

## **ADDENDUM TO FOCUSED FEASIBILITY STUDY AND DISPROPORTIONATE COST ANALYSIS REPORT**

**LAKEVIEW FACILITY  
2800 104<sup>TH</sup> STREET COURT SOUTH  
LAKEWOOD, WASHINGTON  
VCP IDENTIFICATION NO. SW1012**

**Submitted by:  
Farallon Consulting, L.L.C.  
975 5<sup>th</sup> Avenue Northwest  
Issaquah, Washington 98027**

**Farallon PN: 188-002**

**For:  
Woodworth Capital, Inc.  
3110 Ruston Way, Suite D  
Tacoma, Washington 98402**

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Prepared by:



Brani Jurista, L.G., P.G.  
Senior Geologist



Reviewed by:



Peter Jewett, L.G., L.E.G.  
Principal Engineering Geologist



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## ACRONYMS AND ABBREVIATIONS

Addendum	<i>Addendum to Focused Feasibility Study and Disproportionate Cost Analysis Report, Lakeview Facility, 2800 104<sup>th</sup> Street Court South, Lakewood, Washington</i> dated August 3, 2018, prepared by Farallon Consulting, L.L.C. (this report)
AOC	Area of Concern
bgs	below ground surface
cPAHs	carcinogenic polycyclic aromatic hydrocarbons
DCA	Disproportionate Cost Analysis
DRO	total petroleum hydrocarbons as diesel-range organics
Ecology	Washington State Department of Ecology
EPA	U.S. Environmental Protection Agency
Farallon	Farallon Consulting, L.L.C.
FFS	Focused Feasibility Study
FFS/DCA Report	<i>Focused Feasibility Study and Disproportionate Cost Analysis Report, Lakeview Facility, 2800 104<sup>th</sup> Street Court South, Lakewood, Washington</i> dated April 14, 2015, prepared by Farallon
mg/kg	milligrams per kilogram
µg/l	micrograms per liter
MTCA	Washington State Model Toxics Control Act Cleanup Regulation
ORO	total petroleum hydrocarbons as oil-range organics
PCBs	polychlorinated biphenyls
PID	photoionization detector
RI/FS Report	<i>Remedial Investigation/Feasibility Study Report, Woodworth &amp; Company, Inc., Lakeview Facility, 2800 104<sup>th</sup> Street South, Lakewood, Washington</i> 98499 dated August 19, 2009, prepared by Farallon
Lakeview Facility	property at 2800 104 <sup>th</sup> Street Court South in Lakewood, Washington
TEC	total toxicity equivalency method as presented in Section 708(9) of Chapter 173-340 of the Washington Administrative Code
TCE	trichloroethene
VCP	Voluntary Cleanup Program
VOCs	volatile organic compounds
WAC	Washington Administrative Code



Work Plan

the scope of work presented in the Sampling Work Plan, the Addendum to the Sampling Work Plan, and the Revised Addendum to the Sampling Work Plan prepared by Farallon

WSDOT

Washington State Department of Transportation



## 1.0 INTRODUCTION

Farallon Consulting, L.L.C. (Farallon) has prepared this Addendum to the Focused Feasibility Study and Disproportionate Cost Analysis Report (Addendum) to provide results of the supplemental subsurface investigation and groundwater monitoring required by the Washington State Department of Ecology (Ecology) to fill data gaps for selection of the final cleanup action alternative and meet the technical requirements for a No Further Action determination for the property at 2800 104<sup>th</sup> Street Court South in Lakewood, Washington (herein referred to as the Lakeview Facility) (Figure 1). This Addendum supplements the information presented in the *Focused Feasibility Study and Disproportionate Cost Analysis Report, Woodworth & Company, Inc., Lakeview Facility, 2800 104<sup>th</sup> Street Court South, Lakewood, Washington 98499* dated April 14, 2015, prepared by Farallon (2015) (FFS/DCA Report). The information obtained from the supplemental subsurface investigation and groundwater monitoring documented in this Addendum was collected and evaluated by Farallon in accordance with the following documents reviewed and approved by Ecology (2017c):

- Sampling and Analysis Work Plan, Lakeview Facility, 2800 104<sup>th</sup> Street Court South, Lakewood, Washington dated September 25, 2017, prepared by Farallon (2017b);
- Letter regarding Addendum to Sampling and Analysis Work Plan, Woodworth Lakeview Facility Remediation, 2800 104<sup>th</sup> Street Court South, Lakewood, Washington dated October 30, 2017, from Messrs. Brani Jurista and Peter Jewett of Farallon to Mr. Jeremy Hughes of Ecology (Farallon 2017c); and
- Letter regarding Revised Addendum to Sampling and Analysis Work Plan, Woodworth Lakeview Facility Remediation, 2800 104<sup>th</sup> Street Court South, Lakewood, Washington dated November 3, 2017, from Messrs. Jurista and Jewett of Farallon to Mr. Hughes of Ecology (Farallon 2017d).

The scope of work presented in these three documents is herein collectively referred to as the Work Plan. The results of the supplemental subsurface investigation and groundwater monitoring presented in this Addendum are to be used in conjunction with the FFS/DCA Report.

### 1.1 PURPOSE AND OBJECTIVE

This Addendum has been prepared to fill data gaps identified by Ecology to provide sufficient information to enable the evaluation and selection of the final cleanup action for areas of the Lakeview Facility where concentrations of hazardous substances in soil and groundwater exceed cleanup standards under the Washington State Model Toxics Control Act Cleanup Regulation (MTCA), as established in Chapter 173-340 of the Washington Administrative Code (WAC 173-340). The data gaps addressed by the supplemental subsurface investigation and groundwater monitoring are summarized in Section 3.1, Data Gaps.

The objective of the work summarized in this Addendum is to meet the technical requirements for a No Further Action determination for the Lakeview Facility under the Ecology Voluntary Cleanup Program (VCP) Identification No. SW1012.



## 1.2 ORGANIZATION

This Addendum has been organized into the following sections:

- **Section 2, Background**, provides a description of the Lakeview Facility and its location, constituents of concern, and a summary of previous environmental investigations and cleanup actions conducted to date.
- **Section 3, Supplemental Subsurface Investigation and Groundwater Monitoring**, defines the data gaps for which the scope of work was conducted, including a description of the field program for supplemental subsurface investigation and groundwater monitoring.
- **Section 4, Results**, presents a summary of the results for soil samples analyzed for the supplemental subsurface investigation and groundwater samples collected during the groundwater monitoring for each area investigated.
- **Section 5, Revised Vapor Intrusion Assessment**, summarizes the results of the revised vapor intrusion assessment to evaluate whether indoor air is a medium of concern under an industrial exposure scenario in the portion of the Lakeview Facility impacted by trichloroethene (TCE).
- **Section 6, Revised Technical Elements for Cleanup Action**, summarizes revised technical elements for the cleanup action, including identification of constituents of concern, media of concern, and cleanup standards, including defining cleanup levels and points of compliance.
- **Section 7, Recommended Cleanup Alternative**, revisits the recommended cleanup alternative for the Lakeview Facility and presents the revised monitoring plan for the recommended cleanup alternative.
- **Section 8, Bibliography**, lists the documents used during the preparation of this Addendum.
- **Section 9, Limitations**, describes Farallon's standard limitations.



## 2.0 BACKGROUND

The Lakeview Facility is located north of Washington State Route 512, east of Interstate 5, and west of Sales Road South in Lakewood, Pierce County, Washington (Figures 1 and 2). The Lakeview Facility consists of Tacoma-Pierce County Parcel Nos. 0319061135, 0319061142, 0319062075, 0319062076, and 0319062081, which together total approximately 60 acres of land (Pierce County 2018). Former uses of the Lakeview Facility included sand and gravel mining, asphalt production, stockpiling, and permitted thermal desorption treatment of petroleum-contaminated soil.

The Lakeview Facility currently is used for recycling imported asphalt and concrete debris and for producing hot- and cold-mix asphalt. Other former and current uses have included the parking and maintenance of trucks and construction and paving equipment owned and operated by the former owner Woodworth & Company, Inc. and current owner Miles Resources, Inc. Structures on the Lakeview Facility include an asphalt-processing plant, a truck maintenance shop building, a Quonset building used for the shredding and recycling of asphalt shingles, and several small sheds and job-site trailers used for storage, office space, or maintenance activities (Figure 2). Details pertaining to the Lakeview Facility and adjacent properties background and uses are provided in the FFS/DCA Report.

The *Remedial Investigation/Feasibility Study Report, Woodworth & Company, Inc., Lakeview Facility, 2800 104<sup>th</sup> Street South, Lakewood, Washington 98499* dated August 19, 2009, prepared by Farallon (2009) (RI/FS Report), identified TCE, arsenic, lead, and total petroleum hydrocarbons as diesel-range organics (DRO) and as oil-range organics (ORO) as constituents of concern in soil and/or groundwater at the Lakeview Facility. Releases of TCE to soil and groundwater are attributable to historical operations and practices in the reported vicinity of a former Washington State Department of Transportation (WSDOT) mobile testing laboratory. Releases of DRO and ORO to soil and groundwater were associated with historical truck maintenance activities performed at the Lakeview Facility according to Woodworth. Arsenic and lead were detected in groundwater in the area of reported former stockpiling and landfilling of foundry waste material and concrete slurry.

Figure 2 shows the locations of areas where TCE, DRO, or ORO have been detected at concentrations exceeding cleanup levels on the Lakeview Facility. Cleanup actions were evaluated and selected in the RI/FS Report that was reviewed and approved by Ecology (2010; 2011a), and were implemented between 2010 and 2014 under the VCP.

The cleanup action conducted in 2010 included excavation and off-site disposal of soil with concentrations of DRO and ORO in the Equipment Storage Carport Area (formerly referred to as Area of Concern [AOC] 1), Equipment Parking Area (formerly referred to as AOC 2), and Former Recycled Stockpile Area (formerly referred to as AOC 3) (Figure 2).

The cleanup action conducted from 2010 to 2014 included air sparging and soil vapor extraction to reduce concentrations of TCE in groundwater in the area identified as the Former Asphalt-Testing Laboratory Area (formerly referred to as AOC 4) (Figure 2). Groundwater monitoring has occurred



over the past decade, including the area identified as the Arsenic and Lead Plume in Groundwater Area (formerly referred to as AOC 5) (Figure 2).

Two groundwater-bearing zones separated by a discontinuous layer of sandy silt and silty gravel leaky aquitard that is up to 30 feet thick at some portions of the Lakeview Facility were identified during the remedial investigation and subsequent cleanup actions. A shallow water-bearing zone that ranges in thickness from 8 to 20 feet and that appears to be discontinuous under predominantly perched conditions and largely unconfined was encountered at depths ranging from approximately 5 to 40 feet below ground surface (bgs). The large range in depth to groundwater is due to variations in topography across the Lakeview Facility. A deep water-bearing zone that ranges in thickness from 46 to 60 feet and transitions from confined conditions in the east to unconfined conditions on the central portion of the Lakeview Facility was encountered at depths ranging from approximately 28 to 72 feet bgs.

A deeper aquitard consisting of silt and silty gravel was encountered at the base of the deep water-bearing zone in a number of monitoring wells. This aquitard generally separates the deep water-bearing zone from a regional aquifer that provides water for the water-supply well used for industrial processes at the Lakeview Facility.



### **3.0 SUPPLEMENTAL SUBSURFACE INVESTIGATION AND GROUNDWATER MONITORING**

A summary of the data gaps, the scope of work for the supplemental subsurface investigation and groundwater monitoring, and results are presented below.

#### **3.1 DATA GAPS**

Ecology (2017a; 2017b) determined that the FFS/DCA Report did not provide sufficient information for the evaluation and selection of the final cleanup action alternative under MTCA. Ecology (2017a; 2017b) identified the following data gaps that required additional investigation:

- An evaluation of the presence of DRO, ORO, polychlorinated biphenyls (PCBs), and carcinogenic polycyclic aromatic hydrocarbons (cPAHs) in soil in the Equipment Storage Carport Area, Equipment Parking Area, and Former Recycled Stockpile Area that had previously undergone cleanup action were not fully delineated;
- There was insufficient information to determine whether DRO, ORO, PCBs, and cPAHs have been released in the areas identified as the Former Asphalt-Testing Laboratory Area, Asphalt Plant Area, Hot-Mix Storage Area, and Tack Tank Area;
- The current nature and extent of volatile organic compounds (VOCs) in soil and groundwater in the Former Asphalt-Testing Laboratory Area were not fully delineated;
- There was insufficient information to determine whether natural attenuation of TCE in groundwater is occurring;
- No data were available to determine whether the solvent stabilizer 1,4-dioxane is in groundwater;
- There was insufficient information to determine whether there is potential migration of VOCs from sources off the Lakeview Facility;
- There was insufficient data to evaluate whether water extracted from the industrial water supply well for the Lakeview Facility contains VOCs;
- Additional information was necessary to determine the geochemistry affecting the mobilization of arsenic and lead in groundwater; and
- An evaluation of the vapor intrusion assessment to reflect the industrial exposure scenario had not been completed.

A scope of work for supplemental subsurface investigation was conducted in accordance with the Work Plan. The field investigation was conducted in November 2017 and groundwater monitoring was conducted in December 2017 to collect additional information required by Ecology to fill data gaps and support evaluation and selection of the final cleanup action alternative for the Lakeview Facility.





## 3.2 FIELD PROGRAM

The field investigation conducted in November 2017 included advancement of 11 borings for the collection of soil samples and installation of one temporary monitoring well for the collection of a reconnaissance groundwater sample (Figure 3). Prior to conducting the field work, Farallon prepared a site-specific Health and Safety Plan for the field work in accordance with the U.S. Occupational Safety and Health Administration, Part 1910.120 of Title 29 of the Code of Federal Regulations, and WAC 296-62. A public utility locating service was requested after Farallon completed a preliminary site walk and marked the boring locations.

Prior to drilling, a conductible private utility location survey was conducted by Applied Professional Services, Inc. of North Bend, Washington. Boring locations were additionally cleared to depths ranging from 3 to 5 feet bgs by a hand auger or an air-knife tool operated by a vacuum truck to further assess the boring locations for potential underground utilities and collect shallow soil samples.

Borings and a temporary monitoring well were advanced to depths ranging from approximately 5.3 to 21 feet bgs using a limited-access, track-mounted hollow-stem-auger drill rig and a full-size hollow-stem-auger drill rig operated by Holocene Drilling Inc. of Puyallup, Washington. Boring locations were consistent with the locations presented in the Work Plan and included advancing boring B-10 in the Equipment Parking Area, boring B-11 in the Tack Tank Area, boring B-12 in the Equipment Storage Carport Area, borings B-13 through B-17 and boring B-20 in the Former Asphalt-Testing Laboratory Area, boring B-18 in the Asphalt Plant Area, boring B-19 in the Hot-Mix Storage Area, and a boring and temporary monitoring well MW-24T in the Former Recycled Stockpile Area (Figures 3 through 6).

Temporary monitoring well MW-24T was installed at the closest possible accessible location, approximately 20 feet west of the former location of monitoring well MW-24, because this area has already undertaken reclamation by the filling of more than 20 feet of fill with steep slope above the monitoring well MW-24 wellhead monument. Detailed plans and cross-sections depicting the mining reclamation plan and estimated elevation of fill following completion of the reclamation are provided in Appendix A. Monitoring well MW-24 is abandoned and could not be accessed for sampling. Details pertaining to the installation and groundwater sampling of temporary monitoring well MW-24T are provided in Section 4.6, Former Recycled Stockpile Area.

Soil samples were collected at 2.5-foot intervals unless a specific depth for soil samples was required by the Work Plan. Soil samples were collected at selected depths based on subsurface geology and field-discernable olfactory, visual, or other evidence of contamination (e.g., odor, staining, sheen, elevated photoionization detector [PID] readings). Soil samples were classified in accordance with ASTM International standards and collected in accordance with U.S. Environmental Protection Agency (EPA) standard protocols.

Soil samples were collected directly into laboratory-prepared containers, placed on ice in a cooler, and transported to OnSite Environmental Inc. of Redmond, Washington (OnSite) for laboratory analysis under standard chain-of-custody procedures within 24 hours of collection. Soil samples





were selected for laboratory analysis in accordance with the Work Plan and based on visual and olfactory evidence of potential contamination, PID field-screening results, and subsurface geology.

Soil samples were analyzed for one or more of the following:

- DRO and ORO by Northwest Method NWTPH-Dx;
- cPAHs by EPA Method 8270D/SIM;
- PCBs by EPA Method 8082A; and
- VOCs by EPA Method 8260C.

Information recorded on the boring logs included soil types encountered, visual and olfactory evidence of potential contamination, and PID volatile organic vapor screening results. The boring logs are provided in Appendix B.

Each boring was abandoned using hydrated bentonite after completion of soil sampling, and in the case of temporary monitoring well MW-24T in the Former Recycled Stockpile Area, after removing the temporary well casing. The surface was patched using either concrete or asphalt to match the existing surface material.

Non-dedicated field sampling equipment was cleaned and decontaminated between uses. Soil cuttings, decontamination water, and purge water generated during the drilling and sampling activities were placed into sealed and labeled 55-gallon drums. Drums containing soil cuttings are stored on the Lakeview Facility pending waste profiling and proper disposal.

Soil sample locations, analyses, and results for each target area evaluated during the supplemental subsurface investigation are described in Section 4.0, Results.

Farallon Field Staff conducted groundwater monitoring and sampling of previously installed monitoring, soil vapor extraction, and air sparge wells in accordance with the Work Plan. Wells were located throughout the Lakeview Facility by means of a hand-held Global Positioning System unit, a magnetometer, and site photographs and maps. Hand tools were used to uncover wells that have been buried or affected by changing site conditions, to the extent practicable. Wells that were planned to be sampled in accordance with the Work Plan and could not be accessed due to overburden or being paved over included monitoring wells MW-6, MW-11, MW-22, and MW-24 and remediation wells SVE-7, SVE-10, SVE-11, AS-4, AS-9, and AS-10 (Figure 2).

A comprehensive list of wells that were sampled for various analytes in accordance with the Work Plan and the reasons for inability to conduct sampling at wells that could not be located or accessed are referenced in Table 1. Groundwater samples were analyzed for one or more of the following:

- DRO and ORO by Northwest Method NWTPH-Dx;
- VOCs by EPA Method 8260C;



- 1,4-dioxane by EPA Method 8270D/SIM;
- Arsenic and lead by EPA Method 200.8;
- Nitrite and nitrate by EPA Method 353.2;
- Sulfate by ASTM Method D516-07;
- Methane, ethane, and ethene by Gas Chromatograph/Flame Ionization Detector Headspace Method RSK 175; and
- Total organic carbon by Standard Method 5310B.

Prior to groundwater sampling, the depth to groundwater and the total well depth from the top of the well casing were measured in each well using a decontaminated, permanently marked polyethylene measuring tape with a water sensor. Each well was purged at flow rates ranging from 100 to 300 milliliters per minute using either a bladder pump or a peristaltic pump, depending on depth to groundwater, and dedicated polyethylene tubing in accordance with the EPA (1998) low-flow sampling protocols. During purging, water quality was monitored using a YSI Pro DSS water-quality meter equipped with a flow-through cell. The water-quality parameters temperature, pH, specific conductance, dissolved oxygen, and oxidation-reduction potential were monitored and recorded during purging of each well. Each well was purged until the water-quality parameters stabilized to within EPA-recommended guidelines. Following purging, groundwater samples from selected wells were tested for ferrous iron using a “HACH” field test kit. Groundwater samples were then collected directly from the tubing into laboratory-prepared containers, placed on ice in a cooler, and transported to OnSite under standard chain-of-custody procedures.

Results of the groundwater monitoring, including the estimated direction of groundwater flow for the shallow and deep water-bearing zones, analytical results for groundwater samples, and the conceptual site model and exposure assessment, are provided in the following sections for each area investigated.



## **4.0 RESULTS**

Soil encountered consisted of poorly to well-graded sand and gravel with various amounts of silt. This soil type is consistent with the soil encountered during previous subsurface investigations conducted at the Lakeview Facility. Boring logs and a temporary monitoring well construction diagram are provided in Appendix B.

A summary of analytical results for soil and groundwater samples collected during the supplemental subsurface investigation and groundwater monitoring field program is presented in the following sections for each investigated area. The analytical results for DRO and ORO are for soil and groundwater samples that were not treated with the sulfuric acid/silica gel cleanup procedure, unless otherwise noted below.

Soil analytical results are summarized on Figures 7 through 9 and detailed in Tables 2 through 5. Groundwater elevation monitoring and analytical results are summarized on Figures 10 through 15 and detailed in Tables 6 through 10.

Results for geochemical and natural attenuation parameters are provided in Table 11 and discussed in detail in Section 4.7.5, Natural Attenuation Assessment. Laboratory analytical reports for soil and groundwater samples collected during the supplemental subsurface investigation and groundwater monitoring in November and December 2017 are provided in Appendix C.

### **4.1 EQUIPMENT PARKING AREA**

Boring B-10 was advanced at the location of former soil sample A2-4-040710-3 in the area of the previous excavation for the cleanup action in the Equipment Parking Area (Figures 3 and 4). The soil was backfill placed in the excavation to a depth of approximately 3 feet bgs, below which there was native well-graded sand. Boring B-10 was completed to a depth of 4.5 feet bgs with an air-knife tool, and the soil sample was collected from boring B-10 at a depth of 5.0 feet bgs using a hand auger. The soil sample was analyzed for DRO, ORO, cPAHs, and PCBs in accordance with the Work Plan.

#### **4.1.1 Soil Results**

DRO, ORO, cPAHs, and PCBs were not detected at concentrations exceeding their respective MTCA Method A cleanup levels in the soil sample collected from boring B-10 at a depth of 5.0 feet bgs (Figures 7 and 8; Tables 2, 4, and 5).

#### **4.1.2 Groundwater Results**

Groundwater was not encountered during soil sampling activities. During the groundwater sampling event, depth to groundwater was measured at 17.32 feet below the top of casing at monitoring well MW-13 screened in the shallow water-bearing zone (Table 6). The estimated direction of groundwater flow for the shallow water-bearing zone is north-northeast in the Equipment Parking Area, consistent with the estimated groundwater flow direction during prior groundwater monitoring events (Figure 11).



DRO was detected at a concentration of 310 micrograms per liter ( $\mu\text{l}$ ) in the groundwater sample collected from monitoring well MW-13, which is less than the MTCA Method A cleanup level of 500  $\mu\text{l}$  for DRO (Figure 10; Table 7). ORO was detected at a concentration of 580  $\mu\text{l}$  in the groundwater sample collected from monitoring well MW-13, which slightly exceeds the MTCA Method A cleanup level of 500  $\mu\text{l}$  for ORO.

#### **4.1.3 Conclusion**

The cleanup action by excavation in the Equipment Parking Area removed soil containing DRO and ORO at concentrations exceeding MTCA Method A cleanup levels. The analytical results of the soil sample collected for this supplemental subsurface investigation confirm that the cleanup of contaminated soil in this area is complete and no further action is warranted.

DRO and ORO were not detected in groundwater samples collected from the Equipment Parking Area during the remedial investigation (Farallon 2009). However, the groundwater samples were analyzed using the sulfuric acid/silica gel cleanup procedure, which was the Ecology-accepted laboratory standard at the time the cleanup action was conducted.

Ecology required that the groundwater sample collected for the supplemental investigation in December 2017 be analyzed without the use of the sulfuric acid/silica gel cleanup procedure. ORO was detected at a concentration that slightly exceeds the MTCA Method A cleanup level in the groundwater sample.

According to WAC 173-340-702(12)(b), the rules in effect at the time the cleanup action began or when Ecology reviewed the cleanup action, whichever are less stringent, should apply. The use of the sulfuric acid/silica gel cleanup procedure was the laboratory standard under the rules that applied at the time when the cleanup action was conducted. The Lakeview Facility will include the restriction of groundwater use as the recommended final cleanup action for areas with concentrations exceeding cleanup levels, which will be expanded to include the Equipment Parking Area. Therefore, no further action for groundwater cleanup in the Equipment Parking Area is warranted.

## **4.2 TACK TANK AREA**

Boring B-11 was advanced adjacent to the 10,000-gallon aboveground tank used for the storage of tack asphalt sealant (Figures 3 and 4), and was completed to a depth of 10.8 feet bgs. A soil sample was collected from boring B-11 at a depth of 5.0 feet bgs and analyzed for DRO, ORO, cPAHs, and PCBs in accordance with the Work Plan.

### **4.2.1 Soil Results**

DRO, ORO, PCBs, and cPAHs were not detected at concentrations at or exceeding laboratory reporting limits in the soil sample collected from boring B-11 at a depth of 5.0 feet bgs (Figures 7 and 8; Tables 2, 4, and 5).



#### **4.2.2 Groundwater Results**

Groundwater was encountered at a depth of approximately 10 feet bgs during the advancement of boring B-11. The closest down-gradient well is monitoring well MW-19 screened in the deep water-bearing zone. Depth to water was measured at 29.40 feet below the top of casing at monitoring well MW-19 during the groundwater sampling event. DRO and ORO were not detected at concentrations at or exceeding laboratory reporting limits in the groundwater sample collected from monitoring well MW-19 (Figure 10; Table 7).

#### **4.2.3 Conclusion**

DRO, ORO, PCBs, or cPAHs were not detected at concentrations exceeding laboratory reporting limits in soil and groundwater samples collected from the Tack Tank Area. Therefore, no further action is warranted for the Tack Tank Area.

### **4.3 EQUIPMENT STORAGE CARPORT AREA**

Boring B-12 was advanced in the northern portion of the previous excavation in the Equipment Storage Carport Area, proximate to the location of former soil sample A1-7040710-6 (Figures 3 and 5). Boring B-12 was completed to a depth of 11.5 feet bgs, and a soil sample was collected from boring B-12 at a depth of 9.0 feet bgs. Well-graded gravel with sand was encountered from the approximate depth of 9.0 to 9.8 feet bgs. A deeper soil sample from 10.0 to 11.5 feet bgs was not collected due to a rock lodged in the sampling shoe. The soil sample collected from boring B-12 at a depth of 9.0 feet bgs was analyzed for DRO, ORO, cPAHs, and PCBs in accordance with the Work Plan. Separate DRO and ORO analyses were performed on the soil sample by both treating and not treating the sample with the sulfuric acid/silica gel cleanup procedure prior to analysis.

#### **4.3.1 Soil Results**

ORO was detected at a concentration of 11,000 milligrams per kilogram (mg/kg) in the soil sample treated with the sulfuric acid/silica gel cleanup procedure and at 12,000 mg/kg in the untreated soil sample collected from boring B-12 at a depth of 9.0 feet bgs, which both exceed the MTCA Method A and B cleanup levels for soil (Figure 7; Table 2).

Total cPAHs were detected at a concentration of 0.196 mg/kg in the soil sample collected from boring B-12 at a depth of 9.0 feet bgs, which exceeds the MTCA Method A cleanup level of 0.1 mg/kg (Figure 8; Table 4). Total cPAHs were derived using the total toxicity equivalency method in WAC 173-340-708(8) (TEC).

DRO and PCBs were not detected at concentrations at or exceeding laboratory reporting limits.

#### **4.3.2 Groundwater Results**

Groundwater was encountered at a depth of approximately 10 feet bgs during the advancement of boring B-12. Depth to water was measured at 26.72 feet below the top of casing at monitoring well MW-11B screened in the deep water-bearing zone, which was the only accessible monitoring well



in the Equipment Storage Carport Area during the December 2017 groundwater monitoring and sampling event (Table 6). Monitoring well MW-11 screened in the shallow water-bearing zone could not be located or sampled due to heavy equipment being stored on top of the well at the time of sampling. DRO and ORO were not detected at concentrations at or exceeding laboratory reporting limits in groundwater samples collected from monitoring well MW-11B (Figure 10; Table 7).

### **4.3.3 Conclusions**

The cleanup action by excavation conducted in 2010 in the Equipment Storage Carport Area removed soil containing DRO and ORO at concentrations exceeding MTCA Method B cleanup levels, which was approved by Ecology (2011a) to be the applicable cleanup level for this area of the Lakeview Facility. ORO and cPAHs were detected at concentrations exceeding the MTCA Method A and/or Method B cleanup levels in the soil sample recently collected from the Equipment Storage Carport Area. It is unclear to Farallon why this area would be impacted by ORO and cPAHs several years after the completed remediation. The soil sample was analyzed for ORO with and without using the sulfuric acid/silica gel cleanup procedure, and results were similar, suggesting that ORO concentrations are not indicative of polar organics associated with degraded fuel. These data instead suggest a more recent release.

The Equipment Storage Carport Area is paved with asphalt, preventing exposure to soil. The infilling of the Lakeview Facility from north to south (Appendix A) will result in the contaminated soil being covered with approximately 20 feet of fill, which is more than adequate to provide protection from human exposure to contaminated soil. A restriction on groundwater use will be implemented at the Lakeview Facility as the recommended final cleanup action for areas with concentrations exceeding cleanup levels, including the Equipment Storage Carport Area.

No further action is warranted for the Equipment Storage Carport Area.

## **4.4 ASPHALT PLANT AREA**

Boring B-18 was advanced in the Asphalt Plant Area at the closest accessible location to the asphalt mixer and aggregate conveyor (Figure 3). Boring B-18 was completed to a depth of 10.4 feet bgs. Soil samples were collected from boring B-18 at depths of 3.0, 7.5, and 10.0 feet bgs and analyzed for DRO and ORO in accordance with the Work Plan. The soil sample collected from boring B-18 at a depth of 10.0 feet bgs was also analyzed for cPAHs and PCBs.

### **4.4.1 Soil Results**

DRO and ORO were not detected at concentrations exceeding the MTCA Method A cleanup levels in the soil samples collected from boring B-18 at depths of 3.0, 7.5, and 10.0 feet bgs (Figure 7; Table 2).

Total cPAHs were not detected at a concentration exceeding the MTCA Method A cleanup level and PCBs were not detected at a concentration exceeding laboratory reporting limits in the soil sample collected from boring B-18 at a depth of 10.0 feet bgs (Figure 8; Tables 4 and 5).





#### **4.4.2 Groundwater Results**

Groundwater was encountered at a depth of approximately 10 feet bgs during the advancement of boring B-18; however, collection of groundwater samples was not part of the scope approved in the Work Plan. No monitoring wells exist in the immediate vicinity of the Asphalt Plant Area.

#### **4.4.3 Conclusion**

No further action is warranted for the Asphalt Plant Area.

### **4.5 HOT-MIX STORAGE AREA**

Boring B-19 was advanced in the Hot-Mix Storage Area adjacent to the three large aboveground tanks used for storage of hot-mix asphalt (Figure 3). Boring B-19 was completed to a depth of 11.5 feet bgs. Soil samples were collected from boring B-19 at depths of 2.5 and 10.0 feet bgs and analyzed for DRO and ORO in accordance with the Work Plan.

#### **4.5.1 Soil Results**

ORO was detected at a concentration of 6,200 mg/kg in the soil sample collected from boring B-19 at a depth of 2.5 feet bgs, which exceeds the MTCA Method A and B cleanup levels (Figure 7; Table 2). ORO was not detected at a concentration at or exceeding laboratory reporting limits in the soil sample collected from boring B-19 at a depth of 10.0 feet bgs. Heavy sheen was observed on the ground surface surrounding the hot-mix asphalt storage tanks, and could be the main cause of soil contamination encountered at a depth of 2.5 feet bgs.

DRO was not detected at concentrations at or exceeding laboratory reporting limits in the soil samples collected from boring B-19 at depths of 2.5 and 10.0 feet bgs.

#### **4.5.2 Groundwater Results**

Groundwater was not encountered during the advancement of boring B-19, and no groundwater samples were collected per the approved Work Plan pertaining to the Hot-Mix Storage Area. No monitoring wells exist in the immediate vicinity of the Hot-Mix Storage Area.

#### **4.5.3 Conclusion**

Shallow soil appears to be impacted by ORO at concentrations exceeding the MTCA Method A cleanup level in this area. The vast majority of the Hot-Mix Storage Area is paved with asphalt, preventing exposure to contaminated soil. The infilling of the Lakeview Facility from north to south (Appendix A) will cover the contaminated soil with approximately 20 feet of fill, which is more than adequate to provide protection from human exposure to contaminated soil. A restriction on groundwater use will be implemented at the Lakeview Facility as the recommended final cleanup action for areas with concentrations exceeding cleanup levels, including the Hot-Mix Storage Area.



## **4.6 FORMER RECYCLED STOCKPILE AREA**

The boring for temporary monitoring well MW-24T was advanced in the Former Recycled Stockpile Area proximate to the location of former soil sample A3-B2-P-100510-4.5 (Figures 3 and 6). As discussed in Section 3.2, Field Program, temporary monitoring well MW-24T was installed in this boring for collection of a reconnaissance groundwater sample because monitoring well MW-24 was buried and inaccessible.

The boring for temporary monitoring well MW-24T was advanced to a depth of 18.5 feet bgs, and a soil sample was collected at 12.5 feet bgs. The former ground surface during the previous excavation in the Former Recycled Stockpile Area was approximately 5 feet lower than the current elevation. Therefore, the target soil sample depth increased by 5 feet to account for the difference in elevations. The soil sample was collected from the boring for temporary monitoring well MW-24T at a depth of 12.5 feet bgs and analyzed for DRO, ORO, cPAHs, and PCBs in accordance with the Work Plan. Separate DRO and ORO analyses were performed on the soil sample by both treating and not treating the sample with the sulfuric acid/silica gel cleanup procedure prior to analysis.

The temporary monitoring well was constructed in accordance with the Minimum Standards for Construction and Maintenance of Wells, as established in WAC 173-160. The temporary monitoring well was constructed using 2-inch polyvinyl chloride casing with 10 feet of screen and was completed with a 1-foot stick-up. The temporary monitoring well was fitted with a threaded polyvinyl chloride bottom cap and a locking compression-fit well cap on top of the well casing. The annulus of the boring was filled with 10/20 silica sand, and a bentonite seal was installed above the sand pack. The temporary monitoring well was developed and left undisturbed for 48 hours prior to sampling. Temporary monitoring well MW-24T was decommissioned by Holocene Drilling, Inc. following completion of the groundwater sampling event on November 16, 2017. Groundwater sampling procedures are described in Section 3.2, Field Program.

### **4.6.1 Soil Results**

DRO and ORO were detected at concentrations less than the MTCA Method A cleanup levels in the soil samples collected from the boring for temporary monitoring well MW-24T at a depth of 12.5 feet bgs, which were both treated and untreated with the sulfuric acid/silica gel cleanup procedure prior to analysis (Table 2).

Total cPAHs were not detected at a TEC concentration exceeding the MTCA Method A cleanup level and PCBs were not detected at a concentration exceeding laboratory reporting limits in the soil sample collected from the boring for temporary monitoring well MW-24T at a depth of 12.5 feet bgs (Tables 4 and 5).

### **4.6.2 Groundwater Results**

Groundwater was encountered at a depth of approximately 17.5 feet bgs at the time of drilling of the boring for temporary monitoring well MW-24T. However, approximately 48 hours following





the installation of temporary monitoring well MW-24T, the depth to water was measured at approximately 9.5 feet bgs during groundwater sampling.

DRO was not detected at a concentration at or exceeding laboratory reporting limits in the reconnaissance groundwater sample collected from temporary monitoring well MW-24T and treated with the sulfuric acid/silica gel cleanup procedure (Figure 10; Table 7). DRO was detected at a concentration of 970 µg/l in the untreated reconnaissance groundwater sample. However, the DRO results were flagged as “hydrocarbons in the lube oil-range are impacting the diesel range result.”

ORO was not detected in the treated reconnaissance groundwater sample, but was detected at a concentration of 3,000 µg/l in the untreated reconnaissance groundwater sample. Both detected concentrations of DRO and ORO exceed the MTCA Method A cleanup levels, although the detections of DRO concentrations are the result of the interference of the ORO concentrations.

#### **4.6.3 Conclusions**

The cleanup action by excavation in the Former Recycled Stockpile Area removed soil containing DRO and ORO at concentrations exceeding the site-specific MTCA Method B cleanup level. The analytical results of the soil sample collected for this supplemental subsurface investigation confirmed that the cleanup of soil in this area is complete.

DRO and ORO were not detected in groundwater samples collected from the Former Recycled Stockpile Area following completion of the cleanup action in 2010 (Farallon 2011). However, the groundwater samples previously were analyzed using the sulfuric acid/silica gel cleanup procedure, which was the Ecology-approved laboratory standard at the time the cleanup action was conducted. At Ecology’s request, the groundwater sample collected from temporary monitoring well MW-24T in December 2017 was analyzed with and without the use of the cleanup procedure. DRO and ORO concentrations exceeded the MTCA Method A cleanup levels in the groundwater sample analyzed without the sulfuric acid/silica gel cleanup procedure.

According to WAC 173-340-702(12)(b), the rules in effect at the time the cleanup action began or when Ecology reviewed the cleanup action, whichever are less stringent, should apply. The use of the sulfuric acid/silica gel cleanup procedure was the Ecology-approved laboratory standard under the rules that applied at the time when the cleanup action was conducted.

A restriction on groundwater use will be implemented at the Lakeview Facility as the recommended final cleanup action for areas with concentrations exceeding cleanup levels, including the Former Recycled Stockpile Area. Therefore, no future action is warranted.

#### **4.7 FORMER ASPHALT-TESTING LABORATORY AREA**

Borings B-13 through B-17 and B-20 were advanced in and proximate to the Former Asphalt-Testing Laboratory Area and the existing remediation system compound (Figure 3). Borings were completed to depths ranging from 20.4 to 21.0 feet bgs. Soil samples were collected from borings B-13 through B-17 and B-20 at depths ranging from 2.5 to 20 feet bgs, and a minimum of three



soil samples were collected from each of these borings and analyzed for VOCs. Soil samples collected from borings B-14 through B-17 were also analyzed for DRO and ORO. Two soil samples collected from borings B-13 and B16 were also analyzed for cPAHs and PCBs in accordance with the Work Plan.

#### **4.7.1 Soil Results**

A total of 19 soil samples were collected and analyzed from the Former Asphalt-Testing Laboratory Area. ORO was detected at a concentration of 4,300 mg/kg in the soil sample collected from boring B-16 at a depth 3.0 feet bgs, which exceeds the MTCA Method A cleanup level (Figure 7; Table 2). ORO was not detected at concentrations exceeding the MTCA Method A cleanup level in the remaining soil samples collected from the Former Asphalt-Testing Laboratory Area, including the deeper soil samples collected from boring B-16 at depths of 10.0 and 17.5 feet bgs.

Total cPAHs were detected at a TEC concentration of 1.516 mg/kg in the soil sample collected from boring B-16 at a depth of 3.0 feet bgs, which exceeds the MTCA Method A cleanup level (Figure 8; Table 4). cPAHs were not detected at concentrations at or exceeding laboratory reporting limits in the soil sample collected from boring B-13 at a depth of 5.0 feet bgs.

DRO and PCBs were not detected at concentrations at or exceeding laboratory reporting limits in the soil samples analyzed from the Former Asphalt-Testing Laboratory Area (Tables 2 and 5).

VOCs were detected at concentrations less than their respective MTCA Method A or Method B cleanup levels in soil samples collected from borings B-13 through B-17 and B-20 at various depths (Figure 9; Table 3).

#### **4.7.2 Groundwater Results for Shallow Water-Bearing Zone**

Groundwater was encountered at depths ranging from approximately 12.5 to 20 feet bgs at the time of drilling in the Former Asphalt-Testing Laboratory Area (Table 6). The measured depth to water ranged from 8.83 to 13.92 feet below the top of casing at monitoring wells screened in the shallow water-bearing zone in this area. The estimated direction of groundwater flow for the shallow water-bearing zone is north-northeast in the Former Asphalt-Testing Laboratory Area (Figure 11).

ORO was detected at a concentration slightly exceeding the MTCA Method A cleanup level in the groundwater sample collected from remediation well SVE-5 (Figure 10; Table 7). ORO was not detected at concentrations at or exceeding laboratory reporting limits in the groundwater sample collected from monitoring well MW-5. DRO was not detected at concentrations exceeding the MTCA Method A cleanup level in shallow water-bearing zone monitoring wells sampled in this area.

The only VOC detected at a concentration exceeding MTCA cleanup levels in groundwater samples collected from the shallow water-bearing zone was chloroform in remediation well SVE-3 during the December 2017 groundwater monitoring and sampling event (Table 8). Other VOCs,



including TCE, benzene, toluene, ethylbenzene, and xylenes, were not detected at concentrations at or exceeding their respective MTCA Method A or Method B cleanup levels in shallow water-bearing zone monitoring wells sampled at the Lakeview Facility during the December 2017 groundwater monitoring and sampling event (Figure 12). This includes monitoring well MW-26, which is in the area up-gradient of the reported former location of the asphalt-testing laboratory that Ecology specifically requested in the Work Plan to be tested for VOCs.

#### **4.7.3 Groundwater Results for Deep Water-Bearing Zone**

Due to the differences in topography across the Lakeview Facility, the measured depth to water ranged from 17.56 to 70.27 feet below the top of casing at monitoring wells screened in the deep water-bearing zone (Table 6). In the Former Asphalt-Testing Laboratory Area and its vicinity, the measured depth to water in the deep water-bearing zone ranged from 17.56 to 32.65 below the top of casing. The estimated direction of groundwater flow for the deep water-bearing zone is north-northeast in the Former Asphalt-Testing Laboratory Area (Figure 13).

ORO was detected at a concentration of 570 µg/l in the groundwater sample collected from monitoring well MW-16, which slightly exceeds the MTCA Method A cleanup level (Figure 10; Table 7). The monument cover for monitoring well MW-16 was found to be destroyed and the internal cap and casing damaged during the December 2017 groundwater monitoring and sampling event, compromising the integrity of the monitoring well and the analytical results for groundwater samples collected from this well. Monitoring well MW-16 is adjacent to asphalt stockpiles and a gravel drive that is frequently driven by truck traffic. Therefore, the detected ORO concentration likely is not considered representative of groundwater quality at this location.

DRO was not detected at concentrations at or exceeding laboratory reporting limits in the groundwater samples collected from any monitoring and remediation wells in the Former Asphalt-Testing Laboratory Area.

TCE was detected at concentrations exceeding the MTCA Method A cleanup in groundwater samples collected from deep water-bearing zone monitoring wells MW-2, MW-14, and MW-20 and remediation well SVE-2, consistent with prior groundwater monitoring and sampling events (Figure 14; Table 8). TCE and its degradation products were not detected at concentrations exceeding the applicable MTCA Method A or B cleanup levels in groundwater samples collected from the remaining deep water-bearing zone monitoring wells, including monitoring wells MW-14C, MW-15, MW-16, MW-18, MW-19, MW-21, MW-23, MW-25, MW-28, and MW-29; remediation wells SVE-1, SVE-8, and AS-1; and the industrial water supply well.

Chloroform was detected at concentrations slightly exceeding the MTCA Method B cleanup level in a groundwater sample collected from deep water-bearing zone monitoring well MW-2 during the December 2017 groundwater monitoring and sampling event.

1,4-Dioxane was not detected in groundwater samples collected from monitoring wells MW-2, MW-14, or MW-20 where the highest concentrations of TCE had been detected in groundwater.



#### 4.7.4 Groundwater Results for Industrial Well

The industrial water supply well is screened at a depth of 107 to 129 feet bgs in the regional aquifer, which is separated from the shallow and deep water-bearing zones at the Lakeview Facility by a silt and silty gravel aquitard. TCE was detected at a concentration of 0.39 µg/l in the groundwater sample collected in December 2017, which is consistent with TCE concentrations of 0.27, 0.53, and 0.30 µg/l previously detected in August 2015, February 2009, and August 2008, respectively, in groundwater samples collected from this well (Table 8). TCE concentrations detected during the last decade indicate stable conditions at concentrations significantly less than the MTCA Method A cleanup level for TCE in groundwater. No other VOCs were detected in groundwater samples collected from the industrial water supply well.

#### 4.7.5 Natural Attenuation Assessment

Farallon evaluated the potential for natural attenuation of TCE in accordance with the Work Plan. The natural attenuation evaluation included collection of groundwater samples from monitoring wells screened in both the shallow and deep water-bearing zones. Prior evaluation of conditions in these water-bearing zones suggested that biologic and/or chemical degradation processes were not occurring or were negligible compared to physical processes such as dispersion, dilution, and sorption. Groundwater conditions at most of the monitoring wells were stable to decreasing and were attributed to the aforementioned physical processes.

The natural attenuation evaluation is based on two lines of evidence:

- The presence of anaerobic degradation compounds associated with TCE biodegradation via reductive dechlorination. Farallon considered the potential for abiotic and chemical processes for TCE.
- Geochemical indicators of ongoing biodegradation processes associated with reductive dechlorination of TCE.

Microbial analysis of bacteria known to biodegrade TCE was not included based on prior evaluations that suggest that anaerobic conditions required for complete degradation of TCE are not prevalent in either water-bearing zone. The data used in the natural attenuation evaluation are included in Tables 8 and 11. TCE concentrations in the shallow and deep water-bearing zones are depicted on Figures 12 and 14, respectively.

The results of the natural attenuation evaluation for the shallow water-bearing zone are:

- TCE concentrations in groundwater samples collected from remediation well SVE-12 have been the highest concentrations detected in the shallow water-bearing zone and have fluctuated since 2010. TCE concentrations were less than the MTCA Method A cleanup level during the two most-recent groundwater monitoring and sampling events conducted in January 2016 and December 2017. Remediation well SVE-12 was the only well screened in the shallow water-bearing zone that included analysis for a full suite of geochemical parameters as a component of the natural attenuation evaluation.



- TCE concentrations in groundwater samples collected from remediation well SVE-6 have been the second-highest concentrations in the shallow water-bearing zone, and have decreased to less than the MTCA Method A cleanup level during the last groundwater monitoring and sampling event in December 2017.
- Concentrations of 1,1-dichloroethene have been detected in groundwater samples collected from remediation wells SVE-6 and SVE-12. Neither cis-1,2-dichloroethene nor trans-1,2-dichloroethene were detected, and these dichloroethene isomers are more commonly associated with reductive dechlorination compared to 1,1-dichloroethene. Chemical degradation of TCE can result in production of 1,1-dichloroethene. Other degradation compounds such as vinyl chloride and ethene were not detected where analyzed.
- Groundwater geochemistry is variable across the Lakeview Facility and appears primarily aerobic in areas where TCE is present. The geochemical parameters at remediation well SVE-12 collectively are not indicative of an environment that is sufficiently anaerobic to support reductive dechlorination of TCE.

These results suggest that natural attenuation via physical, chemical, and/or biologic processes is occurring in the shallow water-bearing zone.

The deep water-bearing zone was evaluated for potential chemical and/or biologic natural attenuation processes in more detail compared to the shallow water-bearing zone. Groundwater samples collected from monitoring wells MW-2, MW-14, MW-14C, MW-16, MW-18, MW-19, MW-20, MW-23, MW-25, and MW-28 and remediation well SVE-1 were analyzed for geochemical parameters. The results of the natural attenuation evaluation for the deep water-bearing zone are:

- TCE concentrations in groundwater samples collected from monitoring well MW-20 have been the highest concentrations detected in the deep water-bearing zone and, although somewhat fluctuating, have been declining since 2009. TCE concentrations at this location have been stable at 20 µg/l during the three most-recent groundwater monitoring and sampling events.
- TCE concentrations in groundwater samples collected from monitoring well MW-14 have decreased from approximately 30 µg/l in 2010 to stable concentrations ranging from 10 to 12 µg/l during the last four groundwater monitoring and sampling events.
- TCE concentrations in groundwater samples collected from monitoring well MW-2 have fluctuated since 2008, ranging from 4.6 to 14 µg/l.
- TCE concentrations in groundwater samples collected from monitoring well MW-22 have declined from 20 µg/l in 2009 to 12 µg/l in 2013. Monitoring well MW-22 was inaccessible during the December 2017 groundwater monitoring and sampling event.
- Except in groundwater samples collected from monitoring well MW-15, dichloroethene isomers cis-1,2-dichloroethene and trans-1,2-dichloroethene were not detected in groundwater samples collected from the deep water-bearing zone, indicating that reductive dechlorination is not readily occurring via biological processes.



- 1,1-dichloroethene was the prevalent degradation compound detected at low concentrations where TCE has historically been present, suggesting that chemical degradation may be occurring. Other degradation compounds such as vinyl chloride and ethene were not detected where analyzed.
- Groundwater geochemistry is variable across the Lakeview Facility and appears primarily aerobic in areas where TCE is present. This is consistent with prior evaluations of the deep water-bearing zone geochemistry.

These results suggest that natural attenuation via physical, chemical, and/or biologic processes is occurring in the deep water-bearing zone. The results of the evaluation of current groundwater conditions continue to support the conclusions that anaerobic degradation of TCE via biological processes is not the prevalent natural attenuation process occurring in groundwater at the Lakeview Facility. Physical processes such as dispersion, dilution, and sorption are likely occurring; however, these processes appear to be limited based on the relative stability of TCE and dichloroethene isomer concentrations. Chemical degradation of TCE may be occurring in areas where TCE and 1,1-dichloroethene have been detected, but also does not appear to be a significant process based on the absence of the end product, ethene, and the relative stability of TCE and 1,1-dichloroethene concentrations.

#### **4.7.6 Conclusions**

Implementation of an Environmental Covenant that will include engineering controls and the restriction on groundwater use will be the cleanup action for the detection of ORO and cPAHs in a shallow soil sample and ORO at concentrations exceeding MTCA Method A cleanup level in a groundwater sample collected from the Former Asphalt-Testing Laboratory Area. The ORO- and cPAH-impacted area currently is covered with asphalt pavement. A minimum of 20 feet of clean overburden will be placed on top of the existing ground surface (Appendix A). Extraction of groundwater for drinking water purposes will be prohibited by implementation of the Environmental Covenant.

The results from the supplemental subsurface investigation and groundwater monitoring confirmed the results and recommendations presented in the FFS/DCA Report. The source of TCE associated with the former WSDOT mobile testing laboratory has been reduced by degradation processes and cleanup actions to less than the MTCA Method A cleanup level in soil and the shallow water-bearing zone, resulting in a stable to reducing TCE plume in the deep water-bearing zone. The highest concentration of TCE in groundwater (i.e., 20 µg/l) continues to be detected in groundwater collected from monitoring well MW-20 proximate to the reported location of the former WSDOT mobile testing laboratory, followed by TCE concentrations of 12 µg/l in groundwater samples collected from monitoring wells MW-14, MW-2, and MW-22 further down-gradient. TCE concentrations were not detected at concentrations exceeding the MTCA Method A cleanup level in groundwater samples collected near the aggregate crusher area north-northeast and down-gradient of the Former Asphalt-Testing Laboratory Area or south and up-gradient near monitoring wells MW-25 or MW-26.





The potential contribution of TCE to groundwater in the shallow and deep water-bearing zones from off-property sources is at concentrations less than the MTCA Method A cleanup level.

Natural attenuation of TCE is discussed in detail in Section 4.7.5, Natural Attenuation Assessment, with the results of the assessment indicating that anaerobic degradation of TCE via biological processes is not the prevalent degradation process occurring in groundwater at the Lakeview Facility. Instead, physical processes such as dispersion, dilution, and sorption likely are occurring and chemical degradation of TCE may be occurring in some areas.

Chloroform has been detected at concentrations slightly exceeding the MTCA Method B cleanup level in groundwater samples collected from the shallow and deep water-bearing zones. Chloroform is a disinfectant by-product of the chlorination of water containing naturally occurring organic matter. Therefore, chloroform is not retained as a constituent of concern for the Lakeview Facility and no further action regarding this chemical is warranted.

The potential exposure pathways associated with contaminants in soil and groundwater at the Former Asphalt-Testing Laboratory Area will be mitigated by implementation of engineering controls and groundwater use restriction. The vapor intrusion pathway evaluation is revisited in Section 5.0, Revised Vapor Intrusion Assessment.

## **4.8 ARSENIC AND LEAD PLUME IN GROUNDWATER AREA**

Arsenic and Lead Plume in Groundwater Area was not a subject of the supplemental subsurface investigation; therefore, no soil samples were collected or analyzed from this area. Results for groundwater monitoring conducted for the Arsenic and Lead Plume in Groundwater Area are described below.

### **4.8.1 Groundwater Results**

The measured depth to water ranged from 34.65 to 48.69 feet below the top of casing at monitoring wells screened in the shallow water-bearing zone in the Arsenic and Lead Plume in Groundwater Area (Table 6). The direction of groundwater in the shallow water-bearing zone is west-southwest (Figure 11). The down-gradient westerly to southwesterly extent of dissolved arsenic and lead in shallow groundwater is defined by the lack of groundwater in monitoring well MW-30 and the discontinuity of the shallow water-bearing zone. Wells are screened in the shallow water-bearing zone with the exception of monitoring well MW-12B, which is screened in the deep water-bearing zone.

Total and dissolved arsenic were detected at a concentration exceeding the MTCA Method A cleanup level of 5 µg/l in groundwater samples collected from monitoring wells MW-12 and MW-31, consistent with the analytical results of prior groundwater sampling events (Figure 15; Table 10). Total or dissolved arsenic were not detected at concentrations exceeding the MTCA Method A cleanup level in groundwater samples collected from shallow water-bearing zone monitoring wells MW-9, MW-32, MW-33, and MW-34 or deep water-bearing zone monitoring well MW-12B.



Total lead was detected at a concentration exceeding the MTCA Method A cleanup level of 15 µg/l in the groundwater sample collected from shallow water-bearing zone monitoring well MW-31. Total lead was not detected at concentrations exceeding the MTCA Method A cleanup level in the remaining groundwater samples collected from monitoring wells in the Arsenic and Lead Plume in Groundwater Area, including groundwater samples collected from shallow water-bearing zone monitoring wells MW-9, MW-12, MW-32, MW-33, and MW-34 or deep water-bearing zone monitoring well MW-12B.

Dissolved lead was not detected at concentrations exceeding the MTCA Method A cleanup level in monitoring wells sampled.

#### **4.8.2 Conclusions**

Ecology (2017a) provided an opinion that dissolved arsenic and lead concentrations, rather than total arsenic and lead concentrations, are representative of groundwater quality in the Arsenic and Lead Plume in Groundwater Area. The extent of dissolved arsenic and lead in groundwater has been fully delineated during the recent and prior groundwater sampling events.

- The up-gradient extent of dissolved arsenic and lead in shallow groundwater is defined by the analytical results for the groundwater samples collected from monitoring well MW-34, which were reported non-detect for dissolved arsenic and lead (Figure 15; Table 10).
- The cross-gradient extents of dissolved arsenic and lead in shallow groundwater are defined by the analytical results for the groundwater samples collected from monitoring wells MW-32 and MW-33.
- The down-gradient westerly to southwesterly extent of dissolved arsenic and lead in shallow groundwater is defined by the lack of groundwater in monitoring well MW-30 and the discontinuity of the shallow groundwater-bearing zone. Groundwater samples collected from shallow water-bearing zone monitoring well MW-9 further down-gradient were also reported non-detect for dissolved arsenic and lead.

Extensive soil sampling and analysis completed for the remedial investigation and subsequent subsurface investigations did not identify specific sources of arsenic and lead to shallow groundwater. The analytical and geochemical results for groundwater samples suggest that the source of arsenic and lead is more likely than not located within the Lakeview Facility property boundaries and associated with the historical placement of foundry fill and concrete slurry in contact with shallow groundwater, resulting in elevated pH and reducing oxidation-reduction potential conditions and subsequent leaching of lead and arsenic to shallow groundwater. Geochemical parameters collected from monitoring wells MW-12 and MW-31 show the highest pH and the lowest oxidation-reduction potential measurements in shallow water-bearing zone monitoring wells, further supporting the occurrence of arsenic and lead in shallow groundwater due to high pH and reducing conditions.

Total and dissolved arsenic and lead concentrations in shallow groundwater have been stable to declining over time. The potential exposure pathways associated with the occurrence of arsenic





and lead in groundwater at the Arsenic and Lead Plume in Groundwater Area will be mitigated by implementation of restriction on groundwater use.

#### **4.9 SUMMARY**

The scope of work for the supplemental subsurface investigation and groundwater monitoring provided in the Work Plan and approved by Ecology (2017c) has been completed. The results of this work revealed the following:

- ORO and cPAHs in soil and DRO and ORO in groundwater remain at concentrations exceeding MTCA cleanup levels in limited and discrete areas of the Lakeview Facility following completion of the cleanup action in 2010. The proposed final cleanup action that will consist of engineering controls and the restriction on groundwater use will result in full compliance with MTCA and the protection of human health and the environment.
- PCBs were not detected in the soil samples analyzed.
- TCE was not detected at concentrations exceeding the MTCA Method A cleanup levels in soil samples or in groundwater samples collected from the shallow water-bearing zone during the supplemental subsurface investigation and groundwater monitoring. TCE detected at concentrations exceeding the MTCA Method A cleanup level in groundwater in the deep water-bearing zone indicates stable plume conditions.
- The results for the groundwater sample recently collected from the industrial water supply well at the Lakeview Facility and TCE concentrations detected in this well during periodic groundwater monitoring events over the last decade confirm stable TCE concentrations significantly less than the MTCA Method A cleanup level for TCE in groundwater.
- 1,4-Dioxane was not detected in the groundwater samples analyzed.
- Assessment of natural attenuation of TCE and associated geochemical parameters in groundwater has confirmed prior results that show anaerobic degradation of TCE via biological processes is not the prevalent natural attenuation process occurring in groundwater at the Lakeview Facility. Physical processes such as dispersion, dilution, and sorption likely are occurring on a limited scale based on the relative stability of TCE and dichloroethene isomer concentrations. Chemical degradation of TCE may be occurring in some areas, but also does not appear to be a significant process.
- The groundwater monitoring results confirm that dissolved arsenic and/or lead concentrations exceed the MTCA Method A cleanup level in groundwater samples collected from two monitoring wells. The dissolved arsenic and/or lead concentrations, rather than the total arsenic and lead concentrations, are applicable for the Lakeview Facility as confirmed by Ecology (2017a). The extent of dissolved arsenic and lead in groundwater has been fully delineated with the existing monitoring well network and show that concentrations of dissolved arsenic and lead in groundwater are declining. The analytical results and geochemical indicators for groundwater samples suggest that the source of arsenic and lead is associated with the historical placement of foundry fill and concrete slurry in contact with shallow groundwater, resulting in elevated pH and reducing



oxidation-reduction potential conditions and subsequent leaching of lead and arsenic to shallow groundwater.



## 5.0 REVISED VAPOR INTRUSION ASSESSMENT

The vapor intrusion assessment was revised to evaluate the potential for migration of VOCs from soil gas into future buildings under an industrial exposure scenario. The industrial exposure scenario was accepted by Ecology (2017a). TCE is the only VOC detected at the Lakeview Facility that has a potential for vapor intrusion and is the only constituent of concern used for the revised vapor intrusion assessment. There are no buildings designed or used for human occupancy currently within 30 feet of the area containing TCE concentrations in groundwater at the Lakeview Facility (Figure 12); therefore, no completed exposure pathway currently exists for indoor air.

