

**SUBSURFACE INVESTIGATION REPORT AND
ENVIRONMENTAL MEDIA MANAGEMENT PLAN**

**BLOCK 38 WEST PROPERTY
500 THROUGH 536 WESTLAKE AVENUE NORTH
SEATTLE, WASHINGTON**

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ACRONYMS AND ABBREVIATIONS

1998 EA Report	<i>Level I Environmental Site Assessment, Westlake Avenue Building, 534 Westlake Avenue North, Seattle, Washington</i> dated March 25, 1998, prepared by Terra Associates, Inc.
1999 EA Report	letter regarding Preliminary Environmental Assessment Update, Westlake Avenue Property (428, 500, 510, and 520 Westlake Avenue North), Seattle, Washington dated April 5, 1999, from Mr. Rob Roberts and Ms. Julie K.W. Wukelic of HartCrowser, Inc. to City Investors VII LLC c/o Mr. Joe Delaney of Foster Pepper & Shefelman
2014 Subsurface Investigation	subsurface investigation conducted at Block 38 West that commenced on July 21, 2014
2018 Subsurface Investigation	subsurface investigation conducted at Block 38 West that commenced on August 20, 2018
bgs	below ground surface
Block 38 East	the eastern half of the block between Mercer Street to the north, Westlake Avenue North to the west, Republican Street to the South, and a north-south-trending alley bisecting the block to the east
Block 38 West	the western half of the block between Mercer Street to the north, Westlake Avenue North to the west, Republican Street to the South, and a north-south-trending alley bisecting the block to the east
BTEX	benzene, toluene, ethylbenzene, and xylenes
Building	the new multi-story mixed-use building to be constructed on Block 38 West
City Investors	City Investor IX LLC
Cleanup Action	construction mass excavation with construction dewatering and disposal of contaminated soil off Block 38 West
COCs	constituents of concern
COPCs	constituents of potential concern
cPAHs	carcinogenic polycyclic aromatic hydrocarbons
CVOCs	chlorinated volatile organic compounds
DRO	total petroleum hydrocarbons as diesel-range organics



Ecology	Washington State Department of Ecology
Ecology Guidance	<i>Guidance for Remediation of Petroleum Contaminated Sites</i> dated June 2016, prepared by the Washington State Department of Ecology
EMMP	<i>Subsurface Investigation Report and Environmental Media Management Plan, Block 38 West Property, 500 through 536 Westlake Avenue North, Seattle, Washington</i> dated December 28, 2018, prepared by Farallon Consulting, L.L.C. (this document)
EPA	U.S. Environmental Protection Agency
Farallon	Farallon Consulting, L.L.C.
GRO	total petroleum hydrocarbons as gasoline-range organics
Lift Maps	Environmental Media Management Plan Figures 7 through 13
mg/kg	milligrams per kilogram
µg/l	micrograms per liter
msl	mean sea level
MTCA	Washington State Model Toxics Control Act Cleanup Regulation
ORO	total petroleum hydrocarbons as oil-range organics
PAHs	polycyclic aromatic hydrocarbons
Republican Street Drain	the 72-inch-diameter King County sewer main line in the Republican Street right-of-way and its backfill
Subsurface Investigations	the 2014 and 2018 Subsurface Investigations conducted at Block 38 West
SVOCs	semivolatile organic compounds
total cPAHs TEC	a toxic equivalent concentration using a method prescribed by MTCA (WAC 173-340-708[e])
VOCs	volatile organic compounds
WAC	Washington Administrative Code



1.0 INTRODUCTION

Farallon Consulting, L.L.C. (Farallon) has prepared this Subsurface Investigation Report and Environmental Media Management Plan (EMMP) on behalf of City Investors IX LLC (City Investors) to support planning for redevelopment of the property at 500 through 536 Westlake Avenue North in the South Lake Union area of Seattle, Washington comprising the western half of the block between Mercer Street to the north, Westlake Avenue North to the west, Republican Street to the South, and a north-south-trending alley bisecting the block to the east, which is herein referred to as Block 38 West (Figures 1 and 2). The eastern half of the same block is referred to as Block 38 East; the whole block, including Blocks 38 West and 38 East, is referred to as Block 38. This EMMP summarizes results of subsurface investigations conducted to date at Block 38 West and presents a general plan for remediation of soil and groundwater impacted by prior releases of hazardous substances during planned redevelopment mass excavation at Block 38 West.

Redevelopment of Block 38 West is scheduled to begin in mid- to late 2019 and will entail construction of a multi-story mixed-use building (the Building) with a preliminary design for five stories above street level and four levels of parking below street level. The planned finish floor elevation of the lowest level of parking is 3.25 feet below mean sea level (North American Vertical Datum of 1988) (msl). Construction of the Building will require mass excavation across the entirety of Block 38 West. The excavation sidewalls will be retained using soldier pile and lagging shoring methods in conjunction with four rows of tiebacks. The bottom of footing elevation for the majority of the foundation will be about 8 feet below msl, or approximately 39 to 49 feet below existing grade throughout Block 38 West. Excavation for elevator cores likely will extend below the mass excavation subgrade (GeoEngineers, Inc. 2018; Middour Consulting LLC 2018).

Hazardous substances were detected in soil and groundwater samples collected from some locations at Block 38 West during subsurface investigations. Construction of the Building will require managing soil and groundwater impacted with hazardous substances. At some locations sampled during subsurface investigations at Block 38 West, hazardous substances were detected in soil or groundwater samples at concentrations exceeding Method A cleanup levels specified in the Washington State Model Toxics Control Act Cleanup Regulation (MTCA), as established in Chapter 173-340 of the Washington Administrative Code (WAC 173-340). Cleanup of contaminated soil and groundwater will be conducted in conjunction with construction of the Building as an independent action in accordance with MTCA without direct oversight or approval by the Washington State Department of Ecology (Ecology).

1.1 PURPOSE AND OBJECTIVES

The purpose of this EMMP is to document results of subsurface investigations conducted to date at Block 38 West, and to provide general methodologies for testing, excavation, handling, and disposal of impacted soil (including soil exceeding applicable cleanup levels) as required by MTCA during redevelopment construction excavation.



1.2 REPORT ORGANIZATION

This EMMP has been organized into the following sections:

- **Section 2, Background**, provides a description of the property comprising Block 38 West, a summary of land uses and prior environmental assessments of Block 38 West and vicinity, and a description of constituents and media of potential concern at Block 38 West.
- **Section 3, Subsurface Investigations**, presents a summary of the methods and results of two subsurface investigations conducted by Farallon at Block 38 West.
- **Section 4, Construction Excavation**, provides a summary of the selected cleanup action, including remedial action objectives, schedule, and restoration time frame; describes how the cleanup action will be managed; and describes how the cleanup action will be documented.
- **Section 5, References**, provides a list of the source materials used in preparing this EMMP.
- **Section 6, Limitations**, provides Farallon's limitations associated with this EMMP.



2.0 BACKGROUND

This section provides a description of Block 38 West and a summary of current and historical uses of Block 38 West and near vicinity.

2.1 BLOCK 38 WEST DESCRIPTION

Block 38 West is in a commercial and light industrial area zoned as mixed residential/commercial in the South Lake Union Area (SM-SLU 175/85-280) approximately 1 mile north of downtown Seattle. According to King County (2013), Block 38 West comprises King County Parcel Nos. 1983200196 on the northern portion of Block 38 West (534 and 536 Westlake Avenue North), 1983200180 in the central portion of Block 38 West (520 Westlake Avenue North), and 1983200170 on the southern portion of Block 38 West (500 and 510 Westlake Avenue North).

Block 38 West totals approximately 0.34 acre of land developed with structures currently used for retail, temporary offices, storage, and automobile parking. Adjacent street elevations vary from about 41 feet above msl on Republican Street adjoining the southern portion of Block 38 West to about 31 feet above msl on Mercer Street adjoining the northern portion of Block 38 West. The alley bisecting Block 38 and along the eastern boundary of Block 38 West is accessed from Mercer Street and descends from street level to an elevation of about 23 feet above msl, and is used for vehicle access to a parking garage on Block 38 East and access to garage parking and a loading dock on Block 38 West. A historical timber framed trestle extends north from Republican Street into the Block 38 alley approximately 120 feet, to a point approximately 18 feet above the fenced-off southern portion of the alley.

A 72-inch-diameter King County sewer main line is present in the Republican Street right-of-way approximately 20 feet south of the southern boundary of Block 38 West. This sewer line and its backfill (Republican Street Drain) receive inflows from Seattle Public Utilities combined mains and flows westward toward Elliott Bay. The Republican Street Drain is known to draw shallow groundwater flow in the South Lake Union area, which then drains through the backfill material toward the west. The invert elevation of the reinforced concrete pipe of the Republican Street Drain at a manhole immediately southwest of Block 38 West is approximately 14.2 feet above msl and approximately 27 feet below ground surface (bgs).

2.2 BLOCK 38 WEST AND VICINITY LAND USES AND PRIOR ENVIRONMENTAL ASSESSMENTS

According to the *Level I Environmental Site Assessment, Westlake Avenue Building, 534 Westlake Avenue North, Seattle, Washington* dated March 25, 1998, prepared by Terra Associates, Inc. (1998) (1998 EA Report), a Level I Environmental Site Assessment was conducted in 1998 for the Westlake Avenue Building on the northernmost parcel of Block 38 West at 534 Westlake Avenue North. The 1998 EA Report concluded that the potential for contamination due to past or current practices at 534 Westlake Avenue North is low. The 1998 EA Report provided the following



information regarding the potential for past or current practices at other properties to affect conditions at 534 Westlake Avenue North:

- Six sites with active petroleum underground storage tanks were identified within a 1/8-mile radius of 534 Westlake Avenue North.
- Forty-four sites with leaking underground storage tanks were identified within a 0.5-mile radius of 534 Westlake Avenue North. Former operation of underground storage tanks at the north-adjacent Unocal property (Unocal station #5353 at 600 Westlake Avenue North, north of Block 38 West across Mercer Street; now also known as Block 37), at the Rosen property on Block 38 East (960 Republican Street), and at 500 Terry Avenue North (also referred to in prior documents as the Ivars Commissary) resulted in confirmed petroleum releases. The 1998 EA Report indicated cleanup actions had occurred at these properties, and acknowledged the potential for properties with leaking underground storage tanks to affect subsurface media at 534 Westlake Avenue North.
- Fifteen confirmed and suspected contaminated sites were identified within a 1-mile radius of 534 Westlake Avenue North. The 1998 EA Report concluded these properties posed minimal threat to 534 Westlake Avenue North.
- A coal gas facility (likely used for storage of gas manufactured at the coal gas plant 2 miles north, according to the 1998 EA Report) formerly was located at 815 Mercer Street, two blocks west of Block 38 West (the property known as Block 50). No documentation was available to the authors of the 1998 EA Report indicating that soil or groundwater contamination associated with the coal gas facility was present, and the 1998 EA Report considered the risk to 534 Westlake Avenue North from releases or operations at the former coal gas facility on Block 50 to be low.

HartCrowser, Inc. (1999) issued a letter regarding Preliminary Environmental Assessment Update, Westlake Avenue Property (428, 500, 510, and 520 Westlake Avenue North), Seattle, Washington dated April 5, 1999, from Mr. Rob Roberts and Ms. Julie K.W. Wukelic to City Investors VII LLC c/o Mr. Joe Delaney of Foster Pepper & Shefelman (1999 EA Report) pertaining to the two southern parcels of Block 38 West at 500, 510, and 520 Westlake Avenue North and a parcel at 428 Westlake Avenue North on the south-adjacent block (the property known as Block 39). The 1999 EA Report indicated a moderate potential for subsurface contamination at these properties based on field reconnaissance and environmental records review. The properties were not identified on agency environmental lists reviewed. Information presented in the 1999 EA Report pertaining to the two southern parcels of Block 38 West, in addition to information provided in the 1998 EA Report, is summarized below.

- Two blacksmith shops formerly present on the two southern parcels of Block 38 West, at 500 Westlake Avenue North from at least 1905 until 1919 and at 524 Westlake Avenue North, represented some potential for petroleum, solvent, or metals contamination to Block 38 West.
- A heating oil underground storage tank formerly present beneath the Republican Street sidewalk south of 500 Westlake Avenue North represented a low potential for petroleum



contamination. The underground storage tank was decommissioned in 1989 with documentation indicating that no petroleum-affected soil was observed.

- Hazardous building materials, including asbestos, lead-based paint, and polychlorinated biphenyls, potentially are present in the structures on the two southern parcels of Block 38 West.
- Former uses of the southern parcel of Block 38 West at 500 and 510 Westlake Avenue North since the 1890s include lumber storage, the blacksmith shop at 500 Westlake Avenue North, and retail/commercial (i.e., auto parts, appliances, school/office supply, furniture storage, clothing, outdoor equipment).
- Former uses of the middle parcel of Block 38 West at 520 Westlake Avenue North since the 1890s include lumber storage, a horse stable and wagon house, a blacksmith wagon shop at 524 Westlake Avenue North, auto repair, a veterinary hospital, parking, and retail operations.

2.3 GEOLOGY AND HYDROGEOLOGY

The Puget Sound region is underlain by Quaternary sediments deposited by a number of glacial episodes. Deposition occurred prior to, during, and following glacial advances and retreats, creating the existing subsurface conditions. The naturally occurring sediments in the South Lake Union area consist primarily of interlayered and/or sequential deposits of alluvial clays, silts, and sands that typically are situated over deposits of glacial till that consist of silty sand to sandy silt with gravel. Outwash sediments consisting of sands, silts, clays, and gravels were deposited by rivers, streams, and post-glacial lakes during glacial advances and recessions. Advance outwash sediments have been largely over-consolidated by the overriding ice sheets. These advance outwash sediments are overlain by a till-like layer and/or recessional outwash sediments that are less consolidated (Galster and Laprade 1991).

Block 38 West is approximately 600 feet south of Lake Union. According to a U.S. Geological Survey (1909) Seattle Special quadrangle map, the original shoreline of Lake Union extended farther south from its current location, to as far as the current location of Mercer Street. In the late 1800s and the early 1900s, the southern end of Lake Union was filled with sawdust and wood waste generated by lumber mill operations and with other fill materials.

A cross-section depicting the general lithology and hydrogeology of Block 38 West is presented on Figure 3, which is based on field observations made during the Subsurface Investigations as documented in boring logs (Appendix A). The location of the cross-section is shown on Figure 2. According to Farallon observations made during subsurface investigations conducted on adjacent properties and at Block 38 West and a review of boring logs from geotechnical drilling (GeoEngineers, Inc. 2018), three general stratigraphic units are present at Block 38 West:

- The shallowest unit consists of fill material with recent deposits, including lacustrine sediments, and comprises silt, sandy silt, and sand with variable gravel content. In some



areas, this shallowest unit includes wood waste, peat, and organic silt. The shallowest unit is present across Block 38 West.

- The shallowest unit is underlain by a dense stratum of heterogeneous and anisotropic native glacially consolidated deposits comprising dense sand and variable silt and gravel content and very stiff to hard silt with variable sand and gravel content. According to GeoEngineers, Inc. (2018), the contact elevation to glacially consolidated soils typically slopes down to the north toward Lake Union, and at Block 38 West occurs between approximately 11 feet above msl and 6 feet below msl and represents competent bearing soils.
- Although not encountered to the maximum depth explored during the Subsurface Investigations (about 34 feet below msl at monitoring well FMW-130), glacially consolidated advance outwash deposits underlie the intermediate unit and comprise very dense sand with minor silt. This unit was encountered between about 20 and 30 feet below msl on the north-adjacent properties (Block 31 and Block 37).

Three general water-bearing zones are present at Block 38 West:

- The uppermost water-bearing zone encountered in the fill and underlying recent deposits is referred to in documents for other properties in the South Lake Union area as the Shallow Water-Bearing Zone. The Shallow Water-Bearing Zone at Block 38 West varies in thickness from approximately 5 to 15 feet and was encountered at depths ranging from approximately 5 to 8 feet bgs. Monitoring wells at Block 38 West are screened within the Shallow Water-Bearing Zone, with the exception of monitoring wells FMW-130 and FMW-136, which are screened in glacially consolidated deposits comprising the Intermediate Water-Bearing Zone described below.
- A deeper water-bearing zone below the Shallow Water-Bearing Zone, referred to as the Intermediate Water-Bearing Zone, is present in the glacially consolidated soil at Block 38 West encountered at approximate elevations between 5 and 10 feet above msl (approximately 15 to 20 feet bgs). The Intermediate Water-Bearing Zone is continuous across Block 38 West. Farallon has concluded based on the Subsurface Investigations that the Shallow Water-Bearing Zone at Block 38 West is in direct communication with the Intermediate Water-Bearing Zone (i.e., there is no aquitard separating these groundwater-bearing zones).
- Although not encountered to the maximum depth explored the during the Subsurface Investigations (about 34 feet below msl at monitoring well FMW-130), based on other subsurface investigations conducted in the vicinity, a third water-bearing zone, referred to as the Deep Outwash Aquifer, is presumed to be present at an approximate elevation of 35 feet below msl (approximately 60 feet bgs) in dense advance outwash sand deposits consisting of sand with minor silt. The Deep Outwash Aquifer was encountered at elevations between about 20 to 30 feet below msl at properties north of Mercer Street (Block 31 and Block 37). The thickness of the Deep Outwash Aquifer is not known. The occurrence of the Deep Outwash Aquifer and groundwater quality will be assessed during an upcoming investigation that will be reported separate from the EMMP.



2.4 CONSTITUENTS AND MEDIA OF POTENTIAL CONCERN

Constituents of potential concern (COPCs) at Block 38 West were selected based on the known historical uses of Block 38 West and vicinity summarized above, historical land fill known to have been placed in this area, and the potential for releases of contaminants at concentrations exceeding MTCA cleanup levels. The COPCs for soil and groundwater at Block 38 West are:

- Total petroleum hydrocarbons as gasoline-range organics (GRO);
- Total petroleum hydrocarbons as diesel-range organics and oil-range organics (DRO and ORO, respectively);
- Benzene, toluene, ethylbenzene, and xylenes (BTEX);
- Volatile organic compounds (VOCs), including chlorinated volatile organic compounds (CVOCs);
- Polycyclic aromatic hydrocarbons (PAHs) and other semivolatile organic compounds (SVOCs), including carcinogenic polycyclic aromatic hydrocarbons (cPAHs);
- Naphthalenes; and
- Metals (i.e., arsenic, cadmium, chromium, mercury, and lead).



3.0 SUBSURFACE INVESTIGATIONS

Results of the subsurface investigations conducted by Farallon at Block 38 West are summarized below. GeoEngineers, Inc. (2018) has separately presented results from its geotechnical engineering evaluation conducted in support of Block 38 West redevelopment.

Farallon conducted two subsurface investigations at Block 38 West. The first subsurface investigation commenced on July 21, 2014 and entailed installing and collecting samples from a 55-foot-deep monitoring well outside the existing building in the loading dock area, and collecting soil, reconnaissance groundwater, and groundwater samples (2014 Subsurface Investigation). The second subsurface investigation commenced on August 20, 2018 and entailed drilling at 11 locations within Block 38 West to depths of up to 50 feet bgs, collecting soil and reconnaissance groundwater samples, installing and collecting samples from five new monitoring wells, and collecting samples from the monitoring well installed during the 2014 Subsurface Investigation (2018 Subsurface Investigation). The objective of the 2014 Subsurface Investigation and the 2018 Subsurface Investigation (collectively, the Subsurface Investigations) was to obtain lithologic, hydrologic, and analytical data to characterize environmental conditions at Block 38 and inform the selection of remedial actions as set forth in this EMMP. Additionally, some of the data are to be used for geotechnical engineering design by others.

3.1 2014 SUBSURFACE INVESTIGATION

The 2014 Subsurface Investigation entailed the installation of monitoring well FMW-130 in the loading dock area outside the existing building (Figure 2). Methodology employed and results of the 2014 Subsurface Investigation are summarized below.

Soil samples were collected continuously during drilling of the boring for monitoring well FMW-130 to a depth of 60 feet bgs using sonic drilling methods on July 21 and 22, 2014 for lithologic logging. Soil samples also were obtained at 5-foot sampling intervals from a split-spoon sampler driven by a 140-pound hammer 18 inches into the soil formation for collection of blow counts (a metric for evaluating soil density required for geotechnical engineering analysis).

A Farallon Geologist observed subsurface conditions and prepared a boring log and well completion diagram for monitoring well FMW-130 (Appendix A). The information recorded on the boring log included soil types encountered, visual and olfactory evidence of contamination, and volatile organic vapor concentrations as measured using a photoionization detector. Soil samples were collected and transferred directly into laboratory-prepared glass sample containers fitted with Teflon-lined lids in accordance with Farallon's standard sampling procedures.

One reconnaissance groundwater sample was collected during drilling for a temporary monitoring well screened from 15 to 20 feet bgs on July 21, 2014. The reconnaissance groundwater sample was collected in general accordance with standard U.S. Environmental Protection Agency (EPA) (1996) low-flow groundwater sampling procedures. A 0.25-inch-diameter tube was inserted to near the center of the screened interval of the temporary monitoring well. Groundwater was



extracted using a peristaltic pump with a flow rate of less than 300 milliliters per minute until a steady flow was established and extracted groundwater cleared, after which the reconnaissance groundwater sample was collected in a laboratory supplied sample container.

Monitoring well FMW-130 was constructed on July 22, 2014 in accordance with the Minimum Standards for Construction and Maintenance of Wells, as established in WAC 173-160. The monitoring well was constructed using 2 inch-diameter Schedule 40 polyvinyl chloride casing and 0.010-inch slotted screen set from 45 to 55 feet bgs (22.8 to 32.8 feet below msl). This interval was selected for placement of the well screen due to the presence of permeable silty sand and well-graded gravel with silt and sand, and elevated photoionization detector readings that suggested the potential presence of VOCs. The monitoring well was completed at grade in a flush-mounted steel monument. The filter pack surrounding the well screen consisted of 10/20 Monterey filter sand from the bottom of the well screen to approximately 2 feet above the well screen. A 2-foot-thick hydrated bentonite pellet seal was emplaced on the top of the filter pack and a grout consisting of a cement and bentonite mix extended from a depth of about 40 feet bgs to about 1.5 feet bgs, where a flush mounted monument was installed at the ground surface. Monitoring well construction details are provided in Appendix A.

The monitoring well was developed by surging and purging with a submersible pump shortly after well construction was completed. Monitoring well FMW-130 was developed until the majority of fine-grained sediment was removed from the well screen and adjacent sand pack. Monitoring well FMW-130 was sampled during three groundwater monitoring events: July 24, 2014; July 3, 2017; and August 30, 2018. Prior to collecting groundwater samples, groundwater was purged with a submersible pump and routed through a flow-through water quality parameter meter. Water quality parameters, including temperature, pH, specific conductance, turbidity, oxidation-reduction potential, and dissolved oxygen, were monitored and recorded. Monitoring well FMW-130 was purged until parameters stabilized prior to collection of a groundwater sample.

Soil, reconnaissance groundwater, and groundwater samples were placed on ice in a cooler under standard chain-of-custody procedures, and delivered to OnSite Environmental Inc. of Redmond, Washington for laboratory analysis. One soil sample collected from the boring advanced for construction of monitoring well FMW-130 at a depth of 20 feet bgs was submitted for laboratory analysis. The soil sample was analyzed for the following constituents:

- GRO by Northwest Method NWTPH-Gx;
- DRO and ORO by Northwest Method NWTPH-Dx;
- BTEX by EPA Method 8021; and
- PAHs and other SVOCs by EPA Method 8270D.

The reconnaissance groundwater sample (collected in July 2014) and two groundwater samples (one sample collected in July 2014 and one collected in July 2017) were analyzed for the following constituents:

- GRO by Northwest Method NWTPH-Gx;



- BTEX by EPA Method 8021 (July 2014 reconnaissance groundwater sample only);
- VOCs, including BTEX and CVOCs, by EPA Method 8260C (July 2014 reconnaissance groundwater sample and groundwater sample collected during the July 2017 groundwater monitoring event); and
- CVOCs only by EPA Method 8260C (reconnaissance groundwater sample and groundwater samples collected during the July 2014 and July 2017 groundwater monitoring events).

3.2 2018 SUBSURFACE INVESTIGATION

The 2018 Subsurface Investigation entailed drilling on Block 38 West at eight locations within the existing building and three locations adjacent to the existing building (Figure 2). Five of the borings were completed as monitoring wells. Methodology and results of the 2018 Subsurface Investigation are summarized below.

Drilling was conducted using a limited access hollow-stem auger drilling rig between August 20 and 24, 2018 to advance 11 soil borings. Four of the borings within the existing building were completed as monitoring wells FMW-132 and FMW-134 through FMW-136, and one boring adjacent to the existing building was completed as monitoring well FMW-133 (Figure 4). Monitoring well screened intervals varied and were generally shallow, between 20.7 feet above msl and 14.9 feet below msl. Soil samples were collected from each boring generally at 5-foot sampling intervals from an 18-inch-long split-spoon sampler driven by a 140-pound hammer in advance of the lead auger into the soil formation for collection of blow counts. A Farallon Geologist observed subsurface conditions and prepared boring logs and well completion diagrams (Appendix A). The information recorded on the boring logs included soil types encountered, visual and olfactory evidence of contamination, and volatile organic vapor concentrations as measured using a photoionization detector. Soil samples were collected and transferred directly into laboratory-prepared glass sample containers fitted with Teflon-lined lids in accordance with Farallon's standard sampling procedures.

One reconnaissance groundwater sample was collected from each of borings FB-1, FB-3, and FB-5 during drilling for temporary monitoring wells. The reconnaissance groundwater samples were collected in general accordance with standard EPA (1996) low-flow groundwater sampling procedures. A 0.25-inch-diameter tube was inserted to near the center of the screened interval of each temporary monitoring well. Groundwater was extracted using a peristaltic pump with a flow rate of less than 300 milliliters per minute until a steady flow was established and extracted groundwater cleared, after which the reconnaissance groundwater sample was collected.

Monitoring wells FMW-132 through FMW-136 were constructed in accordance with the Minimum Standards for Construction and Maintenance of Wells, as established in WAC 173-160. The monitoring well was constructed using 1-inch-diameter Schedule 40 polyvinyl chloride casing and 0.010-inch slotted screen prepacks with Monterey filter sand. The monitoring wells were completed at grade in flush-mounted steel monument. A hydrated bentonite pellet seal was emplaced from the top of the filter pack to a depth of approximately 1 foot bgs. A 0.5-foot-thick



concrete surface seal was placed around the wells from the top of the bentonite to approximately 1 foot bgs and surrounding the flush-mounted monument up to the ground surface. Monitoring well construction details are provided in Appendix A.

The monitoring wells were developed using surging and purging with a peristaltic pump shortly after well construction was completed. Monitoring wells were developed until the majority of fine-grained sediment was removed from the well screen prepack assemblies. Monitoring wells FMW-132 through FMW-136, and monitoring well FMW-130 installed during the 2014 Subsurface Investigation, were sampled on August 30, 2018. Prior to collecting groundwater samples, groundwater was purged with a peristaltic pump and routed through a flow-through water quality parameter meter. Water quality parameters, including temperature, pH, specific conductance, turbidity, oxidation-reduction potential, and dissolved oxygen, were monitored and recorded. Monitoring wells were purged until parameters stabilized prior to collection of groundwater samples.

Soil, reconnaissance groundwater, and groundwater samples were placed on ice in a cooler under standard chain-of-custody procedures, and delivered to OnSite Environmental Inc. of Redmond, Washington for laboratory analysis. Select soil samples were analyzed for the following constituents:

- GRO by Northwest Method NWTPH-Gx;
- DRO and ORO by Northwest Method NWTPH-Dx;
- BTEX by EPA Method 8021;
- CVOCs by EPA Method 8260C;
- PAHs and other SVOCs by EPA Method 8270D; and
- Arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver by EPA Series Methods 200/6000/7000.

Reconnaissance groundwater samples were analyzed for the following constituents:

- GRO by Northwest Method NWTPH-Gx;
- DRO and ORO by Northwest Method NWTPH-Dx;
- BTEX by EPA Method 8021; and
- VOCs, including CVOCs and BTEX, by EPA Method 8260C.

Groundwater samples were analyzed for the following constituents:

- GRO by Northwest Method NWTPH-Gx;
- DRO and ORO by Northwest Method NWTPH-Dx;
- CVOCs and BTEX by EPA Method 8260C; and
- PAHs by EPA Method 8270D.



3.3 ANALYTICAL RESULTS

A summary of the analytical results for soil and groundwater samples collected by Farallon during Subsurface Investigations is presented below.

3.3.1 Soil

COPCs detected in soil samples are summarized in Figure 2. Analytical results for soil samples are presented in Tables 1 through 4 and described below. Laboratory analytical reports are provided in Appendix B.

3.3.1.1 Petroleum Hydrocarbons

A total of 28 soil samples, collected at depths up to 35 feet bgs, were analyzed for petroleum hydrocarbons.

DRO was detected in 7 of the 28 soil samples at concentrations ranging from 97 to 730 milligrams per kilogram (mg/kg), less than the MTCA Method A cleanup level of 2,000 mg/kg. These samples were collected from 7 of the 11 borings at depths ranging from 2.5 to 15 feet bgs. The laboratory report indicated that the DRO results may be impacted by hydrocarbons detected in the oil range (i.e., ORO) in two of the soil samples analyzed.

ORO was detected in 10 of the 28 soil samples at concentrations ranging from 250 to 3,700 mg/kg. These samples were collected from 8 of the 11 borings at depths ranging from 2.5 to 15 feet bgs. ORO was detected at concentrations exceeding the MTCA Method A cleanup level of 2,000 mg/kg at two locations: in a sample collected from boring FB-1 at a depth of 5 feet bgs, and in the boring for monitoring well FMW-132 in the existing building and within about 20 feet west of boring FB-1 at a depth of 5 feet bgs.

Two soil samples collected from boring FB-1, including the soil sample collected at a depth of 5 feet bgs, were re-analyzed for DRO and ORO after using the silica gel cleanup process intended to remove interference in analytical results presented by natural organic material in the sample aliquot, which could contribute to reported petroleum hydrocarbon concentrations using the standard analytical method without cleanup. DRO and ORO analyzed using silica gel cleanup were detected at lower concentrations than detected in the two soil samples analyzed without cleanup, suggesting some interference from natural organic material in these soil samples.

GRO was detected in one soil sample collected from boring FB-6 at a depth of 2.5 feet bgs at a concentration less than the MTCA Method A cleanup level of 100 mg/kg. The laboratory report indicated that the chromatogram for the GRO detected in the soil sample from boring FB-6 was not a typical gasoline.



3.3.1.2 Polycyclic Aromatic Hydrocarbons, Other Semivolatile Organic Compounds and Chlorinated Volatile Organic Compounds

Total cPAHs were calculated as a toxic equivalent concentration using a method prescribed by MTCA (WAC 173-340-708[e]): total cPAHs TEC. The calculation is based on a toxicity equivalency factor-weighted sum of concentrations of individual cPAHs.¹

A total of 20 soil samples, collected at depths up to 35 feet bgs, were analyzed for cPAHs, naphthalenes, other SVOCs, and 10 soil samples for CVOCs.

Total cPAHs TEC was detected in 6 of the 20 soil samples submitted for laboratory analysis at concentrations ranging from 0.036 to 12.5 mg/kg. These samples were collected from 5 of the 11 borings at depths ranging from 2.5 to 15 feet bgs. Total cPAHs TEC was detected at concentrations exceeding the MTCA Method A cleanup level of 0.1 mg/kg in 5 of the 6 soil samples where total cPAHs TEC was detected. The following five locations where total cPAHs TEC exceeded the MTCA Method A cleanup level are described below:

- A concentration of 3.4 mg/kg in the soil sample collected from boring FB-1 at 5 feet bgs;
- A concentration of 15 mg/kg in the soil sample collected from boring FB-2 at 5 feet bgs;
- A concentration of 0.52 mg/kg in the soil sample collected from boring FB-4 at 10 feet bgs;
- A concentration of 0.65 mg/kg in the soil sample collected from boring FB-6 at 2.5 feet bgs; and
- A concentration of 12.5 mg/kg in the soil sample collected from the boring for monitoring well FMW-132 at 5 feet bgs.

A total naphthalene concentration was calculated using the method prescribed by MTCA. The calculation is a sum of concentrations of three individual naphthalenes.² Total naphthalenes were detected in 13 of the 20 soil samples submitted for laboratory analysis at concentrations ranging from 0.029 to 6.6 mg/kg. The samples were collected from 9 of the 11 borings at depths ranging from 2.5 to 30 feet bgs. Total naphthalenes were detected at concentrations exceeding the MTCA Method A cleanup level of 5 mg/kg at one location, the boring for monitoring well FMW-132 at a depth of 5 feet bgs.

Some non-carcinogenic PAHs and other SVOCs³ were detected at concentrations exceeding laboratory reporting limits in 13 of the 20 soil samples submitted for laboratory

¹ Benzo(a)Pyrene, benzo(a)Anthracene, benzo(b)Fluoranthene, benzo(j,k)Fluoranthene, chrysene, dibenzo(a,h)Anthracene, and indeno(1,2,3-cd)Pyrene.

² Naphthalene, 1-methylnaphthalene, and 2-methylnaphthalene.

³ Acenaphthene, acenaphthylene, anthracene, benzo(g,h,i)Perylene, fluoranthene, fluorene, phenanthrene, pyrene, 2,4-dimethylphenol, carbazole, and dibenzofuran.



analysis, collected from 9 of the 11 borings at depths ranging from 2.5 to 35 feet bgs. Non-carcinogenic PAHs and other SVOCs were not detected at concentrations exceeding MTCA Method A cleanup levels or other MTCA cleanup criteria. Non-carcinogenic PAHs and other SVOCs were not detected at concentrations exceeding laboratory reporting limits in 7 of the 20 soil samples submitted for laboratory analysis, collected at depths of up to 30 feet bgs.

A total of seven soil samples, collected at depths up to 50 feet bgs, were analyzed for CVOCs. CVOCs were not detected at concentrations exceeding laboratory reporting limits in the soil samples collected from borings FB-02, FB-04, and FB-05 and monitoring wells FMW-135 and FMW-136 (Table 4).

3.3.1.3 Metals

Barium, chromium, lead, and/or mercury were detected at concentrations exceeding laboratory reporting limits, but less than MTCA Method A cleanup levels, in all 15 soil samples submitted for laboratory analysis, collected from 9 of the 11 borings at depths ranging from 5 to 35 feet bgs. The other metals tested were not detected at concentrations exceeding MTCA Method A cleanup levels or other MTCA criteria. No Toxicity Characteristic Leaching Procedure laboratory analysis was conducted for disposal characterization, as total metals concentrations were considerably less than 20 times the Toxicity Characteristic Leaching Procedure criteria for metals concentrations in soil acceptable for disposal at Subtitle D permitted facilities.

3.3.2 Groundwater

COPCs detected in groundwater samples are summarized in Figure 4. Stabilized groundwater field parameters measured during groundwater sampling are presented in Table 5. Analytical results for groundwater samples are presented in Tables 6 through 8 and described below. Laboratory analytical reports are provided in Appendix B.

3.3.2.1 Petroleum Hydrocarbons

DRO and/or ORO were detected at concentrations ranging from 260 to 1,000 micrograms per liter ($\mu\text{g}/\text{l}$) in a reconnaissance groundwater sample collected in one boring, and in groundwater samples collected from three monitoring wells. DRO was detected at concentrations exceeding the MTCA Method A cleanup level of 500 $\mu\text{g}/\text{l}$ in groundwater samples collected from two locations: at a concentration of 660 $\mu\text{g}/\text{l}$ in the reconnaissance groundwater sample collected from borings FB-3; and at a concentration of 1,000 $\mu\text{g}/\text{l}$ ⁴ in the groundwater sample collected from monitoring well FMW-134.

⁴ The laboratory report indicated that the concentration of petroleum hydrocarbons characterized as DRO in this groundwater sample was impacted by the hydrocarbons characterized as GRO.



GRO was detected in a reconnaissance groundwater sample collected from one boring and in a groundwater sample collected from one monitoring well at concentrations exceeding the MTCA Method A cleanup level of 800 µg/l:

- GRO was detected at a concentration of 2,100 µg/l in a reconnaissance groundwater sample collected at a depth of 15 to 20 feet bgs (7.2 to 2.2 feet above msl) in the boring for monitoring well FMW-130⁵ in July 2014. BTEX also was detected in this reconnaissance groundwater sample, and benzene was detected at a concentration of 5.1 µg/l, slightly exceeding the 5 µg/l MTCA Method A cleanup level. Toluene, ethylbenzene, and xylenes were not detected at concentrations exceeding MTCA Method A cleanup levels.
- GRO was detected at a concentration of 1,100 µg/l⁶, exceeding the MTCA Method A cleanup level, in a groundwater sample collected from monitoring well FMW-134.

GRO and BTEX were not detected at concentrations exceeding laboratory reporting limits in the other groundwater samples collected at Block 38 West.

3.3.2.2 Polycyclic Aromatic Hydrocarbons

Total cPAHs TEC was not detected at concentrations exceeding laboratory reporting limits in the six groundwater samples submitted for laboratory analysis.

Total naphthalenes were detected at concentrations ranging from 0.39 to 312 µg/l in three of the seven groundwater samples submitted for laboratory analysis. Total naphthalenes were detected at concentrations exceeding the MTCA Method A cleanup level of 160 µg/l at one location, monitoring well FMW-134.

Some non-carcinogenic PAHs were detected at concentrations exceeding laboratory reporting limits in four of the six groundwater samples submitted for laboratory analysis. The detected concentrations of non-carcinogenic PAHs were less than the MTCA Method A cleanup levels or other applicable MTCA cleanup criteria.

3.3.2.3 Volatile Organic Compounds

BTEX VOCs were discussed above in Section 3.3.2.1, Petroleum Hydrocarbons. Remaining VOCs were not detected at concentrations exceeding their respective MTCA Method A cleanup level for the groundwater samples noted below.

- 1,1,1-Trichloroethane, cis-1,2-Dichloroethene, and chloroform were detected in a groundwater sample collected from monitoring well FMW-130 on July 24, 2014 at concentrations less than their respective MTCA cleanup criteria. These VOC

⁵ The screen for monitoring well FMW-130 subsequently was set between elevations of 22.8 to 32.8 feet below msl.

⁶ The laboratory report indicated that the concentration of petroleum hydrocarbons characterized as GRO in this groundwater sample was attributed to a single peak on the chromatogram, which was in the range of naphthalene. Naphthalene was quantified at a concentration of 160 µg/l in this groundwater sample.



constituents were not detected in the groundwater sample collected from monitoring well FMW-130 on July 3, 2017. Cis-1,2-Dichloroethene was detected again in a groundwater sample collected from monitoring well FMW-130 on August 30, 2018 at a concentration less than its MTCA cleanup level.

- Acetone was detected in a reconnaissance groundwater sample collected from boring FB-3 on August 23, 2018 at a concentration less than its MTCA cleanup level.
- Chloroform was detected in a groundwater sample collected from monitoring well FMW-135 on August 30, 2018 at a concentration less than its MTCA cleanup level.
- Chloroform was detected in a groundwater sample collected from monitoring well FMW-136 on August 30, 2018 at a concentration exceeding the MTCA cleanup level.

VOCs otherwise were not detected at concentrations exceeding the laboratory reporting limit or their respective MTCA Method A cleanup level in the remaining groundwater samples collected from Block 38 West.

3.4 SUSPECTED SOURCES OF CONTAMINATION

No specific uses or features have been confirmed as the source of soil and groundwater contamination at Block 38 West. Suspected sources of contamination include:

- Adjacent properties with documented petroleum releases referred to in Section 2.2, Block 38 West and Vicinity Land Uses and Prior Environmental Assessments, and migration to Block 38 West via groundwater transport from properties including the following:
 - Rosen property on Block 38 East (960 Republican Street);
 - Ivars Commissary (500 Terry Avenue North); and
 - Former Unocal station (600 Westlake Avenue North, Block 37).
- Waste constituents, including naphthalenes and PAH constituents, migrating to Block 38 West via groundwater transport from the former coal gas facility (815 Mercer Street, Block 50).
- Possible spills and leaks of petroleum constituents associated with former equipment or auto parking/repair operations, blacksmith shops, and/or heating oil storage at Block 38 West.
- Possible placement of contaminated fill material at Block 38 West prior to construction of the existing building.
- Other possible unidentified sources beyond the boundaries of Block 38 West.



3.5 CONSTITUENTS AND MEDIA OF CONCERN

The results of the Subsurface Investigations indicate constituents of concern (COCs) and media of concern as summarized below.

3.5.1 Constituents of Concern

COCs identified for cleanup at Block 38 West consist of those COPCs detected in soil or groundwater samples collected from Block 38 West at concentrations exceeding MTCA Method A cleanup levels or other applicable MTCA cleanup criteria.

The COCs for soil are:

- ORO;
- Total naphthalenes; and
- Total cPAHs TEC.

The COCs for groundwater are:

- GRO;
- Benzene;
- DRO; and
- Total naphthalenes.

Chloroform was detected at a concentration exceeding the MTCA Method A cleanup level in a groundwater sample collected from monitoring well FMW-136 on August 30, 2018. Chloroform was detected in two other groundwater samples and in the water sample collected from the potable water supply, which was used during drilling. Chloroform is a byproduct of the treatment of municipal water supplies and also is a common contaminant in analytical laboratories and so was not retained as a COC for groundwater. Potable water was introduced to the subsurface during drilling to help control heaving sands and was subsequently recovered during well development. Potable water also can be introduced to the subsurface from leaking water supply and/or sewer piping in the vicinity.

3.5.2 Media of Concern

The media of concern at Block 38 West are soil and groundwater.

3.6 BLOCK 38 HYDROGEOLOGY

Groundwater levels were measured during the August 30, 2018 groundwater sampling event. Depth to water in monitoring wells FMW-130 and FMW-132 through FMW-136 ranged from 5.14 to 8.66 feet bgs (Table 9). Based on the depth-to-water measurements, groundwater elevations ranged from 16.32 to 18.15 feet msl at Block 38 West (Table 9). Based on groundwater levels measured in wells screened in the Shallow Water-Bearing Zone during the August 30, 2018



groundwater monitoring event (Table 9), the inferred groundwater flow direction for this zone is southerly, with a horizontal hydraulic gradient of approximately 0.006 feet/foot, and is inferred to steepen to the south toward the Republican Street Drain. The groundwater flow direction was not estimated for the Intermediate Water-Bearing Zone or the Deep Outwash Aquifer due to the insufficient number of wells screened in those water-bearing zones. A groundwater elevation contour map for the Shallow Water-Bearing Zone at Block 38 West is provided as Figure 5.

Groundwater flow direction in the vicinity of Block 38 West has been affected in recent years by transient conditions related to construction dewatering activities in the South Lake Union area and the presumed effects of groundwater infiltration into the Republican Street Drain structure or backfill. Other factors affecting groundwater flow direction in the Shallow Water-Bearing Zone at Block 38 West include groundwater recharge at higher elevations on Queen Anne Hill and Capitol Hill flowing eastward and westward, respectively, down toward the South Lake Union area and Lake Union itself; and variable characteristics of water-bearing fill. The groundwater flow direction at Block 38 West likely is variable over time.

3.7 NATURE AND EXTENT OF CONTAMINATION

Based on the results of the Subsurface Investigations, the nature and extent of contamination at Block 38 West is shown on Figure 6 for soil and Figure 4 for groundwater. Figure 3 shows the nature and extent of contamination at Block 38 West in vertical cross-section. Tables 1 through 8 present analytical results for COCs detected in soil and groundwater samples collected at Block 38 West. Figures 7 through 13 show the estimated lateral and vertical extents of impacted soil at Block 38 West in 5-foot-thick lifts for purposes of soil disposal planning during construction excavation.

3.7.1 Soil

COCs for soil were detected at concentrations exceeding their respective MTCA Method A cleanup levels in shallow soil samples collected from the following locations on the eastern portion of Block 38 West:

- Boring FB-1 – ORO and total cPAHs TEC in a soil sample collected from 5 feet bgs;
- Boring FB-2 – total cPAHs TEC in a soil sample collected from 5 feet bgs;
- Boring FB-4 – total cPAHs TEC in a soil sample collected from 10 feet bgs;
- Boring FB-6 – total cPAHs TEC in a soil sample collected from 2.5 feet bgs; and
- The boring for monitoring well FMW-132 – ORO, total naphthalenes, and total cPAHs TEC in a soil sample collected from 5 feet bgs.

COCs detected in soil at concentrations exceeding their respective MTCA Method A cleanup levels at Block 38 West are bounded vertically by soil samples collected from boring FB-1 at a depth of 15 feet bgs, boring FB-2 at a depth of 25 feet bgs, boring FB-4 at a depth of 15 feet bgs, boring FB-6 at a depth of 10 feet bgs, and the boring for monitoring well FMW-133 at a depth of 10 feet bgs.



COCs detected in soil at concentrations exceeding their respective MTCA Method A cleanup levels at Block 38 West are bounded laterally to the west by soil samples collected from the boring for monitoring well FMW-135 and from borings FB-3 and FB-5, and bounded laterally to the south by soil samples collected from the borings for monitoring wells FMW-134 and FMW-136. The lateral extent of COCs detected in soil at concentrations exceeding MTCA Method A cleanup levels is not bounded to the north or to the east, as soil samples could not be collected during the Subsurface Investigations because of access limitations. In advance of or during redevelopment of Block 38 West, soil samples will be collected along the northern portion of the alley to define the eastern extent of shallow soil contamination encountered at Block 38 West.

3.7.2 Groundwater

COCs for groundwater were detected at concentrations exceeding their MTCA Method A cleanup levels in reconnaissance groundwater samples collected from the following locations:

- Boring FB-3 – DRO in a reconnaissance groundwater sample collected from between 17 and 22 feet bgs; and
- The boring for monitoring well FMW-130 in July 2014 – GRO, benzene, and total naphthalenes in a reconnaissance groundwater sample collected from 15 to 20 feet bgs.

COCs for groundwater were detected at concentration exceeding their respective MTCA Method A cleanup levels in groundwater samples collected from the following locations:

- Monitoring well FMW-134 – GRO, DRO, and total naphthalenes; and
- Monitoring well FMW-136 – chloroform.

The lateral extent of COCs in the Shallow Water-Bearing Zone at concentrations exceeding their respective MTCA Method A cleanup levels is not bounded off Block 38 West to the west, south, and east. Monitoring wells were not installed outside the Block 38 West property during the Subsurface Investigations. An assessment of deeper groundwater quality will be conducted in advance of redevelopment and will be reported in a later report. There are no data generated to date that suggest soil or groundwater contamination at Block 38 West currently extends to deeper water-bearing zones.



4.0 CONSTRUCTION EXCAVATION

This section describes the cleanup action selected for Block 38 West (Cleanup Action) and a plan for managing impacted soil during construction. The Cleanup Action will not foreclose future remedial action in the rights-of-way bounding Block 38 West.

For purposes of this document, the terms Contaminated Soil and Contaminated Groundwater refer to soil or groundwater containing COCs at concentrations exceeding MTCA Method A cleanup levels. The terms Impacted Soil and Impacted Groundwater, used in the context of materials management during construction, refer to soil and groundwater containing concentrations of constituents exceeding analytical laboratory reporting limits and criteria for off-site reuse, disposal, or discharge of clean soil or groundwater. Impacted Soil and Impacted Groundwater may, or may not, be considered as Contaminated Soil and Contaminated Groundwater depending on whether COCs were detected at concentrations exceeding MTCA cleanup levels. Management of Impacted Soil necessitates special handling considerations during construction. Impacted Groundwater requires special handling, and may require treatment, to comply with discharge protocols or authorizations. Impacted Soil or Impacted Groundwater may be distinguished from clean media with sample laboratory analysis and/or visual, olfactory, or field screening indications of elevated petroleum concentrations (e.g., staining, petroleum odors, volatile vapors measured with a photoionization detector).

4.1 CLEANUP ACTION OBJECTIVES

The objective of the Cleanup Action is to protect human health and the environment by meeting the requirements of MTCA for the Block 38 West property or the “site” as defined under MTCA.⁷

4.2 SCHEDULE AND RESTORATION TIME FRAME

The Cleanup Action will meet the requirements for cleanup actions under MTCA within an approximately 10-month period of construction, scheduled to begin in mid- to late 2019. Removal and off-site disposal of Contaminated Soil will result in achievement of cleanup standards for soil at Block 38 West over the course of a 2- to 3-month excavation period. Removal and treatment of Contaminated Groundwater will result in achievement of cleanup standards for groundwater at Block 38 West over the course of an estimated 8- to 10-month groundwater withdrawal and treatment period.

4.3 CONSTRUCTION MANAGEMENT

All construction work, including implementation of the Cleanup Action, will be managed by a general contractor selected by City Investors (General Contractor). Numerous specialty subcontractors will provide a range of services during construction of the Building and implementation of the Cleanup Action. Subcontractors most involved with implementation of the

⁷ Per WAC 173-340-200, the term “site” is used for the area where a hazardous substance has been deposited, stored, disposed of, or placed, or otherwise came to be located.



Cleanup Action will perform soil excavation (Excavation Subcontractor) and drilling services (Drilling Subcontractor) for installation of shoring components. Both the Excavation Subcontractor and the Drilling Subcontractor will generate Impacted Soil, which will require disposal at facilities permitted to receive the applicable type of soil. A dewatering consultant and a Contaminated Groundwater treatment consultant (collectively Wastewater Consultants) will provide City Investors with services related to operating the dewatering system and extracting and treating Impacted Groundwater (including Contaminated Groundwater) prior to discharge per a temporary discharge permit. An environmental consultant will provide City Investors with services related to implementation of the Cleanup Action (Environmental Consultant). Farallon has been selected by City Investors as the Environmental Consultant for the Cleanup Action. Implementation of the Cleanup Action will require the Environmental Consultant to consult with City Investors, the General Contractor, the Excavation Subcontractor, the Drilling Subcontractor, and the Wastewater Consultants regarding design and implementation of the Cleanup Action.

4.4 ELEMENTS OF CLEANUP ACTION

The Cleanup Action includes the following general elements that will be conducted during construction of the Building, detailed in the sections that follow. During construction, the contaminated Shallow Water-Bearing Zone and the upper portion of the Intermediate Water-Bearing Zone will be dewatered and contaminated soil removed as part of the excavation activities. After construction, these portions of the Shallow and Intermediate Water-Bearing Zones will no longer exist on the Block 38 West property. A waterproofing and vapor barrier will be installed along the exterior subsurface walls and the subsurface floor of the Building to prevent the Block 38 West property from being re-contaminated by hazardous substances that may remain in the adjoining rights-of-way. Following completion of the construction activities, compliance groundwater monitoring will not be conducted as the Shallow Water-Bearing Zone and upper portion of the Intermediate Water-Bearing Zone will no longer be present on the Block 38 West property.

- **Site preparation** includes decommissioning monitoring wells within the boundaries of Block 38 West, installing erosion-control measures prior to beginning excavation, and installing shoring piles and lagging for the excavation shoring system along the perimeter of Block 38 West.
- **Dewatering and wastewater treatment and discharge** includes installing a dewatering system to achieve sufficient groundwater drawdown to enable excavation to a desired depth, and installing a wastewater treatment system to treat COCs in groundwater extracted from the Shallow and Intermediate Water-Bearing Zones and the Deep Outwash Aquifer to achieve MTCA cleanup standards and the authorized discharge criteria. Discharged groundwater will be monitored to confirm that the authorized discharge limits are met.
- **Contaminated soil management** includes excavation, handling, transportation, and disposal of Contaminated Soil generated during mass excavation across the entirety of Block 38 West to approximately 10 feet below msl, and installation of shoring. Contaminated soil removed from Block 38 West will be managed and disposed of per



Ecology (2016) (Ecology Guidance), the disposal criteria of the disposal facilities selected by City Investors, and applicable hazardous waste regulations.

- **Compliance soil monitoring** includes performance and confirmation soil sampling and analysis to guide the excavation and handling of Contaminated Soil and to document compliance with MTCA Method A cleanup levels.
- **Waterproof concrete and vapor barrier installation** includes current construction plans that specify that the exterior walls and floor slab of the underground portion of the Building will be constructed of waterproof concrete below the water table and a vapor barrier will be installed above the water table. No provisions for drainage are planned or needed. The exterior walls and floor slab of the underground portion of the Building and the additional protective measures of the waterproof concrete and vapor barrier will prevent future migration of and potential exposure to contaminated groundwater, if present, emanating from sources at properties adjacent to or in the vicinity of Block 38 West.

4.4.1 Site Preparation

Preparation for implementation of the Cleanup Action and for construction of the Building includes installation of security and erosion controls per permitted construction plans. Work related to re-routing underground utilities out of the construction area or decommissioning them will be completed before construction excavation. Current construction plans specify that a system of soldier piles and lagging be installed around the outside perimeter of Block 38 West, which will be installed concurrently with implementation of the Cleanup Action.

Prior to construction excavation, the monitoring wells at Block 38 West will require decommissioning in accordance with the *Minimum Standards for Construction and Maintenance of Wells* (WAC 173-160). Each monitoring well will be decommissioned by backfilling the well casing with bentonite chips from the total depth of the installation to surface grade, and hydrating the bentonite with water in accordance with WAC 173-160-381. The flush-mounted well monuments will be removed.

4.4.2 Dewatering and Wastewater Treatment and Discharge

Construction excavation requires installation of a dewatering system and a wastewater treatment system per plans and specifications of the Wastewater Consultants. The dewatering system will achieve drawdown to approximately 2 feet below final subgrade to a maximum depth of approximately 10 feet below msl across Block 38 West for a period of up to approximately 10 months. The wastewater treatment system will treat groundwater extracted from the Shallow and Intermediate Water-Bearing Zones and the Deep Outwash Aquifer sufficient to achieve permit requirements prior to discharge to Lake Union or, alternatively, to meet criteria for discharge to the municipal sanitary sewer.⁸

Middour Consulting LLC (2018) prepared a groundwater control plan and specifications for a dewatering system to draw groundwater below the maximum excavation depth required for the

⁸ The wastewater treatment system will be designed to capture and treat stormwater on the construction site.



redevelopment design. Middour Consulting LLC (2018) indicates that eighteen 12-inch-diameter dewatering wells installed in 30- to 36-inch-diameter boreholes drilled around the perimeter of Block 38 West and screened from 10 feet above msl to 30 feet below msl will extract groundwater at a combined rate of about 800 gallons per minute after about 1 week of pumping, tapering to about 540 gallons per minute after a period of about 1 month of operation. Each well will have a pump capable of initially discharging up to 100 gallons per minute under 70 feet of total dynamic head. The dewatering system will be operated continuously until the excavation is complete, the exterior walls and the floor slab are constructed with waterproof concrete below the water table and a vapor barrier above, and sufficient structural weight of the Building is in place to counteract buoyancy. Dewatering system observation wells currently are being planned.

4.4.3 Contaminated Soil Management

Impacted Soil, including the Contaminated Soil generated during construction of the Building, will require special handling and disposal measures beyond those needed for handling and disposing of clean soil. Contaminated Soil will be excavated, segregated, stored temporarily, and disposed of off the site in accordance with Washington State Solid Waste Management Laws and Regulations (Chapter 70.95 of the Revised Code of Washington; WAC 173-351 and 173-304) and the Ecology Guidance. Based on data collected to date, approximately 76,000 tons of Impacted Soil is estimated to be present at Block 31 West, of which less than about 10 percent is estimated to be Contaminated Soil. Management of Impacted Soil, including Contaminated Soil, will be conducted concurrently with other construction activities such as shoring, dewatering, and excavation of Category 1 soil or clean soil that meets criteria for reuse as clean fill or meets acceptance criteria for disposal at a facility or site selected by the Excavation Subcontractor (Table 10). Appendix C includes soil data representative of Category 1 Soil at Block 38 West. Construction excavation will result in elimination of the Shallow Water-Bearing Zone and the upper portion of the Intermediate Water-Bearing Zone to the depth of final subgrade at Block 38 West.

Construction workers encountering Impacted Soil will have completed 40-Hour Hazardous Waste Operations and Emergency Response training in accordance with Part 1910.120 of Title 29 of the Code of Federal Regulations and will have completed Annual 8-Hour Hazardous Waste Operations and Emergency Response refresher training, as needed.

Figures 7 through 13 show the estimated extent of Impacted Soil at Block 38 West in 30-foot-square grid cells and 5-foot-thick lifts (Lift Maps). The estimated extent of Impacted Soil shown on the Lift Maps is based on results from field observations and screening and on laboratory analytical results from the Subsurface Investigation. Lift Maps will be continually updated by the Environmental Consultant as new field-screening results and analytical data become available from performance soil samples collected during the Cleanup Action.

Supplemental characterization of soil, possibly including collection of soil samples from test pits, will be conducted during the Cleanup Action to refine estimated extents of Impacted Soil, including Contaminated Soil. Test pit soil sampling also will serve the purposes of performance and confirmation soil sampling described in more detail in Section 4.4.4, Compliance Soil



Monitoring, and Appendix D, Sampling and Analysis Plan. Test-pit soil sampling and analysis will be conducted by the Environmental Consultant using equipment and an operator provided by the Excavation Subcontractor.

Excavated soil that will be transported off Block 38 West for reuse or disposal will be segregated by category according to Ecology Guidance and/or acceptance criteria of the disposal facility. Four general categories of soil are anticipated to be managed during construction excavation and implementation of the Cleanup Action:

- **Category 1 Soil** has no olfactory, visual, or other evidence of contamination (e.g., odor, staining, sheen, elevated photoionization detector readings) and meets criteria for reuse as clean fill or meets acceptance criteria for disposal at a facility or site selected by the Excavation Subcontractor. Category 1 Soil does not include Impacted Soil and is not a threat to human health or the environment as indicated by the Ecology Guidance and can be reused where allowed under other regulations. Category 1 Soil will be segregated from Impacted Soil to the maximum extent practicable and transported off Block 38 West to the selected destination. Category 1 Soil is indicated by blue-green hatching on the Lift Maps. Appendix C includes soil data representative of Category 1 Soil at Block 38 West.
- **Category 2 Soil** contains COCs or other constituents at concentrations meeting acceptance criteria for disposal at the Category 2 disposal facility selected by City Investors, or by the Excavation Subcontractor with approval from City Investors. Category 2 Soil includes soil that may not contain detected concentrations of petroleum hydrocarbons, but exhibits olfactory, visual, or other evidence of contamination. Category 2 Soil includes Impacted Soil (but not Contaminated Soil) containing COCs and other constituents at concentrations meeting acceptance criteria for the Category 2 Soil disposal facility, and not meeting the criteria for handling as Category 1 Soil. Category 2 Soil is indicated by yellow shading on the Lift Maps.
- **Category 3 Soil** is excavated Impacted Soil containing COCs or other constituents at concentrations not meeting acceptance criteria for disposal at the Category 2 Soil disposal facility, but meeting acceptance criteria for disposal at the Category 3 disposal facility selected by City Investors, or by the Excavation Subcontractor with approval from City Investors. Category 3 Soil may require pre-treatment by the selected disposal facility prior to disposal. Category 3 Soil includes Contaminated Soil and Impacted Soil from Block 38 West containing constituent concentrations not meeting the criteria for disposal as Category 2 Soil. Category 3 Soil is indicated by orange shading on the Lift Maps.
- **Category 3+ Soil** is excavated Impacted Soil containing COCs or other constituents (e.g., wood material) not meeting acceptance criteria for disposal at the Category 3 Soil disposal facility, but meeting acceptance criteria for disposal at the Category 3+ disposal facility selected by City Investors, or by the Excavation Subcontractor with approval from City Investors. Category 3+ Soil may require pre-treatment by the selected disposal facility prior to disposal. Category 3+ Soil includes Contaminated Soil and Impacted Soil from Block 38 West containing constituent concentrations not meeting the criteria for disposal as Category 3 Soil. Category 3+ Soil is indicated by red shading on the Lift Maps.



The Environmental Consultant will observe the construction excavation and drilling during installation of select shoring piles to depths where Impacted Soil or Contaminated Soil is no longer anticipated, as reflected on the Lift Maps. The Environmental Consultant will conduct field screening, following the procedures described in the Sampling and Analysis Plan (provided as Appendix D), in areas of confirmed or suspected Impacted Soil to classify the soil as Category 2 or Category 3 Soil. Field screening may consist of visual observation for evidence of soil staining or discoloration, and/or notation of noticeable odors, and may include use of field instrumentation such as a photoionization detector for detection of volatile vapors. The Environmental Consultant will perform performance and confirmation soil sampling per Section 4.4.4, Compliance Soil Monitoring, and the Sampling and Analysis Plan (Appendix D). The Environmental Consultant will consult with the Excavation Subcontractor and the Drilling Subcontractor as needed regarding management of Impacted Soil based on soil categorization.

If direct loading of excavated soil into trucks is not feasible, temporary stockpiles will be maintained by the Excavation Subcontractor as needed to segregate soil by disposal category until it can be loaded into trucks. The Excavation Subcontractor will use discretion on best means and methods to construct and maintain stockpiles and to prevent intermixing of soil segregated by disposal category to the maximum extent practicable given the constraints of the construction project. The Excavation Subcontractor may consider use of physical barriers such as traffic plates beneath stockpiles to protect clean underlying soil, and/or concrete blocks between stockpiles to prevent commingling of segregated soil. Plastic sheeting should be placed on top of inactive stockpiles to prevent wind or runoff transport of Impacted Soil, and to prevent stockpile cross-contamination pending load-out. Plastic sheeting is not suitable for use beneath stockpiles of Impacted Soil placed on clean soil.

The Environmental Consultant will assist City Investors with manifesting trucks loaded with Impacted Soil, and tracking quantities of soil delivered to disposal facilities. Documentation of soil disposal will be maintained in the project file and used for purposes of regulatory closure under MTCA.

4.4.4 Compliance Soil Monitoring

Requirements for compliance monitoring during implementation of a cleanup action are specified in WAC 173-340-410. Three types of compliance monitoring are identified in MTCA: protection, performance, and confirmation monitoring. This section documents the compliance soil monitoring to be conducted by the Environmental Consultant as part of Cleanup Action.

Health and Safety Plans, including plans for protection monitoring, will be prepared for use by personnel working in the construction excavation. A site-specific Health and Safety Plan will be prepared for use by Farallon as the Environmental Consultant prior to construction excavation. The General Contractor and subcontractors are responsible for their own health and safety, and will follow their own Health and Safety Plans.

Performance and confirmation sampling to be implemented during the Cleanup Action is described in the following sections. Performance sampling includes collection of discrete soil samples to



identify Contaminated Soil for Cleanup Action excavation planning and regulatory purposes and to categorize Impacted Soil for disposal. Confirmation sampling includes collection of discrete soil samples to confirm the removal of Contaminated Soil from Block 38 West and to confirm achievement of soil cleanup standards. Compliance monitoring documentation requirements and the methodology for soil sampling by the Environmental Consultant are provided in the Sampling and Analysis Plan (Appendix D).

4.4.4.1 Performance Soil Sampling

Performance soil sampling includes collection of discrete in-situ soil samples for laboratory analysis to quantify the concentration of COCs (and other constituents required by the disposal facilities) in soil removed from an excavation area with known or suspected Impacted Soil. Results from performance soil sampling conducted to date are indicated on the Lift Maps (Figures 7 through 13) and were used to estimate the limits of Contaminated Soil. Results from future performance soil sampling will be used to refine the estimated lateral and vertical extent of Contaminated Soil and to categorize Impacted Soil for disposal. Key objectives of the performance soil sampling are to minimize the quantity of Impacted Soil requiring disposal as Category 2 or Category 3 Soil and to identify the limits of Contaminated Soil. Results from the performance soil sampling will be used to continually update the Lift Maps, and to track the progress of the Cleanup Action.

The locations and frequency of collection of performance soil samples will be at the discretion of the Environmental Consultant based on professional judgment, requirements for regulatory closure under MTCA, and requirements of the disposal facilities. The frequency of performance soil sampling will be dependent on existing soil analytical data and the results from field screening conducted by the Environmental Consultant, as described in Section 4.4.3, Contaminated Soil Management. If COCs or other constituents required for testing by the disposal facilities are detected in soil samples collected in a particular area, the area may be further divided by the Environmental Consultant into subareas, and additional performance samples may be collected to assess lateral extents. The frequency of performance soil sampling will be higher near the lateral and vertical limits of Contaminated Soil to provide sufficient samples for confirmation sampling. Confirmation soil sampling will be performed as described in Section 4.4.4.2, Confirmation Soil Sampling, to ensure that cleanup standards are met.

4.4.4.2 Confirmation Soil Sampling

Confirmation soil sampling will be conducted once performance soil sampling results indicate the excavation is approaching the lateral and vertical limits of Contaminated Soil. Confirmation soil sampling will consist of collecting and analyzing in-situ soil samples from the base and sidewalls of the excavation to confirm that no COCs are present at concentrations exceeding their respective MTCA cleanup levels. Performance soil sampling locations will be used as confirmation soil sampling points in cases where analytical results for the performance soil samples confirm that cleanup levels have been attained.



4.4.5 Waterproof Concrete and Vapor Barrier Installation

Current construction plans specify that the exterior walls and floor slab of the underground portion of the Building will be constructed along the boundaries of Block 38 West, and the floor will be constructed at approximately 8 feet below msl. The exterior walls and floor slab of the underground portion of the Building will be constructed of waterproof concrete below the water table and a vapor barrier will be installed above the water table. No provisions for drainage are planned or needed. The exterior walls and floor slab of the underground portion of the Building and the additional protective measures of the waterproof concrete and vapor barrier will prevent future migration of and potential exposure to contaminated groundwater, if present, emanating from sources at properties adjacent to or in the vicinity of Block 38 West.

4.5 CLEANUP ACTION COMPLETION REPORT

Following construction completion, the Environmental Consultant will prepare a Cleanup Action Completion Report documenting the Cleanup Action, per WAC 173-340-400(6)(b). The Cleanup Action Completion Report, in addition to reporting documenting the remedial investigation, feasibility study, and Cleanup Action Plan, will provide the technical basis to support a request for a No Further Action determination from Ecology, and a summary of the Cleanup Action, including the limits of the contaminated soil excavation, quantities of contaminated soil disposed of off the site, treatment of groundwater, and results from compliance monitoring.



5.0 REFERENCES

- Galster, Richard W., and William T. Laprade. 1991. "Geology of Seattle, Washington, United States of America." *Bulletin of the Association of Engineering Geologists* 28 (No. 3): 235-302.
- GeoEngineers, Inc. 2018. *Geotechnical Engineering Services, Block 38, Seattle, Washington*. Prepared for City Investors IX, LLC. October 17.
- HartCrowser, Inc. 1999. Letter Regarding Preliminary Environmental Assessment Update, Westlake Avenue Property (428, 500, 510, and 520 Westlake Avenue North), Seattle, Washington. From Rob Roberts and Julie K.W. Wukelic. To City Investors VI LLC, c/o Joe Delaney, Foster Pepper & Shefelman. April 5.
- King County. 2013. Parcel Viewer KCGIS Center, <<https://gismaps.kingcounty.gov/parcelviewer2/>>. (September 17, 2018.)
- Middour Consulting LLC. 2018. *Groundwater Control Plan, Block 38, Seattle, Washington*. Prepared for GLY Construction. October 17.
- Terra Associates, Inc. 1998. *Level I Environmental Site Assessment, Westlake Avenue Building, 534 Westlake Avenue North, Seattle, Washington*. Prepared for Marcus and Millichap. March 25.
- U.S. Geological Survey. 1909. *Seattle Special Quadrangle Map*. May.
- U.S. Environmental Protection Agency (EPA). 1996. *Low Stress (Low Flow) Purging and Sampling Procedure for the Collection of Groundwater Samples from Monitoring Wells*. Publication No. EQASOP-GW-001. July. Updated January 19, 2010.
- Washington State Department of Ecology (Ecology). 2016. *Guidance for Remediation of Petroleum Contaminated Sites*. (Revised.) Publication No. 10-09-057. June.



6.0 LIMITATIONS

6.1 GENERAL LIMITATIONS

The conclusions contained in this report/assessment are based on professional opinions with regard to the subject matter. These opinions have been arrived at in accordance with currently accepted hydrogeologic and engineering standards and practices applicable to this location. The conclusions contained herein are subject to the following inherent limitations:

- **Accuracy of Information.** Farallon obtained, reviewed, and evaluated certain information used in this report/assessment from sources that were believed to be reliable. Farallon's conclusions, opinions, and recommendations are based in part on such information. Farallon's services did not include verification of its accuracy or authenticity. Should the information upon which Farallon relied prove to be inaccurate or unreliable, Farallon reserves the right to amend or revise its conclusions, opinions, and/or recommendations.
- **Reconnaissance and/or Characterization.** Farallon performed a reconnaissance and/or characterization of the Site that is the subject of this report/assessment to document current conditions. Farallon focused on areas deemed more likely to exhibit hazardous materials conditions. Contamination may exist in other areas of the Site that were not investigated or were inaccessible. Site activities beyond Farallon's control could change at any time after the completion of this report/assessment.

For the foregoing reasons, Farallon cannot and does not warrant or guarantee that the Site is free of hazardous or potentially hazardous substances or conditions, or that latent or undiscovered conditions will not become evident in the future. Farallon's observations, findings, and opinions can be considered valid only as of the date of the report.

This report/assessment has been prepared in accordance with the contract for services between Farallon and City Investors IX LLC, and currently accepted industry standards. No other warranties, representations, or certifications are made.

6.2 LIMITATION ON RELIANCE BY THIRD PARTIES

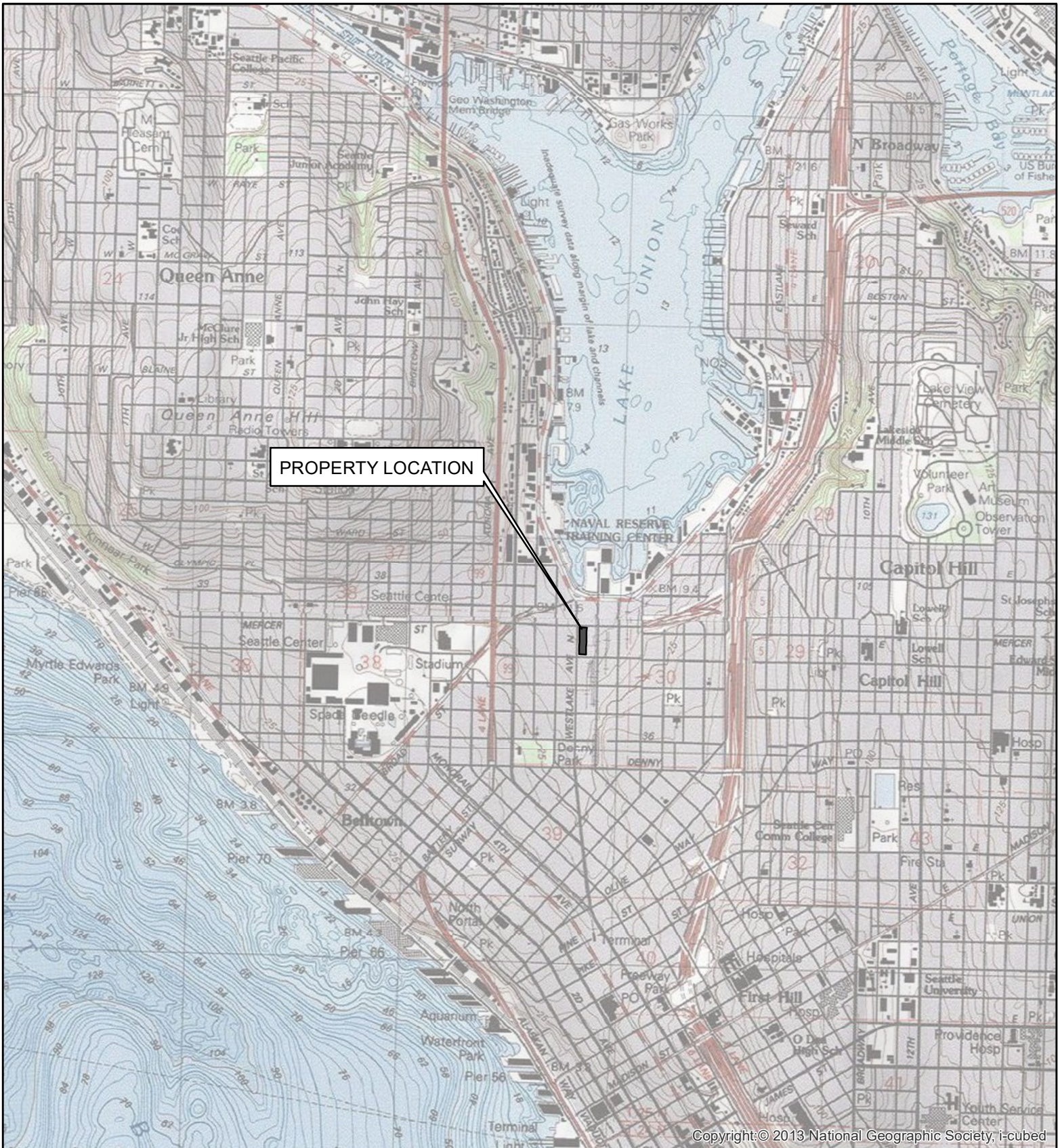
Reliance by third parties is prohibited. This report/assessment has been prepared for the exclusive use of City Investors IX LLC to address the unique needs of City Investors IX LLC at Block 38 West at a specific point in time.

This is not a general grant of reliance. No one other than City Investors IX LLC may rely on this report unless Farallon agrees in advance to such reliance in writing. Any unauthorized use, interpretation, or reliance on this report/assessment is at the sole risk of that party and Farallon will have no liability for such unauthorized use, interpretation, or reliance.

FIGURES

**SUBSURFACE INVESTIGATION REPORT AND ENVIRONMENTAL MEDIA
MANAGEMENT PLAN
Block 38 West Property
500 through 536 Westlake Avenue North
Seattle, Washington**

Farallon PN: 397-019



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REFERENCE: 7.5 MINUTE USGS QUADRANGLE SEATTLE NORTH, WASHINGTON, DATED 1983



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FIGURE 1

VICINITY MAP
BLOCK 38 WEST PROPERTY
SEATTLE, WASHINGTON

FARALLON PN: 397-019

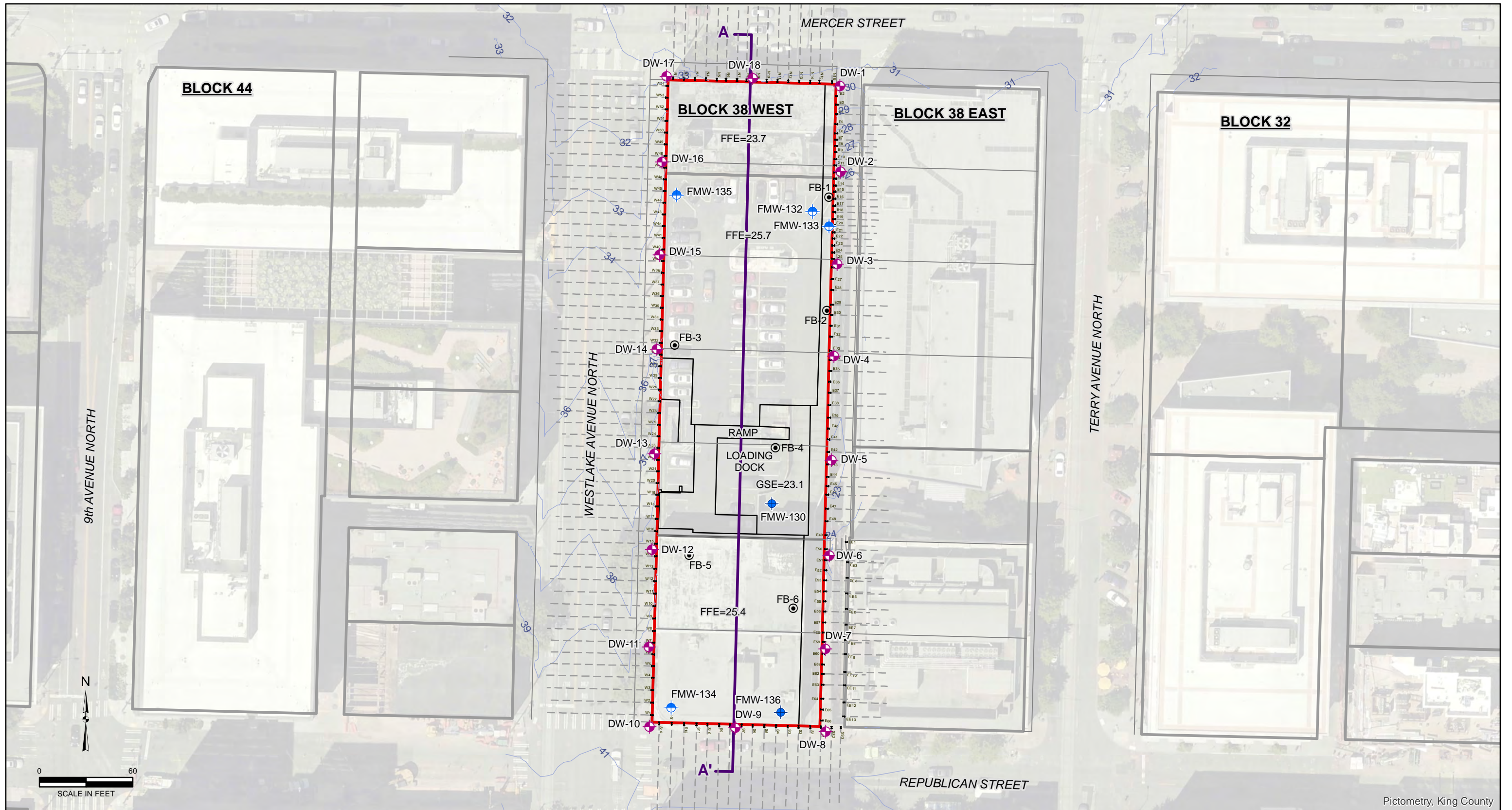
Drawn By: j Jones

Checked By: BJ

Date: 10/29/2018













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Pictometry, King County

LEGEND

-  SHALLOW WATER-BEARING ZONE WELL
-  INTERMEDIATE WATER-BEARING ZONE WELL
-  SOIL BORING
-  DEWATERING WELL
-  38 ELEVATION CONTOUR
-  PROPERTY BOUNDARY
-  KING COUNTY PARCEL BOUNDARY
-  LINE OF CROSS SECTION
-  PILE
-  TIEBACK
-  FFE = APPROXIMATE FINISH FLOOR ELEVATIONS OF GROUND FLOOR OF EXISTING BUILDING
-  GSE = APPROXIMATE GROUND SURFACE ELEVATION OF EXISTING LOADING DOCK AREA

NOTES:
 LOADING DOCK HIGHER THAN GSE
 ELEVATION SOURCE: BUSH, ROED, & HITCHINGS, INC. (2014)
 ELEVATION DATA PRESENTED IN FEET ABOVE MEAN SEA LEVEL IN THE NORTH AMERICAN VERTICAL DATUM OF 1988

ALL LOCATIONS ARE APPROXIMATE.
 FIGURES WERE PRODUCED IN COLOR. GRAYSCALE COPIES MAY NOT REPRODUCE ALL ORIGINAL INFORMATION.



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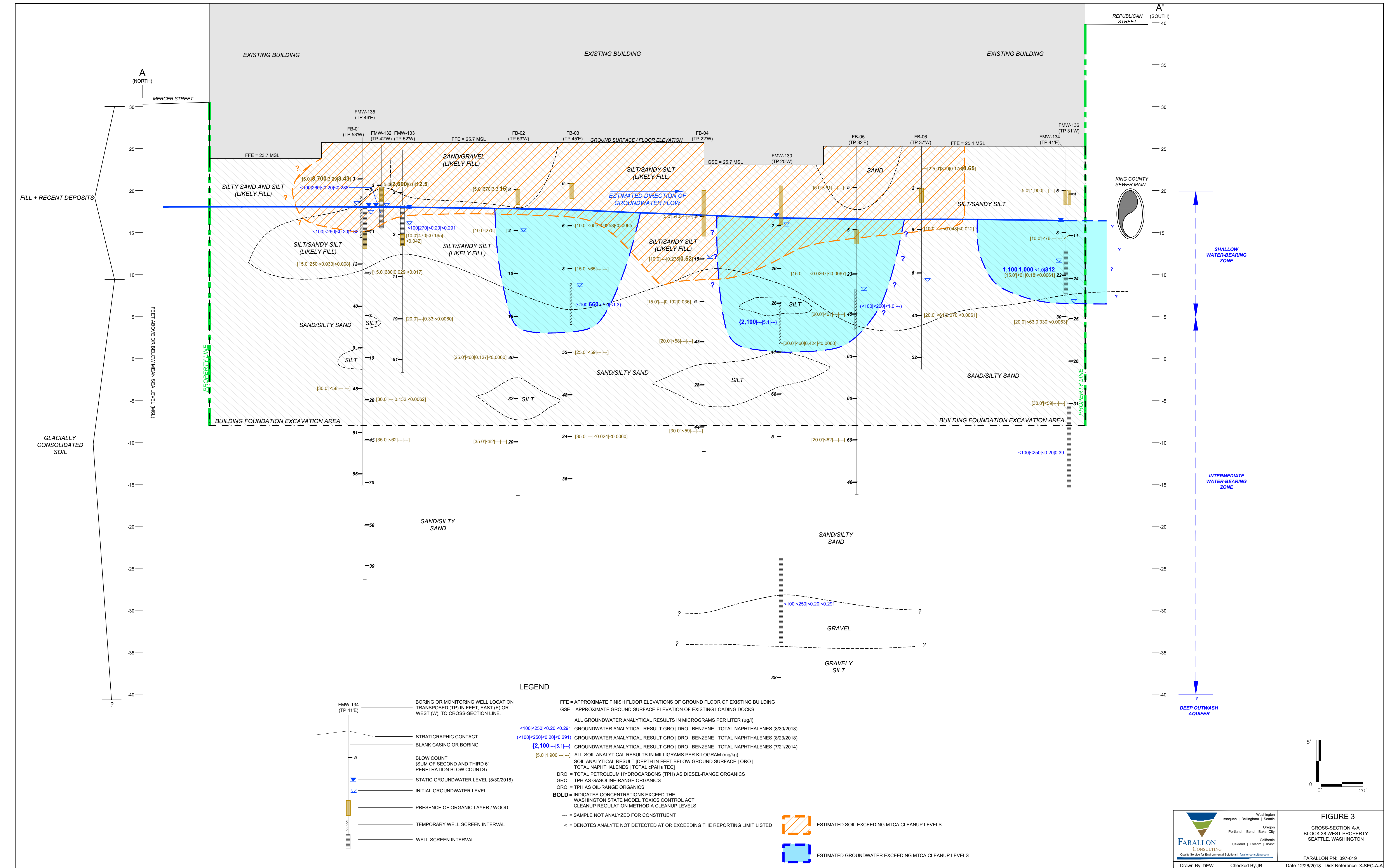
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FIGURE 2
PROPERTY MAP
BLOCK 38 WEST PROPERTY
SEATTLE, WASHINGTON

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Date: 12/28/2018 Disc Reference:
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FILL + RECENT DEPOSITS

GLACIALLY CONSOLIDATED SOIL

A (NORTH)

A' (SOUTH)

MERCER STREET

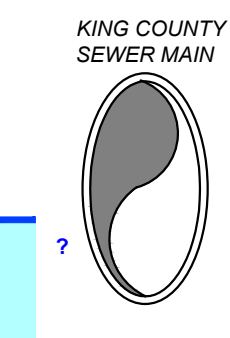
REPUBLICAN STREET

FEET ABOVE OR BELOW MEAN SEA LEVEL (MSL)

EXISTING BUILDING

GROUND SURFACE / FLOOR ELEVATION

BUILDING FOUNDATION EXCAVATION AREA



SHALLOW WATER-BEARING ZONE

INTERMEDIATE WATER-BEARING ZONE

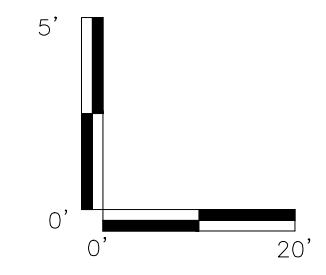
DEEP OUTWASH AQUIFER

LEGEND

- FMW-134 (TP 41E) BORING OR MONITORING WELL LOCATION TRANSPOSED (TP) IN FEET, EAST (E) OR WEST (W), TO CROSS-SECTION LINE.
- STRATIGRAPHIC CONTACT
- BLANK CASING OR BORING
- BLOW COUNT (SUM OF SECOND AND THIRD 6" PENETRATION BLOW COUNTS)
- STATIC GROUNDWATER LEVEL (8/30/2018)
- INITIAL GROUNDWATER LEVEL
- PRESENCE OF ORGANIC LAYER / WOOD
- TEMPORARY WELL SCREEN INTERVAL
- WELL SCREEN INTERVAL

- FFE = APPROXIMATE FINISH FLOOR ELEVATIONS OF GROUND FLOOR OF EXISTING BUILDING
- GSE = APPROXIMATE GROUND SURFACE ELEVATION OF EXISTING LOADING DOCKS
- ALL GROUNDWATER ANALYTICAL RESULTS IN MICROGRAMS PER LITER (µg/l)
- <100|<250|<0.20|<0.291 GROUNDWATER ANALYTICAL RESULT GRO | DRO | BENZENE | TOTAL NAPHTHALENES (8/30/2018)
- <100|<250|<0.20|<0.291 GROUNDWATER ANALYTICAL RESULT GRO | DRO | BENZENE | TOTAL NAPHTHALENES (8/23/2018)
- [2,100]**|-5.1|- GROUNDWATER ANALYTICAL RESULT GRO | DRO | BENZENE | TOTAL NAPHTHALENES (7/21/2014)
- [5.0]1,900|-| SOIL ANALYTICAL RESULTS IN MILLIGRAMS PER KILOGRAM (mg/kg)
- SOIL ANALYTICAL RESULT [DEPTH IN FEET BELOW GROUND SURFACE | ORO | TOTAL NAPHTHALENES | TOTAL gPAHs TEC]
- DRO = TOTAL PETROLEUM HYDROCARBONS (TPH) AS DIESEL-RANGE ORGANICS
- GRO = TPH AS GASOLINE-RANGE ORGANICS
- ORO = TPH AS OIL-RANGE ORGANICS
- BOLD** = INDICATES CONCENTRATIONS EXCEED THE WASHINGTON STATE MODEL TOXICS CONTROL ACT CLEANUP REGULATION METHOD A CLEANUP LEVELS
- - - = SAMPLE NOT ANALYZED FOR CONSTITUENT
- < = DENOTES ANALYTE NOT DETECTED AT OR EXCEEDING THE REPORTING LIMIT LISTED

- ESTIMATED SOIL EXCEEDING MTCA CLEANUP LEVELS
- ESTIMATED GROUNDWATER EXCEEDING MTCA CLEANUP LEVELS



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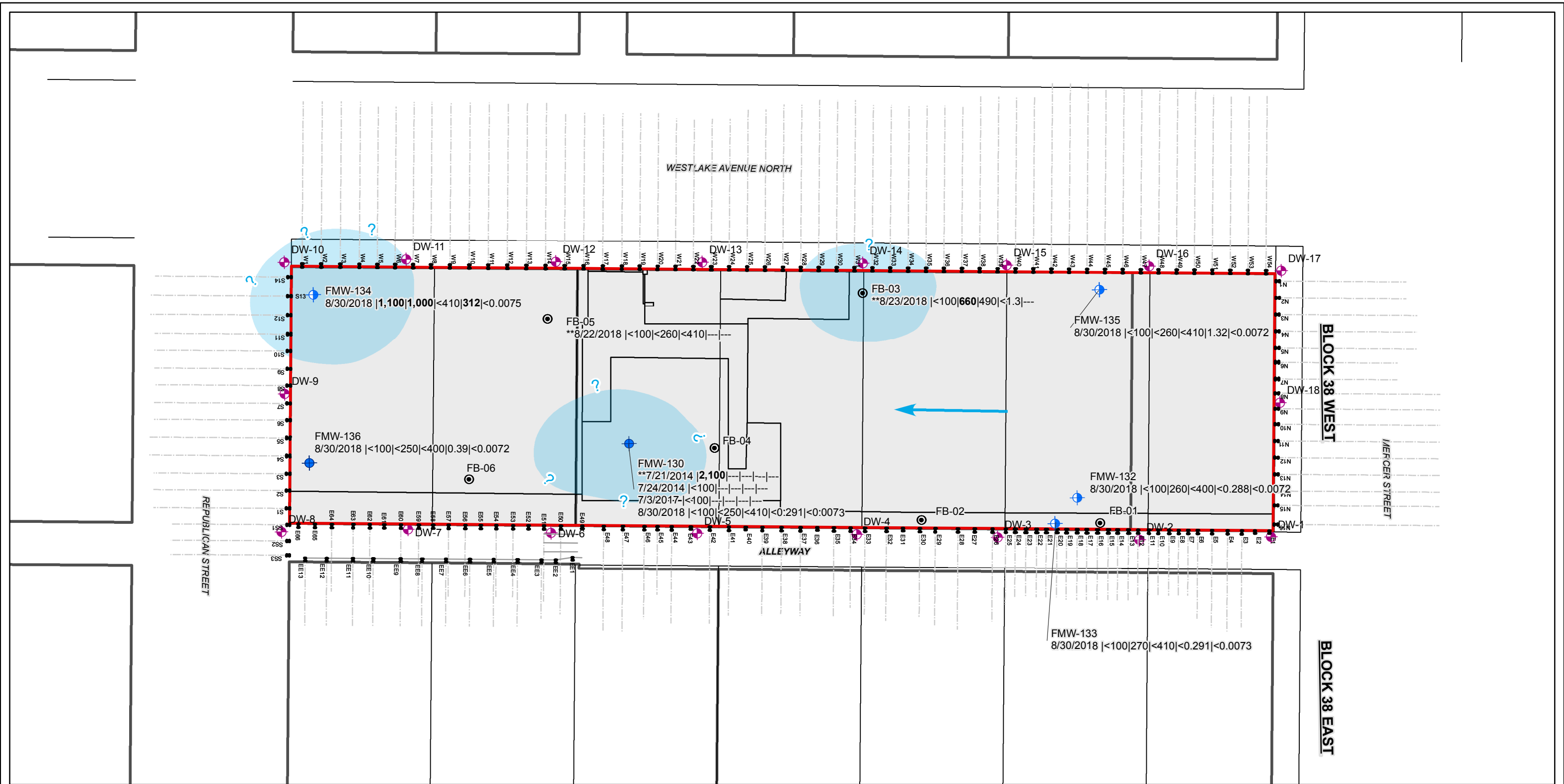
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FIGURE 3
CROSS-SECTION A-A'
BLOCK 38 WEST PROPERTY
SEATTLE, WASHINGTON

FARALLON PN: 397-019



LEGEND

- BORING
- ⊕ SHALLOW WATER-BEARING ZONE WELL
- ⊕ INTERMEDIATE WATER-BEARING ZONE WELL
- ⊕ DEWATERING WELL
- ➔ INFERRED GROUNDWATER FLOW DIRECTION
- ▭ PROPERTY BOUNDARY
- ▭ KING COUNTY PARCEL BOUNDARY

- I PILE
- TIEBACK
- ? GROUNDWATER EXCEEDING MTCA CLEANUP LEVEL
(? ESTIMATED EXTENT INFERRED)

NOTES:
 DATE SAMPLED AND CONCENTRATIONS REPORTED AS:
 BLACK = TPH SAMPLE DATE | GRO | DRO | ORO | TOTAL Naphthalenes | cPAH TEC
 ANALYTICAL RESULTS IN MICROGRAMS PER LITER (µg/l)
 ELEVATION SOURCE: BUSH, ROED, & HITCHINGS, INC. (2014)
 ELEVATION DATA PRESENTED IN FEET ABOVE MSL IN THE
 NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88)

- cPAH TEC = CARCINOGENIC POLYCYCLIC AROMATIC HYDROCARBON TOXIC EQUIVALENT CONCENTRATION
- DRO = TOTAL PETROLEUM HYDROCARBONS (TPH) AS DIESEL-RANGE ORGANICS
- GRO = TPH AS GASOLINE-RANGE ORGANICS
- ORO = TPH AS OIL-RANGE ORGANICS
- FFE = APPROXIMATE FINISH FLOOR ELEVATIONS OF GROUND FLOOR OF EXISTING BUILDING
- GSE = APPROXIMATE GROUND SURFACE ELEVATION OF EXISTING LOADING DOCK
- BOLD** = CONCENTRATIONS THAT EXCEED MTCA CLEANUP LEVELS
- < = ANALYTE NOT DETECTED AT OR EXCEEDING THE REPORTING LIMIT LISTED
- = SAMPLE NOT ANALYZED
- MTCA = WASHINGTON STATE MODEL TOXICS CONTROL ACT CLEANUP REGULATION
- MSL = MEAN SEA LEVEL
- ** = INDICATES RESULTS ARE FROM A RECONNAISSANCE GROUNDWATER SAMPLE

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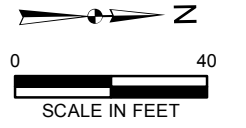
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Oregon
Portland | Bend | Baker City
California
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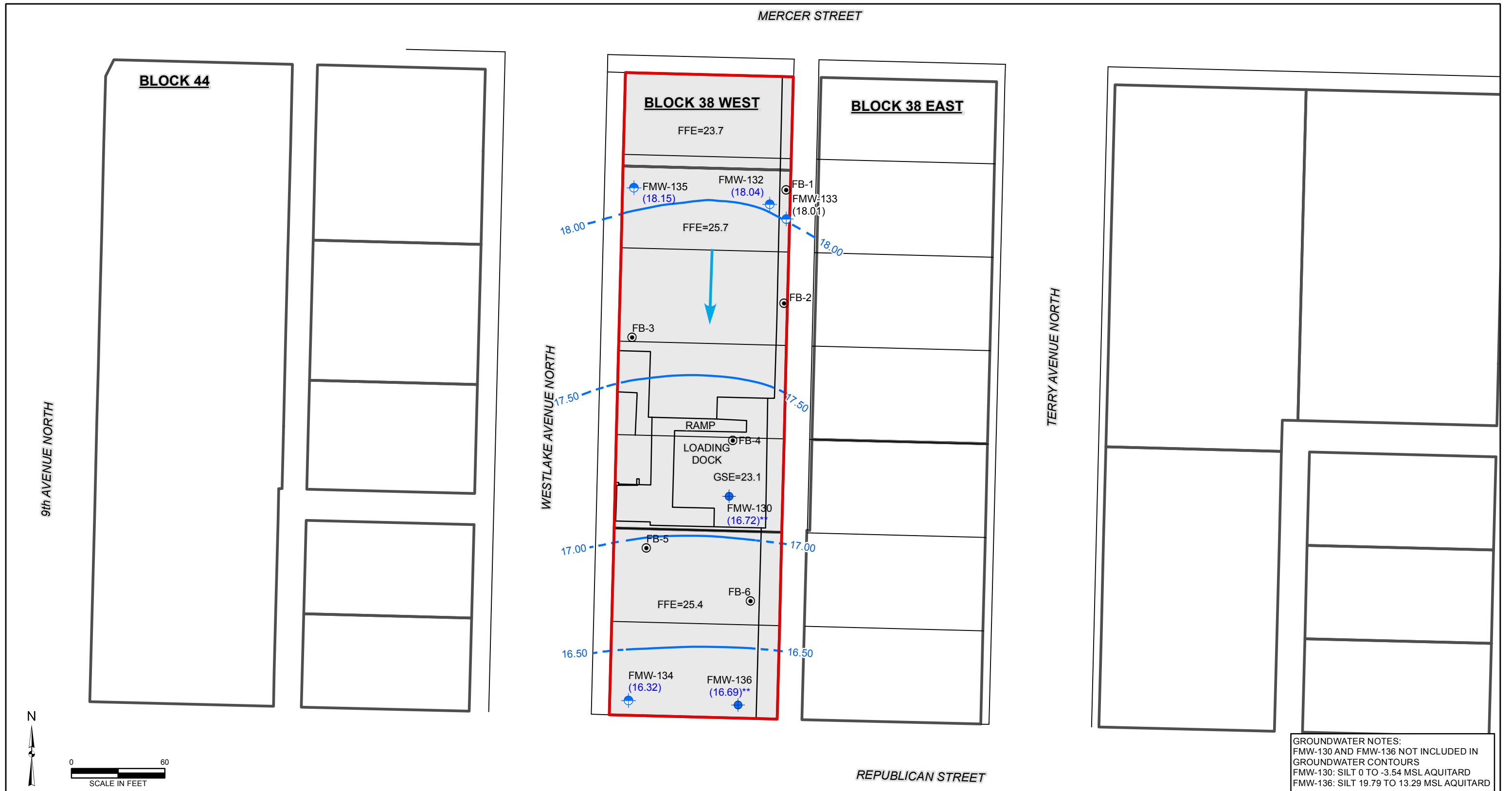
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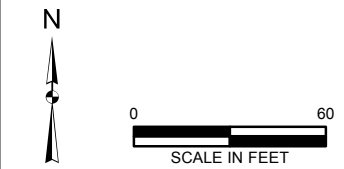
FIGURE 4
GROUNDWATER ANALYTICAL RESULTS
BLOCK 38 WEST PROPERTY
SEATTLE, WASHINGTON

FARALLON PN: 397-019





GROUNDWATER NOTES:
 FMW-130 AND FMW-136 NOT INCLUDED IN GROUNDWATER CONTOURS
 FMW-130: SILT 0 TO -3.54 MSL AQUITARD
 FMW-136: SILT 19.79 TO 13.29 MSL AQUITARD



- LEGEND**
- SHALLOW WATER-BEARING ZONE WELL
 - INTERMEDIATE WATER-BEARING ZONE WELL
 - BORING
 - PROPERTY BOUNDARY
 - KING COUNTY PARCEL BOUNDARY
 - (16.32) GROUNDWATER ELEVATION (8/30/18) MEASURED IN FEET RELATIVE TO NAVD 88
 - (16.69)** ELEVATION NOT USED IN CONTOURING
 - 16.50 - - - APPROXIMATE GROUNDWATER ELEVATION CONTOUR IN FEET NAVD88 (INFERRED WHERE DASHED)
 - INFERRED GROUNDWATER FLOW DIRECTION

FFE = APPROXIMATE FINISH FLOOR ELEVATIONS OF GROUND FLOOR OF EXISTING BUILDING
 GSE = APPROXIMATE GROUND SURFACE ELEVATION OF EXISTING LOADING DOCK AREA
 MSL = MEAN SEA LEVEL
 NS = NOT SURVEYED
 ELEVATION SOURCE: BUSH, ROED, & HITCHINGS, INC. (2014)
 ELEVATION DATA PRESENTED IN FEET ABOVE MEAN SEA LEVEL IN THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88)

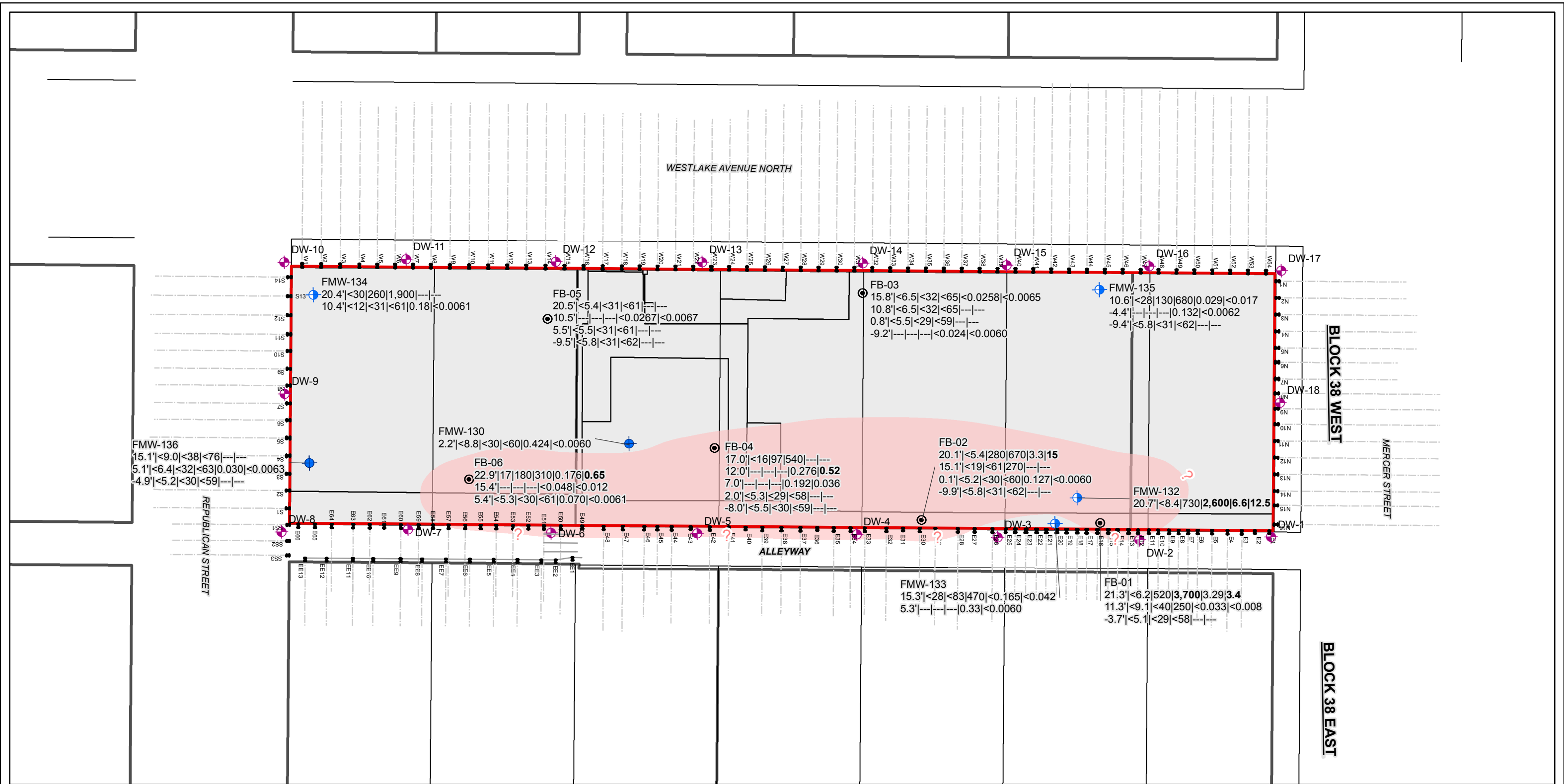
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FIGURE 5
 GROUNDWATER ELEVATION CONTOURS
 FOR AUGUST 30, 2018
 BLOCK 38 WEST PROPERTY
 SEATTLE, WASHINGTON

FARALLON PN: 397-019

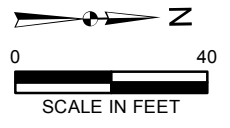
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- LEGEND**
- BORING
 - ⊕ SHALLOW WATER-BEARING ZONE WELL
 - ⊕ INTERMEDIATE WATER-BEARING ZONE WELL
 - ⊕ DEWATERING WELL
 - SOIL EXCEEDING MTCA CLEANUP LEVEL
 - ▭ PROPERTY BOUNDARY
 - ▭ KING COUNTY PARCEL BOUNDARY
 - ⊔ PILE
 - TIEBACK

NOTES:
 SOIL DEPTH AND CONCENTRATIONS REPORTED AS:
 ELEVATION IN FEET ACCORDING TO MSL |
 GRO | DRO | ORO | TOTAL Naphthalenes | cPAH TEC
 ANALYTICAL RESULTS IN MILLIGRAMS PER KILOGRAM
 ELEVATION SOURCE: BUSH, ROED, & HITCHINGS, INC. (2014)
 ELEVATION DATA PRESENTED IN FEET ABOVE MSL
 IN THE NORTH AMERICAN VERTICAL DATUM OF 1988

- cPAH TEC = CARCINOGENIC POLYCYCLIC AROMATIC HYDROCARBON TOXIC EQUIVALENT CONCENTRATION
- DRO = TOTAL PETROLEUM HYDROCARBONS (TPH) AS DIESEL-RANGE ORGANICS
- GRO = TPH AS GASOLINE-RANGE ORGANICS
- ORO = TPH AS OIL-RANGE ORGANICS
- FFE = APPROXIMATE FINISH FLOOR ELEVATIONS OF GROUND FLOOR OF EXISTING BUILDING
- GSE = APPROXIMATE GROUND SURFACE ELEVATION OF EXISTING LOADING DOCK
- BOLD** = CONCENTRATIONS THAT EXCEED MTCA CLEANUP LEVELS
- < = ANALYSE NOT DETECTED AT OR EXCEEDING THE REPORTING LIMIT LISTED
- = SAMPLE NOT ANALYZED
- MTCA = WASHINGTON STATE MODEL TOXICS CONTROL ACT CLEANUP REGULATION
- MSL = MEAN SEA LEVEL



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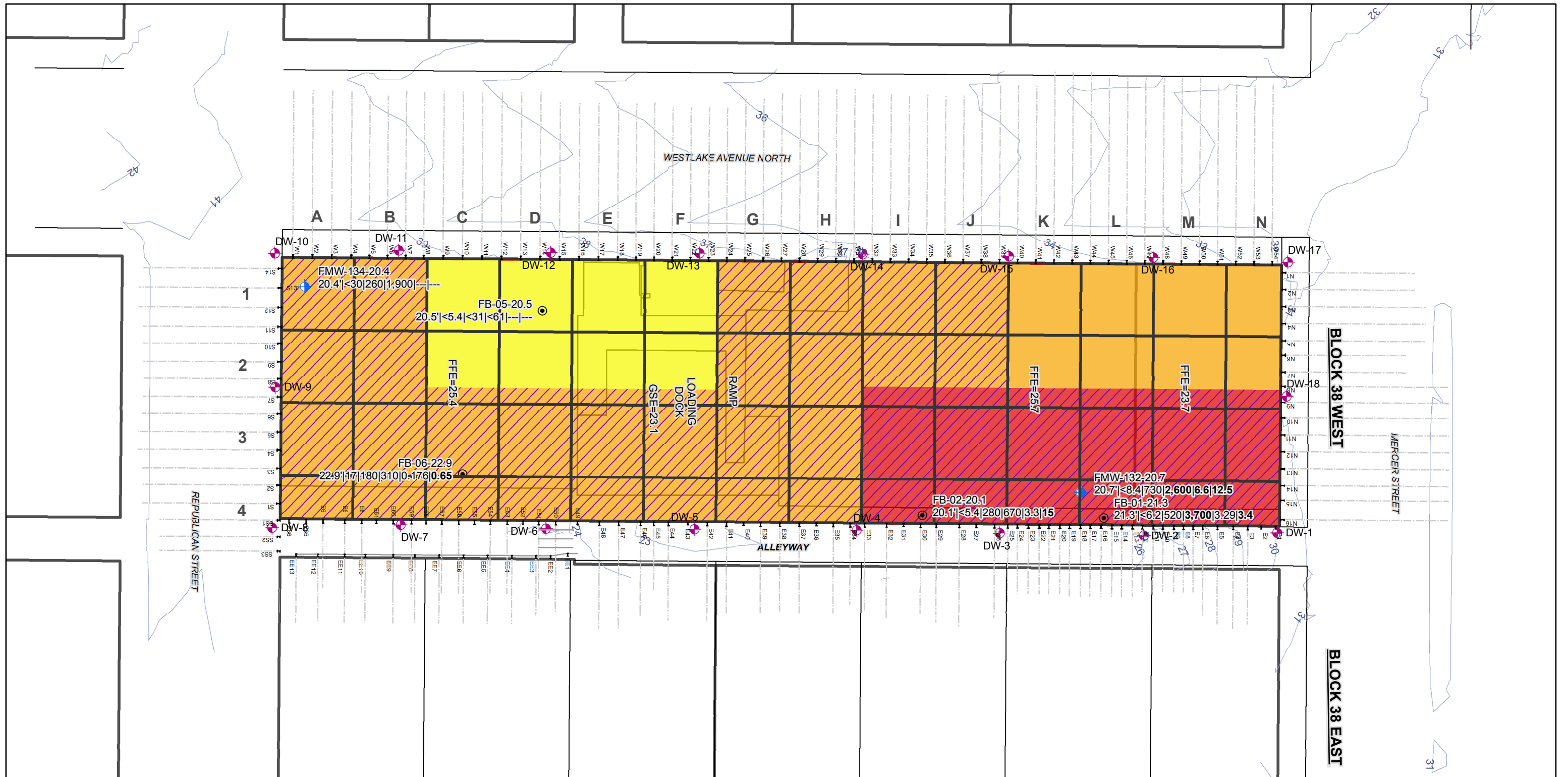
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FIGURE 6
SOIL SAMPLE ANALYTICAL RESULTS
BLOCK 38 WEST PROPERTY
SEATTLE, WASHINGTON

FARALLON PN: 397-019

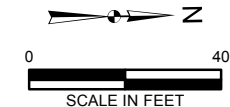


LEGEND

- SHALLOW WATER-BEARING ZONE WELL
- INTERMEDIATE WATER-BEARING ZONE WELL
- MONITORING WELL
- DECOMMISSIONED MONITORING WELL (UNKNOWN ZONE)
- DEWATERING WELL
- SOIL BORING
- PROPERTY BOUNDARY
- CATEGORY 1 CLEAN SOIL
- CATEGORY 2 IMPACTED SOIL
- CATEGORY 3 IMPACTED SOIL
- CATEGORY 3+ IMPACTED SOIL
- SOIL CONTAINS ORGANIC/PEAT/WOOD
- 30' X 30' GRID
- PILE
- TIEBACK

NOTES:
 SOIL DEPTH AND CONCENTRATIONS REPORTED AS:
 ELEVATION IN FEET MSL | GRO | DRO | ORO |
 TOTAL Naphthalenes | cPAH TEC
 ANALYTICAL RESULTS IN MILLIGRAMS PER KILOGRAM
 ELEVATION SOURCE: BUSH, ROED, & HITCHINGS, INC. (2014)
 ELEVATION DATA PRESENTED IN FEET ABOVE MSL
 IN THE NORTH AMERICAN VERTICAL DATUM OF 1988

- cPAH TEC = CARCINOGENIC POLYCYCLIC AROMATIC HYDROCARBONS TOXIC EQUIVALENT CONCENTRATION
- DRO = TOTAL PETROLEUM HYDROCARBONS (TPH) AS DIESEL-RANGE ORGANICS
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- FFE = APPROXIMATE FINISH FLOOR ELEVATIONS OF GROUND FLOOR OF EXISTING BUILDING
- GSE = APPROXIMATE GROUND SURFACE ELEVATION OF EXISTING LOADING DOCK
- BOLD** = CONCENTRATIONS THAT EXCEED MTCA CLEANUP LEVELS
- < = ANALYTE NOT DETECTED AT OR EXCEEDING THE REPORTING LIMIT LISTED
- = SAMPLE NOT ANALYZED
- MTCA = WASHINGTON STATE MODEL TOXICS CONTROL ACT CLEANUP REGULATION
- MSL = MEAN SEA LEVEL



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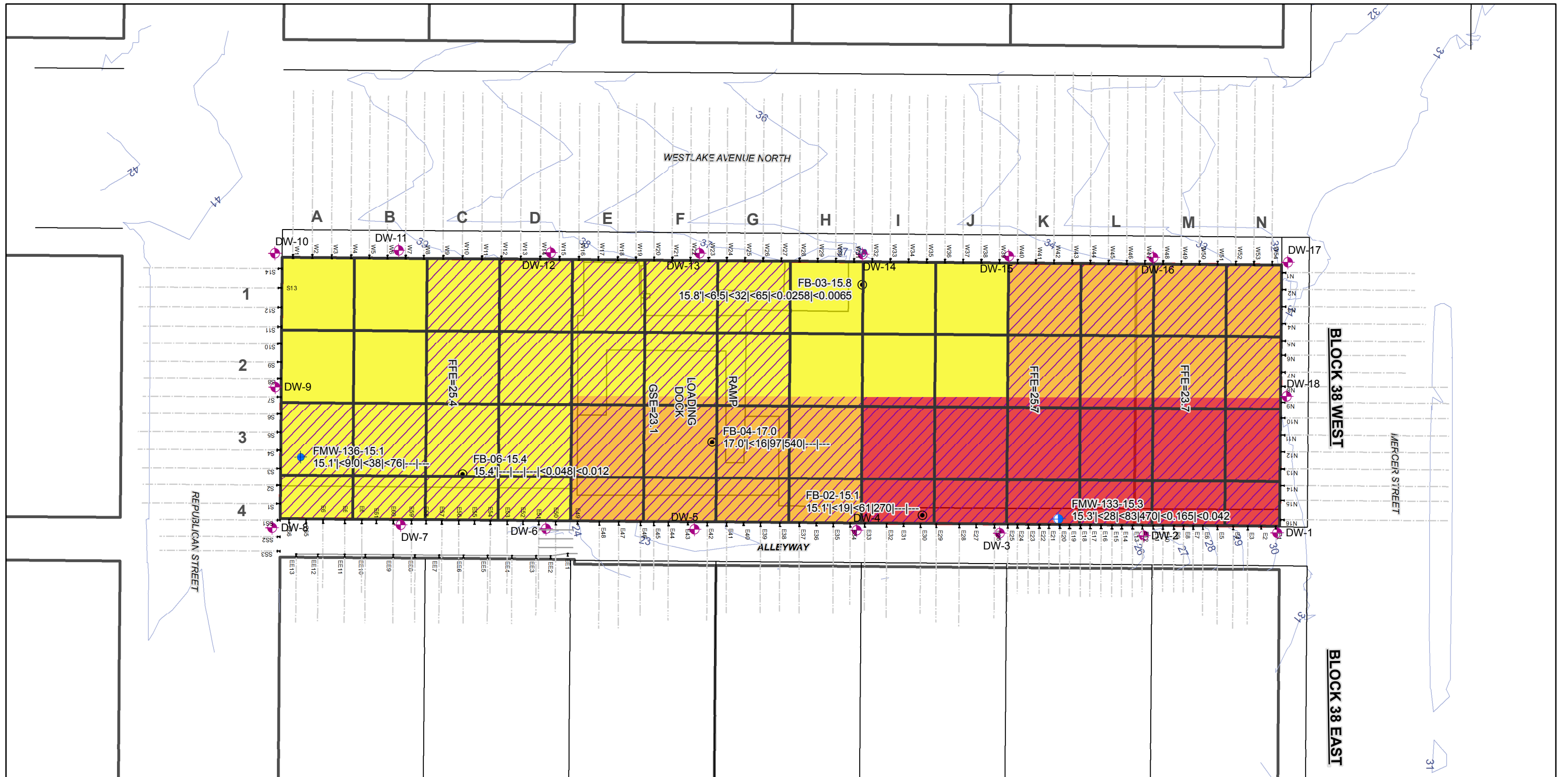
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Oregon
Portland | Bend | Baker City

California
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FIGURE 7
 ESTIMATED EXCAVATION AREAS,
 ELEVATIONS 26 TO 20 FEET MSL
 BLOCK 38 WEST PROPERTY
 SEATTLE, WASHINGTON
 FARALLON PN: 397-019

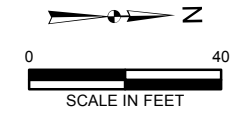


LEGEND

- SHALLOW WATER-BEARING ZONE WELL
- INTERMEDIATE WATER-BEARING ZONE WELL
- MONITORING WELL
- DECOMMISSIONED MONITORING WELL (UNKNOWN ZONE)
- DEWATERING WELL
- SOIL BORING
- PROPERTY BOUNDARY
- CATEGORY 1 CLEAN SOIL
- CATEGORY 2 IMPACTED SOIL
- CATEGORY 3 IMPACTED SOIL
- CATEGORY 3+ IMPACTED SOIL
- SOIL CONTAINS ORGANIC/PEAT/WOOD
- 30' X 30' GRID
- PILE
- TIEBACK

NOTES:
 SOIL DEPTH AND CONCENTRATIONS REPORTED AS:
 ELEVATION IN FEET MSL | GRO | DRO | ORO |
 TOTAL Naphthalenes | cPAH TEC
 ANALYTICAL RESULTS IN MILLIGRAMS PER KILOGRAM
 ELEVATION SOURCE: BUSH, ROED, & HITCHINGS, INC. (2014)
 ELEVATION DATA PRESENTED IN FEET ABOVE MSL
 IN THE NORTH AMERICAN VERTICAL DATUM OF 1988

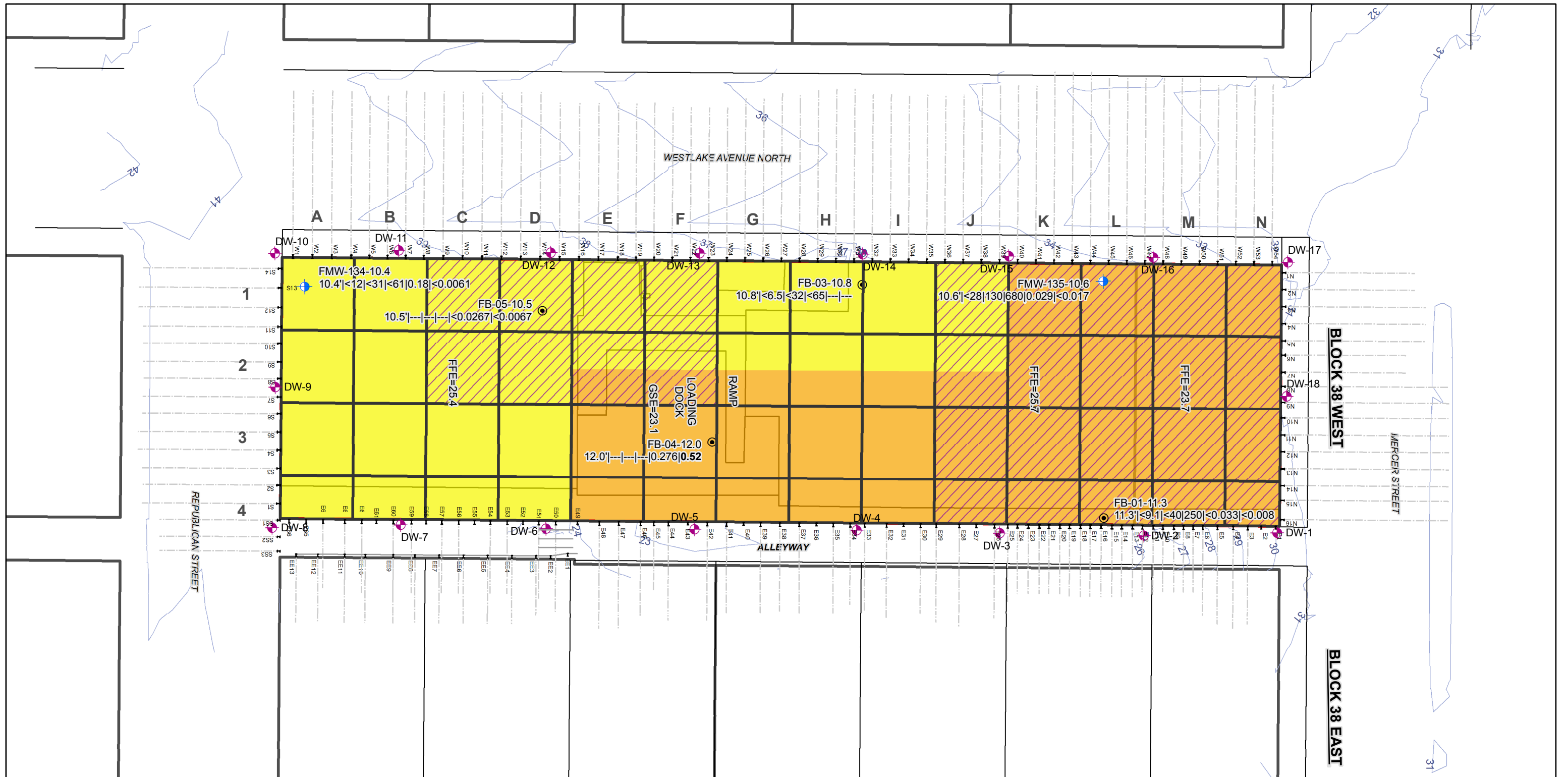
- cPAH TEC = CARCINOGENIC POLYCYCLIC AROMATIC HYDROCARBONS TOXIC EQUIVALENT CONCENTRATION
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FIGURE 8
 ESTIMATED EXCAVATION AREAS,
 ELEVATIONS 20 TO 15 FEET MSL
 BLOCK 38 WEST PROPERTY
 SEATTLE, WASHINGTON
 FARALLON PN: 397-019

