/28/17 08:53	12/06/17 17:04	1
1,2,3,7,8-PeCDD	ND		6.6		pg/g	☼	11/28/17 08:53	12/06/17 17:04	1
1,2,3,7,8-PeCDF	ND		6.6		pg/g	☼	11/28/17 08:53	12/06/17 17:04	1
2,3,4,7,8-PeCDF	ND		6.6		pg/g	☼	11/28/17 08:53	12/06/17 17:04	1
1,2,3,4,7,8-HxCDD	ND		6.6		pg/g	☼	11/28/17 08:53	12/06/17 17:04	1
1,2,3,6,7,8-HxCDD	ND		6.6		pg/g	☼	11/28/17 08:53	12/06/17 17:04	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-7490-1

Client Sample ID: TP-20 (1.5'-2.0')

Lab Sample ID: 590-7490-31

Date Collected: 11/09/17 13:45

Matrix: Solid

Date Received: 11/10/17 09:40

Percent Solids: 75.4

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,7,8,9-HxCDD	ND		6.6		pg/g	☼	11/28/17 08:53	12/06/17 17:04	1
1,2,3,4,7,8-HxCDF	ND		6.6		pg/g	☼	11/28/17 08:53	12/06/17 17:04	1
1,2,3,6,7,8-HxCDF	ND		6.6		pg/g	☼	11/28/17 08:53	12/06/17 17:04	1
1,2,3,7,8,9-HxCDF	ND		6.6		pg/g	☼	11/28/17 08:53	12/06/17 17:04	1
2,3,4,6,7,8-HxCDF	ND		6.6		pg/g	☼	11/28/17 08:53	12/06/17 17:04	1
1,2,3,4,6,7,8-HpCDD	34		6.6		pg/g	☼	11/28/17 08:53	12/06/17 17:04	1
1,2,3,4,6,7,8-HpCDF	ND		6.6		pg/g	☼	11/28/17 08:53	12/06/17 17:04	1
1,2,3,4,7,8,9-HpCDF	ND		6.6		pg/g	☼	11/28/17 08:53	12/06/17 17:04	1
OCDD	210		13		pg/g	☼	11/28/17 08:53	12/06/17 17:04	1
OCDF	14		13		pg/g	☼	11/28/17 08:53	12/06/17 17:04	1
Total TCDD	ND		1.3		pg/g	☼	11/28/17 08:53	12/06/17 17:04	1
Total TCDF	ND		1.3		pg/g	☼	11/28/17 08:53	12/06/17 17:04	1
Total PeCDD	ND		6.6		pg/g	☼	11/28/17 08:53	12/06/17 17:04	1
Total PeCDF	ND		6.6		pg/g	☼	11/28/17 08:53	12/06/17 17:04	1
Total HxCDD	ND		6.6		pg/g	☼	11/28/17 08:53	12/06/17 17:04	1
Total HxCDF	ND		6.6		pg/g	☼	11/28/17 08:53	12/06/17 17:04	1
Total HpCDD	79		6.6		pg/g	☼	11/28/17 08:53	12/06/17 17:04	1
Total HpCDF	9.5		6.6		pg/g	☼	11/28/17 08:53	12/06/17 17:04	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	67		40 - 135				11/28/17 08:53	12/06/17 17:04	1
13C-2,3,7,8-TCDF	81		40 - 135				11/28/17 08:53	12/06/17 17:04	1
13C-1,2,3,7,8-PeCDD	61		40 - 135				11/28/17 08:53	12/06/17 17:04	1
13C-1,2,3,7,8-PeCDF	63		40 - 135				11/28/17 08:53	12/06/17 17:04	1
13C-1,2,3,6,7,8-HxCDD	66		40 - 135				11/28/17 08:53	12/06/17 17:04	1
13C-1,2,3,4,7,8-HxCDF	80		40 - 135				11/28/17 08:53	12/06/17 17:04	1
13C-1,2,3,4,6,7,8-HpCDD	52		40 - 135				11/28/17 08:53	12/06/17 17:04	1
13C-1,2,3,4,6,7,8-HpCDF	47		40 - 135				11/28/17 08:53	12/06/17 17:04	1
13C-OCDD	48		40 - 135				11/28/17 08:53	12/06/17 17:04	1

Client Sample ID: TP-25 (1.5'-2.0')

Lab Sample ID: 590-7490-34

Date Collected: 11/09/17 13:00

Matrix: Solid

Date Received: 11/10/17 09:40

Percent Solids: 80.5

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		1.2		pg/g	☼	11/28/17 08:53	12/06/17 17:47	1
2,3,7,8-TCDF	ND		1.2		pg/g	☼	11/28/17 08:53	12/06/17 17:47	1
1,2,3,7,8-PeCDD	ND		6.1		pg/g	☼	11/28/17 08:53	12/06/17 17:47	1
1,2,3,7,8-PeCDF	ND		6.1		pg/g	☼	11/28/17 08:53	12/06/17 17:47	1
2,3,4,7,8-PeCDF	ND		6.1		pg/g	☼	11/28/17 08:53	12/06/17 17:47	1
1,2,3,4,7,8-HxCDD	ND		6.1		pg/g	☼	11/28/17 08:53	12/06/17 17:47	1
1,2,3,6,7,8-HxCDD	ND		6.1		pg/g	☼	11/28/17 08:53	12/06/17 17:47	1
1,2,3,7,8,9-HxCDD	ND		6.1		pg/g	☼	11/28/17 08:53	12/06/17 17:47	1
1,2,3,4,7,8-HxCDF	ND		6.1		pg/g	☼	11/28/17 08:53	12/06/17 17:47	1
1,2,3,6,7,8-HxCDF	ND		6.1		pg/g	☼	11/28/17 08:53	12/06/17 17:47	1
1,2,3,7,8,9-HxCDF	ND		6.1		pg/g	☼	11/28/17 08:53	12/06/17 17:47	1
2,3,4,6,7,8-HxCDF	ND		6.1		pg/g	☼	11/28/17 08:53	12/06/17 17:47	1
1,2,3,4,6,7,8-HpCDD	87		6.1		pg/g	☼	11/28/17 08:53	12/06/17 17:47	1
1,2,3,4,6,7,8-HpCDF	17		6.1		pg/g	☼	11/28/17 08:53	12/06/17 17:47	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-7490-1

Client Sample ID: TP-25 (1.5'-2.0')

Lab Sample ID: 590-7490-34

Date Collected: 11/09/17 13:00

Matrix: Solid

Date Received: 11/10/17 09:40

Percent Solids: 80.5

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,7,8,9-HpCDF	ND		6.1		pg/g	☼	11/28/17 08:53	12/06/17 17:47	1
OCDD	1300		12		pg/g	☼	11/28/17 08:53	12/06/17 17:47	1
OCDF	110		12		pg/g	☼	11/28/17 08:53	12/06/17 17:47	1
Total TCDD	ND		1.2		pg/g	☼	11/28/17 08:53	12/06/17 17:47	1
Total TCDF	ND	G	3.2		pg/g	☼	11/28/17 08:53	12/06/17 17:47	1
Total PeCDD	ND		6.1		pg/g	☼	11/28/17 08:53	12/06/17 17:47	1
Total PeCDF	ND	G	24		pg/g	☼	11/28/17 08:53	12/06/17 17:47	1
Total HxCDD	ND		6.1		pg/g	☼	11/28/17 08:53	12/06/17 17:47	1
Total HxCDF	9.2		6.1		pg/g	☼	11/28/17 08:53	12/06/17 17:47	1
Total HpCDD	160		6.1		pg/g	☼	11/28/17 08:53	12/06/17 17:47	1
Total HpCDF	98		6.1		pg/g	☼	11/28/17 08:53	12/06/17 17:47	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	60		40 - 135				11/28/17 08:53	12/06/17 17:47	1
13C-2,3,7,8-TCDF	71		40 - 135				11/28/17 08:53	12/06/17 17:47	1
13C-1,2,3,7,8-PeCDD	50		40 - 135				11/28/17 08:53	12/06/17 17:47	1
13C-1,2,3,7,8-PeCDF	54		40 - 135				11/28/17 08:53	12/06/17 17:47	1
13C-1,2,3,6,7,8-HxCDD	61		40 - 135				11/28/17 08:53	12/06/17 17:47	1
13C-1,2,3,4,7,8-HxCDF	74		40 - 135				11/28/17 08:53	12/06/17 17:47	1
13C-1,2,3,4,6,7,8-HpCDD	49		40 - 135				11/28/17 08:53	12/06/17 17:47	1
13C-1,2,3,4,6,7,8-HpCDF	41		40 - 135				11/28/17 08:53	12/06/17 17:47	1
13C-OCDD	45		40 - 135				11/28/17 08:53	12/06/17 17:47	1

Client Sample ID: TP-40 (1.5'-2.0')

Lab Sample ID: 590-7490-37

Date Collected: 11/09/17 12:30

Matrix: Solid

Date Received: 11/10/17 09:40

Percent Solids: 89.1

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		1.1		pg/g	☼	11/28/17 08:53	12/06/17 18:30	1
2,3,7,8-TCDF	ND		1.1		pg/g	☼	11/28/17 08:53	12/06/17 18:30	1
1,2,3,7,8-PeCDD	ND		5.5		pg/g	☼	11/28/17 08:53	12/06/17 18:30	1
1,2,3,7,8-PeCDF	ND		5.5		pg/g	☼	11/28/17 08:53	12/06/17 18:30	1
2,3,4,7,8-PeCDF	ND		5.5		pg/g	☼	11/28/17 08:53	12/06/17 18:30	1
1,2,3,4,7,8-HxCDD	ND		5.5		pg/g	☼	11/28/17 08:53	12/06/17 18:30	1
1,2,3,6,7,8-HxCDD	ND		5.5		pg/g	☼	11/28/17 08:53	12/06/17 18:30	1
1,2,3,7,8,9-HxCDD	ND		5.5		pg/g	☼	11/28/17 08:53	12/06/17 18:30	1
1,2,3,4,7,8-HxCDF	ND		5.5		pg/g	☼	11/28/17 08:53	12/06/17 18:30	1
1,2,3,6,7,8-HxCDF	ND		5.5		pg/g	☼	11/28/17 08:53	12/06/17 18:30	1
1,2,3,7,8,9-HxCDF	ND		5.5		pg/g	☼	11/28/17 08:53	12/06/17 18:30	1
2,3,4,6,7,8-HxCDF	ND		5.5		pg/g	☼	11/28/17 08:53	12/06/17 18:30	1
1,2,3,4,6,7,8-HpCDD	11		5.5		pg/g	☼	11/28/17 08:53	12/06/17 18:30	1
1,2,3,4,6,7,8-HpCDF	ND		5.5		pg/g	☼	11/28/17 08:53	12/06/17 18:30	1
1,2,3,4,7,8,9-HpCDF	ND		5.5		pg/g	☼	11/28/17 08:53	12/06/17 18:30	1
OCDD	120		11		pg/g	☼	11/28/17 08:53	12/06/17 18:30	1
OCDF	ND		11		pg/g	☼	11/28/17 08:53	12/06/17 18:30	1
Total TCDD	ND		1.1		pg/g	☼	11/28/17 08:53	12/06/17 18:30	1
Total TCDF	ND		1.1		pg/g	☼	11/28/17 08:53	12/06/17 18:30	1
Total PeCDD	ND		5.5		pg/g	☼	11/28/17 08:53	12/06/17 18:30	1
Total PeCDF	ND		5.5		pg/g	☼	11/28/17 08:53	12/06/17 18:30	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-7490-1

Client Sample ID: TP-40 (1.5'-2.0')

Lab Sample ID: 590-7490-37

Date Collected: 11/09/17 12:30

Matrix: Solid

Date Received: 11/10/17 09:40

Percent Solids: 89.1

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
Total HxCDD	ND		5.5		pg/g	☼	11/28/17 08:53	12/06/17 18:30	1
Total HxCDF	ND		5.5		pg/g	☼	11/28/17 08:53	12/06/17 18:30	1
Total HpCDD	19		5.5		pg/g	☼	11/28/17 08:53	12/06/17 18:30	1
Total HpCDF	ND		5.5		pg/g	☼	11/28/17 08:53	12/06/17 18:30	1
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C-2,3,7,8-TCDD	62		40 - 135				11/28/17 08:53	12/06/17 18:30	1
13C-2,3,7,8-TCDF	73		40 - 135				11/28/17 08:53	12/06/17 18:30	1
13C-1,2,3,7,8-PeCDD	55		40 - 135				11/28/17 08:53	12/06/17 18:30	1
13C-1,2,3,7,8-PeCDF	58		40 - 135				11/28/17 08:53	12/06/17 18:30	1
13C-1,2,3,6,7,8-HxCDD	67		40 - 135				11/28/17 08:53	12/06/17 18:30	1
13C-1,2,3,4,7,8-HxCDF	82		40 - 135				11/28/17 08:53	12/06/17 18:30	1
13C-1,2,3,4,6,7,8-HpCDD	50		40 - 135				11/28/17 08:53	12/06/17 18:30	1
13C-1,2,3,4,6,7,8-HpCDF	50		40 - 135				11/28/17 08:53	12/06/17 18:30	1
13C-OCDD	47		40 - 135				11/28/17 08:53	12/06/17 18:30	1

Client Sample ID: TP-41 (1.5'-2.0')

Lab Sample ID: 590-7490-42

Date Collected: 11/09/17 12:05

Matrix: Solid

Date Received: 11/10/17 09:40

Percent Solids: 80.7

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		1.2		pg/g	☼	11/28/17 08:53	12/06/17 19:13	1
2,3,7,8-TCDF	ND		1.2		pg/g	☼	11/28/17 08:53	12/06/17 19:13	1
1,2,3,7,8-PeCDD	ND		6.2		pg/g	☼	11/28/17 08:53	12/06/17 19:13	1
1,2,3,7,8-PeCDF	ND		6.2		pg/g	☼	11/28/17 08:53	12/06/17 19:13	1
2,3,4,7,8-PeCDF	ND		6.2		pg/g	☼	11/28/17 08:53	12/06/17 19:13	1
1,2,3,4,7,8-HxCDD	ND		6.2		pg/g	☼	11/28/17 08:53	12/06/17 19:13	1
1,2,3,6,7,8-HxCDD	ND		6.2		pg/g	☼	11/28/17 08:53	12/06/17 19:13	1
1,2,3,7,8,9-HxCDD	ND		6.2		pg/g	☼	11/28/17 08:53	12/06/17 19:13	1
1,2,3,4,7,8-HxCDF	ND		6.2		pg/g	☼	11/28/17 08:53	12/06/17 19:13	1
1,2,3,6,7,8-HxCDF	ND		6.2		pg/g	☼	11/28/17 08:53	12/06/17 19:13	1
1,2,3,7,8,9-HxCDF	ND		6.2		pg/g	☼	11/28/17 08:53	12/06/17 19:13	1
2,3,4,6,7,8-HxCDF	ND		6.2		pg/g	☼	11/28/17 08:53	12/06/17 19:13	1
1,2,3,4,6,7,8-HpCDD	46		6.2		pg/g	☼	11/28/17 08:53	12/06/17 19:13	1
1,2,3,4,6,7,8-HpCDF	ND		6.2		pg/g	☼	11/28/17 08:53	12/06/17 19:13	1
1,2,3,4,7,8,9-HpCDF	ND		6.2		pg/g	☼	11/28/17 08:53	12/06/17 19:13	1
OCDD	460		12		pg/g	☼	11/28/17 08:53	12/06/17 19:13	1
OCDF	18		12		pg/g	☼	11/28/17 08:53	12/06/17 19:13	1
Total TCDD	ND		1.2		pg/g	☼	11/28/17 08:53	12/06/17 19:13	1
Total TCDF	ND		1.2		pg/g	☼	11/28/17 08:53	12/06/17 19:13	1
Total PeCDD	ND		6.2		pg/g	☼	11/28/17 08:53	12/06/17 19:13	1
Total PeCDF	ND		6.2		pg/g	☼	11/28/17 08:53	12/06/17 19:13	1
Total HxCDD	ND		6.2		pg/g	☼	11/28/17 08:53	12/06/17 19:13	1
Total HxCDF	ND	G	9.7		pg/g	☼	11/28/17 08:53	12/06/17 19:13	1
Total HpCDD	74		6.2		pg/g	☼	11/28/17 08:53	12/06/17 19:13	1
Total HpCDF	13		6.2		pg/g	☼	11/28/17 08:53	12/06/17 19:13	1
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C-2,3,7,8-TCDD	61		40 - 135				11/28/17 08:53	12/06/17 19:13	1
13C-2,3,7,8-TCDF	72		40 - 135				11/28/17 08:53	12/06/17 19:13	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-7490-1

Client Sample ID: TP-41 (1.5'-2.0')

Date Collected: 11/09/17 12:05

Date Received: 11/10/17 09:40

Lab Sample ID: 590-7490-42

Matrix: Solid

Percent Solids: 80.7

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-1,2,3,7,8-PeCDD	53		40 - 135	11/28/17 08:53	12/06/17 19:13	1
13C-1,2,3,7,8-PeCDF	54		40 - 135	11/28/17 08:53	12/06/17 19:13	1
13C-1,2,3,6,7,8-HxCDD	57		40 - 135	11/28/17 08:53	12/06/17 19:13	1
13C-1,2,3,4,7,8-HxCDF	75		40 - 135	11/28/17 08:53	12/06/17 19:13	1
13C-1,2,3,4,6,7,8-HpCDD	44		40 - 135	11/28/17 08:53	12/06/17 19:13	1
13C-1,2,3,4,6,7,8-HpCDF	42		40 - 135	11/28/17 08:53	12/06/17 19:13	1
13C-OCDD	41		40 - 135	11/28/17 08:53	12/06/17 19:13	1

Client Sample ID: TP-42 (1.5'-2.0')

Date Collected: 11/09/17 11:35

Date Received: 11/10/17 09:40

Lab Sample ID: 590-7490-45

Matrix: Solid

Percent Solids: 95.2

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		1.0		pg/g	☼	11/28/17 08:53	12/07/17 04:43	1
2,3,7,8-TCDF	ND		1.0		pg/g	☼	11/28/17 08:53	12/07/17 04:43	1
1,2,3,7,8-PeCDD	ND		5.1		pg/g	☼	11/28/17 08:53	12/07/17 04:43	1
1,2,3,7,8-PeCDF	ND		5.1		pg/g	☼	11/28/17 08:53	12/07/17 04:43	1
2,3,4,7,8-PeCDF	ND		5.1		pg/g	☼	11/28/17 08:53	12/07/17 04:43	1
1,2,3,4,7,8-HxCDD	ND		5.1		pg/g	☼	11/28/17 08:53	12/07/17 04:43	1
1,2,3,6,7,8-HxCDD	ND		5.1		pg/g	☼	11/28/17 08:53	12/07/17 04:43	1
1,2,3,7,8,9-HxCDD	ND		5.1		pg/g	☼	11/28/17 08:53	12/07/17 04:43	1
1,2,3,4,7,8-HxCDF	ND		5.1		pg/g	☼	11/28/17 08:53	12/07/17 04:43	1
1,2,3,6,7,8-HxCDF	ND		5.1		pg/g	☼	11/28/17 08:53	12/07/17 04:43	1
1,2,3,7,8,9-HxCDF	ND		5.1		pg/g	☼	11/28/17 08:53	12/07/17 04:43	1
2,3,4,6,7,8-HxCDF	ND		5.1		pg/g	☼	11/28/17 08:53	12/07/17 04:43	1
1,2,3,4,6,7,8-HpCDD	41		5.1		pg/g	☼	11/28/17 08:53	12/07/17 04:43	1
1,2,3,4,6,7,8-HpCDF	ND		5.1		pg/g	☼	11/28/17 08:53	12/07/17 04:43	1
1,2,3,4,7,8,9-HpCDF	ND		5.1		pg/g	☼	11/28/17 08:53	12/07/17 04:43	1
OCDD	440		10		pg/g	☼	11/28/17 08:53	12/07/17 04:43	1
OCDF	16		10		pg/g	☼	11/28/17 08:53	12/07/17 04:43	1
Total TCDD	ND		1.0		pg/g	☼	11/28/17 08:53	12/07/17 04:43	1
Total TCDF	ND		1.0		pg/g	☼	11/28/17 08:53	12/07/17 04:43	1
Total PeCDD	ND		5.1		pg/g	☼	11/28/17 08:53	12/07/17 04:43	1
Total PeCDF	ND		5.1		pg/g	☼	11/28/17 08:53	12/07/17 04:43	1
Total HxCDD	ND		5.1		pg/g	☼	11/28/17 08:53	12/07/17 04:43	1
Total HxCDF	ND		5.1		pg/g	☼	11/28/17 08:53	12/07/17 04:43	1
Total HpCDD	71		5.1		pg/g	☼	11/28/17 08:53	12/07/17 04:43	1
Total HpCDF	13		5.1		pg/g	☼	11/28/17 08:53	12/07/17 04:43	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	64		40 - 135	11/28/17 08:53	12/07/17 04:43	1
13C-2,3,7,8-TCDF	74		40 - 135	11/28/17 08:53	12/07/17 04:43	1
13C-1,2,3,7,8-PeCDD	77		40 - 135	11/28/17 08:53	12/07/17 04:43	1
13C-1,2,3,7,8-PeCDF	65		40 - 135	11/28/17 08:53	12/07/17 04:43	1
13C-1,2,3,6,7,8-HxCDD	72		40 - 135	11/28/17 08:53	12/07/17 04:43	1
13C-1,2,3,4,7,8-HxCDF	83		40 - 135	11/28/17 08:53	12/07/17 04:43	1
13C-1,2,3,4,6,7,8-HpCDD	43		40 - 135	11/28/17 08:53	12/07/17 04:43	1
13C-1,2,3,4,6,7,8-HpCDF	43		40 - 135	11/28/17 08:53	12/07/17 04:43	1
13C-OCDD	51		40 - 135	11/28/17 08:53	12/07/17 04:43	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-7490-1

Client Sample ID: TP-46 (1.5'-2.0')

Lab Sample ID: 590-7490-50

Date Collected: 11/09/17 09:35

Matrix: Solid

Date Received: 11/10/17 09:40

Percent Solids: 69.4

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		1.4		pg/g	☼	11/28/17 08:53	12/07/17 05:26	1
2,3,7,8-TCDF	ND		1.4		pg/g	☼	11/28/17 08:53	12/07/17 05:26	1
1,2,3,7,8-PeCDD	ND		7.2		pg/g	☼	11/28/17 08:53	12/07/17 05:26	1
1,2,3,7,8-PeCDF	ND		7.2		pg/g	☼	11/28/17 08:53	12/07/17 05:26	1
2,3,4,7,8-PeCDF	ND		7.2		pg/g	☼	11/28/17 08:53	12/07/17 05:26	1
1,2,3,4,7,8-HxCDD	ND		7.2		pg/g	☼	11/28/17 08:53	12/07/17 05:26	1
1,2,3,6,7,8-HxCDD	ND		7.2		pg/g	☼	11/28/17 08:53	12/07/17 05:26	1
1,2,3,7,8,9-HxCDD	ND		7.2		pg/g	☼	11/28/17 08:53	12/07/17 05:26	1
1,2,3,4,7,8-HxCDF	ND		7.2		pg/g	☼	11/28/17 08:53	12/07/17 05:26	1
1,2,3,6,7,8-HxCDF	ND		7.2		pg/g	☼	11/28/17 08:53	12/07/17 05:26	1
1,2,3,7,8,9-HxCDF	ND		7.2		pg/g	☼	11/28/17 08:53	12/07/17 05:26	1
2,3,4,6,7,8-HxCDF	ND		7.2		pg/g	☼	11/28/17 08:53	12/07/17 05:26	1
1,2,3,4,6,7,8-HpCDD	48		7.2		pg/g	☼	11/28/17 08:53	12/07/17 05:26	1
1,2,3,4,6,7,8-HpCDF	ND		7.2		pg/g	☼	11/28/17 08:53	12/07/17 05:26	1
1,2,3,4,7,8,9-HpCDF	ND		7.2		pg/g	☼	11/28/17 08:53	12/07/17 05:26	1
OCDD	430		14		pg/g	☼	11/28/17 08:53	12/07/17 05:26	1
OCDF	ND		14		pg/g	☼	11/28/17 08:53	12/07/17 05:26	1
Total TCDD	ND		1.4		pg/g	☼	11/28/17 08:53	12/07/17 05:26	1
Total TCDF	ND	G	4.0		pg/g	☼	11/28/17 08:53	12/07/17 05:26	1
Total PeCDD	ND		7.2		pg/g	☼	11/28/17 08:53	12/07/17 05:26	1
Total PeCDF	ND	G	9.1		pg/g	☼	11/28/17 08:53	12/07/17 05:26	1
Total HxCDD	ND		7.2		pg/g	☼	11/28/17 08:53	12/07/17 05:26	1
Total HxCDF	ND	G	12		pg/g	☼	11/28/17 08:53	12/07/17 05:26	1
Total HpCDD	85		7.2		pg/g	☼	11/28/17 08:53	12/07/17 05:26	1
Total HpCDF	11		7.2		pg/g	☼	11/28/17 08:53	12/07/17 05:26	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	65		40 - 135	11/28/17 08:53	12/07/17 05:26	1
13C-2,3,7,8-TCDF	79		40 - 135	11/28/17 08:53	12/07/17 05:26	1
13C-1,2,3,7,8-PeCDD	79		40 - 135	11/28/17 08:53	12/07/17 05:26	1
13C-1,2,3,7,8-PeCDF	69		40 - 135	11/28/17 08:53	12/07/17 05:26	1
13C-1,2,3,6,7,8-HxCDD	68		40 - 135	11/28/17 08:53	12/07/17 05:26	1
13C-1,2,3,4,7,8-HxCDF	77		40 - 135	11/28/17 08:53	12/07/17 05:26	1
13C-1,2,3,4,6,7,8-HpCDD	38	*	40 - 135	11/28/17 08:53	12/07/17 05:26	1
13C-1,2,3,4,6,7,8-HpCDF	35	*	40 - 135	11/28/17 08:53	12/07/17 05:26	1
13C-OCDD	46		40 - 135	11/28/17 08:53	12/07/17 05:26	1

Client Sample ID: TP-53 (1.5'-2.0')

Lab Sample ID: 590-7490-53

Date Collected: 11/09/17 13:20

Matrix: Solid

Date Received: 11/10/17 09:40

Percent Solids: 84.2

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		1.2		pg/g	☼	11/28/17 08:53	12/07/17 06:09	1
2,3,7,8-TCDF	ND		1.2		pg/g	☼	11/28/17 08:53	12/07/17 06:09	1
1,2,3,7,8-PeCDD	ND		5.9		pg/g	☼	11/28/17 08:53	12/07/17 06:09	1
1,2,3,7,8-PeCDF	ND		5.9		pg/g	☼	11/28/17 08:53	12/07/17 06:09	1
2,3,4,7,8-PeCDF	ND		5.9		pg/g	☼	11/28/17 08:53	12/07/17 06:09	1
1,2,3,4,7,8-HxCDD	ND		5.9		pg/g	☼	11/28/17 08:53	12/07/17 06:09	1
1,2,3,6,7,8-HxCDD	ND		5.9		pg/g	☼	11/28/17 08:53	12/07/17 06:09	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
 Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-7490-1

Client Sample ID: TP-53 (1.5'-2.0')

Lab Sample ID: 590-7490-53

Date Collected: 11/09/17 13:20

Matrix: Solid

Date Received: 11/10/17 09:40

Percent Solids: 84.2

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,7,8,9-HxCDD	ND		5.9		pg/g	☼	11/28/17 08:53	12/07/17 06:09	1
1,2,3,4,7,8-HxCDF	ND		5.9		pg/g	☼	11/28/17 08:53	12/07/17 06:09	1
1,2,3,6,7,8-HxCDF	ND		5.9		pg/g	☼	11/28/17 08:53	12/07/17 06:09	1
1,2,3,7,8,9-HxCDF	ND		5.9		pg/g	☼	11/28/17 08:53	12/07/17 06:09	1
2,3,4,6,7,8-HxCDF	ND		5.9		pg/g	☼	11/28/17 08:53	12/07/17 06:09	1
1,2,3,4,6,7,8-HpCDD	ND		5.9		pg/g	☼	11/28/17 08:53	12/07/17 06:09	1
1,2,3,4,6,7,8-HpCDF	ND		5.9		pg/g	☼	11/28/17 08:53	12/07/17 06:09	1
1,2,3,4,7,8,9-HpCDF	ND		5.9		pg/g	☼	11/28/17 08:53	12/07/17 06:09	1
OCDD	46		12		pg/g	☼	11/28/17 08:53	12/07/17 06:09	1
OCDF	ND		12		pg/g	☼	11/28/17 08:53	12/07/17 06:09	1
Total TCDD	ND		1.2		pg/g	☼	11/28/17 08:53	12/07/17 06:09	1
Total TCDF	ND		1.2		pg/g	☼	11/28/17 08:53	12/07/17 06:09	1
Total PeCDD	ND		5.9		pg/g	☼	11/28/17 08:53	12/07/17 06:09	1
Total PeCDF	ND		5.9		pg/g	☼	11/28/17 08:53	12/07/17 06:09	1
Total HxCDD	ND		5.9		pg/g	☼	11/28/17 08:53	12/07/17 06:09	1
Total HxCDF	ND		5.9		pg/g	☼	11/28/17 08:53	12/07/17 06:09	1
Total HpCDD	ND		5.9		pg/g	☼	11/28/17 08:53	12/07/17 06:09	1
Total HpCDF	ND		5.9		pg/g	☼	11/28/17 08:53	12/07/17 06:09	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	61		40 - 135				11/28/17 08:53	12/07/17 06:09	1
13C-2,3,7,8-TCDF	72		40 - 135				11/28/17 08:53	12/07/17 06:09	1
13C-1,2,3,7,8-PeCDD	72		40 - 135				11/28/17 08:53	12/07/17 06:09	1
13C-1,2,3,7,8-PeCDF	63		40 - 135				11/28/17 08:53	12/07/17 06:09	1
13C-1,2,3,6,7,8-HxCDD	62		40 - 135				11/28/17 08:53	12/07/17 06:09	1
13C-1,2,3,4,7,8-HxCDF	73		40 - 135				11/28/17 08:53	12/07/17 06:09	1
13C-1,2,3,4,6,7,8-HpCDD	40		40 - 135				11/28/17 08:53	12/07/17 06:09	1
13C-1,2,3,4,6,7,8-HpCDF	38 *		40 - 135				11/28/17 08:53	12/07/17 06:09	1
13C-OCDD	44		40 - 135				11/28/17 08:53	12/07/17 06:09	1

QC Sample Results

Client: GeoEngineers Inc
 Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-7490-1

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Lab Sample ID: MB 580-261256/1-A
Matrix: Water
Analysis Batch: 261379

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 261256

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		1.0		ug/L		11/13/17 14:45	11/15/17 15:52	1
Surrogate	%Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol	65		43 - 122				11/13/17 14:45	11/15/17 15:52	1

Lab Sample ID: LCS 580-261256/2-A
Matrix: Water
Analysis Batch: 261379

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 261256

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits		
Pentachlorophenol	4.00	2.34		ug/L		58	49 - 120		
Surrogate	%Recovery	LCS Qualifier	Limits						
2,4,6-Tribromophenol	84		43 - 122						

Lab Sample ID: LCSD 580-261256/3-A
Matrix: Water
Analysis Batch: 261379

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 261256

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Pentachlorophenol	4.00	2.48		ug/L		62	49 - 120	6	31
Surrogate	%Recovery	LCSD Qualifier	Limits						
2,4,6-Tribromophenol	89		43 - 122						

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Lab Sample ID: MB 590-14731/1-A
Matrix: Water
Analysis Batch: 14726

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 14731

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.24		mg/L		11/14/17 09:48	11/14/17 11:03	1
Residual Range Organics (RRO) (C25-C36)	ND		0.40		mg/L		11/14/17 09:48	11/14/17 11:03	1
Surrogate	%Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	106		50 - 150				11/14/17 09:48	11/14/17 11:03	1
n-Triacontane-d62	72		50 - 150				11/14/17 09:48	11/14/17 11:03	1

TestAmerica Spokane

QC Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-7490-1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) (Continued)

Lab Sample ID: LCS 590-14731/2-A
Matrix: Water
Analysis Batch: 14726

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 14731

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Diesel Range Organics (DRO) (C10-C25)	1.60	1.29		mg/L		80	50 - 150
Residual Range Organics (RRO) (C25-C36)	1.60	1.27		mg/L		79	50 - 150

Surrogate	LCS %Recovery	LCS Qualifier	Limits
<i>o</i> -Terphenyl	104		50 - 150
<i>n</i> -Triacontane-d62	93		50 - 150

Lab Sample ID: LCSD 590-14731/3-A
Matrix: Water
Analysis Batch: 14726

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 14731

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics (DRO) (C10-C25)	1.60	1.17		mg/L		73	50 - 150	10	25
Residual Range Organics (RRO) (C25-C36)	1.60	1.25		mg/L		78	50 - 150	2	25

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
<i>o</i> -Terphenyl	103		50 - 150
<i>n</i> -Triacontane-d62	91		50 - 150

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Lab Sample ID: MB 320-194570/1-A
Matrix: Water
Analysis Batch: 195951

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 194570

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		10		pg/L		11/14/17 11:39	11/21/17 06:21	1
2,3,7,8-TCDF	ND		10		pg/L		11/14/17 11:39	11/21/17 06:21	1
1,2,3,7,8-PeCDD	ND		50		pg/L		11/14/17 11:39	11/21/17 06:21	1
1,2,3,7,8-PeCDF	ND		50		pg/L		11/14/17 11:39	11/21/17 06:21	1
2,3,4,7,8-PeCDF	ND		50		pg/L		11/14/17 11:39	11/21/17 06:21	1
1,2,3,4,7,8-HxCDD	ND		50		pg/L		11/14/17 11:39	11/21/17 06:21	1
1,2,3,6,7,8-HxCDD	ND		50		pg/L		11/14/17 11:39	11/21/17 06:21	1
1,2,3,7,8,9-HxCDD	ND		50		pg/L		11/14/17 11:39	11/21/17 06:21	1
1,2,3,4,7,8-HxCDF	ND		50		pg/L		11/14/17 11:39	11/21/17 06:21	1
1,2,3,6,7,8-HxCDF	ND		50		pg/L		11/14/17 11:39	11/21/17 06:21	1
1,2,3,7,8,9-HxCDF	ND		50		pg/L		11/14/17 11:39	11/21/17 06:21	1
2,3,4,6,7,8-HxCDF	ND		50		pg/L		11/14/17 11:39	11/21/17 06:21	1
1,2,3,4,6,7,8-HpCDD	ND		50		pg/L		11/14/17 11:39	11/21/17 06:21	1
1,2,3,4,6,7,8-HpCDF	ND		50		pg/L		11/14/17 11:39	11/21/17 06:21	1
1,2,3,4,7,8,9-HpCDF	ND		50		pg/L		11/14/17 11:39	11/21/17 06:21	1
OCDD	ND		100		pg/L		11/14/17 11:39	11/21/17 06:21	1
OCDF	ND		100		pg/L		11/14/17 11:39	11/21/17 06:21	1
Total TCDD	ND		10		pg/L		11/14/17 11:39	11/21/17 06:21	1

TestAmerica Spokane

QC Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-7490-1

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: MB 320-194570/1-A
Matrix: Water
Analysis Batch: 195951

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 194570

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TCDF	ND		10		pg/L		11/14/17 11:39	11/21/17 06:21	1
Total PeCDD	ND		50		pg/L		11/14/17 11:39	11/21/17 06:21	1
Total PeCDF	ND		50		pg/L		11/14/17 11:39	11/21/17 06:21	1
Total HxCDD	ND		50		pg/L		11/14/17 11:39	11/21/17 06:21	1
Total HxCDF	ND		50		pg/L		11/14/17 11:39	11/21/17 06:21	1
Total HpCDD	ND		50		pg/L		11/14/17 11:39	11/21/17 06:21	1
Total HpCDF	ND		50		pg/L		11/14/17 11:39	11/21/17 06:21	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	87		40 - 135	11/14/17 11:39	11/21/17 06:21	1
13C-2,3,7,8-TCDF	82		40 - 135	11/14/17 11:39	11/21/17 06:21	1
13C-1,2,3,7,8-PeCDD	83		40 - 135	11/14/17 11:39	11/21/17 06:21	1
13C-1,2,3,7,8-PeCDF	82		40 - 135	11/14/17 11:39	11/21/17 06:21	1
13C-1,2,3,6,7,8-HxCDD	79		40 - 135	11/14/17 11:39	11/21/17 06:21	1
13C-1,2,3,4,7,8-HxCDF	77		40 - 135	11/14/17 11:39	11/21/17 06:21	1
13C-1,2,3,4,6,7,8-HpCDD	86		40 - 135	11/14/17 11:39	11/21/17 06:21	1
13C-1,2,3,4,6,7,8-HpCDF	71		40 - 135	11/14/17 11:39	11/21/17 06:21	1
13C-OCDD	77		40 - 135	11/14/17 11:39	11/21/17 06:21	1