The revised vapor intrusion assessment included Tier 1 vapor intrusion screening in accordance with the Draft *Guidance for Evaluating Soil Vapor Intrusion in Washington State: Investigation and Remedial Action* revised April 2018 (Ecology 2009). According to Ecology (2015) cleanup levels and risk calculations, the MTCA Method C Industrial Exposure Scenario groundwater screening levels for TCE are 26.1 µg/l, the value for cancer, and 8.4 µg/l, the non-cancer screening value. The current maximum TCE concentration detected in the shallow water-bearing zone during the December 2017 groundwater monitoring and sampling event was 4.2 µg/l (Table 8), which is less than either the cancer or non-cancer MTCA Method C screening level for TCE in groundwater. TCE concentrations in the shallow water-bearing zone are applicable for the vapor intrusion assessment for the Lakeview Facility.

The results for the Tier 1 vapor intrusion screening confirm that the concentrations of TCE in groundwater are protective of the vapor intrusion pathway for the industrial exposure scenario at any potential future industrial buildings that could be constructed at the Lakeview Facility.



## **6.0 REVISED TECHNICAL ELEMENTS FOR CLEANUP ACTION**

Based on the results of the supplemental subsurface investigation and groundwater monitoring, the technical elements for the cleanup action have been revised and presented in the following sections.

### **6.1 CONSTITUENTS OF CONCERN**

The constituents of concern for the Lakeview Facility are:

- TCE;
- Arsenic;
- Lead;
- ORO; and
- cPAHs.

### **6.2 MEDIA OF CONCERN**

The media of concern at the Lakeview Facility are soil and groundwater.

### **6.3 CONSTITUENTS AND MEDIA OF CONCERN BY AREA**

Equipment Parking Area:

- ORO in groundwater.

Equipment Storage Carport Area:

- ORO in soil; and
- cPAHs in soil.

Hot-Mix Storage Area:

- ORO in soil.

Former Recycled Stockpile Area:

- ORO in groundwater.

Former Asphalt Testing Laboratory Area:

- ORO in soil;
- cPAHs in soil;
- ORO in groundwater; and



- TCE in groundwater.

Arsenic and Lead Plume in Groundwater Area:

- Dissolved arsenic in groundwater; and
- Dissolved lead in groundwater.

## **6.4 CLEANUP STANDARDS**

As defined in WAC 173-340-700, cleanup standards include establishing cleanup levels and the points of compliance at which the cleanup levels are to be attained. The cleanup standards for the Lakeview Facility have been established in accordance with WAC 173-340-704, 173-340-705, 173-340-720, and 173-340-740 to be protective of human health and the environment.

### **6.4.1 Cleanup Levels**

The MTCA Method A cleanup levels established for the constituents of concern are as follows.

Groundwater:

- ORO – 500 µg/l;
- TCE – 5 µg/l;
- Dissolved arsenic – 5 µg/l; and
- Dissolved lead – 15 µg/l.

Soil:

- ORO – 2,000 mg/kg;
- cPAHs (TEC) – 0.1 mg/kg;
- Dissolved arsenic in groundwater – 5 µg/l; and
- Dissolved lead in groundwater – 15 µg/l.

### **6.4.2 Points of Compliance**

Points of compliance are defined in WAC 173-340-200 as the locations where “cleanup levels established in accordance with WAC 173-340-720 through 173-340-760 shall be attained” to meet the requirements of MTCA. Once the cleanup levels have been attained at the defined points of compliance, constituents of concern at each affected area at the Lakeview Facility are no longer considered a threat to human health or the environment.

#### **6.4.2.1 Soil**

The point of compliance for soil is established for the protection of groundwater, and is defined as soil throughout the “site” exceeding cleanup levels protective of groundwater (WAC 173-340-740[6][b]). TCE, arsenic, or lead have not been detected at concentrations



exceeding MTCA Method A cleanup levels in soil; therefore, cleanup levels have been attained at the standard point of compliance for soil for those constituents of concern. ORO and cPAHs have been detected at concentrations exceeding MTCA Method A cleanup levels. Potential exposure will be addressed by engineering controls consisting of an asphalt or concrete cap and/or a minimum of 15 feet of clean fill cover.

#### **6.4.2.2 Groundwater**

The standard point of compliance for groundwater is defined as the uppermost level of the saturated zone extending vertically to the lowest depth that potentially could be impacted by the constituent of concern throughout the “site” (WAC 173-340-720[8][b]). For active cleanup alternatives, the standard points of compliance would include all monitoring wells within the limits of the groundwater affected by the constituents of concern at concentrations exceeding applicable cleanup levels.

A conditional point of compliance is applicable where it is not practicable to meet the cleanup level throughout the “site” within a reasonable restoration time frame (WAC 173-340-720[8][c]). If the selected cleanup action includes a restriction on groundwater use in the form of an Environmental Covenant, the conditional points of compliance as close as practicable to the boundaries of the restrictive area of groundwater use will become applicable for the Lakeview Facility.

The following conditional points of compliance for the shallow water-bearing zone groundwater are selected (Figure 16):

- Monitoring well MW-3 for the TCE-affected Former Asphalt-Testing Laboratory Area;
- Monitoring well MW-9 for the ORO-affected Former Recycled Stockpile Area, ORO-affected Equipment Parking Area and Former Asphalt-Testing Laboratory Area, and arsenic- and lead-affected Arsenic and Lead Plume in Groundwater Area;
- Monitoring well MW-32 for the arsenic- and lead-affected Arsenic and Lead Plume in Groundwater Area; and
- Monitoring well MW-34 for the arsenic- and lead-affected Arsenic and Lead Plume in Groundwater Area.

The following conditional point of compliance for the deep water-bearing zone groundwater is selected (Figure 16):

- Monitoring well MW-12B for the TCE-affected Former Asphalt-Testing Laboratory Area and arsenic- and lead-affected Arsenic and Lead Plume in Groundwater Area.

Farallon understands that reclamation of the Lakeview Facility will include placing up to 30 feet of clean fill in the areas of the selected conditional points of compliance for groundwater (Appendix A). Prior to any permanent filling of the areas of the selected



conditional points of compliance for groundwater, Ecology will be contacted to discuss and seek concurrence for the placement of alternative conditional points of compliance, if concentrations of the constituents of concern still exceed cleanup standards in groundwater at that time.



## **7.0 RECOMMENDED CLEANUP ALTERNATIVE**

The recommended cleanup alternative presented in the FFS/DCA Report remains unchanged. Cleanup Alternative 1—Institutional Controls is the recommended cleanup alternative for residual contamination at the Lakeview Facility to achieve a No Further Action determination from Ecology under the VCP. Cleanup Alternative 1 provides a high degree of environmental benefit, is the most cost-effective of the two permanent technically feasible cleanup alternatives, and meets the MTCA requirements for selection of a cleanup action (WAC 173-340-360).

Protection of human health and the environment will be provided by implementation of institutional controls that include a restriction of groundwater use for drinking water purposes at the Lakeview Facility and engineering controls in the form of an asphalt or concrete cap and/or a minimum of 15 feet of clean fill on top of the contaminated soil. The mandatory reclamation of the Lakeview Facility includes placing up to 30 feet of clean fill on the existing ground surface (Appendix A). Institutional controls and/or engineering controls will not disrupt active business operations occurring at the Lakeview Facility.

As presented in the FFS/DCA Report, the estimated cost for implementing this alternative ranges from approximately \$54,000 to \$92,000. In contrast, the incremental costs that would be incurred to implement Cleanup Alternative 2—Active Cleanup are disproportionate to the incremental environmental benefit gained. The very high cost for implementing Cleanup Alternative 2 would be even higher than the estimated cost range of \$19 to \$23.5 million presented in the FFS/DCA Report due to additional cleanup of areas affected by ORO and cPAHs.

Institutional controls will restrict groundwater from being used for potable water at the Lakeview Facility by recording an Environmental Covenant on the property deed. A revised draft Environmental Covenant is provided for Ecology review in Appendix D. The areas of the Lakeview Facility where engineering controls will be implemented and the conditional points of compliance are shown on Figure 16. Cleanup Alternative 1 assumes long-term groundwater monitoring at the conditional point of compliance monitoring wells to ensure compliance with the provisions of the Environmental Covenant, and at other monitoring wells to monitor progress of the natural attenuation of contaminants of concern.

### **7.1 REVISED MONITORING PLAN**

Groundwater monitoring at the conditional points of compliance monitoring wells selected in Section 6.3.2, Points of Compliance, and monitoring wells selected to monitor natural attenuation will occur every 18 months until the concentrations of constituents of concern attenuate to less than established cleanup levels. The 18-month monitoring frequency is selected to account for seasonal variations in groundwater levels at the Lakeview Facility, and will include collection of





groundwater samples from monitoring wells during late summers and late winters. The following conditional point of compliance monitoring wells and parameters will be monitored:

- Monitoring well MW-3 for TCE by EPA Method 8260c to monitor groundwater down-gradient of the area with residual concentrations of this constituent of concern in the shallow water-bearing zone in the Former Asphalt-Testing Laboratory Area;
- Monitoring wells MW-9, MW-12B, MW-32, and MW-34 for dissolved arsenic and lead by EPA Method 200.8 to monitor groundwater down- and up-gradient of the area with residual concentrations of these constituents of concern in the shallow water-bearing zone in the Arsenic and Lead in Groundwater Plume Area;
- Monitoring well MW-9 for ORO by Northwest Method NWTPH-Dx to monitor groundwater with residual concentrations of this constituent of concern in the shallow water-bearing zone down-gradient of the Former Recycled Stockpile Area, Equipment Parking Area, and Former Asphalt-Testing Laboratory Area; and
- Monitoring well MW-12B for TCE to monitor groundwater down-gradient of the area with residual concentrations of this constituent of concern in the deep water-bearing zone in the Former Asphalt-Testing Laboratory Area.

Six monitoring wells within the contaminant plumes in groundwater will be monitored for natural attenuation, including:

- Remediation well SVE-5 for ORO to monitor natural attenuation of this constituent of concern in the shallow water-bearing zone groundwater in the Former Asphalt Testing Laboratory Area;
- Monitoring well MW-13 for ORO to monitor natural attenuation of this constituent of concern in the shallow water-bearing zone groundwater in the Equipment Parking Area;
- Remediation well SVE-12 for TCE to monitor natural attenuation of this constituent of concern in the shallow water-bearing zone groundwater in the Former Asphalt Testing Laboratory Area;
- Monitoring wells MW-12 and MW-31 for total and dissolved arsenic and lead to monitor natural attenuation of these constituents of concern in the shallow water-bearing zone groundwater in the Arsenic and Lead in Groundwater Plume Area; and
- Monitoring well MW-20 for TCE to monitor natural attenuation of this constituent of concern in the deep water-bearing zone groundwater in the Former Asphalt-Testing Laboratory Area.

A groundwater monitoring report will be prepared and provided to Ecology after 5 years of groundwater monitoring and sampling have been completed. The groundwater monitoring frequency will be reevaluated after the initial 5 years of monitoring and will be discussed with Ecology.



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## 9.0 LIMITATIONS

### 9.1 GENERAL LIMITATIONS

The conclusions contained in this report 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 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 characterization of the Lakeview Facility that is the subject of this report to document current conditions. Farallon focused on areas deemed more likely to exhibit hazardous materials conditions. Contamination may exist in other areas of the Lakeview Facility that were not investigated or were inaccessible. Activities at the Lakeview Facility beyond Farallon's control could change at any time after the completion of this report.

For the foregoing reasons, Farallon cannot and does not warrant or guarantee that the Lakeview Facility 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 this report.

This report has been prepared in accordance with the contract for services between Farallon and Woodworth Capital, Inc., and currently accepted industry standards. No other warranties, representations, or certifications are made.

### 9.2 LIMITATION ON RELIANCE BY THIRD PARTIES

**Reliance by third parties is prohibited.** This report/assessment has been prepared for the exclusive use of Woodworth Capital, Inc. to address the unique needs of Woodworth Capital, Inc. at the Lakeview Facility at a specific point in time.

This is not a general grant of reliance. No one other than Woodworth Capital, Inc. 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.

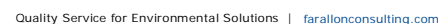
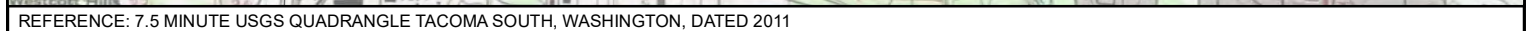
## **FIGURES**

### **ADDENDUM TO FOCUSED FEASIBILITY STUDY/ DISPROPORTIONATE COST ANALYSIS REPORT**

Lakeview Facility  
2800 104<sup>th</sup> Street Court South  
Lakewood, Washington

Farallon PN: 188-002





J Date: 5/15/2018 Disc Reference:  
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2800 104th STREET COURT SOUTH  
LAKEWOOD, WASHINGTON  
FARALLON PN: 188-002





**LEGEND**

- ◆ MONITORING WELL DEEP WATER-BEARING ZONE
- ◆ MONITORING WELL SHALLOW WATER-BEARING ZONE
- DECOMMISSIONED MONITORING WELL
- ◇ AIR SPARGE/SOIL VAPOR EXTRACTION WELL PAIR
- ✦ AIR SPARGE WELL
- ✦ SOIL VAPOR EXTRACTION WELL
- APPROXIMATE PROPERTY BOUNDARY
- - - EXCAVATION LIMITS SEPTEMBER 2010



Washington  
Issaquah | Bellingham | Seattle

Oregon  
Portland | Bend | Baker City

California  
Oakland | Folsom | Irvine

**FIGURE 2**  
**SITE PLAN**  
**LAKEVIEW FACILITY**  
**2800 104TH STREET COURT SOUTH**  
**LAKEWOOD, WASHINGTON**

FARALLON PN: 188-002

Drawn By: jjones

Checked By: BJ

Date: 5/16/2018

Disc Reference:

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**LEGEND**

- BORING LOCATION (11/2017)
- - - APPROXIMATE PROPERTY BOUNDARY
- - - EXCAVATION LIMITS SEPTEMBER 2010



Washington  
Issaquah | Bellingham | Seattle

Oregon  
Portland | Bend | Baker City

California  
Oakland | Folsom | Irvine

Drawn By: jjones

Checked By: BJ

Date: 8/2/2018

Disc Reference:

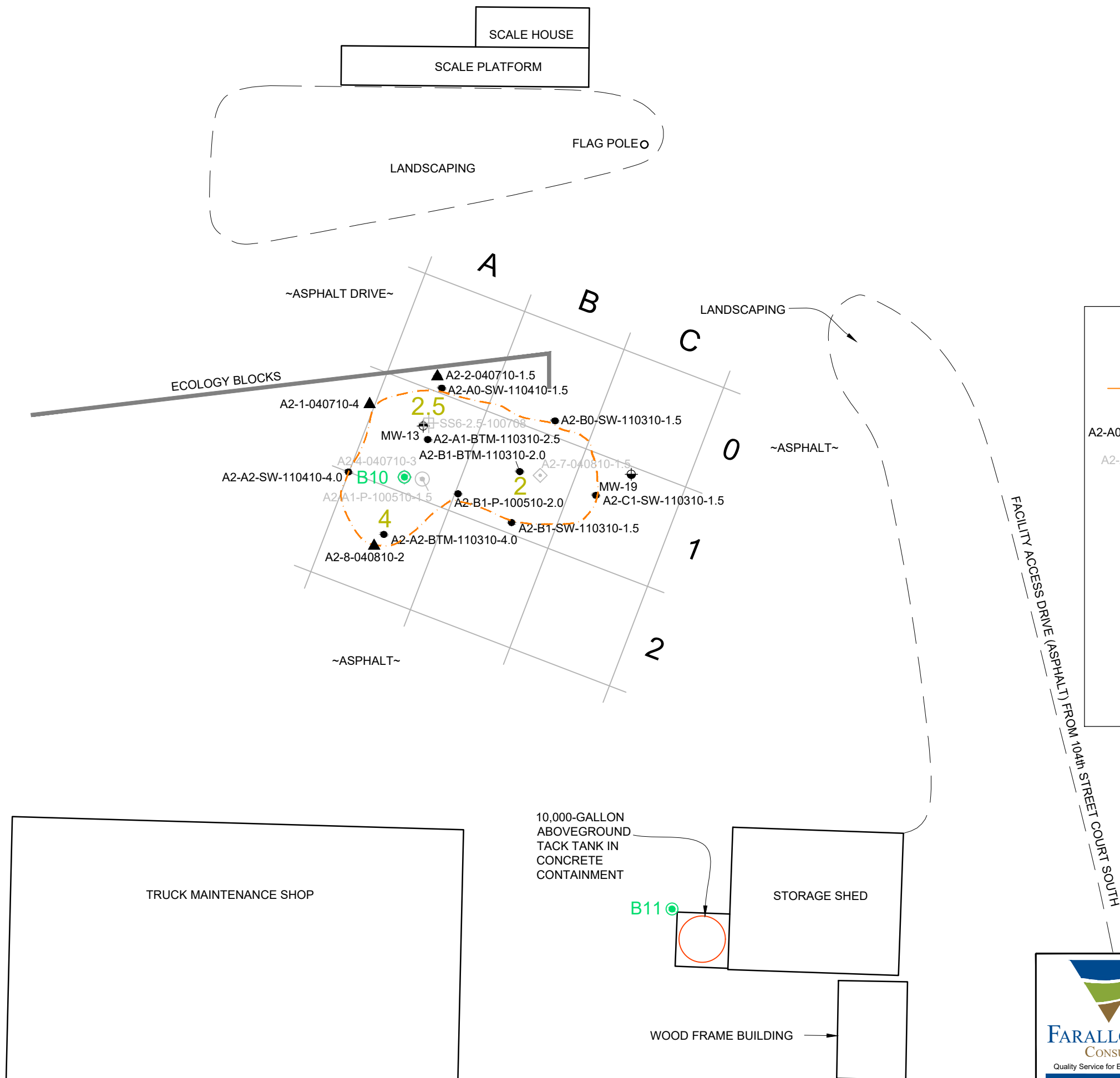
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**FIGURE 3**

**BORING LOCATIONS  
LAKEVIEW FACILITY  
2800 104TH STREET COURT SOUTH  
LAKEWOOD, WASHINGTON**

FARALLON PN: 188-002





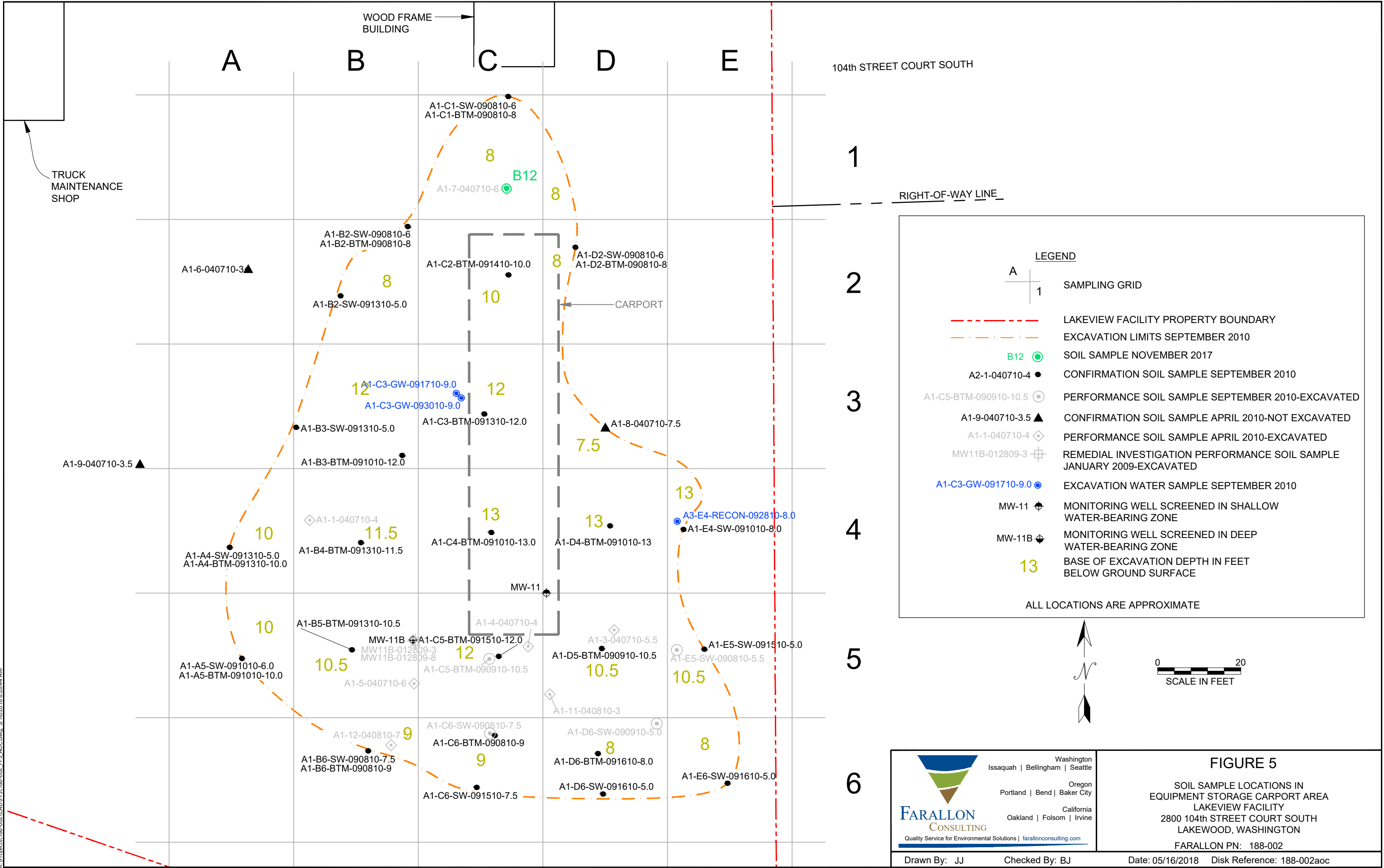
**LEGEND**

The legend defines the symbols used on the map:

- A** (with a crosshair symbol): SAMPLING GRID
- 1** (with a crosshair symbol): EXCAVATION LIMITS SEPTEMBER 2010
- B10** (with a green circle symbol): SOIL SAMPLE NOVEMBER 2017
- A2-A0-SW-110410-1.5** (with a black circle symbol): CONFIRMATION SOIL SAMPLE OCTOBER / NOVEMBER 2010
- A2-A1-P-100510-1.5** (with a grey circle symbol): PERFORMANCE SOIL SAMPLE OCTOBER 2010-EXCAVATED
- A2-8-040810-2** (with a black triangle symbol): CONFIRMATION SOIL SAMPLE APRIL 2010-NOT EXCAVATED
- A2-4-040710-3** (with a diamond symbol): PERFORMANCE SOIL SAMPLE APRIL 2010-EXCAVATED
- SS6-2.5-100708** (with a crosshair symbol): REMEDIAL INVESTIGATION PERFORMANCE SOIL SAMPLE OCTOBER 2009-EXCAVATED
- MW-13** (with a circle and crosshair symbol): MONITORING WELL SCREENED IN SHALLOW WATER-BEARING ZONE
- MW-19** (with a circle and crosshair symbol): MONITORING WELL SCREENED IN DEEP WATER-BEARING ZONE
- 4** (with a yellow number symbol): BASE OF EXCAVATION DEPTH IN FEET BELOW GROUND SURFACE

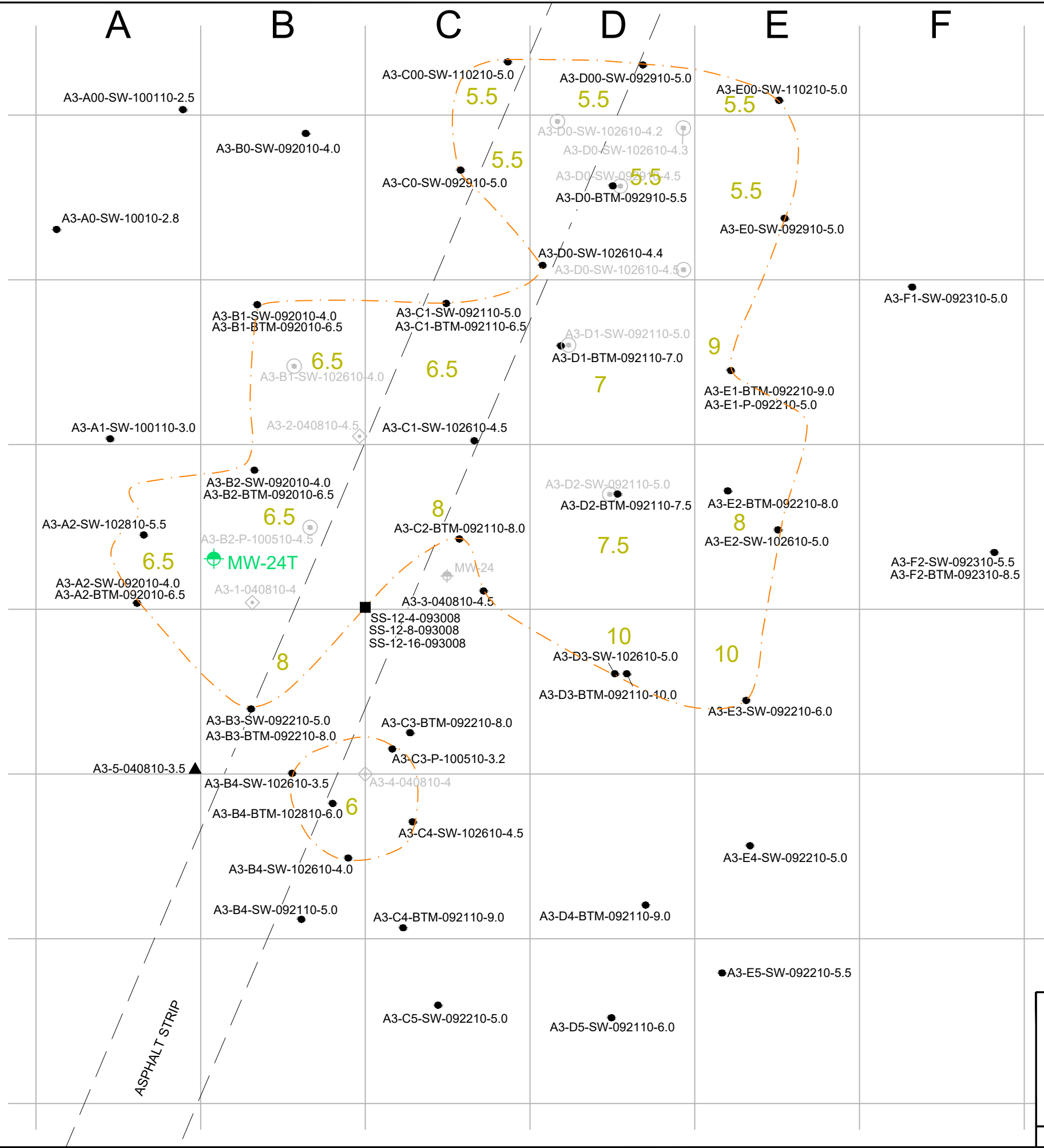
ALL LOCATIONS ARE APPROXIMATE





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**LEGEND**

SAMPLING GRID

EXCAVATION LIMITS SEPTEMBER 2010

SOIL SAMPLE AND RECONNAISSANCE GROUNDWATER SAMPLE NOVEMBER 2017

CONFIRMATION SOIL SAMPLE SEPTEMBER-NOVEMBER 2010

PERFORMANCE SOIL SAMPLE SEPTEMBER-NOVEMBER 2010-EXCAVATED

CONFIRMATION SOIL SAMPLE APRIL 2010-NOT EXCAVATED

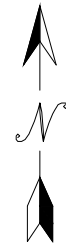
PERFORMANCE SOIL SAMPLE APRIL 2010-EXCAVATED

REMEDIAL INVESTIGATION CONFIRMATION SOIL SAMPLE SEPTEMBER 2008

DECOMMISSIONED MONITORING WELL SCREENED IN SHALLOW WATER-BEARING ZONE

BASE OF EXCAVATION DEPTH IN FEET BELOW GROUND SURFACE

ALL LOCATIONS ARE APPROXIMATE



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**FIGURE 6**

SOIL SAMPLE LOCATIONS IN  
FORMER RECYCLED STOCKPILE AREA  
LAKEVIEW FACILITY  
2800 104th STREET COURT SOUTH  
LAKEWOOD, WASHINGTON

FARALLON PN: 188-002

Drawn By: JJ      Checked By: BJ      Date: 05/16/2018      Disk Reference: 188-002aoc





NOTES:  
RESULTS DEPICTED AS: DEPTH | ORO | ORO  
DEPTH IN FEET BELOW GROUND SURFACE  
CONCENTRATIONS SHOWN IN MILLIGRAMS PER KILOGRAM  
DRO = TOTAL PETROLEUM HYDROCARBONS (TPH) AS  
DIESEL-RANGE ORGANICS  
ORO = TPH AS OIL-RANGE ORGANICS  
**BOLD** = RESULTS DENOTE CONCENTRATIONS EXCEEDING  
APPLICABLE CLEANUP LEVELS  
< = DENOTES ANALYTE NOT DETECTED AT CONCENTRATIONS  
AT OR EXCEEDING THE REPORTING LIMIT LISTED  
NT = NOT TESTED

LEGEND

- BORING LOCATION (11/2017)
- ◆ BORING LOCATION (7/2012)
- ⬮ MONITORING WELL DEEP WATER-BEARING ZONE
- ⬮ MONITORING WELL SHALLOW WATER-BEARING ZONE
- ⬮ DECOMMISSIONED MONITORING WELL
- ◇ SOIL VAPOR EXTRACTION/AIR SPARGE WELL PAIR
- ✦ AIR SPARGE WELL
- ✦ SOIL VAPOR EXTRACTION WELL
- APPROXIMATE PROPERTY BOUNDARY
- - - EXCAVATION LIMITS SEPTEMBER 2010



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Oregon  
Portland | Bend | Baker City  
  
California  
Oakland | Folsom | Irvine

FIGURE 7

SOIL ANALYTICAL RESULTS FOR DRO AND ORO  
LAKEVIEW FACILITY  
2800 104TH STREET COURT SOUTH  
LAKEWOOD, WASHINGTON

FARALLON PN: 188-002

Drawn By: jjones

Checked By: BJ

Date: 5/16/2018

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NOTES:  
RESULTS DEPICTED AS: DEPTH | cPAH  
DEPTH IN FEET BELOW GROUND SURFACE  
CONCENTRATIONS SHOWN IN MILLIGRAMS PER KILOGRAM

cPAH = CARCINOGENIC POLYCYCLIC AROMATIC HYDROCARBON  
TOXICITY EQUIVALENCY CONCENTRATION

**BOLD** = RESULTS DENOTE CONCENTRATIONS EXCEEDING  
APPLICABLE CLEANUP LEVELS

< = DENOTES ANALYTE NOT DETECTED AT CONCENTRATIONS  
AT OR EXCEEDING THE REPORTING LIMIT LISTED

NT = NOT TESTED

LEGEND

- BORING LOCATION (11/2017)
- ◆ BORING LOCATION (7/2012)
- ⬮ MONITORING WELL DEEP WATER-BEARING ZONE
- ⬭ MONITORING WELL SHALLOW WATER-BEARING ZONE
- ⬮ DECOMMISSIONED MONITORING WELL
- ◇ SOIL VAPOR EXTRACTION/AIR SPARGE WELL PAIR
- ✦ AIR SPARGE WELL
- ✦ SOIL VAPOR EXTRACTION WELL
- APPROXIMATE PROPERTY BOUNDARY
- - - EXCAVATION LIMITS SEPTEMBER 2010



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California  
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Drawn By: jjones

Checked By: BJ

Date: 5/16/2018

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**FIGURE 8**  
SOIL ANALYTICAL RESULTS FOR cPAHS  
LAKEVIEW FACILITY  
2800 104TH STREET COURT SOUTH  
LAKEWOOD, WASHINGTON

FARALLON PN: 188-002





NOTES:  
RESULTS DEPICTED AS: DEPTH | TCE  
DEPTH IN FEET BELOW GROUND SURFACE  
CONCENTRATIONS SHOWN IN MILLIGRAMS PER KILOGRAM  
TCE = TRICHLOROETHENE  
< = DENOTES ANALYTE NOT DETECTED AT CONCENTRATIONS  
AT OR EXCEEDING THE REPORTING LIMIT LISTED  
NT = NOT TESTED

LEGEND

- BORING LOCATION (11/2017)
- BORING LOCATION (7/2012)
- MONITORING WELL DEEP WATER-BEARING ZONE
- MONITORING WELL SHALLOW WATER-BEARING ZONE
- DECOMMISSIONED MONITORING WELL
- SOIL VAPOR EXTRACTION/AIR SPARGE WELL PAIR
- AIR SPARGE WELL
- SOIL VAPOR EXTRACTION WELL
- APPROXIMATE PROPERTY BOUNDARY
- EXCAVATION LIMITS SEPTEMBER 2010

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Drawn By: jjones

Checked By: BJ

**FIGURE 9**  
SOIL ANALYTICAL RESULTS FOR TCE  
LAKEVIEW FACILITY  
2800 104TH STREET COURT SOUTH  
LAKEWOOD, WASHINGTON

FARALLON PN: 188-002





NOTES:  
RESULTS DEPICTED AS: DRO | ORO  
CONCENTRATIONS SHOWN IN MICROGRAMS PER LITER  
DRO = TOTAL PETROLEUM HYDROCARBONS (TPH) AS  
DIESEL-RANGE ORGANICS  
ORO = TPH AS OIL-RANGE ORGANICS  
**BOLD** = RESULTS DENOTE CONCENTRATIONS EXCEEDING  
APPLICABLE CLEANUP LEVELS  
< = DENOTES ANALYTE NOT DETECTED AT CONCENTRATIONS  
AT OR EXCEEDING THE REPORTING LIMIT LISTED

**LEGEND**

- RECONNAISSANCE GROUNDWATER SAMPLE
- MONITORING WELL DEEP WATER-BEARING ZONE
- MONITORING WELL SHALLOW WATER-BEARING ZONE
- DECOMMISSIONED MONITORING WELL
- AIR SPARGE/SOIL VAPOR EXTRACTION WELL PAIR
- AIR SPARGE WELL
- SOIL VAPOR EXTRACTION WELL
- APPROXIMATE PROPERTY BOUNDARY
- EXCAVATION LIMITS SEPTEMBER 2010

0 200  
SCALE IN FEET



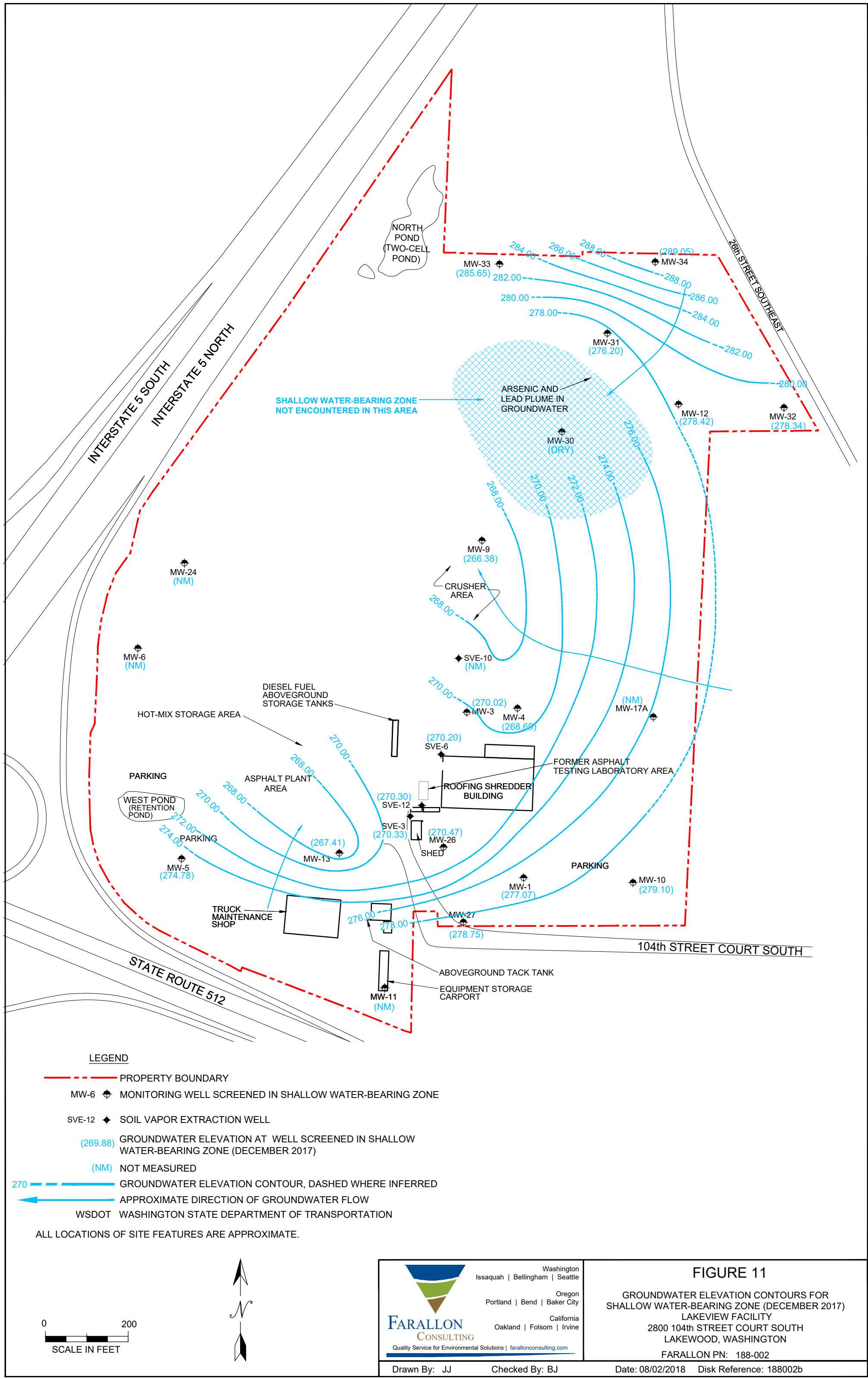
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**FIGURE 10**  
**GROUNDWATER ANALYTICAL RESULTS**  
**FOR DRO AND ORO**  
**LAKEVIEW FACILITY**  
**2800 104TH STREET COURT SOUTH**  
**LAKEWOOD, WASHINGTON**  
FARALLON PN: 188-002

Drawn By: jjones Checked By: BJ Date: 5/1/2018 Disc Reference:  
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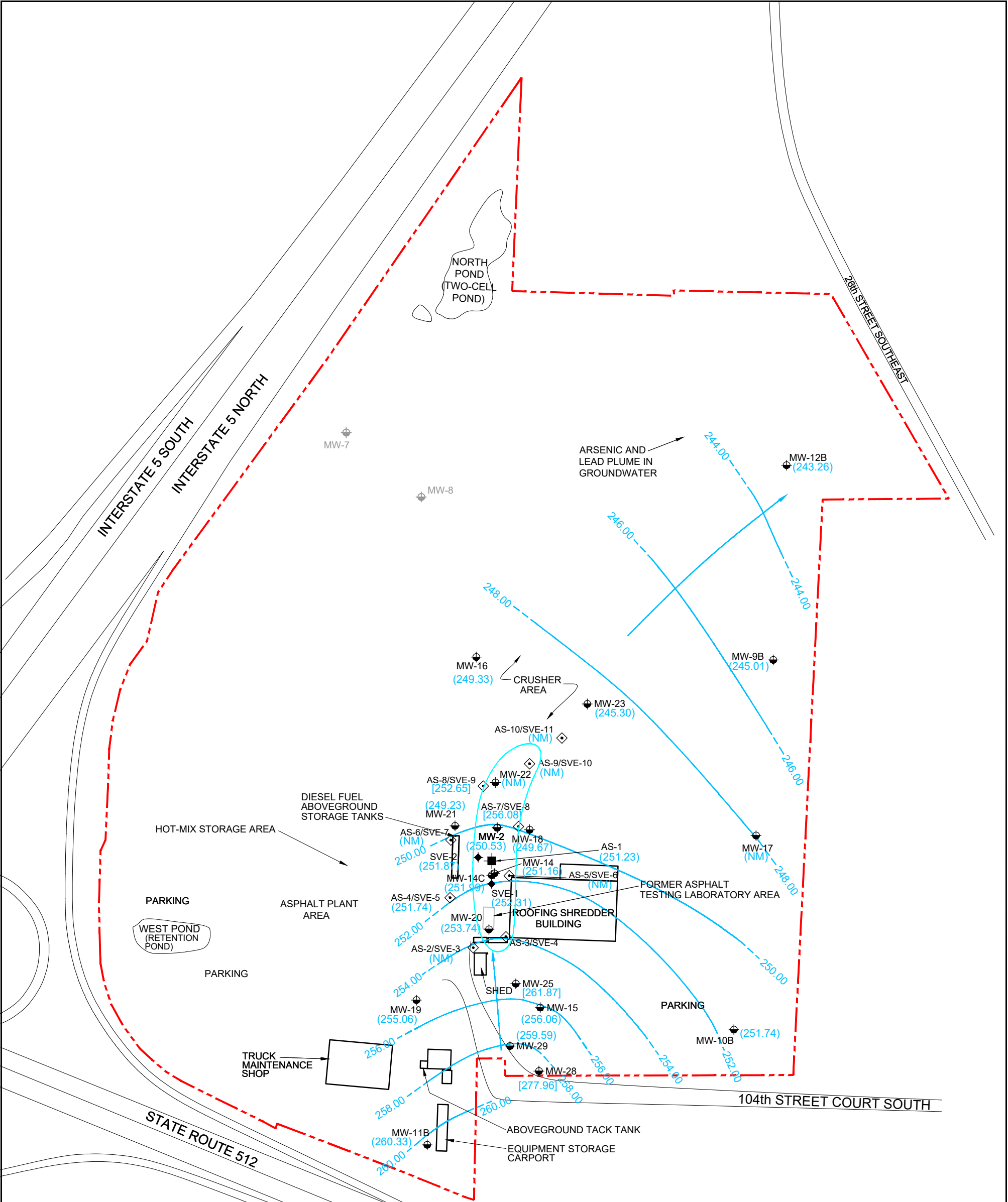


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LEGEND

--- PROPERTY BOUNDARY

MW-11B MONITORING WELL SCREENED IN DEEP WATER-BEARING ZONE

AS-8/SVE-9 SOIL VAPOR EXTRACTION WELL/ AIR SPARGE WELL PAIR

AS-1 AIR SPARGE WELL

SVE-1 SOIL VAPOR EXTRACTION WELL

MW-7 DECOMMISSIONED MONITORING WELL

(269.88) GROUNDWATER ELEVATION AT WELL SCREENED IN SHALLOW WATER-BEARING ZONE (DECEMBER 2017)

[256.08] MEASURED ROUNWATER ELEVATION NOT USED IN CONTOUR GENERATION

(NM) NOT MEASURED

270 --- GROUNDWATER ELEVATION CONTOUR, DASHED WHERE INFERRED

APPROXIMATE DIRECTION OF GROUNDWATER FLOW

WSDOT WASHINGTON STATE DEPARTMENT OF TRANSPORTATION

ALL LOCATIONS OF SITE FEATURES ARE APPROXIMATE.

0 200  
APPROXIMATE SCALE IN FEET



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FIGURE 13

GROUNDWATER ELEVATION CONTOURS FOR  
SHALLOW WATER-BEARING ZONE (DECEMBER 2017)  
LAKEVIEW FACILITY  
2800 104th STREET COURT SOUTH  
LAKEWOOD, WASHINGTON  
FARALLON PN: 188-002

Drawn By: JJ

Checked By: BJ

Date: 05/16/2018 Disk Reference: 188002b

LEGEND

APPROXIMATE AREA WHERE TCE CONCENTRATIONS IN DEEP WATER-BEARING ZONE GROUNDWATER EXCEEDED THE MTCA METHOD A CLEANUP LEVEL IN 2017

DIRECTION OF GROUNDWATER FLOW IN DEEP WATER-BEARING ZONE

MW-11 MONITORING WELL SCREENED IN SHALLOW WATER-BEARING ZONE

MW-14 MONITORING WELL SCREENED IN DEEP WATER-BEARING ZONE

SVE12 SOIL VAPOR EXTRACTION WELL IN SHALLOW WATER-BEARING ZONE

SVE1 SOIL VAPOR EXTRACTION WELL IN DEEP WATER-BEARING ZONE

AS-1 AIR SPARGE WELL

AS-7/SVE-8 AIR SPARGE AND SOIL VAPOR EXTRACTION WELL PAIR

TCE TRICHLOROETHENE

MTCA WASHINGTON STATE MODEL TOXICS CONTROL ACT

WSDOT WASHINGTON STATE DEPARTMENT OF TRANSPORTATION

NT NOT TESTED

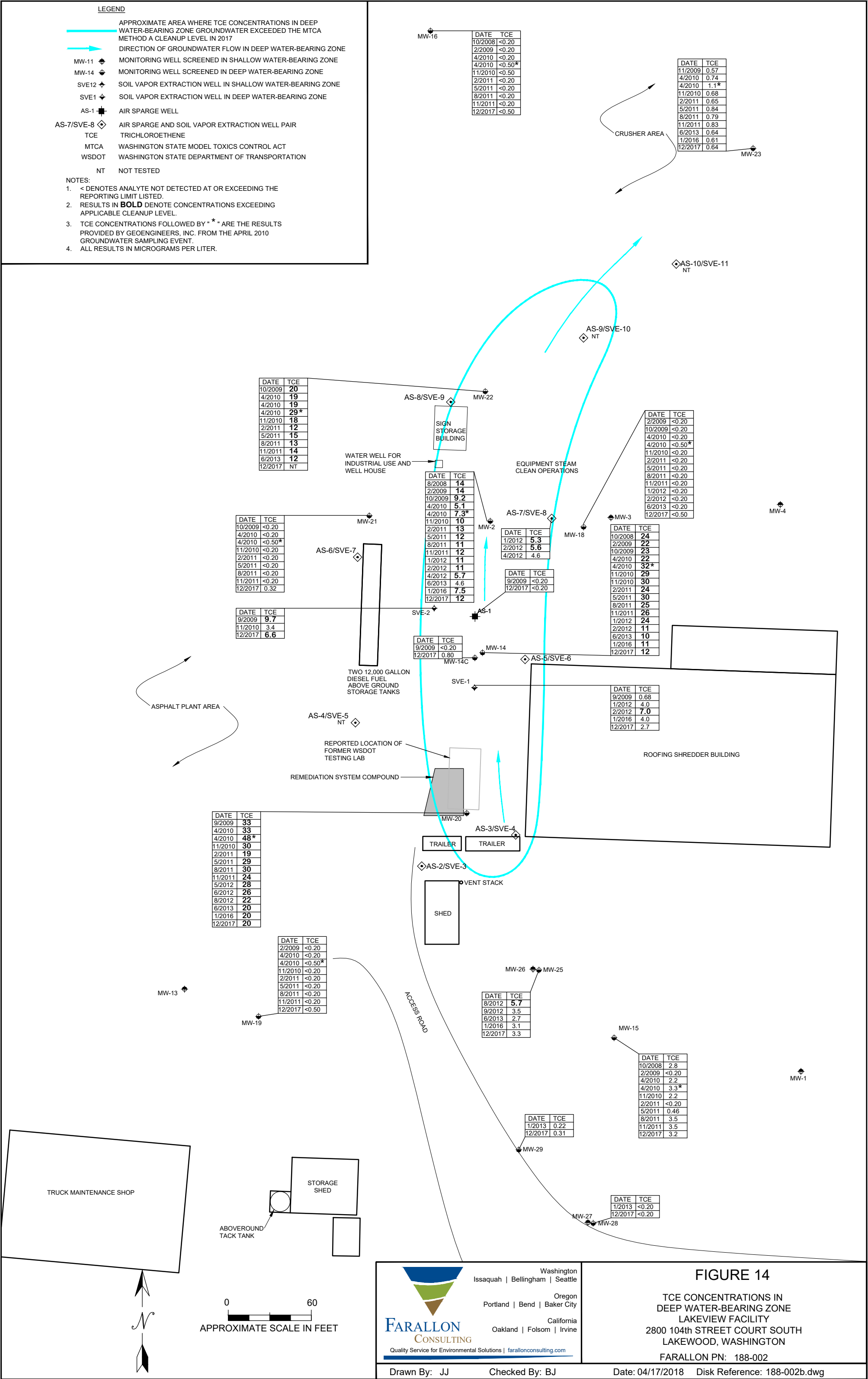
NOTES:

1. < DENOTES ANALYTE NOT DETECTED AT OR EXCEEDING THE REPORTING LIMIT LISTED.

2. RESULTS IN **BOLD** DENOTE CONCENTRATIONS EXCEEDING APPLICABLE CLEANUP LEVEL.

3. TCE CONCENTRATIONS FOLLOWED BY " \* " ARE THE RESULTS PROVIDED BY GEOENGINEERS, INC. FROM THE APRIL 2010 GROUNDWATER SAMPLING EVENT.

4. ALL RESULTS IN MICROGRAMS PER LITER.



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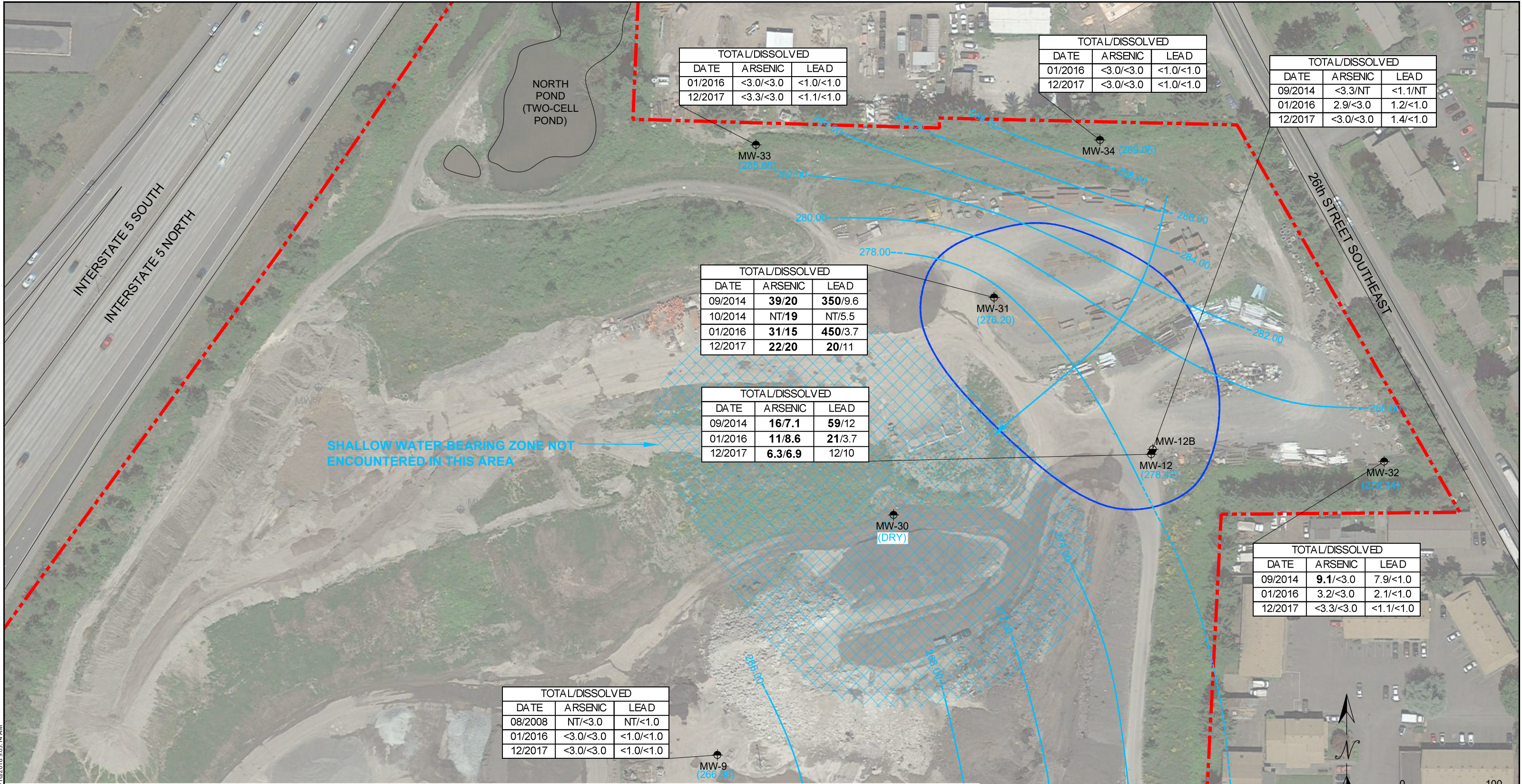
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FIGURE 14

TCE CONCENTRATIONS IN  
DEEP WATER-BEARING ZONE  
LAKEVIEW FACILITY  
2800 104th STREET COURT SOUTH  
LAKEWOOD, WASHINGTON  
FARALLON PN: 188-002

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TOTAL/DISSOLVED		
DATE	ARSENIC	LEAD
01/2016	<3.0/<3.0	<1.0/<1.0
12/2017	<3.3/<3.0	<1.1/<1.0

TOTAL/DISSOLVED		
DATE	ARSENIC	LEAD
01/2016	<3.0/<3.0	<1.0/<1.0
12/2017	<3.0/<3.0	<1.0/<1.0

TOTAL/DISSOLVED		
DATE	ARSENIC	LEAD
09/2014	<3.3/NT	<1.1/NT
01/2016	2.9/<3.0	1.2/<1.0
12/2017	<3.0/<3.0	1.4/<1.0

TOTAL/DISSOLVED		
DATE	ARSENIC	LEAD
09/2014	<b>39/20</b>	<b>350/9.6</b>
10/2014	NT/19	NT/5.5
01/2016	<b>31/15</b>	<b>450/3.7</b>
12/2017	<b>22/20</b>	<b>20/11</b>

TOTAL/DISSOLVED		
DATE	ARSENIC	LEAD
09/2014	<b>16/7.1</b>	<b>59/12</b>
01/2016	<b>11/8.6</b>	<b>21/3.7</b>
12/2017	<b>6.3/6.9</b>	12/10

TOTAL/DISSOLVED		
DATE	ARSENIC	LEAD
09/2014	<b>9.1/&lt;3.0</b>	7.9/<1.0
01/2016	3.2/<3.0	2.1/<1.0
12/2017	<3.3/<3.0	<1.1/<1.0

TOTAL/DISSOLVED		
DATE	ARSENIC	LEAD
08/2008	NT/<3.0	NT/<1.0
01/2016	<3.0/<3.0	<1.0/<1.0
12/2017	<3.0/<3.0	<1.0/<1.0

LEGEND

- PROPERTY BOUNDARY
- MW-11 MONITORING WELL SCREENED IN SHALLOW WATER-BEARING ZONE
- MW-15 MONITORING WELL SCREENED IN DEEP WATER-BEARING ZONE
- MW-8 DECOMMISSIONED MONITORING WELL
- FLOW DIRECTION FOR SHALLOW WATER-BEARING ZONE
- GROUNDWATER ELEVATION AT WELL SCREENED IN SHALLOW WATER-BEARING ZONE (DECEMBER 2017)
- GROUNDWATER ELEVATION CONTOUR, DASHED WHERE INFERRED

- NOTES:
- < DENOTES ANALYTE NOT DETECTED AT OR EXCEEDING THE REPORTING LIMIT LISTED.
  - RESULTS IN **BOLD** DENOTE CONCENTRATIONS EXCEEDING APPLICABLE CLEANUP LEVEL.
  - ALL RESULTS IN MICROGRAMS PER LITER.
  - NT = NOT TESTED

APPROXIMATE EXTENT OF ARSENIC AND/OR LEAD CONCENTRATIONS EXCEEDING CLEANUP LEVEL IN SHALLOW WATER-BEARING ZONE



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FIGURE 15

ARSENIC AND LEAD CONCENTRATIONS IN GROUNDWATER  
LAKEVIEW FACILITY  
2800 104th STREET COURT SOUTH  
LAKEWOOD, WASHINGTON

FARALLON PN: 188-002



**ENVIRONMENTAL COVENANT:**  
1.) THE RESTRICTION ON GROUNDWATER USE WILL BE ON ALL FIVE PIERCE COUNTY PARCELS COMPRISING THE LAKEVIEW FACILITY  
2.) ENGINEERING CONTROLS WILL INCLUDE A CAP (PAVEMENT OR A MINIMUM OF 15 FEET OF CLEAN FILL) IN AREAS SHOWN IN GREEN

**CONDITIONAL POINTS OF COMPLIANCE FOR GROUNDWATER:**

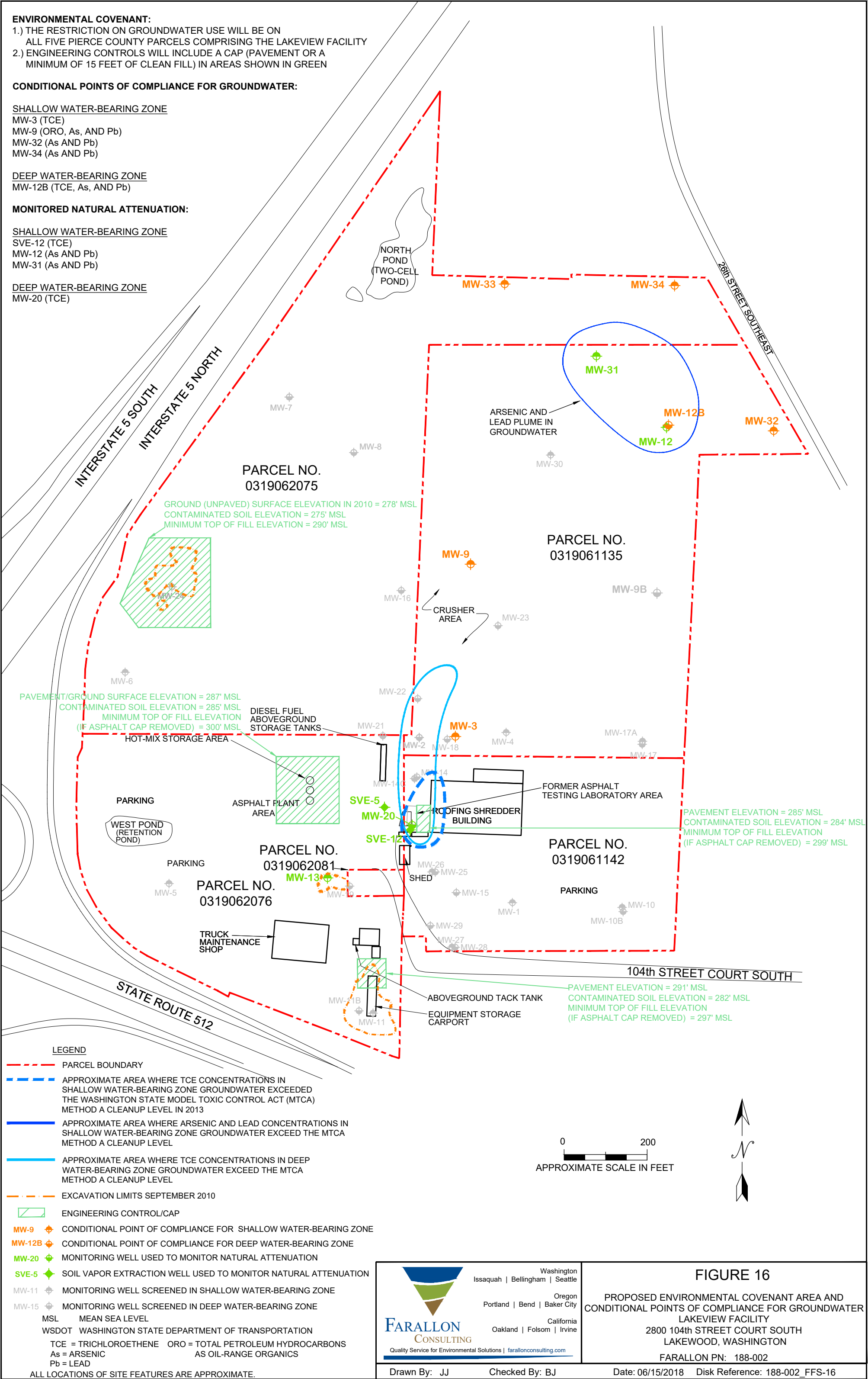
SHALLOW WATER-BEARING ZONE  
MW-3 (TCE)  
MW-9 (ORO, As, AND Pb)  
MW-32 (As AND Pb)  
MW-34 (As AND Pb)