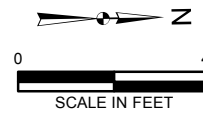


LEGEND

- SHALLOW WATER-BEARING ZONE WELL
- INTERMEDIATE WATER-BEARING ZONE WELL
- MONITORING WELL
- DECOMMISSIONED MONITORING WELL (UNKNOWN ZONE)
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- CATEGORY 3 IMPACTED SOIL
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NOTES:
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 TOTAL Naphthalenes | cPAH TEC
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 ELEVATION SOURCE: BUSH, ROED, & HITCHINGS, INC. (2014)
 ELEVATION DATA PRESENTED IN FEET ABOVE MSL
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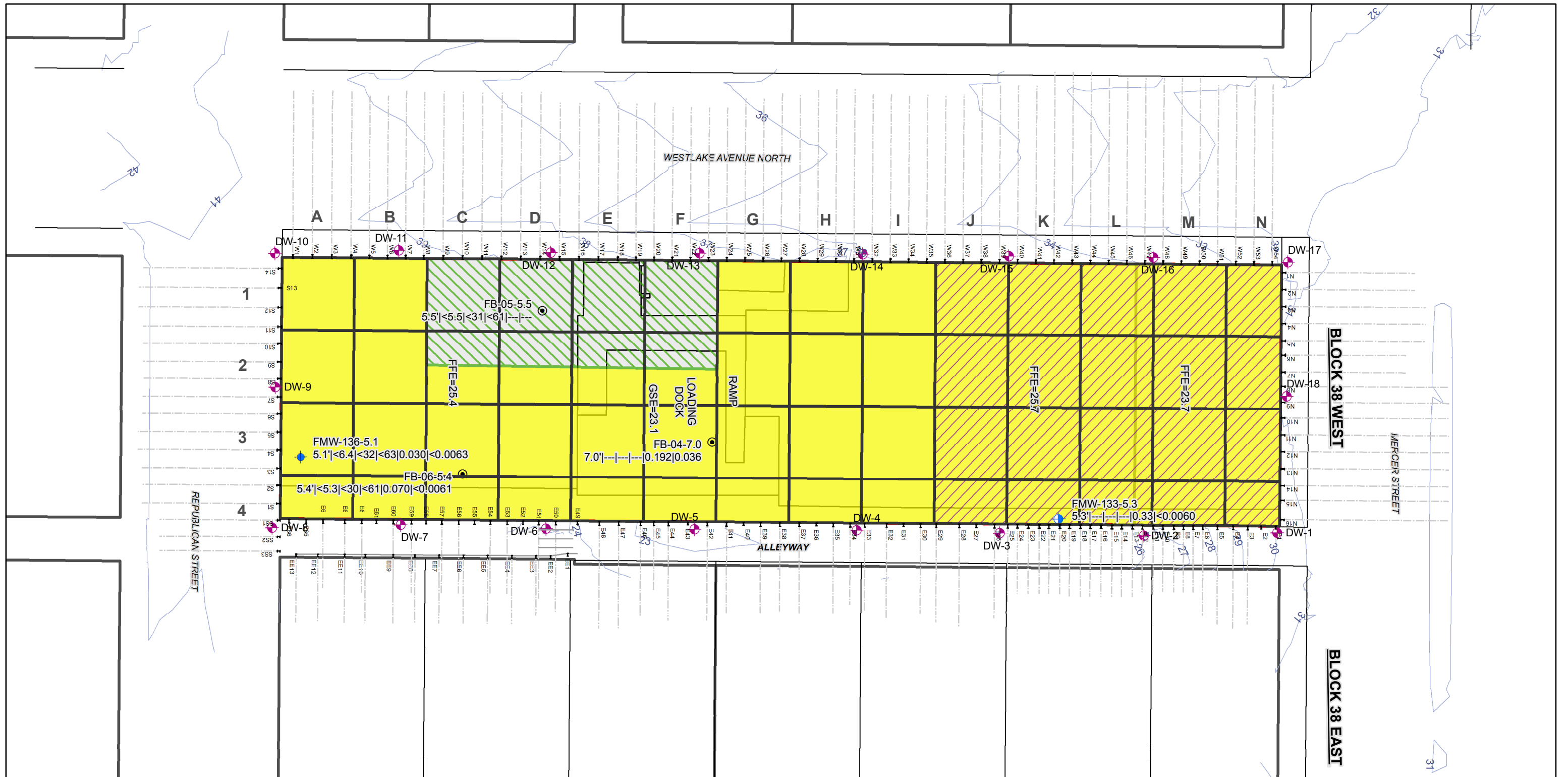
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FIGURE 9
 ESTIMATED EXCAVATION AREAS,
 ELEVATIONS 15 TO 10 FEET MSL
 BLOCK 38 WEST PROPERTY
 SEATTLE, WASHINGTON

FARALLON PN: 397-019

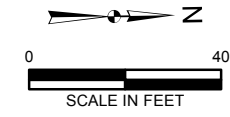


LEGEND

- SHALLOW WATER-BEARING ZONE WELL
- INTERMEDIATE WATER-BEARING ZONE WELL
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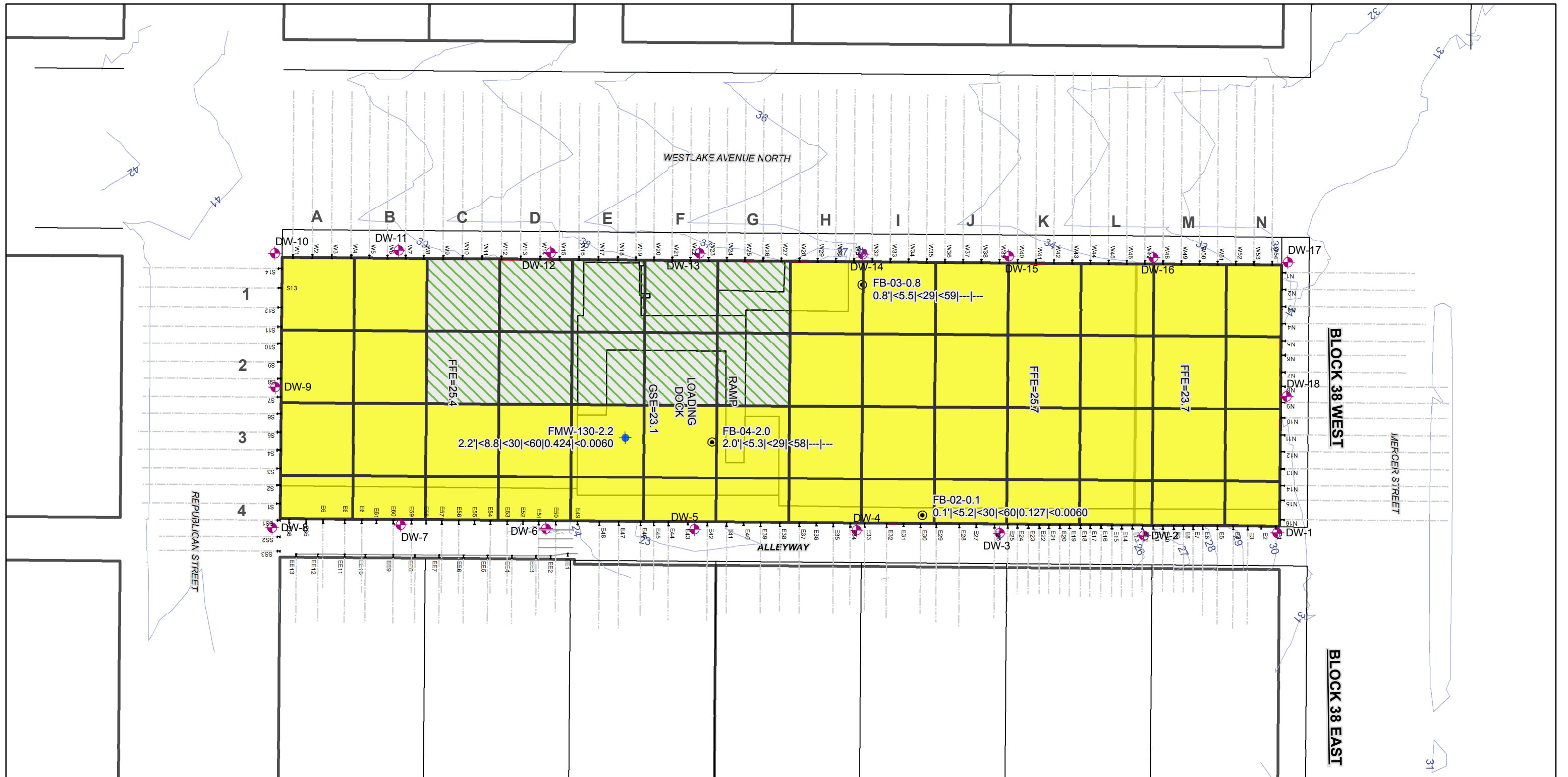
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 Portland | Bend | Baker City

California
 Oakland | Folsom | Irvine

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FIGURE 10
 ESTIMATED EXCAVATION AREAS,
 ELEVATIONS 10 TO 5 FEET MSL
 BLOCK 38 WEST PROPERTY
 SEATTLE, WASHINGTON
 FARALLON PN: 397-019

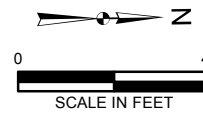


LEGEND

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- INTERMEDIATE WATER-BEARING ZONE WELL
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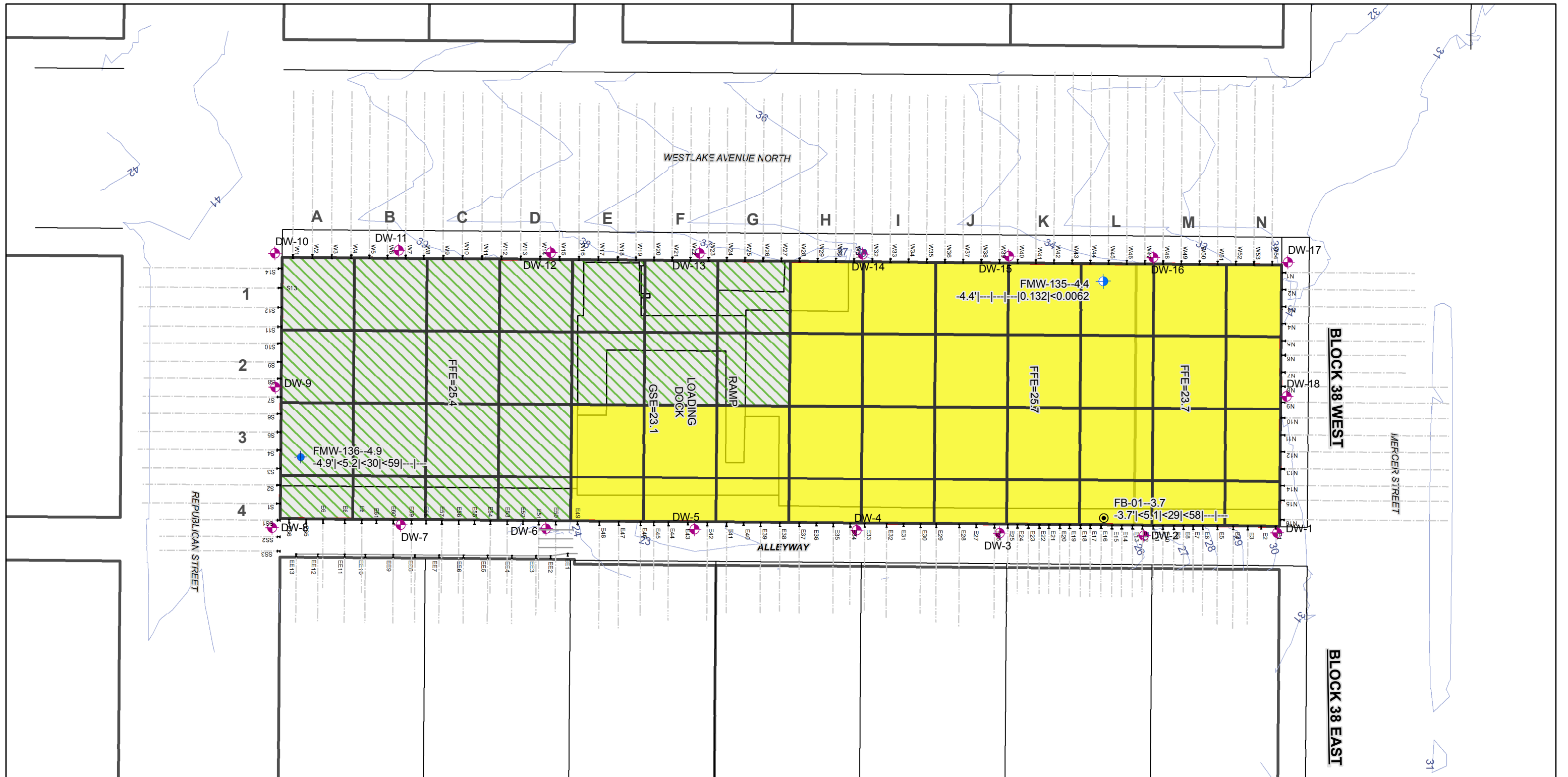
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FIGURE 11
 ESTIMATED EXCAVATION AREAS,
 ELEVATIONS 5 TO 0 FEET MSL
 BLOCK 38 WEST PROPERTY
 SEATTLE, WASHINGTON

FARALLON PN: 397-019



LEGEND

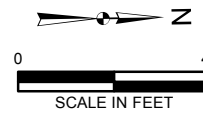
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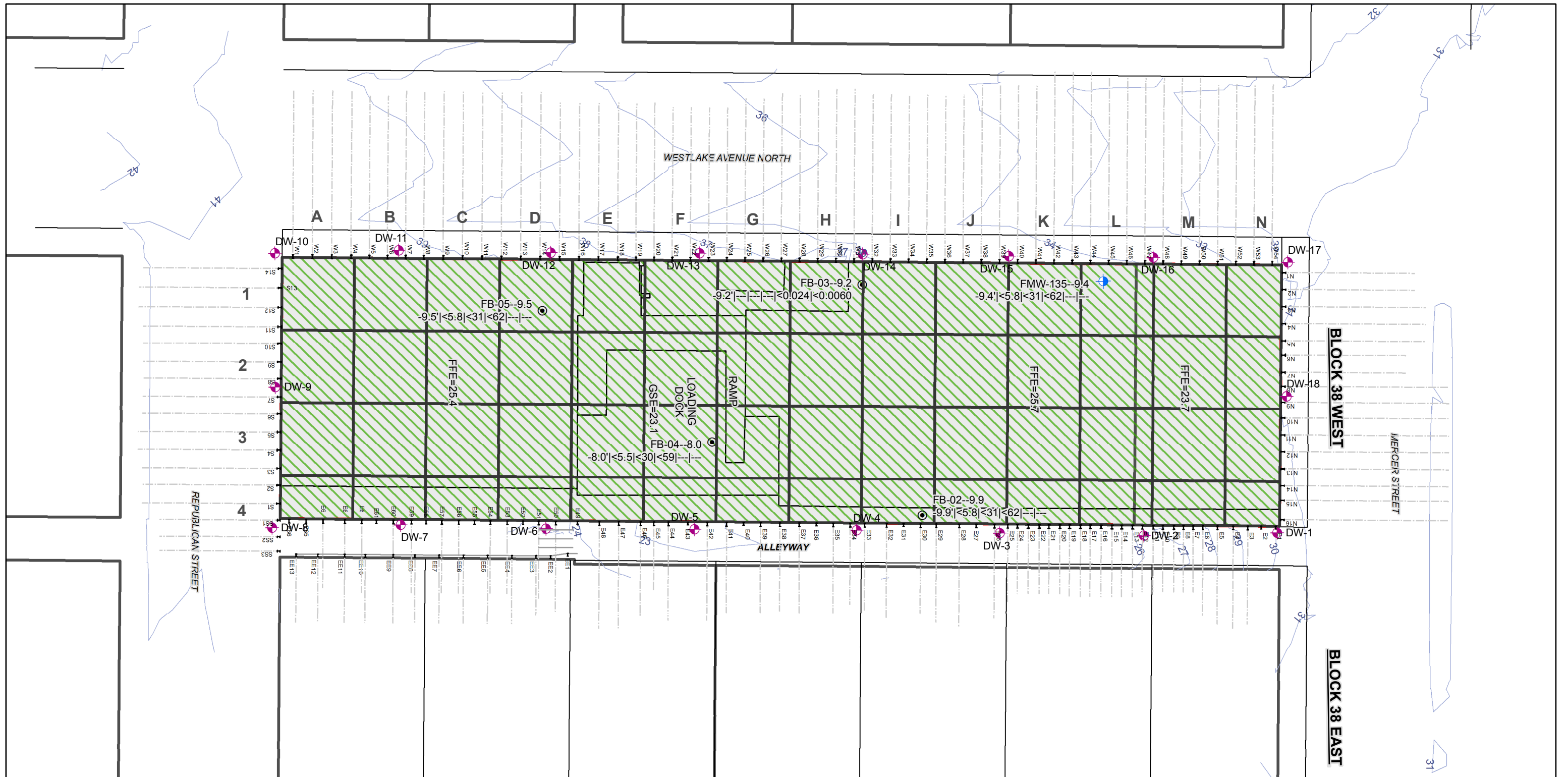
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FIGURE 12
 ESTIMATED EXCAVATION AREAS,
 ELEVATIONS 0 TO -5 FEET MSL
 BLOCK 38 WEST PROPERTY
 SEATTLE, WASHINGTON

FARALLON PN: 397-019

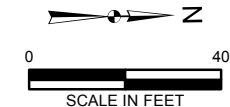


LEGEND

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FIGURE 13
 ESTIMATED EXCAVATION AREAS,
 ELEVATIONS -5 TO -10 FEET MSL
 BLOCK 38 WEST PROPERTY
 SEATTLE, WASHINGTON
 FARALLON PN: 397-019

TABLES

**SUBSURFACE INVESTIGATION REPORT AND ENVIRONMENTAL MEDIA
MANAGEMENT PLAN
Block 38 West Property
500 through 536 Westlake Avenue North
Seattle, Washington**

Farallon PN: 397-019

Table 1
Soil Analytical Results for TPH and BTEX
Block 38 West Property
Seattle, Washington
Farallon PN: 397-019

Sample Location	Sample Identification	Sample Depth (feet) ¹	Sample Elevation (feet msl) ¹	Sample Date	Analytical Results (milligrams per kilogram)								
					NWTPH-Dx ²		NWTPH-Dx with Silica Gel ²		NWTPH-Gx ³	EPA Method 8021B ⁴			
					DRO	ORO	DRO	ORO	GRO	Benzene	Toluene	Ethylbenzene	Xylenes
FB-01	FB-01-5.0-082118	5.0	21.3	8/21/2018	520	3,700	510 N	1,100	< 6.2	< 0.020	< 0.062	< 0.062	< 0.124
	FB-01-15.0-082118	15.0	11.3	8/21/2018	< 40	250	< 40	< 81	< 9.1	< 0.020	< 0.091	< 0.091	< 0.182
	FB-01-30.0-082118	30.0	-3.7	8/21/2018	< 29	< 58	---	---	< 5.1	< 0.020	< 0.051	< 0.051	< 0.102
FB-02	FB-02-5.0-082018	5.0	20.1	8/20/2018	280 N	670	---	---	< 5.4	< 0.020	< 0.054	< 0.054	< 0.108
	FB-02-10.0-082018	10.0	15.1	8/20/2018	< 61	270	---	---	< 19	< 0.037	< 0.19	< 0.19	< 0.38
	FB-02-25.0-082018	25.0	0.1	8/20/2018	< 30	< 60	---	---	< 5.2	< 0.020	< 0.052	< 0.052	< 0.104
	FB-02-35.0-082018	35.0	-9.9	8/20/2018	< 31	< 62	---	---	< 5.8	< 0.020	< 0.058	< 0.058	< 0.116
FB-03	FB-03-10.0-082318	10.0	15.8	8/23/2018	< 32	< 65	---	---	< 6.5	< 0.020	< 0.065	< 0.065	< 0.130
	FB-03-15.0-082318	15.0	10.8	8/23/2018	< 32	< 65	---	---	< 6.5	< 0.020	< 0.065	< 0.065	< 0.130
	FB-03-25.0-082318	25.0	0.8	8/23/2018	< 29	< 59	---	---	< 5.5	< 0.020	< 0.055	< 0.055	< 0.110
FB-04	FB-04-5.0-082118	5.0	17.0	8/21/2018	97 N	540	---	---	< 16	< 0.033	< 0.16	< 0.16	< 0.32
	FB-04-20.0-082118	20.0	2.0	8/21/2018	< 29	< 58	---	---	< 5.3	< 0.020	< 0.053	< 0.053	< 0.106
	FB-04-30.0-082118	30.0	-8.0	8/21/2018	< 30	< 59	---	---	< 5.5	< 0.020	< 0.055	< 0.055	< 0.110
FB-05	FB-05-5.0-082218	5.0	20.5	8/22/2018	< 31	< 61	---	---	< 5.4	< 0.020	< 0.054	< 0.054	< 0.108
	FB-05-20.0-082218	20.0	5.5	8/22/2018	< 31	< 61	---	---	< 5.5	< 0.020	< 0.055	< 0.055	< 0.110
	FB-05-35.0-082218	35.0	-9.5	8/22/2018	< 31	< 62	---	---	< 5.8	< 0.020	< 0.058	< 0.058	< 0.116
FB-06	FB-06-2.5-082218	2.5	22.9	8/22/2018	180	310	---	---	17 T	< 0.024	< 0.12	< 0.12	< 0.24
	FB-06-20.0-082218	20.0	5.4	8/22/2018	< 30	< 61	---	---	< 5.3	< 0.020	< 0.053	< 0.053	< 0.106
FMW-130	F-MW-130-20.0-072114	20.0	2.2	7/21/2014	< 30	< 60	---	---	< 8.8	< 0.020	< 0.088	< 0.088	< 0.176
FMW-132	FMW-132-5.0-082418	5.0	20.7	8/24/2018	730	2,600	---	---	< 8.4	< 0.020	< 0.084	< 0.084	< 0.168
FMW-133	FMW-133-10.0-082418	10.0	15.3	8/24/2018	< 83	470	---	---	< 28	< 0.057	< 0.28	< 0.28	< 0.56
FMW-134	FMW-134-5.0-082318	5.0	20.4	8/23/2018	260	1,900	---	---	< 30	< 0.059	< 0.30	< 0.30	< 0.60
	FMW-134-15.0-082318	15.0	10.4	8/23/2018	< 31	< 61	---	---	< 12	< 0.023	< 0.12	< 0.12	< 0.24
FMW-135	FMW-135-15.0-082418	15.0	10.6	8/24/2018	130	680	---	---	< 28	< 0.055	< 0.28	< 0.28	< 0.56
	FMW-135-35.0-082418	35.0	-9.4	8/24/2018	< 31	< 62	---	---	< 5.8	< 0.020	< 0.058	< 0.058	< 0.116
FMW-136	FMW-136-10.0-082218	10.0	15.1	8/22/2018	< 38	< 76	---	---	< 9.0	< 0.020	< 0.090	< 0.090	< 0.18
	FMW-136-20.0-082218	20.0	5.1	8/22/2018	< 32	< 63	---	---	< 6.4	< 0.020	< 0.064	< 0.064	< 0.128
	FMW-136-30.0-082218	30.0	-4.9	8/22/2018	< 30	< 59	---	---	< 5.2	< 0.020	< 0.052	< 0.052	< 0.104
MTCA Method A Cleanup Levels for Soil⁵					2,000	2,000	2,000	2,000	30/100⁶	0.03	7	6	9

NOTES:

Results in **bold** denote concentrations exceeding applicable cleanup levels.

< denotes analyte not detected at or exceeding the laboratory reporting limit listed.

— denotes sample not analyzed.

¹Depth in feet below ground surface. Elevation in feet mean sea level using North American Vertical Datum of 1988.

²Analyzed by Northwest Method NWTPH-Dx. Results denoted as analyzed by NWTPH-Dx with silica gel were analyzed using a sample extract treated with sulfuric acid/silica gel cleanup procedure.

³Analyzed by Northwest Method NWTPH-Gx.

⁴Analyzed by U.S. Environmental Protection Agency Method 8021B.

⁵Washington State Model Toxics Control Act Cleanup Regulation (MTCA) Method A Soil Cleanup Levels for Unrestricted Land Uses, Table 740-1 of Section 900 of Chapter 173-340 of the Washington Administrative Code, as revised 2013.

⁶Cleanup level is 30 milligrams per kilogram if benzene is detected and 100 milligrams per kilogram if benzene is not detected.

BTEX = benzene, toluene, ethylbenzene and xylenes

DRO = total petroleum hydrocarbons (TPH) as diesel-range organics

GRO = TPH as gasoline-range organics

msl = mean sea level

N = hydrocarbons in the oil-range are impacting the diesel-range result

ORO = TPH as oil-range organics

T = the sample chromatogram is not similar to a typical gasoline standard.

Table 2
Soil Analytical Results for PAHs
Block 38 West Property
Seattle, Washington
Farallon PN: 397-019

Sample Location	Sample Identification	Sample Depth (feet) ¹	Sample Elevation (feet msl) ¹	Sample Date	Analytical Results (milligrams per kilogram) ²																			
					Non-Carcinogenic PAHs											Carcinogenic PAHs								
					Naphthalene	1-Methylnaphthalene	2-Methylnaphthalene	Total Naphthalenes ^{3,5}	Acenaphthene	Acenaphthylene	Anthracene	Benzo(g,h,i)Perylene	Fluoranthene	Fluorene	Phenanthrene	Pyrene	Benzo(a)Pyrene	Benzo(a)Anthracene	Benzo(b)Fluoranthene	Benzo(j,k)Fluoranthene	Chrysene	Dibenzo(a,h)Anthracene	Indeno(1,2,3-cd)Pyrene	Total cPAHs TEC ^{4,5}
FB-01	FB-01-5.0-082118	5.0	21.3	8/21/2018	0.99	1.1	1.2	3.29	0.46	0.32	1.0	1.9	4.8	0.46	5.4	6.8	2.5	2.6	2.9	0.76	3.1	0.45	1.6	3.4
	FB-01-15.0-082118	15.0	11.3	8/21/2018	< 0.011	< 0.011	< 0.011	< 0.033	< 0.011	< 0.011	< 0.011	< 0.011	< 0.011	< 0.011	< 0.011	< 0.011	< 0.011	< 0.011	< 0.011	< 0.011	< 0.011	< 0.011	< 0.011	< 0.008
FB-02	FB-02-5.0-082018	5.0	20.1	8/20/2018	1.1	0.86	1.3	3.3	1.4	0.45	3.3	8.5	18	1.3	12	25	11	9.8	12	3.5	9.7	1.6	8.0	15
	FB-02-25.0-082018	25.0	0.1	8/20/2018	0.083	0.020	0.024	0.127	0.027	< 0.0080	< 0.0080	< 0.0080	< 0.0080	< 0.0080	< 0.0080	< 0.0080	< 0.0080	< 0.0080	< 0.0080	< 0.0080	< 0.0080	< 0.0080	< 0.0080	< 0.0060
FB-03	FB-03-10.0-082318	10.0	15.8	8/23/2018	< 0.0086	< 0.0086	< 0.0086	< 0.0258	< 0.0086	< 0.0086	< 0.0086	< 0.0086	0.011	< 0.0086	0.015	0.012	< 0.0086	< 0.0086	< 0.0086	< 0.0086	< 0.0086	< 0.0086	< 0.0086	< 0.0065
	FB-03-35.0-082318	35.0	-9.2	8/23/2018	< 0.0080	< 0.0080	< 0.0080	< 0.024	< 0.0080	< 0.0080	< 0.0080	< 0.0080	0.015	< 0.0080	0.017	0.017	< 0.0080	< 0.0080	< 0.0080	< 0.0080	< 0.0080	< 0.0080	< 0.0080	< 0.0060
FB-04	FB-04-10.0-082118	10.0	12.0	8/21/2018	0.12	0.057	0.099	0.276	0.21	0.045	0.29	0.21	0.97	0.22	1.0	1.1	0.36	0.67	0.47	0.18	0.95	0.041	0.19	0.52
	FB-04-15.0-082118	15.0	7.0	8/21/2018	0.052	0.048	0.092	0.192	0.049	< 0.0082	0.029	0.018	0.078	0.043	0.16	0.1	0.027	0.027	0.025	0.0099	0.028	< 0.0082	0.017	0.036
FB-05	FB-05-15.0-082218	15.0	10.5	8/22/2018	< 0.0089	< 0.0089	< 0.0089	< 0.0267	< 0.0089	< 0.0089	< 0.0089	< 0.0089	< 0.0089	< 0.0089	< 0.0089	< 0.0089	< 0.0089	< 0.0089	< 0.0089	< 0.0089	< 0.0089	< 0.0089	< 0.0089	< 0.0067
FB-06	FB-06-2.5-082218	2.5	22.9	8/22/2018	0.087	0.044	0.045	0.176	0.13	0.042	0.20	0.35	0.81	0.094	0.89	1.1	0.49	0.47	0.52	0.17	0.50	0.054	0.34	0.65
	FB-06-10.0-082218	10.0	15.4	8/22/2018	< 0.016 H	< 0.016 H	< 0.016 H	< 0.048	< 0.016 H	< 0.016 H	< 0.016 H	< 0.016 H	< 0.016 H	< 0.016 H	< 0.016 H	0.020 H	< 0.016 H	< 0.016 H	< 0.016 H	< 0.016 H	< 0.016 H	< 0.016 H	< 0.016 H	< 0.012
	FB-06-20.0-082218	20.0	5.4	8/22/2018	0.070	< 0.0081	< 0.0081	0.070	< 0.0081	< 0.0081	< 0.0081	< 0.0081	< 0.0081	< 0.0081	< 0.0081	< 0.0081	< 0.0081	< 0.0081	< 0.0081	< 0.0081	< 0.0081	< 0.0081	< 0.0081	< 0.0061
FMW-130	F-MW-130-20.0-072114	20.0	2.2	7/21/2014	0.38	0.016	0.028	0.424	0.014	< 0.0079	< 0.0079	< 0.0079	< 0.0079	< 0.0079	< 0.0079	< 0.0079	< 0.0079	< 0.0079	< 0.0079	< 0.0079	< 0.0079	< 0.0079	< 0.0079	< 0.0060
FMW-132	FMW-132-5.0-082418	5.0	20.7	8/24/2018	2.0	2.0	2.6	6.6	1.5	0.10	3.3	4.4	15	0.84	18	27	9.4	11	10	2.9	13	1.4	4.1	12.5
FMW-133	FMW-133-10.0-082418	10.0	15.3	8/24/2018	< 0.055	< 0.055	< 0.055	< 0.165	< 0.055	< 0.055	< 0.055	< 0.055	< 0.055	< 0.055	< 0.055	< 0.055	< 0.055	< 0.055	< 0.055	< 0.055	< 0.055	< 0.055	< 0.055	< 0.042
	FMW-133-20.0-082418	20.0	5.3	8/24/2018	0.25	0.035	0.042	0.33	0.021	< 0.0080	< 0.0080	< 0.0080	< 0.0080	< 0.0080	< 0.0080	< 0.0080	< 0.0080	< 0.0080	< 0.0080	< 0.0080	< 0.0080	< 0.0080	< 0.0080	< 0.0060
FMW-134	FMW-134-15.0-082318	15.0	10.4	8/23/2018	0.14	0.012	0.028	0.18	0.014	< 0.0081	< 0.0081	< 0.0081	< 0.0081	0.016	0.021	< 0.0081	< 0.0081	< 0.0081	< 0.0081	< 0.0081	< 0.0081	< 0.0081	< 0.0081	< 0.0061
FMW-135	FMW-135-15.0-082418	15.0	10.6	8/24/2018	0.029	< 0.022	< 0.022	0.029	0.039	< 0.022	< 0.022	< 0.022	0.042	< 0.022	0.068	0.073	< 0.022	< 0.022	< 0.022	< 0.022	< 0.022	< 0.022	< 0.022	< 0.017
	FMW-135-30.0-082418	30.0	-4.4	8/24/2018	0.12	0.012	< 0.0082	0.132	< 0.0082	< 0.0082	< 0.0082	< 0.0082	< 0.0082	< 0.0082	< 0.0082	< 0.0082	< 0.0082	< 0.0082	< 0.0082	< 0.0082	< 0.0082	< 0.0082	< 0.0082	< 0.0062
FMW-136	FMW-136-20.0-082218	20.0	5.1	8/22/2018	0.030	< 0.0084	< 0.0084	0.030	< 0.0084	< 0.0084	< 0.0084	< 0.0084	< 0.0084	< 0.0084	< 0.0084	< 0.0084	< 0.0084	< 0.0084	< 0.0084	< 0.0084	< 0.0084	< 0.0084	< 0.0084	< 0.0063
MTCA Method A Cleanup Level for Soil⁶								5	4,800⁷	NE	24,000⁷	NE	3,200⁷	3,200⁷	NE	2,400⁷							0.1	

NOTES:

Results in **bold** denote concentrations exceeding applicable cleanup levels.
 < denotes analyte not detected at or exceeding the reporting limit listed.

¹Depth in feet below ground surface. Elevation in feet mean sea level using North American Vertical Datum of 1988.

²Analyzed by U.S. Environmental Protection Agency Method 8270D/SIM.

³Sum of naphthalene, 1-methylnaphthalene and 2-methylnaphthalene.

⁴Total carcinogenic polycyclic aromatic hydrocarbons derived using the total toxicity equivalency method in Section 708(8) of Chapter 173-340 of the Washington Administrative Code.

⁵For concentrations reported at less than the laboratory reporting limit, half the reporting limit was used to calculate total. If all constituent concentrations are non-detect, calculated total is indicated non-detect.

⁶Washington State Model Toxics Control Act Cleanup Regulation (MTCA) Method A Soil Cleanup Levels for Unrestricted Land Uses,

Table 740-1 of Section 900 of Chapter 173-340 of the Washington Administrative Code, as revised 2013, unless otherwise noted.

⁷Washington State Department of Ecology Cleanup Levels and Risk Calculations, under MTCA Standard Method B Formula Values for Soil (Unrestricted Land Use) - Direct Contact (Ingestion Only) and Leaching Pathway, <https://fortress.wa.gov/ecy/clarc/Reporting/ChemicalQuery.aspx>

cPAHs = carcinogenic polycyclic aromatic hydrocarbons
 H = sample analyzed outside of holding time
 msl = mean sea level
 NE = not established
 PAHs = polycyclic aromatic hydrocarbons
 TEC = toxic equivalent concentration

**Table 3
Soil Analytical Results for Metals
Block 38 West Property
Seattle, Washington
Farallon PN: 397-019**

Sample Location	Sample Identification	Sample Depth (feet) ¹	Sample Elevation (feet msl) ¹	Sample Date	Analytical Results (milligrams per kilogram) ²					
					Cadmium	Chromium	Lead	Mercury	Selenium	Silver
FB-01	FB-01-15.0-082118	15.0	11.3	8/21/2018	< 0.81	60	< 8.1	< 0.40	< 16	< 1.6
FB-02	FB-02-10.0-082018	10.0	15.1	8/20/2018	< 1.2	36	24	1.2	< 12	< 2.5
FB-03	FB-03-10.0-082318	10.0	15.8	8/23/2018	< 0.65	100	8.9	< 0.32	< 13	< 1.3
	FB-03-35.0-082318	35.0	-9.2	8/23/2018	< 0.60	42	< 6.0	< 0.30	< 12	< 1.2
FB-04	FB-04-5.0-082118	5.0	17.0	8/21/2018	< 1.1	53	56	< 0.55	< 11	< 2.2
FB-05	FB-05-35.0-082218	35.0	-9.5	8/22/2018	< 0.62	38	< 6.2	< 0.31	< 12	< 1.2
FMW-133	FMW-133-10.0-082418	10.0	15.3	8/24/2018	< 1.7	29	18	< 0.83	< 17	< 3.3
	FMW-133-20.0-082418	20.0	5.3	8/24/2018	< 0.60	27	< 6.0	< 0.30	< 12	< 1.2
FMW-134	FMW-134-5.0-082318	5.0	20.4	8/23/2018	< 1.7	19	< 17	< 0.83	< 17	< 3.3
	FMW-134-15.0-082318	15.0	10.4	8/23/2018	< 0.61	42	< 6.1	< 0.30	< 12	< 1.2
FMW-135	FMW-135-5.0-082418	5.0	20.6	8/24/2018	< 0.61	48	16	< 0.31	< 12	< 1.2
	FMW-135-25.0-082418	25.0	0.6	8/24/2018	< 0.69	60	< 6.9	< 0.35	< 14	< 1.4
	FMW-135-30.0-082418	30.0	-4.4	8/24/2018	< 0.62	44	< 6.2	< 0.31	< 12	< 1.2
FMW-136	FMW-136-20.0-082218	20.0	5.1	8/22/2018	< 0.63	42	< 6.3	< 0.32	< 13	< 1.3
	FMW-136-30.0-082218	30.0	-4.9	8/22/2018	< 0.59	41	< 5.9	< 0.30	< 12	< 1.2
MTCA Cleanup Levels for Soil³					2	2,000	250	2	400⁴	400⁴

NOTES:

< denotes analyte not detected at or exceeding the laboratory reporting limit listed.

msl = mean sea level

¹Depth in feet below ground surface. Elevation in feet mean sea level using North American Vertical Datum of 1988.

²Analyzed by U.S. Environmental Protection Agency Methods 6010D/7471B.

³Washington State Model Toxics Control Act Cleanup Regulation (MTCA) Method A Soil Cleanup Levels for Unrestricted Land Uses, Table 740-1 of Section 900 of Chapter 173-340 of the Washington Administrative Code, as amended 2013, unless otherwise noted.

⁴Washington State Department of Ecology Cleanup Levels and Risk Calculations, under MTCA Standard Method B Formula Values for Soil (Unrestricted Land Use) - Direct Contact (Ingestion Only) and Leaching Pathway,

Table 4
Soil Analytical Results for Halogenated VOCs
Block 38 West Property
Seattle, Washington
Farallon PN: 397-019

Sample Location	Sample Identification	Sample Depth (feet) ¹	Sample Elevation (feet MSL) ¹	Sample Date	Analytical Results (milligrams per kilogram) ²				
					PCE	TCE	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Vinyl Chloride
FB-02	FB-02-10.0-082018	10.0	15.1	8/20/2018	< 0.0028	< 0.0028	< 0.0028	< 0.0028	< 0.0028
	FB-02-25.0-082018	25.0	0.1	8/20/2018	< 0.00085	< 0.00085	< 0.00085	< 0.00085	< 0.00085
FB-04	FB-04-20.0-082118	20.0	2.0	8/21/2018	< 0.00093	< 0.00093	< 0.00093	< 0.00093	< 0.00093
FB-05	FB-05-20.0-082218	20.0	5.5	8/22/2018	< 0.00090	< 0.00090	< 0.00090	< 0.00090	< 0.00090
FMW-135	FMW-135-50.0-082418	50.0	-24.4	8/24/2018	< 0.00074	< 0.00074	< 0.00074	< 0.00074	< 0.00074
FMW-136	FMW-136-10.0-082218	10.0	15.1	8/22/2018	< 0.0015	< 0.0015	< 0.0015	< 0.0015	< 0.0015
	FMW-136-20.0-082218	20.0	5.1	8/22/2018	< 0.00094	< 0.00094	< 0.00094	< 0.00094	< 0.00094
MTCA Cleanup Levels for Soil³					0.05	0.03	160⁴	1,600⁴	0.67⁴

NOTES:

Results in **bold** denote concentrations exceeding applicable cleanup levels.

< denotes analyte not detected at or exceeding the reporting limit listed.

¹Depth in feet below ground surface. Elevation in feet mean sea level using North American Vertical Datum of 1988.

²Analyzed by U.S. Environmental Protection Agency Method 8260C.

³Washington State Model Toxics Control Act Cleanup Regulation (MTCA) Method A Soil Cleanup Levels for Unrestricted Land Uses, Table 740-1 of Section 900 of Chapter 173-340 of the Washington Administrative Code, as revised 2013, unless otherwise noted.

MSL = mean sea level

PCE = tetrachloroethene

TCE = trichloroethene

VOC = volatile organic compound

Table 5
Stabilized Groundwater Field Parameters
Block 38 West Property
Seattle, Washington
Farallon PN: 397-019

Monitoring Well	Screened Interval (feet msl)¹	Date	Temperature (degrees Celsius)	pH (Standard Units)	Specific Conductivity (mS/cm)	Turbidity (NTU)
FMW-130	-22.8 to -32.8	7/24/2014	17.09	6.63	0.680	3.2
		7/3/2017	15.1	6.41	0.636	--
		8/30/2018	15.3	6.60	0.665	9.2
FMW-132	20.7 to 15.7	8/30/2018	19.5	6.39	1.073	7.9
FMW-133	18.8 to 13.8	8/30/2018	18.4	6.28	1.188	5.1
FMW-134	13.4 to 8.4	8/30/2018	16.6	6.31	0.780	20.9
FMW-135	18.6 to 13.6	8/30/2018	18.5	6.47	0.897	55.2
FMW-136	-4.9 to -14.9	8/30/2018	16.3	6.59	0.483	11.2

NOTE:

— denotes parameter not measured

¹In feet above mean sea level using North American Vertical Datum of 1988.

mS/cm = milliSiemens per centimeter

msl = mean sea level

NTU = Nephelometric Turbidity Unit

Table 6
Groundwater Analytical Results for TPH and BTEX
Block 38 West Property
Seattle, Washington
Farallon PN: 397-019

Sample Location	Sample Date	Sample Identification	Screened Interval (feet msl) ¹	Analytical Results (micrograms per liter)						
				DRO ²	ORO ²	GRO ³	Benzene ⁴	Toluene ⁴	Ethylbenzene ⁴	Xylenes ⁴
Reconnaissance Groundwater Samples from Borings										
FB-03	8/23/2018	FB-03-082318	8.8 to 3.8	660	490	< 100	< 1.0	< 1.0	< 1.0	< 2.0
FB-05	8/22/2018	FB-05-082218	8.5 to 3.5	< 260	< 410	< 100	< 1.0	< 1.0	< 1.0	< 2.0
FMW-130	7/21/2014	F-MW-130-GW1-072114	7.2 to 2.2	---	---	2,100	5.1	7.5	2.2	6.7
Groundwater Samples from Monitoring Wells										
FMW-130	7/24/2014	F-MW-130-072414	-22.8 to -32.8	---	---	< 100	< 1.0	< 1.0	< 1.0	< 2.0
	7/3/2017	FMW-130-070317		---	---	< 100	< 0.20	< 1.0	< 0.20	< 0.60
	8/30/2018	FMW-130-083018		< 250	< 410	< 100	< 0.20	< 1.0	< 0.20	< 0.60
FMW-132	8/30/2018	FMW-132-083018	20.7 to 15.7	260	< 400	< 100	< 0.20	< 1.0	< 0.20	< 0.60
FMW-133	8/30/2018	FMW-133-083018	18.8 to 13.8	270	< 410	< 100	< 0.20	< 1.0	< 0.20	< 0.60
FMW-134	8/30/2018	FMW-134-083018	13.4 to 8.4	1,000 M	< 410	1,100 Z	< 1.0	< 5.0	< 1.0	< 3.0
FMW-135	8/30/2018	FMW-135-083018	18.6 to 13.6	< 260	< 410	< 100	< 0.20	< 1.0	< 0.20	< 0.60
FMW-136	8/30/2018	FMW-136-083018	-4.9 to -14.9	< 250	< 400	< 100	< 0.20	< 1.0	< 0.20	< 0.60
Potable Water Sample										
Potable Well	8/21/2018	POTABLE-082118	Unknown	---	---	---	< 0.20	< 1.0	< 0.20	< 0.60
MTCA Method A Cleanup Level for Groundwater⁵				500	500	800/1,000⁶	5	1,000	700	1,000

NOTES:

Results in **bold** denote concentrations above applicable cleanup levels.
 < denotes analyte not detected at or above the reporting limit listed.
 --- denotes sample not analyzed.

¹In feet above mean sea level using North American Vertical Datum of 1988.

²Analyzed by Northwest Method NWTPH-Dx.

³Analyzed by Northwest Method NWTPH-Gx.

⁴Analyzed by U.S. Environmental Protection Agency Method 8021B and/or 8260C.

⁵Washington State Model Toxics Control Act Cleanup Regulation (MTCA) Method A Cleanup Levels for Groundwater, Table 720-1 of Section 900 of Chapter 173-340 of the Washington Administrative Code, as amended 2013.

⁶Cleanup level is 800 micrograms per liter if benzene is detected and 1,000 micrograms per liter if benzene is not detected.

BTEX = benzene, toluene, ethylbenzene, and xylenes

DRO = total petroleum hydrocarbons (TPH) as diesel-range organics

GRO = TPH as gasoline-range organics

M = hydrocarbons in the gasoline-range are impacting the diesel-range result

msl = mean sea level

ORO = TPH as oil-range organics

Z = the gasoline result is mainly attributed to a single peak (naphthalene)

**Table 7
Groundwater Analytical Results for PAHs
Block 38 West Property
Seattle, Washington
Farallon PN: 397-019**

Sample Location	Sample Date	Sample Identification	Screened Interval (feet msl) ¹	Analytical Results (micrograms per liter) ²																		
				Non-Carcinogenic PAHs											Carcinogenic PAHs							
				Naphthalene	1-Methylnaphthalene	2-Methylnaphthalene	Total Naphthalenes ³	Acenaphthene	Acenaphthylene	Anthracene	Benzo(g,h,i)Perylene	Fluoranthene	Fluorene	Phenanthrene	Pyrene	Benzo(a)pyrene	Benzo(a)anthracene	Benzo(b)fluoranthene	Benzo(j,k)Fluoranthene	Chrysene	Dibenzo(a,h)Anthracene	Indeno(1,2,3-cd)Pyrene
Reconnaissance Groundwater Samples from Borings																						
FB-03	8/23/2018	FB-03-082318	8.8 to 3.8	< 1.3	---	---	< 1.3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Groundwater Samples from Monitoring Wells																						
FMW-130	8/30/2018	FMW-130-083018	-22.8 to -32.8	< 0.097	< 0.097	< 0.097	< 0.291	< 0.097	< 0.097	< 0.097	< 0.0097	< 0.097	< 0.097	< 0.097	< 0.097	< 0.097	< 0.097	< 0.097	< 0.097	< 0.097	< 0.097	< 0.0073
FMW-132	8/30/2018	FMW-132-083018	20.7 to 15.7	< 0.096	< 0.096	< 0.096	< 0.288	0.40	< 0.096	< 0.096	< 0.0096	< 0.096	< 0.096	< 0.096	< 0.096	< 0.096	< 0.096	< 0.096	< 0.096	< 0.096	< 0.096	< 0.0072
FMW-133	8/30/2018	FMW-133-083018	18.8 to 13.8	< 0.097	< 0.097	< 0.097	< 0.291	0.38	< 0.097	< 0.097	< 0.0097	< 0.097	0.098	< 0.097	< 0.097	< 0.097	< 0.097	< 0.097	< 0.097	< 0.097	< 0.097	< 0.0073
FMW-134	8/30/2018	FMW-134-083018	13.4 to 8.4	290	10	12	312	8.3	0.12	< 0.099	< 0.0099	< 0.099	1.6	0.48	< 0.099	< 0.099	< 0.099	< 0.099	< 0.099	< 0.099	< 0.099	< 0.0075
FMW-135	8/30/2018	FMW-135-083018	18.6 to 13.6	0.35	0.68	0.29	1.32	0.39	< 0.096	< 0.096	< 0.0096	< 0.096	< 0.096	< 0.096	< 0.096	< 0.096	< 0.096	< 0.096	< 0.096	< 0.096	< 0.096	< 0.0072
FMW-136	8/30/2018	FMW-136-083018	-4.9 to -14.9	0.39	< 0.096	< 0.096	0.39	< 0.096	< 0.096	< 0.096	< 0.0096	< 0.096	< 0.096	< 0.096	< 0.096	< 0.096	< 0.096	< 0.096	< 0.096	< 0.096	< 0.096	< 0.0072
Potable Water Sample																						
Potable Well	8/21/2018	POTABLE-082118	Unknown	< 1.0	---	---	< 1.0	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MTCA Method A Cleanup Level for Groundwater⁶							160	960⁷	NE	4,800⁷	NE	640⁷	640⁷	NE	480⁷							0.1

NOTES:

Results in **bold** denote concentrations exceeding applicable cleanup levels.

< denotes analyte not detected at or exceeding the reporting limit listed.

— denotes sample not analyzed.

¹In feet above mean sea level using North American Vertical Datum of 1988.

²Analyzed by U.S. Environmental Protection Agency (EPA) Method 8270D/SIM. FB-03 and Potable Well samples analyzed by EPA Method 8260C.

³Sum of naphthalene, 1-methylnaphthalene, and 2-methylnaphthalene.

⁴Total carcinogenic polycyclic aromatic hydrocarbons derived using the total toxicity equivalency method in Section 708(8) of Chapter 173-340 of the Washington Administrative Code.

⁵For concentrations reported at less than the laboratory reporting limit, half the reporting limit was used to calculate total. If all constituent concentrations are non-detect, calculated total is indicated non-detect.

⁶Washington State Model Toxics Control Act Cleanup Regulation (MTCA) Method A Cleanup Levels for Groundwater, Table 720-1 of Section 900 of Chapter 173-340 of the Washington Administrative Code, as revised 2013, unless otherwise noted.

⁷MTCA Cleanup Levels and Risk Calculations, Standard Method B Values for Groundwater, <https://fortress.wa.gov/ecy/clarc/CLARCHome.aspx>.

cPAHs = carcinogenic polycyclic aromatic hydrocarbons

msl = mean sea level

NE = not established

PAHs = polycyclic aromatic hydrocarbons

TEC = toxic equivalent concentration

Table 8
Groundwater Analytical Results for Detected VOCs
Block 38 West Property
Seattle, Washington
Farallon PN: 397-019

Sample Location	Sample Date	Sample Identification	Screened Interval (feet msl) ¹	Analytical Results (micrograms per liter) ²		
				1,1,1-Trichloroethane	Chloroform	cis-1,2-Dichloroethene
Reconnaissance Groundwater Samples from Borings						
FB-03	8/23/2018	FB-03-082318	8.8 to 3.8	< 0.20	< 0.20	< 0.20
FB-05	8/22/2018	FB-05-082218	8.5 to 3.5	< 0.20	< 0.20	< 0.20
FMW-130	7/21/2014	F-MW-130-GW1-072114	7.2 to 2.2	< 0.20	< 0.20	< 0.20
Groundwater Samples from Monitoring Wells						
FMW-130	7/24/2014	F-MW-130-072414	-22.8 to -32.8	0.26	0.91	0.51
	7/3/2017	FMW-130-070317		< 0.20	< 0.20	< 0.20
	8/30/2018	FMW-130-083018		< 0.20	< 0.20	0.27
FMW-132	8/30/2018	FMW-132-083018	20.7 to 15.7	< 0.20	< 0.20	< 0.20
FMW-133	8/30/2018	FMW-133-083018	18.8 to 13.8	< 0.20	< 0.20	< 0.20
FMW-134	8/30/2018	FMW-134-083018	13.4 to 8.4	< 1.0	< 1.0	< 1.0
FMW-135	8/30/2018	FMW-135-083018	18.6 to 13.6	< 0.20	0.41	< 0.20
FMW-136	8/30/2018	FMW-136-083018	-4.9 to -14.9	< 0.20	2.7	0.36
Potable Water Sample						
Potable Well	8/21/2018	POTABLE-082118	Unknown	< 0.20	16	< 0.20
MTCA Cleanup Levels for Groundwater³				200⁴	1.41	16

NOTES:

Results in **bold** denote concentrations exceeding applicable cleanup levels.

< denotes analyte not detected at or exceeding the reporting limit listed.

¹In feet above mean sea level using North American Vertical Datum of 1988.

²Analyzed by U.S. Environmental Protection Agency Method 8260C. Only detected VOCs shown; see lab report for full list of analytes.

³Washington State Model Toxics Control Act (MTCA) Cleanup Regulation Cleanup Levels and Risk Calculations, Standard Method B Values for Groundwater, <https://fortress.wa.gov/ecy/clarc/CLARCHome.aspx>, unless otherwise noted.

⁴MTCA Method A Cleanup Levels for Groundwater, Table 720-1 of Section 900 of Chapter 173-340 of the Washington Administrative Code, as amended 2013.

msl = mean sea level

VOCs = volatile organic compounds

Table 9
Groundwater Elevations
Block 38 West Property
Seattle, Washington
Farallon PN: 397-019

Location	Screened Interval (feet bgs)¹	Screened Interval (feet msl)²	Top of Casing Elevation (feet msl)²	Monitoring Date	Depth to Water (feet)³	Water Level Elevation (feet msl)²
FMW-130	45.0 to 55.0	-22.8 to -32.8	21.86	8/30/2018	5.14	16.72
FMW-132	5.0 to 10.0	20.7 to 15.7	25.48	8/30/2018	7.44	18.04
FMW-133	6.5 to 11.5	18.8 to 13.8	24.87	8/30/2018	6.86	18.01
FMW-134	12.0 to 17.0	13.4 to 8.4	24.98	8/30/2018	8.66	16.32
FMW-135	7.0 to 12.0	18.6 to 13.6	25.29	8/30/2018	7.14	18.15
FMW-136	30.0 to 40.0	-4.9 to -14.9	24.79	8/30/2018	8.10	16.69

Notes:

¹Depth in feet below ground surface.

²In feet above mean sea level using North American Vertical Datum of 1988.

³In feet below top of well casing.

bgs = below ground surface

msl = mean sea level

Table 10
Estimated Quantity of Impacted Soil
Block 38 West Property
Seattle, Washington
Farallon PN: 397-019

Lift (feet msl) ¹	Impacted Grid Cell Identification	Impacted Area (square feet)	Impacted Elevation Range (feet msl) ¹	Impacted Thickness (feet)	Volume (cubic feet)	Volume (cubic yards)	Conversion Factor (tons per cubic yard)	Weight of Impacted Soil (tons)	Category 2 ²		Category 3 ²		Category 3+ ²		
									Without Wood Debris/Organics	With Wood Debris/Organics	Without Wood Debris/Organics	With Wood Debris/Organics	Without Wood Debris/Organics	With Wood Debris/Organics	
26 to 20	A 1	900	26 to 20	6	5,400	200	1.7	340				X			
	A 2	900	26 to 20	6	5,400	200	1.7	340				X			
	A 3	900	26 to 20	6	5,400	200	1.7	340				X			
	A 4	540	26 to 20	6	3,240	120	1.7	204				X			
	B 1	900	26 to 20	6	5,400	200	1.7	340				X			
	B 2	900	26 to 20	6	5,400	200	1.7	340				X			
	B 3	900	26 to 20	6	5,400	200	1.7	340				X			
	B 4	540	26 to 20	6	3,240	120	1.7	204				X			
	C 1	900	26 to 20	6	5,400	200	1.7	340	X						
	C 2	600	26 to 20	6	3,600	133	1.7	227	X						
	C 2	300	26 to 20	6	1,800	67	1.7	113			X				
	C 3	900	26 to 20	6	5,400	200	1.7	340			X				
	C 4	540	26 to 20	6	3,240	120	1.7	204			X				
	D 1	900	26 to 20	6	5,400	200	1.7	340	X						
	D 2	600	26 to 20	6	3,600	133	1.7	227	X						
	D 2	300	26 to 20	6	1,800	67	1.7	113					X		
	D 3	900	26 to 20	6	5,400	200	1.7	340					X		
	D 4	540	26 to 20	6	3,240	120	1.7	204					X		
	E 1	900	26 to 20	6	5,400	200	1.7	340	X						
	E 2	600	26 to 20	6	3,600	133	1.7	227	X						
	E 2	300	26 to 20	6	1,800	67	1.7	113					X		
	E 3	900	26 to 20	6	5,400	200	1.7	340					X		
	E 4	540	26 to 20	6	3,240	120	1.7	204					X		
	F 1	900	26 to 20	6	5,400	200	1.7	340	X						
	F 2	600	26 to 20	6	3,600	133	1.7	227	X						
	F 2	300	26 to 20	6	1,800	67	1.7	113					X		
	F 3	900	26 to 20	6	5,400	200	1.7	340					X		
	F 4	540	26 to 20	6	3,240	120	1.7	204					X		
	G 1	900	26 to 20	6	5,400	200	1.7	340					X		
	G 2	900	26 to 20	6	5,400	200	1.7	340					X		
	G 3	900	26 to 20	6	5,400	200	1.7	340					X		
	G 4	540	26 to 20	6	3,240	120	1.7	204					X		
	H 1	900	26 to 20	6	5,400	200	1.7	340					X		
	H 2	900	26 to 20	6	5,400	200	1.7	340					X		
	H 3	900	26 to 20	6	5,400	200	1.7	340					X		
	H 4	540	26 to 20	6	3,240	120	1.7	204					X		
	I 1	900	26 to 20	6	5,400	200	1.7	340					X		
	I 2	600	26 to 20	6	3,600	133	1.7	227					X		
	I 2	300	26 to 20	6	1,800	67	1.7	113						X	
	I 3	900	26 to 20	6	5,400	200	1.7	340						X	
I 4	540	26 to 20	6	3,240	120	1.7	204						X		
J 1	900	26 to 20	6	5,400	200	1.7	340					X			
J 2	600	26 to 20	6	3,600	133	1.7	227					X			
J 2	300	26 to 20	6	1,800	67	1.7	113						X		
J 3	900	26 to 20	6	5,400	200	1.7	340						X		
J 4	540	26 to 20	6	3,240	120	1.7	204						X		
K 1	900	26 to 20	6	5,400	200	1.7	340			X					
K 2	600	26 to 20	6	3,600	133	1.7	227			X					
K 2	300	26 to 20	6	1,800	67	1.7	113						X		
K 3	900	26 to 20	6	5,400	200	1.7	340						X		
K 4	540	26 to 20	6	3,240	120	1.7	204						X		

Table 10
Estimated Quantity of Impacted Soil
Block 38 West Property
Seattle, Washington
Farallon PN: 397-019

Lift (feet msl) ¹	Impacted Grid Cell Identification	Impacted Area (square feet)	Impacted Elevation Range (feet msl) ¹	Impacted Thickness (feet)	Volume (cubic feet)	Volume (cubic yards)	Conversion Factor (tons per cubic yard)	Weight of Impacted Soil (tons)	Category 2 ²		Category 3 ²		Category 3+ ²	
									Without Wood Debris/Organics	With Wood Debris/Organics	Without Wood Debris/Organics	With Wood Debris/Organics	Without Wood Debris/Organics	With Wood Debris/Organics
26 to 20 (cont.)	L 1	900	26 to 20	6	5,400	200	1.7	340			X			
	L 2	600	26 to 20	6	3,600	133	1.7	227			X			
	L 2	300	26 to 20	6	1,800	67	1.7	113						X
	L 3	900	26 to 20	6	5,400	200	1.7	340						X
	L 4	540	26 to 20	6	3,240	120	1.7	204						X
	M 1	900	26 to 20	6	5,400	200	1.7	340			X			
	M 2	600	26 to 20	6	3,600	133	1.7	227			X			
	M 2	300	26 to 20	6	1,800	67	1.7	113						X
	M 3	900	26 to 20	6	5,400	200	1.7	340						X
	M 4	540	26 to 20	6	3,240	120	1.7	204						X
	N 1	690	26 to 20	6	4,140	153	1.7	261			X			
	N 2	460	26 to 20	6	2,760	102	1.7	174			X			
20 to 15	N 2	230	26 to 20	6	1,380	51	1.7	87						X
	N 3	690	26 to 20	6	4,140	153	1.7	261						X
	N 4	324	26 to 20	6	1,944	72	1.7	122						X
	A 1	900	20 to 15	5	4,500	167	1.7	283	X					
	A 2	900	20 to 15	5	4,500	167	1.7	283	X					
	A 3	900	20 to 15	5	4,500	167	1.7	283		X				
	A 4	540	20 to 15	5	2,700	100	1.7	170		X				
	B 1	900	20 to 15	5	4,500	167	1.7	283	X					
	B 2	900	20 to 15	5	4,500	167	1.7	283	X					
	B 3	900	20 to 15	5	4,500	167	1.7	283		X				
	B 4	540	20 to 15	5	2,700	100	1.7	170		X				
	C 1	900	20 to 15	5	4,500	167	1.7	283		X				
	C 2	900	20 to 15	5	4,500	167	1.7	283		X				
	C 3	900	20 to 15	5	4,500	167	1.7	283		X				
	C 4	540	20 to 15	5	2,700	100	1.7	170		X				
	D 1	900	20 to 15	5	4,500	167	1.7	283		X				
	D 2	900	20 to 15	5	4,500	167	1.7	283		X				
	D 3	900	20 to 15	5	4,500	167	1.7	283		X				
	D 4	540	20 to 15	5	2,700	100	1.7	170		X				
	E 1	900	20 to 15	5	4,500	167	1.7	283		X				
E 2	780	20 to 15	5	3,900	144	1.7	246		X					
E 2	120	20 to 15	5	600	22	1.7	38					X		
E 3	900	20 to 15	5	4,500	167	1.7	283					X		
E 4	540	20 to 15	5	2,700	100	1.7	170					X		
F 1	900	20 to 15	5	4,500	167	1.7	283		X					
F 2	780	20 to 15	5	3,900	144	1.7	246		X					
F 2	120	20 to 15	5	600	22	1.7	38					X		
F 3	900	20 to 15	5	4,500	167	1.7	283					X		
F 4	540	20 to 15	5	2,700	100	1.7	170					X		
G 1	900	20 to 15	5	4,500	167	1.7	283		X					
G 2	780	20 to 15	5	3,900	144	1.7	246		X					
G 2	120	20 to 15	5	600	22	1.7	38					X		
G 3	900	20 to 15	5	4,500	167	1.7	283					X		
G 4	540	20 to 15	5	2,700	100	1.7	170					X		
H 1	900	20 to 15	5	4,500	167	1.7	283	X						
H 2	780	20 to 15	5	3,900	144	1.7	246	X						
H 2	120	20 to 15	5	600	22	1.7	38					X		
H 3	900	20 to 15	5	4,500	167	1.7	283					X		
H 4	540	20 to 15	5	2,700	100	1.7	170					X		

Table 10
Estimated Quantity of Impacted Soil
Block 38 West Property
Seattle, Washington
Farallon PN: 397-019

Lift (feet msl) ¹	Impacted Grid Cell Identification	Impacted Area (square feet)	Impacted Elevation Range (feet msl) ¹	Impacted Thickness (feet)	Volume (cubic feet)	Volume (cubic yards)	Conversion Factor (tons per cubic yard)	Weight of Impacted Soil (tons)	Category 2 ²		Category 3 ²		Category 3+ ²	
									Without Wood Debris/Organics	With Wood Debris/Organics	Without Wood Debris/Organics	With Wood Debris/Organics	Without Wood Debris/Organics	With Wood Debris/Organics
20 to 15 (cont.)	I 1	900	20 to 15	5	4,500	167	1.7	283	X					
	I 2	780	20 to 15	5	3,900	144	1.7	246	X					
	I 2	120	20 to 15	5	600	22	1.7	38						X
	I 3	900	20 to 15	5	4,500	167	1.7	283						X
	I 4	540	20 to 15	5	2,700	100	1.7	170						X
	J 1	900	20 to 15	5	4,500	167	1.7	283	X					
	J 2	780	20 to 15	5	3,900	144	1.7	246	X					
	J 2	120	20 to 15	5	600	22	1.7	38						X
	J 3	900	20 to 15	5	4,500	167	1.7	283						X
	J 4	540	20 to 15	5	2,700	100	1.7	170						X
	K 1	900	20 to 15	5	4,500	167	1.7	283				X		
	K 2	780	20 to 15	5	3,900	144	1.7	246				X		
	K 2	120	20 to 15	5	600	22	1.7	38						X
	K 3	900	20 to 15	5	4,500	167	1.7	283						X
	K 4	540	20 to 15	5	2,700	100	1.7	170						X
	L 1	900	20 to 15	5	4,500	167	1.7	283				X		
	L 2	780	20 to 15	5	3,900	144	1.7	246				X		
	L 2	120	20 to 15	5	600	22	1.7	38						X
	L 3	900	20 to 15	5	4,500	167	1.7	283						X
	L 4	540	20 to 15	5	2,700	100	1.7	170						X
M 1	900	20 to 15	5	4,500	167	1.7	283				X			
M 2	780	20 to 15	5	3,900	144	1.7	246				X			
M 2	120	20 to 15	5	600	22	1.7	38						X	
M 3	900	20 to 15	5	4,500	167	1.7	283						X	
M 4	540	20 to 15	5	2,700	100	1.7	170						X	
N 1	690	20 to 15	5	3,450	128	1.7	217				X			
N 2	530	20 to 15	5	2,650	98	1.7	167				X			
N 2	160	20 to 15	5	800	30	1.7	50						X	
N 3	690	20 to 15	5	3,450	128	1.7	217						X	
N 4	324	20 to 15	5	1,620	60	1.7	102						X	
15 to 10	A 1	900	15 to 10	5	4,500	167	1.7	283	X					
	A 2	900	15 to 10	5	4,500	167	1.7	283	X					
	A 3	900	15 to 10	5	4,500	167	1.7	283	X					
	A 4	540	15 to 10	5	2,700	100	1.7	170	X					
	B 1	900	15 to 10	5	4,500	167	1.7	283	X					
	B 2	900	15 to 10	5	4,500	167	1.7	283	X					
	B 3	900	15 to 10	5	4,500	167	1.7	283	X					
	B 4	540	15 to 10	5	2,700	100	1.7	170	X					
	C 1	900	15 to 10	5	4,500	167	1.7	283		X				
	C 2	900	15 to 10	5	4,500	167	1.7	283		X				
	C 3	900	15 to 10	5	4,500	167	1.7	283	X					
	C 4	540	15 to 10	5	2,700	100	1.7	170	X					
	D 1	900	15 to 10	5	4,500	167	1.7	283		X				
	D 2	900	15 to 10	5	4,500	167	1.7	283		X				
	D 3	900	15 to 10	5	4,500	167	1.7	283	X					
	D 4	540	15 to 10	5	2,700	100	1.7	170	X					
E 1	900	15 to 10	5	4,500	167	1.7	283		X					
E 2	750	15 to 10	5	3,750	139	1.7	236		X					
E 2	150	15 to 10	5	750	28	1.7	47				X			
E 3	900	15 to 10	5	4,500	167	1.7	283			X				
E 4	540	15 to 10	5	2,700	100	1.7	170			X				

Table 10
Estimated Quantity of Impacted Soil
Block 38 West Property
Seattle, Washington
Farallon PN: 397-019

Lift (feet msl) ¹	Impacted Grid Cell Identification	Impacted Area (square feet)	Impacted Elevation Range (feet msl) ¹	Impacted Thickness (feet)	Volume (cubic feet)	Volume (cubic yards)	Conversion Factor (tons per cubic yard)	Weight of Impacted Soil (tons)	Category 2 ²		Category 3 ²		Category 3+ ²	
									Without Wood Debris/Organics	With Wood Debris/Organics	Without Wood Debris/Organics	With Wood Debris/Organics	Without Wood Debris/Organics	With Wood Debris/Organics
15 to 10 (cont.)	F 1	900	15 to 10	5	4,500	167	1.7	283		X				
	F 2	750	15 to 10	5	3,750	139	1.7	236		X				
	F 2	150	15 to 10	5	750	28	1.7	47				X		
	F 3	900	15 to 10	5	4,500	167	1.7	283			X			
	F 4	540	15 to 10	5	2,700	100	1.7	170			X			
	G 1	900	15 to 10	5	4,500	167	1.7	283	X					
	G 2	750	15 to 10	5	3,750	139	1.7	236	X					
	G 2	150	15 to 10	5	750	28	1.7	47			X			
	G 3	900	15 to 10	5	4,500	167	1.7	283			X			
	G 4	540	15 to 10	5	2,700	100	1.7	170			X			
	H 1	900	15 to 10	5	4,500	167	1.7	283	X					
	H 2	750	15 to 10	5	3,750	139	1.7	236	X					
	H 2	150	15 to 10	5	750	28	1.7	47			X			
	H 3	900	15 to 10	5	4,500	167	1.7	283			X			
	H 4	540	15 to 10	5	2,700	100	1.7	170			X			
	I 1	900	15 to 10	5	4,500	167	1.7	283	X					
	I 2	750	15 to 10	5	3,750	139	1.7	236	X					
	I 2	150	15 to 10	5	750	28	1.7	47			X			
	I 3	900	15 to 10	5	4,500	167	1.7	283			X			
	I 4	540	15 to 10	5	2,700	100	1.7	170			X			
	J 1	900	15 to 10	5	4,500	167	1.7	283		X				
	J 2	750	15 to 10	5	3,750	139	1.7	236		X				
	J 2	150	15 to 10	5	750	28	1.7	47				X		
	J 3	900	15 to 10	5	4,500	167	1.7	283				X		
	J 4	540	15 to 10	5	2,700	100	1.7	170				X		
	K 1	900	15 to 10	5	4,500	167	1.7	283				X		
	K 2	900	15 to 10	5	4,500	167	1.7	283				X		
	K 3	900	15 to 10	5	4,500	167	1.7	283				X		
	K 4	540	15 to 10	5	2,700	100	1.7	170				X		
	L 1	900	15 to 10	5	4,500	167	1.7	283				X		
	L 2	900	15 to 10	5	4,500	167	1.7	283				X		
	L 3	900	15 to 10	5	4,500	167	1.7	283				X		
L 4	540	15 to 10	5	2,700	100	1.7	170				X			
M 1	900	15 to 10	5	4,500	167	1.7	283				X			
M 2	900	15 to 10	5	4,500	167	1.7	283				X			
M 3	900	15 to 10	5	4,500	167	1.7	283				X			
M 4	540	15 to 10	5	2,700	100	1.7	170				X			
N 1	690	15 to 10	5	3,450	128	1.7	217				X			
N 2	530	15 to 10	5	2,650	98	1.7	167				X			
N 2	160	15 to 10	5	800	30	1.7	50				X			
N 3	690	15 to 10	5	3,450	128	1.7	217				X			
N 4	324	15 to 10	5	1,620	60	1.7	102				X			
10 to 5	A 1	900	10 to 5	5	4,500	167	1.7	283	X					
	A 2	900	10 to 5	5	4,500	167	1.7	283	X					
	A 3	900	10 to 5	5	4,500	167	1.7	283	X					
	A 4	540	10 to 5	5	2,700	100	1.7	170	X					
	B 1	900	10 to 5	5	4,500	167	1.7	283	X					
	B 2	900	10 to 5	5	4,500	167	1.7	283	X					
	B 3	900	10 to 5	5	4,500	167	1.7	283	X					
	B 4	540	10 to 5	5	2,700	100	1.7	170	X					
	C 2	150	10 to 5	5	750	28	1.7	47	X					
	C 3	900	10 to 5	5	4,500	167	1.7	283	X					
	C 4	540	10 to 5	5	2,700	100	1.7	170	X					

Table 10
Estimated Quantity of Impacted Soil
Block 38 West Property
Seattle, Washington
Farallon PN: 397-019

Lift (feet msl) ¹	Impacted Grid Cell Identification	Impacted Area (square feet)	Impacted Elevation Range (feet msl) ¹	Impacted Thickness (feet)	Volume (cubic feet)	Volume (cubic yards)	Conversion Factor (tons per cubic yard)	Weight of Impacted Soil (tons)	Category 2 ²		Category 3 ²		Category 3+ ²	
									Without Wood Debris/Organics	With Wood Debris/Organics	Without Wood Debris/Organics	With Wood Debris/Organics	Without Wood Debris/Organics	With Wood Debris/Organics
10 to 5 (cont.)	D 2	150	10 to 5	5	750	28	1.7	47	X					
	D 3	900	10 to 5	5	4,500	167	1.7	283	X					
	D 4	540	10 to 5	5	2,700	100	1.7	170	X					
	E 2	150	10 to 5	5	750	28	1.7	47	X					
	E 3	900	10 to 5	5	4,500	167	1.7	283	X					
	E 4	540	10 to 5	5	2,700	100	1.7	170	X					
	F 2	150	10 to 5	5	750	28	1.7	47	X					
	F 3	900	10 to 5	5	4,500	167	1.7	283	X					
	F 4	540	10 to 5	5	2,700	100	1.7	170	X					
	G 1	900	10 to 5	5	4,500	167	1.7	283	X					
	G 2	900	10 to 5	5	4,500	167	1.7	283	X					
	G 3	900	10 to 5	5	4,500	167	1.7	283	X					
	G 4	540	10 to 5	5	2,700	100	1.7	170	X					
	H 1	900	10 to 5	5	4,500	167	1.7	283	X					
	H 2	900	10 to 5	5	4,500	167	1.7	283	X					
	H 3	900	10 to 5	5	4,500	167	1.7	283	X					
	H 4	540	10 to 5	5	2,700	100	1.7	170	X					
	I 1	900	10 to 5	5	4,500	167	1.7	283	X					
	I 2	900	10 to 5	5	4,500	167	1.7	283	X					
	I 3	900	10 to 5	5	4,500	167	1.7	283	X					
	I 4	540	10 to 5	5	2,700	100	1.7	170	X					
	J 1	900	10 to 5	5	4,500	167	1.7	283		X				
	J 2	900	10 to 5	5	4,500	167	1.7	283		X				
	J 3	900	10 to 5	5	4,500	167	1.7	283		X				
	J 4	540	10 to 5	5	2,700	100	1.7	170		X				
	K 1	900	10 to 5	5	4,500	167	1.7	283		X				
	K 2	900	10 to 5	5	4,500	167	1.7	283		X				
	K 3	900	10 to 5	5	4,500	167	1.7	283		X				
	K 4	540	10 to 5	5	2,700	100	1.7	170		X				
	L 1	900	10 to 5	5	4,500	167	1.7	283		X				
	L 2	900	10 to 5	5	4,500	167	1.7	283		X				
	L 3	900	10 to 5	5	4,500	167	1.7	283		X				
L 4	540	10 to 5	5	2,700	100	1.7	170		X					
M 1	900	10 to 5	5	4,500	167	1.7	283		X					
M 2	900	10 to 5	5	4,500	167	1.7	283		X					
M 3	900	10 to 5	5	4,500	167	1.7	283		X					
M 4	540	10 to 5	5	2,700	100	1.7	170		X					
N 1	690	10 to 5	5	3,450	128	1.7	217		X					
N 2	690	10 to 5	5	3,450	128	1.7	217		X					
N 3	690	10 to 5	5	3,450	128	1.7	217		X					
N 4	324	10 to 5	5	1,620	60	1.7	102		X					

Table 10
Estimated Quantity of Impacted Soil
Block 38 West Property
Seattle, Washington
Farallon PN: 397-019

Lift (feet msl) ¹	Impacted Grid Cell Identification	Impacted Area (square feet)	Impacted Elevation Range (feet msl) ¹	Impacted Thickness (feet)	Volume (cubic feet)	Volume (cubic yards)	Conversion Factor (tons per cubic yard)	Weight of Impacted Soil (tons)	Category 2 ²		Category 3 ²		Category 3+ ²	
									Without Wood Debris/Organics	With Wood Debris/Organics	Without Wood Debris/Organics	With Wood Debris/Organics	Without Wood Debris/Organics	With Wood Debris/Organics
5 to 0	A 1	900	5 to 0	5	4,500	167	1.7	283	X					
	A 2	900	5 to 0	5	4,500	167	1.7	283	X					
	A 3	900	5 to 0	5	4,500	167	1.7	283	X					
	A 4	540	5 to 0	5	2,700	100	1.7	170	X					
	B 1	900	5 to 0	5	4,500	167	1.7	283	X					
	B 2	900	5 to 0	5	4,500	167	1.7	283	X					
	B 3	900	5 to 0	5	4,500	167	1.7	283	X					
	B 4	540	5 to 0	5	2,700	100	1.7	170	X					
	C 3	900	5 to 0	5	4,500	167	1.7	283	X					
	C 4	540	5 to 0	5	2,700	100	1.7	170	X					
	D 3	900	5 to 0	5	4,500	167	1.7	283	X					
	D 4	540	5 to 0	5	2,700	100	1.7	170	X					
	E 3	900	5 to 0	5	4,500	167	1.7	283	X					
	E 4	540	5 to 0	5	2,700	100	1.7	170	X					
	F 3	900	5 to 0	5	4,500	167	1.7	283	X					
	F 4	540	5 to 0	5	2,700	100	1.7	170	X					
	G 3	900	5 to 0	5	4,500	167	1.7	283	X					
	G 4	540	5 to 0	5	2,700	100	1.7	170	X					
	H 1	900	5 to 0	5	4,500	167	1.7	283	X					
	H 2	900	5 to 0	5	4,500	167	1.7	283	X					
	H 3	900	5 to 0	5	4,500	167	1.7	283	X					
	H 4	540	5 to 0	5	2,700	100	1.7	170	X					
	I 1	900	5 to 0	5	4,500	167	1.7	283	X					
	I 2	900	5 to 0	5	4,500	167	1.7	283	X					
	I 3	900	5 to 0	5	4,500	167	1.7	283	X					
	I 4	540	5 to 0	5	2,700	100	1.7	170	X					
	J 1	900	5 to 0	5	4,500	167	1.7	283	X					
	J 2	900	5 to 0	5	4,500	167	1.7	283	X					
J 3	900	5 to 0	5	4,500	167	1.7	283	X						
J 4	540	5 to 0	5	2,700	100	1.7	170	X						
K 1	540	5 to 0	5	2,700	100	1.7	170	X						
K 2	900	5 to 0	5	4,500	167	1.7	283	X						
K 3	900	5 to 0	5	4,500	167	1.7	283	X						
K 4	540	5 to 0	5	2,700	100	1.7	170	X						
L 1	900	5 to 0	5	4,500	167	1.7	283	X						
L 2	900	5 to 0	5	4,500	167	1.7	283	X						
L 3	900	5 to 0	5	4,500	167	1.7	283	X						
L 4	540	5 to 0	5	2,700	100	1.7	170	X						
M 1	900	5 to 0	5	4,500	167	1.7	283	X						
M 2	900	5 to 0	5	4,500	167	1.7	283	X						
M 3	900	5 to 0	5	4,500	167	1.7	283	X						
M 4	540	5 to 0	5	2,700	100	1.7	170	X						
N 1	690	5 to 0	5	3,450	128	1.7	217	X						
N 2	690	5 to 0	5	3,450	128	1.7	217	X						
N 3	690	5 to 0	5	3,450	128	1.7	217	X						
N 4	324	5 to 0	5	1,620	60	1.7	102	X						

Table 10
Estimated Quantity of Impacted Soil
Block 38 West Property
Seattle, Washington
Farallon PN: 397-019

Lift (feet msl) ¹	Impacted Grid Cell Identification	Impacted Area (square feet)	Impacted Elevation Range (feet msl) ¹	Impacted Thickness (feet)	Volume (cubic feet)	Volume (cubic yards)	Conversion Factor (tons per cubic yard)	Weight of Impacted Soil (tons)	Category 2 ²		Category 3 ²		Category 3+ ²	
									Without Wood Debris/Organics	With Wood Debris/Organics	Without Wood Debris/Organics	With Wood Debris/Organics	Without Wood Debris/Organics	With Wood Debris/Organics
0 to -5	E 3	900	0 to -5	5	4,500	167	1.7	283	X					
	E 4	540	0 to -5	5	2,700	100	1.7	170	X					
	F 3	900	0 to -5	5	4,500	167	1.7	283	X					
	F 4	540	0 to -5	5	2,700	100	1.7	170	X					
	G 3	900	0 to -5	5	4,500	167	1.7	283	X					
	G 4	540	0 to -5	5	2,700	100	1.7	170	X					
	H 1	900	0 to -5	5	4,500	167	1.7	283	X					
	H 2	900	0 to -5	5	4,500	167	1.7	283	X					
	H 3	900	0 to -5	5	4,500	167	1.7	283	X					
	H 4	540	0 to -5	5	2,700	100	1.7	170	X					
	I 1	900	0 to -5	5	4,500	167	1.7	283	X					
	I 2	900	0 to -5	5	4,500	167	1.7	283	X					
	I 3	900	0 to -5	5	4,500	167	1.7	283	X					
	I 4	540	0 to -5	5	2,700	100	1.7	170	X					
	J 1	900	0 to -5	5	4,500	167	1.7	283	X					
	J 2	900	0 to -5	5	4,500	167	1.7	283	X					
	J 3	900	0 to -5	5	4,500	167	1.7	283	X					
	J 4	540	0 to -5	5	2,700	100	1.7	170	X					
	K 1	900	0 to -5	5	4,500	167	1.7	283	X					
	K 2	900	0 to -5	5	4,500	167	1.7	283	X					
	K 3	900	0 to -5	5	4,500	167	1.7	283	X					
	K 4	540	0 to -5	5	2,700	100	1.7	170	X					
	L 1	900	0 to -5	5	4,500	167	1.7	283	X					
	L 2	900	0 to -5	5	4,500	167	1.7	283	X					
	L 3	900	0 to -5	5	4,500	167	1.7	283	X					
	L 4	540	0 to -5	5	2,700	100	1.7	170	X					
	M 1	900	0 to -5	5	4,500	167	1.7	283	X					
	M 2	900	0 to -5	5	4,500	167	1.7	283	X					
M 3	900	0 to -5	5	4,500	167	1.7	283	X						
M 4	540	0 to -5	5	2,700	100	1.7	170	X						
N 1	690	0 to -5	5	3,450	128	1.7	217	X						
N 2	690	0 to -5	5	3,450	128	1.7	217	X						
N 3	690	0 to -5	5	3,450	128	1.7	217	X						
N 4	324	0 to -5	5	1,620	60	1.7	102	X						
Total Estimated Tonnages of Impacted Soil								76,080	35,895	12,059	5,200	16,345	0	6,582

NOTES:

¹Elevation in feet above mean sea level (msl) (NAVD 88).

msl = mean sea level

²Petroleum-contaminated soil disposal classification according to CEMEX disposal criteria.

APPENDIX A
BORING LOGS AND WELL COMPLETION DIAGRAMS

SUBSURFACE INVESTIGATION REPORT AND ENVIRONMENTAL MEDIA
MANAGEMENT PLAN
Block 38 West Property
500 through 536 Westlake Avenue North
Seattle, Washington

Farallon PN: 397-019

USCS Classification and Graphic Legend

Major Divisions	USCS Graphic Symbol	USCS Letter Symbol	Lithologic Description
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Coarse-Grained Soil (More than 50% of material is larger than No. 200 sieve size)	GRAVEL AND GRAVELLY SOIL (More than 50% of coarse fraction retained on No. 4 sieve)	CLEAN GRAVEL (Little or no fines)		GW	Well graded GRAVEL, well graded GRAVEL with sand
		GRAVEL WITH FINES (Appreciable amount of fines)		GP	Poorly graded GRAVEL, GRAVEL with sand
				GP-GM	Poorly graded GRAVEL - GRAVEL with sand and silt
				GM	Silty GRAVEL
	SAND AND SANDY SOIL (More than 50% of coarse fraction passed through No. 4 sieve)	CLEAN SAND (Little or no fines)		SW	Well graded SAND
				SP	Poorly graded SAND
		SAND WITH FINES (Appreciable amount of fines)		SP-SM	Poorly graded SAND - silty SAND
				SM	Silty SAND
				SC	Clayey SAND
				SM-ML	SILT - Silty SAND
Fine-Grained Soil (More than 50% of material is smaller than No. 200 sieve size)	SILT AND CLAY (Liquid limit less than 50)		ML	SILT	
			CL	CLAY	
			OL	Organic SILT	
	SILT AND CLAY (Liquid limit greater than 50)		MH	Inorganic SILT	
			CH	Inorganic CLAY	
			OH	Organic CLAY	
		Highly Organic Soil		PT	Peat
OTHER MATERIALS	PAVEMENT		AC	Asphalt concrete	
			CO	Concrete	
	OTHER		RK	Bedrock	
			WD	Wood Debris	
			DB	Debris (Miscellaneous)	
			PC	Portland cement	

Legend	
	Sample Interval
	Grab Sample Interval
	Water level at time of drilling
	Water level at time of sampling
	Blank Casing
	Screened Casing
	Cement Grout
	Bentonite
	Sand Pack
	Well Cap
	Solid line indicates sharp contact between units well defined.
	Dashed line indicates gradational contact between units.
	feet bgs = feet below ground surface
	NE = Not Encountered
	NA = Not Applicable
	PID = Photoionization Detector
	PN = Project Number
	*ppm = parts per million total organic vapors in isobutylene equivalents using a 10.6 electron volt lamp
	USCS = Unified Soil Classification System

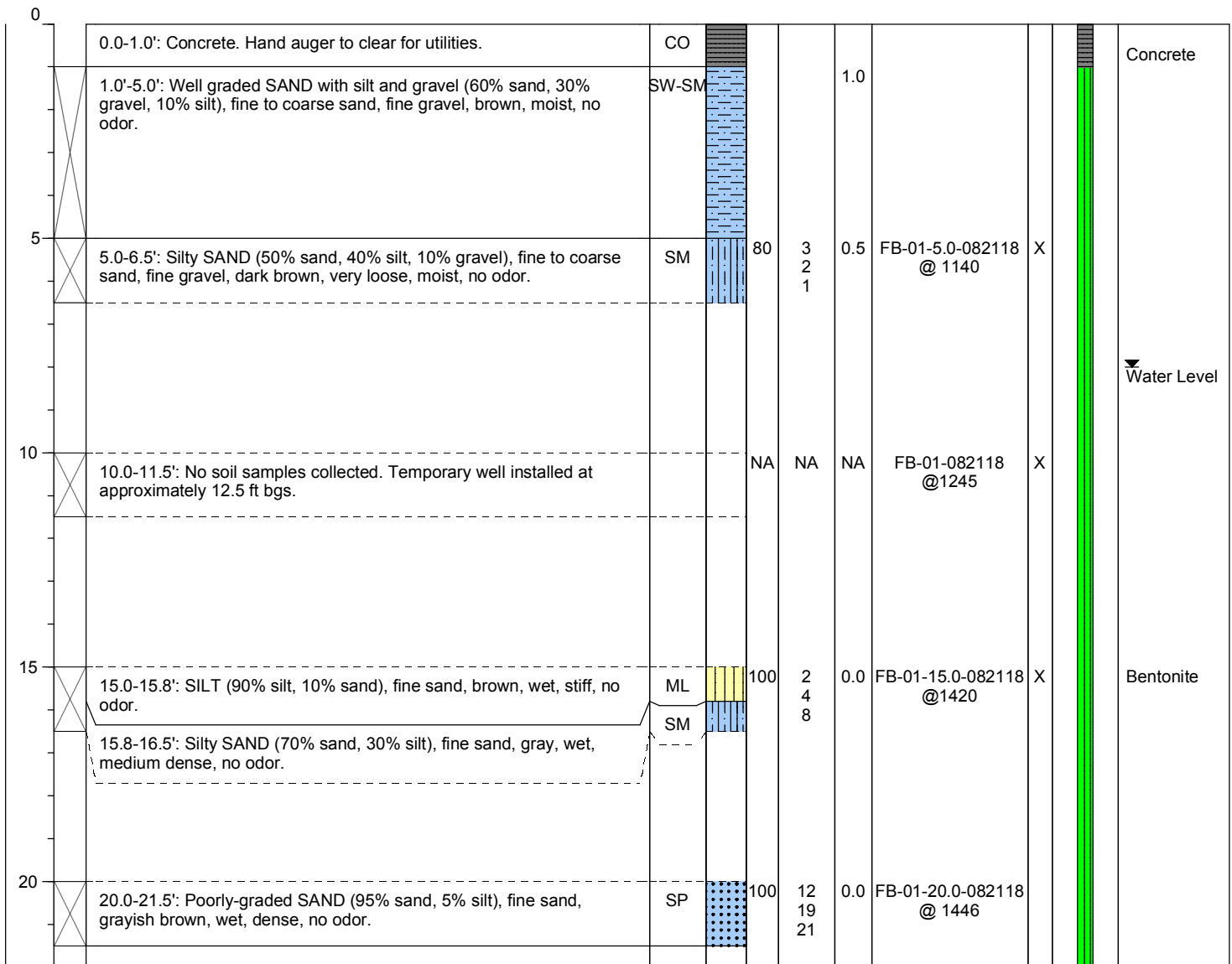
Client: City Investors IX LLC
Project: Block 38 West Property
Location: Seattle, WA

Date/Time Started: 08/21/2018 @ 1126 **Sampler Type:** 1.5 Split Spoon
Date/Time Completed: 08/21/2018 @ 1540 **Drive Hammer (lbs.):** 140
Equipment: MiniTrack **Depth of Water ATD (ft bgs):** 8.0
Drilling Company: Geologic Drilling **Total Boring Depth (ft bgs):** 41.5
Drilling Foreman: Blaine Gibson **Total Well Depth (ft bgs):** NA
Drilling Method: Hollow Stem Auger

Farallon PN: 397-019

Logged By: Greg Peters

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	USCS Graphic	% Recovery	Blow Counts 8/8/8	PID (ppm)	Sample ID	Sample Analyzed	Boring/Well Construction Details
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Well Construction Information

Monument Type: NA	Filter Pack: NA	Ground Surface Elevation (ft): NA
Casing Diameter (inches): NA	Surface Seal: Concrete	Top of Casing Elevation (ft): NA
Screen Slot Size (inches): NA	Annular Seal: NA	Surveyed Location: X: NA
Screened Interval (ft bgs): NA	Boring Abandonment: Bentonite	Y: NA



Log of Boring: FB-01

Client: City Investors IX LLC
Project: Block 38 West Property
Location: Seattle, WA

Date/Time Started: 08/21/2018 @ 1126 **Sampler Type:** 1.5 Split Spoon
Date/Time Completed: 08/21/2018 @ 1540 **Drive Hammer (lbs.):** 140
Equipment: MiniTrack **Depth of Water ATD (ft bgs):** 8.0
Drilling Company: Geologic Drilling **Total Boring Depth (ft bgs):** 41.5
Drilling Foreman: Blaine Gibson **Total Well Depth (ft bgs):** NA
Drilling Method: Hollow Stem Auger

Farallon PN: 397-019

Logged By: Greg Peters

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	USCS Graphic	% Recovery	Blow Counts 8/8/8	PID (ppm)	Sample ID	Sample Analyzed	Boring/Well Construction Details
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25	25.0-26.5'	SILT (90% silt, 10% sand), fine sand, gray, wet, stiff, no odor.	ML		100	3 4 5	0.0	FB-01-25.0-082118 @ 1500		
30	30.0-31.5'	Poorly graded SAND (95% sand, 5% silt), medium sand, gray, wet, dense, no odor.	SP		100	14 20 25	0.0	FB-01-30.0-082118 @ 1515	X	
35	35.0-36.5'	Silty SAND (60% sand, 40% silt), fine sand, gray, moist, very dense no odor.	SM		100	17 35 26	0.0	FB-01-35.0-082118 @ 1530		Bentonite
40	40.0-41.5'	Poorly graded SAND (95% sand, 5% silt), fine sand, dark gray, very dense, moist, no odor.	SP		100	12 15 50 5	0.0	FB-01-40.0-082118 @ 1540		

Well Construction Information

Monument Type: NA	Filter Pack: NA	Ground Surface Elevation (ft): NA
Casing Diameter (inches): NA	Surface Seal: Concrete	Top of Casing Elevation (ft): NA
Screen Slot Size (inches): NA	Annular Seal: NA	Surveyed Location: X: NA
Screened Interval (ft bgs): NA	Boring Abandonment: Bentonite	Y: NA



Log of Boring: FB-02

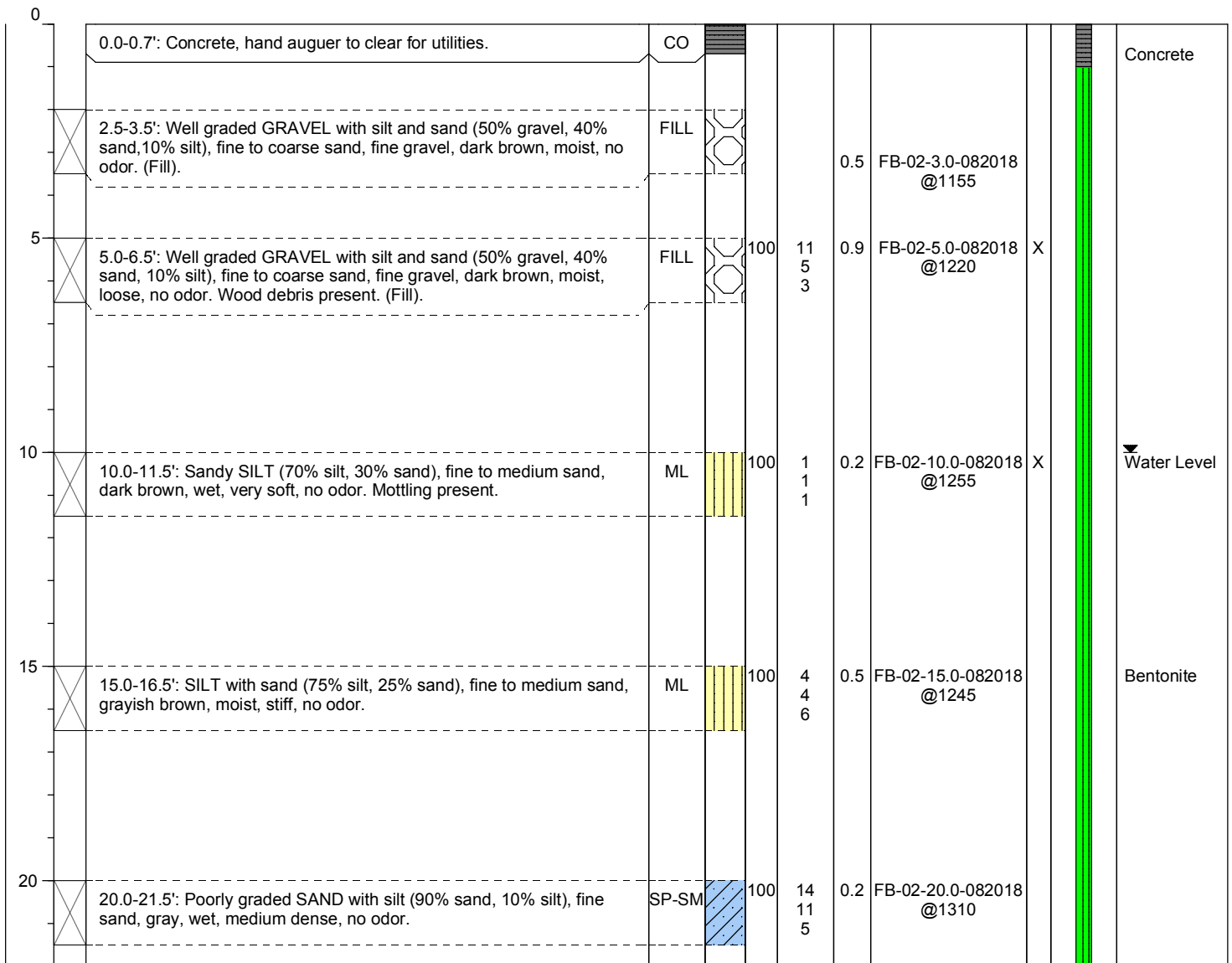
Client: City Investors IX LLC
Project: Block 38 West Property
Location: Seattle, WA

Date/Time Started: 08/20/2018 @ 1045 **Sampler Type:** 1.5 Split Spoon
Date/Time Completed: 08/20/2018 @ 1545 **Drive Hammer (lbs.):** 140
Equipment: Mini-track **Depth of Water ATD (ft bgs):** 10.0
Drilling Company: Geologic Drilling **Total Boring Depth (ft bgs):** 41.5
Drilling Foreman: Blaine Gibson **Total Well Depth (ft bgs):** NA
Drilling Method: Hollow Stem Auger

Farallon PN: 397-019

Logged By: Greg Peters

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	USCS Graphic	% Recovery	Blow Counts 8/8/8	PID (ppm)	Sample ID	Sample Analyzed	Boring/Well Construction Details
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Well Construction Information

Monument Type: NA	Filter Pack: NA	Ground Surface Elevation (ft): NA
Casing Diameter (inches): NA	Surface Seal: Concrete	Top of Casing Elevation (ft): NA
Screen Slot Size (inches): NA	Annular Seal: NA	Surveyed Location: X: NA
Screened Interval (ft bgs): NA	Boring Abandonment: Bentonite	Y: NA



Log of Boring: FB-02

Client: City Investors IX LLC
Project: Block 38 West Property
Location: Seattle, WA

Date/Time Started: 08/20/2018 @ 1045 **Sampler Type:** 1.5 Split Spoon
Date/Time Completed: 08/20/2018 @ 1545 **Drive Hammer (lbs.):** 140
Equipment: Mini-track **Depth of Water ATD (ft bgs):** 10.0
Drilling Company: Geologic Drilling **Total Boring Depth (ft bgs):** 41.5
Drilling Foreman: Blaine Gibson **Total Well Depth (ft bgs):** NA
Drilling Method: Hollow Stem Auger

Farallon PN: 397-019

Logged By: Greg Peters

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	USCS Graphic	% Recovery	Blow Counts 8/8/8	PID (ppm)	Sample ID	Sample Analyzed	Boring/Well Construction Details
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25	25.0-26.5'	Silty SAND (80% sand, 20% silt), fine to medium sand, gray, wet, dense, slight petroleum-like odor.	SM		100	16 20 20	0.4	FB-02-25.0-082018 @1430	X	
30	30.0-31.5'	Sandy SILT (60% silt, 40% sand), fine sand, gray, moist to wet, very stiff, slight petroleum-like odor.	ML		100	12 16 16	0.7	FB-02-30.0-082018 @1454		
35	35.0-36.5'	Poorly graded SAND with silt (90% sand, 10% silt), fine to medium sand, gray, moist to wet, medium dense, no odor.	SP-SM		100	5 8 12	0.6	FB-02-35.0-082018 @1520	X	Bentonite
40	40.0-41.5'	No Recovery. Heaving sands prevented drilling beyond 40.0 ft bgs.			0			No Sample		

Well Construction Information

Monument Type: NA	Filter Pack: NA	Ground Surface Elevation (ft): NA
Casing Diameter (inches): NA	Surface Seal: Concrete	Top of Casing Elevation (ft): NA
Screen Slot Size (inches): NA	Annular Seal: NA	Surveyed Location: X: NA
Screened Interval (ft bgs): NA	Boring Abandonment: Bentonite	Y: NA



Log of Boring: FB-03

Client: City Investors IX LLC
Project: Block 38 West Property
Location: Seattle, WA

Date/Time Started: 08/23/2018 @ 1200 **Sampler Type:** 1.5 Split Spoon
Date/Time Completed: 08/23/2018 @ 1540 **Drive Hammer (lbs.):** 140
Equipment: Mini-track **Depth of Water ATD (ft bgs):** 17.0
Drilling Company: Geologic Drilling **Total Boring Depth (ft bgs):** 41.5
Drilling Foreman: Blaine Gibson **Total Well Depth (ft bgs):** NA
Drilling Method: Hollow Stem Auger

Farallon PN: 397-019

Logged By: Greg Peters

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	USCS Graphic	% Recovery	Blow Counts 8/8/8	PID (ppm)	Sample ID	Sample Analyzed	Boring/Well Construction Details
0	0.0-0.6'	Concrete, asphalt fill material. Hand auger to clear for utilities.	CO							Concrete
5	5.0-6.5'	SILT with sand (80% silt, 10% sand, 10% gravel), fine sand, fine gravel, gray, moist, medium stiff, organic odor. Some charcoal and wood debris. (Fill).	FILL		100	3 3 3	0.1	FB-03-5.0-082318 @1250		
10	10.0-11.5'	SILT (100% silt), gray, moist, medium stiff, no odor.	ML		100	3 3 3	0.2	FB-03-10.0-082318 @1310	X	Bentonite
15	15.0-16.5'	Sandy SILT (60% silt, 40% sand), fine sand, gray, wet, medium stiff, no odor.	ML		100	2 3 5	0.2	FB-03-15.0-082318 @1325	X	
20	20.5-21.5'	No soil sample. Temporary well installed for reconnaissance groundwater sampling.			NA	NA	NA	FB-03-082318 @ 14:00	X	

Water Level

Well Construction Information

Monument Type: NA	Filter Pack: NA	Ground Surface Elevation (ft): NA
Casing Diameter (inches): NA	Surface Seal: Concrete	Top of Casing Elevation (ft): NA
Screen Slot Size (inches): NA	Annular Seal: NA	Surveyed Location: X: NA
Screened Interval (ft bgs): NA	Boring Abandonment: Bentonite	Y: NA



Log of Boring: FB-03

Client: City Investors IX LLC
Project: Block 38 West Property
Location: Seattle, WA

Date/Time Started: 08/23/2018 @ 1200 **Sampler Type:** 1.5 Split Spoon
Date/Time Completed: 08/23/2018 @ 1540 **Drive Hammer (lbs.):** 140
Equipment: Mini-track **Depth of Water ATD (ft bgs):** 17.0
Drilling Company: Geologic Drilling **Total Boring Depth (ft bgs):** 41.5
Drilling Foreman: Blaine Gibson **Total Well Depth (ft bgs):** NA
Drilling Method: Hollow Stem Auger

Farallon PN: 397-019

Logged By: Greg Peters

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	USCS Graphic	% Recovery	Blow Counts 8/8/8	PID (ppm)	Sample ID	Sample Analyzed	Boring/Well Construction Details
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25	25.0-26.5'	Poorly graded SAND with silt (90% sand, 10% silt), medium sand, gray, wet, very dense, no odor.	SP-SM		100	19 22 33	0.2	FB-03-25.0-082318 @1500	X	
30	30.0-31.5'	Poorly graded SAND (100% sand), fine to medium sand, grayish brown, wet, dense, no odor.	SP		100	10 21 27	0.3	FB-03-30.0-082318 @1520		Bentonite
35	35.0-36.5'	Poorly graded SAND with silt (90% sand, 10% silt), fine sand, gray, wet, medium dense, no odor.	SP-SM		100	14 21 13	0.3	FB-03-35.0-082318 @1530	X	
40	40.0-41.5'	Silty SAND (70% sand, 30% silt), fine sand, grayish brown, wet, medium dense, no odor.	SM		100	11 16 20	0.1	FB-03-40.0-082318 @1540		

Well Construction Information

Monument Type: NA	Filter Pack: NA	Ground Surface Elevation (ft): NA
Casing Diameter (inches): NA	Surface Seal: Concrete	Top of Casing Elevation (ft): NA
Screen Slot Size (inches): NA	Annular Seal: NA	Surveyed Location: X: NA
Screened Interval (ft bgs): NA	Boring Abandonment: Bentonite	Y: NA



Log of Boring: FB-04

Client: City Investors IX LLC
Project: Block 38 West Property
Location: Seattle, WA

Date/Time Started: 08/21/2018 @ 0645 **Sampler Type:** 1.5 Split Spoon
Date/Time Completed: 08/21/2018 @ 0900 **Drive Hammer (lbs.):** 140
Equipment: Mini-track **Depth of Water ATD (ft bgs):** 17.0
Drilling Company: Geologic Drilling **Total Boring Depth (ft bgs):** 33.0
Drilling Foreman: Blaine Gibson **Total Well Depth (ft bgs):** NA
Drilling Method: Hollow Stem Auger

Farallon PN: 397-019

Logged By: Greg Peters

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	USCS Graphic	% Recovery	Blow Counts 8/8/8	PID (ppm)	Sample ID	Sample Analyzed	Boring/Well Construction Details
0	0.0-2.0'	Asphalt. Hand auger to clear for utilities.	AC							Concrete
2.0-3.0'	2.0-3.0'	SILT with sand (80% silt, 20% sand), fine sand, dark brown, moist, petroleum-like odor. Peat and organic material present. (Fill).	FILL				0.5	FB-04-3.0-082118 @0645		
5.0-6.5'	5.0-6.5'	SILT with sand (80% silt, 20% sand), fine sand, dark brown, moist, very soft, no odor. Debris and organic material present. (Fill).	FILL		100	1 1 1	0.9	FB-04-5.0-082118 @0650	X	
10.0-11.5'	10.0-11.5'	SILT with sand (80% silt, 20% silt), fine to medium sand, dark brown, moist to wet, stiff, no odor. Debris present. (Fill).	FILL		100	1 5 10	0.2	FB-04-10.0-082118 @0710	X	Bentonite
15.0-16.5'	15.0-16.5'	Silty SAND (80% sand, 20% silt), fine to medium sand, gray, wet, loose, no odor.	SM		100	3 2 4	0.5	FB-04-15.0-082118 @0735	X	Water Level
20.0-21.5'	20.0-21.5'	Poorly graded sand (100% sand), fine to medium sand, gray, wet, dense, no odor.	SP		100	7 15 28	0.2	FB-04-20.0-082118 @0745	X	
25.0-26.5'	25.0-26.5'	SILT with sand (60% silt, 40% sand), fine sand, gray, wet, very stiff, no odor.	ML		100	10 11 17	0.4	FB-04-25.0-082118 @0815		Bentonite
30.0-31.5'	30.0-31.5'	Poorly graded SAND (100% sand), fine to medium sand, gray, wet, dense, no odor.	SP		100	9 14 30	0.7	FB-04-30.0-082118 @0850	X	
35		Refusal at 33.0' bgs due to heaving sands.								