Lab Sample ID: LCS 320-194570/2-A
Matrix: Water
Analysis Batch: 195951

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 194570

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
2,3,7,8-TCDD	200	179		pg/L		90	64 - 142
2,3,7,8-TCDF	200	174		pg/L		87	71 - 142
1,2,3,7,8-PeCDD	1000	907		pg/L		91	71 - 140
1,2,3,7,8-PeCDF	1000	906		pg/L		91	76 - 135
2,3,4,7,8-PeCDF	1000	918		pg/L		92	74 - 137
1,2,3,4,7,8-HxCDD	1000	887		pg/L		89	56 - 146
1,2,3,6,7,8-HxCDD	1000	892		pg/L		89	73 - 144
1,2,3,7,8,9-HxCDD	1000	949		pg/L		95	71 - 151
1,2,3,4,7,8-HxCDF	1000	890		pg/L		89	75 - 131
1,2,3,6,7,8-HxCDF	1000	874		pg/L		87	76 - 133
1,2,3,7,8,9-HxCDF	1000	897		pg/L		90	77 - 142
2,3,4,6,7,8-HxCDF	1000	908		pg/L		91	80 - 137
1,2,3,4,6,7,8-HpCDD	1000	803		pg/L		80	78 - 139
1,2,3,4,6,7,8-HpCDF	1000	889		pg/L		89	79 - 133
1,2,3,4,7,8,9-HpCDF	1000	962		pg/L		96	83 - 130
OCDD	2000	1560	*	pg/L		78	80 - 132
OCDF	2000	1490		pg/L		74	72 - 140

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C-2,3,7,8-TCDD	83		40 - 135
13C-2,3,7,8-TCDF	82		40 - 135
13C-1,2,3,7,8-PeCDD	82		40 - 135
13C-1,2,3,7,8-PeCDF	81		40 - 135
13C-1,2,3,6,7,8-HxCDD	75		40 - 135

TestAmerica Spokane

QC Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-7490-1

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCS 320-194570/2-A
Matrix: Water
Analysis Batch: 195951

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 194570

<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>LCS Qualifier</i>	<i>Limits</i>
13C-1,2,3,4,7,8-HxCDF	77		40 - 135
13C-1,2,3,4,6,7,8-HpCDD	88		40 - 135
13C-1,2,3,4,6,7,8-HpCDF	66		40 - 135
13C-OCDD	82		40 - 135

Lab Sample ID: LCSD 320-194570/3-A
Matrix: Water
Analysis Batch: 195951

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 194570

<i>Analyte</i>	<i>Spike Added</i>	<i>LCSD Result</i>	<i>LCSD Qualifier</i>	<i>Unit</i>	<i>D</i>	<i>%Rec</i>	<i>Limits</i>	<i>RPD</i>	<i>RPD Limit</i>
2,3,7,8-TCDD	200	187		pg/L		94	64 - 142	4	20
2,3,7,8-TCDF	200	186		pg/L		93	71 - 142	7	20
1,2,3,7,8-PeCDD	1000	934		pg/L		93	71 - 140	3	20
1,2,3,7,8-PeCDF	1000	893		pg/L		89	76 - 135	1	20
2,3,4,7,8-PeCDF	1000	913		pg/L		91	74 - 137	1	20
1,2,3,4,7,8-HxCDD	1000	928		pg/L		93	56 - 146	4	20
1,2,3,6,7,8-HxCDD	1000	928		pg/L		93	73 - 144	4	20
1,2,3,7,8,9-HxCDD	1000	1000		pg/L		100	71 - 151	5	20
1,2,3,4,7,8-HxCDF	1000	942		pg/L		94	75 - 131	6	20
1,2,3,6,7,8-HxCDF	1000	926		pg/L		93	76 - 133	6	20
1,2,3,7,8,9-HxCDF	1000	1020		pg/L		102	77 - 142	13	20
2,3,4,6,7,8-HxCDF	1000	987		pg/L		99	80 - 137	8	20
1,2,3,4,6,7,8-HpCDD	1000	895		pg/L		90	78 - 139	11	20
1,2,3,4,6,7,8-HpCDF	1000	883		pg/L		88	79 - 133	1	20
1,2,3,4,7,8,9-HpCDF	1000	936		pg/L		94	83 - 130	3	20
OCDD	2000	1680		pg/L		84	80 - 132	7	20
OCDF	2000	1730		pg/L		86	72 - 140	15	20

<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>LCS Qualifier</i>	<i>Limits</i>
13C-2,3,7,8-TCDD	87		40 - 135
13C-2,3,7,8-TCDF	87		40 - 135
13C-1,2,3,7,8-PeCDD	88		40 - 135
13C-1,2,3,7,8-PeCDF	90		40 - 135
13C-1,2,3,6,7,8-HxCDD	83		40 - 135
13C-1,2,3,4,7,8-HxCDF	81		40 - 135
13C-1,2,3,4,6,7,8-HpCDD	99		40 - 135
13C-1,2,3,4,6,7,8-HpCDF	97		40 - 135
13C-OCDD	96		40 - 135

Lab Sample ID: MB 320-196903/1-A
Matrix: Solid
Analysis Batch: 198600

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 196903

<i>Analyte</i>	<i>MB Result</i>	<i>MB Qualifier</i>	<i>RL</i>	<i>EDL</i>	<i>Unit</i>	<i>D</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
2,3,7,8-TCDD	ND		1.0		pg/g		11/28/17 08:53	12/06/17 12:47	1
2,3,7,8-TCDF	ND		1.0		pg/g		11/28/17 08:53	12/06/17 12:47	1
1,2,3,7,8-PeCDD	ND		5.0		pg/g		11/28/17 08:53	12/06/17 12:47	1
1,2,3,7,8-PeCDF	ND		5.0		pg/g		11/28/17 08:53	12/06/17 12:47	1
2,3,4,7,8-PeCDF	ND		5.0		pg/g		11/28/17 08:53	12/06/17 12:47	1

TestAmerica Spokane

QC Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-7490-1

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: MB 320-196903/1-A
Matrix: Solid
Analysis Batch: 198600

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 196903

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,7,8-HxCDD	ND		5.0		pg/g		11/28/17 08:53	12/06/17 12:47	1
1,2,3,6,7,8-HxCDD	ND		5.0		pg/g		11/28/17 08:53	12/06/17 12:47	1
1,2,3,7,8,9-HxCDD	ND		5.0		pg/g		11/28/17 08:53	12/06/17 12:47	1
1,2,3,4,7,8-HxCDF	ND		5.0		pg/g		11/28/17 08:53	12/06/17 12:47	1
1,2,3,6,7,8-HxCDF	ND		5.0		pg/g		11/28/17 08:53	12/06/17 12:47	1
1,2,3,7,8,9-HxCDF	ND		5.0		pg/g		11/28/17 08:53	12/06/17 12:47	1
2,3,4,6,7,8-HxCDF	ND		5.0		pg/g		11/28/17 08:53	12/06/17 12:47	1
1,2,3,4,6,7,8-HpCDD	ND		5.0		pg/g		11/28/17 08:53	12/06/17 12:47	1
1,2,3,4,6,7,8-HpCDF	ND		5.0		pg/g		11/28/17 08:53	12/06/17 12:47	1
1,2,3,4,7,8,9-HpCDF	ND		5.0		pg/g		11/28/17 08:53	12/06/17 12:47	1
OCDD	ND		10		pg/g		11/28/17 08:53	12/06/17 12:47	1
OCDF	ND		10		pg/g		11/28/17 08:53	12/06/17 12:47	1
Total TCDD	ND		1.0		pg/g		11/28/17 08:53	12/06/17 12:47	1
Total TCDF	ND		1.0		pg/g		11/28/17 08:53	12/06/17 12:47	1
Total PeCDD	ND		5.0		pg/g		11/28/17 08:53	12/06/17 12:47	1
Total PeCDF	ND		5.0		pg/g		11/28/17 08:53	12/06/17 12:47	1
Total HxCDD	ND		5.0		pg/g		11/28/17 08:53	12/06/17 12:47	1
Total HxCDF	ND		5.0		pg/g		11/28/17 08:53	12/06/17 12:47	1
Total HpCDD	ND		5.0		pg/g		11/28/17 08:53	12/06/17 12:47	1
Total HpCDF	ND		5.0		pg/g		11/28/17 08:53	12/06/17 12:47	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	73		40 - 135	11/28/17 08:53	12/06/17 12:47	1
13C-2,3,7,8-TCDF	84		40 - 135	11/28/17 08:53	12/06/17 12:47	1
13C-1,2,3,7,8-PeCDD	74		40 - 135	11/28/17 08:53	12/06/17 12:47	1
13C-1,2,3,7,8-PeCDF	71		40 - 135	11/28/17 08:53	12/06/17 12:47	1
13C-1,2,3,6,7,8-HxCDD	81		40 - 135	11/28/17 08:53	12/06/17 12:47	1
13C-1,2,3,4,7,8-HxCDF	101		40 - 135	11/28/17 08:53	12/06/17 12:47	1
13C-1,2,3,4,6,7,8-HpCDD	69		40 - 135	11/28/17 08:53	12/06/17 12:47	1
13C-1,2,3,4,6,7,8-HpCDF	71		40 - 135	11/28/17 08:53	12/06/17 12:47	1
13C-OCDD	71		40 - 135	11/28/17 08:53	12/06/17 12:47	1

Lab Sample ID: LCS 320-196903/2-A
Matrix: Solid
Analysis Batch: 198600

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 196903

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limit
2,3,7,8-TCDD	20.0	21.7		pg/g		109	77 - 130
2,3,7,8-TCDF	20.0	19.6		pg/g		98	79 - 137
1,2,3,7,8-PeCDD	100	94.7		pg/g		95	79 - 134
1,2,3,7,8-PeCDF	100	116		pg/g		116	81 - 134
2,3,4,7,8-PeCDF	100	119		pg/g		119	76 - 132
1,2,3,4,7,8-HxCDD	100	115		pg/g		115	65 - 144
1,2,3,6,7,8-HxCDD	100	106		pg/g		106	73 - 147
1,2,3,7,8,9-HxCDD	100	101		pg/g		101	80 - 143
1,2,3,4,7,8-HxCDF	100	101		pg/g		101	72 - 140
1,2,3,6,7,8-HxCDF	100	94.6		pg/g		95	63 - 152
1,2,3,7,8,9-HxCDF	100	95.0		pg/g		95	72 - 152

TestAmerica Spokane

QC Sample Results

Client: GeoEngineers Inc
 Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-7490-1

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCS 320-196903/2-A
Matrix: Solid
Analysis Batch: 198600

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 196903

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
2,3,4,6,7,8-HxCDF	100	100		pg/g		100	72 - 151
1,2,3,4,6,7,8-HpCDD	100	96.3		pg/g		96	86 - 134
1,2,3,4,6,7,8-HpCDF	100	101		pg/g		101	81 - 137
1,2,3,4,7,8,9-HpCDF	100	101		pg/g		101	79 - 139
OCDD	200	187		pg/g		94	80 - 137
OCDF	200	172		pg/g		86	75 - 141

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C-2,3,7,8-TCDD	71		40 - 135
13C-2,3,7,8-TCDF	84		40 - 135
13C-1,2,3,7,8-PeCDD	70		40 - 135
13C-1,2,3,7,8-PeCDF	70		40 - 135
13C-1,2,3,6,7,8-HxCDD	78		40 - 135
13C-1,2,3,4,7,8-HxCDF	93		40 - 135
13C-1,2,3,4,6,7,8-HpCDD	65		40 - 135
13C-1,2,3,4,6,7,8-HpCDF	61		40 - 135
13C-OCDD	66		40 - 135

Lab Sample ID: LCSD 320-196903/3-A
Matrix: Solid
Analysis Batch: 198600

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 196903

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	RPD Limit
2,3,7,8-TCDD	20.0	20.3		pg/g		102	77 - 130	7	20
2,3,7,8-TCDF	20.0	18.7		pg/g		93	79 - 137	5	20
1,2,3,7,8-PeCDD	100	92.4		pg/g		92	79 - 134	2	20
1,2,3,7,8-PeCDF	100	118		pg/g		118	81 - 134	1	20
2,3,4,7,8-PeCDF	100	120		pg/g		120	76 - 132	1	20
1,2,3,4,7,8-HxCDD	100	115		pg/g		115	65 - 144	0	20
1,2,3,6,7,8-HxCDD	100	106		pg/g		106	73 - 147	0	20
1,2,3,7,8,9-HxCDD	100	101		pg/g		101	80 - 143	1	20
1,2,3,4,7,8-HxCDF	100	101		pg/g		101	72 - 140	0	20
1,2,3,6,7,8-HxCDF	100	93.4		pg/g		93	63 - 152	1	20
1,2,3,7,8,9-HxCDF	100	93.8		pg/g		94	72 - 152	1	20
2,3,4,6,7,8-HxCDF	100	99.9		pg/g		100	72 - 151	0	20
1,2,3,4,6,7,8-HpCDD	100	95.2		pg/g		95	86 - 134	1	20
1,2,3,4,6,7,8-HpCDF	100	104		pg/g		104	81 - 137	3	20
1,2,3,4,7,8,9-HpCDF	100	96.5		pg/g		96	79 - 139	5	20
OCDD	200	192		pg/g		96	80 - 137	3	20
OCDF	200	187		pg/g		93	75 - 141	9	20

Isotope Dilution	LCSD %Recovery	LCSD Qualifier	Limits
13C-2,3,7,8-TCDD	70		40 - 135
13C-2,3,7,8-TCDF	79		40 - 135
13C-1,2,3,7,8-PeCDD	63		40 - 135
13C-1,2,3,7,8-PeCDF	64		40 - 135
13C-1,2,3,6,7,8-HxCDD	77		40 - 135
13C-1,2,3,4,7,8-HxCDF	94		40 - 135

TestAmerica Spokane

QC Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-7490-1

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCSD 320-196903/3-A
Matrix: Solid
Analysis Batch: 198600

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 196903

<i>Isotope Dilution</i>	<i>LCSD %Recovery</i>	<i>LCSD Qualifier</i>	<i>Limits</i>
13C-1,2,3,4,6,7,8-HpCDD	63		40 - 135
13C-1,2,3,4,6,7,8-HpCDF	65		40 - 135
13C-OCDD	62		40 - 135

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Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-7490-1

Client Sample ID: MW-20:110717

Date Collected: 11/07/17 09:48

Date Received: 11/10/17 09:40

Lab Sample ID: 590-7490-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1036.9 mL	2 mL	261256	11/13/17 14:45	REY	TAL SEA
Total/NA	Analysis	8270D SIM		1			261379	11/15/17 16:16	TL1	TAL SEA
Total/NA	Prep	3510C			242.2 mL	2 mL	14731	11/14/17 09:48	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			14726	11/14/17 12:13	NMI	TAL SPK

Client Sample ID: MW-21:110717

Date Collected: 11/07/17 10:25

Date Received: 11/10/17 09:40

Lab Sample ID: 590-7490-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1031.4 mL	2 mL	261256	11/13/17 14:45	REY	TAL SEA
Total/NA	Analysis	8270D SIM		50			261469	11/16/17 11:55	ERZ	TAL SEA
Total/NA	Prep	3510C			245.6 mL	2 mL	14731	11/14/17 09:48	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			14726	11/14/17 12:30	NMI	TAL SPK

Client Sample ID: MW-22:110717

Date Collected: 11/07/17 11:01

Date Received: 11/10/17 09:40

Lab Sample ID: 590-7490-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1028.3 mL	2 mL	261256	11/13/17 14:45	REY	TAL SEA
Total/NA	Analysis	8270D SIM		5			261469	11/16/17 13:48	ERZ	TAL SEA
Total/NA	Prep	3510C			246.5 mL	2 mL	14731	11/14/17 09:48	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			14726	11/14/17 12:47	NMI	TAL SPK

Client Sample ID: MW-23:110717

Date Collected: 11/07/17 11:49

Date Received: 11/10/17 09:40

Lab Sample ID: 590-7490-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1026.4 mL	2 mL	261256	11/13/17 14:45	REY	TAL SEA
Total/NA	Analysis	8270D SIM		1			261379	11/15/17 17:29	TL1	TAL SEA
Total/NA	Prep	3510C			245.6 mL	2 mL	14731	11/14/17 09:48	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			14726	11/14/17 13:05	NMI	TAL SPK

Client Sample ID: MW-24:110817

Date Collected: 11/08/17 09:24

Date Received: 11/10/17 09:40

Lab Sample ID: 590-7490-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1027.9 mL	2 mL	261256	11/13/17 14:45	REY	TAL SEA
Total/NA	Analysis	8270D SIM		20			261469	11/16/17 12:20	ERZ	TAL SEA
Total/NA	Prep	3510C			241.1 mL	2 mL	14731	11/14/17 09:48	NMI	TAL SPK

TestAmerica Spokane

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-7490-1

Client Sample ID: MW-24:110817

Date Collected: 11/08/17 09:24

Date Received: 11/10/17 09:40

Lab Sample ID: 590-7490-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	NWTPH-Dx		1			14726	11/14/17 13:22	NMI	TAL SPK

Client Sample ID: MW-25:110717

Date Collected: 11/07/17 13:42

Date Received: 11/10/17 09:40

Lab Sample ID: 590-7490-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1024.7 mL	2 mL	261256	11/13/17 14:45	REY	TAL SEA
Total/NA	Analysis	8270D SIM		10			261469	11/16/17 10:42	ERZ	TAL SEA
Total/NA	Prep	3510C			243.2 mL	2 mL	14731	11/14/17 09:48	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			14726	11/14/17 13:39	NMI	TAL SPK

Client Sample ID: MW-26:110817

Date Collected: 11/08/17 10:58

Date Received: 11/10/17 09:40

Lab Sample ID: 590-7490-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1026.8 mL	2 mL	261256	11/13/17 14:45	REY	TAL SEA
Total/NA	Analysis	8270D SIM		20			261469	11/16/17 12:44	ERZ	TAL SEA
Total/NA	Prep	3510C			242.4 mL	2 mL	14731	11/14/17 09:48	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			14726	11/14/17 14:14	NMI	TAL SPK

Client Sample ID: MW-27:110817

Date Collected: 11/08/17 15:36

Date Received: 11/10/17 09:40

Lab Sample ID: 590-7490-8

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1017.3 mL	2 mL	261256	11/13/17 14:45	REY	TAL SEA
Total/NA	Analysis	8270D SIM		5			261379	11/15/17 19:07	TL1	TAL SEA
Total/NA	Prep	3510C			244.8 mL	2 mL	14731	11/14/17 09:48	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			14726	11/14/17 14:31	NMI	TAL SPK
Total/NA	Prep	8290			1011.5 mL	20.0 uL	194570	11/14/17 11:39	DXD	TAL SAC
Total/NA	Analysis	8290A		1			195951	11/21/17 08:47	AS	TAL SAC

Client Sample ID: MW-28:110817

Date Collected: 11/08/17 11:55

Date Received: 11/10/17 09:40

Lab Sample ID: 590-7490-9

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1021.5 mL	2 mL	261256	11/13/17 14:45	REY	TAL SEA
Total/NA	Analysis	8270D SIM		1			261379	11/15/17 19:32	TL1	TAL SEA
Total/NA	Prep	3510C			242.2 mL	2 mL	14731	11/14/17 09:48	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			14726	11/14/17 14:49	NMI	TAL SPK

TestAmerica Spokane

Lab Chronicle

Client: GeoEngineers Inc
 Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-7490-1

Client Sample ID: MW-29:110717

Lab Sample ID: 590-7490-10

Date Collected: 11/07/17 12:47

Matrix: Water

Date Received: 11/10/17 09:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1020.2 mL	2 mL	261256	11/13/17 14:45	REY	TAL SEA
Total/NA	Analysis	8270D SIM		1			261379	11/15/17 19:56	TL1	TAL SEA
Total/NA	Prep	3510C			242.5 mL	2 mL	14731	11/14/17 09:48	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			14726	11/14/17 15:06	NMI	TAL SPK

Client Sample ID: MW-30:110817

Lab Sample ID: 590-7490-11

Date Collected: 11/08/17 14:52

Matrix: Water

Date Received: 11/10/17 09:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1021.7 mL	2 mL	261256	11/13/17 14:45	REY	TAL SEA
Total/NA	Analysis	8270D SIM		50			261469	11/16/17 13:08	ERZ	TAL SEA
Total/NA	Prep	3510C			242.9 mL	2 mL	14731	11/14/17 09:48	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			14726	11/14/17 15:24	NMI	TAL SPK

Client Sample ID: MW-31:110817

Lab Sample ID: 590-7490-12

Date Collected: 11/08/17 10:11

Matrix: Water

Date Received: 11/10/17 09:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1022.2 mL	2 mL	261256	11/13/17 14:45	REY	TAL SEA
Total/NA	Analysis	8270D SIM		1			261379	11/15/17 20:45	TL1	TAL SEA
Total/NA	Prep	3510C			242.3 mL	2 mL	14731	11/14/17 09:48	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			14726	11/14/17 15:41	NMI	TAL SPK

Client Sample ID: MW-32:110717

Lab Sample ID: 590-7490-13

Date Collected: 11/07/17 15:58

Matrix: Water

Date Received: 11/10/17 09:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1032.2 mL	2 mL	261256	11/13/17 14:45	REY	TAL SEA
Total/NA	Analysis	8270D SIM		1			261379	11/15/17 21:10	TL1	TAL SEA
Total/NA	Prep	3510C			243.6 mL	2 mL	14731	11/14/17 09:48	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			14726	11/14/17 15:58	NMI	TAL SPK

Client Sample ID: MW-33:110717

Lab Sample ID: 590-7490-14

Date Collected: 11/07/17 14:31

Matrix: Water

Date Received: 11/10/17 09:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1020.2 mL	2 mL	261256	11/13/17 14:45	REY	TAL SEA
Total/NA	Analysis	8270D SIM		1			261379	11/15/17 21:34	TL1	TAL SEA
Total/NA	Prep	3510C			243.9 mL	2 mL	14731	11/14/17 09:48	NMI	TAL SPK

TestAmerica Spokane

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-7490-1

Client Sample ID: MW-33:110717

Lab Sample ID: 590-7490-14

Date Collected: 11/07/17 14:31

Matrix: Water

Date Received: 11/10/17 09:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	NWTPH-Dx		1			14726	11/14/17 16:16	NMI	TAL SPK

Client Sample ID: MW-34:110817

Lab Sample ID: 590-7490-15

Date Collected: 11/08/17 13:13

Matrix: Water

Date Received: 11/10/17 09:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1029.3 mL	2 mL	261256	11/13/17 14:45	REY	TAL SEA
Total/NA	Analysis	8270D SIM		1			261379	11/15/17 21:59	TL1	TAL SEA
Total/NA	Prep	3510C			242.9 mL	2 mL	14731	11/14/17 09:48	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			14726	11/14/17 16:33	NMI	TAL SPK

Client Sample ID: MW-35:110817

Lab Sample ID: 590-7490-16

Date Collected: 11/08/17 14:05

Matrix: Water

Date Received: 11/10/17 09:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1027.1 mL	2 mL	261256	11/13/17 14:45	REY	TAL SEA
Total/NA	Analysis	8270D SIM		1			261379	11/15/17 22:23	TL1	TAL SEA
Total/NA	Prep	3510C			242.5 mL	2 mL	14731	11/14/17 09:48	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			14726	11/14/17 16:50	NMI	TAL SPK

Client Sample ID: DUP:110817

Lab Sample ID: 590-7490-17

Date Collected: 11/08/17 12:00

Matrix: Water

Date Received: 11/10/17 09:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1012.3 mL	2 mL	261256	11/13/17 14:45	REY	TAL SEA
Total/NA	Analysis	8270D SIM		5			261379	11/15/17 22:47	TL1	TAL SEA
Total/NA	Prep	3510C			241.8 mL	2 mL	14731	11/14/17 09:48	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			14726	11/14/17 17:25	NMI	TAL SPK
Total/NA	Prep	8290			1025.9 mL	40.0 uL	194570	11/14/17 11:39	DXD	TAL SAC
Total/NA	Analysis	8290A		1			195951	11/21/17 09:36	AS	TAL SAC

Client Sample ID: TP-3 (1.5'-2.0')

Lab Sample ID: 590-7490-18

Date Collected: 11/09/17 10:05

Matrix: Solid

Date Received: 11/10/17 09:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			194385	11/13/17 14:54	CFR	TAL SAC

TestAmerica Spokane

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-7490-1

Client Sample ID: TP-3 (1.5'-2.0')

Lab Sample ID: 590-7490-18

Date Collected: 11/09/17 10:05

Matrix: Solid

Date Received: 11/10/17 09:40

Percent Solids: 72.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			9.95 g	36.4 uL	196903	11/28/17 08:53	ADN	TAL SAC
Total/NA	Analysis	8290A		1			198600	12/06/17 14:56	AS	TAL SAC

Client Sample ID: TP-4 (1.5'-2.0')

Lab Sample ID: 590-7490-23

Date Collected: 11/09/17 10:40

Matrix: Solid

Date Received: 11/10/17 09:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			194385	11/13/17 14:54	CFR	TAL SAC

Client Sample ID: TP-4 (1.5'-2.0')

Lab Sample ID: 590-7490-23

Date Collected: 11/09/17 10:40

Matrix: Solid

Date Received: 11/10/17 09:40

Percent Solids: 69.7

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			9.96 g	20.0 uL	196903	11/28/17 08:53	ADN	TAL SAC
Total/NA	Analysis	8290A		1			198600	12/06/17 15:39	AS	TAL SAC

Client Sample ID: TP-6 (1.5'-2.0')

Lab Sample ID: 590-7490-26

Date Collected: 11/09/17 11:05

Matrix: Solid

Date Received: 11/10/17 09:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			194385	11/13/17 14:54	CFR	TAL SAC

Client Sample ID: TP-6 (1.5'-2.0')

Lab Sample ID: 590-7490-26

Date Collected: 11/09/17 11:05

Matrix: Solid

Date Received: 11/10/17 09:40

Percent Solids: 88.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			10.17 g	20.0 uL	196903	11/28/17 08:53	ADN	TAL SAC
Total/NA	Analysis	8290A		1			198600	12/06/17 16:21	AS	TAL SAC

Client Sample ID: TP-20 (1.5'-2.0')

Lab Sample ID: 590-7490-31

Date Collected: 11/09/17 13:45

Matrix: Solid

Date Received: 11/10/17 09:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			194385	11/13/17 14:54	CFR	TAL SAC

TestAmerica Spokane

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-7490-1

Client Sample ID: TP-20 (1.5'-2.0')

Lab Sample ID: 590-7490-31

Date Collected: 11/09/17 13:45

Matrix: Solid

Date Received: 11/10/17 09:40

Percent Solids: 75.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			10.03 g	20.0 uL	196903	11/28/17 08:53	ADN	TAL SAC
Total/NA	Analysis	8290A		1			198600	12/06/17 17:04	AS	TAL SAC

Client Sample ID: TP-25 (1.5'-2.0')

Lab Sample ID: 590-7490-34

Date Collected: 11/09/17 13:00

Matrix: Solid

Date Received: 11/10/17 09:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			194385	11/13/17 14:54	CFR	TAL SAC

Client Sample ID: TP-25 (1.5'-2.0')

Lab Sample ID: 590-7490-34

Date Collected: 11/09/17 13:00

Matrix: Solid

Date Received: 11/10/17 09:40

Percent Solids: 80.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			10.16 g	20.0 uL	196903	11/28/17 08:53	ADN	TAL SAC
Total/NA	Analysis	8290A		1			198600	12/06/17 17:47	AS	TAL SAC

Client Sample ID: TP-40 (1.5'-2.0')

Lab Sample ID: 590-7490-37

Date Collected: 11/09/17 12:30

Matrix: Solid

Date Received: 11/10/17 09:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			194385	11/13/17 14:54	CFR	TAL SAC

Client Sample ID: TP-40 (1.5'-2.0')

Lab Sample ID: 590-7490-37

Date Collected: 11/09/17 12:30

Matrix: Solid

Date Received: 11/10/17 09:40

Percent Solids: 89.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			10.12 g	20.0 uL	196903	11/28/17 08:53	ADN	TAL SAC
Total/NA	Analysis	8290A		1			198600	12/06/17 18:30	AS	TAL SAC

Client Sample ID: TP-41 (1.5'-2.0')

Lab Sample ID: 590-7490-42

Date Collected: 11/09/17 12:05

Matrix: Solid

Date Received: 11/10/17 09:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			194385	11/13/17 14:54	CFR	TAL SAC

TestAmerica Spokane

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-7490-1

Client Sample ID: TP-41 (1.5'-2.0')

Lab Sample ID: 590-7490-42

Date Collected: 11/09/17 12:05

Matrix: Solid

Date Received: 11/10/17 09:40

Percent Solids: 80.7

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			10.06 g	20.0 uL	196903	11/28/17 08:53	ADN	TAL SAC
Total/NA	Analysis	8290A		1			198600	12/06/17 19:13	AS	TAL SAC

Client Sample ID: TP-42 (1.5'-2.0')

Lab Sample ID: 590-7490-45

Date Collected: 11/09/17 11:35

Matrix: Solid

Date Received: 11/10/17 09:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			194643	11/14/17 15:44	CFR	TAL SAC

Client Sample ID: TP-42 (1.5'-2.0')

Lab Sample ID: 590-7490-45

Date Collected: 11/09/17 11:35

Matrix: Solid

Date Received: 11/10/17 09:40

Percent Solids: 95.2

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			10.36 g	20.0 uL	196903	11/28/17 08:53	ADN	TAL SAC
Total/NA	Analysis	8290A		1			198851	12/07/17 04:43	AS	TAL SAC

Client Sample ID: TP-46 (1.5'-2.0')

Lab Sample ID: 590-7490-50

Date Collected: 11/09/17 09:35

Matrix: Solid

Date Received: 11/10/17 09:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			194385	11/13/17 14:54	CFR	TAL SAC

Client Sample ID: TP-46 (1.5'-2.0')

Lab Sample ID: 590-7490-50

Date Collected: 11/09/17 09:35

Matrix: Solid

Date Received: 11/10/17 09:40

Percent Solids: 69.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			10.03 g	20.0 uL	196903	11/28/17 08:53	ADN	TAL SAC
Total/NA	Analysis	8290A		1			198851	12/07/17 05:26	AS	TAL SAC

Client Sample ID: TP-53 (1.5'-2.0')

Lab Sample ID: 590-7490-53

Date Collected: 11/09/17 13:20

Matrix: Solid

Date Received: 11/10/17 09:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			194385	11/13/17 14:54	CFR	TAL SAC

TestAmerica Spokane

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-7490-1

Client Sample ID: TP-53 (1.5'-2.0')

Lab Sample ID: 590-7490-53

Date Collected: 11/09/17 13:20

Matrix: Solid

Date Received: 11/10/17 09:40

Percent Solids: 84.2

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			10.01 g	20.0 uL	196903	11/28/17 08:53	ADN	TAL SAC
Total/NA	Analysis	8290A		1			198851	12/07/17 06:09	AS	TAL SAC

Laboratory References:

TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

TAL SPK = TestAmerica Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

Accreditation/Certification Summary

Client: GeoEngineers Inc
 Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-7490-1

Laboratory: TestAmerica Spokane

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
Washington	State Program	10	C569	01-06-18

Analysis Method	Prep Method	Matrix	Analyte

Laboratory: TestAmerica Sacramento

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska (UST)	State Program	10	UST-055	12-18-17
Arizona	State Program	9	AZ0708	08-11-18
Arkansas DEQ	State Program	6	88-0691	06-17-18
California	State Program	9	2897	01-31-18
Colorado	State Program	8	CA00044	08-31-18
Connecticut	State Program	1	PH-0691	06-30-19
Florida	NELAP	4	E87570	06-30-18
Georgia	State Program	4	N/A	01-28-19
Hawaii	State Program	9	N/A	01-29-18
Illinois	NELAP	5	200060	03-17-18
Kansas	NELAP	7	E-10375	12-31-17
L-A-B	DoD ELAP		L2468	01-20-18
Louisiana	NELAP	6	30612	06-30-18
Maine	State Program	1	CA0004	04-18-18
Michigan	State Program	5	9947	01-31-18
Nevada	State Program	9	CA00044	07-31-18
New Hampshire	NELAP	1	2997	04-18-18
New Jersey	NELAP	2	CA005	06-30-18
Oregon	NELAP	10	4040	01-28-18
Pennsylvania	NELAP	3	68-01272	03-31-18
Texas	NELAP	6	T104704399	05-31-18
US Fish & Wildlife	Federal		LE148388-0	07-31-18
USDA	Federal		P330-11-00436	12-30-17
USEPA UCMR	Federal	1	CA00044	11-06-18
Utah	NELAP	8	CA00044	02-28-18
Virginia	NELAP	3	460278	03-14-18
Washington	State Program	10	C581	05-05-18
West Virginia (DW)	State Program	3	9930C	12-31-17
Wyoming	State Program	8	8TMS-L	01-28-19

Laboratory: TestAmerica Seattle

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska (UST)	State Program	10	UST-022	03-02-18
ANAB	DoD ELAP		L2236	01-19-19
ANAB	ISO/IEC 17025		L2236	01-19-19
California	State Program	9	2901	01-31-18
Montana (UST)	State Program	8	N/A	04-30-20
Oregon	NELAP	10	WA100007	11-05-18
US Fish & Wildlife	Federal		LE058448-0	10-31-18

Accreditation/Certification Summary

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-7490-1

Laboratory: TestAmerica Seattle (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
USDA	Federal		P330-14-00126	02-10-20
Washington	State Program	10	C553	02-17-18

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Method Summary

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-7490-1

Method	Method Description	Protocol	Laboratory
8270D SIM	Semivolatile Organic Compounds (GC/MS SIM)	SW846	TAL SEA
NWTPH-Dx	Northwest - Semi-Volatile Petroleum Products (GC)	NWTPH	TAL SPK
8290A	Dioxins and Furans (HRGC/HRMS)	SW846	TAL SAC
D 2216	Percent Moisture	ASTM	TAL SAC

Protocol References:

ASTM = ASTM International

NWTPH = Northwest Total Petroleum Hydrocarbon

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

TAL SPK = TestAmerica Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

TestAmerica Spokane

11922 East 1st Ave
 Spokane, WA 99206
 Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record



Client Information		Sampler: <i>M. Peterson</i>		Lab PM: Arrington, Randee E		590-7490 Chain of Custody		J4-1054.1		
Client Contact: Scott Lathen		Phone: <i>425-293-9560</i>		E-Mail: randee.arrington@testamerica.com				Page 1 of 7		
Company: GeoEngineers Inc				Analysis Requested				Job #:		
Address: 523 East Second Ave		Due Date Requested:		Field Filtered Sample (Yes or No) Perform MISCED (Year or No) 8290A - Dioxins 17 Isomers & Totals 8270D_SIM - Pentachlorophenol NWTTPH_Dx - DRO and RRO		Total Number of containers		Preservation Codes: A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2O4S E - NaHSO4 Q - Na2SO3 F - MeOH R - Na2S2O3 G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone J - DI Water V - MCAA K - EDTA W - pH 4-5 L - EDA Z - other (specify)		
City: Spokane		TAT Requested (days): <i>Standard</i>						Other:		
State, Zip: WA, 99202		PO #						Purchase Order not required		
Phone: 509-251-5239(Tel)		WO #								
Email: slathen@geoengineers.com		Project #						59001108		
Project Name: Colville Post and Pole/0504-098-01		SSOW#								
Site:										
Sample Identification		Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Preservation Code:		Special Instructions/Note:		
						X	N	N	A	
<i>MW-20:110717</i>		<i>11-7-17</i>	<i>0948</i>	<i>G</i>	<i>Solid</i>			X	X	
<i>MW-21:110717</i>		<i>↓</i>	<i>1025</i>	<i>↓</i>	<i>Solid</i>					
<i>MW-22:110717</i>		<i>↓</i>	<i>1101</i>	<i>↓</i>	<i>Solid</i>					
<i>MW-23:110717</i>		<i>↓</i>	<i>1149</i>	<i>↓</i>	<i>Solid</i>					
<i>MW-24:110817</i>		<i>11-8-17</i>	<i>0924</i>	<i>↓</i>	<i>Solid</i>					
<i>MW-25:110717</i>		<i>11-7-17</i>	<i>1342</i>	<i>↓</i>	<i>Solid</i>					
<i>MW-26:110817</i>		<i>11-8-17</i>	<i>1058</i>	<i>↓</i>	<i>Solid</i>					
<i>MW-27:110817</i>		<i>↓</i>	<i>1536</i>	<i>↓</i>	<i>Solid</i>	X				
<i>MW-28:110817</i>		<i>↓</i>	<i>1155</i>	<i>↓</i>	<i>Solid</i>					
<i>MW-29:110717</i>		<i>11-7-17</i>	<i>1247</i>	<i>↓</i>	<i>Solid</i>					
<i>MW-30:110817</i>		<i>11-8-17</i>	<i>1452</i>	<i>↓</i>	<i>Solid</i>					
Possible Hazard Identification					Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)					
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological					<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months					
Deliverable Requested: I, II, III, IV, Other (specify)					Special Instructions/QC Requirements:					
Empty Kit Relinquished by:		Date:		Time:		Method of Shipment:				
Relinquished by: <i>M. Peterson</i>		Date/Time: <i>11-10-17 0918</i>		Company: <i>GEI</i>		Received by: <i>[Signature]</i>		Date/Time: <i>11/10/17 918</i>		Company: <i>GEI</i>
Relinquished by: <i>[Signature]</i>		Date/Time: <i>11-10-17 940</i>		Company: <i>GE+</i>		Received by: <i>Sheela Tracy</i>		Date/Time: <i>11/10/17 940</i>		Company: <i>TRApdc</i>
Relinquished by: <i>[Signature]</i>		Date/Time:		Company:		Received by:		Date/Time:		Company:
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: <i>-2.2, -0.1, -0.9, -3.2, -0.9°C IROCK</i>						



TestAmerica Spokane

11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Client Information				Sampler: <i>M. Peterson</i>		Lab PM: Arrington, Randee E		Carrier Tracking No(s):		COC No: 590-3204-1054.6																																																																																						
Client Contact: Scott Lathen				Phone: <i>425-293-9560</i>		E-Mail: randee.arrington@testamericainc.com				Page: Page 6 of 7																																																																																						
Company: GeoEngineers Inc				Analysis Requested								Job #:																																																																																				
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<i>MW-33: 110717</i>				<i>↓</i>		<i>1431</i>		<i> </i>		Water																																																																																						
<i>MW-34: 110817</i>				<i>11-8-17</i>		<i>1313</i>		<i> </i>		Water																																																																																						
<i>MW-35: 110817</i>				<i>↓</i>		<i>1405</i>		<i>↓</i>		Water																																																																																						
<i>DUP: 110817</i>				<i>11-8-17</i>		<i>1200</i>		<i>G</i>		Water																																																																																						
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TestAmerica Spokane

11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record



Client Information		Sampler: <i>M. Petersen</i>	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-3204-1054.3																																						
Client Contact: Scott Lathen		Phone: <i>425-293-9560</i>	E-Mail: randee.arrington@testamericainc.com		Page: Page 3 of 7																																						
Company: GeoEngineers Inc		Analysis Requested			Job #:																																						
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<i>TP-6(3.5'-4.0')</i>		<i>11-9-17</i>	<i>1112</i>	<i>G</i>	Solid		<i>- call SML for analysis</i>																																				
<i>TP-6(4.5'-5.0')</i>			<i>1115</i>		Solid																																						
<i>TP-20(1.5'-2.0')</i>			<i>1345</i>		Solid																																						
<i>TP-20(2.0'-2.5')</i>			<i>1347</i>		Solid																																						
<i>TP-20(2.5'-3.0')</i>			<i>1350</i>		Solid																																						
<i>TP-25(1.5'-2.0')</i>			<i>1300</i>		Solid																																						
<i>TP-25(2.0'-2.5')</i>			<i>1302</i>		Solid																																						
<i>TP-25(2.5'-3.0')</i>			<i>1305</i>		Solid																																						
<i>TP-40(1.5'-2.0')</i>			<i>1230</i>		Solid																																						
<i>TP-40(2.0'-2.5')</i>			<i>1232</i>		Solid																																						
<i>TP-40(2.5'-3.0')</i>			<i>1235</i>		Solid																																						
Possible Hazard Identification				Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)																																							
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Chain of Custody Record



Client Information			Sampler: <u>M. Peterson</u>	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-3204-1054.4				
Client Contact: Scott Lathen			Phone: <u>425-293-9560</u>	E-Mail: randee.arrington@testamericainc.com		Page: Page 4 of 7				
Company: GeoEngineers Inc			Analysis Requested			Job #:				
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Sample Identification			Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil)	Preservation Code:	Special Instructions/Note:		
TP-40 (3.5'-4.0')			11-9-17	1237	G	Solid		Call SHEL for analysis		
TP-40 (4.5'-5.0')			↑	1240		Solid				
TP-41 (1.5'-2.0')				1205		Solid				
TP-41 (2.0'-2.5')				1207		Solid				
TP-41 (2.5'-3.0')				1210		Solid				
TP-42 (1.5'-2.0')				1135		Solid				
TP-42 (2.0'-2.5')				1137		Solid				
TP-42 (2.5'-3.0')				1140		Solid				
TP-42 (3.5'-4.0')				1142		Solid				
TP-42 (4.5'-5.0')				1145		Solid				
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Relinquished by: <u>[Signature]</u>			Date/Time: 11-10-17 0910	Company:	Received by: <u>[Signature]</u>		Date/Time: 11/10/17 940	Company: TH Spore		
Relinquished by:			Date/Time:	Company:	Received by:		Date/Time:	Company:		
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Sample Identification		Sample Date		Sample Time		Sample Type (C=comp, O=waste/oil, G=grab)		Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)		
								Preservation Code:		
<i>TP-46 (1.5'-2.0')</i>		<i>11-9-17</i>		<i>0935</i>		<i>G</i>		<i>Solid</i>		
<i>TP-46 (2.0'-2.5')</i>		<i>↓</i>		<i>0938</i>		<i>↓</i>		<i>Solid</i>		
<i>TP-46 (2.5'-3.0')</i>		<i>↓</i>		<i>0940</i>		<i>↓</i>		<i>Solid</i>		
<i>TP-53 (1.5'-2.0')</i>		<i>↓</i>		<i>1320</i>		<i>↓</i>		<i>Solid</i>		
<i>TP-53 (2.0'-2.5')</i>		<i>↓</i>		<i>1322</i>		<i>↓</i>		<i>Solid</i>		
<i>TP-53 (2.5'-3.0')</i>		<i>↓</i>		<i>1325</i>		<i>↓</i>		<i>Solid</i>		
<i>TP-53 (3.5'-4.0')</i>		<i>↓</i>		<i>1327</i>		<i>↓</i>		<i>Solid</i>		
<i>TP-53 (4.5'-5.0')</i>		<i>↓</i>		<i>1330</i>		<i>↓</i>		<i>Solid</i>		
								<i>Solid</i>		
								<i>Solid</i>		
								<i>Solid</i>		
								<i>Solid</i>		
Possible Hazard Identification					Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)					
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological					<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months					
Deliverable Requested: I, II, III, IV, Other (specify)					Special Instructions/QC Requirements:					
Empty Kit Relinquished by:		Date:		Time:		Method of Shipment:				
Relinquished by: <i>Matt Peterson</i>		Date/Time: <i>11-10-17 0918</i>		Company: <i>GED</i>		Received by: <i>[Signature]</i>		Date/Time: <i>11/10/17 918</i>		Company: <i>GED</i>
Relinquished by: <i>[Signature]</i>		Date/Time: <i>11-10-17 0940</i>		Company: <i>GED</i>		Received by: <i>Sheela Kray</i>		Date/Time: <i>11/10/17 940</i>		Company: <i>THE SpOC</i>
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:		Company:
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: <i>-2.2°, -0.4, -0.9, -3.2, -0.9 °C IPOOH</i>						

TP-46 (1.5'-2.0')
TP-46 (2.0'-2.5')
TP-46 (2.5'-3.0')
TP-53 (1.5'-2.0')
TP-53 (2.0'-2.5')
TP-53 (2.5'-3.0')
TP-53 (3.5'-4.0')
TP-53 (4.5'-5.0')



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Chain of Custody Record



Client Information		Sampler: <i>M. Peterson</i>		Lab PM: Arrington, Randee E		Carrier Tracking No(s):		COC No: 590-3204-1054.2	
Client Contact: Scott Lathen		Phone: <i>425-293-9560</i>		E-Mail: randee.arrington@testamericainc.com				Page: Page 2 of 7	
Company: GeoEngineers Inc		Address: 523 East Second Ave		Due Date Requested:		Analysis Requested		Job #:	
City: Spokane		State, Zip: WA, 99202		TAT Requested (days): <i>Standard</i>		Field Filtered Sample (Yes or No) 8290A - Dioxins 17 Isomers & Totals 8270D_SIM - Pentachlorophenol NMTPH_Dx - DRO and RRO		Preservation Codes: A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2O4S E - NaHSO4 Q - Na2SO3 F - MeOH R - Na2S2O3 G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone J - DI Water V - MCAA K - EDTA W - pH 4-5 L - EDA Z - other (specify)	
Phone: 509-251-5239(Tel)		PO #:		Purchase Order not required					
Email: slathen@geoengineers.com		WO #:							
Project Name: Colville Post and Pole/0504-098-01		Project #: 59001108		SSOWN#:					
Site:								Other:	
Sample Identification		Sample Date		Sample Time		Sample Type (C=Comp, G=grab)		Matrix (W=water, S=solid, O=waste/soil, BT=Tissue, AA=Air)	
						Preservation Code:		Total Number of containers	
<i>TP-3(1.5'-2.0')</i>		<i>11-9-17</i>		<i>1005</i>		<i>G</i>		<i>Solid</i>	
<i>TP-3(2.0'-2.5')</i>		<i>|</i>		<i>1007</i>		<i>|</i>		<i>Solid</i>	
<i>TP-3(2.5'-3.0')</i>		<i>|</i>		<i>1010</i>		<i>|</i>		<i>Solid</i>	
<i>TP-3(3.5'-4.0')</i>		<i>|</i>		<i>1012</i>		<i>|</i>		<i>Solid</i>	
<i>TP-3(4.5'-5.0')</i>		<i>|</i>		<i>1015</i>		<i>|</i>		<i>Solid</i>	
<i>TP-4(1.5'-2.0')</i>		<i>|</i>		<i>1040</i>		<i>|</i>		<i>Solid</i>	
<i>TP-4(2.0'-2.5')</i>		<i>|</i>		<i>1042</i>		<i>|</i>		<i>Solid</i>	
<i>TP-4(2.5'-3.0')</i>		<i>|</i>		<i>1045</i>		<i>|</i>		<i>Solid</i>	
<i>TP-6(1.5'-2.0')</i>		<i>|</i>		<i>1105</i>		<i>|</i>		<i>Solid</i>	
<i>TP-6(2.0'-2.5')</i>		<i>|</i>		<i>1107</i>		<i>|</i>		<i>Solid</i>	
<i>TP-6(2.5'-3.0')</i>		<i>|</i>		<i>1110</i>		<i>|</i>		<i>Solid</i>	
Possible Hazard Identification									
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological									
Deliverable Requested: I, II, III, IV, Other (specify)					Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months				
Special Instructions/QC Requirements:									
Empty Kit Relinquished by:		Date:		Time:		Method of Shipment:			
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time: Company:	
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time: Company:	
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time: Company:	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:					

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Chain of Custody Record

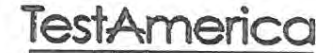


Client Information		Sampler: <i>M. Peterson</i>		Lab PM: Arrington, Randee E		Carrier Tracking No(s):		COC No: 590-3204-1054.3														
Client Contact: Scott Lathen		Phone: <i>425-293-9560</i>		E-Mail: randee.arrington@testamericainc.com				Page: Page 3 of 7														
Company: GeoEngineers Inc								Job #:														
Address: 523 East Second Ave		Due Date Requested:		<table border="1"> <thead> <tr> <th colspan="2">Analysis Requested</th> <th rowspan="2">Field Filled Sample (Yes or No)</th> <th rowspan="2">Total Number of Containers</th> </tr> <tr> <th>8290A - Dioxins 17 Isomers & Totals</th> <th>8270D_SIM - Pentachlorophenol</th> <th>NWTPH_Dx - DRO and RRO</th> </tr> </thead> <tbody> <tr> <td></td><td></td><td></td><td></td> </tr> <tr> <td></td><td></td><td></td><td></td> </tr> </tbody> </table>		Analysis Requested		Field Filled Sample (Yes or No)	Total Number of Containers	8290A - Dioxins 17 Isomers & Totals	8270D_SIM - Pentachlorophenol	NWTPH_Dx - DRO and RRO									Preservation Codes:	
Analysis Requested		Field Filled Sample (Yes or No)	Total Number of Containers																			
8290A - Dioxins 17 Isomers & Totals	8270D_SIM - Pentachlorophenol					NWTPH_Dx - DRO and RRO																
City: Spokane		TAT Requested (days): <i>Standard</i>						A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - As/NaO2 D - Nitric Acid P - Na2O4S E - NaHSO4 Q - Na2SO3 F - MeOH R - Na2SO3 G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone J - DI Water V - MCAA K - EDTA W - pH 4-5 L - EDA Z - other (specify)														
State, Zip: WA, 99202		PO #: Purchase Order not required						Other:														
Phone: 509-251-5239(Tel)		WO #:																				
Email: slathen@geoengineers.com		Project #: 59001108																				
Project Name: Colville Post and Pole/0504-098-01		SSOW#:																				
Site:																						
Sample Identification		Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)			Special Instructions/Note:														
<i>TP-6 (3.5'-4.0')</i>		<i>11-9-17</i>	<i>1112</i>	<i>G</i>	Solid	<i>X</i>	<i>N</i>	<i>N</i>	<i>A</i>													
<i>TP-6 (4.5'-5.0')</i>			<i>1115</i>		Solid																	
<i>TP-20 (1.5'-2.0')</i>			<i>1345</i>		Solid		<i>X</i>															
<i>TP-20 (2.0'-2.5')</i>			<i>1347</i>		Solid																	
<i>TP-20 (2.5'-3.0')</i>			<i>1350</i>		Solid																	
<i>TP-25 (1.5'-2.0')</i>			<i>1300</i>		Solid		<i>X</i>															
<i>TP-25 (2.0'-2.5')</i>			<i>1302</i>		Solid																	
<i>TP-25 (2.5'-3.0')</i>			<i>1305</i>		Solid																	
<i>TP-40 (1.5'-2.0')</i>			<i>1230</i>		Solid		<i>X</i>															
<i>TP-40 (2.0'-2.5')</i>			<i>1232</i>		Solid																	
<i>TP-40 (2.5'-3.0')</i>			<i>1235</i>		Solid																	
Possible Hazard Identification		<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months																		
Deliverable Requested: I, II, III, IV, Other (specify)		Special Instructions/QC Requirements:																				
Empty Kit Relinquished by:		Date:		Time:		Method of Shipment:																
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:														
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:														
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:														
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:																		

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Chain of Custody Record



THE LEADER IN ENVIRONMENTAL TESTING

Client Information		Sampler: <i>M. Peterson</i>		Lab PM: Arrington, Randee E		Carrier Tracking No(s):		COC No: 590-3204-1054.4	
Client Contact: Scott Lathen		Phone: <i>425-293-9560</i>		E-Mail: randee.arrington@testamericainc.com				Page: Page 4 of 7	
Company: GeoEngineers Inc		Due Date Requested:		Analysis Requested				Job #:	
Address: 523 East Second Ave		TAT Requested (days): <i>Standard</i>						Preservation Codes:	
City: Spokane		PO #: Purchase Order not required		Field Filled Sample (Yes or No)		8290A - Dioxins 17 Isomers & Totals		A - HCL M - Hexane	
State, Zip: WA, 99202		WO #:						8270D_S111 - Pentachlorophenol		B - NaOH N - None
Phone: 509-251-5239(Tel)		Project #: 59001108		8270D_S111 - Pentachlorophenol		NUTPH_Dx - DRO and RRO		C - Zn Acetate O - AsNaO2	
Email: slathen@geoengineers.com		SSOW#:						NUTPH_Dx - DRO and RRO		D - Nitric Acid P - Na2O4S
Project Name: Colville Post and Pole/0504-098-01				Total Number of containers				E - NaHSO4 Q - Na2SO3	
Site:								F - MeOH R - Na2S2O3	
								G - Amchlor S - H2SO4	
								H - Ascorbic Acid T - TSP Dodecahydrate	
								I - Ice U - Acetone	
								J - DI Water V - MCAA	
								K - EDTA W - pH 4-5	
								L - EDA Z - other (specify)	
								Other:	
								Special Instructions/Note:	
Sample Identification		Sample Date		Sample Time		Sample Type (C=Comp, G=grab)		Matrix (W=water, S=solid, O=waste/soil, BT=Tissue, A=Air)	
						Preservation Code:			
TP-40 (3.5'-4.0')		11-9-17		1237		G		Solid	
TP-40 (4.5'-5.0')		↓		1240		↓		Solid	
TP-41 (1.5'-2.0')		↓		1205		↓		Solid	
TP-41 (2.0'-2.5')		↓		1207		↓		Solid	
TP-41 (2.5'-3.0')		↓		1210		↓		Solid	
TP-42 (1.5'-2.0')		↓		1135		↓		Solid	
TP-42 (2.0'-2.5')		↓		1137		↓		Solid	
TP-42 (2.5'-3.0')		↓		1140		↓		Solid	
TP-42 (3.5'-4.0')		↓		1142		↓		Solid	
TP-42 (4.5'-5.0')		↓		1145		↓		Solid	
								Solid	
Possible Hazard Identification					Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)				
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological					<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months				
Deliverable Requested: I, II, III, IV, Other (specify)					Special Instructions/QC Requirements:				
Empty Kit Relinquished by:		Date:		Time:		Method of Shipment:			
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:	
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:	
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:	
Custody Seals Intact: Δ Yes Δ No		Custody Seal No.:			Cooler Temperature(s) °C and Other Remarks:				



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Chain of Custody Record



THE LEADER IN ENVIRONMENTAL TESTING

Client Information		Sampler: <i>M. Peterson</i>		Lab PM: Arrington, Randee E		Carrier Tracking No(s):		COC No: 590-3204-1054.4	
Client Contact: Scott Lathen		Phone: <i>425-293-9560</i>		E-Mail: randee.arrington@testamericainc.com				Page: Page 4 of 7	
Company: GeoEngineers Inc		Address: 523 East Second Ave		Due Date Requested:		Analysis Requested (Columns for analysis types)		Job #:	
City: Spokane		State, Zip: WA, 99202		TAT Requested (days): <i>Standard</i>				Preservation Codes:	
Phone: 509-251-5239(Tel)		PO #:		Purchase Order not required				A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2O4S E - NaHSO4 Q - Na2SO3 F - MeOH R - Na2S2O3 G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone J - DI Water V - MCAA K - EDTA W - pH 4-5 L - EDA Z - other (specify)	
Email: slathen@geoengineers.com		WO #:						Other:	
Project Name: Colville Post and Pole/0504-098-01		Project #: 59001108		SSOW#:					
Sample Identification		Sample Date		Sample Time		Sample Type (C=Comp, G=grab)		Matrix (W=water, S=solid, D=waste/soil, BT=Tissue, An=Air)	
								Field Filtered Sample (Yes or No)	
								Future Testing (Yes or No)	
								8290A - Dioxins 17 Isomers & Totals	
								8270D_SIM - Pentachlorophenol	
								NUTPH_Dx - DRO and RRO	
								Total Number of containers	
								Special Instructions/Note:	
TP- 110 -46 (1.5'-2.0')		11-9-17		0935		G		Solid	
TP- 110 -46 (2.0'-2.5')		↓		0938		↓		Solid	
TP- 110 -46 (2.5'-3.0')		↓		0940		↓		Solid	
TP- 110 -53 (1.5'-2.0')		↓		1320		↓		Solid	
TP- 110 -53 (2.0'-2.5')		↓		1322		↓		Solid	
TP- 110 -53 (2.5'-3.0')		↓		1325		↓		Solid	
TP-53 (3.5'-4.0')		↓		1327		↓		Solid	
TP-53 (4.5'-5.0')		↓		1330		↓		Solid	
								Solid	
								Solid	
								Solid	
Possible Hazard Identification		<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)					
Deliverable Requested: I, II, III, IV, Other (specify)								<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months	
Empty Kit Relinquished by:		Date:		Time:		Special Instructions/QC Requirements:			
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:	
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:	
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:	
Custody Seals Intact: Δ Yes Δ No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:					

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Chain of Custody Record



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab), Analysis Requested, Sample Identification - Client ID (Lab ID), Possible Hazard Identification, Sample Disposal, Empty Kit Relinquished by, Custody Seals Intact.

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Chain of Custody Record



THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)		Sampler:		Lab PM: Arrington, Randee E		Carrier Tracking No(s):		COC No: 590-3185.2				
Client Contact: Shipping/Receiving		Phone:		E-Mail: randee.arrington@testamericainc.com		State of Origin: Washington		Page: Page 2 of 2				
Company: TestAmerica Laboratories, Inc.				Accreditations Required (See note): State Program - Washington				Job #: 590-7490-1				
Address: 880 Riverside Parkway		Due Date Requested: 11/22/2017		Analysis Requested						Preservation Codes: A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2O4S E - NaHSO4 Q - Na2SO3 F - MeOH R - Na2S2O3 G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone J - DI Water V - MCAA K - EDTA W - pH 4-5 L - EDA Z - other (specify)		
City: West Sacramento		TAT Requested (days):										
State, Zip: CA, 95605		PO #:										
Phone: 916-373-5600(Tel) 916-372-1059(Fax)		WO #:										
Email:		Project #: 59001108										
Project Name: Colville Post and Pole/0504-098-01		SSOW#:		Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)		Total Number of Containers				
Site:												
Sample Identification - Client ID (Lab ID)		Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8290A/8290_P_Sep 17 Isomers & Totals	8290A/8290_P_Sox 17 Isomers & Totals	Moisture	Total Number of Containers	Special Instructions/Note:
				Preservation Code:		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					
TP-42 (1.5'-2.0') (590-7490-45)		11/9/17	11:35 Pacific		Solid			X	X		1	Former Post and Pole manufacturing site - could be high, please isolate glassware and
TP-46 (1.5'-2.0') (590-7490-50)		11/9/17	09:35 Pacific		Solid			X	X		1	Former Post and Pole manufacturing site - could be high, please isolate glassware and
TP-53 (1.5'-2.0') (590-7490-53)		11/9/17	13:20 Pacific		Solid			X	X		1	Former Post and Pole manufacturing site - could be high, please isolate glassware and

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. |

Possible Hazard Identification		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)	
Unconfirmed		<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months	
Deliverable Requested: I, II, III, IV, Other (specify)		Special Instructions/QC Requirements:	

Empty Kit Relinquished by:		Date:		Time:		Method of Shipment:	
Relinquished by: <i>Shirela Tracy</i>		Date/Time: 11/10/17 1500		Company: TAE/POC		Received by: <i>[Signature]</i>	
Relinquished by:		Date/Time:		Company:		Received by:	
Relinquished by:		Date/Time:		Company:		Received by:	

Custody Seals Intact: Δ Yes Δ No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: 0.6	
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11922 East 1st Ave
 Spokane, WA 99206
 Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)		Sampler:		Lab PM: Arrington, Randee E		Carrier Tracking No(s)		COC No: 590-3183.1	
Client Contact: Shipping/Receiving		Phone:		E-Mail: randee.arrington@testamericainc.com		State of Origin: Washington		Page: Page 1 of 2	
Company: TestAmerica Laboratories, Inc.				Accreditations Required (See note): State Program - Washington				Job #: 590-7490-1	
Address: 5755 8th Street East,		Due Date Requested: 11/27/2017		Analysis Requested				Preservation Codes: A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2O4S E - NaHSO4 Q - Na2SO3 F - MeOH R - Na2S2O3 G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone J - DI Water V - MCAA K - EDTA W - pH 4-5 L - EDA Z - other (specify) Other:	
City: Tacoma		TAT Requested (days):							
State, Zip: WA 98424		PO #:		Field Filtered Sample (Yes or No) Perform MRMSP (Yes or No) 82700_SIM/3520C Pentachlorophenol		Total Number of containers		Special Instructions/Note:	
Phone: 253-922-2310(Tel) 253-922-5047(Fax)		WO #:							
Email:		Project #: 59001108		SSOW#:					
Project Name: Colville Post and Pole/0504-098-01									
Site:									
Sample Identification - Client ID (Lab ID)		Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MRMSP (Yes or No)	82700_SIM/3520C Pentachlorophenol	Total Number of containers
				Preservation Code:					
MW-20:110717 (590-7490-1)		11/7/17	09:48 Pacific		Water	X			2
MW-21:110717 (590-7490-2)		11/7/17	10:25 Pacific		Water	X			2
MW-22:110717 (590-7490-3)		11/7/17	11:01 Pacific		Water	X			2
MW-23:110717 (590-7490-4)		11/7/17	11:49 Pacific		Water	X			2
MW-24:110817 (590-7490-5)		11/8/17	09:24 Pacific		Water	X			2
MW-25:110717 (590-7490-6)		11/7/17	13:42 Pacific		Water	X			2
MW-26:110817 (590-7490-7)		11/8/17	10:58 Pacific		Water	X			2
MW-27:110817 (590-7490-8)		11/8/17	15:36 Pacific		Water	X			2
MW-28:110817 (590-7490-9)		11/8/17	11:55 Pacific		Water	X			2

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to TestAmerica Laboratories, Inc.

Possible Hazard Identification		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)	
Unconfirmed		<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For Months	
Deliverable Requested: I, II, III, IV, Other (specify)		Special Instructions/QC Requirements:	

Empty Kit Relinquished by:		Date:		Time:		Method of Shipment:	
Relinquished by: <i>Sheila Tracy</i>		Date/Time: 11/10/17 1430		Company: TH Apple		Received by: <i>B. Gall</i>	
Relinquished by:		Date/Time:		Company:		Received by:	
Relinquished by:		Date/Time:		Company:		Received by:	

Custody Seats Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: A2 = 0.3/1.0; A2 = -0.4/0.3 A2 = -0.7/0.0; A2 = -0.7/0.0
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*A2 = 0.3/1.0; A2 = -0.4/0.3
 A2 = -0.7/0.0; A2 = -0.7/0.0*



TestAmerica Spokane

11922 East 1st Ave
 Spokane, WA 99206
 Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record



THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)		Sampler:		Lab PM: Arrington, Randee E		Carrier Tracking No(s):		COC No: 590-3183.2			
Client Contact Shipping/Receiving		Phone:		E-Mail: randee.arrington@testamericainc.com		State of Origin: Washington		Page: Page 2 of 2			
Company: TestAmerica Laboratories, Inc.				Accreditations Required (See note): State Program - Washington				Job #: 590-7490-1			
Address: 5755 8th Street East.		Due Date Requested: 11/27/2017		Analysis Requested						Preservation Codes: A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2O4S E - NaHSO4 Q - Na2SO3 F - MeOH R - Na2S2O3 G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone J - DI Water V - MCAA K - EDTA W - pH 4-5 L - EDA Z - other (specify)	
City: Tacoma		TAT Requested (days):									
State, Zip WA, 98424		PO #:		Field Filtered Sample (Yes or No)		Total Number of Containers		Other:			
Phone: 253-922-2310(Tel) 253-922-5047(Fax)		WFO #:		Perform MSHMSO (Yes or No)		8270D_S1M/3520C Pentachlorophenol					
Email:		Project #: 59001108		SSOW#:							
Project Name: Colville Post and Pole/0504-098-01											
Site:											
Sample Identification - Client ID (Lab ID)		Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MSHMSO (Yes or No)	8270D_S1M/3520C Pentachlorophenol	Total Number of Containers	Special Instructions/Note:	
MW-29:110717 (590-7490-10)		11/7/17	12:47 Pacific		Water	X			2		
MW-30:110817 (590-7490-11)		11/8/17	14:52 Pacific		Water	X			2		
MW-31:110817 (590-7490-12)		11/8/17	10:11 Pacific		Water	X			2		
MW-32:110717 (590-7490-13)		11/7/17	15:58 Pacific		Water	X			2		
MW-33:110717 (590-7490-14)		11/7/17	14:31 Pacific		Water	X			2		
MW-34:110817 (590-7490-15)		11/8/17	13:13 Pacific		Water	X			2		
MW-35:110817 (590-7490-16)		11/8/17	14:05 Pacific		Water	X			2		
DUP:110817 (590-7490-17)		11/8/17	12:00 Pacific		Water	X			2		
<p>Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. I</p>											
Possible Hazard Identification						Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)					
Unconfirmed						<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months					
Deliverable Requested: I, II, III, IV, Other (specify)			Primary Deliverable Rank: 2			Special Instructions/QC Requirements:					
Empty Kit Relinquished by:			Date:		Time:		Method of Shipment				
Relinquished by: <i>Shelley Tracy</i>			Date/Time: 11/10/17 14:30		Company: <i>TR Spdc</i>		Received by: <i>B. Shaw</i>		Date/Time: 11/10/17 1600		
Relinquished by:			Date/Time:		Company:		Received by:		Date/Time:		
Relinquished by:			Date/Time:		Company:		Received by:		Date/Time:		
Custody Seals Intact: Δ Yes Δ No		Custody Seal No.:				Cooler Temperature(s) °C and Other Remarks:					

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-7490-1

Login Number: 7490

List Source: TestAmerica Spokane

List Number: 1

Creator: Kratz, Sheila J

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	No analysis requiring residual chlorine check assigned.

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-7490-1

Login Number: 7490

List Number: 2

Creator: Aguayo, Alonso

List Source: TestAmerica Sacramento

List Creation: 11/11/17 01:56 PM

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	128362
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.6
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-7490-1

Login Number: 7490

List Number: 4

Creator: Her, David A

List Source: TestAmerica Sacramento

List Creation: 12/08/17 10:28 AM

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	128384
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	False	NO COC
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-7490-1

Login Number: 7490

List Number: 5

Creator: Turpen, Troy

List Source: TestAmerica Sacramento

List Creation: 12/08/17 04:04 PM

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-7490-1

Login Number: 7490
List Number: 3
Creator: Gall, Brandon A

List Source: TestAmerica Seattle
List Creation: 11/11/17 02:02 PM

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	A2=0.3°/1.0°, A2=-0.4°/0.3°, A2=-0.7°/0.0°, & A2=-0.7°/0.0°
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Sacramento

Sarr



Jo 590-7490 Field Sheet

Tracking # 4131 6790 8488

Use this form to record Sample Custody Seal, Cooler Custody Seal, Temperature & corrected Temperature & other observations. File in the job folder with the COC.

<p>Notes: _____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>	<p>Therm. ID: <u>AK-2</u> / AK-3 / HACCP / Other _____</p> <p>Ice _____ Wet <u>X</u> Dry _____ Other _____</p> <p>Cooler Custody Seal: <u>128362</u></p> <p>Sample Custody Seal: _____</p> <p>Cooler ID: _____</p> <p>Temp: Observed <u>6.6E</u></p> <p>Corrected: _____</p> <p>From: Temp Blank <input checked="" type="checkbox"/> Sample <input type="checkbox"/></p> <p>NCM Filed: Yes <input type="checkbox"/> No <input type="checkbox"/></p> <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:70%;"></th> <th style="width:10%; text-align: center;">Yes</th> <th style="width:10%; text-align: center;">No</th> <th style="width:10%; text-align: center;">NA</th> </tr> </thead> <tbody> <tr> <td>Perchlorate has headspace?</td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> </tr> <tr> <td>CoC is complete w/o discrepancies?</td> <td 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with?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	COC and Samples w/o discrepancies?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sample containers have legible labels?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Containers are not broken or leaking?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sample date/times are provided.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Appropriate containers are used?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sample bottles are completely filled?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Zero headspace?*	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Multiphasic samples are not present?	<input checked="" 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Zero headspace?*	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>																																																										
Multiphasic samples are not present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																																																										

W21C

Isotope Dilution Summary

Client: GeoEngineers Inc
 Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-7490-1

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Matrix: Solid

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	TCDD (40-135)	TCDF (40-135)	PeCDD (40-135)	PeCDF1 (40-135)	HxCDD2 (40-135)	HxCDF1 (40-135)	HpCDD (40-135)	HpCDF1 (40-135)
590-7490-18	TP-3 (1.5'-2.0')	66	79	59	59	66	80	52	38 *
590-7490-23	TP-4 (1.5'-2.0')	67	76	60	60	66	82	57	58
590-7490-26	TP-6 (1.5'-2.0')	60	70	51	54	60	71	45	43
590-7490-31	TP-20 (1.5'-2.0')	67	81	61	63	66	80	52	47
590-7490-34	TP-25 (1.5'-2.0')	60	71	50	54	61	74	49	41
590-7490-37	TP-40 (1.5'-2.0')	62	73	55	58	67	82	50	50
590-7490-42	TP-41 (1.5'-2.0')	61	72	53	54	57	75	44	42
590-7490-45	TP-42 (1.5'-2.0')	64	74	77	65	72	83	43	43
590-7490-50	TP-46 (1.5'-2.0')	65	79	79	69	68	77	38 *	35 *
590-7490-53	TP-53 (1.5'-2.0')	61	72	72	63	62	73	40	38 *
LCS 320-196903/2-A	Lab Control Sample	71	84	70	70	78	93	65	61
LCSD 320-196903/3-A	Lab Control Sample Dup	70	79	63	64	77	94	63	65
MB 320-196903/1-A	Method Blank	73	84	74	71	81	101	69	71

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	OCDD (40-135)
590-7490-18	TP-3 (1.5'-2.0')	52
590-7490-23	TP-4 (1.5'-2.0')	61
590-7490-26	TP-6 (1.5'-2.0')	39 *
590-7490-31	TP-20 (1.5'-2.0')	48
590-7490-34	TP-25 (1.5'-2.0')	45
590-7490-37	TP-40 (1.5'-2.0')	47
590-7490-42	TP-41 (1.5'-2.0')	41
590-7490-45	TP-42 (1.5'-2.0')	51
590-7490-50	TP-46 (1.5'-2.0')	46
590-7490-53	TP-53 (1.5'-2.0')	44
LCS 320-196903/2-A	Lab Control Sample	66
LCSD 320-196903/3-A	Lab Control Sample Dup	62
MB 320-196903/1-A	Method Blank	71

Surrogate Legend

- TCDD = 13C-2,3,7,8-TCDD
- TCDF = 13C-2,3,7,8-TCDF
- PeCDD = 13C-1,2,3,7,8-PeCDD
- PeCDF1 = 13C-1,2,3,7,8-PeCDF
- HxCDD2 = 13C-1,2,3,6,7,8-HxCDD
- HxCDF1 = 13C-1,2,3,4,7,8-HxCDF
- HpCDD = 13C-1,2,3,4,6,7,8-HpCDD
- HpCDF1 = 13C-1,2,3,4,6,7,8-HpCDF
- OCDD = 13C-OCDD

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Matrix: Water

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	TCDD (40-135)	TCDF (40-135)	PeCDD (40-135)	PeCDF1 (40-135)	HxCDD2 (40-135)	HxCDF1 (40-135)	HpCDD (40-135)	HpCDF1 (40-135)
590-7490-8	MW-27:110817	88	87	86	87	65	58	96	74
590-7490-17	DUP:110817	86	84	83	84	83	83	101	80

TestAmerica Spokane

Isotope Dilution Summary

Client: GeoEngineers Inc
 Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-7490-1

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Matrix: Water

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	TCDD (40-135)	TCDF (40-135)	PeCDD (40-135)	PeCDF1 (40-135)	HxCDD2 (40-135)	HxCDF1 (40-135)	HpCDD (40-135)	HpCDF1 (40-135)
LCS 320-194570/2-A	Lab Control Sample	83	82	82	81	75	77	88	66
LCSD 320-194570/3-A	Lab Control Sample Dup	87	87	88	90	83	81	99	97
MB 320-194570/1-A	Method Blank	87	82	83	82	79	77	86	71

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	OCDD (40-135)
590-7490-8	MW-27:110817	95
590-7490-17	DUP:110817	93
LCS 320-194570/2-A	Lab Control Sample	82
LCSD 320-194570/3-A	Lab Control Sample Dup	96
MB 320-194570/1-A	Method Blank	77

Surrogate Legend

- TCDD = 13C-2,3,7,8-TCDD
- TCDF = 13C-2,3,7,8-TCDF
- PeCDD = 13C-1,2,3,7,8-PeCDD
- PeCDF1 = 13C-1,2,3,7,8-PeCDF
- HxCDD2 = 13C-1,2,3,6,7,8-HxCDD
- HxCDF1 = 13C-1,2,3,4,7,8-HxCDF
- HpCDD = 13C-1,2,3,4,6,7,8-HpCDD
- HpCDF1 = 13C-1,2,3,4,6,7,8-HpCDF
- OCDD = 13C-OCDD

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
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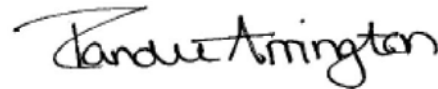
TestAmerica Job ID: 590-7493-1

Client Project/Site: Colville Post and Pole/0504-098-01

For:

GeoEngineers Inc
523 East Second Ave
Spokane, Washington 99202

Attn: Scott Lathen



Authorized for release by:
12/1/2017 12:16:27 PM

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Case Narrative

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-7493-1

Job ID: 590-7493-1

Laboratory: TestAmerica Spokane

Narrative

Receipt

The samples were received on 11/10/2017 3:25 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.4° C.