DEEP WATER-BEARING ZONE  
MW-12B (TCE, As, AND Pb)

**MONITORED NATURAL ATTENUATION:**

SHALLOW WATER-BEARING ZONE  
SVE-12 (TCE)  
MW-12 (As AND Pb)  
MW-31 (As AND Pb)

DEEP WATER-BEARING ZONE  
MW-20 (TCE)





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**FIGURE 16**

PROPOSED ENVIRONMENTAL COVENANT AREA AND  
CONDITIONAL POINTS OF COMPLIANCE FOR GROUNDWATER  
LAKEVIEW FACILITY  
2800 104th STREET COURT SOUTH  
LAKEWOOD, WASHINGTON

FARALLON PN: 188-002

Drawn By: JJ      Checked By: BJ      Date: 06/15/2018      Disk Reference: 188-002\_FFS-16



## **TABLES**

### **ADDENDUM TO FOCUSED FEASIBILITY STUDY/ DISPROPORTIONATE COST ANALYSIS REPORT**

Lakeview Facility  
2800 104<sup>th</sup> Street Court South  
Lakewood, Washington

Farallon PN: 188-002

Table 1  
Groundwater Sampling Matrix  
Lakeview Facility  
Lakewood, Washington  
Farallon PN: 188-002

Well Identification	Water-Bearing Zone	Depth to Water Measurement	DRO <sup>1, 11</sup>	ORO <sup>1, 11</sup>	VOCs <sup>2, 12</sup>	1,4-Dioxane <sup>3</sup>	Total and Dissolved Arsenic <sup>4, 13</sup>	Total and Dissolved Lead <sup>4, 13</sup>	Geochemical and Monitored Natural Attenuation Parameters <sup>14</sup>												Total Organic Carbon <sup>10</sup>
									Dissolved Oxygen <sup>5</sup>	Nitrate <sup>6</sup>	Ferrous Iron <sup>7</sup>	Sulfate <sup>8</sup>	Nitrite <sup>6</sup>	Dissolved Methane <sup>9</sup>	Dissolved Ethane <sup>9</sup>	Dissolved Ethene <sup>9</sup>	pH <sup>5</sup>	Temperature <sup>5</sup>	Specific Conductance <sup>5</sup>	ORP <sup>5</sup>	
MW-1	Shallow	X																			
MW-2	Deep	X			X	X			X	X	X	X	X	X	X	X	X	X	X	X	X
MW-3	Shallow	X			X				X								X	X	X	X	
MW-4	Shallow	X																			
MW-5	Shallow	X	X	X					X								X	X	X	X	
MW-6	Shallow	Unable to locate																			
MW-7	Deep	Destroyed																			
MW-8	Deep	Destroyed																			
MW-9	Shallow	X					X	X	X								X	X	X	X	
MW-9B	Deep	X			Y																
MW-10	Shallow	X																			
MW-10B	Deep	X			X																
MW-11	Shallow	Unable to locate																			
MW-11B	Deep	X	X	X					X								X	X	X	X	
MW-12	Shallow	X					X	X	X								X	X	X	X	
MW-12B	Deep	X			Y		X	X	X								X	X	X	X	
MW-13	Shallow	X	X	X					X								X	X	X	X	
MW-14	Deep	X			X	X			X	X	X	X	X	X	X	X	X	X	X	X	X
MW-14C	Deep	X			X				X	X	X	X	X	X	X	X	X	X	X	X	X
MW-15	Deep	X			X				X								X	X	X	X	
MW-16	Deep	X	X	X	X				X	X	X	X	X	X	X	X	X	X	X	X	X
MW-17A	Shallow	X																			
MW-17	Deep	X																			
MW-18	Deep	X			X				X	X	X	X	X	X	X	X	X	X	X	X	X
MW-19	Deep	X	X	X	X				X	X	X	X	X	X	X	X	X	X	X	X	X
MW-20	Deep	X			X	X			X	X	X	X	X	X	X	X	X	X	X	X	X
MW-21	Deep	X	X	X	X																
MW-22	Deep	Inaccessible due to asphalt over well																			
MW-23	Deep	X			X				X	X	X	X	X	X	X	X	X	X	X	X	X
MW-24	Shallow	Well Destroyed - Under 20 feet of reclamation fill (temporary well MW-24T installed and sampled instead)																			
MW-25	Deep	X			X				X	X	X	X	X	X	X	X	X	X	X	X	X
MW-26	Shallow	X			X				X								X	X	X	X	
MW-27	Shallow	X																			
MW-28	Deep	X			X				X	X	X	X	X	X	X	X	X	X	X	X	X
MW-29	Deep	X			X				X								X	X	X	X	
MW-30	Shallow	X					X	X	X								X	X	X	X	
MW-31	Shallow	X					X	X	X								X	X	X	X	
MW-32	Shallow	X					X	X	X								X	X	X	X	
MW-33	Shallow	X					X	X	X								X	X	X	X	

Table 1  
Groundwater Sampling Matrix  
Lakeview Facility  
Lakewood, Washington  
Farallon PN: 188-002

Well Identification	Water-Bearing Zone	Depth to Water Measurement	DRO <sup>1, 11</sup>	ORO <sup>1, 11</sup>	VOCs <sup>2, 12</sup>	1,4-Dioxane <sup>3</sup>	Total and Dissolved Arsenic <sup>4, 13</sup>	Total and Dissolved Lead <sup>4, 13</sup>	Geochemical and Monitored Natural Attenuation Parameters <sup>14</sup>												
									Dissolved Oxygen <sup>5</sup>	Nitrate <sup>6</sup>	Ferrous Iron <sup>7</sup>	Sulfate <sup>8</sup>	Nitrite <sup>6</sup>	Dissolved Methane <sup>9</sup>	Dissolved Ethane <sup>9</sup>	Dissolved Ethene <sup>9</sup>	pH <sup>5</sup>	Temperature <sup>5</sup>	Specific Conductance <sup>5</sup>	ORP <sup>5</sup>	Total Organic Carbon <sup>10</sup>
MW-34	Shallow	X					X	X	X								X	X	X	X	
SVE-1	Deep	X			X				X	X	X	X	X	X	X	X	X	X	X	X	X
SVE-2	Deep	X	X	X	X				X								X	X	X	X	
SVE-3	Shallow	X			X				X								X	X	X	X	
SVE-4	Deep	No groundwater monitoring or sampling planned <sup>11, 12, 13, 14</sup>																			
SVE-5	Deep	X	X	X					X								X	X	X	X	
SVE-6	Shallow	X			X				X								X	X	X	X	
SVE-7	Deep	Inaccessible due to asphalt over well																			
SVE-9	Deep	X	X	X					X								X	X	X	X	
SVE-10	Deep	Unable to locate																			
SVE-11	Deep	Inaccessible due to overlying asphalt stockpile																			
SVE-12	Shallow	X			X				X	X	X	X	X	X	X	X	X	X	X	X	X
AS-1	Deep	X			X				X								X	X	X	X	
AS-2	Deep	No groundwater monitoring or sampling planned <sup>11, 12, 13, 14</sup>																			
AS-3	Deep	No groundwater monitoring or sampling planned <sup>11, 12, 13, 14</sup>																			
AS-4	Deep	Unable to locate																			
AS-5	Deep	No groundwater monitoring or sampling planned <sup>11, 12, 13, 14</sup>																			
AS-6	Deep	No groundwater monitoring or sampling planned <sup>11, 12, 13, 14</sup>																			
AS-7	Deep	No groundwater monitoring or sampling planned <sup>11, 12, 13, 14</sup>																			
AS-8	Deep	No groundwater monitoring or sampling planned <sup>11, 12, 13, 14</sup>																			
AS-9	Deep	Inaccessible under gravel stockpile																			
AS-10	Deep	Inaccessible due to overlying gravel stockpile																			
Industrial Well	Regional	X			X				Not sample for geochemical and monitored natural attenuation parameters												

NOTES:  
<sup>1</sup>Analyzed by Northwest Method NWTPH-Dx.  
<sup>2</sup>Analyzed by U.S. Environmental Protection Agency (EPA) Method 8260C.  
<sup>3</sup>Analyzed by EPA Method 8270D.  
<sup>4</sup>Analyzed by EPA Method 200.8.  
<sup>5</sup>Collected using a YSI or HORIBA multimeter and flow-through cell.  
<sup>6</sup>Analyzed by EPA Method 353.2.  
<sup>7</sup>Collected and analyzed in the field using a portable ferrous iron test kit.  
<sup>8</sup>Analyzed by ASTM D516-07.  
<sup>9</sup>Analyzed by EPA Method RSK-175.  
<sup>10</sup>Analyzed by Standard Method 5310B/EPA Method 9060A.  
  
<sup>11</sup>Monitoring wells to be sampled for DRO and ORO analysis were selected based on their proximity to areas of concern formerly impacted by total petroleum hydrocarbons and include monitoring wells specifically requested to be sampled by the Washington State Department of Ecology.  
<sup>12</sup>Monitoring wells to be sampled for VOC analysis were selected based on their proximity to the area impacted by trichloroethene.  
<sup>13</sup>Monitoring wells to be sampled for arsenic and lead analysis were selected based on their proximity to the area impacted by those metals.  
<sup>14</sup>Monitoring wells sampled for geochemical and monitored natural attenuation parameters were selected based on the request by the Washington State Department of Ecology. The geochemical and monitored natural attenuation parameters selected for analysis are the most common electron donors and metabolic byproducts of anaerobic biodegradation.

DRO = total petroleum hydrocarbons as diesel-range organics  
ORO = total petroleum hydrocarbons as oil-range organics  
ORP = oxidation-reduction potential  
VOCs = volatile organic compounds  
X = groundwater sample collected  
Y = contingent upon detection of trichloroethene in groundwater samples from monitoring well MW-23

Table 2  
Soil Analytical Results for TPH and BTEX  
Lakeview Facility  
Lakewood, Washington  
Farallon PN: 188-002

Sample Location	Sample Identification	Sample Depth (feet) <sup>1</sup>	Sample Date	Analytical Results (milligrams per kilogram)							
				Sample Extract Treated with a Sulfuric Acid/Silica Gel Cleanup Procedure		Sample Extract Not Treated Prior to Analysis		Benzene <sup>3</sup>	Toluene <sup>3</sup>	Ethylbenzene <sup>3</sup>	Xylenes <sup>3</sup>
				DRO <sup>2</sup>	ORO <sup>2</sup>	DRO <sup>2</sup>	ORO <sup>2</sup>				
Equipment Parking Area											
B-10	B-10-5.0-111317	5.0	11/13/2017	---	---	< 26	130	---	---	---	---
Tack Tank Area											
B-11	B-11-5.0-111617	5.0	11/16/2017	---	---	< 27	< 54	---	---	---	---
Equipment Storage Carport Area											
B-12	B-12-9.0-111617	9.0	11/16/2017	< 580	11,000	< 630	12,000	---	---	---	---
Asphalt Plant Area											
B-18	B-18-3.0-111417	3.0	11/14/2017	---	---	< 26	62	---	---	---	---
	B-18-7.5-111617	7.5	11/16/2017	---	---	59 N	250	---	---	---	---
	B-18-10.0-111617	10.0	11/16/2017	---	---	660 N	730	---	---	---	---
Hot-Mix Storage Area											
B-19	B-19-2.5-111417	2.5	11/14/2017	---	---	< 540	6,200	---	---	---	---
	B-19-10.0-111617	10.0	11/16/2017	---	---	< 26	< 52	---	---	---	---
Former Recycled Stockpile Area											
MW-24T	MW-24T-12.5-111417	12.5	11/14/2017	200 N	800	180 N	1,100	---	---	---	---
Former Asphalt-Testing Laboratory Area											
B-13	B-13-2.5-111317	2.5	11/13/2017	---	---	---	---	< 0.00086	< 0.0043	< 0.00086	< 0.00256
	B-13-5.0-111617	5.0	11/16/2017	---	---	< 26	< 52	---	---	---	---
	B-13-10.0-111617	10.0	11/16/2017	---	---	< 27	< 53	< 0.00083	< 0.0041	< 0.00083	< 0.00253
	B-13-17.5-111617	17.5	11/16/2017	---	---	< 28	< 56	< 0.00079	< 0.0039	< 0.00079	< 0.00239
B-14	B-14-2.5-111317	2.5	11/13/2017	---	---	< 26	< 52	< 0.00093	< 0.0046	< 0.00093	< 0.00283
	B-14-10.0-111417	10.0	11/14/2017	---	---	< 26	< 53	< 0.0010	< 0.0052	< 0.0010	< 0.0031
	B-14-17.5-111417	17.5	11/14/2017	---	---	< 27	< 55	< 0.00090	< 0.0045	< 0.00090	< 0.0027
B-15	B-15-2.5-111317	2.5	11/13/2017	---	---	150	1,000	< 0.00083	< 0.0041	< 0.00083	< 0.00253
	B-15-10.0-111517	10.0	11/15/2017	---	---	< 27	< 53	< 0.00092	< 0.0046	< 0.00092	< 0.00272
	B-15-17.5-111517	17.5	11/15/2017	---	---	< 29	< 58	< 0.00084	< 0.0042	< 0.00084	< 0.00254

Table 2  
Soil Analytical Results for TPH and BTEX  
Lakeview Facility  
Lakewood, Washington  
Farallon PN: 188-002

Sample Location	Sample Identification	Sample Depth (feet) <sup>1</sup>	Sample Date	Analytical Results (milligrams per kilogram)							
				Sample Extract Treated with a Sulfuric Acid/Silica Gel Cleanup Procedure		Sample Extract Not Treated Prior to Analysis		Benzene <sup>3</sup>	Toluene <sup>3</sup>	Ethylbenzene <sup>3</sup>	Xylenes <sup>3</sup>
				DRO <sup>2</sup>	ORO <sup>2</sup>	DRO <sup>2</sup>	ORO <sup>2</sup>				
B-16	B-16-3.0-111417	3.0	11/14/2017	---	---	< 250	<b>4,300</b>	< 0.0011	< 0.0053	< 0.0011	< 0.0032
	B-16-10.0-111517	10.0	11/15/2017	---	---	< 27	< 54	< 0.00074	< 0.0037	< 0.00074	< 0.00224
	B-16-17.5-111517	17.5	11/15/2017	---	---	< 28	< 56	< 0.00083	< 0.0042	< 0.00083	< 0.00253
B-17	B-17-5.0-111517	5.0	11/15/2017	---	---	< 84	1,000	< 0.00083	< 0.0041	< 0.00083	< 0.00253
	B-17-10.0-111517	10.0	11/15/2017	---	---	< 28	< 55	< 0.00072	< 0.0036	< 0.00072	< 0.00212
	B-17-20.0-111517	20.0	11/15/2017	---	---	< 29	< 58	< 0.00084	< 0.0042	< 0.00084	< 0.00254
B-20	B-20-2.5-111417	2.5	11/14/2017	---	---	---	---	< 0.00089	< 0.0044	< 0.00089	< 0.00269
	B-20-10.0-111517	10.0	11/15/2017	---	---	---	---	< 0.0011	< 0.0055	< 0.0011	< 0.0033
	B-20-17.5-111517	17.5	11/15/2017	---	---	---	---	< 0.00099	< 0.0049	< 0.00099	< 0.00299
MTCA Method A Cleanup Levels for Soil <sup>4</sup>				<b>2,000</b>	<b>2,000</b>	<b>2,000</b>	<b>2,000</b>	<b>0.03</b>	<b>7</b>	<b>6</b>	<b>9</b>

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.

<sup>1</sup>Depth in feet below ground surface.

<sup>2</sup>Analyzed by Northwest Method NWTPH-Dx.

<sup>3</sup>Analyzed by U.S. Environmental Protection Agency Method 8260C.

<sup>4</sup>Washington 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.

BTEX = benzene, toluene, ethylbenzene, and xylenes

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

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

ORO = TPH as oil-range organics

Table 3  
Soil Analytical Results for Detected VOCs  
Lakeview Facility  
Lakewood, Washington  
Farallon PN: 188-002

Sample Location	Sample Identification	Sample Depth (feet) <sup>1</sup>	Sample Date	Analytical Results (milligrams per kilogram) <sup>2</sup>									
				PCE	TCE	1,1-Dichloroethene	1,1,1-Trichloroethane	2-Butanone (Methyl Ethyl Ketone)	Carbon Disulfide	Acetone	Naphthalene	1,2,4-Trimethylbenzene	p-Isopropyltoluene
Former Asphalt-Testing Laboratory Area													
B-13	B-13-2.5-111317	2.5	11/13/2017	< 0.00086	< 0.00086	< 0.00086	< 0.00086	< 0.0043	< 0.00086	< 0.0043	< 0.00086	< 0.00086	< 0.00086
	B-13-10.0-111617	10.0	11/16/2017	0.0015	0.0059	< 0.00083	0.0014	< 0.0041	< 0.00083	< 0.0041	< 0.00083	< 0.00083	< 0.00083
	B-13-17.5-111617	17.5	11/16/2017	< 0.00079	0.0017	< 0.00079	< 0.00079	< 0.0039	< 0.00079	< 0.0039	< 0.00079	< 0.00079	< 0.00079
B-14	B-14-2.5-111317	2.5	11/13/2017	< 0.00093	< 0.00093	< 0.00093	< 0.00093	< 0.0046	< 0.00093	< 0.0046	< 0.00093	< 0.00093	< 0.00093
	B-14-10.0-111417	10.0	11/14/2017	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0052	< 0.0010	< 0.0052	< 0.0010	< 0.0010	< 0.0010
	B-14-17.5-111417	17.5	11/14/2017	< 0.00090	0.0085	< 0.00090	< 0.00090	< 0.0045	< 0.00090	< 0.0045	< 0.00090	< 0.00090	< 0.00090
B-15	B-15-2.5-111317	2.5	11/13/2017	< 0.00083	< 0.00083	< 0.00083	< 0.00083	0.0059 J	0.0011	0.030	0.0033	0.0019	0.0022
	B-15-10.0-111517	10.0	11/15/2017	< 0.00092	0.0015	< 0.00092	< 0.00092	< 0.0046	< 0.00092	< 0.0092	< 0.00092	< 0.00092	< 0.00092
	B-15-17.5-111517	17.5	11/15/2017	< 0.00084	0.0044	0.0026	0.0024	< 0.0042	< 0.00084	< 0.0084	< 0.00084	< 0.00084	< 0.00084
B-16	B-16-3.0-111417	3.0	11/14/2017	< 0.0011	< 0.0011	< 0.0011	< 0.0011	< 0.0053	< 0.0011	< 0.0053	< 0.053	< 0.053	< 0.053
	B-16-10.0-111517	10.0	11/15/2017	0.0018	0.0087	< 0.00074	< 0.00074	< 0.0037	< 0.00074	< 0.0074	< 0.00074	< 0.00074	< 0.00074
	B-16-17.5-111517	17.5	11/15/2017	0.0013	0.0041	< 0.00083	< 0.00083	< 0.0042	< 0.00083	< 0.0083	< 0.00083	< 0.00083	< 0.00083
B-17	B-17-5.0-111517	5.0	11/15/2017	< 0.00083	< 0.00083	< 0.00083	< 0.00083	< 0.0041	< 0.00083	0.023	< 0.00083	< 0.00083	< 0.00083
	B-17-10.0-111517	10.0	11/15/2017	< 0.00072	< 0.00072	< 0.00072	< 0.00072	< 0.0036	< 0.00072	< 0.0072	< 0.00072	< 0.00072	< 0.00072
	B-17-20.0-111517	20.0	11/15/2017	0.0016	0.0068	< 0.00084	< 0.00084	< 0.0042	< 0.00084	< 0.0084	< 0.00084	< 0.00084	< 0.00084
B-20	B-20-2.5-111417	2.5	11/14/2017	< 0.00089	< 0.00089	< 0.00089	< 0.00089	< 0.0044	< 0.00089	0.013	< 0.00089	< 0.00089	< 0.00089
	B-20-10.0-111517	10.0	11/15/2017	< 0.0011	< 0.0011	< 0.0011	< 0.0011	< 0.0055	< 0.0011	< 0.011	< 0.0011	< 0.0011	< 0.0011
	B-20-17.5-111517	17.5	11/15/2017	< 0.00099	0.0039	< 0.00099	< 0.00099	< 0.0049	< 0.00099	< 0.0099	< 0.00099	< 0.00099	< 0.00099
MTCA Cleanup Levels for Soil <sup>3</sup>				0.05	0.03	4,000 <sup>4</sup>	2	48,000 <sup>4</sup>	8,000 <sup>4</sup>	72,000 <sup>4</sup>	5	NE	NE
MTCA Method B Cleanup Levels for Soil Protective of Groundwater Vadose at 25 Degrees Celsius <sup>5</sup>				0.053	0.0264	0.0501	1.58	NE	5.65	28.9	4.46	NE	NE
MTCA Method B Cleanup Levels for Soil Protective of Groundwater Vadose at 13 Degrees Celsius <sup>5</sup>				0.0499	0.0252	0.0457	1.49	NE	5.04	28.9	4.45	NE	NE
MTCA Method B Cleanup Levels for Soil Protective of Groundwater Saturated <sup>5</sup>				0.00276	0.00152	0.00246	0.0843	NE	0.266	2.07	0.236	NE	NE

NOTES:  
< denotes analyte not detected at or exceeding the reporting limit listed.  
<sup>1</sup>Depth in feet below ground surface.  
<sup>2</sup>Analyzed by U.S. Environmental Protection Agency Method 8260C.  
<sup>3</sup>Washington 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.  
<sup>4</sup>Washington State Cleanup Levels and Risk Calculations under the 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>  
<sup>5</sup>Washington State Cleanup Levels and Risk Calculations under MTCA Standard Method B Formula Values for Soil from CLARC Master spreadsheet updated September 2015, <https://fortress.wa.gov/ecy/clarc/CLARCDATATables.aspx>

J = result is an estimate  
NE = not established  
PCE = tetrachloroethene  
TCE = trichloroethene  
VOCs = volatile organic compounds

**Table 4**  
**Soil Analytical Results for cPAHs**  
**Lakeview Facility**  
**Lakewood, Washington**  
**Farallon PN: 188-002**

Sample Location	Sample Identification	Sample Depth (feet) <sup>1</sup>	Sample Date	Analytical Results (milligrams per kilogram) <sup>2</sup>							Total cPAHs TEC <sup>3,4</sup>
				Benzo(a)pyrene	Benzo(a)anthracene	Benzo(b)fluoranthene	Benzo(j,k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Indeno(1,2,3-cd)Pyrene	
Equipment Parking Area											
B-10	B-10-5.0-111317	5.0	11/13/2017	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0052
Tack Tank Area											
B-11	B-11-5.0-111617	5.0	11/16/2017	< 0.0071	< 0.0071	< 0.0071	< 0.0071	< 0.0071	< 0.0071	< 0.0071	< 0.0054
Equipment Storage Carport Area											
B-12	B-12-9.0-111617	9.0	11/16/2017	0.16	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	0.196
Asphalt Plant Area											
B-18	B-18-10.0-111617	10.0	11/16/2017	< 0.0074	0.0088	< 0.0074	< 0.0074	0.028	< 0.0074	< 0.0074	0.006
Former Recycled Stockpile Area											
MW-24T	MW-24T-12.5-111417	12.5	11/14/2017	0.053	0.057	0.060	0.020	0.097	0.0099	0.034	0.072
Former Asphalt-Testing Laboratory Area											
B-13	B-13-5.0-111617	5.0	11/16/2017	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0052
B-16	B-16-3.0-111417	3.0	11/14/2017	1.1	0.94	1.4	0.49	1.2	0.21	1.0	1.516
MTCA Method A Cleanup Level for Soil <sup>5</sup>											0.1

**NOTES:**

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

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

<sup>1</sup>Depth in feet below ground surface.

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

<sup>3</sup>Total cPAHs derived using the total toxicity equivalency method in Section 708(8) of Chapter 173-340 of the Washington Administrative Code.

<sup>4</sup>For concentrations reported at less than the laboratory reporting limit, half the reporting limit was used to calculate the TEC.

<sup>5</sup>Washington 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.

cPAHs = carcinogenic polycyclic aromatic hydrocarbons

TEC = toxic equivalent concentration



**Table 5**  
**Soil Analytical Results for PCBs**  
**Lakeview Facility**  
**Lakewood, Washington**  
**Farallon PN: 188-002**

Sample Location	Sample Identification	Sample Depth (feet) <sup>1</sup>	Sample Date	Analytical Results (milligrams per kilogram) <sup>2</sup>							
				Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	Total PCBs <sup>3</sup>
Equipment Parking Area											
B-10	B-10-5.0-111317	5.0	11/13/2017	< 0.052	< 0.052	< 0.052	< 0.052	< 0.052	< 0.052	< 0.052	< 0.182
Tack Tank Area											
B-11	B-11-5.0-111617	5.0	11/16/2017	< 0.053	< 0.053	< 0.053	< 0.053	< 0.053	< 0.053	< 0.053	< 0.186
Equipment Storage Carport Area											
B-12	B-12-9.0-111617	9.0	11/16/2017	< 0.054	< 0.054	< 0.054	< 0.054	< 0.054	< 0.054	< 0.054	< 0.189
Asphalt Plant Area											
B-18	B-18-10.0-111617	10.0	11/16/2017	< 0.055	< 0.055	< 0.055	< 0.055	< 0.055	< 0.055	< 0.055	< 0.193
Former Recycled Stockpile Area											
MW-24T	MW-24T-12.5-111417	12.5	11/14/2017	< 0.056	< 0.056	< 0.056	< 0.056	< 0.056	< 0.056	< 0.056	< 0.196
Former Asphalt-Testing Laboratory Area											
B-13	B-13-5.0-111617	5.0	11/16/2017	< 0.052	< 0.052	< 0.052	< 0.052	< 0.052	< 0.052	< 0.052	< 0.182
B-16	B-16-3.0-111417	3.0	11/14/2017	< 0.053	< 0.053	< 0.053	< 0.053	< 0.053	< 0.053	< 0.053	< 0.186
MTCA Method A Cleanup Level for Soil <sup>4</sup>											1.0

**NOTES:**

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

<sup>1</sup>Depth in feet below ground surface.

<sup>2</sup>Analyzed by U.S. Environmental Protection Agency Method 8082A.

<sup>3</sup>For concentrations reported at less than the laboratory reporting limit, half the reporting limit was used to calculate total PBCs.

<sup>4</sup>Washington 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.

PCBs = polychlorinated biphenyls

**Table 6**  
**Monitoring Well Elevation Data**  
**Lakeview Facility**  
**Lakewood, Washington**  
**Farallon PN: 188-002**

Well Identification	Water-Bearing Zone	Location	Measurement Date	Casing Elevation (feet msl) <sup>1</sup>	Monument Rim Elevation (feet msl) <sup>1</sup>	Ground Elevation (feet msl) <sup>1</sup>	Total Depth of Well (feet below top of casing)	Screen Interval		Depth to Groundwater (feet below top of casing)	Groundwater Elevation (feet msl) <sup>1</sup>
								(feet below ground)	(feet msl) <sup>1</sup>		
Shallow Water-Bearing Zone											
MW-1	Shallow	Miscellaneous	8/19/2008	313.65	NA	309.57	52.95	48.87 to 33.87	260.70 to 275.70	39.70	273.95
			9/17/2008							40.30	273.35
			10/17/2008							40.71	272.94
			2/2/2009							35.89	277.76
			9/30/2009							39.56	274.09
			4/12/2010							35.65	278.00
			11/19/2010							NM	—
			2/1/2011							NM	—
			5/4/2011							NM	—
			8/2/2011							34.76	278.89
			11/8/2011							38.05	275.60
			11/30/2012							36.43	277.22
			6/12/2013							NM	—
			10/23/2014							38.00	275.65
			1/27/2016							35.06	278.59
			12/4/2017							36.58	277.07
MW-3	Shallow	Former Asphalt Testing Laboratory Area	8/19/2008	279.31	279.78	278.20	22.00	20.89 to 7.62	257.31 to 271.69	11.54	267.77
			9/17/2008							12.37	266.94
			10/13/2008							12.26	267.05
			2/2/2009							9.72	269.59
			9/30/2009							10.74	268.57
			4/12/2010							9.67	269.64
			11/19/2010							NM	—
			2/1/2011							NM	—
			5/4/2011							NM	—
			8/2/2011							10.02	269.29
			11/8/2011							10.10	269.21
			6/12/2013							NM	—
			10/23/2014							10.18	269.13
			1/27/2016							8.90	270.41
			12/4/2017							9.29	270.02
			MW-4							Shallow	Former Asphalt Testing Laboratory Area
9/17/2008	14.21	266.56									
10/13/2008	14.30	266.47									
2/2/2009	11.73	269.04									
9/30/2009	13.25	267.52									
4/12/2010	11.35	269.42									
11/19/2010	NM	—									
2/1/2011	NM	—									
5/4/2011	NM	—									
8/2/2011	11.95	268.82									
11/8/2011	NM	—									
6/12/2013	NM	—									
10/23/2014	12.83	267.94									
1/27/2016	NM	—									
12/4/2017	12.08	268.69									

**Table 6**  
**Monitoring Well Elevation Data**  
**Lakeview Facility**  
**Lakewood, Washington**  
**Farallon PN: 188-002**

Well Identification	Water-Bearing Zone	Location	Measurement Date	Casing Elevation (feet msl) <sup>1</sup>	Monument Rim Elevation (feet msl) <sup>1</sup>	Ground Elevation (feet msl) <sup>1</sup>	Total Depth of Well (feet below top of casing)	Screen Interval		Depth to Groundwater (feet below top of casing)	Groundwater Elevation (feet msl) <sup>1</sup>	
								(feet below ground)	(feet msl) <sup>1</sup>			
MW-5	Shallow	Miscellaneous	8/19/2008	282.99	283.26	283.26	16.68	16.95 to 9.95	266.31 to 273.31	11.40	271.59	
			9/17/2008							11.23	271.76	
			10/13/2008							11.24	271.75	
			2/2/2009							8.69	274.30	
			9/30/2009							10.47	272.52	
			4/12/2010							8.38	274.61	
			11/19/2010							NM	—	
			2/1/2011							NM	—	
			5/4/2011							NM	—	
			8/2/2011							9.84	273.15	
			11/8/2011							10.22	272.77	
			6/12/2013							NM	—	
			10/23/2014							9.31	273.68	
			1/27/2016							8.13	274.86	
			12/4/2017							8.21	274.78	
MW-6	Shallow	Miscellaneous	8/19/2008	274.38	274.96	274.96	10.88	11.46 to 4.46	263.50 to 270.50	9.72	264.66	
			9/17/2008							8.96	265.42	
			10/13/2008							8.98	265.40	
			2/2/2009							4.96	269.42	
			9/30/2009							8.29	266.09	
			4/12/2010							4.50	269.88	
			11/19/2010							NM	—	
			2/1/2011							NM	—	
			5/4/2011							NM	—	
			8/2/2011							6.90	267.48	
			11/8/2011							7.55	266.83	
			6/12/2013							NM	—	
			10/23/2014							NM	—	
			1/27/2016							NM	—	
			12/4/2017							NM	—	
MW-9	Shallow	Former Asphalt Testing Laboratory Area; Arsenic and Lead Plume in Groundwater	8/19/2008	278.15	278.67	277.17	25.00	24.02 to 17.02	253.15 to 260.15	14.48	263.67	
			9/17/2008							14.94	263.21	
			10/13/2008							14.79	263.36	
			2/2/2009							11.37	266.78	
			9/30/2009							13.75	264.40	
			4/12/2010							11.00	267.15	
			11/19/2010							NM	—	
			2/1/2011							NM	—	
			5/4/2011							NM	—	
			8/2/2011							12.18	265.97	
			11/8/2011							12.32	265.83	
			6/12/2013							NM	—	
			10/23/2014	13.28	264.78							
			1/27/2016	278.06	278.60	277.10				253.06 to 260.06	9.48	268.58
			12/4/2017								11.68	266.38

**Table 6**  
**Monitoring Well Elevation Data**  
**Lakeview Facility**  
**Lakewood, Washington**  
**Farallon PN: 188-002**

Well Identification	Water-Bearing Zone	Location	Measurement Date	Casing Elevation (feet msl) <sup>1</sup>	Monument Rim Elevation (feet msl) <sup>1</sup>	Ground Elevation (feet msl) <sup>1</sup>	Total Depth of Well (feet below top of casing)	Screen Interval		Depth to Groundwater (feet below top of casing)	Groundwater Elevation (feet msl) <sup>1</sup>
								(feet below ground)	(feet msl) <sup>1</sup>		
MW-10	Shallow	Miscellaneous	8/19/2008	313.18	NA	311.18	41.81	39.81 to 32.81	271.37 to 278.37	36.99	276.19
			9/17/2008							39.42	273.76
			10/13/2008							38.56	274.62
			2/2/2009							33.05	280.13
			9/30/2009							38.60	274.58
			4/12/2010							32.99	280.19
			11/19/2010							NM	—
			2/1/2011							NM	—
			5/4/2011							NM	—
			8/2/2011							36.70	276.48
			11/8/2011							36.93	276.25
			6/12/2013							NM	—
			10/23/2014							32.90	280.28
			1/27/2016							NM	—
12/4/2017	34.08	279.10									
MW-11 <sup>2</sup>	Shallow	Equipment Storage Carport Area	8/19/2008	286.70	287.53	287.53	14.46	15.29 to 8.29	272.24 to 279.24	10.38	276.32
			9/17/2008							10.92	275.78
			10/13/2008							11.27	275.43
			2/2/2009							6.20	280.50
			9/30/2009							10.30	276.40
			4/12/2010							6.22	280.48
			11/19/2010							NM	—
			2/1/2011							6.58	280.55
		5/4/2011	287.13	287.74	287.74	12.11	15.50 to 8.50	6.40		280.73	
		8/2/2011						8.08		279.05	
		11/8/2011						9.60		277.53	
		11/30/2012						7.30		279.83	
		6/12/2013						NM		—	
		10/23/2014						NM		—	
		1/27/2016						5.90		281.23	
		12/4/2017						NM		—	
MW-12	Shallow	Arsenic and Lead Plume in Groundwater	10/13/2008	313.32	313.88	313.88	48.15	48.71 to 43.71	265.17 to 270.17	37.20	276.12
			2/2/2009							34.05	279.27
			9/30/2009							37.00	276.32
			1/13/2010							33.60	279.72
			4/12/2010							33.40	279.92
			11/19/2010							35.30	278.02
			2/1/2011							33.24	280.08
			5/4/2011							33.01	280.31
			8/2/2011							35.25	278.07
			11/8/2011							36.63	276.69
			6/12/2013							34.82	278.50
			10/23/2014							36.41	276.91
			1/27/2016							31.81	281.51
			12/4/2017							34.90	278.42

**Table 6**  
**Monitoring Well Elevation Data**  
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Well Identification	Water-Bearing Zone	Location	Measurement Date	Casing Elevation (feet msl) <sup>1</sup>	Monument Rim Elevation (feet msl) <sup>1</sup>	Ground Elevation (feet msl) <sup>1</sup>	Total Depth of Well (feet below top of casing)	Screen Interval		Depth to Groundwater (feet below top of casing)	Groundwater Elevation (feet msl) <sup>1</sup>
								(feet below ground)	(feet msl) <sup>1</sup>		
MW-13	Shallow	Equipment Parking Area	10/13/2008	284.73	284.97	284.97	24.14	24.38 to 19.38	260.59 to 265.59	33.40	251.33
			2/2/2009							16.80	267.93
			9/30/2009							17.44	267.29
			4/12/2010							15.36	269.37
			11/19/2010							NM	—
			2/1/2011							14.90	269.83
			5/4/2011							13.80	270.93
			8/2/2011							13.20	271.53
			11/8/2011							14.59	270.14
			11/30/2012							14.84	269.89
			6/12/2013							NM	—
			10/23/2014							NM	—
			1/27/2016							16.04	268.69
			12/4/2017							17.32	267.41
MW-17A	Shallow	Miscellaneous	2/2/2009	281.72	282.23	282.23	34.70	35.21 to 25.21	247.02 to 257.02	7.69	274.03
			9/30/2009							10.80	270.92
			4/12/2010							6.66	275.06
			11/19/2010							NM	—
			2/1/2011							NM	—
			5/4/2011							5.58	276.14
			8/2/2011							7.94	273.78
			11/8/2011							9.46	272.26
			6/12/2013							NM	—
			10/23/2014							9.67	272.05
			1/27/2017							NM	—
			12/4/2017							NM	—
MW-24 <sup>3</sup>	Shallow	Former Recycled Stockpile Area	10/6/2010	NA	NA	NA	3.55	~ 4 to ~ 2	NA to NA	0.38	—
			11/19/2010							NM	—
			2/1/2011	277.59	277.92	277.92	7.37	7.70 to 5.70	270.22 to 272.22	3.70 <sup>4</sup>	274.22
			5/4/2011							4.03	273.89
			8/2/2011							5.30	272.62
			11/8/2011							4.30	273.62
			6/12/2013							NM	—
			10/23/2014							NM	—
			1/27/2016							NM	—
			12/4/2017							NM	—

**Table 6**  
**Monitoring Well Elevation Data**  
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**Lakewood, Washington**  
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Well Identification	Water-Bearing Zone	Location	Measurement Date	Casing Elevation (feet msl) <sup>1</sup>	Monument Rim Elevation (feet msl) <sup>1</sup>	Ground Elevation (feet msl) <sup>1</sup>	Total Depth of Well (feet below top of casing)	Screen Interval		Depth to Groundwater (feet below top of casing)	Groundwater Elevation (feet msl) <sup>1</sup>
								(feet below ground)	(feet msl) <sup>1</sup>		
MW-26	Shallow	Former Asphalt Testing Laboratory Area	8/6/2012	279.30	279.70	279.70	9.88	10.28 to 2.78	269.42 to 276.97	Dry	—
			8/9/2012							Dry	—
			9/24/2012							Dry	—
			11/30/2012							8.24	271.06
			12/12/2012							7.11	272.19
			12/21/2012							5.52	273.78
			6/12/2013							NM	—
			10/23/2014							9.55	269.75
			1/27/2016							6.89	272.41
			12/4/2017							8.83	270.47
MW-27	Shallow	Miscellaneous	1/15/2013	311.97	312.37	312.37	41.75	42.2 to 27.2	270.2 to 285.2	32.21	279.8
			6/12/2013							NM	—
			10/23/2014							23.21	288.76
			1/27/2016							31.69	280.28
			12/4/2017							33.22	278.75
MW-30	Shallow	Arsenic and Lead Plume in Groundwater	9/10/2014	303.66	304.20	304.20	37.65	38.2 to 28.2	266.0 to 276.0	Dry	—
			9/12/2014							Dry	—
			10/23/2014							Dry	—
			10/30/2014							Dry	—
			1/27/2016							37.40	266.3
			12/4/2017							Dry	—
MW-31	Shallow	Arsenic and Lead Plume in Groundwater	9/10/2014	324.89	325.19	325.19	55.86	56.2 to 46.2	269.0 to 279.0	48.33	276.56
			9/12/2014							48.33	276.56
			10/23/2014							48.75	276.14
			10/30/2014			55.90				48.81	276.08
			1/27/2016							46.13	278.76
			12/4/2017							48.69	276.20
MW-32	Shallow	Arsenic and Lead Plume in Groundwater	9/10/2014	312.99	313.34	313.34	44.62	45.0 to 35.0	268.4 to 278.4	36.19	276.80
			9/12/2014							36.11	276.88
			10/23/2014							36.15	276.84
			1/27/2016							31.70	281.29
			12/4/2017							34.65	278.34
MW-33	Shallow	Arsenic and Lead Plume in Groundwater	1/27/2016	329.87	329.33	329.33	50.70	50.2 to 40.2	279.2 to 289.2	42.19	287.68
			12/4/2017							44.22	285.65
MW-34	Shallow	Arsenic and Lead Plume in Groundwater	1/27/2016	329.97	329.47	329.47	50.00	49.5 to 39.5	280.0 to 290.0	38.29	291.68
			12/4/2017							40.92	289.05

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Well Identification	Water-Bearing Zone	Location	Measurement Date	Casing Elevation (feet msl) <sup>1</sup>	Monument Rim Elevation (feet msl) <sup>1</sup>	Ground Elevation (feet msl) <sup>1</sup>	Total Depth of Well (feet below top of casing)	Screen Interval		Depth to Groundwater (feet below top of casing)	Groundwater Elevation (feet msl) <sup>1</sup>
								(feet below ground)	(feet msl) <sup>1</sup>		
Deep Water-Bearing Zone											
MW-2	Deep	Former Asphalt Testing Laboratory Area	8/19/2008	278.90	279.15	279.15	34.30	34.55 to 19.54	244.60 to 259.36	32.50	246.40
			9/17/2008							32.74	246.16
			10/13/2008							32.50	246.40
			2/12/2009							27.42	251.48
			9/30/2009							31.66	247.24
			4/12/2010							25.23	253.67
			11/4/2010							28.32	250.58
			2/1/2011							23.75	255.15
			5/4/2011							21.14	257.76
			8/2/2011							26.73	252.17
			11/8/2011							30.23	248.67
			1/10/2012							27.20	251.70
			2/13/2012							29.11	249.79
			4/10/2012							25.60	253.30
			6/12/2013							27.68	251.22
			10/23/2014							NM	—
			1/27/2016							26.14	252.76
			12/4/2017							28.37	250.53
MW-7 (Inaccessible Since April 2010)	NA	NA	8/19/2008	278.09	278.45	278.45	32.50	32.86 to 25.86	245.59 to 252.59	27.78	250.31
			9/17/2008							29.63	248.46
			10/13/2008							29.92	248.17
			2/2/2009							17.26	260.83
			9/30/2009							27.70	250.39
			4/12/2010							15.59	262.50
			11/4/2010							NA	NA
MW-8 (Inaccessible)	NA	NA	8/19/2008 through 2014	275.51 (Approx.	NA	NA	28.00	NA	247.51 to 254.51	NA	NA
MW-9B	Deep	Miscellaneous	2/2/2009	301.23	301.55	301.55	119	119.32 to 109.32	182.23 to 192.23	56.29	244.94
			9/30/2009							61.80	239.43
			4/12/2010							54.70	246.53
			11/4/2010							NM	—
			2/1/2011							53.24	247.99
			5/4/2011							52.25	248.98
			8/2/2011							NM	—
			11/8/2011							58.10	243.13
			6/12/2013							NM	—
			10/23/2014							NM	—
			1/27/2016							NM	—
			12/7/2017							56.22	245.01

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Well Identification	Water-Bearing Zone	Location	Measurement Date	Casing Elevation (feet msl) <sup>1</sup>	Monument Rim Elevation (feet msl) <sup>1</sup>	Ground Elevation (feet msl) <sup>1</sup>	Total Depth of Well (feet below top of casing)	Screen Interval		Depth to Groundwater (feet below top of casing)	Groundwater Elevation (feet msl) <sup>1</sup>
								(feet below ground)	(feet msl) <sup>1</sup>		
MW-10B	Deep	Miscellaneous	2/2/2009	310.91	311.27	311.27	127	127.36 to 117.36	183.91 to 193.91	59.20	251.71
			9/30/2009							63.70	247.21
			4/12/2010							58.16	252.75
			11/4/2010							NM	—
			2/1/2011							56.82	254.09
			5/4/2011							NM	—
			8/2/2011							NM	—
			11/8/2011							61.50	249.41
			6/12/2013							NM	—
			10/23/2014							NM	—
			1/27/2016							57.75	253.16
			12/4/2017							59.17	251.74
MW-11B <sup>2</sup>	Deep	Equipment Storage Carport Area	2/2/2009	287.31	287.53	287.53	58.67	58.89 to 48.89	228.64 to 238.64	27.40	259.91
			9/30/2009							32.40	254.91
			4/12/2010							26.80	260.51
			11/4/2010							NM	—
			2/1/2011	287.05	287.40	287.40	58.67	58.76 to 48.76		27.55	259.50
			5/4/2011							25.65	261.40
			8/2/2011							NM	—
			11/8/2011							30.69	256.36
			11/30/2012							28.18	258.87
			6/12/2013							NM	—
			10/23/2014							29.40	257.65
			1/27/2016							NM	—
			12/4/2017							26.72	260.33
			MW-12B	Deep	Arsenic and Lead Plume in Groundwater	2/2/2009	313.53	313.74		313.74	121.00
9/30/2009	74.15	239.38									
4/12/2010	67.40	246.13									
11/4/2010	NM	—									
2/1/2011	66.10	247.43									
5/4/2011	NM	—									
8/2/2011	71.81	241.72									
11/8/2011	70.92	242.61									
6/12/2013	NM	—									
10/23/2014	NM	—									
1/27/2016	68.06	245.47									
12/4/2017	70.27	243.26									



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Well Identification	Water-Bearing Zone	Location	Measurement Date	Casing Elevation (feet msl) <sup>1</sup>	Monument Rim Elevation (feet msl) <sup>1</sup>	Ground Elevation (feet msl) <sup>1</sup>	Total Depth of Well (feet below top of casing)	Screen Interval		Depth to Groundwater (feet below top of casing)	Groundwater Elevation (feet msl) <sup>1</sup>
								(feet below ground)	(feet msl) <sup>1</sup>		
MW-14 <sup>2</sup>	Deep	Former Asphalt Testing Laboratory Area	10/13/2008	279.79	280.28	280.28	55.30	55.79 to 50.79	224.49 to 229.49	32.70	247.09
			2/2/2009							27.17	252.62
			9/30/2009	279.52						32.01	247.51
			4/12/2010							25.15	254.37
			11/4/2010							28.37	251.15
			2/1/2011							24.45	255.07
			5/4/2011							24.30	255.22
			8/2/2011							28.05	251.47
			11/8/2011							33.30	246.22
			1/10/2012							29.10	250.42
			2/13/2012							29.00	250.52
			6/12/2013							27.92	251.60
			10/23/2014							NM	—
			1/27/2016							26.60	252.92
			12/4/2017							28.36	251.16
MW-14C	Deep	Former Asphalt Testing Laboratory Area	2/2/2009	279.99	280.35	280.35	77.22	77.58 to 67.58	202.77 to 212.77	27.80	252.19
			9/30/2009							33.45	246.54
			4/12/2010							27.00	252.99
			11/4/2010							NM	—
			2/1/2011							NM	—
			5/4/2011							NM	—
			8/2/2011							NM	—
			11/8/2011							NM	—
			6/12/2013							NM	—
			10/23/2014							NM	—
			1/27/2016							NM	—
			12/8/2017							28.00	251.99
			MW-15							Deep	Former Asphalt Testing Laboratory Area
2/12/2009	20.53	257.84									
9/30/2009	23.98	254.39									
4/12/2010	15.30	263.07									
11/4/2010	20.25	258.12									
2/1/2011	16.34	262.03									
5/4/2011	17.30	261.07									
8/2/2011	20.69	257.68									
11/8/2011	27.45	250.92									
9/24/2012	28.96	249.41									
11/30/2012	21.25	257.12									
6/12/2013	NM	—									
10/23/2014	NM	—									
1/27/2016	20.22	258.15									
12/4/2017	22.31	256.06									

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Well Identification	Water-Bearing Zone	Location	Measurement Date	Casing Elevation (feet msl) <sup>1</sup>	Monument Rim Elevation (feet msl) <sup>1</sup>	Ground Elevation (feet msl) <sup>1</sup>	Total Depth of Well (feet below top of casing)	Screen Interval		Depth to Groundwater (feet below top of casing)	Groundwater Elevation (feet msl) <sup>1</sup>
								(feet below ground)	(feet msl) <sup>1</sup>		
MW-16	Deep	Former Asphalt Testing Laboratory Area	10/13/2008	278.00	278.23	278.23	37.41	37.64 to 32.64	240.59 to 250.59	33.64	244.36
			2/2/2009							27.20	250.80
			9/30/2009							32.25	245.75
			4/12/2010							24.87	253.13
			11/4/2010							29.59	248.41
			2/1/2011							24.35	253.65
			5/4/2011							23.30	254.70
			8/2/2011							28.70	249.30
			11/8/2011							31.51	246.49
			6/12/2013							NM	—
			10/23/2014							NM	—
			1/27/2016							NM	—
			12/4/2017							28.67	249.33
MW-17	Deep	Miscellaneous	10/13/2008	281.78	281.96	281.96	50.03	50.21 to 40.21	231.75 to 241.75	39.80	241.98
			2/2/2009							34.15	247.63
			9/30/2009							38.60	243.18
			4/12/2010							NM	—
			11/4/2010							NM	—
			2/1/2011							30.00	251.78
			5/4/2011							29.20	252.58
			8/2/2011							NM	—
			11/8/2011							35.30	246.48
			6/12/2013							NM	—
			10/23/2014							NM	—
			1/27/2016							NM	—
			12/4/2017							NM	—
MW-18	Deep	Former Asphalt Testing Laboratory Area	2/2/2009	277.67	278.09	278.09	59.89	60.31 to 50.31	217.78 to 227.78	26.99	250.68
			9/30/2009							31.80	245.87
			4/12/2010							25.30	252.37
			11/4/2010							28.55	249.12
			2/1/2011							24.51	253.16
			5/4/2011							22.73	254.94
			8/3/2011							28.30	249.37
			11/8/2011							32.75	244.92
			1/10/2012							29.29	248.38
			2/13/2012							28.96	248.71
			4/10/2012							29.44	248.23
			6/12/2013							NM	—
			10/23/2014							NM	—
			1/27/2016							24.77	252.90
			12/4/2017							28.00	249.67

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Well Identification	Water-Bearing Zone	Location	Measurement Date	Casing Elevation (feet msl) <sup>1</sup>	Monument Rim Elevation (feet msl) <sup>1</sup>	Ground Elevation (feet msl) <sup>1</sup>	Total Depth of Well (feet below top of casing)	Screen Interval		Depth to Groundwater (feet below top of casing)	Groundwater Elevation (feet msl) <sup>1</sup>
								(feet below ground)	(feet msl) <sup>1</sup>		
MW-19	Deep	Equipment Parking Area	2/2/2009	284.46	284.71	284.71	55.78	56.03 to 46.03	228.68 to 238.68	26.89	257.57
			9/30/2009							31.78	252.68
			4/12/2010							26.03	258.43
			11/4/2010							28.68	255.78
			2/1/2011							25.89	258.57
			5/4/2011							25.97	258.49
			8/2/2011							26.53	257.93
			11/8/2011							34.95	249.51
			9/24/2012							36.60	247.86
			11/30/2012							30.49	253.97
			6/12/2013							NM	—
			10/23/2014							31.60	252.86
			1/27/2016							27.68	256.78
			12/4/2017							29.40	255.06
MW-20	Deep	Former Asphalt Testing Laboratory Area	9/30/2009	281.58	281.90	281.90	58.45	58.77 to 48.77	223.13 to 233.13	30.83	250.75
			4/12/2010							24.82	256.76
			11/4/2010							27.55	254.03
			2/1/2011							24.64	256.94
			5/4/2011							24.65	256.93
			8/2/2011							27.40	254.18
			11/8/2011							33.49	248.09
			5/11/2012							26.40	255.18
			6/13/2012							26.77	254.81
			8/9/2012							33.07	248.51
			9/24/2012							35.28	246.30
			11/30/2012							29.21	252.37
			6/12/2013							27.95	253.63
			10/23/2014							NM	—
			1/27/2016							25.84	255.74
MW-21	Deep	Former Asphalt Testing Laboratory Area	12/4/2017	281.23	281.85	281.85	55.18	55.80 to 45.80	226.05 to 236.05	27.84	253.74
			9/30/2009							36.00	245.23
			4/12/2010							28.63	252.60
			11/4/2010							31.96	249.27
			2/1/2011							28.12	253.11
			5/4/2011							27.58	253.65
			8/2/2011							32.56	248.67
			11/8/2011							35.60	245.63
			6/12/2013							NM	—
			10/23/2014							NM	—
			1/27/2016							29.93	251.30
			12/7/2017							31.90	249.33

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								(feet below ground)	(feet msl) <sup>1</sup>		
MW-22	Deep	Former Asphalt Testing Laboratory Area	9/30/2009	278.69	279.14	279.14	54.86	55.31 to 45.31	223.83 to 233.83	34.62	244.07
			4/12/2010							27.42	251.27
			11/4/2010							31.00	247.69
			2/1/2011							26.92	251.77
			5/4/2011							24.16	254.53
			8/2/2011							31.69	247.00
			11/8/2011							33.96	244.73
			6/12/2013							30.10	248.59
			10/23/2014							NM	—
			1/27/2016							NM	—
			12/4/2017							NM	—
MW-23	Deep	Former Asphalt Testing Laboratory Area	11/24/2009	277.95	278.24	278.24	56.50	56.79 to 46.79	221.45 to 231.45	36.03	241.92
			4/12/2010							30.47	247.48
			11/4/2010							34.01	243.94
			2/1/2011							29.51	248.44
			5/4/2011							28.59	249.36
			8/2/2011							34.97	242.98
			11/8/2011							34.68	243.27
			6/12/2013							32.62	245.33
			10/23/2014							NM	—
			1/27/2016							30.80	247.15
			12/4/2017							32.65	245.30
MW-25	Deep	Former Asphalt Testing Laboratory Area	8/6/2012	279.43	279.75	279.75	35.54	35.86 to 20.86	243.89 to 258.89	27.40	252.03
			8/9/2012							29.14	250.29
			9/24/2012							29.20	250.23
			11/30/2012							17.08	262.35
			12/6/2012							16.60	262.83
			6/12/2013							16.77	262.66
			10/23/2014							NM	—
			1/27/2016							14.80	264.63
			12/4/2017							17.56	261.87
			1/15/2013							32.87	279.18
MW-28	Deep	Miscellaneous	10/23/2014	312.05	312.46	312.46	58.23	58.6 to 48.6	253.8 to 263.8	34.30	277.75
			1/27/2016							NM	—
			12/4/2017							34.09	277.96
			1/15/2013							42.40	262.81
MW-29	Deep	Miscellaneous	10/23/2014	305.21	305.63	305.63	69.35	69.8 to 59.8	235.9 to 245.9	47.59	257.62
			1/27/2016							NM	—
			12/4/2017							45.62	259.59

**Table 6**  
**Monitoring Well Elevation Data**  
**Lakeview Facility**  
**Lakewood, Washington**  
**Farallon PN: 188-002**

Well Identification	Water-Bearing Zone	Location	Measurement Date	Casing Elevation (feet msl) <sup>1</sup>	Monument Rim Elevation (feet msl) <sup>1</sup>	Ground Elevation (feet msl) <sup>1</sup>	Total Depth of Well (feet below top of casing)	Screen Interval		Depth to Groundwater (feet below top of casing)	Groundwater Elevation (feet msl) <sup>1</sup>
								(feet below ground)	(feet msl) <sup>1</sup>		
Air Sparge Wells											
AS-1	Deep	Former Asphalt Testing Laboratory Area	9/30/2009	279.47	280.13	280.13	81.93	82.59 to 80.59	197.54 to 199.54	33.20	246.27
			4/13/2010							25.79	253.68
			12/8/2017							28.24	251.23
AS-2	Deep		4/13/2010	283.72	284.34	284.34	87.60	88.22 to 86.22	196.12 to 198.12	27.71	256.01
AS-3	Deep		4/13/2010	281.07	281.78	281.78	83.68	84.39 to 82.39	197.39 to 199.39	25.88	255.19
AS-4	Deep		4/13/2010	281.13	281.70	281.70	90.93	91.50 to 89.50	190.20 to 192.20	24.08	257.05
			12/4/2017							NM	—
AS-5	Deep		4/13/2010	280.51	281.13	281.13	82.00	82.62 to 80.62	198.51 to 200.51	27.03	253.48
AS-6	Deep		4/13/2010	281.42	282.13	282.13	94.00	94.71 to 92.71	187.42 to 189.42	25.48	255.94
AS-7	Deep		4/13/2010	277.31	278.00	278.00	72.21	72.90 to 70.90	205.10 to 207.10	27.95	249.36
AS-8	Deep		4/13/2010	280.54	281.23	281.23	83.90	84.59 to 82.59	196.64 to 198.64	30.40	250.14
AS-9	Deep		4/13/2010	279.00	279.63	279.63	93.55	94.18 to 92.18	185.45 to 187.45	31.95	247.05
			12/4/2017							NM	—
AS-10	Deep		4/13/2010	277.35	278.00	278.00	113.45	114.10 to 112.10	163.90 to 165.90	30.56	246.79
			12/4/2017							NM	—
Soil Vapor Extraction Wells											
SVE-1	Deep	Former Asphalt Testing Laboratory Area	9/30/2009	279.89	~281.00	281.00	35.25	36.36 to 24.36	244.64 to 256.64	29.90	249.99
			4/13/2010							23.30	256.59
			11/9/2010							26.16	253.73
			1/10/2012							27.01	252.88
			2/13/2012							30.12	249.77
			1/27/2016							25.87	254.02
			12/4/2017							27.58	252.31
SVE-2	Deep	Former Asphalt Testing Laboratory Area	9/30/2009	280.12	~280.57	280.57	35.94	36.39 to 21.39	244.18 to 259.18	31.41	248.71
			4/13/2010							24.92	255.20
			11/9/2010							27.14	252.98
			12/4/2017							28.25	251.87
SVE-3	Shallow	Former Asphalt Testing Laboratory Area	4/13/2010	284.25	284.71	284.71	33.03	33.49 to 8.49	251.22 to 276.22	12.60	271.65
			5/11/2012							12.75	271.50
			6/13/2012							12.78	271.47
			8/9/2012							13.40	270.85
			11/9/2010							13.01	271.24
			10/23/2014							13.34	270.91
			1/27/2016							12.80	271.45
			12/4/2017							13.92	270.33
SVE-4	Deep	Former Asphalt Testing Laboratory Area	4/13/2010	281.24	281.71	281.71	34.14	34.61 to 23.61	247.10 to 258.10	23.77	257.47
			11/9/2010							25.80	255.44

**Table 6**  
**Monitoring Well Elevation Data**  
**Lakeview Facility**  
**Lakewood, Washington**  
**Farallon PN: 188-002**

Well Identification	Water-Bearing Zone	Location	Measurement Date	Casing Elevation (feet msl) <sup>1</sup>	Monument Rim Elevation (feet msl) <sup>1</sup>	Ground Elevation (feet msl) <sup>1</sup>	Total Depth of Well (feet below top of casing)	Screen Interval		Depth to Groundwater (feet below top of casing)	Groundwater Elevation (feet msl) <sup>1</sup>
								(feet below ground)	(feet msl) <sup>1</sup>		
SVE-5	Shallow	Former Asphalt Testing Laboratory Area	4/13/2010	281.29	281.70	281.70	37.74	38.15 to 10.15	243.55 to 271.55	10.58	270.71
			11/19/2010							10.90	270.39
			1/27/2016							17.73	263.56
			12/4/2107							29.55	251.74
SVE-6	Shallow	Former Asphalt Testing Laboratory Area	4/13/2010	280.91	281.33	281.33	34.62	35.04 to 10.04	246.29 to 271.29	12.55	268.36
			11/9/2010							13.35	267.56
			1/10/2012							11.49	269.42
			2/13/2012							11.15	269.76
			10/23/2014							11.70	269.21
			1/27/2016							10.38	270.53
			12/4/2017							10.71	270.20
SVE-7	Deep	Former Asphalt Testing Laboratory Area	4/13/2010	281.60	282.10	282.10	34.10	34.60 to 22.60	247.50 to 259.50	27.33	254.27
			11/9/2010							26.73	254.87
			12/4/2017							NM	—
SVE-8	Deep	Former Asphalt Testing Laboratory Area	4/13/2010	277.56	278.11	278.11	34.10	34.65 to 18.65	243.46 to 259.46	24.36	253.20
			11/9/2010							27.00	250.56
			1/10/2012							24.40	253.16
			2/13/2012							25.95	251.61
			4/10/2012							21.48	256.08
SVE-9	Deep	Former Asphalt Testing Laboratory Area	4/13/2010	280.75	281.25	281.25	34.40	34.90 to 12.90	246.35 to 268.35	23.12	257.63
			11/9/2010							23.41	257.34
			12/4/2017							28.10	252.65
SVE-10	Shallow	Former Asphalt Testing Laboratory Area	4/13/2010	279.11	279.64	279.64	38.45	38.98 to 5.98	240.66 to 273.66	11.50	267.61
			11/9/2010							12.56	266.55
			10/23/2014							NM	—
			12/4/2017							NM	—
SVE-11	Deep	Former Asphalt Testing Laboratory Area	4/13/2010	277.57	278.02	278.02	47.54	47.99 to 21.99	230.03 to 256.03	26.70	250.87
			10/23/2014							13.35	264.22
			12/4/2017							NM	—
SVE-12	Shallow	Former Asphalt Testing Laboratory Area	4/13/2010	281.99	282.51	282.51	19.35	19.87 to 4.87	262.64 to 277.64	11.24	270.75
			11/9/2010							11.64	270.35
			11/8/2011							11.66	270.33
			8/9/2012							12.01	269.98
			11/30/2012							11.55	270.44
			10/23/2014							11.96	270.03
			1/27/2016							11.00	270.99
			12/4/2017							11.69	270.30

**NOTES:**

--- denotes groundwater elevation not calculated.