Well Construction Information

Monument Type: NA	Filter Pack: NA	Ground Surface Elevation (ft): NA
Casing Diameter (inches): NA	Surface Seal: Concrete	Top of Casing Elevation (ft): NA
Screen Slot Size (inches): NA	Annular Seal: NA	Surveyed Location: X: NA
Screened Interval (ft bgs): NA	Boring Abandonment: Bentonite	Y: NA



Log of Boring: FB-05

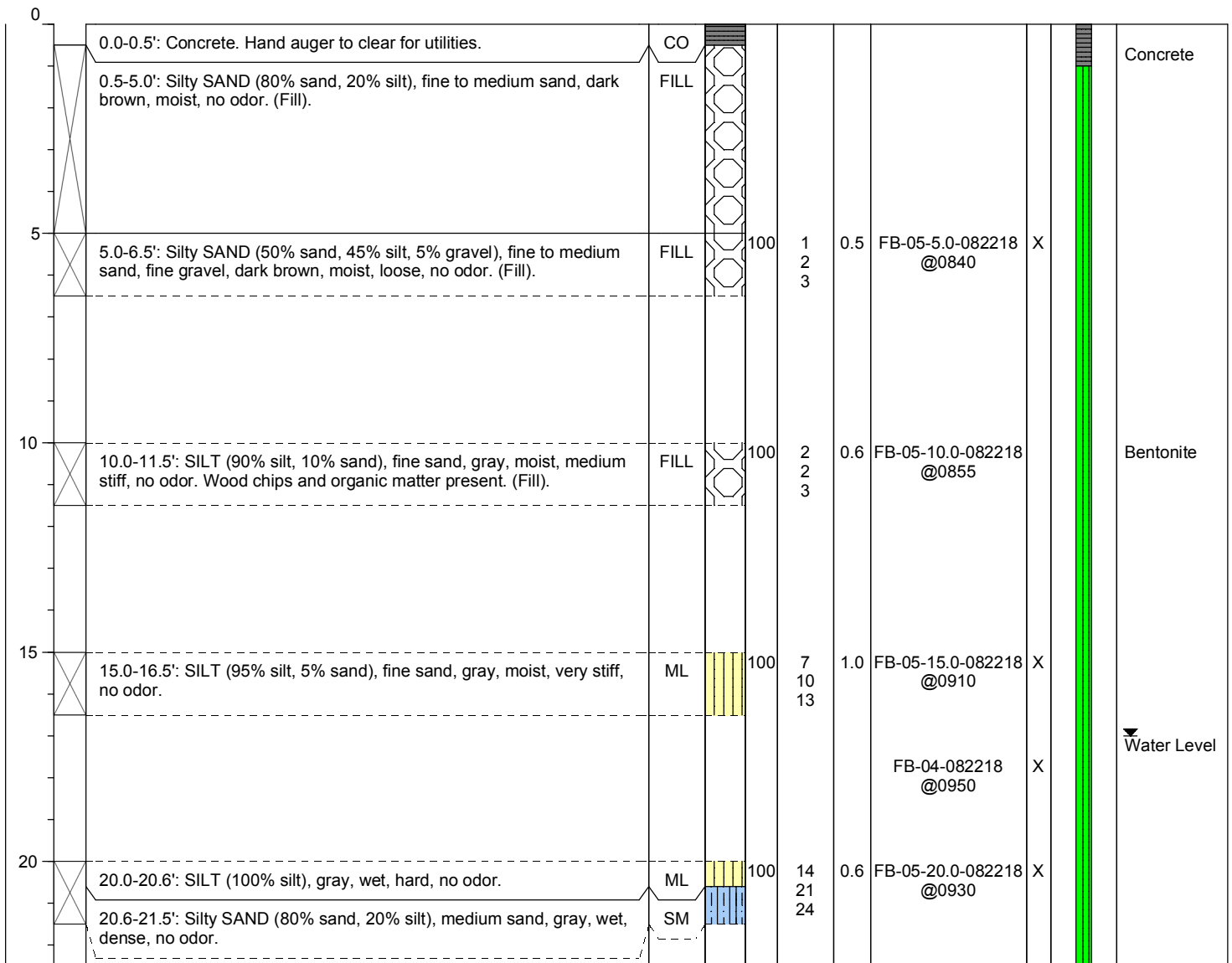
Client: City Investors IX LLC
Project: Block 38 West Property
Location: Seattle, WA

Date/Time Started: 08/22/2018 @ 0815 **Sampler Type:** 1.5 Split Spoon
Date/Time Completed: 08/22/2018 @ 1140 **Drive Hammer (lbs.):** 140
Equipment: Mini-track **Depth of Water ATD (ft bgs):** 17.0
Drilling Company: Geologic Drilling **Total Boring Depth (ft bgs):** 41.5
Drilling Foreman: Blaine Gibson **Total Well Depth (ft bgs):** NA
Drilling Method: Hollow Stem Auger

Farallon PN: 397-019

Logged By: Greg Peters

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	USCS Graphic	% Recovery	Blow Counts 8/8/8	PID (ppm)	Sample ID	Sample Analyzed	Boring/Well Construction Details
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Well Construction Information

Monument Type: NA	Filter Pack: NA	Ground Surface Elevation (ft): NA
Casing Diameter (inches): NA	Surface Seal: Concrete	Top of Casing Elevation (ft): NA
Screen Slot Size (inches): NA	Annular Seal: NA	Surveyed Location: X: NA
Screened Interval (ft bgs): NA	Boring Abandonment: Bentonite	Y: NA



Log of Boring: FB-05

Client: City Investors IX LLC
Project: Block 38 West Property
Location: Seattle, WA

Date/Time Started: 08/22/2018 @ 0815 **Sampler Type:** 1.5 Split Spoon
Date/Time Completed: 08/22/2018 @ 1140 **Drive Hammer (lbs.):** 140
Equipment: Mini-track **Depth of Water ATD (ft bgs):** 17.0
Drilling Company: Geologic Drilling **Total Boring Depth (ft bgs):** 41.5
Drilling Foreman: Blaine Gibson **Total Well Depth (ft bgs):** NA
Drilling Method: Hollow Stem Auger

Farallon PN: 397-019

Logged By: Greg Peters

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	USCS Graphic	% Recovery	Blow Counts 8/8/8	PID (ppm)	Sample ID	Sample Analyzed	Boring/Well Construction Details
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25		25.0-26.5': Poorly-graded SAND with silt (90% sand, 10% silt), fine to medium sand, gray, moist, very dense, no odor.	SP-SM		100	17 13 50-6"	0.7	FB-04-25.0-082218 @1110		
30		30-31.5': Poorly-graded SAND (100% sand), fine to medium sand, grayish brown, wet, very dense, no odor.	SP		100	16 25 35	0.4	FB-04-30.0-082218 @1120		Bentonite
35		35-36.5': Poorly-graded SAND with silt (90% sand, 10% silt), fine to medium sand, grayish brown, wet, very dense, no odor.	SP-SM		100	24 28 32	0.7	FB-04-35.0-082218 @1130	X	
40		40.0-41.5': Poorly-graded SAND with silt (90% sand, 10% silt), fine to medium sand, grayish brown, wet, dense, no odor.	SP-SM		100	11 18 30	0.6	FB-04-40.0-082218 @1140		
45										

Well Construction Information

Monument Type: NA	Filter Pack: NA	Ground Surface Elevation (ft): NA
Casing Diameter (inches): NA	Surface Seal: Concrete	Top of Casing Elevation (ft): NA
Screen Slot Size (inches): NA	Annular Seal: NA	Surveyed Location: X: NA
Screened Interval (ft bgs): NA	Boring Abandonment: Bentonite	Y: NA



Log of Boring: FB-06

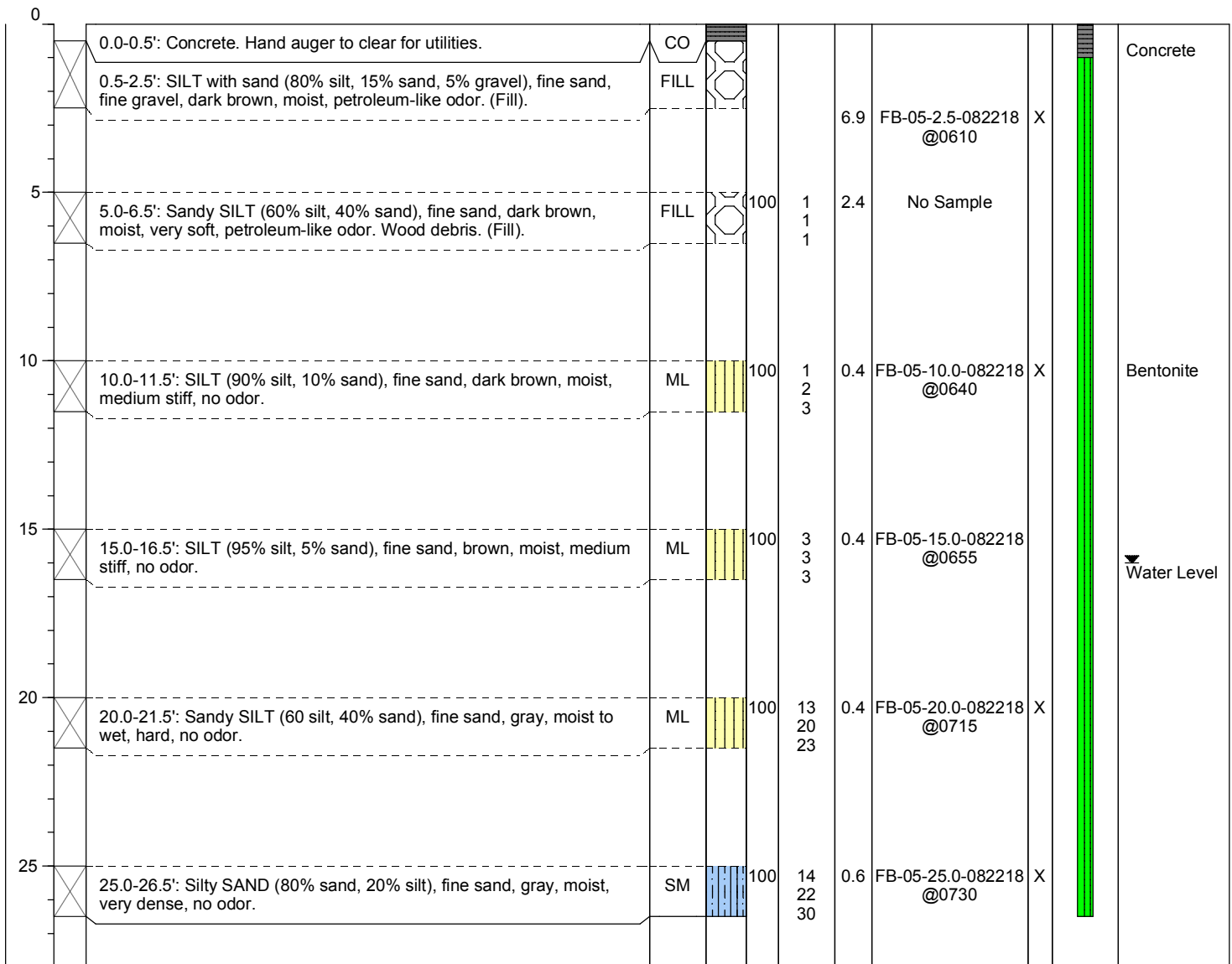
Client: City Investors IX LLC
Project: Block 38 West Property
Location: Seattle, WA

Date/Time Started: 08/22/2018 @ 0610 **Sampler Type:** 1.5 Split Spoon
Date/Time Completed: 08/22/2018 @ 0730 **Drive Hammer (lbs.):** 140
Equipment: Mini-track **Depth of Water ATD (ft bgs):** 16.0
Drilling Company: Geologic Drilling **Total Boring Depth (ft bgs):** 26.5
Drilling Foreman: Blaine Gibson **Total Well Depth (ft bgs):** NA
Drilling Method: Hollow Stem Auger

Farallon PN: 397-019

Logged By: Greg Peters

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	USCS Graphic	% Recovery	Blow Counts 8/8/8	PID (ppm)	Sample ID	Sample Analyzed	Boring/Well Construction Details
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Well Construction Information

Monument Type: NA	Filter Pack: NA	Ground Surface Elevation (ft): NA
Casing Diameter (inches): NA	Surface Seal: Concrete	Top of Casing Elevation (ft): NA
Screen Slot Size (inches): NA	Annular Seal: NA	Surveyed Location: X: NA
Screened Interval (ft bgs): NA	Boring Abandonment: Bentonite	Y: NA



Log of Boring: F-MW-130

Client: Washington Builders LLC
Project: Block 43
Location: Block 38, Seattle, WA

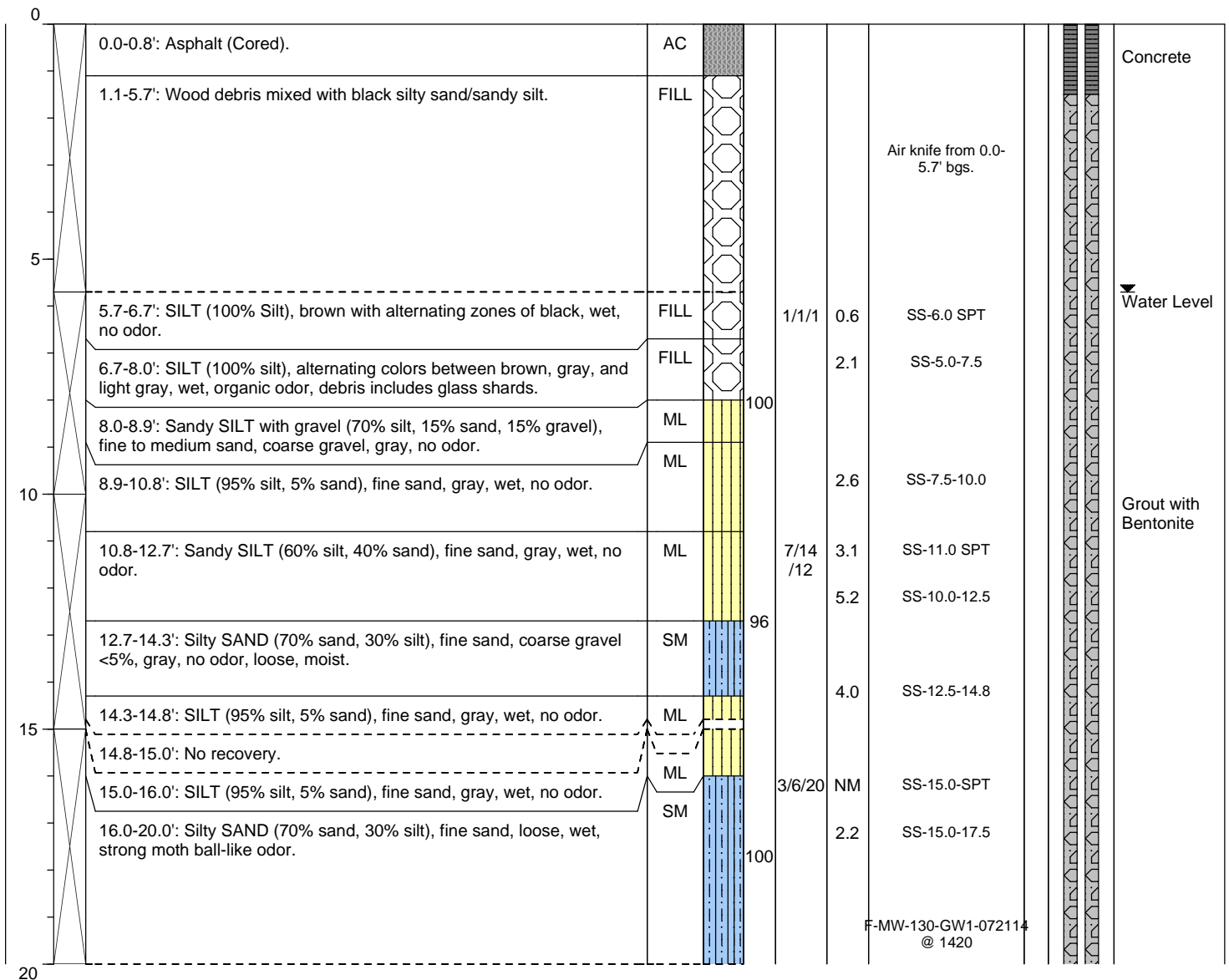
Date/Time Started: 7/21/14 @ 0945
Date/Time Completed: 7/22/14 @
Equipment: Spider 1576
Drilling Company: Cascade Drilling
Drilling Foreman: Zane Huckins
Drilling Method: Sonic

Sampler Type: PE Bags
Drive Hammer (lbs.): Auto
Depth of Water ATD (ft bgs): 5.7
Total Boring Depth (ft bgs): 60.0
Total Well Depth (ft bgs): 55

Farallon PN: 397-010

Logged By: Dincer Kayhan

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	USGS Graphic	% Recovery	Blow Counts 8/8/8	PID (ppm)	Sample ID	Sample Analyzed	Boring/Well Construction Details
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Well Construction Information

Monument Type: Flush Mount
Casing Diameter (inches): 2
Screen Slot Size (inches): 0.010
Screened Interval (ft bgs): 45.0-55.0

Filter Pack: 10/20 Sand
Surface Seal: Concrete
Annular Seal: Bentonite
Boring Abandonment: NA

Ground Surface Elevation (ft): 23
Top of Casing Elevation (ft): NA
Surveyed Location: X: NA
 Y: NA



Log of Boring: F-MW-130

Client: Washington Builders LLC

Project: Block 43

Location: Block 38, Seattle, WA

Farallon PN: 397-010

Logged By: Dincer Kayhan

Date/Time Started: 7/21/14 @ 0945

Date/Time Completed: 7/22/14 @

Equipment: Spider 1576

Drilling Company: Cascade Drilling

Drilling Foreman: Zane Huckins

Drilling Method: Sonic

Sampler Type: PE Bags

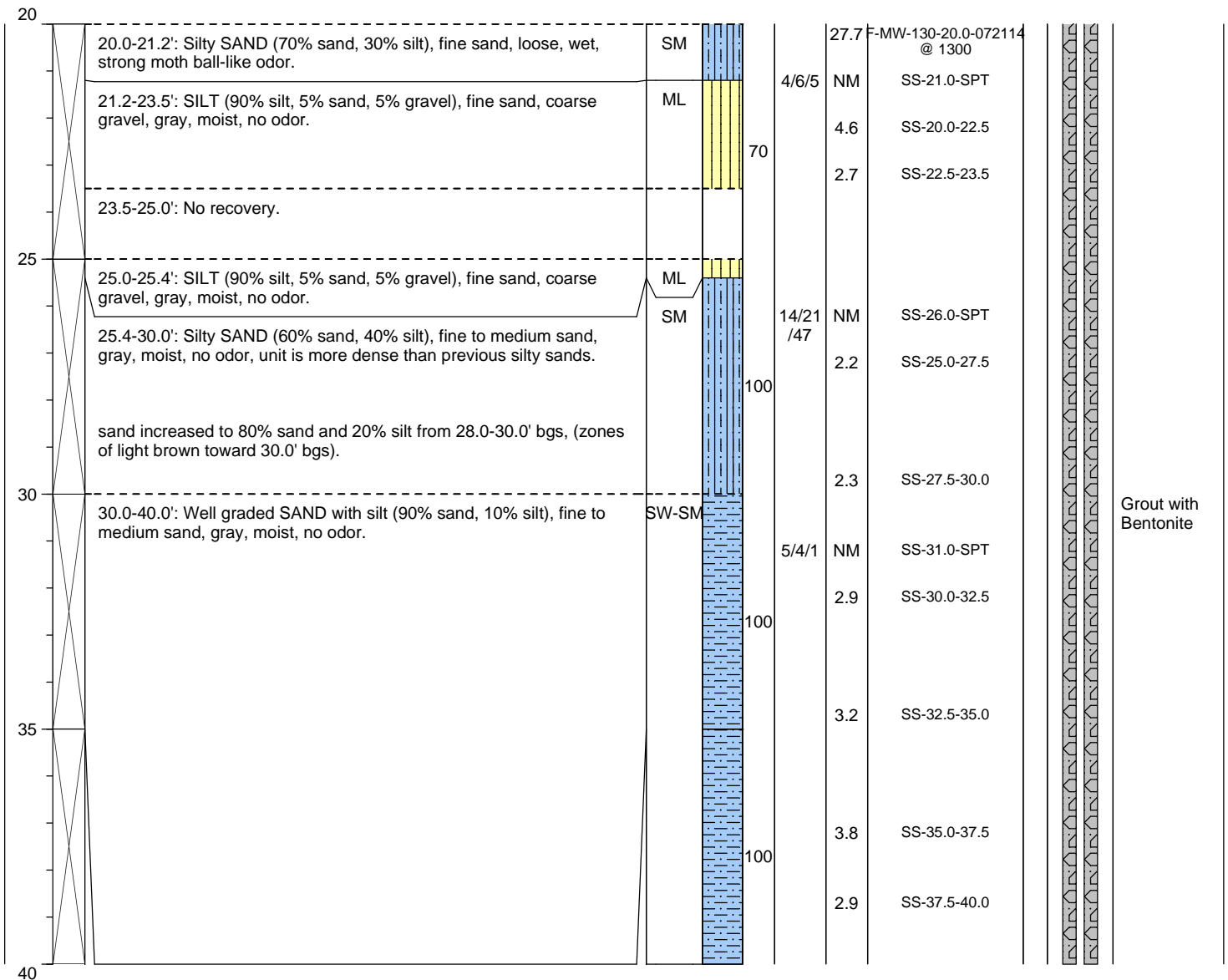
Drive Hammer (lbs.): Auto

Depth of Water ATD (ft bgs): 5.7

Total Boring Depth (ft bgs): 60.0

Total Well Depth (ft bgs): 55

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	USGS Graphic	% Recovery	Blow Counts 8/8/8	PID (ppm)	Sample ID	Sample Analyzed	Boring/Well Construction Details
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Well Construction Information			
Monument Type: Flush Mount	Filter Pack: 10/20 Sand	Ground Surface Elevation (ft): 23	
Casing Diameter (inches): 2	Surface Seal: Concrete	Top of Casing Elevation (ft): NA	
Screen Slot Size (inches): 0.010	Annular Seal: Bentonite	Surveyed Location: X: NA	
Screened Interval (ft bgs): 45.0-55.0	Boring Abandonment: NA	Y: NA	



Log of Boring: F-MW-130

Client: Washington Builders LLC
Project: Block 43
Location: Block 38, Seattle, WA

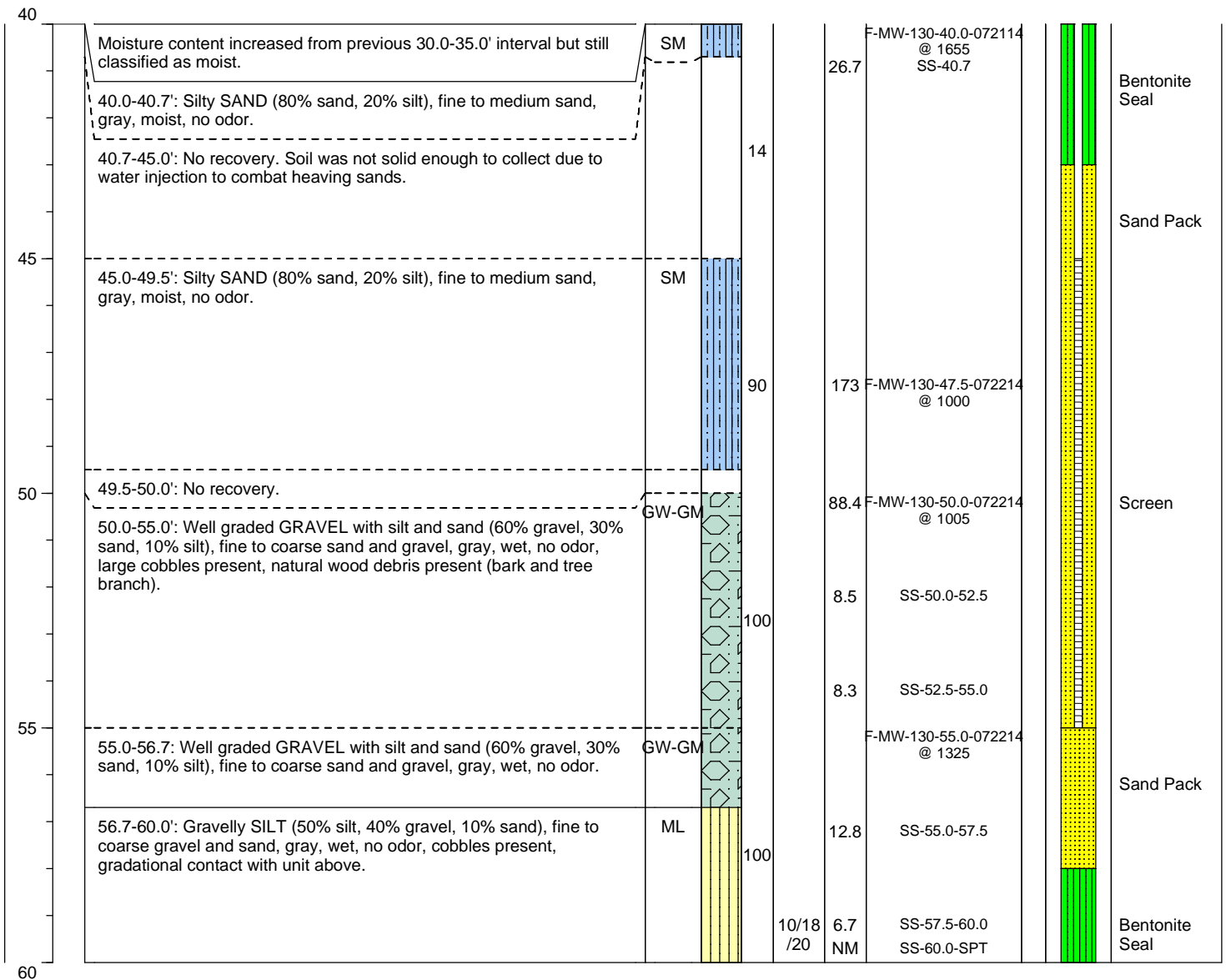
Date/Time Started: 7/21/14 @ 0945
Date/Time Completed: 7/22/14 @
Equipment: Spider 1576
Drilling Company: Cascade Drilling
Drilling Foreman: Zane Huckins
Drilling Method: Sonic

Sampler Type: PE Bags
Drive Hammer (lbs.): Auto
Depth of Water ATD (ft bgs): 5.7
Total Boring Depth (ft bgs): 60.0
Total Well Depth (ft bgs): 55

Farallon PN: 397-010

Logged By: Dincer Kayhan

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	USGS Graphic	% Recovery	Blow Counts 8/8/8	PID (ppm)	Sample ID	Sample Analyzed	Boring/Well Construction Details
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Well Construction Information

Monument Type: Flush Mount
Casing Diameter (inches): 2
Screen Slot Size (inches): 0.010
Screened Interval (ft bgs): 45.0-55.0

Filter Pack: 10/20 Sand
Surface Seal: Concrete
Annular Seal: Bentonite
Boring Abandonment: NA

Ground Surface Elevation (ft): 23
Top of Casing Elevation (ft): NA
Surveyed Location: X: NA
 Y: NA



Log of Boring: FMW-132

Client: City Investors IX LLC
Project: Block 38 West Property
Location: Seattle, WA

Date/Time Started: 08/24/2018 @ 1330 **Sampler Type:** 1.5 Split spoon
Date/Time Completed: 08/24/2018 @ 1530 **Drive Hammer (lbs.):** 140
Equipment: Mini-track **Depth of Water ATD (ft bgs):** 7.5
Drilling Company: Geologic Drilling **Total Boring Depth (ft bgs):** 10.0
Drilling Foreman: Blaine Gibson **Total Well Depth (ft bgs):** 10.0
Drilling Method: Hollow Stem Auger

Farallon PN: 397-019

Logged By: Greg Peters

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	USCS Graphic	% Recovery	Blow Counts 8/8/8	PID (ppm)	Sample ID	Sample Analyzed	Boring/Well Construction Details
0		0.0-1.0': Concrete, tile and asphalt material.	CO							Monument
		1.0-2.5': Poorly graded SAND with gravel (80% sand, 15% gravel, 5% silt), medium to coarse sand, fine gravel, brown, dry, no odor. (Fill).	FILL							Bentonite
							0.3	FMW-132-2.5-082418@1320		
5		5.0-6.5': Sandy SILT (60% sand, 30% silt, 10% gravel), fine sand, fine gravel, brown, dry, very loose, no odor. Fill material consisting of wood & glass debris. Some organic matter present. (Fill).	FILL		100	3 2 1	0.5	FMW-132-5.0-082418@1320	X	Sand Pack
										Pre-packed Screen
										Water Level
10		Drilling crew encountered unidentified hard object while attempting to sample at 10.0 ft bgs. Farallon decided to stop drilling operations and install monitoring well at 10.0 ft bgs.			NA	NA	NA	FMW-132-10.0-082418@1835	X	

Well Construction Information

Monument Type: Flush Mount
Casing Diameter (inches): 1.0
Screen Slot Size (inches): 0.010
Screened Interval (ft bgs): 5.0-10.0

Filter Pack: Silica/Sand
Surface Seal: Grout/Concrete
Annular Seal: Bentonite/Grout
Boring Abandonment: NA

Ground Surface Elevation (ft): NA
Top of Casing Elevation (ft): NA
Surveyed Location: X: NA
Y: NA



Log of Boring: FMW-133

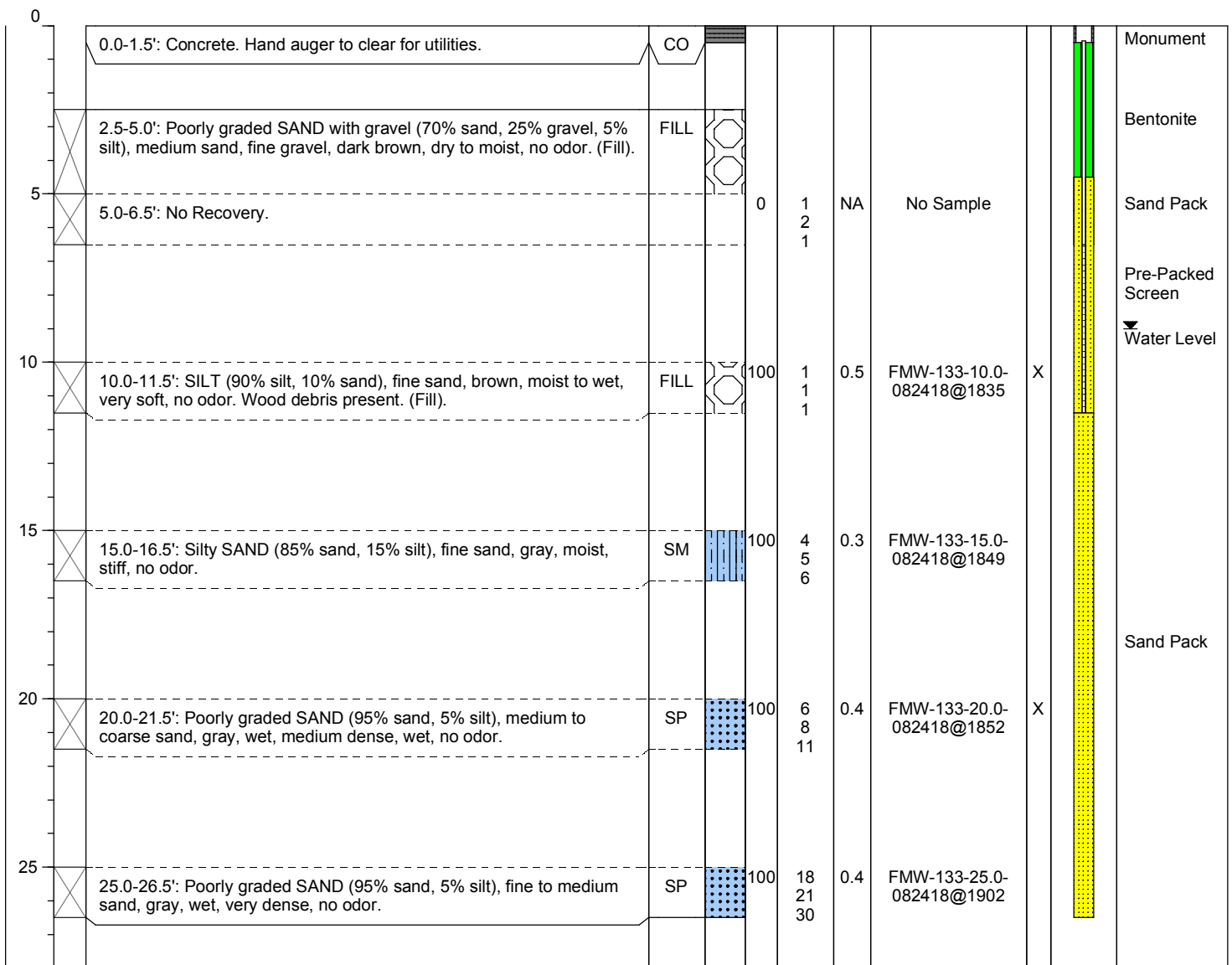
Client: City Investors IX LLC
Project: Block 38 West Property
Location: Seattle, WA

Date/Time Started: 08/24/2018 @ 1745 **Sampler Type:** 1.5 Split Spoon
Date/Time Completed: 08/24/2018 @ 1902 **Drive Hammer (lbs.):** 140
Equipment: Mini-track **Depth of Water ATD (ft bgs):** 9.0
Drilling Company: Geologic Drilling **Total Boring Depth (ft bgs):** 26.5
Drilling Foreman: Blaine Gibson **Total Well Depth (ft bgs):** 11.5
Drilling Method: Hollow Stem Auger

Farallon PN: 397-019

Logged By: Greg Peters

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	USCS Graphic	% Recovery	Blow Counts 8/8/8	PID (ppm)	Sample ID	Sample Analyzed	Boring/Well Construction Details
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Well Construction Information

Monument Type: Flush Mount
Casing Diameter (inches): 1.0
Screen Slot Size (inches): 0.01
Screened Interval (ft bgs): 6.5 - 11.5

Filter Pack: Silica/Sand
Surface Seal: Grout/Concrete
Annular Seal: NA
Boring Abandonment: NA

Ground Surface Elevation (ft): NA
Top of Casing Elevation (ft): NA
Surveyed Location: X: NA
 Y: NA



Log of Boring: FMW-134

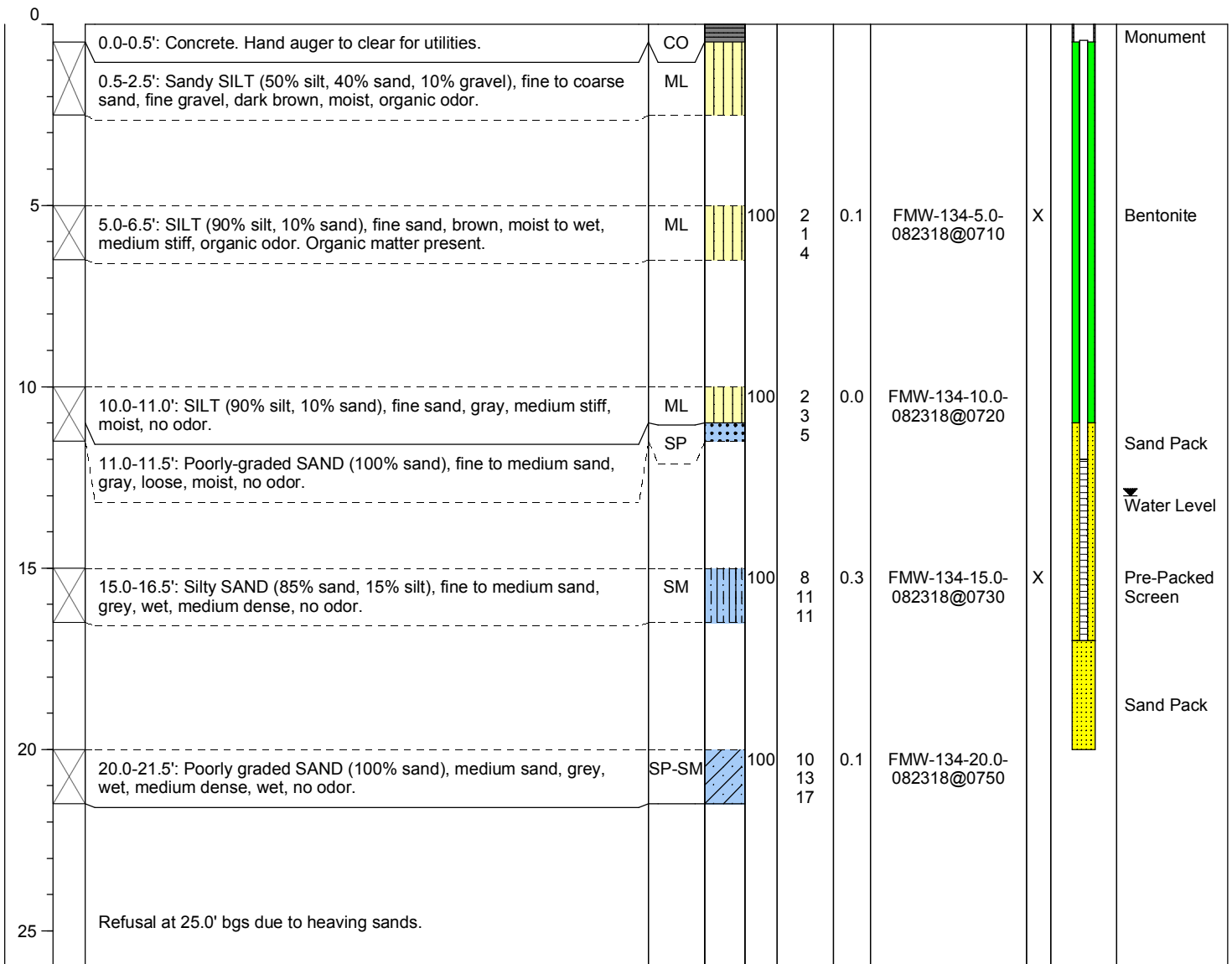
Client: City Investors IX LLC
Project: Block 38 West Property
Location: Seattle, WA

Date/Time Started: 08/24/2018 @ 0700 **Sampler Type:** 1.5 Split Spoon
Date/Time Completed: 08/24/2018 @ 1030 **Drive Hammer (lbs.):** 140
Equipment: Mini-track **Depth of Water ATD (ft bgs):** 13.0
Drilling Company: Geologic Drilling **Total Boring Depth (ft bgs):** 20.0
Drilling Foreman: Blaine Gibson **Total Well Depth (ft bgs):** 17.0
Drilling Method: Hollow Stem Auger

Farallon PN: 397-019

Logged By: Greg Peters

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	USCS Graphic	% Recovery	Blow Counts 8/8/8	PID (ppm)	Sample ID	Sample Analyzed	Boring/Well Construction Details
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Well Construction Information			
Monument Type: Flush Mount	Filter Pack: Silica/Sand	Ground Surface Elevation (ft): NA	
Casing Diameter (inches): 1.0	Surface Seal: Grout/Concrete	Top of Casing Elevation (ft): NA	
Screen Slot Size (inches): 0.010	Annular Seal: Bentonite/Grout	Surveyed Location: X: NA	
Screened Interval (ft bgs): 12.0-17.0	Boring Abandonment: NA	Y: NA	

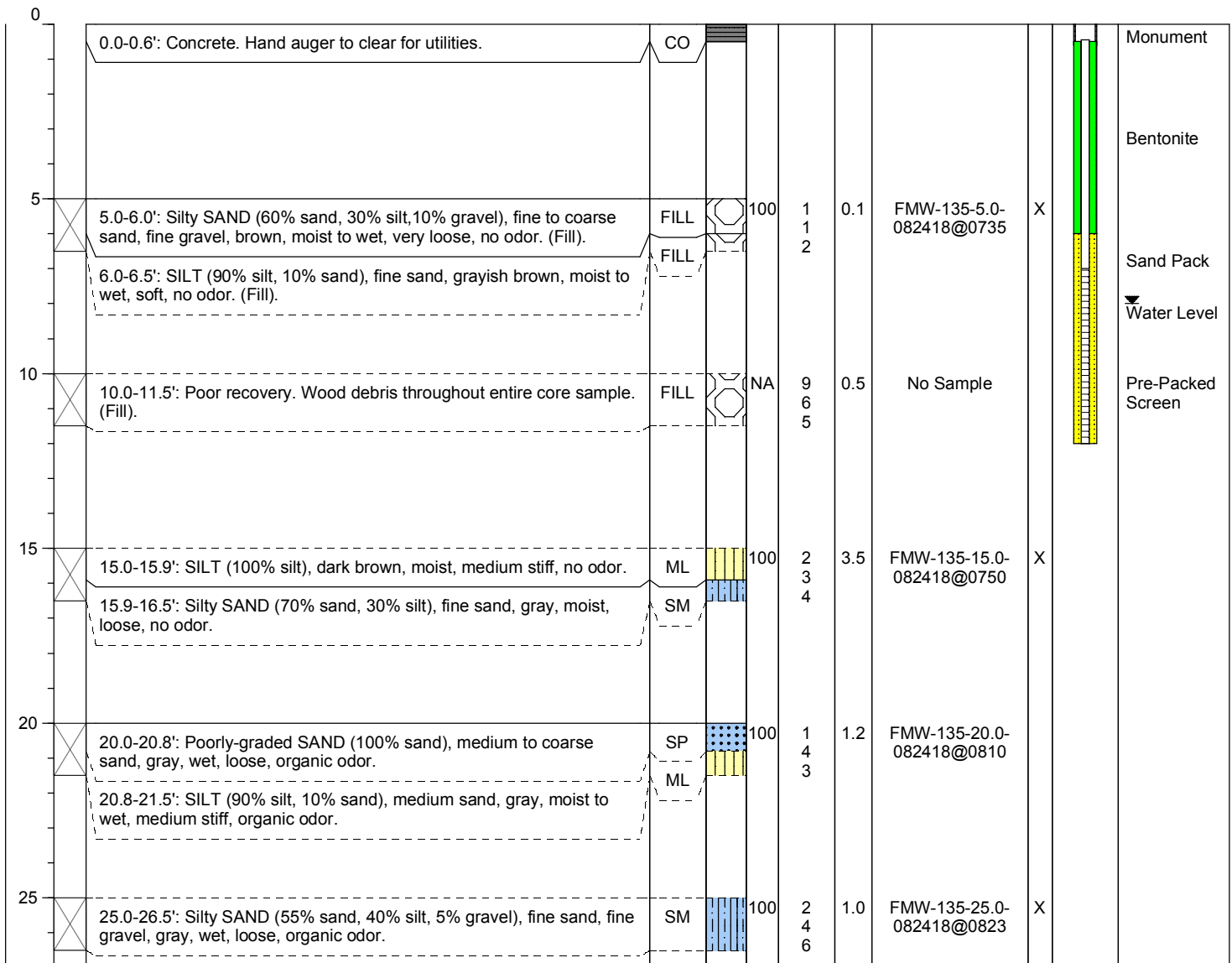
Client: City Investors IX LLC
Project: Block 38 West Property
Location: Seattle, WA

Date/Time Started: 08/24/2018 @ 0700 **Sampler Type:** 1.5 Split Spoon
Date/Time Completed: 08/24/2018 @ 0950 **Drive Hammer (lbs.):** 140
Equipment: Mini-track **Depth of Water ATD (ft bgs):** 8.0
Drilling Company: Geologic Drilling **Total Boring Depth (ft bgs):** 51.5
Drilling Foreman: Blaine Gibson **Total Well Depth (ft bgs):** 12.0
Drilling Method: Hollow Stem Auger

Farallon PN: 397-019

Logged By: Greg Peters

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	USCS Graphic	% Recovery	Blow Counts 8/8/8	PID (ppm)	Sample ID	Sample Analyzed	Boring/Well Construction Details
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Well Construction Information

Monument Type: Flush Mount	Filter Pack: Silica/Sand	Ground Surface Elevation (ft): NA
Casing Diameter (inches): 1.0	Surface Seal: Grout/Concrete	Top of Casing Elevation (ft): NA
Screen Slot Size (inches): 0.010	Annular Seal: Bentonite/Grout	Surveyed Location: X: NA
Screened Interval (ft bgs): 7.0-12.0	Boring Abandonment: NA	Y: NA



Log of Boring: FMW-135

Client: City Investors IX LLC
Project: Block 38 West Property
Location: Seattle, WA

Date/Time Started: 08/24/2018 @ 0700 **Sampler Type:** 1.5 Split Spoon
Date/Time Completed: 08/24/2018 @ 0950 **Drive Hammer (lbs.):** 140
Equipment: Mini-track **Depth of Water ATD (ft bgs):** 8.0
Drilling Company: Geologic Drilling **Total Boring Depth (ft bgs):** 51.5
Drilling Foreman: Blaine Gibson **Total Well Depth (ft bgs):** 12.0
Drilling Method: Hollow Stem Auger

Farallon PN: 397-019

Logged By: Greg Peters

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	USCS Graphic	% Recovery	Blow Counts 8/8/8	PID (ppm)	Sample ID	Sample Analyzed	Boring/Well Construction Details
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30	30.0-31.5'	Silty SAND (70% sand, 30% silt), fine sand, gray, moist, medium dense, no odor.	SM		100	9 13 15	1.1	FMW-135-30.0-082418@0835	X	
35	35.0-36.5'	Silty SAND (60% sand, 40% silt), fine sand, gray, moist, dense, no odor.	SM		100	15 21 24	0.9	FMW-135-35.0-082418@0850	X	
40	40.0-41.5'	Poorly-graded SAND with silt (90% sand, 10% silt), fine sand, grayish brown, moist, very dense, no odor.	SP-SM		100	22 32 38	1.0	FMW-135-40.0-082418@0915		
45	45.0-46.5'	Poorly-graded SAND with silt (90% sand, 10% silt), fine sand, grayish brown, moist, very dense, no odor.	SP-SM		100	19 26 32	0.9	FMW-135-45.0-082418@0930		
50	50.0-51.5'	Well-graded SAND with gravel (70% sand, 25% gravel, 5% silt), fine to coarse sand, fine gravel, moist to wet, dense, no odor.	SW		100	15 21 18	1.0	FMW-135-50.0-082418@0950	X	

Well Construction Information

Monument Type: Flush Mount
Casing Diameter (inches): 1.0
Screen Slot Size (inches): 0.010
Screened Interval (ft bgs): 7.0-12.0

Filter Pack: Silica/Sand
Surface Seal: Grout/Concrete
Annular Seal: Bentonite/Grout
Boring Abandonment: NA

Ground Surface Elevation (ft): NA
Top of Casing Elevation (ft): NA
Surveyed Location: X: NA
Y: NA

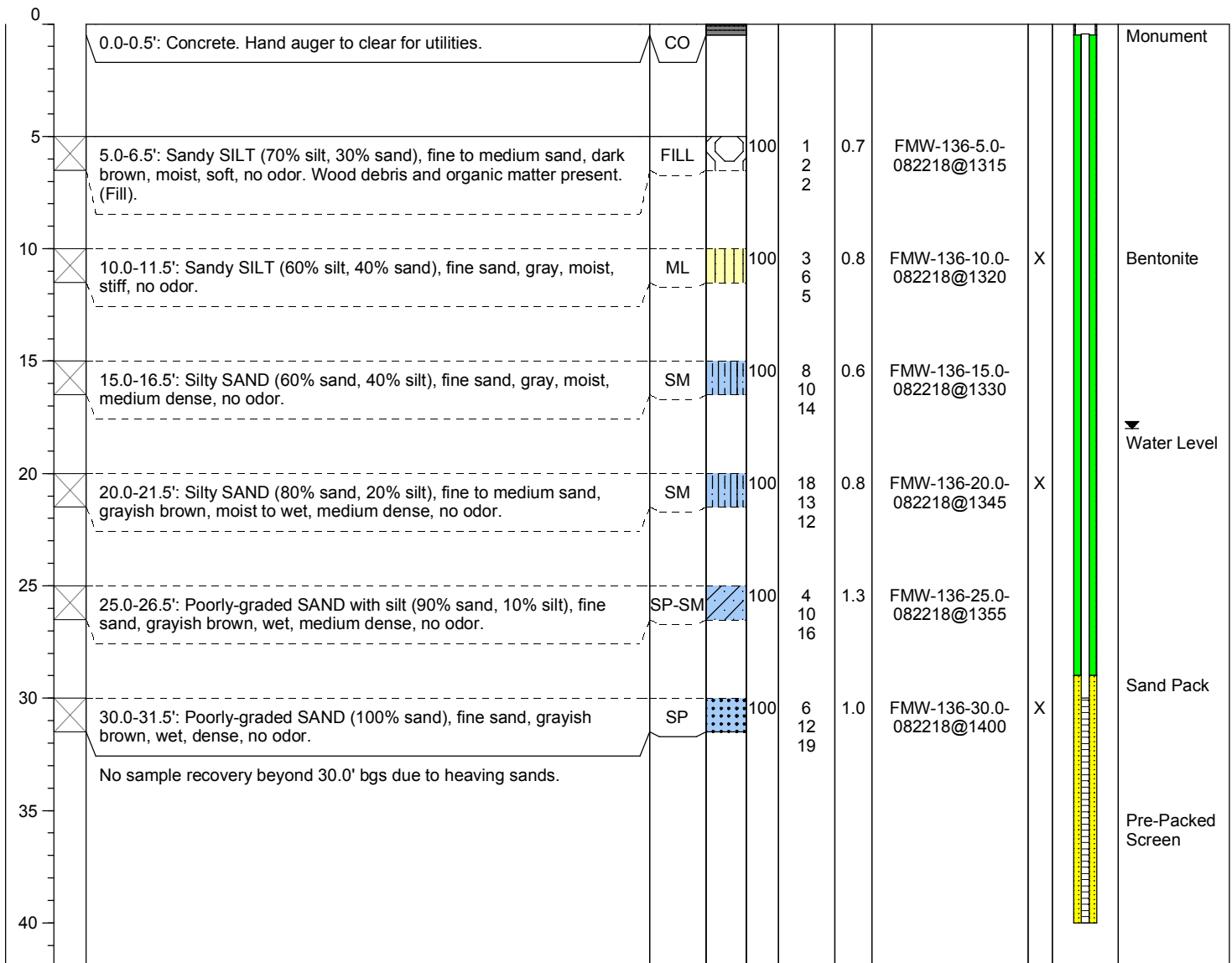
Client: City Investors IX LLC
Project: Block 38 West Property
Location: Seattle, WA

Date/Time Started: 08/22/2018 @ 1310 **Sampler Type:** 1.5 Split Spoon
Date/Time Completed: 08/22/2018 @ 1400 **Drive Hammer (lbs.):** 140
Equipment: Mini-track **Depth of Water ATD (ft bgs):** 18.0
Drilling Company: Geologic Drilling **Total Boring Depth (ft bgs):** 40.0
Drilling Foreman: Blaine Gibson **Total Well Depth (ft bgs):** NA
Drilling Method: Hollow Stem Auger

Farallon PN: 397-019

Logged By: Greg Peters

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	USCS Graphic	% Recovery	Blow Counts 8/8/8	PID (ppm)	Sample ID	Sample Analyzed	Boring/Well Construction Details
-------------------	-----------------	------------------------	------	--------------	------------	-------------------	-----------	-----------	-----------------	----------------------------------



Well Construction Information

Monument Type: Flush Mount
Casing Diameter (inches): 1.0
Screen Slot Size (inches): 0.010
Screened Interval (ft bgs): 30.0- 40.0

Filter Pack: Silica/Sand
Surface Seal: Grout/Concrete
Annular Seal: Bentonite/Grout
Boring Abandonment: NA

Ground Surface Elevation (ft): NA
Top of Casing Elevation (ft): NA
Surveyed Location: X: NA
 Y: NA

APPENDIX B
LABORATORY ANALYTICAL REPORTS

SUBSURFACE INVESTIGATION REPORT AND ENVIRONMENTAL MEDIA
MANAGEMENT PLAN
Block 38 West Property
500 through 536 Westlake Avenue North
Seattle, Washington

Farallon PN: 397-019



14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

July 30, 2014

Cliff Schmitt
Farallon Consulting, LLC
975 5th Avenue NW
Issaquah, WA 98027

Re: Analytical Data for Project 397-010
Laboratory Reference No. 1407-172

Dear Cliff:

Enclosed are the analytical results and associated quality control data for samples submitted on July 22, 2014.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "DB", with a long horizontal flourish extending to the right.

David Baumeister
Project Manager

Enclosures

Date of Report: July 30, 2014
Samples Submitted: July 22, 2014
Laboratory Reference: 1407-172
Project: 397-010

Case Narrative

Samples were collected on July 21 and 22, 2014 and received by the laboratory on July 22, 2014. They were maintained at the laboratory at a temperature of 2°C to 6°C.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

NWTPH Gx/BTEX Analysis

The chromatogram for sample F-MW-130-GW1-072114 is not similar to a typical gas.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

Date of Report: July 30, 2014
 Samples Submitted: July 22, 2014
 Laboratory Reference: 1407-172
 Project: 397-010

NWTPH-Gx/BTEX

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	F-MW-130-GW1-072114					
Laboratory ID:	07-172-02					
Benzene	5.1	1.0	EPA 8021B	7-24-14	7-24-14	
Toluene	7.5	1.0	EPA 8021B	7-24-14	7-24-14	
Ethyl Benzene	2.2	1.0	EPA 8021B	7-24-14	7-24-14	
m,p-Xylene	3.4	1.0	EPA 8021B	7-24-14	7-24-14	
o-Xylene	3.3	1.0	EPA 8021B	7-24-14	7-24-14	
Gasoline	2100	100	NWTPH-Gx	7-24-14	7-24-14	T
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	95	71-112				

Date of Report: July 30, 2014
 Samples Submitted: July 22, 2014
 Laboratory Reference: 1407-172
 Project: 397-010

**NWTPH-Gx/BTEX
 QUALITY CONTROL**

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0724W1					
Benzene	ND	1.0	EPA 8021B	7-24-14	7-24-14	
Toluene	ND	1.0	EPA 8021B	7-24-14	7-24-14	
Ethyl Benzene	ND	1.0	EPA 8021B	7-24-14	7-24-14	
m,p-Xylene	ND	1.0	EPA 8021B	7-24-14	7-24-14	
o-Xylene	ND	1.0	EPA 8021B	7-24-14	7-24-14	
Gasoline	ND	100	NWTPH-Gx	7-24-14	7-24-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	99	71-112				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	07-209-02							
	ORIG	DUP						
Benzene	ND	ND	NA	NA	NA	NA	NA	30
Toluene	ND	ND	NA	NA	NA	NA	NA	30
Ethyl Benzene	ND	ND	NA	NA	NA	NA	NA	30
m,p-Xylene	ND	ND	NA	NA	NA	NA	NA	30
o-Xylene	ND	ND	NA	NA	NA	NA	NA	30
Gasoline	ND	ND	NA	NA	NA	NA	NA	30
<i>Surrogate:</i>								
<i>Fluorobenzene</i>				97	96	71-112		

MATRIX SPIKES

Laboratory ID:	07-209-02									
	MS	MSD	MS	MSD	MS	MSD				
Benzene	52.9	54.0	50.0	50.0	ND	106	108	78-120	2	12
Toluene	54.7	55.9	50.0	50.0	ND	109	112	80-121	2	12
Ethyl Benzene	55.1	55.9	50.0	50.0	ND	110	112	81-120	1	13
m,p-Xylene	55.8	56.7	50.0	50.0	ND	112	113	81-119	2	13
o-Xylene	55.4	56.0	50.0	50.0	ND	111	112	79-117	1	13
<i>Surrogate:</i>										
<i>Fluorobenzene</i>						102	102	71-112		

Date of Report: July 30, 2014
 Samples Submitted: July 22, 2014
 Laboratory Reference: 1407-172
 Project: 397-010

HALOGENATED VOLATILES EPA 8260C

page 1 of 2

Matrix: Water

Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	F-MW-130-GW1-072114					
Laboratory ID:	07-172-02					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	7-23-14	7-23-14	
Chloromethane	ND	1.0	EPA 8260C	7-23-14	7-23-14	
Vinyl Chloride	ND	0.20	EPA 8260C	7-23-14	7-23-14	
Bromomethane	ND	0.20	EPA 8260C	7-23-14	7-23-14	
Chloroethane	ND	1.0	EPA 8260C	7-23-14	7-23-14	
Trichlorofluoromethane	ND	0.20	EPA 8260C	7-23-14	7-23-14	
1,1-Dichloroethene	ND	0.20	EPA 8260C	7-23-14	7-23-14	
Iodomethane	ND	1.0	EPA 8260C	7-23-14	7-23-14	
Methylene Chloride	ND	1.0	EPA 8260C	7-23-14	7-23-14	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	7-23-14	7-23-14	
1,1-Dichloroethane	ND	0.20	EPA 8260C	7-23-14	7-23-14	
2,2-Dichloropropane	ND	0.20	EPA 8260C	7-23-14	7-23-14	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	7-23-14	7-23-14	
Bromochloromethane	ND	0.20	EPA 8260C	7-23-14	7-23-14	
Chloroform	ND	0.20	EPA 8260C	7-23-14	7-23-14	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	7-23-14	7-23-14	
Carbon Tetrachloride	ND	0.20	EPA 8260C	7-23-14	7-23-14	
1,1-Dichloropropene	ND	0.20	EPA 8260C	7-23-14	7-23-14	
1,2-Dichloroethane	ND	0.20	EPA 8260C	7-23-14	7-23-14	
Trichloroethene	ND	0.20	EPA 8260C	7-23-14	7-23-14	
1,2-Dichloropropane	ND	0.20	EPA 8260C	7-23-14	7-23-14	
Dibromomethane	ND	0.20	EPA 8260C	7-23-14	7-23-14	
Bromodichloromethane	ND	0.20	EPA 8260C	7-23-14	7-23-14	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	7-23-14	7-23-14	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	7-23-14	7-23-14	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	7-23-14	7-23-14	

Date of Report: July 30, 2014
 Samples Submitted: July 22, 2014
 Laboratory Reference: 1407-172
 Project: 397-010

HALOGENATED VOLATILES EPA 8260C
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	F-MW-130-GW1-072114					
Laboratory ID:	07-172-02					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	7-23-14	7-23-14	
Tetrachloroethene	ND	0.20	EPA 8260C	7-23-14	7-23-14	
1,3-Dichloropropane	ND	0.20	EPA 8260C	7-23-14	7-23-14	
Dibromochloromethane	ND	0.20	EPA 8260C	7-23-14	7-23-14	
1,2-Dibromoethane	ND	0.20	EPA 8260C	7-23-14	7-23-14	
Chlorobenzene	ND	0.20	EPA 8260C	7-23-14	7-23-14	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	7-23-14	7-23-14	
Bromoform	ND	1.0	EPA 8260C	7-23-14	7-23-14	
Bromobenzene	ND	0.20	EPA 8260C	7-23-14	7-23-14	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	7-23-14	7-23-14	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	7-23-14	7-23-14	
2-Chlorotoluene	ND	0.20	EPA 8260C	7-23-14	7-23-14	
4-Chlorotoluene	ND	0.20	EPA 8260C	7-23-14	7-23-14	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	7-23-14	7-23-14	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	7-23-14	7-23-14	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	7-23-14	7-23-14	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	7-23-14	7-23-14	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	7-23-14	7-23-14	
Hexachlorobutadiene	ND	0.20	EPA 8260C	7-23-14	7-23-14	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	7-23-14	7-23-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>99</i>	<i>62-122</i>				
<i>Toluene-d8</i>	<i>101</i>	<i>70-120</i>				
<i>4-Bromofluorobenzene</i>	<i>99</i>	<i>71-120</i>				

Date of Report: July 30, 2014
 Samples Submitted: July 22, 2014
 Laboratory Reference: 1407-172
 Project: 397-010

**HALOGENATED VOLATILES EPA 8260C
 METHOD BLANK QUALITY CONTROL**

Page 1 of 2

Matrix: Water
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0723W1					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	7-23-14	7-23-14	
Chloromethane	ND	1.0	EPA 8260C	7-23-14	7-23-14	
Vinyl Chloride	ND	0.20	EPA 8260C	7-23-14	7-23-14	
Bromomethane	ND	0.20	EPA 8260C	7-23-14	7-23-14	
Chloroethane	ND	1.0	EPA 8260C	7-23-14	7-23-14	
Trichlorofluoromethane	ND	0.20	EPA 8260C	7-23-14	7-23-14	
1,1-Dichloroethene	ND	0.20	EPA 8260C	7-23-14	7-23-14	
Iodomethane	ND	1.0	EPA 8260C	7-23-14	7-23-14	
Methylene Chloride	ND	1.0	EPA 8260C	7-23-14	7-23-14	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	7-23-14	7-23-14	
1,1-Dichloroethane	ND	0.20	EPA 8260C	7-23-14	7-23-14	
2,2-Dichloropropane	ND	0.20	EPA 8260C	7-23-14	7-23-14	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	7-23-14	7-23-14	
Bromochloromethane	ND	0.20	EPA 8260C	7-23-14	7-23-14	
Chloroform	ND	0.20	EPA 8260C	7-23-14	7-23-14	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	7-23-14	7-23-14	
Carbon Tetrachloride	ND	0.20	EPA 8260C	7-23-14	7-23-14	
1,1-Dichloropropene	ND	0.20	EPA 8260C	7-23-14	7-23-14	
1,2-Dichloroethane	ND	0.20	EPA 8260C	7-23-14	7-23-14	
Trichloroethene	ND	0.20	EPA 8260C	7-23-14	7-23-14	
1,2-Dichloropropane	ND	0.20	EPA 8260C	7-23-14	7-23-14	
Dibromomethane	ND	0.20	EPA 8260C	7-23-14	7-23-14	
Bromodichloromethane	ND	0.20	EPA 8260C	7-23-14	7-23-14	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	7-23-14	7-23-14	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	7-23-14	7-23-14	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	7-23-14	7-23-14	

Date of Report: July 30, 2014
 Samples Submitted: July 22, 2014
 Laboratory Reference: 1407-172
 Project: 397-010

**HALOGENATED VOLATILES EPA 8260C
 METHOD BLANK QUALITY CONTROL**

Page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0723W1					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	7-23-14	7-23-14	
Tetrachloroethene	ND	0.20	EPA 8260C	7-23-14	7-23-14	
1,3-Dichloropropane	ND	0.20	EPA 8260C	7-23-14	7-23-14	
Dibromochloromethane	ND	0.20	EPA 8260C	7-23-14	7-23-14	
1,2-Dibromoethane	ND	0.20	EPA 8260C	7-23-14	7-23-14	
Chlorobenzene	ND	0.20	EPA 8260C	7-23-14	7-23-14	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	7-23-14	7-23-14	
Bromoform	ND	1.0	EPA 8260C	7-23-14	7-23-14	
Bromobenzene	ND	0.20	EPA 8260C	7-23-14	7-23-14	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	7-23-14	7-23-14	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	7-23-14	7-23-14	
2-Chlorotoluene	ND	0.20	EPA 8260C	7-23-14	7-23-14	
4-Chlorotoluene	ND	0.20	EPA 8260C	7-23-14	7-23-14	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	7-23-14	7-23-14	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	7-23-14	7-23-14	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	7-23-14	7-23-14	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	7-23-14	7-23-14	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	7-23-14	7-23-14	
Hexachlorobutadiene	ND	0.20	EPA 8260C	7-23-14	7-23-14	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	7-23-14	7-23-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>100</i>	<i>62-122</i>				
<i>Toluene-d8</i>	<i>100</i>	<i>70-120</i>				
<i>4-Bromofluorobenzene</i>	<i>97</i>	<i>71-120</i>				

Date of Report: July 30, 2014
 Samples Submitted: July 22, 2014
 Laboratory Reference: 1407-172
 Project: 397-010

**HALOGENATED VOLATILES EPA 8260C
 SB/SBD QUALITY CONTROL**

Matrix: Water
 Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery	RPD		Flags
					Recovery	Limits	RPD	Limit		
SPIKE BLANKS										
Laboratory ID:	SB0723W1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	9.90	10.1	10.0	10.0	99	101	63-142	2	17	
Benzene	10.1	10.0	10.0	10.0	101	100	78-125	1	15	
Trichloroethene	10.4	10.0	10.0	10.0	104	100	75-125	4	15	
Toluene	10.1	9.91	10.0	10.0	101	99	80-125	2	15	
Chlorobenzene	9.83	9.74	10.0	10.0	98	97	80-140	1	15	
<i>Surrogate:</i>										
<i>Dibromofluoromethane</i>					<i>95</i>	<i>98</i>	<i>62-122</i>			
<i>Toluene-d8</i>					<i>101</i>	<i>101</i>	<i>70-120</i>			
<i>4-Bromofluorobenzene</i>					<i>95</i>	<i>97</i>	<i>71-120</i>			



Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
 - B - The analyte indicated was also found in the blank sample.
 - C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
 - E - The value reported exceeds the quantitation range and is an estimate.
 - F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
 - H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
 - I - Compound recovery is outside of the control limits.
 - J - The value reported was below the practical quantitation limit. The value is an estimate.
 - K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
 - L - The RPD is outside of the control limits.
 - M - Hydrocarbons in the gasoline range are impacting the diesel range result.
 - M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
 - N - Hydrocarbons in the lube oil range are impacting the diesel range result.
 - N1 - Hydrocarbons in diesel range are impacting lube oil range results.
 - O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
 - P - The RPD of the detected concentrations between the two columns is greater than 40.
 - Q - Surrogate recovery is outside of the control limits.
 - S - Surrogate recovery data is not available due to the necessary dilution of the sample.
 - T - The sample chromatogram is not similar to a typical gas.
 - U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
 - U1 - The practical quantitation limit is elevated due to interferences present in the sample.
 - V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
 - W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
 - X - Sample extract treated with a mercury cleanup procedure.
 - X1 - Sample extract treated with a Sulfuric acid/Silica gel cleanup procedure.
 - Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
 - Z -
- ND - Not Detected at PQL
 PQL - Practical Quantitation Limit
 RPD - Relative Percent Difference



OnSite Environmental Inc.

Analytical Laboratory Testing Services
14648 NE 96th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Chain of Custody

Company: **ERRALON**

Project Number: **317-010**

Project Name: **Block 43**

Project Manager: **CLIFF SCHMITT**

Sampled by: **DINGER KAYHAN**

Turnaround Request (in working days)

(Check One)

- Same Day 1 Day
- 2 Days 3 Days
- Standard (7 Days) (TPH analysis 5 Days)
- (other) _____

Laboratory Number: **07-172**

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	Analytical Parameters																	
1	F-MW-130-20.0-072114	7/21/14	1300	S	5	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	% Moisture	
2	F-MW-130-GW1-072114	7/21/14	1420	W	5																		
3	F-MW-130-40.0-072114	7/21/14	1655	S	4																		
4	DRILLING WATER	7/22/14	0815	W	3																		

Signature	Company	Date	Time	Comments/Special Instructions
	ERRALON	7/22/14	0950	STANDARD STANDARD TAT
	SPECBY	7/22/14	1000	STANDARD STANDARD TAT
	SPECBY	7/22/14	1115	STANDARD STANDARD TAT
				HOLD

Relinquished

Received

Relinquished

Received

Relinquished

Received

Reviewed/Date

Reviewed/Date

Chromatograms with final report



14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

August 5, 2014

Cliff Schmitt
Farallon Consulting, LLC
975 5th Avenue NW
Issaquah, WA 98027

Re: Analytical Data for Project 397-010
Laboratory Reference No. 1407-172B

Dear Cliff:

Enclosed are the analytical results and associated quality control data for samples submitted on July 22, 2014.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "DB", with a long horizontal stroke extending to the right.

David Baumeister
Project Manager

Enclosures

Date of Report: August 5, 2014
Samples Submitted: July 22, 2014
Laboratory Reference: 1407-172B
Project: 397-010

Case Narrative

Samples were collected on July 21 and 22, 2014 and received by the laboratory on July 22, 2014. They were maintained at the laboratory at a temperature of 2°C to 6°C.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Date of Report: August 5, 2014
 Samples Submitted: July 22, 2014
 Laboratory Reference: 1407-172B
 Project: 397-010

NWTPH-Gx/BTEX

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	F-MW-130-20.0-072114					
Laboratory ID:	07-172-01					
Benzene	ND	0.020	EPA 8021B	7-31-14	8-1-14	
Toluene	ND	0.088	EPA 8021B	7-31-14	8-1-14	
Ethyl Benzene	ND	0.088	EPA 8021B	7-31-14	8-1-14	
m,p-Xylene	ND	0.088	EPA 8021B	7-31-14	8-1-14	
o-Xylene	ND	0.088	EPA 8021B	7-31-14	8-1-14	
Gasoline	ND	8.8	NWTPH-Gx	7-31-14	8-1-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	<i>102</i>	<i>71-121</i>				

Date of Report: August 5, 2014
 Samples Submitted: July 22, 2014
 Laboratory Reference: 1407-172B
 Project: 397-010

**NWTPH-Gx/BTEX
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0731S1					
Benzene	ND	0.020	EPA 8021B	7-31-14	7-31-14	
Toluene	ND	0.050	EPA 8021B	7-31-14	7-31-14	
Ethyl Benzene	ND	0.050	EPA 8021B	7-31-14	7-31-14	
m,p-Xylene	ND	0.050	EPA 8021B	7-31-14	7-31-14	
o-Xylene	ND	0.050	EPA 8021B	7-31-14	7-31-14	
Gasoline	ND	5.0	NWTPH-Gx	7-31-14	7-31-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	107	71-121				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	07-275-01							
	ORIG	DUP						
Benzene	ND	ND	NA	NA	NA	NA	NA	30
Toluene	ND	ND	NA	NA	NA	NA	NA	30
Ethyl Benzene	ND	ND	NA	NA	NA	NA	NA	30
m,p-Xylene	ND	ND	NA	NA	NA	NA	NA	30
o-Xylene	ND	ND	NA	NA	NA	NA	NA	30
Gasoline	ND	ND	NA	NA	NA	NA	NA	30
<i>Surrogate:</i>								
<i>Fluorobenzene</i>				109	109	71-121		

SPIKE BLANKS

Laboratory ID:	SB0731S1								
	SB	SBD	SB	SBD	SB	SBD			
Benzene	0.998	1.04	1.00	1.00	100	104	73-121	4	10
Toluene	1.07	1.13	1.00	1.00	107	113	75-124	5	10
Ethyl Benzene	1.07	1.12	1.00	1.00	107	112	75-125	5	9
m,p-Xylene	1.08	1.13	1.00	1.00	108	113	75-126	5	9
o-Xylene	1.07	1.11	1.00	1.00	107	111	74-123	4	8
<i>Surrogate:</i>									
<i>Fluorobenzene</i>					104	107	71-121		

Date of Report: August 5, 2014
 Samples Submitted: July 22, 2014
 Laboratory Reference: 1407-172B
 Project: 397-010

NWTPH-Dx

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	F-MW-130-20.0-072114					
Laboratory ID:	07-172-01					
Diesel Range Organics	ND	30	NWTPH-Dx	8-1-14	8-1-14	
Lube Oil Range Organics	ND	60	NWTPH-Dx	8-1-14	8-1-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	<i>100</i>	<i>50-150</i>				

Date of Report: August 5, 2014
 Samples Submitted: July 22, 2014
 Laboratory Reference: 1407-172B
 Project: 397-010

**NWTPH-Dx
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0801S1					
Diesel Range Organics	ND	25	NWTPH-Dx	8-1-14	8-1-14	
Lube Oil Range Organics	ND	50	NWTPH-Dx	8-1-14	8-1-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	<i>104</i>	<i>50-150</i>				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	07-297-03							
	ORIG	DUP						
Diesel Range	ND	ND	NA	NA	NA	NA	NA	NA
Lube Oil Range	ND	ND	NA	NA	NA	NA	NA	NA
<i>Surrogate:</i>								
<i>o-Terphenyl</i>				95	105	50-150		

Date of Report: August 5, 2014
 Samples Submitted: July 22, 2014
 Laboratory Reference: 1407-172B
 Project: 397-010

SEMIVOLATILES EPA 8270D/SIM
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Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	F-MW-130-20.0-072114					
Laboratory ID:	07-172-01					
n-Nitrosodimethylamine	ND	0.040	EPA 8270D	8-1-14	8-2-14	
Pyridine	ND	0.40	EPA 8270D	8-1-14	8-2-14	
Phenol	ND	0.040	EPA 8270D	8-1-14	8-2-14	
Aniline	ND	0.20	EPA 8270D	8-1-14	8-2-14	
bis(2-Chloroethyl)ether	ND	0.040	EPA 8270D	8-1-14	8-2-14	
2-Chlorophenol	ND	0.040	EPA 8270D	8-1-14	8-2-14	
1,3-Dichlorobenzene	ND	0.040	EPA 8270D	8-1-14	8-2-14	
1,4-Dichlorobenzene	ND	0.040	EPA 8270D	8-1-14	8-2-14	
Benzyl alcohol	ND	0.20	EPA 8270D	8-1-14	8-2-14	
1,2-Dichlorobenzene	ND	0.040	EPA 8270D	8-1-14	8-2-14	
2-Methylphenol (o-Cresol)	ND	0.040	EPA 8270D	8-1-14	8-2-14	
bis(2-Chloroisopropyl)ether	ND	0.040	EPA 8270D	8-1-14	8-2-14	
(3+4)-Methylphenol (m,p-Cresol)	ND	0.040	EPA 8270D	8-1-14	8-2-14	
n-Nitroso-di-n-propylamine	ND	0.040	EPA 8270D	8-1-14	8-2-14	
Hexachloroethane	ND	0.040	EPA 8270D	8-1-14	8-2-14	
Nitrobenzene	ND	0.040	EPA 8270D	8-1-14	8-2-14	
Isophorone	ND	0.040	EPA 8270D	8-1-14	8-2-14	
2-Nitrophenol	ND	0.040	EPA 8270D	8-1-14	8-2-14	
2,4-Dimethylphenol	ND	0.040	EPA 8270D	8-1-14	8-2-14	
bis(2-Chloroethoxy)methane	ND	0.040	EPA 8270D	8-1-14	8-2-14	
2,4-Dichlorophenol	ND	0.040	EPA 8270D	8-1-14	8-2-14	
1,2,4-Trichlorobenzene	ND	0.040	EPA 8270D	8-1-14	8-2-14	
Naphthalene	0.38	0.040	EPA 8270D	8-1-14	8-2-14	
4-Chloroaniline	ND	0.20	EPA 8270D	8-1-14	8-2-14	
Hexachlorobutadiene	ND	0.040	EPA 8270D	8-1-14	8-2-14	
4-Chloro-3-methylphenol	ND	0.040	EPA 8270D	8-1-14	8-2-14	
2-Methylnaphthalene	0.028	0.0079	EPA 8270D/SIM	8-1-14	8-1-14	
1-Methylnaphthalene	0.016	0.0079	EPA 8270D/SIM	8-1-14	8-1-14	
Hexachlorocyclopentadiene	ND	0.040	EPA 8270D	8-1-14	8-2-14	
2,4,6-Trichlorophenol	ND	0.040	EPA 8270D	8-1-14	8-2-14	
2,3-Dichloroaniline	ND	0.040	EPA 8270D	8-1-14	8-2-14	
2,4,5-Trichlorophenol	ND	0.040	EPA 8270D	8-1-14	8-2-14	
2-Chloronaphthalene	ND	0.040	EPA 8270D	8-1-14	8-2-14	
2-Nitroaniline	ND	0.040	EPA 8270D	8-1-14	8-2-14	
1,4-Dinitrobenzene	ND	0.040	EPA 8270D	8-1-14	8-2-14	
Dimethylphthalate	ND	0.040	EPA 8270D	8-1-14	8-2-14	
1,3-Dinitrobenzene	ND	0.040	EPA 8270D	8-1-14	8-2-14	
2,6-Dinitrotoluene	ND	0.040	EPA 8270D	8-1-14	8-2-14	
1,2-Dinitrobenzene	ND	0.040	EPA 8270D	8-1-14	8-2-14	
Acenaphthylene	ND	0.0079	EPA 8270D/SIM	8-1-14	8-1-14	
3-Nitroaniline	ND	0.040	EPA 8270D	8-1-14	8-2-14	

Date of Report: August 5, 2014
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SEMIVOLATILES EPA 8270D/SIM
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	F-MW-130-20.0-072114					
Laboratory ID:	07-172-01					
2,4-Dinitrophenol	ND	0.20	EPA 8270D	8-1-14	8-2-14	
Acenaphthene	0.014	0.0079	EPA 8270D/SIM	8-1-14	8-1-14	
4-Nitrophenol	ND	0.040	EPA 8270D	8-1-14	8-2-14	
2,4-Dinitrotoluene	ND	0.040	EPA 8270D	8-1-14	8-2-14	
Dibenzofuran	ND	0.040	EPA 8270D	8-1-14	8-2-14	
2,3,5,6-Tetrachlorophenol	ND	0.040	EPA 8270D	8-1-14	8-2-14	
2,3,4,6-Tetrachlorophenol	ND	0.040	EPA 8270D	8-1-14	8-2-14	
Diethylphthalate	ND	0.20	EPA 8270D	8-1-14	8-2-14	
4-Chlorophenyl-phenylether	ND	0.040	EPA 8270D	8-1-14	8-2-14	
4-Nitroaniline	ND	0.040	EPA 8270D	8-1-14	8-2-14	
Fluorene	ND	0.0079	EPA 8270D/SIM	8-1-14	8-1-14	
4,6-Dinitro-2-methylphenol	ND	0.20	EPA 8270D	8-1-14	8-2-14	
n-Nitrosodiphenylamine	ND	0.040	EPA 8270D	8-1-14	8-2-14	
1,2-Diphenylhydrazine	ND	0.040	EPA 8270D	8-1-14	8-2-14	
4-Bromophenyl-phenylether	ND	0.040	EPA 8270D	8-1-14	8-2-14	
Hexachlorobenzene	ND	0.040	EPA 8270D	8-1-14	8-2-14	
Pentachlorophenol	ND	0.20	EPA 8270D	8-1-14	8-2-14	
Phenanthrene	ND	0.0079	EPA 8270D/SIM	8-1-14	8-1-14	
Anthracene	ND	0.0079	EPA 8270D/SIM	8-1-14	8-1-14	
Carbazole	ND	0.040	EPA 8270D	8-1-14	8-2-14	
Di-n-butylphthalate	ND	0.040	EPA 8270D	8-1-14	8-2-14	
Fluoranthene	ND	0.0079	EPA 8270D/SIM	8-1-14	8-1-14	
Benzidine	ND	0.40	EPA 8270D	8-1-14	8-2-14	
Pyrene	ND	0.0079	EPA 8270D/SIM	8-1-14	8-1-14	
Butylbenzylphthalate	ND	0.040	EPA 8270D	8-1-14	8-2-14	
bis-2-Ethylhexyladipate	ND	0.040	EPA 8270D	8-1-14	8-2-14	
3,3'-Dichlorobenzidine	ND	0.20	EPA 8270D	8-1-14	8-2-14	
Benzo[a]anthracene	ND	0.0079	EPA 8270D/SIM	8-1-14	8-1-14	
Chrysene	ND	0.0079	EPA 8270D/SIM	8-1-14	8-1-14	
bis(2-Ethylhexyl)phthalate	ND	0.040	EPA 8270D	8-1-14	8-2-14	
Di-n-octylphthalate	ND	0.040	EPA 8270D	8-1-14	8-2-14	
Benzo[b]fluoranthene	ND	0.0079	EPA 8270D/SIM	8-1-14	8-1-14	
Benzo(j,k)fluoranthene	ND	0.0079	EPA 8270D/SIM	8-1-14	8-1-14	
Benzo[a]pyrene	ND	0.0079	EPA 8270D/SIM	8-1-14	8-1-14	
Indeno[1,2,3-cd]pyrene	ND	0.0079	EPA 8270D/SIM	8-1-14	8-1-14	
Dibenz[a,h]anthracene	ND	0.0079	EPA 8270D/SIM	8-1-14	8-1-14	
Benzo[g,h,i]perylene	ND	0.0079	EPA 8270D/SIM	8-1-14	8-1-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorophenol</i>	<i>78</i>	<i>24 - 105</i>				
<i>Phenol-d6</i>	<i>85</i>	<i>34 - 101</i>				
<i>Nitrobenzene-d5</i>	<i>72</i>	<i>32 - 102</i>				
<i>2-Fluorobiphenyl</i>	<i>75</i>	<i>44 - 100</i>				
<i>2,4,6-Tribromophenol</i>	<i>67</i>	<i>34 - 124</i>				
<i>Terphenyl-d14</i>	<i>74</i>	<i>47 - 114</i>				

Date of Report: August 5, 2014
 Samples Submitted: July 22, 2014
 Laboratory Reference: 1407-172B
 Project: 397-010

SEMIVOLATILES EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL
 page 1 of 2

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0801S1					
n-Nitrosodimethylamine	ND	0.033	EPA 8270D	8-1-14	8-1-14	
Pyridine	ND	0.33	EPA 8270D	8-1-14	8-1-14	
Phenol	ND	0.033	EPA 8270D	8-1-14	8-1-14	
Aniline	ND	0.17	EPA 8270D	8-1-14	8-1-14	
bis(2-Chloroethyl)ether	ND	0.033	EPA 8270D	8-1-14	8-1-14	
2-Chlorophenol	ND	0.033	EPA 8270D	8-1-14	8-1-14	
1,3-Dichlorobenzene	ND	0.033	EPA 8270D	8-1-14	8-1-14	
1,4-Dichlorobenzene	ND	0.033	EPA 8270D	8-1-14	8-1-14	
Benzyl alcohol	ND	0.17	EPA 8270D	8-1-14	8-1-14	
1,2-Dichlorobenzene	ND	0.033	EPA 8270D	8-1-14	8-1-14	
2-Methylphenol (o-Cresol)	ND	0.033	EPA 8270D	8-1-14	8-1-14	
bis(2-Chloroisopropyl)ether	ND	0.033	EPA 8270D	8-1-14	8-1-14	
(3+4)-Methylphenol (m,p-Cresol)	ND	0.033	EPA 8270D	8-1-14	8-1-14	
n-Nitroso-di-n-propylamine	ND	0.033	EPA 8270D	8-1-14	8-1-14	
Hexachloroethane	ND	0.033	EPA 8270D	8-1-14	8-1-14	
Nitrobenzene	ND	0.033	EPA 8270D	8-1-14	8-1-14	
Isophorone	ND	0.033	EPA 8270D	8-1-14	8-1-14	
2-Nitrophenol	ND	0.033	EPA 8270D	8-1-14	8-1-14	
2,4-Dimethylphenol	ND	0.033	EPA 8270D	8-1-14	8-1-14	
bis(2-Chloroethoxy)methane	ND	0.033	EPA 8270D	8-1-14	8-1-14	
2,4-Dichlorophenol	ND	0.033	EPA 8270D	8-1-14	8-1-14	
1,2,4-Trichlorobenzene	ND	0.033	EPA 8270D	8-1-14	8-1-14	
Naphthalene	ND	0.0067	EPA 8270D/SIM	8-1-14	8-1-14	
4-Chloroaniline	ND	0.17	EPA 8270D	8-1-14	8-1-14	
Hexachlorobutadiene	ND	0.033	EPA 8270D	8-1-14	8-1-14	
4-Chloro-3-methylphenol	ND	0.033	EPA 8270D	8-1-14	8-1-14	
2-Methylnaphthalene	ND	0.0067	EPA 8270D/SIM	8-1-14	8-1-14	
1-Methylnaphthalene	ND	0.0067	EPA 8270D/SIM	8-1-14	8-1-14	
Hexachlorocyclopentadiene	ND	0.033	EPA 8270D	8-1-14	8-1-14	
2,4,6-Trichlorophenol	ND	0.033	EPA 8270D	8-1-14	8-1-14	
2,3-Dichloroaniline	ND	0.033	EPA 8270D	8-1-14	8-1-14	
2,4,5-Trichlorophenol	ND	0.033	EPA 8270D	8-1-14	8-1-14	
2-Chloronaphthalene	ND	0.033	EPA 8270D	8-1-14	8-1-14	
2-Nitroaniline	ND	0.033	EPA 8270D	8-1-14	8-1-14	
1,4-Dinitrobenzene	ND	0.033	EPA 8270D	8-1-14	8-1-14	
Dimethylphthalate	ND	0.033	EPA 8270D	8-1-14	8-1-14	
1,3-Dinitrobenzene	ND	0.033	EPA 8270D	8-1-14	8-1-14	
2,6-Dinitrotoluene	ND	0.033	EPA 8270D	8-1-14	8-1-14	
1,2-Dinitrobenzene	ND	0.033	EPA 8270D	8-1-14	8-1-14	
Acenaphthylene	ND	0.0067	EPA 8270D/SIM	8-1-14	8-1-14	
3-Nitroaniline	ND	0.033	EPA 8270D	8-1-14	8-1-14	

Date of Report: August 5, 2014
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SEMIVOLATILES EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0801S1					
2,4-Dinitrophenol	ND	0.17	EPA 8270D	8-1-14	8-1-14	
Acenaphthene	ND	0.0067	EPA 8270D/SIM	8-1-14	8-1-14	
4-Nitrophenol	ND	0.033	EPA 8270D	8-1-14	8-1-14	
2,4-Dinitrotoluene	ND	0.033	EPA 8270D	8-1-14	8-1-14	
Dibenzofuran	ND	0.033	EPA 8270D	8-1-14	8-1-14	
2,3,5,6-Tetrachlorophenol	ND	0.033	EPA 8270D	8-1-14	8-1-14	
2,3,4,6-Tetrachlorophenol	ND	0.033	EPA 8270D	8-1-14	8-1-14	
Diethylphthalate	ND	0.17	EPA 8270D	8-1-14	8-1-14	
4-Chlorophenyl-phenylether	ND	0.033	EPA 8270D	8-1-14	8-1-14	
4-Nitroaniline	ND	0.033	EPA 8270D	8-1-14	8-1-14	
Fluorene	ND	0.0067	EPA 8270D/SIM	8-1-14	8-1-14	
4,6-Dinitro-2-methylphenol	ND	0.17	EPA 8270D	8-1-14	8-1-14	
n-Nitrosodiphenylamine	ND	0.033	EPA 8270D	8-1-14	8-1-14	
1,2-Diphenylhydrazine	ND	0.033	EPA 8270D	8-1-14	8-1-14	
4-Bromophenyl-phenylether	ND	0.033	EPA 8270D	8-1-14	8-1-14	
Hexachlorobenzene	ND	0.033	EPA 8270D	8-1-14	8-1-14	
Pentachlorophenol	ND	0.17	EPA 8270D	8-1-14	8-1-14	
Phenanthrene	ND	0.0067	EPA 8270D/SIM	8-1-14	8-1-14	
Anthracene	ND	0.0067	EPA 8270D/SIM	8-1-14	8-1-14	
Carbazole	ND	0.033	EPA 8270D	8-1-14	8-1-14	
Di-n-butylphthalate	ND	0.033	EPA 8270D	8-1-14	8-1-14	
Fluoranthene	ND	0.0067	EPA 8270D/SIM	8-1-14	8-1-14	
Benzidine	ND	0.33	EPA 8270D	8-1-14	8-1-14	
Pyrene	ND	0.0067	EPA 8270D/SIM	8-1-14	8-1-14	
Butylbenzylphthalate	ND	0.033	EPA 8270D	8-1-14	8-1-14	
bis-2-Ethylhexyladipate	ND	0.033	EPA 8270D	8-1-14	8-1-14	
3,3'-Dichlorobenzidine	ND	0.17	EPA 8270D	8-1-14	8-1-14	
Benzo[a]anthracene	ND	0.0067	EPA 8270D/SIM	8-1-14	8-1-14	
Chrysene	ND	0.0067	EPA 8270D/SIM	8-1-14	8-1-14	
bis(2-Ethylhexyl)phthalate	ND	0.033	EPA 8270D	8-1-14	8-1-14	
Di-n-octylphthalate	ND	0.033	EPA 8270D	8-1-14	8-1-14	
Benzo[b]fluoranthene	ND	0.0067	EPA 8270D/SIM	8-1-14	8-1-14	
Benzo(j,k)fluoranthene	ND	0.0067	EPA 8270D/SIM	8-1-14	8-1-14	
Benzo[a]pyrene	ND	0.0067	EPA 8270D/SIM	8-1-14	8-1-14	
Indeno[1,2,3-cd]pyrene	ND	0.0067	EPA 8270D/SIM	8-1-14	8-1-14	
Dibenz[a,h]anthracene	ND	0.0067	EPA 8270D/SIM	8-1-14	8-1-14	
Benzo[g,h,i]perylene	ND	0.0067	EPA 8270D/SIM	8-1-14	8-1-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorophenol</i>	<i>85</i>	<i>24 - 105</i>				
<i>Phenol-d6</i>	<i>90</i>	<i>34 - 101</i>				
<i>Nitrobenzene-d5</i>	<i>79</i>	<i>32 - 102</i>				
<i>2-Fluorobiphenyl</i>	<i>77</i>	<i>44 - 100</i>				
<i>2,4,6-Tribromophenol</i>	<i>76</i>	<i>34 - 124</i>				
<i>Terphenyl-d14</i>	<i>77</i>	<i>47 - 114</i>				

Date of Report: August 5, 2014
 Samples Submitted: July 22, 2014
 Laboratory Reference: 1407-172B
 Project: 397-010

**SEMIVOLATILES EPA 8270D/SIM
 SB/SBD QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery	RPD	RPD	Flags
					SB	SBD	Limits	Limit		
SPIKE BLANKS										
Laboratory ID:	SB0801S1									
	SB	SBD	SB	SBD	SB	SBD				
Phenol	0.798	1.02	1.33	1.33	60	77	41 - 104	24	36	
2-Chlorophenol	0.799	1.03	1.33	1.33	60	77	41 - 100	25	42	
1,4-Dichlorobenzene	0.373	0.507	0.667	0.667	56	76	34 - 100	30	48	
n-Nitroso-di-n-propylamine	0.401	0.495	0.667	0.667	60	74	41 - 98	21	30	
1,2,4-Trichlorobenzene	0.395	0.502	0.667	0.667	59	75	30 - 105	24	46	
4-Chloro-3-methylphenol	0.877	1.02	1.33	1.33	66	77	57 - 101	15	27	
Acenaphthene	0.388	0.455	0.667	0.667	58	68	56 - 95	16	22	
2,4-Dinitrotoluene	0.422	0.485	0.667	0.667	63	73	63 - 110	14	23	
Pentachlorophenol	0.972	1.14	1.33	1.33	73	86	35 - 120	16	29	
Pyrene	0.454	0.502	0.667	0.667	68	75	56 - 114	10	25	
<i>Surrogate:</i>										
2-Fluorophenol					59	80	24 - 105			
Phenol-d6					67	84	34 - 101			
Nitrobenzene-d5					58	74	32 - 102			
2-Fluorobiphenyl					63	74	44 - 100			
2,4,6-Tribromophenol					60	72	34 - 124			
Terphenyl-d14					66	74	47 - 114			

Date of Report: August 5, 2014
Samples Submitted: July 22, 2014
Laboratory Reference: 1407-172B
Project: 397-010

% MOISTURE

Date Analyzed: 8-1-14

Client ID	Lab ID	% Moisture
F-MW-130-20.0-072114	07-172-01	16



Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
 - B - The analyte indicated was also found in the blank sample.
 - C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
 - E - The value reported exceeds the quantitation range and is an estimate.
 - F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
 - H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
 - I - Compound recovery is outside of the control limits.
 - J - The value reported was below the practical quantitation limit. The value is an estimate.
 - K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
 - L - The RPD is outside of the control limits.
 - M - Hydrocarbons in the gasoline range are impacting the diesel range result.
 - M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
 - N - Hydrocarbons in the lube oil range are impacting the diesel range result.
 - N1 - Hydrocarbons in diesel range are impacting lube oil range results.
 - O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
 - P - The RPD of the detected concentrations between the two columns is greater than 40.
 - Q - Surrogate recovery is outside of the control limits.
 - S - Surrogate recovery data is not available due to the necessary dilution of the sample.
 - T - The sample chromatogram is not similar to a typical _____.
 - U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
 - U1 - The practical quantitation limit is elevated due to interferences present in the sample.
 - V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
 - W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
 - X - Sample extract treated with a mercury cleanup procedure.
 - X1 - Sample extract treated with a Sulfuric acid/Silica gel cleanup procedure.
 - Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
 - Z -
- ND - Not Detected at PQL
 PQL - Practical Quantitation Limit
 RPD - Relative Percent Difference



OnSite Environmental Inc.

Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Chain of Custody

Turnaround Request
(in working days)

(Check One)

Same Day 1 Day

2 Days 3 Days

Standard (7 Days)
(TPH analysis 5 Days)

_____ (other)

Laboratory Number: **07-172**

Company: **FRAXION**
Project Number: **317-010**
Project Name: **Block 43**
Project Manager: **CLIFF SCHMITT**
Sampled by: **DINGER KAYHAN**

Lab ID _____ Sample Identification _____

Date Sampled _____ Time Sampled _____ Matrix _____

Number of Containers

NWTPH-HCID

NWTPH-Gx/BTEX

NWTPH-Gx

NWTPH-Dx

Volatiles 8260C

Halogenated Volatiles 8260C

Semivolatiles 8270D/SIM
(with low-level PAHs)

PAHs 8270D/SIM (low-level)

PCBs 8082A

Organochlorine Pesticides 8081B

Organophosphorus Pesticides 8270D/SIM

Chlorinated Acid Herbicides 8151A

Total RCRA Metals

Total MTCA Metals

TCLP Metals

HEM (oil and grease) 1664A

% Moisture

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	Comments/Special Instructions
1	F-MW-130-20.0-072114	7/21/14	1300	S	<input checked="" type="checkbox"/> NWTPH-Gx/BTEX <input checked="" type="checkbox"/> NWTPH-Dx <input checked="" type="checkbox"/> Volatiles 8260C <input checked="" type="checkbox"/> Halogenated Volatiles 8260C <input checked="" type="checkbox"/> Semivolatiles 8270D/SIM (with low-level PAHs) <input checked="" type="checkbox"/> PAHs 8270D/SIM (low-level) <input checked="" type="checkbox"/> PCBs 8082A <input checked="" type="checkbox"/> Organochlorine Pesticides 8081B <input checked="" type="checkbox"/> Organophosphorus Pesticides 8270D/SIM <input checked="" type="checkbox"/> Chlorinated Acid Herbicides 8151A <input checked="" type="checkbox"/> Total RCRA Metals <input checked="" type="checkbox"/> Total MTCA Metals <input checked="" type="checkbox"/> TCLP Metals <input checked="" type="checkbox"/> HEM (oil and grease) 1664A <input checked="" type="checkbox"/> % Moisture	STANDARD TAT DK HOLD
2	F-MW-130-GW1-072114	7/21/14	1420	W	<input checked="" type="checkbox"/> NWTPH-Gx/BTEX <input checked="" type="checkbox"/> NWTPH-Dx <input checked="" type="checkbox"/> Volatiles 8260C <input checked="" type="checkbox"/> Halogenated Volatiles 8260C <input checked="" type="checkbox"/> Semivolatiles 8270D/SIM (with low-level PAHs) <input checked="" type="checkbox"/> PAHs 8270D/SIM (low-level) <input checked="" type="checkbox"/> PCBs 8082A <input checked="" type="checkbox"/> Organochlorine Pesticides 8081B <input checked="" type="checkbox"/> Organophosphorus Pesticides 8270D/SIM <input checked="" type="checkbox"/> Chlorinated Acid Herbicides 8151A <input checked="" type="checkbox"/> Total RCRA Metals <input checked="" type="checkbox"/> Total MTCA Metals <input checked="" type="checkbox"/> TCLP Metals <input checked="" type="checkbox"/> HEM (oil and grease) 1664A <input checked="" type="checkbox"/> % Moisture	STANDARD TAT STANDARD TAT
3	F-MW-130-40.0-072114	7/21/14	1655	S	<input checked="" type="checkbox"/> NWTPH-Gx/BTEX <input checked="" type="checkbox"/> NWTPH-Dx <input checked="" type="checkbox"/> Volatiles 8260C <input checked="" type="checkbox"/> Halogenated Volatiles 8260C <input checked="" type="checkbox"/> Semivolatiles 8270D/SIM (with low-level PAHs) <input checked="" type="checkbox"/> PAHs 8270D/SIM (low-level) <input checked="" type="checkbox"/> PCBs 8082A <input checked="" type="checkbox"/> Organochlorine Pesticides 8081B <input checked="" type="checkbox"/> Organophosphorus Pesticides 8270D/SIM <input checked="" type="checkbox"/> Chlorinated Acid Herbicides 8151A <input checked="" type="checkbox"/> Total RCRA Metals <input checked="" type="checkbox"/> Total MTCA Metals <input checked="" type="checkbox"/> TCLP Metals <input checked="" type="checkbox"/> HEM (oil and grease) 1664A <input checked="" type="checkbox"/> % Moisture	STANDARD TAT HOLD
4	DRILLING WATER	7/22/14	0815	W	<input checked="" type="checkbox"/> NWTPH-Gx/BTEX <input checked="" type="checkbox"/> NWTPH-Dx <input checked="" type="checkbox"/> Volatiles 8260C <input checked="" type="checkbox"/> Halogenated Volatiles 8260C <input checked="" type="checkbox"/> Semivolatiles 8270D/SIM (with low-level PAHs) <input checked="" type="checkbox"/> PAHs 8270D/SIM (low-level) <input checked="" type="checkbox"/> PCBs 8082A <input checked="" type="checkbox"/> Organochlorine Pesticides 8081B <input checked="" type="checkbox"/> Organophosphorus Pesticides 8270D/SIM <input checked="" type="checkbox"/> Chlorinated Acid Herbicides 8151A <input checked="" type="checkbox"/> Total RCRA Metals <input checked="" type="checkbox"/> Total MTCA Metals <input checked="" type="checkbox"/> TCLP Metals <input checked="" type="checkbox"/> HEM (oil and grease) 1664A <input checked="" type="checkbox"/> % Moisture	STANDARD TAT HOLD

Relinquished	Received	Relinquished	Received	Relinquished	Received
FRAXION	FRAXION	SPC 214	SPC 214	SPC 214	SPC 214
7/22/14	7/22/14	7/22/14	7/22/14	7/22/14	7/22/14
0950	1000	1115	1115		
(X) Added 7/31/14. PB (3 day TAT)					



14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

July 30, 2014

Cliff Schmitt
Farallon Consulting, LLC
975 5th Avenue NW
Issaquah, WA 98027

Re: Analytical Data for Project 397-010
Laboratory Reference No. 1407-172

Dear Cliff:

Enclosed are the analytical results and associated quality control data for samples submitted on July 22, 2014.

Please note that this is a revised report, and replaces the original dated July 30, 2014, due to a requested change of the Halogenated Volatiles to full list Volatiles.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

Date of Report: July 30, 2014
Samples Submitted: July 22, 2014
Laboratory Reference: 1407-172
Project: 397-010

Case Narrative

Samples were collected on July 21 and 22, 2014 and received by the laboratory on July 22, 2014. They were maintained at the laboratory at a temperature of 2°C to 6°C.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

NWTPH Gx/BTEX Analysis

The chromatogram for sample F-MW-130-GW1-072114 is not similar to a typical gas.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

Date of Report: July 30, 2014
 Samples Submitted: July 22, 2014
 Laboratory Reference: 1407-172
 Project: 397-010

NWTPH-Gx/BTEX

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	F-MW-130-GW1-072114					
Laboratory ID:	07-172-02					
Benzene	5.1	1.0	EPA 8021B	7-24-14	7-24-14	
Toluene	7.5	1.0	EPA 8021B	7-24-14	7-24-14	
Ethyl Benzene	2.2	1.0	EPA 8021B	7-24-14	7-24-14	
m,p-Xylene	3.4	1.0	EPA 8021B	7-24-14	7-24-14	
o-Xylene	3.3	1.0	EPA 8021B	7-24-14	7-24-14	
Gasoline	2100	100	NWTPH-Gx	7-24-14	7-24-14	T
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	95	71-112				

Date of Report: July 30, 2014
 Samples Submitted: July 22, 2014
 Laboratory Reference: 1407-172
 Project: 397-010

**NWTPH-Gx/BTEX
 QUALITY CONTROL**

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0724W1					
Benzene	ND	1.0	EPA 8021B	7-24-14	7-24-14	
Toluene	ND	1.0	EPA 8021B	7-24-14	7-24-14	
Ethyl Benzene	ND	1.0	EPA 8021B	7-24-14	7-24-14	
m,p-Xylene	ND	1.0	EPA 8021B	7-24-14	7-24-14	
o-Xylene	ND	1.0	EPA 8021B	7-24-14	7-24-14	
Gasoline	ND	100	NWTPH-Gx	7-24-14	7-24-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	99	71-112				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	07-209-02							
	ORIG	DUP						
Benzene	ND	ND	NA	NA	NA	NA	NA	30
Toluene	ND	ND	NA	NA	NA	NA	NA	30
Ethyl Benzene	ND	ND	NA	NA	NA	NA	NA	30
m,p-Xylene	ND	ND	NA	NA	NA	NA	NA	30
o-Xylene	ND	ND	NA	NA	NA	NA	NA	30
Gasoline	ND	ND	NA	NA	NA	NA	NA	30
<i>Surrogate:</i>								
<i>Fluorobenzene</i>				97	96	71-112		

MATRIX SPIKES

Laboratory ID:	07-209-02									
	MS	MSD	MS	MSD	MS	MSD				
Benzene	52.9	54.0	50.0	50.0	ND	106	108	78-120	2	12
Toluene	54.7	55.9	50.0	50.0	ND	109	112	80-121	2	12
Ethyl Benzene	55.1	55.9	50.0	50.0	ND	110	112	81-120	1	13
m,p-Xylene	55.8	56.7	50.0	50.0	ND	112	113	81-119	2	13
o-Xylene	55.4	56.0	50.0	50.0	ND	111	112	79-117	1	13
<i>Surrogate:</i>										
<i>Fluorobenzene</i>					102	102	71-112			

Date of Report: July 30, 2014
 Samples Submitted: July 22, 2014
 Laboratory Reference: 1407-172
 Project: 397-010

VOLATILES EPA 8260C
 page 1 of 2

Matrix: Water
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	F-MW-130-GW1-072114					
Laboratory ID:	07-172-02					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	7-23-14	7-23-14	
Chloromethane	ND	1.0	EPA 8260C	7-23-14	7-23-14	
Vinyl Chloride	ND	0.20	EPA 8260C	7-23-14	7-23-14	
Bromomethane	ND	0.20	EPA 8260C	7-23-14	7-23-14	
Chloroethane	ND	1.0	EPA 8260C	7-23-14	7-23-14	
Trichlorofluoromethane	ND	0.20	EPA 8260C	7-23-14	7-23-14	
1,1-Dichloroethene	ND	0.20	EPA 8260C	7-23-14	7-23-14	
Acetone	ND	6.4	EPA 8260C	7-23-14	7-23-14	
Iodomethane	ND	1.0	EPA 8260C	7-23-14	7-23-14	
Carbon Disulfide	ND	0.20	EPA 8260C	7-23-14	7-23-14	
Methylene Chloride	ND	1.0	EPA 8260C	7-23-14	7-23-14	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	7-23-14	7-23-14	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	7-23-14	7-23-14	
1,1-Dichloroethane	ND	0.20	EPA 8260C	7-23-14	7-23-14	
Vinyl Acetate	ND	1.0	EPA 8260C	7-23-14	7-23-14	
2,2-Dichloropropane	ND	0.20	EPA 8260C	7-23-14	7-23-14	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	7-23-14	7-23-14	
2-Butanone	ND	5.0	EPA 8260C	7-23-14	7-23-14	
Bromochloromethane	ND	0.20	EPA 8260C	7-23-14	7-23-14	
Chloroform	ND	0.20	EPA 8260C	7-23-14	7-23-14	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	7-23-14	7-23-14	
Carbon Tetrachloride	ND	0.20	EPA 8260C	7-23-14	7-23-14	
1,1-Dichloropropene	ND	0.20	EPA 8260C	7-23-14	7-23-14	
Benzene	6.1	0.20	EPA 8260C	7-23-14	7-23-14	
1,2-Dichloroethane	ND	0.20	EPA 8260C	7-23-14	7-23-14	
Trichloroethene	ND	0.20	EPA 8260C	7-23-14	7-23-14	
1,2-Dichloropropane	ND	0.20	EPA 8260C	7-23-14	7-23-14	
Dibromomethane	ND	0.20	EPA 8260C	7-23-14	7-23-14	
Bromodichloromethane	ND	0.20	EPA 8260C	7-23-14	7-23-14	
2-Chloroethyl Vinyl Ether	ND	1.9	EPA 8260C	7-23-14	7-23-14	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	7-23-14	7-23-14	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260C	7-23-14	7-23-14	
Toluene	4.3	1.0	EPA 8260C	7-23-14	7-23-14	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	7-23-14	7-23-14	

Date of Report: July 30, 2014
 Samples Submitted: July 22, 2014
 Laboratory Reference: 1407-172
 Project: 397-010

VOLATILES EPA 8260C
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	F-MW-130-GW1-072114					
Laboratory ID:	07-172-02					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	7-23-14	7-23-14	
Tetrachloroethene	ND	0.20	EPA 8260C	7-23-14	7-23-14	
1,3-Dichloropropane	ND	0.20	EPA 8260C	7-23-14	7-23-14	
2-Hexanone	ND	2.9	EPA 8260C	7-23-14	7-23-14	
Dibromochloromethane	ND	0.20	EPA 8260C	7-23-14	7-23-14	
1,2-Dibromoethane	ND	0.20	EPA 8260C	7-23-14	7-23-14	
Chlorobenzene	ND	0.20	EPA 8260C	7-23-14	7-23-14	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	7-23-14	7-23-14	
Ethylbenzene	1.6	0.20	EPA 8260C	7-23-14	7-23-14	
m,p-Xylene	2.2	0.40	EPA 8260C	7-23-14	7-23-14	
o-Xylene	2.3	0.20	EPA 8260C	7-23-14	7-23-14	
Styrene	ND	0.20	EPA 8260C	7-23-14	7-23-14	
Bromoform	ND	1.0	EPA 8260C	7-23-14	7-23-14	
Isopropylbenzene	0.23	0.20	EPA 8260C	7-23-14	7-23-14	
Bromobenzene	ND	0.20	EPA 8260C	7-23-14	7-23-14	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	7-23-14	7-23-14	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	7-23-14	7-23-14	
n-Propylbenzene	ND	0.20	EPA 8260C	7-23-14	7-23-14	
2-Chlorotoluene	ND	0.20	EPA 8260C	7-23-14	7-23-14	
4-Chlorotoluene	ND	0.20	EPA 8260C	7-23-14	7-23-14	
1,3,5-Trimethylbenzene	1.2	0.20	EPA 8260C	7-23-14	7-23-14	
tert-Butylbenzene	ND	0.20	EPA 8260C	7-23-14	7-23-14	
1,2,4-Trimethylbenzene	2.6	0.20	EPA 8260C	7-23-14	7-23-14	
sec-Butylbenzene	ND	0.20	EPA 8260C	7-23-14	7-23-14	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	7-23-14	7-23-14	
p-Isopropyltoluene	ND	0.20	EPA 8260C	7-23-14	7-23-14	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	7-23-14	7-23-14	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	7-23-14	7-23-14	
n-Butylbenzene	ND	0.20	EPA 8260C	7-23-14	7-23-14	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	7-23-14	7-23-14	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	7-23-14	7-23-14	
Hexachlorobutadiene	ND	0.20	EPA 8260C	7-23-14	7-23-14	
Naphthalene	650	1.0	EPA 8260C	7-23-14	7-23-14	E
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	7-23-14	7-23-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>99</i>	<i>62-122</i>				
<i>Toluene-d8</i>	<i>101</i>	<i>70-120</i>				
<i>4-Bromofluorobenzene</i>	<i>99</i>	<i>71-120</i>				

Date of Report: July 30, 2014
 Samples Submitted: July 22, 2014
 Laboratory Reference: 1407-172
 Project: 397-010

**VOLATILES EPA 8260C
 METHOD BLANK QUALITY CONTROL**

Page 1 of 2

Matrix: Water

Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0723W1					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	7-23-14	7-23-14	
Chloromethane	ND	1.0	EPA 8260C	7-23-14	7-23-14	
Vinyl Chloride	ND	0.20	EPA 8260C	7-23-14	7-23-14	
Bromomethane	ND	0.20	EPA 8260C	7-23-14	7-23-14	
Chloroethane	ND	1.0	EPA 8260C	7-23-14	7-23-14	
Trichlorofluoromethane	ND	0.20	EPA 8260C	7-23-14	7-23-14	
1,1-Dichloroethene	ND	0.20	EPA 8260C	7-23-14	7-23-14	
Acetone	ND	6.4	EPA 8260C	7-23-14	7-23-14	
Iodomethane	ND	1.0	EPA 8260C	7-23-14	7-23-14	
Carbon Disulfide	ND	0.20	EPA 8260C	7-23-14	7-23-14	
Methylene Chloride	ND	1.0	EPA 8260C	7-23-14	7-23-14	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	7-23-14	7-23-14	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	7-23-14	7-23-14	
1,1-Dichloroethane	ND	0.20	EPA 8260C	7-23-14	7-23-14	
Vinyl Acetate	ND	1.0	EPA 8260C	7-23-14	7-23-14	
2,2-Dichloropropane	ND	0.20	EPA 8260C	7-23-14	7-23-14	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	7-23-14	7-23-14	
2-Butanone	ND	5.0	EPA 8260C	7-23-14	7-23-14	
Bromochloromethane	ND	0.20	EPA 8260C	7-23-14	7-23-14	
Chloroform	ND	0.20	EPA 8260C	7-23-14	7-23-14	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	7-23-14	7-23-14	
Carbon Tetrachloride	ND	0.20	EPA 8260C	7-23-14	7-23-14	
1,1-Dichloropropene	ND	0.20	EPA 8260C	7-23-14	7-23-14	
Benzene	ND	0.20	EPA 8260C	7-23-14	7-23-14	
1,2-Dichloroethane	ND	0.20	EPA 8260C	7-23-14	7-23-14	
Trichloroethene	ND	0.20	EPA 8260C	7-23-14	7-23-14	
1,2-Dichloropropane	ND	0.20	EPA 8260C	7-23-14	7-23-14	
Dibromomethane	ND	0.20	EPA 8260C	7-23-14	7-23-14	
Bromodichloromethane	ND	0.20	EPA 8260C	7-23-14	7-23-14	
2-Chloroethyl Vinyl Ether	ND	1.9	EPA 8260C	7-23-14	7-23-14	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	7-23-14	7-23-14	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260C	7-23-14	7-23-14	
Toluene	ND	1.0	EPA 8260C	7-23-14	7-23-14	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	7-23-14	7-23-14	

Date of Report: July 30, 2014
 Samples Submitted: July 22, 2014
 Laboratory Reference: 1407-172
 Project: 397-010

VOLATILES EPA 8260C
METHOD BLANK QUALITY CONTROL
 Page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0723W1					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	7-23-14	7-23-14	
Tetrachloroethene	ND	0.20	EPA 8260C	7-23-14	7-23-14	
1,3-Dichloropropane	ND	0.20	EPA 8260C	7-23-14	7-23-14	
2-Hexanone	ND	2.9	EPA 8260C	7-23-14	7-23-14	
Dibromochloromethane	ND	0.20	EPA 8260C	7-23-14	7-23-14	
1,2-Dibromoethane	ND	0.20	EPA 8260C	7-23-14	7-23-14	
Chlorobenzene	ND	0.20	EPA 8260C	7-23-14	7-23-14	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	7-23-14	7-23-14	
Ethylbenzene	ND	0.20	EPA 8260C	7-23-14	7-23-14	
m,p-Xylene	ND	0.40	EPA 8260C	7-23-14	7-23-14	
o-Xylene	ND	0.20	EPA 8260C	7-23-14	7-23-14	
Styrene	ND	0.20	EPA 8260C	7-23-14	7-23-14	
Bromoform	ND	1.0	EPA 8260C	7-23-14	7-23-14	
Isopropylbenzene	ND	0.20	EPA 8260C	7-23-14	7-23-14	
Bromobenzene	ND	0.20	EPA 8260C	7-23-14	7-23-14	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	7-23-14	7-23-14	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	7-23-14	7-23-14	
n-Propylbenzene	ND	0.20	EPA 8260C	7-23-14	7-23-14	
2-Chlorotoluene	ND	0.20	EPA 8260C	7-23-14	7-23-14	
4-Chlorotoluene	ND	0.20	EPA 8260C	7-23-14	7-23-14	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	7-23-14	7-23-14	
tert-Butylbenzene	ND	0.20	EPA 8260C	7-23-14	7-23-14	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	7-23-14	7-23-14	
sec-Butylbenzene	ND	0.20	EPA 8260C	7-23-14	7-23-14	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	7-23-14	7-23-14	
p-Isopropyltoluene	ND	0.20	EPA 8260C	7-23-14	7-23-14	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	7-23-14	7-23-14	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	7-23-14	7-23-14	
n-Butylbenzene	ND	0.20	EPA 8260C	7-23-14	7-23-14	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	7-23-14	7-23-14	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	7-23-14	7-23-14	
Hexachlorobutadiene	ND	0.20	EPA 8260C	7-23-14	7-23-14	
Naphthalene	ND	1.0	EPA 8260C	7-23-14	7-23-14	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	7-23-14	7-23-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>100</i>	<i>62-122</i>				
<i>Toluene-d8</i>	<i>100</i>	<i>70-120</i>				
<i>4-Bromofluorobenzene</i>	<i>97</i>	<i>71-120</i>				

Date of Report: July 30, 2014
 Samples Submitted: July 22, 2014
 Laboratory Reference: 1407-172
 Project: 397-010

**VOLATILES EPA 8260C
 SB/SBD QUALITY CONTROL**

Matrix: Water
 Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery	RPD	RPD	Flags
					Recovery	Limits	RPD	Limit		
SPIKE BLANKS										
Laboratory ID:	SB0723W1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	9.90	10.1	10.0	10.0	99	101	63-142	2	17	
Benzene	10.1	10.0	10.0	10.0	101	100	78-125	1	15	
Trichloroethene	10.4	10.0	10.0	10.0	104	100	75-125	4	15	
Toluene	10.1	9.91	10.0	10.0	101	99	80-125	2	15	
Chlorobenzene	9.83	9.74	10.0	10.0	98	97	80-140	1	15	
<i>Surrogate:</i>										
<i>Dibromofluoromethane</i>					95	98	62-122			
<i>Toluene-d8</i>					101	101	70-120			
<i>4-Bromofluorobenzene</i>					95	97	71-120			



Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
 - B - The analyte indicated was also found in the blank sample.
 - C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
 - E - The value reported exceeds the quantitation range and is an estimate.
 - F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
 - H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
 - I - Compound recovery is outside of the control limits.
 - J - The value reported was below the practical quantitation limit. The value is an estimate.
 - K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
 - L - The RPD is outside of the control limits.
 - M - Hydrocarbons in the gasoline range are impacting the diesel range result.
 - M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
 - N - Hydrocarbons in the lube oil range are impacting the diesel range result.
 - N1 - Hydrocarbons in diesel range are impacting lube oil range results.
 - O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
 - P - The RPD of the detected concentrations between the two columns is greater than 40.
 - Q - Surrogate recovery is outside of the control limits.
 - S - Surrogate recovery data is not available due to the necessary dilution of the sample.
 - T - The sample chromatogram is not similar to a typical gas.
 - U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
 - U1 - The practical quantitation limit is elevated due to interferences present in the sample.
 - V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
 - W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
 - X - Sample extract treated with a mercury cleanup procedure.
 - X1 - Sample extract treated with a Sulfuric acid/Silica gel cleanup procedure.
 - Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
 - Z -
- ND - Not Detected at PQL
 PQL - Practical Quantitation Limit
 RPD - Relative Percent Difference

Chain of Custody

07-172

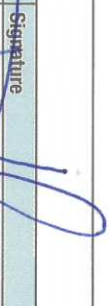
Turnaround Request
(in working days)
(Check One)

Laboratory Number:

Company: FRAXION
Project Number: 397-010
Project Name: Block 43
Project Manager: CLIFF SCHMITZ
Sampled by: DINGER KAYHAN

Same Day 1 Day
 2 Days 3 Days
 Standard (7 Days)
(TPH analysis 5 Days)
 _____ (other)

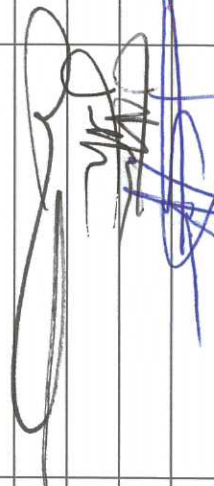
Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	Laboratory Number: 07-172											
1	F-MW-130-20.0-072114	7/21/14	1300	S	5	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2	F-MW-130-GW1-072114	7/21/14	1420	W	5	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
3	F-MW-130-40.0-072114	7/21/14	1655	S	4	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
4	DRILLING WATER	7/22/14	0815	W	3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Signature 

Company FRAXION

Date 7/22/14 Time 0950

Comments/Special Instructions

Received 

Company FRAXION

Date 7/22/14 Time 1000

Comments/Special Instructions

Received 

Company FRAXION

Date 7/22/14 Time 1115

Comments/Special Instructions

Relinquished

Company FRAXION

Date 7/22/14 Time 1000

Comments/Special Instructions

Relinquished

Company FRAXION

Date 7/22/14 Time 1000

Comments/Special Instructions

Relinquished

Company FRAXION

Date 7/22/14 Time 1000

Comments/Special Instructions

Received

Company FRAXION

Date 7/22/14 Time 1000

Comments/Special Instructions

Reviewed/Date

Reviewed/Date

Reviewed/Date

Comments/Special Instructions

Chromatograms with final report

Data Package: Standard Level III Level IV

Electronic Data Deliverables (EDDs)



14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

July 28, 2014

Jennifer Moore
Farallon Consulting, LLC
975 5th Avenue NW
Issaquah, WA 98027

Re: Analytical Data for Project 397-010
Laboratory Reference No. 1407-225

Dear Jennifer:

Enclosed are the analytical results and associated quality control data for samples submitted on July 24, 2014.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read 'DB', with a long horizontal stroke extending to the right.

David Baumeister
Project Manager

Enclosures

Date of Report: July 28, 2014
Samples Submitted: July 24, 2014
Laboratory Reference: 1407-225
Project: 397-010

Case Narrative

Samples were collected on July 24, 2014 and received by the laboratory on July 24, 2014. They were maintained at the laboratory at a temperature of 2°C to 6°C.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Date of Report: July 28, 2014
 Samples Submitted: July 24, 2014
 Laboratory Reference: 1407-225
 Project: 397-010

NWTPH-Gx/BTEX

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	F-MW-130-072414					
Laboratory ID:	07-225-01					
Benzene	ND	1.0	EPA 8021B	7-25-14	7-25-14	
Toluene	ND	1.0	EPA 8021B	7-25-14	7-25-14	
Ethyl Benzene	ND	1.0	EPA 8021B	7-25-14	7-25-14	
m,p-Xylene	ND	1.0	EPA 8021B	7-25-14	7-25-14	
o-Xylene	ND	1.0	EPA 8021B	7-25-14	7-25-14	
Gasoline	ND	100	NWTPH-Gx	7-25-14	7-25-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	93	71-112				

Date of Report: July 28, 2014
 Samples Submitted: July 24, 2014
 Laboratory Reference: 1407-225
 Project: 397-010

**NWTPH-Gx/BTEX
 QUALITY CONTROL**

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0725W1					
Benzene	ND	1.0	EPA 8021B	7-25-14	7-25-14	
Toluene	ND	1.0	EPA 8021B	7-25-14	7-25-14	
Ethyl Benzene	ND	1.0	EPA 8021B	7-25-14	7-25-14	
m,p-Xylene	ND	1.0	EPA 8021B	7-25-14	7-25-14	
o-Xylene	ND	1.0	EPA 8021B	7-25-14	7-25-14	
Gasoline	ND	100	NWTPH-Gx	7-25-14	7-25-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	95	71-112				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	07-225-01							
	ORIG	DUP						
Benzene	ND	ND	NA	NA	NA	NA	NA	30
Toluene	ND	ND	NA	NA	NA	NA	NA	30
Ethyl Benzene	ND	ND	NA	NA	NA	NA	NA	30
m,p-Xylene	ND	ND	NA	NA	NA	NA	NA	30
o-Xylene	ND	ND	NA	NA	NA	NA	NA	30
Gasoline	ND	ND	NA	NA	NA	NA	NA	30
<i>Surrogate:</i>								
<i>Fluorobenzene</i>				93	93	71-112		

SPIKE BLANKS

Laboratory ID:	SB0725W1								
	SB	SBD	SB	SBD	SB	SBD			
Benzene	51.0	49.9	50.0	50.0	102	100	86-116	2	11
Toluene	51.5	50.6	50.0	50.0	103	101	86-117	2	12
Ethyl Benzene	50.9	49.7	50.0	50.0	102	99	86-118	2	13
m,p-Xylene	51.0	49.9	50.0	50.0	102	100	86-118	2	14
o-Xylene	50.9	49.9	50.0	50.0	102	100	85-117	2	14
<i>Surrogate:</i>									
<i>Fluorobenzene</i>					94	95	71-112		

Date of Report: July 28, 2014
 Samples Submitted: July 24, 2014
 Laboratory Reference: 1407-225
 Project: 397-010

HALOGENATED VOLATILES EPA 8260C
 page 1 of 2

Matrix: Water
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	F-MW-130-072414					
Laboratory ID:	07-225-01					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	7-25-14	7-25-14	
Chloromethane	ND	1.0	EPA 8260C	7-25-14	7-25-14	
Vinyl Chloride	ND	0.20	EPA 8260C	7-25-14	7-25-14	
Bromomethane	ND	0.20	EPA 8260C	7-25-14	7-25-14	
Chloroethane	ND	1.0	EPA 8260C	7-25-14	7-25-14	
Trichlorofluoromethane	ND	0.20	EPA 8260C	7-25-14	7-25-14	
1,1-Dichloroethene	ND	0.20	EPA 8260C	7-25-14	7-25-14	
Iodomethane	ND	1.0	EPA 8260C	7-25-14	7-25-14	
Methylene Chloride	ND	1.0	EPA 8260C	7-25-14	7-25-14	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	7-25-14	7-25-14	
1,1-Dichloroethane	ND	0.20	EPA 8260C	7-25-14	7-25-14	
2,2-Dichloropropane	ND	0.20	EPA 8260C	7-25-14	7-25-14	
(cis) 1,2-Dichloroethene	0.51	0.20	EPA 8260C	7-25-14	7-25-14	
Bromochloromethane	ND	0.20	EPA 8260C	7-25-14	7-25-14	
Chloroform	0.91	0.20	EPA 8260C	7-25-14	7-25-14	
1,1,1-Trichloroethane	0.26	0.20	EPA 8260C	7-25-14	7-25-14	
Carbon Tetrachloride	ND	0.20	EPA 8260C	7-25-14	7-25-14	
1,1-Dichloropropene	ND	0.20	EPA 8260C	7-25-14	7-25-14	
1,2-Dichloroethane	ND	0.20	EPA 8260C	7-25-14	7-25-14	
Trichloroethene	ND	0.20	EPA 8260C	7-25-14	7-25-14	
1,2-Dichloropropane	ND	0.20	EPA 8260C	7-25-14	7-25-14	
Dibromomethane	ND	0.20	EPA 8260C	7-25-14	7-25-14	
Bromodichloromethane	ND	0.20	EPA 8260C	7-25-14	7-25-14	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	7-25-14	7-25-14	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	7-25-14	7-25-14	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	7-25-14	7-25-14	

Date of Report: July 28, 2014
 Samples Submitted: July 24, 2014
 Laboratory Reference: 1407-225
 Project: 397-010

HALOGENATED VOLATILES EPA 8260C
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	F-MW-130-072414					
Laboratory ID:	07-225-01					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	7-25-14	7-25-14	
Tetrachloroethene	ND	0.20	EPA 8260C	7-25-14	7-25-14	
1,3-Dichloropropane	ND	0.20	EPA 8260C	7-25-14	7-25-14	
Dibromochloromethane	ND	0.20	EPA 8260C	7-25-14	7-25-14	
1,2-Dibromoethane	ND	0.20	EPA 8260C	7-25-14	7-25-14	
Chlorobenzene	ND	0.20	EPA 8260C	7-25-14	7-25-14	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	7-25-14	7-25-14	
Bromoform	ND	1.0	EPA 8260C	7-25-14	7-25-14	
Bromobenzene	ND	0.20	EPA 8260C	7-25-14	7-25-14	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	7-25-14	7-25-14	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	7-25-14	7-25-14	
2-Chlorotoluene	ND	0.20	EPA 8260C	7-25-14	7-25-14	
4-Chlorotoluene	ND	0.20	EPA 8260C	7-25-14	7-25-14	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	7-25-14	7-25-14	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	7-25-14	7-25-14	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	7-25-14	7-25-14	
1,2-Dibromo-3-chloropropane	ND	1.3	EPA 8260C	7-25-14	7-25-14	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	7-25-14	7-25-14	
Hexachlorobutadiene	ND	0.20	EPA 8260C	7-25-14	7-25-14	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	7-25-14	7-25-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>103</i>	<i>62-122</i>				
<i>Toluene-d8</i>	<i>102</i>	<i>70-120</i>				
<i>4-Bromofluorobenzene</i>	<i>98</i>	<i>71-120</i>				

Date of Report: July 28, 2014
 Samples Submitted: July 24, 2014
 Laboratory Reference: 1407-225
 Project: 397-010

**HALOGENATED VOLATILES EPA 8260C
 METHOD BLANK QUALITY CONTROL**

Page 1 of 2

Matrix: Water
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0725W1					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	7-25-14	7-25-14	
Chloromethane	ND	1.0	EPA 8260C	7-25-14	7-25-14	
Vinyl Chloride	ND	0.20	EPA 8260C	7-25-14	7-25-14	
Bromomethane	ND	0.20	EPA 8260C	7-25-14	7-25-14	
Chloroethane	ND	1.0	EPA 8260C	7-25-14	7-25-14	
Trichlorofluoromethane	ND	0.20	EPA 8260C	7-25-14	7-25-14	
1,1-Dichloroethene	ND	0.20	EPA 8260C	7-25-14	7-25-14	
Iodomethane	ND	1.0	EPA 8260C	7-25-14	7-25-14	
Methylene Chloride	ND	1.0	EPA 8260C	7-25-14	7-25-14	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	7-25-14	7-25-14	
1,1-Dichloroethane	ND	0.20	EPA 8260C	7-25-14	7-25-14	
2,2-Dichloropropane	ND	0.20	EPA 8260C	7-25-14	7-25-14	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	7-25-14	7-25-14	
Bromochloromethane	ND	0.20	EPA 8260C	7-25-14	7-25-14	
Chloroform	ND	0.20	EPA 8260C	7-25-14	7-25-14	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	7-25-14	7-25-14	
Carbon Tetrachloride	ND	0.20	EPA 8260C	7-25-14	7-25-14	
1,1-Dichloropropene	ND	0.20	EPA 8260C	7-25-14	7-25-14	
1,2-Dichloroethane	ND	0.20	EPA 8260C	7-25-14	7-25-14	
Trichloroethene	ND	0.20	EPA 8260C	7-25-14	7-25-14	
1,2-Dichloropropane	ND	0.20	EPA 8260C	7-25-14	7-25-14	
Dibromomethane	ND	0.20	EPA 8260C	7-25-14	7-25-14	
Bromodichloromethane	ND	0.20	EPA 8260C	7-25-14	7-25-14	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	7-25-14	7-25-14	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	7-25-14	7-25-14	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	7-25-14	7-25-14	

Date of Report: July 28, 2014
 Samples Submitted: July 24, 2014
 Laboratory Reference: 1407-225
 Project: 397-010

**HALOGENATED VOLATILES EPA 8260C
 METHOD BLANK QUALITY CONTROL**

Page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0725W1					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	7-25-14	7-25-14	
Tetrachloroethene	ND	0.20	EPA 8260C	7-25-14	7-25-14	
1,3-Dichloropropane	ND	0.20	EPA 8260C	7-25-14	7-25-14	
Dibromochloromethane	ND	0.20	EPA 8260C	7-25-14	7-25-14	
1,2-Dibromoethane	ND	0.20	EPA 8260C	7-25-14	7-25-14	
Chlorobenzene	ND	0.20	EPA 8260C	7-25-14	7-25-14	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	7-25-14	7-25-14	
Bromoform	ND	1.0	EPA 8260C	7-25-14	7-25-14	
Bromobenzene	ND	0.20	EPA 8260C	7-25-14	7-25-14	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	7-25-14	7-25-14	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	7-25-14	7-25-14	
2-Chlorotoluene	ND	0.20	EPA 8260C	7-25-14	7-25-14	
4-Chlorotoluene	ND	0.20	EPA 8260C	7-25-14	7-25-14	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	7-25-14	7-25-14	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	7-25-14	7-25-14	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	7-25-14	7-25-14	
1,2-Dibromo-3-chloropropane	ND	1.3	EPA 8260C	7-25-14	7-25-14	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	7-25-14	7-25-14	
Hexachlorobutadiene	ND	0.20	EPA 8260C	7-25-14	7-25-14	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	7-25-14	7-25-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>93</i>	<i>62-122</i>				
<i>Toluene-d8</i>	<i>99</i>	<i>70-120</i>				
<i>4-Bromofluorobenzene</i>	<i>95</i>	<i>71-120</i>				

Date of Report: July 28, 2014
 Samples Submitted: July 24, 2014
 Laboratory Reference: 1407-225
 Project: 397-010

**HALOGENATED VOLATILES EPA 8260C
 MS/MSD QUALITY CONTROL**

Matrix: Water
 Units: ug/L

Analyte	Result		Spike Level		Source	Percent		Recovery	RPD		Flags
	MS	MSD	MS	MSD	Result	Recovery	Limits	RPD	Limit		
MATRIX SPIKES											
Laboratory ID:	07-225-01										
	MS	MSD	MS	MSD		MS	MSD				
1,1-Dichloroethene	9.22	9.29	10.0	10.0	ND	92	93	57-133	1	15	
Benzene	9.68	9.81	10.0	10.0	ND	97	98	78-117	1	15	
Trichloroethene	9.61	9.56	10.0	10.0	ND	96	96	77-120	1	15	
Toluene	9.48	9.60	10.0	10.0	ND	95	96	80-115	1	15	
Chlorobenzene	9.26	9.32	10.0	10.0	ND	93	93	80-122	1	15	
<i>Surrogate:</i>											
<i>Dibromofluoromethane</i>						99	102	62-122			
<i>Toluene-d8</i>						99	101	70-120			
<i>4-Bromofluorobenzene</i>						95	97	71-120			



Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
 - B - The analyte indicated was also found in the blank sample.
 - C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
 - E - The value reported exceeds the quantitation range and is an estimate.
 - F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
 - H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
 - I - Compound recovery is outside of the control limits.
 - J - The value reported was below the practical quantitation limit. The value is an estimate.
 - K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
 - L - The RPD is outside of the control limits.
 - M - Hydrocarbons in the gasoline range are impacting the diesel range result.
 - M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
 - N - Hydrocarbons in the lube oil range are impacting the diesel range result.
 - N1 - Hydrocarbons in diesel range are impacting lube oil range results.
 - O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
 - P - The RPD of the detected concentrations between the two columns is greater than 40.
 - Q - Surrogate recovery is outside of the control limits.
 - S - Surrogate recovery data is not available due to the necessary dilution of the sample.
 - T - The sample chromatogram is not similar to a typical _____.
 - U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
 - U1 - The practical quantitation limit is elevated due to interferences present in the sample.
 - V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
 - W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
 - X - Sample extract treated with a mercury cleanup procedure.
 - X1 - Sample extract treated with a Sulfuric acid/Silica gel cleanup procedure.
 - Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
 - Z -
- ND - Not Detected at PQL
 PQL - Practical Quantitation Limit
 RPD - Relative Percent Difference



14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

July 11, 2017

Rob Leet
Farallon Consulting
1809 7th Ave., Suite 1111
Seattle, WA 98101

Re: Analytical Data for Project 397-019
Laboratory Reference No. 1707-004

Dear Rob:

Enclosed are the analytical results and associated quality control data for samples submitted on July 3, 2017.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "DB", with a long horizontal stroke extending to the right.

David Baumeister
Project Manager

Enclosures



Date of Report: July 11, 2017
Samples Submitted: July 3, 2017
Laboratory Reference: 1707-004
Project: 397-019

Case Narrative

Samples were collected on July 3, 2017 and received by the laboratory on July 3, 2017. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.



Date of Report: July 11, 2017
 Samples Submitted: July 3, 2017
 Laboratory Reference: 1707-004
 Project: 397-019

NWTPH-Gx

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FMW-130-070317					
Laboratory ID:	07-004-01					
Gasoline	ND	100	NWTPH-Gx	7-6-17	7-6-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	83	61-118				



Date of Report: July 11, 2017
 Samples Submitted: July 3, 2017
 Laboratory Reference: 1707-004
 Project: 397-019

**NWTPH-Gx
 QUALITY CONTROL**

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0706W1					
Gasoline	ND	100	NWTPH-Gx	7-6-17	7-6-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	83	61-118				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	06-353-32							
	ORIG	DUP						
Gasoline	ND	ND	NA	NA	NA	NA	NA	30
<i>Surrogate:</i>								
<i>Fluorobenzene</i>				86	85	61-118		



Date of Report: July 11, 2017
 Samples Submitted: July 3, 2017
 Laboratory Reference: 1707-004
 Project: 397-019

VOLATILES EPA 8260C
 Page 1 of 2

Matrix: Water
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FMW-130-070317					
Laboratory ID:	07-004-01					
Dichlorodifluoromethane	ND	0.35	EPA 8260C	7-5-17	7-5-17	
Chloromethane	ND	1.3	EPA 8260C	7-5-17	7-5-17	
Vinyl Chloride	ND	0.20	EPA 8260C	7-5-17	7-5-17	
Bromomethane	ND	0.20	EPA 8260C	7-5-17	7-5-17	
Chloroethane	ND	1.0	EPA 8260C	7-5-17	7-5-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	7-5-17	7-5-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	7-5-17	7-5-17	
Acetone	ND	5.0	EPA 8260C	7-5-17	7-5-17	
Iodomethane	ND	1.7	EPA 8260C	7-5-17	7-5-17	
Carbon Disulfide	ND	0.43	EPA 8260C	7-5-17	7-5-17	
Methylene Chloride	ND	1.0	EPA 8260C	7-5-17	7-5-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	7-5-17	7-5-17	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	7-5-17	7-5-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	7-5-17	7-5-17	
Vinyl Acetate	ND	1.0	EPA 8260C	7-5-17	7-5-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	7-5-17	7-5-17	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	7-5-17	7-5-17	
2-Butanone	ND	5.0	EPA 8260C	7-5-17	7-5-17	
Bromochloromethane	ND	0.20	EPA 8260C	7-5-17	7-5-17	
Chloroform	ND	0.20	EPA 8260C	7-5-17	7-5-17	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	7-5-17	7-5-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	7-5-17	7-5-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	7-5-17	7-5-17	
Benzene	ND	0.20	EPA 8260C	7-5-17	7-5-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	7-5-17	7-5-17	
Trichloroethene	ND	0.20	EPA 8260C	7-5-17	7-5-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	7-5-17	7-5-17	
Dibromomethane	ND	0.20	EPA 8260C	7-5-17	7-5-17	
Bromodichloromethane	ND	0.20	EPA 8260C	7-5-17	7-5-17	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	7-5-17	7-5-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	7-5-17	7-5-17	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260C	7-5-17	7-5-17	
Toluene	ND	1.0	EPA 8260C	7-5-17	7-5-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	7-5-17	7-5-17	



Date of Report: July 11, 2017
 Samples Submitted: July 3, 2017
 Laboratory Reference: 1707-004
 Project: 397-019

VOLATILES EPA 8260C
 Page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FMW-130-070317					
Laboratory ID:	07-004-01					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	7-5-17	7-5-17	
Tetrachloroethene	ND	0.20	EPA 8260C	7-5-17	7-5-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	7-5-17	7-5-17	
2-Hexanone	ND	2.0	EPA 8260C	7-5-17	7-5-17	
Dibromochloromethane	ND	0.20	EPA 8260C	7-5-17	7-5-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	7-5-17	7-5-17	
Chlorobenzene	ND	0.20	EPA 8260C	7-5-17	7-5-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	7-5-17	7-5-17	
Ethylbenzene	ND	0.20	EPA 8260C	7-5-17	7-5-17	
m,p-Xylene	ND	0.40	EPA 8260C	7-5-17	7-5-17	
o-Xylene	ND	0.20	EPA 8260C	7-5-17	7-5-17	
Styrene	ND	0.20	EPA 8260C	7-5-17	7-5-17	
Bromoform	ND	1.0	EPA 8260C	7-5-17	7-5-17	
Isopropylbenzene	ND	0.20	EPA 8260C	7-5-17	7-5-17	
Bromobenzene	ND	0.20	EPA 8260C	7-5-17	7-5-17	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	7-5-17	7-5-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	7-5-17	7-5-17	
n-Propylbenzene	ND	0.20	EPA 8260C	7-5-17	7-5-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	7-5-17	7-5-17	
4-Chlorotoluene	ND	0.20	EPA 8260C	7-5-17	7-5-17	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	7-5-17	7-5-17	
tert-Butylbenzene	ND	0.20	EPA 8260C	7-5-17	7-5-17	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	7-5-17	7-5-17	
sec-Butylbenzene	ND	0.20	EPA 8260C	7-5-17	7-5-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	7-5-17	7-5-17	
p-Isopropyltoluene	ND	0.20	EPA 8260C	7-5-17	7-5-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	7-5-17	7-5-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	7-5-17	7-5-17	
n-Butylbenzene	ND	0.20	EPA 8260C	7-5-17	7-5-17	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	7-5-17	7-5-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	7-5-17	7-5-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	7-5-17	7-5-17	
Naphthalene	ND	1.0	EPA 8260C	7-5-17	7-5-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	7-5-17	7-5-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>103</i>	<i>77-129</i>				
<i>Toluene-d8</i>	<i>99</i>	<i>80-127</i>				
<i>4-Bromofluorobenzene</i>	<i>105</i>	<i>80-125</i>				



Date of Report: July 11, 2017
 Samples Submitted: July 3, 2017
 Laboratory Reference: 1707-004
 Project: 397-019

VOLATILES EPA 8260C
METHOD BLANK QUALITY CONTROL
 Page 1 of 2

Matrix: Water
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0705W2					
Dichlorodifluoromethane	ND	0.35	EPA 8260C	7-5-17	7-5-17	
Chloromethane	ND	1.3	EPA 8260C	7-5-17	7-5-17	
Vinyl Chloride	ND	0.20	EPA 8260C	7-5-17	7-5-17	
Bromomethane	ND	0.20	EPA 8260C	7-5-17	7-5-17	
Chloroethane	ND	1.0	EPA 8260C	7-5-17	7-5-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	7-5-17	7-5-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	7-5-17	7-5-17	
Acetone	ND	5.0	EPA 8260C	7-5-17	7-5-17	
Iodomethane	ND	1.7	EPA 8260C	7-5-17	7-5-17	
Carbon Disulfide	ND	0.43	EPA 8260C	7-5-17	7-5-17	
Methylene Chloride	ND	1.0	EPA 8260C	7-5-17	7-5-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	7-5-17	7-5-17	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	7-5-17	7-5-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	7-5-17	7-5-17	
Vinyl Acetate	ND	1.0	EPA 8260C	7-5-17	7-5-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	7-5-17	7-5-17	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	7-5-17	7-5-17	
2-Butanone	ND	5.0	EPA 8260C	7-5-17	7-5-17	
Bromochloromethane	ND	0.20	EPA 8260C	7-5-17	7-5-17	
Chloroform	ND	0.20	EPA 8260C	7-5-17	7-5-17	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	7-5-17	7-5-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	7-5-17	7-5-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	7-5-17	7-5-17	
Benzene	ND	0.20	EPA 8260C	7-5-17	7-5-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	7-5-17	7-5-17	
Trichloroethene	ND	0.20	EPA 8260C	7-5-17	7-5-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	7-5-17	7-5-17	
Dibromomethane	ND	0.20	EPA 8260C	7-5-17	7-5-17	
Bromodichloromethane	ND	0.20	EPA 8260C	7-5-17	7-5-17	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	7-5-17	7-5-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	7-5-17	7-5-17	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260C	7-5-17	7-5-17	
Toluene	ND	1.0	EPA 8260C	7-5-17	7-5-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	7-5-17	7-5-17	



Date of Report: July 11, 2017
 Samples Submitted: July 3, 2017
 Laboratory Reference: 1707-004
 Project: 397-019

VOLATILES EPA 8260C
METHOD BLANK QUALITY CONTROL
 Page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:		MB0705W2				
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	7-5-17	7-5-17	
Tetrachloroethene	ND	0.20	EPA 8260C	7-5-17	7-5-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	7-5-17	7-5-17	
2-Hexanone	ND	2.0	EPA 8260C	7-5-17	7-5-17	
Dibromochloromethane	ND	0.20	EPA 8260C	7-5-17	7-5-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	7-5-17	7-5-17	
Chlorobenzene	ND	0.20	EPA 8260C	7-5-17	7-5-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	7-5-17	7-5-17	
Ethylbenzene	ND	0.20	EPA 8260C	7-5-17	7-5-17	
m,p-Xylene	ND	0.40	EPA 8260C	7-5-17	7-5-17	
o-Xylene	ND	0.20	EPA 8260C	7-5-17	7-5-17	
Styrene	ND	0.20	EPA 8260C	7-5-17	7-5-17	
Bromoform	ND	1.0	EPA 8260C	7-5-17	7-5-17	
Isopropylbenzene	ND	0.20	EPA 8260C	7-5-17	7-5-17	
Bromobenzene	ND	0.20	EPA 8260C	7-5-17	7-5-17	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	7-5-17	7-5-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	7-5-17	7-5-17	
n-Propylbenzene	ND	0.20	EPA 8260C	7-5-17	7-5-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	7-5-17	7-5-17	
4-Chlorotoluene	ND	0.20	EPA 8260C	7-5-17	7-5-17	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	7-5-17	7-5-17	
tert-Butylbenzene	ND	0.20	EPA 8260C	7-5-17	7-5-17	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	7-5-17	7-5-17	
sec-Butylbenzene	ND	0.20	EPA 8260C	7-5-17	7-5-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	7-5-17	7-5-17	
p-Isopropyltoluene	ND	0.20	EPA 8260C	7-5-17	7-5-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	7-5-17	7-5-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	7-5-17	7-5-17	
n-Butylbenzene	ND	0.20	EPA 8260C	7-5-17	7-5-17	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	7-5-17	7-5-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	7-5-17	7-5-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	7-5-17	7-5-17	
Naphthalene	ND	1.0	EPA 8260C	7-5-17	7-5-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	7-5-17	7-5-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>94</i>	<i>77-129</i>				
<i>Toluene-d8</i>	<i>97</i>	<i>80-127</i>				
<i>4-Bromofluorobenzene</i>	<i>102</i>	<i>80-125</i>				



Date of Report: July 11, 2017
 Samples Submitted: July 3, 2017
 Laboratory Reference: 1707-004
 Project: 397-019

**VOLATILES EPA 8260C
 SB/SBD QUALITY CONTROL**

Matrix: Water
 Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery	RPD		Flags
					SB	SBD	Limits	RPD	Limit	
SPIKE BLANKS										
Laboratory ID:	SB0705W2									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	7.70	7.67	10.0	10.0	77	77	63-127	0	17	
Benzene	10.0	10.2	10.0	10.0	100	102	76-121	2	12	
Trichloroethene	8.43	8.41	10.0	10.0	84	84	64-120	0	15	
Toluene	10.3	10.6	10.0	10.0	103	106	82-120	3	13	
Chlorobenzene	8.96	9.40	10.0	10.0	90	94	80-120	5	14	
<i>Surrogate:</i>										
<i>Dibromofluoromethane</i>					<i>100</i>	<i>100</i>	<i>77-129</i>			
<i>Toluene-d8</i>					<i>95</i>	<i>95</i>	<i>80-127</i>			
<i>4-Bromofluorobenzene</i>					<i>103</i>	<i>103</i>	<i>80-125</i>			





Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
 - B - The analyte indicated was also found in the blank sample.
 - C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
 - E - The value reported exceeds the quantitation range and is an estimate.
 - F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
 - H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
 - I - Compound recovery is outside of the control limits.
 - J - The value reported was below the practical quantitation limit. The value is an estimate.
 - K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
 - L - The RPD is outside of the control limits.
 - M - Hydrocarbons in the gasoline range are impacting the diesel range result.
 - M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
 - N - Hydrocarbons in the lube oil range are impacting the diesel range result.
 - N1 - Hydrocarbons in diesel range are impacting lube oil range results.
 - O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
 - P - The RPD of the detected concentrations between the two columns is greater than 40.
 - Q - Surrogate recovery is outside of the control limits.
 - S - Surrogate recovery data is not available due to the necessary dilution of the sample.
 - T - The sample chromatogram is not similar to a typical _____.
 - U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
 - U1 - The practical quantitation limit is elevated due to interferences present in the sample.
 - V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
 - W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
 - X - Sample extract treated with a mercury cleanup procedure.
 - X1 - Sample extract treated with a Sulfuric acid/Silica gel cleanup procedure.
 - Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
 - Z -
- ND - Not Detected at PQL
 PQL - Practical Quantitation Limit
 RPD - Relative Percent Difference





Chain of Custody

Company: Ferguson
Project Number: 397-019
Project Name: Block 38
Project Manager: Kob Loet
Sampled by: A. Burns

Turnaround Request (in working days)
(Check One)

- Same Day 1 Day
- 2 Days 3 Days
- Standard (7 Days) (TPH analysis 5 Days)
- _____ (other)

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix
1	FMMW-130-078317	7-3-17	9:10	Water

Number of Containers

Container	Analysis
	NWTPH-HCID
	NWTPH-Gx/BTEX
X	NWTPH-Gx
	NWTPH-Dx (<input type="checkbox"/> Acid / SG Clean-up)
	Volatiles 8260C
	Halogenated Volatiles 8260C
	EDB EPA 8011 (Waters Only)
	Semivolatiles 8270D/SIM (with low-level PAHs)
	PAHs 8270D/SIM (low-level)
	PCBs 8082A
	Organochlorine Pesticides 8081B
	Organophosphorus Pesticides 8270D/SIM
	Chlorinated Acid Herbicides 8151A
	Total RCRA Metals
	Total MTCA Metals
	TCLP Metals
	HEM (oil and grease) 1664A
X	Volatiles by 8260C
	% Moisture

48

Signature	Company	Date	Time	Comments/Special Instructions
	Ferguson	7-3-17	10:32	

Relinquished

Received

Relinquished

Received

Relinquished

Received

Relinquished

Received

Reviewed/Date

Reviewed/Date

Reviewed/Date

Data Package: Standard Level III Level IV

Chromatograms with final report Electronic Data Deliverables (EDDs)

Laboratory Number: **07-004**



14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

August 24, 2018

Javan Ruark
Farallon Consulting, LLC
975 5th Avenue NW
Issaquah, WA 98027

Re: Analytical Data for Project 397-019
Laboratory Reference No. 1808-217

Dear Javan:

Enclosed are the analytical results and associated quality control data for samples submitted on August 21, 2018.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "D. Baumeister", with a long horizontal stroke extending to the right.