Receipt Exceptions

The following samples were activated by the client on 10/13/2017: SS-1-2 (6-12") (590-7493-2), SS-3-2 (6-12") (590-7493-4), SS-5-2 (6-12") (590-7493-5), SS-4-2 (6-12") (590-7493-8), SS-6-2 (6-12") (590-7493-10), ROW-3-3 (12-18") (590-7493-13) and ROW-4-3 (12-18") (590-7493-16).

Dioxin

Method 8290A: The following samples exhibited elevated noise or matrix interferences for one or more analytes causing elevation of the detection limit (EDL): SS-3-2 (6-12") (590-7493-4), SS-4-2 (6-12") (590-7493-8), SS-6-2 (6-12") (590-7493-10), ROW-3-3 (12-18") (590-7493-13) and ROW-4-3 (12-18") (590-7493-16) . The reporting limit (RL) for the affected analytes has been raised to be equal to the EDL, and a "G" qualifier applied.

Method 8290A: The Isotope Dilution Analyte (IDA) recovery associated with the following sample is below the method recommended limit: ROW-3-3 (12-18") (590-7493-13). Generally, data quality is not considered affected if the IDA signal-to-noise ratio is greater than 10:1, which is achieved for all IDA in the sample.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Dioxin Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Sample Summary

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-7493-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
590-7493-2	SS-1-2 (6-12")	Solid	10/16/17 11:00	11/10/17 15:25
590-7493-4	SS-3-2 (6-12")	Solid	10/16/17 11:18	11/10/17 15:25
590-7493-5	SS-5-2 (6-12")	Solid	10/16/17 11:32	11/10/17 15:25
590-7493-8	SS-4-2 (6-12")	Solid	10/16/17 11:45	11/10/17 15:25
590-7493-10	SS-6-2 (6-12")	Solid	10/16/17 12:05	11/10/17 15:25
590-7493-13	ROW-3-3 (12-18")	Solid	10/16/17 13:30	11/10/17 15:25
590-7493-16	ROW-4-3 (12-18")	Solid	10/16/17 13:50	11/10/17 15:25



Definitions/Glossary

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-7493-1

Qualifiers

Dioxin

Qualifier	Qualifier Description
*	Isotope Dilution analyte is outside acceptance limits.
G	The reported quantitation limit has been raised due to an exhibited elevated noise or matrix interference
q	The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-7493-1

Client Sample ID: SS-1-2 (6-12")

Lab Sample ID: 590-7493-2

Date Collected: 10/16/17 11:00

Matrix: Solid

Date Received: 11/10/17 15:25

Percent Solids: 95.1

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		1.1		pg/g	☼	11/14/17 11:28	11/29/17 04:24	1
2,3,7,8-TCDF	ND		1.1		pg/g	☼	11/14/17 11:28	11/29/17 04:24	1
1,2,3,7,8-PeCDD	ND		5.4		pg/g	☼	11/14/17 11:28	11/29/17 04:24	1
1,2,3,7,8-PeCDF	ND		5.4		pg/g	☼	11/14/17 11:28	11/29/17 04:24	1
2,3,4,7,8-PeCDF	ND		5.4		pg/g	☼	11/14/17 11:28	11/29/17 04:24	1
1,2,3,4,7,8-HxCDD	ND		5.4		pg/g	☼	11/14/17 11:28	11/29/17 04:24	1
1,2,3,6,7,8-HxCDD	ND		5.4		pg/g	☼	11/14/17 11:28	11/29/17 04:24	1
1,2,3,7,8,9-HxCDD	ND		5.4		pg/g	☼	11/14/17 11:28	11/29/17 04:24	1
1,2,3,4,7,8-HxCDF	ND		5.4		pg/g	☼	11/14/17 11:28	11/29/17 04:24	1
1,2,3,6,7,8-HxCDF	ND		5.4		pg/g	☼	11/14/17 11:28	11/29/17 04:24	1
1,2,3,7,8,9-HxCDF	ND		5.4		pg/g	☼	11/14/17 11:28	11/29/17 04:24	1
2,3,4,6,7,8-HxCDF	ND		5.4		pg/g	☼	11/14/17 11:28	11/29/17 04:24	1
1,2,3,4,6,7,8-HpCDD	7.9		5.4		pg/g	☼	11/14/17 11:28	11/29/17 04:24	1
1,2,3,4,6,7,8-HpCDF	ND		5.4		pg/g	☼	11/14/17 11:28	11/29/17 04:24	1
1,2,3,4,7,8,9-HpCDF	ND		5.4		pg/g	☼	11/14/17 11:28	11/29/17 04:24	1
OCDD	80		11		pg/g	☼	11/14/17 11:28	11/29/17 04:24	1
OCDF	ND		11		pg/g	☼	11/14/17 11:28	11/29/17 04:24	1
Total TCDD	ND		1.1		pg/g	☼	11/14/17 11:28	11/29/17 04:24	1
Total TCDF	ND		1.1		pg/g	☼	11/14/17 11:28	11/29/17 04:24	1
Total PeCDD	ND		5.4		pg/g	☼	11/14/17 11:28	11/29/17 04:24	1
Total PeCDF	ND		5.4		pg/g	☼	11/14/17 11:28	11/29/17 04:24	1
Total HxCDD	ND		5.4		pg/g	☼	11/14/17 11:28	11/29/17 04:24	1
Total HxCDF	ND		5.4		pg/g	☼	11/14/17 11:28	11/29/17 04:24	1
Total HpCDD	15		5.4		pg/g	☼	11/14/17 11:28	11/29/17 04:24	1
Total HpCDF	ND		5.4		pg/g	☼	11/14/17 11:28	11/29/17 04:24	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	73		40 - 135				11/14/17 11:28	11/29/17 04:24	1
13C-2,3,7,8-TCDF	69		40 - 135				11/14/17 11:28	11/29/17 04:24	1
13C-1,2,3,7,8-PeCDD	70		40 - 135				11/14/17 11:28	11/29/17 04:24	1
13C-1,2,3,7,8-PeCDF	67		40 - 135				11/14/17 11:28	11/29/17 04:24	1
13C-1,2,3,6,7,8-HxCDD	73		40 - 135				11/14/17 11:28	11/29/17 04:24	1
13C-1,2,3,4,7,8-HxCDF	69		40 - 135				11/14/17 11:28	11/29/17 04:24	1
13C-1,2,3,4,6,7,8-HpCDD	87		40 - 135				11/14/17 11:28	11/29/17 04:24	1
13C-1,2,3,4,6,7,8-HpCDF	74		40 - 135				11/14/17 11:28	11/29/17 04:24	1
13C-OCDD	74		40 - 135				11/14/17 11:28	11/29/17 04:24	1

Client Sample ID: SS-3-2 (6-12")

Lab Sample ID: 590-7493-4

Date Collected: 10/16/17 11:18

Matrix: Solid

Date Received: 11/10/17 15:25

Percent Solids: 55.4

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		1.8		pg/g	☼	11/14/17 11:28	11/29/17 05:13	1
2,3,7,8-TCDF	ND		1.8		pg/g	☼	11/14/17 11:28	11/29/17 05:13	1
1,2,3,7,8-PeCDD	ND		9.2		pg/g	☼	11/14/17 11:28	11/29/17 05:13	1
1,2,3,7,8-PeCDF	ND		9.2		pg/g	☼	11/14/17 11:28	11/29/17 05:13	1
2,3,4,7,8-PeCDF	ND		9.2		pg/g	☼	11/14/17 11:28	11/29/17 05:13	1
1,2,3,4,7,8-HxCDD	ND		9.2		pg/g	☼	11/14/17 11:28	11/29/17 05:13	1
1,2,3,6,7,8-HxCDD	ND		9.2		pg/g	☼	11/14/17 11:28	11/29/17 05:13	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-7493-1

Client Sample ID: SS-3-2 (6-12")

Lab Sample ID: 590-7493-4

Date Collected: 10/16/17 11:18

Matrix: Solid

Date Received: 11/10/17 15:25

Percent Solids: 55.4

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,7,8,9-HxCDD	ND		9.2		pg/g	☼	11/14/17 11:28	11/29/17 05:13	1
1,2,3,4,7,8-HxCDF	ND		9.2		pg/g	☼	11/14/17 11:28	11/29/17 05:13	1
1,2,3,6,7,8-HxCDF	ND		9.2		pg/g	☼	11/14/17 11:28	11/29/17 05:13	1
1,2,3,7,8,9-HxCDF	ND		9.2		pg/g	☼	11/14/17 11:28	11/29/17 05:13	1
2,3,4,6,7,8-HxCDF	ND		9.2		pg/g	☼	11/14/17 11:28	11/29/17 05:13	1
1,2,3,4,6,7,8-HpCDD	86		9.2		pg/g	☼	11/14/17 11:28	11/29/17 05:13	1
1,2,3,4,6,7,8-HpCDF	13		9.2		pg/g	☼	11/14/17 11:28	11/29/17 05:13	1
1,2,3,4,7,8,9-HpCDF	ND		9.2		pg/g	☼	11/14/17 11:28	11/29/17 05:13	1
OCDD	870		18		pg/g	☼	11/14/17 11:28	11/29/17 05:13	1
OCDF	40		18		pg/g	☼	11/14/17 11:28	11/29/17 05:13	1
Total TCDD	ND		1.8		pg/g	☼	11/14/17 11:28	11/29/17 05:13	1
Total TCDF	ND		1.8		pg/g	☼	11/14/17 11:28	11/29/17 05:13	1
Total PeCDD	ND		9.2		pg/g	☼	11/14/17 11:28	11/29/17 05:13	1
Total PeCDF	ND	G	12		pg/g	☼	11/14/17 11:28	11/29/17 05:13	1
Total HxCDD	ND		9.2		pg/g	☼	11/14/17 11:28	11/29/17 05:13	1
Total HxCDF	9.3		9.2		pg/g	☼	11/14/17 11:28	11/29/17 05:13	1
Total HpCDD	150		9.2		pg/g	☼	11/14/17 11:28	11/29/17 05:13	1
Total HpCDF	61		9.2		pg/g	☼	11/14/17 11:28	11/29/17 05:13	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	70		40 - 135				11/14/17 11:28	11/29/17 05:13	1
13C-2,3,7,8-TCDF	67		40 - 135				11/14/17 11:28	11/29/17 05:13	1
13C-1,2,3,7,8-PeCDD	71		40 - 135				11/14/17 11:28	11/29/17 05:13	1
13C-1,2,3,7,8-PeCDF	66		40 - 135				11/14/17 11:28	11/29/17 05:13	1
13C-1,2,3,6,7,8-HxCDD	64		40 - 135				11/14/17 11:28	11/29/17 05:13	1
13C-1,2,3,4,7,8-HxCDF	62		40 - 135				11/14/17 11:28	11/29/17 05:13	1
13C-1,2,3,4,6,7,8-HpCDD	74		40 - 135				11/14/17 11:28	11/29/17 05:13	1
13C-1,2,3,4,6,7,8-HpCDF	44		40 - 135				11/14/17 11:28	11/29/17 05:13	1
13C-OCDD	66		40 - 135				11/14/17 11:28	11/29/17 05:13	1

Client Sample ID: SS-5-2 (6-12")

Lab Sample ID: 590-7493-5

Date Collected: 10/16/17 11:32

Matrix: Solid

Date Received: 11/10/17 15:25

Percent Solids: 15.0

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		27		pg/g	☼	11/14/17 11:28	11/29/17 06:01	1
2,3,7,8-TCDF	ND		27		pg/g	☼	11/14/17 11:28	11/29/17 06:01	1
1,2,3,7,8-PeCDD	ND		140		pg/g	☼	11/14/17 11:28	11/29/17 06:01	1
1,2,3,7,8-PeCDF	ND		140		pg/g	☼	11/14/17 11:28	11/29/17 06:01	1
2,3,4,7,8-PeCDF	ND		140		pg/g	☼	11/14/17 11:28	11/29/17 06:01	1
1,2,3,4,7,8-HxCDD	ND		140		pg/g	☼	11/14/17 11:28	11/29/17 06:01	1
1,2,3,6,7,8-HxCDD	150		140		pg/g	☼	11/14/17 11:28	11/29/17 06:01	1
1,2,3,7,8,9-HxCDD	ND		140		pg/g	☼	11/14/17 11:28	11/29/17 06:01	1
1,2,3,4,7,8-HxCDF	140		140		pg/g	☼	11/14/17 11:28	11/29/17 06:01	1
1,2,3,6,7,8-HxCDF	ND		140		pg/g	☼	11/14/17 11:28	11/29/17 06:01	1
1,2,3,7,8,9-HxCDF	ND		140		pg/g	☼	11/14/17 11:28	11/29/17 06:01	1
2,3,4,6,7,8-HxCDF	ND		140		pg/g	☼	11/14/17 11:28	11/29/17 06:01	1
1,2,3,4,6,7,8-HpCDD	4100		140		pg/g	☼	11/14/17 11:28	11/29/17 06:01	1
1,2,3,4,6,7,8-HpCDF	770		140		pg/g	☼	11/14/17 11:28	11/29/17 06:01	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-7493-1

Client Sample ID: SS-5-2 (6-12")

Lab Sample ID: 590-7493-5

Date Collected: 10/16/17 11:32

Matrix: Solid

Date Received: 11/10/17 15:25

Percent Solids: 15.0

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,7,8,9-HpCDF	ND		140		pg/g	☼	11/14/17 11:28	11/29/17 06:01	1
OCDD	53000		270		pg/g	☼	11/14/17 11:28	11/29/17 06:01	1
OCDF	580		270		pg/g	☼	11/14/17 11:28	11/29/17 06:01	1
Total TCDD	ND		27		pg/g	☼	11/14/17 11:28	11/29/17 06:01	1
Total TCDF	ND		27		pg/g	☼	11/14/17 11:28	11/29/17 06:01	1
Total PeCDD	ND		140		pg/g	☼	11/14/17 11:28	11/29/17 06:01	1
Total PeCDF	ND		140		pg/g	☼	11/14/17 11:28	11/29/17 06:01	1
Total HxCDD	390		140		pg/g	☼	11/14/17 11:28	11/29/17 06:01	1
Total HxCDF	1400		140		pg/g	☼	11/14/17 11:28	11/29/17 06:01	1
Total HpCDD	7800		140		pg/g	☼	11/14/17 11:28	11/29/17 06:01	1
Total HpCDF	2700		140		pg/g	☼	11/14/17 11:28	11/29/17 06:01	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	69		40 - 135				11/14/17 11:28	11/29/17 06:01	1
13C-2,3,7,8-TCDF	55		40 - 135				11/14/17 11:28	11/29/17 06:01	1
13C-1,2,3,7,8-PeCDD	56		40 - 135				11/14/17 11:28	11/29/17 06:01	1
13C-1,2,3,7,8-PeCDF	56		40 - 135				11/14/17 11:28	11/29/17 06:01	1
13C-1,2,3,6,7,8-HxCDD	63		40 - 135				11/14/17 11:28	11/29/17 06:01	1
13C-1,2,3,4,7,8-HxCDF	54		40 - 135				11/14/17 11:28	11/29/17 06:01	1
13C-1,2,3,4,6,7,8-HpCDD	76		40 - 135				11/14/17 11:28	11/29/17 06:01	1
13C-1,2,3,4,6,7,8-HpCDF	52		40 - 135				11/14/17 11:28	11/29/17 06:01	1
13C-OCDD	78		40 - 135				11/14/17 11:28	11/29/17 06:01	1

Client Sample ID: SS-4-2 (6-12")

Lab Sample ID: 590-7493-8

Date Collected: 10/16/17 11:45

Matrix: Solid

Date Received: 11/10/17 15:25

Percent Solids: 53.6

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		1.9		pg/g	☼	11/14/17 11:28	11/29/17 12:50	1
2,3,7,8-TCDF	ND		1.9		pg/g	☼	11/14/17 11:28	11/29/17 12:50	1
1,2,3,7,8-PeCDD	ND		9.5		pg/g	☼	11/14/17 11:28	11/29/17 12:50	1
1,2,3,7,8-PeCDF	ND		9.5		pg/g	☼	11/14/17 11:28	11/29/17 12:50	1
2,3,4,7,8-PeCDF	ND		9.5		pg/g	☼	11/14/17 11:28	11/29/17 12:50	1
1,2,3,4,7,8-HxCDD	ND		9.5		pg/g	☼	11/14/17 11:28	11/29/17 12:50	1
1,2,3,6,7,8-HxCDD	ND		9.5		pg/g	☼	11/14/17 11:28	11/29/17 12:50	1
1,2,3,7,8,9-HxCDD	ND		9.5		pg/g	☼	11/14/17 11:28	11/29/17 12:50	1
1,2,3,4,7,8-HxCDF	ND		9.5		pg/g	☼	11/14/17 11:28	11/29/17 12:50	1
1,2,3,6,7,8-HxCDF	ND		9.5		pg/g	☼	11/14/17 11:28	11/29/17 12:50	1
1,2,3,7,8,9-HxCDF	ND		9.5		pg/g	☼	11/14/17 11:28	11/29/17 12:50	1
2,3,4,6,7,8-HxCDF	ND		9.5		pg/g	☼	11/14/17 11:28	11/29/17 12:50	1
1,2,3,4,6,7,8-HpCDD	95		9.5		pg/g	☼	11/14/17 11:28	11/29/17 12:50	1
1,2,3,4,6,7,8-HpCDF	15		9.5		pg/g	☼	11/14/17 11:28	11/29/17 12:50	1
1,2,3,4,7,8,9-HpCDF	ND		9.5		pg/g	☼	11/14/17 11:28	11/29/17 12:50	1
OCDD	1000		19		pg/g	☼	11/14/17 11:28	11/29/17 12:50	1
OCDF	58		19		pg/g	☼	11/14/17 11:28	11/29/17 12:50	1
Total TCDD	ND		1.9		pg/g	☼	11/14/17 11:28	11/29/17 12:50	1
Total TCDF	ND	G	11		pg/g	☼	11/14/17 11:28	11/29/17 12:50	1
Total PeCDD	ND		9.5		pg/g	☼	11/14/17 11:28	11/29/17 12:50	1
Total PeCDF	ND	G	17		pg/g	☼	11/14/17 11:28	11/29/17 12:50	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-7493-1

Client Sample ID: SS-4-2 (6-12")

Lab Sample ID: 590-7493-8

Date Collected: 10/16/17 11:45

Matrix: Solid

Date Received: 11/10/17 15:25

Percent Solids: 53.6

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
Total HxCDD	ND		9.5		pg/g	☼	11/14/17 11:28	11/29/17 12:50	1
Total HxCDF	ND	G	29		pg/g	☼	11/14/17 11:28	11/29/17 12:50	1
Total HpCDD	170		9.5		pg/g	☼	11/14/17 11:28	11/29/17 12:50	1
Total HpCDF	63		9.5		pg/g	☼	11/14/17 11:28	11/29/17 12:50	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	50		40 - 135				11/14/17 11:28	11/29/17 12:50	1
13C-2,3,7,8-TCDF	47		40 - 135				11/14/17 11:28	11/29/17 12:50	1
13C-1,2,3,7,8-PeCDD	51		40 - 135				11/14/17 11:28	11/29/17 12:50	1
13C-1,2,3,7,8-PeCDF	48		40 - 135				11/14/17 11:28	11/29/17 12:50	1
13C-1,2,3,6,7,8-HxCDD	50		40 - 135				11/14/17 11:28	11/29/17 12:50	1
13C-1,2,3,4,7,8-HxCDF	47		40 - 135				11/14/17 11:28	11/29/17 12:50	1
13C-1,2,3,4,6,7,8-HpCDD	59		40 - 135				11/14/17 11:28	11/29/17 12:50	1
13C-1,2,3,4,6,7,8-HpCDF	40		40 - 135				11/14/17 11:28	11/29/17 12:50	1
13C-OCDD	53		40 - 135				11/14/17 11:28	11/29/17 12:50	1

Client Sample ID: SS-6-2 (6-12")

Lab Sample ID: 590-7493-10

Date Collected: 10/16/17 12:05

Matrix: Solid

Date Received: 11/10/17 15:25

Percent Solids: 18.2

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		11000		pg/g	☼	11/14/17 11:28	11/29/17 13:38	1
2,3,7,8-TCDF	ND		11000		pg/g	☼	11/14/17 11:28	11/29/17 13:38	1
1,2,3,7,8-PeCDD	ND		56000		pg/g	☼	11/14/17 11:28	11/29/17 13:38	1
1,2,3,7,8-PeCDF	ND		56000		pg/g	☼	11/14/17 11:28	11/29/17 13:38	1
2,3,4,7,8-PeCDF	ND		56000		pg/g	☼	11/14/17 11:28	11/29/17 13:38	1
1,2,3,4,7,8-HxCDD	ND		56000		pg/g	☼	11/14/17 11:28	11/29/17 13:38	1
1,2,3,6,7,8-HxCDD	ND		56000		pg/g	☼	11/14/17 11:28	11/29/17 13:38	1
1,2,3,7,8,9-HxCDD	ND		56000		pg/g	☼	11/14/17 11:28	11/29/17 13:38	1
1,2,3,4,7,8-HxCDF	ND		56000		pg/g	☼	11/14/17 11:28	11/29/17 13:38	1
1,2,3,6,7,8-HxCDF	ND		56000		pg/g	☼	11/14/17 11:28	11/29/17 13:38	1
1,2,3,7,8,9-HxCDF	ND		56000		pg/g	☼	11/14/17 11:28	11/29/17 13:38	1
2,3,4,6,7,8-HxCDF	ND		56000		pg/g	☼	11/14/17 11:28	11/29/17 13:38	1
1,2,3,4,6,7,8-HpCDD	590000		56000		pg/g	☼	11/14/17 11:28	11/29/17 13:38	1
1,2,3,4,6,7,8-HpCDF	61000		56000		pg/g	☼	11/14/17 11:28	11/29/17 13:38	1
1,2,3,4,7,8,9-HpCDF	ND		56000		pg/g	☼	11/14/17 11:28	11/29/17 13:38	1
OCDD	5000000		110000		pg/g	☼	11/14/17 11:28	11/29/17 13:38	1
OCDF	140000		110000		pg/g	☼	11/14/17 11:28	11/29/17 13:38	1
Total TCDD	ND		11000		pg/g	☼	11/14/17 11:28	11/29/17 13:38	1
Total TCDF	ND		11000		pg/g	☼	11/14/17 11:28	11/29/17 13:38	1
Total PeCDD	ND		56000		pg/g	☼	11/14/17 11:28	11/29/17 13:38	1
Total PeCDF	ND		56000		pg/g	☼	11/14/17 11:28	11/29/17 13:38	1
Total HxCDD	ND		56000		pg/g	☼	11/14/17 11:28	11/29/17 13:38	1
Total HxCDF	59000		56000		pg/g	☼	11/14/17 11:28	11/29/17 13:38	1
Total HpCDD	990000		56000		pg/g	☼	11/14/17 11:28	11/29/17 13:38	1
Total HpCDF	200000		56000		pg/g	☼	11/14/17 11:28	11/29/17 13:38	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	101		40 - 135				11/14/17 11:28	11/29/17 13:38	1
13C-2,3,7,8-TCDF	95		40 - 135				11/14/17 11:28	11/29/17 13:38	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-7493-1

Client Sample ID: SS-6-2 (6-12")

Lab Sample ID: 590-7493-10

Date Collected: 10/16/17 12:05

Matrix: Solid

Date Received: 11/10/17 15:25

Percent Solids: 18.2

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-1,2,3,7,8-PeCDD	104		40 - 135	11/14/17 11:28	11/29/17 13:38	1
13C-1,2,3,7,8-PeCDF	99		40 - 135	11/14/17 11:28	11/29/17 13:38	1
13C-1,2,3,6,7,8-HxCDD	99		40 - 135	11/14/17 11:28	11/29/17 13:38	1
13C-1,2,3,4,7,8-HxCDF	90		40 - 135	11/14/17 11:28	11/29/17 13:38	1
13C-1,2,3,4,6,7,8-HpCDD	116		40 - 135	11/14/17 11:28	11/29/17 13:38	1
13C-1,2,3,4,6,7,8-HpCDF	100		40 - 135	11/14/17 11:28	11/29/17 13:38	1
13C-OCDD	121		40 - 135	11/14/17 11:28	11/29/17 13:38	1

Client Sample ID: ROW-3-3 (12-18")

Lab Sample ID: 590-7493-13

Date Collected: 10/16/17 13:30

Matrix: Solid

Date Received: 11/10/17 15:25

Percent Solids: 97.1

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		2.6		pg/g	☼	11/14/17 11:28	11/29/17 15:15	1
2,3,7,8-TCDF	ND	G	2.9		pg/g	☼	11/14/17 11:28	11/29/17 15:15	1
1,2,3,7,8-PeCDD	ND		13		pg/g	☼	11/14/17 11:28	11/29/17 15:15	1
1,2,3,7,8-PeCDF	ND		13		pg/g	☼	11/14/17 11:28	11/29/17 15:15	1
2,3,4,7,8-PeCDF	ND		13		pg/g	☼	11/14/17 11:28	11/29/17 15:15	1
1,2,3,4,7,8-HxCDD	ND		13		pg/g	☼	11/14/17 11:28	11/29/17 15:15	1
1,2,3,6,7,8-HxCDD	ND		13		pg/g	☼	11/14/17 11:28	11/29/17 15:15	1
1,2,3,7,8,9-HxCDD	ND		13		pg/g	☼	11/14/17 11:28	11/29/17 15:15	1
1,2,3,4,7,8-HxCDF	ND		13		pg/g	☼	11/14/17 11:28	11/29/17 15:15	1
1,2,3,6,7,8-HxCDF	ND		13		pg/g	☼	11/14/17 11:28	11/29/17 15:15	1
1,2,3,7,8,9-HxCDF	ND		13		pg/g	☼	11/14/17 11:28	11/29/17 15:15	1
2,3,4,6,7,8-HxCDF	ND		13		pg/g	☼	11/14/17 11:28	11/29/17 15:15	1
1,2,3,4,6,7,8-HpCDD	330		13		pg/g	☼	11/14/17 11:28	11/29/17 15:15	1
1,2,3,4,6,7,8-HpCDF	53		13		pg/g	☼	11/14/17 11:28	11/29/17 15:15	1
1,2,3,4,7,8,9-HpCDF	ND		13		pg/g	☼	11/14/17 11:28	11/29/17 15:15	1
OCDD	2800		26		pg/g	☼	11/14/17 11:28	11/29/17 15:15	1
OCDF	130		26		pg/g	☼	11/14/17 11:28	11/29/17 15:15	1
Total TCDD	ND		2.6		pg/g	☼	11/14/17 11:28	11/29/17 15:15	1
Total TCDF	ND	G	5.0		pg/g	☼	11/14/17 11:28	11/29/17 15:15	1
Total PeCDD	ND		13		pg/g	☼	11/14/17 11:28	11/29/17 15:15	1
Total PeCDF	ND	G	32		pg/g	☼	11/14/17 11:28	11/29/17 15:15	1
Total HxCDD	52	q	13		pg/g	☼	11/14/17 11:28	11/29/17 15:15	1
Total HxCDF	ND	G	42		pg/g	☼	11/14/17 11:28	11/29/17 15:15	1
Total HpCDD	640		13		pg/g	☼	11/14/17 11:28	11/29/17 15:15	1
Total HpCDF	130		13		pg/g	☼	11/14/17 11:28	11/29/17 15:15	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	70		40 - 135	11/14/17 11:28	11/29/17 15:15	1
13C-2,3,7,8-TCDF	59		40 - 135	11/14/17 11:28	11/29/17 15:15	1
13C-1,2,3,7,8-PeCDD	53		40 - 135	11/14/17 11:28	11/29/17 15:15	1
13C-1,2,3,7,8-PeCDF	47		40 - 135	11/14/17 11:28	11/29/17 15:15	1
13C-1,2,3,6,7,8-HxCDD	73		40 - 135	11/14/17 11:28	11/29/17 15:15	1
13C-1,2,3,4,7,8-HxCDF	59		40 - 135	11/14/17 11:28	11/29/17 15:15	1
13C-1,2,3,4,6,7,8-HpCDD	75		40 - 135	11/14/17 11:28	11/29/17 15:15	1
13C-1,2,3,4,6,7,8-HpCDF	83		40 - 135	11/14/17 11:28	11/29/17 15:15	1
13C-OCDD	33	*	40 - 135	11/14/17 11:28	11/29/17 15:15	1

TestAmerica Spokane

Client Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-7493-1

Client Sample ID: ROW-4-3 (12-18")

Lab Sample ID: 590-7493-16

Date Collected: 10/16/17 13:50

Matrix: Solid

Date Received: 11/10/17 15:25

Percent Solids: 97.6

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		4.2		pg/g	☼	11/14/17 11:28	11/29/17 16:04	1
2,3,7,8-TCDF	ND		4.2		pg/g	☼	11/14/17 11:28	11/29/17 16:04	1
1,2,3,7,8-PeCDD	ND		21		pg/g	☼	11/14/17 11:28	11/29/17 16:04	1
1,2,3,7,8-PeCDF	ND		21		pg/g	☼	11/14/17 11:28	11/29/17 16:04	1
2,3,4,7,8-PeCDF	ND		21		pg/g	☼	11/14/17 11:28	11/29/17 16:04	1
1,2,3,4,7,8-HxCDD	ND		21		pg/g	☼	11/14/17 11:28	11/29/17 16:04	1
1,2,3,6,7,8-HxCDD	28		21		pg/g	☼	11/14/17 11:28	11/29/17 16:04	1
1,2,3,7,8,9-HxCDD	28		21		pg/g	☼	11/14/17 11:28	11/29/17 16:04	1
1,2,3,4,7,8-HxCDF	ND		21		pg/g	☼	11/14/17 11:28	11/29/17 16:04	1
1,2,3,6,7,8-HxCDF	34		21		pg/g	☼	11/14/17 11:28	11/29/17 16:04	1
1,2,3,7,8,9-HxCDF	ND		21		pg/g	☼	11/14/17 11:28	11/29/17 16:04	1
2,3,4,6,7,8-HxCDF	ND		21		pg/g	☼	11/14/17 11:28	11/29/17 16:04	1
1,2,3,4,6,7,8-HpCDD	770		21		pg/g	☼	11/14/17 11:28	11/29/17 16:04	1
1,2,3,4,6,7,8-HpCDF	290		21		pg/g	☼	11/14/17 11:28	11/29/17 16:04	1
1,2,3,4,7,8,9-HpCDF	ND		21		pg/g	☼	11/14/17 11:28	11/29/17 16:04	1
OCDD	7400		42		pg/g	☼	11/14/17 11:28	11/29/17 16:04	1
OCDF	740		42		pg/g	☼	11/14/17 11:28	11/29/17 16:04	1
Total TCDD	ND		4.2		pg/g	☼	11/14/17 11:28	11/29/17 16:04	1
Total TCDF	ND	G	7.0		pg/g	☼	11/14/17 11:28	11/29/17 16:04	1
Total PeCDD	ND		21		pg/g	☼	11/14/17 11:28	11/29/17 16:04	1
Total PeCDF	52		21		pg/g	☼	11/14/17 11:28	11/29/17 16:04	1
Total HxCDD	190		21		pg/g	☼	11/14/17 11:28	11/29/17 16:04	1
Total HxCDF	270		21		pg/g	☼	11/14/17 11:28	11/29/17 16:04	1
Total HpCDD	1400		21		pg/g	☼	11/14/17 11:28	11/29/17 16:04	1
Total HpCDF	660		21		pg/g	☼	11/14/17 11:28	11/29/17 16:04	1
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C-2,3,7,8-TCDD	73		40 - 135				11/14/17 11:28	11/29/17 16:04	1
13C-2,3,7,8-TCDF	59		40 - 135				11/14/17 11:28	11/29/17 16:04	1
13C-1,2,3,7,8-PeCDD	66		40 - 135				11/14/17 11:28	11/29/17 16:04	1
13C-1,2,3,7,8-PeCDF	63		40 - 135				11/14/17 11:28	11/29/17 16:04	1
13C-1,2,3,6,7,8-HxCDD	66		40 - 135				11/14/17 11:28	11/29/17 16:04	1
13C-1,2,3,4,7,8-HxCDF	63		40 - 135				11/14/17 11:28	11/29/17 16:04	1
13C-1,2,3,4,6,7,8-HpCDD	85		40 - 135				11/14/17 11:28	11/29/17 16:04	1
13C-1,2,3,4,6,7,8-HpCDF	75		40 - 135				11/14/17 11:28	11/29/17 16:04	1
13C-OCDD	84		40 - 135				11/14/17 11:28	11/29/17 16:04	1

QC Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-7493-1

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Lab Sample ID: MB 320-194569/1-A
Matrix: Solid
Analysis Batch: 197125