~ denotes approximate value.

<sup>1</sup> Feet above mean sea level (msl); Vertical datum NGVD 29.

<sup>2</sup> Monitoring well casing shortened or extended. The new top of casing elevation was resurveyed by Farallon Consulting, L.L.C.

<sup>3</sup> Monitoring well MW-24 initially was constructed nearly 4 feet below the current ground surface. The well casing was extended to just below the current ground surface in January 2010. The new top of casing and rim elevations were resurveyed by Farallon Consulting, L.L.C.

<sup>4</sup> Measured from monument rim.

Miscellaneous = not associated with any particular area of concern

NA = not available

NM = not measured

Table 7 Groundwater Analytical Results for TPH and BTEX Lakeview Facility Lakewood, Washington Farallon PN: 188-002												
Sample Location	Water-Bearing Zone	Sample Identification	Sample Date	Sampled By	Analytical Results (micrograms per liter) <sup>1</sup>							
					Sample Extract Treated with a Sulfuric Acid/Silica Gel Cleanup Procedure		Sample Extract Not Treated Prior to Analysis		Benzene <sup>2</sup>	Toluene <sup>2</sup>	Ethylbenzene <sup>2</sup>	Xylenes <sup>2</sup>
					DRO <sup>1</sup>	ORO <sup>1</sup>	DRO <sup>1</sup>	ORO <sup>1</sup>				
Shallow Water-Bearing Zone												
MW-3	Shallow	MW-3-120617	12/6/2017	Farallon	---	---	---	---	< 0.20	< 1.0	< 0.20	< 0.60
MW-5	Shallow	MW-5-120517	12/5/2017	Farallon	---	---	< 260	< 410	---	---	---	---
MW-6	Shallow	---	12/5/2017	Farallon	Well Not Sampled - Unable to locate							
MW-11	Shallow	---	12/5/2017	Farallon	Well Not Sampled - Unable to locate							
MW-13	Shallow	MW-13-120517	12/5/2017	Farallon	---	---	310	580	---	---	---	---
MW-24	Shallow	---	12/5/2017	Farallon	Well Destroyed - Under 20 feet of reclamation fill							
MW-26	Shallow	MW-26-120617	12/6/2017	Farallon	---	---	---	---	< 0.20	< 1.0	< 0.20	< 0.60
SVE-3	Shallow	SVE-3-120517	12/5/2017	Farallon	---	---	---	---	< 0.20	< 1.0	< 0.20	< 0.60
SVE-5	Shallow	SVE-5-120817	12/8/2017	Farallon	---	---	330	680	---	---	---	---
SVE-6	Shallow	SVE-6-120817	12/8/2017	Farallon	---	---	---	---	< 0.20	< 1.0	< 0.20	< 0.60
SVE-12	Shallow	SVE-12-120817	12/8/2017	Farallon	---	---	---	---	< 0.20	< 1.0	< 0.20	< 0.60
Reconnaissance Groundwater Sample												
MW-24T	Shallow	MW-24T-111617	11/16/2017	Farallon	< 280	< 450	970 N	3,000	---	---	---	---
Deep Water-Bearing Zone												
MW-2	Deep	MW-2-120617	12/6/2017	Farallon	---	---	---	---	< 0.20	< 1.0	< 0.20	< 0.60
MW-10B	Deep	MW-10B-120717	12/7/2017	Farallon	---	---	---	---	< 0.20	< 1.0	< 0.20	< 0.60
MW-11B	Deep	MW-11B-120517	12/5/2017	Farallon	---	---	< 260	< 410	---	---	---	---
MW-14	Deep	MW-14-120817	12/8/2017	Farallon	---	---	---	---	< 0.20	< 1.0	< 0.20	< 0.60
MW-14C	Deep	MW-14C-120817	12/8/2017	Farallon	---	---	---	---	< 0.20	< 1.0	< 0.20	< 0.60
MW-15	Deep	MW-15-120617	12/6/2017	Farallon	---	---	---	---	< 0.20	< 1.0	< 0.20	< 0.60
MW-16	Deep	MW-16-120617	12/6/2017	Farallon	---	---	< 260	570 <sup>4</sup>	< 0.20	< 1.0	< 0.20	< 0.60
MW-18	Deep	MW-18-120617	12/6/2017	Farallon	---	---	---	---	< 0.20	< 1.0	< 0.20	< 0.60
MW-19	Deep	MW-19-120517	12/5/2017	Farallon	---	---	< 250	< 410	< 0.20	< 1.0	< 0.20	< 0.60
MW-20	Deep	MW-20-120717	12/7/2017	Farallon	---	---	---	---	< 0.20	< 1.0	< 0.20	< 0.60
MW-21	Deep	MW-21-120717	12/7/2017	Farallon	---	---	< 250	< 410	< 0.20	< 1.0	< 0.20	< 0.60
MW-23	Deep	MW-23-120717	12/7/2017	Farallon	---	---	---	---	< 0.20	< 1.0	< 0.20	< 0.60
MW-25	Deep	MW-25-120617	12/6/2017	Farallon	---	---	---	---	< 0.20	< 1.0	< 0.20	< 0.60
MW-28	Deep	MW-28-120717	12/7/2017	Farallon	---	---	---	---	< 0.20	< 1.0	< 0.20	< 0.60
MW-29	Deep	MW-29-120717	12/7/2017	Farallon	---	---	---	---	< 0.20	< 1.0	< 0.20	< 0.60
AS-1	Deep	AS-1-120817	12/8/2017	Farallon	---	---	---	---	< 0.20	< 1.0	< 0.20	< 0.60
SVE-1	Deep	SVE-1-120717	12/7/2017	Farallon	---	---	---	---	< 0.20	< 1.0	< 0.20	< 0.60
SVE-2	Deep	SVE-2-120517	12/5/2017	Farallon	---	---	< 260	< 410	< 0.20	< 1.0	< 0.20	< 0.60
SVE-7	Deep	---	12/5/2017	Farallon	Well Not Sampled - Inaccessible due to gravel stockpile over well							
SVE-9	Deep	SVE-9-120717	12/7/2017	Farallon	---	---	< 260	< 410	---	---	---	---
Regional Water-Bearing Zone												
Industrial Well	Regional	INDUSTRIAL WELL-120717	12/7/2017	Farallon	---	---	---	---	< 0.20	< 1.0	< 0.20	< 0.60
MTCA Method A Cleanup Level for Groundwater <sup>3</sup>					500	500	500	500	5	1,000	700	1,000

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.

<sup>1</sup>Analyzed by Northwest Method NWTPH-Dx.

<sup>2</sup>Analyzed by U.S. Environmental Protection Agency Method 8260C.

<sup>3</sup>Washington State Model Toxics Control Act Cleanup Regulation Method A Cleanup Levels for Groundwater, Table 720-1 of Section 900 of Chapter 173-340 of the Washington Administrative Code, as amended 2013.

<sup>4</sup>The monument cover for monitoring well MW-16 was found to be destroyed and the internal cap/casing damaged during the December 2017 groundwater monitoring and sampling event, impacting the integrity of the monitoring well and the results from this well.

BTEX = benzene, toluene, ethylbenzene, and xylenes

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

Farallon = Farallon Consulting, L.L.C.

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

ORO = TPH as oil-range organics



**Table 8**  
**Groundwater Analytical Results for Select VOCs**  
**Lakeview Facility**  
**Lakewood, Washington**  
**Farallon PN: 188-002**

Sample Location	Water-Bearing Zone	Sample Identification	Sample Date	Sampled By	Analytical Results (micrograms per liter) <sup>1</sup>									
					Tetrachloroethene	Trichloroethene	(cis) 1,2-Dichloroethene	(trans)-1,2-Dichloroethene	1,1-Dichloroethene	Vinyl Chloride	1,1,1-Trichloroethane	1,1-Dichloroethane	1,2-Dichloroethane	Chloroform
Shallow Water-Bearing Zone														
MW-1	Shallow	MW1-082008	8/20/2008	Farallon	<0.20	0.32	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
		MW1-020409	2/4/2009	Farallon	<0.20	0.51	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
		MW-1-041510	4/15/2010	Farallon	<0.20	0.28	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
		MW1-041510-GEO	4/15/2010	GeoEngineers	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
MW-3	Shallow	MW3-082008	8/20/2008	Farallon	<0.20	4.3	<0.20	<0.20	<0.20	<0.20	0.66	<0.20	<0.20	1.2
		MW3-020609	2/6/2009	Farallon	<0.20	3.4	<0.20	<0.20	<0.20	<0.20	0.43	<0.20	<0.20	0.71
		Dup1-020609	2/6/2009	Farallon	<0.20	3.4	<0.20	<0.20	<0.20	<0.20	0.40	<0.20	<0.20	0.69
		MW3-041410	4/14/2010	Farallon	<0.20	2.2	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.56
		MW3-041410-GEO	4/14/2010	GeoEngineers	<0.50	2.2	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.53
		MW-3-012916	1/29/2016	Farallon	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
		MW-3-120617	12/6/2017	Farallon	<0.20	1.4	<0.20	<0.20	<0.20	<0.20	0.28	<0.20	<0.20	<0.20
MW-4	Shallow	MW4-082008	8/20/2008	Farallon	<0.20	2.0	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
		MW4-020609	2/6/2009	Farallon	<0.20	2.3	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
		MW4-041410	4/14/2010	Farallon	<0.20	1.8	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
		MW4-041410-GEO	4/14/2010	GeoEngineers	<0.50	1.8	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
MW-5	Shallow	MW5-081908	8/19/2008	Farallon	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
		MW5-020309	2/3/2009	Farallon	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
		MW-5-041510	4/15/2010	Farallon	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
		MW5-041510-GEO	4/15/2010	GeoEngineers	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
MTCA Cleanup Levels for Groundwater <sup>2</sup>					5	5	16 <sup>3</sup>	160 <sup>3</sup>	400 <sup>3</sup>	0.2	200	7.68 <sup>3</sup>	5	1.41 <sup>3</sup>

**Table 8**  
**Groundwater Analytical Results for Select VOCs**  
**Lakeview Facility**  
**Lakewood, Washington**  
**Farallon PN: 188-002**

Sample Location	Water-Bearing Zone	Sample Identification	Sample Date	Sampled By	Analytical Results (micrograms per liter) <sup>1</sup>									
					Tetrachloroethene	Trichloroethene	(cis) 1,2-Dichloroethene	(trans)-1,2-Dichloroethene	1,1-Dichloroethene	Vinyl Chloride	1,1,1-Trichloroethane	1,1-Dichloroethane	1,2-Dichloroethane	Chloroform
MW-6	Shallow	MW6-081908	8/19/2008	Farallon	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
		MW6-020309	2/3/2009	Farallon	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
		MW-6-041510	4/15/2010	Farallon	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
		MW6-041510-GEO	4/15/2010	GeoEngineers	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
MW-9	Shallow	MW9-082008	8/20/2008	Farallon	<0.20	2.1	<0.20	<0.20	<0.20	<0.20	0.30	<0.20	<0.20	0.41
		MW9-020309	2/3/2009	Farallon	<0.20	2.4	<0.20	<0.20	<0.20	<0.20	0.31	<0.20	<0.20	0.45
		MW-9-041510	4/15/2010	Farallon	<0.20	2.2	<0.20	<0.20	<0.20	<0.20	0.28	<0.20	<0.20	0.42
		MW9-041510-GEO	4/15/2010	GeoEngineers	<0.50	2.6	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.50
		MW-9-012816	1/28/2016	Farallon	<0.20	1.7	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.22
MW-10	Shallow	MW10-091708	9/17/2008	Farallon	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
		MW10-020409	2/4/2009	Farallon	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
		MW-10-041510	4/15/2010	Farallon	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
		MW10-041510-GEO	4/15/2010	GeoEngineers	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
MW-11	Shallow	MW11-081908	8/19/2008	Farallon	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
		MW11-020609	2/6/2009	Farallon	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
		MW11-041310-GEO	4/13/2010	GeoEngineers	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
MW-12	Shallow	MW12-020609	2/6/2009	Farallon	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
		MW12-041310-GEO	4/13/2010	GeoEngineers	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
MW-13	Shallow	MW13-101408	10/14/2008	Farallon	<0.20	<0.20	<0.20	<0.20	0.26	<0.20	0.58	0.73	0.41	<0.20
		MW13-020609	2/6/2009	Farallon	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.68	0.83	0.22	<0.20
		MW13-041310-GEO	4/13/2010	GeoEngineers	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.94	1.1	<0.50	<0.50
MTCA Cleanup Levels for Groundwater <sup>2</sup>					5	5	16 <sup>3</sup>	160 <sup>3</sup>	400 <sup>3</sup>	0.2	200	7.68 <sup>3</sup>	5	1.41 <sup>3</sup>

**Table 8**  
**Groundwater Analytical Results for Select VOCs**  
**Lakeview Facility**  
**Lakewood, Washington**  
**Farallon PN: 188-002**

Sample Location	Water-Bearing Zone	Sample Identification	Sample Date	Sampled By	Analytical Results (micrograms per liter) <sup>1</sup>									
					Tetrachloroethene	Trichloroethene	(cis) 1,2-Dichloroethene	(trans)-1,2-Dichloroethene	1,1-Dichloroethene	Vinyl Chloride	1,1,1-Trichloroethane	1,1-Dichloroethane	1,2-Dichloroethane	Chloroform
MW-17A	Shallow	MW17A-020409	2/4/2009	Farallon	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
		MW17A-041410	4/14/2010	Farallon	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
		MW17A-041410-GEO	4/14/2010	GeoEngineers	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
MW-26	Shallow	MW-26-122112	12/21/2012	Farallon	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
		MW-26-120617	12/6/2017	Farallon	<0.20	0.71	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
MW-27	Shallow	MW-27-011513	1/15/2013	Farallon	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
SVE-3	Shallow	SVE-3-051112	5/11/2012	Farallon	<0.20	0.93	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<b>9.8</b>
		SVE-3-061312	6/13/2012	Farallon	<0.20	1.2	<0.20	<0.20	<0.20	<0.20	0.32	<0.20	<0.20	<b>12</b>
		SVE-3-080912	8/9/2012	Farallon	<0.20	1.4	<0.20	<0.20	<0.20	<0.20	0.27	<0.20	<0.20	<b>14</b>
		SVE-3-012916	1/29/2016	Farallon	<0.20	2.2	<0.20	<0.20	<0.20	<0.20	0.32	<0.20	<0.20	<b>1.9</b>
		SVE-3-120517	12/5/2017	Farallon	<0.20	3.5	<0.20	<0.20	<0.20	<0.20	0.80	<0.20	<0.20	<b>1.9</b>
SVE-6	Shallow	SVE-6-011012	1/10/2012	Farallon	<0.20	<b>5.4</b>	<0.20	<0.20	0.24	<0.20	0.66	<0.20	<0.20	<b>8.2</b>
		SVE-6-021312	2/13/2012	Farallon	<0.20	<b>5.3</b>	<0.20	<0.20	<0.20	<0.20	0.56	<0.20	<0.20	<b>6.3</b>
		SVE-6-012816	1/28/2016	Farallon	0.21	<b>5.2</b>	<0.20	<0.20	0.24	<0.20	0.81	<0.20	<0.20	0.95
		SVE-6-120817	12/8/2017	Farallon	<0.20	2.2	<0.20	<0.20	<0.20	<0.20	0.25	<0.20	<0.20	0.35
SVE-12	Shallow	SVE-12-041310	4/13/2010	Farallon	0.37	<b>10</b>	<0.20	<0.20	0.47	<0.20	4.7	<0.20	<0.20	0.32
		SVE12-041310-GEO	4/13/2010	GeoEngineers	<0.50	<b>15</b>	<0.50	<0.50	0.70	<0.50	7.0	<0.50	<0.50	<0.50
		SVE-12-110911	11/9/2011	Farallon	0.24	<b>11</b>	<0.20	<0.20	4.4	<0.20	5.1	<0.20	<0.20	<b>2.7</b>
		SVE-12-080912	8/9/2012	Farallon	0.26	<b>12</b>	<0.20	<0.20	5.9	<0.20	5.5	<0.20	<0.20	0.43
		SVE-12-061213	6/12/2013	Farallon	<0.20	<b>6.4</b>	<0.20	<0.20	4.1	<0.20	3.6	<0.20	<0.20	0.36
		SVE-12-012916	1/29/2016	Farallon	<0.20	1.7	<0.20	<0.20	1.2	<0.20	2.3	<0.20	<0.20	<0.20
		SVE-12-120817	12/8/2017	Farallon	<0.20	4.2	<0.20	<0.20	4.3	<0.20	5.8	0.48	<0.20	0.21
MTCA Cleanup Levels for Groundwater <sup>2</sup>					<b>5</b>	<b>5</b>	<b>16<sup>3</sup></b>	<b>160<sup>3</sup></b>	<b>400<sup>3</sup></b>	<b>0.2</b>	<b>200</b>	<b>7.68<sup>3</sup></b>	<b>5</b>	<b>1.41<sup>3</sup></b>

**Table 8**  
**Groundwater Analytical Results for Select VOCs**  
**Lakeview Facility**  
**Lakewood, Washington**  
**Farallon PN: 188-002**

Sample Location	Water-Bearing Zone	Sample Identification	Sample Date	Sampled By	Analytical Results (micrograms per liter) <sup>1</sup>									
					Tetrachloroethene	Trichloroethene	(cis) 1,2-Dichloroethene	(trans)-1,2-Dichloroethene	1,1-Dichloroethene	Vinyl Chloride	1,1,1-Trichloroethane	1,1-Dichloroethane	1,2-Dichloroethane	Chloroform
Deep Water-Bearing Zone														
MW-2	Deep	MW2-082008	8/20/2008	Farallon	<0.20	14	<0.20	<0.20	<0.20	<0.20	2.1	<0.20	<0.20	2.2
		MW2-021209	2/12/2009	Farallon	<0.20	14	<0.20	<0.20	<0.20	<0.20	1.2	<0.20	<0.20	2.0
		Dup2-021209	2/12/2009	Farallon	<0.20	14	<0.20	<0.20	<0.20	<0.20	1.2	<0.20	<0.20	1.9
		MW2-100109	10/1/2009	Farallon	<0.20	9.2	<0.20	<0.20	<0.20	<0.20	0.96	<0.20	<0.20	1.4
		MW-2-041310	4/13/2010	Farallon	<0.20	5.1	<0.20	<0.20	<0.20	<0.20	0.57	<0.20	<0.20	1.4
		MW2-041310-GEO	4/13/2010	GeoEngineers	<0.50	7.3	<0.50	<0.50	<0.50	<0.50	0.85	<0.50	<0.50	2.0
		MW-2-110410	11/4/2010	Farallon	<0.20	10	<0.20	<0.20	<0.20	<0.20	0.97	<0.20	<0.20	2.0
		MW-2-020111	2/1/2011	Farallon	<0.20	13	<0.20	<0.20	0.54	<0.20	1.8	<0.20	<0.20	0.76
		MW-2-050411	5/4/2011	Farallon	<0.20	12	<0.20	<0.20	0.51	<0.20	1.5	<0.20	<0.20	0.58
		MW-2-080211	8/2/2011	Farallon	<0.20	11	<0.20	<0.20	0.45	<0.20	1.5	<0.20	<0.20	0.54
		MW-2-1108211	11/8/2011	Farallon	<0.20	12	<0.20	<0.20	0.32	<0.20	1.5	<0.20	<0.20	0.92
		MW-2-011012	1/10/2012	Farallon	<0.20	11	<0.20	<0.20	0.44	<0.20	1.4	<0.20	<0.20	0.70
		MW-2-021312	2/13/2012	Farallon	<0.20	11	<0.20	<0.20	0.39	<0.20	1.5	<0.20	<0.20	0.70
		MW-2	4/10/2012	Farallon	<0.20	6.7	<0.20	<0.20	0.34	<0.20	0.80	<0.20	<0.20	0.30
		MW-2-061213	6/12/2013	Farallon	<0.20	4.6	<0.20	<0.20	<0.20	<0.20	0.46	<0.20	<0.20	0.40
		MW-2-012816	1/28/2016	Farallon	<0.20	7.5	<0.20	<0.20	<0.20	<0.20	0.66	<0.20	<0.20	2.0
		MW-2-120617	12/6/2017	Farallon	<0.20	12	<0.20	<0.20	<0.20	<0.20	0.90	<0.20	<0.20	2.0
MTCA Cleanup Levels for Groundwater <sup>2</sup>					5	5	16 <sup>3</sup>	160 <sup>3</sup>	400 <sup>3</sup>	0.2	200	7.68 <sup>3</sup>	5	1.41 <sup>3</sup>

**Table 8**  
**Groundwater Analytical Results for Select VOCs**  
**Lakeview Facility**  
**Lakewood, Washington**  
**Farallon PN: 188-002**

Sample Location	Water-Bearing Zone	Sample Identification	Sample Date	Sampled By	Analytical Results (micrograms per liter) <sup>1</sup>									
					Tetrachloroethene	Trichloroethene	(cis) 1,2-Dichloroethene	(trans)-1,2-Dichloroethene	1,1-Dichloroethene	Vinyl Chloride	1,1,1-Trichloroethane	1,1-Dichloroethane	1,2-Dichloroethane	Chloroform
MW-7	Deep	MW7-082008	8/20/2008	Farallon	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
		MW7-020309	2/3/2009	Farallon	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
		MW-7-041510	4/15/2010	Farallon	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
		MW7-041510-GEO	4/15/2010	GeoEngineers	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
MW-9B	Deep	MW9B-021209	2/12/2009	Farallon	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.21
		MW-9B-041410	1/14/2010	Farallon	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
		MW9B-041410-GEO	1/14/2010	GeoEngineers	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
MW-10B	Deep	MW10B-020409	2/4/2009	Farallon	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
		MW-10B-041510	4/15/2010	Farallon	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
		MW10B-041510-GEO	4/15/2010	GeoEngineers	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		MW-10B-120717	12/7/2017	Farallon	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
MW-11B	Deep	MW11B-020609	2/6/2009	Farallon	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
		MW-11B-041410	4/14/2010	Farallon	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
		MW11B-041410-GEO	4/14/2010	GeoEngineers	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
MW-12B	Deep	MW12B-021209	2/12/2009	Farallon	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
		MW-12B-041510	4/15/2010	Farallon	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
		MW12B-041510-GEO	4/15/2010	GeoEngineers	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
MTCA Cleanup Levels for Groundwater <sup>2</sup>					5	5	16 <sup>3</sup>	160 <sup>3</sup>	400 <sup>3</sup>	0.2	200	7.68 <sup>3</sup>	5	1.41 <sup>3</sup>

**Table 8**  
**Groundwater Analytical Results for Select VOCs**  
**Lakeview Facility**  
**Lakewood, Washington**  
**Farallon PN: 188-002**

Sample Location	Water-Bearing Zone	Sample Identification	Sample Date	Sampled By	Analytical Results (micrograms per liter) <sup>1</sup>									
					Tetrachloroethene	Trichloroethene	(cis) 1,2-Dichloroethene	(trans)-1,2-Dichloroethene	1,1-Dichloroethene	Vinyl Chloride	1,1,1-Trichloroethane	1,1-Dichloroethane	1,2-Dichloroethane	Chloroform
MW-14	Deep	MW-14-101308	10/13/2008	Farallon	<0.20	24	<0.20	<0.20	3.5	<0.20	11	0.43	<0.20	0.33
		MW-14-021209	2/12/2009	Farallon	<0.20	22	<0.20	<0.20	2.0	<0.20	7.5	0.33	<0.20	0.29
		MW-14-100109	10/1/2009	Farallon	<0.20	23	<0.20	<0.20	2.2	<0.20	7.5	0.42	<0.20	0.30
		MW-14-041310	4/13/2010	Farallon	<0.20	22	<0.20	<0.20	2.2	<0.20	6.7	0.36	<0.20	0.26
		MW-14-041310-GEO	4/13/2010	GeoEngineers	<0.50	32	<0.50	<0.50	3.2	<0.50	10	<0.50	<0.50	<0.50
		MW-14-110410	11/4/2010	Farallon	<0.20	29	<0.20	<0.20	3.4	<0.20	9.3	0.43	<0.20	0.60
		MW-14-110410-X	11/4/2010	Farallon	0.21	30	<0.20	<0.20	3.7	<0.20	10	0.43	<0.20	0.57
		MW-14-020111	2/1/2011	Farallon	<0.20	24	<0.20	<0.20	2.7	<0.20	6.8	0.33	<0.20	0.38
		MW-14-050411	5/4/2011	Farallon	<0.20	30	<0.20	<0.20	3.7	<0.20	8.8	0.41	<0.20	0.48
		MW-14-080311	8/3/2011	Farallon	<0.20	25	<0.20	<0.20	2.4	<0.20	6.8	0.33	<0.20	0.41
		MW-14-110811	11/8/2011	Farallon	<0.20	26	<0.20	<0.20	2.2	<0.20	6.0	0.30	<0.20	0.43
		MW-14-011012	1/10/2012	Farallon	<0.20	24	<0.20	<0.20	2.2	<0.20	5.9	0.34	<0.20	0.59
		MW-14-021312	2/13/2012	Farallon	<0.20	11	<0.20	<0.20	1.6	<0.20	3.4	<0.20	<0.20	<0.20
		MW-14-061213	6/12/2013	Farallon	<0.20	10	<0.20	<0.20	0.75	<0.20	2.3	<0.20	<0.20	3.0
		MW-14-012816	1/28/2016	Farallon	<0.20	11	<0.20	<0.20	1.3	<0.20	4.2	<0.20	<0.20	0.97
		MW-14-120817	12/8/2017	Farallon	<0.20	12	<0.20	<0.20	1.6	<0.20	5.1	<0.20	<0.20	0.61
MW-14C	Deep	MW-14C-020509	2/5/2009	Farallon	<0.20	<0.20	<0.20	<0.20	0.20	<0.20	1.0	<0.20	<0.20	<0.20
		MW-14C-120817	12/8/2017	Farallon	<0.20	0.80	<0.20	<0.20	<0.20	<0.20	0.27	<0.20	<0.20	<0.20
MTCA Cleanup Levels for Groundwater <sup>2</sup>					5	5	16 <sup>3</sup>	160 <sup>3</sup>	400 <sup>3</sup>	0.2	200	7.68 <sup>3</sup>	5	1.41 <sup>3</sup>

**Table 8**  
**Groundwater Analytical Results for Select VOCs**  
**Lakeview Facility**  
**Lakewood, Washington**  
**Farallon PN: 188-002**

Sample Location	Water-Bearing Zone	Sample Identification	Sample Date	Sampled By	Analytical Results (micrograms per liter) <sup>1</sup>									
					Tetrachloroethene	Trichloroethene	(cis) 1,2-Dichloroethene	(trans)-1,2-Dichloroethene	1,1-Dichloroethene	Vinyl Chloride	1,1,1-Trichloroethane	1,1-Dichloroethane	1,2-Dichloroethane	Chloroform
MW-15	Deep	MW15-101308	10/13/2008	Farallon	<0.20	2.8	0.45	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
		MW15-020409	2/4/2009	Farallon	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
		MW-15-041210	4/12/2010	Farallon	<0.20	2.2	0.28	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
		MW15-041210-GEO	4/12/2010	GeoEngineers	<0.50	3.3	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		MW-15-110310	11/3/2010	Farallon	<0.20	2.2	0.33	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
		MW-15-020111	2/1/2011	Farallon	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
		MW-15-050411	5/4/2011	Farallon	<0.20	0.46	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
		MW-15-080211	8/2/2011	Farallon	<0.20	3.5	0.45	0.26	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
		MW-15-110911	11/9/2011	Farallon	<0.20	3.5	0.41	0.21	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
		MW-15-120617	12/6/2017	Farallon	<0.20	3.2	0.41	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
MW-16	Deep	MW16-101308	10/13/2008	Farallon	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
		MW16-020309	2/3/2009	Farallon	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.26	<0.20	<0.20	<0.20
		MW-16-041210	4/12/2010	Farallon	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
		MW16-041210-GEO	4/12/2010	GeoEngineers	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		MW-16-110410	11/4/2010	Farallon	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
		MW-16-020111	2/1/2011	Farallon	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
		MW-16-050311	5/3/2011	Farallon	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
		MW-16-080211	8/2/2011	Farallon	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	<0.20	<0.20	<0.20
		MW-16-110911	11/9/2011	Farallon	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.22	<0.20	<0.20	<0.20
		MW-16-120617	12/6/2017	Farallon	<0.20	<0.50	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
MTCA Cleanup Levels for Groundwater <sup>2</sup>					5	5	16 <sup>3</sup>	160 <sup>3</sup>	400 <sup>3</sup>	0.2	200	7.68 <sup>3</sup>	5	1.41 <sup>3</sup>



**Table 8**  
**Groundwater Analytical Results for Select VOCs**  
**Lakeview Facility**  
**Lakewood, Washington**  
**Farallon PN: 188-002**

Sample Location	Water-Bearing Zone	Sample Identification	Sample Date	Sampled By	Analytical Results (micrograms per liter) <sup>1</sup>									
					Tetrachloroethene	Trichloroethene	(cis) 1,2-Dichloroethene	(trans)-1,2-Dichloroethene	1,1-Dichloroethene	Vinyl Chloride	1,1,1-Trichloroethane	1,1-Dichloroethane	1,2-Dichloroethane	Chloroform
MW-17	Deep	MW17-101308	10/13/2008	Farallon	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
		MW17-020409	2/4/2009	Farallon	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
		MW17-041410	4/14/2010	Farallon	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
		MW17-041410-GEO	4/14/2010	GeoEngineers	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
MW-18	Deep	MW18-020509	2/5/2009	Farallon	<0.20	<0.20	<0.20	<0.20	2.6	<0.20	9.9	0.63	<0.20	<0.20
		MW18-100109	10/1/2009	Farallon	<0.20	<0.20	<0.20	<0.20	4.3	<0.20	15	0.83	<0.20	<0.20
		MW-18-041210	4/12/2010	Farallon	<0.20	<0.20	<0.20	<0.20	4.0	<0.20	12	0.75	<0.20	<0.20
		MW18-041210-GEO	4/12/2010	GeoEngineers	<0.50	<0.50	<0.50	<0.50	6.0	<0.50	19	1.2	<0.50	<0.50
		MW-18-110310	11/3/2010	Farallon	<0.20	<0.20	<0.20	<0.20	2.2	<0.20	6.9	0.75	<0.20	<0.20
		MW-18-020111	2/1/2011	Farallon	<0.20	<0.20	<0.20	<0.20	2.2	<0.20	6.7	0.69	<0.20	<0.20
		MW-18-050411	5/4/2011	Farallon	<0.20	<0.20	<0.20	<0.20	0.71	<0.20	1.5	<0.20	<0.20	<0.20
		MW-18-080311	8/3/2011	Farallon	<0.20	<0.20	<0.20	<0.20	0.81	<0.20	2.6	0.56	<0.20	<0.20
		MW-18-110811	11/8/2011	Farallon	<0.20	<0.20	<0.20	<0.20	0.72	<0.20	2.3	0.48	<0.20	<0.20
		MW-18-011012	1/10/2012	Farallon	<0.20	<0.20	<0.20	<0.20	1.1	<0.20	2.8	0.59	<0.20	<0.20
		MW-18-021312	2/13/2012	Farallon	<0.20	<0.20	<0.20	<0.20	0.28	<0.20	0.78	<0.20	<0.20	<0.20
		MW-18	4/10/2012	Farallon	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.47	0.30	<0.20	<0.20
		MW-18-120617	12/6/2017	Farallon	<0.20	<0.50	<0.20	<0.20	2.8	<0.20	6.9	2.5	<0.20	<0.20
MTCA Cleanup Levels for Groundwater <sup>2</sup>					5	5	16 <sup>3</sup>	160 <sup>3</sup>	400 <sup>3</sup>	0.2	200	7.68 <sup>3</sup>	5	1.41 <sup>3</sup>

**Table 8**  
**Groundwater Analytical Results for Select VOCs**  
**Lakeview Facility**  
**Lakewood, Washington**  
**Farallon PN: 188-002**

Sample Location	Water-Bearing Zone	Sample Identification	Sample Date	Sampled By	Analytical Results (micrograms per liter) <sup>1</sup>									
					Tetrachloroethene	Trichloroethene	(cis) 1,2-Dichloroethene	(trans)-1,2-Dichloroethene	1,1-Dichloroethene	Vinyl Chloride	1,1,1-Trichloroethane	1,1-Dichloroethane	1,2-Dichloroethane	Chloroform
MW-19	Deep	MW19-020509	2/5/2009	Farallon	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
		MW-19-041210	4/12/2010	Farallon	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
		MW19-041210-GEO	4/12/2010	GeoEngineers	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		MW-19-110310	11/3/2010	Farallon	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
		MW-19-020111	2/1/2011	Farallon	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
		MW-19-050411	5/4/2011	Farallon	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
		MW-19-080311	8/3/2011	Farallon	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
		MW-19-110911	11/9/2011	Farallon	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
MW-19-120517	12/5/2017	Farallon	<0.20	<0.50	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	
MW-20	Deep	MW20-093009	9/30/2009	Farallon	<0.20	33	<0.20	<0.20	0.43	<0.20	3.5	0.42	<0.20	<0.20
		MW-20-041310	4/13/2010	Farallon	<0.20	33	0.21	<0.20	0.47	<0.20	3.4	0.29	<0.20	0.23
		MW20-041310-GEO	4/13/2010	GeoEngineers	<0.50	48	<0.50	<0.50	0.70	<0.50	5.0	<0.50	<0.50	<0.50
		MW-20-110410	11/4/2010	Farallon	0.27	30	<0.20	<0.20	0.36	<0.20	3.0	0.23	<0.20	0.28
		MW-20-020111	2/1/2011	Farallon	<0.20	19	<0.20	<0.20	0.22	<0.20	1.7	<0.20	<0.20	0.20
		MW-20-050311	5/3/2011	Farallon	<0.20	29	<0.20	<0.20	0.40	<0.20	2.9	<0.20	<0.20	0.29
		MW-20-080311	8/3/2011	Farallon	<0.20	30	<0.20	<0.20	0.46	<0.20	2.8	<0.20	<0.20	0.28
		MW-20-110811	11/8/2011	Farallon	<0.20	24	0.20	<0.20	0.25	<0.20	2.0	<0.20	<0.20	0.28
		MW-20-051112	5/11/2012	Farallon	<0.20	28	<0.20	<0.20	0.31	<0.20	2.9	<0.20	<0.20	0.38
		MW-20-061312	6/13/2012	Farallon	<0.20	26	<0.20	<0.20	0.36	<0.20	2.5	<0.20	<0.20	0.37
MW-20-080912	8/9/2012	Farallon	<0.20	22	<0.20	<0.20	0.24	<0.20	1.9	<0.20	<0.20	0.31		
MTCA Cleanup Levels for Groundwater <sup>2</sup>					5	5	16 <sup>3</sup>	160 <sup>3</sup>	400 <sup>3</sup>	0.2	200	7.68 <sup>3</sup>	5	1.41 <sup>3</sup>

**Table 8**  
**Groundwater Analytical Results for Select VOCs**  
**Lakeview Facility**  
**Lakewood, Washington**  
**Farallon PN: 188-002**

Sample Location	Water-Bearing Zone	Sample Identification	Sample Date	Sampled By	Analytical Results (micrograms per liter) <sup>1</sup>										
					Tetrachloroethene	Trichloroethene	(cis) 1,2-Dichloroethene	(trans)-1,2-Dichloroethene	1,1-Dichloroethene	Vinyl Chloride	1,1,1-Trichloroethane	1,1-Dichloroethane	1,2-Dichloroethane	Chloroform	
MW-20 (continued)	Deep	MW-20-061213	6/12/2013	Farallon	<0.20	20	<0.20	<0.20	<0.20	<0.20	<0.20	2.0	<0.20	<0.20	0.30
		MW-20-012916	1/29/2016	Farallon	<0.20	20	<0.20	<0.20	<0.20	<0.20	<0.20	2.1	<0.20	<0.20	0.29
		MW-20-120717	12/7/2017	Farallon	<0.20	20	<0.20	<0.20	<0.20	<0.20	<0.20	2.1	<0.20	<0.20	0.26
MW-21	Deep	MW21-100109	10/1/2009	Farallon	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
		MW-21-041310	4/13/2010	Farallon	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
		MW21-041310-GEO	4/13/2010	GeoEngineers	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		MW-21-110310	11/3/2010	Farallon	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
		MW-21-020111	2/1/2011	Farallon	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.21	<0.20	<0.20	<0.20
		MW-21-050311	5/3/2011	Farallon	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
		MW-21-080311	8/3/2011	Farallon	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
		MW-21-110811	11/8/2011	Farallon	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
		MW-21-120717	12/7/2017	Farallon	<0.20	0.32	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	<0.20	<0.20	<0.20
MW-22	Deep	MW22-100109	10/1/2009	Farallon	<0.20	20	<0.20	<0.20	1.6	<0.20	5.9	0.36	<0.20	1.4	
		MW-22-041210	4/12/2010	Farallon	<0.20	19	<0.20	<0.20	1.4	<0.20	5.0	0.28	<0.20	0.60	
		FD-041210	4/12/2010	Farallon	<0.20	19	<0.20	<0.20	1.5	<0.20	5.1	0.31	<0.20	0.55	
		MW22-041210-GEO	4/12/2010	GeoEngineers	<0.50	29	<0.50	<0.50	2.1	<0.50	8.4	<0.50	<0.50	0.89	
		Dupe1-041210-GEO	4/12/2010	GeoEngineers	<0.50	29	<0.50	<0.50	2.1	<0.50	8.5	<0.50	<0.50	0.90	
		MW-22-110410	11/4/2010	Farallon	<0.20	18	<0.20	<0.20	1.2	<0.20	4.6	0.26	<0.20	0.46	
		MW-22-020111	2/1/2011	Farallon	<0.20	12	<0.20	<0.20	0.59	<0.20	2.6	<0.20	<0.20	0.31	
		MW-22-050411	5/4/2011	Farallon	<0.20	15	<0.20	<0.20	0.94	<0.20	3.4	<0.20	<0.20	0.37	
		MW-22-080311	8/2/2011	Farallon	<0.20	13	<0.20	<0.20	0.61	<0.20	2.3	<0.20	<0.20	0.34	
MTCA Cleanup Levels for Groundwater <sup>2</sup>					5	5	16 <sup>3</sup>	160 <sup>3</sup>	400 <sup>3</sup>	0.2	200	7.68 <sup>3</sup>	5	1.41 <sup>3</sup>	

**Table 8**  
**Groundwater Analytical Results for Select VOCs**  
**Lakeview Facility**  
**Lakewood, Washington**  
**Farallon PN: 188-002**

Sample Location	Water-Bearing Zone	Sample Identification	Sample Date	Sampled By	Analytical Results (micrograms per liter) <sup>1</sup>									
					Tetrachloroethene	Trichloroethene	(cis) 1,2-Dichloroethene	(trans)-1,2-Dichloroethene	1,1-Dichloroethene	Vinyl Chloride	1,1,1-Trichloroethane	1,1-Dichloroethane	1,2-Dichloroethane	Chloroform
MW-22 (continued)	Deep	MW-22-110811	11/8/2011	Farallon	<0.20	14	<0.20	<0.20	0.65	<0.20	2.5	<0.20	<0.20	0.36
		MW-22-061213	6/12/2013	Farallon	<0.20	12	<0.20	<0.20	0.45	<0.20	2.3	<0.20	<0.20	0.31
		---	12/7/2017	Farallon	Well Not Sampled - Inaccessible due to asphalt over well									
MW-23	Deep	MW23-112409	11/24/2009	Farallon	<0.20	0.57	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
		MW-23-041210	4/12/2010	Farallon	<0.20	0.74	<0.20	<0.20	<0.20	<0.20	0.30	<0.20	<0.20	<0.20
		MW23-041210-GEO	4/12/2010	GeoEngineers	<0.50	1.1	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		MW-23-110410	11/4/2010	Farallon	<0.20	0.68	<0.20	<0.20	<0.20	<0.20	0.21	<0.20	<0.20	<0.20
		MW-23-020111	2/1/2011	Farallon	<0.20	0.65	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
		MW-23-050311	5/3/2011	Farallon	<0.20	0.84	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
		MW-23-080311	8/3/2011	Farallon	<0.20	0.79	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
		MW-23-110911	11/9/2011	Farallon	<0.20	0.83	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
		MW-23-061213	6/12/2013	Farallon	<0.20	0.64	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
		MW-23-012816	1/28/2016	Farallon	<0.20	0.61	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
		MW-23-120717	12/7/2017	Farallon	<0.20	0.64	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
MW-25	Deep	MW-25-080912	8/9/2012	Farallon	0.26	5.7	<0.20	<0.20	<0.20	<0.20	0.26	<0.20	<0.20	0.46
		MW25-092412	9/24/2012	Farallon	<0.20	3.5	<0.20	<0.20	<0.20	<0.20	0.20	<0.20	<0.20	<0.20
		MW-25-061213	6/12/2013	Farallon	<0.20	2.7	<0.20	<0.20	<0.20	<0.20	0.22	<0.20	<0.20	<0.20
		MW-25-012916	1/29/2016	Farallon	<0.20	3.1	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
		MW-25-120617	12/6/2017	Farallon	<0.20	3.3	<0.20	<0.20	<0.20	<0.20	0.25	<0.20	<0.20	<0.20
MW-28	Deep	MW-28-011513	1/15/2013	Farallon	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.37
		MW-28-120717	12/7/2017	Farallon	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
MTCA Cleanup Levels for Groundwater <sup>2</sup>					5	5	16 <sup>3</sup>	160 <sup>3</sup>	400 <sup>3</sup>	0.2	200	7.68 <sup>3</sup>	5	1.41 <sup>3</sup>

**Table 8**  
**Groundwater Analytical Results for Select VOCs**  
**Lakeview Facility**  
**Lakewood, Washington**  
**Farallon PN: 188-002**

Sample Location	Water-Bearing Zone	Sample Identification	Sample Date	Sampled By	Analytical Results (micrograms per liter) <sup>1</sup>									
					Tetrachloroethene	Trichloroethene	(cis) 1,2-Dichloroethene	(trans)-1,2-Dichloroethene	1,1-Dichloroethene	Vinyl Chloride	1,1,1-Trichloroethane	1,1-Dichloroethane	1,2-Dichloroethane	Chloroform
MW-29	Deep	MW-29-011513	1/15/2013	Farallon	<0.20	0.22	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
		MW-29-120717	12/7/2017	Farallon	<0.20	0.31	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
SVE-1	Deep	SVE1-093009	9/30/2009	Farallon	<0.20	0.68	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<b>1.6</b>
		SVE-1-011012	1/10/2012	Farallon	<0.20	4.0	<0.20	<0.20	1.4	<0.20	2.9	0.28	<0.20	0.95
		SVE-1-021312	2/13/2012	Farallon	<0.20	<b>7.0</b>	<0.20	<0.20	1.1	<0.20	2.5	0.25	<0.20	0.81
		SVE-1-012916	1/29/2016	Farallon	<0.20	4.7	<0.20	<0.20	0.31	<0.20	1.3	<0.20	<0.20	<b>2.2</b>
		SVE-1-120717	12/7/2017	Farallon	<0.20	2.7	<0.20	<0.20	0.24	<0.20	1.1	<0.20	<0.20	1.3
SVE-2	Deep	SVE2-093009	9/30/2009	Farallon	<0.20	<b>9.7</b>	<0.20	<0.20	0.41	<0.20	5.2	<0.20	<0.20	0.50
		SVE2-110910	11/9/2010	Farallon	<0.20	3.4	<0.20	<0.20	<0.20	<0.20	1.3	<0.20	<0.20	0.43
		SVE-2-120517	12/5/2017	Farallon	<0.20	<b>6.6</b>	<0.20	<0.20	<0.20	<0.20	1.6	<0.20	<0.20	0.54
SVE-8	Deep	SVE-8-011012	1/10/2012	Farallon	<0.20	<b>5.3</b>	<0.20	<0.20	0.29	<0.20	0.80	<0.20	<0.20	1.1
		SVE-8-021312	2/13/2012	Farallon	<0.20	<b>5.6</b>	<0.20	<0.20	0.33	<0.20	0.96	<0.20	<0.20	0.40
		SVE-8	4/10/2012	Farallon	<0.20	4.6	<0.20	<0.20	0.30	<0.20	0.62	<0.20	<0.20	<0.20
SVE-10	Deep	---	12/5/2017	Farallon	Well Not Sampled - Unable to locate									
SVE-11	Deep	---	12/5/2017	Farallon	Well Not Sampled - Inaccessible due to overlying asphalt stockpile									
AS-1	Deep	AS1-093009	9/30/2009	Farallon	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<b>1.5</b>
		AS-1-120817	12/8/2017	Farallon	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
AS-4	Deep	---	12/8/2017	Farallon	Well Not Sampled - Unable to locate									
AS-9	Deep	---	12/8/2017	Farallon	Well Not Sampled - Unable to locate under gravel stockpile									
AS-10	Deep	---	12/8/2017	Farallon	Well Not Sampled - Inaccessible due to overlying gravel stockpile									
<b>MTCA Cleanup Levels for Groundwater<sup>2</sup></b>					<b>5</b>	<b>5</b>	<b>16<sup>3</sup></b>	<b>160<sup>3</sup></b>	<b>400<sup>3</sup></b>	<b>0.2</b>	<b>200</b>	<b>7.68<sup>3</sup></b>	<b>5</b>	<b>1.41<sup>3</sup></b>

**Table 8**  
**Groundwater Analytical Results for Select VOCs**  
**Lakeview Facility**  
**Lakewood, Washington**  
**Farallon PN: 188-002**

Sample Location	Water-Bearing Zone	Sample Identification	Sample Date	Sampled By	Analytical Results (micrograms per liter) <sup>1</sup>									
					Tetrachloroethene	Trichloroethene	(cis) 1,2-Dichloroethene	(trans)-1,2-Dichloroethene	1,1-Dichloroethene	Vinyl Chloride	1,1,1-Trichloroethane	1,1-Dichloroethane	1,2-Dichloroethane	Chloroform
Regional Water-Bearing Zone														
Industrial Well	Regional	SW-082008	8/20/2008	Farallon	<0.20	0.30	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
		Pumphouse-021209	2/12/2009	Farallon	<0.20	0.53	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
		PUMP HOUSE - 081715	8/17/2015	Farallon	<0.20	0.27	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
		INDUSTRIAL WELL-120717	12/7/2017	Farallon	<0.20	0.39	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
MTCA Cleanup Levels for Groundwater <sup>2</sup>					5	5	16 <sup>3</sup>	160 <sup>3</sup>	400 <sup>3</sup>	0.2	200	7.68 <sup>3</sup>	5	1.41 <sup>3</sup>

**NOTES:**

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

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

<sup>1</sup> Analyzed by U.S. Environmental Protection Agency Method 8260B/8260C.

<sup>2</sup> Washington State Model Toxics Control Act Cleanup Regulation (MTCA) Cleanup Levels for Groundwater, Table 720-1 of Section 900 of Chapter 173-340 of the Washington Administrative Code, as revised 2013.

<sup>3</sup> MTCA Cleanup Levels and Risk Calculations, Version 3.1, Standard Method B Values for Groundwater, <https://fortress.wa.gov/ecy/clarc/Reporting/ChemicalQuery.aspx>

Farallon = Farallon Consulting, L.L.C.

GeoEngineers = GeoEngineers, Inc.

VOCs = volatile organic compounds

**Table 9**  
**Groundwater Analytical Results for 1,4-Dioxane**  
**Lakeview Facility**  
**Lakewood, Washington**  
**Farallon PN: 188-002**

Sample Location	Water-Bearing Zone	Sample Identification	Sample Date	Sampled By	Analytical Results (micrograms per liter) <sup>1</sup>
					1,4-Dioxane
Deep Water-Bearing Zone					
MW-2	Deep	MW-2-120617	12/6/2017	Farallon	< 0.096
MW-14	Deep	MW-14-120817	12/8/2017	Farallon	< 0.10
MW-20	Deep	MW-20-120717	12/7/2017	Farallon	< 0.10
MTCA Cleanup Level for Groundwater <sup>2</sup>					0.438

NOTES:

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

Farallon = Farallon Consulting, L.L.C.

<sup>1</sup>Analyzed by U.S. Environmental Protection Agency Method 8270D/SIM.

<sup>2</sup>Washington State Model Toxics Control Act Cleanup Regulation (MTCA) Cleanup Levels and Risk Calculations, Standard Method B Values for Groundwater, <https://fortress.wa.gov/ecy/clarc/CLARCHome.aspx>

**Table 10**  
**Groundwater Analytical Results for Metals**  
**Lakeview Facility**  
**Lakewood, Washington**  
**Farallon PN: 188-002**

Well Identification	Water-Bearing Zone	Sample Identification	Sample Date	Analytical Results (micrograms per liter) <sup>1</sup>			
				Arsenic		Lead	
				Total	Dissolved	Total	Dissolved
Shallow Water-Bearing Zone							
MW-9	Shallow	MW9-082008	8/20/2008	—	<3.0	—	<1.0
		MW-9-012816	1/28/2016	<3.0	<3.0	<1.0	<1.0
		MW-9-120717	12/7/2017	<3.0	<3.0	<1.0	<1.0
MW-12	Shallow	MW12-101408	10/14/2008	11	8.2	50	29
		MW12-020609	2/6/2009	15	18	22	6.1
		MW12-011310	1/13/2010	9.2	9.3	6.8	7.1
		MW12-041310	4/13/2010	9.1	9.1	4.5	3.5
		MW12-111910	11/19/2010	7.7	—	14	—
		MW12-020111	2/1/2011	11	—	6	—
		MW12-050311	5/3/2011	16	12	11	—
		MW12-080211	8/2/2011	8.6	6.5	35	25
		MW-12-1110211	11/10/2011	9.5	—	22	—
		MW-12-061313	6/13/2013	8.4	8.4	17	13
		MW-12-091214	9/12/2014	16	7.1	59	12
		MW-12-012716	1/27/2016	11	8.6	21	3.7
		MW-12-120517	12/5/2017	6.3	6.9	12	10
MW-30	Shallow	—	9/12/2014	Dry -- No Groundwater Sample Collected			
		—	10/30/2014	Dry -- No Groundwater Sample Collected			
		—	1/28/2016	Dry -- No Groundwater Sample Collected			
		—	12/5/2017	Dry -- No Groundwater Sample Collected			
MW-31	Shallow	MW-31-091214	9/12/2014	39	20	350	9.6
		MW-31-103014	10/30/2014	—	19	—	5.5
		MW-31-012716	1/27/2016	31	15	450	3.7
		MW-31-120517	12/5/2017	22	20	20	11
MTCA Method A Cleanup Levels <sup>2</sup>				5		15	



**Table 10**  
**Groundwater Analytical Results for Metals**  
**Lakeview Facility**  
**Lakewood, Washington**  
**Farallon PN: 188-002**

Well Identification	Water-Bearing Zone	Sample Identification	Sample Date	Analytical Results (micrograms per liter) <sup>1</sup>			
				Arsenic		Lead	
				Total	Dissolved	Total	Dissolved
MW-32	Shallow	MW-32-091214	9/12/2014	9.1	<3.0	7.9	<1.0
		MW-32-012816	1/28/2016	3.2	<3.0	2.1	<1.0
		MW-32-120517	12/5/2017	<3.3	<3.0	<1.1	<1.0
MW-33	Shallow	MW-33-012916	1/29/2016	<3.0	<3.0	<1.0	<1.0
		MW-33-120517	12/5/2017	<3.3	<3.0	<1.1	<1.0
MW-34	Shallow	MW-34-012916	1/29/2016	<3.0	<3.0	<1.0	<1.0
		MW-34-120617	12/6/2017	<3.0	<3.0	<1.0	<1.0
Deep Water-Bearing Zone							
MW-12B	Deep	MW12B-021209	1/12/2009	<3.3	—	<1.1	—
		MW-12B-012716	1/27/2016	2.9	<3.0	1.2	<1.0
		MW-12B-120617	12/6/2017	<3.0	<3.0	1.4	<1.0
MTCA Method A Cleanup Levels <sup>2</sup>				5		15	

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

<sup>1</sup>Analyzed by U.S. Environmental Protection Agency Method 200.8.

<sup>2</sup>Washington State Model Toxics Control Act Cleanup Regulation (MTCA) Cleanup Levels for Groundwater, Table 720-1 of Section 900 of Chapter 173-340 of the Washington Administrative Code, as revised 2013.