David Baumeister
Project Manager

Enclosures



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: August 24, 2018
Samples Submitted: August 21, 2018
Laboratory Reference: 1808-217
Project: 397-019

Case Narrative

Samples were collected on August 20, 2018 and received by the laboratory on August 21, 2018. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

NWTPH Gx/BTEX Analysis

The MTCA Method A cleanup level of 0.030 ppm for Benzene is not achievable for sample FB-02-10.0-082018 due to the low dry weight of the sample.

Total Metals EPA 6010D/7471B Analysis

The duplicate RPD for Chromium is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

Please note that any other QA/QC issues associated with these extractions and analyses will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.



Date of Report: August 24, 2018
 Samples Submitted: August 21, 2018
 Laboratory Reference: 1808-217
 Project: 397-019

**GASOLINE RANGE ORGANICS/BTEX
 NWTPH-Gx/EPA 8021B**

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FB-02-5.0-082018					
Laboratory ID:	08-217-02					
Benzene	ND	0.020	EPA 8021B	8-21-18	8-21-18	
Toluene	ND	0.054	EPA 8021B	8-21-18	8-21-18	
Ethyl Benzene	ND	0.054	EPA 8021B	8-21-18	8-21-18	
m,p-Xylene	ND	0.054	EPA 8021B	8-21-18	8-21-18	
o-Xylene	ND	0.054	EPA 8021B	8-21-18	8-21-18	
Gasoline	ND	5.4	NWTPH-Gx	8-21-18	8-21-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	90	57-129				
Client ID:	FB-02-10.0-082018					
Laboratory ID:	08-217-03					
Benzene	ND	0.037	EPA 8021B	8-21-18	8-21-18	
Toluene	ND	0.19	EPA 8021B	8-21-18	8-21-18	
Ethyl Benzene	ND	0.19	EPA 8021B	8-21-18	8-21-18	
m,p-Xylene	ND	0.19	EPA 8021B	8-21-18	8-21-18	
o-Xylene	ND	0.19	EPA 8021B	8-21-18	8-21-18	
Gasoline	ND	19	NWTPH-Gx	8-21-18	8-21-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	97	57-129				
Client ID:	FB-02-25.0-082018					
Laboratory ID:	08-217-06					
Benzene	ND	0.020	EPA 8021B	8-21-18	8-21-18	
Toluene	ND	0.052	EPA 8021B	8-21-18	8-21-18	
Ethyl Benzene	ND	0.052	EPA 8021B	8-21-18	8-21-18	
m,p-Xylene	ND	0.052	EPA 8021B	8-21-18	8-21-18	
o-Xylene	ND	0.052	EPA 8021B	8-21-18	8-21-18	
Gasoline	ND	5.2	NWTPH-Gx	8-21-18	8-21-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	85	57-129				



Date of Report: August 24, 2018
 Samples Submitted: August 21, 2018
 Laboratory Reference: 1808-217
 Project: 397-019

**GASOLINE RANGE ORGANICS/BTEX
 NWTPH-Gx/EPA 8021B**

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FB-02-35.0-082018					
Laboratory ID:	08-217-08					
Benzene	ND	0.020	EPA 8021B	8-21-18	8-21-18	
Toluene	ND	0.058	EPA 8021B	8-21-18	8-21-18	
Ethyl Benzene	ND	0.058	EPA 8021B	8-21-18	8-21-18	
m,p-Xylene	ND	0.058	EPA 8021B	8-21-18	8-21-18	
o-Xylene	ND	0.058	EPA 8021B	8-21-18	8-21-18	
Gasoline	ND	5.8	NWTPH-Gx	8-21-18	8-21-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
Fluorobenzene	85	57-129				



Date of Report: August 24, 2018
 Samples Submitted: August 21, 2018
 Laboratory Reference: 1808-217
 Project: 397-019

**GASOLINE RANGE ORGANICS/BTEX
 NWTPH-Gx/EPA 8021B
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0821S1					
Benzene	ND	0.020	EPA 8021B	8-21-18	8-21-18	
Toluene	ND	0.050	EPA 8021B	8-21-18	8-21-18	
Ethyl Benzene	ND	0.050	EPA 8021B	8-21-18	8-21-18	
m,p-Xylene	ND	0.050	EPA 8021B	8-21-18	8-21-18	
o-Xylene	ND	0.050	EPA 8021B	8-21-18	8-21-18	
Gasoline	ND	5.0	NWTPH-Gx	8-21-18	8-21-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>		<i>Control Limits</i>			
<i>Fluorobenzene</i>	84		57-129			

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	08-170-14							
	ORIG	DUP						
Benzene	ND	ND	NA	NA	NA	NA	30	
Toluene	ND	ND	NA	NA	NA	NA	30	
Ethyl Benzene	ND	ND	NA	NA	NA	NA	30	
m,p-Xylene	ND	ND	NA	NA	NA	NA	30	
o-Xylene	ND	ND	NA	NA	NA	NA	30	
Gasoline	ND	ND	NA	NA	NA	NA	30	
<i>Surrogate:</i>								
<i>Fluorobenzene</i>				89	91	57-129		

SPIKE BLANKS

Laboratory ID:	SB0821S1								
	SB	SBD	SB	SBD	SB	SBD			
Benzene	0.875	0.882	1.00	1.00	88	88	69-111	1	10
Toluene	0.868	0.873	1.00	1.00	87	87	70-114	1	11
Ethyl Benzene	0.868	0.876	1.00	1.00	87	88	70-115	1	10
m,p-Xylene	0.860	0.863	1.00	1.00	86	86	72-115	0	10
o-Xylene	0.890	0.884	1.00	1.00	89	88	71-115	1	11
<i>Surrogate:</i>									
<i>Fluorobenzene</i>					86	86	57-129		



Date of Report: August 24, 2018
 Samples Submitted: August 21, 2018
 Laboratory Reference: 1808-217
 Project: 397-019

**DIESEL AND HEAVY OIL RANGE ORGANICS
 NWTPH-Dx**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FB-02-5.0-082018					
Laboratory ID:	08-217-02					
Diesel Range Organics	280	150	NWTPH-Dx	8-22-18	8-22-18	N
Lube Oil Range Organics	670	310	NWTPH-Dx	8-22-18	8-22-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	86	50-150				

Client ID:	FB-02-10.0-082018					
Laboratory ID:	08-217-03					
Diesel Range Organics	ND	61	NWTPH-Dx	8-22-18	8-22-18	
Lube Oil Range Organics	270	120	NWTPH-Dx	8-22-18	8-22-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	103	50-150				

Client ID:	FB-02-25.0-082018					
Laboratory ID:	08-217-06					
Diesel Range Organics	ND	30	NWTPH-Dx	8-22-18	8-22-18	
Lube Oil Range Organics	ND	60	NWTPH-Dx	8-22-18	8-22-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	96	50-150				

Client ID:	FB-02-35.0-082018					
Laboratory ID:	08-217-08					
Diesel Range Organics	ND	31	NWTPH-Dx	8-22-18	8-22-18	
Lube Oil Range Organics	ND	62	NWTPH-Dx	8-22-18	8-22-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	81	50-150				



Date of Report: August 24, 2018
 Samples Submitted: August 21, 2018
 Laboratory Reference: 1808-217
 Project: 397-019

**DIESEL AND HEAVY OIL RANGE ORGANICS
 NWTPH-Dx
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0822S2					
Diesel Range Organics	ND	25	NWTPH-Dx	8-22-18	8-22-18	
Lube Oil Range Organics	ND	50	NWTPH-Dx	8-22-18	8-22-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	121	50-150				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	08-170-16							
	ORIG	DUP						
Diesel Range	ND	ND	NA	NA	NA	NA	NA	NA
Lube Oil Range Organics	149	126	NA	NA	NA	NA	17	NA
<i>Surrogate:</i>								
<i>o-Terphenyl</i>				115	103	50-150		



Date of Report: August 24, 2018
 Samples Submitted: August 21, 2018
 Laboratory Reference: 1808-217
 Project: 397-019

VOLATILE ORGANICS EPA 8260C
 page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FB-02-10.0-082018					
Laboratory ID:	08-217-03					
Dichlorodifluoromethane	ND	0.0028	EPA 8260C	8-21-18	8-21-18	
Chloromethane	ND	0.014	EPA 8260C	8-21-18	8-21-18	
Vinyl Chloride	ND	0.0028	EPA 8260C	8-21-18	8-21-18	
Bromomethane	ND	0.0028	EPA 8260C	8-21-18	8-21-18	
Chloroethane	ND	0.014	EPA 8260C	8-21-18	8-21-18	
Trichlorofluoromethane	ND	0.0028	EPA 8260C	8-21-18	8-21-18	
1,1-Dichloroethene	ND	0.0028	EPA 8260C	8-21-18	8-21-18	
Iodomethane	ND	0.028	EPA 8260C	8-21-18	8-21-18	
Methylene Chloride	ND	0.014	EPA 8260C	8-21-18	8-21-18	
(trans) 1,2-Dichloroethene	ND	0.0028	EPA 8260C	8-21-18	8-21-18	
1,1-Dichloroethane	ND	0.0028	EPA 8260C	8-21-18	8-21-18	
2,2-Dichloropropane	ND	0.0028	EPA 8260C	8-21-18	8-21-18	
(cis) 1,2-Dichloroethene	ND	0.0028	EPA 8260C	8-21-18	8-21-18	
Bromochloromethane	ND	0.0028	EPA 8260C	8-21-18	8-21-18	
Chloroform	ND	0.0028	EPA 8260C	8-21-18	8-21-18	
1,1,1-Trichloroethane	ND	0.0028	EPA 8260C	8-21-18	8-21-18	
Carbon Tetrachloride	ND	0.0028	EPA 8260C	8-21-18	8-21-18	
1,1-Dichloropropene	ND	0.0028	EPA 8260C	8-21-18	8-21-18	
1,2-Dichloroethane	ND	0.0028	EPA 8260C	8-21-18	8-21-18	
Trichloroethene	ND	0.0028	EPA 8260C	8-21-18	8-21-18	
1,2-Dichloropropane	ND	0.0028	EPA 8260C	8-21-18	8-21-18	
Dibromomethane	ND	0.0028	EPA 8260C	8-21-18	8-21-18	
Bromodichloromethane	ND	0.0028	EPA 8260C	8-21-18	8-21-18	
2-Chloroethyl Vinyl Ether	ND	0.014	EPA 8260C	8-21-18	8-21-18	
(cis) 1,3-Dichloropropene	ND	0.0028	EPA 8260C	8-21-18	8-21-18	
(trans) 1,3-Dichloropropene	ND	0.0028	EPA 8260C	8-21-18	8-21-18	



Date of Report: August 24, 2018
 Samples Submitted: August 21, 2018
 Laboratory Reference: 1808-217
 Project: 397-019

VOLATILE ORGANICS EPA 8260C
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FB-02-10.0-082018					
Laboratory ID:	08-217-03					
1,1,2-Trichloroethane	ND	0.0028	EPA 8260C	8-21-18	8-21-18	
Tetrachloroethene	ND	0.0028	EPA 8260C	8-21-18	8-21-18	
1,3-Dichloropropane	ND	0.0028	EPA 8260C	8-21-18	8-21-18	
Dibromochloromethane	ND	0.0028	EPA 8260C	8-21-18	8-21-18	
1,2-Dibromoethane	ND	0.0028	EPA 8260C	8-21-18	8-21-18	
Chlorobenzene	ND	0.0028	EPA 8260C	8-21-18	8-21-18	
1,1,1,2-Tetrachloroethane	ND	0.0028	EPA 8260C	8-21-18	8-21-18	
Bromoform	ND	0.014	EPA 8260C	8-21-18	8-21-18	
Bromobenzene	ND	0.0028	EPA 8260C	8-21-18	8-21-18	
1,1,2,2-Tetrachloroethane	ND	0.0028	EPA 8260C	8-21-18	8-21-18	
1,2,3-Trichloropropane	ND	0.0028	EPA 8260C	8-21-18	8-21-18	
2-Chlorotoluene	ND	0.0028	EPA 8260C	8-21-18	8-21-18	
4-Chlorotoluene	ND	0.0028	EPA 8260C	8-21-18	8-21-18	
1,3-Dichlorobenzene	ND	0.0028	EPA 8260C	8-21-18	8-21-18	
1,4-Dichlorobenzene	ND	0.0028	EPA 8260C	8-21-18	8-21-18	
1,2-Dichlorobenzene	ND	0.0028	EPA 8260C	8-21-18	8-21-18	
1,2-Dibromo-3-chloropropane	ND	0.014	EPA 8260C	8-21-18	8-21-18	
1,2,4-Trichlorobenzene	ND	0.0028	EPA 8260C	8-21-18	8-21-18	
Hexachlorobutadiene	ND	0.014	EPA 8260C	8-21-18	8-21-18	
1,2,3-Trichlorobenzene	ND	0.0028	EPA 8260C	8-21-18	8-21-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>94</i>	<i>68-139</i>				
<i>Toluene-d8</i>	<i>104</i>	<i>79-128</i>				
<i>4-Bromofluorobenzene</i>	<i>87</i>	<i>71-132</i>				



Date of Report: August 24, 2018
 Samples Submitted: August 21, 2018
 Laboratory Reference: 1808-217
 Project: 397-019

VOLATILE ORGANICS EPA 8260C
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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FB-02-25.0-082018					
Laboratory ID:	08-217-06					
Dichlorodifluoromethane	ND	0.00085	EPA 8260C	8-21-18	8-21-18	
Chloromethane	ND	0.0043	EPA 8260C	8-21-18	8-21-18	
Vinyl Chloride	ND	0.00085	EPA 8260C	8-21-18	8-21-18	
Bromomethane	ND	0.00085	EPA 8260C	8-21-18	8-21-18	
Chloroethane	ND	0.0043	EPA 8260C	8-21-18	8-21-18	
Trichlorofluoromethane	ND	0.00085	EPA 8260C	8-21-18	8-21-18	
1,1-Dichloroethene	ND	0.00085	EPA 8260C	8-21-18	8-21-18	
Iodomethane	ND	0.0085	EPA 8260C	8-21-18	8-21-18	
Methylene Chloride	ND	0.0043	EPA 8260C	8-21-18	8-21-18	
(trans) 1,2-Dichloroethene	ND	0.00085	EPA 8260C	8-21-18	8-21-18	
1,1-Dichloroethane	ND	0.00085	EPA 8260C	8-21-18	8-21-18	
2,2-Dichloropropane	ND	0.00085	EPA 8260C	8-21-18	8-21-18	
(cis) 1,2-Dichloroethene	ND	0.00085	EPA 8260C	8-21-18	8-21-18	
Bromochloromethane	ND	0.00085	EPA 8260C	8-21-18	8-21-18	
Chloroform	ND	0.00085	EPA 8260C	8-21-18	8-21-18	
1,1,1-Trichloroethane	ND	0.00085	EPA 8260C	8-21-18	8-21-18	
Carbon Tetrachloride	ND	0.00085	EPA 8260C	8-21-18	8-21-18	
1,1-Dichloropropene	ND	0.00085	EPA 8260C	8-21-18	8-21-18	
1,2-Dichloroethane	ND	0.00085	EPA 8260C	8-21-18	8-21-18	
Trichloroethene	ND	0.00085	EPA 8260C	8-21-18	8-21-18	
1,2-Dichloropropane	ND	0.00085	EPA 8260C	8-21-18	8-21-18	
Dibromomethane	ND	0.00085	EPA 8260C	8-21-18	8-21-18	
Bromodichloromethane	ND	0.00085	EPA 8260C	8-21-18	8-21-18	
2-Chloroethyl Vinyl Ether	ND	0.0043	EPA 8260C	8-21-18	8-21-18	
(cis) 1,3-Dichloropropene	ND	0.00085	EPA 8260C	8-21-18	8-21-18	
(trans) 1,3-Dichloropropene	ND	0.00085	EPA 8260C	8-21-18	8-21-18	



Date of Report: August 24, 2018
 Samples Submitted: August 21, 2018
 Laboratory Reference: 1808-217
 Project: 397-019

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FB-02-25.0-082018					
Laboratory ID:	08-217-06					
1,1,2-Trichloroethane	ND	0.00085	EPA 8260C	8-21-18	8-21-18	
Tetrachloroethene	ND	0.00085	EPA 8260C	8-21-18	8-21-18	
1,3-Dichloropropane	ND	0.00085	EPA 8260C	8-21-18	8-21-18	
Dibromochloromethane	ND	0.00085	EPA 8260C	8-21-18	8-21-18	
1,2-Dibromoethane	ND	0.00085	EPA 8260C	8-21-18	8-21-18	
Chlorobenzene	ND	0.00085	EPA 8260C	8-21-18	8-21-18	
1,1,1,2-Tetrachloroethane	ND	0.00085	EPA 8260C	8-21-18	8-21-18	
Bromoform	ND	0.0043	EPA 8260C	8-21-18	8-21-18	
Bromobenzene	ND	0.00085	EPA 8260C	8-21-18	8-21-18	
1,1,2,2-Tetrachloroethane	ND	0.00085	EPA 8260C	8-21-18	8-21-18	
1,2,3-Trichloropropane	ND	0.00085	EPA 8260C	8-21-18	8-21-18	
2-Chlorotoluene	ND	0.00085	EPA 8260C	8-21-18	8-21-18	
4-Chlorotoluene	ND	0.00085	EPA 8260C	8-21-18	8-21-18	
1,3-Dichlorobenzene	ND	0.00085	EPA 8260C	8-21-18	8-21-18	
1,4-Dichlorobenzene	ND	0.00085	EPA 8260C	8-21-18	8-21-18	
1,2-Dichlorobenzene	ND	0.00085	EPA 8260C	8-21-18	8-21-18	
1,2-Dibromo-3-chloropropane	ND	0.0043	EPA 8260C	8-21-18	8-21-18	
1,2,4-Trichlorobenzene	ND	0.00085	EPA 8260C	8-21-18	8-21-18	
Hexachlorobutadiene	ND	0.0043	EPA 8260C	8-21-18	8-21-18	
1,2,3-Trichlorobenzene	ND	0.00085	EPA 8260C	8-21-18	8-21-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>94</i>	<i>68-139</i>				
<i>Toluene-d8</i>	<i>108</i>	<i>79-128</i>				
<i>4-Bromofluorobenzene</i>	<i>105</i>	<i>71-132</i>				



Date of Report: August 24, 2018
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 Project: 397-019

VOLATILE ORGANICS EPA 8260C
METHOD BLANK QUALITY CONTROL
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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0821S1					
Dichlorodifluoromethane	ND	0.0010	EPA 8260C	8-21-18	8-21-18	
Chloromethane	ND	0.0050	EPA 8260C	8-21-18	8-21-18	
Vinyl Chloride	ND	0.0010	EPA 8260C	8-21-18	8-21-18	
Bromomethane	ND	0.0010	EPA 8260C	8-21-18	8-21-18	
Chloroethane	ND	0.0050	EPA 8260C	8-21-18	8-21-18	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	8-21-18	8-21-18	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	8-21-18	8-21-18	
Iodomethane	ND	0.0050	EPA 8260C	8-21-18	8-21-18	
Methylene Chloride	ND	0.0065	EPA 8260C	8-21-18	8-21-18	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	8-21-18	8-21-18	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	8-21-18	8-21-18	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	8-21-18	8-21-18	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	8-21-18	8-21-18	
Bromochloromethane	ND	0.0010	EPA 8260C	8-21-18	8-21-18	
Chloroform	ND	0.0010	EPA 8260C	8-21-18	8-21-18	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	8-21-18	8-21-18	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	8-21-18	8-21-18	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	8-21-18	8-21-18	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	8-21-18	8-21-18	
Trichloroethene	ND	0.0010	EPA 8260C	8-21-18	8-21-18	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	8-21-18	8-21-18	
Dibromomethane	ND	0.0010	EPA 8260C	8-21-18	8-21-18	
Bromodichloromethane	ND	0.0010	EPA 8260C	8-21-18	8-21-18	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260C	8-21-18	8-21-18	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	8-21-18	8-21-18	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	8-21-18	8-21-18	



Date of Report: August 24, 2018
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 Laboratory Reference: 1808-217
 Project: 397-019

VOLATILE ORGANICS EPA 8260C
METHOD BLANK QUALITY CONTROL
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:		MB0821S1				
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	8-21-18	8-21-18	
Tetrachloroethene	ND	0.0010	EPA 8260C	8-21-18	8-21-18	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	8-21-18	8-21-18	
Dibromochloromethane	ND	0.0010	EPA 8260C	8-21-18	8-21-18	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	8-21-18	8-21-18	
Chlorobenzene	ND	0.0010	EPA 8260C	8-21-18	8-21-18	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	8-21-18	8-21-18	
Bromoform	ND	0.0050	EPA 8260C	8-21-18	8-21-18	
Bromobenzene	ND	0.0010	EPA 8260C	8-21-18	8-21-18	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	8-21-18	8-21-18	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	8-21-18	8-21-18	
2-Chlorotoluene	ND	0.0010	EPA 8260C	8-21-18	8-21-18	
4-Chlorotoluene	ND	0.0010	EPA 8260C	8-21-18	8-21-18	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	8-21-18	8-21-18	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	8-21-18	8-21-18	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	8-21-18	8-21-18	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260C	8-21-18	8-21-18	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	8-21-18	8-21-18	
Hexachlorobutadiene	ND	0.0050	EPA 8260C	8-21-18	8-21-18	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	8-21-18	8-21-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>89</i>	<i>68-139</i>				
<i>Toluene-d8</i>	<i>99</i>	<i>79-128</i>				
<i>4-Bromofluorobenzene</i>	<i>89</i>	<i>71-132</i>				



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 Project: 397-019

**VOLATILE ORGANICS EPA 8260C
 SB/SBD QUALITY CONTROL**

Matrix: Soil
 Units: mg/kg

Analyte	Result		Spike Level		Percent Recovery		Recovery	RPD	RPD	Flags
					Recovery	Limits	RPD	Limit		
SPIKE BLANKS										
Laboratory ID:	SB0821S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	0.0511	0.0534	0.0500	0.0500	102	107	53-141	4	17	
Benzene	0.0432	0.0439	0.0500	0.0500	86	88	70-130	2	15	
Trichloroethene	0.0520	0.0545	0.0500	0.0500	104	109	74-122	5	16	
Toluene	0.0493	0.0505	0.0500	0.0500	99	101	76-130	2	15	
Chlorobenzene	0.0477	0.0479	0.0500	0.0500	95	96	75-120	0	14	
<i>Surrogate:</i>										
<i>Dibromofluoromethane</i>					95	92	68-139			
<i>Toluene-d8</i>					97	98	79-128			
<i>4-Bromofluorobenzene</i>					94	92	71-132			



Date of Report: August 24, 2018
 Samples Submitted: August 21, 2018
 Laboratory Reference: 1808-217
 Project: 397-019

SEMIVOLATILE ORGANICS EPA 8270D/SIM
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Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FB-02-25.0-082018					
Laboratory ID:	08-217-06					
n-Nitrosodimethylamine	ND	0.040	EPA 8270D	8-22-18	8-22-18	
Pyridine	ND	0.40	EPA 8270D	8-22-18	8-22-18	
Phenol	ND	0.040	EPA 8270D	8-22-18	8-22-18	
Aniline	ND	0.20	EPA 8270D	8-22-18	8-22-18	
bis(2-Chloroethyl)ether	ND	0.040	EPA 8270D	8-22-18	8-22-18	
2-Chlorophenol	ND	0.040	EPA 8270D	8-22-18	8-22-18	
1,3-Dichlorobenzene	ND	0.040	EPA 8270D	8-22-18	8-22-18	
1,4-Dichlorobenzene	ND	0.040	EPA 8270D	8-22-18	8-22-18	
Benzyl alcohol	ND	0.20	EPA 8270D	8-22-18	8-22-18	
1,2-Dichlorobenzene	ND	0.040	EPA 8270D	8-22-18	8-22-18	
2-Methylphenol (o-Cresol)	ND	0.040	EPA 8270D	8-22-18	8-22-18	
bis(2-Chloroisopropyl)ether	ND	0.040	EPA 8270D	8-22-18	8-22-18	
(3+4)-Methylphenol (m,p-Cresol)	ND	0.040	EPA 8270D	8-22-18	8-22-18	
n-Nitroso-di-n-propylamine	ND	0.040	EPA 8270D	8-22-18	8-22-18	
Hexachloroethane	ND	0.040	EPA 8270D	8-22-18	8-22-18	
Nitrobenzene	ND	0.040	EPA 8270D	8-22-18	8-22-18	
Isophorone	ND	0.040	EPA 8270D	8-22-18	8-22-18	
2-Nitrophenol	ND	0.040	EPA 8270D	8-22-18	8-22-18	
2,4-Dimethylphenol	ND	0.040	EPA 8270D	8-22-18	8-22-18	
bis(2-Chloroethoxy)methane	ND	0.040	EPA 8270D	8-22-18	8-22-18	
2,4-Dichlorophenol	ND	0.040	EPA 8270D	8-22-18	8-22-18	
1,2,4-Trichlorobenzene	ND	0.040	EPA 8270D	8-22-18	8-22-18	
Naphthalene	0.083	0.040	EPA 8270D	8-22-18	8-22-18	
4-Chloroaniline	ND	0.20	EPA 8270D	8-22-18	8-22-18	
Hexachlorobutadiene	ND	0.040	EPA 8270D	8-22-18	8-22-18	
4-Chloro-3-methylphenol	ND	0.040	EPA 8270D	8-22-18	8-22-18	
2-Methylnaphthalene	0.024	0.0080	EPA 8270D/SIM	8-22-18	8-22-18	
1-Methylnaphthalene	0.020	0.0080	EPA 8270D/SIM	8-22-18	8-22-18	
Hexachlorocyclopentadiene	ND	0.040	EPA 8270D	8-22-18	8-22-18	
2,4,6-Trichlorophenol	ND	0.040	EPA 8270D	8-22-18	8-22-18	
2,3-Dichloroaniline	ND	0.040	EPA 8270D	8-22-18	8-22-18	
2,4,5-Trichlorophenol	ND	0.040	EPA 8270D	8-22-18	8-22-18	
2-Chloronaphthalene	ND	0.040	EPA 8270D	8-22-18	8-22-18	
2-Nitroaniline	ND	0.040	EPA 8270D	8-22-18	8-22-18	
1,4-Dinitrobenzene	ND	0.040	EPA 8270D	8-22-18	8-22-18	
Dimethylphthalate	ND	0.040	EPA 8270D	8-22-18	8-22-18	
1,3-Dinitrobenzene	ND	0.040	EPA 8270D	8-22-18	8-22-18	
2,6-Dinitrotoluene	ND	0.040	EPA 8270D	8-22-18	8-22-18	
1,2-Dinitrobenzene	ND	0.040	EPA 8270D	8-22-18	8-22-18	
Acenaphthylene	ND	0.0080	EPA 8270D/SIM	8-22-18	8-22-18	
3-Nitroaniline	ND	0.040	EPA 8270D	8-22-18	8-22-18	



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SEMIVOLATILE ORGANICS EPA 8270D/SIM
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FB-02-25.0-082018					
Laboratory ID:	08-217-06					
2,4-Dinitrophenol	ND	0.20	EPA 8270D	8-22-18	8-22-18	
Acenaphthene	0.027	0.0080	EPA 8270D/SIM	8-22-18	8-22-18	
4-Nitrophenol	ND	0.040	EPA 8270D	8-22-18	8-22-18	
2,4-Dinitrotoluene	ND	0.040	EPA 8270D	8-22-18	8-22-18	
Dibenzofuran	ND	0.040	EPA 8270D	8-22-18	8-22-18	
2,3,5,6-Tetrachlorophenol	ND	0.040	EPA 8270D	8-22-18	8-22-18	
2,3,4,6-Tetrachlorophenol	ND	0.040	EPA 8270D	8-22-18	8-22-18	
Diethylphthalate	ND	0.20	EPA 8270D	8-22-18	8-22-18	
4-Chlorophenyl-phenylether	ND	0.040	EPA 8270D	8-22-18	8-22-18	
4-Nitroaniline	ND	0.040	EPA 8270D	8-22-18	8-22-18	
Fluorene	ND	0.0080	EPA 8270D/SIM	8-22-18	8-22-18	
4,6-Dinitro-2-methylphenol	ND	0.20	EPA 8270D	8-22-18	8-22-18	
n-Nitrosodiphenylamine	ND	0.040	EPA 8270D	8-22-18	8-22-18	
1,2-Diphenylhydrazine	ND	0.040	EPA 8270D	8-22-18	8-22-18	
4-Bromophenyl-phenylether	ND	0.040	EPA 8270D	8-22-18	8-22-18	
Hexachlorobenzene	ND	0.040	EPA 8270D	8-22-18	8-22-18	
Pentachlorophenol	ND	0.20	EPA 8270D	8-22-18	8-22-18	
Phenanthrene	ND	0.0080	EPA 8270D/SIM	8-22-18	8-22-18	
Anthracene	ND	0.0080	EPA 8270D/SIM	8-22-18	8-22-18	
Carbazole	ND	0.040	EPA 8270D	8-22-18	8-22-18	
Di-n-butylphthalate	ND	0.20	EPA 8270D	8-22-18	8-22-18	
Fluoranthene	ND	0.0080	EPA 8270D/SIM	8-22-18	8-22-18	
Benzidine	ND	0.40	EPA 8270D	8-22-18	8-22-18	
Pyrene	ND	0.0080	EPA 8270D/SIM	8-22-18	8-22-18	
Butylbenzylphthalate	ND	0.20	EPA 8270D	8-22-18	8-22-18	
bis-2-Ethylhexyladipate	ND	0.20	EPA 8270D	8-22-18	8-22-18	
3,3'-Dichlorobenzidine	ND	0.20	EPA 8270D	8-22-18	8-22-18	
Benzo[a]anthracene	ND	0.0080	EPA 8270D/SIM	8-22-18	8-22-18	
Chrysene	ND	0.0080	EPA 8270D/SIM	8-22-18	8-22-18	
bis(2-Ethylhexyl)phthalate	ND	0.20	EPA 8270D	8-22-18	8-22-18	
Di-n-octylphthalate	ND	0.20	EPA 8270D	8-22-18	8-22-18	
Benzo[b]fluoranthene	ND	0.0080	EPA 8270D/SIM	8-22-18	8-22-18	
Benzo(j,k)fluoranthene	ND	0.0080	EPA 8270D/SIM	8-22-18	8-22-18	
Benzo[a]pyrene	ND	0.0080	EPA 8270D/SIM	8-22-18	8-22-18	
Indeno[1,2,3-cd]pyrene	ND	0.0080	EPA 8270D/SIM	8-22-18	8-22-18	
Dibenz[a,h]anthracene	ND	0.0080	EPA 8270D/SIM	8-22-18	8-22-18	
Benzo[g,h,i]perylene	ND	0.0080	EPA 8270D/SIM	8-22-18	8-22-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorophenol	74	19 - 103				
Phenol-d6	72	30 - 103				
Nitrobenzene-d5	69	27 - 105				
2-Fluorobiphenyl	77	36 - 102				
2,4,6-Tribromophenol	82	33 - 110				
Terphenyl-d14	74	38 - 108				



Date of Report: August 24, 2018
 Samples Submitted: August 21, 2018
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 Project: 397-019

**SEMIVOLATILE ORGANICS EPA 8270D/SIM
 METHOD BLANK QUALITY CONTROL**

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Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0822S1					
n-Nitrosodimethylamine	ND	0.033	EPA 8270D	8-22-18	8-22-18	
Pyridine	ND	0.33	EPA 8270D	8-22-18	8-22-18	
Phenol	ND	0.033	EPA 8270D	8-22-18	8-22-18	
Aniline	ND	0.17	EPA 8270D	8-22-18	8-22-18	
bis(2-Chloroethyl)ether	ND	0.033	EPA 8270D	8-22-18	8-22-18	
2-Chlorophenol	ND	0.033	EPA 8270D	8-22-18	8-22-18	
1,3-Dichlorobenzene	ND	0.033	EPA 8270D	8-22-18	8-22-18	
1,4-Dichlorobenzene	ND	0.033	EPA 8270D	8-22-18	8-22-18	
Benzyl alcohol	ND	0.17	EPA 8270D	8-22-18	8-22-18	
1,2-Dichlorobenzene	ND	0.033	EPA 8270D	8-22-18	8-22-18	
2-Methylphenol (o-Cresol)	ND	0.033	EPA 8270D	8-22-18	8-22-18	
bis(2-Chloroisopropyl)ether	ND	0.033	EPA 8270D	8-22-18	8-22-18	
(3+4)-Methylphenol (m,p-Cresol)	ND	0.033	EPA 8270D	8-22-18	8-22-18	
n-Nitroso-di-n-propylamine	ND	0.033	EPA 8270D	8-22-18	8-22-18	
Hexachloroethane	ND	0.033	EPA 8270D	8-22-18	8-22-18	
Nitrobenzene	ND	0.033	EPA 8270D	8-22-18	8-22-18	
Isophorone	ND	0.033	EPA 8270D	8-22-18	8-22-18	
2-Nitrophenol	ND	0.033	EPA 8270D	8-22-18	8-22-18	
2,4-Dimethylphenol	ND	0.033	EPA 8270D	8-22-18	8-22-18	
bis(2-Chloroethoxy)methane	ND	0.033	EPA 8270D	8-22-18	8-22-18	
2,4-Dichlorophenol	ND	0.033	EPA 8270D	8-22-18	8-22-18	
1,2,4-Trichlorobenzene	ND	0.033	EPA 8270D	8-22-18	8-22-18	
Naphthalene	ND	0.0067	EPA 8270D/SIM	8-22-18	8-22-18	
4-Chloroaniline	ND	0.17	EPA 8270D	8-22-18	8-22-18	
Hexachlorobutadiene	ND	0.033	EPA 8270D	8-22-18	8-22-18	
4-Chloro-3-methylphenol	ND	0.033	EPA 8270D	8-22-18	8-22-18	
2-Methylnaphthalene	ND	0.0067	EPA 8270D/SIM	8-22-18	8-22-18	
1-Methylnaphthalene	ND	0.0067	EPA 8270D/SIM	8-22-18	8-22-18	
Hexachlorocyclopentadiene	ND	0.033	EPA 8270D	8-22-18	8-22-18	
2,4,6-Trichlorophenol	ND	0.033	EPA 8270D	8-22-18	8-22-18	
2,3-Dichloroaniline	ND	0.033	EPA 8270D	8-22-18	8-22-18	
2,4,5-Trichlorophenol	ND	0.033	EPA 8270D	8-22-18	8-22-18	
2-Chloronaphthalene	ND	0.033	EPA 8270D	8-22-18	8-22-18	
2-Nitroaniline	ND	0.033	EPA 8270D	8-22-18	8-22-18	
1,4-Dinitrobenzene	ND	0.033	EPA 8270D	8-22-18	8-22-18	
Dimethylphthalate	ND	0.033	EPA 8270D	8-22-18	8-22-18	
1,3-Dinitrobenzene	ND	0.033	EPA 8270D	8-22-18	8-22-18	
2,6-Dinitrotoluene	ND	0.033	EPA 8270D	8-22-18	8-22-18	
1,2-Dinitrobenzene	ND	0.033	EPA 8270D	8-22-18	8-22-18	
Acenaphthylene	ND	0.0067	EPA 8270D/SIM	8-22-18	8-22-18	
3-Nitroaniline	ND	0.033	EPA 8270D	8-22-18	8-22-18	



Date of Report: August 24, 2018
 Samples Submitted: August 21, 2018
 Laboratory Reference: 1808-217
 Project: 397-019

**SEMIVOLATILE ORGANICS EPA 8270D/SIM
 METHOD BLANK QUALITY CONTROL**

page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0822S1					
2,4-Dinitrophenol	ND	0.17	EPA 8270D	8-22-18	8-22-18	
Acenaphthene	ND	0.0067	EPA 8270D/SIM	8-22-18	8-22-18	
4-Nitrophenol	ND	0.033	EPA 8270D	8-22-18	8-22-18	
2,4-Dinitrotoluene	ND	0.033	EPA 8270D	8-22-18	8-22-18	
Dibenzofuran	ND	0.033	EPA 8270D	8-22-18	8-22-18	
2,3,5,6-Tetrachlorophenol	ND	0.033	EPA 8270D	8-22-18	8-22-18	
2,3,4,6-Tetrachlorophenol	ND	0.033	EPA 8270D	8-22-18	8-22-18	
Diethylphthalate	ND	0.17	EPA 8270D	8-22-18	8-22-18	
4-Chlorophenyl-phenylether	ND	0.033	EPA 8270D	8-22-18	8-22-18	
4-Nitroaniline	ND	0.033	EPA 8270D	8-22-18	8-22-18	
Fluorene	ND	0.0067	EPA 8270D/SIM	8-22-18	8-22-18	
4,6-Dinitro-2-methylphenol	ND	0.17	EPA 8270D	8-22-18	8-22-18	
n-Nitrosodiphenylamine	ND	0.033	EPA 8270D	8-22-18	8-22-18	
1,2-Diphenylhydrazine	ND	0.033	EPA 8270D	8-22-18	8-22-18	
4-Bromophenyl-phenylether	ND	0.033	EPA 8270D	8-22-18	8-22-18	
Hexachlorobenzene	ND	0.033	EPA 8270D	8-22-18	8-22-18	
Pentachlorophenol	ND	0.17	EPA 8270D	8-22-18	8-22-18	
Phenanthrene	ND	0.0067	EPA 8270D/SIM	8-22-18	8-22-18	
Anthracene	ND	0.0067	EPA 8270D/SIM	8-22-18	8-22-18	
Carbazole	ND	0.033	EPA 8270D	8-22-18	8-22-18	
Di-n-butylphthalate	ND	0.17	EPA 8270D	8-22-18	8-22-18	
Fluoranthene	ND	0.0067	EPA 8270D/SIM	8-22-18	8-22-18	
Benzidine	ND	0.33	EPA 8270D	8-22-18	8-22-18	
Pyrene	ND	0.0067	EPA 8270D/SIM	8-22-18	8-22-18	
Butylbenzylphthalate	ND	0.17	EPA 8270D	8-22-18	8-22-18	
bis(2-Ethylhexyl)adipate	ND	0.17	EPA 8270D	8-22-18	8-22-18	
3,3'-Dichlorobenzidine	ND	0.17	EPA 8270D	8-22-18	8-22-18	
Benzo[a]anthracene	ND	0.0067	EPA 8270D/SIM	8-22-18	8-22-18	
Chrysene	ND	0.0067	EPA 8270D/SIM	8-22-18	8-22-18	
bis(2-Ethylhexyl)phthalate	ND	0.17	EPA 8270D	8-22-18	8-22-18	
Di-n-octylphthalate	ND	0.17	EPA 8270D	8-22-18	8-22-18	
Benzo[b]fluoranthene	ND	0.0067	EPA 8270D/SIM	8-22-18	8-22-18	
Benzo(j,k)fluoranthene	ND	0.0067	EPA 8270D/SIM	8-22-18	8-22-18	
Benzo[a]pyrene	ND	0.0067	EPA 8270D/SIM	8-22-18	8-22-18	
Indeno[1,2,3-cd]pyrene	ND	0.0067	EPA 8270D/SIM	8-22-18	8-22-18	
Dibenz[a,h]anthracene	ND	0.0067	EPA 8270D/SIM	8-22-18	8-22-18	
Benzo[g,h,i]perylene	ND	0.0067	EPA 8270D/SIM	8-22-18	8-22-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorophenol	86	19 - 103				
Phenol-d6	87	30 - 103				
Nitrobenzene-d5	84	27 - 105				
2-Fluorobiphenyl	92	36 - 102				
2,4,6-Tribromophenol	99	33 - 110				
Terphenyl-d14	92	38 - 108				



Date of Report: August 24, 2018
 Samples Submitted: August 21, 2018
 Laboratory Reference: 1808-217
 Project: 397-019

**SEMIVOLATILE ORGANICS EPA 8270D/SIM
 SB/SBD QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
	SB	SBD	SB	SBD	SB	SBD				
SPIKE BLANKS										
Laboratory ID:	SB0822S1									
Phenol	0.988	1.12	1.33	1.33	74	84	45 - 94	13	29	
2-Chlorophenol	1.05	1.21	1.33	1.33	79	91	46 - 94	14	33	
1,4-Dichlorobenzene	0.511	0.581	0.667	0.667	77	87	42 - 91	13	37	
n-Nitroso-di-n-propylamine	0.506	0.568	0.667	0.667	76	85	45 - 100	12	26	
1,2,4-Trichlorobenzene	0.559	0.579	0.667	0.667	84	87	45 - 100	4	32	
4-Chloro-3-methylphenol	1.09	1.13	1.33	1.33	82	85	55 - 97	4	21	
Acenaphthene	0.539	0.564	0.667	0.667	81	85	48 - 91	5	21	
4-Nitrophenol	1.06	1.17	1.33	1.33	80	88	53 - 102	10	20	
2,4-Dinitrotoluene	0.527	0.583	0.667	0.667	79	87	47 - 96	10	19	
Pentachlorophenol	1.34	1.40	1.33	1.33	101	105	35 - 125	4	26	
Pyrene	0.534	0.561	0.667	0.667	80	84	55 - 110	5	17	
<i>Surrogate:</i>										
2-Fluorophenol					72	81	19 - 103			
Phenol-d6					73	80	30 - 103			
Nitrobenzene-d5					72	73	27 - 105			
2-Fluorobiphenyl					79	80	36 - 102			
2,4,6-Tribromophenol					86	85	33 - 110			
Terphenyl-d14					76	78	38 - 108			



Date of Report: August 24, 2018
 Samples Submitted: August 21, 2018
 Laboratory Reference: 1808-217
 Project: 397-019

**TOTAL METALS
 EPA 6010D/7471B**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FB-02-10.0-082018					
Laboratory ID:	08-217-03					
Arsenic	ND	12	EPA 6010D	8-23-18	8-23-18	
Barium	190	6.1	EPA 6010D	8-23-18	8-23-18	
Cadmium	ND	1.2	EPA 6010D	8-23-18	8-23-18	
Chromium	36	1.2	EPA 6010D	8-23-18	8-23-18	
Lead	24	12	EPA 6010D	8-23-18	8-23-18	
Mercury	1.2	0.61	EPA 7471B	8-22-18	8-22-18	
Selenium	ND	12	EPA 6010D	8-23-18	8-23-18	
Silver	ND	2.5	EPA 6010D	8-23-18	8-23-18	



Date of Report: August 24, 2018
 Samples Submitted: August 21, 2018
 Laboratory Reference: 1808-217
 Project: 397-019

**TOTAL METALS
 EPA 6010D/7471B
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0823SM1					
Arsenic	ND	5.0	EPA 6010D	8-23-18	8-23-18	
Barium	ND	2.5	EPA 6010D	8-23-18	8-23-18	
Cadmium	ND	0.50	EPA 6010D	8-23-18	8-23-18	
Chromium	ND	0.50	EPA 6010D	8-23-18	8-23-18	
Lead	ND	5.0	EPA 6010D	8-23-18	8-23-18	
Selenium	ND	5.0	EPA 6010D	8-23-18	8-23-18	
Silver	ND	1.0	EPA 6010D	8-23-18	8-23-18	

Laboratory ID:	MB0822S1					
Mercury	ND	0.25	EPA 7471B	8-22-18	8-22-18	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	08-239-08							
	ORIG	DUP						
Arsenic	ND	ND	NA	NA	NA	NA	20	
Barium	92.2	83.3	NA	NA	NA	10	20	
Cadmium	ND	ND	NA	NA	NA	NA	20	
Chromium	8.30	5.65	NA	NA	NA	38	20	K
Lead	ND	ND	NA	NA	NA	NA	20	
Selenium	ND	ND	NA	NA	NA	NA	20	
Silver	ND	ND	NA	NA	NA	NA	20	

Laboratory ID:	08-218-01							
Mercury	ND	ND	NA	NA	NA	NA	20	

MATRIX SPIKES

Laboratory ID:	08-239-08									
	MS	MSD	MS	MSD		MS	MSD			
Arsenic	93.1	95.5	100	100	ND	93	96	75-125	3	20
Barium	188	184	100	100	92.2	96	92	75-125	2	20
Cadmium	46.3	45.8	50.0	50.0	ND	93	92	75-125	1	20
Chromium	102	102	100	100	8.30	94	94	75-125	0	20
Lead	232	233	250	250	ND	93	93	75-125	1	20
Selenium	91.2	92.2	100	100	ND	91	92	75-125	1	20
Silver	21.8	21.9	25.0	25.0	ND	87	88	75-125	1	20

Laboratory ID:	08-218-01									
Mercury	0.562	0.540	0.500	0.500	0.0190	109	104	80-120	4	20



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: August 24, 2018
Samples Submitted: August 21, 2018
Laboratory Reference: 1808-217
Project: 397-019

% MOISTURE

Date Analyzed: 8-22-18

Client ID	Lab ID	% Moisture
FB-02-5.0-082018	08-217-02	18
FB-02-10.0-082018	08-217-03	59
FB-02-25.0-082018	08-217-06	17
FB-02-35.0-082018	08-217-08	19





Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
 - B - The analyte indicated was also found in the blank sample.
 - C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
 - E - The value reported exceeds the quantitation range and is an estimate.
 - F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
 - H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
 - I - Compound recovery is outside of the control limits.
 - J - The value reported was below the practical quantitation limit. The value is an estimate.
 - K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
 - L - The RPD is outside of the control limits.
 - M - Hydrocarbons in the gasoline range are impacting the diesel range result.
 - M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
 - N - Hydrocarbons in the lube oil range are impacting the diesel range result.
 - N1 - Hydrocarbons in diesel range are impacting lube oil range results.
 - O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
 - P - The RPD of the detected concentrations between the two columns is greater than 40.
 - Q - Surrogate recovery is outside of the control limits.
 - S - Surrogate recovery data is not available due to the necessary dilution of the sample.
 - T - The sample chromatogram is not similar to a typical _____.
 - U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
 - U1 - The practical quantitation limit is elevated due to interferences present in the sample.
 - V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
 - W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
 - X - Sample extract treated with a mercury cleanup procedure.
 - X1 - Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
 - Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
 - Z -
- ND - Not Detected at PQL
 PQL - Practical Quantitation Limit
 RPD - Relative Percent Difference





MVA Onsite Environmental Inc.
 Analytical Laboratory Testing Services
 14648 NE 95th Street • Redmond, WA 98052
 Phone: (425) 883-3881 • www.onsite-env.com

Chain of Custody

Turnaround Request
 (in working days)
 (Check One)

Same Day 1 Day

2 Days 3 Days

Standard (7 Days)
 (TPH analysis 5 Days)

(other) _____

Laboratory Number: **08-217**

Company: **Fire Alton**
 Project Number: **397-019**
 Project Name: **Block 38 West Property**
 Project Manager: **Jarvan Ruark**
 Sampled by: **Greg Peters**

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers
1	FB-02-3.0-082018	8/20/18	1555	Soil	5
2	FB-02-5.0-082018		1220		
3	FB-02-10.0-082018		1235		
4	FB-02-15.0-082018		1245		
5	FB-02-20.0-082018		1310		
6	FB-02-25.0-082018		1430		
7	FB-02-30.0-082018		1454		
8	FB-02-35.0-082018		1520		

Lab ID	Date	Time	Matrix	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (<input type="checkbox"/> Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	% Moisture	
1	8/20/18	1555	Soil		X	X	X															X
2		1220			X	X	X															X
3		1235			X	X	X															X
4		1245																				
5		1310																				
6		1430			X	X	X															X
7		1454																				
8		1520			X	X	X															X

Signature	Company	Date	Time	Comments/Special Instructions
	Fire Alton	8/20/18	1845	Please contact Project Manager for averages and turnaround time requests!! JS 8/22/18
	Fire Alton	8/21/18	1000	

Received _____ Relinquished _____

Received _____ Relinquished _____

Received _____ Relinquished _____

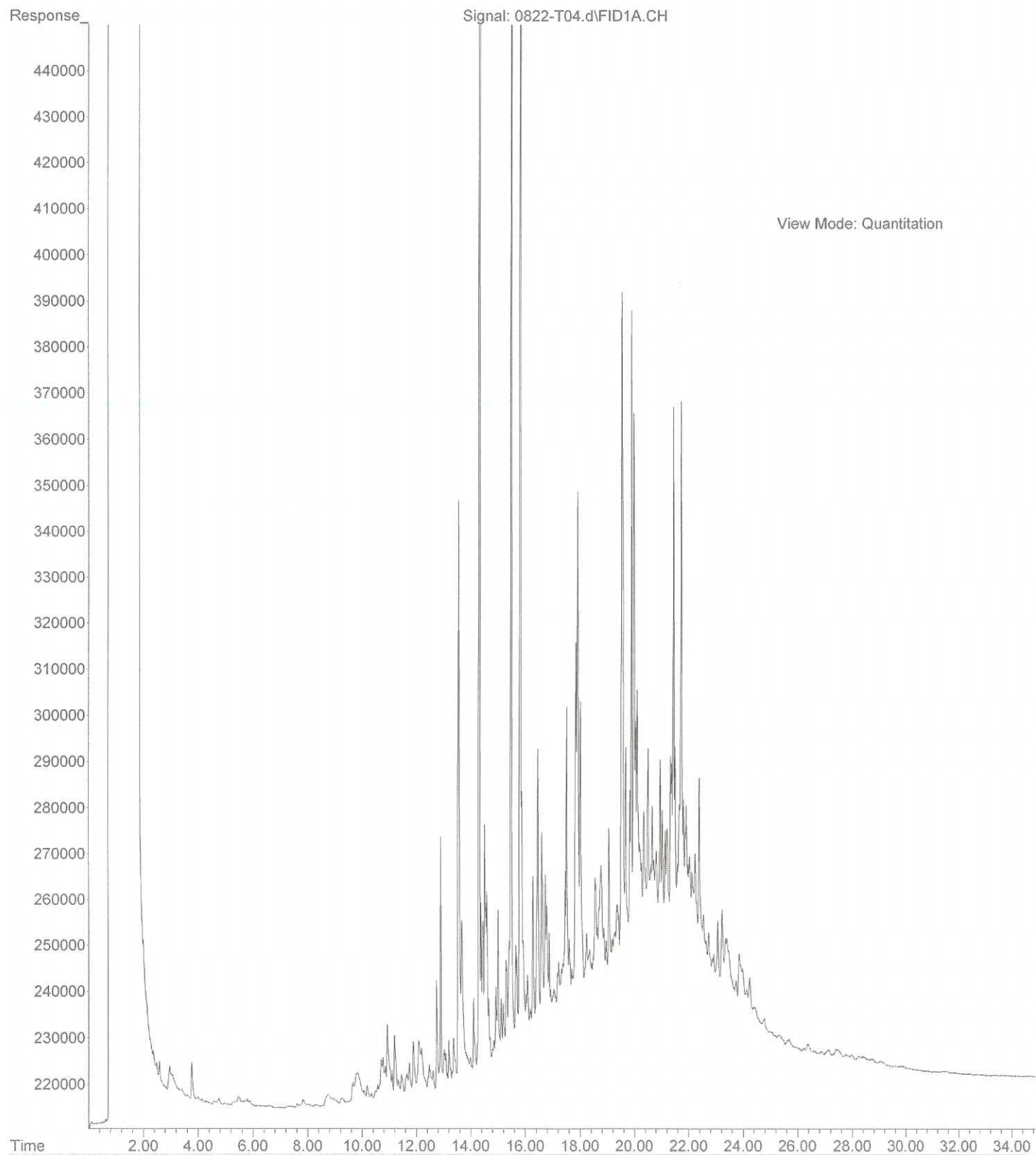
Received _____ Relinquished _____

Reviewed/Date _____ Reviewed/Date _____

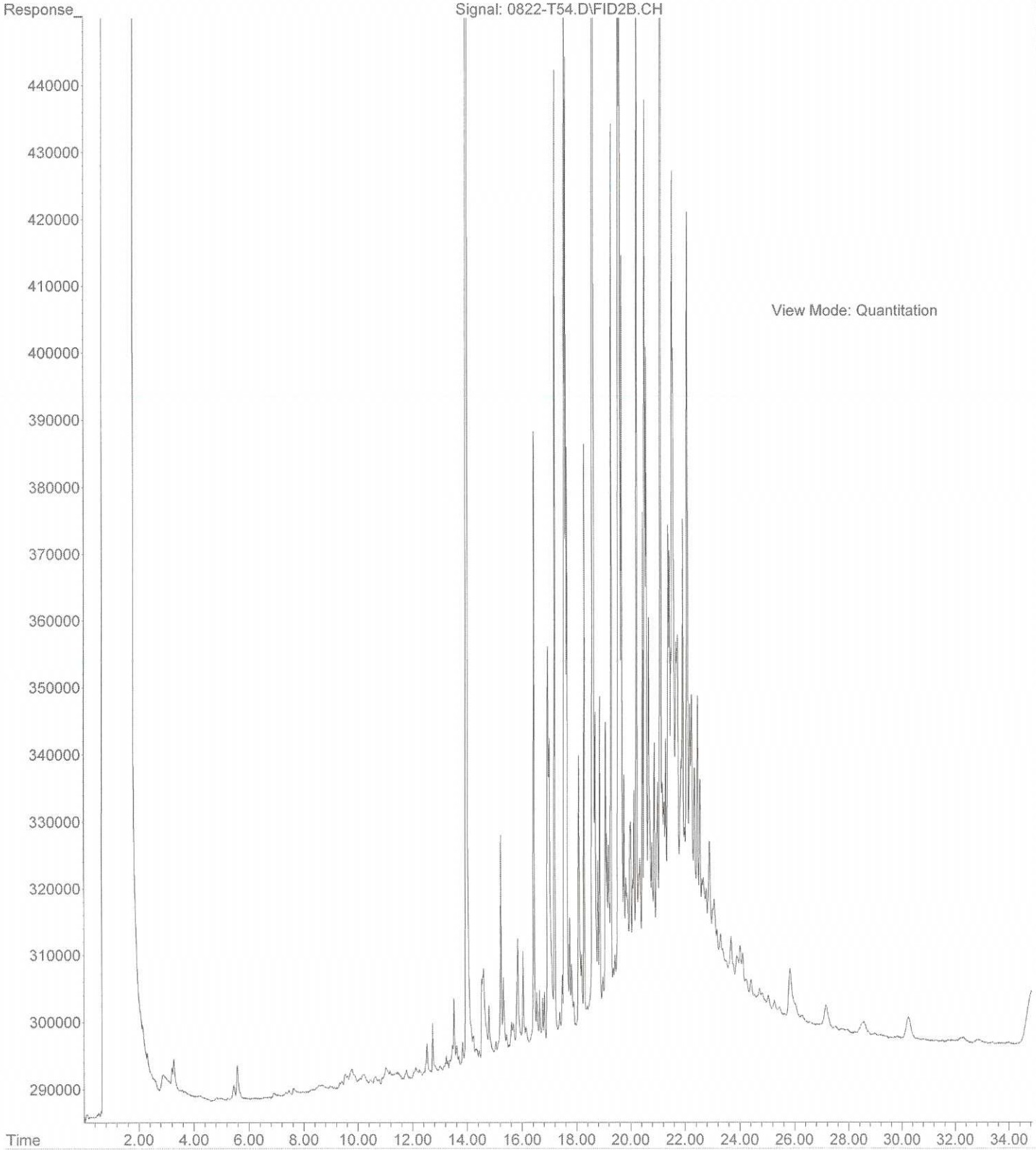
Data Package: Standard Level III Level IV

Chromatograms with final report Electronic Data Deliverables (EDDs)

File :C:\msdchem\1\data\T180822\0822-T04.d
Operator : JT
Acquired : 22 Aug 2018 11:01 using AcqMethod T180110F.M
Instrument : Teri
Sample Name: 08-217-02 5X
Misc Info :
Vial Number: 4



File :C:\msdchem\1\data\T180822.SEC\0822-T54.D
Operator : JT
Acquired : 22 Aug 2018 11:01 using AcqMethod T180110F.M
Instrument : Teri
Sample Name: 08-217-03
Misc Info :
Vial Number: 54





14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

September 26, 2018

Javan Ruark
Farallon Consulting, LLC
975 5th Avenue NW
Issaquah, WA 98027

Re: Analytical Data for Project 397-019
Laboratory Reference No. 1808-217B

Dear Javan:

Enclosed are the analytical results and associated quality control data for samples submitted on August 21, 2018.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "DB", with a long horizontal stroke extending to the right.

David Baumeister
Project Manager

Enclosures



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 26, 2018
Samples Submitted: August 21, 2018
Laboratory Reference: 1808-217B
Project: 397-019

Case Narrative

Samples were collected on August 20, 2018 and received by the laboratory on August 21, 2018. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.



Date of Report: September 26, 2018
 Samples Submitted: August 21, 2018
 Laboratory Reference: 1808-217B
 Project: 397-019

SEMIVOLATILE ORGANICS EPA 8270D/SIM
 page 1 of 2

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FB-02-5.0-082018					
Laboratory ID:	08-217-02					
n-Nitrosodimethylamine	ND	0.30	EPA 8270D	9-1-18	9-24-18	
Pyridine	ND	3.0	EPA 8270D	9-1-18	9-24-18	
Phenol	ND	0.30	EPA 8270D	9-1-18	9-24-18	
Aniline	ND	1.5	EPA 8270D	9-1-18	9-24-18	
bis(2-Chloroethyl)ether	ND	0.30	EPA 8270D	9-1-18	9-24-18	
2-Chlorophenol	ND	0.30	EPA 8270D	9-1-18	9-24-18	
1,3-Dichlorobenzene	ND	0.30	EPA 8270D	9-1-18	9-24-18	
1,4-Dichlorobenzene	ND	0.30	EPA 8270D	9-1-18	9-24-18	
Benzyl alcohol	ND	1.5	EPA 8270D	9-1-18	9-24-18	
1,2-Dichlorobenzene	ND	0.30	EPA 8270D	9-1-18	9-24-18	
2-Methylphenol (o-Cresol)	ND	0.30	EPA 8270D	9-1-18	9-24-18	
bis(2-Chloroisopropyl)ether	ND	0.30	EPA 8270D	9-1-18	9-24-18	
(3+4)-Methylphenol (m,p-Cresol)	ND	0.30	EPA 8270D	9-1-18	9-24-18	
n-Nitroso-di-n-propylamine	ND	0.30	EPA 8270D	9-1-18	9-24-18	
Hexachloroethane	ND	0.30	EPA 8270D	9-1-18	9-24-18	
Nitrobenzene	ND	0.30	EPA 8270D	9-1-18	9-24-18	
Isophorone	ND	0.30	EPA 8270D	9-1-18	9-24-18	
2-Nitrophenol	ND	0.30	EPA 8270D	9-1-18	9-24-18	
2,4-Dimethylphenol	ND	0.30	EPA 8270D	9-1-18	9-24-18	
bis(2-Chloroethoxy)methane	ND	0.30	EPA 8270D	9-1-18	9-24-18	
2,4-Dichlorophenol	ND	0.30	EPA 8270D	9-1-18	9-24-18	
1,2,4-Trichlorobenzene	ND	0.30	EPA 8270D	9-1-18	9-24-18	
Naphthalene	1.1	0.30	EPA 8270D	9-1-18	9-24-18	
4-Chloroaniline	ND	1.5	EPA 8270D	9-1-18	9-24-18	
Hexachlorobutadiene	ND	0.30	EPA 8270D	9-1-18	9-24-18	
4-Chloro-3-methylphenol	ND	0.30	EPA 8270D	9-1-18	9-24-18	
2-Methylnaphthalene	1.3	0.30	EPA 8270D	9-1-18	9-24-18	
1-Methylnaphthalene	0.86	0.30	EPA 8270D	9-1-18	9-24-18	
Hexachlorocyclopentadiene	ND	0.30	EPA 8270D	9-1-18	9-24-18	
2,4,6-Trichlorophenol	ND	0.30	EPA 8270D	9-1-18	9-24-18	
2,3-Dichloroaniline	ND	0.30	EPA 8270D	9-1-18	9-24-18	
2,4,5-Trichlorophenol	ND	0.30	EPA 8270D	9-1-18	9-24-18	
2-Chloronaphthalene	ND	0.30	EPA 8270D	9-1-18	9-24-18	
2-Nitroaniline	ND	0.30	EPA 8270D	9-1-18	9-24-18	
1,4-Dinitrobenzene	ND	0.30	EPA 8270D	9-1-18	9-24-18	
Dimethylphthalate	ND	0.30	EPA 8270D	9-1-18	9-24-18	
1,3-Dinitrobenzene	ND	0.30	EPA 8270D	9-1-18	9-24-18	
2,6-Dinitrotoluene	ND	0.30	EPA 8270D	9-1-18	9-24-18	
1,2-Dinitrobenzene	ND	0.30	EPA 8270D	9-1-18	9-24-18	
Acenaphthylene	0.45	0.30	EPA 8270D	9-1-18	9-24-18	
3-Nitroaniline	ND	0.30	EPA 8270D	9-1-18	9-24-18	



Date of Report: September 26, 2018
 Samples Submitted: August 21, 2018
 Laboratory Reference: 1808-217B
 Project: 397-019

SEMIVOLATILE ORGANICS EPA 8270D/SIM
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FB-02-5.0-082018					
Laboratory ID:	08-217-02					
2,4-Dinitrophenol	ND	1.5	EPA 8270D	9-1-18	9-24-18	
Acenaphthene	1.4	0.30	EPA 8270D	9-1-18	9-24-18	
4-Nitrophenol	ND	0.30	EPA 8270D	9-1-18	9-24-18	
2,4-Dinitrotoluene	ND	0.30	EPA 8270D	9-1-18	9-24-18	
Dibenzofuran	0.71	0.30	EPA 8270D	9-1-18	9-24-18	
2,3,5,6-Tetrachlorophenol	ND	0.30	EPA 8270D	9-1-18	9-24-18	
2,3,4,6-Tetrachlorophenol	ND	0.30	EPA 8270D	9-1-18	9-24-18	
Diethylphthalate	ND	1.5	EPA 8270D	9-1-18	9-24-18	
4-Chlorophenyl-phenylether	ND	0.30	EPA 8270D	9-1-18	9-24-18	
4-Nitroaniline	ND	0.30	EPA 8270D	9-1-18	9-24-18	
Fluorene	1.3	0.30	EPA 8270D	9-1-18	9-24-18	
4,6-Dinitro-2-methylphenol	ND	1.5	EPA 8270D	9-1-18	9-24-18	
n-Nitrosodiphenylamine	ND	0.30	EPA 8270D	9-1-18	9-24-18	
1,2-Diphenylhydrazine	ND	0.30	EPA 8270D	9-1-18	9-24-18	
4-Bromophenyl-phenylether	ND	0.30	EPA 8270D	9-1-18	9-24-18	
Hexachlorobenzene	ND	0.30	EPA 8270D	9-1-18	9-24-18	
Pentachlorophenol	ND	1.5	EPA 8270D	9-1-18	9-24-18	
Phenanthrene	12	0.30	EPA 8270D	9-1-18	9-24-18	
Anthracene	3.3	0.30	EPA 8270D	9-1-18	9-24-18	
Carbazole	0.55	0.30	EPA 8270D	9-1-18	9-24-18	
Di-n-butylphthalate	ND	1.5	EPA 8270D	9-1-18	9-24-18	
Fluoranthene	18	0.30	EPA 8270D	9-1-18	9-24-18	
Benzidine	ND	3.0	EPA 8270D	9-1-18	9-24-18	
Pyrene	25	1.2	EPA 8270D	9-1-18	9-25-18	
Butylbenzylphthalate	ND	1.5	EPA 8270D	9-1-18	9-24-18	
bis-2-Ethylhexyladipate	ND	1.5	EPA 8270D	9-1-18	9-24-18	
3,3'-Dichlorobenzidine	ND	1.5	EPA 8270D	9-1-18	9-24-18	
Benzo[a]anthracene	9.8	0.30	EPA 8270D	9-1-18	9-24-18	
Chrysene	9.7	0.30	EPA 8270D	9-1-18	9-24-18	
bis(2-Ethylhexyl)phthalate	ND	1.5	EPA 8270D	9-1-18	9-24-18	
Di-n-octylphthalate	ND	1.5	EPA 8270D	9-1-18	9-24-18	
Benzo[b]fluoranthene	12	0.30	EPA 8270D	9-1-18	9-24-18	
Benzo(j,k)fluoranthene	3.5	0.30	EPA 8270D	9-1-18	9-24-18	
Benzo[a]pyrene	11	0.30	EPA 8270D	9-1-18	9-24-18	
Indeno[1,2,3-cd]pyrene	8.0	0.30	EPA 8270D	9-1-18	9-24-18	
Dibenz[a,h]anthracene	1.6	0.30	EPA 8270D	9-1-18	9-24-18	
Benzo[g,h,i]perylene	8.5	0.30	EPA 8270D	9-1-18	9-24-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorophenol</i>	<i>63</i>	<i>19 - 103</i>				
<i>Phenol-d6</i>	<i>73</i>	<i>30 - 103</i>				
<i>Nitrobenzene-d5</i>	<i>73</i>	<i>27 - 105</i>				
<i>2-Fluorobiphenyl</i>	<i>91</i>	<i>36 - 102</i>				
<i>2,4,6-Tribromophenol</i>	<i>79</i>	<i>33 - 110</i>				
<i>Terphenyl-d14</i>	<i>97</i>	<i>38 - 108</i>				



Date of Report: September 26, 2018
 Samples Submitted: August 21, 2018
 Laboratory Reference: 1808-217B
 Project: 397-019

**SEMIVOLATILE ORGANICS EPA 8270D/SIM
 METHOD BLANK QUALITY CONTROL**

page 1 of 2

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0901S1					
n-Nitrosodimethylamine	ND	0.033	EPA 8270D	9-1-18	9-4-18	
Pyridine	ND	0.33	EPA 8270D	9-1-18	9-4-18	
Phenol	ND	0.033	EPA 8270D	9-1-18	9-4-18	
Aniline	ND	0.17	EPA 8270D	9-1-18	9-4-18	
bis(2-Chloroethyl)ether	ND	0.033	EPA 8270D	9-1-18	9-4-18	
2-Chlorophenol	ND	0.033	EPA 8270D	9-1-18	9-4-18	
1,3-Dichlorobenzene	ND	0.033	EPA 8270D	9-1-18	9-4-18	
1,4-Dichlorobenzene	ND	0.033	EPA 8270D	9-1-18	9-4-18	
Benzyl alcohol	ND	0.17	EPA 8270D	9-1-18	9-4-18	
1,2-Dichlorobenzene	ND	0.033	EPA 8270D	9-1-18	9-4-18	
2-Methylphenol (o-Cresol)	ND	0.033	EPA 8270D	9-1-18	9-4-18	
bis(2-Chloroisopropyl)ether	ND	0.033	EPA 8270D	9-1-18	9-4-18	
(3+4)-Methylphenol (m,p-Cresol)	ND	0.033	EPA 8270D	9-1-18	9-4-18	
n-Nitroso-di-n-propylamine	ND	0.033	EPA 8270D	9-1-18	9-4-18	
Hexachloroethane	ND	0.033	EPA 8270D	9-1-18	9-4-18	
Nitrobenzene	ND	0.033	EPA 8270D	9-1-18	9-4-18	
Isophorone	ND	0.033	EPA 8270D	9-1-18	9-4-18	
2-Nitrophenol	ND	0.033	EPA 8270D	9-1-18	9-4-18	
2,4-Dimethylphenol	ND	0.033	EPA 8270D	9-1-18	9-4-18	
bis(2-Chloroethoxy)methane	ND	0.033	EPA 8270D	9-1-18	9-4-18	
2,4-Dichlorophenol	ND	0.033	EPA 8270D	9-1-18	9-4-18	
1,2,4-Trichlorobenzene	ND	0.033	EPA 8270D	9-1-18	9-4-18	
Naphthalene	ND	0.0067	EPA 8270D/SIM	9-1-18	9-4-18	
4-Chloroaniline	ND	0.17	EPA 8270D	9-1-18	9-4-18	
Hexachlorobutadiene	ND	0.033	EPA 8270D	9-1-18	9-4-18	
4-Chloro-3-methylphenol	ND	0.033	EPA 8270D	9-1-18	9-4-18	
2-Methylnaphthalene	ND	0.0067	EPA 8270D/SIM	9-1-18	9-4-18	
1-Methylnaphthalene	ND	0.0067	EPA 8270D/SIM	9-1-18	9-4-18	
Hexachlorocyclopentadiene	ND	0.033	EPA 8270D	9-1-18	9-4-18	
2,4,6-Trichlorophenol	ND	0.033	EPA 8270D	9-1-18	9-4-18	
2,3-Dichloroaniline	ND	0.033	EPA 8270D	9-1-18	9-4-18	
2,4,5-Trichlorophenol	ND	0.033	EPA 8270D	9-1-18	9-4-18	
2-Chloronaphthalene	ND	0.033	EPA 8270D	9-1-18	9-4-18	
2-Nitroaniline	ND	0.033	EPA 8270D	9-1-18	9-4-18	
1,4-Dinitrobenzene	ND	0.033	EPA 8270D	9-1-18	9-4-18	
Dimethylphthalate	ND	0.033	EPA 8270D	9-1-18	9-4-18	
1,3-Dinitrobenzene	ND	0.033	EPA 8270D	9-1-18	9-4-18	
2,6-Dinitrotoluene	ND	0.033	EPA 8270D	9-1-18	9-4-18	
1,2-Dinitrobenzene	ND	0.033	EPA 8270D	9-1-18	9-4-18	
Acenaphthylene	ND	0.0067	EPA 8270D/SIM	9-1-18	9-4-18	
3-Nitroaniline	ND	0.033	EPA 8270D	9-1-18	9-4-18	



Date of Report: September 26, 2018
 Samples Submitted: August 21, 2018
 Laboratory Reference: 1808-217B
 Project: 397-019

**SEMIVOLATILE ORGANICS EPA 8270D/SIM
 METHOD BLANK QUALITY CONTROL**

page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0901S1					
2,4-Dinitrophenol	ND	0.17	EPA 8270D	9-1-18	9-4-18	
Acenaphthene	ND	0.0067	EPA 8270D/SIM	9-1-18	9-4-18	
4-Nitrophenol	ND	0.033	EPA 8270D	9-1-18	9-4-18	
2,4-Dinitrotoluene	ND	0.033	EPA 8270D	9-1-18	9-4-18	
Dibenzofuran	ND	0.033	EPA 8270D	9-1-18	9-4-18	
2,3,5,6-Tetrachlorophenol	ND	0.033	EPA 8270D	9-1-18	9-4-18	
2,3,4,6-Tetrachlorophenol	ND	0.033	EPA 8270D	9-1-18	9-4-18	
Diethylphthalate	ND	0.17	EPA 8270D	9-1-18	9-4-18	
4-Chlorophenyl-phenylether	ND	0.033	EPA 8270D	9-1-18	9-4-18	
4-Nitroaniline	ND	0.033	EPA 8270D	9-1-18	9-4-18	
Fluorene	ND	0.0067	EPA 8270D/SIM	9-1-18	9-4-18	
4,6-Dinitro-2-methylphenol	ND	0.17	EPA 8270D	9-1-18	9-4-18	
n-Nitrosodiphenylamine	ND	0.033	EPA 8270D	9-1-18	9-4-18	
1,2-Diphenylhydrazine	ND	0.033	EPA 8270D	9-1-18	9-4-18	
4-Bromophenyl-phenylether	ND	0.033	EPA 8270D	9-1-18	9-4-18	
Hexachlorobenzene	ND	0.033	EPA 8270D	9-1-18	9-4-18	
Pentachlorophenol	ND	0.17	EPA 8270D	9-1-18	9-4-18	
Phenanthrene	ND	0.0067	EPA 8270D/SIM	9-1-18	9-4-18	
Anthracene	ND	0.0067	EPA 8270D/SIM	9-1-18	9-4-18	
Carbazole	ND	0.033	EPA 8270D	9-1-18	9-4-18	
Di-n-butylphthalate	ND	0.17	EPA 8270D	9-1-18	9-4-18	
Fluoranthene	ND	0.0067	EPA 8270D/SIM	9-1-18	9-4-18	
Benzidine	ND	0.33	EPA 8270D	9-1-18	9-4-18	
Pyrene	ND	0.0067	EPA 8270D/SIM	9-1-18	9-4-18	
Butylbenzylphthalate	ND	0.17	EPA 8270D	9-1-18	9-4-18	
bis-2-Ethylhexyladipate	ND	0.17	EPA 8270D	9-1-18	9-4-18	
3,3'-Dichlorobenzidine	ND	0.17	EPA 8270D	9-1-18	9-4-18	
Benzo[a]anthracene	ND	0.0067	EPA 8270D/SIM	9-1-18	9-4-18	
Chrysene	ND	0.0067	EPA 8270D/SIM	9-1-18	9-4-18	
bis(2-Ethylhexyl)phthalate	ND	0.17	EPA 8270D	9-1-18	9-4-18	
Di-n-octylphthalate	ND	0.17	EPA 8270D	9-1-18	9-4-18	
Benzo[b]fluoranthene	ND	0.0067	EPA 8270D/SIM	9-1-18	9-4-18	
Benzo(j,k)fluoranthene	ND	0.0067	EPA 8270D/SIM	9-1-18	9-4-18	
Benzo[a]pyrene	ND	0.0067	EPA 8270D/SIM	9-1-18	9-4-18	
Indeno[1,2,3-cd]pyrene	ND	0.0067	EPA 8270D/SIM	9-1-18	9-4-18	
Dibenz[a,h]anthracene	ND	0.0067	EPA 8270D/SIM	9-1-18	9-4-18	
Benzo[g,h,i]perylene	ND	0.0067	EPA 8270D/SIM	9-1-18	9-4-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorophenol</i>	<i>89</i>	<i>19 - 103</i>				
<i>Phenol-d6</i>	<i>91</i>	<i>30 - 103</i>				
<i>Nitrobenzene-d5</i>	<i>75</i>	<i>27 - 105</i>				
<i>2-Fluorobiphenyl</i>	<i>83</i>	<i>36 - 102</i>				
<i>2,4,6-Tribromophenol</i>	<i>99</i>	<i>33 - 110</i>				
<i>Terphenyl-d14</i>	<i>101</i>	<i>38 - 108</i>				



Date of Report: September 26, 2018
 Samples Submitted: August 21, 2018
 Laboratory Reference: 1808-217B
 Project: 397-019

**PAHs EPA 8270D/SIM
 SB/SBD QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery	RPD	RPD	Flags
					Recovery	Limits	Limits	Limit		
SPIKE BLANKS										
Laboratory ID:	SB0901S1									
	SB	SBD	SB	SBD	SB	SBD				
Phenol	1.09	1.18	1.33	1.33	82	89	45 - 94	8	29	
2-Chlorophenol	1.03	1.10	1.33	1.33	77	83	46 - 94	7	33	
1,4-Dichlorobenzene	0.521	0.524	0.667	0.667	78	79	42 - 91	1	37	
n-Nitroso-di-n-propylamine	0.526	0.582	0.667	0.667	79	87	45 - 100	10	26	
1,2,4-Trichlorobenzene	0.519	0.555	0.667	0.667	78	83	45 - 100	7	32	
4-Chloro-3-methylphenol	1.04	1.19	1.33	1.33	78	89	55 - 97	13	21	
Acenaphthene	0.533	0.577	0.667	0.667	80	87	48 - 91	8	21	
4-Nitrophenol	0.917	1.03	1.33	1.33	69	77	53 - 102	12	20	
2,4-Dinitrotoluene	0.407	0.460	0.667	0.667	61	69	47 - 96	12	19	
Pentachlorophenol	1.08	1.26	1.33	1.33	81	95	35 - 125	15	26	
Pyrene	0.581	0.627	0.667	0.667	87	94	55 - 110	8	17	
<i>Surrogate:</i>										
2-Fluorophenol					81	82	19 - 103			
Phenol-d6					79	84	30 - 103			
Nitrobenzene-d5					69	74	27 - 105			
2-Fluorobiphenyl					76	78	36 - 102			
2,4,6-Tribromophenol					84	91	33 - 110			
Terphenyl-d14					85	87	38 - 108			





Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
 - B - The analyte indicated was also found in the blank sample.
 - C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
 - E - The value reported exceeds the quantitation range and is an estimate.
 - F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
 - H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
 - I - Compound recovery is outside of the control limits.
 - J - The value reported was below the practical quantitation limit. The value is an estimate.
 - K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
 - L - The RPD is outside of the control limits.
 - M - Hydrocarbons in the gasoline range are impacting the diesel range result.
 - M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
 - N - Hydrocarbons in the lube oil range are impacting the diesel range result.
 - N1 - Hydrocarbons in diesel range are impacting lube oil range results.
 - O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
 - P - The RPD of the detected concentrations between the two columns is greater than 40.
 - Q - Surrogate recovery is outside of the control limits.
 - S - Surrogate recovery data is not available due to the necessary dilution of the sample.
 - T - The sample chromatogram is not similar to a typical _____.
 - U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
 - U1 - The practical quantitation limit is elevated due to interferences present in the sample.
 - V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
 - W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
 - X - Sample extract treated with a mercury cleanup procedure.
 - X1 - Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
 - Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
 - Z -
- ND - Not Detected at PQL
 PQL - Practical Quantitation Limit
 RPD - Relative Percent Difference





MVA Onsite Environmental Inc.
 Analytical Laboratory / Testing Services
 14648 NE 95th Street • Redmond, WA 98052
 Phone: (425) 883-3881 • www.onsite-env.com

Chain of Custody

Turnaround Request
(in working days)

(Check One)

Same Day 1 Day

2 Days 3 Days

Standard (7 Days)
(TPH analysis 5 Days)

(other)

Laboratory Number: **08-217**

Company: **Fire Alcon**
 Project Number: **397-019**
 Project Name: **Block 38 West Property**
 Project Manager: **Joson Runk**
 Sampled by: **Greg Peters**

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers
1	FB-02-30-082018	8/20/18	1555	Soil	5
2	FB-02-50-082018		1220		
3	FB-02-100-082018		1235		
4	FB-02-150-082018		1245		
5	FB-02-200-082018		1310		
6	FB-02-250-082018		1430		
7	FB-02-300-082018		1454		
8	FB-02-350-082018		1520		

Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (<input type="checkbox"/> Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	% Moisture
5		X	X	X				X										X
		X	X	X														X
																		X
																		X
																		X
																		X
																		X
																		X

Signature	Company	Date	Time	Comments/Special Instructions
<i>[Signature]</i>	foradkin	8/20/18	1845	
<i>[Signature]</i>	OGE	8/21/18	1000	

Relinquished
 Received
 Relinquished
 Received
 Relinquished
 Received
 Reviewed/Date

Reviewed/Date

Chromatograms with final report Electronic Data Deliverables (EDDs)

ADAMSIS reanalysis 9/22/18. DS (57)



14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

August 27, 2018

Javan Ruark
Farallon Consulting, LLC
975 5th Avenue NW
Issaquah, WA 98027

Re: Analytical Data for Project 397-019
Laboratory Reference No. 1808-229

Dear Javan:

Enclosed are the analytical results and associated quality control data for samples submitted on August 22, 2018.

Please note that the data for the additionally requested analyses will follow in the final report.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "D. Baumeister", with a long horizontal flourish extending to the right.

David Baumeister
Project Manager

Enclosures



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: August 27, 2018
Samples Submitted: August 22, 2018
Laboratory Reference: 1808-229
Project: 397-019

Case Narrative

Samples were collected on August 21, 2018 and received by the laboratory on August 22, 2018. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

NWTPH Gx/BTEX Analysis

The MTCA Method A cleanup level of 0.030 ppm for Benzene is not achievable for sample FB-04-5.0-082118 due to the low dry weight of the sample.

Total Metals EPA 6010D/7471B Analysis

The duplicate RPD for Chromium is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

Please note that any other QA/QC issues associated with these extractions and analyses will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.



Date of Report: August 27, 2018
 Samples Submitted: August 22, 2018
 Laboratory Reference: 1808-229
 Project: 397-019

**GASOLINE RANGE ORGANICS/BTEX
 NWTPH-Gx/EPA 8021B**

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FB-04-5.0-082118					
Laboratory ID:	08-229-02					
Benzene	ND	0.033	EPA 8021B	8-22-18	8-22-18	
Toluene	ND	0.16	EPA 8021B	8-22-18	8-22-18	
Ethyl Benzene	ND	0.16	EPA 8021B	8-22-18	8-22-18	
m,p-Xylene	ND	0.16	EPA 8021B	8-22-18	8-22-18	
o-Xylene	ND	0.16	EPA 8021B	8-22-18	8-22-18	
Gasoline	ND	16	NWTPH-Gx	8-22-18	8-22-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	104	57-129				
Client ID:	FB-04-20.0-082118					
Laboratory ID:	08-229-05					
Benzene	ND	0.020	EPA 8021B	8-22-18	8-22-18	
Toluene	ND	0.053	EPA 8021B	8-22-18	8-22-18	
Ethyl Benzene	ND	0.053	EPA 8021B	8-22-18	8-22-18	
m,p-Xylene	ND	0.053	EPA 8021B	8-22-18	8-22-18	
o-Xylene	ND	0.053	EPA 8021B	8-22-18	8-22-18	
Gasoline	ND	5.3	NWTPH-Gx	8-22-18	8-22-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	85	57-129				
Client ID:	FB-04-30.0-082118					
Laboratory ID:	08-229-07					
Benzene	ND	0.020	EPA 8021B	8-22-18	8-22-18	
Toluene	ND	0.055	EPA 8021B	8-22-18	8-22-18	
Ethyl Benzene	ND	0.055	EPA 8021B	8-22-18	8-22-18	
m,p-Xylene	ND	0.055	EPA 8021B	8-22-18	8-22-18	
o-Xylene	ND	0.055	EPA 8021B	8-22-18	8-22-18	
Gasoline	ND	5.5	NWTPH-Gx	8-22-18	8-22-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	88	57-129				



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**GASOLINE RANGE ORGANICS/BTEX
 NWTPH-Gx/EPA 8021B**

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FB-01-5.0-082118					
Laboratory ID:	08-229-08					
Benzene	ND	0.020	EPA 8021B	8-22-18	8-22-18	
Toluene	ND	0.062	EPA 8021B	8-22-18	8-22-18	
Ethyl Benzene	ND	0.062	EPA 8021B	8-22-18	8-22-18	
m,p-Xylene	ND	0.062	EPA 8021B	8-22-18	8-22-18	
o-Xylene	ND	0.062	EPA 8021B	8-22-18	8-22-18	
Gasoline	ND	6.2	NWTPH-Gx	8-22-18	8-22-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	90	57-129				
Client ID:	FB-01-15.0-082118					
Laboratory ID:	08-229-09					
Benzene	ND	0.020	EPA 8021B	8-22-18	8-22-18	
Toluene	ND	0.091	EPA 8021B	8-22-18	8-22-18	
Ethyl Benzene	ND	0.091	EPA 8021B	8-22-18	8-22-18	
m,p-Xylene	ND	0.091	EPA 8021B	8-22-18	8-22-18	
o-Xylene	ND	0.091	EPA 8021B	8-22-18	8-22-18	
Gasoline	ND	9.1	NWTPH-Gx	8-22-18	8-22-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	105	57-129				
Client ID:	FB-01-30.0-082118					
Laboratory ID:	08-229-12					
Benzene	ND	0.020	EPA 8021B	8-22-18	8-22-18	
Toluene	ND	0.051	EPA 8021B	8-22-18	8-22-18	
Ethyl Benzene	ND	0.051	EPA 8021B	8-22-18	8-22-18	
m,p-Xylene	ND	0.051	EPA 8021B	8-22-18	8-22-18	
o-Xylene	ND	0.051	EPA 8021B	8-22-18	8-22-18	
Gasoline	ND	5.1	NWTPH-Gx	8-22-18	8-22-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	85	57-129				



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**GASOLINE RANGE ORGANICS/BTEX
 NWTPH-Gx/EPA 8021B
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0822S1					
Benzene	ND	0.020	EPA 8021B	8-22-18	8-22-18	
Toluene	ND	0.050	EPA 8021B	8-22-18	8-22-18	
Ethyl Benzene	ND	0.050	EPA 8021B	8-22-18	8-22-18	
m,p-Xylene	ND	0.050	EPA 8021B	8-22-18	8-22-18	
o-Xylene	ND	0.050	EPA 8021B	8-22-18	8-22-18	
Gasoline	ND	5.0	NWTPH-Gx	8-22-18	8-22-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	83	57-129				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	08-229-02							
	ORIG	DUP						
Benzene	ND	ND	NA	NA	NA	NA	30	
Toluene	ND	ND	NA	NA	NA	NA	30	
Ethyl Benzene	ND	ND	NA	NA	NA	NA	30	
m,p-Xylene	ND	ND	NA	NA	NA	NA	30	
o-Xylene	ND	ND	NA	NA	NA	NA	30	
Gasoline	ND	ND	NA	NA	NA	NA	30	
<i>Surrogate:</i>								
<i>Fluorobenzene</i>				104	102	57-129		

SPIKE BLANKS

Laboratory ID:	SB0822S1							
	SB	SBD	SB	SBD	SB	SBD		
Benzene	0.855	0.924	1.00	1.00	86	92	69-111	8 10
Toluene	0.842	0.912	1.00	1.00	84	91	70-114	8 11
Ethyl Benzene	0.843	0.915	1.00	1.00	84	92	70-115	8 10
m,p-Xylene	0.826	0.900	1.00	1.00	83	90	72-115	9 10
o-Xylene	0.853	0.919	1.00	1.00	85	92	71-115	7 11
<i>Surrogate:</i>								
<i>Fluorobenzene</i>					83	89	57-129	



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**DIESEL AND HEAVY OIL RANGE ORGANICS
 NWTPH-Dx**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FB-01-5.0-082118					
Laboratory ID:	08-229-08					
Diesel Range Organics	520	320	NWTPH-Dx	8-22-18	8-24-18	
Lube Oil Range Organics	3700	640	NWTPH-Dx	8-22-18	8-24-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	---	50-150				S

Client ID:	FB-01-15.0-082118					
Laboratory ID:	08-229-09					
Diesel Range Organics	ND	40	NWTPH-Dx	8-22-18	8-23-18	
Lube Oil Range Organics	250	81	NWTPH-Dx	8-22-18	8-23-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	116	50-150				

Client ID:	FB-01-30.0-082118					
Laboratory ID:	08-229-12					
Diesel Range Organics	ND	29	NWTPH-Dx	8-22-18	8-23-18	
Lube Oil Range Organics	ND	58	NWTPH-Dx	8-22-18	8-23-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	89	50-150				



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**DIESEL AND HEAVY OIL RANGE ORGANICS
 NWTPH-Dx
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0822S4					
Diesel Range Organics	ND	25	NWTPH-Dx	8-22-18	8-22-18	
Lube Oil Range Organics	ND	50	NWTPH-Dx	8-22-18	8-22-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	131	50-150				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	08-231-10							
	ORIG	DUP						
Diesel Range	ND	ND	NA	NA	NA	NA	NA	NA
Lube Oil Range	ND	ND	NA	NA	NA	NA	NA	NA
<i>Surrogate:</i>								
<i>o-Terphenyl</i>				55	64	50-150		



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**DIESEL AND HEAVY OIL RANGE ORGANICS
 NWTPH-Dx**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FB-01-5.0-082118					
Laboratory ID:	08-229-08					
Diesel Range Organics	510	160	NWTPH-Dx	8-22-18	8-25-18	X1,N
Lube Oil Range Organics	1100	320	NWTPH-Dx	8-22-18	8-25-18	X1
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	<i>109</i>	<i>50-150</i>				

Client ID:	FB-01-15.0-082118					
Laboratory ID:	08-229-09					
Diesel Range Organics	ND	40	NWTPH-Dx	8-22-18	8-25-18	X1
Lube Oil Range Organics	ND	81	NWTPH-Dx	8-22-18	8-25-18	X1
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	<i>97</i>	<i>50-150</i>				



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**DIESEL AND HEAVY OIL RANGE ORGANICS
 NWTPH-Dx
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0822S4					
Diesel Range Organics	ND	25	NWTPH-Dx	8-22-18	8-25-18	X1
Lube Oil Range Organics	ND	50	NWTPH-Dx	8-22-18	8-25-18	X1
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	102	50-150				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	08-231-10							
	ORIG	DUP						
Diesel Range	ND	ND	NA	NA	NA	NA	NA	NA
Lube Oil Range	ND	ND	NA	NA	NA	NA	NA	NA
<i>Surrogate:</i>								
<i>o-Terphenyl</i>			55	64	50-150			



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**DIESEL AND HEAVY OIL RANGE ORGANICS
 NWTPH-Dx**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FB-04-5.0-082118					
Laboratory ID:	08-229-02					
Diesel Range Organics	97	55	NWTPH-Dx	8-23-18	8-23-18	N
Lube Oil Range Organics	540	110	NWTPH-Dx	8-23-18	8-23-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	85	50-150				

Client ID:	FB-04-20.0-082118					
Laboratory ID:	08-229-05					
Diesel Range Organics	ND	29	NWTPH-Dx	8-23-18	8-23-18	
Lube Oil Range Organics	ND	58	NWTPH-Dx	8-23-18	8-23-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	96	50-150				

Client ID:	FB-04-30.0-082118					
Laboratory ID:	08-229-07					
Diesel Range Organics	ND	30	NWTPH-Dx	8-23-18	8-23-18	
Lube Oil Range Organics	ND	59	NWTPH-Dx	8-23-18	8-23-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	86	50-150				



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**DIESEL AND HEAVY OIL RANGE ORGANICS
 NWTPH-Dx
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0823S2					
Diesel Range Organics	ND	25	NWTPH-Dx	8-23-18	8-23-18	
Lube Oil Range Organics	ND	50	NWTPH-Dx	8-23-18	8-23-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	<i>94</i>	<i>50-150</i>				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	08-229-05							
	ORIG	DUP						
Diesel Range	ND	ND	NA	NA	NA	NA	NA	NA
Lube Oil Range	ND	ND	NA	NA	NA	NA	NA	NA
<i>Surrogate:</i>								
<i>o-Terphenyl</i>				96	63	50-150		



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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FB-04-20.0-082118					
Laboratory ID:	08-229-05					
Dichlorodifluoromethane	ND	0.0013	EPA 8260C	8-22-18	8-22-18	
Chloromethane	ND	0.0046	EPA 8260C	8-22-18	8-22-18	
Vinyl Chloride	ND	0.00093	EPA 8260C	8-22-18	8-22-18	
Bromomethane	ND	0.00093	EPA 8260C	8-22-18	8-22-18	
Chloroethane	ND	0.0046	EPA 8260C	8-22-18	8-22-18	
Trichlorofluoromethane	ND	0.00093	EPA 8260C	8-22-18	8-22-18	
1,1-Dichloroethene	ND	0.00093	EPA 8260C	8-22-18	8-22-18	
Iodomethane	ND	0.0046	EPA 8260C	8-22-18	8-22-18	
Methylene Chloride	ND	0.0046	EPA 8260C	8-22-18	8-22-18	
(trans) 1,2-Dichloroethene	ND	0.00093	EPA 8260C	8-22-18	8-22-18	
1,1-Dichloroethane	ND	0.00093	EPA 8260C	8-22-18	8-22-18	
2,2-Dichloropropane	ND	0.00093	EPA 8260C	8-22-18	8-22-18	
(cis) 1,2-Dichloroethene	ND	0.00093	EPA 8260C	8-22-18	8-22-18	
Bromochloromethane	ND	0.00093	EPA 8260C	8-22-18	8-22-18	
Chloroform	ND	0.00093	EPA 8260C	8-22-18	8-22-18	
1,1,1-Trichloroethane	ND	0.00093	EPA 8260C	8-22-18	8-22-18	
Carbon Tetrachloride	ND	0.00093	EPA 8260C	8-22-18	8-22-18	
1,1-Dichloropropene	ND	0.00093	EPA 8260C	8-22-18	8-22-18	
1,2-Dichloroethane	ND	0.00093	EPA 8260C	8-22-18	8-22-18	
Trichloroethene	ND	0.00093	EPA 8260C	8-22-18	8-22-18	
1,2-Dichloropropane	ND	0.00093	EPA 8260C	8-22-18	8-22-18	
Dibromomethane	ND	0.00093	EPA 8260C	8-22-18	8-22-18	
Bromodichloromethane	ND	0.00093	EPA 8260C	8-22-18	8-22-18	
2-Chloroethyl Vinyl Ether	ND	0.0046	EPA 8260C	8-22-18	8-22-18	
(cis) 1,3-Dichloropropene	ND	0.00093	EPA 8260C	8-22-18	8-22-18	
(trans) 1,3-Dichloropropene	ND	0.00093	EPA 8260C	8-22-18	8-22-18	



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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FB-04-20.0-082118					
Laboratory ID:	08-229-05					
1,1,2-Trichloroethane	ND	0.00093	EPA 8260C	8-22-18	8-22-18	
Tetrachloroethene	ND	0.00093	EPA 8260C	8-22-18	8-22-18	
1,3-Dichloropropane	ND	0.00093	EPA 8260C	8-22-18	8-22-18	
Dibromochloromethane	ND	0.00093	EPA 8260C	8-22-18	8-22-18	
1,2-Dibromoethane	ND	0.00093	EPA 8260C	8-22-18	8-22-18	
Chlorobenzene	ND	0.00093	EPA 8260C	8-22-18	8-22-18	
1,1,1,2-Tetrachloroethane	ND	0.00093	EPA 8260C	8-22-18	8-22-18	
Bromoform	ND	0.0046	EPA 8260C	8-22-18	8-22-18	
Bromobenzene	ND	0.00093	EPA 8260C	8-22-18	8-22-18	
1,1,2,2-Tetrachloroethane	ND	0.00093	EPA 8260C	8-22-18	8-22-18	
1,2,3-Trichloropropane	ND	0.0012	EPA 8260C	8-22-18	8-22-18	
2-Chlorotoluene	ND	0.00093	EPA 8260C	8-22-18	8-22-18	
4-Chlorotoluene	ND	0.00093	EPA 8260C	8-22-18	8-22-18	
1,3-Dichlorobenzene	ND	0.00093	EPA 8260C	8-22-18	8-22-18	
1,4-Dichlorobenzene	ND	0.00093	EPA 8260C	8-22-18	8-22-18	
1,2-Dichlorobenzene	ND	0.00093	EPA 8260C	8-22-18	8-22-18	
1,2-Dibromo-3-chloropropane	ND	0.0060	EPA 8260C	8-22-18	8-22-18	
1,2,4-Trichlorobenzene	ND	0.00093	EPA 8260C	8-22-18	8-22-18	
Hexachlorobutadiene	ND	0.0046	EPA 8260C	8-22-18	8-22-18	
1,2,3-Trichlorobenzene	ND	0.00093	EPA 8260C	8-22-18	8-22-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>95</i>	<i>68-139</i>				
<i>Toluene-d8</i>	<i>100</i>	<i>79-128</i>				
<i>4-Bromofluorobenzene</i>	<i>103</i>	<i>71-132</i>				



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METHOD BLANK QUALITY CONTROL
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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0822S1					
Dichlorodifluoromethane	ND	0.0014	EPA 8260C	8-22-18	8-22-18	
Chloromethane	ND	0.0050	EPA 8260C	8-22-18	8-22-18	
Vinyl Chloride	ND	0.0010	EPA 8260C	8-22-18	8-22-18	
Bromomethane	ND	0.0010	EPA 8260C	8-22-18	8-22-18	
Chloroethane	ND	0.0050	EPA 8260C	8-22-18	8-22-18	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	8-22-18	8-22-18	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	8-22-18	8-22-18	
Iodomethane	ND	0.0050	EPA 8260C	8-22-18	8-22-18	
Methylene Chloride	ND	0.0050	EPA 8260C	8-22-18	8-22-18	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	8-22-18	8-22-18	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	8-22-18	8-22-18	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	8-22-18	8-22-18	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	8-22-18	8-22-18	
Bromochloromethane	ND	0.0010	EPA 8260C	8-22-18	8-22-18	
Chloroform	ND	0.0010	EPA 8260C	8-22-18	8-22-18	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	8-22-18	8-22-18	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	8-22-18	8-22-18	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	8-22-18	8-22-18	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	8-22-18	8-22-18	
Trichloroethene	ND	0.0010	EPA 8260C	8-22-18	8-22-18	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	8-22-18	8-22-18	
Dibromomethane	ND	0.0010	EPA 8260C	8-22-18	8-22-18	
Bromodichloromethane	ND	0.0010	EPA 8260C	8-22-18	8-22-18	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260C	8-22-18	8-22-18	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	8-22-18	8-22-18	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	8-22-18	8-22-18	



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METHOD BLANK QUALITY CONTROL
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0822S1					
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	8-22-18	8-22-18	
Tetrachloroethene	ND	0.0010	EPA 8260C	8-22-18	8-22-18	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	8-22-18	8-22-18	
Dibromochloromethane	ND	0.0010	EPA 8260C	8-22-18	8-22-18	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	8-22-18	8-22-18	
Chlorobenzene	ND	0.0010	EPA 8260C	8-22-18	8-22-18	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	8-22-18	8-22-18	
Bromoform	ND	0.0050	EPA 8260C	8-22-18	8-22-18	
Bromobenzene	ND	0.0010	EPA 8260C	8-22-18	8-22-18	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	8-22-18	8-22-18	
1,2,3-Trichloropropane	ND	0.0013	EPA 8260C	8-22-18	8-22-18	
2-Chlorotoluene	ND	0.0010	EPA 8260C	8-22-18	8-22-18	
4-Chlorotoluene	ND	0.0010	EPA 8260C	8-22-18	8-22-18	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	8-22-18	8-22-18	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	8-22-18	8-22-18	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	8-22-18	8-22-18	
1,2-Dibromo-3-chloropropane	ND	0.0065	EPA 8260C	8-22-18	8-22-18	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	8-22-18	8-22-18	
Hexachlorobutadiene	ND	0.0050	EPA 8260C	8-22-18	8-22-18	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	8-22-18	8-22-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>97</i>	<i>68-139</i>				
<i>Toluene-d8</i>	<i>100</i>	<i>79-128</i>				
<i>4-Bromofluorobenzene</i>	<i>104</i>	<i>71-132</i>				



Date of Report: August 27, 2018
 Samples Submitted: August 22, 2018
 Laboratory Reference: 1808-229
 Project: 397-019

**VOLATILE ORGANICS EPA 8260C
 SB/SBD QUALITY CONTROL**

Matrix: Soil
 Units: mg/kg

Analyte	Result		Spike Level		Percent Recovery		Recovery	RPD		Flags
					Recovery	Limits	RPD	Limit		
SPIKE BLANKS										
Laboratory ID:	SB0822S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	0.0491	0.0531	0.0500	0.0500	98	106	53-141	8	17	
Benzene	0.0466	0.0535	0.0500	0.0500	93	107	70-130	14	15	
Trichloroethene	0.0469	0.0529	0.0500	0.0500	94	106	74-122	12	16	
Toluene	0.0490	0.0543	0.0500	0.0500	98	109	76-130	10	15	
Chlorobenzene	0.0444	0.0496	0.0500	0.0500	89	99	75-120	11	14	
<i>Surrogate:</i>										
<i>Dibromofluoromethane</i>					96	91	68-139			
<i>Toluene-d8</i>					103	100	79-128			
<i>4-Bromofluorobenzene</i>					103	104	71-132			



Date of Report: August 27, 2018
 Samples Submitted: August 22, 2018
 Laboratory Reference: 1808-229
 Project: 397-019

VOLATILE ORGANICS EPA 8260C
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Matrix: Water
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	Potable-082118					
Laboratory ID:	08-229-16					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	8-23-18	8-23-18	
Chloromethane	ND	1.0	EPA 8260C	8-23-18	8-23-18	
Vinyl Chloride	ND	0.20	EPA 8260C	8-23-18	8-23-18	
Bromomethane	ND	2.0	EPA 8260C	8-23-18	8-23-18	
Chloroethane	ND	1.0	EPA 8260C	8-23-18	8-23-18	
Trichlorofluoromethane	ND	0.20	EPA 8260C	8-23-18	8-23-18	
1,1-Dichloroethene	ND	0.20	EPA 8260C	8-23-18	8-23-18	
Acetone	10	5.0	EPA 8260C	8-23-18	8-23-18	
Iodomethane	ND	5.0	EPA 8260C	8-23-18	8-23-18	
Carbon Disulfide	ND	0.20	EPA 8260C	8-23-18	8-23-18	
Methylene Chloride	ND	1.0	EPA 8260C	8-23-18	8-23-18	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	8-23-18	8-23-18	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	8-23-18	8-23-18	
1,1-Dichloroethane	ND	0.20	EPA 8260C	8-23-18	8-23-18	
Vinyl Acetate	ND	1.0	EPA 8260C	8-23-18	8-23-18	
2,2-Dichloropropane	ND	0.20	EPA 8260C	8-23-18	8-23-18	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	8-23-18	8-23-18	
2-Butanone	ND	5.0	EPA 8260C	8-23-18	8-23-18	
Bromochloromethane	ND	0.20	EPA 8260C	8-23-18	8-23-18	
Chloroform	16	0.20	EPA 8260C	8-23-18	8-23-18	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	8-23-18	8-23-18	
Carbon Tetrachloride	ND	0.20	EPA 8260C	8-23-18	8-23-18	
1,1-Dichloropropene	ND	0.20	EPA 8260C	8-23-18	8-23-18	
Benzene	ND	0.20	EPA 8260C	8-23-18	8-23-18	
1,2-Dichloroethane	ND	0.20	EPA 8260C	8-23-18	8-23-18	
Trichloroethene	ND	0.20	EPA 8260C	8-23-18	8-23-18	
1,2-Dichloropropane	ND	0.20	EPA 8260C	8-23-18	8-23-18	
Dibromomethane	ND	0.20	EPA 8260C	8-23-18	8-23-18	
Bromodichloromethane	1.6	0.20	EPA 8260C	8-23-18	8-23-18	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	8-23-18	8-23-18	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	8-23-18	8-23-18	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260C	8-23-18	8-23-18	
Toluene	ND	1.0	EPA 8260C	8-23-18	8-23-18	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	8-23-18	8-23-18	



Date of Report: August 27, 2018
 Samples Submitted: August 22, 2018
 Laboratory Reference: 1808-229
 Project: 397-019

VOLATILE ORGANICS EPA 8260C
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	Potable-082118					
Laboratory ID:	08-229-16					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	8-23-18	8-23-18	
Tetrachloroethene	ND	0.20	EPA 8260C	8-23-18	8-23-18	
1,3-Dichloropropane	ND	0.20	EPA 8260C	8-23-18	8-23-18	
2-Hexanone	ND	2.0	EPA 8260C	8-23-18	8-23-18	
Dibromochloromethane	ND	0.20	EPA 8260C	8-23-18	8-23-18	
1,2-Dibromoethane	ND	0.20	EPA 8260C	8-23-18	8-23-18	
Chlorobenzene	ND	0.20	EPA 8260C	8-23-18	8-23-18	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	8-23-18	8-23-18	
Ethylbenzene	ND	0.20	EPA 8260C	8-23-18	8-23-18	
m,p-Xylene	ND	0.40	EPA 8260C	8-23-18	8-23-18	
o-Xylene	ND	0.20	EPA 8260C	8-23-18	8-23-18	
Styrene	ND	0.20	EPA 8260C	8-23-18	8-23-18	
Bromoform	ND	1.0	EPA 8260C	8-23-18	8-23-18	
Isopropylbenzene	ND	0.20	EPA 8260C	8-23-18	8-23-18	
Bromobenzene	ND	0.20	EPA 8260C	8-23-18	8-23-18	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	8-23-18	8-23-18	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	8-23-18	8-23-18	
n-Propylbenzene	ND	0.20	EPA 8260C	8-23-18	8-23-18	
2-Chlorotoluene	ND	0.20	EPA 8260C	8-23-18	8-23-18	
4-Chlorotoluene	ND	0.20	EPA 8260C	8-23-18	8-23-18	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	8-23-18	8-23-18	
tert-Butylbenzene	ND	0.20	EPA 8260C	8-23-18	8-23-18	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	8-23-18	8-23-18	
sec-Butylbenzene	ND	0.20	EPA 8260C	8-23-18	8-23-18	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	8-23-18	8-23-18	
p-Isopropyltoluene	ND	0.20	EPA 8260C	8-23-18	8-23-18	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	8-23-18	8-23-18	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	8-23-18	8-23-18	
n-Butylbenzene	ND	0.20	EPA 8260C	8-23-18	8-23-18	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	8-23-18	8-23-18	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	8-23-18	8-23-18	
Hexachlorobutadiene	ND	1.0	EPA 8260C	8-23-18	8-23-18	
Naphthalene	ND	1.0	EPA 8260C	8-23-18	8-23-18	
1,2,3-Trichlorobenzene	ND	0.26	EPA 8260C	8-23-18	8-23-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>90</i>	<i>75-127</i>				
<i>Toluene-d8</i>	<i>85</i>	<i>80-127</i>				
<i>4-Bromofluorobenzene</i>	<i>96</i>	<i>78-125</i>				



Date of Report: August 27, 2018
 Samples Submitted: August 22, 2018
 Laboratory Reference: 1808-229
 Project: 397-019

VOLATILE ORGANICS EPA 8260C
METHOD BLANK QUALITY CONTROL
 page 1 of 2

Matrix: Water
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0823W1					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	8-23-18	8-23-18	
Chloromethane	ND	1.0	EPA 8260C	8-23-18	8-23-18	
Vinyl Chloride	ND	0.20	EPA 8260C	8-23-18	8-23-18	
Bromomethane	ND	2.0	EPA 8260C	8-23-18	8-23-18	
Chloroethane	ND	1.0	EPA 8260C	8-23-18	8-23-18	
Trichlorofluoromethane	ND	0.20	EPA 8260C	8-23-18	8-23-18	
1,1-Dichloroethene	ND	0.20	EPA 8260C	8-23-18	8-23-18	
Acetone	ND	5.0	EPA 8260C	8-23-18	8-23-18	
Iodomethane	ND	5.0	EPA 8260C	8-23-18	8-23-18	
Carbon Disulfide	ND	0.20	EPA 8260C	8-23-18	8-23-18	
Methylene Chloride	ND	1.0	EPA 8260C	8-23-18	8-23-18	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	8-23-18	8-23-18	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	8-23-18	8-23-18	
1,1-Dichloroethane	ND	0.20	EPA 8260C	8-23-18	8-23-18	
Vinyl Acetate	ND	1.0	EPA 8260C	8-23-18	8-23-18	
2,2-Dichloropropane	ND	0.20	EPA 8260C	8-23-18	8-23-18	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	8-23-18	8-23-18	
2-Butanone	ND	5.0	EPA 8260C	8-23-18	8-23-18	
Bromochloromethane	ND	0.20	EPA 8260C	8-23-18	8-23-18	
Chloroform	ND	0.20	EPA 8260C	8-23-18	8-23-18	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	8-23-18	8-23-18	
Carbon Tetrachloride	ND	0.20	EPA 8260C	8-23-18	8-23-18	
1,1-Dichloropropene	ND	0.20	EPA 8260C	8-23-18	8-23-18	
Benzene	ND	0.20	EPA 8260C	8-23-18	8-23-18	
1,2-Dichloroethane	ND	0.20	EPA 8260C	8-23-18	8-23-18	
Trichloroethene	ND	0.20	EPA 8260C	8-23-18	8-23-18	
1,2-Dichloropropane	ND	0.20	EPA 8260C	8-23-18	8-23-18	
Dibromomethane	ND	0.20	EPA 8260C	8-23-18	8-23-18	
Bromodichloromethane	ND	0.20	EPA 8260C	8-23-18	8-23-18	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	8-23-18	8-23-18	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	8-23-18	8-23-18	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260C	8-23-18	8-23-18	
Toluene	ND	1.0	EPA 8260C	8-23-18	8-23-18	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	8-23-18	8-23-18	



Date of Report: August 27, 2018
 Samples Submitted: August 22, 2018
 Laboratory Reference: 1808-229
 Project: 397-019

VOLATILE ORGANICS EPA 8260C
METHOD BLANK QUALITY CONTROL
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0823W1					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	8-23-18	8-23-18	
Tetrachloroethene	ND	0.20	EPA 8260C	8-23-18	8-23-18	
1,3-Dichloropropane	ND	0.20	EPA 8260C	8-23-18	8-23-18	
2-Hexanone	ND	2.0	EPA 8260C	8-23-18	8-23-18	
Dibromochloromethane	ND	0.20	EPA 8260C	8-23-18	8-23-18	
1,2-Dibromoethane	ND	0.20	EPA 8260C	8-23-18	8-23-18	
Chlorobenzene	ND	0.20	EPA 8260C	8-23-18	8-23-18	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	8-23-18	8-23-18	
Ethylbenzene	ND	0.20	EPA 8260C	8-23-18	8-23-18	
m,p-Xylene	ND	0.40	EPA 8260C	8-23-18	8-23-18	
o-Xylene	ND	0.20	EPA 8260C	8-23-18	8-23-18	
Styrene	ND	0.20	EPA 8260C	8-23-18	8-23-18	
Bromoform	ND	1.0	EPA 8260C	8-23-18	8-23-18	
Isopropylbenzene	ND	0.20	EPA 8260C	8-23-18	8-23-18	
Bromobenzene	ND	0.20	EPA 8260C	8-23-18	8-23-18	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	8-23-18	8-23-18	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	8-23-18	8-23-18	
n-Propylbenzene	ND	0.20	EPA 8260C	8-23-18	8-23-18	
2-Chlorotoluene	ND	0.20	EPA 8260C	8-23-18	8-23-18	
4-Chlorotoluene	ND	0.20	EPA 8260C	8-23-18	8-23-18	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	8-23-18	8-23-18	
tert-Butylbenzene	ND	0.20	EPA 8260C	8-23-18	8-23-18	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	8-23-18	8-23-18	
sec-Butylbenzene	ND	0.20	EPA 8260C	8-23-18	8-23-18	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	8-23-18	8-23-18	
p-Isopropyltoluene	ND	0.20	EPA 8260C	8-23-18	8-23-18	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	8-23-18	8-23-18	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	8-23-18	8-23-18	
n-Butylbenzene	ND	0.20	EPA 8260C	8-23-18	8-23-18	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	8-23-18	8-23-18	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	8-23-18	8-23-18	
Hexachlorobutadiene	ND	1.0	EPA 8260C	8-23-18	8-23-18	
Naphthalene	ND	1.0	EPA 8260C	8-23-18	8-23-18	
1,2,3-Trichlorobenzene	ND	0.26	EPA 8260C	8-23-18	8-23-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>89</i>	<i>75-127</i>				
<i>Toluene-d8</i>	<i>89</i>	<i>80-127</i>				
<i>4-Bromofluorobenzene</i>	<i>97</i>	<i>78-125</i>				



Date of Report: August 27, 2018
 Samples Submitted: August 22, 2018
 Laboratory Reference: 1808-229
 Project: 397-019

**VOLATILE ORGANICS EPA 8260C
 SB/SBD QUALITY CONTROL**

Matrix: Water
 Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery	RPD	RPD	Flags
					Recovery	Limits	RPD	Limit		
SPIKE BLANKS										
Laboratory ID:	SB0823W1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	10.8	10.2	10.0	10.0	108	102	62-129	6	15	
Benzene	10.6	9.90	10.0	10.0	106	99	77-127	7	15	
Trichloroethene	10.1	9.52	10.0	10.0	101	95	70-120	6	15	
Toluene	10.4	9.86	10.0	10.0	104	99	82-123	5	15	
Chlorobenzene	10.0	9.49	10.0	10.0	100	95	79-120	5	15	
<i>Surrogate:</i>										
<i>Dibromofluoromethane</i>					89	90	75-127			
<i>Toluene-d8</i>					89	90	80-127			
<i>4-Bromofluorobenzene</i>					96	97	78-125			



Date of Report: August 27, 2018
 Samples Submitted: August 22, 2018
 Laboratory Reference: 1808-229
 Project: 397-019

SEMIVOLATILE ORGANICS EPA 8270D/SIM
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Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FB-01-5.0-082118					
Laboratory ID:	08-229-08					
n-Nitrosodimethylamine	ND	0.86	EPA 8270D	8-22-18	8-24-18	
Pyridine	ND	8.6	EPA 8270D	8-22-18	8-24-18	
Phenol	ND	0.86	EPA 8270D	8-22-18	8-24-18	
Aniline	ND	4.3	EPA 8270D	8-22-18	8-24-18	
bis(2-Chloroethyl)ether	ND	0.86	EPA 8270D	8-22-18	8-24-18	
2-Chlorophenol	ND	0.86	EPA 8270D	8-22-18	8-24-18	
1,3-Dichlorobenzene	ND	0.86	EPA 8270D	8-22-18	8-24-18	
1,4-Dichlorobenzene	ND	0.86	EPA 8270D	8-22-18	8-24-18	
Benzyl alcohol	ND	4.3	EPA 8270D	8-22-18	8-24-18	
1,2-Dichlorobenzene	ND	0.86	EPA 8270D	8-22-18	8-24-18	
2-Methylphenol (o-Cresol)	ND	0.86	EPA 8270D	8-22-18	8-24-18	
bis(2-Chloroisopropyl)ether	ND	0.86	EPA 8270D	8-22-18	8-24-18	
(3+4)-Methylphenol (m,p-Cresol)	ND	0.86	EPA 8270D	8-22-18	8-24-18	
n-Nitroso-di-n-propylamine	ND	0.86	EPA 8270D	8-22-18	8-24-18	
Hexachloroethane	ND	0.86	EPA 8270D	8-22-18	8-24-18	
Nitrobenzene	ND	0.86	EPA 8270D	8-22-18	8-24-18	
Isophorone	ND	0.86	EPA 8270D	8-22-18	8-24-18	
2-Nitrophenol	ND	0.86	EPA 8270D	8-22-18	8-24-18	
2,4-Dimethylphenol	ND	0.86	EPA 8270D	8-22-18	8-24-18	
bis(2-Chloroethoxy)methane	ND	0.86	EPA 8270D	8-22-18	8-24-18	
2,4-Dichlorophenol	ND	0.86	EPA 8270D	8-22-18	8-24-18	
1,2,4-Trichlorobenzene	ND	0.86	EPA 8270D	8-22-18	8-24-18	
Naphthalene	0.99	0.86	EPA 8270D	8-22-18	8-24-18	
4-Chloroaniline	ND	4.3	EPA 8270D	8-22-18	8-24-18	
Hexachlorobutadiene	ND	0.86	EPA 8270D	8-22-18	8-24-18	
4-Chloro-3-methylphenol	ND	0.86	EPA 8270D	8-22-18	8-24-18	
2-Methylnaphthalene	1.2	0.86	EPA 8270D	8-22-18	8-24-18	
1-Methylnaphthalene	1.1	0.86	EPA 8270D	8-22-18	8-24-18	
Hexachlorocyclopentadiene	ND	0.86	EPA 8270D	8-22-18	8-24-18	
2,4,6-Trichlorophenol	ND	0.86	EPA 8270D	8-22-18	8-24-18	
2,3-Dichloroaniline	ND	0.86	EPA 8270D	8-22-18	8-24-18	
2,4,5-Trichlorophenol	ND	0.86	EPA 8270D	8-22-18	8-24-18	
2-Chloronaphthalene	ND	0.86	EPA 8270D	8-22-18	8-24-18	
2-Nitroaniline	ND	0.86	EPA 8270D	8-22-18	8-24-18	
1,4-Dinitrobenzene	ND	0.86	EPA 8270D	8-22-18	8-24-18	
Dimethylphthalate	ND	0.86	EPA 8270D	8-22-18	8-24-18	
1,3-Dinitrobenzene	ND	0.86	EPA 8270D	8-22-18	8-24-18	
2,6-Dinitrotoluene	ND	0.86	EPA 8270D	8-22-18	8-24-18	
1,2-Dinitrobenzene	ND	0.86	EPA 8270D	8-22-18	8-24-18	
Acenaphthylene	0.32	0.034	EPA 8270D/SIM	8-22-18	8-24-18	
3-Nitroaniline	ND	0.86	EPA 8270D	8-22-18	8-24-18	