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 194569

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		1.0		pg/g		11/14/17 11:28	11/29/17 10:24	1
2,3,7,8-TCDF	ND		1.0		pg/g		11/14/17 11:28	11/29/17 10:24	1
1,2,3,7,8-PeCDD	ND		5.0		pg/g		11/14/17 11:28	11/29/17 10:24	1
1,2,3,7,8-PeCDF	ND		5.0		pg/g		11/14/17 11:28	11/29/17 10:24	1
2,3,4,7,8-PeCDF	ND		5.0		pg/g		11/14/17 11:28	11/29/17 10:24	1
1,2,3,4,7,8-HxCDD	ND		5.0		pg/g		11/14/17 11:28	11/29/17 10:24	1
1,2,3,6,7,8-HxCDD	ND		5.0		pg/g		11/14/17 11:28	11/29/17 10:24	1
1,2,3,7,8,9-HxCDD	ND		5.0		pg/g		11/14/17 11:28	11/29/17 10:24	1
1,2,3,4,7,8-HxCDF	ND		5.0		pg/g		11/14/17 11:28	11/29/17 10:24	1
1,2,3,6,7,8-HxCDF	ND		5.0		pg/g		11/14/17 11:28	11/29/17 10:24	1
1,2,3,7,8,9-HxCDF	ND		5.0		pg/g		11/14/17 11:28	11/29/17 10:24	1
2,3,4,6,7,8-HxCDF	ND		5.0		pg/g		11/14/17 11:28	11/29/17 10:24	1
1,2,3,4,6,7,8-HpCDD	ND		5.0		pg/g		11/14/17 11:28	11/29/17 10:24	1
1,2,3,4,6,7,8-HpCDF	ND		5.0		pg/g		11/14/17 11:28	11/29/17 10:24	1
1,2,3,4,7,8,9-HpCDF	ND		5.0		pg/g		11/14/17 11:28	11/29/17 10:24	1
OCDD	ND		10		pg/g		11/14/17 11:28	11/29/17 10:24	1
OCDF	ND		10		pg/g		11/14/17 11:28	11/29/17 10:24	1
Total TCDD	ND		1.0		pg/g		11/14/17 11:28	11/29/17 10:24	1
Total TCDF	ND		1.0		pg/g		11/14/17 11:28	11/29/17 10:24	1
Total PeCDD	ND		5.0		pg/g		11/14/17 11:28	11/29/17 10:24	1
Total PeCDF	ND		5.0		pg/g		11/14/17 11:28	11/29/17 10:24	1
Total HxCDD	ND		5.0		pg/g		11/14/17 11:28	11/29/17 10:24	1
Total HxCDF	ND		5.0		pg/g		11/14/17 11:28	11/29/17 10:24	1
Total HpCDD	ND		5.0		pg/g		11/14/17 11:28	11/29/17 10:24	1
Total HpCDF	ND		5.0		pg/g		11/14/17 11:28	11/29/17 10:24	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	68		40 - 135	11/14/17 11:28	11/29/17 10:24	1
13C-2,3,7,8-TCDF	64		40 - 135	11/14/17 11:28	11/29/17 10:24	1
13C-1,2,3,7,8-PeCDD	71		40 - 135	11/14/17 11:28	11/29/17 10:24	1
13C-1,2,3,7,8-PeCDF	69		40 - 135	11/14/17 11:28	11/29/17 10:24	1
13C-1,2,3,6,7,8-HxCDD	71		40 - 135	11/14/17 11:28	11/29/17 10:24	1
13C-1,2,3,4,7,8-HxCDF	67		40 - 135	11/14/17 11:28	11/29/17 10:24	1
13C-1,2,3,4,6,7,8-HpCDD	84		40 - 135	11/14/17 11:28	11/29/17 10:24	1
13C-1,2,3,4,6,7,8-HpCDF	80		40 - 135	11/14/17 11:28	11/29/17 10:24	1
13C-OCDD	78		40 - 135	11/14/17 11:28	11/29/17 10:24	1

Lab Sample ID: LCS 320-194569/2-A
Matrix: Solid
Analysis Batch: 197125

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 194569

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
2,3,7,8-TCDD	20.0	17.2		pg/g		86	77 - 130
2,3,7,8-TCDF	20.0	18.6		pg/g		93	79 - 137
1,2,3,7,8-PeCDD	100	92.0		pg/g		92	79 - 134
1,2,3,7,8-PeCDF	100	91.0		pg/g		91	81 - 134
2,3,4,7,8-PeCDF	100	93.1		pg/g		93	76 - 132
1,2,3,4,7,8-HxCDD	100	94.0		pg/g		94	65 - 144

TestAmerica Spokane

QC Sample Results

Client: GeoEngineers Inc
 Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-7493-1

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCS 320-194569/2-A
Matrix: Solid
Analysis Batch: 197125

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 194569

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
1,2,3,6,7,8-HxCDD	100	102		pg/g		102	73 - 147
1,2,3,7,8,9-HxCDD	100	100		pg/g		100	80 - 143
1,2,3,4,7,8-HxCDF	100	99.0		pg/g		99	72 - 140
1,2,3,6,7,8-HxCDF	100	107		pg/g		107	63 - 152
1,2,3,7,8,9-HxCDF	100	100		pg/g		100	72 - 152
2,3,4,6,7,8-HxCDF	100	104		pg/g		104	72 - 151
1,2,3,4,6,7,8-HpCDD	100	91.9		pg/g		92	86 - 134
1,2,3,4,6,7,8-HpCDF	100	98.0		pg/g		98	81 - 137
1,2,3,4,7,8,9-HpCDF	100	101		pg/g		101	79 - 139
OCDD	200	198		pg/g		99	80 - 137
OCDF	200	184		pg/g		92	75 - 141

Isotope Dilution	LCS LCS		Limits
	%Recovery	Qualifier	
13C-2,3,7,8-TCDD	64		40 - 135
13C-2,3,7,8-TCDF	58		40 - 135
13C-1,2,3,7,8-PeCDD	67		40 - 135
13C-1,2,3,7,8-PeCDF	64		40 - 135
13C-1,2,3,6,7,8-HxCDD	63		40 - 135
13C-1,2,3,4,7,8-HxCDF	61		40 - 135
13C-1,2,3,4,6,7,8-HpCDD	81		40 - 135
13C-1,2,3,4,6,7,8-HpCDF	73		40 - 135
13C-OCDD	79		40 - 135

Lab Sample ID: LCSD 320-194569/3-A
Matrix: Solid
Analysis Batch: 197125

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 194569

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
2,3,7,8-TCDD	20.0	17.7		pg/g		88	77 - 130	3	20
2,3,7,8-TCDF	20.0	18.1		pg/g		91	79 - 137	3	20
1,2,3,7,8-PeCDD	100	95.8		pg/g		96	79 - 134	4	20
1,2,3,7,8-PeCDF	100	91.5		pg/g		91	81 - 134	1	20
2,3,4,7,8-PeCDF	100	93.2		pg/g		93	76 - 132	0	20
1,2,3,4,7,8-HxCDD	100	84.6		pg/g		85	65 - 144	11	20
1,2,3,6,7,8-HxCDD	100	99.9		pg/g		100	73 - 147	2	20
1,2,3,7,8,9-HxCDD	100	93.2		pg/g		93	80 - 143	7	20
1,2,3,4,7,8-HxCDF	100	97.3		pg/g		97	72 - 140	2	20
1,2,3,6,7,8-HxCDF	100	102		pg/g		102	63 - 152	5	20
1,2,3,7,8,9-HxCDF	100	97.7		pg/g		98	72 - 152	2	20
2,3,4,6,7,8-HxCDF	100	99.4		pg/g		99	72 - 151	4	20
1,2,3,4,6,7,8-HpCDD	100	93.4		pg/g		93	86 - 134	2	20
1,2,3,4,6,7,8-HpCDF	100	98.1		pg/g		98	81 - 137	0	20
1,2,3,4,7,8,9-HpCDF	100	95.4		pg/g		95	79 - 139	6	20
OCDD	200	197		pg/g		98	80 - 137	1	20
OCDF	200	174		pg/g		87	75 - 141	5	20

Isotope Dilution	LCSD LCSD		Limits
	%Recovery	Qualifier	
13C-2,3,7,8-TCDD	70		40 - 135

TestAmerica Spokane

QC Sample Results

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-7493-1

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCSD 320-194569/3-A

Matrix: Solid

Analysis Batch: 197125

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 194569

<i>Isotope Dilution</i>	<i>LCSD</i>		<i>Limits</i>
	<i>%Recovery</i>	<i>Qualifier</i>	
13C-2,3,7,8-TCDF	67		40 - 135
13C-1,2,3,7,8-PeCDD	74		40 - 135
13C-1,2,3,7,8-PeCDF	73		40 - 135
13C-1,2,3,6,7,8-HxCDD	75		40 - 135
13C-1,2,3,4,7,8-HxCDF	70		40 - 135
13C-1,2,3,4,6,7,8-HpCDD	87		40 - 135
13C-1,2,3,4,6,7,8-HpCDF	81		40 - 135
13C-OCDD	82		40 - 135

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-7493-1

Client Sample ID: SS-1-2 (6-12")

Date Collected: 10/16/17 11:00

Date Received: 11/10/17 15:25

Lab Sample ID: 590-7493-2

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			195983	11/21/17 10:19	XIB	TAL SAC

Client Sample ID: SS-1-2 (6-12")

Date Collected: 10/16/17 11:00

Date Received: 11/10/17 15:25

Lab Sample ID: 590-7493-2

Matrix: Solid

Percent Solids: 95.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			9.75 g	20.0 uL	194569	11/14/17 11:28	SXS	TAL SAC
Total/NA	Analysis	8290A		1			197123	11/29/17 04:24	AS	TAL SAC

Client Sample ID: SS-3-2 (6-12")

Date Collected: 10/16/17 11:18

Date Received: 11/10/17 15:25

Lab Sample ID: 590-7493-4

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			195983	11/21/17 10:19	XIB	TAL SAC

Client Sample ID: SS-3-2 (6-12")

Date Collected: 10/16/17 11:18

Date Received: 11/10/17 15:25

Lab Sample ID: 590-7493-4

Matrix: Solid

Percent Solids: 55.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			9.76 g	20.0 uL	194569	11/14/17 11:28	SXS	TAL SAC
Total/NA	Analysis	8290A		1			197123	11/29/17 05:13	AS	TAL SAC

Client Sample ID: SS-5-2 (6-12")

Date Collected: 10/16/17 11:32

Date Received: 11/10/17 15:25

Lab Sample ID: 590-7493-5

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			195983	11/21/17 10:19	XIB	TAL SAC

Client Sample ID: SS-5-2 (6-12")

Date Collected: 10/16/17 11:32

Date Received: 11/10/17 15:25

Lab Sample ID: 590-7493-5

Matrix: Solid

Percent Solids: 15.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			9.82 g	80.0 uL	194569	11/14/17 11:28	SXS	TAL SAC
Total/NA	Analysis	8290A		1			197123	11/29/17 06:01	AS	TAL SAC

TestAmerica Spokane

Lab Chronicle

Client: GeoEngineers Inc
 Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-7493-1

Client Sample ID: SS-4-2 (6-12")

Lab Sample ID: 590-7493-8

Date Collected: 10/16/17 11:45

Matrix: Solid

Date Received: 11/10/17 15:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			195983	11/21/17 10:19	XIB	TAL SAC

Client Sample ID: SS-4-2 (6-12")

Lab Sample ID: 590-7493-8

Date Collected: 10/16/17 11:45

Matrix: Solid

Date Received: 11/10/17 15:25

Percent Solids: 53.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			9.84 g	20.0 uL	194569	11/14/17 11:28	SXS	TAL SAC
Total/NA	Analysis	8290A		1			197125	11/29/17 12:50	ALM	TAL SAC

Client Sample ID: SS-6-2 (6-12")

Lab Sample ID: 590-7493-10

Date Collected: 10/16/17 12:05

Matrix: Solid

Date Received: 11/10/17 15:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			195983	11/21/17 10:19	XIB	TAL SAC

Client Sample ID: SS-6-2 (6-12")

Lab Sample ID: 590-7493-10

Date Collected: 10/16/17 12:05

Matrix: Solid

Date Received: 11/10/17 15:25

Percent Solids: 18.2

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			9.75 g	40000 uL	194569	11/14/17 11:28	SXS	TAL SAC
Total/NA	Analysis	8290A		1			197125	11/29/17 13:38	ALM	TAL SAC

Client Sample ID: ROW-3-3 (12-18")

Lab Sample ID: 590-7493-13

Date Collected: 10/16/17 13:30

Matrix: Solid

Date Received: 11/10/17 15:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			195983	11/21/17 10:19	XIB	TAL SAC

Client Sample ID: ROW-3-3 (12-18")

Lab Sample ID: 590-7493-13

Date Collected: 10/16/17 13:30

Matrix: Solid

Date Received: 11/10/17 15:25

Percent Solids: 97.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			9.95 g	50.0 uL	194569	11/14/17 11:28	SXS	TAL SAC
Total/NA	Analysis	8290A		1			197125	11/29/17 15:15	ALM	TAL SAC

TestAmerica Spokane

Lab Chronicle

Client: GeoEngineers Inc
 Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-7493-1

Client Sample ID: ROW-4-3 (12-18")

Lab Sample ID: 590-7493-16

Date Collected: 10/16/17 13:50

Matrix: Solid

Date Received: 11/10/17 15:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			195983	11/21/17 10:19	XIB	TAL SAC

Client Sample ID: ROW-4-3 (12-18")

Lab Sample ID: 590-7493-16

Date Collected: 10/16/17 13:50

Matrix: Solid

Date Received: 11/10/17 15:25

Percent Solids: 97.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			9.83 g	80.0 uL	194569	11/14/17 11:28	SXS	TAL SAC
Total/NA	Analysis	8290A		1			197125	11/29/17 16:04	ALM	TAL SAC

Laboratory References:

TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Accreditation/Certification Summary

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-7493-1

Laboratory: TestAmerica Spokane

The accreditations/certifications listed below are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Washington	State Program	10	C569	01-06-18

Laboratory: TestAmerica Sacramento

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska (UST)	State Program	10	UST-055	12-18-17
Arizona	State Program	9	AZ0708	08-11-18
Arkansas DEQ	State Program	6	88-0691	06-17-18
California	State Program	9	2897	01-31-18
Colorado	State Program	8	CA00044	08-31-18
Connecticut	State Program	1	PH-0691	06-30-19
Florida	NELAP	4	E87570	06-30-18
Georgia	State Program	4	N/A	01-28-19
Hawaii	State Program	9	N/A	01-29-18
Illinois	NELAP	5	200060	03-17-18
Kansas	NELAP	7	E-10375	12-31-17
L-A-B	DoD ELAP		L2468	01-20-18
Louisiana	NELAP	6	30612	06-30-18
Maine	State Program	1	CA0004	04-18-18
Michigan	State Program	5	9947	01-31-18
Nevada	State Program	9	CA00044	07-31-18
New Hampshire	NELAP	1	2997	04-18-18
New Jersey	NELAP	2	CA005	06-30-18
New York	NELAP	2	11666	04-01-18
Oregon	NELAP	10	4040	01-28-18
Pennsylvania	NELAP	3	68-01272	03-31-18
Texas	NELAP	6	T104704399	05-31-18
US Fish & Wildlife	Federal		LE148388-0	07-31-18
USDA	Federal		P330-11-00436	12-30-17
USEPA UCMR	Federal	1	CA00044	11-06-18
Utah	NELAP	8	CA00044	02-28-18
Virginia	NELAP	3	460278	03-14-18
Washington	State Program	10	C581	05-05-18
West Virginia (DW)	State Program	3	9930C	12-31-17
Wyoming	State Program	8	8TMS-L	01-28-19

Method Summary

Client: GeoEngineers Inc
Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-7493-1

Method	Method Description	Protocol	Laboratory
8290A	Dioxins and Furans (HRGC/HRMS)	SW846	TAL SAC
D 2216	Percent Moisture	ASTM	TAL SAC

Protocol References:

ASTM = ASTM International

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

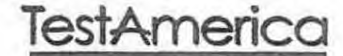
TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

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TestAmerica Spokane

11922 East 1st Ave
 Spokane, WA 99206
 Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record



THE LEADER IN ENVIRONMENTAL TESTING

Client Information		Sampler: TWR	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-3204-1054.5		
Client Contact: Scott Lathen		Phone:	E-Mail: randee.arrington@testamericainc.com		Page: Page 5 of 7		
Company: GeoEngineers Inc		Analysis Requested			Job #:		
Address: 523 East Second Ave		Field Filtered Sample (Yes or No) Perchlorate, Hg, As, Cd, Pb, Cr, Cu, Fe, Ni, Se, V, Zn 8290A - Dioxins 17 Isomers & Totals 8270D_SLM - Pentachlorophenol NWTPH_Dx - DRO and RRO			Total Number of Containers		
City: Spokane						Preservation Codes:	
State, Zip: WA, 99202						A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2O4S E - NaHSO4 Q - Na2SO3 F - MeOH R - Na2S2O3 G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone J - DI Water V - MCAA K - EDTA W - pH 4-5 L - EDA Z - other (specify)	
PO #: Purchase Order not required						Other:	
WO #:							
Project #: 59001108							
SSOW#:							
Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Special Instructions/Note:	
RDW-4-2 (6-12")	10-6-17	1348	G	Solid	X		
SS-1-2 (6-12")	11	1100	G	Solid	X		
RDW-1-2 (6-12")	11	1303	G	Solid	X		
SS-3-2 (6-12")	11	1118	G	Solid	X		
SS-5-2 (6-12")	11	1132	G	Solid	X		
RDW-2-2 (6-12")	11	1312	G	Solid	X		
RDW-2-3 (12-18")	11	1315	G	Water	X		
SS-4-2 (6-12")	11	1145	G	Water	X		
RDW-1-3 (12-18")	11	1305	G	Water	X		
SS-6-2 (6-12")	11	1205	G	Water	X		
SS-7-2 (6-12")	11	1212	G	Water	X		



590-7493 Chain of Custody

Possible Hazard Identification
 Non-Hazard Flammable Skin Irritant Poison B Unknown Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client Disposal By Lab Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)		Special Instructions/QC Requirements:			
Empty Kit Relinquished by: <i>[Signature]</i>	Date:	Time:	Method of Shipment:		
Relinquished by: <i>[Signature]</i>	Date/Time: 11/01/17 1525	Company: BEI	Received by: <i>[Signature]</i>	Date/Time: 11/01/17 1525	Company: MAE/pdc
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:

Custody Seals Intact: Yes No Custody Seal No.: _____

Cooler Temperature(s) °C and Other Remarks: **3.4 C IPOOY**

TestAmerica Spokane

11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record



Client Information			Sampler:	Lab PM:	Carrier Tracking No(s):	COC No:						
Client Contact:			Phone:	Arrington, Randee E		590-3204-1054.5						
Scott Lathen				E-Mail:		Page 5 of 7						
Company:			Analysis Requested									
GeoEngineers Inc			Job #:									
Address:			Due Date Requested:									
523 East Second Ave			TAT Requested (days):									
City:			PO #:									
Spokane			Purchase Order not required									
State, Zip:			WO #:									
WA, 99202			Project #:									
Phone:			SSOW#:									
509-251-5239(Tel)												
Email:			Project Name:									
slathen@geoengineers.com			Colville Post and Pole/0504-098-01									
Project Name:			Site:									
Colville Post and Pole/0504-098-01												
Site:												
Sample Identification			Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	8290A - Dioxins 17 Isomers & Totals	8270D_SIM - Pentachlorophenol	NWTPH_Dx - DRO and RRO	Total Number of containers	Preservation Codes:
			Preservation Code:									A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA
												M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)
												Other:
												Special Instructions/Note:
SS-2-2 (6-12)			10/14/17	1055	G	Solid						
ROW-3-3(12-18)				1330		Solid						
SS-7-3(12-18)				1215		Solid						
ROW-3-2(6-12)				1328		Solid						
ROW-4-3(12-18)				1350		Solid						
						Solid						
						Water						
						Water						
						Water						
						Water						
						Water						
						Water						
Possible Hazard Identification			Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)									
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological			<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months									
Deliverable Requested: I, II, III, IV, Other (specify)			Special Instructions/QC Requirements:									
Empty Kit Relinquished by:			Date:	Time:	Method of Shipment:							
Relinquished by: <i>[Signature]</i>			Date/Time: 11-10-17 1525	Company: LEI	Received by: <i>[Signature]</i>							
Relinquished by:			Date/Time:	Company:	Received by:							
Relinquished by:			Date/Time:	Company:	Received by:							
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No			Custody Seal No.:			Cooler Temperature(s) °C and Other Remarks: 3.4 °C 100%						

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-7493-1

Login Number: 7493

List Source: TestAmerica Spokane

List Number: 1

Creator: Kratz, Sheila J

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	No analysis requiring residual chlorine check assigned.

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-7493-1

Login Number: 7493
List Number: 2
Creator: Hytrek, Cheryl

List Source: TestAmerica Sacramento
List Creation: 11/11/17 02:45 PM

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.6
COC is present.	False	Refer to Job Narrative for details.
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Se



590-7493 Field Sheet

Tracking # 4131 6790 8488

Use this form to record Sample Custody Seal, Cooler Custody Seal, Temperature & corrected Temperature & other observations. File in the job folder with the COC.

Notes:

Therm. ID: AK-2 / AK-3 / HACCP /Other _____

Ice Wet Dry _____ Other _____

Cooler Custody Seal: 128362

Sample Custody Seal: -

Cooler ID: -

Temp: Observed 6.6E

Corrected: -

From: Temp Blank Sample
NCM Filed: Yes No

	Yes	No	NA
Perchlorate has headspace?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
CoC is complete w/o discrepancies?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Samples received within holding time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample preservatives verified?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Cooler compromised/tampered with?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Samples compromised/tampered with?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
COC and Samples w/o discrepancies?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample containers have legible labels?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Containers are not broken or leaking?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample date/times are provided.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Appropriate containers are used?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample bottles are completely filled?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Zero headspace?*	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Multiphasic samples are not present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Initials: DH Date: 12/11/17

*Containers requiring zero headspace have no headspace, or bubble < 6 mm (1/4")

W2IC 21E

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Isotope Dilution Summary

Client: GeoEngineers Inc
 Project/Site: Colville Post and Pole/0504-098-01

TestAmerica Job ID: 590-7493-1

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Matrix: Solid

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	TCDD (40-135)	TCDF (40-135)	PeCDD (40-135)	PeCDF1 (40-135)	HxCDD2 (40-135)	HxCDF1 (40-135)	HpCDD (40-135)	HpCDF1 (40-135)
590-7493-2	SS-1-2 (6-12")	73	69	70	67	73	69	87	74
590-7493-4	SS-3-2 (6-12")	70	67	71	66	64	62	74	44
590-7493-5	SS-5-2 (6-12")	69	55	56	56	63	54	76	52
590-7493-8	SS-4-2 (6-12")	50	47	51	48	50	47	59	40
590-7493-10	SS-6-2 (6-12")	101	95	104	99	99	90	116	100
590-7493-13	ROW-3-3 (12-18")	70	59	53	47	73	59	75	83
590-7493-16	ROW-4-3 (12-18")	73	59	66	63	66	63	85	75
LCS 320-194569/2-A	Lab Control Sample	64	58	67	64	63	61	81	73
LCSD 320-194569/3-A	Lab Control Sample Dup	70	67	74	73	75	70	87	81
MB 320-194569/1-A	Method Blank	68	64	71	69	71	67	84	80

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	OCDD (40-135)
590-7493-2	SS-1-2 (6-12")	74
590-7493-4	SS-3-2 (6-12")	66
590-7493-5	SS-5-2 (6-12")	78
590-7493-8	SS-4-2 (6-12")	53
590-7493-10	SS-6-2 (6-12")	121
590-7493-13	ROW-3-3 (12-18")	33 *
590-7493-16	ROW-4-3 (12-18")	84
LCS 320-194569/2-A	Lab Control Sample	79
LCSD 320-194569/3-A	Lab Control Sample Dup	82
MB 320-194569/1-A	Method Blank	78

Surrogate Legend

TCDD = 13C-2,3,7,8-TCDD
 TCDF = 13C-2,3,7,8-TCDF
 PeCDD = 13C-1,2,3,7,8-PeCDD
 PeCDF1 = 13C-1,2,3,7,8-PeCDF
 HxCDD2 = 13C-1,2,3,6,7,8-HxCDD
 HxCDF1 = 13C-1,2,3,4,7,8-HxCDF
 HpCDD = 13C-1,2,3,4,6,7,8-HpCDD
 HpCDF1 = 13C-1,2,3,4,6,7,8-HpCDF
 OCDD = 13C-OCDD

APPENDIX F
**FS Supporting Documentation and
Cost Estimate Calculations**

PRODUCT DATA SHEET

January, 2007

2" DUPLEX BAG FILTER SYSTEM

GENERAL INFORMATION

Two independent filter housings are skid-mounted and piped such that one filter unit is active while the other is out of service. Inlet and outlet connections are provided on each end of the skid. Use for filtering a wide range of industrial and commercial process fluids, groundwater discharge from construction sites, stormwater or urban runoff.

WEIGHTS AND MEASURES

» Capacity:	.....	50 - 110 gpm per filter when clean (depends on filter media micron rating)
» Design Pressure:	.....	150 psi
» Design Temp:	.....	140°F max.*
» Height:	.....	4'-9" (overall)
» Width :	.....	4'-8"
» Length:	.....	5'-8"
» Weight:	.....	550 lbs. (approx.)

SKID DESIGN

» Outer Frame:	.....	6 x 8.2 A36 carbon steel channel
» Inter. Frame:	.....	2"x2 "x3/16" A36 carbon steel angle
» Filter Housing Pad:	.....	15 x 33.9 A36 carbon steel channel
» Forklift Pockets:	.....	Through front and rear framing channels
» Cover:	.....	Expanded metal grating
» Lifting Eyes:	.....	All four corners

*Practical limit for the PVC header piping. Unit could be used up to 225°F if carbon steel piping is used instead.

FILTER DESIGN

» Filter Housing	.....	Rosedale model 8-30-2F-2-150-C-B-S-PB
» Top Cover:	.....	Three eyenuts; hinged for easy access
» Piping:	.....	2" schedule 80 PVC (inlet and outlet headers)
» Inlet & Outlet:	.....	2" 150# ANSI flanges
» Cover Seal:	.....	Buna N (Nitrile) o-ring
» Housing Material:	.....	Carbon Steel
» Filter Basket:	.....	30" deep, 6.7" diameter, 4.4 sq. ft. surface area, 1000 cu. in. volume, 9/64" dia holes (51% open)
» Filter Media:	.....	Filter bags, size #2. Wide range of micron ratings is available, down to 1.0.
» Vent Valves:	.....	1/4" ball valve on top cover
» Drain Valves:	1" ball valve on the bottom of each housing

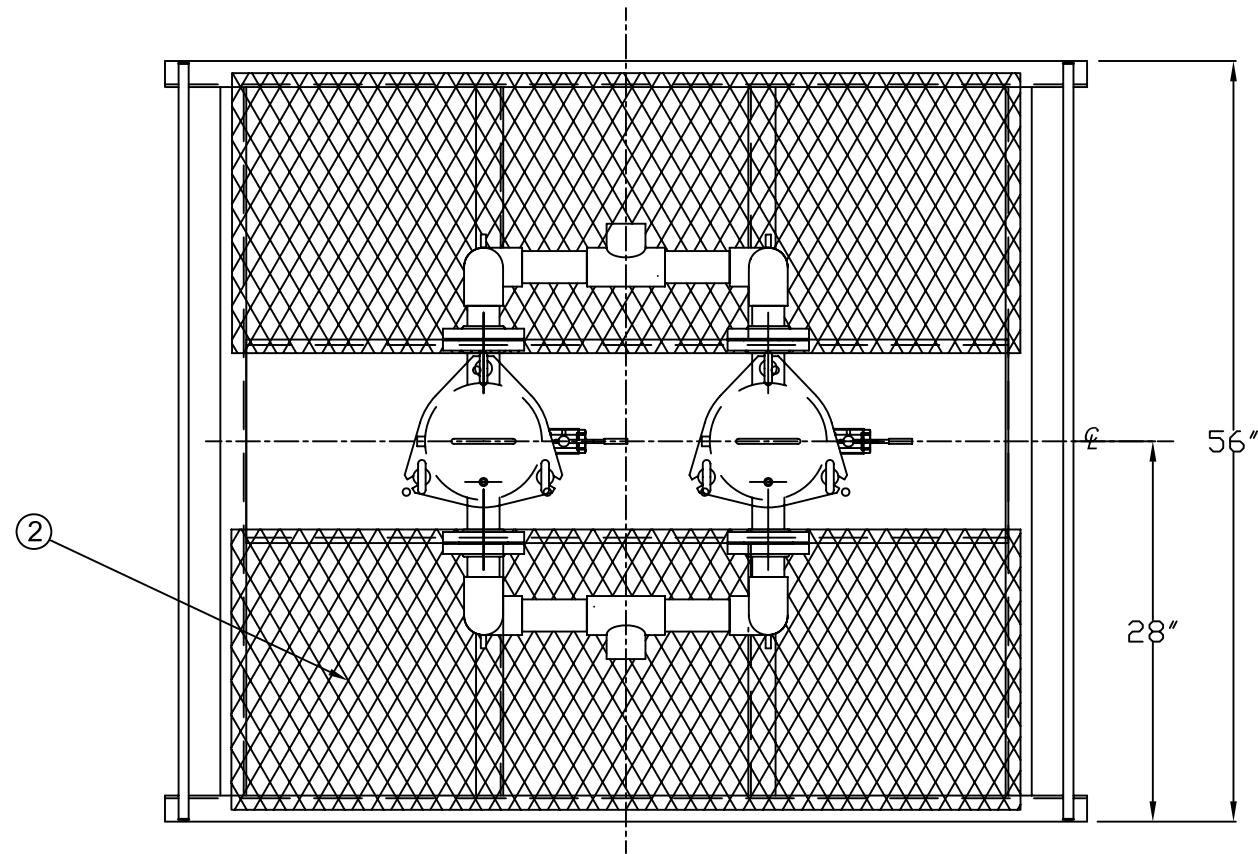
SURFACE DETAILS

» Exterior Coating:	High gloss polyurethane
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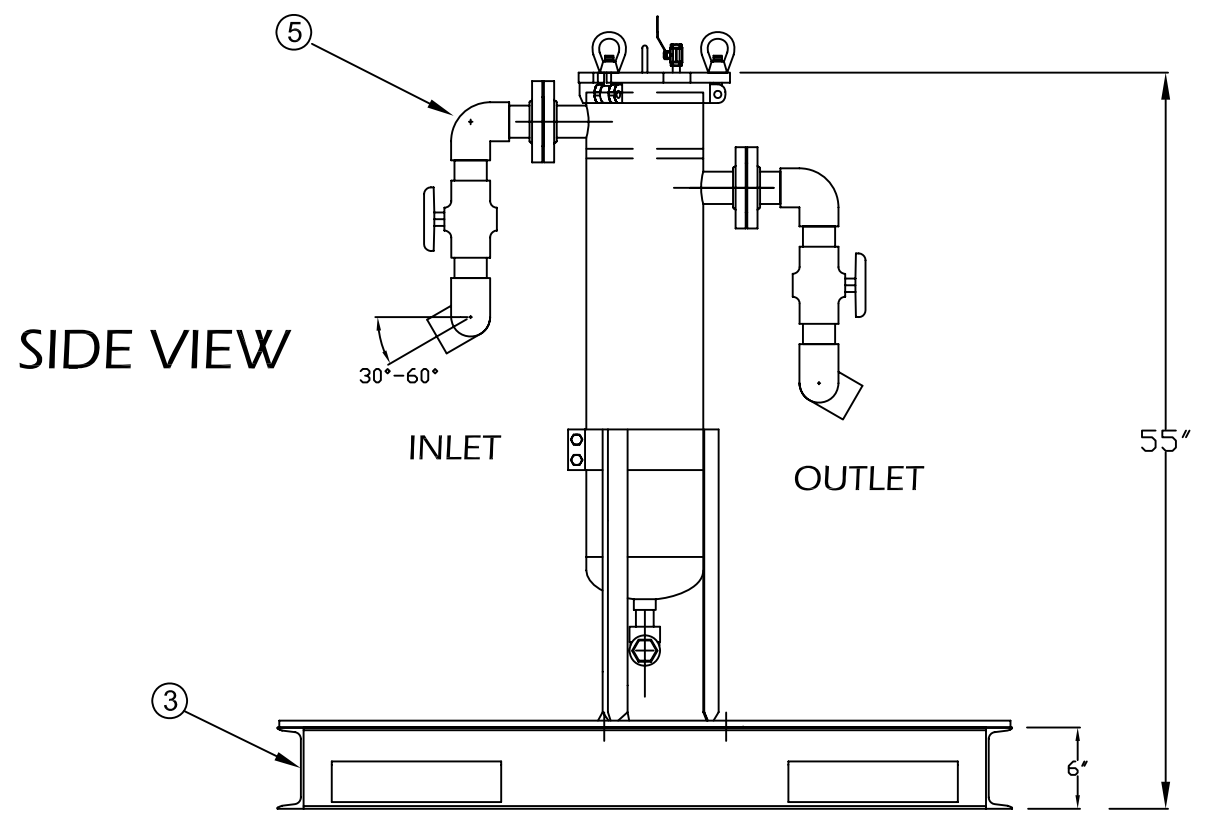
TESTS / CERTIFICATIONS

» Test Performed:	Scheduled QMS inspections
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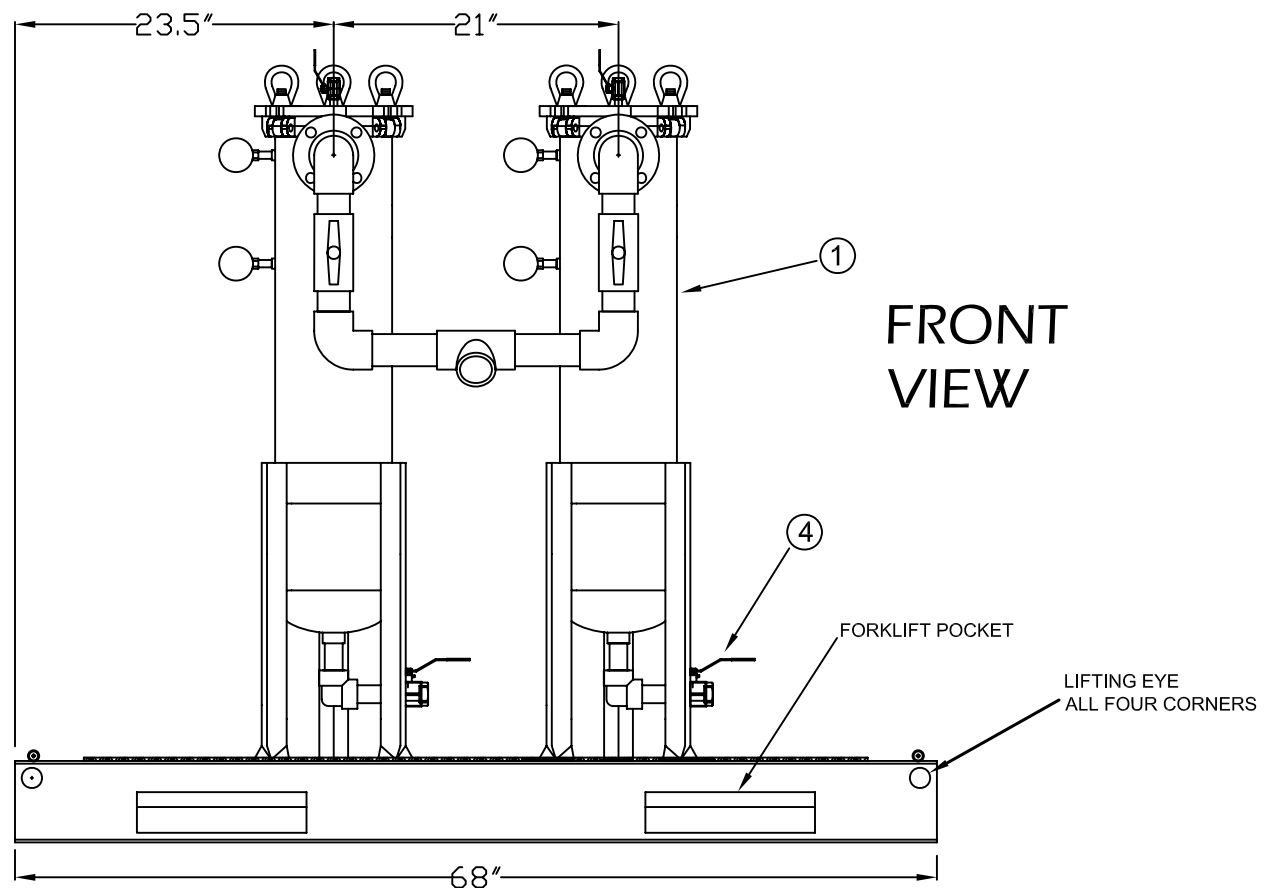
ITEM	DESCRIPTION
1	Rosedale Model 8302F2150CBS-PB Bag Filter, all welded construction, carbon steel wetted parts; Design Pressure: 150 psi; Design Temperature: 400°F; Filter Basket: 304 SS, 4.4 sq. ft. area, 9/64" dia. holes (51% open).
2	Expanded metal grating
3	Mounting skid with forklift pockets
4	1" bottom drain
5	2" PVC piping



TOP VIEW



SIDE VIEW



FRONT VIEW

<p>The information contained herein is proprietary to BakerCorp and shall not be reproduced or disclosed in whole or in part, or used for any design or manufacture except when user obtains direct written authorization from BakerCorp.</p>						<p>3020 OLD RANCH PARKWAY SEAL BEACH, CA 90740-2751</p>	
G				SCALE:	SIZE	ORIGINAL DWG. DATE	
F				To Scale	B	18AUG03	
E				DRAWN BY:	APPROVED BY:	CAT/CLASS	
D				P.J.B.	-	--	
C				TITLE			SHEET
B				2" BAG FILTER UNIT			1 OF 1
A	Changed drawing title	2/18/05	PJB	DRAWING NO.			REV.
REV.	DESCRIPTION	DATE	BY	S-9-M0010-1-			A

06/11/2018

10:33

18044

GeoEngineers Post and Poles PAZ

*** Mark McCullough

BID TOTALS

<u>Biditem</u>	<u>Description</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Bid Total</u>
10	Mobilization	1.000	LS	67,697.26	67,697.26
40	Mix Sand & ZVI	1,400.000	BCY	98.44	137,816.00
50	Install ZVI Wall (.004 iron/soil by weight)	1,400.000	CY	101.89	142,646.00
60	Regrade site	200.000	CY	57.79	11,558.00
80	Demobilization	1.000	LS	41,299.86	41,299.86

Bid Total =====> \$401,017.12

ORC Injections

Assume saturated zone ^{at} = 3-18 ft. ^{bgs} = 15 feet treatment zone

Assume we will treat the same area: MNA

200' x 400' = 80,000 SF ← assumed injection area

at 18 ft OC ← from vendor

⇒ injection grid is 20 x 40 = 800 locations

Assume ORC rate of 5 lbs / ft ^{deep} = 75 lbs / Location

(800 locations) x (75 lbs / location) = 60,000 lbs of ORC needed

if we do two treatments then 120,000 lbs of ORC

120,000 lb @ 6.15/lb = \$738,000 ORC purchase cost

Assume 1600 locations @ 20 locations/day (two rigs)

= 80 days to conduct two treatments

⇒ assume two treatments, each w/ 800 injections, 40 days each

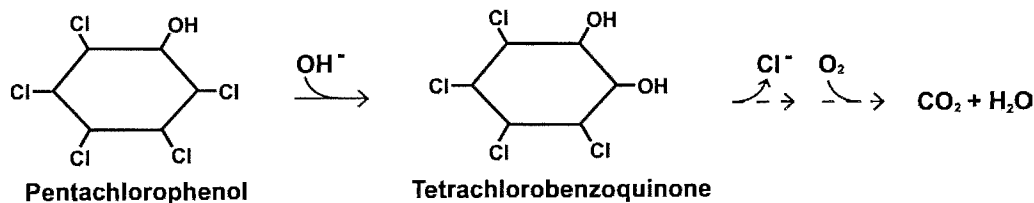
Oxygen Release Compound, ORC®

Remediation of Pentachlorophenol (PCP)

Pentachlorophenol (PCP) is a biocide used widely in the wood preservation industry. Laboratory results have successfully demonstrated bioremediation in soils and groundwater contaminated with pentachlorophenol. In fact, bioremediation has been recommended for implementation at numerous abandoned wood treatment sites (Dasappa, S.M. and R.C. Loehr, 1991). Oxygen Release Compound (ORC®) has been demonstrated to stimulate the rate of pentachlorophenol degradation and offers a unique alternative for PCP remediation.