Table 11  
Natural Attenuation and Water Quality Parameters  
Lakeview Facility  
Lakewood, Washington  
Farallon PN: 188-002

Sample Location	Water-Bearing Zone	Sample Identification	Sample Date	Sampled By	Electron Receptors				Metals	Metabolic Byproducts			Water Quality Parameters <sup>1</sup>				Available Organic Carbon
					Dissolved Oxygen <sup>1</sup> (mg/l)	Nitrite <sup>2</sup> (mg/l)	Nitrate <sup>2</sup> (mg/l)	Sulfate <sup>3</sup> (mg/l)	Ferrous Iron <sup>4</sup> (mg/l)	Methane <sup>5</sup> (µg/l)	Ethane <sup>5</sup> (µg/l)	Ethene <sup>5</sup> (µg/l)	pH	Temperature (°Celsius)	Conductivity (mS/cm)	ORP (mV)	Total Organic Carbon <sup>6</sup> (mg/l)
Shallow Water-Bearing Zone																	
MW-3	Shallow	MW-3-120617	12/6/2017	Farallon	2.09	---	---	---	---	---	---	---	6.48	12.1	0.446	166.0	---
MW-5	Shallow	MW-5-120517	12/5/2017	Farallon	0.30	---	---	---	---	---	---	---	6.04	14.8	0.339	68.4	---
MW-6	Shallow	---	12/5/2017	Farallon	Well Not Sampled - Unable to locate												
MW-9	Shallow	MW-9-120717	12/7/2017	Farallon	2.17	---	---	---	---	---	---	---	6.61	11.9	0.380	185.6	---
MW-11	Shallow	---	12/5/2017	Farallon	Well Not Sampled - Unable to locate												
MW-12	Shallow	MW-12-120517	12/5/2017	Farallon	0.44	---	---	---	---	---	---	---	8.92	12.4	0.823	-326.5	---
MW-13	Shallow	MW-13-120517	12/5/2017	Farallon	0.92	---	---	---	---	---	---	---	7.63	15.4	0.314	-46.5	---
MW-24	Shallow	---	12/5/2017	Farallon	Well Not Sampled - Inaccessible due to overlying gravel stockpile												
MW-26	Shallow	MW-26-120617	12/6/2017	Farallon	4.50	---	---	---	---	---	---	---	6.18	10.6	0.155	101.9	---
MW-30	Shallow	---	12/5/2017	Farallon	Well Not Sampled - Dry												
MW-31	Shallow	MW-31-120517	12/5/2017	Farallon	0.08	---	---	---	---	---	---	---	12.52	12.0	1.446	-400.5	---
MW-32	Shallow	MW-32-120517	12/5/2017	Farallon	7.48	---	---	---	---	---	---	---	5.79	12.3	0.191	141.0	---
MW-33	Shallow	MW-33-120517	12/5/2017	Farallon	7.86	---	---	---	---	---	---	---	5.88	12.7	0.158	148.8	---
MW-34	Shallow	MW-34-120617	12/6/2017	Farallon	7.42	---	---	---	---	---	---	---	5.85	12.6	0.127	132.9	---
SVE-3	Shallow	SVE-3-120517	12/5/2017	Farallon	8.87	---	---	---	---	---	---	---	7.00	13.8	0.133	59.8	---
SVE-5	Shallow	SVE-5-120817	12/8/2017	Farallon	6.68	---	---	---	---	---	---	---	6.37	14.5	0.312	89.5	---
SVE-6	Shallow	SVE-6-120817	12/8/2017	Farallon	2.54	---	---	---	---	---	---	---	6.24	11.6	0.367	72.9	---
SVE-12	Shallow	SVE-12-120817	12/8/2017	Farallon	7.75	< 0.020	0.81	21	0.0	< 0.50	< 0.50	< 0.50	6.79	12.6	0.228	158.8	1.7
Deep Water-Bearing Zone																	
MW-2	Deep	MW-2-120617	12/6/2017	Farallon	3.40	0.027	0.52	16	---	< 0.50	< 0.50	< 0.50	6.65	13.9	0.310	190.6	1.1
MW-9B	Deep	MW-9B-120717	12/7/2017	Farallon	0.45	---	---	---	---	---	---	---	13.01	9.0	2.906	-248.2	---
MW-10B	Deep	MW-10B-120717	12/7/2017	Farallon	1.21	---	---	---	---	---	---	---	6.32	11.3	0.337	79.5	---
MW-11B	Deep	MW-11B-120517	12/5/2017	Farallon	8.18	---	---	---	---	---	---	---	6.84	11.3	0.165	107.3	---
MW-12B	Deep	MW-12B-120617	12/6/2017	Farallon	1.10	---	---	---	---	---	---	---	6.91	12.5	0.255	157.1	---
MW-14	Deep	MW-14-120817	12/8/2017	Farallon	2.29	0.056	0.23	18	0.0	< 0.50	< 0.50	< 0.50	6.84	12.3	0.351	73.2	1.1
MW-14C	Deep	MW-14C-120817	12/8/2017	Farallon	0.44	< 0.020	< 0.050	120	0.0	4.9	< 0.50	< 0.50	7.52	11.2	0.534	39.7	1.7
MW-15	Deep	MW-15-120617	12/6/2017	Farallon	0.18	---	---	---	---	---	---	---	6.95	11.4	0.281	58.6	---
MW-16	Deep	MW-16-120617	12/6/2017	Farallon	0.42	< 0.020	0.088	74	0.0	< 0.50	< 0.50	< 0.50	6.46	13.8	0.701	67.6	6.2
MW-18	Deep	MW-18-120617	12/6/2017	Farallon	0.70	0.076	< 0.050	40	0.0	0.90	< 0.50	< 0.50	7.61	13.2	0.420	47.6	2.7
MW-19	Deep	MW-19-120517	12/5/2017	Farallon	0.27	< 0.020	0.60	52	0.0	1.7	< 0.50	< 0.50	7.28	14.0	0.472	4.5	2.1

Table 11  
Natural Attenuation and Water Quality Parameters  
Lakeview Facility  
Lakewood, Washington  
Farallon PN: 188-002

Sample Location	Water-Bearing Zone	Sample Identification	Sample Date	Sampled By	Electron Receptors				Metals	Metabolic Byproducts			Water Quality Parameters <sup>1</sup>				Available Organic Carbon
					Dissolved Oxygen <sup>1</sup> (mg/l)	Nitrite <sup>2</sup> (mg/l)	Nitrate <sup>2</sup> (mg/l)	Sulfate <sup>3</sup> (mg/l)	Ferrous Iron <sup>4</sup> (mg/l)	Methane <sup>5</sup> (µg/l)	Ethane <sup>5</sup> (µg/l)	Ethene <sup>5</sup> (µg/l)	pH	Temperature (°Celsius)	Conductivity (mS/cm)	ORP (mV)	Total Organic Carbon <sup>6</sup> (mg/l)
MW-20	Deep	MW-20-120717	12/7/2017	Farallon	0.44	0.074	0.10	10	0.0	0.58	< 0.50	< 0.50	6.59	12.3	0.300	69.0	1.3
MW-21	Deep	MW-21-120717	12/7/2017	Farallon	0.14	---	---	---	---	---	---	---	7.70	11.7	0.212	94.7	---
MW-22	Deep	---	12/7/2017	Farallon	Well Not Sampled - Inaccessible due to asphalt over well												
MW-23	Deep	MW-23-120717	12/7/2017	Farallon	0.32	< 0.020	< 0.050	38	0.0	79	< 5.0	< 5.0	6.44	11.6	0.600	71.7	3.6
MW-25	Deep	MW-25-120617	12/6/2017	Farallon	0.28	< 0.020	< 0.050	21	0.0	440	< 50	< 50	6.19	12.3	0.397	103.3	1.9
MW-28	Deep	MW-28-120717	12/7/2017	Farallon	0.14	0.029	< 0.050	23	0.0	630	< 75	< 75	6.46	10.5	0.425	-53.4	3.3
MW-29	Deep	MW-29-120717	12/7/2017	Farallon	1.20	---	---	---	---	---	---	---	6.55	11.1	0.335	80.8	---
AS-1	Deep	AS-1-120817	12/8/2017	Farallon	2.02	---	---	---	---	---	---	---	7.22	12.7	0.656	-10.1	---
AS-4	Deep	---	12/7/2017	Farallon	Well Not Sampled - Unable to Locate												
SVE-1	Deep	SVE-1-120717	12/7/2017	Farallon	6.75	< 0.020	0.85	20	---	< 0.50	< 0.50	< 0.50	6.55	13.5	0.278	83.3	1.2
SVE-2	Deep	SVE-2-120517	12/5/2017	Farallon	7.38	---	---	---	---	---	---	---	6.84	13.3	0.294	160.0	---
SVE-7	Deep	---	12/7/2017	Farallon	Well Not Sampled - Inaccessible due to overlying gravel stockpile												
SVE-9	Deep	SVE-9-120717	12/7/2017	Farallon	6.97	---	---	---	---	---	---	---	6.46	13.4	0.368	88.1	---
SVE-10	Deep	---	12/7/2017	Farallon	Well Not Sampled - Unable to Locate												
SVE-11	Deep	---	12/7/2017	Farallon	Well Not Sampled - Inaccessible due to overlying asphalt stockpile												
Regional Water-Bearing Zone																	
Industrial Well	Regional	---	12/7/2017	Farallon	Water Quality Parameters not Measured												

NOTES:  
< denotes analyte not detected at or exceeding the reporting limit listed.  
— denotes sample not analyzed or measured.  
<sup>1</sup>Collected using a multimeter with flow-through cell.  
<sup>2</sup>Analyzed by U.S. Environmental Protection Agency (EPA) Method 353.2.  
<sup>3</sup>Analyzed by ASTM D516-07.  
<sup>4</sup>Measured in the field using conventional chemistry parameters by EPA/American Public Health Association Methods.  
<sup>5</sup>Analyzed by Gas Chromatograph/Flame Ionization Detector Headspace Method RSK 175.  
<sup>6</sup>Analyzed by Standard Method 5310B.

electron receptors = compounds that gain electrons and are sources of energy during biodegradation  
° = degrees  
Farallon = Farallon Consulting, L.L.C.  
metabolic byproducts = compounds that result from biodegradation processes  
mg/l = milligrams per liter; equivalent to parts per million  
mS/cm = milliSiemens per centimeter specific conductance units  
mV = millivolt units for measurement of oxidation-reduction potential (ORP)  
ORP = oxidation-reduction potential  
µg/l = micrograms per liter

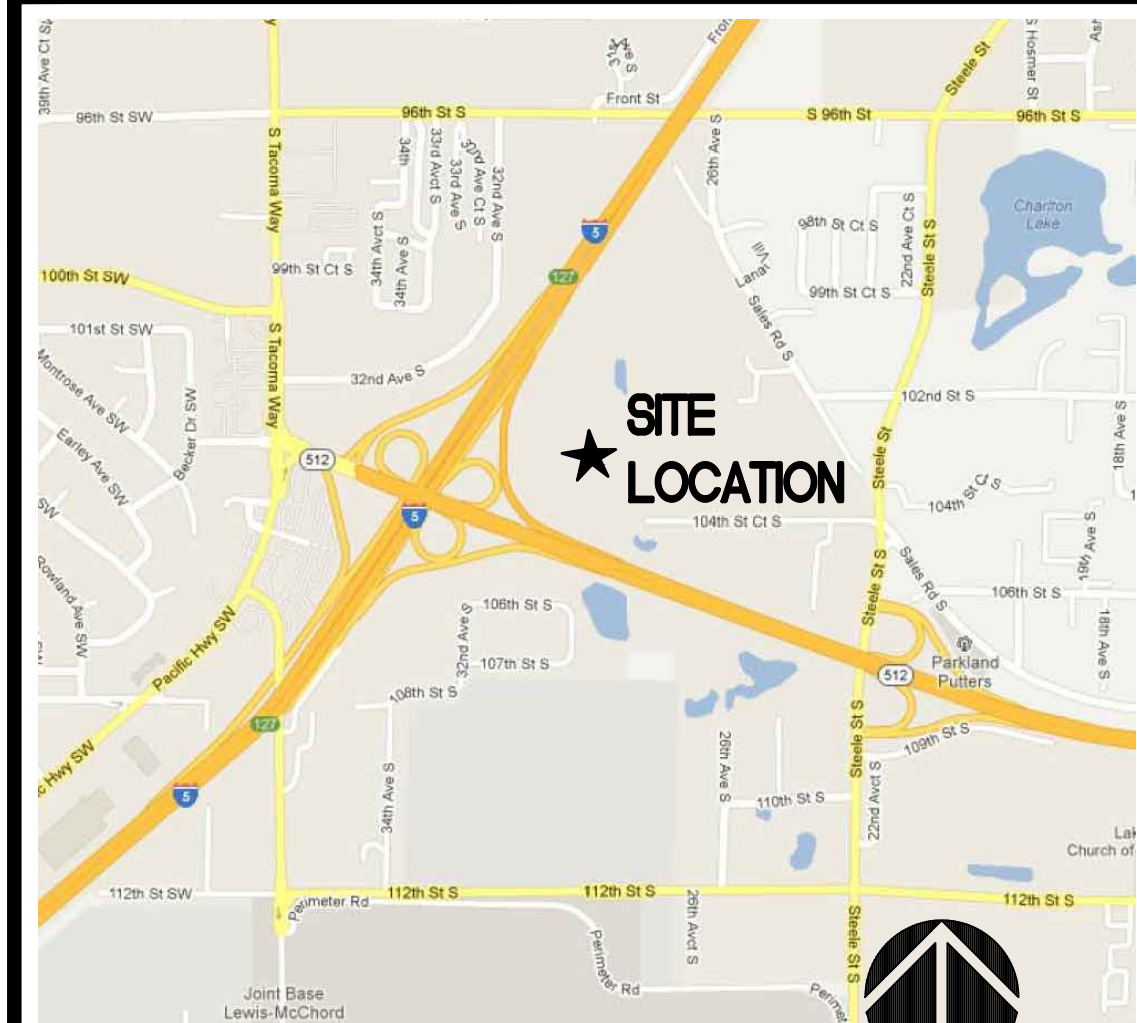
**APPENDIX A**  
**FINAL RECLAMATION PLAN**

**ADDENDUM TO FOCUSED FEASIBILITY STUDY/  
DISPROPORTIONATE COST ANALYSIS REPORT**

Lakeview Facility  
2800 104<sup>th</sup> Street Court South  
Lakewood, Washington

Farallon PN: 188-002





VICINITY MAP  
SCALE: N.T.S.



A PORTION OF SECTION 6, TOWNSHIP 19 NORTH, RANGE 03 EAST, W.M.  
THE CITY OF LAKEWOOD, WASHINGTON

LEGEND

EXISTING FEATURES

- CATCH BASIN
- POWER POLE
- LIGHT POLE
- SIGN
- TREE
- MONUMENT
- MONITORING POINT
- SD STORM LINE
- PROPERTY BOUNDARY

PROPOSED FEATURES

- 100 CONTOUR

DNR PERMIT #70-010420

GENERAL NOTES

- HORIZONTAL DATUM FOR THIS PROJECT IS NAD 83/91 WASHINGTON STATE COORDINATE SYSTEM, SOUTH ZONE.
- VERTICAL DATUM FOR THIS PROJECT IS NGVD 29 BENCHMARKS USED:  
NO. 52-9 PER PIERCE COUNTY PUBLIC WORKS ELEVATION = 293.56  
NO. 17-1 PER PIERCE COUNTY PUBLIC WORKS ELEVATION = 304.14
- THE TOPOGRAPHIC MAPPING SHOWN ON THIS PLAN WAS PREPARED BY DEGROSS AERIAL MAPPING INC. FROM AERIAL PHOTOGRAPHY TAKEN ON JANUARY 10, 2012. IT WAS TRANSLATED TO NAD 83/91 DATUM IN FEBRUARY 2012, BASED ON FIELD MEASUREMENTS PERFORMED BY SITTS & HILL ENGINEERS IN FEBRUARY 2012. THIS TOPOGRAPHY HAS A RELATIVE HORIZONTAL ACCURACY OF +/- 0.6' WHICH IS WITHIN ACCEPTABLE TOLERANCE FOR 100 SCALE MAPPING.
- PLEASE SEE TRANSLATION NOTE FOR MORE SPECIFIC INFORMATION PROVIDED BY DEGROSS AERIAL MAPPING, INC.
- BOUNDARY INFORMATION SHOWN IS AS SHOWN ON A BOUNDARY LINE ADJUSTMENT DATED 03/11/1996 RECORDED UNDER AFN. 9611130445.
- STORM WATER FACILITIES FOR FINAL RECLAMATION WILL BE DESIGNED FOR THE 25-YEAR, 24-HOUR DESIGN RAINFALL EVENT.

TRANSLATION INFORMATION NOTES

- PROVIDED BY DEGROSS AERIAL MAPPING, INC. - FEBRUARY 2012
- THIS MAP WAS TRANSLATED TO NAD 83-91 USING POINTS 5001, 5003, 5004 PROVIDED BY SITTS & HILL ENGINEERS. THE TRANSLATION OF THE ORIGINAL 1998 POINTS FIT TO WITHIN 0.6' IN NORTHINGS AND EASTINGS IN THE FINAL ADJUSTMENT ON THESE SAME THREE POINTS.
- THE VERTICAL DATUM IS NGVD 29 AS PROVIDED BY SITTS & HILL ENGINEERS. IT IS BASED ON POINT NO. 5003 WHICH WAS PK NAIL HV 781 THAT WAS USED IN THE ORIGINAL 1998 SURVEY, AND THE ONLY ORIGINAL VERTICAL TIE PROVIDED. THIS RESULTED IN A SHIFT OF 179.023 FEET IN ELEVATION. IT IS NOTED THAT TWO OLD POINTS NEAR POINTS 5001 AND 5005 AGREE WITH THIS SHIFT WITHIN 0.5'.

TAX PARCEL SUMMARY

PARCEL	AREA (AC.)
031906-1135	16.1
031906-1142	6.2
031906-2075	19.7
031906-2076	10.7
TOTAL:	52.7

FINAL RECLAMATION PLAN

SCALE: 1"=100'



HORIZONTAL SCALE: 1"=100'  
100 0 100 200

DESIGNED  
W.J.L.

DRAWN  
K.L.K.

CHECKED  
W.J.L.

DATE  
05/02/2013

SCALE  
AS NOTED

SEAL  
KATIE A. HARRIS  
REGISTERED PROFESSIONAL ENGINEER  
WASHINGTON STATE  
00794  
16/15/2013

PREPARED BY  
**SITTS & HILL  
ENGINEERS, INC.**  
CIVIL - STRUCTURAL - SURVEYING  
4815 CENTER STREET | TACOMA, WA 98409  
PHONE: (253) 474-9449 | FAX: (253) 474-0153  
http://www.sitts-hill-engineers.com/

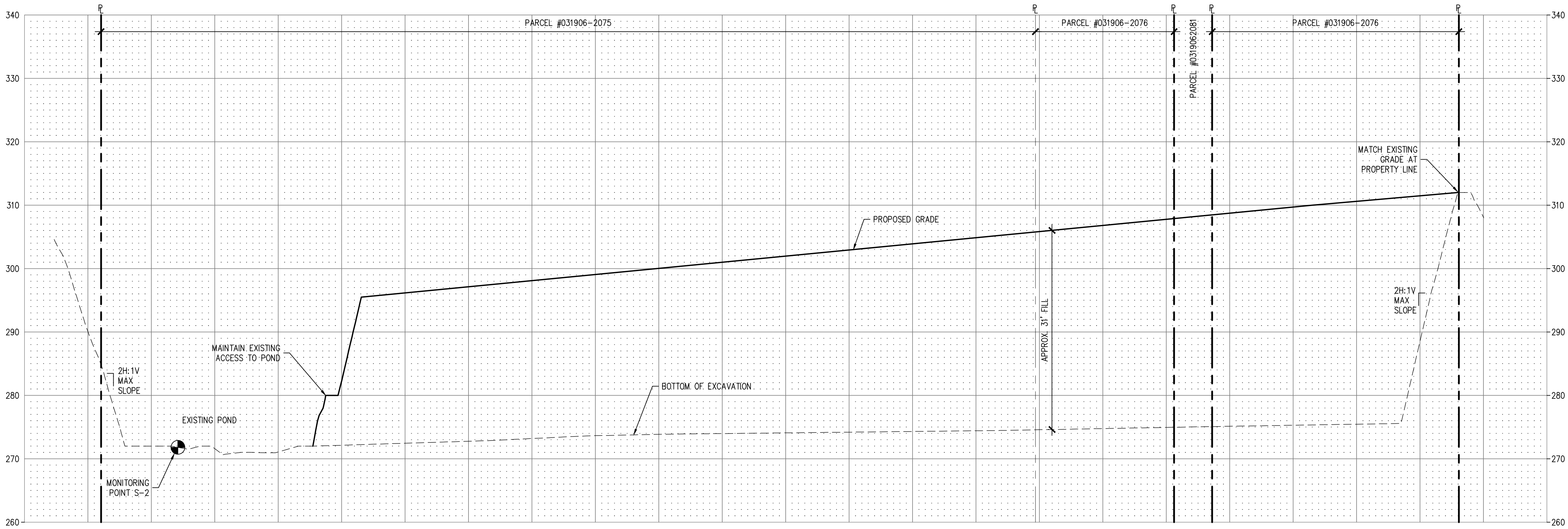
PROJECT  
MILES SAND & GRAVEL COMPANY  
LAKEVIEW SITE  
LAKEWOOD, WASHINGTON

SHEET TITLE  
FINAL RECLAMATION PLAN

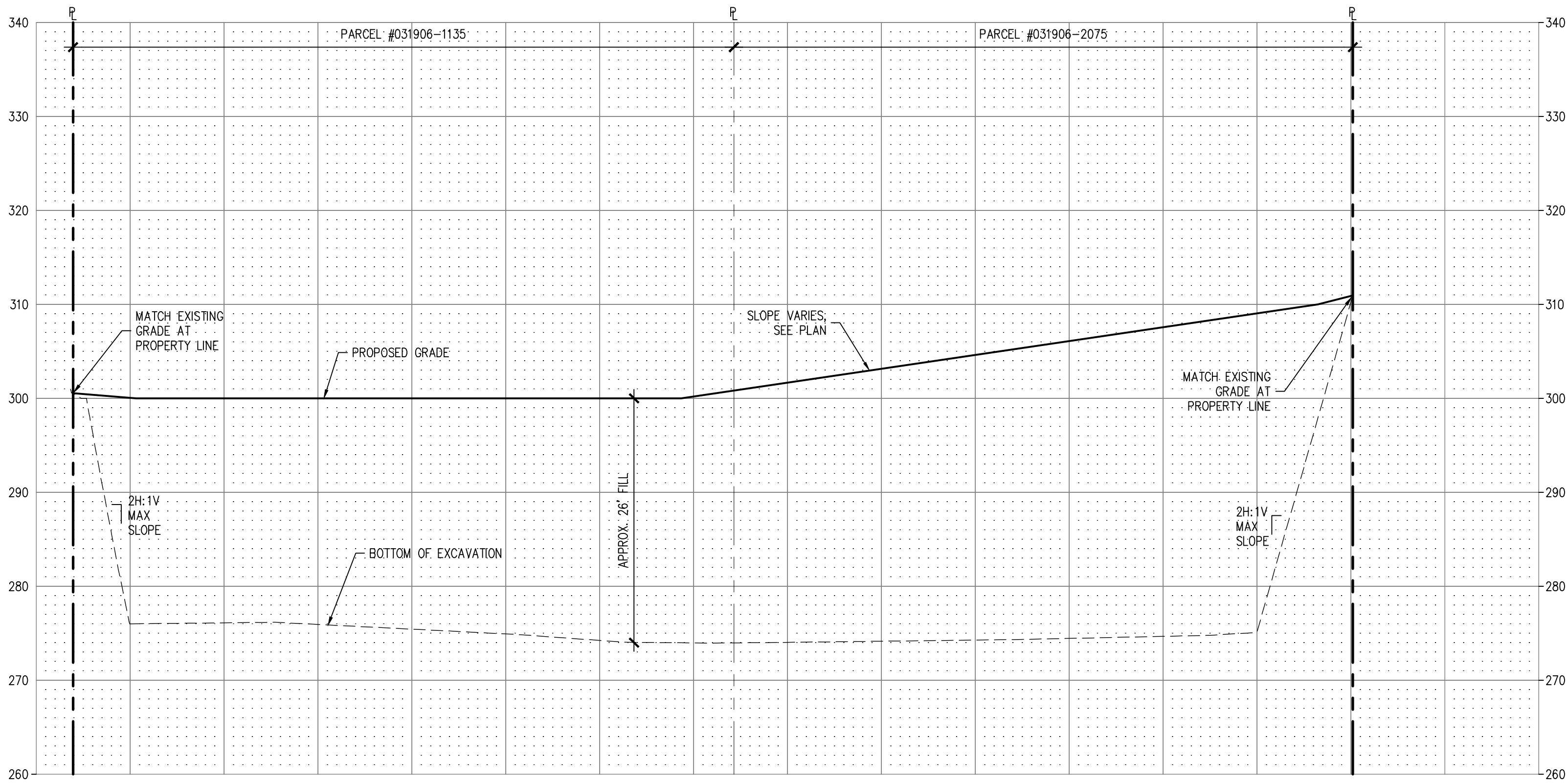
SHEET NO.  
C1.0

PROJECT NO.  
15,244

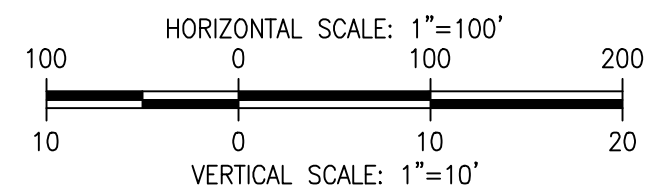




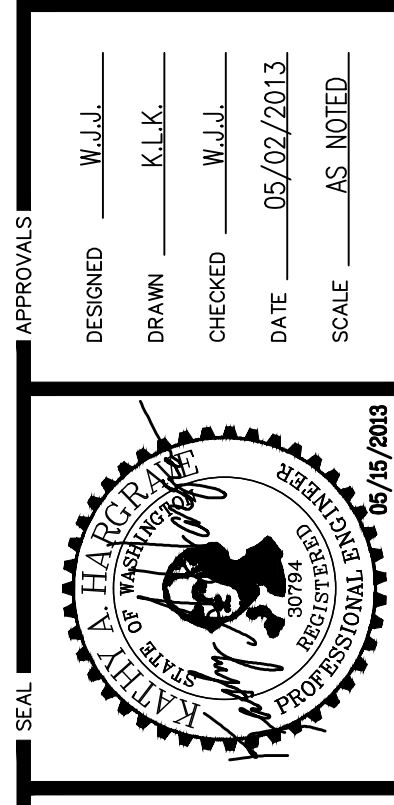
1 NORTH/SOUTH SITE SECTION  
SCALE: HORZ: 1"=100' VERT: 1"=10'



2 EAST/WEST SITE SECTION  
SCALE: HORZ: 1"=100' VERT: 1"=10'



APPROVALS		REVISIONS	
DESIGNED	W.J.J.		
DRAWN	K.L.K.		
CHECKED	W.J.J.		
DATE	05/02/2013		
SCALE	AS NOTED		



**SITTS & HILL ENGINEERS, INC.**  
CIVIL ■ STRUCTURAL ■ SURVEYING  
4815 CENTER STREET | TACOMA, WA 98409  
PHONE: (253) 474-9449 | FAX: (253) 474-0153  
http://www.sitts-hill-engineers.com/

**MILES SAND & GRAVEL COMPANY**  
400 VALLEY AVE NE  
PUYALLUP, WASHINGTON 98372  
CONTACT: MIKE SCHUH  
(253) 833-3705

**LAKEVIEW SITE**  
LAKEWOOD, WASHINGTON  
RECLAMATION SECTIONS  
SHEET NO. C1.1

PROJECT NO. 15,244

**APPENDIX B**  
**BORING AND MONITORING WELL CONSTRUCTION LOGS**














ADDENDUM TO FOCUSED FEASIBILITY STUDY/  
DISPROPORTIONATE COST ANALYSIS REPORT

Lakeview Facility  
2800 104<sup>th</sup> Street Court South  
Lakewood, Washington

Farallon PN: 188-002

# USCS Classification and Graphic Legend

Major Divisions	USCS Graphic Symbol	USCS Letter Symbol	Lithologic Description
-----------------	---------------------	--------------------	------------------------

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
				GP	Poorly graded GRAVEL, GRAVEL with sand
		GRAVEL WITH FINES (Appreciable amount of fines)		GP-GM	Poorly graded GRAVEL - GRAVEL with sand and silt
				GM	Silty GRAVEL
				GC	Clayey 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





## Log of Boring: B-10

Page 1 of 1



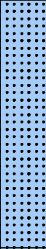
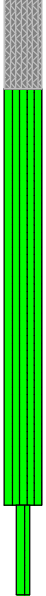
**Client:** Mr. Jeff Woodworth  
**Project:** Woodworth Lakeview Facility  
**Location:** Lakewood, Washington

**Farallon PN:** 188-002

**Logged By:** Daniel Aguilar

**Date/Time Started:** 11/13/17 0815  
**Date/Time Completed:** 11/13/17 0945  
**Equipment:** Vac truck  
**Drilling Company:** Holocene  
**Drilling Foreman:** Jerrod  
**Drilling Method:** Airknife

**Sampler Type:** Hand auger  
**Drive Hammer (lbs.):** NA  
**Depth of Water ATD (ft bgs):** NE  
**Total Boring Depth (ft bgs):** 5.3  
**Total Well Depth (ft bgs):** NA

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		0.0-0.4': Asphalt. Airknife to 4.5' and sample at 5' with hand auger.	AC							Asphalt
		0.4-3.1': Well-graded SAND silt and gravel (75% sand, 15% gravel, 10% silt), fine to coarse sand and gravel, dark brown to black, moist, no odor, no sheen.	SW-SM							
		3.1-5.3': Well-graded SAND with gravel (90% sand, 10% gravel), fine to coarse sand, coarse gravel, brown, moist, no odor, no sheen.	SW							
5							0.0	B-10-5.0-111317	X	
10										

**Monument Type:** NA

**Casing Diameter (inches):** NA

**Screen Slot Size (inches):** NA

**Screened Interval (ft bgs):** NA

### Well Construction Information

**Filter Pack:** NA

**Surface Seal:** Asphalt

**Annular Seal:** NA

**Boring Abandonment:** Bentonite

**Ground Surface Elevation (ft):** NA

**Top of Casing Elevation (ft):** NA

**Surveyed Location:** X: NA

Y: NA



## Log of Boring: B-11

Page 1 of 1






**Client:** Mr. Jeff Woodworth  
**Project:** Woodworth Lakeview Facility  
**Location:** Lakewood, Washington

**Farallon PN:** 188-002

**Logged By:** Daniel Aguilar

**Date/Time Started:** 11/13/17 0945  
**Date/Time Completed:** 11/16/17 1020  
**Equipment:** BK 81  
**Drilling Company:** Holocene  
**Drilling Foreman:** Jerrod  
**Drilling Method:** HSA

**Sampler Type:** 1.5' SPT  
**Drive Hammer (lbs.):** 140  
**Depth of Water ATD (ft bgs):** 10.0  
**Total Boring Depth (ft bgs):** 10.9  
**Total Well Depth (ft bgs):** NA

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		0.0-0.5': Asphalt. Airknife to clear for utilities.	AC							Asphalt
		0.5-3.4': Silty SAND with gravel (60% sand, 20% gravel, 20% silt), fine to medium sand, fine and coarse gravel, brown, very dense, moist, no odor, no sheen. Refusal with airknife at 3.4'.	SM							
							0.0	B-11-2.5-111317		
5		5.0-5.5': Silty SAND with gravel (60% sand, 20% gravel, 20% silt), fine to coarse sand, fine and coarse gravel, brown, very dense, moist, no odor, no sheen.	SM		55	31/50 for 5"	0.0	B-11-5.0-111617	X	Bentonite
		7.5-8.3': Silty SAND with gravel (60% sand, 20% gravel, 20% silt), fine to coarse sand, fine and coarse gravel, brown, very dense, moist, no odor, no sheen.	SM		100	33/50 for 4"	0.0	B-11-7.5-111617		
10		10.0-10.8': Silty SAND with gravel (60% sand, 20% gravel, 20% silt), fine to coarse sand, fine and coarse gravel, brown, very dense, wet, no odor, no sheen.	SM		100	20/50 for 5"	0.0	B-11-10.0-111617		Water level

**Monument Type:** NA

**Casing Diameter (inches):** NA

**Screen Slot Size (inches):** NA

**Screened Interval (ft bgs):** NA

### Well Construction Information

**Filter Pack:** NA

**Surface Seal:** Asphalt

**Annular Seal:** NA

**Boring Abandonment:** Bentonite

**Ground Surface Elevation (ft):** NA

**Top of Casing Elevation (ft):** NA

**Surveyed Location:** X: NA

Y: NA



Log of Boring: B-12

Page 1 of 1

Client: Mr. Jeff Woodworth  
Project: Woodworth Lakeview Facility  
Location: Lakewood, Washington

Farallon PN: 188-002

Logged By: Daniel Aguilar

Date/Time Started: 11/13/17 1120  
Date/Time Completed: 11/16/17 1150  
Equipment: BK 81  
Drilling Company: Holocene  
Drilling Foreman: Jerrod  
Drilling Method: HSA  
Sampler Type: 1.5' D&M  
Drive Hammer (lbs.): 140  
Depth of Water ATD (ft bgs): 10.0  
Total Boring Depth (ft bgs): 11.3  
Total Well Depth (ft bgs): NA

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		0.0-0.3': Asphalt. Airknife to clear for utilities.	AC							Asphalt
		0.3-3.4': Well-graded SAND with silt and gravel (75% sand, 15% gravel 10% silt), fine to coarse sand and gravel, brown, moist, no odor, no sheen.	SW-SM							
		3.4-4.3': Well-graded SAND with silt and gravel (75% sand, 15% gravel 10% silt), fine to coarse sand and gravel, brown, moist, no odor, no sheen. Asphalt chunks and large cobbles present.	SW-SM							
5										Bentonite
		9.0-9.8': Well-graded GRAVEL with sand (80% gravel, 20% sand), fine to coarse sand and gravel, dark brown to black, very dense, moist, no odor, no sheen.	GW		100	19/50 for 3"	0.0	B-12-9.0-111617	X	
10		9.8-11.3': No recovery, rock in shoe. Sampler wet.			0	11/6/17				Water level

Monument Type: NA

Casing Diameter (inches): NA

Screen Slot Size (inches): NA

Screened Interval (ft bgs): NA

Well Construction Information

Filter Pack: NA

Surface Seal: NA

Annular Seal: NA

Boring Abandonment: Bentonite

Ground Surface Elevation (ft): NA

Top of Casing Elevation (ft): NA

Surveyed Location: X: NA

Y: NA



## Log of Boring: B-13

Page 1 of 1

**Client:** Mr. Jeff Woodworth  
**Project:** Woodworth Lakeview Facility  
**Location:** Lakewood, Washington

**Farallon PN:** 188-002

**Logged By:** Daniel Aguilar

**Date/Time Started:** 11/13/17 1310  
**Date/Time Completed:** 11/16/17 0910  
**Equipment:** BK 81  
**Drilling Company:** Holocene  
**Drilling Foreman:** Jerrod  
**Drilling Method:** HSA

**Sampler Type:** 1.5' SPT  
**Drive Hammer (lbs.):** 140  
**Depth of Water ATD (ft bgs):** 12.5  
**Total Boring Depth (ft bgs):** 20.5  
**Total Well Depth (ft bgs):** NA

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		0.0-0.5': Asphalt. Airknife to clear for utilities.	AC							Asphalt
		0.5-5.0': Well-graded SAND with gravel (90% sand, 10% gravel), fine to coarse sand and gravel, brown, moist, no odor, no sheen.	SW-SM				0.0	B-13-2.5-111317	X	
5		5.0-6.0': Well-graded SAND with gravel (60% sand, 40% gravel), fine to coarse sand and gravel, brown, very dense, moist, no odor, no sheen.	SW-SM		67	8/20/38	0.0	B-13-5.0-111617		
		7.5-8.1': Silty SAND with gravel (60% sand, 20% silt, 20% gravel), fine to medium sand, coarse gravel, dark brown, very dense, moist, no odor, no sheen. Organics present.	SM		60	20/50 for 6"	0.0	B-13-7.5-111617		
10		10.0-10.7': Silty SAND (70% sand, 20% silt, 10% gravel), fine to medium sand, fine to coarse gravel, brown, very dense, moist, no odor, no sheen.	SM		70	38/50 for 6"	0.0	B-13-10.0-111617	X	Bentonite
		12.5-13.1': No recovery. Rock in shoe. Sampler wet.	NR		0	NR				Water level
15		15.0-15.8': Well-graded GRAVEL with sand (80% gravel, 15% sand, 5% silt), fine to coarse sand and gravel, brown, very dense, wet, no odor, no sheen.	GW		87	38/50 for 5"	0.1	B-13-15.0-111617		
		17.5-18.0': Well-graded GRAVEL with sand (80% gravel, 15% sand, 5% silt), fine to coarse sand and gravel, brown, very dense, wet, no odor, no sheen.	GW		60	28/50 for 4"	0.0	B-13-17.5-111617		
20		20.0-20.3': Well-graded GRAVEL with sand (80% gravel, 15% sand, 5% silt), fine to coarse sand and gravel, brown, very dense, wet, no odor, no sheen.	GW		60	50 for 6"	0.0	B-13-20.0-111617		

**Monument Type:** NA

**Casing Diameter (inches):** NA

**Screen Slot Size (inches):** NA

**Screened Interval (ft bgs):** NA

### Well Construction Information

**Filter Pack:** NA

**Surface Seal:** Asphalt

**Annular Seal:** NA

**Boring Abandonment:** Bentonite

**Ground Surface Elevation (ft):** NA

**Top of Casing Elevation (ft):** NA

**Surveyed Location:** X: NA

Y: NA



# Log of Boring: B-14

Page 1 of 1

**Client:** Mr. Jeff Woodworth  
**Project:** Woodworth Lakeview Facility  
**Location:** Lakewood, Washington

**Farallon PN:** 188-002

**Logged By:** Daniel Aguilar

**Date/Time Started:** 11/13/17 1410  
**Date/Time Completed:** 11/14/17 1415  
**Equipment:** LAR  
**Drilling Company:** Holocene  
**Drilling Foreman:** Rudy Ortega  
**Drilling Method:** HSA

**Sampler Type:** 1.5' SPT  
**Drive Hammer (lbs.):** 140  
**Depth of Water ATD (ft bgs):** 17.5  
**Total Boring Depth (ft bgs):** 20.5  
**Total Well Depth (ft bgs):** NA

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		0.0-0.2': Gravel walkway. Airknife to clear for utilities.	RK							Gravel
		0.2-0.6': Asphalt.	AC							Concrete
		0.6-2.0': Well-graded GRAVEL with sand (60% gravel, 40% sand), fine to coarse sand and gravel, brown, moist, no odor.	GW				0.0	B-14-2.5-111417	X	
		2.0-5.0': Well-graded GRAVEL with sand (80% gravel, 20% sand), fine to coarse sand and gravel, brown, moist, no odor, no sheen.	GW							
5		5.0-5.5': Silty SAND with gravel (60% sand, 20% silt, 20% gravel), fine to medium sand, coarse gravel, brown, very dense, moist, no odor, no sheen.	SM		50	28/50 for 6"	0.0	B-14-5.0-111417		
		7.5-7.8': Silty SAND with gravel (60% sand, 20% silt, 20% gravel), fine to medium sand, coarse gravel, brown, very dense, moist, no odor, no sheen.	SM		100	50 for 3"	0.0	B-14-7.5-111417		
10		10.0-10.5': Silty SAND with gravel (60% sand, 20% silt, 20% gravel), fine to medium sand, coarse gravel, brown, very dense, moist, no odor, no sheen.	SM		100	50 for 6"	0.0	B-14-10.0-111417	X	Bentonite
		12.5-12.8': Silty SAND (50% sand, 40% silt, 10% gravel), fine sand, fine and coarse gravel, brown, very dense, moist, no odor, no sheen.	SM		72	50 for 5"	0.0	B-14-12.5-111417		Water level
		12.8-12.9': No recovery.	NR							
15		15.0-15.5': Silty SAND (50% sand, 40% silt, 10% gravel), fine sand, fine and coarse gravel, brown, very dense, moist, no odor, no sheen.	SM		100	50 for 6"	0.0	B-14-15.0-111417		
		17.5-18.5': Well-graded GRAVEL with silt and sand (60% gravel, 30% sand, 10% silt), fine to coarse sand and gravel, brown, very dense, wet, no odor, no sheen.	GW-GM		100	18/50 for 6"	0.0	B-14-17.5-111417	X	
20		20.0-20.1': Well-graded GRAVEL with silt and sand (60% gravel, 30% sand, 10% silt), fine to coarse sand and gravel, brown, very dense, wet, no odor, no sheen. Rock in shoe, not enough material to sample.	GW-GM		0	50 for 6"	0.0	SS at 20.0'		

**Monument Type:** NA

**Casing Diameter (inches):** NA

**Screen Slot Size (inches):** NA

**Screened Interval (ft bgs):** NA

## Well Construction Information

**Filter Pack:** NA

**Surface Seal:** Concrete

**Annular Seal:** NA

**Boring Abandonment:** Bentonite

**Ground Surface Elevation (ft):** NA

**Top of Casing Elevation (ft):** NA

**Surveyed Location:** X: NA

Y: NA



# Log of Boring: B-15

Page 1 of 1

**Client:** Mr. Jeff Woodworth  
**Project:** Woodworth Lakeview Facility  
**Location:** Lakewood, Washington

**Farallon PN:** 188-002

**Logged By:** Daniel Aguilar

**Date/Time Started:** 11/13/17 1255  
**Date/Time Completed:** 11/15/17 0950  
**Equipment:** BK 81  
**Drilling Company:** Holocene  
**Drilling Foreman:** Jerrod  
**Drilling Method:** HSA

**Sampler Type:** 1.5' SPT  
**Drive Hammer (lbs.):** 140  
**Depth of Water ATD (ft bgs):** 12.5  
**Total Boring Depth (ft bgs):** 20.4  
**Total Well Depth (ft bgs):** NA

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		0.0-0.5': Asphalt. Airknife to clear for utilities.	AC							Asphalt
		0.5-2.0': Well-graded GRAVEL with sand (80% gravel, 20% sand), fine to coarse sand and gravel, brown, moist, no odor.	GW							
		2.0-3.0': Poorly graded SAND with gravel (60% sand, 35% gravel, 5% silt), fine to medium sand, fine and coarse gravel, brown, moist, no odor. Refusal with airknife at 3.0'.	SP				0.5	B-15-2.5-111517	X	
5		5.0-5.6': Silty SAND with gravel (50% sand, 30% gravel, 20% silt), fine to medium sand, coarse gravel, brown, very dense, moist, no odor, no sheen.	SM		40	40/32/36	0.0	B-15-5.0-111517		
		5.6-6.5': No recovery.	NR							
		7.5-7.8': Silty SAND with gravel 50% sand, 30% gravel, 20% silt), fine to medium sand, coarse gravel, brown, very dense, moist, no odor, no sheen.	SM		45	36/50 for 2"	0.0	B-15-7.5-111517		
		7.8-8.1': No recovery.	NR							
10		10.0-10.4': Silty SAND with gravel (60% sand, 25% silt, 15% gravel) fine sand, fine and coarse gravel, brown, very dense, moist, no odor, no sheen.	SM		100	50 for 5"	0.0	B-15-10.0-111517	X	Bentonite
		12.5-13.1': Silty SAND with gravel (50% sand, 35% silt, 15% gravel), fine sand, fine gravel, brown, very dense, slightly wet, no odor, no sheen.	SM		72	37/50 for 4"	0.0	B-15-12.5-111517		Water level
		13.1-13.3': No recovery.	NR							
15		15.0-15.4': No recovery, rock in shoe.	NR		0	50 for 3"				
		17.5-18.2': Sandy SILT (60% silt, 30% sand, 10% gravel), fine sand, fine gravel, light brown, very dense, wet, no odor, no sheen.	ML		84	17/50 for 4"	0.0	B-15-17.5-111517	X	
		18.2-18.3': No recovery.	NR							
20		20.0-20.4': No recovery. Sampler wet.	NR		0	50 for 5"				

**Monument Type:** NA

**Casing Diameter (inches):** NA

**Screen Slot Size (inches):** NA

**Screened Interval (ft bgs):** NA

## Well Construction Information

**Filter Pack:** NA

**Surface Seal:** Asphalt

**Annular Seal:** NA

**Boring Abandonment:** Bentonite

**Ground Surface Elevation (ft):** NA

**Top of Casing Elevation (ft):** NA

**Surveyed Location:** X: NA

Y: NA



# Log of Boring: B-16

Page 1 of 1

**Client:** Mr. Jeff Woodworth  
**Project:** Woodworth Lakeview Facility  
**Location:** Lakewood, Washington

**Farallon PN:** 188-002

**Logged By:** Daniel Aguilar

**Date/Time Started:** 11/14/17 0940  
**Date/Time Completed:** 11/15/17 1126  
**Equipment:** BK 81  
**Drilling Company:** Holocene  
**Drilling Foreman:** Jerrod  
**Drilling Method:** HSA

**Sampler Type:** 1.5' SPT  
**Drive Hammer (lbs.):** 140  
**Depth of Water ATD (ft bgs):** 20.0  
**Total Boring Depth (ft bgs):** 20.9  
**Total Well Depth (ft bgs):** NA

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		0.0-0.5': Asphalt. Airknife to clear for utilities.	AC							Asphalt
		0.5-1.3': Poorly graded GRAVEL with sand (70% gravel, 30% sand), fine to coarse sand, fine gravel, brown, moist, no odor.	GP							
		1.3-2.9': Poorly graded GRAVEL with sand (85% gravel, 15% sand), medium to coarse sand, coarse gravel, brown, moist, no odor.	GP							
		2.9-3.3': Well-graded GRAVEL with sand (60% gravel, 40% sand), fine to coarse sand and gravel, brown, moist, no odor. Chunks of asphalt and large cobbles cause refusal with airknife at 3.4'.	GW			0.0		B-16-3.0-111417	X	
5		5.0-6.5': No recovery. Wood in cuttings.	NR		0	NA				
		7.5-9.0': Silty SAND with gravel (50% sand, 25% silt, 25% gravel), fine to coarse sand and gravel, light brown, very dense, moist, no odor, no sheen.	SM		100	17/35/37	0.0	B-16-7.5-111517		
10		10.0-11.3': Well-graded SAND with gravel (60% sand, 30% gravel, 5% silt), fine to coarse sand and gravel, brown, very dense, moist, no odor, no sheen.	SW		87	20/49/47	0.0	B-16-10.0-111517	X	Bentonite
		11.3-11.5': No recovery.	NR		0	50 for 4"				
		12.5-12.8': No recovery.	NR		0	50 for 2"				
15		15.0-15.2': Silty SAND with gravel (60% sand, 20% silt, 20% gravel), fine sand and gravel, gray, very dense, moist, no odor, no sheen.	SM		100	50 for 2"	0.0	B-16-15.0-111517		
		17.5-18.7': Silty GRAVEL with sand (50% gravel, 30% silt, 20% sand), fine sand, fine and coarse gravel, brown, very dense, moist, no odor, no sheen.	GM		93	12/37/50 for 5"	0.0	B-16-17.5-111517	X	
20		18.7-18.9': No recovery.	NR							
		20.0-20.9': Silty GRAVEL with sand (50% gravel, 30% silt, 20% sand), fine sand, fine and coarse gravel, brown, very dense, slightly wet, no odor, no sheen.	GM		100	27/50 for 5"	0.0	B-16-20.0-111517		
										Water level

**Monument Type:** NA

**Casing Diameter (inches):** NA

**Screen Slot Size (inches):** NA

**Screened Interval (ft bgs):** NA

## Well Construction Information

**Filter Pack:** NA

**Surface Seal:** NA

**Annular Seal:** NA

**Boring Abandonment:** Bentonite

**Ground Surface Elevation (ft):** NA

**Top of Casing Elevation (ft):** NA

**Surveyed Location:** X: NA

Y: NA





## Log of Boring: B-17

Page 1 of 1

**Client:** Mr. Jeff Woodworth  
**Project:** Woodworth Lakeview Facility  
**Location:** Lakewood, Washington

**Farallon PN:** 188-002

**Logged By:** Daniel Aguilar

**Date/Time Started:** 11/14/17 0915  
**Date/Time Completed:** 11/15/17 1230  
**Equipment:** BK 81  
**Drilling Company:** Holocene  
**Drilling Foreman:** Jerrod  
**Drilling Method:** HSA

**Sampler Type:** 1.5' SPT  
**Drive Hammer (lbs.):** 140  
**Depth of Water ATD (ft bgs):** 15.0  
**Total Boring Depth (ft bgs):** 21.0  
**Total Well Depth (ft bgs):** NA

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		0.0-0.3': Asphalt. Airknife to clear for utilities.	AC							Asphalt
		0.3-2.2': Well-graded SAND with gravel (70% sand, 30% gravel), fine to coarse sand, fine gravel, brown, moist, no odor.	SW							
		2.2-2.5': Well-graded GRAVEL with sand (70% gravel, 30% sand), fine to coarse sand and gravel, brown, moist, no odor. Large cobbles less than 8".	GW				0.0	B-17-2.5-111417		
		2.5-3.5': Well-graded SAND with gravel (70% sand, 30% gravel), fine to coarse sand, fine gravel, dark brown, very dense, moist, no odor. Chunks of asphalt and large cobbles cause refusal at 3.5' with airknife.	SW							
5		2.5-3.5': Well-graded SAND with gravel (70% sand, 30% gravel), fine to coarse sand, fine gravel, dark brown, very dense, moist, no odor. Chunks of asphalt and large cobbles cause refusal at 3.5' with airknife.	GW-GM		40	15/34/38	0.2	B-17-5.0-111517		
		5.0-5.6': Well-graded GRAVEL with silt and sand (50% gravel, 40% sand, 10% silt), fine to coarse gravel, fine to medium sand, brown, very dense, moist, no odor, no sheen.	GW-GM		70	19/50 for 6"	0.0	B-17-7.5-111517		
		5.6-6.5': No recovery.								
10		7.5-8.2': Well-graded GRAVEL with silt and sand (50% gravel, 40% sand, 10% silt), fine to coarse gravel, fine to medium sand, brown, very dense, moist, no odor, no sheen.	SM		88	12/40/50 for 5"	0.0	B-17-10.0-111517		Bentonite
		10.0-11.4': Silty SAND (75% sand, 15% silt, 10% gravel), very fine to fine sand, fine gravel, light brown, very dense, moist, no odor, no sheen.	NR		0	50 for 6"				
		12.5-13.0': No recovery. Rock fragments in sampler.								
15		15.0-16.2': Silty SAND with gravel (50% sand, 30% gravel, 20% silt), fine to medium sand, fine to coarse gravel, brown, very dense, wet, no odor, no sheen.	SM		88	8/34/50 for 4"	0.0	B-17-15.0-111517		Water level
		17.5-17.8': No recovery. Rock fragments in sampler.	NR		0	50 for 4"				
20		20.0-21.0': Well-graded GRAVEL with silt and sand (60% gravel, 20% sand, 20% silt), fine sand, fine to coarse gravel, brown, very dense, wet, no odor, no sheen.	GW-GM		100	34/50 for 6"	0.0	B-17-20.0-111517		

**Monument Type:** NA

**Casing Diameter (inches):** NA

**Screen Slot Size (inches):** NA

**Screened Interval (ft bgs):** NA

### Well Construction Information

**Filter Pack:** NA

**Surface Seal:** Asphalt

**Annular Seal:** NA

**Boring Abandonment:** Bentonite

**Ground Surface Elevation (ft):** NA










**Top of Casing Elevation (ft):** NA

**Surveyed Location:** X: NA

Y: NA



<b>Client:</b> Mr. Jeff Woodworth	<b>Date/Time Started:</b> 11/14/17 1040	<b>Sampler Type:</b> 1.5' SPT
<b>Project:</b> Woodworth Lakeview Facility	<b>Date/Time Completed:</b> 11/16/17 1335	<b>Drive Hammer (lbs.):</b> 140
<b>Location:</b> Lakewood, Washington	<b>Equipment:</b> BK 81	<b>Depth of Water ATD (ft bgs):</b> 10.0
<b>Farallon PN:</b> 188-002	<b>Drilling Company:</b> Holocene	<b>Total Boring Depth (ft bgs):</b> 10.4
<b>Logged By:</b> Daniel Aguilar	<b>Drilling Foreman:</b> Jerrod	<b>Total Well Depth (ft bgs):</b> NA
	<b>Drilling Method:</b> HSA	

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		0.0-0.3': Asphalt. Airknife to clear for utilities.	AC							Asphalt
		0.3-0.6': Well-graded GRAVEL with sand (70% gravel, 30% sand), fine to coarse sand and gravel, brown, moist, no odor. Large cobbles present.	GW							
		0.6-0.7': Asphalt.	AC							
		0.7-4.4': Well-graded GRAVEL with sand (70% gravel, 30% sand), fine to coarse sand and gravel, brown, moist, no odor. Large cobbles present.	GW							
						0.0		B-18-3.0-111617	X	
5		4.4-5.0': Well-graded GRAVEL with sand (60% gravel, 40% sand), fine to coarse sand and gravel, brown, slightly wet, no odor. Large cobbles present.	GW							
		5.0-5.4': Well-graded GRAVEL with sand (90% sand, 10% sand), fine to coarse sand and gravel, brown, medium dense, slightly wet, no odor, no sheen.	GW		26	4/6/9	0.0	B-18-5.0-111617		Bentonite
		7.5-8.1': Well-graded GRAVEL with sand (90% sand, 10% sand), fine to coarse sand and gravel, brown, dense, slightly wet, no odor, no sheen.	GW		40	10/18/14	0.0	B-18-7.5-111617	X	
		8.1-9.0': No recovery.	NR							
10		10.0-10.1': Rock fragments.	RK		100	50 for 5"	35.6	B-18-10.0-111617	X	Water level
		10.1-10.4': Silty SAND with gravel (70% sand, 15% gravel, 15% silt), fine to medium sand, gray, very dense, wet, TPH odor, sheen present. Wet at 10.0 feet bgs.	SM							

<b>Monument Type:</b> NA	<b>Well Construction Information</b>	<b>Ground Surface Elevation (ft):</b> NA
<b>Casing Diameter (inches):</b> NA	<b>Filter Pack:</b> NA	<b>Top of Casing Elevation (ft):</b> NA
<b>Screen Slot Size (inches):</b> NA	<b>Surface Seal:</b> Asphalt	<b>Surveyed Location:</b> X: NA
<b>Screened Interval (ft bgs):</b> NA	<b>Annular Seal:</b> NA	Y: NA
	<b>Boring Abandonment:</b> Bentonite	



# Log of Boring: B-19

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**Client:** Mr. Jeff Woodworth  
**Project:** Woodworth Lakeview Facility  
**Location:** Lakewood, Washington

**Farallon PN:** 188-002

**Logged By:** Daniel Aguilar

**Date/Time Started:** 11/14/17 1245  
**Date/Time Completed:** 11/16/17 1245  
**Equipment:** BK 81  
**Drilling Company:** Holocene  
**Drilling Foreman:** Jerrod  
**Drilling Method:** HSA

**Sampler Type:** 1.5' SPT  
**Drive Hammer (lbs.):** 140  
**Depth of Water ATD (ft bgs):** NE  
**Total Boring Depth (ft bgs):** 11.3  
**Total Well Depth (ft bgs):** NA

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': Asphalt. Airknife to clear for utilities.	AC							Asphalt
		1.0-2.5': Well-graded SAND with gravel (65% sand, 35% gravel), fine to coarse sand, fine gravel, dark brown, dry to moist, no odor, no sheen.	SW							
		2.5-3.1': Well-graded GRAVEL with sand (70% gravel, 30% sand), fine to coarse sand and gravel, brown, dry to moist, no odor, no sheen. Large cobbles present. Refusal at 3.1' with airknife.	GW				0.0	B-19-2.5-111417	X	
5		5.0-5.9': Well-graded GRAVEL with sand (80% gravel, 20% sand), fine to coarse sand and gravel, brown, medium dense, slightly wet, no odor, no sheen.	GW		60	20/13/15	0.1	B-19-5.0-111617		Bentonite
		5.9-6.5': No recovery.	NR							
		7.5-8.7': Well-graded GRAVEL with sand (80% gravel, 20% sand), fine to coarse sand and gravel, brown, medium dense, slightly wet, no odor, no sheen.	GW		80	3/1/10	0.0	B-19-7.5-111617		
		8.7-9.0': No recovery.	NR							
10		10.0-11.3': Well-graded GRAVEL with sand (80% gravel, 20% sand), fine to coarse sand and gravel, brown, medium dense, slightly wet, no odor, no sheen.	GW		87	5/7/9	0.2	B-19-10.0-111617	X	

**Monument Type:** NA

**Casing Diameter (inches):** NA

**Screen Slot Size (inches):** NA

**Screened Interval (ft bgs):** NA

## Well Construction Information

**Filter Pack:** NA

**Surface Seal:** Asphalt

**Annular Seal:** NA

**Boring Abandonment:** Bentonite

**Ground Surface Elevation (ft):** NA

**Top of Casing Elevation (ft):** NA

**Surveyed Location:** X: NA

Y: NA



# Log of Boring: B-20

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**Client:** Mr. Jeff Woodworth  
**Project:** Woodworth Lakeview Facility  
**Location:** Lakewood, Washington

**Farallon PN:** 188-002

**Logged By:** Daniel Aguilar

**Date/Time Started:** 11/14/17 1430  
**Date/Time Completed:** 11/15/17 1525  
**Equipment:** BK 81  
**Drilling Company:** Holocene  
**Drilling Foreman:** Jerrod  
**Drilling Method:** HSA

**Sampler Type:** 1.5' SPT  
**Drive Hammer (lbs.):** 140  
**Depth of Water ATD (ft bgs):** 20.0  
**Total Boring Depth (ft bgs):** 20.5  
**Total Well Depth (ft bgs):** NA

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		0.0-0.8': Asphalt. Airknife to clear for utilities.	AC							Asphalt
		0.8-2.4': Well-graded SAND with gravel (60% sand, 40% gravel), fine to coarse sand and gravel, dark brown, dry to moist, no odor, no sheen. Cobbles present.	SW-SM							
		2.4-3.5': Well-graded SAND with gravel (70% sand, 30% gravel), fine to coarse sand and gravel, dark gray, no odor, no sheen. Refusal at 3.5' with airknife.	SW-SM				0.9	B-20-2.5-111417	X	
5		5.0-6.2': Poorly graded SAND with silt and gravel (60% sand, 30% gravel, 10% silt), fine sand, light brown, very dense, moist, no odor, no sheen. Rock fragments in sampler.	SP-SM		92	12/38/50 for 4"	0.0	B-20-5.0-111517		
		7.5-8.4': Poorly graded SAND with silt and gravel (60% sand, 30% gravel, 10% silt), fine sand, light brown, very dense, moist, no odor, no sheen. Rock fragments in sampler.	SP-SM		100	36/50 for 5"	0.0	B-20-7.5-111517		
10		10.0-11.0': Silty GRAVEL with sand (50% gravel, 35% sand, 15% silt), fine to coarse sand and gravel, light brown, slightly wet, no odor, no sheen.	GM		67	16/28/30	0.0	B-20-10.0-111517	X	Bentonite
		11.0-11.5': No recovery.	NR							
		12.5-13.3': Poorly graded SAND with silt and gravel (60% sand, 30% gravel, 10% silt), fine sand, light brown, very dense, slightly moist, no odor, no sheen. Rock fragments in sampler.	SP-SM		100	22/50 for 4"	0.0	B-20-12.5-111517		
15		15.0-15.3': Poorly graded SAND with silt and gravel (60% sand, 30% gravel, 10% silt), fine sand, light brown, very dense, dry to moist, no odor, no sheen. Rock fragments in sampler.	SP-SM		100	50 for 3"	0.0	B-20-15.0-111517		
		17.5-18.2': Well-graded GRAVEL with sand (75% gravel, 20% sand, 5% silt) fine to coarse sand and gravel, light brown, very dense, moist, no odor, no sheen.	GW		100	30/50 for 3"	0.0	B-20-17.5-111517	X	
20		20.0-20.4': Silty SAND with gravel (50% sand, 30% silt, 20% gravel), fine to coarse sand, fine gravel, light brown, very dense, very wet, no odor, no sheen.	SM		100	50 for 5"	0.0	B-20-20.0-111517		Water level

**Monument Type:** NA

**Casing Diameter (inches):** NA

**Screen Slot Size (inches):** NA

**Screened Interval (ft bgs):** NA

## Well Construction Information

**Filter Pack:** NA

**Surface Seal:** Asphalt

**Annular Seal:** NA

**Boring Abandonment:** Bentonite

**Ground Surface Elevation (ft):** NA

**Top of Casing Elevation (ft):** NA

**Surveyed Location:** X: NA

Y: NA



# Log of Boring: MW-24T

Page 1 of 1

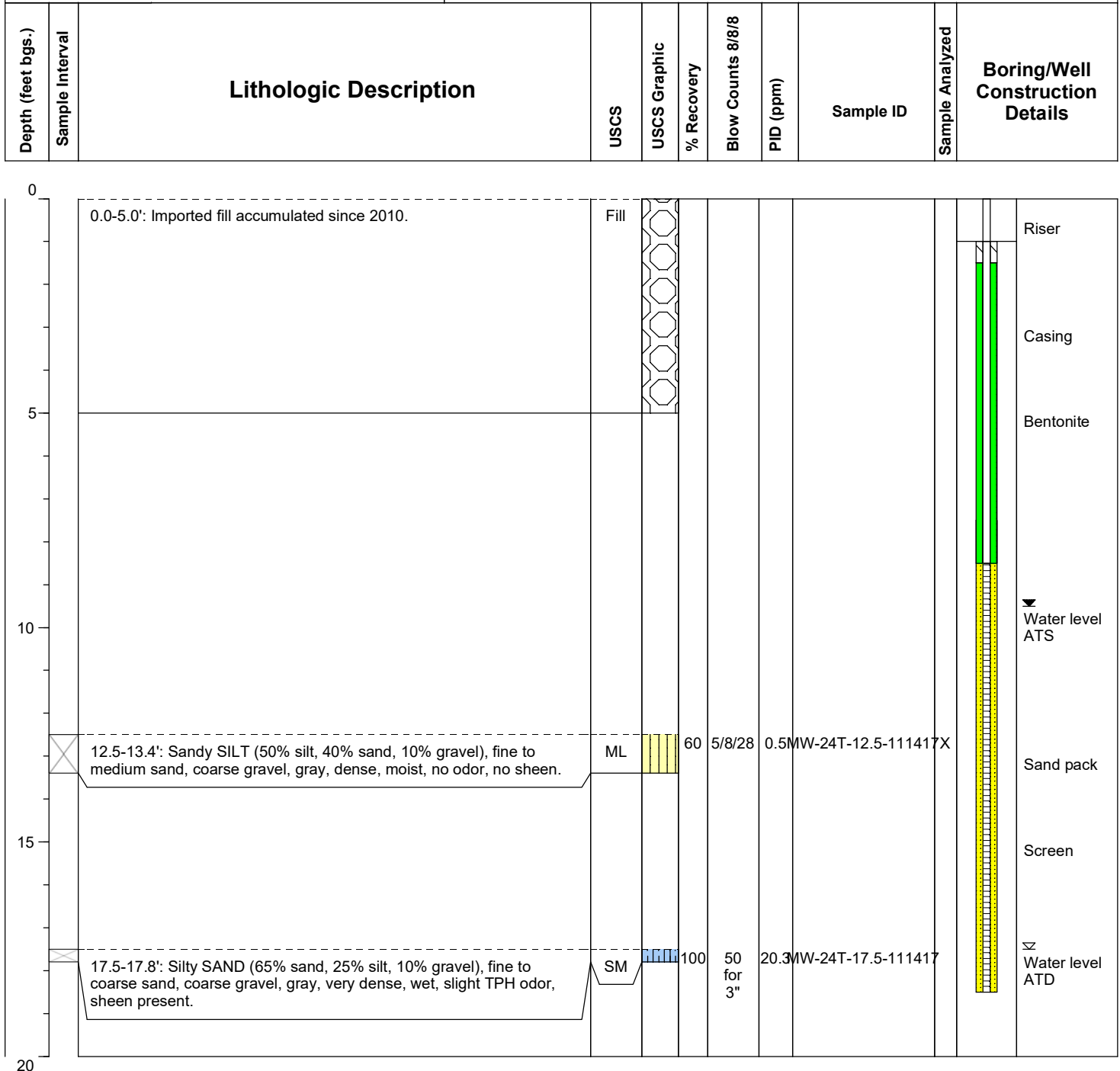
**Client:** Mr. Jeff Woodworth  
**Project:** Woodworth Lakeview Facility  
**Location:** Lakewood, Washington

**Farallon PN:** 188-002

**Logged By:** Daniel Aguilar

**Date/Time Started:** 11/14/17 0850  
**Date/Time Completed:** 11/14/17 1030  
**Equipment:** Track rig  
**Drilling Company:** Holocene  
**Drilling Foreman:** Rudy Ortega  
**Drilling Method:** Hollow Stem Auger

**Sampler Type:** 1.5' D&M  
**Drive Hammer (lbs.):** 140  
**Depth of Water ATD (ft bgs):** 17.5'/9.5'  
**Total Boring Depth (ft bgs):** 17.5'  
**Total Well Depth (ft bgs):** 18.9 Temp.