Date of Report: August 27, 2018
 Samples Submitted: August 22, 2018
 Laboratory Reference: 1808-229
 Project: 397-019

SEMIVOLATILE ORGANICS EPA 8270D/SIM
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FB-01-5.0-082118					
Laboratory ID:	08-229-08					
2,4-Dinitrophenol	ND	4.3	EPA 8270D	8-22-18	8-24-18	
Acenaphthene	0.46	0.034	EPA 8270D/SIM	8-22-18	8-24-18	
4-Nitrophenol	ND	0.86	EPA 8270D	8-22-18	8-24-18	
2,4-Dinitrotoluene	ND	0.86	EPA 8270D	8-22-18	8-24-18	
Dibenzofuran	ND	0.86	EPA 8270D	8-22-18	8-24-18	
2,3,5,6-Tetrachlorophenol	ND	0.86	EPA 8270D	8-22-18	8-24-18	
2,3,4,6-Tetrachlorophenol	ND	0.86	EPA 8270D	8-22-18	8-24-18	
Diethylphthalate	ND	4.3	EPA 8270D	8-22-18	8-24-18	
4-Chlorophenyl-phenylether	ND	0.86	EPA 8270D	8-22-18	8-24-18	
4-Nitroaniline	ND	0.86	EPA 8270D	8-22-18	8-24-18	
Fluorene	0.46	0.034	EPA 8270D/SIM	8-22-18	8-24-18	
4,6-Dinitro-2-methylphenol	ND	4.3	EPA 8270D	8-22-18	8-24-18	
n-Nitrosodiphenylamine	ND	0.86	EPA 8270D	8-22-18	8-24-18	
1,2-Diphenylhydrazine	ND	0.86	EPA 8270D	8-22-18	8-24-18	
4-Bromophenyl-phenylether	ND	0.86	EPA 8270D	8-22-18	8-24-18	
Hexachlorobenzene	ND	0.86	EPA 8270D	8-22-18	8-24-18	
Pentachlorophenol	ND	4.3	EPA 8270D	8-22-18	8-24-18	
Phenanthrene	5.4	0.86	EPA 8270D	8-22-18	8-24-18	
Anthracene	1.0	0.86	EPA 8270D	8-22-18	8-24-18	
Carbazole	ND	0.86	EPA 8270D	8-22-18	8-24-18	
Di-n-butylphthalate	ND	4.3	EPA 8270D	8-22-18	8-24-18	
Fluoranthene	4.8	0.86	EPA 8270D	8-22-18	8-24-18	
Benzidine	ND	8.6	EPA 8270D	8-22-18	8-24-18	
Pyrene	6.8	0.86	EPA 8270D	8-22-18	8-24-18	
Butylbenzylphthalate	ND	4.3	EPA 8270D	8-22-18	8-24-18	
bis-2-Ethylhexyladipate	ND	4.3	EPA 8270D	8-22-18	8-24-18	
3,3'-Dichlorobenzidine	ND	4.3	EPA 8270D	8-22-18	8-24-18	
Benzo[a]anthracene	2.6	0.86	EPA 8270D	8-22-18	8-24-18	
Chrysene	3.1	0.86	EPA 8270D	8-22-18	8-24-18	
bis(2-Ethylhexyl)phthalate	ND	4.3	EPA 8270D	8-22-18	8-24-18	
Di-n-octylphthalate	ND	4.3	EPA 8270D	8-22-18	8-24-18	
Benzo[b]fluoranthene	2.9	0.86	EPA 8270D	8-22-18	8-24-18	
Benzo(j,k)fluoranthene	0.76	0.034	EPA 8270D/SIM	8-22-18	8-24-18	
Benzo[a]pyrene	2.5	0.86	EPA 8270D	8-22-18	8-24-18	
Indeno[1,2,3-cd]pyrene	1.6	0.86	EPA 8270D	8-22-18	8-24-18	
Dibenz[a,h]anthracene	0.45	0.034	EPA 8270D/SIM	8-22-18	8-24-18	
Benzo[g,h,i]perylene	1.9	0.86	EPA 8270D	8-22-18	8-24-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorophenol	52	19 - 103				
Phenol-d6	61	30 - 103				
Nitrobenzene-d5	68	27 - 105				
2-Fluorobiphenyl	88	36 - 102				
2,4,6-Tribromophenol	66	33 - 110				
Terphenyl-d14	94	38 - 108				



Date of Report: August 27, 2018
 Samples Submitted: August 22, 2018
 Laboratory Reference: 1808-229
 Project: 397-019

**SEMIVOLATILE ORGANICS EPA 8270D/SIM
 METHOD BLANK QUALITY CONTROL**

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Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0822S1					
n-Nitrosodimethylamine	ND	0.033	EPA 8270D	8-22-18	8-22-18	
Pyridine	ND	0.33	EPA 8270D	8-22-18	8-22-18	
Phenol	ND	0.033	EPA 8270D	8-22-18	8-22-18	
Aniline	ND	0.17	EPA 8270D	8-22-18	8-22-18	
bis(2-Chloroethyl)ether	ND	0.033	EPA 8270D	8-22-18	8-22-18	
2-Chlorophenol	ND	0.033	EPA 8270D	8-22-18	8-22-18	
1,3-Dichlorobenzene	ND	0.033	EPA 8270D	8-22-18	8-22-18	
1,4-Dichlorobenzene	ND	0.033	EPA 8270D	8-22-18	8-22-18	
Benzyl alcohol	ND	0.17	EPA 8270D	8-22-18	8-22-18	
1,2-Dichlorobenzene	ND	0.033	EPA 8270D	8-22-18	8-22-18	
2-Methylphenol (o-Cresol)	ND	0.033	EPA 8270D	8-22-18	8-22-18	
bis(2-Chloroisopropyl)ether	ND	0.033	EPA 8270D	8-22-18	8-22-18	
(3+4)-Methylphenol (m,p-Cresol)	ND	0.033	EPA 8270D	8-22-18	8-22-18	
n-Nitroso-di-n-propylamine	ND	0.033	EPA 8270D	8-22-18	8-22-18	
Hexachloroethane	ND	0.033	EPA 8270D	8-22-18	8-22-18	
Nitrobenzene	ND	0.033	EPA 8270D	8-22-18	8-22-18	
Isophorone	ND	0.033	EPA 8270D	8-22-18	8-22-18	
2-Nitrophenol	ND	0.033	EPA 8270D	8-22-18	8-22-18	
2,4-Dimethylphenol	ND	0.033	EPA 8270D	8-22-18	8-22-18	
bis(2-Chloroethoxy)methane	ND	0.033	EPA 8270D	8-22-18	8-22-18	
2,4-Dichlorophenol	ND	0.033	EPA 8270D	8-22-18	8-22-18	
1,2,4-Trichlorobenzene	ND	0.033	EPA 8270D	8-22-18	8-22-18	
Naphthalene	ND	0.0067	EPA 8270D/SIM	8-22-18	8-22-18	
4-Chloroaniline	ND	0.17	EPA 8270D	8-22-18	8-22-18	
Hexachlorobutadiene	ND	0.033	EPA 8270D	8-22-18	8-22-18	
4-Chloro-3-methylphenol	ND	0.033	EPA 8270D	8-22-18	8-22-18	
2-Methylnaphthalene	ND	0.0067	EPA 8270D/SIM	8-22-18	8-22-18	
1-Methylnaphthalene	ND	0.0067	EPA 8270D/SIM	8-22-18	8-22-18	
Hexachlorocyclopentadiene	ND	0.033	EPA 8270D	8-22-18	8-22-18	
2,4,6-Trichlorophenol	ND	0.033	EPA 8270D	8-22-18	8-22-18	
2,3-Dichloroaniline	ND	0.033	EPA 8270D	8-22-18	8-22-18	
2,4,5-Trichlorophenol	ND	0.033	EPA 8270D	8-22-18	8-22-18	
2-Chloronaphthalene	ND	0.033	EPA 8270D	8-22-18	8-22-18	
2-Nitroaniline	ND	0.033	EPA 8270D	8-22-18	8-22-18	
1,4-Dinitrobenzene	ND	0.033	EPA 8270D	8-22-18	8-22-18	
Dimethylphthalate	ND	0.033	EPA 8270D	8-22-18	8-22-18	
1,3-Dinitrobenzene	ND	0.033	EPA 8270D	8-22-18	8-22-18	
2,6-Dinitrotoluene	ND	0.033	EPA 8270D	8-22-18	8-22-18	
1,2-Dinitrobenzene	ND	0.033	EPA 8270D	8-22-18	8-22-18	
Acenaphthylene	ND	0.0067	EPA 8270D/SIM	8-22-18	8-22-18	
3-Nitroaniline	ND	0.033	EPA 8270D	8-22-18	8-22-18	



Date of Report: August 27, 2018
 Samples Submitted: August 22, 2018
 Laboratory Reference: 1808-229
 Project: 397-019

**SEMIVOLATILE ORGANICS EPA 8270D/SIM
 METHOD BLANK QUALITY CONTROL**

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0822S1					
2,4-Dinitrophenol	ND	0.17	EPA 8270D	8-22-18	8-22-18	
Acenaphthene	ND	0.0067	EPA 8270D/SIM	8-22-18	8-22-18	
4-Nitrophenol	ND	0.033	EPA 8270D	8-22-18	8-22-18	
2,4-Dinitrotoluene	ND	0.033	EPA 8270D	8-22-18	8-22-18	
Dibenzofuran	ND	0.033	EPA 8270D	8-22-18	8-22-18	
2,3,5,6-Tetrachlorophenol	ND	0.033	EPA 8270D	8-22-18	8-22-18	
2,3,4,6-Tetrachlorophenol	ND	0.033	EPA 8270D	8-22-18	8-22-18	
Diethylphthalate	ND	0.17	EPA 8270D	8-22-18	8-22-18	
4-Chlorophenyl-phenylether	ND	0.033	EPA 8270D	8-22-18	8-22-18	
4-Nitroaniline	ND	0.033	EPA 8270D	8-22-18	8-22-18	
Fluorene	ND	0.0067	EPA 8270D/SIM	8-22-18	8-22-18	
4,6-Dinitro-2-methylphenol	ND	0.17	EPA 8270D	8-22-18	8-22-18	
n-Nitrosodiphenylamine	ND	0.033	EPA 8270D	8-22-18	8-22-18	
1,2-Diphenylhydrazine	ND	0.033	EPA 8270D	8-22-18	8-22-18	
4-Bromophenyl-phenylether	ND	0.033	EPA 8270D	8-22-18	8-22-18	
Hexachlorobenzene	ND	0.033	EPA 8270D	8-22-18	8-22-18	
Pentachlorophenol	ND	0.17	EPA 8270D	8-22-18	8-22-18	
Phenanthrene	ND	0.0067	EPA 8270D/SIM	8-22-18	8-22-18	
Anthracene	ND	0.0067	EPA 8270D/SIM	8-22-18	8-22-18	
Carbazole	ND	0.033	EPA 8270D	8-22-18	8-22-18	
Di-n-butylphthalate	ND	0.17	EPA 8270D	8-22-18	8-22-18	
Fluoranthene	ND	0.0067	EPA 8270D/SIM	8-22-18	8-22-18	
Benzidine	ND	0.33	EPA 8270D	8-22-18	8-22-18	
Pyrene	ND	0.0067	EPA 8270D/SIM	8-22-18	8-22-18	
Butylbenzylphthalate	ND	0.17	EPA 8270D	8-22-18	8-22-18	
bis(2-Ethylhexyl)adipate	ND	0.17	EPA 8270D	8-22-18	8-22-18	
3,3'-Dichlorobenzidine	ND	0.17	EPA 8270D	8-22-18	8-22-18	
Benzo[a]anthracene	ND	0.0067	EPA 8270D/SIM	8-22-18	8-22-18	
Chrysene	ND	0.0067	EPA 8270D/SIM	8-22-18	8-22-18	
bis(2-Ethylhexyl)phthalate	ND	0.17	EPA 8270D	8-22-18	8-22-18	
Di-n-octylphthalate	ND	0.17	EPA 8270D	8-22-18	8-22-18	
Benzo[b]fluoranthene	ND	0.0067	EPA 8270D/SIM	8-22-18	8-22-18	
Benzo(j,k)fluoranthene	ND	0.0067	EPA 8270D/SIM	8-22-18	8-22-18	
Benzo[a]pyrene	ND	0.0067	EPA 8270D/SIM	8-22-18	8-22-18	
Indeno[1,2,3-cd]pyrene	ND	0.0067	EPA 8270D/SIM	8-22-18	8-22-18	
Dibenz[a,h]anthracene	ND	0.0067	EPA 8270D/SIM	8-22-18	8-22-18	
Benzo[g,h,i]perylene	ND	0.0067	EPA 8270D/SIM	8-22-18	8-22-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorophenol	86	19 - 103				
Phenol-d6	87	30 - 103				
Nitrobenzene-d5	84	27 - 105				
2-Fluorobiphenyl	92	36 - 102				
2,4,6-Tribromophenol	99	33 - 110				
Terphenyl-d14	92	38 - 108				



Date of Report: August 27, 2018
 Samples Submitted: August 22, 2018
 Laboratory Reference: 1808-229
 Project: 397-019

**SEMIVOLATILE ORGANICS EPA 8270D/SIM
 SB/SBD QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery	RPD	RPD	Flags
					Recovery	Limits	Limit			
SPIKE BLANKS										
Laboratory ID:	SB0822S1									
	SB	SBD	SB	SBD	SB	SBD				
Phenol	0.988	1.12	1.33	1.33	74	84	45 - 94	13	29	
2-Chlorophenol	1.05	1.21	1.33	1.33	79	91	46 - 94	14	33	
1,4-Dichlorobenzene	0.511	0.581	0.667	0.667	77	87	42 - 91	13	37	
n-Nitroso-di-n-propylamine	0.506	0.568	0.667	0.667	76	85	45 - 100	12	26	
1,2,4-Trichlorobenzene	0.559	0.579	0.667	0.667	84	87	45 - 100	4	32	
4-Chloro-3-methylphenol	1.09	1.13	1.33	1.33	82	85	55 - 97	4	21	
Acenaphthene	0.539	0.564	0.667	0.667	81	85	48 - 91	5	21	
4-Nitrophenol	1.06	1.17	1.33	1.33	80	88	53 - 102	10	20	
2,4-Dinitrotoluene	0.527	0.583	0.667	0.667	79	87	47 - 96	10	19	
Pentachlorophenol	1.34	1.40	1.33	1.33	101	105	35 - 125	4	26	
Pyrene	0.534	0.561	0.667	0.667	80	84	55 - 110	5	17	
<i>Surrogate:</i>										
2-Fluorophenol					72	81	19 - 103			
Phenol-d6					73	80	30 - 103			
Nitrobenzene-d5					72	73	27 - 105			
2-Fluorobiphenyl					79	80	36 - 102			
2,4,6-Tribromophenol					86	85	33 - 110			
Terphenyl-d14					76	78	38 - 108			



Date of Report: August 27, 2018
 Samples Submitted: August 22, 2018
 Laboratory Reference: 1808-229
 Project: 397-019

SEMIVOLATILE ORGANICS EPA 8270D/SIM
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Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FB-04-10.0-082118					
Laboratory ID:	08-229-03					
n-Nitrosodimethylamine	ND	0.083	EPA 8270D	8-22-18	8-24-18	
Pyridine	ND	0.83	EPA 8270D	8-22-18	8-24-18	
Phenol	ND	0.083	EPA 8270D	8-22-18	8-24-18	
Aniline	ND	0.42	EPA 8270D	8-22-18	8-24-18	
bis(2-Chloroethyl)ether	ND	0.083	EPA 8270D	8-22-18	8-24-18	
2-Chlorophenol	ND	0.083	EPA 8270D	8-22-18	8-24-18	
1,3-Dichlorobenzene	ND	0.083	EPA 8270D	8-22-18	8-24-18	
1,4-Dichlorobenzene	ND	0.083	EPA 8270D	8-22-18	8-24-18	
Benzyl alcohol	ND	0.42	EPA 8270D	8-22-18	8-24-18	
1,2-Dichlorobenzene	ND	0.083	EPA 8270D	8-22-18	8-24-18	
2-Methylphenol (o-Cresol)	ND	0.083	EPA 8270D	8-22-18	8-24-18	
bis(2-Chloroisopropyl)ether	ND	0.083	EPA 8270D	8-22-18	8-24-18	
(3+4)-Methylphenol (m,p-Cresol)	ND	0.083	EPA 8270D	8-22-18	8-24-18	
n-Nitroso-di-n-propylamine	ND	0.083	EPA 8270D	8-22-18	8-24-18	
Hexachloroethane	ND	0.083	EPA 8270D	8-22-18	8-24-18	
Nitrobenzene	ND	0.083	EPA 8270D	8-22-18	8-24-18	
Isophorone	ND	0.083	EPA 8270D	8-22-18	8-24-18	
2-Nitrophenol	ND	0.083	EPA 8270D	8-22-18	8-24-18	
2,4-Dimethylphenol	ND	0.083	EPA 8270D	8-22-18	8-24-18	
bis(2-Chloroethoxy)methane	ND	0.083	EPA 8270D	8-22-18	8-24-18	
2,4-Dichlorophenol	ND	0.083	EPA 8270D	8-22-18	8-24-18	
1,2,4-Trichlorobenzene	ND	0.083	EPA 8270D	8-22-18	8-24-18	
Naphthalene	0.12	0.083	EPA 8270D	8-22-18	8-24-18	
4-Chloroaniline	ND	0.42	EPA 8270D	8-22-18	8-24-18	
Hexachlorobutadiene	ND	0.083	EPA 8270D	8-22-18	8-24-18	
4-Chloro-3-methylphenol	ND	0.083	EPA 8270D	8-22-18	8-24-18	
2-Methylnaphthalene	0.099	0.083	EPA 8270D	8-22-18	8-24-18	
1-Methylnaphthalene	0.057	0.017	EPA 8270D/SIM	8-22-18	8-24-18	
Hexachlorocyclopentadiene	ND	0.083	EPA 8270D	8-22-18	8-24-18	
2,4,6-Trichlorophenol	ND	0.083	EPA 8270D	8-22-18	8-24-18	
2,3-Dichloroaniline	ND	0.083	EPA 8270D	8-22-18	8-24-18	
2,4,5-Trichlorophenol	ND	0.083	EPA 8270D	8-22-18	8-24-18	
2-Chloronaphthalene	ND	0.083	EPA 8270D	8-22-18	8-24-18	
2-Nitroaniline	ND	0.083	EPA 8270D	8-22-18	8-24-18	
1,4-Dinitrobenzene	ND	0.083	EPA 8270D	8-22-18	8-24-18	
Dimethylphthalate	ND	0.083	EPA 8270D	8-22-18	8-24-18	
1,3-Dinitrobenzene	ND	0.083	EPA 8270D	8-22-18	8-24-18	
2,6-Dinitrotoluene	ND	0.083	EPA 8270D	8-22-18	8-24-18	
1,2-Dinitrobenzene	ND	0.083	EPA 8270D	8-22-18	8-24-18	
Acenaphthylene	0.045	0.017	EPA 8270D/SIM	8-22-18	8-24-18	
3-Nitroaniline	ND	0.083	EPA 8270D	8-22-18	8-24-18	



Date of Report: August 27, 2018
 Samples Submitted: August 22, 2018
 Laboratory Reference: 1808-229
 Project: 397-019

SEMIVOLATILE ORGANICS EPA 8270D/SIM
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FB-04-10.0-082118					
Laboratory ID:	08-229-03					
2,4-Dinitrophenol	ND	0.42	EPA 8270D	8-22-18	8-24-18	
Acenaphthene	0.21	0.083	EPA 8270D	8-22-18	8-24-18	
4-Nitrophenol	ND	0.083	EPA 8270D	8-22-18	8-24-18	
2,4-Dinitrotoluene	ND	0.083	EPA 8270D	8-22-18	8-24-18	
Dibenzofuran	0.12	0.083	EPA 8270D	8-22-18	8-24-18	
2,3,5,6-Tetrachlorophenol	ND	0.083	EPA 8270D	8-22-18	8-24-18	
2,3,4,6-Tetrachlorophenol	ND	0.083	EPA 8270D	8-22-18	8-24-18	
Diethylphthalate	ND	0.42	EPA 8270D	8-22-18	8-24-18	
4-Chlorophenyl-phenylether	ND	0.083	EPA 8270D	8-22-18	8-24-18	
4-Nitroaniline	ND	0.083	EPA 8270D	8-22-18	8-24-18	
Fluorene	0.22	0.083	EPA 8270D	8-22-18	8-24-18	
4,6-Dinitro-2-methylphenol	ND	0.42	EPA 8270D	8-22-18	8-24-18	
n-Nitrosodiphenylamine	ND	0.083	EPA 8270D	8-22-18	8-24-18	
1,2-Diphenylhydrazine	ND	0.18	EPA 8270D	8-22-18	8-24-18	U1
4-Bromophenyl-phenylether	ND	0.083	EPA 8270D	8-22-18	8-24-18	
Hexachlorobenzene	ND	0.083	EPA 8270D	8-22-18	8-24-18	
Pentachlorophenol	ND	0.42	EPA 8270D	8-22-18	8-24-18	
Phenanthrene	1.0	0.083	EPA 8270D	8-22-18	8-24-18	
Anthracene	0.29	0.083	EPA 8270D	8-22-18	8-24-18	
Carbazole	ND	0.083	EPA 8270D	8-22-18	8-24-18	
Di-n-butylphthalate	ND	0.42	EPA 8270D	8-22-18	8-24-18	
Fluoranthene	0.97	0.083	EPA 8270D	8-22-18	8-24-18	
Benzidine	ND	0.83	EPA 8270D	8-22-18	8-24-18	
Pyrene	1.1	0.083	EPA 8270D	8-22-18	8-24-18	
Butylbenzylphthalate	ND	0.42	EPA 8270D	8-22-18	8-24-18	
bis-2-Ethylhexyladipate	ND	0.42	EPA 8270D	8-22-18	8-24-18	
3,3'-Dichlorobenzidine	ND	0.42	EPA 8270D	8-22-18	8-24-18	
Benzo[a]anthracene	0.67	0.083	EPA 8270D	8-22-18	8-24-18	
Chrysene	0.95	0.083	EPA 8270D	8-22-18	8-24-18	
bis(2-Ethylhexyl)phthalate	ND	0.42	EPA 8270D	8-22-18	8-24-18	
Di-n-octylphthalate	ND	0.42	EPA 8270D	8-22-18	8-24-18	
Benzo[b]fluoranthene	0.47	0.083	EPA 8270D	8-22-18	8-24-18	
Benzo(j,k)fluoranthene	0.18	0.083	EPA 8270D	8-22-18	8-24-18	
Benzo[a]pyrene	0.36	0.083	EPA 8270D	8-22-18	8-24-18	
Indeno[1,2,3-cd]pyrene	0.19	0.083	EPA 8270D	8-22-18	8-24-18	
Dibenz[a,h]anthracene	0.041	0.017	EPA 8270D/SIM	8-22-18	8-24-18	
Benzo[g,h,i]perylene	0.21	0.083	EPA 8270D	8-22-18	8-24-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorophenol	41	19 - 103				
Phenol-d6	48	30 - 103				
Nitrobenzene-d5	45	27 - 105				
2-Fluorobiphenyl	55	36 - 102				
2,4,6-Tribromophenol	64	33 - 110				
Terphenyl-d14	60	38 - 108				



Date of Report: August 27, 2018
 Samples Submitted: August 22, 2018
 Laboratory Reference: 1808-229
 Project: 397-019

**SEMIVOLATILE ORGANICS EPA 8270D/SIM
 METHOD BLANK QUALITY CONTROL**

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Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0822S1					
n-Nitrosodimethylamine	ND	0.033	EPA 8270D	8-22-18	8-22-18	
Pyridine	ND	0.33	EPA 8270D	8-22-18	8-22-18	
Phenol	ND	0.033	EPA 8270D	8-22-18	8-22-18	
Aniline	ND	0.17	EPA 8270D	8-22-18	8-22-18	
bis(2-Chloroethyl)ether	ND	0.033	EPA 8270D	8-22-18	8-22-18	
2-Chlorophenol	ND	0.033	EPA 8270D	8-22-18	8-22-18	
1,3-Dichlorobenzene	ND	0.033	EPA 8270D	8-22-18	8-22-18	
1,4-Dichlorobenzene	ND	0.033	EPA 8270D	8-22-18	8-22-18	
Benzyl alcohol	ND	0.17	EPA 8270D	8-22-18	8-22-18	
1,2-Dichlorobenzene	ND	0.033	EPA 8270D	8-22-18	8-22-18	
2-Methylphenol (o-Cresol)	ND	0.033	EPA 8270D	8-22-18	8-22-18	
bis(2-Chloroisopropyl)ether	ND	0.033	EPA 8270D	8-22-18	8-22-18	
(3+4)-Methylphenol (m,p-Cresol)	ND	0.033	EPA 8270D	8-22-18	8-22-18	
n-Nitroso-di-n-propylamine	ND	0.033	EPA 8270D	8-22-18	8-22-18	
Hexachloroethane	ND	0.033	EPA 8270D	8-22-18	8-22-18	
Nitrobenzene	ND	0.033	EPA 8270D	8-22-18	8-22-18	
Isophorone	ND	0.033	EPA 8270D	8-22-18	8-22-18	
2-Nitrophenol	ND	0.033	EPA 8270D	8-22-18	8-22-18	
2,4-Dimethylphenol	ND	0.033	EPA 8270D	8-22-18	8-22-18	
bis(2-Chloroethoxy)methane	ND	0.033	EPA 8270D	8-22-18	8-22-18	
2,4-Dichlorophenol	ND	0.033	EPA 8270D	8-22-18	8-22-18	
1,2,4-Trichlorobenzene	ND	0.033	EPA 8270D	8-22-18	8-22-18	
Naphthalene	ND	0.0067	EPA 8270D/SIM	8-22-18	8-22-18	
4-Chloroaniline	ND	0.17	EPA 8270D	8-22-18	8-22-18	
Hexachlorobutadiene	ND	0.033	EPA 8270D	8-22-18	8-22-18	
4-Chloro-3-methylphenol	ND	0.033	EPA 8270D	8-22-18	8-22-18	
2-Methylnaphthalene	ND	0.0067	EPA 8270D/SIM	8-22-18	8-22-18	
1-Methylnaphthalene	ND	0.0067	EPA 8270D/SIM	8-22-18	8-22-18	
Hexachlorocyclopentadiene	ND	0.033	EPA 8270D	8-22-18	8-22-18	
2,4,6-Trichlorophenol	ND	0.033	EPA 8270D	8-22-18	8-22-18	
2,3-Dichloroaniline	ND	0.033	EPA 8270D	8-22-18	8-22-18	
2,4,5-Trichlorophenol	ND	0.033	EPA 8270D	8-22-18	8-22-18	
2-Chloronaphthalene	ND	0.033	EPA 8270D	8-22-18	8-22-18	
2-Nitroaniline	ND	0.033	EPA 8270D	8-22-18	8-22-18	
1,4-Dinitrobenzene	ND	0.033	EPA 8270D	8-22-18	8-22-18	
Dimethylphthalate	ND	0.033	EPA 8270D	8-22-18	8-22-18	
1,3-Dinitrobenzene	ND	0.033	EPA 8270D	8-22-18	8-22-18	
2,6-Dinitrotoluene	ND	0.033	EPA 8270D	8-22-18	8-22-18	
1,2-Dinitrobenzene	ND	0.033	EPA 8270D	8-22-18	8-22-18	
Acenaphthylene	ND	0.0067	EPA 8270D/SIM	8-22-18	8-22-18	
3-Nitroaniline	ND	0.033	EPA 8270D	8-22-18	8-22-18	



Date of Report: August 27, 2018
 Samples Submitted: August 22, 2018
 Laboratory Reference: 1808-229
 Project: 397-019

**SEMIVOLATILE ORGANICS EPA 8270D/SIM
 METHOD BLANK QUALITY CONTROL**

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0822S1					
2,4-Dinitrophenol	ND	0.17	EPA 8270D	8-22-18	8-22-18	
Acenaphthene	ND	0.0067	EPA 8270D/SIM	8-22-18	8-22-18	
4-Nitrophenol	ND	0.033	EPA 8270D	8-22-18	8-22-18	
2,4-Dinitrotoluene	ND	0.033	EPA 8270D	8-22-18	8-22-18	
Dibenzofuran	ND	0.033	EPA 8270D	8-22-18	8-22-18	
2,3,5,6-Tetrachlorophenol	ND	0.033	EPA 8270D	8-22-18	8-22-18	
2,3,4,6-Tetrachlorophenol	ND	0.033	EPA 8270D	8-22-18	8-22-18	
Diethylphthalate	ND	0.17	EPA 8270D	8-22-18	8-22-18	
4-Chlorophenyl-phenylether	ND	0.033	EPA 8270D	8-22-18	8-22-18	
4-Nitroaniline	ND	0.033	EPA 8270D	8-22-18	8-22-18	
Fluorene	ND	0.0067	EPA 8270D/SIM	8-22-18	8-22-18	
4,6-Dinitro-2-methylphenol	ND	0.17	EPA 8270D	8-22-18	8-22-18	
n-Nitrosodiphenylamine	ND	0.033	EPA 8270D	8-22-18	8-22-18	
1,2-Diphenylhydrazine	ND	0.033	EPA 8270D	8-22-18	8-22-18	
4-Bromophenyl-phenylether	ND	0.033	EPA 8270D	8-22-18	8-22-18	
Hexachlorobenzene	ND	0.033	EPA 8270D	8-22-18	8-22-18	
Pentachlorophenol	ND	0.17	EPA 8270D	8-22-18	8-22-18	
Phenanthrene	ND	0.0067	EPA 8270D/SIM	8-22-18	8-22-18	
Anthracene	ND	0.0067	EPA 8270D/SIM	8-22-18	8-22-18	
Carbazole	ND	0.033	EPA 8270D	8-22-18	8-22-18	
Di-n-butylphthalate	ND	0.17	EPA 8270D	8-22-18	8-22-18	
Fluoranthene	ND	0.0067	EPA 8270D/SIM	8-22-18	8-22-18	
Benzidine	ND	0.33	EPA 8270D	8-22-18	8-22-18	
Pyrene	ND	0.0067	EPA 8270D/SIM	8-22-18	8-22-18	
Butylbenzylphthalate	ND	0.17	EPA 8270D	8-22-18	8-22-18	
bis(2-Ethylhexyl)adipate	ND	0.17	EPA 8270D	8-22-18	8-22-18	
3,3'-Dichlorobenzidine	ND	0.17	EPA 8270D	8-22-18	8-22-18	
Benzo[a]anthracene	ND	0.0067	EPA 8270D/SIM	8-22-18	8-22-18	
Chrysene	ND	0.0067	EPA 8270D/SIM	8-22-18	8-22-18	
bis(2-Ethylhexyl)phthalate	ND	0.17	EPA 8270D	8-22-18	8-22-18	
Di-n-octylphthalate	ND	0.17	EPA 8270D	8-22-18	8-22-18	
Benzo[b]fluoranthene	ND	0.0067	EPA 8270D/SIM	8-22-18	8-22-18	
Benzo(j,k)fluoranthene	ND	0.0067	EPA 8270D/SIM	8-22-18	8-22-18	
Benzo[a]pyrene	ND	0.0067	EPA 8270D/SIM	8-22-18	8-22-18	
Indeno[1,2,3-cd]pyrene	ND	0.0067	EPA 8270D/SIM	8-22-18	8-22-18	
Dibenz[a,h]anthracene	ND	0.0067	EPA 8270D/SIM	8-22-18	8-22-18	
Benzo[g,h,i]perylene	ND	0.0067	EPA 8270D/SIM	8-22-18	8-22-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorophenol	86	19 - 103				
Phenol-d6	87	30 - 103				
Nitrobenzene-d5	84	27 - 105				
2-Fluorobiphenyl	92	36 - 102				
2,4,6-Tribromophenol	99	33 - 110				
Terphenyl-d14	92	38 - 108				



Date of Report: August 27, 2018
 Samples Submitted: August 22, 2018
 Laboratory Reference: 1808-229
 Project: 397-019

**SEMIVOLATILE ORGANICS EPA 8270D/SIM
 SB/SBD QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery	RPD	RPD	Flags
					Recovery	Limits	Limits	Limit		
SPIKE BLANKS										
Laboratory ID:	SB0822S1									
	SB	SBD	SB	SBD	SB	SBD				
Phenol	0.988	1.12	1.33	1.33	74	84	45 - 94	13	29	
2-Chlorophenol	1.05	1.21	1.33	1.33	79	91	46 - 94	14	33	
1,4-Dichlorobenzene	0.511	0.581	0.667	0.667	77	87	42 - 91	13	37	
n-Nitroso-di-n-propylamine	0.506	0.568	0.667	0.667	76	85	45 - 100	12	26	
1,2,4-Trichlorobenzene	0.559	0.579	0.667	0.667	84	87	45 - 100	4	32	
4-Chloro-3-methylphenol	1.09	1.13	1.33	1.33	82	85	55 - 97	4	21	
Acenaphthene	0.539	0.564	0.667	0.667	81	85	48 - 91	5	21	
4-Nitrophenol	1.06	1.17	1.33	1.33	80	88	53 - 102	10	20	
2,4-Dinitrotoluene	0.527	0.583	0.667	0.667	79	87	47 - 96	10	19	
Pentachlorophenol	1.34	1.40	1.33	1.33	101	105	35 - 125	4	26	
Pyrene	0.534	0.561	0.667	0.667	80	84	55 - 110	5	17	
<i>Surrogate:</i>										
2-Fluorophenol					72	81	19 - 103			
Phenol-d6					73	80	30 - 103			
Nitrobenzene-d5					72	73	27 - 105			
2-Fluorobiphenyl					79	80	36 - 102			
2,4,6-Tribromophenol					86	85	33 - 110			
Terphenyl-d14					76	78	38 - 108			



Date of Report: August 27, 2018
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Laboratory Reference: 1808-229
Project: 397-019

SEMIVOLATILE ORGANICS EPA 8270D/SIM
page 1 of 2



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

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SEMIVOLATILE ORGANICS EPA 8270D/SIM
page 2 of 2



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SEMIVOLATILE ORGANICS EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL
page 1 of 2



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SEMIVOLATILE ORGANICS EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL
page 2 of 2



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**SEMIVOLATILE ORGANICS EPA 8270D/SIM
SB/SBD QUALITY CONTROL**



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

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Date of Report: August 27, 2018
 Samples Submitted: August 22, 2018
 Laboratory Reference: 1808-229
 Project: 397-019

**TOTAL METALS
 EPA 6010D/7471B**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FB-04-5.0-082118					
Laboratory ID:	08-229-02					
Arsenic	ND	11	EPA 6010D	8-23-18	8-23-18	
Barium	290	5.5	EPA 6010D	8-23-18	8-23-18	
Cadmium	ND	1.1	EPA 6010D	8-23-18	8-23-18	
Chromium	53	1.1	EPA 6010D	8-23-18	8-23-18	
Lead	56	11	EPA 6010D	8-23-18	8-23-18	
Mercury	ND	0.55	EPA 7471B	8-23-18	8-23-18	
Selenium	ND	11	EPA 6010D	8-23-18	8-23-18	
Silver	ND	2.2	EPA 6010D	8-23-18	8-23-18	

Client ID:	FB-01-15.0-082118					
Laboratory ID:	08-229-09					
Arsenic	ND	16	EPA 6010D	8-23-18	8-23-18	
Barium	110	4.0	EPA 6010D	8-23-18	8-23-18	
Cadmium	ND	0.81	EPA 6010D	8-23-18	8-23-18	
Chromium	60	0.81	EPA 6010D	8-23-18	8-23-18	
Lead	ND	8.1	EPA 6010D	8-23-18	8-23-18	
Mercury	ND	0.40	EPA 7471B	8-23-18	8-23-18	
Selenium	ND	16	EPA 6010D	8-23-18	8-23-18	
Silver	ND	1.6	EPA 6010D	8-23-18	8-23-18	



Date of Report: August 27, 2018
 Samples Submitted: August 22, 2018
 Laboratory Reference: 1808-229
 Project: 397-019

**TOTAL METALS
 EPA 6010D/7471B
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0823SM1					
Arsenic	ND	5.0	EPA 6010D	8-23-18	8-23-18	
Barium	ND	2.5	EPA 6010D	8-23-18	8-23-18	
Cadmium	ND	0.50	EPA 6010D	8-23-18	8-23-18	
Chromium	ND	0.50	EPA 6010D	8-23-18	8-23-18	
Lead	ND	5.0	EPA 6010D	8-23-18	8-23-18	
Selenium	ND	5.0	EPA 6010D	8-23-18	8-23-18	
Silver	ND	1.0	EPA 6010D	8-23-18	8-23-18	

Laboratory ID:	MB0823S1					
Mercury	ND	0.25	EPA 7471B	8-23-18	8-23-18	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	08-239-08							
	ORIG	DUP						
Arsenic	ND	ND	NA	NA	NA	NA	20	
Barium	92.2	83.3	NA	NA	NA	10	20	
Cadmium	ND	ND	NA	NA	NA	NA	20	
Chromium	8.30	5.65	NA	NA	NA	38	20	K
Lead	ND	ND	NA	NA	NA	NA	20	
Selenium	ND	ND	NA	NA	NA	NA	20	
Silver	ND	ND	NA	NA	NA	NA	20	

Laboratory ID:	08-239-08							
Mercury	ND	ND	NA	NA	NA	NA	20	

MATRIX SPIKES

Laboratory ID:	08-239-08									
	MS	MSD	MS	MSD		MS	MSD			
Arsenic	93.1	95.5	100	100	ND	93	96	75-125	3	20
Barium	188	184	100	100	92.2	96	92	75-125	2	20
Cadmium	46.3	45.8	50.0	50.0	ND	93	92	75-125	1	20
Chromium	102	102	100	100	8.30	94	94	75-125	0	20
Lead	232	233	250	250	ND	93	93	75-125	1	20
Selenium	91.2	92.2	100	100	ND	91	92	75-125	1	20
Silver	21.8	21.9	25.0	25.0	ND	87	88	75-125	1	20

Laboratory ID:	08-239-08									
Mercury	0.555	0.554	0.500	0.500	0.00530	110	110	80-120	0	20



Date of Report: August 27, 2018
Samples Submitted: August 22, 2018
Laboratory Reference: 1808-229
Project: 397-019

% MOISTURE

Date Analyzed: 8-22-18

Client ID	Lab ID	% Moisture
FB-04-3.0-082118	08-229-02	54
FB-04-10.0-082118	08-229-03	60
FB-04-20.0-082118	08-229-05	14
FB-04-30.0-082118	08-229-07	15
FB-01-5.0-082118	08-229-08	22
FB-01-15.0-082118	08-229-09	38
FB-01-30.0-082118	08-229-12	13





Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
 - B - The analyte indicated was also found in the blank sample.
 - C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
 - E - The value reported exceeds the quantitation range and is an estimate.
 - F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
 - H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
 - I - Compound recovery is outside of the control limits.
 - J - The value reported was below the practical quantitation limit. The value is an estimate.
 - K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
 - L - The RPD is outside of the control limits.
 - M - Hydrocarbons in the gasoline range are impacting the diesel range result.
 - M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
 - N - Hydrocarbons in the lube oil range are impacting the diesel range result.
 - N1 - Hydrocarbons in diesel range are impacting lube oil range results.
 - O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
 - P - The RPD of the detected concentrations between the two columns is greater than 40.
 - Q - Surrogate recovery is outside of the control limits.
 - S - Surrogate recovery data is not available due to the necessary dilution of the sample.
 - T - The sample chromatogram is not similar to a typical _____.
 - U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
 - U1 - The practical quantitation limit is elevated due to interferences present in the sample.
 - V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
 - W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
 - X - Sample extract treated with a mercury cleanup procedure.
 - X1 - Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
 - Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
 - Z -
- ND - Not Detected at PQL
 PQL - Practical Quantitation Limit
 RPD - Relative Percent Difference





MVA Onsite Environmental Inc.
 Analytical Laboratory Testing Services
 14648 NE 96th Street • Redmond, WA 98052
 Phone: (425) 883-3881 • www.onsite-env.com

Chain of Custody

Turnaround Request
 (in working days)
 (Check One)

Same Day 1 Day

2 Days 3 Days

Standard (7 Days)
 (TPH analysis 5 Days)

_____ (other)

Laboratory Number: **08-229**

Company: **Fixation**
 Project Number: **397-019**
 Project Name: **Block 38 West Property**
 Project Manager: **Jason Ruark**
 Sampled by: **Greg Peters**

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers
1	FB-04-3.0-082118	8/21/18	0645	Soil	5
2	FB-04-5.0-082118		0650		
3	FB-04-10.0-082118		0710		
4	FB-04-15.0-082118		0735		
5	FB-04-20.0-082118		0745		
6	FB-04-25.0-082118		0815		
7	FB-04-30.0-082118		0850		
8	FB-04-5.0-082118		1140		
9	FB-01-15.0-082118		1420		
10	FB-01-20.0-082118		1446		

Date	Time	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (<input type="checkbox"/> Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	% Moisture
		X			X				X						X				X
																			X
																			X
																			X
																			X
																			X
																			X
																			X
																			X

ACU/SG
 2 DAY TAT
 3 DAY TAT

Company	Signature	Company	Date	Time	Comments/Special Instructions
			8/21/18	0930	X - Added 8/22/18. DB (2-3 day TAT)
			8/21/18	0930	(X) Added 8/24/18. DB (1 day TAT)
			8/27/18		Added 8/27/18. DB (STA)

Received _____
 Relinquished _____
 Received _____
 Relinquished _____
 Received _____
 Relinquished _____
 Reviewed/Date _____

Data Package: Standard Level III Level IV

Chromatograms with final report Electronic Data Deliverables (EDDs)



Onsite Environmental Inc.

Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Chain of Custody

Turnaround Request (in working days)

(Check One)

Same Day 1 Day

2 Days 3 Days

Standard (7 Days)
(TPH analysis 5 Days)

(other) _____

Laboratory Number: 08-229

Company: _____

Project Number: _____

Project Name: _____

Project Manager: _____

Sampled by: _____

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers
11	FB-01-25.0-082118	8/21/18	1500	Soil	5
12	FB-01-30.0-082118		1515	Soil	5
13	FB-01-35.0-082118		1530	Soil	5
14	FB-01-40.0-082118		1540	Soil	5
15	FB01-082118		1245	Water	8
16	Potable-082118		655	Water	12

Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (<input type="checkbox"/> Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	2 DAY TAT	3 DAY TAT	% Moisture
5																				
5		X																	X	
5			X																	X
5				X																
5				X																
8		X		X																
12					X															X

Signature: _____

Company: Fossilman

Date: 8/21/18 Time: 1915

Signature: _____

Company: ORE

Date: 8/21/18 Time: 0730

Comments/Special Instructions: Please contact project manager for analyses and sample turnaround time confirmations.

Data Package: Standard Level III Level IV

Chromatograms with final report Electronic Data Deliverables (EDDs)

Received _____

Relinquished _____

Received _____

Relinquished _____

Received _____

Relinquished _____

Reviewed/Date _____



14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

September 4, 2018

Javan Ruark
Farallon Consulting, LLC
975 5th Avenue NW
Issaquah, WA 98027

Re: Analytical Data for Project 397-019
Laboratory Reference No. 1808-271

Dear Javan:

Enclosed are the analytical results and associated quality control data for samples submitted on August 23, 2018.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "DB", with a long horizontal stroke extending to the right.

David Baumeister
Project Manager

Enclosures



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 4, 2018
Samples Submitted: August 23, 2018
Laboratory Reference: 1808-271
Project: 397-019

Case Narrative

Samples were collected on August 22, 2018 and received by the laboratory on August 23, 2018. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.



Date of Report: September 4, 2018
 Samples Submitted: August 23, 2018
 Laboratory Reference: 1808-271
 Project: 397-019

**GASOLINE RANGE ORGANICS/BTEX
 NWTPH-Gx/EPA 8021B**

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FMW-136-10.0-082218					
Laboratory ID:	08-271-02					
Benzene	ND	0.020	EPA 8021B	8-24-18	8-24-18	
Toluene	ND	0.090	EPA 8021B	8-24-18	8-24-18	
Ethyl Benzene	ND	0.090	EPA 8021B	8-24-18	8-24-18	
m,p-Xylene	ND	0.090	EPA 8021B	8-24-18	8-24-18	
o-Xylene	ND	0.090	EPA 8021B	8-24-18	8-24-18	
Gasoline	ND	9.0	NWTPH-Gx	8-24-18	8-24-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	94	57-129				
Client ID:	FMW-136-20.0-082218					
Laboratory ID:	08-271-04					
Benzene	ND	0.020	EPA 8021B	8-24-18	8-24-18	
Toluene	ND	0.064	EPA 8021B	8-24-18	8-24-18	
Ethyl Benzene	ND	0.064	EPA 8021B	8-24-18	8-24-18	
m,p-Xylene	ND	0.064	EPA 8021B	8-24-18	8-24-18	
o-Xylene	ND	0.064	EPA 8021B	8-24-18	8-24-18	
Gasoline	ND	6.4	NWTPH-Gx	8-24-18	8-24-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	93	57-129				
Client ID:	FMW-136-30.0-082218					
Laboratory ID:	08-271-06					
Benzene	ND	0.020	EPA 8021B	8-24-18	8-24-18	
Toluene	ND	0.052	EPA 8021B	8-24-18	8-24-18	
Ethyl Benzene	ND	0.052	EPA 8021B	8-24-18	8-24-18	
m,p-Xylene	ND	0.052	EPA 8021B	8-24-18	8-24-18	
o-Xylene	ND	0.052	EPA 8021B	8-24-18	8-24-18	
Gasoline	ND	5.2	NWTPH-Gx	8-24-18	8-24-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	87	57-129				



Date of Report: September 4, 2018
 Samples Submitted: August 23, 2018
 Laboratory Reference: 1808-271
 Project: 397-019

**GASOLINE RANGE ORGANICS/BTEX
 NWTPH-Gx/EPA 8021B
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0824S1					
Benzene	ND	0.020	EPA 8021B	8-24-18	8-24-18	
Toluene	ND	0.050	EPA 8021B	8-24-18	8-24-18	
Ethyl Benzene	ND	0.050	EPA 8021B	8-24-18	8-24-18	
m,p-Xylene	ND	0.050	EPA 8021B	8-24-18	8-24-18	
o-Xylene	ND	0.050	EPA 8021B	8-24-18	8-24-18	
Gasoline	ND	5.0	NWTPH-Gx	8-24-18	8-24-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	86	57-129				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	08-271-02							
	ORIG	DUP						
Benzene	ND	ND	NA	NA	NA	NA	30	
Toluene	ND	ND	NA	NA	NA	NA	30	
Ethyl Benzene	ND	ND	NA	NA	NA	NA	30	
m,p-Xylene	ND	ND	NA	NA	NA	NA	30	
o-Xylene	ND	ND	NA	NA	NA	NA	30	
Gasoline	ND	ND	NA	NA	NA	NA	30	
<i>Surrogate:</i>								
<i>Fluorobenzene</i>				94	95	57-129		

SPIKE BLANKS

Laboratory ID:	SB0824S1							
	SB	SBD	SB	SBD	SB	SBD		
Benzene	0.873	0.924	1.00	1.00	87	92	69-111	6 10
Toluene	0.863	0.912	1.00	1.00	86	91	70-114	6 11
Ethyl Benzene	0.860	0.915	1.00	1.00	86	92	70-115	6 10
m,p-Xylene	0.841	0.897	1.00	1.00	84	90	72-115	6 10
o-Xylene	0.872	0.916	1.00	1.00	87	92	71-115	5 11
<i>Surrogate:</i>								
<i>Fluorobenzene</i>					85	91	57-129	



Date of Report: September 4, 2018
 Samples Submitted: August 23, 2018
 Laboratory Reference: 1808-271
 Project: 397-019

**DIESEL AND HEAVY OIL RANGE ORGANICS
 NWTPH-Dx**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FMW-136-10.0-082218					
Laboratory ID:	08-271-02					
Diesel Range Organics	ND	38	NWTPH-Dx	8-24-18	8-24-18	
Lube Oil Range Organics	ND	76	NWTPH-Dx	8-24-18	8-24-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	96	50-150				

Client ID:	FMW-136-20.0-082218					
Laboratory ID:	08-271-04					
Diesel Range Organics	ND	32	NWTPH-Dx	8-24-18	8-27-18	
Lube Oil Range Organics	ND	63	NWTPH-Dx	8-24-18	8-27-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	66	50-150				

Client ID:	FMW-136-30.0-082218					
Laboratory ID:	08-271-06					
Diesel Range Organics	ND	30	NWTPH-Dx	8-24-18	8-24-18	
Lube Oil Range Organics	ND	59	NWTPH-Dx	8-24-18	8-24-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	77	50-150				



Date of Report: September 4, 2018
 Samples Submitted: August 23, 2018
 Laboratory Reference: 1808-271
 Project: 397-019

**DIESEL AND HEAVY OIL RANGE ORGANICS
 NWTPH-Dx
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0824S1					
Diesel Range Organics	ND	25	NWTPH-Dx	8-24-18	8-24-18	
Lube Oil Range Organics	ND	50	NWTPH-Dx	8-24-18	8-24-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	111	50-150				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	08-245-02							
	ORIG	DUP						
Diesel Range	ND	ND	NA	NA	NA	NA	NA	NA
Lube Oil Range	ND	ND	NA	NA	NA	NA	NA	NA
<i>Surrogate:</i>								
<i>o-Terphenyl</i>				56	90	50-150		



Date of Report: September 4, 2018
 Samples Submitted: August 23, 2018
 Laboratory Reference: 1808-271
 Project: 397-019

VOLATILE ORGANICS EPA 8260C
 page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FMW-136-10.0-082218					
Laboratory ID:	08-271-02					
Dichlorodifluoromethane	ND	0.0015	EPA 8260C	8-24-18	8-24-18	
Chloromethane	ND	0.0077	EPA 8260C	8-24-18	8-24-18	
Vinyl Chloride	ND	0.0015	EPA 8260C	8-24-18	8-24-18	
Bromomethane	ND	0.0015	EPA 8260C	8-24-18	8-24-18	
Chloroethane	ND	0.0077	EPA 8260C	8-24-18	8-24-18	
Trichlorofluoromethane	ND	0.0015	EPA 8260C	8-24-18	8-24-18	
1,1-Dichloroethene	ND	0.0015	EPA 8260C	8-24-18	8-24-18	
Iodomethane	ND	0.0077	EPA 8260C	8-24-18	8-24-18	
Methylene Chloride	ND	0.0077	EPA 8260C	8-24-18	8-24-18	
(trans) 1,2-Dichloroethene	ND	0.0015	EPA 8260C	8-24-18	8-24-18	
1,1-Dichloroethane	ND	0.0015	EPA 8260C	8-24-18	8-24-18	
2,2-Dichloropropane	ND	0.0015	EPA 8260C	8-24-18	8-24-18	
(cis) 1,2-Dichloroethene	ND	0.0015	EPA 8260C	8-24-18	8-24-18	
Bromochloromethane	ND	0.0015	EPA 8260C	8-24-18	8-24-18	
Chloroform	ND	0.0015	EPA 8260C	8-24-18	8-24-18	
1,1,1-Trichloroethane	ND	0.0015	EPA 8260C	8-24-18	8-24-18	
Carbon Tetrachloride	ND	0.0015	EPA 8260C	8-24-18	8-24-18	
1,1-Dichloropropene	ND	0.0015	EPA 8260C	8-24-18	8-24-18	
1,2-Dichloroethane	ND	0.0015	EPA 8260C	8-24-18	8-24-18	
Trichloroethene	ND	0.0015	EPA 8260C	8-24-18	8-24-18	
1,2-Dichloropropane	ND	0.0015	EPA 8260C	8-24-18	8-24-18	
Dibromomethane	ND	0.0015	EPA 8260C	8-24-18	8-24-18	
Bromodichloromethane	ND	0.0015	EPA 8260C	8-24-18	8-24-18	
2-Chloroethyl Vinyl Ether	ND	0.0077	EPA 8260C	8-24-18	8-24-18	
(cis) 1,3-Dichloropropene	ND	0.0015	EPA 8260C	8-24-18	8-24-18	
(trans) 1,3-Dichloropropene	ND	0.0015	EPA 8260C	8-24-18	8-24-18	



Date of Report: September 4, 2018
 Samples Submitted: August 23, 2018
 Laboratory Reference: 1808-271
 Project: 397-019

VOLATILE ORGANICS EPA 8260C
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FMW-136-10.0-082218					
Laboratory ID:	08-271-02					
1,1,2-Trichloroethane	ND	0.0015	EPA 8260C	8-24-18	8-24-18	
Tetrachloroethene	ND	0.0015	EPA 8260C	8-24-18	8-24-18	
1,3-Dichloropropane	ND	0.0015	EPA 8260C	8-24-18	8-24-18	
Dibromochloromethane	ND	0.0015	EPA 8260C	8-24-18	8-24-18	
1,2-Dibromoethane	ND	0.0015	EPA 8260C	8-24-18	8-24-18	
Chlorobenzene	ND	0.0015	EPA 8260C	8-24-18	8-24-18	
1,1,1,2-Tetrachloroethane	ND	0.0015	EPA 8260C	8-24-18	8-24-18	
Bromoform	ND	0.0077	EPA 8260C	8-24-18	8-24-18	
Bromobenzene	ND	0.093	EPA 8260C	8-24-18	8-24-18	
1,1,2,2-Tetrachloroethane	ND	0.093	EPA 8260C	8-24-18	8-24-18	
1,2,3-Trichloropropane	ND	0.093	EPA 8260C	8-24-18	8-24-18	
2-Chlorotoluene	ND	0.093	EPA 8260C	8-24-18	8-24-18	
4-Chlorotoluene	ND	0.093	EPA 8260C	8-24-18	8-24-18	
1,3-Dichlorobenzene	ND	0.093	EPA 8260C	8-24-18	8-24-18	
1,4-Dichlorobenzene	ND	0.093	EPA 8260C	8-24-18	8-24-18	
1,2-Dichlorobenzene	ND	0.093	EPA 8260C	8-24-18	8-24-18	
1,2-Dibromo-3-chloropropane	ND	0.46	EPA 8260C	8-24-18	8-24-18	
1,2,4-Trichlorobenzene	ND	0.093	EPA 8260C	8-24-18	8-24-18	
Hexachlorobutadiene	ND	0.46	EPA 8260C	8-24-18	8-24-18	
1,2,3-Trichlorobenzene	ND	0.093	EPA 8260C	8-24-18	8-24-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	99	68-139				
<i>Toluene-d8</i>	98	79-128				
<i>4-Bromofluorobenzene</i>	83	71-132				



Date of Report: September 4, 2018
 Samples Submitted: August 23, 2018
 Laboratory Reference: 1808-271
 Project: 397-019

VOLATILE ORGANICS EPA 8260C
 page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FMW-136-20.0-082218					
Laboratory ID:	08-271-04					
Dichlorodifluoromethane	ND	0.00094	EPA 8260C	8-24-18	8-24-18	
Chloromethane	ND	0.0047	EPA 8260C	8-24-18	8-24-18	
Vinyl Chloride	ND	0.00094	EPA 8260C	8-24-18	8-24-18	
Bromomethane	ND	0.00094	EPA 8260C	8-24-18	8-24-18	
Chloroethane	ND	0.0047	EPA 8260C	8-24-18	8-24-18	
Trichlorofluoromethane	ND	0.00094	EPA 8260C	8-24-18	8-24-18	
1,1-Dichloroethene	ND	0.00094	EPA 8260C	8-24-18	8-24-18	
Iodomethane	ND	0.0047	EPA 8260C	8-24-18	8-24-18	
Methylene Chloride	ND	0.0047	EPA 8260C	8-24-18	8-24-18	
(trans) 1,2-Dichloroethene	ND	0.00094	EPA 8260C	8-24-18	8-24-18	
1,1-Dichloroethane	ND	0.00094	EPA 8260C	8-24-18	8-24-18	
2,2-Dichloropropane	ND	0.00094	EPA 8260C	8-24-18	8-24-18	
(cis) 1,2-Dichloroethene	ND	0.00094	EPA 8260C	8-24-18	8-24-18	
Bromochloromethane	ND	0.00094	EPA 8260C	8-24-18	8-24-18	
Chloroform	ND	0.00094	EPA 8260C	8-24-18	8-24-18	
1,1,1-Trichloroethane	ND	0.00094	EPA 8260C	8-24-18	8-24-18	
Carbon Tetrachloride	ND	0.00094	EPA 8260C	8-24-18	8-24-18	
1,1-Dichloropropene	ND	0.00094	EPA 8260C	8-24-18	8-24-18	
1,2-Dichloroethane	ND	0.00094	EPA 8260C	8-24-18	8-24-18	
Trichloroethene	ND	0.00094	EPA 8260C	8-24-18	8-24-18	
1,2-Dichloropropane	ND	0.00094	EPA 8260C	8-24-18	8-24-18	
Dibromomethane	ND	0.00094	EPA 8260C	8-24-18	8-24-18	
Bromodichloromethane	ND	0.00094	EPA 8260C	8-24-18	8-24-18	
2-Chloroethyl Vinyl Ether	ND	0.0047	EPA 8260C	8-24-18	8-24-18	
(cis) 1,3-Dichloropropene	ND	0.00094	EPA 8260C	8-24-18	8-24-18	
(trans) 1,3-Dichloropropene	ND	0.00094	EPA 8260C	8-24-18	8-24-18	



Date of Report: September 4, 2018
 Samples Submitted: August 23, 2018
 Laboratory Reference: 1808-271
 Project: 397-019

VOLATILE ORGANICS EPA 8260C
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FMW-136-20.0-082218					
Laboratory ID:	08-271-04					
1,1,2-Trichloroethane	ND	0.00094	EPA 8260C	8-24-18	8-24-18	
Tetrachloroethene	ND	0.00094	EPA 8260C	8-24-18	8-24-18	
1,3-Dichloropropane	ND	0.00094	EPA 8260C	8-24-18	8-24-18	
Dibromochloromethane	ND	0.00094	EPA 8260C	8-24-18	8-24-18	
1,2-Dibromoethane	ND	0.00094	EPA 8260C	8-24-18	8-24-18	
Chlorobenzene	ND	0.00094	EPA 8260C	8-24-18	8-24-18	
1,1,1,2-Tetrachloroethane	ND	0.00094	EPA 8260C	8-24-18	8-24-18	
Bromoform	ND	0.0047	EPA 8260C	8-24-18	8-24-18	
Bromobenzene	ND	0.00094	EPA 8260C	8-24-18	8-24-18	
1,1,2,2-Tetrachloroethane	ND	0.00094	EPA 8260C	8-24-18	8-24-18	
1,2,3-Trichloropropane	ND	0.00094	EPA 8260C	8-24-18	8-24-18	
2-Chlorotoluene	ND	0.00094	EPA 8260C	8-24-18	8-24-18	
4-Chlorotoluene	ND	0.00094	EPA 8260C	8-24-18	8-24-18	
1,3-Dichlorobenzene	ND	0.00094	EPA 8260C	8-24-18	8-24-18	
1,4-Dichlorobenzene	ND	0.00094	EPA 8260C	8-24-18	8-24-18	
1,2-Dichlorobenzene	ND	0.00094	EPA 8260C	8-24-18	8-24-18	
1,2-Dibromo-3-chloropropane	ND	0.0047	EPA 8260C	8-24-18	8-24-18	
1,2,4-Trichlorobenzene	ND	0.00094	EPA 8260C	8-24-18	8-24-18	
Hexachlorobutadiene	ND	0.0047	EPA 8260C	8-24-18	8-24-18	
1,2,3-Trichlorobenzene	ND	0.00094	EPA 8260C	8-24-18	8-24-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>97</i>	<i>68-139</i>				
<i>Toluene-d8</i>	<i>104</i>	<i>79-128</i>				
<i>4-Bromofluorobenzene</i>	<i>98</i>	<i>71-132</i>				



Date of Report: September 4, 2018
 Samples Submitted: August 23, 2018
 Laboratory Reference: 1808-271
 Project: 397-019

VOLATILE ORGANICS EPA 8260C
METHOD BLANK QUALITY CONTROL
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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0824S1					
Dichlorodifluoromethane	ND	0.0010	EPA 8260C	8-24-18	8-24-18	
Chloromethane	ND	0.0050	EPA 8260C	8-24-18	8-24-18	
Vinyl Chloride	ND	0.0010	EPA 8260C	8-24-18	8-24-18	
Bromomethane	ND	0.0010	EPA 8260C	8-24-18	8-24-18	
Chloroethane	ND	0.0050	EPA 8260C	8-24-18	8-24-18	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	8-24-18	8-24-18	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	8-24-18	8-24-18	
Iodomethane	ND	0.0050	EPA 8260C	8-24-18	8-24-18	
Methylene Chloride	ND	0.0050	EPA 8260C	8-24-18	8-24-18	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	8-24-18	8-24-18	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	8-24-18	8-24-18	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	8-24-18	8-24-18	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	8-24-18	8-24-18	
Bromochloromethane	ND	0.0010	EPA 8260C	8-24-18	8-24-18	
Chloroform	ND	0.0010	EPA 8260C	8-24-18	8-24-18	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	8-24-18	8-24-18	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	8-24-18	8-24-18	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	8-24-18	8-24-18	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	8-24-18	8-24-18	
Trichloroethene	ND	0.0010	EPA 8260C	8-24-18	8-24-18	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	8-24-18	8-24-18	
Dibromomethane	ND	0.0010	EPA 8260C	8-24-18	8-24-18	
Bromodichloromethane	ND	0.0010	EPA 8260C	8-24-18	8-24-18	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260C	8-24-18	8-24-18	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	8-24-18	8-24-18	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	8-24-18	8-24-18	



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VOLATILE ORGANICS EPA 8260C
METHOD BLANK QUALITY CONTROL
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0824S1					
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	8-24-18	8-24-18	
Tetrachloroethene	ND	0.0010	EPA 8260C	8-24-18	8-24-18	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	8-24-18	8-24-18	
Dibromochloromethane	ND	0.0010	EPA 8260C	8-24-18	8-24-18	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	8-24-18	8-24-18	
Chlorobenzene	ND	0.0010	EPA 8260C	8-24-18	8-24-18	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	8-24-18	8-24-18	
Bromoform	ND	0.0050	EPA 8260C	8-24-18	8-24-18	
Bromobenzene	ND	0.0010	EPA 8260C	8-24-18	8-24-18	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	8-24-18	8-24-18	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	8-24-18	8-24-18	
2-Chlorotoluene	ND	0.0010	EPA 8260C	8-24-18	8-24-18	
4-Chlorotoluene	ND	0.0010	EPA 8260C	8-24-18	8-24-18	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	8-24-18	8-24-18	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	8-24-18	8-24-18	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	8-24-18	8-24-18	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260C	8-24-18	8-24-18	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	8-24-18	8-24-18	
Hexachlorobutadiene	ND	0.0050	EPA 8260C	8-24-18	8-24-18	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	8-24-18	8-24-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>98</i>	<i>68-139</i>				
<i>Toluene-d8</i>	<i>101</i>	<i>79-128</i>				
<i>4-Bromofluorobenzene</i>	<i>97</i>	<i>71-132</i>				



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**VOLATILE ORGANICS EPA 8260C
 SB/SBD QUALITY CONTROL**

Matrix: Soil
 Units: mg/kg

Analyte	Result		Spike Level		Percent Recovery		Recovery	RPD	RPD	Flags
					Recovery	Limits	RPD	Limit		
SPIKE BLANKS										
Laboratory ID:	SB0824S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	0.0480	0.0510	0.0500	0.0500	96	102	53-141	6	17	
Benzene	0.0481	0.0509	0.0500	0.0500	96	102	70-130	6	15	
Trichloroethene	0.0506	0.0520	0.0500	0.0500	101	104	74-122	3	16	
Toluene	0.0513	0.0551	0.0500	0.0500	103	110	76-130	7	15	
Chlorobenzene	0.0488	0.0506	0.0500	0.0500	98	101	75-120	4	14	
<i>Surrogate:</i>										
<i>Dibromofluoromethane</i>					98	94	68-139			
<i>Toluene-d8</i>					101	103	79-128			
<i>4-Bromofluorobenzene</i>					98	98	71-132			



Date of Report: September 4, 2018
 Samples Submitted: August 23, 2018
 Laboratory Reference: 1808-271
 Project: 397-019

SEMIVOLATILE ORGANICS EPA 8270D/SIM
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Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FMW-136-20.0-082218					
Laboratory ID:	08-271-04					
n-Nitrosodimethylamine	ND	0.042	EPA 8270D	8-27-18	8-30-18	
Pyridine	ND	0.42	EPA 8270D	8-27-18	8-30-18	
Phenol	ND	0.042	EPA 8270D	8-27-18	8-30-18	
Aniline	ND	0.21	EPA 8270D	8-27-18	8-30-18	
bis(2-Chloroethyl)ether	ND	0.042	EPA 8270D	8-27-18	8-30-18	
2-Chlorophenol	ND	0.042	EPA 8270D	8-27-18	8-30-18	
1,3-Dichlorobenzene	ND	0.042	EPA 8270D	8-27-18	8-30-18	
1,4-Dichlorobenzene	ND	0.042	EPA 8270D	8-27-18	8-30-18	
Benzyl alcohol	ND	0.21	EPA 8270D	8-27-18	8-30-18	
1,2-Dichlorobenzene	ND	0.042	EPA 8270D	8-27-18	8-30-18	
2-Methylphenol (o-Cresol)	ND	0.042	EPA 8270D	8-27-18	8-30-18	
bis(2-Chloroisopropyl)ether	ND	0.042	EPA 8270D	8-27-18	8-30-18	
(3+4)-Methylphenol (m,p-Cresol)	ND	0.042	EPA 8270D	8-27-18	8-30-18	
n-Nitroso-di-n-propylamine	ND	0.042	EPA 8270D	8-27-18	8-30-18	
Hexachloroethane	ND	0.042	EPA 8270D	8-27-18	8-30-18	
Nitrobenzene	ND	0.042	EPA 8270D	8-27-18	8-30-18	
Isophorone	ND	0.042	EPA 8270D	8-27-18	8-30-18	
2-Nitrophenol	ND	0.042	EPA 8270D	8-27-18	8-30-18	
2,4-Dimethylphenol	ND	0.042	EPA 8270D	8-27-18	8-30-18	
bis(2-Chloroethoxy)methane	ND	0.042	EPA 8270D	8-27-18	8-30-18	
2,4-Dichlorophenol	ND	0.042	EPA 8270D	8-27-18	8-30-18	
1,2,4-Trichlorobenzene	ND	0.042	EPA 8270D	8-27-18	8-30-18	
Naphthalene	0.030	0.0084	EPA 8270D/SIM	8-27-18	8-28-18	
4-Chloroaniline	ND	0.21	EPA 8270D	8-27-18	8-30-18	
Hexachlorobutadiene	ND	0.042	EPA 8270D	8-27-18	8-30-18	
4-Chloro-3-methylphenol	ND	0.042	EPA 8270D	8-27-18	8-30-18	
2-Methylnaphthalene	ND	0.0084	EPA 8270D/SIM	8-27-18	8-28-18	
1-Methylnaphthalene	ND	0.0084	EPA 8270D/SIM	8-27-18	8-28-18	
Hexachlorocyclopentadiene	ND	0.042	EPA 8270D	8-27-18	8-30-18	
2,4,6-Trichlorophenol	ND	0.042	EPA 8270D	8-27-18	8-30-18	
2,3-Dichloroaniline	ND	0.042	EPA 8270D	8-27-18	8-30-18	
2,4,5-Trichlorophenol	ND	0.042	EPA 8270D	8-27-18	8-30-18	
2-Chloronaphthalene	ND	0.042	EPA 8270D	8-27-18	8-30-18	
2-Nitroaniline	ND	0.042	EPA 8270D	8-27-18	8-30-18	
1,4-Dinitrobenzene	ND	0.042	EPA 8270D	8-27-18	8-30-18	
Dimethylphthalate	ND	0.042	EPA 8270D	8-27-18	8-30-18	
1,3-Dinitrobenzene	ND	0.042	EPA 8270D	8-27-18	8-30-18	
2,6-Dinitrotoluene	ND	0.042	EPA 8270D	8-27-18	8-30-18	
1,2-Dinitrobenzene	ND	0.042	EPA 8270D	8-27-18	8-30-18	
Acenaphthylene	ND	0.0084	EPA 8270D/SIM	8-27-18	8-28-18	
3-Nitroaniline	ND	0.042	EPA 8270D	8-27-18	8-30-18	



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SEMIVOLATILE ORGANICS EPA 8270D/SIM
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FMW-136-20.0-082218					
Laboratory ID:	08-271-04					
2,4-Dinitrophenol	ND	0.21	EPA 8270D	8-27-18	8-30-18	
Acenaphthene	ND	0.0084	EPA 8270D/SIM	8-27-18	8-28-18	
4-Nitrophenol	ND	0.042	EPA 8270D	8-27-18	8-30-18	
2,4-Dinitrotoluene	ND	0.042	EPA 8270D	8-27-18	8-30-18	
Dibenzofuran	ND	0.042	EPA 8270D	8-27-18	8-30-18	
2,3,5,6-Tetrachlorophenol	ND	0.042	EPA 8270D	8-27-18	8-30-18	
2,3,4,6-Tetrachlorophenol	ND	0.042	EPA 8270D	8-27-18	8-30-18	
Diethylphthalate	ND	0.21	EPA 8270D	8-27-18	8-30-18	
4-Chlorophenyl-phenylether	ND	0.042	EPA 8270D	8-27-18	8-30-18	
4-Nitroaniline	ND	0.042	EPA 8270D	8-27-18	8-30-18	
Fluorene	ND	0.0084	EPA 8270D/SIM	8-27-18	8-28-18	
4,6-Dinitro-2-methylphenol	ND	0.21	EPA 8270D	8-27-18	8-30-18	
n-Nitrosodiphenylamine	ND	0.042	EPA 8270D	8-27-18	8-30-18	
1,2-Diphenylhydrazine	ND	0.042	EPA 8270D	8-27-18	8-30-18	
4-Bromophenyl-phenylether	ND	0.042	EPA 8270D	8-27-18	8-30-18	
Hexachlorobenzene	ND	0.042	EPA 8270D	8-27-18	8-30-18	
Pentachlorophenol	ND	0.21	EPA 8270D	8-27-18	8-30-18	
Phenanthrene	ND	0.0084	EPA 8270D/SIM	8-27-18	8-28-18	
Anthracene	ND	0.0084	EPA 8270D/SIM	8-27-18	8-28-18	
Carbazole	ND	0.042	EPA 8270D	8-27-18	8-30-18	
Di-n-butylphthalate	ND	0.21	EPA 8270D	8-27-18	8-30-18	
Fluoranthene	ND	0.0084	EPA 8270D/SIM	8-27-18	8-28-18	
Benzidine	ND	0.42	EPA 8270D	8-27-18	8-30-18	
Pyrene	ND	0.0084	EPA 8270D/SIM	8-27-18	8-28-18	
Butylbenzylphthalate	ND	0.21	EPA 8270D	8-27-18	8-30-18	
bis-2-Ethylhexyladipate	ND	0.21	EPA 8270D	8-27-18	8-30-18	
3,3'-Dichlorobenzidine	ND	0.21	EPA 8270D	8-27-18	8-30-18	
Benzo[a]anthracene	ND	0.0084	EPA 8270D/SIM	8-27-18	8-28-18	
Chrysene	ND	0.0084	EPA 8270D/SIM	8-27-18	8-28-18	
bis(2-Ethylhexyl)phthalate	ND	0.21	EPA 8270D	8-27-18	8-30-18	
Di-n-octylphthalate	ND	0.21	EPA 8270D	8-27-18	8-30-18	
Benzo[b]fluoranthene	ND	0.0084	EPA 8270D/SIM	8-27-18	8-28-18	
Benzo(j,k)fluoranthene	ND	0.0084	EPA 8270D/SIM	8-27-18	8-28-18	
Benzo[a]pyrene	ND	0.0084	EPA 8270D/SIM	8-27-18	8-28-18	
Indeno[1,2,3-cd]pyrene	ND	0.0084	EPA 8270D/SIM	8-27-18	8-28-18	
Dibenz[a,h]anthracene	ND	0.0084	EPA 8270D/SIM	8-27-18	8-28-18	
Benzo[g,h,i]perylene	ND	0.0084	EPA 8270D/SIM	8-27-18	8-28-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorophenol</i>	<i>67</i>	<i>19 - 103</i>				
<i>Phenol-d6</i>	<i>68</i>	<i>30 - 103</i>				
<i>Nitrobenzene-d5</i>	<i>62</i>	<i>27 - 105</i>				
<i>2-Fluorobiphenyl</i>	<i>69</i>	<i>36 - 102</i>				
<i>2,4,6-Tribromophenol</i>	<i>78</i>	<i>33 - 110</i>				
<i>Terphenyl-d14</i>	<i>72</i>	<i>38 - 108</i>				



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**SEMIVOLATILE ORGANICS EPA 8270D/SIM
 METHOD BLANK QUALITY CONTROL**

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Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0827S2					
n-Nitrosodimethylamine	ND	0.033	EPA 8270D	8-27-18	8-28-18	
Pyridine	ND	0.33	EPA 8270D	8-27-18	8-28-18	
Phenol	ND	0.033	EPA 8270D	8-27-18	8-28-18	
Aniline	ND	0.17	EPA 8270D	8-27-18	8-28-18	
bis(2-Chloroethyl)ether	ND	0.033	EPA 8270D	8-27-18	8-28-18	
2-Chlorophenol	ND	0.033	EPA 8270D	8-27-18	8-28-18	
1,3-Dichlorobenzene	ND	0.033	EPA 8270D	8-27-18	8-28-18	
1,4-Dichlorobenzene	ND	0.033	EPA 8270D	8-27-18	8-28-18	
Benzyl alcohol	ND	0.17	EPA 8270D	8-27-18	8-28-18	
1,2-Dichlorobenzene	ND	0.033	EPA 8270D	8-27-18	8-28-18	
2-Methylphenol (o-Cresol)	ND	0.033	EPA 8270D	8-27-18	8-28-18	
bis(2-Chloroisopropyl)ether	ND	0.033	EPA 8270D	8-27-18	8-28-18	
(3+4)-Methylphenol (m,p-Cresol)	ND	0.033	EPA 8270D	8-27-18	8-28-18	
n-Nitroso-di-n-propylamine	ND	0.033	EPA 8270D	8-27-18	8-28-18	
Hexachloroethane	ND	0.033	EPA 8270D	8-27-18	8-28-18	
Nitrobenzene	ND	0.033	EPA 8270D	8-27-18	8-28-18	
Isophorone	ND	0.033	EPA 8270D	8-27-18	8-28-18	
2-Nitrophenol	ND	0.033	EPA 8270D	8-27-18	8-28-18	
2,4-Dimethylphenol	ND	0.033	EPA 8270D	8-27-18	8-28-18	
bis(2-Chloroethoxy)methane	ND	0.033	EPA 8270D	8-27-18	8-28-18	
2,4-Dichlorophenol	ND	0.033	EPA 8270D	8-27-18	8-28-18	
1,2,4-Trichlorobenzene	ND	0.033	EPA 8270D	8-27-18	8-28-18	
Naphthalene	ND	0.0067	EPA 8270D/SIM	8-27-18	8-28-18	
4-Chloroaniline	ND	0.17	EPA 8270D	8-27-18	8-28-18	
Hexachlorobutadiene	ND	0.033	EPA 8270D	8-27-18	8-28-18	
4-Chloro-3-methylphenol	ND	0.033	EPA 8270D	8-27-18	8-28-18	
2-Methylnaphthalene	ND	0.0067	EPA 8270D/SIM	8-27-18	8-28-18	
1-Methylnaphthalene	ND	0.0067	EPA 8270D/SIM	8-27-18	8-28-18	
Hexachlorocyclopentadiene	ND	0.033	EPA 8270D	8-27-18	8-28-18	
2,4,6-Trichlorophenol	ND	0.033	EPA 8270D	8-27-18	8-28-18	
2,3-Dichloroaniline	ND	0.033	EPA 8270D	8-27-18	8-28-18	
2,4,5-Trichlorophenol	ND	0.033	EPA 8270D	8-27-18	8-28-18	
2-Chloronaphthalene	ND	0.033	EPA 8270D	8-27-18	8-28-18	
2-Nitroaniline	ND	0.033	EPA 8270D	8-27-18	8-28-18	
1,4-Dinitrobenzene	ND	0.033	EPA 8270D	8-27-18	8-28-18	
Dimethylphthalate	ND	0.033	EPA 8270D	8-27-18	8-28-18	
1,3-Dinitrobenzene	ND	0.033	EPA 8270D	8-27-18	8-28-18	
2,6-Dinitrotoluene	ND	0.033	EPA 8270D	8-27-18	8-28-18	
1,2-Dinitrobenzene	ND	0.033	EPA 8270D	8-27-18	8-28-18	
Acenaphthylene	ND	0.0067	EPA 8270D/SIM	8-27-18	8-28-18	
3-Nitroaniline	ND	0.033	EPA 8270D	8-27-18	8-28-18	



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**SEMIVOLATILE ORGANICS EPA 8270D/SIM
 METHOD BLANK QUALITY CONTROL**

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0827S2					
2,4-Dinitrophenol	ND	0.17	EPA 8270D	8-27-18	8-28-18	
Acenaphthene	ND	0.0067	EPA 8270D/SIM	8-27-18	8-28-18	
4-Nitrophenol	ND	0.033	EPA 8270D	8-27-18	8-28-18	
2,4-Dinitrotoluene	ND	0.033	EPA 8270D	8-27-18	8-28-18	
Dibenzofuran	ND	0.033	EPA 8270D	8-27-18	8-28-18	
2,3,5,6-Tetrachlorophenol	ND	0.033	EPA 8270D	8-27-18	8-28-18	
2,3,4,6-Tetrachlorophenol	ND	0.033	EPA 8270D	8-27-18	8-28-18	
Diethylphthalate	ND	0.17	EPA 8270D	8-27-18	8-28-18	
4-Chlorophenyl-phenylether	ND	0.033	EPA 8270D	8-27-18	8-28-18	
4-Nitroaniline	ND	0.033	EPA 8270D	8-27-18	8-28-18	
Fluorene	ND	0.0067	EPA 8270D/SIM	8-27-18	8-28-18	
4,6-Dinitro-2-methylphenol	ND	0.17	EPA 8270D	8-27-18	8-28-18	
n-Nitrosodiphenylamine	ND	0.033	EPA 8270D	8-27-18	8-28-18	
1,2-Diphenylhydrazine	ND	0.033	EPA 8270D	8-27-18	8-28-18	
4-Bromophenyl-phenylether	ND	0.033	EPA 8270D	8-27-18	8-28-18	
Hexachlorobenzene	ND	0.033	EPA 8270D	8-27-18	8-28-18	
Pentachlorophenol	ND	0.17	EPA 8270D	8-27-18	8-28-18	
Phenanthrene	ND	0.0067	EPA 8270D/SIM	8-27-18	8-28-18	
Anthracene	ND	0.0067	EPA 8270D/SIM	8-27-18	8-28-18	
Carbazole	ND	0.033	EPA 8270D	8-27-18	8-28-18	
Di-n-butylphthalate	ND	0.17	EPA 8270D	8-27-18	8-28-18	
Fluoranthene	ND	0.0067	EPA 8270D/SIM	8-27-18	8-28-18	
Benzidine	ND	0.33	EPA 8270D	8-27-18	8-28-18	
Pyrene	ND	0.0067	EPA 8270D/SIM	8-27-18	8-28-18	
Butylbenzylphthalate	ND	0.17	EPA 8270D	8-27-18	8-28-18	
bis(2-Ethylhexyl)adipate	ND	0.17	EPA 8270D	8-27-18	8-28-18	
3,3'-Dichlorobenzidine	ND	0.17	EPA 8270D	8-27-18	8-28-18	
Benzo[a]anthracene	ND	0.0067	EPA 8270D/SIM	8-27-18	8-28-18	
Chrysene	ND	0.0067	EPA 8270D/SIM	8-27-18	8-28-18	
bis(2-Ethylhexyl)phthalate	ND	0.17	EPA 8270D	8-27-18	8-28-18	
Di-n-octylphthalate	ND	0.17	EPA 8270D	8-27-18	8-28-18	
Benzo[b]fluoranthene	ND	0.0067	EPA 8270D/SIM	8-27-18	8-28-18	
Benzo(j,k)fluoranthene	ND	0.0067	EPA 8270D/SIM	8-27-18	8-28-18	
Benzo[a]pyrene	ND	0.0067	EPA 8270D/SIM	8-27-18	8-28-18	
Indeno[1,2,3-cd]pyrene	ND	0.0067	EPA 8270D/SIM	8-27-18	8-28-18	
Dibenz[a,h]anthracene	ND	0.0067	EPA 8270D/SIM	8-27-18	8-28-18	
Benzo[g,h,i]perylene	ND	0.0067	EPA 8270D/SIM	8-27-18	8-28-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorophenol	79	19 - 103				
Phenol-d6	82	30 - 103				
Nitrobenzene-d5	78	27 - 105				
2-Fluorobiphenyl	83	36 - 102				
2,4,6-Tribromophenol	94	33 - 110				
Terphenyl-d14	84	38 - 108				



Date of Report: September 4, 2018
 Samples Submitted: August 23, 2018
 Laboratory Reference: 1808-271
 Project: 397-019

**SEMIVOLATILE ORGANICS EPA 8270D/SIM
 MS/MSD QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg

Analyte	Result		Spike Level		Source	Percent		Recovery	RPD	RPD	Flags
	MS	MSD	MS	MSD	Result	Recovery	Limits	RPD	Limit		
MATRIX SPIKES											
Laboratory ID:	08-245-02										
	MS	MSD	MS	MSD		MS	MSD				
Phenol	1.14	1.11	1.33	1.33	ND	86	83	37 - 94	3	27	
2-Chlorophenol	1.15	1.12	1.33	1.33	ND	86	84	37 - 95	3	32	
1,4-Dichlorobenzene	0.550	0.554	0.667	0.667	ND	82	83	23 - 97	1	37	
n-Nitroso-di-n-propylamine	0.562	0.552	0.667	0.667	ND	84	83	40 - 91	2	28	
1,2,4-Trichlorobenzene	0.586	0.564	0.667	0.667	ND	88	85	37 - 93	4	30	
4-Chloro-3-methylphenol	1.15	1.11	1.33	1.33	ND	86	83	46 - 96	4	25	
Acenaphthene	0.581	0.573	0.667	0.667	ND	87	86	43 - 90	1	25	
4-Nitrophenol	1.15	1.18	1.33	1.33	ND	86	89	31 - 104	3	28	
2,4-Dinitrotoluene	0.607	0.576	0.667	0.667	ND	91	86	31 - 96	5	32	
Pentachlorophenol	1.34	1.36	1.33	1.33	ND	101	102	20 - 123	1	29	
Pyrene	0.590	0.590	0.667	0.667	ND	88	88	28 - 114	0	35	
<i>Surrogate:</i>											
2-Fluorophenol						80	81	19 - 103			
Phenol-d6						83	82	30 - 103			
Nitrobenzene-d5						74	73	27 - 105			
2-Fluorobiphenyl						78	79	36 - 102			
2,4,6-Tribromophenol						91	92	33 - 110			
Terphenyl-d14						80	80	38 - 108			



Date of Report: September 4, 2018
 Samples Submitted: August 23, 2018
 Laboratory Reference: 1808-271
 Project: 397-019

**TOTAL METALS
 EPA 6010D/7471B**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FMW-136-20.0-082218					
Laboratory ID:	08-271-04					
Arsenic	ND	13	EPA 6010D	8-28-18	8-30-18	
Barium	46	3.2	EPA 6010D	8-28-18	8-30-18	
Cadmium	ND	0.63	EPA 6010D	8-28-18	8-30-18	
Chromium	42	0.63	EPA 6010D	8-28-18	8-30-18	
Lead	ND	6.3	EPA 6010D	8-28-18	8-30-18	
Mercury	ND	0.32	EPA 7471B	8-27-18	8-27-18	
Selenium	ND	13	EPA 6010D	8-28-18	8-30-18	
Silver	ND	1.3	EPA 6010D	8-28-18	8-30-18	

Client ID:	FMW-136-30.0-082218					
Laboratory ID:	08-271-06					
Arsenic	ND	12	EPA 6010D	8-28-18	8-30-18	
Barium	45	3.0	EPA 6010D	8-28-18	8-30-18	
Cadmium	ND	0.59	EPA 6010D	8-28-18	8-30-18	
Chromium	41	0.59	EPA 6010D	8-28-18	8-30-18	
Lead	ND	5.9	EPA 6010D	8-28-18	8-30-18	
Mercury	ND	0.30	EPA 7471B	8-27-18	8-27-18	
Selenium	ND	12	EPA 6010D	8-28-18	8-30-18	
Silver	ND	1.2	EPA 6010D	8-28-18	8-30-18	



Date of Report: September 4, 2018
 Samples Submitted: August 23, 2018
 Laboratory Reference: 1808-271
 Project: 397-019

**TOTAL METALS
 EPA 6010D/7471B
 METHOD BLANK QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID: MB0828SM1						
Arsenic	ND	10	EPA 6010D	8-28-18	8-30-18	
Cadmium	ND	0.50	EPA 6010D	8-28-18	8-30-18	
Chromium	ND	0.50	EPA 6010D	8-28-18	8-30-18	
Lead	ND	5.0	EPA 6010D	8-28-18	8-30-18	
Selenium	ND	10	EPA 6010D	8-28-18	8-30-18	
Silver	ND	1.0	EPA 6010D	8-28-18	8-30-18	
Laboratory ID: MB0827S1						
Mercury	ND	0.25	EPA 7471B	8-27-18	8-27-18	
Laboratory ID: MB0828SM3						
Barium	ND	2.5	EPA 6010D	8-28-18	8-30-18	



Date of Report: September 4, 2018
 Samples Submitted: August 23, 2018
 Laboratory Reference: 1808-271
 Project: 397-019

**TOTAL METALS
 EPA 6010D/7471B
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	08-245-01							
	ORIG	DUP						
Arsenic	ND	ND	NA	NA	NA	NA	20	
Cadmium	ND	ND	NA	NA	NA	NA	20	
Chromium	35.3	42.0	NA	NA	NA	17	20	
Lead	ND	ND	NA	NA	NA	NA	20	
Selenium	ND	ND	NA	NA	NA	NA	20	
Silver	ND	ND	NA	NA	NA	NA	20	
Laboratory ID:	08-245-05							
Mercury	ND	ND	NA	NA	NA	NA	20	
Laboratory ID:	08-245-01							
	ORIG	DUP						
Barium	69.6	60.3	NA	NA	NA	14	20	
MATRIX SPIKES								
Laboratory ID:	08-245-01							
	MS	MSD	MS	MSD	MS	MSD		
Arsenic	95.8	96.1	100	100	ND	96 96	75-125	0 20
Cadmium	46.4	47.9	50.0	50.0	ND	93 96	75-125	3 20
Chromium	133	141	100	100	35.3	98 106	75-125	6 20
Lead	243	250	250	250	ND	97 100	75-125	3 20
Selenium	93.1	96.9	100	100	ND	93 97	75-125	4 20
Silver	22.4	22.6	25.0	25.0	ND	90 90	75-125	1 20
Laboratory ID:	08-245-05							
Mercury	0.529	0.523	0.500	0.500	0.0116	103 102	80-120	1 20
Laboratory ID:	08-245-01							
	MS	MSD	MS	MSD	MS	MSD		
Barium	186	183	100	100	69.6	116 113	75-125	2 20



Date of Report: September 4, 2018
Samples Submitted: August 23, 2018
Laboratory Reference: 1808-271
Project: 397-019

% MOISTURE

Date Analyzed: 8-24-18

Client ID	Lab ID	% Moisture
FMW-136-10.0-082218	08-271-02	34
FMW-136-20.0-082218	08-271-04	21
FMW-136-30.0-082218	08-271-06	15





Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
 - B - The analyte indicated was also found in the blank sample.
 - C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
 - E - The value reported exceeds the quantitation range and is an estimate.
 - F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
 - H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
 - I - Compound recovery is outside of the control limits.
 - J - The value reported was below the practical quantitation limit. The value is an estimate.
 - K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
 - L - The RPD is outside of the control limits.
 - M - Hydrocarbons in the gasoline range are impacting the diesel range result.
 - M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
 - N - Hydrocarbons in the lube oil range are impacting the diesel range result.
 - N1 - Hydrocarbons in diesel range are impacting lube oil range results.
 - O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
 - P - The RPD of the detected concentrations between the two columns is greater than 40.
 - Q - Surrogate recovery is outside of the control limits.
 - S - Surrogate recovery data is not available due to the necessary dilution of the sample.
 - T - The sample chromatogram is not similar to a typical _____.
 - U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
 - U1 - The practical quantitation limit is elevated due to interferences present in the sample.
 - V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
 - W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
 - X - Sample extract treated with a mercury cleanup procedure.
 - X1 - Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
 - Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
 - Z -
- ND - Not Detected at PQL
 PQL - Practical Quantitation Limit
 RPD - Relative Percent Difference





MVA Onsite Environmental Inc.
 Analytical Laboratory/ Testing Services
 14648 NE 95th Street • Redmond, WA 98052
 Phone: (425) 883-3881 • www.onsite-env.com

Chain of Custody

Turnaround Request
 (in working days)
 (Check One)

Same Day 1 Day

2 Days 3 Days

Standard (7 Days)
 (TPH analysis 5 Days)

_____ (other)

Laboratory Number:

08-271

Company: Farellon
 Project Number: 397-019
 Project Name: Block 38 West Projects
 Project Manager: Javon Ruark
 Sampled by: Bres Peters

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers
1	FMW-136-5.0-082218	8/22/18	1315	Soil	5
2	FMW-136-10.0-082218		1320		
3	FMW-136-15.0-082218		1330		
4	FMW-136-20.0-082218		1345		
5	FMW-136-25.0-082218		1355		
6	FMW-136-30.0-082218		1400		

Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (<input type="checkbox"/> Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	% Moisture
5		X	X	X		X												X
		X	X	X		X												X
		X	X	X		X												X
		X	X	X		X												X
		X	X	X		X												X

Signature	Company	Date	Time	Comments/Special Instructions
<u>[Signature]</u>	<u>Farellon</u>	<u>8/22/18</u>	<u>1915</u>	<u>Please Contact Project Manager for sample analysis and turn around time. X - Added 8-24-18 VL (STA)</u>
<u>[Signature]</u>	<u>OSE</u>	<u>8/23/18</u>	<u>1417</u>	

Relinquished
 Received
 Relinquished
 Received
 Relinquished
 Received
 Relinquished
 Received
 Relinquished

Reviewed/Date _____

Reviewed/Date _____

Reviewed/Date _____

Chromatograms with final report Electronic Data Deliverables (EDDs)



14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

September 4, 2018

Javan Ruark
Farallon Consulting, LLC
975 5th Avenue NW
Issaquah, WA 98027

Re: Analytical Data for Project 397-019
Laboratory Reference No. 1808-272

Dear Javan:

Enclosed are the analytical results and associated quality control data for samples submitted on August 23, 2018.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "D. Baumeister", with a long horizontal stroke extending to the right.

David Baumeister
Project Manager

Enclosures



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 4, 2018
Samples Submitted: August 23, 2018
Laboratory Reference: 1808-272
Project: 397-019

Case Narrative

Samples were collected on August 22, 2018 and received by the laboratory on August 23, 2018. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

NWTPH Gx/BTEX (soil) Analysis

The chromatogram for sample FB-06-2.5-082218 is not similar to a typical gas.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.



Date of Report: September 4, 2018
 Samples Submitted: August 23, 2018
 Laboratory Reference: 1808-272
 Project: 397-019

**GASOLINE RANGE ORGANICS/BTEX
 NWTPH-Gx/EPA 8021B**

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FB-06-2.5-082218					
Laboratory ID:	08-272-01					
Benzene	ND	0.024	EPA 8021B	8-24-18	8-24-18	
Toluene	ND	0.12	EPA 8021B	8-24-18	8-24-18	
Ethyl Benzene	ND	0.12	EPA 8021B	8-24-18	8-24-18	
m,p-Xylene	ND	0.12	EPA 8021B	8-24-18	8-24-18	
o-Xylene	ND	0.12	EPA 8021B	8-24-18	8-24-18	
Gasoline	17	12	NWTPH-Gx	8-24-18	8-24-18	T
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	96	57-129				
Client ID:	FB-06-20.0-082218					
Laboratory ID:	08-272-04					
Benzene	ND	0.020	EPA 8021B	8-24-18	8-24-18	
Toluene	ND	0.053	EPA 8021B	8-24-18	8-24-18	
Ethyl Benzene	ND	0.053	EPA 8021B	8-24-18	8-24-18	
m,p-Xylene	ND	0.053	EPA 8021B	8-24-18	8-24-18	
o-Xylene	ND	0.053	EPA 8021B	8-24-18	8-24-18	
Gasoline	ND	5.3	NWTPH-Gx	8-24-18	8-24-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	89	57-129				
Client ID:	FB-05-5.0-082218					
Laboratory ID:	08-272-06					
Benzene	ND	0.020	EPA 8021B	8-24-18	8-24-18	
Toluene	ND	0.054	EPA 8021B	8-24-18	8-24-18	
Ethyl Benzene	ND	0.054	EPA 8021B	8-24-18	8-24-18	
m,p-Xylene	ND	0.054	EPA 8021B	8-24-18	8-24-18	
o-Xylene	ND	0.054	EPA 8021B	8-24-18	8-24-18	
Gasoline	ND	5.4	NWTPH-Gx	8-24-18	8-24-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	97	57-129				



Date of Report: September 4, 2018
 Samples Submitted: August 23, 2018
 Laboratory Reference: 1808-272
 Project: 397-019

**GASOLINE RANGE ORGANICS/BTEX
 NWTPH-Gx/EPA 8021B**

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FB-05-20.0-082218					
Laboratory ID:	08-272-09					
Benzene	ND	0.020	EPA 8021B	8-24-18	8-24-18	
Toluene	ND	0.055	EPA 8021B	8-24-18	8-24-18	
Ethyl Benzene	ND	0.055	EPA 8021B	8-24-18	8-24-18	
m,p-Xylene	ND	0.055	EPA 8021B	8-24-18	8-24-18	
o-Xylene	ND	0.055	EPA 8021B	8-24-18	8-24-18	
Gasoline	ND	5.5	NWTPH-Gx	8-24-18	8-24-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	79	57-129				
Client ID:	FB-05-35.0-082218					
Laboratory ID:	08-272-12					
Benzene	ND	0.020	EPA 8021B	8-24-18	8-24-18	
Toluene	ND	0.058	EPA 8021B	8-24-18	8-24-18	
Ethyl Benzene	ND	0.058	EPA 8021B	8-24-18	8-24-18	
m,p-Xylene	ND	0.058	EPA 8021B	8-24-18	8-24-18	
o-Xylene	ND	0.058	EPA 8021B	8-24-18	8-24-18	
Gasoline	ND	5.8	NWTPH-Gx	8-24-18	8-24-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	91	57-129				



Date of Report: September 4, 2018
 Samples Submitted: August 23, 2018
 Laboratory Reference: 1808-272
 Project: 397-019

**GASOLINE RANGE ORGANICS/BTEX
 NWTPH-Gx/EPA 8021B
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0824S1					
Benzene	ND	0.020	EPA 8021B	8-24-18	8-24-18	
Toluene	ND	0.050	EPA 8021B	8-24-18	8-24-18	
Ethyl Benzene	ND	0.050	EPA 8021B	8-24-18	8-24-18	
m,p-Xylene	ND	0.050	EPA 8021B	8-24-18	8-24-18	
o-Xylene	ND	0.050	EPA 8021B	8-24-18	8-24-18	
Gasoline	ND	5.0	NWTPH-Gx	8-24-18	8-24-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	86	57-129				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	08-271-02							
	ORIG	DUP						
Benzene	ND	ND	NA	NA	NA	NA	30	
Toluene	ND	ND	NA	NA	NA	NA	30	
Ethyl Benzene	ND	ND	NA	NA	NA	NA	30	
m,p-Xylene	ND	ND	NA	NA	NA	NA	30	
o-Xylene	ND	ND	NA	NA	NA	NA	30	
Gasoline	ND	ND	NA	NA	NA	NA	30	
<i>Surrogate:</i>								
<i>Fluorobenzene</i>				94	95	57-129		

SPIKE BLANKS

Laboratory ID:	SB0824S1							
	SB	SBD	SB	SBD	SB	SBD		
Benzene	0.873	0.924	1.00	1.00	87	92	69-111	6 10
Toluene	0.863	0.912	1.00	1.00	86	91	70-114	6 11
Ethyl Benzene	0.860	0.915	1.00	1.00	86	92	70-115	6 10
m,p-Xylene	0.841	0.897	1.00	1.00	84	90	72-115	6 10
o-Xylene	0.872	0.916	1.00	1.00	87	92	71-115	5 11
<i>Surrogate:</i>								
<i>Fluorobenzene</i>					85	91	57-129	



Date of Report: September 4, 2018
 Samples Submitted: August 23, 2018
 Laboratory Reference: 1808-272
 Project: 397-019

**GASOLINE RANGE ORGANICS/BTEX
 NWTPH-Gx/EPA 8021B**

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FB-05-082218					
Laboratory ID:	08-272-14					
Benzene	ND	1.0	EPA 8021B	8-27-18	8-27-18	
Toluene	ND	1.0	EPA 8021B	8-27-18	8-27-18	
Ethyl Benzene	ND	1.0	EPA 8021B	8-27-18	8-27-18	
m,p-Xylene	ND	1.0	EPA 8021B	8-27-18	8-27-18	
o-Xylene	ND	1.0	EPA 8021B	8-27-18	8-27-18	
Gasoline	ND	100	NWTPH-Gx	8-27-18	8-27-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	98	66-117				



Date of Report: September 4, 2018
 Samples Submitted: August 23, 2018
 Laboratory Reference: 1808-272
 Project: 397-019

**GASOLINE RANGE ORGANICS/BTEX
 NWTPH-Gx/EPA 8021B
 QUALITY CONTROL**

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0827W2					
Benzene	ND	1.0	EPA 8021B	8-27-18	8-27-18	
Toluene	ND	1.0	EPA 8021B	8-27-18	8-27-18	
Ethyl Benzene	ND	1.0	EPA 8021B	8-27-18	8-27-18	
m,p-Xylene	ND	1.0	EPA 8021B	8-27-18	8-27-18	
o-Xylene	ND	1.0	EPA 8021B	8-27-18	8-27-18	
Gasoline	ND	100	NWTPH-Gx	8-27-18	8-27-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	111	66-117				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	08-276-03							
	ORIG	DUP						
Benzene	ND	ND	NA	NA	NA	NA	30	
Toluene	ND	ND	NA	NA	NA	NA	30	
Ethyl Benzene	ND	ND	NA	NA	NA	NA	30	
m,p-Xylene	ND	ND	NA	NA	NA	NA	30	
o-Xylene	ND	ND	NA	NA	NA	NA	30	
Gasoline	ND	ND	NA	NA	NA	NA	30	
<i>Surrogate:</i>								
<i>Fluorobenzene</i>				101	93	66-117		

MATRIX SPIKES

Laboratory ID:	08-276-03									
	MS	MSD	MS	MSD		MS	MSD			
Benzene	53.6	51.8	50.0	50.0	ND	107	104	82-122	3	11
Toluene	52.2	50.4	50.0	50.0	ND	104	101	83-123	4	12
Ethyl Benzene	52.3	50.6	50.0	50.0	ND	105	101	83-123	3	12
m,p-Xylene	51.7	50.2	50.0	50.0	ND	103	100	83-123	3	12
o-Xylene	52.3	51.0	50.0	50.0	ND	105	102	83-123	3	11
<i>Surrogate:</i>										
<i>Fluorobenzene</i>						103	104	66-117		



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 Samples Submitted: August 23, 2018
 Laboratory Reference: 1808-272
 Project: 397-019

**DIESEL AND HEAVY OIL RANGE ORGANICS
 NWTPH-Dx**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FB-06-2.5-082218					
Laboratory ID:	08-272-01					
Diesel Range Organics	180	43	NWTPH-Dx	8-27-18	8-27-18	
Lube Oil Range Organics	310	87	NWTPH-Dx	8-27-18	8-27-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	88	50-150				
Client ID:	FB-06-20.0-082218					
Laboratory ID:	08-272-04					
Diesel Range Organics	ND	30	NWTPH-Dx	8-27-18	8-27-18	
Lube Oil Range Organics	ND	61	NWTPH-Dx	8-27-18	8-27-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	117	50-150				
Client ID:	FB-05-5.0-082218					
Laboratory ID:	08-272-06					
Diesel Range Organics	ND	31	NWTPH-Dx	8-27-18	8-27-18	
Lube Oil Range Organics	ND	61	NWTPH-Dx	8-27-18	8-27-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	131	50-150				
Client ID:	FB-05-20.0-082218					
Laboratory ID:	08-272-09					
Diesel Range Organics	ND	31	NWTPH-Dx	8-27-18	8-27-18	
Lube Oil Range Organics	ND	61	NWTPH-Dx	8-27-18	8-27-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	56	50-150				
Client ID:	FB-05-35.0-082218					
Laboratory ID:	08-272-12					
Diesel Range Organics	ND	31	NWTPH-Dx	8-27-18	8-27-18	
Lube Oil Range Organics	ND	62	NWTPH-Dx	8-27-18	8-27-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	90	50-150				



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**DIESEL AND HEAVY OIL RANGE ORGANICS
 NWTPH-Dx
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0827S2					
Diesel Range Organics	ND	25	NWTPH-Dx	8-27-18	8-27-18	
Lube Oil Range Organics	ND	50	NWTPH-Dx	8-27-18	8-27-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	93	50-150				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	08-272-01							
	ORIG	DUP						
Diesel Range Organics	101	73.8	NA	NA	NA	NA	31	NA
Lube Oil Range Organics	177	148	NA	NA	NA	NA	18	NA
<i>Surrogate:</i>								
<i>o-Terphenyl</i>				88	102	50-150		



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**DIESEL AND HEAVY OIL RANGE ORGANICS
 NWTPH-Dx**

Matrix: Water
 Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FB-05-082218					
Laboratory ID:	08-272-14					
Diesel Range Organics	ND	0.26	NWTPH-Dx	8-27-18	8-27-18	
Lube Oil Range Organics	ND	0.41	NWTPH-Dx	8-27-18	8-27-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	92	50-150				



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**DIESEL AND HEAVY OIL RANGE ORGANICS
 NWTPH-Dx
 QUALITY CONTROL**

Matrix: Water
 Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0827W1					
Diesel Range Organics	ND	0.25	NWTPH-Dx	8-27-18	8-27-18	
Lube Oil Range Organics	ND	0.40	NWTPH-Dx	8-27-18	8-27-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	80	50-150				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	08-270-01							
	ORIG	DUP						
Diesel Range	ND	ND	NA	NA	NA	NA	NA	NA
Lube Oil Range Organics	0.687	0.476	NA	NA	NA	NA	36	NA
<i>Surrogate:</i>								
<i>o-Terphenyl</i>				88	82	50-150		



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VOLATILE ORGANICS EPA 8260C
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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FB-05-20.0-082218					
Laboratory ID:	08-272-09					
Dichlorodifluoromethane	ND	0.00090	EPA 8260C	8-24-18	8-24-18	
Chloromethane	ND	0.0045	EPA 8260C	8-24-18	8-24-18	
Vinyl Chloride	ND	0.00090	EPA 8260C	8-24-18	8-24-18	
Bromomethane	ND	0.00090	EPA 8260C	8-24-18	8-24-18	
Chloroethane	ND	0.0045	EPA 8260C	8-24-18	8-24-18	
Trichlorofluoromethane	ND	0.00090	EPA 8260C	8-24-18	8-24-18	
1,1-Dichloroethene	ND	0.00090	EPA 8260C	8-24-18	8-24-18	
Iodomethane	ND	0.0045	EPA 8260C	8-24-18	8-24-18	
Methylene Chloride	ND	0.0045	EPA 8260C	8-24-18	8-24-18	
(trans) 1,2-Dichloroethene	ND	0.00090	EPA 8260C	8-24-18	8-24-18	
1,1-Dichloroethane	ND	0.00090	EPA 8260C	8-24-18	8-24-18	
2,2-Dichloropropane	ND	0.00090	EPA 8260C	8-24-18	8-24-18	
(cis) 1,2-Dichloroethene	ND	0.00090	EPA 8260C	8-24-18	8-24-18	
Bromochloromethane	ND	0.00090	EPA 8260C	8-24-18	8-24-18	
Chloroform	ND	0.00090	EPA 8260C	8-24-18	8-24-18	
1,1,1-Trichloroethane	ND	0.00090	EPA 8260C	8-24-18	8-24-18	
Carbon Tetrachloride	ND	0.00090	EPA 8260C	8-24-18	8-24-18	
1,1-Dichloropropene	ND	0.00090	EPA 8260C	8-24-18	8-24-18	
1,2-Dichloroethane	ND	0.00090	EPA 8260C	8-24-18	8-24-18	
Trichloroethene	ND	0.00090	EPA 8260C	8-24-18	8-24-18	
1,2-Dichloropropane	ND	0.00090	EPA 8260C	8-24-18	8-24-18	
Dibromomethane	ND	0.00090	EPA 8260C	8-24-18	8-24-18	
Bromodichloromethane	ND	0.00090	EPA 8260C	8-24-18	8-24-18	
2-Chloroethyl Vinyl Ether	ND	0.0045	EPA 8260C	8-24-18	8-24-18	
(cis) 1,3-Dichloropropene	ND	0.00090	EPA 8260C	8-24-18	8-24-18	
(trans) 1,3-Dichloropropene	ND	0.00090	EPA 8260C	8-24-18	8-24-18	



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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FB-05-20.0-082218					
Laboratory ID:	08-272-09					
1,1,2-Trichloroethane	ND	0.00090	EPA 8260C	8-24-18	8-24-18	
Tetrachloroethene	ND	0.00090	EPA 8260C	8-24-18	8-24-18	
1,3-Dichloropropane	ND	0.00090	EPA 8260C	8-24-18	8-24-18	
Dibromochloromethane	ND	0.00090	EPA 8260C	8-24-18	8-24-18	
1,2-Dibromoethane	ND	0.00090	EPA 8260C	8-24-18	8-24-18	
Chlorobenzene	ND	0.00090	EPA 8260C	8-24-18	8-24-18	
1,1,1,2-Tetrachloroethane	ND	0.00090	EPA 8260C	8-24-18	8-24-18	
Bromoform	ND	0.0045	EPA 8260C	8-24-18	8-24-18	
Bromobenzene	ND	0.00090	EPA 8260C	8-24-18	8-24-18	
1,1,2,2-Tetrachloroethane	ND	0.00090	EPA 8260C	8-24-18	8-24-18	
1,2,3-Trichloropropane	ND	0.00090	EPA 8260C	8-24-18	8-24-18	
2-Chlorotoluene	ND	0.00090	EPA 8260C	8-24-18	8-24-18	
4-Chlorotoluene	ND	0.00090	EPA 8260C	8-24-18	8-24-18	
1,3-Dichlorobenzene	ND	0.00090	EPA 8260C	8-24-18	8-24-18	
1,4-Dichlorobenzene	ND	0.00090	EPA 8260C	8-24-18	8-24-18	
1,2-Dichlorobenzene	ND	0.00090	EPA 8260C	8-24-18	8-24-18	
1,2-Dibromo-3-chloropropane	ND	0.0045	EPA 8260C	8-24-18	8-24-18	
1,2,4-Trichlorobenzene	ND	0.00090	EPA 8260C	8-24-18	8-24-18	
Hexachlorobutadiene	ND	0.0045	EPA 8260C	8-24-18	8-24-18	
1,2,3-Trichlorobenzene	ND	0.00090	EPA 8260C	8-24-18	8-24-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>96</i>	<i>68-139</i>				
<i>Toluene-d8</i>	<i>100</i>	<i>79-128</i>				
<i>4-Bromofluorobenzene</i>	<i>94</i>	<i>71-132</i>				



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VOLATILE ORGANICS EPA 8260C
METHOD BLANK QUALITY CONTROL
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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0824S1					
Dichlorodifluoromethane	ND	0.0010	EPA 8260C	8-24-18	8-24-18	
Chloromethane	ND	0.0050	EPA 8260C	8-24-18	8-24-18	
Vinyl Chloride	ND	0.0010	EPA 8260C	8-24-18	8-24-18	
Bromomethane	ND	0.0010	EPA 8260C	8-24-18	8-24-18	
Chloroethane	ND	0.0050	EPA 8260C	8-24-18	8-24-18	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	8-24-18	8-24-18	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	8-24-18	8-24-18	
Iodomethane	ND	0.0050	EPA 8260C	8-24-18	8-24-18	
Methylene Chloride	ND	0.0050	EPA 8260C	8-24-18	8-24-18	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	8-24-18	8-24-18	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	8-24-18	8-24-18	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	8-24-18	8-24-18	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	8-24-18	8-24-18	
Bromochloromethane	ND	0.0010	EPA 8260C	8-24-18	8-24-18	
Chloroform	ND	0.0010	EPA 8260C	8-24-18	8-24-18	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	8-24-18	8-24-18	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	8-24-18	8-24-18	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	8-24-18	8-24-18	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	8-24-18	8-24-18	
Trichloroethene	ND	0.0010	EPA 8260C	8-24-18	8-24-18	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	8-24-18	8-24-18	
Dibromomethane	ND	0.0010	EPA 8260C	8-24-18	8-24-18	
Bromodichloromethane	ND	0.0010	EPA 8260C	8-24-18	8-24-18	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260C	8-24-18	8-24-18	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	8-24-18	8-24-18	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	8-24-18	8-24-18	



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METHOD BLANK QUALITY CONTROL
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0824S1					
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	8-24-18	8-24-18	
Tetrachloroethene	ND	0.0010	EPA 8260C	8-24-18	8-24-18	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	8-24-18	8-24-18	
Dibromochloromethane	ND	0.0010	EPA 8260C	8-24-18	8-24-18	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	8-24-18	8-24-18	
Chlorobenzene	ND	0.0010	EPA 8260C	8-24-18	8-24-18	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	8-24-18	8-24-18	
Bromoform	ND	0.0050	EPA 8260C	8-24-18	8-24-18	
Bromobenzene	ND	0.0010	EPA 8260C	8-24-18	8-24-18	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	8-24-18	8-24-18	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	8-24-18	8-24-18	
2-Chlorotoluene	ND	0.0010	EPA 8260C	8-24-18	8-24-18	
4-Chlorotoluene	ND	0.0010	EPA 8260C	8-24-18	8-24-18	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	8-24-18	8-24-18	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	8-24-18	8-24-18	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	8-24-18	8-24-18	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260C	8-24-18	8-24-18	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	8-24-18	8-24-18	
Hexachlorobutadiene	ND	0.0050	EPA 8260C	8-24-18	8-24-18	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	8-24-18	8-24-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>98</i>	<i>68-139</i>				
<i>Toluene-d8</i>	<i>101</i>	<i>79-128</i>				
<i>4-Bromofluorobenzene</i>	<i>97</i>	<i>71-132</i>				



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**VOLATILE ORGANICS EPA 8260C
 SB/SBD QUALITY CONTROL**

Matrix: Soil
 Units: mg/kg

Analyte	Result		Spike Level		Percent Recovery		Recovery	RPD	RPD	Flags
					Recovery	Limits	RPD	Limit		
SPIKE BLANKS										
Laboratory ID:	SB0824S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	0.0480	0.0510	0.0500	0.0500	96	102	53-141	6	17	
Benzene	0.0481	0.0509	0.0500	0.0500	96	102	70-130	6	15	
Trichloroethene	0.0506	0.0520	0.0500	0.0500	101	104	74-122	3	16	
Toluene	0.0513	0.0551	0.0500	0.0500	103	110	76-130	7	15	
Chlorobenzene	0.0488	0.0506	0.0500	0.0500	98	101	75-120	4	14	
<i>Surrogate:</i>										
<i>Dibromofluoromethane</i>					98	94	68-139			
<i>Toluene-d8</i>					101	103	79-128			
<i>4-Bromofluorobenzene</i>					98	98	71-132			



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Matrix: Water
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FB-05-082218					
Laboratory ID:	08-272-14					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	8-29-18	8-29-18	
Chloromethane	ND	1.0	EPA 8260C	8-29-18	8-29-18	
Vinyl Chloride	ND	0.20	EPA 8260C	8-29-18	8-29-18	
Bromomethane	ND	2.0	EPA 8260C	8-29-18	8-29-18	
Chloroethane	ND	1.0	EPA 8260C	8-29-18	8-29-18	
Trichlorofluoromethane	ND	0.20	EPA 8260C	8-29-18	8-29-18	
1,1-Dichloroethene	ND	0.20	EPA 8260C	8-29-18	8-29-18	
Iodomethane	ND	5.0	EPA 8260C	8-29-18	8-29-18	
Methylene Chloride	ND	1.0	EPA 8260C	8-29-18	8-29-18	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	8-29-18	8-29-18	
1,1-Dichloroethane	ND	0.20	EPA 8260C	8-29-18	8-29-18	
2,2-Dichloropropane	ND	0.20	EPA 8260C	8-29-18	8-29-18	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	8-29-18	8-29-18	
Bromochloromethane	ND	0.20	EPA 8260C	8-29-18	8-29-18	
Chloroform	ND	0.20	EPA 8260C	8-29-18	8-29-18	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	8-29-18	8-29-18	
Carbon Tetrachloride	ND	0.20	EPA 8260C	8-29-18	8-29-18	
1,1-Dichloropropene	ND	0.20	EPA 8260C	8-29-18	8-29-18	
1,2-Dichloroethane	ND	0.20	EPA 8260C	8-29-18	8-29-18	
Trichloroethene	ND	0.20	EPA 8260C	8-29-18	8-29-18	
1,2-Dichloropropane	ND	0.20	EPA 8260C	8-29-18	8-29-18	
Dibromomethane	ND	0.20	EPA 8260C	8-29-18	8-29-18	
Bromodichloromethane	ND	0.20	EPA 8260C	8-29-18	8-29-18	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	8-29-18	8-29-18	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	8-29-18	8-29-18	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	8-29-18	8-29-18	



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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FB-05-082218					
Laboratory ID:	08-272-14					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	8-29-18	8-29-18	
Tetrachloroethene	ND	0.20	EPA 8260C	8-29-18	8-29-18	
1,3-Dichloropropane	ND	0.20	EPA 8260C	8-29-18	8-29-18	
Dibromochloromethane	ND	0.20	EPA 8260C	8-29-18	8-29-18	
1,2-Dibromoethane	ND	0.20	EPA 8260C	8-29-18	8-29-18	
Chlorobenzene	ND	0.20	EPA 8260C	8-29-18	8-29-18	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	8-29-18	8-29-18	
Bromoform	ND	1.0	EPA 8260C	8-29-18	8-29-18	
Bromobenzene	ND	0.20	EPA 8260C	8-29-18	8-29-18	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	8-29-18	8-29-18	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	8-29-18	8-29-18	
2-Chlorotoluene	ND	0.20	EPA 8260C	8-29-18	8-29-18	
4-Chlorotoluene	ND	0.20	EPA 8260C	8-29-18	8-29-18	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	8-29-18	8-29-18	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	8-29-18	8-29-18	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	8-29-18	8-29-18	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	8-29-18	8-29-18	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	8-29-18	8-29-18	
Hexachlorobutadiene	ND	1.0	EPA 8260C	8-29-18	8-29-18	
1,2,3-Trichlorobenzene	ND	0.26	EPA 8260C	8-29-18	8-29-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>90</i>	<i>75-127</i>				
<i>Toluene-d8</i>	<i>90</i>	<i>80-127</i>				
<i>4-Bromofluorobenzene</i>	<i>99</i>	<i>78-125</i>				



Date of Report: September 4, 2018
 Samples Submitted: August 23, 2018
 Laboratory Reference: 1808-272
 Project: 397-019

VOLATILE ORGANICS EPA 8260C
METHOD BLANK QUALITY CONTROL
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Matrix: Water
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0829W1					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	8-29-18	8-29-18	
Chloromethane	ND	1.0	EPA 8260C	8-29-18	8-29-18	
Vinyl Chloride	ND	0.20	EPA 8260C	8-29-18	8-29-18	
Bromomethane	ND	2.0	EPA 8260C	8-29-18	8-29-18	
Chloroethane	ND	1.0	EPA 8260C	8-29-18	8-29-18	
Trichlorofluoromethane	ND	0.20	EPA 8260C	8-29-18	8-29-18	
1,1-Dichloroethene	ND	0.20	EPA 8260C	8-29-18	8-29-18	
Iodomethane	ND	5.0	EPA 8260C	8-29-18	8-29-18	
Methylene Chloride	ND	1.0	EPA 8260C	8-29-18	8-29-18	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	8-29-18	8-29-18	
1,1-Dichloroethane	ND	0.20	EPA 8260C	8-29-18	8-29-18	
2,2-Dichloropropane	ND	0.20	EPA 8260C	8-29-18	8-29-18	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	8-29-18	8-29-18	
Bromochloromethane	ND	0.20	EPA 8260C	8-29-18	8-29-18	
Chloroform	ND	0.20	EPA 8260C	8-29-18	8-29-18	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	8-29-18	8-29-18	
Carbon Tetrachloride	ND	0.20	EPA 8260C	8-29-18	8-29-18	
1,1-Dichloropropene	ND	0.20	EPA 8260C	8-29-18	8-29-18	
1,2-Dichloroethane	ND	0.20	EPA 8260C	8-29-18	8-29-18	
Trichloroethene	ND	0.20	EPA 8260C	8-29-18	8-29-18	
1,2-Dichloropropane	ND	0.20	EPA 8260C	8-29-18	8-29-18	
Dibromomethane	ND	0.20	EPA 8260C	8-29-18	8-29-18	
Bromodichloromethane	ND	0.20	EPA 8260C	8-29-18	8-29-18	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	8-29-18	8-29-18	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	8-29-18	8-29-18	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	8-29-18	8-29-18	



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VOLATILE ORGANICS EPA 8260C
METHOD BLANK QUALITY CONTROL
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0829W1					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	8-29-18	8-29-18	
Tetrachloroethene	ND	0.20	EPA 8260C	8-29-18	8-29-18	
1,3-Dichloropropane	ND	0.20	EPA 8260C	8-29-18	8-29-18	
Dibromochloromethane	ND	0.20	EPA 8260C	8-29-18	8-29-18	
1,2-Dibromoethane	ND	0.20	EPA 8260C	8-29-18	8-29-18	
Chlorobenzene	ND	0.20	EPA 8260C	8-29-18	8-29-18	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	8-29-18	8-29-18	
Bromoform	ND	1.0	EPA 8260C	8-29-18	8-29-18	
Bromobenzene	ND	0.20	EPA 8260C	8-29-18	8-29-18	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	8-29-18	8-29-18	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	8-29-18	8-29-18	
2-Chlorotoluene	ND	0.20	EPA 8260C	8-29-18	8-29-18	
4-Chlorotoluene	ND	0.20	EPA 8260C	8-29-18	8-29-18	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	8-29-18	8-29-18	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	8-29-18	8-29-18	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	8-29-18	8-29-18	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	8-29-18	8-29-18	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	8-29-18	8-29-18	
Hexachlorobutadiene	ND	1.0	EPA 8260C	8-29-18	8-29-18	
1,2,3-Trichlorobenzene	ND	0.26	EPA 8260C	8-29-18	8-29-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>87</i>	<i>75-127</i>				
<i>Toluene-d8</i>	<i>88</i>	<i>80-127</i>				
<i>4-Bromofluorobenzene</i>	<i>95</i>	<i>78-125</i>				



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**VOLATILE ORGANICS EPA 8260C
 SB/SBD QUALITY CONTROL**

Matrix: Water
 Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery	RPD	RPD	Flags
					Recovery	Limits	RPD	Limit		
SPIKE BLANKS										
Laboratory ID:	SB0829W1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	10.6	10.0	10.0	10.0	106	100	62-129	6	15	
Benzene	11.1	10.5	10.0	10.0	111	105	77-127	6	15	
Trichloroethene	10.7	9.96	10.0	10.0	107	100	70-120	7	15	
Toluene	11.1	10.5	10.0	10.0	111	105	82-123	6	15	
Chlorobenzene	10.5	9.70	10.0	10.0	105	97	79-120	8	15	
<i>Surrogate:</i>										
<i>Dibromofluoromethane</i>					<i>85</i>	<i>89</i>	<i>75-127</i>			
<i>Toluene-d8</i>					<i>88</i>	<i>89</i>	<i>80-127</i>			
<i>4-Bromofluorobenzene</i>					<i>93</i>	<i>94</i>	<i>78-125</i>			



Date of Report: September 4, 2018
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 Project: 397-019