Biodegradation of Pentachlorophenol

PCP degradation proceeds via a complex series of biochemical reactions beginning with an aerobic step that results in the formation of tetrachlorobenzoquinone (Spain, 1997). Subsequent dechlorination steps yield intermediate compounds susceptible to aerobic ring cleavage. The oxidative sequence ultimately ends in the formation of carbon dioxide.



Laboratory results indicate that PCP degradation occurs rapidly under aerobic conditions with half lives ($T_{1/2}$) less than 48 hours. (Maritinson et.al., 1984). Furthermore, field demonstrations in certain contaminated soils show half lives less than 15 days (Crawford and Hohn, 1985).

Pentachlorophenol Treatment with ORC

ORC provides a slow, steady supply of oxygen that can stimulate the aerobic degradation of pentachlorophenol. Results from a field study at a Region 9 USEPA wood treatment site show that soils amended with ORC achieved a PCP biodegradation half life ($T_{1/2}$) of 37 days compared to the aerobic control (contaminated soils not treated with ORC but exposed to air) which showed a PCP degradation half life of 210 days (Vernalia, et.al., 1997).

A pilot study in which ORC filter socks are being used to enhance the remediation of PCP-contaminated groundwater has produced promising results. The following data were collected after 2.5 months of treatment with ORC.

Well No.	Distance Downgradient	Initial Concentration (ppb)	Concentration after 2.5 Months (ppb)
1	30	400	7
2	5	7	0.3
3	30	54	1.7
4	30	16	1.2

Full scale implementation of enhanced in situ bioremediation with ORC is currently under consideration at several wood treatment facilities with PCP contaminated soils and groundwater. ORC presents a passive, cost effective approach to the remediation of PCP, without the costs associated with highly engineered systems.

ORC Installation Design Parameters

The theoretical mass ratio of oxygen to PCP required for the aerobic degradation of the contaminant is 0.54 to 1.0. Thus, 0.54 pounds of oxygen are required to degrade one pound of PCP.

The sorption coefficient (K_{oc}) for pentachlorophenol is $5.30E+4$ ml/g, suggesting that the compound has a stronger tendency to sorb to the aquifer matrix relative to petroleum hydrocarbons (e.g., benzene $K_{oc} = 8.30E+01$ ml/g). Therefore, when designing groundwater treatment systems employing ORC it is recommended that the aquifer matrix is sampled for PCP concentration. Such considerations will allow for more accurate indications of the oxygen demand imparted by the sorbed fraction of contamination.

References

Crawford, R.L., W.W.Mohn. 1985. Microbial removal of pentachlorophenol from soil using *Flavobacterium*. *Enzyme Microbiol.* 45:1122-1125.

Dasappa, S.M. and R.C. Loehr. 1991. Toxicity reduction in contaminated soil bioremediation processes. *Water Res.* 25:1121-1130.

Martinson, M.M., J.G. Steiert, D.L. Saber, and R.L.Crawford. 1984. Microbiological decontamination of pentachlorophenol in natural waters. In: *Biodeterioration Society: Proceedings of the Sixth International Symposium*. Ed.: E.E. O'Rear, Commonwealth Agricultural Bureau.

Spain, J. 1997. Synthetic Chemicals with Potential for Natural Attenuation. *Bioremediation Journal* 1:1-9.

Vernalia, J.L., L.T. LaPat-Polasko, S. Koenigsberg. 1997. Bioremediation of PCP in soil under anaerobic and aerobic conditions. In *Situ and On-site Bioremediation* 4:469. Eds: Alleman and Lesson. Battelle Press, Columbus, Ohio.

[Technical Bulletin Index](#) | [Regenesis Home Page](#)

Production Rate of Soil Washing

From EcoSPEARS

rate \rightarrow 10 tons/hr

Assume 10 hr/day = 100 ton/day

Assume 95,773 tons

Assume construction season = April - November = 8 months

(8 months) $\left(\frac{30 \text{ day}}{\text{month}}\right)$ = 240 days

$$\Rightarrow \left(\frac{100 \text{ ton}}{\text{day}}\right) (240 \text{ days}) = 24,000 \text{ ton/year}$$

$$\frac{95,773 \text{ ton}}{24,000 \frac{\text{ton}}{\text{year}}} = 4 \text{ years @ } 10 \text{ hr/day}$$

$$\textcircled{2} \text{ @ } 24 \text{ hrs/day} = 240 \text{ tons/day}$$

$$\left(\frac{240 \text{ ton}}{\text{day}}\right) (240 \text{ days}) = 57,600 \text{ ton/year}$$

$$\frac{95,773 \text{ ton}}{57,600 \text{ ton/year}} = 1.7 \text{ years @ } 24 \text{ hrs/day}$$



Gw Pump and treat

Area = 452,170 SF

Depth = 18 ft

=> volume = $8,139,060 \text{ ft}^3 = 60,884,400 \text{ gallons}$

Volume of Soil and water

Assume Average concentration of 34 ug/L PCP

From vendor 0.0225 lbs carbon/day

=> $\left(\frac{100 \text{ gal}}{\text{min}}\right) \left(\frac{60 \text{ min}}{\text{hr}}\right) \left(\frac{24 \text{ hr}}{\text{day}}\right) = \frac{144,000 \text{ gal}}{\text{day}}$ Daily pumping rate.

$\left(\frac{144,000 \text{ gal}}{\text{day}}\right) \left(\frac{3.785 \text{ L}}{1 \text{ gal}}\right) \left(34 \text{ ug/L}\right) = \frac{18,531,360 \text{ ug}}{\text{day}}$

Assume a porosity of 27.5%

=> $(60,884,400) (0.275) = 16,743,221 \text{ gallons of water to treat}$

$\frac{16,743,221}{144,000} = 116.27 \text{ days to treat one volume of contaminated water @ } 100 \text{ gpm}$

$(116.27 \text{ days}) \left(\frac{0.0225 \text{ lbs}}{\text{day}}\right) = 2.616 \text{ lbs of GAC used to remove PCP contaminated only}$

from vendor

Volume of Excavation: ZVI mass

$L = 700 \text{ ft}$

$b = 18 \text{ ft} = 37,800 \text{ ft}^3$

$w = 3 \text{ ft}$ (Bucket width)
NAVFAC

$(37,800 \text{ ft}^3)(0.004) = 151.2 \text{ ft}^3$

Volume of iron

$(151.2 \text{ ft}^3)(167.3 \frac{\text{lb}}{\text{ft}^3}) = 25,300 \text{ lbs of ZVI}$

have Fe₂O₃ Flow

width of wall

$\text{width} = v \cdot t$

v = GW Velocity
t = residence time

$t = \frac{-\ln(\frac{c_e}{c_0})}{k} = \frac{-\ln(\frac{0.210}{200})}{k}$

MTR

0.343 day^{-1}

have Fe₂O₃ Flow

$t = 19.87 \text{ days}$
residence time

$v = \frac{-k}{2e} \frac{dh}{dL}$ (unit/grat)

$= \frac{10^{-3} \text{ cm/s}}{(0.003)}$

GW RFT

assumed

$= 1.1 \times 10^{-5} \text{ cm/s}$

$= 0.0312 \text{ ft/day}$
GW velocity

$(19.87 \text{ day})(0.0312 \text{ ft/day})$

$= 0.62 \text{ ft} = \text{width of ZVI well}$

$\text{width} = v \cdot t$

v = GW velocity

t = residence time



Assume standard bucket width of 3 feet, for factor of safety

ZU ± well Dimensions

Assume length = 700 ft (L)

Depth = Cross section A-A' 14 ft (North) (A)
18 ft (South)

Assume 18 ft

width (z)

$$z = v \cdot t$$

v = GW Velocity

t = residence time

$$t = \frac{-\ln\left(\frac{C_t}{C_0}\right)}{K}$$

← clean up
→ initial

$$v = \frac{k \cdot dh}{r_e \cdot dl}$$

$$= \frac{10^{-3} \frac{cm}{s} \cdot 0.0032}{0.275}$$

$$= 0.00011 \frac{cm}{s}$$

$$= 0.312 \frac{ft}{day}$$

FINAL

Technical Protocol for Enhanced Anaerobic Bioremediation Using Permeable Mulch Biowalls and Bioreactors

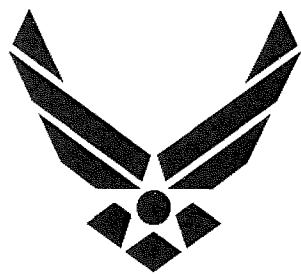
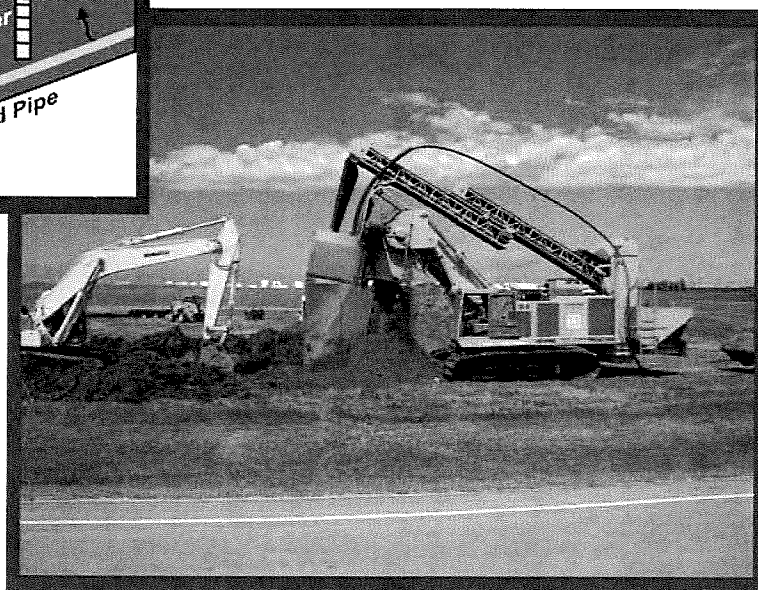
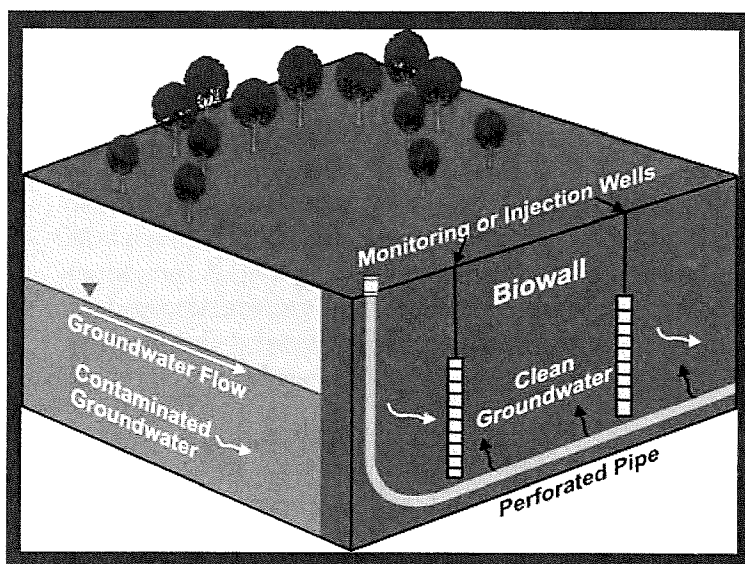


Table 3.1
Literature Values for First-Order Degradation Rates in the Presence of Mulch Substrates

Type of Study	Contaminant	First-Order Rate Coefficient (<i>k</i>)	Reference
Column Studies			
Column study using mulch mixture for SS-17 biowall at Altus AFB, Oklahoma	TCE	0.22 to 0.53 per day	Shen and Wilson, 2007
Column study for RDX with 70% tree mulch to 30% pea gravel by volume	RDX	0.20 to 0.27 per hour	Ahmad <i>et al.</i> , 2007a
Field Sites			
B301 Pilot Biowall, Offutt AFB, Nebraska	TCE	0.114 per day	Ahmad <i>et al.</i> , 2007b using data from GSI, 2001.
B301 Full-Scale Biowall, Offutt AFB, Nebraska	TCE	0.185 per day	Ahmad <i>et al.</i> , 2007b using data from GSI, 2004.
OU-1 Biowall, Altus AFB, Oklahoma	TCE	0.230 per day	Ahmad <i>et al.</i> , 2007b using data from Henry <i>et al.</i> , 2003.

For TCE, it appears that a range of *k* of 0.1 to 0.2 per day is a suitable approximation of the degradation rate that may be achieved in a biowall of approximately 1.5 to 2.0 feet in thickness. However, dechlorination of TCE to DCE to VC to ethene must also be accounted for if sequential biotic anaerobic reductive dechlorination is the primary degradation process. For such target contaminants experiencing reactions-in-series that yield toxic intermediates, the *k* value for each reaction can be estimated by utilizing the BIOCHLOR screening model to model the thickness of the biowall (Ahmad *et al.*, 2007b).

3.5.2 Residence Time

The residence time required to meet remedial objectives can simply be estimated from a reasonable first order rate constant(s) and the maximum contaminant concentration(s) that are present at a site. The solution to the first-order decay rate is:

$$C_t = C_o e^{-(kt)} \quad (3-1)$$

where

C_t is the concentration (mass per unit volume or µg/L) at time *t* (days)

C_o is the initial concentration (µg/L)

k is the first order degradation coefficient (per day)

Equation 3-1 can be rearranged to yield the time (*t*) to meet a target concentration as:

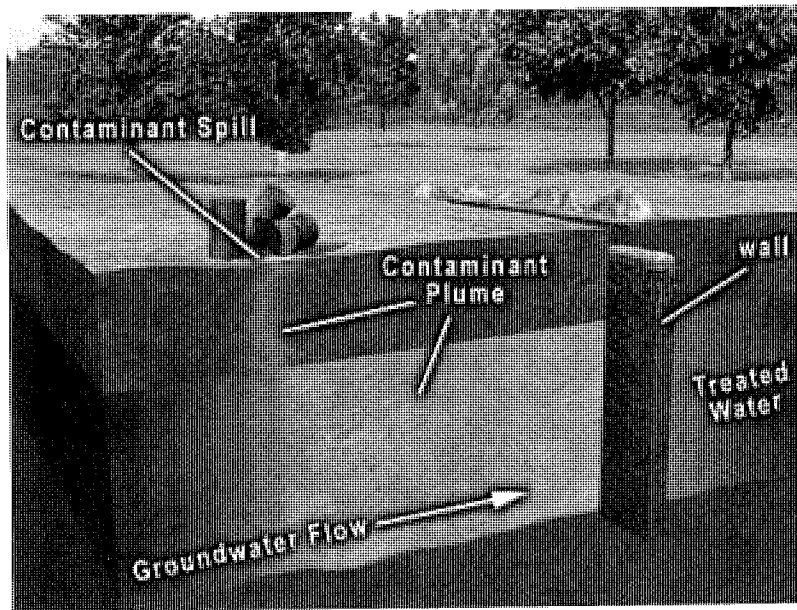
$$t = -\ln(C_t/C_o) / k \quad (3-2)$$



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FINAL TECHNICAL REPORT
TR-NAVFAC-ESC-EV-1207

PERMEABLE REACTIVE BARRIER COST AND PERFORMANCE REPORT



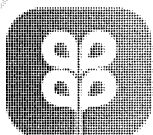
Courtesy of Battelle

by
Battelle Memorial Institute
March 2012

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The primary lessons learned from the PRB application at these three Navy sites are as follows:

- A ZVI design iron-to-soil mass ratio of 0.004 proved adequate to produce sufficient reducing conditions (e.g., ORP less than -150 mV) to degrade chlorinated compounds at the ZVI injection site.
- Monitoring remains key to evaluating system performance. The monitoring plan should include a monitoring network with wells located upgradient, cross-gradient, downgradient, and within the plume. Advanced field tools, including biaxial tiltmeter monitoring and down-hole pressure transducers, should be used to monitor injection of reactive material when fracturing and injecting.
- When fracturing and injecting at shallow depths, be aware of the risks of increasing soil vapor concentrations. Also note that pressurized injection may lead to “daylighting,” when reactive media reaches the surface.
- The use of ZVI material may increase dissolved metal concentrations. This impact on secondary water quality should be carefully monitored and mitigated when necessary.
- Using recycled materials and minimizing the quantity and distance materials are transported make a large impact on reducing the carbon footprint and energy usage at a site.
- Rejuvenation of biowalls can be performed sustainably and cost-effectively to provide sufficient bioavailable carbon for perchlorate treatment. Key parameters include monitoring perchlorate, TOC, ORP, nitrate, and methane. For the majority of the wells, no carbon supplementation has yet been needed. The rejuvenation, when needed, may start as early as four to five years after biowall installation. However, the vegetable oil may be rapidly consumed, requiring subsequent additions of supplemental carbon as frequently as annually.



Degradation of Chlorinated Phenols by Zero Valent Iron and Bimetals of Iron: A Review

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Abstract

Chlorophenols (CPs) are widely used industrial chemicals that have been identified as being toxic to both humans and the environment. Zero valent iron (ZVI) and iron based bimetallic systems have the potential to efficiently dechlorinate CPs. This paper reviews the research conducted in this area over the past decade, with emphasis on the processes and mechanisms for the removal of CPs, as well as the characterization and role of the iron oxides formed on the ZVI surface. The removal of dissolved CPs in iron-water systems occurs via dechlorination, sorption and co-precipitation. Although ZVI has been commonly used for the dechlorination of CPs, its long term reactivity is limited due to surface passivation over time. However, iron based bimetallic systems are an effective alternative for overcoming this limitation. Bimetallic systems prepared by physically mixing ZVI and the catalyst or through reductive deposition of a catalyst onto ZVI have been shown to display superior performance over unmodified ZVI. Nonetheless, the efficiency and rate of hydrodechlorination of CPs by bimetallics depend on the type of metal combinations used, properties of the metals and characteristics of the target CP. The presence and formation of various iron oxides can affect the reactivities of ZVI and bimetallics. Oxides, such as green rust and magnetite, facilitate the dechlorination of CPs by ZVI and bimetallics, while oxide films, such as hematite, maghemite, lepidocrocite and goethite, passivate the iron surface and hinder the dechlorination reaction. Key environmental parameters, such as solution pH, presence of dissolved oxygen and dissolved co-contaminants, exert significant impacts on the rate and extent of CP dechlorination by ZVI and bimetallics.

Keywords: Chlorophenols, Bimetallics, Dechlorination, Iron oxides, Passivation, Sorption, Zero valent iron

1. Introduction

Chlorinated phenols (CPs) are industrial chemicals with wide applications, such as pesticides, herbicides, disinfectants, biocides and wood preservatives [1, 2]. The group of CPs comprise of 19 different chlorinated phenolic compounds, including pentachlorophenol (PCP), 3 tetrachlorophenols (TeCP), 6 trichlorophenols (TCP), 6 dichlorophenols (DCP), and 3 monochlorophenols (MCP) [3]. CPs are industrially produced by direct chlorination of phenol with chlorine gas, as well as other reactions, such as hydrolysis and hydrodechlorination, or by chlorination of less chlorinated phenols in the presence of aluminium or iron trichloride [4, 5]. CPs are also by products of industrial processes, such as the bleaching of pulp using chlorine or chlorine dioxide [6] and during the production of higher chlorinated phenols [3]. CPs have been detected in groundwater, surface water, waste water, air and soils as a result of their improper disposal, leaching from landfills and the incineration of chlorinated wastes [3].

CPs have been identified as priority toxic pollutants by the

U.S. Environmental Protection Agency under the Clean Water Act [4, 7-9] due to their environmental persistence, low biodegradability and potential health hazard. The toxicity of CPs increases with the degree of chlorination, but decreases with the degree of their dissociation [4]. As a result, at low pH, where the non-dissociated form of CP is dominant, their toxicity is greater. While PCP has been identified as the most toxic chlorophenol [10], many CPs are of environmental concern due to their acute toxicity and resistance to degradation [1, 2]. In addition to PCP, which has a maximum contaminant level in drinking water of 1 ppb, 2, 4, 6-TCP and 2, 4-DCP are also in the list of drinking water contaminants [11]. CPs have been identified by the International Agency for Research on Cancer as possible carcinogens [3] and some studies involving the exposure to PCP via inhalation and dermal contact have shown the development of specific cancers, such as non-Hodgkin's lymphoma, multiple myeloma, soft tissue sarcoma and liver cancer [12]. A case study of sawmill workers in New Zealand exposed to PCP reported neuropsychological effects and respiratory diseases in some cases [13]. PCP is also acutely toxic to aquatic microorganisms and fish [10]. Even

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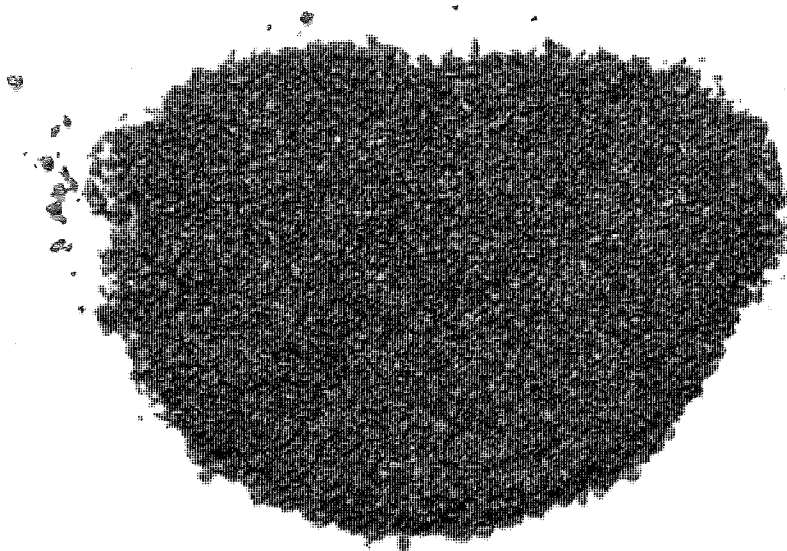


Ferox Flow is a highly reactive, remediation grade zero valent iron (ZVI) powder proven to

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contaminant source areas.



Ferox Flow Zero Valent Iron Powder

Ferox Flow is Hepure's most versatile ZVI product, capable of treating numerous contaminant types (CVOCs, Metals, and PCBs) in a variety of geological settings (i.e. unsaturated/saturated zone, silt, clay, and bedrock). The particle size is ideal for providing high reactivity and long treatment life.

Ferox Flow reacts abiotically with contaminants, bypassing the more harmful daughter products (i.e. DCE and vinyl chloride). The reactivity is driven by surface area and is an important element in design of ZVI treatment projects. Ferox Flow is 95% pure ZVI containing no residual oils. The patented manufacturing process produces a consistent product from cast iron stock with over 90% of the particles in the 100 to 150 micron size range.

[CASE STUDIES](#)[GET PRODUCT INFORMATION](#)[SAFETY DATA SHEET](#)

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Contaminants Treated	Grain Size	Reactivity	Bulk Density	Packaging
Halogenated aliphatics (PCE, TCE, TCA) Halogenated Aromatics PCBs	Mesh: -100/+325	Rate Constant – 0.343/day	2.68 g/cm ³	2.68 g/cm ³
Nitroaromatics Metals Halogenated herbicides	Micron: 100 – 150	Surface Area – 4.81 m ² /g	167 lb/ft ³	Super Sacks – 500 – 1000 kg

Treatment:

Ferox Flow is a direct replacement for many dechlorination amendments providing a long term treatment solution when high contaminate concentrations may lead to formation of DCE and VC in excess of the amendments capacity. Ferox Flow is commonly mixed with emulsified vegetable oil and sodium lactate to make an eZVI solution, **Ferox Plus**. The long term biological dechlorination process utilizing EVO/Lactate is a proven compliment to the abiotic dechlorination of ZVI. Ferox Flow can also be combined with Ferox Target to provide additional reactivity and longevity for high concentrations or source area DNAPL.

Product Performance:

Ferox Flow's uniform particle size provides exceptional cost-effective performance. The substantial number of catalytic sites on the powder surface ensures superior reactivity and supports lower ZVI loading requirements in comparison to other ZVI materials. Figure 1 shows a comparison of ZVI iron powder ability to degrade Trichloroethylene (TCE).

on site consolidation for thermal treatment

Foot Print = 6,400 yd² ← Google earth

= $\frac{56,823}{6,400} = 8.9 \text{ yds} \approx 27 \text{ feet high}$ ← 13.15 ac @ 18" + (150' x 225' x 20') deep source area

reasonable treatment cell size

$\frac{31,823 \text{ CY}}{6,400 \text{ SY}} = 5 \text{ yd} = 15 \text{ ft high}$ ← 13.15 ac @ 18" deep

$\frac{25,000 \text{ CY}}{6,400 \text{ SY}} = 4 \text{ yd} = 12 \text{ ft high}$ ← 150' x 225' x 70' deep source area.

	<u>5-Sac</u>	<u>6-Sac</u>
Colville concrete - concrete =	\$101.60	\$110.40
	/ yd	/ yd

Red construction.

6" thick pad
↓
⇒ $(6,400 \text{ SY}) \left(\frac{0.5 \text{ ft}}{3 \text{ ft}} \right) \left(\frac{\text{yd}}{3 \text{ ft}} \right) = 1066.7 \text{ CY}$

$(1066.7 \text{ CY}) \left(\frac{\$110.40}{\text{yd}} \right) = \$117,760$ - concrete alone not including rebar & labor

Volume of thin lifts for outlands

Wetland = 5.36 ac = 27,249 yd²

⇒ (27,249 yd²) (1/3) = 9,083 yd³

Google Earth

From Google Earth

12" oc topsoil

⇒ 9,100 yd³

Volume of debris piles

From Google Earth Area = 1,600 ft² for NW pile.

⇒ (1600 ft²) (6 piles) (2 ft high) = 19,200 ft³

↑ assumed

⇒ 711 CY

4-6 lbs per mgal

8,000 sf

3 lbs per foot

\$ 6.15 / pound

120,000 lb

10-12 ft oc

75 lbs / point

440 points / ac

Other barrels

\$ 8.95 / lb

JR Sugalski

From: Platts, Scott <Scott.Platts@avistacorp.com>
Sent: Thursday, May 24, 2018 3:33 PM
To: JR Sugalski
Subject: Avista

Hi JR,

Depending on load and location, we can supply up to 1500 kVA 480 volt 3-phase service for around \$50,000. I am waiting for answers from our transmission department as to the feasibility of tapping into our 115 kV line. Can you provide more information as to what you anticipate for this project:

Duration of project?

Type of equipment (horsepower, kVA, etc.)?

Will the load be steady or intermittent?

If tapping off of the transmission line to a primary meter, will you provide the substation or do we need to build one?

Other information?

Thanks, Scott

Scott Platts

Project Coordinator



Office 509-685-6416

Fax 509-777-5770

Cell 509-690-2087

scott.platts@avistacorp.com

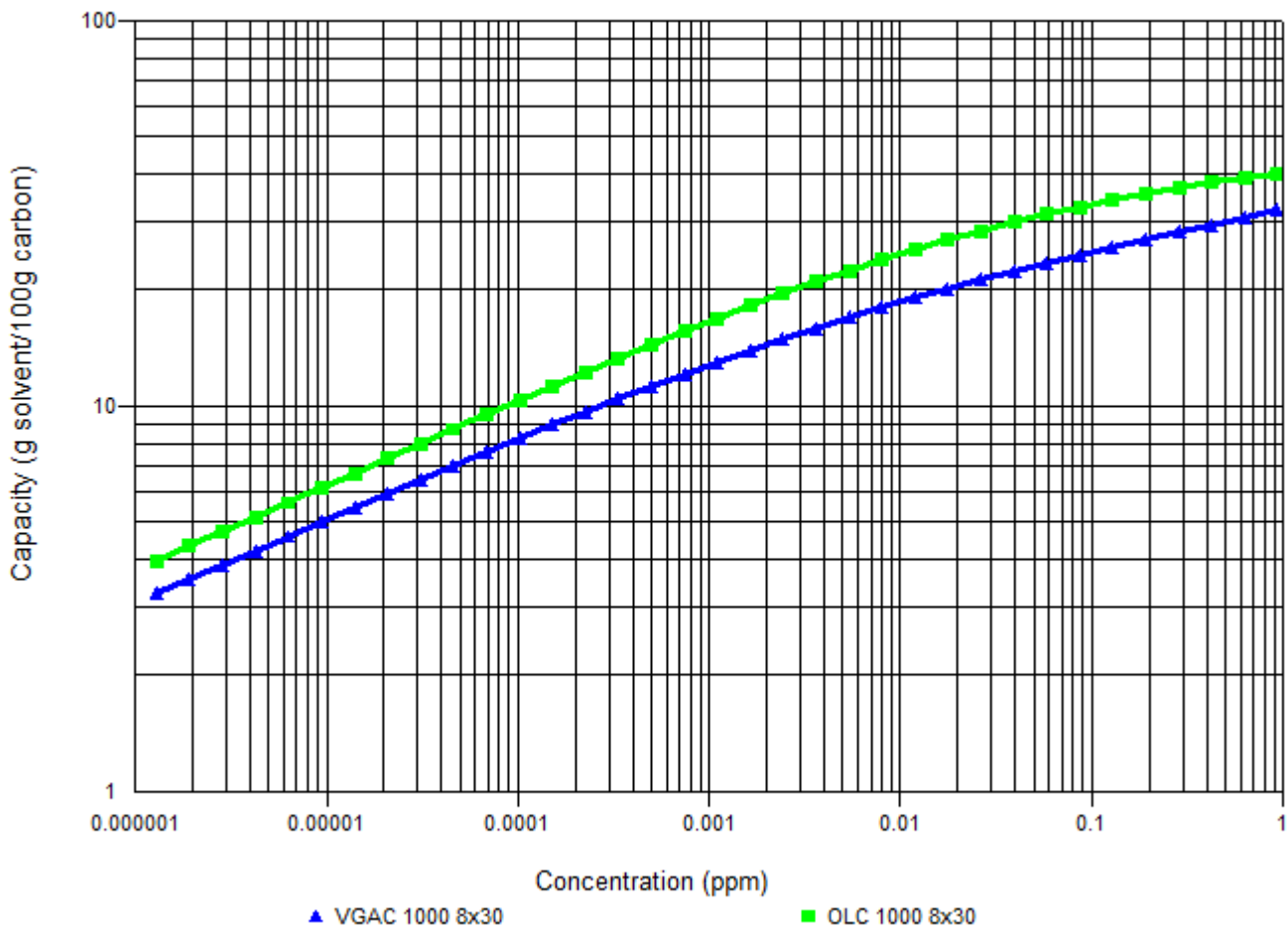
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JR Sugalski

From: Tim Ferris <TFerris@bakercorp.com>
Sent: Thursday, May 10, 2018 1:11 PM
To: JR Sugalski
Subject: RE: Activated Carbon Isotherms Request: Colville Post and Poles Feasibility Study

Assuming Pentachlorophenol is the only organic in the stream, it is estimated that 0.02 to 0.025 lbs carbon will be exhausted per day at 100 GPM and 25°C. I have attached a single component isotherm for Pentachlorophenol. This assumes minimal concentrations of any VOC's. If we know the total volume you'll be treating we can tell you the total burn rate. The total gpm, work shifts hours combined with the flowrate of 100gpm will give us the final total

Liquid Phase Isotherm for Pentachlorophenol at 25 C and 1 atm



Tim Ferris
Sr.Sales Representative
9715 24th Place West
Everett, WA 98204
p. 425-347-8811
f. 425-347-0369
m. 206-793-6136



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From: JR Sugalski [mailto:jsugalski@geoengineers.com]
Sent: Tuesday, May 08, 2018 2:43 PM
To: Tim Ferris <TFerris@bakercorp.com>
Subject: Activated Carbon Isotherms Request: Colville Post and Poles Feasibility Study

Thanks for speaking with me this afternoon!

Attached is our groundwater data for the site. I would appreciate it if you could provide the following information:

- Adsorption isotherm (theoretical or actual)
- GAC canister dimensions
- GAC bulk density
- Any additional information like design hydraulic loading, empty bed contact time or other information is appreciated.

Our site is about 13 acres and the contaminated groundwater is limited to about about half the site. After source removal, I would hope our PCP concentration in groundwater would be reduced to less than 100 ug/L (ideally around 30 ug/L) and that is what we would be sending to the GAC units. I would expect we would be pumping and reinjecting or discharging groundwater for quite a while at this site.