**Monument Type:** Temporary

**Casing Diameter (inches):** 2.0

**Screen Slot Size (inches):** 0.010

**Screened Interval (ft bgs):** 7.5-17.5

## Well Construction Information

**Filter Pack:** 10/20 sand

**Surface Seal:** NA

**Annular Seal:** Bentonite

**Boring Abandonment:** Sand and Bentonite

**Ground Surface Elevation (ft):** NA

**Top of Casing Elevation (ft):** 1.0' stickup

**Surveyed Location:** X: NA

Y: NA

**APPENDIX C**  
**LABORATORY ANALYTICAL REPORTS**

ADDENDUM TO FOCUSED FEASIBILITY STUDY/  
DISPROPORTIONATE COST ANALYSIS REPORT

Lakeview Facility  
2800 104<sup>th</sup> Street Court South  
Lakewood, Washington

Farallon PN: 188-002





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

November 27, 2017

Brani Jurista  
Farallon Consulting, LLC  
975 5th Avenue NW  
Issaquah, WA 98027

Re: Analytical Data for Project 188-002  
Laboratory Reference No. 1711-166

Dear Brani:

Enclosed are the analytical results and associated quality control data for samples submitted on November 14, 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



OnSite Environmental, Inc. 14648 NE 95<sup>th</sup> 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: November 27, 2017  
Samples Submitted: November 14, 2017  
Laboratory Reference: 1711-166  
Project: 188-002

### **Case Narrative**

Samples were collected on November 13, 2017 and received by the laboratory on November 14, 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: November 27, 2017  
 Samples Submitted: November 14, 2017  
 Laboratory Reference: 1711-166  
 Project: 188-002

### NWTPH-Dx

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>B-10-5.0-111317</b>					
Laboratory ID:	11-166-01					
Diesel Range Organics	<b>ND</b>	26	NWTPH-Dx	11-15-17	11-15-17	
Lube Oil	<b>130</b>	52	NWTPH-Dx	11-15-17	11-15-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	97	50-150				



Date of Report: November 27, 2017  
 Samples Submitted: November 14, 2017  
 Laboratory Reference: 1711-166  
 Project: 188-002

**NWTPH-Dx  
QUALITY CONTROL**

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB1115S2					
Diesel Range Organics	ND	25	NWTPH-Dx	11-15-17	11-15-17	
Lube Oil Range Organics	ND	50	NWTPH-Dx	11-15-17	11-15-17	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	92	50-150				

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags	
DUPLICATE											
Laboratory ID:	11-174-02										
	ORIG	DUP									
Diesel Range	ND	ND	NA	NA		NA	NA	NA	NA		
Lube Oil Range	ND	ND	NA	NA		NA	NA	NA	NA		
Surrogate:											
o-Terphenyl						98	98	50-150			



Date of Report: November 27, 2017  
 Samples Submitted: November 14, 2017  
 Laboratory Reference: 1711-166  
 Project: 188-002

### NWTPH-Dx

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>B-14-2.5-111317</b>					
Laboratory ID:	11-166-04					
Diesel Range Organics	<b>ND</b>	26	NWTPH-Dx	11-20-17	11-20-17	
Lube Oil Range Organics	<b>ND</b>	52	NWTPH-Dx	11-20-17	11-20-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	84	50-150				
<b>Client ID:</b>	<b>B-15-2.5-111317</b>					
Laboratory ID:	11-166-05					
Diesel Fuel #2	<b>150</b>	53	NWTPH-Dx	11-20-17	11-20-17	
Lube Oil	<b>1000</b>	110	NWTPH-Dx	11-20-17	11-20-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	98	50-150				





Date of Report: November 27, 2017  
 Samples Submitted: November 14, 2017  
 Laboratory Reference: 1711-166  
 Project: 188-002

**NWTPH-Dx  
 QUALITY CONTROL**

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB1120S1					
Diesel Range Organics	ND	25	NWTPH-Dx	11-20-17	11-20-17	
Lube Oil Range Organics	ND	50	NWTPH-Dx	11-20-17	11-20-17	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	84	50-150				

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE										
Laboratory ID:	11-201-08									
	ORIG	DUP								
Diesel Range	ND	ND	NA	NA		NA	NA	NA	NA	
Lube Oil Range	ND	ND	NA	NA		NA	NA	NA	NA	
Surrogate:										
o-Terphenyl						76	81	50-150		



Date of Report: November 27, 2017  
 Samples Submitted: November 14, 2017  
 Laboratory Reference: 1711-166  
 Project: 188-002

# **VOLATILES EPA 8260C**

Page 1 of 2

Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID: B-13-2.5-111317</b>						
<b>Laboratory ID: 11-166-03</b>						
Dichlorodifluoromethane	ND	0.0011	EPA 8260C	11-21-17	11-21-17	
Chloromethane	ND	0.0043	EPA 8260C	11-21-17	11-21-17	
Vinyl Chloride	ND	0.00086	EPA 8260C	11-21-17	11-21-17	
Bromomethane	ND	0.00086	EPA 8260C	11-21-17	11-21-17	
Chloroethane	ND	0.0043	EPA 8260C	11-21-17	11-21-17	
Trichlorofluoromethane	ND	0.00086	EPA 8260C	11-21-17	11-21-17	
1,1-Dichloroethene	ND	0.00086	EPA 8260C	11-21-17	11-21-17	
Acetone	ND	0.0043	EPA 8260C	11-21-17	11-21-17	
Iodomethane	ND	0.0043	EPA 8260C	11-21-17	11-21-17	
Carbon Disulfide	ND	0.00086	EPA 8260C	11-21-17	11-21-17	
Methylene Chloride	ND	0.0043	EPA 8260C	11-21-17	11-21-17	
(trans) 1,2-Dichloroethene	ND	0.00086	EPA 8260C	11-21-17	11-21-17	
Methyl t-Butyl Ether	ND	0.00086	EPA 8260C	11-21-17	11-21-17	
1,1-Dichloroethane	ND	0.00086	EPA 8260C	11-21-17	11-21-17	
Vinyl Acetate	ND	0.0043	EPA 8260C	11-21-17	11-21-17	
2,2-Dichloropropane	ND	0.00086	EPA 8260C	11-21-17	11-21-17	
(cis) 1,2-Dichloroethene	ND	0.00086	EPA 8260C	11-21-17	11-21-17	
2-Butanone	ND	0.0043	EPA 8260C	11-21-17	11-21-17	
Bromochloromethane	ND	0.00086	EPA 8260C	11-21-17	11-21-17	
Chloroform	ND	0.00086	EPA 8260C	11-21-17	11-21-17	
1,1,1-Trichloroethane	ND	0.00086	EPA 8260C	11-21-17	11-21-17	
Carbon Tetrachloride	ND	0.00086	EPA 8260C	11-21-17	11-21-17	
1,1-Dichloropropene	ND	0.00086	EPA 8260C	11-21-17	11-21-17	
Benzene	ND	0.00086	EPA 8260C	11-21-17	11-21-17	
1,2-Dichloroethane	ND	0.00086	EPA 8260C	11-21-17	11-21-17	
Trichloroethene	ND	0.00086	EPA 8260C	11-21-17	11-21-17	
1,2-Dichloropropane	ND	0.00086	EPA 8260C	11-21-17	11-21-17	
Dibromomethane	ND	0.00086	EPA 8260C	11-21-17	11-21-17	
Bromodichloromethane	ND	0.00086	EPA 8260C	11-21-17	11-21-17	
2-Chloroethyl Vinyl Ether	ND	0.010	EPA 8260C	11-21-17	11-21-17	
(cis) 1,3-Dichloropropene	ND	0.00086	EPA 8260C	11-21-17	11-21-17	
Methyl Isobutyl Ketone	ND	0.0043	EPA 8260C	11-21-17	11-21-17	
Toluene	ND	0.0043	EPA 8260C	11-21-17	11-21-17	
(trans) 1,3-Dichloropropene	ND	0.00086	EPA 8260C	11-21-17	11-21-17	



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

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Date of Report: November 27, 2017  
 Samples Submitted: November 14, 2017  
 Laboratory Reference: 1711-166  
 Project: 188-002

**VOLATILES EPA 8260C**  
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>		<b>B-13-2.5-111317</b>				
Laboratory ID:		11-166-03				
1,1,2-Trichloroethane	ND	0.00086	EPA 8260C	11-21-17	11-21-17	
Tetrachloroethene	ND	0.00086	EPA 8260C	11-21-17	11-21-17	
1,3-Dichloropropane	ND	0.00086	EPA 8260C	11-21-17	11-21-17	
2-Hexanone	ND	0.0043	EPA 8260C	11-21-17	11-21-17	
Dibromochloromethane	ND	0.00086	EPA 8260C	11-21-17	11-21-17	
1,2-Dibromoethane	ND	0.00086	EPA 8260C	11-21-17	11-21-17	
Chlorobenzene	ND	0.00086	EPA 8260C	11-21-17	11-21-17	
1,1,1,2-Tetrachloroethane	ND	0.00086	EPA 8260C	11-21-17	11-21-17	
Ethylbenzene	ND	0.00086	EPA 8260C	11-21-17	11-21-17	
m,p-Xylene	ND	0.0017	EPA 8260C	11-21-17	11-21-17	
o-Xylene	ND	0.00086	EPA 8260C	11-21-17	11-21-17	
Styrene	ND	0.00086	EPA 8260C	11-21-17	11-21-17	
Bromoform	ND	0.0043	EPA 8260C	11-21-17	11-21-17	
Isopropylbenzene	ND	0.00086	EPA 8260C	11-21-17	11-21-17	
Bromobenzene	ND	0.00086	EPA 8260C	11-21-17	11-21-17	
1,1,2,2-Tetrachloroethane	ND	0.00086	EPA 8260C	11-21-17	11-21-17	
1,2,3-Trichloropropane	ND	0.00086	EPA 8260C	11-21-17	11-21-17	
n-Propylbenzene	ND	0.00086	EPA 8260C	11-21-17	11-21-17	
2-Chlorotoluene	ND	0.00086	EPA 8260C	11-21-17	11-21-17	
4-Chlorotoluene	ND	0.00086	EPA 8260C	11-21-17	11-21-17	
1,3,5-Trimethylbenzene	ND	0.00086	EPA 8260C	11-21-17	11-21-17	
tert-Butylbenzene	ND	0.00086	EPA 8260C	11-21-17	11-21-17	
1,2,4-Trimethylbenzene	ND	0.00086	EPA 8260C	11-21-17	11-21-17	
sec-Butylbenzene	ND	0.00086	EPA 8260C	11-21-17	11-21-17	
1,3-Dichlorobenzene	ND	0.00086	EPA 8260C	11-21-17	11-21-17	
p-Isopropyltoluene	ND	0.00086	EPA 8260C	11-21-17	11-21-17	
1,4-Dichlorobenzene	ND	0.00086	EPA 8260C	11-21-17	11-21-17	
1,2-Dichlorobenzene	ND	0.00086	EPA 8260C	11-21-17	11-21-17	
n-Butylbenzene	ND	0.00086	EPA 8260C	11-21-17	11-21-17	
1,2-Dibromo-3-chloropropane	ND	0.0043	EPA 8260C	11-21-17	11-21-17	
1,2,4-Trichlorobenzene	ND	0.00086	EPA 8260C	11-21-17	11-21-17	
Hexachlorobutadiene	ND	0.0043	EPA 8260C	11-21-17	11-21-17	
Naphthalene	ND	0.00086	EPA 8260C	11-21-17	11-21-17	
1,2,3-Trichlorobenzene	ND	0.00086	EPA 8260C	11-21-17	11-21-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>102</i>	<i>75-131</i>				
<i>Toluene-d8</i>	<i>98</i>	<i>83-126</i>				
<i>4-Bromofluorobenzene</i>	<i>99</i>	<i>78-125</i>				



Date of Report: November 27, 2017  
 Samples Submitted: November 14, 2017  
 Laboratory Reference: 1711-166  
 Project: 188-002

# **VOLATILES EPA 8260C**

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Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>		<b>B-14-2.5-111317</b>				
Laboratory ID:		11-166-04				
Dichlorodifluoromethane	ND	0.0012	EPA 8260C	11-21-17	11-21-17	
Chloromethane	ND	0.0046	EPA 8260C	11-21-17	11-21-17	
Vinyl Chloride	ND	0.00093	EPA 8260C	11-21-17	11-21-17	
Bromomethane	ND	0.00093	EPA 8260C	11-21-17	11-21-17	
Chloroethane	ND	0.0046	EPA 8260C	11-21-17	11-21-17	
Trichlorofluoromethane	ND	0.00093	EPA 8260C	11-21-17	11-21-17	
1,1-Dichloroethene	ND	0.00093	EPA 8260C	11-21-17	11-21-17	
Acetone	ND	0.0046	EPA 8260C	11-21-17	11-21-17	
Iodomethane	ND	0.0046	EPA 8260C	11-21-17	11-21-17	
Carbon Disulfide	ND	0.00093	EPA 8260C	11-21-17	11-21-17	
Methylene Chloride	ND	0.0046	EPA 8260C	11-21-17	11-21-17	
(trans) 1,2-Dichloroethene	ND	0.00093	EPA 8260C	11-21-17	11-21-17	
Methyl t-Butyl Ether	ND	0.00093	EPA 8260C	11-21-17	11-21-17	
1,1-Dichloroethane	ND	0.00093	EPA 8260C	11-21-17	11-21-17	
Vinyl Acetate	ND	0.0046	EPA 8260C	11-21-17	11-21-17	
2,2-Dichloropropane	ND	0.00093	EPA 8260C	11-21-17	11-21-17	
(cis) 1,2-Dichloroethene	ND	0.00093	EPA 8260C	11-21-17	11-21-17	
2-Butanone	ND	0.0046	EPA 8260C	11-21-17	11-21-17	
Bromochloromethane	ND	0.00093	EPA 8260C	11-21-17	11-21-17	
Chloroform	ND	0.00093	EPA 8260C	11-21-17	11-21-17	
1,1,1-Trichloroethane	ND	0.00093	EPA 8260C	11-21-17	11-21-17	
Carbon Tetrachloride	ND	0.00093	EPA 8260C	11-21-17	11-21-17	
1,1-Dichloropropene	ND	0.00093	EPA 8260C	11-21-17	11-21-17	
Benzene	ND	0.00093	EPA 8260C	11-21-17	11-21-17	
1,2-Dichloroethane	ND	0.00093	EPA 8260C	11-21-17	11-21-17	
Trichloroethene	ND	0.00093	EPA 8260C	11-21-17	11-21-17	
1,2-Dichloropropane	ND	0.00093	EPA 8260C	11-21-17	11-21-17	
Dibromomethane	ND	0.00093	EPA 8260C	11-21-17	11-21-17	
Bromodichloromethane	ND	0.00093	EPA 8260C	11-21-17	11-21-17	
2-Chloroethyl Vinyl Ether	ND	0.011	EPA 8260C	11-21-17	11-21-17	
(cis) 1,3-Dichloropropene	ND	0.00093	EPA 8260C	11-21-17	11-21-17	
Methyl Isobutyl Ketone	ND	0.0046	EPA 8260C	11-21-17	11-21-17	
Toluene	ND	0.0046	EPA 8260C	11-21-17	11-21-17	
(trans) 1,3-Dichloropropene	ND	0.00093	EPA 8260C	11-21-17	11-21-17	



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Date of Report: November 27, 2017  
 Samples Submitted: November 14, 2017  
 Laboratory Reference: 1711-166  
 Project: 188-002

**VOLATILES EPA 8260C**  
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>		<b>B-14-2.5-111317</b>				
Laboratory ID:		11-166-04				
1,1,2-Trichloroethane	ND	0.00093	EPA 8260C	11-21-17	11-21-17	
Tetrachloroethene	ND	0.00093	EPA 8260C	11-21-17	11-21-17	
1,3-Dichloropropane	ND	0.00093	EPA 8260C	11-21-17	11-21-17	
2-Hexanone	ND	0.0046	EPA 8260C	11-21-17	11-21-17	
Dibromochloromethane	ND	0.00093	EPA 8260C	11-21-17	11-21-17	
1,2-Dibromoethane	ND	0.00093	EPA 8260C	11-21-17	11-21-17	
Chlorobenzene	ND	0.00093	EPA 8260C	11-21-17	11-21-17	
1,1,1,2-Tetrachloroethane	ND	0.00093	EPA 8260C	11-21-17	11-21-17	
Ethylbenzene	ND	0.00093	EPA 8260C	11-21-17	11-21-17	
m,p-Xylene	ND	0.0019	EPA 8260C	11-21-17	11-21-17	
o-Xylene	ND	0.00093	EPA 8260C	11-21-17	11-21-17	
Styrene	ND	0.00093	EPA 8260C	11-21-17	11-21-17	
Bromoform	ND	0.0046	EPA 8260C	11-21-17	11-21-17	
Isopropylbenzene	ND	0.00093	EPA 8260C	11-21-17	11-21-17	
Bromobenzene	ND	0.00093	EPA 8260C	11-21-17	11-21-17	
1,1,2,2-Tetrachloroethane	ND	0.00093	EPA 8260C	11-21-17	11-21-17	
1,2,3-Trichloropropane	ND	0.00093	EPA 8260C	11-21-17	11-21-17	
n-Propylbenzene	ND	0.00093	EPA 8260C	11-21-17	11-21-17	
2-Chlorotoluene	ND	0.00093	EPA 8260C	11-21-17	11-21-17	
4-Chlorotoluene	ND	0.00093	EPA 8260C	11-21-17	11-21-17	
1,3,5-Trimethylbenzene	ND	0.00093	EPA 8260C	11-21-17	11-21-17	
tert-Butylbenzene	ND	0.00093	EPA 8260C	11-21-17	11-21-17	
1,2,4-Trimethylbenzene	ND	0.00093	EPA 8260C	11-21-17	11-21-17	
sec-Butylbenzene	ND	0.00093	EPA 8260C	11-21-17	11-21-17	
1,3-Dichlorobenzene	ND	0.00093	EPA 8260C	11-21-17	11-21-17	
p-Isopropyltoluene	ND	0.00093	EPA 8260C	11-21-17	11-21-17	
1,4-Dichlorobenzene	ND	0.00093	EPA 8260C	11-21-17	11-21-17	
1,2-Dichlorobenzene	ND	0.00093	EPA 8260C	11-21-17	11-21-17	
n-Butylbenzene	ND	0.00093	EPA 8260C	11-21-17	11-21-17	
1,2-Dibromo-3-chloropropane	ND	0.0046	EPA 8260C	11-21-17	11-21-17	
1,2,4-Trichlorobenzene	ND	0.00093	EPA 8260C	11-21-17	11-21-17	
Hexachlorobutadiene	ND	0.0046	EPA 8260C	11-21-17	11-21-17	
Naphthalene	ND	0.00093	EPA 8260C	11-21-17	11-21-17	
1,2,3-Trichlorobenzene	ND	0.00093	EPA 8260C	11-21-17	11-21-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>111</i>	<i>75-131</i>				
<i>Toluene-d8</i>	<i>114</i>	<i>83-126</i>				
<i>4-Bromofluorobenzene</i>	<i>111</i>	<i>78-125</i>				





Date of Report: November 27, 2017  
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 Laboratory Reference: 1711-166  
 Project: 188-002

# **VOLATILES EPA 8260C**

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Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>		<b>B-15-2.5-111317</b>				
Laboratory ID:		11-166-05				
Dichlorodifluoromethane	ND	0.00083	EPA 8260C	11-22-17	11-22-17	
Chloromethane	ND	0.0041	EPA 8260C	11-22-17	11-22-17	
Vinyl Chloride	ND	0.00083	EPA 8260C	11-22-17	11-22-17	
Bromomethane	ND	0.00083	EPA 8260C	11-22-17	11-22-17	
Chloroethane	ND	0.0041	EPA 8260C	11-22-17	11-22-17	
Trichlorofluoromethane	ND	0.00083	EPA 8260C	11-22-17	11-22-17	
1,1-Dichloroethene	ND	0.00083	EPA 8260C	11-22-17	11-22-17	
Acetone	0.030	0.0041	EPA 8260C	11-22-17	11-22-17	
Iodomethane	ND	0.0041	EPA 8260C	11-22-17	11-22-17	
Carbon Disulfide	0.0011	0.00083	EPA 8260C	11-22-17	11-22-17	
Methylene Chloride	ND	0.0041	EPA 8260C	11-22-17	11-22-17	
(trans) 1,2-Dichloroethene	ND	0.00083	EPA 8260C	11-22-17	11-22-17	
Methyl t-Butyl Ether	ND	0.00083	EPA 8260C	11-22-17	11-22-17	
1,1-Dichloroethane	ND	0.00083	EPA 8260C	11-22-17	11-22-17	
Vinyl Acetate	ND	0.0041	EPA 8260C	11-22-17	11-22-17	
2,2-Dichloropropane	ND	0.00083	EPA 8260C	11-22-17	11-22-17	
(cis) 1,2-Dichloroethene	ND	0.00083	EPA 8260C	11-22-17	11-22-17	
2-Butanone	0.0059	0.0041	EPA 8260C	11-22-17	11-22-17	Y
Bromochloromethane	ND	0.00083	EPA 8260C	11-22-17	11-22-17	
Chloroform	ND	0.00083	EPA 8260C	11-22-17	11-22-17	
1,1,1-Trichloroethane	ND	0.00083	EPA 8260C	11-22-17	11-22-17	
Carbon Tetrachloride	ND	0.00083	EPA 8260C	11-22-17	11-22-17	
1,1-Dichloropropene	ND	0.00083	EPA 8260C	11-22-17	11-22-17	
Benzene	ND	0.00083	EPA 8260C	11-22-17	11-22-17	
1,2-Dichloroethane	ND	0.00083	EPA 8260C	11-22-17	11-22-17	
Trichloroethene	ND	0.00083	EPA 8260C	11-22-17	11-22-17	
1,2-Dichloropropane	ND	0.00083	EPA 8260C	11-22-17	11-22-17	
Dibromomethane	ND	0.00083	EPA 8260C	11-22-17	11-22-17	
Bromodichloromethane	ND	0.00083	EPA 8260C	11-22-17	11-22-17	
2-Chloroethyl Vinyl Ether	ND	0.0091	EPA 8260C	11-22-17	11-22-17	
(cis) 1,3-Dichloropropene	ND	0.00083	EPA 8260C	11-22-17	11-22-17	
Methyl Isobutyl Ketone	ND	0.0041	EPA 8260C	11-22-17	11-22-17	
Toluene	ND	0.0041	EPA 8260C	11-22-17	11-22-17	
(trans) 1,3-Dichloropropene	ND	0.00083	EPA 8260C	11-22-17	11-22-17	



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Date of Report: November 27, 2017  
 Samples Submitted: November 14, 2017  
 Laboratory Reference: 1711-166  
 Project: 188-002

# **VOLATILES EPA 8260C**

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>		<b>B-15-2.5-111317</b>				
Laboratory ID:		11-166-05				
1,1,2-Trichloroethane	ND	0.00083	EPA 8260C	11-22-17	11-22-17	
Tetrachloroethene	ND	0.00083	EPA 8260C	11-22-17	11-22-17	
1,3-Dichloropropane	ND	0.00083	EPA 8260C	11-22-17	11-22-17	
2-Hexanone	ND	0.0041	EPA 8260C	11-22-17	11-22-17	
Dibromochloromethane	ND	0.00083	EPA 8260C	11-22-17	11-22-17	
1,2-Dibromoethane	ND	0.00083	EPA 8260C	11-22-17	11-22-17	
Chlorobenzene	ND	0.00083	EPA 8260C	11-22-17	11-22-17	
1,1,1,2-Tetrachloroethane	ND	0.00083	EPA 8260C	11-22-17	11-22-17	
Ethylbenzene	ND	0.00083	EPA 8260C	11-22-17	11-22-17	
m,p-Xylene	ND	0.0017	EPA 8260C	11-22-17	11-22-17	
o-Xylene	ND	0.00083	EPA 8260C	11-22-17	11-22-17	
Styrene	ND	0.00083	EPA 8260C	11-22-17	11-22-17	
Bromoform	ND	0.0041	EPA 8260C	11-22-17	11-22-17	
Isopropylbenzene	ND	0.00083	EPA 8260C	11-22-17	11-22-17	
Bromobenzene	ND	0.00083	EPA 8260C	11-22-17	11-22-17	
1,1,2,2-Tetrachloroethane	ND	0.00083	EPA 8260C	11-22-17	11-22-17	
1,2,3-Trichloropropane	ND	0.00083	EPA 8260C	11-22-17	11-22-17	
n-Propylbenzene	ND	0.00083	EPA 8260C	11-22-17	11-22-17	
2-Chlorotoluene	ND	0.00083	EPA 8260C	11-22-17	11-22-17	
4-Chlorotoluene	ND	0.00083	EPA 8260C	11-22-17	11-22-17	
1,3,5-Trimethylbenzene	ND	0.00083	EPA 8260C	11-22-17	11-22-17	
tert-Butylbenzene	ND	0.00083	EPA 8260C	11-22-17	11-22-17	
1,2,4-Trimethylbenzene	0.0019	0.00083	EPA 8260C	11-22-17	11-22-17	
sec-Butylbenzene	ND	0.00083	EPA 8260C	11-22-17	11-22-17	
1,3-Dichlorobenzene	ND	0.00083	EPA 8260C	11-22-17	11-22-17	
p-Isopropyltoluene	0.0022	0.00083	EPA 8260C	11-22-17	11-22-17	
1,4-Dichlorobenzene	ND	0.00083	EPA 8260C	11-22-17	11-22-17	
1,2-Dichlorobenzene	ND	0.00083	EPA 8260C	11-22-17	11-22-17	
n-Butylbenzene	ND	0.00083	EPA 8260C	11-22-17	11-22-17	
1,2-Dibromo-3-chloropropane	ND	0.0041	EPA 8260C	11-22-17	11-22-17	
1,2,4-Trichlorobenzene	ND	0.00083	EPA 8260C	11-22-17	11-22-17	
Hexachlorobutadiene	ND	0.0041	EPA 8260C	11-22-17	11-22-17	
Naphthalene	0.0033	0.00083	EPA 8260C	11-22-17	11-22-17	
1,2,3-Trichlorobenzene	ND	0.00083	EPA 8260C	11-22-17	11-22-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>118</i>	<i>75-131</i>				
<i>Toluene-d8</i>	<i>116</i>	<i>83-126</i>				
<i>4-Bromofluorobenzene</i>	<i>108</i>	<i>78-125</i>				



OnSite Environmental, Inc. 14648 NE 95<sup>th</sup> 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: November 27, 2017  
 Samples Submitted: November 14, 2017  
 Laboratory Reference: 1711-166  
 Project: 188-002

**VOLATILES 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:	MB1121S1					
Dichlorodifluoromethane	ND	0.0013	EPA 8260C	11-21-17	11-21-17	
Chloromethane	ND	0.0050	EPA 8260C	11-21-17	11-21-17	
Vinyl Chloride	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
Bromomethane	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
Chloroethane	ND	0.0050	EPA 8260C	11-21-17	11-21-17	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
Acetone	ND	0.0050	EPA 8260C	11-21-17	11-21-17	
Iodomethane	ND	0.0050	EPA 8260C	11-21-17	11-21-17	
Carbon Disulfide	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
Methylene Chloride	ND	0.0050	EPA 8260C	11-21-17	11-21-17	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
Vinyl Acetate	ND	0.0050	EPA 8260C	11-21-17	11-21-17	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
2-Butanone	ND	0.0050	EPA 8260C	11-21-17	11-21-17	
Bromochloromethane	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
Chloroform	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
Benzene	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
Trichloroethene	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
Dibromomethane	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
Bromodichloromethane	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
2-Chloroethyl Vinyl Ether	ND	0.012	EPA 8260C	11-21-17	11-21-17	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
Methyl Isobutyl Ketone	ND	0.0050	EPA 8260C	11-21-17	11-21-17	
Toluene	ND	0.0050	EPA 8260C	11-21-17	11-21-17	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	11-21-17	11-21-17	



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Date of Report: November 27, 2017  
 Samples Submitted: November 14, 2017  
 Laboratory Reference: 1711-166  
 Project: 188-002

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

Page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID: MB1121S1						
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
Tetrachloroethene	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
2-Hexanone	ND	0.0050	EPA 8260C	11-21-17	11-21-17	
Dibromochloromethane	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
Chlorobenzene	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
Ethylbenzene	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
m,p-Xylene	ND	0.0020	EPA 8260C	11-21-17	11-21-17	
o-Xylene	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
Styrene	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
Bromoform	ND	0.0050	EPA 8260C	11-21-17	11-21-17	
Isopropylbenzene	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
Bromobenzene	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
n-Propylbenzene	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
2-Chlorotoluene	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
4-Chlorotoluene	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
1,3,5-Trimethylbenzene	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
tert-Butylbenzene	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
1,2,4-Trimethylbenzene	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
sec-Butylbenzene	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
p-Isopropyltoluene	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
n-Butylbenzene	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260C	11-21-17	11-21-17	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
Hexachlorobutadiene	ND	0.0050	EPA 8260C	11-21-17	11-21-17	
Naphthalene	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>101</i>	<i>75-131</i>				
<i>Toluene-d8</i>	<i>100</i>	<i>83-126</i>				
<i>4-Bromofluorobenzene</i>	<i>102</i>	<i>78-125</i>				



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

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Date of Report: November 27, 2017  
 Samples Submitted: November 14, 2017  
 Laboratory Reference: 1711-166  
 Project: 188-002

**VOLATILES 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:	MB1122S1					
Dichlorodifluoromethane	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
Chloromethane	ND	0.0050	EPA 8260C	11-22-17	11-22-17	
Vinyl Chloride	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
Bromomethane	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
Chloroethane	ND	0.0050	EPA 8260C	11-22-17	11-22-17	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
Acetone	ND	0.0050	EPA 8260C	11-22-17	11-22-17	
Iodomethane	ND	0.0050	EPA 8260C	11-22-17	11-22-17	
Carbon Disulfide	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
Methylene Chloride	ND	0.0050	EPA 8260C	11-22-17	11-22-17	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
Vinyl Acetate	ND	0.0050	EPA 8260C	11-22-17	11-22-17	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
2-Butanone	ND	0.0050	EPA 8260C	11-22-17	11-22-17	
Bromochloromethane	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
Chloroform	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
Benzene	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
Trichloroethene	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
Dibromomethane	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
Bromodichloromethane	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
2-Chloroethyl Vinyl Ether	ND	0.011	EPA 8260C	11-22-17	11-22-17	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
Methyl Isobutyl Ketone	ND	0.0050	EPA 8260C	11-22-17	11-22-17	
Toluene	ND	0.0050	EPA 8260C	11-22-17	11-22-17	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	11-22-17	11-22-17	





Date of Report: November 27, 2017  
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 Laboratory Reference: 1711-166  
 Project: 188-002

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

Page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID: MB1122S1						
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
Tetrachloroethene	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
2-Hexanone	ND	0.0050	EPA 8260C	11-22-17	11-22-17	
Dibromochloromethane	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
Chlorobenzene	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
Ethylbenzene	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
m,p-Xylene	ND	0.0020	EPA 8260C	11-22-17	11-22-17	
o-Xylene	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
Styrene	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
Bromoform	ND	0.0050	EPA 8260C	11-22-17	11-22-17	
Isopropylbenzene	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
Bromobenzene	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
n-Propylbenzene	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
2-Chlorotoluene	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
4-Chlorotoluene	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
1,3,5-Trimethylbenzene	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
tert-Butylbenzene	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
1,2,4-Trimethylbenzene	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
sec-Butylbenzene	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
p-Isopropyltoluene	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
n-Butylbenzene	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260C	11-22-17	11-22-17	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
Hexachlorobutadiene	ND	0.0050	EPA 8260C	11-22-17	11-22-17	
Naphthalene	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>98</i>	<i>75-131</i>				
<i>Toluene-d8</i>	<i>101</i>	<i>83-126</i>				
<i>4-Bromofluorobenzene</i>	<i>97</i>	<i>78-125</i>				



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Date of Report: November 27, 2017  
 Samples Submitted: November 14, 2017  
 Laboratory Reference: 1711-166  
 Project: 188-002

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

Matrix: Soil  
 Units: mg/kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits		RPD	Limit	Flags
					Recovery				RPD		
SPIKE BLANKS											
Laboratory ID:	SB1121S1										
	SB	SBD	SB	SBD	SB	SBD					
1,1-Dichloroethene	0.0519	0.0527	0.0500	0.0500	104	105	58-126	2		20	
Benzene	0.0530	0.0536	0.0500	0.0500	106	107	72-122	1		19	
Trichloroethene	0.0446	0.0473	0.0500	0.0500	89	95	75-120	6		20	
Toluene	0.0536	0.0557	0.0500	0.0500	107	111	78-123	4		19	
Chlorobenzene	0.0514	0.0526	0.0500	0.0500	103	105	75-120	2		18	
Surrogate:											
Dibromofluoromethane					105	104	75-131				
Toluene-d8					107	102	83-126				
4-Bromofluorobenzene					109	103	78-125				



Date of Report: November 27, 2017  
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 Laboratory Reference: 1711-166  
 Project: 188-002

**VOLATILES EPA 8260C  
 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:	SB1122S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	0.0526	0.0531	0.0500	0.0500	105	106	58-126	1	20	
Benzene	0.0544	0.0532	0.0500	0.0500	109	106	72-122	2	19	
Trichloroethene	0.0464	0.0462	0.0500	0.0500	93	92	75-120	0	20	
Toluene	0.0561	0.0548	0.0500	0.0500	112	110	78-123	2	19	
Chlorobenzene	0.0522	0.0512	0.0500	0.0500	104	102	75-120	2	18	
Surrogate:										
Dibromofluoromethane					100	91	75-131			
Toluene-d8					102	95	83-126			
4-Bromofluorobenzene					99	91	78-125			



Date of Report: November 27, 2017  
 Samples Submitted: November 14, 2017  
 Laboratory Reference: 1711-166  
 Project: 188-002

**cPAHs EPA 8270D/SIM**

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>B-10-5.0-111317</b>					
<b>Laboratory ID:</b>	11-166-01					
Benzo[a]anthracene	ND	0.0069	EPA 8270D/SIM	11-16-17	11-22-17	
Chrysene	ND	0.0069	EPA 8270D/SIM	11-16-17	11-22-17	
Benzo[b]fluoranthene	ND	0.0069	EPA 8270D/SIM	11-16-17	11-22-17	
Benzo(j,k)fluoranthene	ND	0.0069	EPA 8270D/SIM	11-16-17	11-22-17	
Benzo[a]pyrene	ND	0.0069	EPA 8270D/SIM	11-16-17	11-22-17	
Indeno(1,2,3-c,d)pyrene	ND	0.0069	EPA 8270D/SIM	11-16-17	11-22-17	
Dibenz[a,h]anthracene	ND	0.0069	EPA 8270D/SIM	11-16-17	11-22-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	95	32 - 115				
Pyrene-d10	80	35 - 129				
Terphenyl-d14	100	33 - 114				



Date of Report: November 27, 2017  
 Samples Submitted: November 14, 2017  
 Laboratory Reference: 1711-166  
 Project: 188-002

**cPAHs EPA 8270D/SIM  
 METHOD BLANK QUALITY CONTROL**

Matrix: Soil  
 Units: mg/Kg

<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>Method</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Flags</b>
<hr/>						
Laboratory ID:	MB1116S1					
Benzo[a]anthracene	<b>ND</b>	0.0067	EPA 8270D/SIM	11-16-17	11-16-17	
Chrysene	<b>ND</b>	0.0067	EPA 8270D/SIM	11-16-17	11-16-17	
Benzo[b]fluoranthene	<b>ND</b>	0.0067	EPA 8270D/SIM	11-16-17	11-16-17	
Benzo[j,k]fluoranthene	<b>ND</b>	0.0067	EPA 8270D/SIM	11-16-17	11-16-17	
Benzo[a]pyrene	<b>ND</b>	0.0067	EPA 8270D/SIM	11-16-17	11-16-17	
Indeno(1,2,3-c,d)pyrene	<b>ND</b>	0.0067	EPA 8270D/SIM	11-16-17	11-16-17	
Dibenz[a,h]anthracene	<b>ND</b>	0.0067	EPA 8270D/SIM	11-16-17	11-16-17	
<hr/>						
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>100</i>	<i>32 - 115</i>				
<i>Pyrene-d10</i>	<i>101</i>	<i>35 - 129</i>				
<i>Terphenyl-d14</i>	<i>114</i>	<i>33 - 114</i>				





Date of Report: November 27, 2017  
 Samples Submitted: November 14, 2017  
 Laboratory Reference: 1711-166  
 Project: 188-002

**cPAHs 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:	11-174-02									
	MS	MSD	MS	MSD		MS	MSD			
Benzo[a]anthracene	0.0849	0.0845	0.0833	0.0833	ND	102	101	27 - 143	0	23
Chrysene	0.0828	0.0840	0.0833	0.0833	ND	99	101	22 - 130	1	24
Benzo[b]fluoranthene	0.0797	0.0819	0.0833	0.0833	ND	96	98	15 - 141	3	26
Benzo(j,k)fluoranthene	0.0846	0.0840	0.0833	0.0833	ND	102	101	42 - 112	1	24
Benzo[a]pyrene	0.0790	0.0793	0.0833	0.0833	ND	95	95	33 - 126	0	26
Indeno(1,2,3-c,d)pyrene	0.0755	0.0769	0.0833	0.0833	ND	91	92	30 - 125	2	25
Dibenz[a,h]anthracene	0.0744	0.0767	0.0833	0.0833	ND	89	92	31 - 124	3	22
Surrogate:										
2-Fluorobiphenyl						91	91	32 - 115		
Pyrene-d10						93	93	35 - 129		
Terphenyl-d14						100	100	33 - 114		



Date of Report: November 27, 2017  
 Samples Submitted: November 14, 2017  
 Laboratory Reference: 1711-166  
 Project: 188-002

### PCBs EPA 8082A

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>B-10-5.0-111317</b>					
Laboratory ID:	11-166-01					
Aroclor 1016	ND	0.052	EPA 8082A	11-15-17	11-15-17	
Aroclor 1221	ND	0.052	EPA 8082A	11-15-17	11-15-17	
Aroclor 1232	ND	0.052	EPA 8082A	11-15-17	11-15-17	
Aroclor 1242	ND	0.052	EPA 8082A	11-15-17	11-15-17	
Aroclor 1248	ND	0.052	EPA 8082A	11-15-17	11-15-17	
Aroclor 1254	ND	0.052	EPA 8082A	11-15-17	11-15-17	
Aroclor 1260	ND	0.052	EPA 8082A	11-15-17	11-15-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>DCB</i>	<i>64</i>	<i>40-134</i>				



Date of Report: November 27, 2017  
 Samples Submitted: November 14, 2017  
 Laboratory Reference: 1711-166  
 Project: 188-002

**PCBs EPA 8082A  
 QUALITY CONTROL**

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB1115S1					
Aroclor 1016	ND	0.050	EPA 8082A	11-15-17	11-15-17	
Aroclor 1221	ND	0.050	EPA 8082A	11-15-17	11-15-17	
Aroclor 1232	ND	0.050	EPA 8082A	11-15-17	11-15-17	
Aroclor 1242	ND	0.050	EPA 8082A	11-15-17	11-15-17	
Aroclor 1248	ND	0.050	EPA 8082A	11-15-17	11-15-17	
Aroclor 1254	ND	0.050	EPA 8082A	11-15-17	11-15-17	
Aroclor 1260	ND	0.050	EPA 8082A	11-15-17	11-15-17	
Surrogate:	Percent Recovery	Control Limits				
DCB	57	40-134				

Analyte	Result		Spike Level		Source	Percent	Recovery	RPD		
					Result	Recovery	Limits			
MATRIX SPIKES										
Laboratory ID:	11-166-01									
	MS	MSD	MS	MSD		MS	MSD			
Aroclor 1260	0.317	0.345	0.500	0.500	ND	63	69	34-126	8	16
Surrogate:										
DCB						64	72	40-134		



Date of Report: November 27, 2017  
Samples Submitted: November 14, 2017  
Laboratory Reference: 1711-166  
Project: 188-002

### % MOISTURE

Date Analyzed: 11-15,20&21-17

Client ID	Lab ID	% Moisture
B-10-5.0-111317	11-166-01	4
B-13-2.5-111317	11-166-03	4
B-14-2.5-111317	11-166-04	4
B-15-2.5-111317	11-166-05	6





### 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







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

## Chain of Custody

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[illegible]



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

November 28, 2017

Brani Jurista  
Farallon Consulting, LLC  
975 5th Avenue NW  
Issaquah, WA 98027

Re: Analytical Data for Project 188-002  
Laboratory Reference No. 1711-201

Dear Brani:

Enclosed are the analytical results and associated quality control data for samples submitted on November 15, 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



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OnSite Environmental, Inc. 14648 NE 95<sup>th</sup> 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: November 28, 2017  
Samples Submitted: November 15, 2017  
Laboratory Reference: 1711-201  
Project: 188-002

### **Case Narrative**

Samples were collected on November 14, 2017 and received by the laboratory on November 15, 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: November 28, 2017  
 Samples Submitted: November 15, 2017  
 Laboratory Reference: 1711-201  
 Project: 188-002

### NWTPH-Dx

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	B-16-3.0-111417					
Laboratory ID:	11-201-01					
Diesel Range Organics	ND	250	NWTPH-Dx	11-20-17	11-20-17	U1
Lube Oil	4300	260	NWTPH-Dx	11-20-17	11-20-17	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	81	50-150				
Client ID:	MW-24T-12.5-111417					
Laboratory ID:	11-201-02					
Diesel Fuel #2	180	56	NWTPH-Dx	11-20-17	11-20-17	N
Lube Oil	1100	110	NWTPH-Dx	11-20-17	11-20-17	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	80	50-150				
Client ID:	MW-24T-12.5-111417					
Laboratory ID:	11-201-02					
Diesel Fuel #2	200	28	NWTPH-Dx	11-20-17	11-20-17	N,X1
Lube Oil	800	56	NWTPH-Dx	11-20-17	11-20-17	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	91	50-150				
Client ID:	B-18-3.0-111417					
Laboratory ID:	11-201-05					
Diesel Range Organics	ND	26	NWTPH-Dx	11-20-17	11-20-17	
Lube Oil	62	52	NWTPH-Dx	11-20-17	11-20-17	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	91	50-150				
Client ID:	B-14-10.0-111417					
Laboratory ID:	11-201-08					
Diesel Range Organics	ND	26	NWTPH-Dx	11-20-17	11-20-17	
Lube Oil Range Organics	ND	53	NWTPH-Dx	11-20-17	11-20-17	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	76	50-150				
Client ID:	B-19-2.5-111417					
Laboratory ID:	11-201-11					
Diesel Range Organics	ND	540	NWTPH-Dx	11-20-17	11-21-17	U1
Lube Oil	6200	530	NWTPH-Dx	11-20-17	11-21-17	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	---	50-150				
						S



Date of Report: November 28, 2017  
 Samples Submitted: November 15, 2017  
 Laboratory Reference: 1711-201  
 Project: 188-002

# **NWTPH-Dx**

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>B-14-17.5-111417</b>					
Laboratory ID:	11-201-12					
Diesel Range Organics	<b>ND</b>	27	NWTPH-Dx	11-20-17	11-20-17	
Lube Oil Range Organics	<b>ND</b>	55	NWTPH-Dx	11-20-17	11-20-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	103	50-150				





Date of Report: November 28, 2017  
 Samples Submitted: November 15, 2017  
 Laboratory Reference: 1711-201  
 Project: 188-002

**NWTPH-Dx  
QUALITY CONTROL**

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1120S1					
Diesel Range Organics	ND	25	NWTPH-Dx	11-20-17	11-20-17	
Lube Oil Range Organics	ND	50	NWTPH-Dx	11-20-17	11-20-17	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	84	50-150				
Laboratory ID:	MB1120S1					
Diesel Range Organics	ND	25	NWTPH-Dx	11-20-17	11-20-17	X1
Lube Oil Range Organics	ND	50	NWTPH-Dx	11-20-17	11-20-17	X1
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	91	50-150				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
<b>DUPLICATE</b>								
Laboratory ID:	11-232-03							
	ORIG	DUP						
Diesel Range	ND	ND	NA	NA	NA	NA	NA	
Lube Oil Range	ND	ND	NA	NA	NA	NA	NA	
Surrogate:								
o-Terphenyl				85	75	50-150		



Date of Report: November 28, 2017  
 Samples Submitted: November 15, 2017  
 Laboratory Reference: 1711-201  
 Project: 188-002

# **VOLATILES EPA 8260C**

Page 1 of 2

Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID: B-16-3.0-111417</b>						
<b>Laboratory ID: 11-201-01</b>						
Dichlorodifluoromethane	ND	0.0014	EPA 8260C	11-21-17	11-21-17	
Chloromethane	ND	0.0053	EPA 8260C	11-21-17	11-21-17	
Vinyl Chloride	ND	0.0011	EPA 8260C	11-21-17	11-21-17	
Bromomethane	ND	0.0011	EPA 8260C	11-21-17	11-21-17	
Chloroethane	ND	0.0053	EPA 8260C	11-21-17	11-21-17	
Trichlorofluoromethane	ND	0.0011	EPA 8260C	11-21-17	11-21-17	
1,1-Dichloroethene	ND	0.0011	EPA 8260C	11-21-17	11-21-17	
Acetone	ND	0.0053	EPA 8260C	11-21-17	11-21-17	
Iodomethane	ND	0.0053	EPA 8260C	11-21-17	11-21-17	
Carbon Disulfide	ND	0.0011	EPA 8260C	11-21-17	11-21-17	
Methylene Chloride	ND	0.0053	EPA 8260C	11-21-17	11-21-17	
(trans) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	11-21-17	11-21-17	
Methyl t-Butyl Ether	ND	0.0011	EPA 8260C	11-21-17	11-21-17	
1,1-Dichloroethane	ND	0.0011	EPA 8260C	11-21-17	11-21-17	
Vinyl Acetate	ND	0.0053	EPA 8260C	11-21-17	11-21-17	
2,2-Dichloropropane	ND	0.0011	EPA 8260C	11-21-17	11-21-17	
(cis) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	11-21-17	11-21-17	
2-Butanone	ND	0.0053	EPA 8260C	11-21-17	11-21-17	
Bromochloromethane	ND	0.0011	EPA 8260C	11-21-17	11-21-17	
Chloroform	ND	0.0011	EPA 8260C	11-21-17	11-21-17	
1,1,1-Trichloroethane	ND	0.0011	EPA 8260C	11-21-17	11-21-17	
Carbon Tetrachloride	ND	0.0011	EPA 8260C	11-21-17	11-21-17	
1,1-Dichloropropene	ND	0.0011	EPA 8260C	11-21-17	11-21-17	
Benzene	ND	0.0011	EPA 8260C	11-21-17	11-21-17	
1,2-Dichloroethane	ND	0.0011	EPA 8260C	11-21-17	11-21-17	
Trichloroethene	ND	0.0011	EPA 8260C	11-21-17	11-21-17	
1,2-Dichloropropane	ND	0.0011	EPA 8260C	11-21-17	11-21-17	
Dibromomethane	ND	0.0011	EPA 8260C	11-21-17	11-21-17	
Bromodichloromethane	ND	0.0011	EPA 8260C	11-21-17	11-21-17	
2-Chloroethyl Vinyl Ether	ND	0.013	EPA 8260C	11-21-17	11-21-17	
(cis) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	11-21-17	11-21-17	
Methyl Isobutyl Ketone	ND	0.0053	EPA 8260C	11-21-17	11-21-17	
Toluene	ND	0.0053	EPA 8260C	11-21-17	11-21-17	
(trans) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	11-21-17	11-21-17	



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Date of Report: November 28, 2017  
 Samples Submitted: November 15, 2017  
 Laboratory Reference: 1711-201  
 Project: 188-002

# **VOLATILES EPA 8260C**

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>		<b>B-16-3.0-111417</b>				
Laboratory ID:		11-201-01				
1,1,2-Trichloroethane	ND	0.0011	EPA 8260C	11-21-17	11-21-17	
Tetrachloroethene	ND	0.0011	EPA 8260C	11-21-17	11-21-17	
1,3-Dichloropropane	ND	0.0011	EPA 8260C	11-21-17	11-21-17	
2-Hexanone	ND	0.0053	EPA 8260C	11-21-17	11-21-17	
Dibromochloromethane	ND	0.0011	EPA 8260C	11-21-17	11-21-17	
1,2-Dibromoethane	ND	0.0011	EPA 8260C	11-21-17	11-21-17	
Chlorobenzene	ND	0.0011	EPA 8260C	11-21-17	11-21-17	
1,1,1,2-Tetrachloroethane	ND	0.0011	EPA 8260C	11-21-17	11-21-17	
Ethylbenzene	ND	0.0011	EPA 8260C	11-21-17	11-21-17	
m,p-Xylene	ND	0.0021	EPA 8260C	11-21-17	11-21-17	
o-Xylene	ND	0.0011	EPA 8260C	11-21-17	11-21-17	
Styrene	ND	0.0011	EPA 8260C	11-21-17	11-21-17	
Bromoform	ND	0.0053	EPA 8260C	11-21-17	11-21-17	
Isopropylbenzene	ND	0.0011	EPA 8260C	11-21-17	11-21-17	
Bromobenzene	ND	0.053	EPA 8260C	11-22-17	11-22-17	
1,1,2,2-Tetrachloroethane	ND	0.053	EPA 8260C	11-22-17	11-22-17	
1,2,3-Trichloropropane	ND	0.053	EPA 8260C	11-22-17	11-22-17	
n-Propylbenzene	ND	0.053	EPA 8260C	11-22-17	11-22-17	
2-Chlorotoluene	ND	0.053	EPA 8260C	11-22-17	11-22-17	
4-Chlorotoluene	ND	0.053	EPA 8260C	11-22-17	11-22-17	
1,3,5-Trimethylbenzene	ND	0.053	EPA 8260C	11-22-17	11-22-17	
tert-Butylbenzene	ND	0.053	EPA 8260C	11-22-17	11-22-17	
1,2,4-Trimethylbenzene	ND	0.053	EPA 8260C	11-22-17	11-22-17	
sec-Butylbenzene	ND	0.053	EPA 8260C	11-22-17	11-22-17	
1,3-Dichlorobenzene	ND	0.053	EPA 8260C	11-22-17	11-22-17	
p-Isopropyltoluene	ND	0.053	EPA 8260C	11-22-17	11-22-17	
1,4-Dichlorobenzene	ND	0.053	EPA 8260C	11-22-17	11-22-17	
1,2-Dichlorobenzene	ND	0.053	EPA 8260C	11-22-17	11-22-17	
n-Butylbenzene	ND	0.053	EPA 8260C	11-22-17	11-22-17	
1,2-Dibromo-3-chloropropane	ND	0.27	EPA 8260C	11-22-17	11-22-17	
1,2,4-Trichlorobenzene	ND	0.053	EPA 8260C	11-22-17	11-22-17	
Hexachlorobutadiene	ND	0.27	EPA 8260C	11-22-17	11-22-17	
Naphthalene	ND	0.053	EPA 8260C	11-22-17	11-22-17	
1,2,3-Trichlorobenzene	ND	0.053	EPA 8260C	11-22-17	11-22-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>122</i>	<i>75-131</i>				
<i>Toluene-d8</i>	<i>104</i>	<i>83-126</i>				
<i>4-Bromofluorobenzene</i>	<i>90</i>	<i>78-125</i>				



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Date of Report: November 28, 2017  
 Samples Submitted: November 15, 2017  
 Laboratory Reference: 1711-201  
 Project: 188-002

# **VOLATILES EPA 8260C**

Page 1 of 2

Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID: B-14-10.0-111417</b>						
<b>Laboratory ID: 11-201-08</b>						
Dichlorodifluoromethane	ND	0.0014	EPA 8260C	11-21-17	11-21-17	
Chloromethane	ND	0.0052	EPA 8260C	11-21-17	11-21-17	
Vinyl Chloride	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
Bromomethane	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
Chloroethane	ND	0.0052	EPA 8260C	11-21-17	11-21-17	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
Acetone	ND	0.0052	EPA 8260C	11-21-17	11-21-17	
Iodomethane	ND	0.0052	EPA 8260C	11-21-17	11-21-17	
Carbon Disulfide	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
Methylene Chloride	ND	0.0052	EPA 8260C	11-21-17	11-21-17	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
Vinyl Acetate	ND	0.0052	EPA 8260C	11-21-17	11-21-17	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
2-Butanone	ND	0.0052	EPA 8260C	11-21-17	11-21-17	
Bromochloromethane	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
Chloroform	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
Benzene	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
Trichloroethene	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
Dibromomethane	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
Bromodichloromethane	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
2-Chloroethyl Vinyl Ether	ND	0.013	EPA 8260C	11-21-17	11-21-17	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
Methyl Isobutyl Ketone	ND	0.0052	EPA 8260C	11-21-17	11-21-17	
Toluene	ND	0.0052	EPA 8260C	11-21-17	11-21-17	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	11-21-17	11-21-17	



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

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Date of Report: November 28, 2017  
 Samples Submitted: November 15, 2017  
 Laboratory Reference: 1711-201  
 Project: 188-002

# **VOLATILES EPA 8260C**

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>		<b>B-14-10.0-111417</b>				
Laboratory ID:		11-201-08				
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
Tetrachloroethene	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
2-Hexanone	ND	0.0052	EPA 8260C	11-21-17	11-21-17	
Dibromochloromethane	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
Chlorobenzene	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
Ethylbenzene	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
m,p-Xylene	ND	0.0021	EPA 8260C	11-21-17	11-21-17	
o-Xylene	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
Styrene	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
Bromoform	ND	0.0052	EPA 8260C	11-21-17	11-21-17	
Isopropylbenzene	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
Bromobenzene	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
n-Propylbenzene	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
2-Chlorotoluene	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
4-Chlorotoluene	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
1,3,5-Trimethylbenzene	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
tert-Butylbenzene	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
1,2,4-Trimethylbenzene	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
sec-Butylbenzene	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
p-Isopropyltoluene	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
n-Butylbenzene	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
1,2-Dibromo-3-chloropropane	ND	0.0052	EPA 8260C	11-21-17	11-21-17	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
Hexachlorobutadiene	ND	0.0052	EPA 8260C	11-21-17	11-21-17	
Naphthalene	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>101</i>	<i>75-131</i>				
<i>Toluene-d8</i>	<i>96</i>	<i>83-126</i>				
<i>4-Bromofluorobenzene</i>	<i>98</i>	<i>78-125</i>				



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

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Date of Report: November 28, 2017  
 Samples Submitted: November 15, 2017  
 Laboratory Reference: 1711-201  
 Project: 188-002