SEMIVOLATILE ORGANICS EPA 8270D/SIM
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Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FB-06-2.5-082218					
Laboratory ID:	08-272-01					
n-Nitrosodimethylamine	ND	0.058	EPA 8270D	8-27-18	8-30-18	
Pyridine	ND	0.58	EPA 8270D	8-27-18	8-30-18	
Phenol	ND	0.058	EPA 8270D	8-27-18	8-30-18	
Aniline	ND	0.29	EPA 8270D	8-27-18	8-30-18	
bis(2-Chloroethyl)ether	ND	0.058	EPA 8270D	8-27-18	8-30-18	
2-Chlorophenol	ND	0.058	EPA 8270D	8-27-18	8-30-18	
1,3-Dichlorobenzene	ND	0.058	EPA 8270D	8-27-18	8-30-18	
1,4-Dichlorobenzene	ND	0.058	EPA 8270D	8-27-18	8-30-18	
Benzyl alcohol	ND	0.29	EPA 8270D	8-27-18	8-30-18	
1,2-Dichlorobenzene	ND	0.058	EPA 8270D	8-27-18	8-30-18	
2-Methylphenol (o-Cresol)	ND	0.058	EPA 8270D	8-27-18	8-30-18	
bis(2-Chloroisopropyl)ether	ND	0.058	EPA 8270D	8-27-18	8-30-18	
(3+4)-Methylphenol (m,p-Cresol)	ND	0.058	EPA 8270D	8-27-18	8-30-18	
n-Nitroso-di-n-propylamine	ND	0.058	EPA 8270D	8-27-18	8-30-18	
Hexachloroethane	ND	0.058	EPA 8270D	8-27-18	8-30-18	
Nitrobenzene	ND	0.058	EPA 8270D	8-27-18	8-30-18	
Isophorone	ND	0.058	EPA 8270D	8-27-18	8-30-18	
2-Nitrophenol	ND	0.058	EPA 8270D	8-27-18	8-30-18	
2,4-Dimethylphenol	ND	0.058	EPA 8270D	8-27-18	8-30-18	
bis(2-Chloroethoxy)methane	ND	0.058	EPA 8270D	8-27-18	8-30-18	
2,4-Dichlorophenol	ND	0.058	EPA 8270D	8-27-18	8-30-18	
1,2,4-Trichlorobenzene	ND	0.058	EPA 8270D	8-27-18	8-30-18	
Naphthalene	0.087	0.058	EPA 8270D	8-27-18	8-30-18	
4-Chloroaniline	ND	0.29	EPA 8270D	8-27-18	8-30-18	
Hexachlorobutadiene	ND	0.058	EPA 8270D	8-27-18	8-30-18	
4-Chloro-3-methylphenol	ND	0.058	EPA 8270D	8-27-18	8-30-18	
2-Methylnaphthalene	0.045	0.012	EPA 8270D/SIM	8-27-18	8-28-18	
1-Methylnaphthalene	0.044	0.012	EPA 8270D/SIM	8-27-18	8-28-18	
Hexachlorocyclopentadiene	ND	0.058	EPA 8270D	8-27-18	8-30-18	
2,4,6-Trichlorophenol	ND	0.058	EPA 8270D	8-27-18	8-30-18	
2,3-Dichloroaniline	ND	0.058	EPA 8270D	8-27-18	8-30-18	
2,4,5-Trichlorophenol	ND	0.058	EPA 8270D	8-27-18	8-30-18	
2-Chloronaphthalene	ND	0.058	EPA 8270D	8-27-18	8-30-18	
2-Nitroaniline	ND	0.058	EPA 8270D	8-27-18	8-30-18	
1,4-Dinitrobenzene	ND	0.058	EPA 8270D	8-27-18	8-30-18	
Dimethylphthalate	ND	0.058	EPA 8270D	8-27-18	8-30-18	
1,3-Dinitrobenzene	ND	0.058	EPA 8270D	8-27-18	8-30-18	
2,6-Dinitrotoluene	ND	0.058	EPA 8270D	8-27-18	8-30-18	
1,2-Dinitrobenzene	ND	0.058	EPA 8270D	8-27-18	8-30-18	
Acenaphthylene	0.042	0.012	EPA 8270D/SIM	8-27-18	8-28-18	
3-Nitroaniline	ND	0.058	EPA 8270D	8-27-18	8-30-18	



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SEMIVOLATILE ORGANICS EPA 8270D/SIM
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FB-06-2.5-082218					
Laboratory ID:	08-272-01					
2,4-Dinitrophenol	ND	0.29	EPA 8270D	8-27-18	8-30-18	
Acenaphthene	0.13	0.058	EPA 8270D	8-27-18	8-30-18	
4-Nitrophenol	ND	0.058	EPA 8270D	8-27-18	8-30-18	
2,4-Dinitrotoluene	ND	0.058	EPA 8270D	8-27-18	8-30-18	
Dibenzofuran	ND	0.058	EPA 8270D	8-27-18	8-30-18	
2,3,5,6-Tetrachlorophenol	ND	0.058	EPA 8270D	8-27-18	8-30-18	
2,3,4,6-Tetrachlorophenol	ND	0.058	EPA 8270D	8-27-18	8-30-18	
Diethylphthalate	ND	0.29	EPA 8270D	8-27-18	8-30-18	
4-Chlorophenyl-phenylether	ND	0.058	EPA 8270D	8-27-18	8-30-18	
4-Nitroaniline	ND	0.058	EPA 8270D	8-27-18	8-30-18	
Fluorene	0.094	0.058	EPA 8270D	8-27-18	8-30-18	
4,6-Dinitro-2-methylphenol	ND	0.29	EPA 8270D	8-27-18	8-30-18	
n-Nitrosodiphenylamine	ND	0.058	EPA 8270D	8-27-18	8-30-18	
1,2-Diphenylhydrazine	ND	0.16	EPA 8270D	8-27-18	8-30-18	U1
4-Bromophenyl-phenylether	ND	0.058	EPA 8270D	8-27-18	8-30-18	
Hexachlorobenzene	ND	0.058	EPA 8270D	8-27-18	8-30-18	
Pentachlorophenol	ND	0.29	EPA 8270D	8-27-18	8-30-18	
Phenanthrene	0.89	0.058	EPA 8270D	8-27-18	8-30-18	
Anthracene	0.20	0.058	EPA 8270D	8-27-18	8-30-18	
Carbazole	ND	0.058	EPA 8270D	8-27-18	8-30-18	
Di-n-butylphthalate	ND	0.29	EPA 8270D	8-27-18	8-30-18	
Fluoranthene	0.81	0.058	EPA 8270D	8-27-18	8-30-18	
Benzidine	ND	0.58	EPA 8270D	8-27-18	8-30-18	
Pyrene	1.1	0.058	EPA 8270D	8-27-18	8-30-18	
Butylbenzylphthalate	ND	0.29	EPA 8270D	8-27-18	8-30-18	
bis-2-Ethylhexyladipate	ND	0.29	EPA 8270D	8-27-18	8-30-18	
3,3'-Dichlorobenzidine	ND	0.29	EPA 8270D	8-27-18	8-30-18	
Benzo[a]anthracene	0.47	0.012	EPA 8270D/SIM	8-27-18	8-28-18	
Chrysene	0.50	0.058	EPA 8270D	8-27-18	8-30-18	
bis(2-Ethylhexyl)phthalate	ND	0.29	EPA 8270D	8-27-18	8-30-18	
Di-n-octylphthalate	ND	0.29	EPA 8270D	8-27-18	8-30-18	
Benzo[b]fluoranthene	0.52	0.012	EPA 8270D/SIM	8-27-18	8-28-18	
Benzo(j,k)fluoranthene	0.17	0.012	EPA 8270D/SIM	8-27-18	8-28-18	
Benzo[a]pyrene	0.49	0.012	EPA 8270D/SIM	8-27-18	8-28-18	
Indeno[1,2,3-cd]pyrene	0.34	0.012	EPA 8270D/SIM	8-27-18	8-28-18	
Dibenz[a,h]anthracene	0.054	0.012	EPA 8270D/SIM	8-27-18	8-28-18	
Benzo[g,h,i]perylene	0.35	0.012	EPA 8270D/SIM	8-27-18	8-28-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorophenol	65	19 - 103				
Phenol-d6	65	30 - 103				
Nitrobenzene-d5	63	27 - 105				
2-Fluorobiphenyl	76	36 - 102				
2,4,6-Tribromophenol	80	33 - 110				
Terphenyl-d14	83	38 - 108				



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SEMIVOLATILE ORGANICS EPA 8270D/SIM
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Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FB-06-20.0-082218					
Laboratory ID:	08-272-04					
n-Nitrosodimethylamine	ND	0.040	EPA 8270D	8-27-18	8-30-18	
Pyridine	ND	0.40	EPA 8270D	8-27-18	8-30-18	
Phenol	ND	0.040	EPA 8270D	8-27-18	8-30-18	
Aniline	ND	0.20	EPA 8270D	8-27-18	8-30-18	
bis(2-Chloroethyl)ether	ND	0.040	EPA 8270D	8-27-18	8-30-18	
2-Chlorophenol	ND	0.040	EPA 8270D	8-27-18	8-30-18	
1,3-Dichlorobenzene	ND	0.040	EPA 8270D	8-27-18	8-30-18	
1,4-Dichlorobenzene	ND	0.040	EPA 8270D	8-27-18	8-30-18	
Benzyl alcohol	ND	0.20	EPA 8270D	8-27-18	8-30-18	
1,2-Dichlorobenzene	ND	0.040	EPA 8270D	8-27-18	8-30-18	
2-Methylphenol (o-Cresol)	ND	0.040	EPA 8270D	8-27-18	8-30-18	
bis(2-Chloroisopropyl)ether	ND	0.040	EPA 8270D	8-27-18	8-30-18	
(3+4)-Methylphenol (m,p-Cresol)	ND	0.040	EPA 8270D	8-27-18	8-30-18	
n-Nitroso-di-n-propylamine	ND	0.040	EPA 8270D	8-27-18	8-30-18	
Hexachloroethane	ND	0.040	EPA 8270D	8-27-18	8-30-18	
Nitrobenzene	ND	0.040	EPA 8270D	8-27-18	8-30-18	
Isophorone	ND	0.040	EPA 8270D	8-27-18	8-30-18	
2-Nitrophenol	ND	0.040	EPA 8270D	8-27-18	8-30-18	
2,4-Dimethylphenol	ND	0.040	EPA 8270D	8-27-18	8-30-18	
bis(2-Chloroethoxy)methane	ND	0.040	EPA 8270D	8-27-18	8-30-18	
2,4-Dichlorophenol	ND	0.040	EPA 8270D	8-27-18	8-30-18	
1,2,4-Trichlorobenzene	ND	0.040	EPA 8270D	8-27-18	8-30-18	
Naphthalene	0.070	0.040	EPA 8270D	8-27-18	8-30-18	
4-Chloroaniline	ND	0.20	EPA 8270D	8-27-18	8-30-18	
Hexachlorobutadiene	ND	0.040	EPA 8270D	8-27-18	8-30-18	
4-Chloro-3-methylphenol	ND	0.040	EPA 8270D	8-27-18	8-30-18	
2-Methylnaphthalene	ND	0.0081	EPA 8270D/SIM	8-27-18	8-28-18	
1-Methylnaphthalene	ND	0.0081	EPA 8270D/SIM	8-27-18	8-28-18	
Hexachlorocyclopentadiene	ND	0.040	EPA 8270D	8-27-18	8-30-18	
2,4,6-Trichlorophenol	ND	0.040	EPA 8270D	8-27-18	8-30-18	
2,3-Dichloroaniline	ND	0.040	EPA 8270D	8-27-18	8-30-18	
2,4,5-Trichlorophenol	ND	0.040	EPA 8270D	8-27-18	8-30-18	
2-Chloronaphthalene	ND	0.040	EPA 8270D	8-27-18	8-30-18	
2-Nitroaniline	ND	0.040	EPA 8270D	8-27-18	8-30-18	
1,4-Dinitrobenzene	ND	0.040	EPA 8270D	8-27-18	8-30-18	
Dimethylphthalate	ND	0.040	EPA 8270D	8-27-18	8-30-18	
1,3-Dinitrobenzene	ND	0.040	EPA 8270D	8-27-18	8-30-18	
2,6-Dinitrotoluene	ND	0.040	EPA 8270D	8-27-18	8-30-18	
1,2-Dinitrobenzene	ND	0.040	EPA 8270D	8-27-18	8-30-18	
Acenaphthylene	ND	0.0081	EPA 8270D/SIM	8-27-18	8-28-18	
3-Nitroaniline	ND	0.040	EPA 8270D	8-27-18	8-30-18	



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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FB-06-20.0-082218					
Laboratory ID:	08-272-04					
2,4-Dinitrophenol	ND	0.20	EPA 8270D	8-27-18	8-30-18	
Acenaphthene	ND	0.0081	EPA 8270D/SIM	8-27-18	8-28-18	
4-Nitrophenol	ND	0.040	EPA 8270D	8-27-18	8-30-18	
2,4-Dinitrotoluene	ND	0.040	EPA 8270D	8-27-18	8-30-18	
Dibenzofuran	ND	0.040	EPA 8270D	8-27-18	8-30-18	
2,3,5,6-Tetrachlorophenol	ND	0.040	EPA 8270D	8-27-18	8-30-18	
2,3,4,6-Tetrachlorophenol	ND	0.040	EPA 8270D	8-27-18	8-30-18	
Diethylphthalate	ND	0.20	EPA 8270D	8-27-18	8-30-18	
4-Chlorophenyl-phenylether	ND	0.040	EPA 8270D	8-27-18	8-30-18	
4-Nitroaniline	ND	0.040	EPA 8270D	8-27-18	8-30-18	
Fluorene	ND	0.0081	EPA 8270D/SIM	8-27-18	8-28-18	
4,6-Dinitro-2-methylphenol	ND	0.20	EPA 8270D	8-27-18	8-30-18	
n-Nitrosodiphenylamine	ND	0.040	EPA 8270D	8-27-18	8-30-18	
1,2-Diphenylhydrazine	ND	0.040	EPA 8270D	8-27-18	8-30-18	
4-Bromophenyl-phenylether	ND	0.040	EPA 8270D	8-27-18	8-30-18	
Hexachlorobenzene	ND	0.040	EPA 8270D	8-27-18	8-30-18	
Pentachlorophenol	ND	0.20	EPA 8270D	8-27-18	8-30-18	
Phenanthrene	ND	0.0081	EPA 8270D/SIM	8-27-18	8-28-18	
Anthracene	ND	0.0081	EPA 8270D/SIM	8-27-18	8-28-18	
Carbazole	ND	0.040	EPA 8270D	8-27-18	8-30-18	
Di-n-butylphthalate	ND	0.20	EPA 8270D	8-27-18	8-30-18	
Fluoranthene	ND	0.0081	EPA 8270D/SIM	8-27-18	8-28-18	
Benzidine	ND	0.40	EPA 8270D	8-27-18	8-30-18	
Pyrene	ND	0.0081	EPA 8270D/SIM	8-27-18	8-28-18	
Butylbenzylphthalate	ND	0.20	EPA 8270D	8-27-18	8-30-18	
bis-2-Ethylhexyladipate	ND	0.20	EPA 8270D	8-27-18	8-30-18	
3,3'-Dichlorobenzidine	ND	0.20	EPA 8270D	8-27-18	8-30-18	
Benzo[a]anthracene	ND	0.0081	EPA 8270D/SIM	8-27-18	8-28-18	
Chrysene	ND	0.0081	EPA 8270D/SIM	8-27-18	8-28-18	
bis(2-Ethylhexyl)phthalate	ND	0.20	EPA 8270D	8-27-18	8-30-18	
Di-n-octylphthalate	ND	0.20	EPA 8270D	8-27-18	8-30-18	
Benzo[b]fluoranthene	ND	0.0081	EPA 8270D/SIM	8-27-18	8-28-18	
Benzo(j,k)fluoranthene	ND	0.0081	EPA 8270D/SIM	8-27-18	8-28-18	
Benzo[a]pyrene	ND	0.0081	EPA 8270D/SIM	8-27-18	8-28-18	
Indeno[1,2,3-cd]pyrene	ND	0.0081	EPA 8270D/SIM	8-27-18	8-28-18	
Dibenz[a,h]anthracene	ND	0.0081	EPA 8270D/SIM	8-27-18	8-28-18	
Benzo[g,h,i]perylene	ND	0.0081	EPA 8270D/SIM	8-27-18	8-28-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorophenol</i>	<i>70</i>	<i>19 - 103</i>				
<i>Phenol-d6</i>	<i>71</i>	<i>30 - 103</i>				
<i>Nitrobenzene-d5</i>	<i>64</i>	<i>27 - 105</i>				
<i>2-Fluorobiphenyl</i>	<i>71</i>	<i>36 - 102</i>				
<i>2,4,6-Tribromophenol</i>	<i>80</i>	<i>33 - 110</i>				
<i>Terphenyl-d14</i>	<i>75</i>	<i>38 - 108</i>				



Date of Report: September 4, 2018
 Samples Submitted: August 23, 2018
 Laboratory Reference: 1808-272
 Project: 397-019

SEMIVOLATILE ORGANICS EPA 8270D/SIM
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Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FB-05-15.0-082218					
Laboratory ID:	08-272-08					
n-Nitrosodimethylamine	ND	0.045	EPA 8270D	8-27-18	8-30-18	
Pyridine	ND	0.45	EPA 8270D	8-27-18	8-30-18	
Phenol	ND	0.045	EPA 8270D	8-27-18	8-30-18	
Aniline	ND	0.22	EPA 8270D	8-27-18	8-30-18	
bis(2-Chloroethyl)ether	ND	0.045	EPA 8270D	8-27-18	8-30-18	
2-Chlorophenol	ND	0.045	EPA 8270D	8-27-18	8-30-18	
1,3-Dichlorobenzene	ND	0.045	EPA 8270D	8-27-18	8-30-18	
1,4-Dichlorobenzene	ND	0.045	EPA 8270D	8-27-18	8-30-18	
Benzyl alcohol	ND	0.22	EPA 8270D	8-27-18	8-30-18	
1,2-Dichlorobenzene	ND	0.045	EPA 8270D	8-27-18	8-30-18	
2-Methylphenol (o-Cresol)	ND	0.045	EPA 8270D	8-27-18	8-30-18	
bis(2-Chloroisopropyl)ether	ND	0.045	EPA 8270D	8-27-18	8-30-18	
(3+4)-Methylphenol (m,p-Cresol)	ND	0.045	EPA 8270D	8-27-18	8-30-18	
n-Nitroso-di-n-propylamine	ND	0.045	EPA 8270D	8-27-18	8-30-18	
Hexachloroethane	ND	0.045	EPA 8270D	8-27-18	8-30-18	
Nitrobenzene	ND	0.045	EPA 8270D	8-27-18	8-30-18	
Isophorone	ND	0.045	EPA 8270D	8-27-18	8-30-18	
2-Nitrophenol	ND	0.045	EPA 8270D	8-27-18	8-30-18	
2,4-Dimethylphenol	ND	0.045	EPA 8270D	8-27-18	8-30-18	
bis(2-Chloroethoxy)methane	ND	0.045	EPA 8270D	8-27-18	8-30-18	
2,4-Dichlorophenol	ND	0.045	EPA 8270D	8-27-18	8-30-18	
1,2,4-Trichlorobenzene	ND	0.045	EPA 8270D	8-27-18	8-30-18	
Naphthalene	ND	0.0089	EPA 8270D/SIM	8-27-18	8-28-18	
4-Chloroaniline	ND	0.22	EPA 8270D	8-27-18	8-30-18	
Hexachlorobutadiene	ND	0.045	EPA 8270D	8-27-18	8-30-18	
4-Chloro-3-methylphenol	ND	0.045	EPA 8270D	8-27-18	8-30-18	
2-Methylnaphthalene	ND	0.0089	EPA 8270D/SIM	8-27-18	8-28-18	
1-Methylnaphthalene	ND	0.0089	EPA 8270D/SIM	8-27-18	8-28-18	
Hexachlorocyclopentadiene	ND	0.045	EPA 8270D	8-27-18	8-30-18	
2,4,6-Trichlorophenol	ND	0.045	EPA 8270D	8-27-18	8-30-18	
2,3-Dichloroaniline	ND	0.045	EPA 8270D	8-27-18	8-30-18	
2,4,5-Trichlorophenol	ND	0.045	EPA 8270D	8-27-18	8-30-18	
2-Chloronaphthalene	ND	0.045	EPA 8270D	8-27-18	8-30-18	
2-Nitroaniline	ND	0.045	EPA 8270D	8-27-18	8-30-18	
1,4-Dinitrobenzene	ND	0.045	EPA 8270D	8-27-18	8-30-18	
Dimethylphthalate	ND	0.045	EPA 8270D	8-27-18	8-30-18	
1,3-Dinitrobenzene	ND	0.045	EPA 8270D	8-27-18	8-30-18	
2,6-Dinitrotoluene	ND	0.045	EPA 8270D	8-27-18	8-30-18	
1,2-Dinitrobenzene	ND	0.045	EPA 8270D	8-27-18	8-30-18	
Acenaphthylene	ND	0.0089	EPA 8270D/SIM	8-27-18	8-28-18	
3-Nitroaniline	ND	0.045	EPA 8270D	8-27-18	8-30-18	



Date of Report: September 4, 2018
 Samples Submitted: August 23, 2018
 Laboratory Reference: 1808-272
 Project: 397-019

SEMIVOLATILE ORGANICS EPA 8270D/SIM
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FB-05-15.0-082218					
Laboratory ID:	08-272-08					
2,4-Dinitrophenol	ND	0.22	EPA 8270D	8-27-18	8-30-18	
Acenaphthene	ND	0.0089	EPA 8270D/SIM	8-27-18	8-28-18	
4-Nitrophenol	ND	0.045	EPA 8270D	8-27-18	8-30-18	
2,4-Dinitrotoluene	ND	0.045	EPA 8270D	8-27-18	8-30-18	
Dibenzofuran	ND	0.045	EPA 8270D	8-27-18	8-30-18	
2,3,5,6-Tetrachlorophenol	ND	0.045	EPA 8270D	8-27-18	8-30-18	
2,3,4,6-Tetrachlorophenol	ND	0.045	EPA 8270D	8-27-18	8-30-18	
Diethylphthalate	ND	0.22	EPA 8270D	8-27-18	8-30-18	
4-Chlorophenyl-phenylether	ND	0.045	EPA 8270D	8-27-18	8-30-18	
4-Nitroaniline	ND	0.045	EPA 8270D	8-27-18	8-30-18	
Fluorene	ND	0.0089	EPA 8270D/SIM	8-27-18	8-28-18	
4,6-Dinitro-2-methylphenol	ND	0.22	EPA 8270D	8-27-18	8-30-18	
n-Nitrosodiphenylamine	ND	0.045	EPA 8270D	8-27-18	8-30-18	
1,2-Diphenylhydrazine	ND	0.045	EPA 8270D	8-27-18	8-30-18	
4-Bromophenyl-phenylether	ND	0.045	EPA 8270D	8-27-18	8-30-18	
Hexachlorobenzene	ND	0.045	EPA 8270D	8-27-18	8-30-18	
Pentachlorophenol	ND	0.22	EPA 8270D	8-27-18	8-30-18	
Phenanthrene	ND	0.0089	EPA 8270D/SIM	8-27-18	8-28-18	
Anthracene	ND	0.0089	EPA 8270D/SIM	8-27-18	8-28-18	
Carbazole	ND	0.045	EPA 8270D	8-27-18	8-30-18	
Di-n-butylphthalate	ND	0.22	EPA 8270D	8-27-18	8-30-18	
Fluoranthene	ND	0.0089	EPA 8270D/SIM	8-27-18	8-28-18	
Benzidine	ND	0.45	EPA 8270D	8-27-18	8-30-18	
Pyrene	ND	0.0089	EPA 8270D/SIM	8-27-18	8-28-18	
Butylbenzylphthalate	ND	0.22	EPA 8270D	8-27-18	8-30-18	
bis-2-Ethylhexyladipate	ND	0.22	EPA 8270D	8-27-18	8-30-18	
3,3'-Dichlorobenzidine	ND	0.22	EPA 8270D	8-27-18	8-30-18	
Benzo[a]anthracene	ND	0.0089	EPA 8270D/SIM	8-27-18	8-28-18	
Chrysene	ND	0.0089	EPA 8270D/SIM	8-27-18	8-28-18	
bis(2-Ethylhexyl)phthalate	ND	0.22	EPA 8270D	8-27-18	8-30-18	
Di-n-octylphthalate	ND	0.22	EPA 8270D	8-27-18	8-30-18	
Benzo[b]fluoranthene	ND	0.0089	EPA 8270D/SIM	8-27-18	8-28-18	
Benzo(j,k)fluoranthene	ND	0.0089	EPA 8270D/SIM	8-27-18	8-28-18	
Benzo[a]pyrene	ND	0.0089	EPA 8270D/SIM	8-27-18	8-28-18	
Indeno[1,2,3-cd]pyrene	ND	0.0089	EPA 8270D/SIM	8-27-18	8-28-18	
Dibenz[a,h]anthracene	ND	0.0089	EPA 8270D/SIM	8-27-18	8-28-18	
Benzo[g,h,i]perylene	ND	0.0089	EPA 8270D/SIM	8-27-18	8-28-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorophenol</i>	<i>60</i>	<i>19 - 103</i>				
<i>Phenol-d6</i>	<i>61</i>	<i>30 - 103</i>				
<i>Nitrobenzene-d5</i>	<i>57</i>	<i>27 - 105</i>				
<i>2-Fluorobiphenyl</i>	<i>66</i>	<i>36 - 102</i>				
<i>2,4,6-Tribromophenol</i>	<i>78</i>	<i>33 - 110</i>				
<i>Terphenyl-d14</i>	<i>76</i>	<i>38 - 108</i>				



Date of Report: September 4, 2018
 Samples Submitted: August 23, 2018
 Laboratory Reference: 1808-272
 Project: 397-019

**SEMIVOLATILE ORGANICS EPA 8270D/SIM
 METHOD BLANK QUALITY CONTROL**

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Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0827S2					
n-Nitrosodimethylamine	ND	0.033	EPA 8270D	8-27-18	8-28-18	
Pyridine	ND	0.33	EPA 8270D	8-27-18	8-28-18	
Phenol	ND	0.033	EPA 8270D	8-27-18	8-28-18	
Aniline	ND	0.17	EPA 8270D	8-27-18	8-28-18	
bis(2-Chloroethyl)ether	ND	0.033	EPA 8270D	8-27-18	8-28-18	
2-Chlorophenol	ND	0.033	EPA 8270D	8-27-18	8-28-18	
1,3-Dichlorobenzene	ND	0.033	EPA 8270D	8-27-18	8-28-18	
1,4-Dichlorobenzene	ND	0.033	EPA 8270D	8-27-18	8-28-18	
Benzyl alcohol	ND	0.17	EPA 8270D	8-27-18	8-28-18	
1,2-Dichlorobenzene	ND	0.033	EPA 8270D	8-27-18	8-28-18	
2-Methylphenol (o-Cresol)	ND	0.033	EPA 8270D	8-27-18	8-28-18	
bis(2-Chloroisopropyl)ether	ND	0.033	EPA 8270D	8-27-18	8-28-18	
(3+4)-Methylphenol (m,p-Cresol)	ND	0.033	EPA 8270D	8-27-18	8-28-18	
n-Nitroso-di-n-propylamine	ND	0.033	EPA 8270D	8-27-18	8-28-18	
Hexachloroethane	ND	0.033	EPA 8270D	8-27-18	8-28-18	
Nitrobenzene	ND	0.033	EPA 8270D	8-27-18	8-28-18	
Isophorone	ND	0.033	EPA 8270D	8-27-18	8-28-18	
2-Nitrophenol	ND	0.033	EPA 8270D	8-27-18	8-28-18	
2,4-Dimethylphenol	ND	0.033	EPA 8270D	8-27-18	8-28-18	
bis(2-Chloroethoxy)methane	ND	0.033	EPA 8270D	8-27-18	8-28-18	
2,4-Dichlorophenol	ND	0.033	EPA 8270D	8-27-18	8-28-18	
1,2,4-Trichlorobenzene	ND	0.033	EPA 8270D	8-27-18	8-28-18	
Naphthalene	ND	0.0067	EPA 8270D/SIM	8-27-18	8-28-18	
4-Chloroaniline	ND	0.17	EPA 8270D	8-27-18	8-28-18	
Hexachlorobutadiene	ND	0.033	EPA 8270D	8-27-18	8-28-18	
4-Chloro-3-methylphenol	ND	0.033	EPA 8270D	8-27-18	8-28-18	
2-Methylnaphthalene	ND	0.0067	EPA 8270D/SIM	8-27-18	8-28-18	
1-Methylnaphthalene	ND	0.0067	EPA 8270D/SIM	8-27-18	8-28-18	
Hexachlorocyclopentadiene	ND	0.033	EPA 8270D	8-27-18	8-28-18	
2,4,6-Trichlorophenol	ND	0.033	EPA 8270D	8-27-18	8-28-18	
2,3-Dichloroaniline	ND	0.033	EPA 8270D	8-27-18	8-28-18	
2,4,5-Trichlorophenol	ND	0.033	EPA 8270D	8-27-18	8-28-18	
2-Chloronaphthalene	ND	0.033	EPA 8270D	8-27-18	8-28-18	
2-Nitroaniline	ND	0.033	EPA 8270D	8-27-18	8-28-18	
1,4-Dinitrobenzene	ND	0.033	EPA 8270D	8-27-18	8-28-18	
Dimethylphthalate	ND	0.033	EPA 8270D	8-27-18	8-28-18	
1,3-Dinitrobenzene	ND	0.033	EPA 8270D	8-27-18	8-28-18	
2,6-Dinitrotoluene	ND	0.033	EPA 8270D	8-27-18	8-28-18	
1,2-Dinitrobenzene	ND	0.033	EPA 8270D	8-27-18	8-28-18	
Acenaphthylene	ND	0.0067	EPA 8270D/SIM	8-27-18	8-28-18	
3-Nitroaniline	ND	0.033	EPA 8270D	8-27-18	8-28-18	



Date of Report: September 4, 2018
 Samples Submitted: August 23, 2018
 Laboratory Reference: 1808-272
 Project: 397-019

**SEMIVOLATILE ORGANICS EPA 8270D/SIM
 METHOD BLANK QUALITY CONTROL**

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0827S2					
2,4-Dinitrophenol	ND	0.17	EPA 8270D	8-27-18	8-28-18	
Acenaphthene	ND	0.0067	EPA 8270D/SIM	8-27-18	8-28-18	
4-Nitrophenol	ND	0.033	EPA 8270D	8-27-18	8-28-18	
2,4-Dinitrotoluene	ND	0.033	EPA 8270D	8-27-18	8-28-18	
Dibenzofuran	ND	0.033	EPA 8270D	8-27-18	8-28-18	
2,3,5,6-Tetrachlorophenol	ND	0.033	EPA 8270D	8-27-18	8-28-18	
2,3,4,6-Tetrachlorophenol	ND	0.033	EPA 8270D	8-27-18	8-28-18	
Diethylphthalate	ND	0.17	EPA 8270D	8-27-18	8-28-18	
4-Chlorophenyl-phenylether	ND	0.033	EPA 8270D	8-27-18	8-28-18	
4-Nitroaniline	ND	0.033	EPA 8270D	8-27-18	8-28-18	
Fluorene	ND	0.0067	EPA 8270D/SIM	8-27-18	8-28-18	
4,6-Dinitro-2-methylphenol	ND	0.17	EPA 8270D	8-27-18	8-28-18	
n-Nitrosodiphenylamine	ND	0.033	EPA 8270D	8-27-18	8-28-18	
1,2-Diphenylhydrazine	ND	0.033	EPA 8270D	8-27-18	8-28-18	
4-Bromophenyl-phenylether	ND	0.033	EPA 8270D	8-27-18	8-28-18	
Hexachlorobenzene	ND	0.033	EPA 8270D	8-27-18	8-28-18	
Pentachlorophenol	ND	0.17	EPA 8270D	8-27-18	8-28-18	
Phenanthrene	ND	0.0067	EPA 8270D/SIM	8-27-18	8-28-18	
Anthracene	ND	0.0067	EPA 8270D/SIM	8-27-18	8-28-18	
Carbazole	ND	0.033	EPA 8270D	8-27-18	8-28-18	
Di-n-butylphthalate	ND	0.17	EPA 8270D	8-27-18	8-28-18	
Fluoranthene	ND	0.0067	EPA 8270D/SIM	8-27-18	8-28-18	
Benzidine	ND	0.33	EPA 8270D	8-27-18	8-28-18	
Pyrene	ND	0.0067	EPA 8270D/SIM	8-27-18	8-28-18	
Butylbenzylphthalate	ND	0.17	EPA 8270D	8-27-18	8-28-18	
bis(2-Ethylhexyl)adipate	ND	0.17	EPA 8270D	8-27-18	8-28-18	
3,3'-Dichlorobenzidine	ND	0.17	EPA 8270D	8-27-18	8-28-18	
Benzo[a]anthracene	ND	0.0067	EPA 8270D/SIM	8-27-18	8-28-18	
Chrysene	ND	0.0067	EPA 8270D/SIM	8-27-18	8-28-18	
bis(2-Ethylhexyl)phthalate	ND	0.17	EPA 8270D	8-27-18	8-28-18	
Di-n-octylphthalate	ND	0.17	EPA 8270D	8-27-18	8-28-18	
Benzo[b]fluoranthene	ND	0.0067	EPA 8270D/SIM	8-27-18	8-28-18	
Benzo(j,k)fluoranthene	ND	0.0067	EPA 8270D/SIM	8-27-18	8-28-18	
Benzo[a]pyrene	ND	0.0067	EPA 8270D/SIM	8-27-18	8-28-18	
Indeno[1,2,3-cd]pyrene	ND	0.0067	EPA 8270D/SIM	8-27-18	8-28-18	
Dibenz[a,h]anthracene	ND	0.0067	EPA 8270D/SIM	8-27-18	8-28-18	
Benzo[g,h,i]perylene	ND	0.0067	EPA 8270D/SIM	8-27-18	8-28-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorophenol	79	19 - 103				
Phenol-d6	82	30 - 103				
Nitrobenzene-d5	78	27 - 105				
2-Fluorobiphenyl	83	36 - 102				
2,4,6-Tribromophenol	94	33 - 110				
Terphenyl-d14	84	38 - 108				



Date of Report: September 4, 2018
 Samples Submitted: August 23, 2018
 Laboratory Reference: 1808-272
 Project: 397-019

**SEMIVOLATILE ORGANICS EPA 8270D/SIM
 MS/MSD QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
MATRIX SPIKES											
Laboratory ID:	08-245-02										
	MS	MSD	MS	MSD		MS	MSD				
Phenol	1.14	1.11	1.33	1.33	ND	86	83	37 - 94	3	27	
2-Chlorophenol	1.15	1.12	1.33	1.33	ND	86	84	37 - 95	3	32	
1,4-Dichlorobenzene	0.550	0.554	0.667	0.667	ND	82	83	23 - 97	1	37	
n-Nitroso-di-n-propylamine	0.562	0.552	0.667	0.667	ND	84	83	40 - 91	2	28	
1,2,4-Trichlorobenzene	0.586	0.564	0.667	0.667	ND	88	85	37 - 93	4	30	
4-Chloro-3-methylphenol	1.15	1.11	1.33	1.33	ND	86	83	46 - 96	4	25	
Acenaphthene	0.581	0.573	0.667	0.667	ND	87	86	43 - 90	1	25	
4-Nitrophenol	1.15	1.18	1.33	1.33	ND	86	89	31 - 104	3	28	
2,4-Dinitrotoluene	0.607	0.576	0.667	0.667	ND	91	86	31 - 96	5	32	
Pentachlorophenol	1.34	1.36	1.33	1.33	ND	101	102	20 - 123	1	29	
Pyrene	0.590	0.590	0.667	0.667	ND	88	88	28 - 114	0	35	
<i>Surrogate:</i>											
2-Fluorophenol						80	81	19 - 103			
Phenol-d6						83	82	30 - 103			
Nitrobenzene-d5						74	73	27 - 105			
2-Fluorobiphenyl						78	79	36 - 102			
2,4,6-Tribromophenol						91	92	33 - 110			
Terphenyl-d14						80	80	38 - 108			



Date of Report: September 4, 2018
 Samples Submitted: August 23, 2018
 Laboratory Reference: 1808-272
 Project: 397-019

**TOTAL METALS
 EPA 6010D/7471B**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FB-05-35.0-082218					
Laboratory ID:	08-272-12					
Arsenic	ND	12	EPA 6010D	8-28-18	8-30-18	
Barium	58	3.1	EPA 6010D	8-28-18	8-30-18	
Cadmium	ND	0.62	EPA 6010D	8-28-18	8-30-18	
Chromium	38	0.62	EPA 6010D	8-28-18	8-30-18	
Lead	ND	6.2	EPA 6010D	8-28-18	8-30-18	
Mercury	ND	0.31	EPA 7471B	8-27-18	8-27-18	
Selenium	ND	12	EPA 6010D	8-28-18	8-30-18	
Silver	ND	1.2	EPA 6010D	8-28-18	8-30-18	



Date of Report: September 4, 2018
 Samples Submitted: August 23, 2018
 Laboratory Reference: 1808-272
 Project: 397-019

**TOTAL METALS
 EPA 6010D/7471B
 METHOD BLANK QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID: MB0828SM1						
Arsenic	ND	10	EPA 6010D	8-28-18	8-30-18	
Cadmium	ND	0.50	EPA 6010D	8-28-18	8-30-18	
Chromium	ND	0.50	EPA 6010D	8-28-18	8-30-18	
Lead	ND	5.0	EPA 6010D	8-28-18	8-30-18	
Selenium	ND	10	EPA 6010D	8-28-18	8-30-18	
Silver	ND	1.0	EPA 6010D	8-28-18	8-30-18	
Laboratory ID: MB0827S1						
Mercury	ND	0.25	EPA 7471B	8-27-18	8-27-18	
Laboratory ID: MB0828SM3						
Barium	ND	2.5	EPA 6010D	8-28-18	8-30-18	



Date of Report: September 4, 2018
 Samples Submitted: August 23, 2018
 Laboratory Reference: 1808-272
 Project: 397-019

**TOTAL METALS
 EPA 6010D/7471B
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	08-245-01							
	ORIG	DUP						
Arsenic	ND	ND	NA	NA	NA	NA	20	
Cadmium	ND	ND	NA	NA	NA	NA	20	
Chromium	35.3	42.0	NA	NA	NA	17	20	
Lead	ND	ND	NA	NA	NA	NA	20	
Selenium	ND	ND	NA	NA	NA	NA	20	
Silver	ND	ND	NA	NA	NA	NA	20	

Laboratory ID:	08-245-05							
Mercury	ND	ND	NA	NA	NA	NA	20	

Laboratory ID:	08-245-01							
	ORIG	DUP						
Barium	69.6	60.3	NA	NA	NA	14	20	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
MATRIX SPIKES								
Laboratory ID:	08-245-01							
	MS	MSD	MS	MSD	MS	MSD		
Arsenic	95.8	96.1	100	100	ND	96 96	75-125	0 20
Cadmium	46.4	47.9	50.0	50.0	ND	93 96	75-125	3 20
Chromium	133	141	100	100	35.3	98 106	75-125	6 20
Lead	243	250	250	250	ND	97 100	75-125	3 20
Selenium	93.1	96.9	100	100	ND	93 97	75-125	4 20
Silver	22.4	22.6	25.0	25.0	ND	90 90	75-125	1 20

Laboratory ID:	08-245-05							
Mercury	0.529	0.523	0.500	0.500	0.0116	103 102	80-120	1 20

Laboratory ID:	08-245-01							
	MS	MSD	MS	MSD	MS	MSD		
Barium	186	183	100	100	69.6	116 113	75-125	2 20



Date of Report: September 4, 2018
Samples Submitted: August 23, 2018
Laboratory Reference: 1808-272
Project: 397-019

% MOISTURE

Date Analyzed: 8-24&27-18

Client ID	Lab ID	% Moisture
FB-06-2.5-082218	08-272-01	42
FB-06-20.0-082218	08-272-04	18
FB-05-5.0-082218	08-272-06	18
FB-05-15.0-082218	08-272-08	25
FB-05-20.0-082218	08-272-09	18
FB-05-35.0-082218	08-272-12	19





Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
 - B - The analyte indicated was also found in the blank sample.
 - C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
 - E - The value reported exceeds the quantitation range and is an estimate.
 - F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
 - H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
 - I - Compound recovery is outside of the control limits.
 - J - The value reported was below the practical quantitation limit. The value is an estimate.
 - K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
 - L - The RPD is outside of the control limits.
 - M - Hydrocarbons in the gasoline range are impacting the diesel range result.
 - M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
 - N - Hydrocarbons in the lube oil range are impacting the diesel range result.
 - N1 - Hydrocarbons in diesel range are impacting lube oil range results.
 - O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
 - P - The RPD of the detected concentrations between the two columns is greater than 40.
 - Q - Surrogate recovery is outside of the control limits.
 - S - Surrogate recovery data is not available due to the necessary dilution of the sample.
 - T - The sample chromatogram is not similar to a typical gas.
 - U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
 - U1 - The practical quantitation limit is elevated due to interferences present in the sample.
 - V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
 - W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
 - X - Sample extract treated with a mercury cleanup procedure.
 - X1 - Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
 - Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
 - Z -
- ND - Not Detected at PQL
 PQL - Practical Quantitation Limit
 RPD - Relative Percent Difference





MVA Onsite Environmental Inc.

Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Chain of Custody

Turnaround Request (in Working days)

(Check One)

- Same Day 1 Day
 2 Days 3 Days
 Standard (7 Days) (TPH analysis 5 Days)
 _____ (other)

Laboratory Number:

08-272

Company: FIRE & CLEAN
 Project Number: 397-019
 Project Name: Block 38 West Property
 Project Manager: Tyvon Newark
 Sampled by: Greg Peters

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix
1	FB-06-2.5-082218	8/22/18	0610	soil
2	FB-06-10.0-082218		0640	
3	FB-06-15.0-082218		0655	
4	FB-06-20.0-082218		0710	
5	FB-06-25.0-082218		0730	
6	FB-05-5.0-082218		0840	
7	FB-05-10.0-082218		0855	
8	FB-05-15.0-082218		0910	
9	FB-05-20.0-082218		0930	
10	FB-05-25.0-082218		1110	

Number of Containers

Lab ID	Date	Time	Matrix	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (<input type="checkbox"/> Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	% Moisture	
1	8/22/18	1850	soil	X			X				X										X	
2																						X
3																						X
4					X		X				X											X
5					X		X				X											X
6					X		X				X											X
7																						X
8																						X
9					X		X				X											X
10					X		X				X											X

Signature

Company

Date

Time

Comments/Special Instructions

Relinquished		fire & clean	8/22/18	1850	<p>Please Contact Project Manager for Analyses and Turnaround time for each sample.</p> <p>X - Added 8/22/18. DR (STAR)</p> <p>Data Package: Standard <input type="checkbox"/> Level III <input type="checkbox"/> Level IV <input type="checkbox"/></p> <p>Chromatograms with final report <input type="checkbox"/> Electronic Data Deliverables (EDDs) <input type="checkbox"/></p>
Received		OSB	8/23/18	1417	
Relinquished					
Received					
Relinquished					
Received					
Relinquished					
Received					
Relinquished					
Received					



MVA Onsite Environmental Inc.

Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Chain of Custody

Turnaround Request (in working days)

(Check One)

Same Day 1 Day

2 Days 3 Days

Standard (7 Days)
(TPH analysis 5 Days)

_____ (other)

Laboratory Number:

08-272

Company: _____

Project Number: _____

Project Name: _____

Project Manager: _____

Sampled by: _____

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix
11	FG-05-30.0-082218	8/22/18	1120	Soil S
12	FG-05-35.0-082218		1130	Soil S
13	FG-05-40.0-082218		1140	Soil S
14	FG-05-082218		0950	Water 12

Number of Containers

Container	11	12	13	14
NWTPH-HCID				
NWTPH-Gx/BTEX	X			
NWTPH-Gx				
NWTPH-Dx (<input type="checkbox"/> Acid / SG Clean-up)	X			
Volatiles 8260C				
Halogenated Volatiles 8260C	X			
EDB EPA 8011 (Waters Only)				
Semivolatiles 8270D/SIM (with low-level PAHs)				
PAHs 8270D/SIM (low-level)				
PCBs 8082A				
Organochlorine Pesticides 8081B				
Organophosphorus Pesticides 8270D/SIM				
Chlorinated Acid Herbicides 8151A				
Total RCRA Metals		X		
Total MTCA Metals				
TCLP Metals				
HEM (oil and grease) 1664A				
% Moisture		X		

Signature	Company	Date	Time	Comments/Special Instructions
<i>[Signature]</i>	Forweller	8/22/18	1558	<i>See page 1.</i>
<i>[Signature]</i>	OSE	8/23/18	1417	

Relinquished

Received

Relinquished

Received

Relinquished

Received

Reviewed/Date

Reviewed/Date

Data Package: Standard Level III Level IV

Chromatograms with final report Electronic Data Deliverables (EDDs)



14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

September 7, 2018

Javan Ruark
Farallon Consulting, LLC
975 5th Avenue NW
Issaquah, WA 98027

Re: Analytical Data for Project 397-019
Laboratory Reference No. 1808-272B

Dear Javan:

Enclosed are the analytical results and associated quality control data for samples submitted on September 5, 2018.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "DB", with a long horizontal stroke extending to the right.

David Baumeister
Project Manager

Enclosures



Date of Report: September 7, 2018
Samples Submitted: September 5, 2018
Laboratory Reference: 1808-272B
Project: 397-019

Case Narrative

Samples were collected on August 22, 2018 and received by the laboratory on August 23, 2018. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Semivolatiles EPA 8270D/SIM Analysis

Per client request, sample FB-06-10.0-082218 was extracted and analyzed out of hold-time.

The Spike Blank Duplicate associated with sample FB-06-10.0-082218 had one recovery slightly above control limits. The sample was non-detect for this analyte so no further action was taken.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.



Date of Report: September 7, 2018
 Samples Submitted: September 5, 2018
 Laboratory Reference: 1808-272B
 Project: 397-019

SEMIVOLATILE ORGANICS EPA 8270D/SIM
 page 1 of 2

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FB-06-10.0-082218					
Laboratory ID:	08-272-02					
n-Nitrosodimethylamine	ND	0.082	EPA 8270D	9-6-18	9-6-18	
Pyridine	ND	0.82	EPA 8270D	9-6-18	9-6-18	
Phenol	ND	0.082	EPA 8270D	9-6-18	9-6-18	
Aniline	ND	0.41	EPA 8270D	9-6-18	9-6-18	
bis(2-Chloroethyl)ether	ND	0.082	EPA 8270D	9-6-18	9-6-18	
2-Chlorophenol	ND	0.082	EPA 8270D	9-6-18	9-6-18	
1,3-Dichlorobenzene	ND	0.082	EPA 8270D	9-6-18	9-6-18	
1,4-Dichlorobenzene	ND	0.082	EPA 8270D	9-6-18	9-6-18	
Benzyl alcohol	ND	0.41	EPA 8270D	9-6-18	9-6-18	
1,2-Dichlorobenzene	ND	0.082	EPA 8270D	9-6-18	9-6-18	
2-Methylphenol (o-Cresol)	ND	0.082	EPA 8270D	9-6-18	9-6-18	
bis(2-Chloroisopropyl)ether	ND	0.082	EPA 8270D	9-6-18	9-6-18	
(3+4)-Methylphenol (m,p-Cresol)	ND	0.082	EPA 8270D	9-6-18	9-6-18	
n-Nitroso-di-n-propylamine	ND	0.082	EPA 8270D	9-6-18	9-6-18	
Hexachloroethane	ND	0.082	EPA 8270D	9-6-18	9-6-18	
Nitrobenzene	ND	0.082	EPA 8270D	9-6-18	9-6-18	
Isophorone	ND	0.082	EPA 8270D	9-6-18	9-6-18	
2-Nitrophenol	ND	0.082	EPA 8270D	9-6-18	9-6-18	
2,4-Dimethylphenol	ND	0.082	EPA 8270D	9-6-18	9-6-18	
bis(2-Chloroethoxy)methane	ND	0.082	EPA 8270D	9-6-18	9-6-18	
2,4-Dichlorophenol	ND	0.082	EPA 8270D	9-6-18	9-6-18	
1,2,4-Trichlorobenzene	ND	0.082	EPA 8270D	9-6-18	9-6-18	
Naphthalene	ND	0.016	EPA 8270D/SIM	9-6-18	9-6-18	
4-Chloroaniline	ND	0.41	EPA 8270D	9-6-18	9-6-18	
Hexachlorobutadiene	ND	0.082	EPA 8270D	9-6-18	9-6-18	
4-Chloro-3-methylphenol	ND	0.082	EPA 8270D	9-6-18	9-6-18	
2-Methylnaphthalene	ND	0.016	EPA 8270D/SIM	9-6-18	9-6-18	
1-Methylnaphthalene	ND	0.016	EPA 8270D/SIM	9-6-18	9-6-18	
Hexachlorocyclopentadiene	ND	0.082	EPA 8270D	9-6-18	9-6-18	
2,4,6-Trichlorophenol	ND	0.082	EPA 8270D	9-6-18	9-6-18	
2,3-Dichloroaniline	ND	0.082	EPA 8270D	9-6-18	9-6-18	
2,4,5-Trichlorophenol	ND	0.082	EPA 8270D	9-6-18	9-6-18	
2-Chloronaphthalene	ND	0.082	EPA 8270D	9-6-18	9-6-18	
2-Nitroaniline	ND	0.082	EPA 8270D	9-6-18	9-6-18	
1,4-Dinitrobenzene	ND	0.082	EPA 8270D	9-6-18	9-6-18	
Dimethylphthalate	ND	0.082	EPA 8270D	9-6-18	9-6-18	
1,3-Dinitrobenzene	ND	0.082	EPA 8270D	9-6-18	9-6-18	
2,6-Dinitrotoluene	ND	0.082	EPA 8270D	9-6-18	9-6-18	
1,2-Dinitrobenzene	ND	0.082	EPA 8270D	9-6-18	9-6-18	
Acenaphthylene	ND	0.016	EPA 8270D/SIM	9-6-18	9-6-18	
3-Nitroaniline	ND	0.082	EPA 8270D	9-6-18	9-6-18	



Date of Report: September 7, 2018
 Samples Submitted: September 5, 2018
 Laboratory Reference: 1808-272B
 Project: 397-019

SEMIVOLATILE ORGANICS EPA 8270D/SIM
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FB-06-10.0-082218					
Laboratory ID:	08-272-02					
2,4-Dinitrophenol	ND	0.41	EPA 8270D	9-6-18	9-6-18	
Acenaphthene	ND	0.016	EPA 8270D/SIM	9-6-18	9-6-18	
4-Nitrophenol	ND	0.082	EPA 8270D	9-6-18	9-6-18	
2,4-Dinitrotoluene	ND	0.082	EPA 8270D	9-6-18	9-6-18	
Dibenzofuran	ND	0.082	EPA 8270D	9-6-18	9-6-18	
2,3,5,6-Tetrachlorophenol	ND	0.082	EPA 8270D	9-6-18	9-6-18	
2,3,4,6-Tetrachlorophenol	ND	0.082	EPA 8270D	9-6-18	9-6-18	
Diethylphthalate	ND	0.41	EPA 8270D	9-6-18	9-6-18	
4-Chlorophenyl-phenylether	ND	0.082	EPA 8270D	9-6-18	9-6-18	
4-Nitroaniline	ND	0.082	EPA 8270D	9-6-18	9-6-18	
Fluorene	ND	0.016	EPA 8270D/SIM	9-6-18	9-6-18	
4,6-Dinitro-2-methylphenol	ND	0.41	EPA 8270D	9-6-18	9-6-18	
n-Nitrosodiphenylamine	ND	0.082	EPA 8270D	9-6-18	9-6-18	
1,2-Diphenylhydrazine	ND	0.082	EPA 8270D	9-6-18	9-6-18	
4-Bromophenyl-phenylether	ND	0.082	EPA 8270D	9-6-18	9-6-18	
Hexachlorobenzene	ND	0.082	EPA 8270D	9-6-18	9-6-18	
Pentachlorophenol	ND	0.41	EPA 8270D	9-6-18	9-6-18	
Phenanthrene	ND	0.016	EPA 8270D/SIM	9-6-18	9-6-18	
Anthracene	ND	0.016	EPA 8270D/SIM	9-6-18	9-6-18	
Carbazole	ND	0.082	EPA 8270D	9-6-18	9-6-18	
Di-n-butylphthalate	ND	0.93	EPA 8270D	9-6-18	9-6-18	U1
Fluoranthene	ND	0.016	EPA 8270D/SIM	9-6-18	9-6-18	
Benzidine	ND	0.82	EPA 8270D	9-6-18	9-6-18	
Pyrene	0.020	0.016	EPA 8270D/SIM	9-6-18	9-6-18	
Butylbenzylphthalate	ND	0.41	EPA 8270D	9-6-18	9-6-18	
bis-2-Ethylhexyladipate	ND	0.41	EPA 8270D	9-6-18	9-6-18	
3,3'-Dichlorobenzidine	ND	0.41	EPA 8270D	9-6-18	9-6-18	
Benzo[a]anthracene	ND	0.016	EPA 8270D/SIM	9-6-18	9-6-18	
Chrysene	ND	0.016	EPA 8270D/SIM	9-6-18	9-6-18	
bis(2-Ethylhexyl)phthalate	ND	0.41	EPA 8270D	9-6-18	9-6-18	
Di-n-octylphthalate	ND	0.41	EPA 8270D	9-6-18	9-6-18	
Benzo[b]fluoranthene	ND	0.016	EPA 8270D/SIM	9-6-18	9-6-18	
Benzo(j,k)fluoranthene	ND	0.016	EPA 8270D/SIM	9-6-18	9-6-18	
Benzo[a]pyrene	ND	0.016	EPA 8270D/SIM	9-6-18	9-6-18	
Indeno[1,2,3-cd]pyrene	ND	0.016	EPA 8270D/SIM	9-6-18	9-6-18	
Dibenz[a,h]anthracene	ND	0.016	EPA 8270D/SIM	9-6-18	9-6-18	
Benzo[g,h,i]perylene	ND	0.016	EPA 8270D/SIM	9-6-18	9-6-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorophenol</i>	<i>64</i>	<i>19 - 103</i>				
<i>Phenol-d6</i>	<i>79</i>	<i>30 - 103</i>				
<i>Nitrobenzene-d5</i>	<i>76</i>	<i>27 - 105</i>				
<i>2-Fluorobiphenyl</i>	<i>76</i>	<i>36 - 102</i>				
<i>2,4,6-Tribromophenol</i>	<i>86</i>	<i>33 - 110</i>				
<i>Terphenyl-d14</i>	<i>82</i>	<i>38 - 108</i>				



Date of Report: September 7, 2018
 Samples Submitted: September 5, 2018
 Laboratory Reference: 1808-272B
 Project: 397-019

**SEMIVOLATILE ORGANICS EPA 8270D/SIM
 METHOD BLANK QUALITY CONTROL**

page 1 of 2

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0906S2					
n-Nitrosodimethylamine	ND	0.033	EPA 8270D	9-6-18	9-6-18	
Pyridine	ND	0.33	EPA 8270D	9-6-18	9-6-18	
Phenol	ND	0.033	EPA 8270D	9-6-18	9-6-18	
Aniline	ND	0.17	EPA 8270D	9-6-18	9-6-18	
bis(2-Chloroethyl)ether	ND	0.033	EPA 8270D	9-6-18	9-6-18	
2-Chlorophenol	ND	0.033	EPA 8270D	9-6-18	9-6-18	
1,3-Dichlorobenzene	ND	0.033	EPA 8270D	9-6-18	9-6-18	
1,4-Dichlorobenzene	ND	0.033	EPA 8270D	9-6-18	9-6-18	
Benzyl alcohol	ND	0.17	EPA 8270D	9-6-18	9-6-18	
1,2-Dichlorobenzene	ND	0.033	EPA 8270D	9-6-18	9-6-18	
2-Methylphenol (o-Cresol)	ND	0.033	EPA 8270D	9-6-18	9-6-18	
bis(2-Chloroisopropyl)ether	ND	0.033	EPA 8270D	9-6-18	9-6-18	
(3+4)-Methylphenol (m,p-Cresol)	ND	0.033	EPA 8270D	9-6-18	9-6-18	
n-Nitroso-di-n-propylamine	ND	0.033	EPA 8270D	9-6-18	9-6-18	
Hexachloroethane	ND	0.033	EPA 8270D	9-6-18	9-6-18	
Nitrobenzene	ND	0.033	EPA 8270D	9-6-18	9-6-18	
Isophorone	ND	0.033	EPA 8270D	9-6-18	9-6-18	
2-Nitrophenol	ND	0.033	EPA 8270D	9-6-18	9-6-18	
2,4-Dimethylphenol	ND	0.033	EPA 8270D	9-6-18	9-6-18	
bis(2-Chloroethoxy)methane	ND	0.033	EPA 8270D	9-6-18	9-6-18	
2,4-Dichlorophenol	ND	0.033	EPA 8270D	9-6-18	9-6-18	
1,2,4-Trichlorobenzene	ND	0.033	EPA 8270D	9-6-18	9-6-18	
Naphthalene	ND	0.0067	EPA 8270D/SIM	9-6-18	9-6-18	
4-Chloroaniline	ND	0.17	EPA 8270D	9-6-18	9-6-18	
Hexachlorobutadiene	ND	0.033	EPA 8270D	9-6-18	9-6-18	
4-Chloro-3-methylphenol	ND	0.033	EPA 8270D	9-6-18	9-6-18	
2-Methylnaphthalene	ND	0.0067	EPA 8270D/SIM	9-6-18	9-6-18	
1-Methylnaphthalene	ND	0.0067	EPA 8270D/SIM	9-6-18	9-6-18	
Hexachlorocyclopentadiene	ND	0.033	EPA 8270D	9-6-18	9-6-18	
2,4,6-Trichlorophenol	ND	0.033	EPA 8270D	9-6-18	9-6-18	
2,3-Dichloroaniline	ND	0.033	EPA 8270D	9-6-18	9-6-18	
2,4,5-Trichlorophenol	ND	0.033	EPA 8270D	9-6-18	9-6-18	
2-Chloronaphthalene	ND	0.033	EPA 8270D	9-6-18	9-6-18	
2-Nitroaniline	ND	0.033	EPA 8270D	9-6-18	9-6-18	
1,4-Dinitrobenzene	ND	0.033	EPA 8270D	9-6-18	9-6-18	
Dimethylphthalate	ND	0.033	EPA 8270D	9-6-18	9-6-18	
1,3-Dinitrobenzene	ND	0.033	EPA 8270D	9-6-18	9-6-18	
2,6-Dinitrotoluene	ND	0.033	EPA 8270D	9-6-18	9-6-18	
1,2-Dinitrobenzene	ND	0.033	EPA 8270D	9-6-18	9-6-18	
Acenaphthylene	ND	0.0067	EPA 8270D/SIM	9-6-18	9-6-18	
3-Nitroaniline	ND	0.033	EPA 8270D	9-6-18	9-6-18	



Date of Report: September 7, 2018
 Samples Submitted: September 5, 2018
 Laboratory Reference: 1808-272B
 Project: 397-019

**SEMIVOLATILE ORGANICS EPA 8270D/SIM
 METHOD BLANK QUALITY CONTROL**

page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0906S2					
2,4-Dinitrophenol	ND	0.17	EPA 8270D	9-6-18	9-6-18	
Acenaphthene	ND	0.0067	EPA 8270D/SIM	9-6-18	9-6-18	
4-Nitrophenol	ND	0.033	EPA 8270D	9-6-18	9-6-18	
2,4-Dinitrotoluene	ND	0.033	EPA 8270D	9-6-18	9-6-18	
Dibenzofuran	ND	0.033	EPA 8270D	9-6-18	9-6-18	
2,3,5,6-Tetrachlorophenol	ND	0.033	EPA 8270D	9-6-18	9-6-18	
2,3,4,6-Tetrachlorophenol	ND	0.033	EPA 8270D	9-6-18	9-6-18	
Diethylphthalate	ND	0.17	EPA 8270D	9-6-18	9-6-18	
4-Chlorophenyl-phenylether	ND	0.033	EPA 8270D	9-6-18	9-6-18	
4-Nitroaniline	ND	0.033	EPA 8270D	9-6-18	9-6-18	
Fluorene	ND	0.0067	EPA 8270D/SIM	9-6-18	9-6-18	
4,6-Dinitro-2-methylphenol	ND	0.17	EPA 8270D	9-6-18	9-6-18	
n-Nitrosodiphenylamine	ND	0.033	EPA 8270D	9-6-18	9-6-18	
1,2-Diphenylhydrazine	ND	0.033	EPA 8270D	9-6-18	9-6-18	
4-Bromophenyl-phenylether	ND	0.033	EPA 8270D	9-6-18	9-6-18	
Hexachlorobenzene	ND	0.033	EPA 8270D	9-6-18	9-6-18	
Pentachlorophenol	ND	0.17	EPA 8270D	9-6-18	9-6-18	
Phenanthrene	ND	0.0067	EPA 8270D/SIM	9-6-18	9-6-18	
Anthracene	ND	0.0067	EPA 8270D/SIM	9-6-18	9-6-18	
Carbazole	ND	0.033	EPA 8270D	9-6-18	9-6-18	
Di-n-butylphthalate	ND	0.17	EPA 8270D	9-6-18	9-6-18	
Fluoranthene	ND	0.0067	EPA 8270D/SIM	9-6-18	9-6-18	
Benzidine	ND	0.33	EPA 8270D	9-6-18	9-6-18	
Pyrene	ND	0.0067	EPA 8270D/SIM	9-6-18	9-6-18	
Butylbenzylphthalate	ND	0.17	EPA 8270D	9-6-18	9-6-18	
bis-2-Ethylhexyladipate	ND	0.17	EPA 8270D	9-6-18	9-6-18	
3,3'-Dichlorobenzidine	ND	0.17	EPA 8270D	9-6-18	9-6-18	
Benzo[a]anthracene	ND	0.0067	EPA 8270D/SIM	9-6-18	9-6-18	
Chrysene	ND	0.0067	EPA 8270D/SIM	9-6-18	9-6-18	
bis(2-Ethylhexyl)phthalate	ND	0.17	EPA 8270D	9-6-18	9-6-18	
Di-n-octylphthalate	ND	0.17	EPA 8270D	9-6-18	9-6-18	
Benzo[b]fluoranthene	ND	0.0067	EPA 8270D/SIM	9-6-18	9-6-18	
Benzo(j,k)fluoranthene	ND	0.0067	EPA 8270D/SIM	9-6-18	9-6-18	
Benzo[a]pyrene	ND	0.0067	EPA 8270D/SIM	9-6-18	9-6-18	
Indeno[1,2,3-cd]pyrene	ND	0.0067	EPA 8270D/SIM	9-6-18	9-6-18	
Dibenz[a,h]anthracene	ND	0.0067	EPA 8270D/SIM	9-6-18	9-6-18	
Benzo[g,h,i]perylene	ND	0.0067	EPA 8270D/SIM	9-6-18	9-6-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorophenol	73	19 - 103				
Phenol-d6	83	30 - 103				
Nitrobenzene-d5	82	27 - 105				
2-Fluorobiphenyl	82	36 - 102				
2,4,6-Tribromophenol	86	33 - 110				
Terphenyl-d14	80	38 - 108				



Date of Report: September 7, 2018
 Samples Submitted: September 5, 2018
 Laboratory Reference: 1808-272B
 Project: 397-019

**SEMIVOLATILE ORGANICS EPA 8270D/SIM
 SB/SBD QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
	SB	SBD	SB	SBD	SB	SBD				
SPIKE BLANKS										
Laboratory ID:	SB0906S2									
Phenol	0.940	0.997	1.33	1.33	71	75	45 - 94	6	29	
2-Chlorophenol	0.963	1.05	1.33	1.33	72	79	46 - 94	9	33	
1,4-Dichlorobenzene	0.405	0.493	0.667	0.667	61	74	42 - 91	20	37	
n-Nitroso-di-n-propylamine	0.495	0.576	0.667	0.667	74	86	45 - 100	15	26	
1,2,4-Trichlorobenzene	0.480	0.537	0.667	0.667	72	81	45 - 100	11	32	
4-Chloro-3-methylphenol	1.08	1.19	1.33	1.33	81	89	55 - 97	10	21	
Acenaphthene	0.531	0.589	0.667	0.667	80	88	48 - 91	10	21	
4-Nitrophenol	1.17	1.33	1.33	1.33	88	100	53 - 102	13	20	
2,4-Dinitrotoluene	0.534	0.606	0.667	0.667	80	91	47 - 96	13	19	
Pentachlorophenol	1.46	1.78	1.33	1.33	110	134	35 - 125	20	26	I
Pyrene	0.523	0.592	0.667	0.667	78	89	55 - 110	12	17	
<i>Surrogate:</i>										
2-Fluorophenol					68	70	19 - 103			
Phenol-d6					77	79	30 - 103			
Nitrobenzene-d5					80	76	27 - 105			
2-Fluorobiphenyl					79	85	36 - 102			
2,4,6-Tribromophenol					82	91	33 - 110			
Terphenyl-d14					76	85	38 - 108			



Date of Report: September 7, 2018
Samples Submitted: September 5, 2018
Laboratory Reference: 1808-272B
Project: 397-019

% MOISTURE

Date Analyzed: 8-24,27&9-5-18

Client ID	Lab ID	% Moisture
FB-06-10.0-082218	08-272-02	59





Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
 - B - The analyte indicated was also found in the blank sample.
 - C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
 - E - The value reported exceeds the quantitation range and is an estimate.
 - F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
 - H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
 - I - Compound recovery is outside of the control limits.
 - J - The value reported was below the practical quantitation limit. The value is an estimate.
 - K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
 - L - The RPD is outside of the control limits.
 - M - Hydrocarbons in the gasoline range are impacting the diesel range result.
 - M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
 - N - Hydrocarbons in the lube oil range are impacting the diesel range result.
 - N1 - Hydrocarbons in diesel range are impacting lube oil range results.
 - O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
 - P - The RPD of the detected concentrations between the two columns is greater than 40.
 - Q - Surrogate recovery is outside of the control limits.
 - S - Surrogate recovery data is not available due to the necessary dilution of the sample.
 - T - The sample chromatogram is not similar to a typical _____.
 - U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
 - U1 - The practical quantitation limit is elevated due to interferences present in the sample.
 - V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
 - W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
 - X - Sample extract treated with a mercury cleanup procedure.
 - X1 - Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
 - Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
 - Z -
- ND - Not Detected at PQL
 PQL - Practical Quantitation Limit
 RPD - Relative Percent Difference





Mn Onsite
Environmental Inc.

Analytical Laboratory Testing Services
 14648 NE 95th Street • Redmond, WA 98052
 Phone: (425) 883-3881 • www.onsite-env.com

Chain of Custody

Turnaround Request
 (In working days)
 (Check One)

- Same Day 1 Day
 2 Days 3 Days

Standard (7 Days)
 (TPH analysis 5 Days)

 (other)

Laboratory Number: **08-2772**

Company: **FAKALLEN**
 Project Number: **397-019**
 Project Name: **Block 35 West Property**
 Project Manager: **Byron Newark**
 Sampled by: **Greg Pates**

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers
1	FB-06-2.5-082218	8/22/18	0610	Soil	5
2	FB-06-10.0-082218		0640		
3	FB-06-15.0-082218		0655		
4	FB-06-20.0-082218		0710		
5	FB-06-25.0-082218		0730		
6	FB-05-5.0-082218		0840		
7	FB-05-10.0-082218		0855		
8	FB-05-15.0-082218		0910		
9	FB-05-20.0-082218		0930		
10	FB-05-25.0-082218		1110		

Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	% Moisture
5	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Signature: **[Signature]**
 Company: **FAKALLEN**
 Date: **8/23/18**
 Time: **1850**

Comments/Special Instructions:
Please contact Project Manager for analyses and turnaround time for each sample.

Relinquished
 Received
 Relinquished
 Received
 Relinquished
 Received
 Reviewed/Date

Reviewed/Date
 Chromatograms with final report Electronic Data Deliverables (EDDs)

Data Package: Standard Added Level
 X- Added 8/22/18 DR (STA)
 Added 8/15/18 PB (STA)



14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

September 6, 2018

Javan Ruark
Farallon Consulting, LLC
975 5th Avenue NW
Issaquah, WA 98027

Re: Analytical Data for Project 397-019
Laboratory Reference No. 1808-277

Dear Javan:

Enclosed are the analytical results and associated quality control data for samples submitted on August 24, 2018.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "DB", with a long horizontal stroke extending to the right.

David Baumeister
Project Manager

Enclosures



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 6, 2018
Samples Submitted: August 24, 2018
Laboratory Reference: 1808-277
Project: 397-019

Case Narrative

Samples were collected on August 23, 2018 and received by the laboratory on August 24, 2018. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

NWTPH Gx/BTEX Analysis

The MTCA Method A cleanup level of 0.030 ppm for Benzene is not achievable for sample FMW-134-5.0-082318 due to the low dry weight of the sample.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.



Date of Report: September 6, 2018
 Samples Submitted: August 24, 2018
 Laboratory Reference: 1808-277
 Project: 397-019

**GASOLINE RANGE ORGANICS/BTEX
 NWTPH-Gx/EPA 8021B**

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FMW-134-5.0-082318					
Laboratory ID:	08-277-01					
Benzene	ND	0.059	EPA 8021B	8-27-18	8-27-18	
Toluene	ND	0.30	EPA 8021B	8-27-18	8-27-18	
Ethyl Benzene	ND	0.30	EPA 8021B	8-27-18	8-27-18	
m,p-Xylene	ND	0.30	EPA 8021B	8-27-18	8-27-18	
o-Xylene	ND	0.30	EPA 8021B	8-27-18	8-27-18	
Gasoline	ND	30	NWTPH-Gx	8-27-18	8-27-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	80	57-129				

Client ID:	FMW-134-15.0-082318					
Laboratory ID:	08-277-03					
Benzene	ND	0.023	EPA 8021B	8-27-18	8-27-18	
Toluene	ND	0.12	EPA 8021B	8-27-18	8-27-18	
Ethyl Benzene	ND	0.12	EPA 8021B	8-27-18	8-27-18	
m,p-Xylene	ND	0.12	EPA 8021B	8-27-18	8-27-18	
o-Xylene	ND	0.12	EPA 8021B	8-27-18	8-27-18	
Gasoline	ND	12	NWTPH-Gx	8-27-18	8-27-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	87	57-129				

Client ID:	FB-03-10.0-082318					
Laboratory ID:	08-277-06					
Benzene	ND	0.020	EPA 8021B	8-27-18	8-27-18	
Toluene	ND	0.065	EPA 8021B	8-27-18	8-27-18	
Ethyl Benzene	ND	0.065	EPA 8021B	8-27-18	8-27-18	
m,p-Xylene	ND	0.065	EPA 8021B	8-27-18	8-27-18	
o-Xylene	ND	0.065	EPA 8021B	8-27-18	8-27-18	
Gasoline	ND	6.5	NWTPH-Gx	8-27-18	8-27-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	101	57-129				



Date of Report: September 6, 2018
 Samples Submitted: August 24, 2018
 Laboratory Reference: 1808-277
 Project: 397-019

**GASOLINE RANGE ORGANICS/BTEX
 NWTPH-Gx/EPA 8021B**

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FB-03-15.0-082318					
Laboratory ID:	08-277-07					
Benzene	ND	0.020	EPA 8021B	8-27-18	8-27-18	
Toluene	ND	0.065	EPA 8021B	8-27-18	8-27-18	
Ethyl Benzene	ND	0.065	EPA 8021B	8-27-18	8-27-18	
m,p-Xylene	ND	0.065	EPA 8021B	8-27-18	8-27-18	
o-Xylene	ND	0.065	EPA 8021B	8-27-18	8-27-18	
Gasoline	ND	6.5	NWTPH-Gx	8-27-18	8-27-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	87	57-129				
Client ID:	FB-03-25.0-082318					
Laboratory ID:	08-277-08					
Benzene	ND	0.020	EPA 8021B	8-27-18	8-27-18	
Toluene	ND	0.055	EPA 8021B	8-27-18	8-27-18	
Ethyl Benzene	ND	0.055	EPA 8021B	8-27-18	8-27-18	
m,p-Xylene	ND	0.055	EPA 8021B	8-27-18	8-27-18	
o-Xylene	ND	0.055	EPA 8021B	8-27-18	8-27-18	
Gasoline	ND	5.5	NWTPH-Gx	8-27-18	8-27-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	87	57-129				



Date of Report: September 6, 2018
 Samples Submitted: August 24, 2018
 Laboratory Reference: 1808-277
 Project: 397-019

**GASOLINE RANGE ORGANICS/BTEX
 NWTPH-Gx/EPA 8021B
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0827S2					
Benzene	ND	0.020	EPA 8021B	8-27-18	8-27-18	
Toluene	ND	0.050	EPA 8021B	8-27-18	8-27-18	
Ethyl Benzene	ND	0.050	EPA 8021B	8-27-18	8-27-18	
m,p-Xylene	ND	0.050	EPA 8021B	8-27-18	8-27-18	
o-Xylene	ND	0.050	EPA 8021B	8-27-18	8-27-18	
Gasoline	ND	5.0	NWTPH-Gx	8-27-18	8-27-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	90	57-129				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	08-276-04							
	ORIG	DUP						
Benzene	ND	ND	NA	NA	NA	NA	30	
Toluene	ND	ND	NA	NA	NA	NA	30	
Ethyl Benzene	ND	ND	NA	NA	NA	NA	30	
m,p-Xylene	ND	ND	NA	NA	NA	NA	30	
o-Xylene	ND	ND	NA	NA	NA	NA	30	
Gasoline	ND	ND	NA	NA	NA	NA	30	
<i>Surrogate:</i>								
<i>Fluorobenzene</i>				99	94	57-129		

SPIKE BLANKS

Laboratory ID:	SB0827S1								
	SB	SBD	SB	SBD	SB	SBD			
Benzene	0.923	0.893	1.00	1.00	92	89	69-111	3	10
Toluene	0.915	0.880	1.00	1.00	92	88	70-114	4	11
Ethyl Benzene	0.918	0.886	1.00	1.00	92	89	70-115	4	10
m,p-Xylene	0.907	0.877	1.00	1.00	91	88	72-115	3	10
o-Xylene	0.917	0.882	1.00	1.00	92	88	71-115	4	11
<i>Surrogate:</i>									
<i>Fluorobenzene</i>					89	86	57-129		



Date of Report: September 6, 2018
 Samples Submitted: August 24, 2018
 Laboratory Reference: 1808-277
 Project: 397-019

**GASOLINE RANGE ORGANICS/BTEX
 NWTPH-Gx/EPA 8021B**

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FB-03-082318					
Laboratory ID:	08-277-12					
Benzene	ND	1.0	EPA 8021B	8-28-18	8-28-18	
Toluene	ND	1.0	EPA 8021B	8-28-18	8-28-18	
Ethyl Benzene	ND	1.0	EPA 8021B	8-28-18	8-28-18	
m,p-Xylene	ND	1.0	EPA 8021B	8-28-18	8-28-18	
o-Xylene	ND	1.0	EPA 8021B	8-28-18	8-28-18	
Gasoline	ND	100	NWTPH-Gx	8-28-18	8-28-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	111	66-117				



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**GASOLINE RANGE ORGANICS/BTEX
 NWTPH-Gx/EPA 8021B
 QUALITY CONTROL**

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0828W1					
Benzene	ND	1.0	EPA 8021B	8-28-18	8-28-18	
Toluene	ND	1.0	EPA 8021B	8-28-18	8-28-18	
Ethyl Benzene	ND	1.0	EPA 8021B	8-28-18	8-28-18	
m,p-Xylene	ND	1.0	EPA 8021B	8-28-18	8-28-18	
o-Xylene	ND	1.0	EPA 8021B	8-28-18	8-28-18	
Gasoline	ND	100	NWTPH-Gx	8-28-18	8-28-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	112	66-117				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	08-277-12							
	ORIG	DUP						
Benzene	ND	ND	NA	NA	NA	NA	30	
Toluene	ND	ND	NA	NA	NA	NA	30	
Ethyl Benzene	ND	ND	NA	NA	NA	NA	30	
m,p-Xylene	ND	ND	NA	NA	NA	NA	30	
o-Xylene	ND	ND	NA	NA	NA	NA	30	
Gasoline	ND	ND	NA	NA	NA	NA	30	
<i>Surrogate:</i>								
<i>Fluorobenzene</i>				111	113	66-117		

MATRIX SPIKES

Laboratory ID:	08-277-12									
	MS	MSD	MS	MSD		MS	MSD			
Benzene	50.9	52.1	50.0	50.0	ND	102	104	82-122	2	11
Toluene	50.2	51.2	50.0	50.0	ND	100	102	83-123	2	12
Ethyl Benzene	50.6	51.9	50.0	50.0	ND	101	104	83-123	3	12
m,p-Xylene	50.1	51.2	50.0	50.0	ND	100	102	83-123	2	12
o-Xylene	50.7	51.8	50.0	50.0	ND	101	104	83-123	2	11
<i>Surrogate:</i>										
<i>Fluorobenzene</i>						100	100	66-117		



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**DIESEL AND HEAVY OIL RANGE ORGANICS
 NWTPH-Dx**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FMW-134-5.0-082318					
Laboratory ID:	08-277-01					
Diesel Range Organics	260	83	NWTPH-Dx	8-28-18	8-28-18	
Lube Oil Range Organics	1900	170	NWTPH-Dx	8-28-18	8-28-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	83	50-150				

Client ID:	FMW-134-15.0-082318					
Laboratory ID:	08-277-03					
Diesel Range Organics	ND	31	NWTPH-Dx	8-28-18	8-28-18	
Lube Oil Range Organics	ND	61	NWTPH-Dx	8-28-18	8-28-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	124	50-150				

Client ID:	FB-03-10.0-082318					
Laboratory ID:	08-277-06					
Diesel Range Organics	ND	32	NWTPH-Dx	8-28-18	8-28-18	
Lube Oil Range Organics	ND	65	NWTPH-Dx	8-28-18	8-28-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	75	50-150				

Client ID:	FB-03-15.0-082318					
Laboratory ID:	08-277-07					
Diesel Range Organics	ND	32	NWTPH-Dx	8-28-18	8-28-18	
Lube Oil Range Organics	ND	65	NWTPH-Dx	8-28-18	8-28-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	92	50-150				

Client ID:	FB-03-25.0-082318					
Laboratory ID:	08-277-08					
Diesel Range Organics	ND	29	NWTPH-Dx	8-28-18	8-28-18	
Lube Oil Range Organics	ND	59	NWTPH-Dx	8-28-18	8-28-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	77	50-150				



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**DIESEL AND HEAVY OIL RANGE ORGANICS
 NWTPH-Dx
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0828S1					
Diesel Range Organics	ND	25	NWTPH-Dx	8-28-18	8-28-18	
Lube Oil Range Organics	ND	50	NWTPH-Dx	8-28-18	8-28-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	111	50-150				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	08-277-03							
	ORIG	DUP						
Diesel Range	ND	ND	NA	NA	NA	NA	NA	NA
Lube Oil Range	ND	ND	NA	NA	NA	NA	NA	NA
<i>Surrogate:</i>								
<i>o-Terphenyl</i>				124	113	50-150		



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**DIESEL AND HEAVY OIL RANGE ORGANICS
 NWTPH-Dx**

Matrix: Water
 Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FB-03-082318					
Laboratory ID:	08-277-12					
Diesel Range Organics	0.66	0.25	NWTPH-Dx	8-28-18	8-30-18	
Lube Oil Range Organics	0.49	0.41	NWTPH-Dx	8-28-18	8-30-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	91	50-150				



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**DIESEL AND HEAVY OIL RANGE ORGANICS
 NWTPH-Dx
 QUALITY CONTROL**

Matrix: Water
 Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0828W1					
Diesel Range Organics	ND	0.25	NWTPH-Dx	8-28-18	8-28-18	
Lube Oil Range Organics	ND	0.40	NWTPH-Dx	8-28-18	8-28-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	118	50-150				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	SB0828W1							
	ORIG	DUP						
Diesel Fuel #2	0.920	0.849	NA	NA	NA	NA	8	NA
Lube Oil	ND	ND	NA	NA	NA	NA	NA	NA
<i>Surrogate:</i>								
<i>o-Terphenyl</i>				103	106	50-150		



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Matrix: Water
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FB-03-082318					
Laboratory ID:	08-277-12					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	8-29-18	8-29-18	
Chloromethane	ND	1.0	EPA 8260C	8-29-18	8-29-18	
Vinyl Chloride	ND	0.20	EPA 8260C	8-29-18	8-29-18	
Bromomethane	ND	2.0	EPA 8260C	8-29-18	8-29-18	
Chloroethane	ND	1.0	EPA 8260C	8-29-18	8-29-18	
Trichlorofluoromethane	ND	0.20	EPA 8260C	8-29-18	8-29-18	
1,1-Dichloroethene	ND	0.20	EPA 8260C	8-29-18	8-29-18	
Acetone	7.4	5.0	EPA 8260C	8-29-18	8-29-18	
Iodomethane	ND	5.0	EPA 8260C	8-29-18	8-29-18	
Carbon Disulfide	ND	0.20	EPA 8260C	8-29-18	8-29-18	
Methylene Chloride	ND	1.0	EPA 8260C	8-29-18	8-29-18	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	8-29-18	8-29-18	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	8-29-18	8-29-18	
1,1-Dichloroethane	ND	0.20	EPA 8260C	8-29-18	8-29-18	
Vinyl Acetate	ND	1.0	EPA 8260C	8-29-18	8-29-18	
2,2-Dichloropropane	ND	0.20	EPA 8260C	8-29-18	8-29-18	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	8-29-18	8-29-18	
2-Butanone	ND	5.0	EPA 8260C	8-29-18	8-29-18	
Bromochloromethane	ND	0.20	EPA 8260C	8-29-18	8-29-18	
Chloroform	ND	0.20	EPA 8260C	8-29-18	8-29-18	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	8-29-18	8-29-18	
Carbon Tetrachloride	ND	0.20	EPA 8260C	8-29-18	8-29-18	
1,1-Dichloropropene	ND	0.20	EPA 8260C	8-29-18	8-29-18	
Benzene	ND	0.20	EPA 8260C	8-29-18	8-29-18	
1,2-Dichloroethane	ND	0.20	EPA 8260C	8-29-18	8-29-18	
Trichloroethene	ND	0.20	EPA 8260C	8-29-18	8-29-18	
1,2-Dichloropropane	ND	0.20	EPA 8260C	8-29-18	8-29-18	
Dibromomethane	ND	0.20	EPA 8260C	8-29-18	8-29-18	
Bromodichloromethane	ND	0.20	EPA 8260C	8-29-18	8-29-18	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	8-29-18	8-29-18	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	8-29-18	8-29-18	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260C	8-29-18	8-29-18	
Toluene	ND	1.0	EPA 8260C	8-29-18	8-29-18	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	8-29-18	8-29-18	



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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FB-03-082318					
Laboratory ID:	08-277-12					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	8-29-18	8-29-18	
Tetrachloroethene	ND	0.20	EPA 8260C	8-29-18	8-29-18	
1,3-Dichloropropane	ND	0.20	EPA 8260C	8-29-18	8-29-18	
2-Hexanone	ND	2.0	EPA 8260C	8-29-18	8-29-18	
Dibromochloromethane	ND	0.20	EPA 8260C	8-29-18	8-29-18	
1,2-Dibromoethane	ND	0.20	EPA 8260C	8-29-18	8-29-18	
Chlorobenzene	ND	0.20	EPA 8260C	8-29-18	8-29-18	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	8-29-18	8-29-18	
Ethylbenzene	ND	0.20	EPA 8260C	8-29-18	8-29-18	
m,p-Xylene	ND	0.40	EPA 8260C	8-29-18	8-29-18	
o-Xylene	ND	0.20	EPA 8260C	8-29-18	8-29-18	
Styrene	ND	0.20	EPA 8260C	8-29-18	8-29-18	
Bromoform	ND	1.0	EPA 8260C	8-29-18	8-29-18	
Isopropylbenzene	ND	0.20	EPA 8260C	8-29-18	8-29-18	
Bromobenzene	ND	0.20	EPA 8260C	8-29-18	8-29-18	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	8-29-18	8-29-18	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	8-29-18	8-29-18	
n-Propylbenzene	ND	0.20	EPA 8260C	8-29-18	8-29-18	
2-Chlorotoluene	ND	0.20	EPA 8260C	8-29-18	8-29-18	
4-Chlorotoluene	ND	0.20	EPA 8260C	8-29-18	8-29-18	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	8-29-18	8-29-18	
tert-Butylbenzene	ND	0.20	EPA 8260C	8-29-18	8-29-18	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	8-29-18	8-29-18	
sec-Butylbenzene	ND	0.20	EPA 8260C	8-29-18	8-29-18	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	8-29-18	8-29-18	
p-Isopropyltoluene	ND	0.20	EPA 8260C	8-29-18	8-29-18	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	8-29-18	8-29-18	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	8-29-18	8-29-18	
n-Butylbenzene	ND	0.20	EPA 8260C	8-29-18	8-29-18	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	8-29-18	8-29-18	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	8-29-18	8-29-18	
Hexachlorobutadiene	ND	1.0	EPA 8260C	8-29-18	8-29-18	
Naphthalene	ND	1.3	EPA 8260C	8-29-18	8-29-18	
1,2,3-Trichlorobenzene	ND	0.26	EPA 8260C	8-29-18	8-29-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>99</i>	<i>75-127</i>				
<i>Toluene-d8</i>	<i>96</i>	<i>80-127</i>				
<i>4-Bromofluorobenzene</i>	<i>106</i>	<i>78-125</i>				



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VOLATILES EPA 8260C
METHOD BLANK QUALITY CONTROL
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Matrix: Water
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0829W1					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	8-29-18	8-29-18	
Chloromethane	ND	1.0	EPA 8260C	8-29-18	8-29-18	
Vinyl Chloride	ND	0.20	EPA 8260C	8-29-18	8-29-18	
Bromomethane	ND	2.0	EPA 8260C	8-29-18	8-29-18	
Chloroethane	ND	1.0	EPA 8260C	8-29-18	8-29-18	
Trichlorofluoromethane	ND	0.20	EPA 8260C	8-29-18	8-29-18	
1,1-Dichloroethene	ND	0.20	EPA 8260C	8-29-18	8-29-18	
Acetone	ND	5.0	EPA 8260C	8-29-18	8-29-18	
Iodomethane	ND	5.0	EPA 8260C	8-29-18	8-29-18	
Carbon Disulfide	ND	0.20	EPA 8260C	8-29-18	8-29-18	
Methylene Chloride	ND	1.0	EPA 8260C	8-29-18	8-29-18	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	8-29-18	8-29-18	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	8-29-18	8-29-18	
1,1-Dichloroethane	ND	0.20	EPA 8260C	8-29-18	8-29-18	
Vinyl Acetate	ND	1.0	EPA 8260C	8-29-18	8-29-18	
2,2-Dichloropropane	ND	0.20	EPA 8260C	8-29-18	8-29-18	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	8-29-18	8-29-18	
2-Butanone	ND	5.0	EPA 8260C	8-29-18	8-29-18	
Bromochloromethane	ND	0.20	EPA 8260C	8-29-18	8-29-18	
Chloroform	ND	0.20	EPA 8260C	8-29-18	8-29-18	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	8-29-18	8-29-18	
Carbon Tetrachloride	ND	0.20	EPA 8260C	8-29-18	8-29-18	
1,1-Dichloropropene	ND	0.20	EPA 8260C	8-29-18	8-29-18	
Benzene	ND	0.20	EPA 8260C	8-29-18	8-29-18	
1,2-Dichloroethane	ND	0.20	EPA 8260C	8-29-18	8-29-18	
Trichloroethene	ND	0.20	EPA 8260C	8-29-18	8-29-18	
1,2-Dichloropropane	ND	0.20	EPA 8260C	8-29-18	8-29-18	
Dibromomethane	ND	0.20	EPA 8260C	8-29-18	8-29-18	
Bromodichloromethane	ND	0.20	EPA 8260C	8-29-18	8-29-18	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	8-29-18	8-29-18	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	8-29-18	8-29-18	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260C	8-29-18	8-29-18	
Toluene	ND	1.0	EPA 8260C	8-29-18	8-29-18	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	8-29-18	8-29-18	



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METHOD BLANK QUALITY CONTROL
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:		MB0829W1				
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	8-29-18	8-29-18	
Tetrachloroethene	ND	0.20	EPA 8260C	8-29-18	8-29-18	
1,3-Dichloropropane	ND	0.20	EPA 8260C	8-29-18	8-29-18	
2-Hexanone	ND	2.0	EPA 8260C	8-29-18	8-29-18	
Dibromochloromethane	ND	0.20	EPA 8260C	8-29-18	8-29-18	
1,2-Dibromoethane	ND	0.20	EPA 8260C	8-29-18	8-29-18	
Chlorobenzene	ND	0.20	EPA 8260C	8-29-18	8-29-18	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	8-29-18	8-29-18	
Ethylbenzene	ND	0.20	EPA 8260C	8-29-18	8-29-18	
m,p-Xylene	ND	0.40	EPA 8260C	8-29-18	8-29-18	
o-Xylene	ND	0.20	EPA 8260C	8-29-18	8-29-18	
Styrene	ND	0.20	EPA 8260C	8-29-18	8-29-18	
Bromoform	ND	1.0	EPA 8260C	8-29-18	8-29-18	
Isopropylbenzene	ND	0.20	EPA 8260C	8-29-18	8-29-18	
Bromobenzene	ND	0.20	EPA 8260C	8-29-18	8-29-18	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	8-29-18	8-29-18	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	8-29-18	8-29-18	
n-Propylbenzene	ND	0.20	EPA 8260C	8-29-18	8-29-18	
2-Chlorotoluene	ND	0.20	EPA 8260C	8-29-18	8-29-18	
4-Chlorotoluene	ND	0.20	EPA 8260C	8-29-18	8-29-18	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	8-29-18	8-29-18	
tert-Butylbenzene	ND	0.20	EPA 8260C	8-29-18	8-29-18	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	8-29-18	8-29-18	
sec-Butylbenzene	ND	0.20	EPA 8260C	8-29-18	8-29-18	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	8-29-18	8-29-18	
p-Isopropyltoluene	ND	0.20	EPA 8260C	8-29-18	8-29-18	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	8-29-18	8-29-18	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	8-29-18	8-29-18	
n-Butylbenzene	ND	0.20	EPA 8260C	8-29-18	8-29-18	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	8-29-18	8-29-18	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	8-29-18	8-29-18	
Hexachlorobutadiene	ND	1.0	EPA 8260C	8-29-18	8-29-18	
Naphthalene	ND	1.3	EPA 8260C	8-29-18	8-29-18	
1,2,3-Trichlorobenzene	ND	0.26	EPA 8260C	8-29-18	8-29-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>87</i>	<i>75-127</i>				
<i>Toluene-d8</i>	<i>88</i>	<i>80-127</i>				
<i>4-Bromofluorobenzene</i>	<i>95</i>	<i>78-125</i>				



Date of Report: September 6, 2018
 Samples Submitted: August 24, 2018
 Laboratory Reference: 1808-277
 Project: 397-019

**VOLATILES EPA 8260C
 SB/SBD QUALITY CONTROL**

Matrix: Water
 Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery	RPD	RPD	Flags
					SB	SBD	Limits	RPD	Limit	
SPIKE BLANKS										
Laboratory ID:	SB0829W1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	10.6	10.0	10.0	10.0	106	100	62-129	6	15	
Benzene	11.1	10.5	10.0	10.0	111	105	77-127	6	15	
Trichloroethene	10.7	9.96	10.0	10.0	107	100	70-120	7	15	
Toluene	11.1	10.5	10.0	10.0	111	105	82-123	6	15	
Chlorobenzene	10.5	9.70	10.0	10.0	105	97	79-120	8	15	
<i>Surrogate:</i>										
<i>Dibromofluoromethane</i>					<i>85</i>	<i>89</i>	<i>75-127</i>			
<i>Toluene-d8</i>					<i>88</i>	<i>89</i>	<i>80-127</i>			
<i>4-Bromofluorobenzene</i>					<i>93</i>	<i>94</i>	<i>78-125</i>			



Date of Report: September 6, 2018
 Samples Submitted: August 24, 2018
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 Project: 397-019

SEMIVOLATILE ORGANICS EPA 8270D/SIM
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Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FMW-134-15.0-082318					
Laboratory ID:	08-277-03					
n-Nitrosodimethylamine	ND	0.041	EPA 8270D	8-29-18	8-29-18	
Pyridine	ND	0.41	EPA 8270D	8-29-18	8-29-18	
Phenol	ND	0.041	EPA 8270D	8-29-18	8-29-18	
Aniline	ND	0.20	EPA 8270D	8-29-18	8-29-18	
bis(2-Chloroethyl)ether	ND	0.041	EPA 8270D	8-29-18	8-29-18	
2-Chlorophenol	ND	0.041	EPA 8270D	8-29-18	8-29-18	
1,3-Dichlorobenzene	ND	0.041	EPA 8270D	8-29-18	8-29-18	
1,4-Dichlorobenzene	ND	0.041	EPA 8270D	8-29-18	8-29-18	
Benzyl alcohol	ND	0.20	EPA 8270D	8-29-18	8-29-18	
1,2-Dichlorobenzene	ND	0.041	EPA 8270D	8-29-18	8-29-18	
2-Methylphenol (o-Cresol)	ND	0.041	EPA 8270D	8-29-18	8-29-18	
bis(2-Chloroisopropyl)ether	ND	0.041	EPA 8270D	8-29-18	8-29-18	
(3+4)-Methylphenol (m,p-Cresol)	ND	0.041	EPA 8270D	8-29-18	8-29-18	
n-Nitroso-di-n-propylamine	ND	0.041	EPA 8270D	8-29-18	8-29-18	
Hexachloroethane	ND	0.041	EPA 8270D	8-29-18	8-29-18	
Nitrobenzene	ND	0.041	EPA 8270D	8-29-18	8-29-18	
Isophorone	ND	0.041	EPA 8270D	8-29-18	8-29-18	
2-Nitrophenol	ND	0.041	EPA 8270D	8-29-18	8-29-18	
2,4-Dimethylphenol	ND	0.041	EPA 8270D	8-29-18	8-29-18	
bis(2-Chloroethoxy)methane	ND	0.041	EPA 8270D	8-29-18	8-29-18	
2,4-Dichlorophenol	ND	0.041	EPA 8270D	8-29-18	8-29-18	
1,2,4-Trichlorobenzene	ND	0.041	EPA 8270D	8-29-18	8-29-18	
Naphthalene	0.14	0.041	EPA 8270D	8-29-18	8-29-18	
4-Chloroaniline	ND	0.20	EPA 8270D	8-29-18	8-29-18	
Hexachlorobutadiene	ND	0.041	EPA 8270D	8-29-18	8-29-18	
4-Chloro-3-methylphenol	ND	0.041	EPA 8270D	8-29-18	8-29-18	
2-Methylnaphthalene	0.028	0.0081	EPA 8270D/SIM	8-29-18	8-29-18	
1-Methylnaphthalene	0.012	0.0081	EPA 8270D/SIM	8-29-18	8-29-18	
Hexachlorocyclopentadiene	ND	0.041	EPA 8270D	8-29-18	8-29-18	
2,4,6-Trichlorophenol	ND	0.041	EPA 8270D	8-29-18	8-29-18	
2,3-Dichloroaniline	ND	0.041	EPA 8270D	8-29-18	8-29-18	
2,4,5-Trichlorophenol	ND	0.041	EPA 8270D	8-29-18	8-29-18	
2-Chloronaphthalene	ND	0.041	EPA 8270D	8-29-18	8-29-18	
2-Nitroaniline	ND	0.041	EPA 8270D	8-29-18	8-29-18	
1,4-Dinitrobenzene	ND	0.041	EPA 8270D	8-29-18	8-29-18	
Dimethylphthalate	ND	0.041	EPA 8270D	8-29-18	8-29-18	
1,3-Dinitrobenzene	ND	0.041	EPA 8270D	8-29-18	8-29-18	
2,6-Dinitrotoluene	ND	0.041	EPA 8270D	8-29-18	8-29-18	
1,2-Dinitrobenzene	ND	0.041	EPA 8270D	8-29-18	8-29-18	
Acenaphthylene	ND	0.0081	EPA 8270D/SIM	8-29-18	8-29-18	
3-Nitroaniline	ND	0.041	EPA 8270D	8-29-18	8-29-18	



Date of Report: September 6, 2018
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SEMIVOLATILE ORGANICS EPA 8270D/SIM
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FMW-134-15.0-082318					
Laboratory ID:	08-277-03					
2,4-Dinitrophenol	ND	0.20	EPA 8270D	8-29-18	8-29-18	
Acenaphthene	0.014	0.0081	EPA 8270D/SIM	8-29-18	8-29-18	
4-Nitrophenol	ND	0.041	EPA 8270D	8-29-18	8-29-18	
2,4-Dinitrotoluene	ND	0.041	EPA 8270D	8-29-18	8-29-18	
Dibenzofuran	ND	0.041	EPA 8270D	8-29-18	8-29-18	
2,3,5,6-Tetrachlorophenol	ND	0.041	EPA 8270D	8-29-18	8-29-18	
2,3,4,6-Tetrachlorophenol	ND	0.041	EPA 8270D	8-29-18	8-29-18	
Diethylphthalate	ND	0.20	EPA 8270D	8-29-18	8-29-18	
4-Chlorophenyl-phenylether	ND	0.041	EPA 8270D	8-29-18	8-29-18	
4-Nitroaniline	ND	0.041	EPA 8270D	8-29-18	8-29-18	
Fluorene	0.016	0.0081	EPA 8270D/SIM	8-29-18	8-29-18	
4,6-Dinitro-2-methylphenol	ND	0.20	EPA 8270D	8-29-18	8-29-18	
n-Nitrosodiphenylamine	ND	0.041	EPA 8270D	8-29-18	8-29-18	
1,2-Diphenylhydrazine	ND	0.041	EPA 8270D	8-29-18	8-29-18	
4-Bromophenyl-phenylether	ND	0.041	EPA 8270D	8-29-18	8-29-18	
Hexachlorobenzene	ND	0.041	EPA 8270D	8-29-18	8-29-18	
Pentachlorophenol	ND	0.20	EPA 8270D	8-29-18	8-29-18	
Phenanthrene	0.021	0.0081	EPA 8270D/SIM	8-29-18	8-29-18	
Anthracene	ND	0.0081	EPA 8270D/SIM	8-29-18	8-29-18	
Carbazole	ND	0.041	EPA 8270D	8-29-18	8-29-18	
Di-n-butylphthalate	ND	0.20	EPA 8270D	8-29-18	8-29-18	
Fluoranthene	ND	0.0081	EPA 8270D/SIM	8-29-18	8-29-18	
Benzidine	ND	0.41	EPA 8270D	8-29-18	8-29-18	
Pyrene	ND	0.0081	EPA 8270D/SIM	8-29-18	8-29-18	
Butylbenzylphthalate	ND	0.20	EPA 8270D	8-29-18	8-29-18	
bis(2-Ethylhexyl)adipate	ND	0.20	EPA 8270D	8-29-18	8-29-18	
3,3'-Dichlorobenzidine	ND	0.20	EPA 8270D	8-29-18	8-29-18	
Benzo[a]anthracene	ND	0.0081	EPA 8270D/SIM	8-29-18	8-29-18	
Chrysene	ND	0.0081	EPA 8270D/SIM	8-29-18	8-29-18	
bis(2-Ethylhexyl)phthalate	ND	0.20	EPA 8270D	8-29-18	8-29-18	
Di-n-octylphthalate	ND	0.20	EPA 8270D	8-29-18	8-29-18	
Benzo[b]fluoranthene	ND	0.0081	EPA 8270D/SIM	8-29-18	8-29-18	
Benzo(j,k)fluoranthene	ND	0.0081	EPA 8270D/SIM	8-29-18	8-29-18	
Benzo[a]pyrene	ND	0.0081	EPA 8270D/SIM	8-29-18	8-29-18	
Indeno[1,2,3-cd]pyrene	ND	0.0081	EPA 8270D/SIM	8-29-18	8-29-18	
Dibenz[a,h]anthracene	ND	0.0081	EPA 8270D/SIM	8-29-18	8-29-18	
Benzo[g,h,i]perylene	ND	0.0081	EPA 8270D/SIM	8-29-18	8-29-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorophenol</i>	<i>71</i>	<i>19 - 103</i>				
<i>Phenol-d6</i>	<i>71</i>	<i>30 - 103</i>				
<i>Nitrobenzene-d5</i>	<i>65</i>	<i>27 - 105</i>				
<i>2-Fluorobiphenyl</i>	<i>70</i>	<i>36 - 102</i>				
<i>2,4,6-Tribromophenol</i>	<i>79</i>	<i>33 - 110</i>				
<i>Terphenyl-d14</i>	<i>69</i>	<i>38 - 108</i>				



Date of Report: September 6, 2018
 Samples Submitted: August 24, 2018
 Laboratory Reference: 1808-277
 Project: 397-019

SEMIVOLATILE ORGANICS EPA 8270D/SIM
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Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FB-03-10.0-082318					
Laboratory ID:	08-277-06					
n-Nitrosodimethylamine	ND	0.043	EPA 8270D	8-29-18	8-29-18	
Pyridine	ND	0.43	EPA 8270D	8-29-18	8-29-18	
Phenol	ND	0.043	EPA 8270D	8-29-18	8-29-18	
Aniline	ND	0.22	EPA 8270D	8-29-18	8-29-18	
bis(2-Chloroethyl)ether	ND	0.043	EPA 8270D	8-29-18	8-29-18	
2-Chlorophenol	ND	0.043	EPA 8270D	8-29-18	8-29-18	
1,3-Dichlorobenzene	ND	0.043	EPA 8270D	8-29-18	8-29-18	
1,4-Dichlorobenzene	ND	0.043	EPA 8270D	8-29-18	8-29-18	
Benzyl alcohol	ND	0.22	EPA 8270D	8-29-18	8-29-18	
1,2-Dichlorobenzene	ND	0.043	EPA 8270D	8-29-18	8-29-18	
2-Methylphenol (o-Cresol)	ND	0.043	EPA 8270D	8-29-18	8-29-18	
bis(2-Chloroisopropyl)ether	ND	0.043	EPA 8270D	8-29-18	8-29-18	
(3+4)-Methylphenol (m,p-Cresol)	ND	0.043	EPA 8270D	8-29-18	8-29-18	
n-Nitroso-di-n-propylamine	ND	0.043	EPA 8270D	8-29-18	8-29-18	
Hexachloroethane	ND	0.043	EPA 8270D	8-29-18	8-29-18	
Nitrobenzene	ND	0.043	EPA 8270D	8-29-18	8-29-18	
Isophorone	ND	0.043	EPA 8270D	8-29-18	8-29-18	
2-Nitrophenol	ND	0.043	EPA 8270D	8-29-18	8-29-18	
2,4-Dimethylphenol	ND	0.043	EPA 8270D	8-29-18	8-29-18	
bis(2-Chloroethoxy)methane	ND	0.043	EPA 8270D	8-29-18	8-29-18	
2,4-Dichlorophenol	ND	0.043	EPA 8270D	8-29-18	8-29-18	
1,2,4-Trichlorobenzene	ND	0.043	EPA 8270D	8-29-18	8-29-18	
Naphthalene	ND	0.0086	EPA 8270D/SIM	8-29-18	8-29-18	
4-Chloroaniline	ND	0.22	EPA 8270D	8-29-18	8-29-18	
Hexachlorobutadiene	ND	0.043	EPA 8270D	8-29-18	8-29-18	
4-Chloro-3-methylphenol	ND	0.043	EPA 8270D	8-29-18	8-29-18	
2-Methylnaphthalene	ND	0.0086	EPA 8270D/SIM	8-29-18	8-29-18	
1-Methylnaphthalene	ND	0.0086	EPA 8270D/SIM	8-29-18	8-29-18	
Hexachlorocyclopentadiene	ND	0.043	EPA 8270D	8-29-18	8-29-18	
2,4,6-Trichlorophenol	ND	0.043	EPA 8270D	8-29-18	8-29-18	
2,3-Dichloroaniline	ND	0.043	EPA 8270D	8-29-18	8-29-18	
2,4,5-Trichlorophenol	ND	0.043	EPA 8270D	8-29-18	8-29-18	
2-Chloronaphthalene	ND	0.043	EPA 8270D	8-29-18	8-29-18	
2-Nitroaniline	ND	0.043	EPA 8270D	8-29-18	8-29-18	
1,4-Dinitrobenzene	ND	0.043	EPA 8270D	8-29-18	8-29-18	
Dimethylphthalate	ND	0.043	EPA 8270D	8-29-18	8-29-18	
1,3-Dinitrobenzene	ND	0.043	EPA 8270D	8-29-18	8-29-18	
2,6-Dinitrotoluene	ND	0.043	EPA 8270D	8-29-18	8-29-18	
1,2-Dinitrobenzene	ND	0.043	EPA 8270D	8-29-18	8-29-18	
Acenaphthylene	ND	0.0086	EPA 8270D/SIM	8-29-18	8-29-18	
3-Nitroaniline	ND	0.043	EPA 8270D	8-29-18	8-29-18	



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 Project: 397-019

SEMIVOLATILE ORGANICS EPA 8270D/SIM
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FB-03-10.0-082318					
Laboratory ID:	08-277-06					
2,4-Dinitrophenol	ND	0.22	EPA 8270D	8-29-18	8-29-18	
Acenaphthene	ND	0.0086	EPA 8270D/SIM	8-29-18	8-29-18	
4-Nitrophenol	ND	0.043	EPA 8270D	8-29-18	8-29-18	
2,4-Dinitrotoluene	ND	0.043	EPA 8270D	8-29-18	8-29-18	
Dibenzofuran	ND	0.043	EPA 8270D	8-29-18	8-29-18	
2,3,5,6-Tetrachlorophenol	ND	0.043	EPA 8270D	8-29-18	8-29-18	
2,3,4,6-Tetrachlorophenol	ND	0.043	EPA 8270D	8-29-18	8-29-18	
Diethylphthalate	ND	0.22	EPA 8270D	8-29-18	8-29-18	
4-Chlorophenyl-phenylether	ND	0.043	EPA 8270D	8-29-18	8-29-18	
4-Nitroaniline	ND	0.043	EPA 8270D	8-29-18	8-29-18	
Fluorene	ND	0.0086	EPA 8270D/SIM	8-29-18	8-29-18	
4,6-Dinitro-2-methylphenol	ND	0.22	EPA 8270D	8-29-18	8-29-18	
n-Nitrosodiphenylamine	ND	0.043	EPA 8270D	8-29-18	8-29-18	
1,2-Diphenylhydrazine	ND	0.043	EPA 8270D	8-29-18	8-29-18	
4-Bromophenyl-phenylether	ND	0.043	EPA 8270D	8-29-18	8-29-18	
Hexachlorobenzene	ND	0.043	EPA 8270D	8-29-18	8-29-18	
Pentachlorophenol	ND	0.22	EPA 8270D	8-29-18	8-29-18	
Phenanthrene	0.015	0.0086	EPA 8270D/SIM	8-29-18	8-29-18	
Anthracene	ND	0.0086	EPA 8270D/SIM	8-29-18	8-29-18	
Carbazole	ND	0.043	EPA 8270D	8-29-18	8-29-18	
Di-n-butylphthalate	ND	0.22	EPA 8270D	8-29-18	8-29-18	
Fluoranthene	0.011	0.0086	EPA 8270D/SIM	8-29-18	8-29-18	
Benzidine	ND	0.43	EPA 8270D	8-29-18	8-29-18	
Pyrene	0.012	0.0086	EPA 8270D/SIM	8-29-18	8-29-18	
Butylbenzylphthalate	ND	0.22	EPA 8270D	8-29-18	8-29-18	
bis-2-Ethylhexyladipate	ND	0.22	EPA 8270D	8-29-18	8-29-18	
3,3'-Dichlorobenzidine	ND	0.22	EPA 8270D	8-29-18	8-29-18	
Benzo[a]anthracene	ND	0.0086	EPA 8270D/SIM	8-29-18	8-29-18	
Chrysene	ND	0.0086	EPA 8270D/SIM	8-29-18	8-29-18	
bis(2-Ethylhexyl)phthalate	ND	0.22	EPA 8270D	8-29-18	8-29-18	
Di-n-octylphthalate	ND	0.22	EPA 8270D	8-29-18	8-29-18	
Benzo[b]fluoranthene	ND	0.0086	EPA 8270D/SIM	8-29-18	8-29-18	
Benzo(j,k)fluoranthene	ND	0.0086	EPA 8270D/SIM	8-29-18	8-29-18	
Benzo[a]pyrene	ND	0.0086	EPA 8270D/SIM	8-29-18	8-29-18	
Indeno[1,2,3-cd]pyrene	ND	0.0086	EPA 8270D/SIM	8-29-18	8-29-18	
Dibenz[a,h]anthracene	ND	0.0086	EPA 8270D/SIM	8-29-18	8-29-18	
Benzo[g,h,i]perylene	ND	0.0086	EPA 8270D/SIM	8-29-18	8-29-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorophenol</i>	<i>60</i>	<i>19 - 103</i>				
<i>Phenol-d6</i>	<i>61</i>	<i>30 - 103</i>				
<i>Nitrobenzene-d5</i>	<i>52</i>	<i>27 - 105</i>				
<i>2-Fluorobiphenyl</i>	<i>54</i>	<i>36 - 102</i>				
<i>2,4,6-Tribromophenol</i>	<i>56</i>	<i>33 - 110</i>				
<i>Terphenyl-d14</i>	<i>52</i>	<i>38 - 108</i>				



Date of Report: September 6, 2018
 Samples Submitted: August 24, 2018
 Laboratory Reference: 1808-277
 Project: 397-019

SEMIVOLATILE ORGANICS EPA 8270D/SIM
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Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FB-03-35.0-082318					
Laboratory ID:	08-277-10					
n-Nitrosodimethylamine	ND	0.040	EPA 8270D	8-29-18	8-29-18	
Pyridine	ND	0.40	EPA 8270D	8-29-18	8-29-18	
Phenol	ND	0.040	EPA 8270D	8-29-18	8-29-18	
Aniline	ND	0.20	EPA 8270D	8-29-18	8-29-18	
bis(2-Chloroethyl)ether	ND	0.040	EPA 8270D	8-29-18	8-29-18	
2-Chlorophenol	ND	0.040	EPA 8270D	8-29-18	8-29-18	
1,3-Dichlorobenzene	ND	0.040	EPA 8270D	8-29-18	8-29-18	
1,4-Dichlorobenzene	ND	0.040	EPA 8270D	8-29-18	8-29-18	
Benzyl alcohol	ND	0.20	EPA 8270D	8-29-18	8-29-18	
1,2-Dichlorobenzene	ND	0.040	EPA 8270D	8-29-18	8-29-18	
2-Methylphenol (o-Cresol)	ND	0.040	EPA 8270D	8-29-18	8-29-18	
bis(2-Chloroisopropyl)ether	ND	0.040	EPA 8270D	8-29-18	8-29-18	
(3+4)-Methylphenol (m,p-Cresol)	ND	0.040	EPA 8270D	8-29-18	8-29-18	
n-Nitroso-di-n-propylamine	ND	0.040	EPA 8270D	8-29-18	8-29-18	
Hexachloroethane	ND	0.040	EPA 8270D	8-29-18	8-29-18	
Nitrobenzene	ND	0.040	EPA 8270D	8-29-18	8-29-18	
Isophorone	ND	0.040	EPA 8270D	8-29-18	8-29-18	
2-Nitrophenol	ND	0.040	EPA 8270D	8-29-18	8-29-18	
2,4-Dimethylphenol	ND	0.040	EPA 8270D	8-29-18	8-29-18	
bis(2-Chloroethoxy)methane	ND	0.040	EPA 8270D	8-29-18	8-29-18	
2,4-Dichlorophenol	ND	0.040	EPA 8270D	8-29-18	8-29-18	
1,2,4-Trichlorobenzene	ND	0.040	EPA 8270D	8-29-18	8-29-18	
Naphthalene	ND	0.0080	EPA 8270D/SIM	8-29-18	8-29-18	
4-Chloroaniline	ND	0.20	EPA 8270D	8-29-18	8-29-18	
Hexachlorobutadiene	ND	0.040	EPA 8270D	8-29-18	8-29-18	
4-Chloro-3-methylphenol	ND	0.040	EPA 8270D	8-29-18	8-29-18	
2-Methylnaphthalene	ND	0.0080	EPA 8270D/SIM	8-29-18	8-29-18	
1-Methylnaphthalene	ND	0.0080	EPA 8270D/SIM	8-29-18	8-29-18	
Hexachlorocyclopentadiene	ND	0.040	EPA 8270D	8-29-18	8-29-18	
2,4,6-Trichlorophenol	ND	0.040	EPA 8270D	8-29-18	8-29-18	
2,3-Dichloroaniline	ND	0.040	EPA 8270D	8-29-18	8-29-18	
2,4,5-Trichlorophenol	ND	0.040	EPA 8270D	8-29-18	8-29-18	
2-Chloronaphthalene	ND	0.040	EPA 8270D	8-29-18	8-29-18	
2-Nitroaniline	ND	0.040	EPA 8270D	8-29-18	8-29-18	
1,4-Dinitrobenzene	ND	0.040	EPA 8270D	8-29-18	8-29-18	
Dimethylphthalate	ND	0.040	EPA 8270D	8-29-18	8-29-18	
1,3-Dinitrobenzene	ND	0.040	EPA 8270D	8-29-18	8-29-18	
2,6-Dinitrotoluene	ND	0.040	EPA 8270D	8-29-18	8-29-18	
1,2-Dinitrobenzene	ND	0.040	EPA 8270D	8-29-18	8-29-18	
Acenaphthylene	ND	0.0080	EPA 8270D/SIM	8-29-18	8-29-18	
3-Nitroaniline	ND	0.040	EPA 8270D	8-29-18	8-29-18	



Date of Report: September 6, 2018
 Samples Submitted: August 24, 2018
 Laboratory Reference: 1808-277
 Project: 397-019

SEMIVOLATILE ORGANICS EPA 8270D/SIM
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FB-03-35.0-082318					
Laboratory ID:	08-277-10					
2,4-Dinitrophenol	ND	0.20	EPA 8270D	8-29-18	8-29-18	
Acenaphthene	ND	0.0080	EPA 8270D/SIM	8-29-18	8-29-18	
4-Nitrophenol	ND	0.040	EPA 8270D	8-29-18	8-29-18	
2,4-Dinitrotoluene	ND	0.040	EPA 8270D	8-29-18	8-29-18	
Dibenzofuran	ND	0.040	EPA 8270D	8-29-18	8-29-18	
2,3,5,6-Tetrachlorophenol	ND	0.040	EPA 8270D	8-29-18	8-29-18	
2,3,4,6-Tetrachlorophenol	ND	0.040	EPA 8270D	8-29-18	8-29-18	
Diethylphthalate	ND	0.20	EPA 8270D	8-29-18	8-29-18	
4-Chlorophenyl-phenylether	ND	0.040	EPA 8270D	8-29-18	8-29-18	
4-Nitroaniline	ND	0.040	EPA 8270D	8-29-18	8-29-18	
Fluorene	ND	0.0080	EPA 8270D/SIM	8-29-18	8-29-18	
4,6-Dinitro-2-methylphenol	ND	0.20	EPA 8270D	8-29-18	8-29-18	
n-Nitrosodiphenylamine	ND	0.040	EPA 8270D	8-29-18	8-29-18	
1,2-Diphenylhydrazine	ND	0.040	EPA 8270D	8-29-18	8-29-18	
4-Bromophenyl-phenylether	ND	0.040	EPA 8270D	8-29-18	8-29-18	
Hexachlorobenzene	ND	0.040	EPA 8270D	8-29-18	8-29-18	
Pentachlorophenol	ND	0.20	EPA 8270D	8-29-18	8-29-18	
Phenanthrene	0.017	0.0080	EPA 8270D/SIM	8-29-18	8-29-18	
Anthracene	ND	0.0080	EPA 8270D/SIM	8-29-18	8-29-18	
Carbazole	ND	0.040	EPA 8270D	8-29-18	8-29-18	
Di-n-butylphthalate	ND	0.20	EPA 8270D	8-29-18	8-29-18	
Fluoranthene	0.015	0.0080	EPA 8270D/SIM	8-29-18	8-29-18	
Benzidine	ND	0.40	EPA 8270D	8-29-18	8-29-18	
Pyrene	0.017	0.0080	EPA 8270D/SIM	8-29-18	8-29-18	
Butylbenzylphthalate	ND	0.20	EPA 8270D	8-29-18	8-29-18	
bis-2-Ethylhexyladipate	ND	0.20	EPA 8270D	8-29-18	8-29-18	
3,3'-Dichlorobenzidine	ND	0.20	EPA 8270D	8-29-18	8-29-18	
Benzo[a]anthracene	ND	0.0080	EPA 8270D/SIM	8-29-18	8-29-18	
Chrysene	ND	0.0080	EPA 8270D/SIM	8-29-18	8-29-18	
bis(2-Ethylhexyl)phthalate	ND	0.20	EPA 8270D	8-29-18	8-29-18	
Di-n-octylphthalate	ND	0.20	EPA 8270D	8-29-18	8-29-18	
Benzo[b]fluoranthene	ND	0.0080	EPA 8270D/SIM	8-29-18	8-29-18	
Benzo(j,k)fluoranthene	ND	0.0080	EPA 8270D/SIM	8-29-18	8-29-18	
Benzo[a]pyrene	ND	0.0080	EPA 8270D/SIM	8-29-18	8-29-18	
Indeno[1,2,3-cd]pyrene	ND	0.0080	EPA 8270D/SIM	8-29-18	8-29-18	
Dibenz[a,h]anthracene	ND	0.0080	EPA 8270D/SIM	8-29-18	8-29-18	
Benzo[g,h,i]perylene	ND	0.0080	EPA 8270D/SIM	8-29-18	8-29-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorophenol</i>	<i>75</i>	<i>19 - 103</i>				
<i>Phenol-d6</i>	<i>78</i>	<i>30 - 103</i>				
<i>Nitrobenzene-d5</i>	<i>69</i>	<i>27 - 105</i>				
<i>2-Fluorobiphenyl</i>	<i>73</i>	<i>36 - 102</i>				
<i>2,4,6-Tribromophenol</i>	<i>84</i>	<i>33 - 110</i>				
<i>Terphenyl-d14</i>	<i>75</i>	<i>38 - 108</i>				



Date of Report: September 6, 2018
 Samples Submitted: August 24, 2018
 Laboratory Reference: 1808-277
 Project: 397-019

**SEMIVOLATILE ORGANICS EPA 8270D/SIM
 METHOD BLANK QUALITY CONTROL**

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Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0829S1					
n-Nitrosodimethylamine	ND	0.033	EPA 8270D	8-29-18	8-29-18	
Pyridine	ND	0.33	EPA 8270D	8-29-18	8-29-18	
Phenol	ND	0.033	EPA 8270D	8-29-18	8-29-18	
Aniline	ND	0.17	EPA 8270D	8-29-18	8-29-18	
bis(2-Chloroethyl)ether	ND	0.033	EPA 8270D	8-29-18	8-29-18	
2-Chlorophenol	ND	0.033	EPA 8270D	8-29-18	8-29-18	
1,3-Dichlorobenzene	ND	0.033	EPA 8270D	8-29-18	8-29-18	
1,4-Dichlorobenzene	ND	0.033	EPA 8270D	8-29-18	8-29-18	
Benzyl alcohol	ND	0.17	EPA 8270D	8-29-18	8-29-18	
1,2-Dichlorobenzene	ND	0.033	EPA 8270D	8-29-18	8-29-18	
2-Methylphenol (o-Cresol)	ND	0.033	EPA 8270D	8-29-18	8-29-18	
bis(2-Chloroisopropyl)ether	ND	0.033	EPA 8270D	8-29-18	8-29-18	
(3+4)-Methylphenol (m,p-Cresol)	ND	0.033	EPA 8270D	8-29-18	8-29-18	
n-Nitroso-di-n-propylamine	ND	0.033	EPA 8270D	8-29-18	8-29-18	
Hexachloroethane	ND	0.033	EPA 8270D	8-29-18	8-29-18	
Nitrobenzene	ND	0.033	EPA 8270D	8-29-18	8-29-18	
Isophorone	ND	0.033	EPA 8270D	8-29-18	8-29-18	
2-Nitrophenol	ND	0.033	EPA 8270D	8-29-18	8-29-18	
2,4-Dimethylphenol	ND	0.033	EPA 8270D	8-29-18	8-29-18	
bis(2-Chloroethoxy)methane	ND	0.033	EPA 8270D	8-29-18	8-29-18	
2,4-Dichlorophenol	ND	0.033	EPA 8270D	8-29-18	8-29-18	
1,2,4-Trichlorobenzene	ND	0.033	EPA 8270D	8-29-18	8-29-18	
Naphthalene	ND	0.0067	EPA 8270D/SIM	8-29-18	8-29-18	
4-Chloroaniline	ND	0.17	EPA 8270D	8-29-18	8-29-18	
Hexachlorobutadiene	ND	0.033	EPA 8270D	8-29-18	8-29-18	
4-Chloro-3-methylphenol	ND	0.033	EPA 8270D	8-29-18	8-29-18	
2-Methylnaphthalene	ND	0.0067	EPA 8270D/SIM	8-29-18	8-29-18	
1-Methylnaphthalene	ND	0.0067	EPA 8270D/SIM	8-29-18	8-29-18	
Hexachlorocyclopentadiene	ND	0.033	EPA 8270D	8-29-18	8-29-18	
2,4,6-Trichlorophenol	ND	0.033	EPA 8270D	8-29-18	8-29-18	
2,3-Dichloroaniline	ND	0.033	EPA 8270D	8-29-18	8-29-18	
2,4,5-Trichlorophenol	ND	0.033	EPA 8270D	8-29-18	8-29-18	
2-Chloronaphthalene	ND	0.033	EPA 8270D	8-29-18	8-29-18	
2-Nitroaniline	ND	0.033	EPA 8270D	8-29-18	8-29-18	
1,4-Dinitrobenzene	ND	0.033	EPA 8270D	8-29-18	8-29-18	
Dimethylphthalate	ND	0.033	EPA 8270D	8-29-18	8-29-18	
1,3-Dinitrobenzene	ND	0.033	EPA 8270D	8-29-18	8-29-18	
2,6-Dinitrotoluene	ND	0.033	EPA 8270D	8-29-18	8-29-18	
1,2-Dinitrobenzene	ND	0.033	EPA 8270D	8-29-18	8-29-18	
Acenaphthylene	ND	0.0067	EPA 8270D/SIM	8-29-18	8-29-18	
3-Nitroaniline	ND	0.033	EPA 8270D	8-29-18	8-29-18	



Date of Report: September 6, 2018
 Samples Submitted: August 24, 2018
 Laboratory Reference: 1808-277
 Project: 397-019

**SEMIVOLATILE ORGANICS EPA 8270D/SIM
 METHOD BLANK QUALITY CONTROL**

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0829S1					
2,4-Dinitrophenol	ND	0.17	EPA 8270D	8-29-18	8-29-18	
Acenaphthene	ND	0.0067	EPA 8270D/SIM	8-29-18	8-29-18	
4-Nitrophenol	ND	0.033	EPA 8270D	8-29-18	8-29-18	
2,4-Dinitrotoluene	ND	0.033	EPA 8270D	8-29-18	8-29-18	
Dibenzofuran	ND	0.033	EPA 8270D	8-29-18	8-29-18	
2,3,5,6-Tetrachlorophenol	ND	0.033	EPA 8270D	8-29-18	8-29-18	
2,3,4,6-Tetrachlorophenol	ND	0.033	EPA 8270D	8-29-18	8-29-18	
Diethylphthalate	ND	0.17	EPA 8270D	8-29-18	8-29-18	
4-Chlorophenyl-phenylether	ND	0.033	EPA 8270D	8-29-18	8-29-18	
4-Nitroaniline	ND	0.033	EPA 8270D	8-29-18	8-29-18	
Fluorene	ND	0.0067	EPA 8270D/SIM	8-29-18	8-29-18	
4,6-Dinitro-2-methylphenol	ND	0.17	EPA 8270D	8-29-18	8-29-18	
n-Nitrosodiphenylamine	ND	0.033	EPA 8270D	8-29-18	8-29-18	
1,2-Diphenylhydrazine	ND	0.033	EPA 8270D	8-29-18	8-29-18	
4-Bromophenyl-phenylether	ND	0.033	EPA 8270D	8-29-18	8-29-18	
Hexachlorobenzene	ND	0.033	EPA 8270D	8-29-18	8-29-18	
Pentachlorophenol	ND	0.17	EPA 8270D	8-29-18	8-29-18	
Phenanthrene	ND	0.0067	EPA 8270D/SIM	8-29-18	8-29-18	
Anthracene	ND	0.0067	EPA 8270D/SIM	8-29-18	8-29-18	
Carbazole	ND	0.033	EPA 8270D	8-29-18	8-29-18	
Di-n-butylphthalate	ND	0.17	EPA 8270D	8-29-18	8-29-18	
Fluoranthene	ND	0.0067	EPA 8270D/SIM	8-29-18	8-29-18	
Benzidine	ND	0.33	EPA 8270D	8-29-18	8-29-18	
Pyrene	ND	0.0067	EPA 8270D/SIM	8-29-18	8-29-18	
Butylbenzylphthalate	ND	0.17	EPA 8270D	8-29-18	8-29-18	
bis(2-Ethylhexyl)adipate	ND	0.17	EPA 8270D	8-29-18	8-29-18	
3,3'-Dichlorobenzidine	ND	0.17	EPA 8270D	8-29-18	8-29-18	
Benzo[a]anthracene	ND	0.0067	EPA 8270D/SIM	8-29-18	8-29-18	
Chrysene	ND	0.0067	EPA 8270D/SIM	8-29-18	8-29-18	
bis(2-Ethylhexyl)phthalate	ND	0.17	EPA 8270D	8-29-18	8-29-18	
Di-n-octylphthalate	ND	0.17	EPA 8270D	8-29-18	8-29-18	
Benzo[b]fluoranthene	ND	0.0067	EPA 8270D/SIM	8-29-18	8-29-18	
Benzo(j,k)fluoranthene	ND	0.0067	EPA 8270D/SIM	8-29-18	8-29-18	
Benzo[a]pyrene	ND	0.0067	EPA 8270D/SIM	8-29-18	8-29-18	
Indeno[1,2,3-cd]pyrene	ND	0.0067	EPA 8270D/SIM	8-29-18	8-29-18	
Dibenz[a,h]anthracene	ND	0.0067	EPA 8270D/SIM	8-29-18	8-29-18	
Benzo[g,h,i]perylene	ND	0.0067	EPA 8270D/SIM	8-29-18	8-29-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorophenol	79	19 - 103				
Phenol-d6	79	30 - 103				
Nitrobenzene-d5	73	27 - 105				
2-Fluorobiphenyl	75	36 - 102				
2,4,6-Tribromophenol	88	33 - 110				
Terphenyl-d14	81	38 - 108				



Date of Report: September 6, 2018
 Samples Submitted: August 24, 2018
 Laboratory Reference: 1808-277
 Project: 397-019

**SEMIVOLATILE ORGANICS EPA 8270D/SIM
 MS/MSD QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg

Analyte	Result		Spike Level		Source	Percent		Recovery	RPD	RPD	Flags
	MS	MSD	MS	MSD	Result	Recovery	Limits	RPD	Limit		
MATRIX SPIKES											
Laboratory ID:	08-229-04										
	MS	MSD	MS	MSD		MS	MSD				
Phenol	1.15	0.989	1.33	1.33	ND	86	74	37 - 94	15	27	
2-Chlorophenol	1.21	1.03	1.33	1.33	ND	91	77	37 - 95	16	32	
1,4-Dichlorobenzene	0.568	0.493	0.667	0.667	ND	85	74	23 - 97	14	37	
n-Nitroso-di-n-propylamine	0.580	0.501	0.667	0.667	ND	87	75	40 - 91	15	28	
1,2,4-Trichlorobenzene	0.563	0.505	0.667	0.667	ND	84	76	37 - 93	11	30	
4-Chloro-3-methylphenol	1.11	1.03	1.33	1.33	ND	83	77	46 - 96	7	25	
Acenaphthene	0.585	0.526	0.667	0.667	0.0395	82	73	43 - 90	11	25	
4-Nitrophenol	1.15	1.03	1.33	1.33	ND	86	77	31 - 104	11	28	
2,4-Dinitrotoluene	0.575	0.516	0.667	0.667	ND	86	77	31 - 96	11	32	
Pentachlorophenol	1.38	1.22	1.33	1.33	ND	104	92	20 - 123	12	29	
Pyrene	0.582	0.518	0.667	0.667	0.0828	75	65	28 - 114	12	35	
<i>Surrogate:</i>											
2-Fluorophenol						85	71	19 - 103			
Phenol-d6						84	73	30 - 103			
Nitrobenzene-d5						72	65	27 - 105			
2-Fluorobiphenyl						77	70	36 - 102			
2,4,6-Tribromophenol						92	84	33 - 110			
Terphenyl-d14						78	71	38 - 108			



Date of Report: September 6, 2018
 Samples Submitted: August 24, 2018
 Laboratory Reference: 1808-277
 Project: 397-019

**TOTAL METALS
 EPA 6010D/7471B**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FMW-134-5.0-082318					
Laboratory ID:	08-277-01					
Arsenic	ND	17	EPA 6010D	8-29-18	8-31-18	
Barium	110	8.3	EPA 6010D	8-29-18	8-31-18	
Cadmium	ND	1.7	EPA 6010D	8-29-18	8-31-18	
Chromium	19	1.7	EPA 6010D	8-29-18	8-31-18	
Lead	ND	17	EPA 6010D	8-29-18	8-31-18	
Mercury	ND	0.83	EPA 7471B	8-29-18	8-29-18	
Selenium	ND	17	EPA 6010D	8-29-18	8-31-18	
Silver	ND	3.3	EPA 6010D	8-29-18	8-31-18	

Client ID: FMW-134-15.0-082318

Laboratory ID: 08-277-03

Arsenic	ND	12	EPA 6010D	8-29-18	8-31-18	
Barium	48	3.0	EPA 6010D	8-29-18	8-31-18	
Cadmium	ND	0.61	EPA 6010D	8-29-18	8-31-18	
Chromium	42	0.61	EPA 6010D	8-29-18	8-31-18	
Lead	ND	6.1	EPA 6010D	8-29-18	8-31-18	
Mercury	ND	0.30	EPA 7471B	8-29-18	8-29-18	
Selenium	ND	12	EPA 6010D	8-29-18	8-31-18	
Silver	ND	1.2	EPA 6010D	8-29-18	8-31-18	

Client ID: FB-03-10.0-082318

Laboratory ID: 08-277-06

Arsenic	ND	13	EPA 6010D	8-29-18	8-31-18	
Barium	230	3.2	EPA 6010D	8-29-18	8-31-18	
Cadmium	ND	0.65	EPA 6010D	8-29-18	8-31-18	
Chromium	100	0.65	EPA 6010D	8-29-18	8-31-18	
Lead	8.9	6.5	EPA 6010D	8-29-18	8-31-18	
Mercury	ND	0.32	EPA 7471B	8-29-18	8-29-18	
Selenium	ND	13	EPA 6010D	8-29-18	8-31-18	
Silver	ND	1.3	EPA 6010D	8-29-18	8-31-18	



Date of Report: September 6, 2018
 Samples Submitted: August 24, 2018
 Laboratory Reference: 1808-277
 Project: 397-019

**TOTAL METALS
 EPA 6010D/7471B**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FB-03-35.0-082318					
Laboratory ID:	08-277-10					
Arsenic	ND	12	EPA 6010D	8-29-18	8-31-18	
Barium	44	3.0	EPA 6010D	8-29-18	8-31-18	
Cadmium	ND	0.60	EPA 6010D	8-29-18	8-31-18	
Chromium	42	0.60	EPA 6010D	8-29-18	8-31-18	
Lead	ND	6.0	EPA 6010D	8-29-18	8-31-18	
Mercury	ND	0.30	EPA 7471B	8-29-18	8-29-18	
Selenium	ND	12	EPA 6010D	8-29-18	8-31-18	
Silver	ND	1.2	EPA 6010D	8-29-18	8-31-18	



Date of Report: September 6, 2018
 Samples Submitted: August 24, 2018
 Laboratory Reference: 1808-277
 Project: 397-019

**TOTAL METALS
 EPA 6010D/7471B
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0829SM1					
Arsenic	ND	5.0	EPA 6010D	8-29-18	8-31-18	
Barium	ND	2.5	EPA 6010D	8-29-18	8-31-18	
Cadmium	ND	0.50	EPA 6010D	8-29-18	8-31-18	
Chromium	ND	0.50	EPA 6010D	8-29-18	8-31-18	
Lead	ND	5.0	EPA 6010D	8-29-18	8-31-18	
Selenium	ND	5.0	EPA 6010D	8-29-18	8-31-18	
Silver	ND	1.0	EPA 6010D	8-29-18	8-31-18	

Laboratory ID:	MB0829S1					
Mercury	ND	0.25	EPA 7471B	8-29-18	8-29-18	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	08-277-03							
	ORIG	DUP						
Arsenic	ND	ND	NA	NA	NA	NA	20	
Barium	39.8	42.3	NA	NA	NA	6	20	
Cadmium	ND	ND	NA	NA	NA	NA	20	
Chromium	34.5	36.2	NA	NA	NA	5	20	
Lead	ND	ND	NA	NA	NA	NA	20	
Selenium	ND	ND	NA	NA	NA	NA	20	
Silver	ND	ND	NA	NA	NA	NA	20	

Laboratory ID:	08-277-03							
Mercury	ND	ND	NA	NA	NA	NA	20	

MATRIX SPIKES

Laboratory ID:	08-277-03									
	MS	MSD	MS	MSD	MS	MSD				
Arsenic	98.9	98.4	100	100	ND	99	98	75-125	0	20
Barium	148	148	100	100	39.8	109	109	75-125	0	20
Cadmium	49.4	48.5	50.0	50.0	ND	99	97	75-125	2	20
Chromium	137	136	100	100	34.5	102	102	75-125	0	20
Lead	242	239	250	250	ND	97	96	75-125	1	20
Selenium	100	101	100	100	ND	100	101	75-125	0	20
Silver	22.9	22.7	25.0	25.0	ND	92	91	75-125	1	20

Laboratory ID:	08-277-03									
Mercury	0.534	0.537	0.500	0.500	0.0115	105	105	80-120	1	20



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 6, 2018
Samples Submitted: August 24, 2018
Laboratory Reference: 1808-277
Project: 397-019

% MOISTURE

Date Analyzed: 8-27&28-18

Client ID	Lab ID	% Moisture
FMW-134-5.0-082318	08-277-01	70
FMW-134-15.0-082318	08-277-03	18
FB-03-10.0-082318	08-277-06	23
FB-03-15.0-082318	08-277-07	23
FB-03-25.0-082318	08-277-08	15
FB-03-35.0-082318	08-277-10	16





Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
 - B - The analyte indicated was also found in the blank sample.
 - C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
 - E - The value reported exceeds the quantitation range and is an estimate.
 - F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
 - H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
 - I - Compound recovery is outside of the control limits.
 - J - The value reported was below the practical quantitation limit. The value is an estimate.
 - K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
 - L - The RPD is outside of the control limits.
 - M - Hydrocarbons in the gasoline range are impacting the diesel range result.
 - M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
 - N - Hydrocarbons in the lube oil range are impacting the diesel range result.
 - N1 - Hydrocarbons in diesel range are impacting lube oil range results.
 - O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
 - P - The RPD of the detected concentrations between the two columns is greater than 40.
 - Q - Surrogate recovery is outside of the control limits.
 - S - Surrogate recovery data is not available due to the necessary dilution of the sample.
 - T - The sample chromatogram is not similar to a typical _____.
 - U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
 - U1 - The practical quantitation limit is elevated due to interferences present in the sample.
 - V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
 - W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
 - X - Sample extract treated with a mercury cleanup procedure.
 - X1 - Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
 - Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
 - Z -
- ND - Not Detected at PQL
 PQL - Practical Quantitation Limit
 RPD - Relative Percent Difference





OnSite Environmental Inc.
 Analytical Laboratory Testing Services
 14648 NE 95th Street • Redmond, WA 98052
 Phone: (425) 883-3881 • www.onsite-env.com

Chain of Custody

Turnaround Request
 (in working days)

(Check One)

Same Day 1 Day

2 Days 3 Days

Standard (7 Days)
 (TPH analysis 5 Days)

_____ (other)

Laboratory Number: 08-2777

Company: **Farr-Len**
 Project Number: **397-019**
 Project Name: **Block 38 West Property**
 Project Manager: **Tamara Ewert**
 Sampled by: _____

Lab ID Sample Identification Date Sampled Time Sampled Matrix

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (<input type="checkbox"/> Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	% Moisture	
1	FNW-134-5.0-082318	8/21/18	0710	Soil	5	X	X	X	X				X	X					X	X			X	
2	FNW-134-10.0-082318		0720																					
3	FNW-134-15.0-082318		0730				X		X				X							X				X
4	FNW-134-20.0-082318		0750																					
5	FB03-5.0-082318		1250																					
6	FB03-10.0-082318		1310				X		X				X							X				X
7	FB03-15.0-082318		1325				X		X				X											X
8	FB03-25.0-082318		1500				X		X				X											X
9	FB03-30.0-082318		1520																					
10	FB03-35.0-082318		1530																					X

Signature

Company

Date

Time

Comments/Special Instructions

[Signature]

Farr-Len

8/23/18

1857

Please Contact Project Manager for Sample Analysis and Turnaround time. Confirmations of X-Added 8/27/18. DS (STA)

[Signature]

[Signature]

8/24/18

1100

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

Relinquished Received Relinquished Received Relinquished Received Reviewed/Date

Data Package: Standard Level III Level IV Chromatograms with final report Electronic Data Deliverables (EDDs)



MVA Onsite Environmental Inc.
 Analytical Laboratory Testing Services
 14648 NE 95th Street • Redmond, WA 98052
 Phone: (425) 883-3881 • www.onsite-env.com

Chain of Custody

Terraround Request
 (In working days)

Laboratory Number: **08-2777**

(Check One)

- Same Day 1 Day
- 2 Days 3 Days
- Standard (7 Days)
 (TPH analysis 5 Days)
- _____ (other)

Company: _____

Project Number: _____

Project Name: _____

Project Manager: _____

Sampled by: _____

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix
11	FG-03-410.0-082318	8/23/18	1540	Soil S
12	FG-03-082318	8/23/18	1400	Water 8
13	FMW-134-2.5-082318	8/23/18	0700	Soil S

Number of Containers

NWTPH-HCID	
NWTPH-Gx/BTEX	
NWTPH-Gx	<input checked="" type="checkbox"/>
NWTPH-Dx (<input type="checkbox"/> Acid / SG Clean-up)	<input checked="" type="checkbox"/>
Volatiles 8260C	<input checked="" type="checkbox"/>
Halogenated Volatiles 8260C	<input checked="" type="checkbox"/>
EDB EPA 8011 (Waters Only)	
Semivolatiles 8270D/SIM (with low-level PAHs)	
PAHs 8270D/SIM (low-level)	
PCBs 8082A	
Organochlorine Pesticides 8081B	
Organophosphorus Pesticides 8270D/SIM	
Chlorinated Acid Herbicides 8151A	
Total RCRA Metals	
Total MTCA Metals	
TCLP Metals	
HEM (oil and grease) 1664A	
% Moisture	

Signature	Company	Date	Time	Comments/Special Instructions
	ORR	8/24/18	1100	See Page 1.