Please let me know if you need additional information,

JR Sugalski, PE
Environmental Engineer 2 | GeoEngineers, Inc.
Telephone: 509.209.2830
Fax: 509.747.2250
Mobile: 509.991.4471
Email: jsugalski@geoengineers.com

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Misc Cost Estimates

OT_RGGB01

WASHINGTON STATE DEPARTMENT OF TRANSPORTATION

DATE: 04/16/2018

*** BID CHECK REPORT ***

TIME: 13:21

S&E JOB NO : 18Z011 REVISION NO :
 CONTRACT NO : 009258 REGION NO : 6
 ERSION NO : 3 WORK ORDER# : XL5422
 WY : SR 395
 TITLE : US 395
 DEER PARK CORRIDOR -
 INTERSECTION IMPROVEMENTS
 18Z011
 PROJECT : HSIP-0395 (109)
 COUNTY (S) : SPOKANE

BIDS OPENED ON : Apr 25 2018

AWARDED ON : May 2 2018

----- LOW BIDDER ----- 2ND BIDDER -----
 CPM DEVELOPMENT CORPORATION SHAMROCK PAVING, INC.
 5111 E BROADWAY AVE 110 N HAYFORD RD
 SPOKANE VALLEY WA 99212-0928 SPOKANE, WA 99224-9555
 SPOKANE WA 992203366 SPOKANE WA 992199263
 CONTRACTOR NUMBER : 406000 CONTRACTOR NUMBER : 553750

ITEM NO.	ITEM DESCRIPTION EST. QUANTITY	UNIT MEAS	ENGR'S. EST.		2ND BIDDER	
			PRICE PER UNIT/ TOTAL AMOUNT	PRICE PER UNIT/ TOTAL AMOUNT	% DIFF./ AMT.DIFF.	PRICE PER UNIT/ TOTAL AMOUNT	% DIFF./ AMT.DIFF.
PREPARATION						
1	MOBILIZATION	L.S.			23.66%	45.05%
			206,828.00	255,761.36	48,933.36	93,172.00
2	CLEARING AND GRUBBING 4.2500	ACRE	5,000.0000	12,000.0000	140.00%	5,000.0000
			21,250.00	51,000.00	29,750.00	21,250.00
3	REMOVING ASPHALT CONC. PAVEMENT 950.0000	S.Y.	3.5000	10.0000	185.71%	29.0000
			3,325.00	9,500.00	6,175.00	27,550.00
4	REMOVING GUARDRAIL 220.0000	L.F.	7.0000	9.0000	28.57%	9.0000
			1,540.00	1,980.00	440.00	1,980.00
5	REMOVING GUARDRAIL ANCHOR 3.0000	EACH	250.0000	350.0000	40.00%	400.0000
			750.00	1,050.00	300.00	1,200.00
6	REMOVING GUIDE POST 69.0000	EACH	10.0000	10.0000	0.00%	10.0000
			690.00	690.00	0.00	690.00
7	REMOVING PAINT LINE 300.0000	L.F.	2.0000	5.0000	150.00%	5.0000
			600.00	1,500.00	900.00	1,500.00
8	REMOVING WIRE FENCE 760.0000	L.F.	5.0000	6.0000	20.00%	5.0000
			3,800.00	4,560.00	760.00	3,800.00
GRADING						
9	SOIL DECOMPACTION 6392.0000	S.Y.	5.0000	0.7500	-85.00%	15.0000
			31,960.00	4,794.00	-27,166.00	95,880.00
10	ROADWAY EXCAVATION INCL. HAUL 13440.0000	C.Y.	20.0000	13.2500	-33.75%	22.0000
			268,800.00	178,080.00	-90,720.00	295,680.00

Average = 12k

WASHINGTON STATE DEPARTMENT OF TRANSPORTATION
 * * * BID CHECK REPORT * * *

DATE: 04/16/2018
 TIME: 13:21

S&E JOB NO : 18Z011 REVISION NO :
 CONTRACT NO : 009258 REGION NO : 6
 REVISION NO : 3 WORK ORDER# : XL5422
 HWY : SR 395
 TITLE : US 395
 DEER PARK CORRIDOR -
 INTERSECTION IMPROVEMENTS
 18Z011
 PROJECT : HSLP-0395 (109)
 COUNTY(S) : SPOKANE

BIDS OPENED ON : Apr 25 2018
 AWARDED ON : May 2 2018

----- LOW BIDDER ----- ----- 2ND BIDDER -----
 CPM DEVELOPMENT CORPORATION SHAMROCK PAVING, INC.
 5111 E BROADWAY AVE 110 N HAYFORD RD
 SPOKANE VALLEY WA 99212-0928 SPOKANE, WA 99224-9555
 SPOKANE WA 992203366 SPOKANE WA 992199263
 CONTRACTOR NUMBER : 406000 CONTRACTOR NUMBER : 553750

ITEM NO.	ITEM DESCRIPTION	UNIT MEAS	ENGR'S. EST.		LOW BIDDER		2ND BIDDER	
			PRICE PER UNIT/ TOTAL AMOUNT	% DIFF./ AMT.DIFF.	PRICE PER UNIT/ TOTAL AMOUNT	% DIFF./ AMT.DIFF.	PRICE PER UNIT/ TOTAL AMOUNT	% DIFF./ AMT.DIFF.
EROSION CONTROL AND ROADSIDE PLANTING								
35	SEEDING, FERTILIZING, AND MULCHING							
	4.5700	ACRE	1,200.0000		5,112.0000	326.00 %	5,500.0000	358.33 %
			5,484.00		23,361.84	17,877.84	25,135.00	19,651.00
36	TOPSOIL TYPE A							
	617.0000	S.Y.	10.0000		11.0000	10.00 %	20.0000	100.00 %
			6,170.00		6,787.00	617.00	12,340.00	6,170.00
37	WEED AND PEST CONTROL							
		EST.				0.00 %		0.00 %
			3,000.00		3,000.00		3,000.00	
38	SOIL AMENDMENT							
	1.5600	ACRE	15,000.0000		8,360.0000	-44.27 %	8,000.0000	-46.67 %
			23,400.00		13,041.60	-10,358.40	12,480.00	-10,920.00
39	HIGH VISIBILITY SILT FENCE							
	3070.0000	L.F.	5.0000		6.0000	20.00 %	7.0000	40.00 %
			15,350.00		18,420.00	3,070.00	21,490.00	6,140.00
TRAFFIC								
40	ROUNDAABOUT SPLITTER ISLAND NOSING CURB							
	12.0000	EACH	150.0000		385.0000	156.67 %	400.0000	166.67 %
			1,800.00		4,620.00	2,820.00	4,800.00	3,000.00
41	ROUNDAABOUT CEMENT CONCRETE CURB AND GUTTER							
	2682.0000	L.F.	20.0000		20.0000	0.00 %	20.0000	0.00 %
			53,640.00		53,640.00	0.00	53,640.00	0.00
42	ROUNDAABOUT CENTRAL ISLAND CEMENT CONCRETE CURB							
	396.0000	L.F.	25.0000		97.0000	288.00 %	95.0000	280.00 %
			9,900.00		38,412.00	28,512.00	37,620.00	27,720.00
43	ROUNDAABOUT TRUCK APRON CEM. CONC. CURB AND GUTTER							
	900.0000	L.F.	20.0000		28.0000	40.00 %	30.0000	50.00 %
			18,000.00		25,200.00	7,200.00	27,000.00	9,000.00
44	BEAM GUARDRAIL TYPE 31							
	25.0000	L.F.	22.0000		32.5000	47.73 %	33.0000	50.00 %
			550.00		812.50	262.50	825.00	275.00

S&E JOB NO : 182011 REVISION NO :
 CONTRACT NO : 009258 REGION NO : 6
 VERSION NO : 3 WORK ORDER# : XL5422
 HWY : SR 395
 TITLE : US 395
 DEER PARK CORRIDOR -
 INTERSECTION IMPROVEMENTS
 182011
 PROJECT : HSIP-0395 (109)
 COUNTY(S) : SPOKANE

BIDS OPENED ON : Apr 25 2018
 AWARDED ON : May 2 2018

----- LOW BIDDER ----- 2ND BIDDER -----
 CPM DEVELOPMENT CORPORATION SHAMROCK PAVING, INC.
 5111 E BROADWAY AVE 110 N HAYFORD RD
 SPOKANE VALLEY WA 99212-0928 SPOKANE, WA 99224-9555
 SPOKANE WA 992203366 SPOKANE WA 992199263
 CONTRACTOR NUMBER : 406000 CONTRACTOR NUMBER : 553750

ITEM NO.	ITEM DESCRIPTION	UNIT MEAS	ENGR'S. EST. PRICE PER UNIT/ TOTAL AMOUNT	PRICE PER UNIT/ TOTAL AMOUNT	% DIFF. / AMT.DIFF.	PRICE PER UNIT/ TOTAL AMOUNT	% DIFF. / AMT.DIFF.
OTHER ITEMS							
66	STRUCTURE EXCAVATION CLASS B INCL. HAUL						
	230.0000	C.Y.	15.0000	17.7500	18.33 %	13.5000	-10.00 %
			3,450.00	4,082.50	632.50	3,105.00	-345.00
67	SHORING OR EXTRA EXCAVATION CLASS B						
	860.0000	S.F.	1.0000	19.2000	1,820.00 %	5.4000	440.00 %
			860.00	16,512.00	15,652.00	4,644.00	3,784.00
68	PLUGGING EXISTING PIPE						
	1.0000	EACH	300.0000	500.0000	66.67 %	750.0000	150.00 %
			300.00	500.00	200.00	750.00	450.00
69	CEMENT CONC. SIDEWALK						
	196.0000	S.Y.	85.0000	51.0000	-40.00 %	55.0000	-35.29 %
			16,660.00	9,996.00	-6,664.00	10,780.00	-5,880.00
70	CEMENT CONC. CURB RAMP						
	18.0000	S.Y.	75.0000	75.0000	0.00 %	100.0000	33.33 %
			1,350.00	1,350.00	0.00	1,800.00	450.00
71	CEMENT CONC. TRAFFIC ISLAND						
	773.0000	S.Y.	65.0000	41.0000	-36.92 %	44.0000	-32.31 %
			50,245.00	31,693.00	-18,552.00	34,012.00	-16,233.00
72	HMA RAMP						
	4.0000	EACH	250.0000	935.0000	274.00 %	1,800.0000	620.00 %
			1,000.00	3,740.00	2,740.00	7,200.00	6,200.00
73	CHAIN LINK FENCE TYPE 3						
	67.0000	L.F.	70.0000	60.0000	-14.29 %	65.0000	-7.14 %
			4,690.00	4,020.00	-670.00	4,355.00	-335.00
74	END, GATE, CORNER, AND PULL POST FOR CHAIN LINK FENCE						
	2.0000	EACH	225.0000	325.0000	44.44 %	400.0000	77.78 %
			450.00	650.00	200.00	800.00	350.00
75	WIRE FENCE TYPE 2						
	210.0000	L.F.	9.0000	37.0000	311.11 %	38.0000	322.22 %
			1,890.00	7,770.00	5,880.00	7,980.00	6,090.00
76	REMOVE AND RESET GATE						
	1.0000	EACH	500.0000	1,800.0000	260.00 %	2,000.0000	300.00 %
			500.00	1,800.00	1,300.00	2,000.00	1,500.00

Deer Excavation



Quote number 1899
Date: 5/14/2018

JR Sugalski
Geoengineers
523 East 2nd Ave
Spokane, WA, 99202

Exhibit A - Confidential

Regarding: Cost Estimate: Colville Post and Pole (F032 waste) meeting Pre Existing ODEQ Variance Conditions

Dear JR,

Thank you for considering Waste Management (WM) for your Industrial and Hazardous Waste needs. We appreciate your business and look forward to providing you with the best waste services in the industry. The attached quotation is based on our discussions regarding your service needs as summarized below.

Scope of Service

- WM will provide Transportation and Disposal of Waste Materials from Site.
- See Special Conditions.

This quotation is made subject to: (1) the terms and conditions of Waste Management's standard Industrial Waste Service Agreement, which shall be executed by the parties in connection with performing the services described above, (2) the proper submittal of an acceptable Generator Waste Profile Sheet(s), which must be submitted to and approved by an authorized Waste Management facility, including any analytical data requested by Waste Management regarding the waste stream.

Waste Management is a recognized leader in the waste disposal business with the ability to manage the quoted services at or through our permitted and licensed facilities. To accept this proposal and initiate project start, please sign the acknowledgement block below and return this document to my attention.

I look forward to assisting you with your environmental needs. If you have any questions or need further assistance, you may reach me at the contact information listed below.

Sincerely,

Fred Downs

Fred Downs
Senior Industrial Account Manager
509 309 6850 fdowns1@wm.com



PRICE SCHEDULE

Disposal Pricing

Code / Description	Price	Unit	Facility
LF04 <i>Hazardous Waste for Subtitle C Disposal (meets LDR's)</i>	\$182.50	Ton	Chem Waste Manag
STAB07 <i>Macro encapsulation (must be 50% or greater debris)</i>	\$318.00	Yd	Chem Waste Manag

Transportation Pricing

Code / Description	Price	Unit	Minimum
NA002 <i>Transportation pricing is included in quoted disposal rates</i>		Per each	\$5,475.00
NA002 <i>Transportation pricing is included in quoted disposal rates</i>		Per each	\$6,360.00

Assessorial

Code / Description	Price	Unit
SUP001 <i>Liners, dump truck</i>	\$60.00	Each

Fees and Taxes

- \$75 profile fee charged to each profile submitted.
- Taxes are included in the disposal price quoted above.

General Conditions

1. Pricing is contingent upon waste profile acceptance as proposed.
2. Truck transportation pricing is based on same day unload at the proposed WM facility.
3. Railroad schedules are dictated by the corresponding Railroad. WM will not be liable for any charges resulting in delays caused by the Railroad.
4. Pricing in this proposal is valid for a term of 30 days from the date listed above. Upon acceptance, pricing will be valid for one calendar year.
5. Generator is responsible for waste classification.
6. Material with a density < 75 pounds/cubic foot will be billed by the cubic yard
7. Unless otherwise noted, applicable state, local and federal taxes are not included in the enclosed rates and will be assessed during invoicing.
8. Waste removal scheduling is dependent upon available equipment at the time of project startup.
9. Nonconforming waste is subject to additional charges and fees.
10. A 10 - ton/yard minimum will apply to all bulk solid disposal rates.
11. Demurrage charges of \$125/hr will be assessed on delays exceeding ½ hour load and unload time.
12. Rinsate from tanker washout will be invoiced at quoted disposal rates.
13. Transportation quoted by weight or volume will be subject to a minimum charge.
14. Certificates of disposal (other than TSCA waste) will be charged at \$35/cert if noted at the time of profile generation and \$400/cert if requested after the waste is received.
15. Standard profile approval time is 2-5 days. 1 day expedited approval available for an additional fee of \$500.



16. Transportation ordered, but not used will be invoiced at cost plus 15%.
17. Unless noted above, a variable fuel and environmental fee currently at 17.5% will apply to this projet.
18. Excluding certain contracted rates, pricing will be increased annually based on consumer product index, customarily ranging between 2%-8%.

Special Conditions

1. ODEQ Tax \$2.50/ton included for Remedial Wastes (non-Characteristic) over 25,000 tons.
2. Liner charge if liners required.

Acknowledgement

Your signature below indicates your acceptance of the pricing and terms detailed in the quote above
Thank you for the opportunity.

Signature

Date

Printed Name

Waste Category Definitions

LF04	Must pass paint filter test, meet LDR's, no asbestos
STAB07	>=50% debris (pieces bigger than 60mm). No free liquids, no asbestos, maximum size 2ft tx 4ft (larger size case by case)

GeoEngineers, Inc.
Colville Post and Poles Site
Colville, Washington

Preliminary Site Evaluation
Budgetary Proposal

May 30, 2018



CASCADE

T H E R M A L

About Cascade Thermal



- A U.S. based company offering all major methods of subsurface heating:
 - In Situ Thermal Desorption (ISTD) via Thermal Conductive Heating (TCH)
 - Steam Enhanced Extraction (SEE)
 - Electrical Resistance Heating (ERH)
- Completed 80 thermal projects worldwide either directly or through a Licensee
- Meets treatment goals 100% of the time
- Cascade Thermal Experience Modification Rating (EMR) history:
 - 2017: 0.74
 - 2016: 0.70
 - 2015: 0.69
 - 2014: 0.91
 - 2013: 0.89
 - 2012: 0.90

Site Background

Site Name: Colville Post and Poles Site

Site Location: Colville, Washington

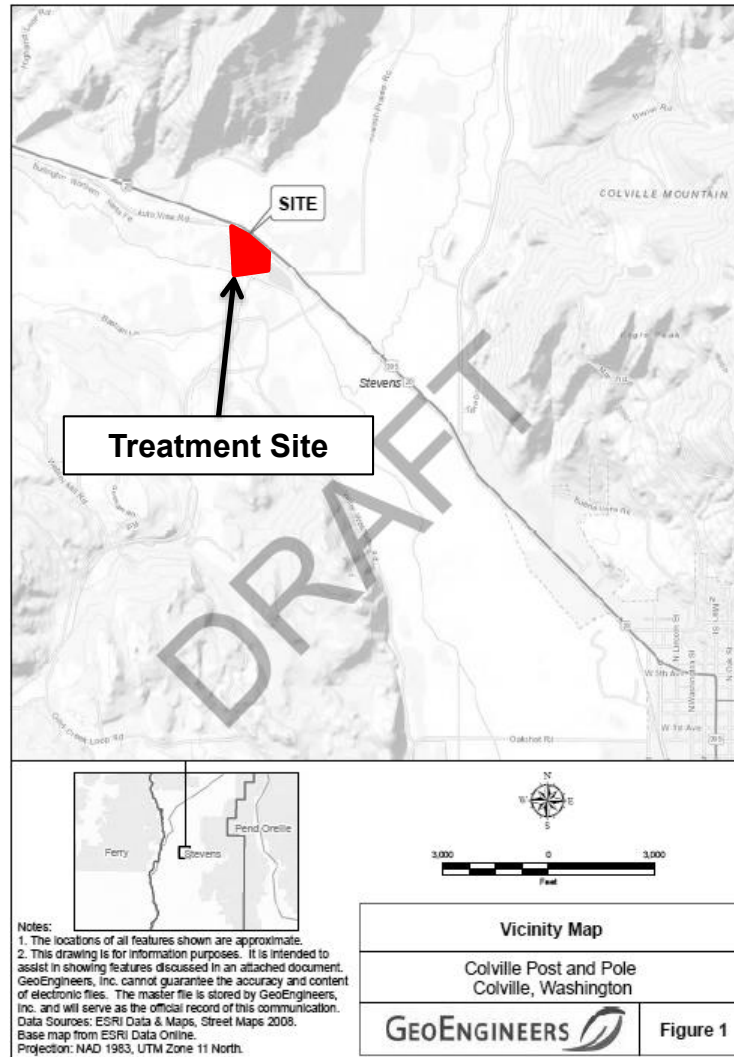
Site/Environmental Consultant: GeoEngineers, Inc.

Objective: Obtain a conceptual cost to implement thermal remediation at the site

Contaminants of Concern: PCP, Diesel, Dioxin Congeners and Furan Congeners



Site Location Map



Geology and Hydrogeology

Geology:

- 0.0 to 5.0 ft bgs: Fill-Clay, Silt, Sand, Gravel, Cobbles, Wood Chips
- 5.0 to 9.0 ft bgs: Silt
- 9.0 to 15.0 ft bgs: Sand With Variable Fines Content
- 15.0 to 24.0 ft bgs: Gravel With Variable Sand and Fines Contents
- Beyond 24.0 ft bgs: Clay

Hydrogeology: Water surface elevation varies between 5 to 9 ft bgs.

Hydrogeology:

A hydraulic conductivity value of 2.8 ft/day (1.0×10^{-3} cm/sec) was provided.

Hydraulic gradient: A hydraulic gradient of 0.003 ft/ft was provided.

Since the site remedy is an ex situ application, the hydrogeological parameters do not have a significant affect on the evaluation

Treatment Areas



Treatment Piles

For this preliminary approach, a two phase pile approach was considered. In the next phase of the project it should be evaluated how many treatment phases is the most cost effective for the project.

Total estimated volume is 57,000 cy of contaminated soils.

Pile Treatment Area (yd ²)		Pile Area (ft ²)	Pile Treatment Height (ft)	Pile Treatment Volume (CY)
Treatment Pile Phase 1	7,200 (L: 476 ft – W: 136 ft)	65,000	12	28,800
Treatment Pile Phase 2	7,200 (L: 476 ft – W: 136 ft)	65,000	12	28,800

Contaminants of Concern, Mass Estimate, and Remediation Goals

Contaminants of Concern: PCP, Diesel, Dioxin Congeners and Furan Congeners.

Mass Estimate: Mass was not provided. An average concentration (total chemicals) of 50 mg/kg was assumed, providing a total mass of around 1,500 lbs/pile..

Remediation Goals:

Chemical Name	Groundwater (µg/L)		Soil	
	Max Level Detected	Target Level	Max Level Detected	Target Level
Pentachlorophenol	190	0.219	97,000 µg/Kg	2,500 µg/Kg
Dioxin/furan				5.2 pg/kg
Diesel	1.3	0.5	20,000 µg/Kg	2,000 µg/Kg

Please note that we recently reached dioxin concentrations below 1 pg/kg in a similar IPTD application.

Conceptual Treatment Approach/Methodology

Conceptual Treatment Approach:

Treatment Pile 1 and 2

- In Pile Thermal Desorption (IPTD)
- Thermal Conduction Heating (TCH) using horizontal heaters (2 horizontal layers) with a spacing of 8 feet to target the treatment temperatures required. Soil vapor and steam extraction from horizontal extraction wells installed in the pile used to extract the vaporized contaminants and steam, and to maintain pneumatic control.
- Heater cans and vapor screens are placed in the pile as the layers are placed – no drilling is needed.

Vapor and Liquid Treatment Approach:

- Extracted vapors and liquid (condensate) treated using Granular Activated Carbon (GAC).

Monitoring:

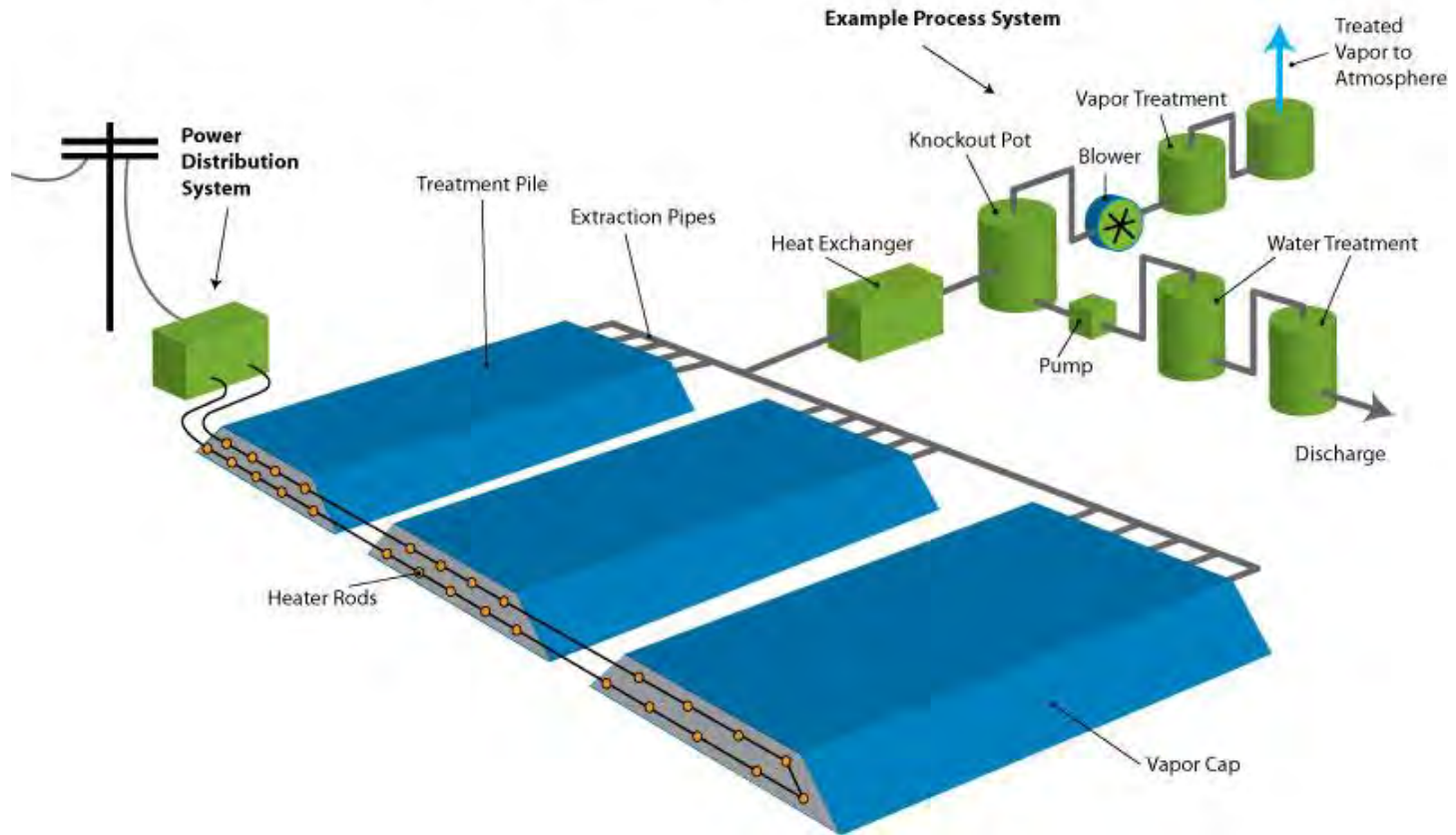
- Temperature and pressure monitoring to track subsurface heating, pneumatic, and hydraulic control.
- Vapor and liquid treatment system monitoring for mass removal and discharge compliance.

Technology Description

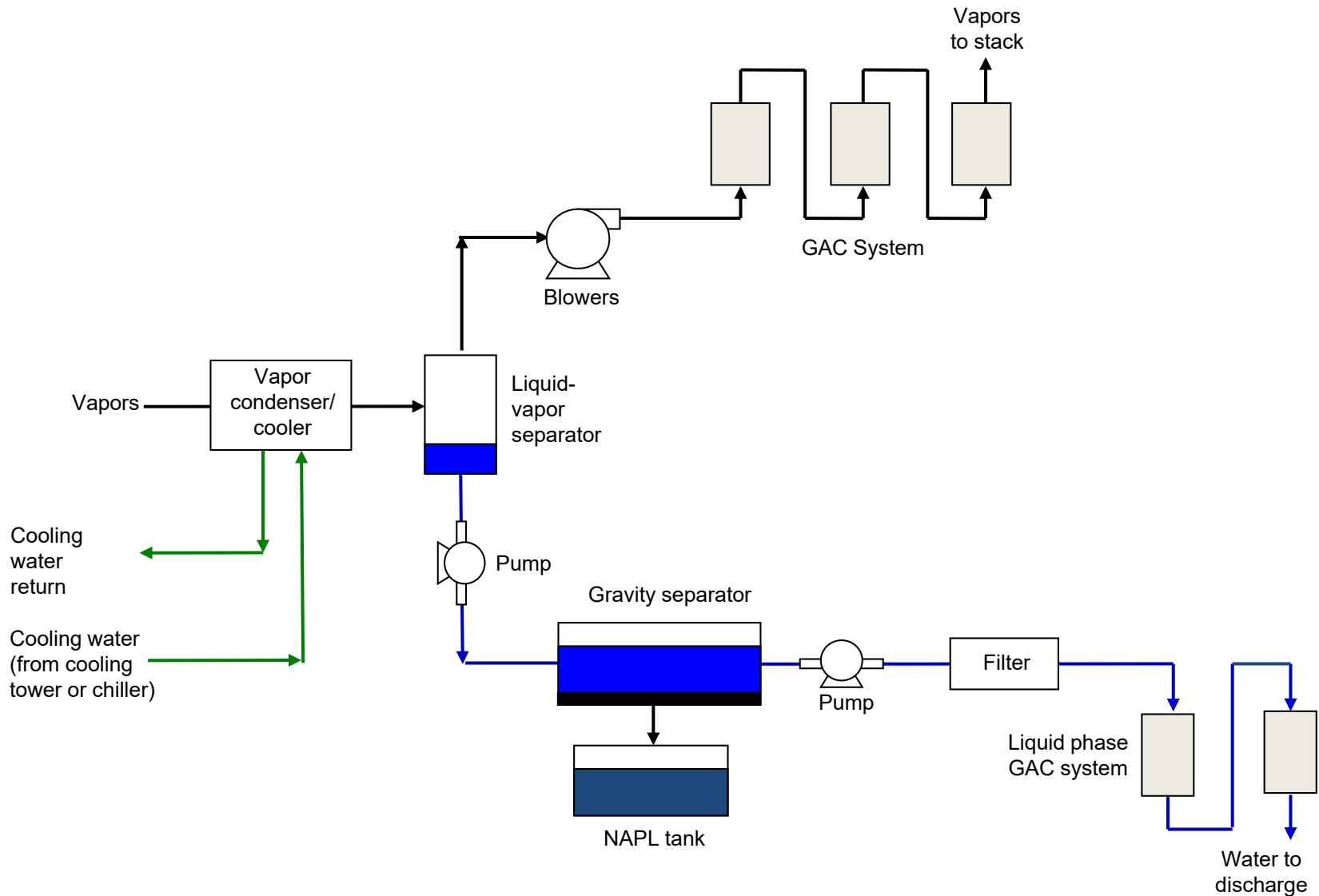
In-Pile Thermal Desorption (IPTD®) is proposed for on-site treatment of the contaminated soils. The IPTD® process utilizes conductive heating and vapor recovery to remediate soil and sediment contaminated with VOCs, SVOCs, and non-volatile organic contaminants. Heat and vacuum are applied simultaneously to the soil with an array of horizontal thermal conduction heater wells and horizontal vapor collectors, all within an insulated, covered treatment pile. Each heater well contains an electrically powered heating element with an operating temperature of approximately 750 to 800°C (1400 to 1500°F), modulated by Silicon Controlled Rectifier (SCRs).

As the soil is heated during IPTD®, organic contaminants are vaporized and/or destroyed by a number of mechanisms including: (1) evaporation; (2) boiling of water and attendant steam distillation; (3) volatilization of the contaminants; (4) oxidation; and (5) pyrolysis (chemical decomposition in the absence of oxygen) (Stegemeier and Vinegar 2001; Baker and Kuhlman 2002). The vaporized water and contaminants are drawn into the vapor extraction wells. Contaminant vapors are then removed from the produced vapor stream at the surface with an air quality control (AQC) system. Only after all the water has been boiled off is the soil temperature able to rise above the boiling point of water (100 C) to attain the target treatment temperature of 335 °C for treatment of dioxins and furans.

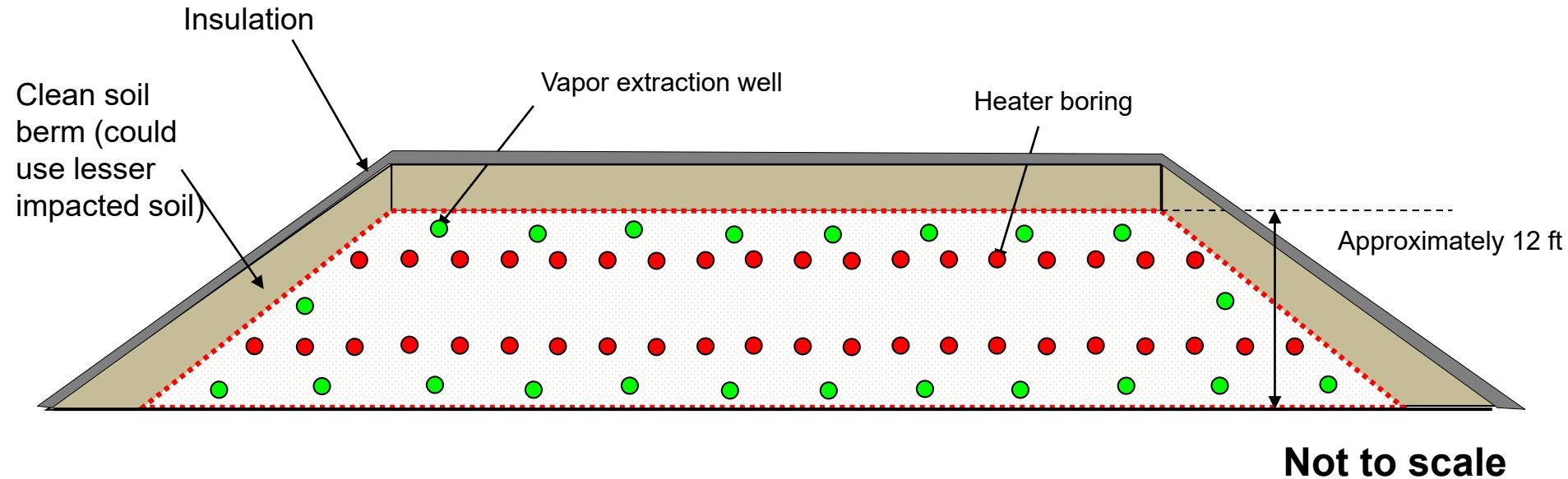
IPTDSM In-Pile Thermal Desorption



Conceptual Process Flow Diagram Vapor and Liquid Treatment System



IPTD[®] Conceptual Cross-Section – Treatment Piles 1 and 2

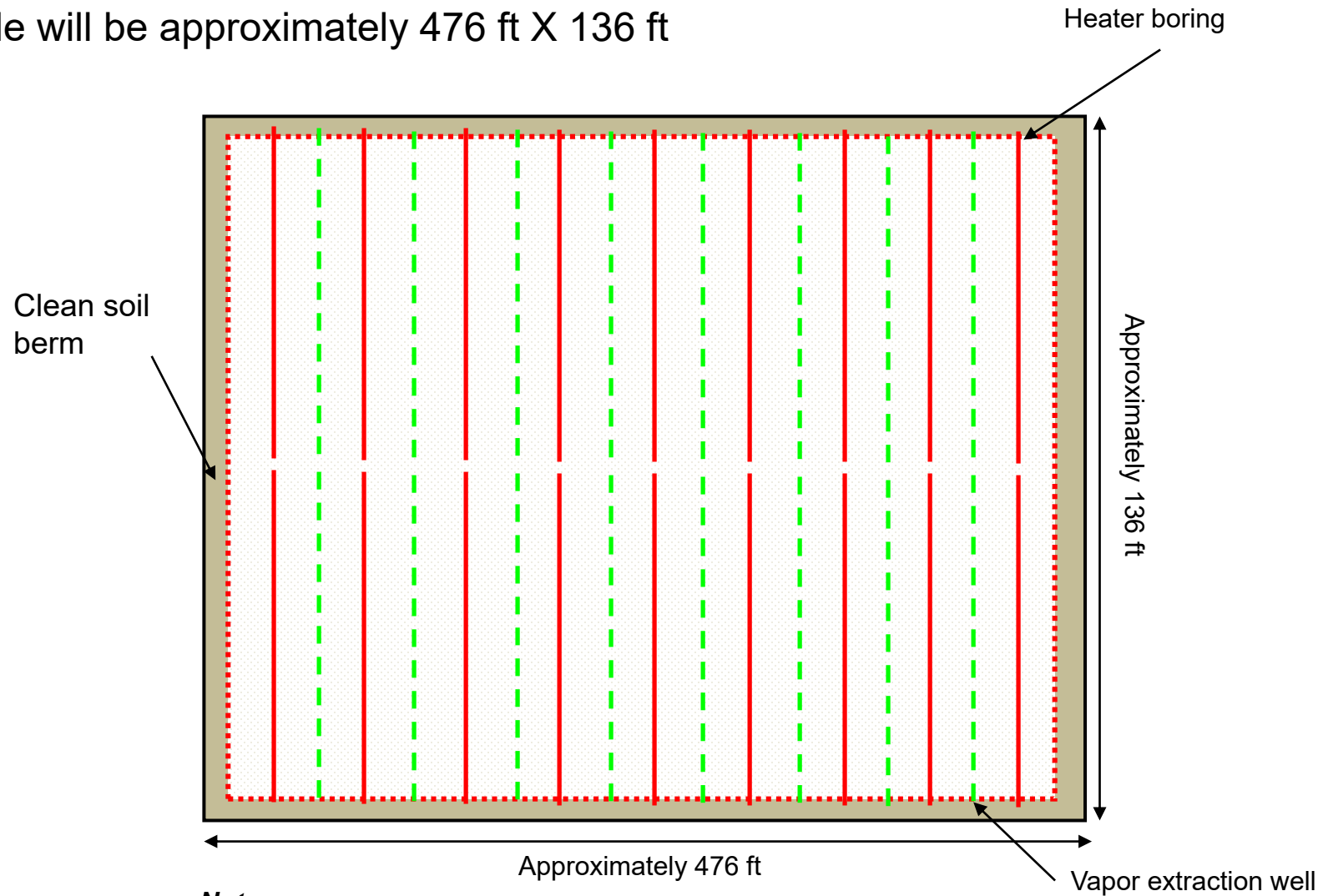


Note:

- Soil pile constructed by GeoEngineers, Inc.
- Clean soil (or the less impacted soil) used to support the pile structure
- Pile constructed in layers
- Heater cans and vapor screens are placed in the pile as the layers are placed – no drilling needed
- Cascade Thermal will install heater elements in the heater cans and connect the treatment system when pile construction is complete

IPTD[®] Conceptual Plan – Treatment Piles 1 and 2

Soil pile will be approximately 476 ft X 136 ft



Note:

- Soil pile constructed by GeoEngineers, Inc.