# **VOLATILES EPA 8260C**

Page 1 of 2

Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>		<b>B-14-17.5-111417</b>				
<b>Laboratory ID:</b>		<b>11-201-12</b>				
Dichlorodifluoromethane	ND	0.0012	EPA 8260C	11-21-17	11-21-17	
Chloromethane	ND	0.0045	EPA 8260C	11-21-17	11-21-17	
Vinyl Chloride	ND	0.00090	EPA 8260C	11-21-17	11-21-17	
Bromomethane	ND	0.00090	EPA 8260C	11-21-17	11-21-17	
Chloroethane	ND	0.0045	EPA 8260C	11-21-17	11-21-17	
Trichlorofluoromethane	ND	0.00090	EPA 8260C	11-21-17	11-21-17	
1,1-Dichloroethene	ND	0.00090	EPA 8260C	11-21-17	11-21-17	
Acetone	ND	0.0045	EPA 8260C	11-21-17	11-21-17	
Iodomethane	ND	0.0045	EPA 8260C	11-21-17	11-21-17	
Carbon Disulfide	ND	0.00090	EPA 8260C	11-21-17	11-21-17	
Methylene Chloride	ND	0.0045	EPA 8260C	11-21-17	11-21-17	
(trans) 1,2-Dichloroethene	ND	0.00090	EPA 8260C	11-21-17	11-21-17	
Methyl t-Butyl Ether	ND	0.00090	EPA 8260C	11-21-17	11-21-17	
1,1-Dichloroethane	ND	0.00090	EPA 8260C	11-21-17	11-21-17	
Vinyl Acetate	ND	0.0045	EPA 8260C	11-21-17	11-21-17	
2,2-Dichloropropane	ND	0.00090	EPA 8260C	11-21-17	11-21-17	
(cis) 1,2-Dichloroethene	ND	0.00090	EPA 8260C	11-21-17	11-21-17	
2-Butanone	ND	0.0045	EPA 8260C	11-21-17	11-21-17	
Bromochloromethane	ND	0.00090	EPA 8260C	11-21-17	11-21-17	
Chloroform	ND	0.00090	EPA 8260C	11-21-17	11-21-17	
1,1,1-Trichloroethane	ND	0.00090	EPA 8260C	11-21-17	11-21-17	
Carbon Tetrachloride	ND	0.00090	EPA 8260C	11-21-17	11-21-17	
1,1-Dichloropropene	ND	0.00090	EPA 8260C	11-21-17	11-21-17	
Benzene	ND	0.00090	EPA 8260C	11-21-17	11-21-17	
1,2-Dichloroethane	ND	0.00090	EPA 8260C	11-21-17	11-21-17	
Trichloroethene	0.0085	0.00090	EPA 8260C	11-21-17	11-21-17	
1,2-Dichloropropane	ND	0.00090	EPA 8260C	11-21-17	11-21-17	
Dibromomethane	ND	0.00090	EPA 8260C	11-21-17	11-21-17	
Bromodichloromethane	ND	0.00090	EPA 8260C	11-21-17	11-21-17	
2-Chloroethyl Vinyl Ether	ND	0.011	EPA 8260C	11-21-17	11-21-17	
(cis) 1,3-Dichloropropene	ND	0.00090	EPA 8260C	11-21-17	11-21-17	
Methyl Isobutyl Ketone	ND	0.0045	EPA 8260C	11-21-17	11-21-17	
Toluene	ND	0.0045	EPA 8260C	11-21-17	11-21-17	
(trans) 1,3-Dichloropropene	ND	0.00090	EPA 8260C	11-21-17	11-21-17	



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Date of Report: November 28, 2017  
 Samples Submitted: November 15, 2017  
 Laboratory Reference: 1711-201  
 Project: 188-002

# **VOLATILES EPA 8260C**

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Analyte	Result	PQL	Method	Date	Date	Flags
				Prepared	Analyzed	
Client ID:	B-14-17.5-111417					
Laboratory ID:	11-201-12					
1,1,2-Trichloroethane	ND	0.00090	EPA 8260C	11-21-17	11-21-17	
Tetrachloroethene	ND	0.00090	EPA 8260C	11-21-17	11-21-17	
1,3-Dichloropropane	ND	0.00090	EPA 8260C	11-21-17	11-21-17	
2-Hexanone	ND	0.0045	EPA 8260C	11-21-17	11-21-17	
Dibromochloromethane	ND	0.00090	EPA 8260C	11-21-17	11-21-17	
1,2-Dibromoethane	ND	0.00090	EPA 8260C	11-21-17	11-21-17	
Chlorobenzene	ND	0.00090	EPA 8260C	11-21-17	11-21-17	
1,1,1,2-Tetrachloroethane	ND	0.00090	EPA 8260C	11-21-17	11-21-17	
Ethylbenzene	ND	0.00090	EPA 8260C	11-21-17	11-21-17	
m,p-Xylene	ND	0.0018	EPA 8260C	11-21-17	11-21-17	
o-Xylene	ND	0.00090	EPA 8260C	11-21-17	11-21-17	
Styrene	ND	0.00090	EPA 8260C	11-21-17	11-21-17	
Bromoform	ND	0.0045	EPA 8260C	11-21-17	11-21-17	
Isopropylbenzene	ND	0.00090	EPA 8260C	11-21-17	11-21-17	
Bromobenzene	ND	0.00090	EPA 8260C	11-21-17	11-21-17	
1,1,2,2-Tetrachloroethane	ND	0.00090	EPA 8260C	11-21-17	11-21-17	
1,2,3-Trichloropropane	ND	0.00090	EPA 8260C	11-21-17	11-21-17	
n-Propylbenzene	ND	0.00090	EPA 8260C	11-21-17	11-21-17	
2-Chlorotoluene	ND	0.00090	EPA 8260C	11-21-17	11-21-17	
4-Chlorotoluene	ND	0.00090	EPA 8260C	11-21-17	11-21-17	
1,3,5-Trimethylbenzene	ND	0.00090	EPA 8260C	11-21-17	11-21-17	
tert-Butylbenzene	ND	0.00090	EPA 8260C	11-21-17	11-21-17	
1,2,4-Trimethylbenzene	ND	0.00090	EPA 8260C	11-21-17	11-21-17	
sec-Butylbenzene	ND	0.00090	EPA 8260C	11-21-17	11-21-17	
1,3-Dichlorobenzene	ND	0.00090	EPA 8260C	11-21-17	11-21-17	
p-Isopropyltoluene	ND	0.00090	EPA 8260C	11-21-17	11-21-17	
1,4-Dichlorobenzene	ND	0.00090	EPA 8260C	11-21-17	11-21-17	
1,2-Dichlorobenzene	ND	0.00090	EPA 8260C	11-21-17	11-21-17	
n-Butylbenzene	ND	0.00090	EPA 8260C	11-21-17	11-21-17	
1,2-Dibromo-3-chloropropane	ND	0.0045	EPA 8260C	11-21-17	11-21-17	
1,2,4-Trichlorobenzene	ND	0.00090	EPA 8260C	11-21-17	11-21-17	
Hexachlorobutadiene	ND	0.0045	EPA 8260C	11-21-17	11-21-17	
Naphthalene	ND	0.00090	EPA 8260C	11-21-17	11-21-17	
1,2,3-Trichlorobenzene	ND	0.00090	EPA 8260C	11-21-17	11-21-17	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	98	75-131				
Toluene-d8	98	83-126				
4-Bromofluorobenzene	98	78-125				



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 Laboratory Reference: 1711-201  
 Project: 188-002

# **VOLATILES EPA 8260C**

Page 1 of 2

Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>B-20-2.5-111417</b>					
<b>Laboratory ID:</b>	<b>11-201-13</b>					
Dichlorodifluoromethane	ND	0.0012	EPA 8260C	11-21-17	11-21-17	
Chloromethane	ND	0.0044	EPA 8260C	11-21-17	11-21-17	
Vinyl Chloride	ND	0.00089	EPA 8260C	11-21-17	11-21-17	
Bromomethane	ND	0.00089	EPA 8260C	11-21-17	11-21-17	
Chloroethane	ND	0.0044	EPA 8260C	11-21-17	11-21-17	
Trichlorofluoromethane	ND	0.00089	EPA 8260C	11-21-17	11-21-17	
1,1-Dichloroethene	ND	0.00089	EPA 8260C	11-21-17	11-21-17	
Acetone	0.013	0.0044	EPA 8260C	11-21-17	11-21-17	
Iodomethane	ND	0.0044	EPA 8260C	11-21-17	11-21-17	
Carbon Disulfide	ND	0.00089	EPA 8260C	11-21-17	11-21-17	
Methylene Chloride	ND	0.0044	EPA 8260C	11-21-17	11-21-17	
(trans) 1,2-Dichloroethene	ND	0.00089	EPA 8260C	11-21-17	11-21-17	
Methyl t-Butyl Ether	ND	0.00089	EPA 8260C	11-21-17	11-21-17	
1,1-Dichloroethane	ND	0.00089	EPA 8260C	11-21-17	11-21-17	
Vinyl Acetate	ND	0.0044	EPA 8260C	11-21-17	11-21-17	
2,2-Dichloropropane	ND	0.00089	EPA 8260C	11-21-17	11-21-17	
(cis) 1,2-Dichloroethene	ND	0.00089	EPA 8260C	11-21-17	11-21-17	
2-Butanone	ND	0.0044	EPA 8260C	11-21-17	11-21-17	
Bromochloromethane	ND	0.00089	EPA 8260C	11-21-17	11-21-17	
Chloroform	ND	0.00089	EPA 8260C	11-21-17	11-21-17	
1,1,1-Trichloroethane	ND	0.00089	EPA 8260C	11-21-17	11-21-17	
Carbon Tetrachloride	ND	0.00089	EPA 8260C	11-21-17	11-21-17	
1,1-Dichloropropene	ND	0.00089	EPA 8260C	11-21-17	11-21-17	
Benzene	ND	0.00089	EPA 8260C	11-21-17	11-21-17	
1,2-Dichloroethane	ND	0.00089	EPA 8260C	11-21-17	11-21-17	
Trichloroethene	ND	0.00089	EPA 8260C	11-21-17	11-21-17	
1,2-Dichloropropane	ND	0.00089	EPA 8260C	11-21-17	11-21-17	
Dibromomethane	ND	0.00089	EPA 8260C	11-21-17	11-21-17	
Bromodichloromethane	ND	0.00089	EPA 8260C	11-21-17	11-21-17	
2-Chloroethyl Vinyl Ether	ND	0.011	EPA 8260C	11-21-17	11-21-17	
(cis) 1,3-Dichloropropene	ND	0.00089	EPA 8260C	11-21-17	11-21-17	
Methyl Isobutyl Ketone	ND	0.0044	EPA 8260C	11-21-17	11-21-17	
Toluene	ND	0.0044	EPA 8260C	11-21-17	11-21-17	
(trans) 1,3-Dichloropropene	ND	0.00089	EPA 8260C	11-21-17	11-21-17	



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 Laboratory Reference: 1711-201  
 Project: 188-002

# **VOLATILES EPA 8260C**

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>		<b>B-20-2.5-111417</b>				
Laboratory ID:		11-201-13				
1,1,2-Trichloroethane	ND	0.00089	EPA 8260C	11-21-17	11-21-17	
Tetrachloroethene	ND	0.00089	EPA 8260C	11-21-17	11-21-17	
1,3-Dichloropropane	ND	0.00089	EPA 8260C	11-21-17	11-21-17	
2-Hexanone	ND	0.0044	EPA 8260C	11-21-17	11-21-17	
Dibromochloromethane	ND	0.00089	EPA 8260C	11-21-17	11-21-17	
1,2-Dibromoethane	ND	0.00089	EPA 8260C	11-21-17	11-21-17	
Chlorobenzene	ND	0.00089	EPA 8260C	11-21-17	11-21-17	
1,1,1,2-Tetrachloroethane	ND	0.00089	EPA 8260C	11-21-17	11-21-17	
Ethylbenzene	ND	0.00089	EPA 8260C	11-21-17	11-21-17	
m,p-Xylene	ND	0.0018	EPA 8260C	11-21-17	11-21-17	
o-Xylene	ND	0.00089	EPA 8260C	11-21-17	11-21-17	
Styrene	ND	0.00089	EPA 8260C	11-21-17	11-21-17	
Bromoform	ND	0.0044	EPA 8260C	11-21-17	11-21-17	
Isopropylbenzene	ND	0.00089	EPA 8260C	11-21-17	11-21-17	
Bromobenzene	ND	0.00089	EPA 8260C	11-21-17	11-21-17	
1,1,2,2-Tetrachloroethane	ND	0.00089	EPA 8260C	11-21-17	11-21-17	
1,2,3-Trichloropropane	ND	0.00089	EPA 8260C	11-21-17	11-21-17	
n-Propylbenzene	ND	0.00089	EPA 8260C	11-21-17	11-21-17	
2-Chlorotoluene	ND	0.00089	EPA 8260C	11-21-17	11-21-17	
4-Chlorotoluene	ND	0.00089	EPA 8260C	11-21-17	11-21-17	
1,3,5-Trimethylbenzene	ND	0.00089	EPA 8260C	11-21-17	11-21-17	
tert-Butylbenzene	ND	0.00089	EPA 8260C	11-21-17	11-21-17	
1,2,4-Trimethylbenzene	ND	0.00089	EPA 8260C	11-21-17	11-21-17	
sec-Butylbenzene	ND	0.00089	EPA 8260C	11-21-17	11-21-17	
1,3-Dichlorobenzene	ND	0.00089	EPA 8260C	11-21-17	11-21-17	
p-Isopropyltoluene	ND	0.00089	EPA 8260C	11-21-17	11-21-17	
1,4-Dichlorobenzene	ND	0.00089	EPA 8260C	11-21-17	11-21-17	
1,2-Dichlorobenzene	ND	0.00089	EPA 8260C	11-21-17	11-21-17	
n-Butylbenzene	ND	0.00089	EPA 8260C	11-21-17	11-21-17	
1,2-Dibromo-3-chloropropane	ND	0.0044	EPA 8260C	11-21-17	11-21-17	
1,2,4-Trichlorobenzene	ND	0.00089	EPA 8260C	11-21-17	11-21-17	
Hexachlorobutadiene	ND	0.0044	EPA 8260C	11-21-17	11-21-17	
Naphthalene	ND	0.00089	EPA 8260C	11-21-17	11-21-17	
1,2,3-Trichlorobenzene	ND	0.00089	EPA 8260C	11-21-17	11-21-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>110</i>	<i>75-131</i>				
<i>Toluene-d8</i>	<i>108</i>	<i>83-126</i>				
<i>4-Bromofluorobenzene</i>	<i>107</i>	<i>78-125</i>				



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Date of Report: November 28, 2017  
 Samples Submitted: November 15, 2017  
 Laboratory Reference: 1711-201  
 Project: 188-002

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

Page 1 of 2

Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<hr/>						
Laboratory ID:	MB1121S1					
Dichlorodifluoromethane	ND	0.0013	EPA 8260C	11-21-17	11-21-17	
Chloromethane	ND	0.0050	EPA 8260C	11-21-17	11-21-17	
Vinyl Chloride	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
Bromomethane	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
Chloroethane	ND	0.0050	EPA 8260C	11-21-17	11-21-17	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
Acetone	ND	0.0050	EPA 8260C	11-21-17	11-21-17	
Iodomethane	ND	0.0050	EPA 8260C	11-21-17	11-21-17	
Carbon Disulfide	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
Methylene Chloride	ND	0.0050	EPA 8260C	11-21-17	11-21-17	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
Vinyl Acetate	ND	0.0050	EPA 8260C	11-21-17	11-21-17	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
2-Butanone	ND	0.0050	EPA 8260C	11-21-17	11-21-17	
Bromochloromethane	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
Chloroform	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
Benzene	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
Trichloroethene	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
Dibromomethane	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
Bromodichloromethane	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
2-Chloroethyl Vinyl Ether	ND	0.012	EPA 8260C	11-21-17	11-21-17	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
Methyl Isobutyl Ketone	ND	0.0050	EPA 8260C	11-21-17	11-21-17	
Toluene	ND	0.0050	EPA 8260C	11-21-17	11-21-17	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	11-21-17	11-21-17	





Date of Report: November 28, 2017  
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 Project: 188-002

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

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID: MB1121S1						
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
Tetrachloroethene	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
2-Hexanone	ND	0.0050	EPA 8260C	11-21-17	11-21-17	
Dibromochloromethane	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
Chlorobenzene	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
Ethylbenzene	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
m,p-Xylene	ND	0.0020	EPA 8260C	11-21-17	11-21-17	
o-Xylene	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
Styrene	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
Bromoform	ND	0.0050	EPA 8260C	11-21-17	11-21-17	
Isopropylbenzene	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
Bromobenzene	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
n-Propylbenzene	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
2-Chlorotoluene	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
4-Chlorotoluene	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
1,3,5-Trimethylbenzene	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
tert-Butylbenzene	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
1,2,4-Trimethylbenzene	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
sec-Butylbenzene	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
p-Isopropyltoluene	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
n-Butylbenzene	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260C	11-21-17	11-21-17	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
Hexachlorobutadiene	ND	0.0050	EPA 8260C	11-21-17	11-21-17	
Naphthalene	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	11-21-17	11-21-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>101</i>	<i>75-131</i>				
<i>Toluene-d8</i>	<i>100</i>	<i>83-126</i>				
<i>4-Bromofluorobenzene</i>	<i>102</i>	<i>78-125</i>				



OnSite Environmental, Inc. 14648 NE 95<sup>th</sup> 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: November 28, 2017  
 Samples Submitted: November 15, 2017  
 Laboratory Reference: 1711-201  
 Project: 188-002

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

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Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<hr/>						
Laboratory ID:	MB1122S1					
Dichlorodifluoromethane	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
Chloromethane	ND	0.0050	EPA 8260C	11-22-17	11-22-17	
Vinyl Chloride	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
Bromomethane	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
Chloroethane	ND	0.0050	EPA 8260C	11-22-17	11-22-17	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
Acetone	ND	0.0050	EPA 8260C	11-22-17	11-22-17	
Iodomethane	ND	0.0050	EPA 8260C	11-22-17	11-22-17	
Carbon Disulfide	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
Methylene Chloride	ND	0.0050	EPA 8260C	11-22-17	11-22-17	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
Vinyl Acetate	ND	0.0050	EPA 8260C	11-22-17	11-22-17	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
2-Butanone	ND	0.0050	EPA 8260C	11-22-17	11-22-17	
Bromochloromethane	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
Chloroform	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
Benzene	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
Trichloroethene	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
Dibromomethane	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
Bromodichloromethane	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
2-Chloroethyl Vinyl Ether	ND	0.011	EPA 8260C	11-22-17	11-22-17	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
Methyl Isobutyl Ketone	ND	0.0050	EPA 8260C	11-22-17	11-22-17	
Toluene	ND	0.0050	EPA 8260C	11-22-17	11-22-17	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	11-22-17	11-22-17	



Date of Report: November 28, 2017  
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**VOLATILES EPA 8260C**  
**METHOD BLANK QUALITY CONTROL**  
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID: MB1122S1						
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
Tetrachloroethene	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
2-Hexanone	ND	0.0050	EPA 8260C	11-22-17	11-22-17	
Dibromochloromethane	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
Chlorobenzene	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
Ethylbenzene	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
m,p-Xylene	ND	0.0020	EPA 8260C	11-22-17	11-22-17	
o-Xylene	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
Styrene	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
Bromoform	ND	0.0050	EPA 8260C	11-22-17	11-22-17	
Isopropylbenzene	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
Bromobenzene	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
n-Propylbenzene	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
2-Chlorotoluene	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
4-Chlorotoluene	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
1,3,5-Trimethylbenzene	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
tert-Butylbenzene	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
1,2,4-Trimethylbenzene	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
sec-Butylbenzene	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
p-Isopropyltoluene	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
n-Butylbenzene	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260C	11-22-17	11-22-17	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
Hexachlorobutadiene	ND	0.0050	EPA 8260C	11-22-17	11-22-17	
Naphthalene	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	11-22-17	11-22-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>98</i>	<i>75-131</i>				
<i>Toluene-d8</i>	<i>101</i>	<i>83-126</i>				
<i>4-Bromofluorobenzene</i>	<i>97</i>	<i>78-125</i>				



Date of Report: November 28, 2017  
 Samples Submitted: November 15, 2017  
 Laboratory Reference: 1711-201  
 Project: 188-002

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

Matrix: Soil  
 Units: mg/kg

Analyte	Result		Spike Level		Percent		Recovery		RPD	
					Recovery		Limits		RPD	Limit
SPIKE BLANKS										
Laboratory ID:	SB1121S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	0.0519	0.0527	0.0500	0.0500	104	105	58-126	2	20	
Benzene	0.0530	0.0536	0.0500	0.0500	106	107	72-122	1	19	
Trichloroethene	0.0446	0.0473	0.0500	0.0500	89	95	75-120	6	20	
Toluene	0.0536	0.0557	0.0500	0.0500	107	111	78-123	4	19	
Chlorobenzene	0.0514	0.0526	0.0500	0.0500	103	105	75-120	2	18	
Surrogate:										
Dibromofluoromethane					105	104	75-131			
Toluene-d8					107	102	83-126			
4-Bromofluorobenzene					109	103	78-125			



Date of Report: November 28, 2017  
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 Laboratory Reference: 1711-201  
 Project: 188-002

**VOLATILES EPA 8260C  
 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:	SB1122S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	0.0526	0.0531	0.0500	0.0500	105	106	58-126	1	20	
Benzene	0.0544	0.0532	0.0500	0.0500	109	106	72-122	2	19	
Trichloroethene	0.0464	0.0462	0.0500	0.0500	93	92	75-120	0	20	
Toluene	0.0561	0.0548	0.0500	0.0500	112	110	78-123	2	19	
Chlorobenzene	0.0522	0.0512	0.0500	0.0500	104	102	75-120	2	18	
Surrogate:										
Dibromofluoromethane					100	91	75-131			
Toluene-d8					102	95	83-126			
4-Bromofluorobenzene					99	91	78-125			





Date of Report: November 28, 2017  
 Samples Submitted: November 15, 2017  
 Laboratory Reference: 1711-201  
 Project: 188-002

**cPAHs EPA 8270D/SIM**

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>B-16-3.0-111417</b>					
Laboratory ID:	11-201-01					
Benzo[a]anthracene	<b>0.94</b>	0.14	EPA 8270D/SIM	11-20-17	11-22-17	
Chrysene	<b>1.2</b>	0.14	EPA 8270D/SIM	11-20-17	11-22-17	
Benzo[b]fluoranthene	<b>1.4</b>	0.14	EPA 8270D/SIM	11-20-17	11-22-17	
Benzo(j,k)fluoranthene	<b>0.49</b>	0.14	EPA 8270D/SIM	11-20-17	11-22-17	
Benzo[a]pyrene	<b>1.1</b>	0.14	EPA 8270D/SIM	11-20-17	11-22-17	
Indeno(1,2,3-c,d)pyrene	<b>1.0</b>	0.14	EPA 8270D/SIM	11-20-17	11-22-17	
Dibenz[a,h]anthracene	<b>0.21</b>	0.14	EPA 8270D/SIM	11-20-17	11-22-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	96	32 - 115				
Pyrene-d10	82	35 - 129				
Terphenyl-d14	97	33 - 114				



Date of Report: November 28, 2017  
 Samples Submitted: November 15, 2017  
 Laboratory Reference: 1711-201  
 Project: 188-002

**cPAHs EPA 8270D/SIM**

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID: MW-24T-12.5-111417</b>						
Laboratory ID: 11-201-02						
Benzo[a]anthracene	<b>0.057</b>	0.0075	EPA 8270D/SIM	11-20-17	11-22-17	
Chrysene	<b>0.097</b>	0.0075	EPA 8270D/SIM	11-20-17	11-22-17	
Benzo[b]fluoranthene	<b>0.060</b>	0.0075	EPA 8270D/SIM	11-20-17	11-22-17	
Benzo(j,k)fluoranthene	<b>0.020</b>	0.0075	EPA 8270D/SIM	11-20-17	11-22-17	
Benzo[a]pyrene	<b>0.053</b>	0.0075	EPA 8270D/SIM	11-20-17	11-22-17	
Indeno(1,2,3-c,d)pyrene	<b>0.034</b>	0.0075	EPA 8270D/SIM	11-20-17	11-22-17	
Dibenz[a,h]anthracene	<b>0.0099</b>	0.0075	EPA 8270D/SIM	11-20-17	11-22-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	101	32 - 115				
Pyrene-d10	84	35 - 129				
Terphenyl-d14	103	33 - 114				



Date of Report: November 28, 2017  
 Samples Submitted: November 15, 2017  
 Laboratory Reference: 1711-201  
 Project: 188-002

**cPAHs EPA 8270D/SIM  
 METHOD BLANK QUALITY CONTROL**

Matrix: Soil  
 Units: mg/Kg

<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>Method</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Flags</b>
<hr/>						
Laboratory ID:	MB1120S1					
Benzo[a]anthracene	<b>ND</b>	0.0067	EPA 8270D/SIM	11-20-17	11-21-17	
Chrysene	<b>ND</b>	0.0067	EPA 8270D/SIM	11-20-17	11-21-17	
Benzo[b]fluoranthene	<b>ND</b>	0.0067	EPA 8270D/SIM	11-20-17	11-21-17	
Benzo[j,k]fluoranthene	<b>ND</b>	0.0067	EPA 8270D/SIM	11-20-17	11-21-17	
Benzo[a]pyrene	<b>ND</b>	0.0067	EPA 8270D/SIM	11-20-17	11-21-17	
Indeno(1,2,3-c,d)pyrene	<b>ND</b>	0.0067	EPA 8270D/SIM	11-20-17	11-21-17	
Dibenz[a,h]anthracene	<b>ND</b>	0.0067	EPA 8270D/SIM	11-20-17	11-21-17	
<hr/>						
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>85</i>	<i>32 - 115</i>				
<i>Pyrene-d10</i>	<i>95</i>	<i>35 - 129</i>				
<i>Terphenyl-d14</i>	<i>105</i>	<i>33 - 114</i>				



Date of Report: November 28, 2017  
 Samples Submitted: November 15, 2017  
 Laboratory Reference: 1711-201  
 Project: 188-002

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

Matrix: Soil  
 Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB1120S1									
	SB	SBD	SB	SBD	SB	SBD				
Benzo[a]anthracene	0.0881	0.0871	0.0833	0.0833	106	105	64 - 135	1	15	
Chrysene	0.0830	0.0816	0.0833	0.0833	100	98	70 - 119	2	15	
Benzo[b]fluoranthene	0.0799	0.0791	0.0833	0.0833	96	95	54 - 135	1	15	
Benzo(j,k)fluoranthene	0.0865	0.0845	0.0833	0.0833	104	101	66 - 122	2	15	
Benzo[a]pyrene	0.0822	0.0807	0.0833	0.0833	99	97	62 - 125	2	15	
Indeno(1,2,3-c,d)pyrene	0.0837	0.0821	0.0833	0.0833	100	99	55 - 129	2	15	
Dibenz[a,h]anthracene	0.0866	0.0839	0.0833	0.0833	104	101	58 - 125	3	15	
Surrogate:										
2-Fluorobiphenyl					79	87	32 - 115			
Pyrene-d10					90	90	35 - 129			
Terphenyl-d14					98	98	33 - 114			



Date of Report: November 28, 2017  
 Samples Submitted: November 15, 2017  
 Laboratory Reference: 1711-201  
 Project: 188-002

### PCBs EPA 8082A

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID: B-16-3.0-111417</b>						
Laboratory ID: 11-201-01						
Aroclor 1016	ND	0.053	EPA 8082A	11-20-17	11-20-17	
Aroclor 1221	ND	0.053	EPA 8082A	11-20-17	11-20-17	
Aroclor 1232	ND	0.053	EPA 8082A	11-20-17	11-20-17	
Aroclor 1242	ND	0.053	EPA 8082A	11-20-17	11-20-17	
Aroclor 1248	ND	0.053	EPA 8082A	11-20-17	11-20-17	
Aroclor 1254	ND	0.053	EPA 8082A	11-20-17	11-20-17	
Aroclor 1260	ND	0.053	EPA 8082A	11-20-17	11-20-17	
<i>Surrogate: Percent Recovery Control Limits</i>						
<i>DCB 54 40-134</i>						

<b>Client ID: MW-24T-12.5-111417</b>						
Laboratory ID: 11-201-02						
Aroclor 1016	ND	0.056	EPA 8082A	11-20-17	11-20-17	
Aroclor 1221	ND	0.056	EPA 8082A	11-20-17	11-20-17	
Aroclor 1232	ND	0.056	EPA 8082A	11-20-17	11-20-17	
Aroclor 1242	ND	0.056	EPA 8082A	11-20-17	11-20-17	
Aroclor 1248	ND	0.056	EPA 8082A	11-20-17	11-20-17	
Aroclor 1254	ND	0.056	EPA 8082A	11-20-17	11-20-17	
Aroclor 1260	ND	0.056	EPA 8082A	11-20-17	11-20-17	
<i>Surrogate: Percent Recovery Control Limits</i>						
<i>DCB 71 40-134</i>						



Date of Report: November 28, 2017  
 Samples Submitted: November 15, 2017  
 Laboratory Reference: 1711-201  
 Project: 188-002

**PCBs EPA 8082A  
 QUALITY CONTROL**

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB1120S1					
Aroclor 1016	ND	0.050	EPA 8082A	11-20-17	11-20-17	
Aroclor 1221	ND	0.050	EPA 8082A	11-20-17	11-20-17	
Aroclor 1232	ND	0.050	EPA 8082A	11-20-17	11-20-17	
Aroclor 1242	ND	0.050	EPA 8082A	11-20-17	11-20-17	
Aroclor 1248	ND	0.050	EPA 8082A	11-20-17	11-20-17	
Aroclor 1254	ND	0.050	EPA 8082A	11-20-17	11-20-17	
Aroclor 1260	ND	0.050	EPA 8082A	11-20-17	11-20-17	
Surrogate:	Percent Recovery	Control Limits				
DCB	67	40-134				

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB1120S1									
	SB	SBD	SB	SBD		SB	SBD			
Aroclor 1260	0.421	0.461	0.500	0.500	N/A	84	92	56-130	9	15
Surrogate:										
DCB						79	82	40-134		





Date of Report: November 28, 2017  
Samples Submitted: November 15, 2017  
Laboratory Reference: 1711-201  
Project: 188-002

**% MOISTURE**

Date Analyzed: 11-20&21-17

Client ID	Lab ID	% Moisture
B-16-3.0-111417	11-201-01	5
MW-24T-12.5-111417	11-201-02	11
B-18-3.0-111417	11-201-05	3
B-14-10.0-111417	11-201-08	5
B-19-2.5-111417	11-201-11	5
B-14-17.5-111417	11-201-12	9
B-20-2.5-111417	11-201-13	4





### 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









**Analytical Laboratory Testing Services**  
14648 NE 95th Street • Redmond, WA 98052  
Phone: (425) 883-3881 • [www.on-site-env.com](http://www.on-site-env.com)

# Chain of Custody

Page 3 of 3

[illegible]



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

November 29, 2017

Brani Jurista  
Farallon Consulting, LLC  
975 5th Avenue NW  
Issaquah, WA 98027

Re: Analytical Data for Project 188-002  
Laboratory Reference No. 1711-218

Dear Brani:

Enclosed are the analytical results and associated quality control data for samples submitted on November 16, 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



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OnSite Environmental, Inc. 14648 NE 95<sup>th</sup> 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: November 29, 2017  
Samples Submitted: November 16, 2017  
Laboratory Reference: 1711-218  
Project: 188-002

### **Case Narrative**

Samples were collected on November 15, 2017 and received by the laboratory on November 16, 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: November 29, 2017  
 Samples Submitted: November 16, 2017  
 Laboratory Reference: 1711-218  
 Project: 188-002

### NWTPH-Dx

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	B-15-10.0-111517					
Laboratory ID:	11-218-03					
Diesel Range Organics	ND	27	NWTPH-Dx	11-20-17	11-21-17	
Lube Oil Range Organics	ND	53	NWTPH-Dx	11-20-17	11-21-17	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	90	50-150				
Client ID:	B-15-17.5-111517					
Laboratory ID:	11-218-05					
Diesel Range Organics	ND	29	NWTPH-Dx	11-20-17	11-21-17	
Lube Oil Range Organics	ND	58	NWTPH-Dx	11-20-17	11-21-17	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	74	50-150				
Client ID:	B-16-10.0-111517					
Laboratory ID:	11-218-07					
Diesel Range Organics	ND	27	NWTPH-Dx	11-20-17	11-21-17	
Lube Oil Range Organics	ND	54	NWTPH-Dx	11-20-17	11-21-17	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	107	50-150				
Client ID:	B-16-17.5-111517					
Laboratory ID:	11-218-09					
Diesel Range Organics	ND	28	NWTPH-Dx	11-20-17	11-21-17	
Lube Oil Range Organics	ND	56	NWTPH-Dx	11-20-17	11-21-17	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	82	50-150				
Client ID:	B-17-5.0-111517					
Laboratory ID:	11-218-11					
Diesel Range Organics	ND	84	NWTPH-Dx	11-20-17	11-21-17	U1
Lube Oil	1000	53	NWTPH-Dx	11-20-17	11-21-17	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	102	50-150				
Client ID:	B-17-10.0-111517					
Laboratory ID:	11-218-13					
Diesel Range Organics	ND	28	NWTPH-Dx	11-20-17	11-21-17	
Lube Oil Range Organics	ND	55	NWTPH-Dx	11-20-17	11-21-17	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	71	50-150				



Date of Report: November 29, 2017  
 Samples Submitted: November 16, 2017  
 Laboratory Reference: 1711-218  
 Project: 188-002

# **NWTPH-Dx**

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>B-17-20.0-111517</b>					
Laboratory ID:	11-218-15					
Diesel Range Organics	<b>ND</b>	29	NWTPH-Dx	11-20-17	11-21-17	
Lube Oil Range Organics	<b>ND</b>	58	NWTPH-Dx	11-20-17	11-21-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	72	50-150				



Date of Report: November 29, 2017  
 Samples Submitted: November 16, 2017  
 Laboratory Reference: 1711-218  
 Project: 188-002

**NWTPH-Dx  
 QUALITY CONTROL**

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB1120S2					
Diesel Range Organics	ND	25	NWTPH-Dx	11-20-17	11-21-17	
Lube Oil Range Organics	ND	50	NWTPH-Dx	11-20-17	11-21-17	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	93	50-150				

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE										
Laboratory ID:	11-218-07									
	ORIG	DUP								
Diesel Range	ND	ND	NA	NA		NA	NA	NA	NA	
Lube Oil Range	ND	ND	NA	NA		NA	NA	NA	NA	
Surrogate:										
o-Terphenyl						107	90	50-150		



Date of Report: November 29, 2017  
 Samples Submitted: November 16, 2017  
 Laboratory Reference: 1711-218  
 Project: 188-002

# **VOLATILES EPA 8260C**

Page 1 of 2

Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID: B-15-10.0-111517</b>						
<b>Laboratory ID: 11-218-03</b>						
Dichlorodifluoromethane	ND	0.0028	EPA 8260C	11-28-17	11-28-17	
Chloromethane	ND	0.0074	EPA 8260C	11-28-17	11-28-17	
Vinyl Chloride	ND	0.0012	EPA 8260C	11-28-17	11-28-17	
Bromomethane	ND	0.00092	EPA 8260C	11-28-17	11-28-17	
Chloroethane	ND	0.0046	EPA 8260C	11-28-17	11-28-17	
Trichlorofluoromethane	ND	0.00092	EPA 8260C	11-28-17	11-28-17	
1,1-Dichloroethene	ND	0.00092	EPA 8260C	11-28-17	11-28-17	
Acetone	ND	0.0092	EPA 8260C	11-28-17	11-28-17	
Iodomethane	ND	0.0046	EPA 8260C	11-28-17	11-28-17	
Carbon Disulfide	ND	0.00092	EPA 8260C	11-28-17	11-28-17	
Methylene Chloride	ND	0.0046	EPA 8260C	11-28-17	11-28-17	
(trans) 1,2-Dichloroethene	ND	0.00092	EPA 8260C	11-28-17	11-28-17	
Methyl t-Butyl Ether	ND	0.00092	EPA 8260C	11-28-17	11-28-17	
1,1-Dichloroethane	ND	0.00092	EPA 8260C	11-28-17	11-28-17	
Vinyl Acetate	ND	0.0046	EPA 8260C	11-28-17	11-28-17	
2,2-Dichloropropane	ND	0.00092	EPA 8260C	11-28-17	11-28-17	
(cis) 1,2-Dichloroethene	ND	0.00092	EPA 8260C	11-28-17	11-28-17	
2-Butanone	ND	0.0046	EPA 8260C	11-28-17	11-28-17	
Bromochloromethane	ND	0.00092	EPA 8260C	11-28-17	11-28-17	
Chloroform	ND	0.00092	EPA 8260C	11-28-17	11-28-17	
1,1,1-Trichloroethane	ND	0.00092	EPA 8260C	11-28-17	11-28-17	
Carbon Tetrachloride	ND	0.00092	EPA 8260C	11-28-17	11-28-17	
1,1-Dichloropropene	ND	0.00092	EPA 8260C	11-28-17	11-28-17	
Benzene	ND	0.00092	EPA 8260C	11-28-17	11-28-17	
1,2-Dichloroethane	ND	0.00092	EPA 8260C	11-28-17	11-28-17	
Trichloroethene	0.0015	0.00092	EPA 8260C	11-28-17	11-28-17	
1,2-Dichloropropane	ND	0.00092	EPA 8260C	11-28-17	11-28-17	
Dibromomethane	ND	0.00092	EPA 8260C	11-28-17	11-28-17	
Bromodichloromethane	ND	0.00092	EPA 8260C	11-28-17	11-28-17	
2-Chloroethyl Vinyl Ether	ND	0.0092	EPA 8260C	11-28-17	11-28-17	
(cis) 1,3-Dichloropropene	ND	0.00092	EPA 8260C	11-28-17	11-28-17	
Methyl Isobutyl Ketone	ND	0.0046	EPA 8260C	11-28-17	11-28-17	
Toluene	ND	0.0046	EPA 8260C	11-28-17	11-28-17	
(trans) 1,3-Dichloropropene	ND	0.00092	EPA 8260C	11-28-17	11-28-17	



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

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Date of Report: November 29, 2017  
 Samples Submitted: November 16, 2017  
 Laboratory Reference: 1711-218  
 Project: 188-002

**VOLATILES EPA 8260C**  
 Page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>		<b>B-15-10.0-111517</b>				
Laboratory ID:		11-218-03				
1,1,2-Trichloroethane	ND	0.00092	EPA 8260C	11-28-17	11-28-17	
Tetrachloroethene	ND	0.00092	EPA 8260C	11-28-17	11-28-17	
1,3-Dichloropropane	ND	0.00092	EPA 8260C	11-28-17	11-28-17	
2-Hexanone	ND	0.0046	EPA 8260C	11-28-17	11-28-17	
Dibromochloromethane	ND	0.00092	EPA 8260C	11-28-17	11-28-17	
1,2-Dibromoethane	ND	0.00092	EPA 8260C	11-28-17	11-28-17	
Chlorobenzene	ND	0.00092	EPA 8260C	11-28-17	11-28-17	
1,1,1,2-Tetrachloroethane	ND	0.00092	EPA 8260C	11-28-17	11-28-17	
Ethylbenzene	ND	0.00092	EPA 8260C	11-28-17	11-28-17	
m,p-Xylene	ND	0.0018	EPA 8260C	11-28-17	11-28-17	
o-Xylene	ND	0.00092	EPA 8260C	11-28-17	11-28-17	
Styrene	ND	0.00092	EPA 8260C	11-28-17	11-28-17	
Bromoform	ND	0.0046	EPA 8260C	11-28-17	11-28-17	
Isopropylbenzene	ND	0.00092	EPA 8260C	11-28-17	11-28-17	
Bromobenzene	ND	0.00092	EPA 8260C	11-28-17	11-28-17	
1,1,2,2-Tetrachloroethane	ND	0.00092	EPA 8260C	11-28-17	11-28-17	
1,2,3-Trichloropropane	ND	0.00092	EPA 8260C	11-28-17	11-28-17	
n-Propylbenzene	ND	0.00092	EPA 8260C	11-28-17	11-28-17	
2-Chlorotoluene	ND	0.00092	EPA 8260C	11-28-17	11-28-17	
4-Chlorotoluene	ND	0.00092	EPA 8260C	11-28-17	11-28-17	
1,3,5-Trimethylbenzene	ND	0.00092	EPA 8260C	11-28-17	11-28-17	
tert-Butylbenzene	ND	0.00092	EPA 8260C	11-28-17	11-28-17	
1,2,4-Trimethylbenzene	ND	0.00092	EPA 8260C	11-28-17	11-28-17	
sec-Butylbenzene	ND	0.00092	EPA 8260C	11-28-17	11-28-17	
1,3-Dichlorobenzene	ND	0.00092	EPA 8260C	11-28-17	11-28-17	
p-Isopropyltoluene	ND	0.00092	EPA 8260C	11-28-17	11-28-17	
1,4-Dichlorobenzene	ND	0.00092	EPA 8260C	11-28-17	11-28-17	
1,2-Dichlorobenzene	ND	0.00092	EPA 8260C	11-28-17	11-28-17	
n-Butylbenzene	ND	0.00092	EPA 8260C	11-28-17	11-28-17	
1,2-Dibromo-3-chloropropane	ND	0.0046	EPA 8260C	11-28-17	11-28-17	
1,2,4-Trichlorobenzene	ND	0.00092	EPA 8260C	11-28-17	11-28-17	
Hexachlorobutadiene	ND	0.0046	EPA 8260C	11-28-17	11-28-17	
Naphthalene	ND	0.00092	EPA 8260C	11-28-17	11-28-17	
1,2,3-Trichlorobenzene	ND	0.00092	EPA 8260C	11-28-17	11-28-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>117</i>	<i>75-131</i>				
<i>Toluene-d8</i>	<i>118</i>	<i>83-126</i>				
<i>4-Bromofluorobenzene</i>	<i>110</i>	<i>78-125</i>				



Date of Report: November 29, 2017  
 Samples Submitted: November 16, 2017  
 Laboratory Reference: 1711-218  
 Project: 188-002

# **VOLATILES EPA 8260C**

Page 1 of 2

Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID: B-15-17.5-111517</b>						
<b>Laboratory ID: 11-218-05</b>						
Dichlorodifluoromethane	ND	0.0025	EPA 8260C	11-28-17	11-28-17	
Chloromethane	ND	0.0068	EPA 8260C	11-28-17	11-28-17	
Vinyl Chloride	ND	0.0011	EPA 8260C	11-28-17	11-28-17	
Bromomethane	ND	0.00084	EPA 8260C	11-28-17	11-28-17	
Chloroethane	ND	0.0042	EPA 8260C	11-28-17	11-28-17	
Trichlorofluoromethane	ND	0.00084	EPA 8260C	11-28-17	11-28-17	
1,1-Dichloroethene	0.0026	0.00084	EPA 8260C	11-28-17	11-28-17	
Acetone	ND	0.0084	EPA 8260C	11-28-17	11-28-17	
Iodomethane	ND	0.0042	EPA 8260C	11-28-17	11-28-17	
Carbon Disulfide	ND	0.00084	EPA 8260C	11-28-17	11-28-17	
Methylene Chloride	ND	0.0042	EPA 8260C	11-28-17	11-28-17	
(trans) 1,2-Dichloroethene	ND	0.00084	EPA 8260C	11-28-17	11-28-17	
Methyl t-Butyl Ether	ND	0.00084	EPA 8260C	11-28-17	11-28-17	
1,1-Dichloroethane	ND	0.00084	EPA 8260C	11-28-17	11-28-17	
Vinyl Acetate	ND	0.0042	EPA 8260C	11-28-17	11-28-17	
2,2-Dichloropropane	ND	0.00084	EPA 8260C	11-28-17	11-28-17	
(cis) 1,2-Dichloroethene	ND	0.00084	EPA 8260C	11-28-17	11-28-17	
2-Butanone	ND	0.0042	EPA 8260C	11-28-17	11-28-17	
Bromochloromethane	ND	0.00084	EPA 8260C	11-28-17	11-28-17	
Chloroform	ND	0.00084	EPA 8260C	11-28-17	11-28-17	
1,1,1-Trichloroethane	0.0024	0.00084	EPA 8260C	11-28-17	11-28-17	
Carbon Tetrachloride	ND	0.00084	EPA 8260C	11-28-17	11-28-17	
1,1-Dichloropropene	ND	0.00084	EPA 8260C	11-28-17	11-28-17	
Benzene	ND	0.00084	EPA 8260C	11-28-17	11-28-17	
1,2-Dichloroethane	ND	0.00084	EPA 8260C	11-28-17	11-28-17	
Trichloroethene	0.0044	0.00084	EPA 8260C	11-28-17	11-28-17	
1,2-Dichloropropane	ND	0.00084	EPA 8260C	11-28-17	11-28-17	
Dibromomethane	ND	0.00084	EPA 8260C	11-28-17	11-28-17	
Bromodichloromethane	ND	0.00084	EPA 8260C	11-28-17	11-28-17	
2-Chloroethyl Vinyl Ether	ND	0.0084	EPA 8260C	11-28-17	11-28-17	
(cis) 1,3-Dichloropropene	ND	0.00084	EPA 8260C	11-28-17	11-28-17	
Methyl Isobutyl Ketone	ND	0.0042	EPA 8260C	11-28-17	11-28-17	
Toluene	ND	0.0042	EPA 8260C	11-28-17	11-28-17	
(trans) 1,3-Dichloropropene	ND	0.00084	EPA 8260C	11-28-17	11-28-17	



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Date of Report: November 29, 2017  
 Samples Submitted: November 16, 2017  
 Laboratory Reference: 1711-218  
 Project: 188-002

**VOLATILES EPA 8260C**  
 Page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>B-15-17.5-111517</b>					
Laboratory ID:	11-218-05					
1,1,2-Trichloroethane	ND	0.00084	EPA 8260C	11-28-17	11-28-17	
Tetrachloroethene	ND	0.00084	EPA 8260C	11-28-17	11-28-17	
1,3-Dichloropropane	ND	0.00084	EPA 8260C	11-28-17	11-28-17	
2-Hexanone	ND	0.0042	EPA 8260C	11-28-17	11-28-17	
Dibromochloromethane	ND	0.00084	EPA 8260C	11-28-17	11-28-17	
1,2-Dibromoethane	ND	0.00084	EPA 8260C	11-28-17	11-28-17	
Chlorobenzene	ND	0.00084	EPA 8260C	11-28-17	11-28-17	
1,1,1,2-Tetrachloroethane	ND	0.00084	EPA 8260C	11-28-17	11-28-17	
Ethylbenzene	ND	0.00084	EPA 8260C	11-28-17	11-28-17	
m,p-Xylene	ND	0.0017	EPA 8260C	11-28-17	11-28-17	
o-Xylene	ND	0.00084	EPA 8260C	11-28-17	11-28-17	
Styrene	ND	0.00084	EPA 8260C	11-28-17	11-28-17	
Bromoform	ND	0.0042	EPA 8260C	11-28-17	11-28-17	
Isopropylbenzene	ND	0.00084	EPA 8260C	11-28-17	11-28-17	
Bromobenzene	ND	0.00084	EPA 8260C	11-28-17	11-28-17	
1,1,2,2-Tetrachloroethane	ND	0.00084	EPA 8260C	11-28-17	11-28-17	
1,2,3-Trichloropropane	ND	0.00084	EPA 8260C	11-28-17	11-28-17	
n-Propylbenzene	ND	0.00084	EPA 8260C	11-28-17	11-28-17	
2-Chlorotoluene	ND	0.00084	EPA 8260C	11-28-17	11-28-17	
4-Chlorotoluene	ND	0.00084	EPA 8260C	11-28-17	11-28-17	
1,3,5-Trimethylbenzene	ND	0.00084	EPA 8260C	11-28-17	11-28-17	
tert-Butylbenzene	ND	0.00084	EPA 8260C	11-28-17	11-28-17	
1,2,4-Trimethylbenzene	ND	0.00084	EPA 8260C	11-28-17	11-28-17	
sec-Butylbenzene	ND	0.00084	EPA 8260C	11-28-17	11-28-17	
1,3-Dichlorobenzene	ND	0.00084	EPA 8260C	11-28-17	11-28-17	
p-Isopropyltoluene	ND	0.00084	EPA 8260C	11-28-17	11-28-17	
1,4-Dichlorobenzene	ND	0.00084	EPA 8260C	11-28-17	11-28-17	
1,2-Dichlorobenzene	ND	0.00084	EPA 8260C	11-28-17	11-28-17	
n-Butylbenzene	ND	0.00084	EPA 8260C	11-28-17	11-28-17	
1,2-Dibromo-3-chloropropane	ND	0.0042	EPA 8260C	11-28-17	11-28-17	
1,2,4-Trichlorobenzene	ND	0.00084	EPA 8260C	11-28-17	11-28-17	
Hexachlorobutadiene	ND	0.0042	EPA 8260C	11-28-17	11-28-17	
Naphthalene	ND	0.00084	EPA 8260C	11-28-17	11-28-17	
1,2,3-Trichlorobenzene	ND	0.00084	EPA 8260C	11-28-17	11-28-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>111</i>	<i>75-131</i>				
<i>Toluene-d8</i>	<i>109</i>	<i>83-126</i>				
<i>4-Bromofluorobenzene</i>	<i>109</i>	<i>78-125</i>				



Date of Report: November 29, 2017  
 Samples Submitted: November 16, 2017  
 Laboratory Reference: 1711-218  
 Project: 188-002

# **VOLATILES EPA 8260C**

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Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>		<b>B-16-10.0-111517</b>				
Laboratory ID:		11-218-07				
Dichlorodifluoromethane	ND	0.0022	EPA 8260C	11-28-17	11-28-17	
Chloromethane	ND	0.0059	EPA 8260C	11-28-17	11-28-17	
Vinyl Chloride	ND	0.00097	EPA 8260C	11-28-17	11-28-17	
Bromomethane	ND	0.00074	EPA 8260C	11-28-17	11-28-17	
Chloroethane	ND	0.0037	EPA 8260C	11-28-17	11-28-17	
Trichlorofluoromethane	ND	0.00074	EPA 8260C	11-28-17	11-28-17	
1,1-Dichloroethene	ND	0.00074	EPA 8260C	11-28-17	11-28-17	
Acetone	ND	0.0074	EPA 8260C	11-28-17	11-28-17	
Iodomethane	ND	0.0037	EPA 8260C	11-28-17	11-28-17	
Carbon Disulfide	ND	0.00074	EPA 8260C	11-28-17	11-28-17	
Methylene Chloride	ND	0.0037	EPA 8260C	11-28-17	11-28-17	
(trans) 1,2-Dichloroethene	ND	0.00074	EPA 8260C	11-28-17	11-28-17	
Methyl t-Butyl Ether	ND	0.00074	EPA 8260C	11-28-17	11-28-17	
1,1-Dichloroethane	ND	0.00074	EPA 8260C	11-28-17	11-28-17	
Vinyl Acetate	ND	0.0037	EPA 8260C	11-28-17	11-28-17	
2,2-Dichloropropane	ND	0.00074	EPA 8260C	11-28-17	11-28-17	
(cis) 1,2-Dichloroethene	ND	0.00074	EPA 8260C	11-28-17	11-28-17	
2-Butanone	ND	0.0037	EPA 8260C	11-28-17	11-28-17	
Bromochloromethane	ND	0.00074	EPA 8260C	11-28-17	11-28-17	
Chloroform	ND	0.00074	EPA 8260C	11-28-17	11-28-17	
1,1,1-Trichloroethane	ND	0.00074	EPA 8260C	11-28-17	11-28-17	
Carbon Tetrachloride	ND	0.00074	EPA 8260C	11-28-17	11-28-17	
1,1-Dichloropropene	ND	0.00074	EPA 8260C	11-28-17	11-28-17	
Benzene	ND	0.00074	EPA 8260C	11-28-17	11-28-17	
1,2-Dichloroethane	ND	0.00074	EPA 8260C	11-28-17	11-28-17	
Trichloroethene	0.0087	0.00074	EPA 8260C	11-28-17	11-28-17	
1,2-Dichloropropane	ND	0.00074	EPA 8260C	11-28-17	11-28-17	
Dibromomethane	ND	0.00074	EPA 8260C	11-28-17	11-28-17	
Bromodichloromethane	ND	0.00074	EPA 8260C	11-28-17	11-28-17	
2-Chloroethyl Vinyl Ether	ND	0.0074	EPA 8260C	11-28-17	11-28-17	
(cis) 1,3-Dichloropropene	ND	0.00074	EPA 8260C	11-28-17	11-28-17	
Methyl Isobutyl Ketone	ND	0.0037	EPA 8260C	11-28-17	11-28-17	
Toluene	ND	0.0037	EPA 8260C	11-28-17	11-28-17	
(trans) 1,3-Dichloropropene	ND	0.00074	EPA 8260C	11-28-17	11-28-17	



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Date of Report: November 29, 2017  
 Samples Submitted: November 16, 2017  
 Laboratory Reference: 1711-218  
 Project: 188-002

**VOLATILES EPA 8260C**  
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID: B-16-10.0-111517</b>						
Laboratory ID: 11-218-07						
1,1,2-Trichloroethane	ND	0.00074	EPA 8260C	11-28-17	11-28-17	
Tetrachloroethene	0.0018	0.00074	EPA 8260C	11-28-17	11-28-17	
1,3-Dichloropropane	ND	0.00074	EPA 8260C	11-28-17	11-28-17	
2-Hexanone	ND	0.0037	EPA 8260C	11-28-17	11-28-17	
Dibromochloromethane	ND	0.00074	EPA 8260C	11-28-17	11-28-17	
1,2-Dibromoethane	ND	0.00074	EPA 8260C	11-28-17	11-28-17	
Chlorobenzene	ND	0.00074	EPA 8260C	11-28-17	11-28-17	
1,1,1,2-Tetrachloroethane	ND	0.00074	EPA 8260C	11-28-17	11-28-17	
Ethylbenzene	ND	0.00074	EPA 8260C	11-28-17	11-28-17	
m,p-Xylene	ND	0.0015	EPA 8260C	11-28-17	11-28-17	
o-Xylene	ND	0.00074	EPA 8260C	11-28-17	11-28-17	
Styrene	ND	0.00074	EPA 8260C	11-28-17	11-28-17	
Bromoform	ND	0.0037	EPA 8260C	11-28-17	11-28-17	
Isopropylbenzene	ND	0.00074	EPA 8260C	11-28-17	11-28-17	
Bromobenzene	ND	0.00074	EPA 8260C	11-28-17	11-28-17	
1,1,2,2-Tetrachloroethane	ND	0.00074	EPA 8260C	11-28-17	11-28-17	
1,2,3-Trichloropropane	ND	0.00074	EPA 8260C	11-28-17	11-28-17	
n-Propylbenzene	ND	0.00074	EPA 8260C	11-28-17	11-28-17	
2-Chlorotoluene	ND	0.00074	EPA 8260C	11-28-17	11-28-17	
4-Chlorotoluene	ND	0.00074	EPA 8260C	11-28-17	11-28-17	
1,3,5-Trimethylbenzene	ND	0.00074	EPA 8260C	11-28-17	11-28-17	
tert-Butylbenzene	ND	0.00074	EPA 8260C	11-28-17	11-28-17	
1,2,4-Trimethylbenzene	ND	0.00074	EPA 8260C	11-28-17	11-28-17	
sec-Butylbenzene	ND	0.00074	EPA 8260C	11-28-17	11-28-17	
1,3-Dichlorobenzene	ND	0.00074	EPA 8260C	11-28-17	11-28-17	
p-Isopropyltoluene	ND	0.00074	EPA 8260C	11-28-17	11-28-17	
1,4-Dichlorobenzene	ND	0.00074	EPA 8260C	11-28-17	11-28-17	
1,2-Dichlorobenzene	ND	0.00074	EPA 8260C	11-28-17	11-28-17	
n-Butylbenzene	ND	0.00074	EPA 8260C	11-28-17	11-28-17	
1,2-Dibromo-3-chloropropane	ND	0.0037	EPA 8260C	11-28-17	11-28-17	
1,2,4-Trichlorobenzene	ND	0.00074	EPA 8260C	11-28-17	11-28-17	
Hexachlorobutadiene	ND	0.0037	EPA 8260C	11-28-17	11-28-17	
Naphthalene	ND	0.00074	EPA 8260C	11-28-17	11-28-17	
1,2,3-Trichlorobenzene	ND	0.00074	EPA 8260C	11-28-17	11-28-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
Dibromofluoromethane	114	75-131				
Toluene-d8	113	83-126				
4-Bromofluorobenzene	108	78-125				



Date of Report: November 29, 2017  
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 Project: 188-002

# **VOLATILES EPA 8260C**

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Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>		<b>B-16-17.5-111517</b>				
Laboratory ID:		11-218-09				
Dichlorodifluoromethane	ND	0.0025	EPA 8260C	11-28-17	11-28-17	
Chloromethane	ND	0.0066	EPA 8260C	11-28-17	11-28-17	
Vinyl Chloride	ND	0.0011	EPA 8260C	11-28-17	11-28-17	
Bromomethane	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
Chloroethane	ND	0.0042	EPA 8260C	11-28-17	11-28-17	
Trichlorofluoromethane	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
1,1-Dichloroethene	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
Acetone	ND	0.0083	EPA 8260C	11-28-17	11-28-17	
Iodomethane	ND	0.0042	EPA 8260C	11-28-17	11-28-17	
Carbon Disulfide	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
Methylene Chloride	ND	0.0042	EPA 8260C	11-28-17	11-28-17	
(trans) 1,2-Dichloroethene	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
Methyl t-Butyl Ether	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
1,1-Dichloroethane	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
Vinyl Acetate	ND	0.0042	EPA 8260C	11-28-17	11-28-17	
2,2-Dichloropropane	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
(cis) 1,2-Dichloroethene	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
2-Butanone	ND	0.0042	EPA 8260C	11-28-17	11-28-17	
Bromochloromethane	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
Chloroform	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
1,1,1-Trichloroethane	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
Carbon Tetrachloride	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
1,1-Dichloropropene	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
Benzene	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
1,2-Dichloroethane	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
Trichloroethene	0.0041	0.00083	EPA 8260C	11-28-17	11-28-17	
1,2-Dichloropropane	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
Dibromomethane	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
Bromodichloromethane	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
2-Chloroethyl Vinyl Ether	ND	0.0083	EPA 8260C	11-28-17	11-28-17	
(cis) 1,3-Dichloropropene	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
Methyl Isobutyl Ketone	ND	0.0042	EPA 8260C	11-28-17	11-28-17	
Toluene	ND	0.0042	EPA 8260C	11-28-17	11-28-17	
(trans) 1,3-Dichloropropene	ND	0.00083	EPA 8260C	11-28-17	11-28-17	



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Date of Report: November 29, 2017  
 Samples Submitted: November 16, 2017  
 Laboratory Reference: 1711-218  
 Project: 188-002