Relinquished

Received

Relinquished

Received

Relinquished

Received

Reviewed/Date

Reviewed/Date

Reviewed/Date

Data Package: Standard Level III Level IV

Chromatograms with final report Electronic Data Deliverables (EDDs)



14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

September 5, 2018

Javan Ruark
Farallon Consulting, LLC
975 5th Avenue NW
Issaquah, WA 98027

Re: Analytical Data for Project 397-019
Laboratory Reference No. 1808-292

Dear Javan:

Enclosed are the analytical results and associated quality control data for samples submitted on August 25, 2018.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "D. Baumeister", with a long horizontal stroke extending to the right.

David Baumeister
Project Manager

Enclosures



Date of Report: September 5, 2018
Samples Submitted: August 25, 2018
Laboratory Reference: 1808-292
Project: 397-019

Case Narrative

Samples were collected on August 24, 2018 and received by the laboratory on August 25, 2018. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

NWTPH Gx/BTEX Analysis

The MTCA Method A cleanup level of 0.030 ppm for Benzene is not achievable for sample FMW-135-15.0-082418 due to the low dry weight of the sample.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.



Date of Report: September 5, 2018
 Samples Submitted: August 25, 2018
 Laboratory Reference: 1808-292
 Project: 397-019

**GASOLINE RANGE ORGANICS/BTEX
 NWTPH-Gx/EPA 8021B**

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FMW-135-15.0-082418					
Laboratory ID:	08-292-02					
Benzene	ND	0.055	EPA 8021B	8-27-18	8-28-18	
Toluene	ND	0.28	EPA 8021B	8-27-18	8-28-18	
Ethyl Benzene	ND	0.28	EPA 8021B	8-27-18	8-28-18	
m,p-Xylene	ND	0.28	EPA 8021B	8-27-18	8-28-18	
o-Xylene	ND	0.28	EPA 8021B	8-27-18	8-28-18	
Gasoline	ND	28	NWTPH-Gx	8-27-18	8-28-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	109	57-129				

Client ID:	FMW-135-35.0-082418					
Laboratory ID:	08-292-06					
Benzene	ND	0.020	EPA 8021B	8-27-18	8-28-18	
Toluene	ND	0.058	EPA 8021B	8-27-18	8-28-18	
Ethyl Benzene	ND	0.058	EPA 8021B	8-27-18	8-28-18	
m,p-Xylene	ND	0.058	EPA 8021B	8-27-18	8-28-18	
o-Xylene	ND	0.058	EPA 8021B	8-27-18	8-28-18	
Gasoline	ND	5.8	NWTPH-Gx	8-27-18	8-28-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	80	57-129				



Date of Report: September 5, 2018
 Samples Submitted: August 25, 2018
 Laboratory Reference: 1808-292
 Project: 397-019

**GASOLINE RANGE ORGANICS/BTEX
 NWTPH-Gx/EPA 8021B
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0827S1					
Benzene	ND	0.020	EPA 8021B	8-27-18	8-27-18	
Toluene	ND	0.050	EPA 8021B	8-27-18	8-27-18	
Ethyl Benzene	ND	0.050	EPA 8021B	8-27-18	8-27-18	
m,p-Xylene	ND	0.050	EPA 8021B	8-27-18	8-27-18	
o-Xylene	ND	0.050	EPA 8021B	8-27-18	8-27-18	
Gasoline	ND	5.0	NWTPH-Gx	8-27-18	8-27-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	90	57-129				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	08-276-01							
	ORIG	DUP						
Benzene	ND	ND	NA	NA	NA	NA	30	
Toluene	ND	ND	NA	NA	NA	NA	30	
Ethyl Benzene	ND	ND	NA	NA	NA	NA	30	
m,p-Xylene	ND	ND	NA	NA	NA	NA	30	
o-Xylene	ND	ND	NA	NA	NA	NA	30	
Gasoline	ND	ND	NA	NA	NA	NA	30	
<i>Surrogate:</i>								
<i>Fluorobenzene</i>				104	103	57-129		

SPIKE BLANKS

Laboratory ID:	SB0827S1								
	SB	SBD	SB	SBD	SB	SBD			
Benzene	0.923	0.893	1.00	1.00	92	89	69-111	3	10
Toluene	0.915	0.880	1.00	1.00	92	88	70-114	4	11
Ethyl Benzene	0.918	0.886	1.00	1.00	92	89	70-115	4	10
m,p-Xylene	0.907	0.877	1.00	1.00	91	88	72-115	3	10
o-Xylene	0.917	0.882	1.00	1.00	92	88	71-115	4	11
<i>Surrogate:</i>									
<i>Fluorobenzene</i>					89	86	57-129		



Date of Report: September 5, 2018
 Samples Submitted: August 25, 2018
 Laboratory Reference: 1808-292
 Project: 397-019

**DIESEL AND HEAVY OIL RANGE ORGANICS
 NWTPH-Dx**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FMW-135-15.0-082418					
Laboratory ID:	08-292-02					
Diesel Range Organics	130	83	NWTPH-Dx	8-28-18	8-28-18	
Lube Oil Range Organics	680	170	NWTPH-Dx	8-28-18	8-28-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	78	50-150				

Client ID:	FMW-135-35.0-082418					
Laboratory ID:	08-292-06					
Diesel Range Organics	ND	31	NWTPH-Dx	8-28-18	8-28-18	
Lube Oil Range Organics	ND	62	NWTPH-Dx	8-28-18	8-28-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	99	50-150				



Date of Report: September 5, 2018
 Samples Submitted: August 25, 2018
 Laboratory Reference: 1808-292
 Project: 397-019

**DIESEL AND HEAVY OIL RANGE ORGANICS
 NWTPH-Dx
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0828S1					
Diesel Range Organics	ND	25	NWTPH-Dx	8-28-18	8-28-18	
Lube Oil Range Organics	ND	50	NWTPH-Dx	8-28-18	8-28-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	111	50-150				

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	08-277-03							
	ORIG	DUP						
Diesel Range	ND	ND	NA	NA	NA	NA	NA	NA
Lube Oil Range	ND	ND	NA	NA	NA	NA	NA	NA
<i>Surrogate:</i>								
<i>o-Terphenyl</i>				124	113	50-150		



Date of Report: September 5, 2018
 Samples Submitted: August 25, 2018
 Laboratory Reference: 1808-292
 Project: 397-019

VOLATILE ORGANICS EPA 8260C
 page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FMW-135-50.0-082418					
Laboratory ID:	08-292-09					
Dichlorodifluoromethane	ND	0.0010	EPA 8260C	8-28-18	8-29-18	
Chloromethane	ND	0.0037	EPA 8260C	8-28-18	8-29-18	
Vinyl Chloride	ND	0.00074	EPA 8260C	8-28-18	8-29-18	
Bromomethane	ND	0.00074	EPA 8260C	8-28-18	8-29-18	
Chloroethane	ND	0.0037	EPA 8260C	8-28-18	8-29-18	
Trichlorofluoromethane	ND	0.00074	EPA 8260C	8-28-18	8-29-18	
1,1-Dichloroethene	ND	0.00074	EPA 8260C	8-28-18	8-29-18	
Iodomethane	ND	0.0053	EPA 8260C	8-28-18	8-29-18	
Methylene Chloride	ND	0.0037	EPA 8260C	8-28-18	8-29-18	
(trans) 1,2-Dichloroethene	ND	0.00074	EPA 8260C	8-28-18	8-29-18	
1,1-Dichloroethane	ND	0.00074	EPA 8260C	8-28-18	8-29-18	
2,2-Dichloropropane	ND	0.00074	EPA 8260C	8-28-18	8-29-18	
(cis) 1,2-Dichloroethene	ND	0.00074	EPA 8260C	8-28-18	8-29-18	
Bromochloromethane	ND	0.00074	EPA 8260C	8-28-18	8-29-18	
Chloroform	ND	0.00074	EPA 8260C	8-28-18	8-29-18	
1,1,1-Trichloroethane	ND	0.00074	EPA 8260C	8-28-18	8-29-18	
Carbon Tetrachloride	ND	0.00074	EPA 8260C	8-28-18	8-29-18	
1,1-Dichloropropene	ND	0.00074	EPA 8260C	8-28-18	8-29-18	
1,2-Dichloroethane	ND	0.00074	EPA 8260C	8-28-18	8-29-18	
Trichloroethene	ND	0.00074	EPA 8260C	8-28-18	8-29-18	
1,2-Dichloropropane	ND	0.00074	EPA 8260C	8-28-18	8-29-18	
Dibromomethane	ND	0.00074	EPA 8260C	8-28-18	8-29-18	
Bromodichloromethane	ND	0.00074	EPA 8260C	8-28-18	8-29-18	
2-Chloroethyl Vinyl Ether	ND	0.0037	EPA 8260C	8-28-18	8-29-18	
(cis) 1,3-Dichloropropene	ND	0.00074	EPA 8260C	8-28-18	8-29-18	
(trans) 1,3-Dichloropropene	ND	0.00074	EPA 8260C	8-28-18	8-29-18	



Date of Report: September 5, 2018
 Samples Submitted: August 25, 2018
 Laboratory Reference: 1808-292
 Project: 397-019

VOLATILE ORGANICS EPA 8260C
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FMW-135-50.0-082418					
Laboratory ID:	08-292-09					
1,1,2-Trichloroethane	ND	0.00074	EPA 8260C	8-28-18	8-29-18	
Tetrachloroethene	ND	0.00074	EPA 8260C	8-28-18	8-29-18	
1,3-Dichloropropane	ND	0.00074	EPA 8260C	8-28-18	8-29-18	
Dibromochloromethane	ND	0.00074	EPA 8260C	8-28-18	8-29-18	
1,2-Dibromoethane	ND	0.00074	EPA 8260C	8-28-18	8-29-18	
Chlorobenzene	ND	0.00074	EPA 8260C	8-28-18	8-29-18	
1,1,1,2-Tetrachloroethane	ND	0.00074	EPA 8260C	8-28-18	8-29-18	
Bromoform	ND	0.0037	EPA 8260C	8-28-18	8-29-18	
Bromobenzene	ND	0.00074	EPA 8260C	8-28-18	8-29-18	
1,1,2,2-Tetrachloroethane	ND	0.00074	EPA 8260C	8-28-18	8-29-18	
1,2,3-Trichloropropane	ND	0.00074	EPA 8260C	8-28-18	8-29-18	
2-Chlorotoluene	ND	0.00074	EPA 8260C	8-28-18	8-29-18	
4-Chlorotoluene	ND	0.00074	EPA 8260C	8-28-18	8-29-18	
1,3-Dichlorobenzene	ND	0.00074	EPA 8260C	8-28-18	8-29-18	
1,4-Dichlorobenzene	ND	0.00074	EPA 8260C	8-28-18	8-29-18	
1,2-Dichlorobenzene	ND	0.00074	EPA 8260C	8-28-18	8-29-18	
1,2-Dibromo-3-chloropropane	ND	0.0037	EPA 8260C	8-28-18	8-29-18	
1,2,4-Trichlorobenzene	ND	0.00074	EPA 8260C	8-28-18	8-29-18	
Hexachlorobutadiene	ND	0.0037	EPA 8260C	8-28-18	8-29-18	
1,2,3-Trichlorobenzene	ND	0.00074	EPA 8260C	8-28-18	8-29-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	95	68-139				
<i>Toluene-d8</i>	100	79-128				
<i>4-Bromofluorobenzene</i>	102	71-132				



Date of Report: September 5, 2018
 Samples Submitted: August 25, 2018
 Laboratory Reference: 1808-292
 Project: 397-019

VOLATILE ORGANICS EPA 8260C
METHOD BLANK QUALITY CONTROL
 page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0828S2					
Dichlorodifluoromethane	ND	0.0015	EPA 8260C	8-28-18	8-28-18	
Chloromethane	ND	0.0050	EPA 8260C	8-28-18	8-28-18	
Vinyl Chloride	ND	0.0010	EPA 8260C	8-28-18	8-28-18	
Bromomethane	ND	0.0010	EPA 8260C	8-28-18	8-28-18	
Chloroethane	ND	0.0050	EPA 8260C	8-28-18	8-28-18	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	8-28-18	8-28-18	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	8-28-18	8-28-18	
Iodomethane	ND	0.0065	EPA 8260C	8-28-18	8-28-18	
Methylene Chloride	ND	0.0050	EPA 8260C	8-28-18	8-28-18	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	8-28-18	8-28-18	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	8-28-18	8-28-18	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	8-28-18	8-28-18	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	8-28-18	8-28-18	
Bromochloromethane	ND	0.0010	EPA 8260C	8-28-18	8-28-18	
Chloroform	ND	0.0010	EPA 8260C	8-28-18	8-28-18	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	8-28-18	8-28-18	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	8-28-18	8-28-18	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	8-28-18	8-28-18	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	8-28-18	8-28-18	
Trichloroethene	ND	0.0010	EPA 8260C	8-28-18	8-28-18	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	8-28-18	8-28-18	
Dibromomethane	ND	0.0010	EPA 8260C	8-28-18	8-28-18	
Bromodichloromethane	ND	0.0010	EPA 8260C	8-28-18	8-28-18	
2-Chloroethyl Vinyl Ether	ND	0.0074	EPA 8260C	8-28-18	8-28-18	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	8-28-18	8-28-18	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	8-28-18	8-28-18	



Date of Report: September 5, 2018
 Samples Submitted: August 25, 2018
 Laboratory Reference: 1808-292
 Project: 397-019

VOLATILE ORGANICS EPA 8260C
METHOD BLANK QUALITY CONTROL
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:		MB0828S2				
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	8-28-18	8-28-18	
Tetrachloroethene	ND	0.0010	EPA 8260C	8-28-18	8-28-18	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	8-28-18	8-28-18	
Dibromochloromethane	ND	0.0010	EPA 8260C	8-28-18	8-28-18	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	8-28-18	8-28-18	
Chlorobenzene	ND	0.0010	EPA 8260C	8-28-18	8-28-18	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	8-28-18	8-28-18	
Bromoform	ND	0.0050	EPA 8260C	8-28-18	8-28-18	
Bromobenzene	ND	0.0010	EPA 8260C	8-28-18	8-28-18	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	8-28-18	8-28-18	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	8-28-18	8-28-18	
2-Chlorotoluene	ND	0.0010	EPA 8260C	8-28-18	8-28-18	
4-Chlorotoluene	ND	0.0010	EPA 8260C	8-28-18	8-28-18	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	8-28-18	8-28-18	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	8-28-18	8-28-18	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	8-28-18	8-28-18	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260C	8-28-18	8-28-18	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	8-28-18	8-28-18	
Hexachlorobutadiene	ND	0.0050	EPA 8260C	8-28-18	8-28-18	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	8-28-18	8-28-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>99</i>	<i>68-139</i>				
<i>Toluene-d8</i>	<i>106</i>	<i>79-128</i>				
<i>4-Bromofluorobenzene</i>	<i>108</i>	<i>71-132</i>				



Date of Report: September 5, 2018
 Samples Submitted: August 25, 2018
 Laboratory Reference: 1808-292
 Project: 397-019

**VOLATILE ORGANICS EPA 8260C
 SB/SBD QUALITY CONTROL**

Matrix: Soil
 Units: mg/kg

Analyte	Result		Spike Level		Percent Recovery		Recovery	RPD	RPD	Flags
					SB	SBD	Limits	RPD	Limit	
SPIKE BLANKS										
Laboratory ID:	SB0828S2									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	0.0608	0.0586	0.0500	0.0500	122	117	53-141	4	17	
Benzene	0.0636	0.0600	0.0500	0.0500	127	120	70-130	6	15	
Trichloroethene	0.0588	0.0580	0.0500	0.0500	118	116	74-122	1	16	
Toluene	0.0628	0.0621	0.0500	0.0500	126	124	76-130	1	15	
Chlorobenzene	0.0559	0.0532	0.0500	0.0500	112	106	75-120	5	14	
<i>Surrogate:</i>										
Dibromofluoromethane					99	99	68-139			
Toluene-d8					108	107	79-128			
4-Bromofluorobenzene					108	109	71-132			



Date of Report: September 5, 2018
 Samples Submitted: August 25, 2018
 Laboratory Reference: 1808-292
 Project: 397-019

SEMIVOLATILE ORGANICS EPA 8270D/SIM
 page 1 of 2

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FMW-135-15.0-082418					
Laboratory ID:	08-292-02					
n-Nitrosodimethylamine	ND	0.11	EPA 8270D	8-29-18	8-30-18	
Pyridine	ND	1.1	EPA 8270D	8-29-18	8-30-18	
Phenol	ND	0.11	EPA 8270D	8-29-18	8-30-18	
Aniline	ND	0.56	EPA 8270D	8-29-18	8-30-18	
bis(2-Chloroethyl)ether	ND	0.11	EPA 8270D	8-29-18	8-30-18	
2-Chlorophenol	ND	0.11	EPA 8270D	8-29-18	8-30-18	
1,3-Dichlorobenzene	ND	0.11	EPA 8270D	8-29-18	8-30-18	
1,4-Dichlorobenzene	ND	0.11	EPA 8270D	8-29-18	8-30-18	
Benzyl alcohol	ND	0.56	EPA 8270D	8-29-18	8-30-18	
1,2-Dichlorobenzene	ND	0.11	EPA 8270D	8-29-18	8-30-18	
2-Methylphenol (o-Cresol)	ND	0.11	EPA 8270D	8-29-18	8-30-18	
bis(2-Chloroisopropyl)ether	ND	0.11	EPA 8270D	8-29-18	8-30-18	
(3+4)-Methylphenol (m,p-Cresol)	ND	0.11	EPA 8270D	8-29-18	8-30-18	
n-Nitroso-di-n-propylamine	ND	0.11	EPA 8270D	8-29-18	8-30-18	
Hexachloroethane	ND	0.11	EPA 8270D	8-29-18	8-30-18	
Nitrobenzene	ND	0.11	EPA 8270D	8-29-18	8-30-18	
Isophorone	ND	0.11	EPA 8270D	8-29-18	8-30-18	
2-Nitrophenol	ND	0.11	EPA 8270D	8-29-18	8-30-18	
2,4-Dimethylphenol	ND	0.11	EPA 8270D	8-29-18	8-30-18	
bis(2-Chloroethoxy)methane	ND	0.11	EPA 8270D	8-29-18	8-30-18	
2,4-Dichlorophenol	ND	0.11	EPA 8270D	8-29-18	8-30-18	
1,2,4-Trichlorobenzene	ND	0.11	EPA 8270D	8-29-18	8-30-18	
Naphthalene	0.029	0.022	EPA 8270D/SIM	8-29-18	8-31-18	
4-Chloroaniline	ND	0.56	EPA 8270D	8-29-18	8-30-18	
Hexachlorobutadiene	ND	0.11	EPA 8270D	8-29-18	8-30-18	
4-Chloro-3-methylphenol	ND	0.11	EPA 8270D	8-29-18	8-30-18	
2-Methylnaphthalene	ND	0.022	EPA 8270D/SIM	8-29-18	8-31-18	
1-Methylnaphthalene	ND	0.022	EPA 8270D/SIM	8-29-18	8-31-18	
Hexachlorocyclopentadiene	ND	0.11	EPA 8270D	8-29-18	8-30-18	
2,4,6-Trichlorophenol	ND	0.11	EPA 8270D	8-29-18	8-30-18	
2,3-Dichloroaniline	ND	0.11	EPA 8270D	8-29-18	8-30-18	
2,4,5-Trichlorophenol	ND	0.11	EPA 8270D	8-29-18	8-30-18	
2-Chloronaphthalene	ND	0.11	EPA 8270D	8-29-18	8-30-18	
2-Nitroaniline	ND	0.11	EPA 8270D	8-29-18	8-30-18	
1,4-Dinitrobenzene	ND	0.11	EPA 8270D	8-29-18	8-30-18	
Dimethylphthalate	ND	0.11	EPA 8270D	8-29-18	8-30-18	
1,3-Dinitrobenzene	ND	0.11	EPA 8270D	8-29-18	8-30-18	
2,6-Dinitrotoluene	ND	0.11	EPA 8270D	8-29-18	8-30-18	
1,2-Dinitrobenzene	ND	0.11	EPA 8270D	8-29-18	8-30-18	
Acenaphthylene	ND	0.022	EPA 8270D/SIM	8-29-18	8-31-18	
3-Nitroaniline	ND	0.11	EPA 8270D	8-29-18	8-30-18	



Date of Report: September 5, 2018
 Samples Submitted: August 25, 2018
 Laboratory Reference: 1808-292
 Project: 397-019

SEMIVOLATILE ORGANICS EPA 8270D/SIM
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FMW-135-15.0-082418					
Laboratory ID:	08-292-02					
2,4-Dinitrophenol	ND	0.56	EPA 8270D	8-29-18	8-30-18	
Acenaphthene	0.039	0.022	EPA 8270D/SIM	8-29-18	8-31-18	
4-Nitrophenol	ND	0.11	EPA 8270D	8-29-18	8-30-18	
2,4-Dinitrotoluene	ND	0.11	EPA 8270D	8-29-18	8-30-18	
Dibenzofuran	ND	0.11	EPA 8270D	8-29-18	8-30-18	
2,3,5,6-Tetrachlorophenol	ND	0.11	EPA 8270D	8-29-18	8-30-18	
2,3,4,6-Tetrachlorophenol	ND	0.11	EPA 8270D	8-29-18	8-30-18	
Diethylphthalate	ND	0.56	EPA 8270D	8-29-18	8-30-18	
4-Chlorophenyl-phenylether	ND	0.11	EPA 8270D	8-29-18	8-30-18	
4-Nitroaniline	ND	0.11	EPA 8270D	8-29-18	8-30-18	
Fluorene	ND	0.022	EPA 8270D/SIM	8-29-18	8-31-18	
4,6-Dinitro-2-methylphenol	ND	0.56	EPA 8270D	8-29-18	8-30-18	
n-Nitrosodiphenylamine	ND	0.11	EPA 8270D	8-29-18	8-30-18	
1,2-Diphenylhydrazine	ND	0.11	EPA 8270D	8-29-18	8-30-18	
4-Bromophenyl-phenylether	ND	0.11	EPA 8270D	8-29-18	8-30-18	
Hexachlorobenzene	ND	0.11	EPA 8270D	8-29-18	8-30-18	
Pentachlorophenol	ND	0.56	EPA 8270D	8-29-18	8-30-18	
Phenanthrene	0.068	0.022	EPA 8270D/SIM	8-29-18	8-31-18	
Anthracene	ND	0.022	EPA 8270D/SIM	8-29-18	8-31-18	
Carbazole	ND	0.11	EPA 8270D	8-29-18	8-30-18	
Di-n-butylphthalate	ND	0.56	EPA 8270D	8-29-18	8-30-18	
Fluoranthene	0.042	0.022	EPA 8270D/SIM	8-29-18	8-31-18	
Benzidine	ND	1.1	EPA 8270D	8-29-18	8-30-18	
Pyrene	0.073	0.022	EPA 8270D/SIM	8-29-18	8-31-18	
Butylbenzylphthalate	ND	0.56	EPA 8270D	8-29-18	8-30-18	
bis-2-Ethylhexyladipate	ND	0.56	EPA 8270D	8-29-18	8-30-18	
3,3'-Dichlorobenzidine	ND	0.56	EPA 8270D	8-29-18	8-30-18	
Benzo[a]anthracene	ND	0.022	EPA 8270D/SIM	8-29-18	8-31-18	
Chrysene	ND	0.022	EPA 8270D/SIM	8-29-18	8-31-18	
bis(2-Ethylhexyl)phthalate	ND	0.56	EPA 8270D	8-29-18	8-30-18	
Di-n-octylphthalate	ND	0.56	EPA 8270D	8-29-18	8-30-18	
Benzo[b]fluoranthene	ND	0.022	EPA 8270D/SIM	8-29-18	8-31-18	
Benzo(j,k)fluoranthene	ND	0.022	EPA 8270D/SIM	8-29-18	8-31-18	
Benzo[a]pyrene	ND	0.022	EPA 8270D/SIM	8-29-18	8-31-18	
Indeno[1,2,3-cd]pyrene	ND	0.022	EPA 8270D/SIM	8-29-18	8-31-18	
Dibenz[a,h]anthracene	ND	0.022	EPA 8270D/SIM	8-29-18	8-31-18	
Benzo[g,h,i]perylene	ND	0.022	EPA 8270D/SIM	8-29-18	8-31-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorophenol</i>	<i>58</i>	<i>19 - 103</i>				
<i>Phenol-d6</i>	<i>60</i>	<i>30 - 103</i>				
<i>Nitrobenzene-d5</i>	<i>59</i>	<i>27 - 105</i>				
<i>2-Fluorobiphenyl</i>	<i>65</i>	<i>36 - 102</i>				
<i>2,4,6-Tribromophenol</i>	<i>76</i>	<i>33 - 110</i>				
<i>Terphenyl-d14</i>	<i>71</i>	<i>38 - 108</i>				



Date of Report: September 5, 2018
 Samples Submitted: August 25, 2018
 Laboratory Reference: 1808-292
 Project: 397-019

SEMIVOLATILE ORGANICS EPA 8270D/SIM
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Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FMW-135-30.0-082418					
Laboratory ID:	08-292-05					
n-Nitrosodimethylamine	ND	0.041	EPA 8270D	8-29-18	8-30-18	
Pyridine	ND	0.41	EPA 8270D	8-29-18	8-30-18	
Phenol	ND	0.041	EPA 8270D	8-29-18	8-30-18	
Aniline	ND	0.21	EPA 8270D	8-29-18	8-30-18	
bis(2-Chloroethyl)ether	ND	0.041	EPA 8270D	8-29-18	8-30-18	
2-Chlorophenol	ND	0.041	EPA 8270D	8-29-18	8-30-18	
1,3-Dichlorobenzene	ND	0.041	EPA 8270D	8-29-18	8-30-18	
1,4-Dichlorobenzene	ND	0.041	EPA 8270D	8-29-18	8-30-18	
Benzyl alcohol	ND	0.21	EPA 8270D	8-29-18	8-30-18	
1,2-Dichlorobenzene	ND	0.041	EPA 8270D	8-29-18	8-30-18	
2-Methylphenol (o-Cresol)	ND	0.041	EPA 8270D	8-29-18	8-30-18	
bis(2-Chloroisopropyl)ether	ND	0.041	EPA 8270D	8-29-18	8-30-18	
(3+4)-Methylphenol (m,p-Cresol)	ND	0.041	EPA 8270D	8-29-18	8-30-18	
n-Nitroso-di-n-propylamine	ND	0.041	EPA 8270D	8-29-18	8-30-18	
Hexachloroethane	ND	0.041	EPA 8270D	8-29-18	8-30-18	
Nitrobenzene	ND	0.041	EPA 8270D	8-29-18	8-30-18	
Isophorone	ND	0.041	EPA 8270D	8-29-18	8-30-18	
2-Nitrophenol	ND	0.041	EPA 8270D	8-29-18	8-30-18	
2,4-Dimethylphenol	ND	0.041	EPA 8270D	8-29-18	8-30-18	
bis(2-Chloroethoxy)methane	ND	0.041	EPA 8270D	8-29-18	8-30-18	
2,4-Dichlorophenol	ND	0.041	EPA 8270D	8-29-18	8-30-18	
1,2,4-Trichlorobenzene	ND	0.041	EPA 8270D	8-29-18	8-30-18	
Naphthalene	0.12	0.041	EPA 8270D	8-29-18	8-30-18	
4-Chloroaniline	ND	0.21	EPA 8270D	8-29-18	8-30-18	
Hexachlorobutadiene	ND	0.041	EPA 8270D	8-29-18	8-30-18	
4-Chloro-3-methylphenol	ND	0.041	EPA 8270D	8-29-18	8-30-18	
2-Methylnaphthalene	ND	0.0082	EPA 8270D/SIM	8-29-18	8-29-18	
1-Methylnaphthalene	0.012	0.0082	EPA 8270D/SIM	8-29-18	8-29-18	
Hexachlorocyclopentadiene	ND	0.041	EPA 8270D	8-29-18	8-30-18	
2,4,6-Trichlorophenol	ND	0.041	EPA 8270D	8-29-18	8-30-18	
2,3-Dichloroaniline	ND	0.041	EPA 8270D	8-29-18	8-30-18	
2,4,5-Trichlorophenol	ND	0.041	EPA 8270D	8-29-18	8-30-18	
2-Chloronaphthalene	ND	0.041	EPA 8270D	8-29-18	8-30-18	
2-Nitroaniline	ND	0.041	EPA 8270D	8-29-18	8-30-18	
1,4-Dinitrobenzene	ND	0.041	EPA 8270D	8-29-18	8-30-18	
Dimethylphthalate	ND	0.041	EPA 8270D	8-29-18	8-30-18	
1,3-Dinitrobenzene	ND	0.041	EPA 8270D	8-29-18	8-30-18	
2,6-Dinitrotoluene	ND	0.041	EPA 8270D	8-29-18	8-30-18	
1,2-Dinitrobenzene	ND	0.041	EPA 8270D	8-29-18	8-30-18	
Acenaphthylene	ND	0.0082	EPA 8270D/SIM	8-29-18	8-29-18	
3-Nitroaniline	ND	0.041	EPA 8270D	8-29-18	8-30-18	



Date of Report: September 5, 2018
 Samples Submitted: August 25, 2018
 Laboratory Reference: 1808-292
 Project: 397-019

SEMIVOLATILE ORGANICS EPA 8270D/SIM
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FMW-135-30.0-082418					
Laboratory ID:	08-292-05					
2,4-Dinitrophenol	ND	0.21	EPA 8270D	8-29-18	8-30-18	
Acenaphthene	ND	0.0082	EPA 8270D/SIM	8-29-18	8-29-18	
4-Nitrophenol	ND	0.041	EPA 8270D	8-29-18	8-30-18	
2,4-Dinitrotoluene	ND	0.041	EPA 8270D	8-29-18	8-30-18	
Dibenzofuran	ND	0.041	EPA 8270D	8-29-18	8-30-18	
2,3,5,6-Tetrachlorophenol	ND	0.041	EPA 8270D	8-29-18	8-30-18	
2,3,4,6-Tetrachlorophenol	ND	0.041	EPA 8270D	8-29-18	8-30-18	
Diethylphthalate	ND	0.21	EPA 8270D	8-29-18	8-30-18	
4-Chlorophenyl-phenylether	ND	0.041	EPA 8270D	8-29-18	8-30-18	
4-Nitroaniline	ND	0.041	EPA 8270D	8-29-18	8-30-18	
Fluorene	ND	0.0082	EPA 8270D/SIM	8-29-18	8-29-18	
4,6-Dinitro-2-methylphenol	ND	0.21	EPA 8270D	8-29-18	8-30-18	
n-Nitrosodiphenylamine	ND	0.041	EPA 8270D	8-29-18	8-30-18	
1,2-Diphenylhydrazine	ND	0.041	EPA 8270D	8-29-18	8-30-18	
4-Bromophenyl-phenylether	ND	0.041	EPA 8270D	8-29-18	8-30-18	
Hexachlorobenzene	ND	0.041	EPA 8270D	8-29-18	8-30-18	
Pentachlorophenol	ND	0.21	EPA 8270D	8-29-18	8-30-18	
Phenanthrene	ND	0.0082	EPA 8270D/SIM	8-29-18	8-29-18	
Anthracene	ND	0.0082	EPA 8270D/SIM	8-29-18	8-29-18	
Carbazole	ND	0.041	EPA 8270D	8-29-18	8-30-18	
Di-n-butylphthalate	ND	0.21	EPA 8270D	8-29-18	8-30-18	
Fluoranthene	ND	0.0082	EPA 8270D/SIM	8-29-18	8-29-18	
Benzidine	ND	0.41	EPA 8270D	8-29-18	8-30-18	
Pyrene	ND	0.0082	EPA 8270D/SIM	8-29-18	8-29-18	
Butylbenzylphthalate	ND	0.21	EPA 8270D	8-29-18	8-30-18	
bis-2-Ethylhexyladipate	ND	0.21	EPA 8270D	8-29-18	8-30-18	
3,3'-Dichlorobenzidine	ND	0.21	EPA 8270D	8-29-18	8-30-18	
Benzo[a]anthracene	ND	0.0082	EPA 8270D/SIM	8-29-18	8-29-18	
Chrysene	ND	0.0082	EPA 8270D/SIM	8-29-18	8-29-18	
bis(2-Ethylhexyl)phthalate	ND	0.21	EPA 8270D	8-29-18	8-30-18	
Di-n-octylphthalate	ND	0.21	EPA 8270D	8-29-18	8-30-18	
Benzo[b]fluoranthene	ND	0.0082	EPA 8270D/SIM	8-29-18	8-29-18	
Benzo(j,k)fluoranthene	ND	0.0082	EPA 8270D/SIM	8-29-18	8-29-18	
Benzo[a]pyrene	ND	0.0082	EPA 8270D/SIM	8-29-18	8-29-18	
Indeno[1,2,3-cd]pyrene	ND	0.0082	EPA 8270D/SIM	8-29-18	8-29-18	
Dibenz[a,h]anthracene	ND	0.0082	EPA 8270D/SIM	8-29-18	8-29-18	
Benzo[g,h,i]perylene	ND	0.0082	EPA 8270D/SIM	8-29-18	8-29-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorophenol</i>	<i>73</i>	<i>19 - 103</i>				
<i>Phenol-d6</i>	<i>72</i>	<i>30 - 103</i>				
<i>Nitrobenzene-d5</i>	<i>64</i>	<i>27 - 105</i>				
<i>2-Fluorobiphenyl</i>	<i>71</i>	<i>36 - 102</i>				
<i>2,4,6-Tribromophenol</i>	<i>80</i>	<i>33 - 110</i>				
<i>Terphenyl-d14</i>	<i>78</i>	<i>38 - 108</i>				



Date of Report: September 5, 2018
 Samples Submitted: August 25, 2018
 Laboratory Reference: 1808-292
 Project: 397-019

**SEMIVOLATILE ORGANICS EPA 8270D/SIM
 METHOD BLANK QUALITY CONTROL**

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Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0829S1					
n-Nitrosodimethylamine	ND	0.033	EPA 8270D	8-29-18	8-29-18	
Pyridine	ND	0.33	EPA 8270D	8-29-18	8-29-18	
Phenol	ND	0.033	EPA 8270D	8-29-18	8-29-18	
Aniline	ND	0.17	EPA 8270D	8-29-18	8-29-18	
bis(2-Chloroethyl)ether	ND	0.033	EPA 8270D	8-29-18	8-29-18	
2-Chlorophenol	ND	0.033	EPA 8270D	8-29-18	8-29-18	
1,3-Dichlorobenzene	ND	0.033	EPA 8270D	8-29-18	8-29-18	
1,4-Dichlorobenzene	ND	0.033	EPA 8270D	8-29-18	8-29-18	
Benzyl alcohol	ND	0.17	EPA 8270D	8-29-18	8-29-18	
1,2-Dichlorobenzene	ND	0.033	EPA 8270D	8-29-18	8-29-18	
2-Methylphenol (o-Cresol)	ND	0.033	EPA 8270D	8-29-18	8-29-18	
bis(2-Chloroisopropyl)ether	ND	0.033	EPA 8270D	8-29-18	8-29-18	
(3+4)-Methylphenol (m,p-Cresol)	ND	0.033	EPA 8270D	8-29-18	8-29-18	
n-Nitroso-di-n-propylamine	ND	0.033	EPA 8270D	8-29-18	8-29-18	
Hexachloroethane	ND	0.033	EPA 8270D	8-29-18	8-29-18	
Nitrobenzene	ND	0.033	EPA 8270D	8-29-18	8-29-18	
Isophorone	ND	0.033	EPA 8270D	8-29-18	8-29-18	
2-Nitrophenol	ND	0.033	EPA 8270D	8-29-18	8-29-18	
2,4-Dimethylphenol	ND	0.033	EPA 8270D	8-29-18	8-29-18	
bis(2-Chloroethoxy)methane	ND	0.033	EPA 8270D	8-29-18	8-29-18	
2,4-Dichlorophenol	ND	0.033	EPA 8270D	8-29-18	8-29-18	
1,2,4-Trichlorobenzene	ND	0.033	EPA 8270D	8-29-18	8-29-18	
Naphthalene	ND	0.0067	EPA 8270D/SIM	8-29-18	8-29-18	
4-Chloroaniline	ND	0.17	EPA 8270D	8-29-18	8-29-18	
Hexachlorobutadiene	ND	0.033	EPA 8270D	8-29-18	8-29-18	
4-Chloro-3-methylphenol	ND	0.033	EPA 8270D	8-29-18	8-29-18	
2-Methylnaphthalene	ND	0.0067	EPA 8270D/SIM	8-29-18	8-29-18	
1-Methylnaphthalene	ND	0.0067	EPA 8270D/SIM	8-29-18	8-29-18	
Hexachlorocyclopentadiene	ND	0.033	EPA 8270D	8-29-18	8-29-18	
2,4,6-Trichlorophenol	ND	0.033	EPA 8270D	8-29-18	8-29-18	
2,3-Dichloroaniline	ND	0.033	EPA 8270D	8-29-18	8-29-18	
2,4,5-Trichlorophenol	ND	0.033	EPA 8270D	8-29-18	8-29-18	
2-Chloronaphthalene	ND	0.033	EPA 8270D	8-29-18	8-29-18	
2-Nitroaniline	ND	0.033	EPA 8270D	8-29-18	8-29-18	
1,4-Dinitrobenzene	ND	0.033	EPA 8270D	8-29-18	8-29-18	
Dimethylphthalate	ND	0.033	EPA 8270D	8-29-18	8-29-18	
1,3-Dinitrobenzene	ND	0.033	EPA 8270D	8-29-18	8-29-18	
2,6-Dinitrotoluene	ND	0.033	EPA 8270D	8-29-18	8-29-18	
1,2-Dinitrobenzene	ND	0.033	EPA 8270D	8-29-18	8-29-18	
Acenaphthylene	ND	0.0067	EPA 8270D/SIM	8-29-18	8-29-18	
3-Nitroaniline	ND	0.033	EPA 8270D	8-29-18	8-29-18	



Date of Report: September 5, 2018
 Samples Submitted: August 25, 2018
 Laboratory Reference: 1808-292
 Project: 397-019

**SEMIVOLATILE ORGANICS EPA 8270D/SIM
 METHOD BLANK QUALITY CONTROL**

page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0829S1					
2,4-Dinitrophenol	ND	0.17	EPA 8270D	8-29-18	8-29-18	
Acenaphthene	ND	0.0067	EPA 8270D/SIM	8-29-18	8-29-18	
4-Nitrophenol	ND	0.033	EPA 8270D	8-29-18	8-29-18	
2,4-Dinitrotoluene	ND	0.033	EPA 8270D	8-29-18	8-29-18	
Dibenzofuran	ND	0.033	EPA 8270D	8-29-18	8-29-18	
2,3,5,6-Tetrachlorophenol	ND	0.033	EPA 8270D	8-29-18	8-29-18	
2,3,4,6-Tetrachlorophenol	ND	0.033	EPA 8270D	8-29-18	8-29-18	
Diethylphthalate	ND	0.17	EPA 8270D	8-29-18	8-29-18	
4-Chlorophenyl-phenylether	ND	0.033	EPA 8270D	8-29-18	8-29-18	
4-Nitroaniline	ND	0.033	EPA 8270D	8-29-18	8-29-18	
Fluorene	ND	0.0067	EPA 8270D/SIM	8-29-18	8-29-18	
4,6-Dinitro-2-methylphenol	ND	0.17	EPA 8270D	8-29-18	8-29-18	
n-Nitrosodiphenylamine	ND	0.033	EPA 8270D	8-29-18	8-29-18	
1,2-Diphenylhydrazine	ND	0.033	EPA 8270D	8-29-18	8-29-18	
4-Bromophenyl-phenylether	ND	0.033	EPA 8270D	8-29-18	8-29-18	
Hexachlorobenzene	ND	0.033	EPA 8270D	8-29-18	8-29-18	
Pentachlorophenol	ND	0.17	EPA 8270D	8-29-18	8-29-18	
Phenanthrene	ND	0.0067	EPA 8270D/SIM	8-29-18	8-29-18	
Anthracene	ND	0.0067	EPA 8270D/SIM	8-29-18	8-29-18	
Carbazole	ND	0.033	EPA 8270D	8-29-18	8-29-18	
Di-n-butylphthalate	ND	0.17	EPA 8270D	8-29-18	8-29-18	
Fluoranthene	ND	0.0067	EPA 8270D/SIM	8-29-18	8-29-18	
Benzidine	ND	0.33	EPA 8270D	8-29-18	8-29-18	
Pyrene	ND	0.0067	EPA 8270D/SIM	8-29-18	8-29-18	
Butylbenzylphthalate	ND	0.17	EPA 8270D	8-29-18	8-29-18	
bis(2-Ethylhexyl)adipate	ND	0.17	EPA 8270D	8-29-18	8-29-18	
3,3'-Dichlorobenzidine	ND	0.17	EPA 8270D	8-29-18	8-29-18	
Benzo[a]anthracene	ND	0.0067	EPA 8270D/SIM	8-29-18	8-29-18	
Chrysene	ND	0.0067	EPA 8270D/SIM	8-29-18	8-29-18	
bis(2-Ethylhexyl)phthalate	ND	0.17	EPA 8270D	8-29-18	8-29-18	
Di-n-octylphthalate	ND	0.17	EPA 8270D	8-29-18	8-29-18	
Benzo[b]fluoranthene	ND	0.0067	EPA 8270D/SIM	8-29-18	8-29-18	
Benzo(j,k)fluoranthene	ND	0.0067	EPA 8270D/SIM	8-29-18	8-29-18	
Benzo[a]pyrene	ND	0.0067	EPA 8270D/SIM	8-29-18	8-29-18	
Indeno[1,2,3-cd]pyrene	ND	0.0067	EPA 8270D/SIM	8-29-18	8-29-18	
Dibenz[a,h]anthracene	ND	0.0067	EPA 8270D/SIM	8-29-18	8-29-18	
Benzo[g,h,i]perylene	ND	0.0067	EPA 8270D/SIM	8-29-18	8-29-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorophenol	79	19 - 103				
Phenol-d6	79	30 - 103				
Nitrobenzene-d5	73	27 - 105				
2-Fluorobiphenyl	75	36 - 102				
2,4,6-Tribromophenol	88	33 - 110				
Terphenyl-d14	81	38 - 108				



Date of Report: September 5, 2018
 Samples Submitted: August 25, 2018
 Laboratory Reference: 1808-292
 Project: 397-019

**SEMIVOLATILE ORGANICS EPA 8270D/SIM
 MS/MSD QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg

Analyte	Result		Spike Level		Source	Percent		Recovery	RPD	RPD	Flags
	MS	MSD	MS	MSD	Result	Recovery	Limits	RPD	Limit		
MATRIX SPIKES											
Laboratory ID:	08-229-04										
	MS	MSD	MS	MSD		MS	MSD				
Phenol	1.15	0.989	1.33	1.33	ND	86	74	37 - 94	15	27	
2-Chlorophenol	1.21	1.03	1.33	1.33	ND	91	77	37 - 95	16	32	
1,4-Dichlorobenzene	0.568	0.493	0.667	0.667	ND	85	74	23 - 97	14	37	
n-Nitroso-di-n-propylamine	0.580	0.501	0.667	0.667	ND	87	75	40 - 91	15	28	
1,2,4-Trichlorobenzene	0.563	0.505	0.667	0.667	ND	84	76	37 - 93	11	30	
4-Chloro-3-methylphenol	1.11	1.03	1.33	1.33	ND	83	77	46 - 96	7	25	
Acenaphthene	0.585	0.526	0.667	0.667	0.0395	82	73	43 - 90	11	25	
4-Nitrophenol	1.15	1.03	1.33	1.33	ND	86	77	31 - 104	11	28	
2,4-Dinitrotoluene	0.575	0.516	0.667	0.667	ND	86	77	31 - 96	11	32	
Pentachlorophenol	1.38	1.22	1.33	1.33	ND	104	92	20 - 123	12	29	
Pyrene	0.582	0.518	0.667	0.667	0.0828	75	65	28 - 114	12	35	
<i>Surrogate:</i>											
2-Fluorophenol						85	71	19 - 103			
Phenol-d6						84	73	30 - 103			
Nitrobenzene-d5						72	65	27 - 105			
2-Fluorobiphenyl						77	70	36 - 102			
2,4,6-Tribromophenol						92	84	33 - 110			
Terphenyl-d14						78	71	38 - 108			



Date of Report: September 5, 2018
 Samples Submitted: August 25, 2018
 Laboratory Reference: 1808-292
 Project: 397-019

**TOTAL METALS
 EPA 6010D/7471B**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FMW-135-5.0-082418					
Laboratory ID:	08-292-01					
Arsenic	ND	12	EPA 6010D	8-28-18	8-31-18	
Barium	120	3.1	EPA 6010D	8-28-18	8-31-18	
Cadmium	ND	0.61	EPA 6010D	8-28-18	8-31-18	
Chromium	48	0.61	EPA 6010D	8-28-18	8-31-18	
Lead	16	6.1	EPA 6010D	8-28-18	8-31-18	
Mercury	ND	0.31	EPA 7471B	8-29-18	8-29-18	
Selenium	ND	12	EPA 6010D	8-28-18	8-31-18	
Silver	ND	1.2	EPA 6010D	8-28-18	8-31-18	

Client ID: FMW-135-25.0-082418

Laboratory ID: 08-292-04

Arsenic	ND	14	EPA 6010D	8-28-18	8-31-18	
Barium	120	3.5	EPA 6010D	8-28-18	8-31-18	
Cadmium	ND	0.69	EPA 6010D	8-28-18	8-31-18	
Chromium	60	0.69	EPA 6010D	8-28-18	8-31-18	
Lead	ND	6.9	EPA 6010D	8-28-18	8-31-18	
Mercury	ND	0.35	EPA 7471B	8-29-18	8-29-18	
Selenium	ND	14	EPA 6010D	8-28-18	8-31-18	
Silver	ND	1.4	EPA 6010D	8-28-18	8-31-18	

Client ID: FMW-135-30.0-082418

Laboratory ID: 08-292-05

Arsenic	ND	12	EPA 6010D	8-28-18	8-31-18	
Barium	66	3.1	EPA 6010D	8-28-18	8-31-18	
Cadmium	ND	0.62	EPA 6010D	8-28-18	8-31-18	
Chromium	44	0.62	EPA 6010D	8-28-18	8-31-18	
Lead	ND	6.2	EPA 6010D	8-28-18	8-31-18	
Mercury	ND	0.31	EPA 7471B	8-29-18	8-29-18	
Selenium	ND	12	EPA 6010D	8-28-18	8-31-18	
Silver	ND	1.2	EPA 6010D	8-28-18	8-31-18	



Date of Report: September 5, 2018
 Samples Submitted: August 25, 2018
 Laboratory Reference: 1808-292
 Project: 397-019

**TOTAL METALS
 EPA 6010D/7471B
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0828SM2					
Arsenic	ND	10	EPA 6010D	8-28-18	8-29-18	
Barium	ND	2.5	EPA 6010D	8-28-18	8-29-18	
Cadmium	ND	0.50	EPA 6010D	8-28-18	8-29-18	
Chromium	ND	0.50	EPA 6010D	8-28-18	8-28-18	
Lead	ND	5.0	EPA 6010D	8-28-18	8-29-18	
Selenium	ND	10	EPA 6010D	8-28-18	8-29-18	
Silver	ND	1.0	EPA 6010D	8-28-18	8-29-18	

Laboratory ID:	MB0829S1					
Mercury	ND	0.25	EPA 7471B	8-29-18	8-29-18	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	08-265-16							
	ORIG	DUP						
Arsenic	ND	ND	NA	NA	NA	NA	20	
Barium	22.1	19.5	NA	NA	NA	13	20	
Cadmium	25.2	23.2	NA	NA	NA	8	20	
Chromium	8.95	7.40	NA	NA	NA	19	20	
Lead	ND	ND	NA	NA	NA	NA	20	
Selenium	ND	ND	NA	NA	NA	NA	20	
Silver	ND	ND	NA	NA	NA	NA	20	

Laboratory ID:	08-277-03							
Mercury	ND	ND	NA	NA	NA	NA	20	

MATRIX SPIKES

Laboratory ID:	08-265-16									
	MS	MSD	MS	MSD		MS	MSD			
Arsenic	111	112	100	100	ND	111	112	75-125	1	20
Barium	141	139	100	100	22.1	119	117	75-125	1	20
Cadmium	75.1	75.9	50.0	50.0	25.2	100	101	75-125	1	20
Chromium	109	108	100	100	8.95	100	99	75-125	1	20
Lead	237	239	250	250	ND	95	95	75-125	1	20
Selenium	104	101	100	100	ND	104	101	75-125	2	20
Silver	25.6	25.4	25.0	25.0	ND	102	102	75-125	1	20

Laboratory ID:	08-277-03									
Mercury	0.534	0.537	0.500	0.500	0.0115	105	105	80-120	1	20



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 5, 2018
Samples Submitted: August 25, 2018
Laboratory Reference: 1808-292
Project: 397-019

% MOISTURE

Date Analyzed: 8-27&28-18

Client ID	Lab ID	% Moisture
FMW-135-5.0-082418	08-292-01	18
FMW-135-15.0-082418	08-292-02	70
FMW-135-25.0-082418	08-292-04	28
FMW-135-30.0-082418	08-292-05	19
FMW-135-35.0-082418	08-292-06	19
FMW-135-50.0-082418	08-292-09	16





Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
 - B - The analyte indicated was also found in the blank sample.
 - C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
 - E - The value reported exceeds the quantitation range and is an estimate.
 - F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
 - H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
 - I - Compound recovery is outside of the control limits.
 - J - The value reported was below the practical quantitation limit. The value is an estimate.
 - K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
 - L - The RPD is outside of the control limits.
 - M - Hydrocarbons in the gasoline range are impacting the diesel range result.
 - M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
 - N - Hydrocarbons in the lube oil range are impacting the diesel range result.
 - N1 - Hydrocarbons in diesel range are impacting lube oil range results.
 - O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
 - P - The RPD of the detected concentrations between the two columns is greater than 40.
 - Q - Surrogate recovery is outside of the control limits.
 - S - Surrogate recovery data is not available due to the necessary dilution of the sample.
 - T - The sample chromatogram is not similar to a typical _____.
 - U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
 - U1 - The practical quantitation limit is elevated due to interferences present in the sample.
 - V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
 - W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
 - X - Sample extract treated with a mercury cleanup procedure.
 - X1 - Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
 - Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
 - Z -
- ND - Not Detected at PQL
 PQL - Practical Quantitation Limit
 RPD - Relative Percent Difference





Mw Onsite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-9881 • www.onsite-env.com

Chain of Custody

Turnaround Request
(in working days)
(Check One)

Laboratory Number:

08-292

Company: **Fovallan**

Project Number: **397-019**

Project Name: **Block 38 West Property**

- Same Day 1 Day
 2 Days 3 Days
 Standard (7 Days)
 (TPH analysis 5 Days)

Project Manager: **Savon Puente**

Sampled by: **Greg Peters**

Lab ID: **8/24/18** Date Sampled: **0735** Time Sampled: **0750** Matrix: **Soil S**

Number of Containers

NWTPH-HCID	
NWTPH-Gx/BTEX	X
NWTPH-Gx	
NWTPH-Dx (<input type="checkbox"/> Acid / SG Clean-up)	X
Volatiles 8260C	
Halogenated Volatiles 8260C	
EDB EPA 8011 (Waters Only)	
Semivolatiles 8270D/SIM (with low-level PAHs)	X
PAHs 8270D/SIM (low-level)	
PCBs 8082A	
Organochlorine Pesticides 8081B	
Organophosphorus Pesticides 8270D/SIM	
Chlorinated Acid Herbicides 8151A	
Total RCRA Metals	X
Total MTCA Metals	
TCLP Metals	
HEM (oil and grease) 1664A	

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (<input type="checkbox"/> Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	% Moisture
1	FMW-135-50-082418	8/24/18	0735	Soil S	1		X		X				X						X				X
2	FMW-135-150-082418		0750		1		X		X				X						X				X
3	FMW-135-200-082418		0810		1																		X
4	FMW-135-250-082418		0823		1														X				X
5	FMW-135-300-082418		0835		1														X				X
6	FMW-135-350-082418		0850		1		X		X														X
7	FMW-135-400-082418		0915		1																		X
8	FMW-135-450-082418		0930		1																		X
9	FMW-135-500-082418		0950		1						X												X

Relinquished	Signature	Company	Date	Time	Comments/Special Instructions
Received		Fovallan	8/24/18	0840	<p>Please Contact Project manager for Analyses and turnaround time confirmation - X-Added 8/27/18. 08 (STA)</p>
Relinquished		onsite env	8/25/18	840	
Received					
Relinquished					
Received					
Reviewed/Date		Reviewed/Date			Data Package: Standard <input type="checkbox"/> Level III <input type="checkbox"/> Level IV <input type="checkbox"/> Chromatograms with final report <input type="checkbox"/> Electronic Data Deliverables (EDDs) <input type="checkbox"/>



14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

September 5, 2018

Javan Ruark
Farallon Consulting, LLC
975 5th Avenue NW
Issaquah, WA 98027

Re: Analytical Data for Project 397-019
Laboratory Reference No. 1808-293

Dear Javan:

Enclosed are the analytical results and associated quality control data for samples submitted on August 25, 2018.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "DB", with a long horizontal stroke extending to the right.

David Baumeister
Project Manager

Enclosures



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 5, 2018
Samples Submitted: August 25, 2018
Laboratory Reference: 1808-293
Project: 397-019

Case Narrative

Samples were collected on August 24, 2018 and received by the laboratory on August 25, 2018. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Semivolatiles EPA 8270D/SIM Analysis

Sample FMW-133-20.0-082418 had one surrogate recovery out of control limits. This is within allowance of our standard operating procedure as long as the recovery is above 10%.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.



Date of Report: September 5, 2018
 Samples Submitted: August 25, 2018
 Laboratory Reference: 1808-293
 Project: 397-019

**GASOLINE RANGE ORGANICS/BTEX
 NWTPH-Gx/EPA 8021B**

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FMW-132-5.0-082418					
Laboratory ID:	08-293-02					
Benzene	ND	0.020	EPA 8021B	8-27-18	8-28-18	
Toluene	ND	0.084	EPA 8021B	8-27-18	8-28-18	
Ethyl Benzene	ND	0.084	EPA 8021B	8-27-18	8-28-18	
m,p-Xylene	ND	0.084	EPA 8021B	8-27-18	8-28-18	
o-Xylene	ND	0.084	EPA 8021B	8-27-18	8-28-18	
Gasoline	ND	8.4	NWTPH-Gx	8-27-18	8-28-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	<i>77</i>	<i>57-129</i>				

Client ID:	FMW-133-10.0-082418					
Laboratory ID:	08-293-03					
Benzene	ND	0.057	EPA 8021B	8-27-18	8-28-18	
Toluene	ND	0.28	EPA 8021B	8-27-18	8-28-18	
Ethyl Benzene	ND	0.28	EPA 8021B	8-27-18	8-28-18	
m,p-Xylene	ND	0.28	EPA 8021B	8-27-18	8-28-18	
o-Xylene	ND	0.28	EPA 8021B	8-27-18	8-28-18	
Gasoline	ND	28	NWTPH-Gx	8-27-18	8-28-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	<i>80</i>	<i>57-129</i>				



Date of Report: September 5, 2018
 Samples Submitted: August 25, 2018
 Laboratory Reference: 1808-293
 Project: 397-019

**GASOLINE RANGE ORGANICS/BTEX
 NWTPH-Gx/EPA 8021B
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0827S1					
Benzene	ND	0.020	EPA 8021B	8-27-18	8-27-18	
Toluene	ND	0.050	EPA 8021B	8-27-18	8-27-18	
Ethyl Benzene	ND	0.050	EPA 8021B	8-27-18	8-27-18	
m,p-Xylene	ND	0.050	EPA 8021B	8-27-18	8-27-18	
o-Xylene	ND	0.050	EPA 8021B	8-27-18	8-27-18	
Gasoline	ND	5.0	NWTPH-Gx	8-27-18	8-27-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	90	57-129				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	08-276-01							
	ORIG	DUP						
Benzene	ND	ND	NA	NA	NA	NA	30	
Toluene	ND	ND	NA	NA	NA	NA	30	
Ethyl Benzene	ND	ND	NA	NA	NA	NA	30	
m,p-Xylene	ND	ND	NA	NA	NA	NA	30	
o-Xylene	ND	ND	NA	NA	NA	NA	30	
Gasoline	ND	ND	NA	NA	NA	NA	30	
<i>Surrogate:</i>								
<i>Fluorobenzene</i>				104	103	57-129		

SPIKE BLANKS

Laboratory ID:	SB0827S1								
	SB	SBD	SB	SBD	SB	SBD			
Benzene	0.923	0.893	1.00	1.00	92	89	69-111	3	10
Toluene	0.915	0.880	1.00	1.00	92	88	70-114	4	11
Ethyl Benzene	0.918	0.886	1.00	1.00	92	89	70-115	4	10
m,p-Xylene	0.907	0.877	1.00	1.00	91	88	72-115	3	10
o-Xylene	0.917	0.882	1.00	1.00	92	88	71-115	4	11
<i>Surrogate:</i>									
<i>Fluorobenzene</i>					89	86	57-129		



Date of Report: September 5, 2018
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 Project: 397-019

**DIESEL AND HEAVY OIL RANGE ORGANICS
 NWTPH-Dx**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FMW-132-5.0-082418					
Laboratory ID:	08-293-02					
Diesel Range Organics	730	180	NWTPH-Dx	8-28-18	8-30-18	
Lube Oil Range Organics	2600	360	NWTPH-Dx	8-28-18	8-30-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	97	50-150				

Client ID:	FMW-133-10.0-082418					
Laboratory ID:	08-293-03					
Diesel Range Organics	ND	83	NWTPH-Dx	8-28-18	8-28-18	
Lube Oil Range Organics	470	170	NWTPH-Dx	8-28-18	8-28-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	104	50-150				



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**DIESEL AND HEAVY OIL RANGE ORGANICS
 NWTPH-Dx
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0828S1					
Diesel Range Organics	ND	25	NWTPH-Dx	8-28-18	8-28-18	
Lube Oil Range Organics	ND	50	NWTPH-Dx	8-28-18	8-28-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	<i>111</i>	<i>50-150</i>				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	08-277-03							
	ORIG	DUP						
Diesel Range	ND	ND	NA	NA	NA	NA	NA	NA
Lube Oil Range	ND	ND	NA	NA	NA	NA	NA	NA
<i>Surrogate:</i>								
<i>o-Terphenyl</i>				124	113	50-150		



Date of Report: September 5, 2018
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SEMIVOLATILE ORGANICS EPA 8270D/SIM
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Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FMW-132-5.0-082418					
Laboratory ID:	08-293-02					
n-Nitrosodimethylamine	ND	0.48	EPA 8270D	8-29-18	8-31-18	
Pyridine	ND	4.8	EPA 8270D	8-29-18	8-31-18	
Phenol	ND	0.48	EPA 8270D	8-29-18	8-31-18	
Aniline	ND	2.4	EPA 8270D	8-29-18	8-31-18	
bis(2-Chloroethyl)ether	ND	0.48	EPA 8270D	8-29-18	8-31-18	
2-Chlorophenol	ND	0.48	EPA 8270D	8-29-18	8-31-18	
1,3-Dichlorobenzene	ND	0.48	EPA 8270D	8-29-18	8-31-18	
1,4-Dichlorobenzene	ND	0.48	EPA 8270D	8-29-18	8-31-18	
Benzyl alcohol	ND	2.4	EPA 8270D	8-29-18	8-31-18	
1,2-Dichlorobenzene	ND	0.48	EPA 8270D	8-29-18	8-31-18	
2-Methylphenol (o-Cresol)	ND	0.48	EPA 8270D	8-29-18	8-31-18	
bis(2-Chloroisopropyl)ether	ND	0.48	EPA 8270D	8-29-18	8-31-18	
(3+4)-Methylphenol (m,p-Cresol)	ND	0.48	EPA 8270D	8-29-18	8-31-18	
n-Nitroso-di-n-propylamine	ND	0.48	EPA 8270D	8-29-18	8-31-18	
Hexachloroethane	ND	0.48	EPA 8270D	8-29-18	8-31-18	
Nitrobenzene	ND	0.48	EPA 8270D	8-29-18	8-31-18	
Isophorone	ND	0.48	EPA 8270D	8-29-18	8-31-18	
2-Nitrophenol	ND	0.48	EPA 8270D	8-29-18	8-31-18	
2,4-Dimethylphenol	ND	0.48	EPA 8270D	8-29-18	8-31-18	
bis(2-Chloroethoxy)methane	ND	0.48	EPA 8270D	8-29-18	8-31-18	
2,4-Dichlorophenol	ND	0.48	EPA 8270D	8-29-18	8-31-18	
1,2,4-Trichlorobenzene	ND	0.48	EPA 8270D	8-29-18	8-31-18	
Naphthalene	2.0	0.48	EPA 8270D	8-29-18	8-31-18	
4-Chloroaniline	ND	2.4	EPA 8270D	8-29-18	8-31-18	
Hexachlorobutadiene	ND	0.48	EPA 8270D	8-29-18	8-31-18	
4-Chloro-3-methylphenol	ND	0.48	EPA 8270D	8-29-18	8-31-18	
2-Methylnaphthalene	2.6	0.48	EPA 8270D	8-29-18	8-31-18	
1-Methylnaphthalene	2.0	0.48	EPA 8270D	8-29-18	8-31-18	
Hexachlorocyclopentadiene	ND	0.48	EPA 8270D	8-29-18	8-31-18	
2,4,6-Trichlorophenol	ND	0.48	EPA 8270D	8-29-18	8-31-18	
2,3-Dichloroaniline	ND	0.48	EPA 8270D	8-29-18	8-31-18	
2,4,5-Trichlorophenol	ND	0.48	EPA 8270D	8-29-18	8-31-18	
2-Chloronaphthalene	ND	0.48	EPA 8270D	8-29-18	8-31-18	
2-Nitroaniline	ND	0.48	EPA 8270D	8-29-18	8-31-18	
1,4-Dinitrobenzene	ND	0.48	EPA 8270D	8-29-18	8-31-18	
Dimethylphthalate	ND	0.48	EPA 8270D	8-29-18	8-31-18	
1,3-Dinitrobenzene	ND	0.48	EPA 8270D	8-29-18	8-31-18	
2,6-Dinitrotoluene	ND	0.48	EPA 8270D	8-29-18	8-31-18	
1,2-Dinitrobenzene	ND	0.48	EPA 8270D	8-29-18	8-31-18	
Acenaphthylene	0.10	0.0095	EPA 8270D/SIM	8-29-18	8-29-18	
3-Nitroaniline	ND	0.48	EPA 8270D	8-29-18	8-31-18	



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SEMIVOLATILE ORGANICS EPA 8270D/SIM
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FMW-132-5.0-082418					
Laboratory ID:	08-293-02					
2,4-Dinitrophenol	ND	2.4	EPA 8270D	8-29-18	8-31-18	
Acenaphthene	1.5	0.48	EPA 8270D	8-29-18	8-31-18	
4-Nitrophenol	ND	0.48	EPA 8270D	8-29-18	8-31-18	
2,4-Dinitrotoluene	ND	0.48	EPA 8270D	8-29-18	8-31-18	
Dibenzofuran	0.70	0.48	EPA 8270D	8-29-18	8-31-18	
2,3,5,6-Tetrachlorophenol	ND	0.48	EPA 8270D	8-29-18	8-31-18	
2,3,4,6-Tetrachlorophenol	ND	0.48	EPA 8270D	8-29-18	8-31-18	
Diethylphthalate	ND	2.4	EPA 8270D	8-29-18	8-31-18	
4-Chlorophenyl-phenylether	ND	0.48	EPA 8270D	8-29-18	8-31-18	
4-Nitroaniline	ND	0.48	EPA 8270D	8-29-18	8-31-18	
Fluorene	0.84	0.48	EPA 8270D	8-29-18	8-31-18	
4,6-Dinitro-2-methylphenol	ND	2.4	EPA 8270D	8-29-18	8-31-18	
n-Nitrosodiphenylamine	ND	0.48	EPA 8270D	8-29-18	8-31-18	
1,2-Diphenylhydrazine	ND	0.48	EPA 8270D	8-29-18	8-31-18	
4-Bromophenyl-phenylether	ND	0.48	EPA 8270D	8-29-18	8-31-18	
Hexachlorobenzene	ND	0.48	EPA 8270D	8-29-18	8-31-18	
Pentachlorophenol	ND	2.4	EPA 8270D	8-29-18	8-31-18	
Phenanthrene	18	0.48	EPA 8270D	8-29-18	8-31-18	
Anthracene	3.3	0.48	EPA 8270D	8-29-18	8-31-18	
Carbazole	1.1	0.48	EPA 8270D	8-29-18	8-31-18	
Di-n-butylphthalate	ND	2.4	EPA 8270D	8-29-18	8-31-18	
Fluoranthene	15	0.48	EPA 8270D	8-29-18	8-31-18	
Benzidine	ND	4.8	EPA 8270D	8-29-18	8-31-18	
Pyrene	27	0.48	EPA 8270D	8-29-18	8-31-18	
Butylbenzylphthalate	ND	2.4	EPA 8270D	8-29-18	8-31-18	
bis-2-Ethylhexyladipate	ND	2.4	EPA 8270D	8-29-18	8-31-18	
3,3'-Dichlorobenzidine	ND	2.4	EPA 8270D	8-29-18	8-31-18	
Benzo[a]anthracene	11	0.48	EPA 8270D	8-29-18	8-31-18	
Chrysene	13	0.48	EPA 8270D	8-29-18	8-31-18	
bis(2-Ethylhexyl)phthalate	ND	2.4	EPA 8270D	8-29-18	8-31-18	
Di-n-octylphthalate	ND	2.4	EPA 8270D	8-29-18	8-31-18	
Benzo[b]fluoranthene	10	0.48	EPA 8270D	8-29-18	8-31-18	
Benzo(j,k)fluoranthene	2.9	0.48	EPA 8270D	8-29-18	8-31-18	
Benzo[a]pyrene	9.4	0.48	EPA 8270D	8-29-18	8-31-18	
Indeno[1,2,3-cd]pyrene	4.1	0.48	EPA 8270D	8-29-18	8-31-18	
Dibenz[a,h]anthracene	1.4	0.48	EPA 8270D	8-29-18	8-31-18	
Benzo[g,h,i]perylene	4.4	0.48	EPA 8270D	8-29-18	8-31-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorophenol	54	19 - 103				
Phenol-d6	53	30 - 103				
Nitrobenzene-d5	67	27 - 105				
2-Fluorobiphenyl	77	36 - 102				
2,4,6-Tribromophenol	72	33 - 110				
Terphenyl-d14	75	38 - 108				



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Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FMW-133-10.0-082418					
Laboratory ID:	08-293-03					
n-Nitrosodimethylamine	ND	0.28	EPA 8270D	8-29-18	8-30-18	
Pyridine	ND	2.8	EPA 8270D	8-29-18	8-30-18	
Phenol	ND	0.28	EPA 8270D	8-29-18	8-30-18	
Aniline	ND	1.4	EPA 8270D	8-29-18	8-30-18	
bis(2-Chloroethyl)ether	ND	0.28	EPA 8270D	8-29-18	8-30-18	
2-Chlorophenol	ND	0.28	EPA 8270D	8-29-18	8-30-18	
1,3-Dichlorobenzene	ND	0.28	EPA 8270D	8-29-18	8-30-18	
1,4-Dichlorobenzene	ND	0.28	EPA 8270D	8-29-18	8-30-18	
Benzyl alcohol	ND	1.4	EPA 8270D	8-29-18	8-30-18	
1,2-Dichlorobenzene	ND	0.28	EPA 8270D	8-29-18	8-30-18	
2-Methylphenol (o-Cresol)	ND	0.28	EPA 8270D	8-29-18	8-30-18	
bis(2-Chloroisopropyl)ether	ND	0.28	EPA 8270D	8-29-18	8-30-18	
(3+4)-Methylphenol (m,p-Cresol)	ND	0.28	EPA 8270D	8-29-18	8-30-18	
n-Nitroso-di-n-propylamine	ND	0.28	EPA 8270D	8-29-18	8-30-18	
Hexachloroethane	ND	0.28	EPA 8270D	8-29-18	8-30-18	
Nitrobenzene	ND	0.28	EPA 8270D	8-29-18	8-30-18	
Isophorone	ND	0.28	EPA 8270D	8-29-18	8-30-18	
2-Nitrophenol	ND	0.28	EPA 8270D	8-29-18	8-30-18	
2,4-Dimethylphenol	ND	0.28	EPA 8270D	8-29-18	8-30-18	
bis(2-Chloroethoxy)methane	ND	0.28	EPA 8270D	8-29-18	8-30-18	
2,4-Dichlorophenol	ND	0.28	EPA 8270D	8-29-18	8-30-18	
1,2,4-Trichlorobenzene	ND	0.28	EPA 8270D	8-29-18	8-30-18	
Naphthalene	ND	0.055	EPA 8270D/SIM	8-29-18	8-29-18	
4-Chloroaniline	ND	1.4	EPA 8270D	8-29-18	8-30-18	
Hexachlorobutadiene	ND	0.28	EPA 8270D	8-29-18	8-30-18	
4-Chloro-3-methylphenol	ND	0.28	EPA 8270D	8-29-18	8-30-18	
2-Methylnaphthalene	ND	0.055	EPA 8270D/SIM	8-29-18	8-29-18	
1-Methylnaphthalene	ND	0.055	EPA 8270D/SIM	8-29-18	8-29-18	
Hexachlorocyclopentadiene	ND	0.28	EPA 8270D	8-29-18	8-30-18	
2,4,6-Trichlorophenol	ND	0.28	EPA 8270D	8-29-18	8-30-18	
2,3-Dichloroaniline	ND	0.28	EPA 8270D	8-29-18	8-30-18	
2,4,5-Trichlorophenol	ND	0.28	EPA 8270D	8-29-18	8-30-18	
2-Chloronaphthalene	ND	0.28	EPA 8270D	8-29-18	8-30-18	
2-Nitroaniline	ND	0.28	EPA 8270D	8-29-18	8-30-18	
1,4-Dinitrobenzene	ND	0.28	EPA 8270D	8-29-18	8-30-18	
Dimethylphthalate	ND	0.28	EPA 8270D	8-29-18	8-30-18	
1,3-Dinitrobenzene	ND	0.28	EPA 8270D	8-29-18	8-30-18	
2,6-Dinitrotoluene	ND	0.28	EPA 8270D	8-29-18	8-30-18	
1,2-Dinitrobenzene	ND	0.28	EPA 8270D	8-29-18	8-30-18	
Acenaphthylene	ND	0.055	EPA 8270D/SIM	8-29-18	8-29-18	
3-Nitroaniline	ND	0.28	EPA 8270D	8-29-18	8-30-18	



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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FMW-133-10.0-082418					
Laboratory ID:	08-293-03					
2,4-Dinitrophenol	ND	1.4	EPA 8270D	8-29-18	8-30-18	
Acenaphthene	ND	0.055	EPA 8270D/SIM	8-29-18	8-29-18	
4-Nitrophenol	ND	0.28	EPA 8270D	8-29-18	8-30-18	
2,4-Dinitrotoluene	ND	0.28	EPA 8270D	8-29-18	8-30-18	
Dibenzofuran	ND	0.28	EPA 8270D	8-29-18	8-30-18	
2,3,5,6-Tetrachlorophenol	ND	0.28	EPA 8270D	8-29-18	8-30-18	
2,3,4,6-Tetrachlorophenol	ND	0.28	EPA 8270D	8-29-18	8-30-18	
Diethylphthalate	ND	1.4	EPA 8270D	8-29-18	8-30-18	
4-Chlorophenyl-phenylether	ND	0.28	EPA 8270D	8-29-18	8-30-18	
4-Nitroaniline	ND	0.28	EPA 8270D	8-29-18	8-30-18	
Fluorene	ND	0.055	EPA 8270D/SIM	8-29-18	8-29-18	
4,6-Dinitro-2-methylphenol	ND	1.4	EPA 8270D	8-29-18	8-30-18	
n-Nitrosodiphenylamine	ND	0.28	EPA 8270D	8-29-18	8-30-18	
1,2-Diphenylhydrazine	ND	0.28	EPA 8270D	8-29-18	8-30-18	
4-Bromophenyl-phenylether	ND	0.28	EPA 8270D	8-29-18	8-30-18	
Hexachlorobenzene	ND	0.28	EPA 8270D	8-29-18	8-30-18	
Pentachlorophenol	ND	1.4	EPA 8270D	8-29-18	8-30-18	
Phenanthrene	ND	0.055	EPA 8270D/SIM	8-29-18	8-29-18	
Anthracene	ND	0.055	EPA 8270D/SIM	8-29-18	8-29-18	
Carbazole	ND	0.28	EPA 8270D	8-29-18	8-30-18	
Di-n-butylphthalate	ND	1.4	EPA 8270D	8-29-18	8-30-18	
Fluoranthene	ND	0.055	EPA 8270D/SIM	8-29-18	8-29-18	
Benzidine	ND	2.8	EPA 8270D	8-29-18	8-30-18	
Pyrene	ND	0.055	EPA 8270D/SIM	8-29-18	8-29-18	
Butylbenzylphthalate	ND	1.4	EPA 8270D	8-29-18	8-30-18	
bis-2-Ethylhexyladipate	ND	1.4	EPA 8270D	8-29-18	8-30-18	
3,3'-Dichlorobenzidine	ND	1.4	EPA 8270D	8-29-18	8-30-18	
Benzo[a]anthracene	ND	0.055	EPA 8270D/SIM	8-29-18	8-29-18	
Chrysene	ND	0.055	EPA 8270D/SIM	8-29-18	8-29-18	
bis(2-Ethylhexyl)phthalate	ND	1.4	EPA 8270D	8-29-18	8-30-18	
Di-n-octylphthalate	ND	1.4	EPA 8270D	8-29-18	8-30-18	
Benzo[b]fluoranthene	ND	0.055	EPA 8270D/SIM	8-29-18	8-29-18	
Benzo(j,k)fluoranthene	ND	0.055	EPA 8270D/SIM	8-29-18	8-29-18	
Benzo[a]pyrene	ND	0.055	EPA 8270D/SIM	8-29-18	8-29-18	
Indeno[1,2,3-cd]pyrene	ND	0.055	EPA 8270D/SIM	8-29-18	8-29-18	
Dibenz[a,h]anthracene	ND	0.055	EPA 8270D/SIM	8-29-18	8-29-18	
Benzo[g,h,i]perylene	ND	0.055	EPA 8270D/SIM	8-29-18	8-29-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorophenol</i>	<i>57</i>	<i>19 - 103</i>				
<i>Phenol-d6</i>	<i>61</i>	<i>30 - 103</i>				
<i>Nitrobenzene-d5</i>	<i>52</i>	<i>27 - 105</i>				
<i>2-Fluorobiphenyl</i>	<i>59</i>	<i>36 - 102</i>				
<i>2,4,6-Tribromophenol</i>	<i>73</i>	<i>33 - 110</i>				
<i>Terphenyl-d14</i>	<i>65</i>	<i>38 - 108</i>				



Date of Report: September 5, 2018
 Samples Submitted: August 25, 2018
 Laboratory Reference: 1808-293
 Project: 397-019

SEMIVOLATILE ORGANICS EPA 8270D/SIM
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Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FMW-133-20.0-082418					
Laboratory ID:	08-293-05					
n-Nitrosodimethylamine	ND	0.040	EPA 8270D	8-29-18	8-30-18	
Pyridine	ND	0.40	EPA 8270D	8-29-18	8-30-18	
Phenol	ND	0.040	EPA 8270D	8-29-18	8-30-18	
Aniline	ND	0.20	EPA 8270D	8-29-18	8-30-18	
bis(2-Chloroethyl)ether	ND	0.040	EPA 8270D	8-29-18	8-30-18	
2-Chlorophenol	ND	0.040	EPA 8270D	8-29-18	8-30-18	
1,3-Dichlorobenzene	ND	0.040	EPA 8270D	8-29-18	8-30-18	
1,4-Dichlorobenzene	ND	0.040	EPA 8270D	8-29-18	8-30-18	
Benzyl alcohol	ND	0.20	EPA 8270D	8-29-18	8-30-18	
1,2-Dichlorobenzene	ND	0.040	EPA 8270D	8-29-18	8-30-18	
2-Methylphenol (o-Cresol)	ND	0.040	EPA 8270D	8-29-18	8-30-18	
bis(2-Chloroisopropyl)ether	ND	0.040	EPA 8270D	8-29-18	8-30-18	
(3+4)-Methylphenol (m,p-Cresol)	ND	0.040	EPA 8270D	8-29-18	8-30-18	
n-Nitroso-di-n-propylamine	ND	0.040	EPA 8270D	8-29-18	8-30-18	
Hexachloroethane	ND	0.040	EPA 8270D	8-29-18	8-30-18	
Nitrobenzene	ND	0.040	EPA 8270D	8-29-18	8-30-18	
Isophorone	ND	0.040	EPA 8270D	8-29-18	8-30-18	
2-Nitrophenol	ND	0.040	EPA 8270D	8-29-18	8-30-18	
2,4-Dimethylphenol	0.091	0.040	EPA 8270D	8-29-18	8-30-18	
bis(2-Chloroethoxy)methane	ND	0.040	EPA 8270D	8-29-18	8-30-18	
2,4-Dichlorophenol	ND	0.040	EPA 8270D	8-29-18	8-30-18	
1,2,4-Trichlorobenzene	ND	0.040	EPA 8270D	8-29-18	8-30-18	
Naphthalene	0.25	0.040	EPA 8270D	8-29-18	8-30-18	
4-Chloroaniline	ND	0.20	EPA 8270D	8-29-18	8-30-18	
Hexachlorobutadiene	ND	0.040	EPA 8270D	8-29-18	8-30-18	
4-Chloro-3-methylphenol	ND	0.040	EPA 8270D	8-29-18	8-30-18	
2-Methylnaphthalene	0.042	0.040	EPA 8270D	8-29-18	8-30-18	
1-Methylnaphthalene	0.035	0.0080	EPA 8270D/SIM	8-29-18	8-29-18	
Hexachlorocyclopentadiene	ND	0.040	EPA 8270D	8-29-18	8-30-18	
2,4,6-Trichlorophenol	ND	0.040	EPA 8270D	8-29-18	8-30-18	
2,3-Dichloroaniline	ND	0.040	EPA 8270D	8-29-18	8-30-18	
2,4,5-Trichlorophenol	ND	0.040	EPA 8270D	8-29-18	8-30-18	
2-Chloronaphthalene	ND	0.040	EPA 8270D	8-29-18	8-30-18	
2-Nitroaniline	ND	0.040	EPA 8270D	8-29-18	8-30-18	
1,4-Dinitrobenzene	ND	0.040	EPA 8270D	8-29-18	8-30-18	
Dimethylphthalate	ND	0.040	EPA 8270D	8-29-18	8-30-18	
1,3-Dinitrobenzene	ND	0.040	EPA 8270D	8-29-18	8-30-18	
2,6-Dinitrotoluene	ND	0.040	EPA 8270D	8-29-18	8-30-18	
1,2-Dinitrobenzene	ND	0.040	EPA 8270D	8-29-18	8-30-18	
Acenaphthylene	ND	0.0080	EPA 8270D/SIM	8-29-18	8-29-18	
3-Nitroaniline	ND	0.040	EPA 8270D	8-29-18	8-30-18	



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SEMIVOLATILE ORGANICS EPA 8270D/SIM
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FMW-133-20.0-082418					
Laboratory ID:	08-293-05					
2,4-Dinitrophenol	ND	0.20	EPA 8270D	8-29-18	8-30-18	
Acenaphthene	0.021	0.0080	EPA 8270D/SIM	8-29-18	8-29-18	
4-Nitrophenol	ND	0.040	EPA 8270D	8-29-18	8-30-18	
2,4-Dinitrotoluene	ND	0.040	EPA 8270D	8-29-18	8-30-18	
Dibenzofuran	ND	0.040	EPA 8270D	8-29-18	8-30-18	
2,3,5,6-Tetrachlorophenol	ND	0.040	EPA 8270D	8-29-18	8-30-18	
2,3,4,6-Tetrachlorophenol	ND	0.040	EPA 8270D	8-29-18	8-30-18	
Diethylphthalate	ND	0.20	EPA 8270D	8-29-18	8-30-18	
4-Chlorophenyl-phenylether	ND	0.040	EPA 8270D	8-29-18	8-30-18	
4-Nitroaniline	ND	0.040	EPA 8270D	8-29-18	8-30-18	
Fluorene	ND	0.0080	EPA 8270D/SIM	8-29-18	8-29-18	
4,6-Dinitro-2-methylphenol	ND	0.20	EPA 8270D	8-29-18	8-30-18	
n-Nitrosodiphenylamine	ND	0.040	EPA 8270D	8-29-18	8-30-18	
1,2-Diphenylhydrazine	ND	0.040	EPA 8270D	8-29-18	8-30-18	
4-Bromophenyl-phenylether	ND	0.040	EPA 8270D	8-29-18	8-30-18	
Hexachlorobenzene	ND	0.040	EPA 8270D	8-29-18	8-30-18	
Pentachlorophenol	ND	0.20	EPA 8270D	8-29-18	8-30-18	
Phenanthrene	ND	0.0080	EPA 8270D/SIM	8-29-18	8-29-18	
Anthracene	ND	0.0080	EPA 8270D/SIM	8-29-18	8-29-18	
Carbazole	ND	0.040	EPA 8270D	8-29-18	8-30-18	
Di-n-butylphthalate	ND	0.20	EPA 8270D	8-29-18	8-30-18	
Fluoranthene	ND	0.0080	EPA 8270D/SIM	8-29-18	8-29-18	
Benzidine	ND	0.40	EPA 8270D	8-29-18	8-30-18	
Pyrene	ND	0.0080	EPA 8270D/SIM	8-29-18	8-29-18	
Butylbenzylphthalate	ND	0.20	EPA 8270D	8-29-18	8-30-18	
bis-2-Ethylhexyladipate	ND	0.20	EPA 8270D	8-29-18	8-30-18	
3,3'-Dichlorobenzidine	ND	0.20	EPA 8270D	8-29-18	8-30-18	
Benzo[a]anthracene	ND	0.0080	EPA 8270D/SIM	8-29-18	8-29-18	
Chrysene	ND	0.0080	EPA 8270D/SIM	8-29-18	8-29-18	
bis(2-Ethylhexyl)phthalate	ND	0.20	EPA 8270D	8-29-18	8-30-18	
Di-n-octylphthalate	ND	0.20	EPA 8270D	8-29-18	8-30-18	
Benzo[b]fluoranthene	ND	0.0080	EPA 8270D/SIM	8-29-18	8-29-18	
Benzo(j,k)fluoranthene	ND	0.0080	EPA 8270D/SIM	8-29-18	8-29-18	
Benzo[a]pyrene	ND	0.0080	EPA 8270D/SIM	8-29-18	8-29-18	
Indeno[1,2,3-cd]pyrene	ND	0.0080	EPA 8270D/SIM	8-29-18	8-29-18	
Dibenz[a,h]anthracene	ND	0.0080	EPA 8270D/SIM	8-29-18	8-29-18	
Benzo[g,h,i]perylene	ND	0.0080	EPA 8270D/SIM	8-29-18	8-29-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorophenol	51	19 - 103				
Phenol-d6	70	30 - 103				
Nitrobenzene-d5	66	27 - 105				
2-Fluorobiphenyl	72	36 - 102				
2,4,6-Tribromophenol	27	33 - 110				
Terphenyl-d14	74	38 - 108				

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Date of Report: September 5, 2018
 Samples Submitted: August 25, 2018
 Laboratory Reference: 1808-293
 Project: 397-019

**SEMIVOLATILE ORGANICS EPA 8270D/SIM
 METHOD BLANK QUALITY CONTROL**

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Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0829S1					
n-Nitrosodimethylamine	ND	0.033	EPA 8270D	8-29-18	8-29-18	
Pyridine	ND	0.33	EPA 8270D	8-29-18	8-29-18	
Phenol	ND	0.033	EPA 8270D	8-29-18	8-29-18	
Aniline	ND	0.17	EPA 8270D	8-29-18	8-29-18	
bis(2-Chloroethyl)ether	ND	0.033	EPA 8270D	8-29-18	8-29-18	
2-Chlorophenol	ND	0.033	EPA 8270D	8-29-18	8-29-18	
1,3-Dichlorobenzene	ND	0.033	EPA 8270D	8-29-18	8-29-18	
1,4-Dichlorobenzene	ND	0.033	EPA 8270D	8-29-18	8-29-18	
Benzyl alcohol	ND	0.17	EPA 8270D	8-29-18	8-29-18	
1,2-Dichlorobenzene	ND	0.033	EPA 8270D	8-29-18	8-29-18	
2-Methylphenol (o-Cresol)	ND	0.033	EPA 8270D	8-29-18	8-29-18	
bis(2-Chloroisopropyl)ether	ND	0.033	EPA 8270D	8-29-18	8-29-18	
(3+4)-Methylphenol (m,p-Cresol)	ND	0.033	EPA 8270D	8-29-18	8-29-18	
n-Nitroso-di-n-propylamine	ND	0.033	EPA 8270D	8-29-18	8-29-18	
Hexachloroethane	ND	0.033	EPA 8270D	8-29-18	8-29-18	
Nitrobenzene	ND	0.033	EPA 8270D	8-29-18	8-29-18	
Isophorone	ND	0.033	EPA 8270D	8-29-18	8-29-18	
2-Nitrophenol	ND	0.033	EPA 8270D	8-29-18	8-29-18	
2,4-Dimethylphenol	ND	0.033	EPA 8270D	8-29-18	8-29-18	
bis(2-Chloroethoxy)methane	ND	0.033	EPA 8270D	8-29-18	8-29-18	
2,4-Dichlorophenol	ND	0.033	EPA 8270D	8-29-18	8-29-18	
1,2,4-Trichlorobenzene	ND	0.033	EPA 8270D	8-29-18	8-29-18	
Naphthalene	ND	0.0067	EPA 8270D/SIM	8-29-18	8-29-18	
4-Chloroaniline	ND	0.17	EPA 8270D	8-29-18	8-29-18	
Hexachlorobutadiene	ND	0.033	EPA 8270D	8-29-18	8-29-18	
4-Chloro-3-methylphenol	ND	0.033	EPA 8270D	8-29-18	8-29-18	
2-Methylnaphthalene	ND	0.0067	EPA 8270D/SIM	8-29-18	8-29-18	
1-Methylnaphthalene	ND	0.0067	EPA 8270D/SIM	8-29-18	8-29-18	
Hexachlorocyclopentadiene	ND	0.033	EPA 8270D	8-29-18	8-29-18	
2,4,6-Trichlorophenol	ND	0.033	EPA 8270D	8-29-18	8-29-18	
2,3-Dichloroaniline	ND	0.033	EPA 8270D	8-29-18	8-29-18	
2,4,5-Trichlorophenol	ND	0.033	EPA 8270D	8-29-18	8-29-18	
2-Chloronaphthalene	ND	0.033	EPA 8270D	8-29-18	8-29-18	
2-Nitroaniline	ND	0.033	EPA 8270D	8-29-18	8-29-18	
1,4-Dinitrobenzene	ND	0.033	EPA 8270D	8-29-18	8-29-18	
Dimethylphthalate	ND	0.033	EPA 8270D	8-29-18	8-29-18	
1,3-Dinitrobenzene	ND	0.033	EPA 8270D	8-29-18	8-29-18	
2,6-Dinitrotoluene	ND	0.033	EPA 8270D	8-29-18	8-29-18	
1,2-Dinitrobenzene	ND	0.033	EPA 8270D	8-29-18	8-29-18	
Acenaphthylene	ND	0.0067	EPA 8270D/SIM	8-29-18	8-29-18	
3-Nitroaniline	ND	0.033	EPA 8270D	8-29-18	8-29-18	



Date of Report: September 5, 2018
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**SEMIVOLATILE ORGANICS EPA 8270D/SIM
 METHOD BLANK QUALITY CONTROL**

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0829S1					
2,4-Dinitrophenol	ND	0.17	EPA 8270D	8-29-18	8-29-18	
Acenaphthene	ND	0.0067	EPA 8270D/SIM	8-29-18	8-29-18	
4-Nitrophenol	ND	0.033	EPA 8270D	8-29-18	8-29-18	
2,4-Dinitrotoluene	ND	0.033	EPA 8270D	8-29-18	8-29-18	
Dibenzofuran	ND	0.033	EPA 8270D	8-29-18	8-29-18	
2,3,5,6-Tetrachlorophenol	ND	0.033	EPA 8270D	8-29-18	8-29-18	
2,3,4,6-Tetrachlorophenol	ND	0.033	EPA 8270D	8-29-18	8-29-18	
Diethylphthalate	ND	0.17	EPA 8270D	8-29-18	8-29-18	
4-Chlorophenyl-phenylether	ND	0.033	EPA 8270D	8-29-18	8-29-18	
4-Nitroaniline	ND	0.033	EPA 8270D	8-29-18	8-29-18	
Fluorene	ND	0.0067	EPA 8270D/SIM	8-29-18	8-29-18	
4,6-Dinitro-2-methylphenol	ND	0.17	EPA 8270D	8-29-18	8-29-18	
n-Nitrosodiphenylamine	ND	0.033	EPA 8270D	8-29-18	8-29-18	
1,2-Diphenylhydrazine	ND	0.033	EPA 8270D	8-29-18	8-29-18	
4-Bromophenyl-phenylether	ND	0.033	EPA 8270D	8-29-18	8-29-18	
Hexachlorobenzene	ND	0.033	EPA 8270D	8-29-18	8-29-18	
Pentachlorophenol	ND	0.17	EPA 8270D	8-29-18	8-29-18	
Phenanthrene	ND	0.0067	EPA 8270D/SIM	8-29-18	8-29-18	
Anthracene	ND	0.0067	EPA 8270D/SIM	8-29-18	8-29-18	
Carbazole	ND	0.033	EPA 8270D	8-29-18	8-29-18	
Di-n-butylphthalate	ND	0.17	EPA 8270D	8-29-18	8-29-18	
Fluoranthene	ND	0.0067	EPA 8270D/SIM	8-29-18	8-29-18	
Benzidine	ND	0.33	EPA 8270D	8-29-18	8-29-18	
Pyrene	ND	0.0067	EPA 8270D/SIM	8-29-18	8-29-18	
Butylbenzylphthalate	ND	0.17	EPA 8270D	8-29-18	8-29-18	
bis(2-Ethylhexyl)adipate	ND	0.17	EPA 8270D	8-29-18	8-29-18	
3,3'-Dichlorobenzidine	ND	0.17	EPA 8270D	8-29-18	8-29-18	
Benzo[a]anthracene	ND	0.0067	EPA 8270D/SIM	8-29-18	8-29-18	
Chrysene	ND	0.0067	EPA 8270D/SIM	8-29-18	8-29-18	
bis(2-Ethylhexyl)phthalate	ND	0.17	EPA 8270D	8-29-18	8-29-18	
Di-n-octylphthalate	ND	0.17	EPA 8270D	8-29-18	8-29-18	
Benzo[b]fluoranthene	ND	0.0067	EPA 8270D/SIM	8-29-18	8-29-18	
Benzo(j,k)fluoranthene	ND	0.0067	EPA 8270D/SIM	8-29-18	8-29-18	
Benzo[a]pyrene	ND	0.0067	EPA 8270D/SIM	8-29-18	8-29-18	
Indeno[1,2,3-cd]pyrene	ND	0.0067	EPA 8270D/SIM	8-29-18	8-29-18	
Dibenz[a,h]anthracene	ND	0.0067	EPA 8270D/SIM	8-29-18	8-29-18	
Benzo[g,h,i]perylene	ND	0.0067	EPA 8270D/SIM	8-29-18	8-29-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorophenol	79	19 - 103				
Phenol-d6	79	30 - 103				
Nitrobenzene-d5	73	27 - 105				
2-Fluorobiphenyl	75	36 - 102				
2,4,6-Tribromophenol	88	33 - 110				
Terphenyl-d14	81	38 - 108				



Date of Report: September 5, 2018
 Samples Submitted: August 25, 2018
 Laboratory Reference: 1808-293
 Project: 397-019

**SEMIVOLATILE ORGANICS EPA 8270D/SIM
 MS/MSD QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg

Analyte	Result		Spike Level		Source	Percent		Recovery	RPD	RPD	Flags
	MS	MSD	MS	MSD	Result	Recovery	Limits	RPD	Limit		
MATRIX SPIKES											
Laboratory ID:	08-229-04										
	MS	MSD	MS	MSD		MS	MSD				
Phenol	1.15	0.989	1.33	1.33	ND	86	74	37 - 94	15	27	
2-Chlorophenol	1.21	1.03	1.33	1.33	ND	91	77	37 - 95	16	32	
1,4-Dichlorobenzene	0.568	0.493	0.667	0.667	ND	85	74	23 - 97	14	37	
n-Nitroso-di-n-propylamine	0.580	0.501	0.667	0.667	ND	87	75	40 - 91	15	28	
1,2,4-Trichlorobenzene	0.563	0.505	0.667	0.667	ND	84	76	37 - 93	11	30	
4-Chloro-3-methylphenol	1.11	1.03	1.33	1.33	ND	83	77	46 - 96	7	25	
Acenaphthene	0.585	0.526	0.667	0.667	0.0395	82	73	43 - 90	11	25	
4-Nitrophenol	1.15	1.03	1.33	1.33	ND	86	77	31 - 104	11	28	
2,4-Dinitrotoluene	0.575	0.516	0.667	0.667	ND	86	77	31 - 96	11	32	
Pentachlorophenol	1.38	1.22	1.33	1.33	ND	104	92	20 - 123	12	29	
Pyrene	0.582	0.518	0.667	0.667	0.0828	75	65	28 - 114	12	35	
<i>Surrogate:</i>											
2-Fluorophenol						85	71	19 - 103			
Phenol-d6						84	73	30 - 103			
Nitrobenzene-d5						72	65	27 - 105			
2-Fluorobiphenyl						77	70	36 - 102			
2,4,6-Tribromophenol						92	84	33 - 110			
Terphenyl-d14						78	71	38 - 108			



Date of Report: September 5, 2018
 Samples Submitted: August 25, 2018
 Laboratory Reference: 1808-293
 Project: 397-019

**TOTAL METALS
 EPA 6010D/7471B**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FMW-133-10.0-082418					
Laboratory ID:	08-293-03					
Arsenic	ND	17	EPA 6010D	8-28-18	8-31-18	
Barium	200	8.3	EPA 6010D	8-28-18	8-31-18	
Cadmium	ND	1.7	EPA 6010D	8-28-18	8-31-18	
Chromium	29	1.7	EPA 6010D	8-28-18	8-31-18	
Lead	18	17	EPA 6010D	8-28-18	8-31-18	
Mercury	ND	0.83	EPA 7471B	8-29-18	8-29-18	
Selenium	ND	17	EPA 6010D	8-28-18	8-31-18	
Silver	ND	3.3	EPA 6010D	8-28-18	8-31-18	

Client ID:	FMW-133-20.0-082418					
Laboratory ID:	08-293-05					
Arsenic	ND	12	EPA 6010D	8-28-18	8-31-18	
Barium	50	3.0	EPA 6010D	8-28-18	8-31-18	
Cadmium	ND	0.60	EPA 6010D	8-28-18	8-31-18	
Chromium	27	0.60	EPA 6010D	8-28-18	8-31-18	
Lead	ND	6.0	EPA 6010D	8-28-18	8-31-18	
Mercury	ND	0.30	EPA 7471B	8-29-18	8-29-18	
Selenium	ND	12	EPA 6010D	8-28-18	8-31-18	
Silver	ND	1.2	EPA 6010D	8-28-18	8-31-18	



Date of Report: September 5, 2018
 Samples Submitted: August 25, 2018
 Laboratory Reference: 1808-293
 Project: 397-019

**TOTAL METALS
 EPA 6010D/7471B
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0828SM2					
Arsenic	ND	5.0	EPA 6010D	8-28-18	8-29-18	
Barium	ND	2.5	EPA 6010D	8-28-18	8-29-18	
Cadmium	ND	0.50	EPA 6010D	8-28-18	8-29-18	
Chromium	ND	0.50	EPA 6010D	8-28-18	8-28-18	
Lead	ND	5.0	EPA 6010D	8-28-18	8-29-18	
Selenium	ND	5.0	EPA 6010D	8-28-18	8-29-18	
Silver	ND	1.0	EPA 6010D	8-28-18	8-29-18	

Laboratory ID:	MB0829S1					
Mercury	ND	0.25	EPA 7471B	8-29-18	8-29-18	

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE										
Laboratory ID:	08-265-16									
	ORIG	DUP								
Arsenic	ND	ND	NA	NA		NA	NA	NA	20	
Barium	22.1	19.5	NA	NA		NA	NA	13	20	
Cadmium	25.2	23.2	NA	NA		NA	NA	8	20	
Chromium	8.95	7.40	NA	NA		NA	NA	19	20	
Lead	ND	ND	NA	NA		NA	NA	NA	20	
Selenium	ND	ND	NA	NA		NA	NA	NA	20	
Silver	ND	ND	NA	NA		NA	NA	NA	20	

Laboratory ID:	08-277-03									
Mercury	ND	ND	NA	NA		NA	NA	NA	20	

MATRIX SPIKES

Laboratory ID:	08-265-16									
	MS	MSD	MS	MSD		MS	MSD			
Arsenic	111	112	100	100	ND	111	112	75-125	1	20
Barium	141	139	100	100	22.1	119	117	75-125	1	20
Cadmium	75.1	75.9	50.0	50.0	25.2	100	101	75-125	1	20
Chromium	109	108	100	100	8.95	100	99	75-125	1	20
Lead	237	239	250	250	ND	95	95	75-125	1	20
Selenium	104	101	100	100	ND	104	101	75-125	2	20
Silver	25.6	25.4	25.0	25.0	ND	102	102	75-125	1	20

Laboratory ID:	08-277-03									
Mercury	0.534	0.537	0.500	0.500	0.0115	105	105	80-120	1	20



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 5, 2018
Samples Submitted: August 25, 2018
Laboratory Reference: 1808-293
Project: 397-019

% MOISTURE

Date Analyzed: 8-27&28-18

Client ID	Lab ID	% Moisture
FMW-132-5.0-082418	08-293-02	30
FMW-133-10.0-082418	08-293-03	70
FMW-133-20.0-082418	08-293-05	17





Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
 - B - The analyte indicated was also found in the blank sample.
 - C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
 - E - The value reported exceeds the quantitation range and is an estimate.
 - F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
 - H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
 - I - Compound recovery is outside of the control limits.
 - J - The value reported was below the practical quantitation limit. The value is an estimate.
 - K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
 - L - The RPD is outside of the control limits.
 - M - Hydrocarbons in the gasoline range are impacting the diesel range result.
 - M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
 - N - Hydrocarbons in the lube oil range are impacting the diesel range result.
 - N1 - Hydrocarbons in diesel range are impacting lube oil range results.
 - O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
 - P - The RPD of the detected concentrations between the two columns is greater than 40.
 - Q - Surrogate recovery is outside of the control limits.
 - S - Surrogate recovery data is not available due to the necessary dilution of the sample.
 - T - The sample chromatogram is not similar to a typical _____.
 - U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
 - U1 - The practical quantitation limit is elevated due to interferences present in the sample.
 - V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
 - W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
 - X - Sample extract treated with a mercury cleanup procedure.
 - X1 - Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
 - Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
 - Z -
- ND - Not Detected at PQL
 PQL - Practical Quantitation Limit
 RPD - Relative Percent Difference





Mw Onsite Environmental Inc.
 Analytical Laboratory Testing Services
 14648 NE 95th Street • Redmond, WA 98052
 Phone: (425) 883-3881 • www.onsite-env.com

Chain of Custody

Turnaround Request (in working days)
 (Check One)
 Same Day 1 Day
 2 Days 3 Days
 Standard (7 Days) (TPH analysis 5 Days)
 _____ (other)

Laboratory Number:

08-293

Company: **Favallen**
 Project Number: **397-019**
 Project Name: **Block 38 West Property**
 Project Manager: **Jarvan Ruark**
 Sampled by: **Greg Peters**

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers
--------	-----------------------	--------------	--------------	--------	----------------------

1	Fmw-132-2.5-082418	8/24/18	1320	Soil	5
2	Fmw-132-5.0-082418		1430		5
3	Fmw-133-100-082418		1835		1
4	Fmw-133-050-082418		1849		1
5	Fmw-133-200-082418		1852		1
6	Fmw-133-25.0-082418		1902		1

Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (<input type="checkbox"/> Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	% Moisture
5		X						X										X
5		X						X										X
1																		
1																		
1																		
1																		

Signature	Company	Date	Time	Comments/Special Instructions
	Favallen	8/24/18	0840	<p>Please contact project manager for analyses and turn around time. Laboratory X-Added 8/27/18. DB (STA)</p>
	Onsite Env	8/24/18	0840	

Received _____
 Relinquished _____
 Received _____
 Relinquished _____
 Reviewed/Date _____

Data Package: Standard Level III Level IV
 Chromatograms with final report Electronic Data Deliverables (EDDs)



14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

September 11, 2018

Javan Ruark
Farallon Consulting, LLC
975 5th Avenue NW
Issaquah, WA 98027

Re: Analytical Data for Project 397-019
Laboratory Reference No. 1808-374

Dear Javan:

Enclosed are the analytical results and associated quality control data for samples submitted on August 31, 2018.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "D. Baumeister", with a long horizontal stroke extending to the right.

David Baumeister
Project Manager

Enclosures



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 11, 2018
Samples Submitted: August 31, 2018
Laboratory Reference: 1808-374
Project: 397-019

Case Narrative

Samples were collected on August 30, 2018 and received by the laboratory on August 31, 2018. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

NWTPH-Gx Analysis

The gasoline result for sample FMW-134-083018 is mainly attributed to a single peak (Naphthalene).

Volatiles EPA 8260C Analysis

Some MTCA Method A cleanup levels are non-achievable for sample FMW-134-083018 due to the necessary dilution of the sample.

PAHs EPA 8270D/SIM Analysis

The associated method blank had one surrogate recovery out of control limits. This is within allowance of our standard operating procedure as long as the recovery is above 10%.

Please note that any other QA/QC issues associated with these extractions and analyses will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.