Not to scale

Treatment Pile

Preliminary design numbers for each pile

Conceptual Design Parameters/Treatment Outputs

Colville Post and Poles Site		GeoEngineers, Inc.
<i>Volume and heat capacity</i>	<i>Treatment Pile 1 and 2</i>	<i>Unit</i>
Treatment area, estimated pile	64,736	ft ²
Upper depth of treatment	-	ft bgs
Pile height	12	ft bgs
Volume, treated soils	28,772	yd ³
Solids volume	17,263	yd ³
Porosity	0.40	-
Porosity volume	11,509	yd ³
Initial saturation	50	percent
Soil weight	77,084,321	lbs soil
Water weight	9,709,587	lbs water
Soil heat capacity	19,271,080	BTU/F
Water heat capacity	9,709,587	BTU/F
Total heat capacity, whole TTZ	28,980,667	BTU/F

Conceptual Design Parameters/Treatment Outputs (Continued)

Colville Post and Poles Site		GeoEngineers, Inc.	
<i>Energy balance</i>	<i>Treatment Pile 1 and 2</i>	<i>Unit</i>	
TCH power input rate	4,011	kW	
Average extracted water temperature	190	F	
Percent of injected energy extracted as steam	30	%	
Steam extracted, average	4,228	lbs/hr	
Energy flux into treatment volume	13,683,901	BTU/hr	
Energy flux in extracted steam	4,105,170	BTU/hr	
Net energy flux into treatment volume	9,578,731	BTU/hr	
Heating per day	7.9	F/day	
Start temperature	50	F	
Target temperature	635	F	
Estimated heat loss, worst case	37	%	
<i>Operating time</i>			
Shake-down	5	days	
Heating to boiling point	28	days	
Boiling and drying	76	days	
Heating to target temperature	34	days	
Sampling/analysis phase	5	days	
Post treatment vapor extraction	28	days	
Total operating time	176	days	

Note:

A conservative heat loss of 37% was assumed. The better the pile is insulated, the less energy is required to treat the soil.

Conceptual Design Parameters/Treatment Outputs (Continued)

Colville Post and Poles Site	
Numbers of wells	Treatment Pile 1 and 2
Heater borings in pile	215
Horizontal SVE wells	107
Temperature monitoring holes	10

Colville Post and Poles Site	GeoEngineers, Inc.	
Process equipment	Value	Unit
ISTD power supply	4,010	kW
Treatment system power supply	370	kW
Total power need to site	5,480	kW
Estimated total electric load	6,900	kVA
Vapor extraction rate, total	3,330	scfm
Non-condensable vapor	1,820	scfm
Estimated steam extraction	1,510	scfm
Liquid extraction rate	0.0	gpm
Condensed liquid rate	8.5	gpm
Water treatment rate	8.5	gpm
Vapor treatment type	GAC w/ gas conditioning	-
Dominant contaminant of concern	Dioxins & Furans	-
Estimated COC mass	1,433	lbs
Estimated COC mass treated by vapor system	717	lbs
Estimated COC mass treated by water system	29	lbs
Estimated COC mass generated as NAPL	29	lbs
Estimated COC mass destructed in-situ	659	lbs
Estimated max mass removal rate, vapor system	10	lbs/day

Conceptual Utility Requirements and Costs

Colville Post and Poles Site		GeoEngineers, Inc.	
<i>Utility estimates</i>	<i>Value</i>	<i>Unit</i>	
Power usage, in pile	13,892,000	kWh	
Power usage, treatment system	1,551,000	kWh	
Power usage, total	15,443,000	kWh	

Note:

- Power usage in the pile is estimated to be 530 kWh/cy. This is a typical power usage needed to properly heat and treat the soil at 325 degrees C.

Task	Pile 1	Pile 2	Total
Design and preparation	578,000	388,900	966,900
Site activities pre operation	5,444,000	2,275,000	7,719,000
Operation	1,539,000	1,539,000	3,078,000
Demob and other	580,000	442,700	1,022,700
Utilities, paid by client	1,390,000	1,390,000	2,780,000
Total	9,531,000	6,035,600	15,566,600

Note:

- Pricing above corresponds to a unit treatment cost of approximately \$270/CY including power.
- It is assumed that GeoEngineers, Inc. will construct the pile as soil is excavated. Cascade Thermal has included the cost of pile insulation.

Notes/Assumptions

Assumptions:

- **Price:**
 - +/- 30% price accuracy based on current understanding of preliminary Conceptual Site Model (CSM) as stated in this treatment concept
 - Power cost is included at 0.09 \$/kWh.
 - Evaluation assumes full access to site during construction and operation
- **Turn-Key services:**
 - Design/procurement/permitting (permitting managed by GeoEngineers, Inc., Cascade Thermal supports the process)
 - Construction of heating and treatment system
 - Operations (site and office support)
 - Demobilization
 - Reporting
- **Construction:**
 - No drilling needed
 - Electrical and mechanical connections above grade
- **Operations**
 - Standard:
 - Field Crew (2 persons on average) housed within 30 minute drive to the site for each Treatment Pile
 - Office support: Project Management and Engineering
- **Demobilization**
 - Bringing site back to as near to starting conditions as possible:
 - Removal of all equipment



9715 24th Place West
Seattle, WA 98204

Contractors license # 993194
DIR #1000007343

FOR INTERNAL USE ONLY	
<input checked="" type="checkbox"/> QUOTE	<input type="checkbox"/> ORDER
<input type="checkbox"/> CONTRACT RATES APPLY	
Sales Rep #:	Tim Ferris
Territory #:	105
MS Code:	
SFDC Opportunity#:	
Location ID #	301

Date May 14, 2018
 Contact JR Sugalski
 Company GeoEngineers
 Customer # _____
 Phys. Location _____
 City, State Zip Spokane, WA
 Phone 509-991-4471
 Fax _____
 Email _____
 Sales Rep Tim Ferris Cell: 206-793-6136

Ship Date _____ Time _____
 Ship To Colville Post & Pole
 Address _____
 City, State ZIP Colville, WA
 Site Contact _____
 Site Phone _____
 Purchase Order # _____
 Product _____
 Temperature _____
 pH _____

JOB DETAILS: Quote #

RENTAL ITEMS:

Qty	Equipment Description	Type of Billing 3 or 28	Daily Rate Per Unit	Weekly Rate Per Unit	Monthly Rate Per Unit	Est Rental Term (Months)	Total Rental Cost Based on Rental Term
1	2" Duplex Bag Filter	3.0	\$ 75.00	\$ 225.00	\$ 675.00	1	\$ 675.00
2	KW 2000 GAC Vessels (rated at Maximum of 100gpm)	3.0	\$ 50.00	\$ 150.00	\$ 450.00	1	\$ 900.00
1	Tsurumi LB800 115v /1ph Electric sub pump	3.0	\$ 35.00	\$ 105.00	\$ 315.00	1	\$ 315.00
4	2"X20' camlock suction hose	3.0	\$ 10.00	\$ 30.00	\$ 90.00	1	\$ 360.00
2	2"X50' Camlock discharge hose	3.0	\$ 10.00	\$ 30.00	\$ 90.00	1	\$ 180.00
1	2" McCrometer flowmeter	3.0	\$ 25.00	\$ 75.00	\$ 225.00	1	\$ 225.00
				\$ -	\$ -		\$ -
				\$ -	\$ -		\$ -
				\$ -	\$ -		\$ -
				\$ -	\$ -		\$ -
Subtotal Rental Items (Page 1)							\$ 2,655.00
Subtotal Rental Items (Page 2)							\$ -
Subtotal Rental Items (Pages 1&2)							\$ 2,655.00

SALE AND LABOR ITEMS:

Description	Qty.	Unit Cost	Total Cost
Purchase of 4,000# of Liquid Phase 8X30 Carbon media	4000	\$ 1.49	\$ 5,960.00
Carbon service (vac out 4,000# of spend media, replace with 4k of same and disposal of 4,000# (no-haz only)	1	\$ 6,850.00	\$ 6,850.00
		\$ -	\$ -
		\$ -	\$ -
Contractor required for all heavy equipment work including offloading, staging pumps, pulling pipe, reloading, etc.			
Sub-Total Sale Items			\$ 12,810.00

ESTIMATED FREIGHT:

Description	Deliveries	Pickups	Total	Rate	Total	
Delivery & pick-up of all above items	13	13	26	\$ 125.00	\$ 3,250.00	
Overnight per-diem	1	1	2	\$ 250.00	\$ 500.00	
			0	\$ -	\$ -	
Onsite delays will be billed at \$85/hour --- cost determined at time of service if necessary					Subtotal Freight	\$ 3,750.00
Environmental Recovery Fee					1.50%	\$ 39.83
TOTAL PROJECT COST ESTIMATE BASED ON RENTAL TERM					\$ 19,215.00	

Quote Accepted By: _____ Print Name: _____ Date: _____

The pricing provided above is for customer's internal use only. We ask that these items be kept confidential. All applicable tax and freight charges will be added to invoices. All quotations are subject to credit approval and are valid for 28 days. All prices quoted are in US Dollars. **See attached Terms and Conditions**, which are part of this quote. Transportation based on inventory availability out of the Branch noted above at the time of order. Pumps will need to be serviced every 250 operating hours by BakerCorp personnel at Customer's expense. Price may change if job scope changes. Customer will be billed actual rental days and equipment used (may be more or less than quoted). Release # must be obtained when equipment is called off rent. If no release # is provided, please call to obtain one.

PRODUCT DATA SHEET

January, 2007

**KLEEN.WATER
1000S & 2000S**

GENERAL INFORMATION

These units are designed for the efficient purification of contaminated water or liquid streams. These filters have the ability to remove contaminants to non-detectable levels. The vessels are constructed of heavy-duty mild steel and are lined with a double-layer epoxy coating.

WEIGHTS AND MEASURES

» Max. Flowrate:	1000S: 80 gpm 2000S: 100 gpm
» Max. Pressure:	15 psi
» Max. Temp:	150°F
» Height:	1000S: 66" 2000S: 92"
» Diameter:	46"
» Shipping Wt*: (drum + media) (* Media dependent)	1000S: 1900 lbs. – 2900 lbs. 2000S: 3050 lbs. – 5050 lbs.

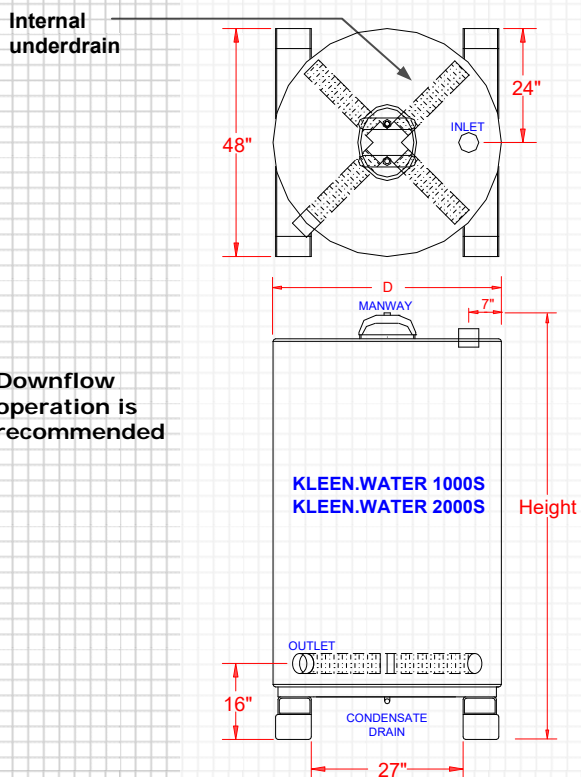
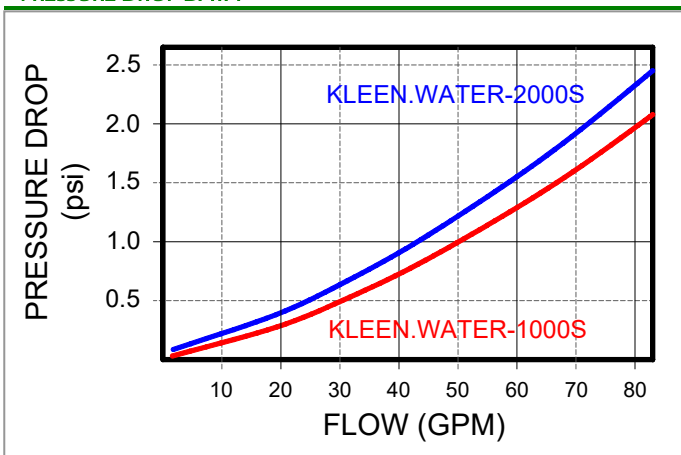
FILTER MEDIA

» Types:	•Activated Carbon •Organoclay •Ion Exchange Resin •Specialty Media
» Volume:	1000S: 34 cu. ft. 2000S: 68 cu. ft.
» Weight*: (* Media dependent)	1000S: 1000 lbs. – 2000 lbs. 2000S: 2000 lbs. – 4000 lbs.

MISCELLANEOUS

» Inlet:	4" FNPT
» Outlet:	4" FNPT
» Interior Coating:	Double-layered epoxy coating
» Internals:	PVC underdrain
» Media Access:	Top manway (neoprene gasket)

PRESSURE DROP DATA



NOTES:

1. Wet activated carbon preferentially removes oxygen from air. In closed or partially closed containers and vessels, oxygen depletion may reach hazardous levels. If workers are to enter a vessel containing carbon, appropriate procedures for potentially low oxygen spaces must be followed, including all federal and state requirements.



**PROPOSAL TO REMEDIATE DIOXINS FROM SOILS EXCAVATED FROM THE “COLVILLE SITE”
LOCATED NORTH OF SPOKANE, WASHINGTON, USA**

April 23, 2018

GeoEngineers,
Mr. Scott Lathen, P.E.
523 East Second Avenue
Spokane, Washington 99202

Mr. Lathen:

ecoSPEARS, Inc., is pleased to present this proposed scope of work and cost estimate to GeoEngineers, Inc., to apply a portion of the “E-n-D” System known as RIDS technology, in a phased manner, to meet the remedial goals as they pertain to dioxins via the following scope:

- a) Treatability Lab Study;
- b) 1000-Ton Pilot Study; and
- c) Treatment Phase, at the “Colville” site located north of Spokane, Washington.

This proposal has been prepared following your request during our conference call on March 19, 2018, and includes a provision regarding “\$0 RESIDUAL LIABILITY”. **The concept of “\$0 residual liability” is based on the implementation of the NASA developed technology, which eliminates your client’s ongoing legal exposure to dioxin material stored in an approved landfill by virtue of the destruction of the extracted dioxins.**

OVERVIEW

WHEREAS, ecoSPEARS has the expertise in Transformative NASA Technology to remove PCBs (Polychlorinated Biphenyls), Dioxins, and other toxins from waterways via an In-situ Extraction & Destruction Solution for Soil and Sediments, commonly known as “E-n-D System”; and

WHEREAS, the “E-n-D System” utilizes the SPEARS and RIDS (Reductive Integrated Destruction System) technologies to extract and destroy the PCBs and other applicable toxins such as Dioxins onsite without the need for transportation and long-term storage of dredged toxic soil off-site; and

WHEREAS, on March 19, 2018, GeoEngineers and ecoSPEARS conducted a needs analysis call to discuss GeoEngineers’ dioxin-contaminated sediment site generally located 90 minutes north of Spokane, Washington, United States, also known as the “Colville Site”; and

WHEREAS, during the aforementioned needs analysis call, GeoEngineers identified the following contamination and project parameters:

- 1) Dioxins at 18”-24” range;
- 2) Small area encompassing location of plant operations encountered diesel and PCB contamination in the soil at about 10’-12’ down;

-
- 3) Existence of an extensive groundwater plume of PCB contamination with diesel;
 - 4) Groundwater plume and PCBs are two main issues;
 - 5) In Pre-Feasibility Phase, looking at feasibility study, cost structure and analysis to see what can be recommended to the Department of Ecology; and

WHEREAS, GeoEngineers also elaborated during the needs analysis call, the issue of how much volume of soil they were looking to treat. GeoEngineers stated that in the early stages of the Feasibility Study, they have not defined the lateral extent completely, but believed the project to be somewhere in the magnitude of 8-10 acres at depths of 18"-24", or about 36,000 tons of material to be treated; and

WHEREAS, GeoEngineers further elaborated during the needs analysis call that it was the goal of the project to go from 2,500 ppt (parts per trillion) to 5 ppt (parts per trillion); and

WHEREAS, in consideration of the aforementioned factors, this proposal is strictly structured to remediate only the dioxins via the ecoSPEARS "RIDS" system on the aforementioned site, and ecoSPEARS will make every effort to the fullest extent possible, not to add toxins to the soil upon completion of said process; and

WHEREAS, ecoSPEARS is willing to provide services to GeoEngineers based on this Pre-Feasibility Study background and GeoEngineers desire to have services provided by ecoSPEARS.

ecoSPEARS has developed the proposed scope of work presented herein so as to further advance the technology that was originally developed by scientists at the National Aeronautics and Space Administration (NASA) Kennedy Space Center (KSC). GeoEngineers, Inc., has expressed interest in supporting the further development of this technology and further quantifying its performance/applicability under differing site conditions and contaminant levels, including the following:

- 1) Environmentally friendly solution that is protective of the natural habitat and surrounding communities;
- 2) Demonstrated effectiveness that remediates dioxins with much less disposal volume compared to other methods;
- 3) Onsite adaptability and destruction of dioxins is immediate with "\$0 Residual Liability";

SCOPE OF SERVICES

TASK 1 – TREATABILITY LAB STUDY

ecoSPEARS will analyze the soil samples sent by the client for composition and develop the baselines for further testing and assessment. The treatability study will determine the feasibility of the solvent extraction and RIDS processes to meet remedial goals as they apply to this soil matrix. Additionally, this study will be used to determine starting process parameters for the subsequent Pilot Study.

Task 2 – Pilot study

Following completion of the Treatability Lab Study, and subsequent deployment of the test equipment, ecoSPEARS will conduct a 1000-ton Pilot Study. The Pilot Study will be used to determine the ability of the extraction process, previously established in the Treatability Lab Study, to meet remedial goals for soil dioxin contamination levels at a project-relevant scale. The Pilot Study will also be used to determine optimal operating parameters to be used in the subsequent Treatment Phase.

TASK 3 – TREATMENT PHASE

At the end of the Pilot Study, ecoSPEARS will commence with treatment of the balance of the 36,000 tons. Processes optimized in the Pilot Study will be applied to the remainder of the contaminated soil in a manner that results in soil dioxin levels below site remedial goals.

PROJECT TEAM

For this project, the Principal Scientist or designated representative in our Orlando, Florida office, will serve as the project manager. ecoSPEARS has additional engineers and analytical capabilities on staff for project support.

OVERALL PROJECT SCHEDULE

ecoSPEARS will coordinate with GeoEngineers to perform the scope of work in accordance with a mutually acceptable schedule. However, please note that some lead time will likely be required for deployment/mobilization of staff and necessary equipment for the Pilot Study and the RIDS Treatment Phase.

COST ESTIMATES

Task Order	Cost/Ton (USD)	Cost (USD)	Lead Time
Task 1 – RIDS Treatability Lab Study	-	\$30,000	4-6 Weeks
Task 2 – RIDS 1,000 Ton Pilot Study	\$700	\$700,000	3 Months
Task 3 – RIDS Treatment Phase (which includes "\$0 Residual Liability")	\$350	\$12,250,000 (based on 35,000 tons of additional of soil to be cleaned)	TBD
Totals:		\$12,980,000	

Based on the scope of work, and the per task summary presented above, ecoSPEARS proposes to conduct the proposed scope of work on a lump sum basis, for an estimated total cost of \$12,980,000 plus the Additional Provisions outlined below. If this proposal is acceptable, please issue a purchase order or work authorization indicating your formal approval to proceed with performance of the services presented in this proposal.

ADDITIONAL PROVISIONS

1. EXPENSE REIMBURSEMENT. ecoSPEARS shall be entitled to reimbursement from GeoEngineers for all "out-of-pocket" expenses associated with change orders.

2. SUPPORT SERVICES. GeoEngineers will provide the following support services/items for the benefit of ecoSPEARS so as to allow ecoSPEARS to carry out its responsibilities under this agreement:

- i. Current survey of property including topography above and below waterline and any riparian rights & easements; location of utility lines, pipes, infrastructure and other appurtenances, maritime and otherwise, including abandoned pilings, docks & cars, location of protected or endangered species or fauna; Indian and Tribal areas & any other federally, state or locally protected or historical areas;
- ii. Legal description of property and owners consent;
- iii. Any and all federal, state and local permits required to perform the services as outlined in this agreement;
- iv. Signed and sealed calculations by a professional engineer in the State where work is to be done attesting to the parameters of the clean-up (i.e. cubic yards to be removed, tonnage, volumetric calculations, degree of contamination etc. & other information deemed necessary by ecoSPEARS and its scientists & engineers;
- v. Any studies or documents that will aid ecoSPEARS, in providing services outlined in this agreement;
- vi. Soil samples as required by ecoSPEARS scientists & engineers, to be shipped to ecoSPEARS Florida offices at GeoEngineers expense;

-
- vii. GeoEngineers shall also be responsible for paying all application, permitting and processing fees for said project to federal, state and local agencies associated with carrying out this project, in addition to any bonding or surety requirements that may be required.

3. TERM/TERMINATION. This Agreement may be terminated by either party upon 90 days' written notice to the other party.

4. RELATIONSHIP OF PARTIES. It is understood by the parties that ecoSPEARS is an independent contractor with respect to GeoEngineers, and not an employee of GeoEngineers. GeoEngineers will not provide fringe benefits, including health insurance benefits, paid vacation, or any other employee benefit, for the benefit of ecoSPEARS.

5. DISCLOSURE. ecoSPEARS is required to disclose any outside activities or interests, including ownership or participation in the development of prior inventions or intellectual property, that conflict or may conflict with the best interests of GeoEngineers. Prompt disclosure is also required under this paragraph by both parties, if any activity or interest is related, directly or indirectly.

6. EMPLOYEES. ecoSPEARS employees or consultants, if any, who perform services for GeoEngineers under this Agreement shall also be bound by the provisions of this Agreement.

7. INJURIES AND INSURANCE. ecoSPEARS acknowledges ecoSPEARS obligation to obtain appropriate insurance coverage for the benefit of ecoSPEARS (and ecoSPEARS employees, if any). ecoSPEARS waives any rights to recovery from GeoEngineers for any injuries that ecoSPEARS (and/or ecoSPEARS employees) may sustain while performing services under this Agreement and that are a result of the negligence of ecoSPEARS or ecoSPEARS's employees.

8. INDEMNIFICATION. ecoSPEARS agrees to indemnify and hold harmless GeoEngineers from all claims, losses, expenses, fees including attorney fees, costs, and judgments that may be asserted against GeoEngineers that result from the acts or omissions of ecoSPEARS, its employees, if any, and its agents. GeoEngineers agrees to indemnify and hold harmless ecoSPEARS from all claims, losses, expenses, fees including attorney fees, costs, and judgments that may be asserted against ecoSPEARS that result from the acts or omissions of GeoEngineers, its employees, if any, and its agents.

Any and all liability created as a result of the contamination on site by the responsible parties or other entities shall not transfer to ecoSPEARS. Furthermore, ecoSPEARS shall not be held liable for any existing conditions on the site.

9. INTELLECTUAL PROPERTY. The following provisions shall apply with respect to copyrightable works, ideas, discoveries, trademarks, service marks, inventions, applications for patents, and patents (collectively, "Intellectual Property"):

Consultant's Intellectual Property. ecoSPEARS holds interest in Intellectual Property that is utilized in its technology outlined in this agreement. As a result, GeoEngineers and its agents and subcontractors shall enter into a non-disclosure agreement with ecoSPEARS.

10. OWNERSHIP OF SOCIAL MEDIA CONTACTS. Any social media contacts, including "followers" or "friends," that are acquired through accounts (including, but not limited to email addresses, blogs, Twitter, Facebook, Youtube, or other social media networks) used or created on behalf of ecoSPEARS are the property of ecoSPEARS.

11. CONFIDENTIALITY. Either party to this agreement will not at any time or in any manner, either directly or indirectly, use any Information for their own benefit, or divulge, disclose, or communicate in any manner any Information to any third party without the prior written consent of each party. Both parties to this agreement will protect information and treat it as strictly confidential. A violation of this paragraph shall be a material violation of this Agreement.

12. CONFIDENTIALITY AFTER TERMINATION. The confidentiality provisions of this Agreement shall remain in full force and effect after the termination of this Agreement.

13. RETURN OF RECORDS. Upon termination of this Agreement, both parties shall deliver all records, notes, data, memoranda, models, and equipment of any nature that are in either 's possession or and that are either's property or relate to either's business.

14. NOTICES. All notices required or permitted under this Agreement shall be in writing and shall be deemed delivered when delivered in person or deposited in the United States mail, postage prepaid, addressed as follows:

IF for GeoEngineers:

GeoEngineers,
Mr. Scott Lathen, P.E.
523 East Second Avenue
Spokane, Washington 99202

IF for ecoSPEARS:

ecoSPEARS, Inc.
Serg Albino, President & CEO
309 Cranes Roost Blvd. Ste. 2000
Altamonte Springs, Florida 32701

Such address may be changed from time to time by either party by providing written notice to the other in the manner set forth above.

15. ENTIRE AGREEMENT. This Agreement contains the entire agreement of the parties and there are no other promises or conditions in any other agreement whether oral or written. This Agreement supersedes any prior written or oral agreements between the parties.

16. AMENDMENT. This Agreement may be modified or amended if the amendment is made in writing and is signed by both parties.

17. SEVERABILITY. If any provision of this Agreement shall be held to be invalid or unenforceable for any reason, the remaining provisions shall continue to be valid and enforceable. If a court finds that any provision of this Agreement is invalid or unenforceable, but that by limiting such provision it would become valid and enforceable, then such provision shall be deemed to be written, construed, and enforced as so limited.

18. WAIVER OF CONTRACTUAL RIGHT. The failure of either party to enforce any provision of this Agreement shall not be construed as a waiver or limitation of that party's right to subsequently enforce and compel strict compliance with every provision of this Agreement.

19. APPLICABLE LAW. This Agreement shall be governed by the laws of the State of Florida.

20. INTERRUPTION OF SERVICE. Either party shall be excused from any delay or failure in performance required hereunder if caused by reason of any occurrence or contingency beyond its reasonable control, including, but not limited to, acts of God, acts of war, fire, insurrection, laws proclamations, edicts, ordinances or regulations, strikes, lock-outs or other serious labor disputes, riots, earthquakes, floods, explosions or other acts of nature. The obligations and rights of the party so excused shall be extended on a day-to-day basis for the time period equal to the period of such excusable interruption. When such events have abated, the parties' respective obligations hereunder shall resume. In the event the interruption of the excused

party's obligations continues for a period in excess of thirty (30) days, either party shall have the right to terminate this Agreement upon ten (10) days' prior written notice to the other party.

21. ASSIGNMENT. Both parties agree that it will not assign, sell, transfer, delegate or otherwise dispose of any rights or obligations under this Agreement without the prior written consent of either party.

22. SIGNATORIES. This Agreement shall be signed on behalf of GeoEngineers by Scott Lathen, Environmental Engineer and on behalf of ecoSPEARS by Serg Albino, CEO and effective as of the date first above written.

Party receiving services:

GeoEngineers

By: _____
Scott Lathen, P.E.

Party providing services:

ecoSPEARS, Inc.

By: _____
Serg Albino, President & CEO

ecoSPEARS appreciates the opportunity to assist GeoEngineers with this project. Please contact us with any questions regarding this proposal.

Sincerely,

Serg Albino
ecoSPEARS, Inc., President and CEO

$$\Rightarrow \frac{26,111}{7,926} = 30.4\% \text{ increase w/ 2:1 side slopes}$$

$$\text{Vertical Excavation} = (235)(150)(20) = 26,111 \text{ CY}$$

$$= 214,000 \text{ ft}^3 = 7926 \text{ CY} \text{ required for sloping}$$

$$\Rightarrow (400)(235) + (400)(150) + (900)(150) = 214,000 \text{ ft}^3$$

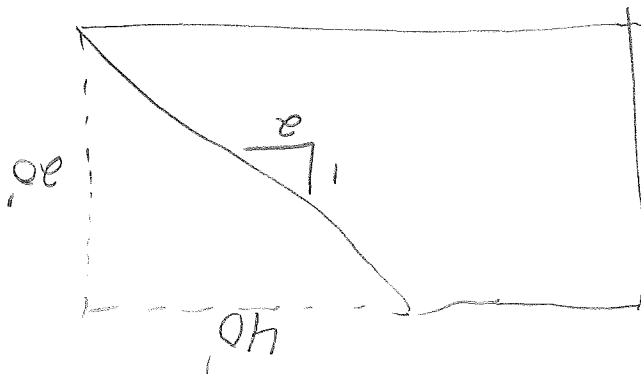
16 rail road.

Assume only 3 sides will be excavated because of

$$= 400 \text{ SF per side of excavat}$$

$$= \frac{1}{2}(40)(20)$$

$$A = 400$$



Deep Excavation Side Slopes: Additional Excav



PREMIUM GARDEN SOIL™

[BACK »](#)



For Vegetable and Flower Gardening -- Our special blend of black peat soil, organic compost and sand produces the best fertile soil for heavy feeders like perennials, vegetables and annuals. Our patented Premium Garden Soil is specially blended to retain moisture while providing the perfect drainage and the optimum amounts of organic matter for healthy plants. Your roses will grow healthy and strong, your flowers will be lush and colorful and your vegetables will yield a bountiful harvest when you start with Premium Garden Soil

The calculator (at right) will provide you with the number of cubic yards you need, for your given space, at two inches deep.



PRICING

- \$24.95 per yard picked up
- \$29.95 per yard delivered
- \$150 minimum for dump truck delivery

COMMON USES

- Vegetable Gardens
- Flower Gardens

HOW MUCH DO I NEED?

LENGTH

WIDTH

CALCULATE

What to Expect on Delivery

This material is delivered in a dump truck. We gladly make deliveries to the curblin. Upon delivery should you request the dump truck to dump inside your property line, you will be asked to sign a waiver of liability. Please be aware that large vehicles cannot make sharp turns. Also please be aware that any overhanging branches, power lines, or other overhead obstructions might prevent a dump truck from lifting its box in the air to dump. All delivery locations are determined by the discretion of the professional driver, and safety and property damage precautions. [Click here for more information on deliveries.](#)

General Fill


www.landscapeandgarden.com/products/bark-and-compost/colville-valley-compost/

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MENU **COLVILLE VALLEY COMPOST** [BACK »](#)



Can be used as a mulch or as a compost. Great water holding capabilities to help keep plants cool during hot summer months.

The calculator (at right) will provide you with the number of yards needed for a given space, at two inches deep.

PRICING
 \$29.95 per yard picked up
 \$34.95 per yard delivered

\$150 minimum for delivery

COMMON USES
 mulching
 soil amendment

READY TO ORDER? CALL US AT (509)467-0685

HOW MUCH DO I NEED?

LENGTH

WIDTH

CALCULATE

What to Expect on Delivery
 This material is delivered in a dump truck. We gladly make deliveries to the curb line, you will be asked to sign a waiver of liability for all deliveries made inside your property line. Please keep in mind large vehicles cannot make sharp turns. Also please be aware that any overhead obstacles, such as power lines, tree limbs, and other overhanging obstructions may prevent a dump truck from dumping. All dumping locations are up to the discretion of the professional driver, while keeping safety and liability in

NEED INSPIRATION
 SEE THIS PRODUCT IN USE »

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Wetland Soil

VCC 8x30 Virgin Coconut Shell Carbon

BakerCorp's VCC 8x30 mesh virgin carbon made from select grades of coconut shell. These activated carbon granules are a uniform adsorbent with well developed pore structure, allowing for a wide range of adsorbate retention. This carbon is ideal for purification of potable water, industrial wastewater treatment and groundwater treatment. This product is also suitable for refinement of organic liquids requiring purification and color reduction, such as amine and glycol solutions and will remove MTBE from groundwater.

PHYSICAL PROPERTIES:

Carbon Tetrachloride Activity:	60% minimum
Apparent Density (lbs./cu.ft.):	29 average
Total Ash Content:	3% maximum
Hardness (Ball Abrasion):	98% minimum
Iodine Number:	1,000 minimum
Moisture (as packed):	5% maximum
Mesh Size:	8x30

Standard Packaging: 1000 lb. super sacks. Other packaging available upon request.

These specifications represent general parameters and are subject to change. Please consult with BakerCorp before processing with your applications.

AVISTA CORPORATION
dba Avista Utilities

SCHEDULE 25
EXTRA LARGE GENERAL SERVICE - WASHINGTON
(Three phase, available voltage)

AVAILABLE:

To Customers in the State of Washington where Company has electric service available.

APPLICABLE:

To general service supplied for all power requirements when all such service taken on the premises is supplied through one meter installation for a demand of not less than 3,000 kVa. The average of the Customer's demand for the most recent twelve-month period be at least 3,000 kVa for service under this Schedule. If the Customer has less than twelve months of billing history, the Customer must have a minimum of six consecutive billing months of demand of at least 3,000 kVa in order to receive service under this Schedule. New Customers must meet the above criteria or otherwise provide the Company with reasonable assurance that their peak demand will average at least 3,000 kVa. Customer shall provide and maintain all transformers and other necessary equipment on his side of the point of delivery and enter into a written contract for five (5) years or longer. The written contract will specify a limit on both firm energy and demand.

MONTHLY RATE:

The sum of the following demand and energy charges:

Energy Charge:

First	500,000 kWh	5.505¢ per kWh
Next	5,500,000 kWh	4.953¢ per kWh
All Over	6,000,000 kWh	4.235¢ per kWh

Demand Charge:

\$24,000.00 for the first 3,000 kVa of demand or less.
\$6.50 per kVa for each additional kVa of demand.

Primary Voltage Discount:

If Customer takes service at:

- 1) 11 kV (wye grounded) or higher, he will be allowed a primary voltage discount of \$0.20 per kVa of demand per month.
- 2) 60 kV (wye grounded) or higher, he will be allowed a primary voltage discount of \$1.10 per kVa of demand per month.
- 3) 115 kV (wye grounded) or higher, he will be allowed a primary voltage discount of \$1.40 per kVa of demand per month.

Minimum:

The demand charge unless a higher minimum is required under contract to cover special conditions.

(l)
(l)

Issued April 27, 2018

Effective May 1, 2018

Issued by Avista Corporation
By

Patrick Ehrbar, Director of Regulatory Affairs

AVISTA CORPORATION
dba Avista Utilities

SCHEDULE 25A
EXTRA LARGE GENERAL SERVICE – WASHINGTON

ANNUAL MINIMUM: \$829,950

(R)

Any annual minimum deficiency will be determined during the April billing cycle for the previous 12-month period. For a customer who has taken service on this schedule for less than 12 months, the annual minimum will be prorated based on the actual months of service.

DEMAND:

(T)

The average kVa supplied during the 30-minute period of maximum use during the current month as measured by Company's metering equipment.

SPECIAL TERMS AND CONDITIONS:

(T)

Existing Customers who install demand-side management measures, which cause their demand to fall below 3,000 kVa, will continue to qualify for service under this Schedule. The Company will estimate the Customer's demand reduction created by those demand-side management measures in order to determine qualification for service under this Schedule. If a Customer installs demand-side management measures without assistance from the Company, it is the Customer's responsibility to inform the Company regarding the installation of such measures.

Service under this schedule is subject to the Rules and Regulations contained in this tariff.

The above Monthly Rate is subject to the provisions of Tax Adjustment Schedule 58, Demand Side Management Schedule 91, Low Income Rate Assistance Schedule 92, Temporary Power Cost Surcharge Schedule 93 and Renewable Energy Credit Revenue Mechanism Schedule 98.

Issued January 7, 2016

Effective January 11, 2016

Issued by Avista Corporation
By

Patrick Ehrbar, Director of Regulatory Affairs

www.geoengineers.com