Date of Report: September 11, 2018
 Samples Submitted: August 31, 2018
 Laboratory Reference: 1808-374
 Project: 397-019

**GASOLINE RANGE ORGANICS
 NWTPH-Gx**

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FMW-134-083018					
Laboratory ID:	08-374-01					
Gasoline	1100	100	NWTPH-Gx	9-6-18	9-6-18	Z
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	114	66-117				
Client ID:	FMW-133-083018					
Laboratory ID:	08-374-02					
Gasoline	ND	100	NWTPH-Gx	9-6-18	9-6-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	112	66-117				
Client ID:	FMW-132-083018					
Laboratory ID:	08-374-03					
Gasoline	ND	100	NWTPH-Gx	9-6-18	9-6-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	112	66-117				
Client ID:	FMW-130-083018					
Laboratory ID:	08-374-04					
Gasoline	ND	100	NWTPH-Gx	9-6-18	9-6-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	111	66-117				



Date of Report: September 11, 2018
 Samples Submitted: August 31, 2018
 Laboratory Reference: 1808-374
 Project: 397-019

**GASOLINE RANGE ORGANICS
 NWTPH-Gx
 QUALITY CONTROL**

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0906W3					
Gasoline	ND	100	NWTPH-Gx	9-6-18	9-6-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	111	66-117				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	08-380-02							
	ORIG	DUP						
Gasoline	ND	ND	NA	NA	NA	NA	30	
<i>Surrogate:</i>								
<i>Fluorobenzene</i>				112	112	66-117		



Date of Report: September 11, 2018
 Samples Submitted: August 31, 2018
 Laboratory Reference: 1808-374
 Project: 397-019

**DIESEL AND HEAVY OIL RANGE ORGANICS
 NWTPH-Dx**

Matrix: Water
 Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FMW-134-083018					
Laboratory ID:	08-374-01					
Diesel Range Organics	1.0	0.26	NWTPH-Dx	9-7-18	9-8-18	M
Lube Oil Range Organics	ND	0.41	NWTPH-Dx	9-7-18	9-8-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	100	50-150				

Client ID:	FMW-133-083018					
Laboratory ID:	08-374-02					
Diesel Range Organics	0.27	0.26	NWTPH-Dx	9-7-18	9-8-18	
Lube Oil Range Organics	ND	0.41	NWTPH-Dx	9-7-18	9-8-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	95	50-150				

Client ID:	FMW-132-083018					
Laboratory ID:	08-374-03					
Diesel Range Organics	0.26	0.25	NWTPH-Dx	9-7-18	9-8-18	
Lube Oil Range Organics	ND	0.40	NWTPH-Dx	9-7-18	9-8-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	98	50-150				

Client ID:	FMW-130-083018					
Laboratory ID:	08-374-04					
Diesel Range Organics	ND	0.25	NWTPH-Dx	9-7-18	9-8-18	
Lube Oil Range Organics	ND	0.41	NWTPH-Dx	9-7-18	9-8-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	95	50-150				



Date of Report: September 11, 2018
 Samples Submitted: August 31, 2018
 Laboratory Reference: 1808-374
 Project: 397-019

**DIESEL AND HEAVY OIL RANGE ORGANICS
 NWTPH-Dx
 QUALITY CONTROL**

Matrix: Water
 Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0907W1					
Diesel Range Organics	ND	0.25	NWTPH-Dx	9-7-18	9-8-18	
Lube Oil Range Organics	ND	0.40	NWTPH-Dx	9-7-18	9-8-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	<i>91</i>	<i>50-150</i>				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	08-374-01							
	ORIG	DUP						
Diesel Range Organics	1.03	1.01	NA	NA	NA	NA	2	NA M
Lube Oil Range	ND	ND	NA	NA	NA	NA	NA	NA
<i>Surrogate:</i>								
<i>o-Terphenyl</i>				100	94	50-150		



Date of Report: September 11, 2018
 Samples Submitted: August 31, 2018
 Laboratory Reference: 1808-374
 Project: 397-019

VOLATILE ORGANICS EPA 8260C
 page 1 of 2

Matrix: Water
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FMW-134-083018					
Laboratory ID:	08-374-01					
Dichlorodifluoromethane	ND	1.0	EPA 8260C	9-5-18	9-5-18	
Chloromethane	ND	5.0	EPA 8260C	9-5-18	9-5-18	
Vinyl Chloride	ND	1.0	EPA 8260C	9-5-18	9-5-18	
Bromomethane	ND	1.0	EPA 8260C	9-5-18	9-5-18	
Chloroethane	ND	5.0	EPA 8260C	9-5-18	9-5-18	
Trichlorofluoromethane	ND	1.0	EPA 8260C	9-5-18	9-5-18	
1,1-Dichloroethene	ND	1.0	EPA 8260C	9-5-18	9-5-18	
Iodomethane	ND	5.0	EPA 8260C	9-5-18	9-5-18	
Methylene Chloride	ND	5.0	EPA 8260C	9-5-18	9-5-18	
(trans) 1,2-Dichloroethene	ND	1.0	EPA 8260C	9-5-18	9-5-18	
1,1-Dichloroethane	ND	1.0	EPA 8260C	9-5-18	9-5-18	
2,2-Dichloropropane	ND	1.0	EPA 8260C	9-5-18	9-5-18	
(cis) 1,2-Dichloroethene	ND	1.0	EPA 8260C	9-5-18	9-5-18	
Bromochloromethane	ND	1.0	EPA 8260C	9-5-18	9-5-18	
Chloroform	ND	1.0	EPA 8260C	9-5-18	9-5-18	
1,1,1-Trichloroethane	ND	1.0	EPA 8260C	9-5-18	9-5-18	
Carbon Tetrachloride	ND	1.0	EPA 8260C	9-5-18	9-5-18	
1,1-Dichloropropene	ND	1.0	EPA 8260C	9-5-18	9-5-18	
Benzene	ND	1.0	EPA 8260C	9-5-18	9-5-18	
1,2-Dichloroethane	ND	1.0	EPA 8260C	9-5-18	9-5-18	
Trichloroethene	ND	1.0	EPA 8260C	9-5-18	9-5-18	
1,2-Dichloropropane	ND	1.0	EPA 8260C	9-5-18	9-5-18	
Dibromomethane	ND	1.0	EPA 8260C	9-5-18	9-5-18	
Bromodichloromethane	ND	1.0	EPA 8260C	9-5-18	9-5-18	
2-Chloroethyl Vinyl Ether	ND	5.0	EPA 8260C	9-5-18	9-5-18	
(cis) 1,3-Dichloropropene	ND	1.0	EPA 8260C	9-5-18	9-5-18	
Toluene	ND	5.0	EPA 8260C	9-5-18	9-5-18	
(trans) 1,3-Dichloropropene	ND	1.0	EPA 8260C	9-5-18	9-5-18	



Date of Report: September 11, 2018
 Samples Submitted: August 31, 2018
 Laboratory Reference: 1808-374
 Project: 397-019

VOLATILE ORGANICS EPA 8260C
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FMW-134-083018					
Laboratory ID:	08-374-01					
1,1,2-Trichloroethane	ND	1.0	EPA 8260C	9-5-18	9-5-18	
Tetrachloroethene	ND	1.0	EPA 8260C	9-5-18	9-5-18	
1,3-Dichloropropane	ND	1.0	EPA 8260C	9-5-18	9-5-18	
Dibromochloromethane	ND	1.0	EPA 8260C	9-5-18	9-5-18	
1,2-Dibromoethane	ND	1.0	EPA 8260C	9-5-18	9-5-18	
Chlorobenzene	ND	1.0	EPA 8260C	9-5-18	9-5-18	
1,1,1,2-Tetrachloroethane	ND	1.0	EPA 8260C	9-5-18	9-5-18	
Ethylbenzene	ND	1.0	EPA 8260C	9-5-18	9-5-18	
m,p-Xylene	ND	2.0	EPA 8260C	9-5-18	9-5-18	
o-Xylene	ND	1.0	EPA 8260C	9-5-18	9-5-18	
Bromoform	ND	5.0	EPA 8260C	9-5-18	9-5-18	
Bromobenzene	ND	1.0	EPA 8260C	9-5-18	9-5-18	
1,1,2,2-Tetrachloroethane	ND	1.0	EPA 8260C	9-5-18	9-5-18	
1,2,3-Trichloropropane	ND	1.0	EPA 8260C	9-5-18	9-5-18	
2-Chlorotoluene	ND	1.0	EPA 8260C	9-5-18	9-5-18	
4-Chlorotoluene	ND	1.0	EPA 8260C	9-5-18	9-5-18	
1,3-Dichlorobenzene	ND	1.0	EPA 8260C	9-5-18	9-5-18	
1,4-Dichlorobenzene	ND	1.0	EPA 8260C	9-5-18	9-5-18	
1,2-Dichlorobenzene	ND	1.0	EPA 8260C	9-5-18	9-5-18	
1,2-Dibromo-3-chloropropane	ND	5.0	EPA 8260C	9-5-18	9-5-18	
1,2,4-Trichlorobenzene	ND	1.0	EPA 8260C	9-5-18	9-5-18	
Hexachlorobutadiene	ND	5.0	EPA 8260C	9-5-18	9-5-18	
1,2,3-Trichlorobenzene	ND	1.0	EPA 8260C	9-5-18	9-5-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>113</i>	<i>75-127</i>				
<i>Toluene-d8</i>	<i>107</i>	<i>80-127</i>				
<i>4-Bromofluorobenzene</i>	<i>87</i>	<i>78-125</i>				



Date of Report: September 11, 2018
 Samples Submitted: August 31, 2018
 Laboratory Reference: 1808-374
 Project: 397-019

VOLATILE ORGANICS EPA 8260C
 page 1 of 2

Matrix: Water
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FMW-133-083018					
Laboratory ID:	08-374-02					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	9-5-18	9-5-18	
Chloromethane	ND	1.0	EPA 8260C	9-5-18	9-5-18	
Vinyl Chloride	ND	0.20	EPA 8260C	9-5-18	9-5-18	
Bromomethane	ND	0.20	EPA 8260C	9-5-18	9-5-18	
Chloroethane	ND	1.0	EPA 8260C	9-5-18	9-5-18	
Trichlorofluoromethane	ND	0.20	EPA 8260C	9-5-18	9-5-18	
1,1-Dichloroethene	ND	0.20	EPA 8260C	9-5-18	9-5-18	
Iodomethane	ND	1.0	EPA 8260C	9-5-18	9-5-18	
Methylene Chloride	ND	2.0	EPA 8260C	9-5-18	9-5-18	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	9-5-18	9-5-18	
1,1-Dichloroethane	ND	0.20	EPA 8260C	9-5-18	9-5-18	
2,2-Dichloropropane	ND	0.20	EPA 8260C	9-5-18	9-5-18	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	9-5-18	9-5-18	
Bromochloromethane	ND	0.20	EPA 8260C	9-5-18	9-5-18	
Chloroform	ND	0.20	EPA 8260C	9-5-18	9-5-18	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	9-5-18	9-5-18	
Carbon Tetrachloride	ND	0.20	EPA 8260C	9-5-18	9-5-18	
1,1-Dichloropropene	ND	0.20	EPA 8260C	9-5-18	9-5-18	
Benzene	ND	0.20	EPA 8260C	9-5-18	9-5-18	
1,2-Dichloroethane	ND	0.20	EPA 8260C	9-5-18	9-5-18	
Trichloroethene	ND	0.20	EPA 8260C	9-5-18	9-5-18	
1,2-Dichloropropane	ND	0.20	EPA 8260C	9-5-18	9-5-18	
Dibromomethane	ND	0.20	EPA 8260C	9-5-18	9-5-18	
Bromodichloromethane	ND	0.20	EPA 8260C	9-5-18	9-5-18	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	9-5-18	9-5-18	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	9-5-18	9-5-18	
Toluene	ND	1.0	EPA 8260C	9-5-18	9-5-18	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	9-5-18	9-5-18	



Date of Report: September 11, 2018
 Samples Submitted: August 31, 2018
 Laboratory Reference: 1808-374
 Project: 397-019

VOLATILE ORGANICS EPA 8260C
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FMW-133-083018					
Laboratory ID:	08-374-02					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	9-5-18	9-5-18	
Tetrachloroethene	ND	0.20	EPA 8260C	9-5-18	9-5-18	
1,3-Dichloropropane	ND	0.20	EPA 8260C	9-5-18	9-5-18	
Dibromochloromethane	ND	0.20	EPA 8260C	9-5-18	9-5-18	
1,2-Dibromoethane	ND	0.20	EPA 8260C	9-5-18	9-5-18	
Chlorobenzene	ND	0.20	EPA 8260C	9-5-18	9-5-18	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	9-5-18	9-5-18	
Ethylbenzene	ND	0.20	EPA 8260C	9-5-18	9-5-18	
m,p-Xylene	ND	0.40	EPA 8260C	9-5-18	9-5-18	
o-Xylene	ND	0.20	EPA 8260C	9-5-18	9-5-18	
Bromoform	ND	1.0	EPA 8260C	9-5-18	9-5-18	
Bromobenzene	ND	0.20	EPA 8260C	9-5-18	9-5-18	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	9-5-18	9-5-18	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	9-5-18	9-5-18	
2-Chlorotoluene	ND	0.20	EPA 8260C	9-5-18	9-5-18	
4-Chlorotoluene	ND	0.20	EPA 8260C	9-5-18	9-5-18	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	9-5-18	9-5-18	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	9-5-18	9-5-18	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	9-5-18	9-5-18	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	9-5-18	9-5-18	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	9-5-18	9-5-18	
Hexachlorobutadiene	ND	1.0	EPA 8260C	9-5-18	9-5-18	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	9-5-18	9-5-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>116</i>	<i>75-127</i>				
<i>Toluene-d8</i>	<i>107</i>	<i>80-127</i>				
<i>4-Bromofluorobenzene</i>	<i>89</i>	<i>78-125</i>				



Date of Report: September 11, 2018
 Samples Submitted: August 31, 2018
 Laboratory Reference: 1808-374
 Project: 397-019

VOLATILE ORGANICS EPA 8260C
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Matrix: Water
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FMW-132-083018					
Laboratory ID:	08-374-03					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	9-5-18	9-5-18	
Chloromethane	ND	1.0	EPA 8260C	9-5-18	9-5-18	
Vinyl Chloride	ND	0.20	EPA 8260C	9-5-18	9-5-18	
Bromomethane	ND	0.20	EPA 8260C	9-5-18	9-5-18	
Chloroethane	ND	1.0	EPA 8260C	9-5-18	9-5-18	
Trichlorofluoromethane	ND	0.20	EPA 8260C	9-5-18	9-5-18	
1,1-Dichloroethene	ND	0.20	EPA 8260C	9-5-18	9-5-18	
Iodomethane	ND	1.0	EPA 8260C	9-5-18	9-5-18	
Methylene Chloride	ND	2.0	EPA 8260C	9-5-18	9-5-18	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	9-5-18	9-5-18	
1,1-Dichloroethane	ND	0.20	EPA 8260C	9-5-18	9-5-18	
2,2-Dichloropropane	ND	0.20	EPA 8260C	9-5-18	9-5-18	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	9-5-18	9-5-18	
Bromochloromethane	ND	0.20	EPA 8260C	9-5-18	9-5-18	
Chloroform	ND	0.20	EPA 8260C	9-5-18	9-5-18	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	9-5-18	9-5-18	
Carbon Tetrachloride	ND	0.20	EPA 8260C	9-5-18	9-5-18	
1,1-Dichloropropene	ND	0.20	EPA 8260C	9-5-18	9-5-18	
Benzene	ND	0.20	EPA 8260C	9-5-18	9-5-18	
1,2-Dichloroethane	ND	0.20	EPA 8260C	9-5-18	9-5-18	
Trichloroethene	ND	0.20	EPA 8260C	9-5-18	9-5-18	
1,2-Dichloropropane	ND	0.20	EPA 8260C	9-5-18	9-5-18	
Dibromomethane	ND	0.20	EPA 8260C	9-5-18	9-5-18	
Bromodichloromethane	ND	0.20	EPA 8260C	9-5-18	9-5-18	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	9-5-18	9-5-18	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	9-5-18	9-5-18	
Toluene	ND	1.0	EPA 8260C	9-5-18	9-5-18	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	9-5-18	9-5-18	



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 Project: 397-019

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FMW-132-083018					
Laboratory ID:	08-374-03					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	9-5-18	9-5-18	
Tetrachloroethene	ND	0.20	EPA 8260C	9-5-18	9-5-18	
1,3-Dichloropropane	ND	0.20	EPA 8260C	9-5-18	9-5-18	
Dibromochloromethane	ND	0.20	EPA 8260C	9-5-18	9-5-18	
1,2-Dibromoethane	ND	0.20	EPA 8260C	9-5-18	9-5-18	
Chlorobenzene	ND	0.20	EPA 8260C	9-5-18	9-5-18	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	9-5-18	9-5-18	
Ethylbenzene	ND	0.20	EPA 8260C	9-5-18	9-5-18	
m,p-Xylene	ND	0.40	EPA 8260C	9-5-18	9-5-18	
o-Xylene	ND	0.20	EPA 8260C	9-5-18	9-5-18	
Bromoform	ND	1.0	EPA 8260C	9-5-18	9-5-18	
Bromobenzene	ND	0.20	EPA 8260C	9-5-18	9-5-18	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	9-5-18	9-5-18	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	9-5-18	9-5-18	
2-Chlorotoluene	ND	0.20	EPA 8260C	9-5-18	9-5-18	
4-Chlorotoluene	ND	0.20	EPA 8260C	9-5-18	9-5-18	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	9-5-18	9-5-18	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	9-5-18	9-5-18	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	9-5-18	9-5-18	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	9-5-18	9-5-18	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	9-5-18	9-5-18	
Hexachlorobutadiene	ND	1.0	EPA 8260C	9-5-18	9-5-18	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	9-5-18	9-5-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>116</i>	<i>75-127</i>				
<i>Toluene-d8</i>	<i>105</i>	<i>80-127</i>				
<i>4-Bromofluorobenzene</i>	<i>87</i>	<i>78-125</i>				



Date of Report: September 11, 2018
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 Project: 397-019

VOLATILE ORGANICS EPA 8260C
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Matrix: Water
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FMW-130-083018					
Laboratory ID:	08-374-04					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	9-5-18	9-5-18	
Chloromethane	ND	1.0	EPA 8260C	9-5-18	9-5-18	
Vinyl Chloride	ND	0.20	EPA 8260C	9-5-18	9-5-18	
Bromomethane	ND	0.20	EPA 8260C	9-5-18	9-5-18	
Chloroethane	ND	1.0	EPA 8260C	9-5-18	9-5-18	
Trichlorofluoromethane	ND	0.20	EPA 8260C	9-5-18	9-5-18	
1,1-Dichloroethene	ND	0.20	EPA 8260C	9-5-18	9-5-18	
Iodomethane	ND	1.0	EPA 8260C	9-5-18	9-5-18	
Methylene Chloride	ND	1.0	EPA 8260C	9-5-18	9-5-18	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	9-5-18	9-5-18	
1,1-Dichloroethane	ND	0.20	EPA 8260C	9-5-18	9-5-18	
2,2-Dichloropropane	ND	0.20	EPA 8260C	9-5-18	9-5-18	
(cis) 1,2-Dichloroethene	0.27	0.20	EPA 8260C	9-5-18	9-5-18	
Bromochloromethane	ND	0.20	EPA 8260C	9-5-18	9-5-18	
Chloroform	ND	0.20	EPA 8260C	9-5-18	9-5-18	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	9-5-18	9-5-18	
Carbon Tetrachloride	ND	0.20	EPA 8260C	9-5-18	9-5-18	
1,1-Dichloropropene	ND	0.20	EPA 8260C	9-5-18	9-5-18	
Benzene	ND	0.20	EPA 8260C	9-5-18	9-5-18	
1,2-Dichloroethane	ND	0.20	EPA 8260C	9-5-18	9-5-18	
Trichloroethene	ND	0.20	EPA 8260C	9-5-18	9-5-18	
1,2-Dichloropropane	ND	0.20	EPA 8260C	9-5-18	9-5-18	
Dibromomethane	ND	0.20	EPA 8260C	9-5-18	9-5-18	
Bromodichloromethane	ND	0.20	EPA 8260C	9-5-18	9-5-18	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	9-5-18	9-5-18	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	9-5-18	9-5-18	
Toluene	ND	1.0	EPA 8260C	9-5-18	9-5-18	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	9-5-18	9-5-18	



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VOLATILE ORGANICS EPA 8260C
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FMW-130-083018					
Laboratory ID:	08-374-04					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	9-5-18	9-5-18	
Tetrachloroethene	ND	0.20	EPA 8260C	9-5-18	9-5-18	
1,3-Dichloropropane	ND	0.20	EPA 8260C	9-5-18	9-5-18	
Dibromochloromethane	ND	0.20	EPA 8260C	9-5-18	9-5-18	
1,2-Dibromoethane	ND	0.20	EPA 8260C	9-5-18	9-5-18	
Chlorobenzene	ND	0.20	EPA 8260C	9-5-18	9-5-18	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	9-5-18	9-5-18	
Ethylbenzene	ND	0.20	EPA 8260C	9-5-18	9-5-18	
m,p-Xylene	ND	0.40	EPA 8260C	9-5-18	9-5-18	
o-Xylene	ND	0.20	EPA 8260C	9-5-18	9-5-18	
Bromoform	ND	1.0	EPA 8260C	9-5-18	9-5-18	
Bromobenzene	ND	0.20	EPA 8260C	9-5-18	9-5-18	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	9-5-18	9-5-18	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	9-5-18	9-5-18	
2-Chlorotoluene	ND	0.20	EPA 8260C	9-5-18	9-5-18	
4-Chlorotoluene	ND	0.20	EPA 8260C	9-5-18	9-5-18	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	9-5-18	9-5-18	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	9-5-18	9-5-18	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	9-5-18	9-5-18	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	9-5-18	9-5-18	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	9-5-18	9-5-18	
Hexachlorobutadiene	ND	1.0	EPA 8260C	9-5-18	9-5-18	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	9-5-18	9-5-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>118</i>	<i>75-127</i>				
<i>Toluene-d8</i>	<i>108</i>	<i>80-127</i>				
<i>4-Bromofluorobenzene</i>	<i>86</i>	<i>78-125</i>				



Date of Report: September 11, 2018
 Samples Submitted: August 31, 2018
 Laboratory Reference: 1808-374
 Project: 397-019

VOLATILE ORGANICS EPA 8260C
METHOD BLANK QUALITY CONTROL
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Matrix: Water
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0905W1					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	9-5-18	9-5-18	
Chloromethane	ND	1.0	EPA 8260C	9-5-18	9-5-18	
Vinyl Chloride	ND	0.20	EPA 8260C	9-5-18	9-5-18	
Bromomethane	ND	0.20	EPA 8260C	9-5-18	9-5-18	
Chloroethane	ND	1.0	EPA 8260C	9-5-18	9-5-18	
Trichlorofluoromethane	ND	0.20	EPA 8260C	9-5-18	9-5-18	
1,1-Dichloroethene	ND	0.20	EPA 8260C	9-5-18	9-5-18	
Iodomethane	ND	1.0	EPA 8260C	9-5-18	9-5-18	
Methylene Chloride	ND	2.0	EPA 8260C	9-5-18	9-5-18	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	9-5-18	9-5-18	
1,1-Dichloroethane	ND	0.20	EPA 8260C	9-5-18	9-5-18	
2,2-Dichloropropane	ND	0.20	EPA 8260C	9-5-18	9-5-18	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	9-5-18	9-5-18	
Bromochloromethane	ND	0.20	EPA 8260C	9-5-18	9-5-18	
Chloroform	ND	0.20	EPA 8260C	9-5-18	9-5-18	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	9-5-18	9-5-18	
Carbon Tetrachloride	ND	0.20	EPA 8260C	9-5-18	9-5-18	
1,1-Dichloropropene	ND	0.20	EPA 8260C	9-5-18	9-5-18	
Benzene	ND	0.20	EPA 8260C	9-5-18	9-5-18	
1,2-Dichloroethane	ND	0.20	EPA 8260C	9-5-18	9-5-18	
Trichloroethene	ND	0.20	EPA 8260C	9-5-18	9-5-18	
1,2-Dichloropropane	ND	0.20	EPA 8260C	9-5-18	9-5-18	
Dibromomethane	ND	0.20	EPA 8260C	9-5-18	9-5-18	
Bromodichloromethane	ND	0.20	EPA 8260C	9-5-18	9-5-18	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	9-5-18	9-5-18	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	9-5-18	9-5-18	
Toluene	ND	1.0	EPA 8260C	9-5-18	9-5-18	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	9-5-18	9-5-18	



Date of Report: September 11, 2018
 Samples Submitted: August 31, 2018
 Laboratory Reference: 1808-374
 Project: 397-019

VOLATILE ORGANICS EPA 8260C
METHOD BLANK QUALITY CONTROL
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0905W1					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	9-5-18	9-5-18	
Tetrachloroethene	ND	0.20	EPA 8260C	9-5-18	9-5-18	
1,3-Dichloropropane	ND	0.20	EPA 8260C	9-5-18	9-5-18	
Dibromochloromethane	ND	0.20	EPA 8260C	9-5-18	9-5-18	
1,2-Dibromoethane	ND	0.20	EPA 8260C	9-5-18	9-5-18	
Chlorobenzene	ND	0.20	EPA 8260C	9-5-18	9-5-18	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	9-5-18	9-5-18	
Ethylbenzene	ND	0.20	EPA 8260C	9-5-18	9-5-18	
m,p-Xylene	ND	0.40	EPA 8260C	9-5-18	9-5-18	
o-Xylene	ND	0.20	EPA 8260C	9-5-18	9-5-18	
Bromoform	ND	1.0	EPA 8260C	9-5-18	9-5-18	
Bromobenzene	ND	0.20	EPA 8260C	9-5-18	9-5-18	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	9-5-18	9-5-18	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	9-5-18	9-5-18	
2-Chlorotoluene	ND	0.20	EPA 8260C	9-5-18	9-5-18	
4-Chlorotoluene	ND	0.20	EPA 8260C	9-5-18	9-5-18	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	9-5-18	9-5-18	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	9-5-18	9-5-18	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	9-5-18	9-5-18	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	9-5-18	9-5-18	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	9-5-18	9-5-18	
Hexachlorobutadiene	ND	1.0	EPA 8260C	9-5-18	9-5-18	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	9-5-18	9-5-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>109</i>	<i>75-127</i>				
<i>Toluene-d8</i>	<i>106</i>	<i>80-127</i>				
<i>4-Bromofluorobenzene</i>	<i>86</i>	<i>78-125</i>				



Date of Report: September 11, 2018
 Samples Submitted: August 31, 2018
 Laboratory Reference: 1808-374
 Project: 397-019

**VOLATILE ORGANICS EPA 8260C
 SB/SBD QUALITY CONTROL**

Matrix: Water
 Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery	RPD	RPD	Flags
					SB	SBD	Limits	RPD	Limit	
SPIKE BLANKS										
Laboratory ID:	SB0905W1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	7.44	7.44	10.0	10.0	74	74	62-129	0	15	
Benzene	8.58	8.79	10.0	10.0	86	88	77-127	2	15	
Trichloroethene	8.79	8.75	10.0	10.0	88	88	70-120	0	15	
Toluene	9.25	9.39	10.0	10.0	93	94	82-123	2	15	
Chlorobenzene	9.02	9.13	10.0	10.0	90	91	79-120	1	15	
<i>Surrogate:</i>										
Dibromofluoromethane					105	107	75-127			
Toluene-d8					105	104	80-127			
4-Bromofluorobenzene					85	86	78-125			



Date of Report: September 11, 2018
 Samples Submitted: August 31, 2018
 Laboratory Reference: 1808-374
 Project: 397-019

PAHs EPA 8270D/SIM

Matrix: Water
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FMW-134-083018					
Laboratory ID:	08-374-01					
Naphthalene	290	9.9	EPA 8270D/SIM	9-4-18	9-5-18	
2-Methylnaphthalene	12	2.0	EPA 8270D/SIM	9-4-18	9-5-18	
1-Methylnaphthalene	10	2.0	EPA 8270D/SIM	9-4-18	9-5-18	
Acenaphthylene	0.12	0.099	EPA 8270D/SIM	9-4-18	9-5-18	
Acenaphthene	8.3	2.0	EPA 8270D/SIM	9-4-18	9-5-18	
Fluorene	1.6	0.099	EPA 8270D/SIM	9-4-18	9-5-18	
Phenanthrene	0.48	0.099	EPA 8270D/SIM	9-4-18	9-5-18	
Anthracene	ND	0.099	EPA 8270D/SIM	9-4-18	9-5-18	
Fluoranthene	ND	0.099	EPA 8270D/SIM	9-4-18	9-5-18	
Pyrene	ND	0.099	EPA 8270D/SIM	9-4-18	9-5-18	
Benzo[a]anthracene	ND	0.0099	EPA 8270D/SIM	9-4-18	9-5-18	
Chrysene	ND	0.0099	EPA 8270D/SIM	9-4-18	9-5-18	
Benzo[b]fluoranthene	ND	0.0099	EPA 8270D/SIM	9-4-18	9-5-18	
Benzo(j,k)fluoranthene	ND	0.0099	EPA 8270D/SIM	9-4-18	9-5-18	
Benzo[a]pyrene	ND	0.0099	EPA 8270D/SIM	9-4-18	9-5-18	
Indeno(1,2,3-c,d)pyrene	ND	0.0099	EPA 8270D/SIM	9-4-18	9-5-18	
Dibenz[a,h]anthracene	ND	0.0099	EPA 8270D/SIM	9-4-18	9-5-18	
Benzo[g,h,i]perylene	ND	0.0099	EPA 8270D/SIM	9-4-18	9-5-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>64</i>	<i>21 - 110</i>				
<i>Pyrene-d10</i>	<i>73</i>	<i>19 - 111</i>				
<i>Terphenyl-d14</i>	<i>73</i>	<i>32 - 137</i>				



Date of Report: September 11, 2018
 Samples Submitted: August 31, 2018
 Laboratory Reference: 1808-374
 Project: 397-019

PAHs EPA 8270D/SIM

Matrix: Water
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FMW-133-083018					
Laboratory ID:	08-374-02					
Naphthalene	ND	0.097	EPA 8270D/SIM	9-4-18	9-5-18	
2-Methylnaphthalene	ND	0.097	EPA 8270D/SIM	9-4-18	9-5-18	
1-Methylnaphthalene	ND	0.097	EPA 8270D/SIM	9-4-18	9-5-18	
Acenaphthylene	ND	0.097	EPA 8270D/SIM	9-4-18	9-5-18	
Acenaphthene	0.38	0.097	EPA 8270D/SIM	9-4-18	9-5-18	
Fluorene	0.098	0.097	EPA 8270D/SIM	9-4-18	9-5-18	
Phenanthrene	ND	0.097	EPA 8270D/SIM	9-4-18	9-5-18	
Anthracene	ND	0.097	EPA 8270D/SIM	9-4-18	9-5-18	
Fluoranthene	ND	0.097	EPA 8270D/SIM	9-4-18	9-5-18	
Pyrene	ND	0.097	EPA 8270D/SIM	9-4-18	9-5-18	
Benzo[a]anthracene	ND	0.0097	EPA 8270D/SIM	9-4-18	9-5-18	
Chrysene	ND	0.0097	EPA 8270D/SIM	9-4-18	9-5-18	
Benzo[b]fluoranthene	ND	0.0097	EPA 8270D/SIM	9-4-18	9-5-18	
Benzo(j,k)fluoranthene	ND	0.0097	EPA 8270D/SIM	9-4-18	9-5-18	
Benzo[a]pyrene	ND	0.0097	EPA 8270D/SIM	9-4-18	9-5-18	
Indeno(1,2,3-c,d)pyrene	ND	0.0097	EPA 8270D/SIM	9-4-18	9-5-18	
Dibenz[a,h]anthracene	ND	0.0097	EPA 8270D/SIM	9-4-18	9-5-18	
Benzo[g,h,i]perylene	ND	0.0097	EPA 8270D/SIM	9-4-18	9-5-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>78</i>	<i>21 - 110</i>				
<i>Pyrene-d10</i>	<i>89</i>	<i>19 - 111</i>				
<i>Terphenyl-d14</i>	<i>89</i>	<i>32 - 137</i>				



Date of Report: September 11, 2018
 Samples Submitted: August 31, 2018
 Laboratory Reference: 1808-374
 Project: 397-019

PAHs EPA 8270D/SIM

Matrix: Water
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FMW-132-083018					
Laboratory ID:	08-374-03					
Naphthalene	ND	0.096	EPA 8270D/SIM	9-4-18	9-5-18	
2-Methylnaphthalene	ND	0.096	EPA 8270D/SIM	9-4-18	9-5-18	
1-Methylnaphthalene	ND	0.096	EPA 8270D/SIM	9-4-18	9-5-18	
Acenaphthylene	ND	0.096	EPA 8270D/SIM	9-4-18	9-5-18	
Acenaphthene	0.40	0.096	EPA 8270D/SIM	9-4-18	9-5-18	
Fluorene	ND	0.096	EPA 8270D/SIM	9-4-18	9-5-18	
Phenanthrene	ND	0.096	EPA 8270D/SIM	9-4-18	9-5-18	
Anthracene	ND	0.096	EPA 8270D/SIM	9-4-18	9-5-18	
Fluoranthene	ND	0.096	EPA 8270D/SIM	9-4-18	9-5-18	
Pyrene	ND	0.096	EPA 8270D/SIM	9-4-18	9-5-18	
Benzo[a]anthracene	ND	0.0096	EPA 8270D/SIM	9-4-18	9-5-18	
Chrysene	ND	0.0096	EPA 8270D/SIM	9-4-18	9-5-18	
Benzo[b]fluoranthene	ND	0.0096	EPA 8270D/SIM	9-4-18	9-5-18	
Benzo(j,k)fluoranthene	ND	0.0096	EPA 8270D/SIM	9-4-18	9-5-18	
Benzo[a]pyrene	ND	0.0096	EPA 8270D/SIM	9-4-18	9-5-18	
Indeno(1,2,3-c,d)pyrene	ND	0.0096	EPA 8270D/SIM	9-4-18	9-5-18	
Dibenz[a,h]anthracene	ND	0.0096	EPA 8270D/SIM	9-4-18	9-5-18	
Benzo[g,h,i]perylene	ND	0.0096	EPA 8270D/SIM	9-4-18	9-5-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>71</i>	<i>21 - 110</i>				
<i>Pyrene-d10</i>	<i>84</i>	<i>19 - 111</i>				
<i>Terphenyl-d14</i>	<i>84</i>	<i>32 - 137</i>				



Date of Report: September 11, 2018
 Samples Submitted: August 31, 2018
 Laboratory Reference: 1808-374
 Project: 397-019

PAHs EPA 8270D/SIM

Matrix: Water
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FMW-130-083018					
Laboratory ID:	08-374-04					
Naphthalene	ND	0.097	EPA 8270D/SIM	9-4-18	9-5-18	
2-Methylnaphthalene	ND	0.097	EPA 8270D/SIM	9-4-18	9-5-18	
1-Methylnaphthalene	ND	0.097	EPA 8270D/SIM	9-4-18	9-5-18	
Acenaphthylene	ND	0.097	EPA 8270D/SIM	9-4-18	9-5-18	
Acenaphthene	ND	0.097	EPA 8270D/SIM	9-4-18	9-5-18	
Fluorene	ND	0.097	EPA 8270D/SIM	9-4-18	9-5-18	
Phenanthrene	ND	0.097	EPA 8270D/SIM	9-4-18	9-5-18	
Anthracene	ND	0.097	EPA 8270D/SIM	9-4-18	9-5-18	
Fluoranthene	ND	0.097	EPA 8270D/SIM	9-4-18	9-5-18	
Pyrene	ND	0.097	EPA 8270D/SIM	9-4-18	9-5-18	
Benzo[a]anthracene	ND	0.0097	EPA 8270D/SIM	9-4-18	9-5-18	
Chrysene	ND	0.0097	EPA 8270D/SIM	9-4-18	9-5-18	
Benzo[b]fluoranthene	ND	0.0097	EPA 8270D/SIM	9-4-18	9-5-18	
Benzo(j,k)fluoranthene	ND	0.0097	EPA 8270D/SIM	9-4-18	9-5-18	
Benzo[a]pyrene	ND	0.0097	EPA 8270D/SIM	9-4-18	9-5-18	
Indeno(1,2,3-c,d)pyrene	ND	0.0097	EPA 8270D/SIM	9-4-18	9-5-18	
Dibenz[a,h]anthracene	ND	0.0097	EPA 8270D/SIM	9-4-18	9-5-18	
Benzo[g,h,i]perylene	ND	0.0097	EPA 8270D/SIM	9-4-18	9-5-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>69</i>	<i>21 - 110</i>				
<i>Pyrene-d10</i>	<i>85</i>	<i>19 - 111</i>				
<i>Terphenyl-d14</i>	<i>84</i>	<i>32 - 137</i>				



Date of Report: September 11, 2018
 Samples Submitted: August 31, 2018
 Laboratory Reference: 1808-374
 Project: 397-019

**PAHs EPA 8270D/SIM
 METHOD BLANK QUALITY CONTROL**

Matrix: Water
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0904W1					
Naphthalene	ND	0.10	EPA 8270D/SIM	9-4-18	9-4-18	
2-Methylnaphthalene	ND	0.10	EPA 8270D/SIM	9-4-18	9-4-18	
1-Methylnaphthalene	ND	0.10	EPA 8270D/SIM	9-4-18	9-4-18	
Acenaphthylene	ND	0.10	EPA 8270D/SIM	9-4-18	9-4-18	
Acenaphthene	ND	0.10	EPA 8270D/SIM	9-4-18	9-4-18	
Fluorene	ND	0.10	EPA 8270D/SIM	9-4-18	9-4-18	
Phenanthrene	ND	0.10	EPA 8270D/SIM	9-4-18	9-4-18	
Anthracene	ND	0.10	EPA 8270D/SIM	9-4-18	9-4-18	
Fluoranthene	ND	0.10	EPA 8270D/SIM	9-4-18	9-4-18	
Pyrene	ND	0.10	EPA 8270D/SIM	9-4-18	9-4-18	
Benzo[a]anthracene	ND	0.010	EPA 8270D/SIM	9-4-18	9-4-18	
Chrysene	ND	0.010	EPA 8270D/SIM	9-4-18	9-4-18	
Benzo[b]fluoranthene	ND	0.010	EPA 8270D/SIM	9-4-18	9-4-18	
Benzo(j,k)fluoranthene	ND	0.010	EPA 8270D/SIM	9-4-18	9-4-18	
Benzo[a]pyrene	ND	0.010	EPA 8270D/SIM	9-4-18	9-4-18	
Indeno(1,2,3-c,d)pyrene	ND	0.010	EPA 8270D/SIM	9-4-18	9-4-18	
Dibenz[a,h]anthracene	ND	0.010	EPA 8270D/SIM	9-4-18	9-4-18	
Benzo[g,h,i]perylene	ND	0.010	EPA 8270D/SIM	9-4-18	9-4-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	115	21 - 110				Q
Pyrene-d10	88	19 - 111				
Terphenyl-d14	117	32 - 137				



Date of Report: September 11, 2018
 Samples Submitted: August 31, 2018
 Laboratory Reference: 1808-374
 Project: 397-019

**PAHs EPA 8270D/SIM
 SB/SBD QUALITY CONTROL**

Matrix: Water
 Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery	RPD	RPD	Flags
					SB	SBD	Limits	Limit		
SPIKE BLANKS										
Laboratory ID:	SB0904W1									
	SB	SBD	SB	SBD	SB	SBD				
Naphthalene	0.343	0.271	0.500	0.500	69	54	28 - 109	23	38	
Acenaphthylene	0.384	0.320	0.500	0.500	77	64	37 - 111	18	26	
Acenaphthene	0.375	0.304	0.500	0.500	75	61	41 - 113	21	33	
Fluorene	0.366	0.339	0.500	0.500	73	68	47 - 114	8	23	
Phenanthrene	0.363	0.339	0.500	0.500	73	68	50 - 113	7	18	
Anthracene	0.380	0.362	0.500	0.500	76	72	50 - 117	5	18	
Fluoranthene	0.396	0.381	0.500	0.500	79	76	52 - 120	4	15	
Pyrene	0.395	0.381	0.500	0.500	79	76	51 - 128	4	31	
Benzo[a]anthracene	0.428	0.413	0.500	0.500	86	83	57 - 127	4	15	
Chrysene	0.414	0.413	0.500	0.500	83	83	51 - 120	0	15	
Benzo[b]fluoranthene	0.412	0.402	0.500	0.500	82	80	54 - 124	2	17	
Benzo(j,k)fluoranthene	0.426	0.418	0.500	0.500	85	84	50 - 127	2	18	
Benzo[a]pyrene	0.414	0.398	0.500	0.500	83	80	50 - 120	4	16	
Indeno(1,2,3-c,d)pyrene	0.407	0.390	0.500	0.500	81	78	46 - 132	4	20	
Dibenz[a,h]anthracene	0.416	0.403	0.500	0.500	83	81	49 - 129	3	18	
Benzo[g,h,i]perylene	0.412	0.402	0.500	0.500	82	80	45 - 130	2	19	
<i>Surrogate:</i>										
2-Fluorobiphenyl					69	56	21 - 110			
Pyrene-d10					79	78	19 - 111			
Terphenyl-d14					79	77	32 - 137			





Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B - The analyte indicated was also found in the blank sample.
- C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
- E - The value reported exceeds the quantitation range and is an estimate.
- F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
- H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
- I - Compound recovery is outside of the control limits.
- J - The value reported was below the practical quantitation limit. The value is an estimate.
- K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L - The RPD is outside of the control limits.
- M - Hydrocarbons in the gasoline range are impacting the diesel range result.
- M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
- N - Hydrocarbons in the lube oil range are impacting the diesel range result.
- N1 - Hydrocarbons in diesel range are impacting lube oil range results.
- O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
- P - The RPD of the detected concentrations between the two columns is greater than 40.
- Q - Surrogate recovery is outside of the control limits.
- S - Surrogate recovery data is not available due to the necessary dilution of the sample.
- T - The sample chromatogram is not similar to a typical _____.
- U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- U1 - The practical quantitation limit is elevated due to interferences present in the sample.
- V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
- W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
- X - Sample extract treated with a mercury cleanup procedure.
- X1 - Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
- Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
- Z - The gasoline result is mainly attributed to a single peak (Naphthalene).

ND - Not Detected at PQL
 PQL - Practical Quantitation Limit
 RPD - Relative Percent Difference





Onsite Environmental Inc.

Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 833-3881 • www.onsite-env.com

Chain of Custody

Turnaround Request
(in working days)

(Check One)

Same Day 1 Day

2 Days 3 Days

Standard (7 Days)

_____ (other)

Laboratory Number: **08-374**

Company: Favallan

Project Number: 397-019

Project Name: Block 38 West

Project Manager: Dawn Knuckle

Sampled by: Greg Peters

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix
1	Fmw-134-083018	8/30/18	1034	Water
2	Fmw-133-083018		1819	U
3	Fmw-132-083018		1707	U
4	Fmw-130-083018		1347	U

Number of Containers		Laboratory Number: 08-374											
NWTPH-HCID													
NWTPH-Gx/BTEX		X											
NWTPH-Gx													
NWTPH-Dx (<input type="checkbox"/> Acid / SG Clean-up)		X											
Volatiles 8260C													
Halogenated Volatiles 8260C		X											
EDB EPA 8011 (Waters Only)													
Semivolatiles 8270D/SIM (with low-level PAHs)													
PAHs 8270D/SIM (low-level)		X											
PCBs 8082A													
Organochlorine Pesticides 8081B													
Organophosphorus Pesticides 8270D/SIM													
Chlorinated Acid Herbicides 8151A													
Total RCRA Metals													
Total MTCA Metals													
TCLP Metals													
HEM (oil and grease) 1664A													
% Moisture													

Signature	Company	Date	Time	Comments/Special Instructions
<u>[Signature]</u>	<u>Favallan</u>	<u>8/30/18</u>	<u>1834</u>	<u>Please Contact Project Manager for Sample analysis and turnaround time. X-Added 9/14/18, DS (STA)</u>
<u>[Signature]</u>	<u>[Signature]</u>	<u>8/31/18</u>	<u>1015</u>	

Relinquished

Received

Relinquished

Received

Relinquished

Received

Reviewed/Date

Data Package: Standard Level III Level IV

Chromatograms with final report Electronic Data Deliverables (EDDs)



14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

September 11, 2018

Javan Ruark
Farallon Consulting, LLC
975 5th Avenue NW
Issaquah, WA 98027

Re: Analytical Data for Project 397-019
Laboratory Reference No. 1808-375

Dear Javan:

Enclosed are the analytical results and associated quality control data for samples submitted on August 31, 2018.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "DB", with a long horizontal stroke extending to the right.

David Baumeister
Project Manager

Enclosures



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 11, 2018
Samples Submitted: August 31, 2018
Laboratory Reference: 1808-375
Project: 397-019

Case Narrative

Samples were collected on August 30, 2018 and received by the laboratory on August 31, 2018. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

PAHs EPA 8270D/SIM Analysis

The associated method blank had one surrogate recovery out of control limits. This is within allowance of our standard operating procedure as long as the recovery is above 10%.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.



Date of Report: September 11, 2018
 Samples Submitted: August 31, 2018
 Laboratory Reference: 1808-375
 Project: 397-019

GASOLINE RANGE ORGANICS
NWTPH-Gx

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FMW-135-083018					
Laboratory ID:	08-375-01					
Gasoline	ND	100	NWTPH-Gx	9-6-18	9-6-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	110	66-117				
Client ID:	FMW-136-083018					
Laboratory ID:	08-375-02					
Gasoline	ND	100	NWTPH-Gx	9-6-18	9-6-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	110	66-117				



Date of Report: September 11, 2018
 Samples Submitted: August 31, 2018
 Laboratory Reference: 1808-375
 Project: 397-019

**GASOLINE RANGE ORGANICS
 NWTPH-Gx
 QUALITY CONTROL**

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0906W3					
Gasoline	ND	100	NWTPH-Gx	9-6-18	9-6-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	111	66-117				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	08-380-02							
	ORIG	DUP						
Gasoline	ND	ND	NA	NA	NA	NA	NA	30
<i>Surrogate:</i>								
<i>Fluorobenzene</i>				112	112	66-117		



Date of Report: September 11, 2018
 Samples Submitted: August 31, 2018
 Laboratory Reference: 1808-375
 Project: 397-019

**DIESEL AND HEAVY OIL RANGE ORGANICS
 NWTPH-Dx**

Matrix: Water
 Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FMW-135-083018					
Laboratory ID:	08-375-01					
Diesel Range Organics	ND	0.26	NWTPH-Dx	9-7-18	9-8-18	
Lube Oil Range Organics	ND	0.41	NWTPH-Dx	9-7-18	9-8-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	89	50-150				

Client ID:	FMW-136-083018					
Laboratory ID:	08-375-02					
Diesel Range Organics	ND	0.25	NWTPH-Dx	9-7-18	9-8-18	
Lube Oil Range Organics	ND	0.40	NWTPH-Dx	9-7-18	9-8-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	91	50-150				



Date of Report: September 11, 2018
 Samples Submitted: August 31, 2018
 Laboratory Reference: 1808-375
 Project: 397-019

**DIESEL AND HEAVY OIL RANGE ORGANICS
 NWTPH-Dx
 QUALITY CONTROL**

Matrix: Water
 Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0907W1					
Diesel Range Organics	ND	0.25	NWTPH-Dx	9-7-18	9-8-18	
Lube Oil Range Organics	ND	0.40	NWTPH-Dx	9-7-18	9-8-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	<i>91</i>	<i>50-150</i>				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	08-374-01							
	ORIG	DUP						
Diesel Range Organics	1.03	1.01	NA	NA	NA	NA	2	NA M
Lube Oil Range	ND	ND	NA	NA	NA	NA	NA	NA
<i>Surrogate:</i>								
<i>o-Terphenyl</i>				100	94	50-150		



Date of Report: September 11, 2018
 Samples Submitted: August 31, 2018
 Laboratory Reference: 1808-375
 Project: 397-019

VOLATILE ORGANICS EPA 8260C
 page 1 of 2

Matrix: Water
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FMW-135-083018					
Laboratory ID:	08-375-01					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	9-10-18	9-10-18	
Chloromethane	ND	1.0	EPA 8260C	9-10-18	9-10-18	
Vinyl Chloride	ND	0.20	EPA 8260C	9-10-18	9-10-18	
Bromomethane	ND	0.20	EPA 8260C	9-10-18	9-10-18	
Chloroethane	ND	1.0	EPA 8260C	9-10-18	9-10-18	
Trichlorofluoromethane	ND	0.20	EPA 8260C	9-10-18	9-10-18	
1,1-Dichloroethene	ND	0.20	EPA 8260C	9-10-18	9-10-18	
Iodomethane	ND	1.5	EPA 8260C	9-10-18	9-10-18	
Methylene Chloride	ND	1.0	EPA 8260C	9-10-18	9-10-18	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	9-10-18	9-10-18	
1,1-Dichloroethane	ND	0.20	EPA 8260C	9-10-18	9-10-18	
2,2-Dichloropropane	ND	0.20	EPA 8260C	9-10-18	9-10-18	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	9-10-18	9-10-18	
Bromochloromethane	ND	0.20	EPA 8260C	9-10-18	9-10-18	
Chloroform	0.41	0.20	EPA 8260C	9-10-18	9-10-18	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	9-10-18	9-10-18	
Carbon Tetrachloride	ND	0.20	EPA 8260C	9-10-18	9-10-18	
1,1-Dichloropropene	ND	0.20	EPA 8260C	9-10-18	9-10-18	
Benzene	ND	0.20	EPA 8260C	9-10-18	9-10-18	
1,2-Dichloroethane	ND	0.20	EPA 8260C	9-10-18	9-10-18	
Trichloroethene	ND	0.20	EPA 8260C	9-10-18	9-10-18	
1,2-Dichloropropane	ND	0.20	EPA 8260C	9-10-18	9-10-18	
Dibromomethane	ND	0.20	EPA 8260C	9-10-18	9-10-18	
Bromodichloromethane	ND	0.20	EPA 8260C	9-10-18	9-10-18	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	9-10-18	9-10-18	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	9-10-18	9-10-18	
Toluene	ND	1.0	EPA 8260C	9-10-18	9-10-18	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	9-10-18	9-10-18	



Date of Report: September 11, 2018
 Samples Submitted: August 31, 2018
 Laboratory Reference: 1808-375
 Project: 397-019

VOLATILE ORGANICS EPA 8260C
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FMW-135-083018					
Laboratory ID:	08-375-01					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	9-10-18	9-10-18	
Tetrachloroethene	ND	0.20	EPA 8260C	9-10-18	9-10-18	
1,3-Dichloropropane	ND	0.20	EPA 8260C	9-10-18	9-10-18	
Dibromochloromethane	ND	0.20	EPA 8260C	9-10-18	9-10-18	
1,2-Dibromoethane	ND	0.20	EPA 8260C	9-10-18	9-10-18	
Chlorobenzene	ND	0.20	EPA 8260C	9-10-18	9-10-18	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	9-10-18	9-10-18	
Ethylbenzene	ND	0.20	EPA 8260C	9-10-18	9-10-18	
m,p-Xylene	ND	0.40	EPA 8260C	9-10-18	9-10-18	
o-Xylene	ND	0.20	EPA 8260C	9-10-18	9-10-18	
Bromoform	ND	1.0	EPA 8260C	9-10-18	9-10-18	
Bromobenzene	ND	0.20	EPA 8260C	9-10-18	9-10-18	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	9-10-18	9-10-18	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	9-10-18	9-10-18	
2-Chlorotoluene	ND	0.20	EPA 8260C	9-10-18	9-10-18	
4-Chlorotoluene	ND	0.20	EPA 8260C	9-10-18	9-10-18	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	9-10-18	9-10-18	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	9-10-18	9-10-18	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	9-10-18	9-10-18	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	9-10-18	9-10-18	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	9-10-18	9-10-18	
Hexachlorobutadiene	ND	1.0	EPA 8260C	9-10-18	9-10-18	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	9-10-18	9-10-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>111</i>	<i>75-127</i>				
<i>Toluene-d8</i>	<i>108</i>	<i>80-127</i>				
<i>4-Bromofluorobenzene</i>	<i>84</i>	<i>78-125</i>				



Date of Report: September 11, 2018
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 Project: 397-019

VOLATILE ORGANICS EPA 8260C
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Matrix: Water
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FMW-136-083018					
Laboratory ID:	08-375-02					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	9-10-18	9-10-18	
Chloromethane	ND	1.0	EPA 8260C	9-10-18	9-10-18	
Vinyl Chloride	ND	0.20	EPA 8260C	9-10-18	9-10-18	
Bromomethane	ND	0.20	EPA 8260C	9-10-18	9-10-18	
Chloroethane	ND	1.0	EPA 8260C	9-10-18	9-10-18	
Trichlorofluoromethane	ND	0.20	EPA 8260C	9-10-18	9-10-18	
1,1-Dichloroethene	ND	0.20	EPA 8260C	9-10-18	9-10-18	
Iodomethane	ND	1.5	EPA 8260C	9-10-18	9-10-18	
Methylene Chloride	ND	1.0	EPA 8260C	9-10-18	9-10-18	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	9-10-18	9-10-18	
1,1-Dichloroethane	ND	0.20	EPA 8260C	9-10-18	9-10-18	
2,2-Dichloropropane	ND	0.20	EPA 8260C	9-10-18	9-10-18	
(cis) 1,2-Dichloroethene	0.36	0.20	EPA 8260C	9-10-18	9-10-18	
Bromochloromethane	ND	0.20	EPA 8260C	9-10-18	9-10-18	
Chloroform	2.7	0.20	EPA 8260C	9-10-18	9-10-18	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	9-10-18	9-10-18	
Carbon Tetrachloride	ND	0.20	EPA 8260C	9-10-18	9-10-18	
1,1-Dichloropropene	ND	0.20	EPA 8260C	9-10-18	9-10-18	
Benzene	ND	0.20	EPA 8260C	9-10-18	9-10-18	
1,2-Dichloroethane	ND	0.20	EPA 8260C	9-10-18	9-10-18	
Trichloroethene	ND	0.20	EPA 8260C	9-10-18	9-10-18	
1,2-Dichloropropane	ND	0.20	EPA 8260C	9-10-18	9-10-18	
Dibromomethane	ND	0.20	EPA 8260C	9-10-18	9-10-18	
Bromodichloromethane	ND	0.20	EPA 8260C	9-10-18	9-10-18	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	9-10-18	9-10-18	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	9-10-18	9-10-18	
Toluene	ND	1.0	EPA 8260C	9-10-18	9-10-18	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	9-10-18	9-10-18	



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VOLATILE ORGANICS EPA 8260C
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FMW-136-083018					
Laboratory ID:	08-375-02					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	9-10-18	9-10-18	
Tetrachloroethene	ND	0.20	EPA 8260C	9-10-18	9-10-18	
1,3-Dichloropropane	ND	0.20	EPA 8260C	9-10-18	9-10-18	
Dibromochloromethane	ND	0.20	EPA 8260C	9-10-18	9-10-18	
1,2-Dibromoethane	ND	0.20	EPA 8260C	9-10-18	9-10-18	
Chlorobenzene	ND	0.20	EPA 8260C	9-10-18	9-10-18	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	9-10-18	9-10-18	
Ethylbenzene	ND	0.20	EPA 8260C	9-10-18	9-10-18	
m,p-Xylene	ND	0.40	EPA 8260C	9-10-18	9-10-18	
o-Xylene	ND	0.20	EPA 8260C	9-10-18	9-10-18	
Bromoform	ND	1.0	EPA 8260C	9-10-18	9-10-18	
Bromobenzene	ND	0.20	EPA 8260C	9-10-18	9-10-18	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	9-10-18	9-10-18	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	9-10-18	9-10-18	
2-Chlorotoluene	ND	0.20	EPA 8260C	9-10-18	9-10-18	
4-Chlorotoluene	ND	0.20	EPA 8260C	9-10-18	9-10-18	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	9-10-18	9-10-18	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	9-10-18	9-10-18	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	9-10-18	9-10-18	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	9-10-18	9-10-18	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	9-10-18	9-10-18	
Hexachlorobutadiene	ND	1.0	EPA 8260C	9-10-18	9-10-18	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	9-10-18	9-10-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>114</i>	<i>75-127</i>				
<i>Toluene-d8</i>	<i>107</i>	<i>80-127</i>				
<i>4-Bromofluorobenzene</i>	<i>84</i>	<i>78-125</i>				



Date of Report: September 11, 2018
 Samples Submitted: August 31, 2018
 Laboratory Reference: 1808-375
 Project: 397-019

VOLATILE ORGANICS EPA 8260C
METHOD BLANK QUALITY CONTROL
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Matrix: Water
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0910W1					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	9-10-18	9-10-18	
Chloromethane	ND	1.0	EPA 8260C	9-10-18	9-10-18	
Vinyl Chloride	ND	0.20	EPA 8260C	9-10-18	9-10-18	
Bromomethane	ND	0.20	EPA 8260C	9-10-18	9-10-18	
Chloroethane	ND	1.0	EPA 8260C	9-10-18	9-10-18	
Trichlorofluoromethane	ND	0.20	EPA 8260C	9-10-18	9-10-18	
1,1-Dichloroethene	ND	0.20	EPA 8260C	9-10-18	9-10-18	
Iodomethane	ND	1.5	EPA 8260C	9-10-18	9-10-18	
Methylene Chloride	ND	1.0	EPA 8260C	9-10-18	9-10-18	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	9-10-18	9-10-18	
1,1-Dichloroethane	ND	0.20	EPA 8260C	9-10-18	9-10-18	
2,2-Dichloropropane	ND	0.20	EPA 8260C	9-10-18	9-10-18	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	9-10-18	9-10-18	
Bromochloromethane	ND	0.20	EPA 8260C	9-10-18	9-10-18	
Chloroform	ND	0.20	EPA 8260C	9-10-18	9-10-18	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	9-10-18	9-10-18	
Carbon Tetrachloride	ND	0.20	EPA 8260C	9-10-18	9-10-18	
1,1-Dichloropropene	ND	0.20	EPA 8260C	9-10-18	9-10-18	
Benzene	ND	0.20	EPA 8260C	9-10-18	9-10-18	
1,2-Dichloroethane	ND	0.20	EPA 8260C	9-10-18	9-10-18	
Trichloroethene	ND	0.20	EPA 8260C	9-10-18	9-10-18	
1,2-Dichloropropane	ND	0.20	EPA 8260C	9-10-18	9-10-18	
Dibromomethane	ND	0.20	EPA 8260C	9-10-18	9-10-18	
Bromodichloromethane	ND	0.20	EPA 8260C	9-10-18	9-10-18	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	9-10-18	9-10-18	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	9-10-18	9-10-18	
Toluene	ND	1.0	EPA 8260C	9-10-18	9-10-18	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	9-10-18	9-10-18	



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 Samples Submitted: August 31, 2018
 Laboratory Reference: 1808-375
 Project: 397-019

VOLATILE ORGANICS EPA 8260C
METHOD BLANK QUALITY CONTROL
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0910W1					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	9-10-18	9-10-18	
Tetrachloroethene	ND	0.20	EPA 8260C	9-10-18	9-10-18	
1,3-Dichloropropane	ND	0.20	EPA 8260C	9-10-18	9-10-18	
Dibromochloromethane	ND	0.20	EPA 8260C	9-10-18	9-10-18	
1,2-Dibromoethane	ND	0.20	EPA 8260C	9-10-18	9-10-18	
Chlorobenzene	ND	0.20	EPA 8260C	9-10-18	9-10-18	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	9-10-18	9-10-18	
Ethylbenzene	ND	0.20	EPA 8260C	9-10-18	9-10-18	
m,p-Xylene	ND	0.40	EPA 8260C	9-10-18	9-10-18	
o-Xylene	ND	0.20	EPA 8260C	9-10-18	9-10-18	
Bromoform	ND	1.0	EPA 8260C	9-10-18	9-10-18	
Bromobenzene	ND	0.20	EPA 8260C	9-10-18	9-10-18	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	9-10-18	9-10-18	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	9-10-18	9-10-18	
2-Chlorotoluene	ND	0.20	EPA 8260C	9-10-18	9-10-18	
4-Chlorotoluene	ND	0.20	EPA 8260C	9-10-18	9-10-18	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	9-10-18	9-10-18	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	9-10-18	9-10-18	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	9-10-18	9-10-18	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	9-10-18	9-10-18	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	9-10-18	9-10-18	
Hexachlorobutadiene	ND	1.0	EPA 8260C	9-10-18	9-10-18	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	9-10-18	9-10-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>111</i>	<i>75-127</i>				
<i>Toluene-d8</i>	<i>106</i>	<i>80-127</i>				
<i>4-Bromofluorobenzene</i>	<i>83</i>	<i>78-125</i>				



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 Laboratory Reference: 1808-375
 Project: 397-019

**VOLATILE ORGANICS EPA 8260C
 SB/SBD QUALITY CONTROL**

Matrix: Water
 Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery	RPD	RPD	Flags
					SB	SBD	Limits	RPD	Limit	
SPIKE BLANKS										
Laboratory ID:	SB0910W1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	10.2	9.81	10.0	10.0	102	98	62-129	4	15	
Benzene	9.94	9.63	10.0	10.0	99	96	77-127	3	15	
Trichloroethene	9.86	9.35	10.0	10.0	99	94	70-120	5	15	
Toluene	10.2	9.78	10.0	10.0	102	98	82-123	4	15	
Chlorobenzene	9.76	9.14	10.0	10.0	98	91	79-120	7	15	
<i>Surrogate:</i>										
Dibromofluoromethane					109	111	75-127			
Toluene-d8					107	107	80-127			
4-Bromofluorobenzene					86	85	78-125			



Date of Report: September 11, 2018
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 Project: 397-019

PAHs EPA 8270D/SIM

Matrix: Water
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FMW-135-083018					
Laboratory ID:	08-375-01					
Naphthalene	0.35	0.096	EPA 8270D/SIM	9-4-18	9-5-18	
2-Methylnaphthalene	0.29	0.096	EPA 8270D/SIM	9-4-18	9-5-18	
1-Methylnaphthalene	0.68	0.096	EPA 8270D/SIM	9-4-18	9-5-18	
Acenaphthylene	ND	0.096	EPA 8270D/SIM	9-4-18	9-5-18	
Acenaphthene	0.39	0.096	EPA 8270D/SIM	9-4-18	9-5-18	
Fluorene	ND	0.096	EPA 8270D/SIM	9-4-18	9-5-18	
Phenanthrene	ND	0.096	EPA 8270D/SIM	9-4-18	9-5-18	
Anthracene	ND	0.096	EPA 8270D/SIM	9-4-18	9-5-18	
Fluoranthene	ND	0.096	EPA 8270D/SIM	9-4-18	9-5-18	
Pyrene	ND	0.096	EPA 8270D/SIM	9-4-18	9-5-18	
Benzo[a]anthracene	ND	0.0096	EPA 8270D/SIM	9-4-18	9-5-18	
Chrysene	ND	0.0096	EPA 8270D/SIM	9-4-18	9-5-18	
Benzo[b]fluoranthene	ND	0.0096	EPA 8270D/SIM	9-4-18	9-5-18	
Benzo(j,k)fluoranthene	ND	0.0096	EPA 8270D/SIM	9-4-18	9-5-18	
Benzo[a]pyrene	ND	0.0096	EPA 8270D/SIM	9-4-18	9-5-18	
Indeno(1,2,3-c,d)pyrene	ND	0.0096	EPA 8270D/SIM	9-4-18	9-5-18	
Dibenz[a,h]anthracene	ND	0.0096	EPA 8270D/SIM	9-4-18	9-5-18	
Benzo[g,h,i]perylene	ND	0.0096	EPA 8270D/SIM	9-4-18	9-5-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>50</i>	<i>21 - 110</i>				
<i>Pyrene-d10</i>	<i>62</i>	<i>19 - 111</i>				
<i>Terphenyl-d14</i>	<i>62</i>	<i>32 - 137</i>				



Date of Report: September 11, 2018
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 Project: 397-019

PAHs EPA 8270D/SIM

Matrix: Water
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FMW-136-083018					
Laboratory ID:	08-375-02					
Naphthalene	0.39	0.096	EPA 8270D/SIM	9-4-18	9-5-18	
2-Methylnaphthalene	ND	0.096	EPA 8270D/SIM	9-4-18	9-5-18	
1-Methylnaphthalene	ND	0.096	EPA 8270D/SIM	9-4-18	9-5-18	
Acenaphthylene	ND	0.096	EPA 8270D/SIM	9-4-18	9-5-18	
Acenaphthene	ND	0.096	EPA 8270D/SIM	9-4-18	9-5-18	
Fluorene	ND	0.096	EPA 8270D/SIM	9-4-18	9-5-18	
Phenanthrene	ND	0.096	EPA 8270D/SIM	9-4-18	9-5-18	
Anthracene	ND	0.096	EPA 8270D/SIM	9-4-18	9-5-18	
Fluoranthene	ND	0.096	EPA 8270D/SIM	9-4-18	9-5-18	
Pyrene	ND	0.096	EPA 8270D/SIM	9-4-18	9-5-18	
Benzo[a]anthracene	ND	0.0096	EPA 8270D/SIM	9-4-18	9-5-18	
Chrysene	ND	0.0096	EPA 8270D/SIM	9-4-18	9-5-18	
Benzo[b]fluoranthene	ND	0.0096	EPA 8270D/SIM	9-4-18	9-5-18	
Benzo(j,k)fluoranthene	ND	0.0096	EPA 8270D/SIM	9-4-18	9-5-18	
Benzo[a]pyrene	ND	0.0096	EPA 8270D/SIM	9-4-18	9-5-18	
Indeno(1,2,3-c,d)pyrene	ND	0.0096	EPA 8270D/SIM	9-4-18	9-5-18	
Dibenz[a,h]anthracene	ND	0.0096	EPA 8270D/SIM	9-4-18	9-5-18	
Benzo[g,h,i]perylene	ND	0.0096	EPA 8270D/SIM	9-4-18	9-5-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>83</i>	<i>21 - 110</i>				
<i>Pyrene-d10</i>	<i>84</i>	<i>19 - 111</i>				
<i>Terphenyl-d14</i>	<i>83</i>	<i>32 - 137</i>				



Date of Report: September 11, 2018
 Samples Submitted: August 31, 2018
 Laboratory Reference: 1808-375
 Project: 397-019

**PAHs EPA 8270D/SIM
 METHOD BLANK QUALITY CONTROL**

Matrix: Water
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0904W1					
Naphthalene	ND	0.10	EPA 8270D/SIM	9-4-18	9-4-18	
2-Methylnaphthalene	ND	0.10	EPA 8270D/SIM	9-4-18	9-4-18	
1-Methylnaphthalene	ND	0.10	EPA 8270D/SIM	9-4-18	9-4-18	
Acenaphthylene	ND	0.10	EPA 8270D/SIM	9-4-18	9-4-18	
Acenaphthene	ND	0.10	EPA 8270D/SIM	9-4-18	9-4-18	
Fluorene	ND	0.10	EPA 8270D/SIM	9-4-18	9-4-18	
Phenanthrene	ND	0.10	EPA 8270D/SIM	9-4-18	9-4-18	
Anthracene	ND	0.10	EPA 8270D/SIM	9-4-18	9-4-18	
Fluoranthene	ND	0.10	EPA 8270D/SIM	9-4-18	9-4-18	
Pyrene	ND	0.10	EPA 8270D/SIM	9-4-18	9-4-18	
Benzo[a]anthracene	ND	0.010	EPA 8270D/SIM	9-4-18	9-4-18	
Chrysene	ND	0.010	EPA 8270D/SIM	9-4-18	9-4-18	
Benzo[b]fluoranthene	ND	0.010	EPA 8270D/SIM	9-4-18	9-4-18	
Benzo(j,k)fluoranthene	ND	0.010	EPA 8270D/SIM	9-4-18	9-4-18	
Benzo[a]pyrene	ND	0.010	EPA 8270D/SIM	9-4-18	9-4-18	
Indeno(1,2,3-c,d)pyrene	ND	0.010	EPA 8270D/SIM	9-4-18	9-4-18	
Dibenz[a,h]anthracene	ND	0.010	EPA 8270D/SIM	9-4-18	9-4-18	
Benzo[g,h,i]perylene	ND	0.010	EPA 8270D/SIM	9-4-18	9-4-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	115	21 - 110				Q
Pyrene-d10	88	19 - 111				
Terphenyl-d14	117	32 - 137				



Date of Report: September 11, 2018
 Samples Submitted: August 31, 2018
 Laboratory Reference: 1808-375
 Project: 397-019

**PAHs EPA 8270D/SIM
 SB/SBD QUALITY CONTROL**

Matrix: Water
 Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery	RPD	RPD	Flags
					SB	SBD	Limits	Limit		
SPIKE BLANKS										
Laboratory ID:	SB0904W1									
	SB	SBD	SB	SBD	SB	SBD				
Naphthalene	0.343	0.271	0.500	0.500	69	54	28 - 109	23	38	
Acenaphthylene	0.384	0.320	0.500	0.500	77	64	37 - 111	18	26	
Acenaphthene	0.375	0.304	0.500	0.500	75	61	41 - 113	21	33	
Fluorene	0.366	0.339	0.500	0.500	73	68	47 - 114	8	23	
Phenanthrene	0.363	0.339	0.500	0.500	73	68	50 - 113	7	18	
Anthracene	0.380	0.362	0.500	0.500	76	72	50 - 117	5	18	
Fluoranthene	0.396	0.381	0.500	0.500	79	76	52 - 120	4	15	
Pyrene	0.395	0.381	0.500	0.500	79	76	51 - 128	4	31	
Benzo[a]anthracene	0.428	0.413	0.500	0.500	86	83	57 - 127	4	15	
Chrysene	0.414	0.413	0.500	0.500	83	83	51 - 120	0	15	
Benzo[b]fluoranthene	0.412	0.402	0.500	0.500	82	80	54 - 124	2	17	
Benzo(j,k)fluoranthene	0.426	0.418	0.500	0.500	85	84	50 - 127	2	18	
Benzo[a]pyrene	0.414	0.398	0.500	0.500	83	80	50 - 120	4	16	
Indeno(1,2,3-c,d)pyrene	0.407	0.390	0.500	0.500	81	78	46 - 132	4	20	
Dibenz[a,h]anthracene	0.416	0.403	0.500	0.500	83	81	49 - 129	3	18	
Benzo[g,h,i]perylene	0.412	0.402	0.500	0.500	82	80	45 - 130	2	19	
<i>Surrogate:</i>										
2-Fluorobiphenyl					69	56	21 - 110			
Pyrene-d10					79	78	19 - 111			
Terphenyl-d14					79	77	32 - 137			





Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
 - B - The analyte indicated was also found in the blank sample.
 - C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
 - E - The value reported exceeds the quantitation range and is an estimate.
 - F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
 - H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
 - I - Compound recovery is outside of the control limits.
 - J - The value reported was below the practical quantitation limit. The value is an estimate.
 - K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
 - L - The RPD is outside of the control limits.
 - M - Hydrocarbons in the gasoline range are impacting the diesel range result.
 - M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
 - N - Hydrocarbons in the lube oil range are impacting the diesel range result.
 - N1 - Hydrocarbons in diesel range are impacting lube oil range results.
 - O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
 - P - The RPD of the detected concentrations between the two columns is greater than 40.
 - Q - Surrogate recovery is outside of the control limits.
 - S - Surrogate recovery data is not available due to the necessary dilution of the sample.
 - T - The sample chromatogram is not similar to a typical _____.
 - U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
 - U1 - The practical quantitation limit is elevated due to interferences present in the sample.
 - V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
 - W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
 - X - Sample extract treated with a mercury cleanup procedure.
 - X1 - Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
 - Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
 - Z -
- ND - Not Detected at PQL
 PQL - Practical Quantitation Limit
 RPD - Relative Percent Difference





MVA Onsite Environmental Inc.
 Analytical Laboratory Testing Services
 14648 NE 95th Street • Redmond, WA 98052
 Phone: (425) 883-3881 • www.onsite-env.com

Chain of Custody

Turnaround Request
(in working days)

(Check One)

Same Day 1 Day

2 Days 3 Days

Standard (7 Days)

_____ (other)

Company: **Favallon**
 Project Number: **397-019**
 Project Name: **Block 38 West**
 Project Manager: **Jovan Kneale**
 Sampled by: **Greg Roberts**

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers
1	Fmw-125 - 083018	8/30/18	1545	Water II	
2	Fmw-136-083018	8/30/18	1151	Water II	

Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (<input type="checkbox"/> Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C + BTEX	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	% Moisture
		X				X			X									
		X				X			X									

Laboratory Number:

08-375

Signature	Company	Date	Time	Comments/Special Instructions
	Favallon	8/30/18	1839	Project Contact Project
	Favallon	8/31/18	1015	Always for sample analyses and turnaround time!!

Received _____
 Relinquished _____
 Received _____
 Relinquished _____
 Received _____
 Relinquished _____
 Reviewed/Date _____

Reviewed/Date _____

Data Package: Standard Level III Level IV

Chromatograms with final report Electronic Data Deliverables (EDDs)

APPENDIX C
CATEGORY 1 SOIL ANALYTICAL DATA TABLES

SUBSURFACE INVESTIGATION REPORT AND ENVIRONMENTAL MEDIA
MANAGEMENT PLAN
Block 38 West Property
500 through 536 Westlake Avenue North
Seattle, Washington

Farallon PN: 397-019

Table 1
Soil Analytical Results for TPH and BTEX
South Lake Union Block 38
Seattle, Washington
Farallon PN: 397-019

Sample Location	Sample Identification	Sample Depth (feet) ¹	Sample Date	Analytical Results (milligrams per kilogram)						
				NWTPH-Dx ²		NWTPH-Gx ³	EPA Method 8021B ⁴			
				DRO	ORO	GRO	Benzene	Toluene	Ethylbenzene	Xylenes
FB-01	FB-01-30.0-082118	30.0	8/21/2018	< 29	< 58	< 5.1	< 0.020	< 0.051	< 0.051	< 0.102
FB-02	FB-02-35.0-082018	35.0	8/20/2018	< 31	< 62	< 5.8	< 0.020	< 0.058	< 0.058	< 0.116
FB-03	FB-03-15.0-082318	15.0	8/23/2018	< 32	< 65	< 6.5	< 0.020	< 0.065	< 0.065	< 0.130
	FB-03-25.0-082318	25.0	8/23/2018	< 29	< 59	< 5.5	< 0.020	< 0.055	< 0.055	< 0.110
FB-04	FB-04-20.0-082118	20.0	8/21/2018	< 29	< 58	< 5.3	< 0.020	< 0.053	< 0.053	< 0.106
	FB-04-30.0-082118	30.0	8/21/2018	< 30	< 59	< 5.5	< 0.020	< 0.055	< 0.055	< 0.110
FB-05	FB-05-5.0-082218	5.0	8/22/2018	< 31	< 61	< 5.4	< 0.020	< 0.054	< 0.054	< 0.108
	FB-05-20.0-082218	20.0	8/22/2018	< 31	< 61	< 5.5	< 0.020	< 0.055	< 0.055	< 0.110
	FB-05-35.0-082218	35.0	8/22/2018	< 31	< 62	< 5.8	< 0.020	< 0.058	< 0.058	< 0.116
FMW-135	FMW-135-35.0-082418	35.0	8/24/2018	< 31	< 62	< 5.8	< 0.020	< 0.058	< 0.058	< 0.116
FMW-136	FMW-136-10.0-082218	10.0	8/22/2018	< 38	< 76	< 9.0	< 0.020	< 0.090	< 0.090	< 0.18
	FMW-136-30.0-082218	30.0	8/22/2018	< 30	< 59	< 5.2	< 0.020	< 0.052	< 0.052	< 0.104
MTCA Method A Cleanup Levels for Soil⁵				2,000	2,000	30/100⁶	0.03	7	6	9

NOTES:

< denotes analyte not detected at or exceeding the laboratory reporting limit listed.

— denotes sample not analyzed.

¹Depth in feet below ground surface.

²Analyzed by Northwest Method NWTPH-Dx.

³Analyzed by Northwest Method NWTPH-Gx.

⁴Analyzed by U.S. Environmental Protection Agency Method 8021B.

⁵Washington State Model Toxics Control Act Cleanup Regulation (MTCA) Method A Soil Cleanup Levels for Unrestricted Land Uses, Table 740-1 of Section 900 of Chapter 173-340 of the Washington Administrative Code, as revised 2013.

⁶Cleanup level is 30 milligrams per kilogram if benzene is detected and 100 milligrams per kilogram if benzene is not detected.

EPA = U.S. Environmental Protection Agency

BTEX = benzene, toluene, ethylbenzene and xylenes

DRO = total petroleum hydrocarbons (TPH) as diesel-range organics

GRO = TPH as gasoline-range organics

ORO = TPH as oil-range organics

Table 2
Soil Analytical Results for Halogenated VOCs
South Lake Union Block 38
Seattle, Washington
Farallon PN: 397-019

Sample Location	Sample Identification	Sample Depth (feet) ¹	Sample Date	Analytical Results (milligrams per kilogram) ²				
				PCE	TCE	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Vinyl Chloride
FB-04	FB-04-20.0-082118	20.0	8/21/2018	< 0.00093	< 0.00093	< 0.00093	< 0.00093	< 0.00093
FB-05	FB-05-20.0-082218	20.0	8/22/2018	< 0.00090	< 0.00090	< 0.00090	< 0.00090	< 0.00090
FMW-135	FMW-135-50.0-082418	50.0	8/24/2018	< 0.00074	< 0.00074	< 0.00074	< 0.00074	< 0.00074
FMW-136	FMW-136-10.0-082218	10.0	8/22/2018	< 0.0015	< 0.0015	< 0.0015	< 0.0015	< 0.0015
MTCA Cleanup Levels for Soil³				0.05	0.03	160⁴	1,600⁴	0.67⁴

NOTES:

< denotes analyte not detected at or exceeding the reporting limit listed.

¹Depth in feet below ground surface.

²Analyzed by U.S. Environmental Protection Agency Method 8260C.

³Washington State Model Toxics Control Act Cleanup Regulation (MTCA) Method A Soil Cleanup Levels for Unrestricted Land Uses, Table 740-1 of Section 900 of Chapter 173-340 of the Washington Administrative Code, as revised 2013, unless otherwise noted.

⁴Washington State Cleanup Levels and Risk Calculations under MTCA Standard Method B Formula Values for Soil (Unrestricted Land Use) - Direct Contact (Ingestion Only) and Leaching Pathway, <https://fortress.wa.gov/ecy/clarc/Reporting/ChemicalQuery.aspx>

PCE = tetrachloroethene

TCE = trichloroethene

VOCs = volatile organic compounds

**Table 3
Soil Analytical Results for PAHs
South Lake Union Block 38
Seattle, Washington
Farallon PN: 397-019**

Sample Location	Sample Identification	Sample Depth (feet) ¹	Sample Date	Analytical Results (milligrams per kilogram) ²																		
				Non-Carcinogenic PAHs											Carcinogenic PAHs							
				Naphthalene	1-Methylnaphthalene	2-Methylnaphthalene	Total Naphthalenes ³	Acenaphthene	Acenaphthylene	Anthracene	Benzo(g,h,i)Perylene	Fluoranthene	Fluorene	Phenanthrene	Pyrene	Benzo(a)Pyrene	Benzo(a)Anthracene	Benzo(b)Fluoranthene	Benzo(j,k)Fluoranthene	Chrysene	Dibenzo(a,h)Anthracene	Indeno(1,2,3-cd)Pyrene
FB-05	FB-05-15.0-082218	15.0	8/22/2018	< 0.0089	< 0.0089	< 0.0089	< 0.0267	< 0.0089	< 0.0089	< 0.0089	< 0.0089	< 0.0089	< 0.0089	< 0.0089	< 0.0089	< 0.0089	< 0.0089	< 0.0089	< 0.0089	< 0.0089	< 0.0089	0.0067
FB-06	FB-06-10.0-082218	10.0	8/22/2018	< 0.016 H	< 0.016 H	< 0.016 H	< 0.048	< 0.016 H	< 0.016 H	< 0.016 H	< 0.016 H	< 0.016 H	< 0.016 H	< 0.016 H	< 0.016 H	< 0.016 H	< 0.016 H	< 0.016 H	< 0.016 H	< 0.016 H	< 0.016 H	0.012
MTCA Method A Cleanup Level for Soil⁶							5	4,800⁷	NE	24,000⁷	NE	3,200⁷	3,200⁷	NE	2,400⁷							0.1

NOTES:

< denotes analyte not detected at or exceeding the reporting limit listed.

¹Depth in feet below ground surface.

²Analyzed by U.S. Environmental Protection Agency Method 8270D/SIM.

³Sum of naphthalene, 1-methylnaphthalene, and 2-methylnaphthalene.

⁴Total carcinogenic polycyclic aromatic hydrocarbons derived using the total toxicity equivalency method in Section 708(8) of Chapter 173-340 of the Washington Administrative Code.

⁵For concentrations reported at less than the laboratory reporting limit, half the reporting limit was used to calculate the TEC.

⁶Washington State Model Toxics Control Act Cleanup Regulation (MTCA) Method A Soil Cleanup Levels for Unrestricted Land Uses, Table 740-1 of Section 900 of Chapter 173-340 of the Washington Administrative Code, as revised 2013, unless otherwise noted.

⁷Washington State Department of Ecology Cleanup Levels and Risk Calculations, under MTCA Standard Method B Formula Values for Soil (Unrestricted Land Use) - Direct Contact (Ingestion Only) and Leaching Pathway, <https://fortress.wa.gov/ecy/clarc/Reporting/ChemicalQuery.aspx>

cPAHs = carcinogenic polycyclic aromatic hydrocarbons

H = sample analyzed outside of holding time

NE = not established

PAHs = polycyclic aromatic hydrocarbons

TEC = toxic equivalent concentration

Table 4
Soil Analytical Results for Detected SVOCs
South Lake Union Block 38
Seattle, Washington
Farallon PN: 397-019

Sample Location	Sample Identification	Sample Depth (feet) ¹	Sample Date	Analytical Results (milligrams per kilogram) ²		
				2,4-Dimethylphenol	Carbazole	Dibenzofuran
FB-05	FB-05-15.0-082218	15.0	8/22/2018	< 0.045	< 0.045	< 0.045
FB-06	FB-06-10.0-082218	10.0	8/22/2018	< 0.082 H	< 0.082 H	< 0.082 H
MTCA Cleanup Levels for Soil³				1,600	NE	80

NOTES:

Results in **bold** denote concentrations exceeding applicable cleanup levels.
 < denotes analyte not detected at or exceeding the reporting limit listed.

¹Depth in feet below ground surface.

²Analyzed by U.S. Environmental Protection Agency Method 8270D or 8270D/SIM. Only detected SVOCs shown in table; see lab report for full list of analytes.

³Washington State Cleanup Levels and Risk Calculations under the Washington State Model Toxics Control Act (MTCA) Cleanup Regulation, Standard Method B Formula Values for Soil (Unrestricted Land Use) - Direct Contact (Ingestion Only) and Leaching Pathway, <https://fortress.wa.gov/ecy/clarc/Reporting/ChemicalQuery.aspx>

H = sample analyzed outside of holding time
 NE = not established
 SVOCs = semivolatile organic compounds

**Table 5
Soil Analytical Results for Metals
South Lake Union Block 38
Seattle, Washington
Farallon PN: 397-019**

Sample Location	Sample Identification	Sample Depth (feet) ¹	Sample Date	Analytical Results (milligrams per kilogram) ²							
				Arsenic	Barium	Cadmium	Chromium	Lead	Mercury	Selenium	Silver
FB-05	FB-05-35.0-082218	35.0	8/22/2018	< 12	58	< 0.62	38	< 6.2	< 0.31	< 12	< 1.2
FMW-135	FMW-135-5.0-082418	5.0	8/24/2018	< 12	120	< 0.61	48	16	< 0.31	< 12	< 1.2
	FMW-135-25.0-082418	25.0	8/24/2018	< 14	120	< 0.69	60	< 6.9	< 0.35	< 14	< 1.4
FMW-136	FMW-136-30.0-082218	30.0	8/22/2018	< 12	45	< 0.59	41	< 5.9	< 0.30	< 12	< 1.2
MTCA Cleanup Levels for Soil ³				20	16,000⁴	2	2,000	250	2	400⁴	400⁴

NOTES:

< denotes analyte not detected at or exceeding the laboratory reporting limit listed.

¹Depth in feet below ground surface.

²Analyzed by U.S. Environmental Protection Agency Methods 6010D/7471B.

³Washington State Model Toxics Control Act Cleanup Regulation (MTCA) Method A Soil Cleanup Levels for Unrestricted Land Uses, Table 740-1 of Section 900 of Chapter 173-340 of the Washington Administrative Code, as amended 2013, unless otherwise noted.

⁴Washington State Department of Ecology Cleanup Levels and Risk Calculations, under MTCA Standard Method B Formula Values for Soil (Unrestricted Land Use) - Direct Contact (Ingestion Only) and Leaching Pathway, <https://fortress.wa.gov/ecy/clarc/Reporting/ChemicalQuery.aspx>

APPENDIX D
SAMPLING AND ANALYSIS PLAN

SUBSURFACE INVESTIGATION REPORT AND ENVIRONMENTAL MEDIA
MANAGEMENT PLAN
Block 38 West Property
500 through 536 Westlake Avenue North
Seattle, Washington

Farallon PN: 397-019

SAMPLING AND ANALYSIS PLAN

APPENDIX D

ENVIRONMENTAL MEDIA MANAGEMENT PLAN BLOCK 38 WEST PROPERTY 500 THROUGH 536 WESTLAKE AVENUE NORTH SEATTLE, WASHINGTON

**Submitted by:
Farallon Consulting, L.L.C.
975 5th Avenue Northwest
Issaquah, Washington 98027**

Farallon PN: 397-019

**For:
City Investors IX LLC
505 5th Avenue South, Suite 900
Seattle, Washington 98104**

December 28, 2018

Prepared by:



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Reviewed by:



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ATTACHMENT

Attachment 1 Field Forms



1.0 INTRODUCTION

Farallon Consulting, L.L.C. (Farallon) prepared this Sampling and Analysis Plan (SAP) on behalf of Lakefront Investors IX LLC (Lakefront Investors) to present the requirements and methodology for sample collection and laboratory analysis activities related to the planned redevelopment at the property at 500 through 536 Westlake Avenue North in Seattle, Washington (herein referred to as Block 38 West). The SAP presents project-specific protocols and information pertaining to sampling and analysis procedures to be used during the redevelopment at Block 38 West in accordance with the Environmental Media Management Plan (EMMP) to which this SAP is attached as Appendix D.

The objective of the cleanup action to be conducted during construction excavation will be to protect human health and the environment and to satisfy the requirements for regulatory closure and a No Further Action determination from the Washington State Department of Ecology (Ecology) under the Washington State Model Toxics Control Act Cleanup Regulation (MTCR), as established in Chapter 173-340 of the Washington Administrative Code (WAC 173-340). The cleanup action summarized in the EMMP describes the following general elements: site preparation, dewatering and wastewater treatment and discharge, contaminated soil management, compliance soil monitoring, and waterproof barrier installation. The cleanup action entails mass excavation of contaminated soil until cleanup objectives identified in the EMMP are achieved.

The purpose of the SAP is to specify requirements for field screening and compliance monitoring soil sample collection and laboratory analysis activities to be conducted during the excavation of impacted soil at Block 38 West, to ensure data are collected in accordance with technically acceptable protocols and that analytical results will meet the data quality objectives (DQOs) for the cleanup action.



2.0 PROJECT ORGANIZATION AND RESPONSIBILITIES

This section identifies key personnel related to the cleanup action excavation at Block 38 West and their responsibilities.

2.1 MANAGEMENT

The Farallon Principal is Mr. Thaddeus Cline, who will provide overall program guidance to support staff and will have a direct line of communication with Lakefront Investors.

The Farallon Project Manager is Mr. Javan Ruark, whose primary role is to ensure compliance with the requirements of this SAP during implementation of the cleanup action.

The Farallon Health and Safety Coordinator is Mr. Joe Rounds, who will provide support in implementing health and safety protocols for Farallon field personnel.

2.2 FIELD COORDINATOR

The Farallon Field Coordinator will be responsible for monitoring Farallon field activities and supporting the Field Scientist(s). The Field Coordinator will ensure that appropriate protocols for sample collection, preservation, and holding times are observed, and will submit or arrange for submittal of soil samples to the designated laboratory for analyses. Farallon Engineer Mr. Russell Luiten has been assigned the Field Coordinator role for the cleanup action excavation at Block 38 West.

2.3 FIELD SCIENTISTS

Farallon Field Scientists are experienced field technicians with training in field procedures related to cleanup action excavations and the methodology described in this SAP. Personnel assigned to the Field Scientist role have not yet been named for the cleanup action excavation.

2.4 QUALITY ASSURANCE/QUALITY CONTROL MANAGER

Farallon Associate Geologist Mr. Ruark will serve as the Farallon Quality Assurance and Quality Control (QA/QC) Manager, providing QA/QC oversight for field screening, soil sampling, and laboratory analytical programs; ensuring that field data are collected and documented appropriately; coordinating with the analytical laboratories; and overseeing data quality assessment and quality assurance coordination.

2.5 DATA MANAGER

Ms. Jeannette Mullin will serve as the Farallon Data Manager, and will compile field measurements and analytical data into a project database, review the data for completeness and consistency, conduct data quality assessment activities, and review assigned data qualifiers based on results of data quality assessment.



2.6 LABORATORY PROJECT MANAGER

OnSite Environmental, Inc. in Redmond, Washington (OnSite) is the analytical laboratory selected for this project. Mr. David Baumeister will serve as the Laboratory Project Manager, overseeing laboratory operations associated with the receipt of environmental samples, chemical analyses, and laboratory report preparation for this project.

OnSite will be responsible for the following tasks:

- Performing laboratory analysis of samples using the methods outlined in the SAP;
- Adhering to documentation, custody, and sample logbook procedures;
- Meeting reporting and QA/QC requirements;
- Delivering electronic data deliverables as specified in the SAP;
- Meeting turnaround times for deliverables as described in the SAP; and
- Allowing the Farallon QA/QC Manager to perform laboratory and data audits as requested.

OnSite will be certified through Ecology and the National Environmental Laboratory Accreditation Program for the analytical methods performed.



3.0 DATA QUALITY OBJECTIVES AND MEASUREMENT CRITERIA

DQOs provide a qualitative and quantitative framework pertaining to laboratory analysis of soil samples collected during the cleanup action excavation, including a series of planning steps based on the scientific method around which data collection programs are designed. The use of DQOs ensures that:

- The objectives of field screening, soil sampling, and laboratory analysis to be conducted during the cleanup action excavation are clearly defined;
- The type, quantity, and quality of environmental data used in decision making are appropriate for their intended application; and
- Acceptable levels of decision error and performance goals are specified, such that the quantity and quality of data needed to support management decisions are provided.

The objectives of field screening, soil sampling, and laboratory analysis are to obtain data documenting the effectiveness of the cleanup action so that the cleanup action objectives indicated in the EMMP and summarized in Section 1, Introduction, are met. The overall QA/QC objective for this SAP is to develop and implement procedures that will ensure the collection of representative data of known and acceptable quality.

Measurement quality indicators pertaining to field sampling and laboratory analysis are generally defined in terms of five parameters:

- Precision;
- Accuracy;
- Representativeness;
- Comparability; and
- Completeness.

Each parameter is defined below. Specific QC objectives for sample collection and laboratory analyses are set forth below.

3.1 PRECISION

Precision measures the reproducibility of measurements under a given set of conditions and pertains to laboratory analytical results. The goal is to maintain a level of analytical precision consistent with the objectives of the cleanup action. Work for this project will adhere to established protocols as presented in this SAP. Precision will be evaluated using laboratory duplicate results as applicable per the analytical methods. Analytical precision measurements may be carried out



on project-specific samples at the discretion of the Field Coordinator. The equation used to evaluate precision is:

$$RPD = \frac{(A-B)}{\left[\frac{(A+B)}{2}\right]} \times 100\%$$

Where:

RPD = relative percent difference

A = Analytical result from one of two duplicate measurements

B = Analytical result from the second measurement

Plus or minus 35 percent RPD is the criterion for sufficient precision for this project.

3.2 ACCURACY

Accuracy (or bias) is an expression of the degree to which a measured value conforms to the reference value and pertains to laboratory analytical results. Laboratory blanks and surrogate standards will be used to evaluate the bias of the analytical data.

Accuracy can be expressed as a percentage of the true or reference value, or as percent recovery in analyses where reference materials are not available and spiked samples are analyzed. The equation used to determine percent recovery for spiked samples is:

$$\text{Percent Recovery} = \frac{A-X}{B} \times 100\%$$

Where:

A = Value measured in spiked sample or standard

X = Value measured in original sample

B = True value of amount added to sample or true value of standard

The equation used to determine percent recovery for reference materials is:

$$\text{Percent Recovery} = \frac{A}{B} \times 100\%$$

Where:

A = Value measured in control or reference sample

B = Established concentration of the control or reference sample

Method blank analytical results can reflect systematic bias resulting from contamination of samples during laboratory analysis, and as such, any detected values will be evaluated.

Recovery of 60 to 140 percent is the criterion for sufficient accuracy for this project.

Trip blank analytical results may be evaluated to check for procedural contamination, cross-contamination, and contamination during shipment and storage of samples collected for



volatile organic compounds (VOC) analysis, which includes benzene. Up to one trip blank, filled with analyte-free deionized water and preserved with hydrochloric acid, may be submitted to the project laboratory for each cooler containing samples for analysis for benzene. After their preparation, the trip blank sample containers are not to be opened until the containers have been returned to the laboratory.

3.3 REPRESENTATIVENESS

Representativeness is the degree to which laboratory analytical data accurately and precisely represent conditions in the project area. Representativeness is dependent on sampling and analytical variability and the variability of environmental media. The sampling plan, sample collection techniques, sample handling protocols, analytical methods, and data review procedures have been developed to ensure that the results obtained are representative of conditions at Block 38 West.

3.4 COMPARABILITY

Comparability is a qualitative parameter expressing the confidence with which a data set can be compared with another. Comparability will be maintained through consistent use of the field sampling and laboratory analytical methodologies set forth in the SAP, and through the use of established QA/QC procedures and appropriately trained personnel. In addition, the use of standard methods and procedures for both sample collection and laboratory analysis will make the data collected comparable to internal and other data generated.

3.5 COMPLETENESS

Completeness is defined as a measure of the amount of valid data obtained from an event or investigation compared to the total amount obtained. Completeness (*C*) will be calculated as follows:

$$C = \frac{[(\text{number of acceptable data points}) \times 100]}{(\text{total number of data points collected})}$$

The measurement quality objective for completeness for all components of this project is 95 percent. Data that have been qualified as estimated because the QC criteria were not met will be considered valid for the purpose of assessing completeness. Data that have been qualified as rejected will not be considered valid for the purpose of assessing completeness.

Completeness of 95 percent is the criterion for sufficient completeness for this project.



4.0 DOCUMENTATION AND RECORD KEEPING

Procedures, observations, and test results will be documented for sample collection, laboratory analysis and reporting, and data quality assessment activities. Procedures for documentation of these activities are described in this section.

4.1 FIELD RECORDS

Documentation of field activities will be provided on Field Report forms, Soil Sample Data Log forms, sample and waste material labels, Chain of Custody forms, Soil Disposal Tracking Sheets, and field maps. Documentation generated during the field program will be scanned for electronic archive with hard copies retained in the project file and included in the reports generated, as appropriate.

4.1.1 Field Report Form

Field personnel will be required to keep a daily record of field activities on a Field Report form. Field notes will be as descriptive and inclusive as possible, enabling independent parties to reconstruct the sampling situation from the recorded information. Language will be objective, factual, and free of inappropriate terminology. A summary of daily events will be provided on the Field Report form. At a minimum, field documentation will include the date, job number, project identification and location, weather conditions, sample collection data, personnel present and responsibilities, field equipment used, and any field activities performed during the day. In addition, if other forms or documents such as well-head surveys or maps are completed or used, these documents will be cited in and attached to the Field Report form. Field personnel will sign the completed Field Report form. A copy of the Field Report form is included in Attachment 1.

4.1.2 Soil Sample Data Log Form

A Soil Sample Data Log form will be used to record soil field measurements, observations, and samples collected for analysis. The Soil Sample Data Log form will be completed by the Field Scientist at the time of sample collection. A copy of a Soil Sample Data Log form is included in Attachment 1.

4.1.3 Sample Labels

A sample label is filled out and affixed to appropriate sample containers immediately prior to sample collection. Each sample collected will be assigned a unique sample identifier and number. The sample identifier and number will be filled out in indelible ink and affixed to sample containers immediately prior to sample collection. The sample identifier will be placed on the sample label, Field Report form, and Chain of Custody form. In addition to the sample identifier and number, the sample labels will include the client name, project name and number, date and time of sample collection, sampler's initials, analytical method, and analyte preservative(s).



4.1.4 Chain of Custody Form

The written procedures that are followed whenever samples are collected, transferred, stored, analyzed, or destroyed are designed to create an accurate written record that can be used to trace the possession and handling of the sample from the moment of its collection through analysis and reporting of analytical values. This written record, the Chain of Custody form, will be filled out by the Farallon Field Scientist at the time a sample is obtained. The Farallon Field Scientist will sign and date the Chain of Custody form to relinquish custody of the samples to another party such as the analytical laboratory.

Samples submitted to the laboratory are accompanied by a Chain of Custody form. This form is checked for accuracy and completeness, signed, and dated by the laboratory sample custodian accepting the sample. At the laboratory, each sample is assigned a unique, sequential laboratory identification number that is stamped or written on the Chain of Custody form.

Samples are held under internal chain of custody in the Sample Control room under the appropriate storage conditions (e.g., ambient, refrigeration, frozen). The laboratory Project Manager assigned to a particular client is responsible for tracking the status of the samples throughout the laboratory. Samples are signed out of the Sample Control room in a sample control logbook by the analyst who will prepare the samples for analysis.

The Chain of Custody form includes the client name, project name and number, date and time sampled, sample identifier, sampler's initials, analysis, and analyte preservative(s), if any. A copy of the Chain of Custody form is included in Attachment 1.

4.1.5 Soil Disposal Tracking Sheet

A Soil Disposal Tracking Sheet will be used to document and track the soil excavated and disposed of during the cleanup action. The form will include: the categorization of the soil (Category 2 and Category 3), the source area and depth of the soil disposed as described using the grid system shown on the series of maps with an overlay grid system (Lift Maps) provided in the EMMP, the time the truck transporting the soil departs the site, the name of the trucking company, and the identification number for the truck. A copy of the Soil Disposal Tracking Sheet is included in Attachment 1. Minor modifications may be made to the Soil Disposal Tracking Sheet to satisfy specific project requirements.

4.1.6 Field Maps (Lift Maps)

The EMMP includes Lift Maps that will be used to record the locations for soil samples collected and features related to excavation progress. The locations will be documented on the Lift Maps by the Field Scientist at the time the observation is made and/or sample collection. In addition, Farallon field personnel will track changes in topographic elevations as the excavation progresses and the approximate locations of stockpiled soil segregated by category. The Lift Maps will be updated continually during the cleanup action excavation, and final versions will be maintained in the project files.



4.2 LABORATORY DATA REPORTS

Activities and results associated with analysis of the samples submitted to the analytical laboratory will be documented at the analytical laboratory.

The analytical laboratory will provide analytical results and associated documentation for each sample in a standard data package for each sample delivery group or analytical batch. Each data package will contain the information required for a complete quality assurance review, including the following:

- **Project Narrative.** This summary, presented in a cover letter, will discuss problems (including deviations from applicable laboratory Standard Operating Procedures and this SAP), if any, encountered during analysis. This summary will discuss but not be limited to QC, sample shipment, sample storage, and analytical difficulties. Any actual or perceived problems identified and their resolution will be documented with as much detail as appropriate.
- **Chain-of-Custody Records.** Legible copies of the Chain of Custody forms will be provided as part of the data package. This documentation will include the time of receipt and the condition of each sample received by the laboratory. Additional internal tracking of sample custody by the laboratory also will be documented.
- **Sample Results.** The data package will summarize the results for each sample analyzed. The summary will include the following information, where applicable:
 - Field sample identification and the corresponding laboratory sample identification;
 - Sample matrix;
 - Date of sample extraction;
 - Date and time of analysis;
 - Weight and/or volume used for analysis;
 - Final dilution volume or concentration factor for the sample;
 - The instrument used for analysis;
 - Method detection limits;
 - Method reporting limits;
 - Analytical results with units identified; and
 - Data qualifiers and their definitions.
- **QC Summaries.** This section will contain the results of the laboratory QC procedures. Each QC sample analysis will be documented with the same information required for the sample results (see above). No recovery or blank corrections will be made by the laboratory. The required summaries are listed below; additional information may be requested.



- **Method Blank Analysis.** The method blank analyses associated with each sample and the concentrations of all compounds of interest will be reported.
- **Surrogate Spike Recovery.** Surrogate spike recovery data will be reported. The names of compounds added, percent recoveries, and range of acceptable recoveries will be listed.



5.0 FIELD SCREENING AND SOIL SAMPLING

The procedures for soil field screening and soil sampling are described in this section. Field screening techniques will be used by the Field Scientist to obtain real-time information for guiding the cleanup action excavation activities and the segregation of waste soil for disposal, and for identifying areas for soil sampling. Additional information pertaining to field screening and soil sampling is provided in the EMMP.

Soil sampling will be conducted for purposes of cleanup action excavation performance and protection monitoring. Descriptions of soil sampling procedures are provided in Section 5.2, Soil Sampling.

Field screening and soil sampling data will be documented on appropriate field records, as described in Section 4, Documentation and Record Keeping. Proper personal protective equipment will be used during field screening and soil sample collection per the Health and Safety Plan prepared for Block 38 West.

Four general categories of soil are expected to be encountered during implementation of the cleanup action excavation, as described in the EMMP and summarized below:

- **Category 1 Soil** has no olfactory, visual, or other evidence of contamination (e.g., odor, staining, sheen, elevated photoionization detector readings) and meets criteria for reuse as clean fill or meets acceptance criteria for disposal at a facility or site selected by the excavation subcontractor. Category 1 Soil is not a threat to human health or the environment and can be reused where allowed under other regulations. Areas of Category 1 Soil are indicated by blue-green hatching on the Lift Maps in the EMMP.
- **Category 2 Soil** contains constituents at concentrations not meeting acceptance criteria for the Category 1 Soil disposal facility or for reuse as clean fill off Block 38 West, but meeting acceptance criteria for disposal at the selected Category 2 Soil disposal facility. Category 2 Soil may not contain concentrations of constituents of concern detected in laboratory analyses, but instead could exhibit olfactory, visual, or other evidence of impact. Areas of Category 2 Soil are indicated by yellow shading on the Lift Maps in the EMMP.
- **Category 3 Soil** contains constituents at concentrations exceeding acceptance criteria for disposal at the selected Category 2 Soil disposal facility, but meeting acceptance criteria for disposal at the Category 3 Soil disposal facility. Areas of Category 3 Soil are indicated by orange shading on the Lift Maps in the EMMP.
- **Category 3+ Soil** contains constituents and other material (e.g., wood debris) not meeting acceptance criteria for disposal at the Category 3 Soil disposal facility, but meeting acceptance criteria for disposal at the selected Category 3+ disposal facility. Category 3+ Soil may require pre-treatment by the selected disposal facility prior to disposal. Areas of Category 3+ Soil are indicated by red shading on the Lift Maps in the EMMP.



Lift Maps will be updated continually during the cleanup action excavation to document the extent of the soil categories encountered.

5.1 FIELD SCREENING

Field screening will be performed by the Field Scientist to guide the cleanup action excavation work and to supplement soil sample analytical data, as needed, in identifying extents of the general categories of soil for purposes of soil handling and disposal and regulatory closure under MTCA.

Field screening will consist of any or all of the following:

- Visual and olfactory observations;
- Organic vapor screening; and
- Soil sheen testing.

Results of field screening will be recorded by the Field Scientist on a Field Report form and/or Lift Maps.

Soil sampling procedures for cleanup action excavation performance and confirmation monitoring are discussed in Section 5.2, Soil Sampling.

5.1.1 Visual and Olfactory Observations

Field Scientist visual and olfactory observations will include at a minimum: elevation and soil lift identification, Unified Soil Classification System soil description, estimated soil moisture, physical indications of contamination (e.g., odor, staining), and estimate of percentage of wood debris by volume.

5.1.2 Organic Vapor Screening

Organic vapor screening may be performed by the Field Scientist using a calibrated photoionization detector (PID) for purposes of identifying soil containing VOCs or for health and safety monitoring. A PID reading exceeding ambient or background concentrations indicates potential confirmation of VOC concentrations in a soil sample. Organic vapor screening will be conducted as follows:

- Approximately 100 grams of the soil sample will be sealed in a heavy resealable plastic bag, and care will be taken to leave air (headspace) in the bag for the volatile organic vapors to collect;
- The sealed bag will be shaken to volatilize the contaminants in the soil;
- After waiting approximately 5 minutes, the Field Scientist will insert the PID probe tip into a small opening in the seal at the top of the bag, and the highest PID reading will be recorded on the Soil Sample Data Log form; and



- The bag will be resealed after taking the headspace reading in case further assessment of the sample is needed.

5.1.3 Soil Sheen Test

Soil sheen testing will be performed for purposes of identifying soil containing petroleum hydrocarbons. The Field Scientist will place a soil sample into a clean sample jar and add fresh water. The surface of the water will then be observed for the presence or absence of a sheen in accordance with *Guidance for Remediation of Petroleum Contaminated Sites* dated 2016, prepared by Ecology (2016) (Ecology Guidance), with the following sheen descriptors noted:

- NS – No visible sheen on the water surface.
- SS – Slight (i.e., light, colorless, dull) sheen on the water surface, with irregular non-rapid spread. Natural organic oils or iron bacteria in the soil may produce a slight sheen.
- MS – Moderate (i.e., pronounced over limited area) sheen. Sheen may have some color/iridescence, with irregular and possibly rapid spread, but does not spread over entire water surface.
- HS – Heavy sheen with pronounced color/iridescence and rapid spread, with the sheen covering the entire water surface.

Decaying organic matter and/or iron bacteria can produce a rainbow-like sheen similar to an oil sheen. However, these sheens typically can be broken up when agitated or disturbed, unlike oil sheens, which can be iridescent.

5.2 SOIL SAMPLING

The cleanup action excavation provides for compliance monitoring soil sampling in accordance with WAC 173-340-410 to document the effectiveness of the cleanup action excavation. The following sections summarize the methodology for compliance monitoring to be conducted as performance soil sampling and confirmation soil sampling, as described in the EMMP. Performance soil sample results will be used to identify the limits of the cleanup action excavation and may also be used, as needed, to document compliance of soil with waste profiles approved by selected disposal facilities. Confirmation soil sampling results will confirm compliance with cleanup objectives identified in the EMMP, to the extent practicable, at the limits of the cleanup action excavation. Data pertaining to soil sampling will be recorded by the Field Scientist on a Field Report form, a Soil Sample Data Log form, and/or Lift Maps. Soil sampling methodology is discussed in Section 6, Sample Handling and Chain-of-Custody Procedures.

5.2.1 Performance Soil Sampling

Performance soil sampling will involve collecting discrete in-situ soil samples for laboratory analysis. Performance soil samples generally will be collected from test pits excavated by a track-hoe in advance of mass excavation and at the direction of the Field Scientist. Performance soil



samples may in some cases be used for confirmation soil samples when data indicate that cleanup objectives identified in the EMMP have been attained.

The frequency and location of performance soil sampling will be dependent on the sampling data available at that time and results of field screening described in Section 5.1, Field Screening, and at the discretion of the Field Scientist. Performance soil sample locations and elevations will be measured using a geographic positioning system or by a construction land surveyor, and will be clearly indicated on the Lift Maps.

Lift Maps will be updated continually with results of field screening and performance soil sampling, and will be used for planning of additional performance soil sampling, to minimize the amount of contaminated soil requiring off-site disposal, and to minimize the amount of soil requiring off-site disposal at a higher cost. If soil contamination is confirmed in a Lift Map grid area, the grid area may be divided further into subareas and additional performance samples collected to assess the lateral extent of contamination, as needed. The frequency of performance soil sampling may be higher near the lateral and vertical limits of the cleanup action excavation to confirm that cleanup objectives are attained.

5.2.2 Confirmation Soil Sampling

Confirmation soil sampling will be conducted once performance soil sampling results indicate the excavation is approaching the lateral and vertical limits of Contaminated Soil. Confirmation soil sampling will consist of collecting and analyzing in-situ soil samples from the base and sidewalls of the excavation to confirm that no constituents of concern are present at concentrations exceeding their respective cleanup levels. Performance soil sampling locations will be used as confirmation soil sampling points in cases where analytical results for the performance soil samples confirm that cleanup levels have been attained.

5.2.3 General Field Procedures

Soil samples will be collected and handled in accordance with the general procedures listed below:

- Don a new pair of powder-free nitrile gloves prior to collecting each individual soil sample to avoid potential cross-contamination.
- Collect soil samples directly from the top 6 inches of exposed surface of the sidewalls and/or bottom of the cleanup action excavation, unless otherwise directed by the Farallon Project Manager or Field Coordinator, using decontaminated stainless steel sampling tools or sampling kits specific to the U.S. Environmental Protection Agency (EPA) Method 5035A sampling protocol to analyze for VOCs (as applicable). If sampling personnel are not allowed into the excavation area due to health and safety concerns, samples can be collected directly from the excavator bucket, taking care to collect soil from the center of the bucket and not to collect soil samples that have come in contact with the excavator bucket. Samples collected for laboratory analyses should only come into contact with decontaminated stainless steel equipment or laboratory certified-clean sample containers.



- If VOC analyses are to be conducted, fill VOC-specific sampling vials as soon as possible from the excavator bucket or exposed soil to minimize volatilization of VOCs. VOC samples will be prepared in accordance with the EPA Method 5035A sampling protocol for VOCs in soil. This method entails collection of approximately 5 grams of a representative soil sample using a dedicated sampling tool from target locations into a standard 40-milliliter, septum-sealed, threaded screw-capped glass vial containing a laboratory-provided preservative.
- For all other analyses, transfer the soil immediately to an 8-ounce, laboratory-supplied and certified-clean sampling container using a decontaminated stainless steel spoon. Care will be taken not to handle the seal or the inside cap of the container when placing the sample into the container. The container will be filled to eliminate headspace and the seal/cap will be secured. Non-dedicated sampling equipment will be decontaminated between uses, as appropriate.
- Place soil sample containers into a cooler chilled to approximately 4 degrees Celsius immediately upon collection.
- Record the following information, at a minimum, on the Soil Sample Data Log form during sampling: sample identification, sample depth, Unified Soil Classification System soil description, soil moisture, and physical indications of contamination (e.g., visual observations, PID readings).
- Label the sample container with the client name, project name and number, date and time sampled, sample identification, sampler's initials, analysis, and analyte preservative(s), if any.
- Log the sample on a Chain of Custody form and place into a cooler on ice for transport to the laboratory under standard chain-of-custody protocols. The Chain of Custody form will clearly indicate that each sample is to be thoroughly homogenized by the laboratory.
- Discard of all disposable sampling and health and safety supplies and equipment in an appropriate waste dumpster on Block 38 West.
- Deliver soil samples to the analytical laboratory as soon as possible after sampling in order for the laboratory to analyze the samples within regulatory holding times as described in Section 7, Sample Analysis.

5.2.4 Sample Designation

Each soil sample collected during the cleanup action will be assigned a unique sample identifier. The soil sample identifier will be filled out in indelible ink on sample labels affixed to appropriate containers immediately prior to sample collection.

Soil samples collected from interior portions of the excavation will be assigned a unique sample identifier that will include the components listed below:

- Lift Map grid designation (e.g., A2);



- Grid quarter designation, as appropriate:
 - Northwest (NW)
 - Northeast (NE)
 - Southeast (SE)
 - Southwest (SW)
 - Center (C);
- Elevation of the surface soil sample in feet above mean sea level (msl); and
- Sampling date (e.g., MMDDYY).

For example, the soil sample collected from the northwestern portion of grid square G2 at 15 feet above msl on October 30, 2019 would be assigned the sample identifier G2-NW-15-103019.

Soil samples collected from the sidewalls of the excavation will include a designation of WL before the grid number. For example, the soil sample collected from the southwestern sidewall of grid G2 at 15 feet above msl on October 30, 2019 would be assigned the sample identifier WLG2-SW-15-103019.

5.3 QA/QC SAMPLES

QA/QC samples will be used to evaluate sample heterogeneity, laboratory homogenization procedures, and the potential for cross-contamination for volatile constituents, as appropriate and directed by the Farallon Project Manager. Field QA/QC samples will be documented on the Field Report forms and may include the collection of temperature blanks and trip blanks (for VOC samples). A description of the QA/QC samples that may be used for Block 38 West is provided in the following sections.

5.3.1 Trip Blanks

Analyses of trip blanks are performed to evaluate outside contributions of VOCs during transport of the sample containers to and/or from the laboratory. A trip blank is prepared by the laboratory and included in each sample cooler containing samples for analysis for VOCs.

5.3.2 Temperature Blanks

One temperature blank will be included in each cooler in which samples are stored and/or shipped. A temperature blank is prepared by the analytical laboratory and is prepared by pouring distilled/deionized water into a vial and tightly closing the lid.

5.3.3 Laboratory Duplicate Samples

OnSite will provide one laboratory duplicate result for each analysis within each analytical laboratory report. The laboratory duplicate samples used will either be taken from the laboratory-



homogenized samples collected from Block 38 West or from other samples analyzed within that sample batch at the laboratory.



6.0 SAMPLE HANDLING AND CHAIN-OF-CUSTODY PROCEDURES

This section discusses the sample handling and chain-of-custody procedures to be used during the cleanup action excavation. Analytical method-specific containers, preservation, and holding times are summarized in Section 7.1, Analytical Methodology.

6.1 SAMPLE PACKAGING AND SHIPMENT

Samples shipped for laboratory analysis will be packaged according to applicable regulations and the recommendations of the laboratory performing the analysis. Performance and confirmation soil samples will be transported by courier or by Farallon staff to the analytical laboratory within 1 working day of sample collection.

The following procedures (representing the minimum shipping and handling requirements) will be used for sample packaging:

- Bubble-wrap bags or an equivalent will be used to protect glass sample containers.
- Sample containers will be placed upright into a cooler and checked against the Chain of Custody form to ensure that all samples are listed and placed into the correct cooler.
- One copy of the Chain of Custody form will be detached and retained by the Farallon Field Scientist for submittal to the Farallon Project Manager with the daily field notes.
- Remaining paperwork will be sealed in a resealable plastic bag and taped to the inside of the cooler lid.
- One to three resealable bags will be filled with ice and included in the cooler. All ice will be double-bagged in heavy-duty bags.
- The cooler will be sealed with a chain-of-custody seal.
- The cooler will be taped shut using shipping tape.
- Extraneous stickers will be removed from the cooler.

6.2 CHAIN-OF-CUSTODY PROCEDURES

An important component of data collection is the ability to demonstrate that samples were obtained from the stated locations and that samples reached the laboratory or archive location without alteration. Evidence of collection, shipment, laboratory receipt, and laboratory custody until disposal or archive must be properly documented. Documentation will be accomplished through a Chain of Custody form that documents each sample and identifies the individuals responsible for sample collection, shipment, and receipt. A sample is considered in one's custody if at least one of the following criteria is met:

- The sample is in a person's actual possession or view;



- The sample is placed in a container and secured with an official seal (signed and dated by the custodian) such that the sample cannot be reached without the seal being broken;
- The sample is locked and only accessible by the custodian after having been in the person's actual possession; or
- The sample is in a secured area, restricted to authorized personnel (e.g., laboratory).

A laboratory typically will not accept samples for analysis without a correctly prepared Chain of Custody form. The Chain of Custody form must be signed by each individual who has the sample in his/her custody. A Chain of Custody form is to be prepared for each sample shipped to a laboratory for analysis. Information on this form correlates with other supporting documentation, including sample labels and sample collection logs.

The Chain of Custody form accounts for the elapsed time and custodians of the sample from the time of its collection. The individuals who have physically handled the sample or witnessed initial sample collection and packaging (e.g., a sample team member) must be identified on the form. A sample team member relinquishes the sample by signing the Chain of Custody form. Individuals who either relinquish or receive samples must include their complete names, company affiliation, and the date and time the samples were relinquished and received. The times the samples are relinquished and received by the next custodian should coincide, with the exception of transfer by commercial carriers. Commercial carriers will not be required to sign the Chain of Custody form; however, their waybill or shipment tracking number must be included on the Chain of Custody form as described below.

If a sample is to be stored for a period of time (e.g., overnight), measures are to be taken to secure the sample container in a manner that provides only the custodian of record with access. If samples are relinquished to a commercial carrier (e.g., UPS, Federal Express), the carrier waybill or shipment tracking number will be recorded and a copy of the waybill will be attached to the Chain of Custody form. These documents are maintained with other field documentation. The original Chain of Custody form will be sealed inside the shipping container with the samples.

If a correction is made to the Chain of Custody form, the correction should be made by the originator of the change, who will draw a single line through the error; initial and date the correction; and, if necessary, provide an explanation of the change. The documentation should have sufficient detail to clearly document the change to a third-party reviewer.



7.0 SAMPLE ANALYSIS

This section summarizes analytical laboratory methodology. OnSite has been selected as the analytical laboratory for this project. OnSite is Ecology-certified and meets Ecology and EPA QA/QC requirements.

7.1 ANALYTICAL METHODOLOGY

Analytical methods for performance and/or confirmation soil samples for constituents of concern for the cleanup action identified in the Cleanup Action Plan include:

- Total petroleum hydrocarbons as diesel-range organics and as oil-range organics by Northwest Method NWTPH-Dx;
- Total petroleum hydrocarbons as gasoline-range organics by Northwest Method NWTPH-Gx;
- Benzene by EPA Method 8021B;
- Total carcinogenic polycyclic aromatic hydrocarbons (cPAHs) by EPA Method 8270D/SIM; and
- Total naphthalenes (a sum of naphthalene, 2-methylnaphthalene, and 1 methylnaphthalene) and cPAHs by EPA Method 8270D/SIM.

Farallon may perform additional laboratory analyses if unforeseen conditions are encountered (e.g., a previously unknown area of soil contamination is discovered) during the cleanup action excavation in order to adequately assess the soil for disposal. Any additional analysis of soil samples will be conducted in accordance with the sampling requirements described in MTCA (Table 830-1 of WAC 173-340-900).

Although the soil sample analytical turnaround times will vary depending on the cleanup action excavation schedule, most performance and confirmation soil samples will require expedited turnaround times to prevent potential construction delays.

Analytical method containers, preservation, and holding times for the planned analytical methods include the following:

- Total petroleum hydrocarbons as diesel-range organics and as oil-range organics by Northwest Method NWTPH-Dx:
 - Sample container: one 4-ounce, laboratory-supplied, clear wide-mouth jar;
 - Preservation: chilled to less than 6 degrees Celsius;
 - Holding time: 14 days to extraction and 40 days to analyze after extraction; and
 - Standard turnaround time: 5 working days.



- Total petroleum hydrocarbons as gasoline-range organics by Northwest Method NWTPH-Gx:
 - Sample container: one 4-ounce, laboratory-supplied, clear wide-mouth jar;
 - Preservation: chilled to less than 6 degrees Celsius;
 - Holding time: 14 days to analyze; and
 - Standard turnaround time: 5 working days.
- Benzene by EPA Method 8021B:
 - Sample containers: one 40-milliliter laboratory-supplied volatile organic analysis container without a stir bar; one 4-ounce, clear wide-mouth jar;
 - Preservation: chilled to less than 6 degrees Celsius;
 - Holding time: 14 days to analyze; and
 - Standard turnaround time: 5 working days.
- Total naphthalenes and cPAHs by EPA Method 8270D/SIM:
 - Sample container: one 4-ounce, laboratory-supplied, clear wide-mouth jar;
 - Preservation: chilled to less than 6 degrees Celsius;
 - Holding time: 14 days to extraction and 40 days to analyze after extraction; and
 - Standard turnaround time: 7 working days.

With laboratory pre-approval, it may be possible to collect one sample container for more than one analysis. If additional analyses are to be conducted for unforeseen conditions, contact the laboratory for specifics of the methods regarding containers, preservation, holding times, and standard turnaround times.

Reporting limits will be the analytical laboratory's practical quantitation limits, which are the lowest concentrations that can be reliably measured during routine laboratory operation conditions using approved methods.

Farallon will obtain analytical results from the laboratory in electronic format and the data will undergo a QA/QC review at the time of receipt by the Farallon QA/QC Manager. The analytical results will be compiled into the Farallon project database by the Farallon Data Manager, and plotted on draft Lift Maps as needed. Updated Lift Maps will be used to evaluate whether sufficient performance and/or confirmation soil samples have been collected to meet the requirements of MTCA and the Ecology Guidance.

7.2 ANALYTICAL LABORATORY QUALITY CONTROL CHECKS

Internal analytical laboratory QC checks will be used to monitor data integrity. These checks will include method blanks, internal standards, surrogate standards, and calibration standards.



Surrogate recoveries will be evaluated using laboratory control limits. Laboratory control charts will be used to determine long-term instrument trends.

Results of QC samples from each sample group will be reviewed by the laboratory immediately following sample group analysis. The QC sample results will then be evaluated to determine whether control limits have been exceeded. If control limits are grossly exceeded in the sample group, the Farallon QA/QC Manager will be contacted immediately and a corrective action (e.g., method modifications followed by reprocessing of the affected samples) will be initiated prior to processing a subsequent group of samples.

The primary chemical standards and standard solutions used in this project will be traceable to the National Institute of Standards and Technology, the Environmental Resource Associates, the National Research Council of Canada, or other documented and reliable commercial sources. Standards will be validated to determine their accuracy by comparison with an independent standard. Any impurities identified in a standard will be documented.

7.2.1 Method Blanks

Method blanks are analyzed to assess possible laboratory contamination at all stages of sample preparation and analysis. The method blank for analyses must be less than the method reporting limit of any single target analyte or compound. If a method blank exceeds this criterion for any analyte or compound and the concentration of the analyte or compound in the samples is less than 5 times the concentration found in the method blank (10 times for common contaminants), analysis must stop, and the source of contamination must be eliminated or reduced.

7.2.2 Surrogate Spikes

Surrogates are compounds that are unlikely to occur under natural conditions and have properties similar to the analytes of interest. Surrogates are added to the samples prior to purging or extraction and are used primarily for organic samples analyzed by gas chromatography and/or mass spectrometry methods. The surrogate spike provides broader insight into the proficiency and efficiency of an analytical method on a sample-specific basis. This control reflects analytical conditions that may not be attributable to the sample matrix. The project samples and associated sample QC to be analyzed by organic methods will be spiked with appropriate surrogate compounds as defined in the analytical methods.

7.2.3 Calibration Check Standards

Calibration check standards analyzed within a particular analytical series provide information regarding instrument stability and validate instrument calibration. The analytical frequency of calibration check standards is specified by the analytical method.

7.3 LABORATORY DELIVERABLES

The analytical laboratory will provide analytical results and associated documentation for each sample in a data package for each sample delivery group or analytical batch as specified in Section



4.2, Laboratory Data Reports. Laboratory data requested on expedited turnaround times may be submitted as draft results, with the final analytical data package and electronic deliverables to follow within a turnaround time of 1 business day from the time of sample receipt at the laboratory for performance and confirmation soil samples.



8.0 REFERENCE

Washington State Department of Ecology (Ecology). 2016. *Guidance for Remediation of Petroleum Contaminated Sites*. (Revised.) Publication No. 10-09-057. Washington State Department of Ecology Toxics Cleanup Program. June.

**ATTACHMENT 1
FIELD FORMS**

SAMPLING AND ANALYSIS PLAN
Block 38 West Property
500 through 536 Westlake Avenue North
Seattle, Washington

Farallon PN: 397-019



Soil Sample Data Log

Date: _____ Project Name: _____ Farallon P/N: _____

PID Model & Serial No: _____ Calibration Date/Standard: _____

- Headspace Container:** 16 oz glass 8 oz glass Zip-loc Other
Sample Method: Hand auger Direct push Split spoon Corer Other
Equip Decon: Tap water wash DIST/DEION 1 Rinse Isopropanol Analyte-free final rinse Tap water final rinse
 Alconox wash Liquinox Wash DIST/DEION 2 rinse Other solvent DIST/DEION final rinse Air Dry

Test Pit/Boring Location	Sample ID	Time	Depth	PID	Odor	Sheen Tare Weight	Staining Field Weight	Containers	Lithological Description Remarks

2 oz = two-ounce jars
 4 oz = four-ounce jars



**OnSite
Environmental Inc.**

14648 NE 95th Street
Redmond, WA 98052
(425) 883-3881

Client _____

Project _____

Sample ID _____

Date _____ Time _____

Analysis _____ Preservative _____