**VOLATILES EPA 8260C**  
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>		<b>B-16-17.5-111517</b>				
Laboratory ID:		11-218-09				
1,1,2-Trichloroethane	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
Tetrachloroethene	0.0013	0.00083	EPA 8260C	11-28-17	11-28-17	
1,3-Dichloropropane	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
2-Hexanone	ND	0.0042	EPA 8260C	11-28-17	11-28-17	
Dibromochloromethane	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
1,2-Dibromoethane	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
Chlorobenzene	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
1,1,1,2-Tetrachloroethane	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
Ethylbenzene	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
m,p-Xylene	ND	0.0017	EPA 8260C	11-28-17	11-28-17	
o-Xylene	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
Styrene	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
Bromoform	ND	0.0042	EPA 8260C	11-28-17	11-28-17	
Isopropylbenzene	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
Bromobenzene	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
1,1,2,2-Tetrachloroethane	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
1,2,3-Trichloropropane	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
n-Propylbenzene	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
2-Chlorotoluene	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
4-Chlorotoluene	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
1,3,5-Trimethylbenzene	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
tert-Butylbenzene	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
1,2,4-Trimethylbenzene	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
sec-Butylbenzene	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
1,3-Dichlorobenzene	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
p-Isopropyltoluene	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
1,4-Dichlorobenzene	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
1,2-Dichlorobenzene	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
n-Butylbenzene	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
1,2-Dibromo-3-chloropropane	ND	0.0042	EPA 8260C	11-28-17	11-28-17	
1,2,4-Trichlorobenzene	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
Hexachlorobutadiene	ND	0.0042	EPA 8260C	11-28-17	11-28-17	
Naphthalene	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
1,2,3-Trichlorobenzene	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>104</i>	<i>75-131</i>				
<i>Toluene-d8</i>	<i>103</i>	<i>83-126</i>				
<i>4-Bromofluorobenzene</i>	<i>99</i>	<i>78-125</i>				



Date of Report: November 29, 2017  
 Samples Submitted: November 16, 2017  
 Laboratory Reference: 1711-218  
 Project: 188-002

# **VOLATILES EPA 8260C**

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Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID: B-17-5.0-111517</b>						
<b>Laboratory ID: 11-218-11</b>						
Dichlorodifluoromethane	ND	0.0025	EPA 8260C	11-28-17	11-28-17	
Chloromethane	ND	0.0066	EPA 8260C	11-28-17	11-28-17	
Vinyl Chloride	ND	0.0011	EPA 8260C	11-28-17	11-28-17	
Bromomethane	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
Chloroethane	ND	0.0041	EPA 8260C	11-28-17	11-28-17	
Trichlorofluoromethane	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
1,1-Dichloroethene	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
Acetone	0.023	0.0083	EPA 8260C	11-28-17	11-28-17	
Iodomethane	ND	0.0041	EPA 8260C	11-28-17	11-28-17	
Carbon Disulfide	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
Methylene Chloride	ND	0.0041	EPA 8260C	11-28-17	11-28-17	
(trans) 1,2-Dichloroethene	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
Methyl t-Butyl Ether	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
1,1-Dichloroethane	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
Vinyl Acetate	ND	0.0041	EPA 8260C	11-28-17	11-28-17	
2,2-Dichloropropane	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
(cis) 1,2-Dichloroethene	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
2-Butanone	ND	0.0041	EPA 8260C	11-28-17	11-28-17	
Bromochloromethane	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
Chloroform	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
1,1,1-Trichloroethane	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
Carbon Tetrachloride	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
1,1-Dichloropropene	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
Benzene	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
1,2-Dichloroethane	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
Trichloroethene	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
1,2-Dichloropropane	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
Dibromomethane	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
Bromodichloromethane	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
2-Chloroethyl Vinyl Ether	ND	0.0083	EPA 8260C	11-28-17	11-28-17	
(cis) 1,3-Dichloropropene	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
Methyl Isobutyl Ketone	ND	0.0041	EPA 8260C	11-28-17	11-28-17	
Toluene	ND	0.0041	EPA 8260C	11-28-17	11-28-17	
(trans) 1,3-Dichloropropene	ND	0.00083	EPA 8260C	11-28-17	11-28-17	



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

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Date of Report: November 29, 2017  
 Samples Submitted: November 16, 2017  
 Laboratory Reference: 1711-218  
 Project: 188-002

**VOLATILES EPA 8260C**  
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>		<b>B-17-5.0-111517</b>				
Laboratory ID:		11-218-11				
1,1,2-Trichloroethane	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
Tetrachloroethene	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
1,3-Dichloropropane	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
2-Hexanone	ND	0.0041	EPA 8260C	11-28-17	11-28-17	
Dibromochloromethane	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
1,2-Dibromoethane	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
Chlorobenzene	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
1,1,1,2-Tetrachloroethane	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
Ethylbenzene	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
m,p-Xylene	ND	0.0017	EPA 8260C	11-28-17	11-28-17	
o-Xylene	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
Styrene	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
Bromoform	ND	0.0041	EPA 8260C	11-28-17	11-28-17	
Isopropylbenzene	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
Bromobenzene	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
1,1,2,2-Tetrachloroethane	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
1,2,3-Trichloropropane	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
n-Propylbenzene	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
2-Chlorotoluene	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
4-Chlorotoluene	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
1,3,5-Trimethylbenzene	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
tert-Butylbenzene	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
1,2,4-Trimethylbenzene	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
sec-Butylbenzene	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
1,3-Dichlorobenzene	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
p-Isopropyltoluene	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
1,4-Dichlorobenzene	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
1,2-Dichlorobenzene	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
n-Butylbenzene	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
1,2-Dibromo-3-chloropropane	ND	0.0041	EPA 8260C	11-28-17	11-28-17	
1,2,4-Trichlorobenzene	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
Hexachlorobutadiene	ND	0.0041	EPA 8260C	11-28-17	11-28-17	
Naphthalene	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
1,2,3-Trichlorobenzene	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>101</i>	<i>75-131</i>				
<i>Toluene-d8</i>	<i>102</i>	<i>83-126</i>				
<i>4-Bromofluorobenzene</i>	<i>95</i>	<i>78-125</i>				



Date of Report: November 29, 2017  
 Samples Submitted: November 16, 2017  
 Laboratory Reference: 1711-218  
 Project: 188-002

# **VOLATILES EPA 8260C**

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Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID: B-17-10.0-111517</b>						
<b>Laboratory ID: 11-218-13</b>						
Dichlorodifluoromethane	ND	0.0022	EPA 8260C	11-28-17	11-28-17	
Chloromethane	ND	0.0057	EPA 8260C	11-28-17	11-28-17	
Vinyl Chloride	ND	0.00093	EPA 8260C	11-28-17	11-28-17	
Bromomethane	ND	0.00072	EPA 8260C	11-28-17	11-28-17	
Chloroethane	ND	0.0036	EPA 8260C	11-28-17	11-28-17	
Trichlorofluoromethane	ND	0.00072	EPA 8260C	11-28-17	11-28-17	
1,1-Dichloroethene	ND	0.00072	EPA 8260C	11-28-17	11-28-17	
Acetone	ND	0.0072	EPA 8260C	11-28-17	11-28-17	
Iodomethane	ND	0.0036	EPA 8260C	11-28-17	11-28-17	
Carbon Disulfide	ND	0.00072	EPA 8260C	11-28-17	11-28-17	
Methylene Chloride	ND	0.0036	EPA 8260C	11-28-17	11-28-17	
(trans) 1,2-Dichloroethene	ND	0.00072	EPA 8260C	11-28-17	11-28-17	
Methyl t-Butyl Ether	ND	0.00072	EPA 8260C	11-28-17	11-28-17	
1,1-Dichloroethane	ND	0.00072	EPA 8260C	11-28-17	11-28-17	
Vinyl Acetate	ND	0.0036	EPA 8260C	11-28-17	11-28-17	
2,2-Dichloropropane	ND	0.00072	EPA 8260C	11-28-17	11-28-17	
(cis) 1,2-Dichloroethene	ND	0.00072	EPA 8260C	11-28-17	11-28-17	
2-Butanone	ND	0.0036	EPA 8260C	11-28-17	11-28-17	
Bromochloromethane	ND	0.00072	EPA 8260C	11-28-17	11-28-17	
Chloroform	ND	0.00072	EPA 8260C	11-28-17	11-28-17	
1,1,1-Trichloroethane	ND	0.00072	EPA 8260C	11-28-17	11-28-17	
Carbon Tetrachloride	ND	0.00072	EPA 8260C	11-28-17	11-28-17	
1,1-Dichloropropene	ND	0.00072	EPA 8260C	11-28-17	11-28-17	
Benzene	ND	0.00072	EPA 8260C	11-28-17	11-28-17	
1,2-Dichloroethane	ND	0.00072	EPA 8260C	11-28-17	11-28-17	
Trichloroethene	ND	0.00072	EPA 8260C	11-28-17	11-28-17	
1,2-Dichloropropane	ND	0.00072	EPA 8260C	11-28-17	11-28-17	
Dibromomethane	ND	0.00072	EPA 8260C	11-28-17	11-28-17	
Bromodichloromethane	ND	0.00072	EPA 8260C	11-28-17	11-28-17	
2-Chloroethyl Vinyl Ether	ND	0.0072	EPA 8260C	11-28-17	11-28-17	
(cis) 1,3-Dichloropropene	ND	0.00072	EPA 8260C	11-28-17	11-28-17	
Methyl Isobutyl Ketone	ND	0.0036	EPA 8260C	11-28-17	11-28-17	
Toluene	ND	0.0036	EPA 8260C	11-28-17	11-28-17	
(trans) 1,3-Dichloropropene	ND	0.00072	EPA 8260C	11-28-17	11-28-17	



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Date of Report: November 29, 2017  
 Samples Submitted: November 16, 2017  
 Laboratory Reference: 1711-218  
 Project: 188-002

**VOLATILES EPA 8260C**  
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>		<b>B-17-10.0-111517</b>				
Laboratory ID:		11-218-13				
1,1,2-Trichloroethane	ND	0.00072	EPA 8260C	11-28-17	11-28-17	
Tetrachloroethene	ND	0.00072	EPA 8260C	11-28-17	11-28-17	
1,3-Dichloropropane	ND	0.00072	EPA 8260C	11-28-17	11-28-17	
2-Hexanone	ND	0.0036	EPA 8260C	11-28-17	11-28-17	
Dibromochloromethane	ND	0.00072	EPA 8260C	11-28-17	11-28-17	
1,2-Dibromoethane	ND	0.00072	EPA 8260C	11-28-17	11-28-17	
Chlorobenzene	ND	0.00072	EPA 8260C	11-28-17	11-28-17	
1,1,1,2-Tetrachloroethane	ND	0.00072	EPA 8260C	11-28-17	11-28-17	
Ethylbenzene	ND	0.00072	EPA 8260C	11-28-17	11-28-17	
m,p-Xylene	ND	0.0014	EPA 8260C	11-28-17	11-28-17	
o-Xylene	ND	0.00072	EPA 8260C	11-28-17	11-28-17	
Styrene	ND	0.00072	EPA 8260C	11-28-17	11-28-17	
Bromoform	ND	0.0036	EPA 8260C	11-28-17	11-28-17	
Isopropylbenzene	ND	0.00072	EPA 8260C	11-28-17	11-28-17	
Bromobenzene	ND	0.00072	EPA 8260C	11-28-17	11-28-17	
1,1,2,2-Tetrachloroethane	ND	0.00072	EPA 8260C	11-28-17	11-28-17	
1,2,3-Trichloropropane	ND	0.00072	EPA 8260C	11-28-17	11-28-17	
n-Propylbenzene	ND	0.00072	EPA 8260C	11-28-17	11-28-17	
2-Chlorotoluene	ND	0.00072	EPA 8260C	11-28-17	11-28-17	
4-Chlorotoluene	ND	0.00072	EPA 8260C	11-28-17	11-28-17	
1,3,5-Trimethylbenzene	ND	0.00072	EPA 8260C	11-28-17	11-28-17	
tert-Butylbenzene	ND	0.00072	EPA 8260C	11-28-17	11-28-17	
1,2,4-Trimethylbenzene	ND	0.00072	EPA 8260C	11-28-17	11-28-17	
sec-Butylbenzene	ND	0.00072	EPA 8260C	11-28-17	11-28-17	
1,3-Dichlorobenzene	ND	0.00072	EPA 8260C	11-28-17	11-28-17	
p-Isopropyltoluene	ND	0.00072	EPA 8260C	11-28-17	11-28-17	
1,4-Dichlorobenzene	ND	0.00072	EPA 8260C	11-28-17	11-28-17	
1,2-Dichlorobenzene	ND	0.00072	EPA 8260C	11-28-17	11-28-17	
n-Butylbenzene	ND	0.00072	EPA 8260C	11-28-17	11-28-17	
1,2-Dibromo-3-chloropropane	ND	0.0036	EPA 8260C	11-28-17	11-28-17	
1,2,4-Trichlorobenzene	ND	0.00072	EPA 8260C	11-28-17	11-28-17	
Hexachlorobutadiene	ND	0.0036	EPA 8260C	11-28-17	11-28-17	
Naphthalene	ND	0.00072	EPA 8260C	11-28-17	11-28-17	
1,2,3-Trichlorobenzene	ND	0.00072	EPA 8260C	11-28-17	11-28-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>119</i>	<i>75-131</i>				
<i>Toluene-d8</i>	<i>120</i>	<i>83-126</i>				
<i>4-Bromofluorobenzene</i>	<i>114</i>	<i>78-125</i>				



Date of Report: November 29, 2017  
 Samples Submitted: November 16, 2017  
 Laboratory Reference: 1711-218  
 Project: 188-002

# **VOLATILES EPA 8260C**

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Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID: B-17-20.0-111517</b>						
<b>Laboratory ID: 11-218-15</b>						
Dichlorodifluoromethane	ND	0.0025	EPA 8260C	11-28-17	11-28-17	
Chloromethane	ND	0.0067	EPA 8260C	11-28-17	11-28-17	
Vinyl Chloride	ND	0.0011	EPA 8260C	11-28-17	11-28-17	
Bromomethane	ND	0.00084	EPA 8260C	11-28-17	11-28-17	
Chloroethane	ND	0.0042	EPA 8260C	11-28-17	11-28-17	
Trichlorofluoromethane	ND	0.00084	EPA 8260C	11-28-17	11-28-17	
1,1-Dichloroethene	ND	0.00084	EPA 8260C	11-28-17	11-28-17	
Acetone	ND	0.0084	EPA 8260C	11-28-17	11-28-17	
Iodomethane	ND	0.0042	EPA 8260C	11-28-17	11-28-17	
Carbon Disulfide	ND	0.00084	EPA 8260C	11-28-17	11-28-17	
Methylene Chloride	ND	0.0042	EPA 8260C	11-28-17	11-28-17	
(trans) 1,2-Dichloroethene	ND	0.00084	EPA 8260C	11-28-17	11-28-17	
Methyl t-Butyl Ether	ND	0.00084	EPA 8260C	11-28-17	11-28-17	
1,1-Dichloroethane	ND	0.00084	EPA 8260C	11-28-17	11-28-17	
Vinyl Acetate	ND	0.0042	EPA 8260C	11-28-17	11-28-17	
2,2-Dichloropropane	ND	0.00084	EPA 8260C	11-28-17	11-28-17	
(cis) 1,2-Dichloroethene	ND	0.00084	EPA 8260C	11-28-17	11-28-17	
2-Butanone	ND	0.0042	EPA 8260C	11-28-17	11-28-17	
Bromochloromethane	ND	0.00084	EPA 8260C	11-28-17	11-28-17	
Chloroform	ND	0.00084	EPA 8260C	11-28-17	11-28-17	
1,1,1-Trichloroethane	ND	0.00084	EPA 8260C	11-28-17	11-28-17	
Carbon Tetrachloride	ND	0.00084	EPA 8260C	11-28-17	11-28-17	
1,1-Dichloropropene	ND	0.00084	EPA 8260C	11-28-17	11-28-17	
Benzene	ND	0.00084	EPA 8260C	11-28-17	11-28-17	
1,2-Dichloroethane	ND	0.00084	EPA 8260C	11-28-17	11-28-17	
Trichloroethene	0.0068	0.00084	EPA 8260C	11-28-17	11-28-17	
1,2-Dichloropropane	ND	0.00084	EPA 8260C	11-28-17	11-28-17	
Dibromomethane	ND	0.00084	EPA 8260C	11-28-17	11-28-17	
Bromodichloromethane	ND	0.00084	EPA 8260C	11-28-17	11-28-17	
2-Chloroethyl Vinyl Ether	ND	0.0084	EPA 8260C	11-28-17	11-28-17	
(cis) 1,3-Dichloropropene	ND	0.00084	EPA 8260C	11-28-17	11-28-17	
Methyl Isobutyl Ketone	ND	0.0042	EPA 8260C	11-28-17	11-28-17	
Toluene	ND	0.0042	EPA 8260C	11-28-17	11-28-17	
(trans) 1,3-Dichloropropene	ND	0.00084	EPA 8260C	11-28-17	11-28-17	



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Date of Report: November 29, 2017  
 Samples Submitted: November 16, 2017  
 Laboratory Reference: 1711-218  
 Project: 188-002

# **VOLATILES EPA 8260C**

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>		<b>B-17-20.0-111517</b>				
Laboratory ID:		11-218-15				
1,1,2-Trichloroethane	ND	0.00084	EPA 8260C	11-28-17	11-28-17	
Tetrachloroethene	0.0016	0.00084	EPA 8260C	11-28-17	11-28-17	
1,3-Dichloropropane	ND	0.00084	EPA 8260C	11-28-17	11-28-17	
2-Hexanone	ND	0.0042	EPA 8260C	11-28-17	11-28-17	
Dibromochloromethane	ND	0.00084	EPA 8260C	11-28-17	11-28-17	
1,2-Dibromoethane	ND	0.00084	EPA 8260C	11-28-17	11-28-17	
Chlorobenzene	ND	0.00084	EPA 8260C	11-28-17	11-28-17	
1,1,1,2-Tetrachloroethane	ND	0.00084	EPA 8260C	11-28-17	11-28-17	
Ethylbenzene	ND	0.00084	EPA 8260C	11-28-17	11-28-17	
m,p-Xylene	ND	0.0017	EPA 8260C	11-28-17	11-28-17	
o-Xylene	ND	0.00084	EPA 8260C	11-28-17	11-28-17	
Styrene	ND	0.00084	EPA 8260C	11-28-17	11-28-17	
Bromoform	ND	0.0042	EPA 8260C	11-28-17	11-28-17	
Isopropylbenzene	ND	0.00084	EPA 8260C	11-28-17	11-28-17	
Bromobenzene	ND	0.00084	EPA 8260C	11-28-17	11-28-17	
1,1,2,2-Tetrachloroethane	ND	0.00084	EPA 8260C	11-28-17	11-28-17	
1,2,3-Trichloropropane	ND	0.00084	EPA 8260C	11-28-17	11-28-17	
n-Propylbenzene	ND	0.00084	EPA 8260C	11-28-17	11-28-17	
2-Chlorotoluene	ND	0.00084	EPA 8260C	11-28-17	11-28-17	
4-Chlorotoluene	ND	0.00084	EPA 8260C	11-28-17	11-28-17	
1,3,5-Trimethylbenzene	ND	0.00084	EPA 8260C	11-28-17	11-28-17	
tert-Butylbenzene	ND	0.00084	EPA 8260C	11-28-17	11-28-17	
1,2,4-Trimethylbenzene	ND	0.00084	EPA 8260C	11-28-17	11-28-17	
sec-Butylbenzene	ND	0.00084	EPA 8260C	11-28-17	11-28-17	
1,3-Dichlorobenzene	ND	0.00084	EPA 8260C	11-28-17	11-28-17	
p-Isopropyltoluene	ND	0.00084	EPA 8260C	11-28-17	11-28-17	
1,4-Dichlorobenzene	ND	0.00084	EPA 8260C	11-28-17	11-28-17	
1,2-Dichlorobenzene	ND	0.00084	EPA 8260C	11-28-17	11-28-17	
n-Butylbenzene	ND	0.00084	EPA 8260C	11-28-17	11-28-17	
1,2-Dibromo-3-chloropropane	ND	0.0042	EPA 8260C	11-28-17	11-28-17	
1,2,4-Trichlorobenzene	ND	0.00084	EPA 8260C	11-28-17	11-28-17	
Hexachlorobutadiene	ND	0.0042	EPA 8260C	11-28-17	11-28-17	
Naphthalene	ND	0.00084	EPA 8260C	11-28-17	11-28-17	
1,2,3-Trichlorobenzene	ND	0.00084	EPA 8260C	11-28-17	11-28-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>115</i>	<i>75-131</i>				
<i>Toluene-d8</i>	<i>119</i>	<i>83-126</i>				
<i>4-Bromofluorobenzene</i>	<i>116</i>	<i>78-125</i>				



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Date of Report: November 29, 2017  
 Samples Submitted: November 16, 2017  
 Laboratory Reference: 1711-218  
 Project: 188-002

# **VOLATILES EPA 8260C**

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Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID: B-20-10.0-111517</b>						
<b>Laboratory ID: 11-218-18</b>						
Dichlorodifluoromethane	ND	0.0033	EPA 8260C	11-28-17	11-28-17	
Chloromethane	ND	0.0088	EPA 8260C	11-28-17	11-28-17	
Vinyl Chloride	ND	0.0014	EPA 8260C	11-28-17	11-28-17	
Bromomethane	ND	0.0011	EPA 8260C	11-28-17	11-28-17	
Chloroethane	ND	0.0055	EPA 8260C	11-28-17	11-28-17	
Trichlorofluoromethane	ND	0.0011	EPA 8260C	11-28-17	11-28-17	
1,1-Dichloroethene	ND	0.0011	EPA 8260C	11-28-17	11-28-17	
Acetone	ND	0.011	EPA 8260C	11-28-17	11-28-17	
Iodomethane	ND	0.0055	EPA 8260C	11-28-17	11-28-17	
Carbon Disulfide	ND	0.0011	EPA 8260C	11-28-17	11-28-17	
Methylene Chloride	ND	0.0055	EPA 8260C	11-28-17	11-28-17	
(trans) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	11-28-17	11-28-17	
Methyl t-Butyl Ether	ND	0.0011	EPA 8260C	11-28-17	11-28-17	
1,1-Dichloroethane	ND	0.0011	EPA 8260C	11-28-17	11-28-17	
Vinyl Acetate	ND	0.0055	EPA 8260C	11-28-17	11-28-17	
2,2-Dichloropropane	ND	0.0011	EPA 8260C	11-28-17	11-28-17	
(cis) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	11-28-17	11-28-17	
2-Butanone	ND	0.0055	EPA 8260C	11-28-17	11-28-17	
Bromochloromethane	ND	0.0011	EPA 8260C	11-28-17	11-28-17	
Chloroform	ND	0.0011	EPA 8260C	11-28-17	11-28-17	
1,1,1-Trichloroethane	ND	0.0011	EPA 8260C	11-28-17	11-28-17	
Carbon Tetrachloride	ND	0.0011	EPA 8260C	11-28-17	11-28-17	
1,1-Dichloropropene	ND	0.0011	EPA 8260C	11-28-17	11-28-17	
Benzene	ND	0.0011	EPA 8260C	11-28-17	11-28-17	
1,2-Dichloroethane	ND	0.0011	EPA 8260C	11-28-17	11-28-17	
Trichloroethene	ND	0.0011	EPA 8260C	11-28-17	11-28-17	
1,2-Dichloropropane	ND	0.0011	EPA 8260C	11-28-17	11-28-17	
Dibromomethane	ND	0.0011	EPA 8260C	11-28-17	11-28-17	
Bromodichloromethane	ND	0.0011	EPA 8260C	11-28-17	11-28-17	
2-Chloroethyl Vinyl Ether	ND	0.011	EPA 8260C	11-28-17	11-28-17	
(cis) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	11-28-17	11-28-17	
Methyl Isobutyl Ketone	ND	0.0055	EPA 8260C	11-28-17	11-28-17	
Toluene	ND	0.0055	EPA 8260C	11-28-17	11-28-17	
(trans) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	11-28-17	11-28-17	



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

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Date of Report: November 29, 2017  
 Samples Submitted: November 16, 2017  
 Laboratory Reference: 1711-218  
 Project: 188-002

**VOLATILES EPA 8260C**  
 Page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>		<b>B-20-10.0-111517</b>				
Laboratory ID:		11-218-18				
1,1,2-Trichloroethane	ND	0.0011	EPA 8260C	11-28-17	11-28-17	
Tetrachloroethene	ND	0.0011	EPA 8260C	11-28-17	11-28-17	
1,3-Dichloropropane	ND	0.0011	EPA 8260C	11-28-17	11-28-17	
2-Hexanone	ND	0.0055	EPA 8260C	11-28-17	11-28-17	
Dibromochloromethane	ND	0.0011	EPA 8260C	11-28-17	11-28-17	
1,2-Dibromoethane	ND	0.0011	EPA 8260C	11-28-17	11-28-17	
Chlorobenzene	ND	0.0011	EPA 8260C	11-28-17	11-28-17	
1,1,1,2-Tetrachloroethane	ND	0.0011	EPA 8260C	11-28-17	11-28-17	
Ethylbenzene	ND	0.0011	EPA 8260C	11-28-17	11-28-17	
m,p-Xylene	ND	0.0022	EPA 8260C	11-28-17	11-28-17	
o-Xylene	ND	0.0011	EPA 8260C	11-28-17	11-28-17	
Styrene	ND	0.0011	EPA 8260C	11-28-17	11-28-17	
Bromoform	ND	0.0055	EPA 8260C	11-28-17	11-28-17	
Isopropylbenzene	ND	0.0011	EPA 8260C	11-28-17	11-28-17	
Bromobenzene	ND	0.0011	EPA 8260C	11-28-17	11-28-17	
1,1,2,2-Tetrachloroethane	ND	0.0011	EPA 8260C	11-28-17	11-28-17	
1,2,3-Trichloropropane	ND	0.0011	EPA 8260C	11-28-17	11-28-17	
n-Propylbenzene	ND	0.0011	EPA 8260C	11-28-17	11-28-17	
2-Chlorotoluene	ND	0.0011	EPA 8260C	11-28-17	11-28-17	
4-Chlorotoluene	ND	0.0011	EPA 8260C	11-28-17	11-28-17	
1,3,5-Trimethylbenzene	ND	0.0011	EPA 8260C	11-28-17	11-28-17	
tert-Butylbenzene	ND	0.0011	EPA 8260C	11-28-17	11-28-17	
1,2,4-Trimethylbenzene	ND	0.0011	EPA 8260C	11-28-17	11-28-17	
sec-Butylbenzene	ND	0.0011	EPA 8260C	11-28-17	11-28-17	
1,3-Dichlorobenzene	ND	0.0011	EPA 8260C	11-28-17	11-28-17	
p-Isopropyltoluene	ND	0.0011	EPA 8260C	11-28-17	11-28-17	
1,4-Dichlorobenzene	ND	0.0011	EPA 8260C	11-28-17	11-28-17	
1,2-Dichlorobenzene	ND	0.0011	EPA 8260C	11-28-17	11-28-17	
n-Butylbenzene	ND	0.0011	EPA 8260C	11-28-17	11-28-17	
1,2-Dibromo-3-chloropropane	ND	0.0055	EPA 8260C	11-28-17	11-28-17	
1,2,4-Trichlorobenzene	ND	0.0011	EPA 8260C	11-28-17	11-28-17	
Hexachlorobutadiene	ND	0.0055	EPA 8260C	11-28-17	11-28-17	
Naphthalene	ND	0.0011	EPA 8260C	11-28-17	11-28-17	
1,2,3-Trichlorobenzene	ND	0.0011	EPA 8260C	11-28-17	11-28-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>117</i>	<i>75-131</i>				
<i>Toluene-d8</i>	<i>120</i>	<i>83-126</i>				
<i>4-Bromofluorobenzene</i>	<i>113</i>	<i>78-125</i>				



Date of Report: November 29, 2017  
 Samples Submitted: November 16, 2017  
 Laboratory Reference: 1711-218  
 Project: 188-002

# **VOLATILES EPA 8260C**

Page 1 of 2

Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID: B-20-17.5-111517</b>						
Laboratory ID: 11-218-21						
Dichlorodifluoromethane	ND	0.0030	EPA 8260C	11-28-17	11-28-17	
Chloromethane	ND	0.0079	EPA 8260C	11-28-17	11-28-17	
Vinyl Chloride	ND	0.0013	EPA 8260C	11-28-17	11-28-17	
Bromomethane	ND	0.00099	EPA 8260C	11-28-17	11-28-17	
Chloroethane	ND	0.0049	EPA 8260C	11-28-17	11-28-17	
Trichlorofluoromethane	ND	0.00099	EPA 8260C	11-28-17	11-28-17	
1,1-Dichloroethene	ND	0.00099	EPA 8260C	11-28-17	11-28-17	
Acetone	ND	0.0099	EPA 8260C	11-28-17	11-28-17	
Iodomethane	ND	0.0049	EPA 8260C	11-28-17	11-28-17	
Carbon Disulfide	ND	0.00099	EPA 8260C	11-28-17	11-28-17	
Methylene Chloride	ND	0.0049	EPA 8260C	11-28-17	11-28-17	
(trans) 1,2-Dichloroethene	ND	0.00099	EPA 8260C	11-28-17	11-28-17	
Methyl t-Butyl Ether	ND	0.00099	EPA 8260C	11-28-17	11-28-17	
1,1-Dichloroethane	ND	0.00099	EPA 8260C	11-28-17	11-28-17	
Vinyl Acetate	ND	0.0049	EPA 8260C	11-28-17	11-28-17	
2,2-Dichloropropane	ND	0.00099	EPA 8260C	11-28-17	11-28-17	
(cis) 1,2-Dichloroethene	ND	0.00099	EPA 8260C	11-28-17	11-28-17	
2-Butanone	ND	0.0049	EPA 8260C	11-28-17	11-28-17	
Bromochloromethane	ND	0.00099	EPA 8260C	11-28-17	11-28-17	
Chloroform	ND	0.00099	EPA 8260C	11-28-17	11-28-17	
1,1,1-Trichloroethane	ND	0.00099	EPA 8260C	11-28-17	11-28-17	
Carbon Tetrachloride	ND	0.00099	EPA 8260C	11-28-17	11-28-17	
1,1-Dichloropropene	ND	0.00099	EPA 8260C	11-28-17	11-28-17	
Benzene	ND	0.00099	EPA 8260C	11-28-17	11-28-17	
1,2-Dichloroethane	ND	0.00099	EPA 8260C	11-28-17	11-28-17	
Trichloroethene	0.0039	0.00099	EPA 8260C	11-28-17	11-28-17	
1,2-Dichloropropane	ND	0.00099	EPA 8260C	11-28-17	11-28-17	
Dibromomethane	ND	0.00099	EPA 8260C	11-28-17	11-28-17	
Bromodichloromethane	ND	0.00099	EPA 8260C	11-28-17	11-28-17	
2-Chloroethyl Vinyl Ether	ND	0.0099	EPA 8260C	11-28-17	11-28-17	
(cis) 1,3-Dichloropropene	ND	0.00099	EPA 8260C	11-28-17	11-28-17	
Methyl Isobutyl Ketone	ND	0.0049	EPA 8260C	11-28-17	11-28-17	
Toluene	ND	0.0049	EPA 8260C	11-28-17	11-28-17	
(trans) 1,3-Dichloropropene	ND	0.00099	EPA 8260C	11-28-17	11-28-17	



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

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Date of Report: November 29, 2017  
 Samples Submitted: November 16, 2017  
 Laboratory Reference: 1711-218  
 Project: 188-002

# **VOLATILES EPA 8260C**

Page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>		<b>B-20-17.5-111517</b>				
Laboratory ID:		11-218-21				
1,1,2-Trichloroethane	ND	0.00099	EPA 8260C	11-28-17	11-28-17	
Tetrachloroethene	ND	0.00099	EPA 8260C	11-28-17	11-28-17	
1,3-Dichloropropane	ND	0.00099	EPA 8260C	11-28-17	11-28-17	
2-Hexanone	ND	0.0049	EPA 8260C	11-28-17	11-28-17	
Dibromochloromethane	ND	0.00099	EPA 8260C	11-28-17	11-28-17	
1,2-Dibromoethane	ND	0.00099	EPA 8260C	11-28-17	11-28-17	
Chlorobenzene	ND	0.00099	EPA 8260C	11-28-17	11-28-17	
1,1,1,2-Tetrachloroethane	ND	0.00099	EPA 8260C	11-28-17	11-28-17	
Ethylbenzene	ND	0.00099	EPA 8260C	11-28-17	11-28-17	
m,p-Xylene	ND	0.0020	EPA 8260C	11-28-17	11-28-17	
o-Xylene	ND	0.00099	EPA 8260C	11-28-17	11-28-17	
Styrene	ND	0.00099	EPA 8260C	11-28-17	11-28-17	
Bromoform	ND	0.0049	EPA 8260C	11-28-17	11-28-17	
Isopropylbenzene	ND	0.00099	EPA 8260C	11-28-17	11-28-17	
Bromobenzene	ND	0.00099	EPA 8260C	11-28-17	11-28-17	
1,1,2,2-Tetrachloroethane	ND	0.00099	EPA 8260C	11-28-17	11-28-17	
1,2,3-Trichloropropane	ND	0.00099	EPA 8260C	11-28-17	11-28-17	
n-Propylbenzene	ND	0.00099	EPA 8260C	11-28-17	11-28-17	
2-Chlorotoluene	ND	0.00099	EPA 8260C	11-28-17	11-28-17	
4-Chlorotoluene	ND	0.00099	EPA 8260C	11-28-17	11-28-17	
1,3,5-Trimethylbenzene	ND	0.00099	EPA 8260C	11-28-17	11-28-17	
tert-Butylbenzene	ND	0.00099	EPA 8260C	11-28-17	11-28-17	
1,2,4-Trimethylbenzene	ND	0.00099	EPA 8260C	11-28-17	11-28-17	
sec-Butylbenzene	ND	0.00099	EPA 8260C	11-28-17	11-28-17	
1,3-Dichlorobenzene	ND	0.00099	EPA 8260C	11-28-17	11-28-17	
p-Isopropyltoluene	ND	0.00099	EPA 8260C	11-28-17	11-28-17	
1,4-Dichlorobenzene	ND	0.00099	EPA 8260C	11-28-17	11-28-17	
1,2-Dichlorobenzene	ND	0.00099	EPA 8260C	11-28-17	11-28-17	
n-Butylbenzene	ND	0.00099	EPA 8260C	11-28-17	11-28-17	
1,2-Dibromo-3-chloropropane	ND	0.0049	EPA 8260C	11-28-17	11-28-17	
1,2,4-Trichlorobenzene	ND	0.00099	EPA 8260C	11-28-17	11-28-17	
Hexachlorobutadiene	ND	0.0049	EPA 8260C	11-28-17	11-28-17	
Naphthalene	ND	0.00099	EPA 8260C	11-28-17	11-28-17	
1,2,3-Trichlorobenzene	ND	0.00099	EPA 8260C	11-28-17	11-28-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>116</i>	<i>75-131</i>				
<i>Toluene-d8</i>	<i>118</i>	<i>83-126</i>				
<i>4-Bromofluorobenzene</i>	<i>113</i>	<i>78-125</i>				



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

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Date of Report: November 29, 2017  
 Samples Submitted: November 16, 2017  
 Laboratory Reference: 1711-218  
 Project: 188-002

**VOLATILES 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:	MB1128S1					
Dichlorodifluoromethane	ND	0.0030	EPA 8260C	11-28-17	11-28-17	
Chloromethane	ND	0.0080	EPA 8260C	11-28-17	11-28-17	
Vinyl Chloride	ND	0.0013	EPA 8260C	11-28-17	11-28-17	
Bromomethane	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
Chloroethane	ND	0.0050	EPA 8260C	11-28-17	11-28-17	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
Acetone	ND	0.010	EPA 8260C	11-28-17	11-28-17	
Iodomethane	ND	0.0050	EPA 8260C	11-28-17	11-28-17	
Carbon Disulfide	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
Methylene Chloride	ND	0.0050	EPA 8260C	11-28-17	11-28-17	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
Vinyl Acetate	ND	0.0050	EPA 8260C	11-28-17	11-28-17	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
2-Butanone	ND	0.0050	EPA 8260C	11-28-17	11-28-17	
Bromochloromethane	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
Chloroform	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
Benzene	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
Trichloroethene	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
Dibromomethane	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
Bromodichloromethane	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
2-Chloroethyl Vinyl Ether	ND	0.010	EPA 8260C	11-28-17	11-28-17	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
Methyl Isobutyl Ketone	ND	0.0050	EPA 8260C	11-28-17	11-28-17	
Toluene	ND	0.0050	EPA 8260C	11-28-17	11-28-17	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	11-28-17	11-28-17	



Date of Report: November 29, 2017  
 Samples Submitted: November 16, 2017  
 Laboratory Reference: 1711-218  
 Project: 188-002

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

Page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID: MB1128S1						
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
Tetrachloroethene	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
2-Hexanone	ND	0.0050	EPA 8260C	11-28-17	11-28-17	
Dibromochloromethane	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
Chlorobenzene	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
Ethylbenzene	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
m,p-Xylene	ND	0.0020	EPA 8260C	11-28-17	11-28-17	
o-Xylene	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
Styrene	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
Bromoform	ND	0.0050	EPA 8260C	11-28-17	11-28-17	
Isopropylbenzene	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
Bromobenzene	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
n-Propylbenzene	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
2-Chlorotoluene	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
4-Chlorotoluene	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
1,3,5-Trimethylbenzene	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
tert-Butylbenzene	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
1,2,4-Trimethylbenzene	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
sec-Butylbenzene	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
p-Isopropyltoluene	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
n-Butylbenzene	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260C	11-28-17	11-28-17	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
Hexachlorobutadiene	ND	0.0050	EPA 8260C	11-28-17	11-28-17	
Naphthalene	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>106</i>	<i>75-131</i>				
<i>Toluene-d8</i>	<i>104</i>	<i>83-126</i>				
<i>4-Bromofluorobenzene</i>	<i>103</i>	<i>78-125</i>				



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Date of Report: November 29, 2017  
 Samples Submitted: November 16, 2017  
 Laboratory Reference: 1711-218  
 Project: 188-002

**VOLATILES EPA 8260C  
 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:	SB1128S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	0.0576	0.0537	0.0500	0.0500	115	107	58-126	7	20	
Benzene	0.0572	0.0547	0.0500	0.0500	114	109	72-122	4	19	
Trichloroethene	0.0464	0.0442	0.0500	0.0500	93	88	75-120	5	20	
Toluene	0.0572	0.0541	0.0500	0.0500	114	108	78-123	6	19	
Chlorobenzene	0.0511	0.0490	0.0500	0.0500	102	98	75-120	4	18	
Surrogate:										
Dibromofluoromethane					99	99	75-131			
Toluene-d8					97	99	83-126			
4-Bromofluorobenzene					95	95	78-125			





Date of Report: November 29, 2017  
Samples Submitted: November 16, 2017  
Laboratory Reference: 1711-218  
Project: 188-002

### % MOISTURE

Date Analyzed: 11-20&21-17

Client ID	Lab ID	% Moisture
B-15-10.0-111517	11-218-03	6
B-15-17.5-111517	11-218-05	14
B-16-10.0-111517	11-218-07	7
B-16-17.5-111517	11-218-09	11
B-17-5.0-111517	11-218-11	6
B-17-10.0-111517	11-218-13	9
B-17-20.0-111517	11-218-15	13
B-20-10.0-111517	11-218-18	8
B-20-17.5-111517	11-218-21	11





### 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





**ANALYTICAL LABORATORY TESTING SERVICES**  
14648 NE 95th Street • Redmond, WA 98052  
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# Chain of Custody

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# Onsite Environmental Inc.

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## Chain of Custody

Page 2 of 3

Company: <u>Farallon Consulting</u>		Turnaround Request (in working days)		Laboratory Number: <u>11-218</u>	
Project Number: <u>188-002</u>		<input type="checkbox"/> Same Day <input type="checkbox"/> 1 Day			
Project Name: <u>Woodworth Lakeview Facility</u>		<input type="checkbox"/> 2 Days <input type="checkbox"/> 3 Days			
Project Manager: <u>Bruni Juvista</u>		<input checked="" type="checkbox"/> Standard (7 Days) (TPH analysis 5 Days)			
Sampled by: <u>Daniel Aguilar</u>		<input type="checkbox"/> (other)			
Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers
4	B-16- <del>5.5</del> -111517	11/15/17	1017	Soil	4
7	B-16-10.0-111517		1025		4
8	B-16-15.0-111517		1045		4
9	B-16-17.5-111517		1053		4
10	B-16-20.0-111517		1100		4
11	B-17-5.0-111517		1130		4
12	B-17-7.5-111517		1140		4
13	B-17-10.0-111517		1145		4
14	B-17-15.0-111517		1200		4
15	B-17-20.0-111517		1215		4
Signature: <u>[Signature]</u>		Company: <u>Farallon</u>		Date: <u>11/15/17</u>	Time: <u>1747</u>
Relinquished					
Received					
Relinquished					
Received					
Relinquished					
Received					
Relinquished					
Received					
Relinquished					
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"/>	





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# Chain of Custody

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November 29, 2017

Brani Jurista  
Farallon Consulting, LLC  
975 5th Avenue NW  
Issaquah, WA 98027

Re: Analytical Data for Project 188-002  
Laboratory Reference No. 1711-232

Dear Brani:

Enclosed are the analytical results and associated quality control data for samples submitted on November 17, 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



---

OnSite Environmental, Inc. 14648 NE 95<sup>th</sup> 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: November 29, 2017  
Samples Submitted: November 17, 2017  
Laboratory Reference: 1711-232  
Project: 188-002

### Case Narrative

Samples were collected on November 16, 2017 and received by the laboratory on November 17, 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.

#### NWTPH Dx Analysis

Sample MW-24T-111617 (acid cleaned fraction) had a surrogate recovery outside of control limits. Because the recovery showed high bias and the sample was non-detect, no further action was deemed necessary.

#### Volatiles EPA 8260C Analysis

Surrogate Standard Toluene-d8 is outside control limits on the high end for sample B-13-10.0-111617. The sample was 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: November 29, 2017  
 Samples Submitted: November 17, 2017  
 Laboratory Reference: 1711-232  
 Project: 188-002

### NWTPH-Dx

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>B-13-5.0-111617</b>					
Laboratory ID:	11-232-01					
Diesel Range Organics	ND	26	NWTPH-Dx	11-20-17	11-20-17	
Lube Oil Range Organics	ND	52	NWTPH-Dx	11-20-17	11-20-17	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	92	50-150				
<b>Client ID:</b>	<b>B-13-10.0-111617</b>					
Laboratory ID:	11-232-03					
Diesel Range Organics	ND	27	NWTPH-Dx	11-20-17	11-20-17	
Lube Oil Range Organics	ND	53	NWTPH-Dx	11-20-17	11-20-17	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	85	50-150				
<b>Client ID:</b>	<b>B-13-17.5-111617</b>					
Laboratory ID:	11-232-05					
Diesel Range Organics	ND	28	NWTPH-Dx	11-20-17	11-21-17	
Lube Oil Range Organics	ND	56	NWTPH-Dx	11-20-17	11-21-17	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	64	50-150				
<b>Client ID:</b>	<b>B-11-5.0-111617</b>					
Laboratory ID:	11-232-07					
Diesel Range Organics	ND	27	NWTPH-Dx	11-20-17	11-20-17	
Lube Oil Range Organics	ND	54	NWTPH-Dx	11-20-17	11-20-17	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	95	50-150				
<b>Client ID:</b>	<b>B-12-9.0-111617</b>					
Laboratory ID:	11-232-10					
Diesel Range Organics	ND	630	NWTPH-Dx	11-20-17	11-21-17	U1
Lube Oil	12000	1100	NWTPH-Dx	11-20-17	11-21-17	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	---	50-150				S
<b>Client ID:</b>	<b>B-12-9.0-111617</b>					
Laboratory ID:	11-232-10					
Diesel Range Organics	ND	580	NWTPH-Dx	11-20-17	11-21-17	U1,X1
Lube Oil	11000	1100	NWTPH-Dx	11-20-17	11-21-17	X1
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	---	50-150				S



Date of Report: November 29, 2017  
 Samples Submitted: November 17, 2017  
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 Project: 188-002

### NWTPH-Dx

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	B-19-10.0-111617					
Laboratory ID:	11-232-13					
Diesel Range Organics	ND	26	NWTPH-Dx	11-20-17	11-20-17	
Lube Oil Range Organics	ND	52	NWTPH-Dx	11-20-17	11-20-17	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	87	50-150				
Client ID:	B-18-7.5-111617					
Laboratory ID:	11-232-15					
Diesel Range Organics	59	27	NWTPH-Dx	11-20-17	11-20-17	N
Lube Oil	250	53	NWTPH-Dx	11-20-17	11-20-17	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	91	50-150				
Client ID:	B-18-10.0-111617					
Laboratory ID:	11-232-16					
Diesel Range Organics	660	83	NWTPH-Dx	11-20-17	11-21-17	N
Lube Oil	730	170	NWTPH-Dx	11-20-17	11-21-17	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	68	50-150				



Date of Report: November 29, 2017  
 Samples Submitted: November 17, 2017  
 Laboratory Reference: 1711-232  
 Project: 188-002

### NWTPH-Dx QUALITY CONTROL

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1120S1					
Diesel Range Organics	ND	25	NWTPH-Dx	11-20-17	11-20-17	
Lube Oil Range Organics	ND	50	NWTPH-Dx	11-20-17	11-20-17	
Surrogate:	Percent Recovery	Control Limits				
<i>o</i> -Terphenyl	84	50-150				
Laboratory ID:	MB1120S1					
Diesel Range Organics	ND	25	NWTPH-Dx	11-20-17	11-20-17	X1
Lube Oil Range Organics	ND	50	NWTPH-Dx	11-20-17	11-20-17	X1
Surrogate:	Percent Recovery	Control Limits				
<i>o</i> -Terphenyl	91	50-150				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
<b>DUPLICATE</b>								
Laboratory ID:	11-232-03							
	ORIG	DUP						
Diesel Range	ND	ND	NA	NA	NA	NA	NA	
Lube Oil Range	ND	ND	NA	NA	NA	NA	NA	
Surrogate:								
<i>o</i> -Terphenyl				85	75	50-150		



Date of Report: November 29, 2017  
 Samples Submitted: November 17, 2017  
 Laboratory Reference: 1711-232  
 Project: 188-002

### NWTPH-Dx

Matrix: Water  
 Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	MW-24T-111617					
Laboratory ID:	11-232-17					
Diesel Range Organics	0.97	0.28	NWTPH-Dx	11-17-17	11-17-17	N
Lube Oil Range Organics	3.0	0.45	NWTPH-Dx	11-17-17	11-17-17	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	126	50-150				
Client ID:	MW-24T-111617					
Laboratory ID:	11-232-17					
Diesel Range Organics	ND	0.28	NWTPH-Dx	11-17-17	11-17-17	X1
Lube Oil Range Organics	ND	0.45	NWTPH-Dx	11-17-17	11-17-17	X1
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	165	50-150				



Date of Report: November 29, 2017  
 Samples Submitted: November 17, 2017  
 Laboratory Reference: 1711-232  
 Project: 188-002

**NWTPH-Dx  
QUALITY CONTROL**

Matrix: Water  
 Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1117W1					
Diesel Range Organics	ND	0.13	NWTPH-Dx	11-17-17	11-17-17	
Lube Oil Range Organics	ND	0.20	NWTPH-Dx	11-17-17	11-17-17	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	100	50-150				
Laboratory ID:	MB1117W1					
Diesel Range Organics	ND	0.13	NWTPH-Dx	11-17-17	11-17-17	X1
Lube Oil Range Organics	ND	0.20	NWTPH-Dx	11-17-17	11-17-17	X1
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	113	50-150				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
<b>DUPLICATE</b>								
Laboratory ID:	11-219-01							
	ORIG	DUP						
Diesel Range	ND	ND	NA	NA	NA	NA	NA	
Lube Oil Range	ND	ND	NA	NA	NA	NA	NA	
Surrogate:								
<i>o</i> -Terphenyl				92	88	50-150		





Date of Report: November 29, 2017  
 Samples Submitted: November 17, 2017  
 Laboratory Reference: 1711-232  
 Project: 188-002

# **VOLATILES EPA 8260C**

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Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID: B-13-10.0-111617</b>						
<b>Laboratory ID: 11-232-03</b>						
Dichlorodifluoromethane	ND	0.0025	EPA 8260C	11-28-17	11-28-17	
Chloromethane	ND	0.0066	EPA 8260C	11-28-17	11-28-17	
Vinyl Chloride	ND	0.0011	EPA 8260C	11-28-17	11-28-17	
Bromomethane	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
Chloroethane	ND	0.0041	EPA 8260C	11-28-17	11-28-17	
Trichlorofluoromethane	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
1,1-Dichloroethene	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
Acetone	ND	0.0041	EPA 8260C	11-28-17	11-28-17	
Iodomethane	ND	0.0041	EPA 8260C	11-28-17	11-28-17	
Carbon Disulfide	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
Methylene Chloride	ND	0.0041	EPA 8260C	11-28-17	11-28-17	
(trans) 1,2-Dichloroethene	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
Methyl t-Butyl Ether	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
1,1-Dichloroethane	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
Vinyl Acetate	ND	0.0041	EPA 8260C	11-28-17	11-28-17	
2,2-Dichloropropane	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
(cis) 1,2-Dichloroethene	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
2-Butanone	ND	0.0041	EPA 8260C	11-28-17	11-28-17	
Bromochloromethane	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
Chloroform	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
1,1,1-Trichloroethane	0.0014	0.00083	EPA 8260C	11-28-17	11-28-17	
Carbon Tetrachloride	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
1,1-Dichloropropene	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
Benzene	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
1,2-Dichloroethane	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
Trichloroethene	0.0059	0.00083	EPA 8260C	11-28-17	11-28-17	
1,2-Dichloropropane	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
Dibromomethane	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
Bromodichloromethane	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
2-Chloroethyl Vinyl Ether	ND	0.0083	EPA 8260C	11-28-17	11-28-17	
(cis) 1,3-Dichloropropene	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
Methyl Isobutyl Ketone	ND	0.0041	EPA 8260C	11-28-17	11-28-17	
Toluene	ND	0.0041	EPA 8260C	11-28-17	11-28-17	
(trans) 1,3-Dichloropropene	ND	0.00083	EPA 8260C	11-28-17	11-28-17	



OnSite Environmental, Inc. 14648 NE 95<sup>th</sup> 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: November 29, 2017  
 Samples Submitted: November 17, 2017  
 Laboratory Reference: 1711-232  
 Project: 188-002

**VOLATILES EPA 8260C**  
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID: B-13-10.0-111617</b>						
Laboratory ID: 11-232-03						
1,1,2-Trichloroethane	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
Tetrachloroethene	0.0015	0.00083	EPA 8260C	11-28-17	11-28-17	
1,3-Dichloropropane	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
2-Hexanone	ND	0.0041	EPA 8260C	11-28-17	11-28-17	
Dibromochloromethane	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
1,2-Dibromoethane	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
Chlorobenzene	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
1,1,1,2-Tetrachloroethane	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
Ethylbenzene	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
m,p-Xylene	ND	0.0017	EPA 8260C	11-28-17	11-28-17	
o-Xylene	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
Styrene	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
Bromoform	ND	0.0041	EPA 8260C	11-28-17	11-28-17	
Isopropylbenzene	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
Bromobenzene	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
1,1,2,2-Tetrachloroethane	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
1,2,3-Trichloropropane	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
n-Propylbenzene	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
2-Chlorotoluene	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
4-Chlorotoluene	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
1,3,5-Trimethylbenzene	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
tert-Butylbenzene	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
1,2,4-Trimethylbenzene	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
sec-Butylbenzene	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
1,3-Dichlorobenzene	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
p-Isopropyltoluene	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
1,4-Dichlorobenzene	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
1,2-Dichlorobenzene	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
n-Butylbenzene	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
1,2-Dibromo-3-chloropropane	ND	0.0041	EPA 8260C	11-28-17	11-28-17	
1,2,4-Trichlorobenzene	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
Hexachlorobutadiene	ND	0.0041	EPA 8260C	11-28-17	11-28-17	
Naphthalene	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
1,2,3-Trichlorobenzene	ND	0.00083	EPA 8260C	11-28-17	11-28-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
Dibromofluoromethane	121	75-131				
Toluene-d8	128	83-126				Q
4-Bromofluorobenzene	121	78-125				



Date of Report: November 29, 2017  
 Samples Submitted: November 17, 2017  
 Laboratory Reference: 1711-232  
 Project: 188-002

# **VOLATILES EPA 8260C**

Page 1 of 2

Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID: B-13-17.5-111617</b>						
Laboratory ID: 11-232-05						
Dichlorodifluoromethane	ND	0.00079	EPA 8260C	11-29-17	11-29-17	
Chloromethane	ND	0.0039	EPA 8260C	11-29-17	11-29-17	
Vinyl Chloride	ND	0.00079	EPA 8260C	11-29-17	11-29-17	
Bromomethane	ND	0.00079	EPA 8260C	11-29-17	11-29-17	
Chloroethane	ND	0.0039	EPA 8260C	11-29-17	11-29-17	
Trichlorofluoromethane	ND	0.00079	EPA 8260C	11-29-17	11-29-17	
1,1-Dichloroethene	ND	0.00079	EPA 8260C	11-29-17	11-29-17	
Acetone	ND	0.0039	EPA 8260C	11-29-17	11-29-17	
Iodomethane	ND	0.0039	EPA 8260C	11-29-17	11-29-17	
Carbon Disulfide	ND	0.00079	EPA 8260C	11-29-17	11-29-17	
Methylene Chloride	ND	0.0039	EPA 8260C	11-29-17	11-29-17	
(trans) 1,2-Dichloroethene	ND	0.00079	EPA 8260C	11-29-17	11-29-17	
Methyl t-Butyl Ether	ND	0.00079	EPA 8260C	11-29-17	11-29-17	
1,1-Dichloroethane	ND	0.00079	EPA 8260C	11-29-17	11-29-17	
Vinyl Acetate	ND	0.0039	EPA 8260C	11-29-17	11-29-17	
2,2-Dichloropropane	ND	0.00079	EPA 8260C	11-29-17	11-29-17	
(cis) 1,2-Dichloroethene	ND	0.00079	EPA 8260C	11-29-17	11-29-17	
2-Butanone	ND	0.0039	EPA 8260C	11-29-17	11-29-17	
Bromochloromethane	ND	0.00079	EPA 8260C	11-29-17	11-29-17	
Chloroform	ND	0.00079	EPA 8260C	11-29-17	11-29-17	
1,1,1-Trichloroethane	ND	0.00079	EPA 8260C	11-29-17	11-29-17	
Carbon Tetrachloride	ND	0.00079	EPA 8260C	11-29-17	11-29-17	
1,1-Dichloropropene	ND	0.00079	EPA 8260C	11-29-17	11-29-17	
Benzene	ND	0.00079	EPA 8260C	11-29-17	11-29-17	
1,2-Dichloroethane	ND	0.00079	EPA 8260C	11-29-17	11-29-17	
Trichloroethene	0.0017	0.00079	EPA 8260C	11-29-17	11-29-17	
1,2-Dichloropropane	ND	0.00079	EPA 8260C	11-29-17	11-29-17	
Dibromomethane	ND	0.00079	EPA 8260C	11-29-17	11-29-17	
Bromodichloromethane	ND	0.00079	EPA 8260C	11-29-17	11-29-17	
2-Chloroethyl Vinyl Ether	ND	0.0095	EPA 8260C	11-29-17	11-29-17	
(cis) 1,3-Dichloropropene	ND	0.00079	EPA 8260C	11-29-17	11-29-17	
Methyl Isobutyl Ketone	ND	0.0039	EPA 8260C	11-29-17	11-29-17	
Toluene	ND	0.0039	EPA 8260C	11-29-17	11-29-17	
(trans) 1,3-Dichloropropene	ND	0.00079	EPA 8260C	11-29-17	11-29-17	



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

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Date of Report: November 29, 2017  
 Samples Submitted: November 17, 2017  
 Laboratory Reference: 1711-232  
 Project: 188-002

**VOLATILES EPA 8260C**  
 Page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>		<b>B-13-17.5-111617</b>				
Laboratory ID:		11-232-05				
1,1,2-Trichloroethane	ND	0.00079	EPA 8260C	11-29-17	11-29-17	
Tetrachloroethene	ND	0.00079	EPA 8260C	11-29-17	11-29-17	
1,3-Dichloropropane	ND	0.00079	EPA 8260C	11-29-17	11-29-17	
2-Hexanone	ND	0.0039	EPA 8260C	11-29-17	11-29-17	
Dibromochloromethane	ND	0.00079	EPA 8260C	11-29-17	11-29-17	
1,2-Dibromoethane	ND	0.00079	EPA 8260C	11-29-17	11-29-17	
Chlorobenzene	ND	0.00079	EPA 8260C	11-29-17	11-29-17	
1,1,1,2-Tetrachloroethane	ND	0.00079	EPA 8260C	11-29-17	11-29-17	
Ethylbenzene	ND	0.00079	EPA 8260C	11-29-17	11-29-17	
m,p-Xylene	ND	0.0016	EPA 8260C	11-29-17	11-29-17	
o-Xylene	ND	0.00079	EPA 8260C	11-29-17	11-29-17	
Styrene	ND	0.00079	EPA 8260C	11-29-17	11-29-17	
Bromoform	ND	0.0039	EPA 8260C	11-29-17	11-29-17	
Isopropylbenzene	ND	0.00079	EPA 8260C	11-29-17	11-29-17	
Bromobenzene	ND	0.00079	EPA 8260C	11-29-17	11-29-17	
1,1,2,2-Tetrachloroethane	ND	0.00079	EPA 8260C	11-29-17	11-29-17	
1,2,3-Trichloropropane	ND	0.00079	EPA 8260C	11-29-17	11-29-17	
n-Propylbenzene	ND	0.00079	EPA 8260C	11-29-17	11-29-17	
2-Chlorotoluene	ND	0.00079	EPA 8260C	11-29-17	11-29-17	
4-Chlorotoluene	ND	0.00079	EPA 8260C	11-29-17	11-29-17	
1,3,5-Trimethylbenzene	ND	0.00079	EPA 8260C	11-29-17	11-29-17	
tert-Butylbenzene	ND	0.00079	EPA 8260C	11-29-17	11-29-17	
1,2,4-Trimethylbenzene	ND	0.00079	EPA 8260C	11-29-17	11-29-17	
sec-Butylbenzene	ND	0.00079	EPA 8260C	11-29-17	11-29-17	
1,3-Dichlorobenzene	ND	0.00079	EPA 8260C	11-29-17	11-29-17	
p-Isopropyltoluene	ND	0.00079	EPA 8260C	11-29-17	11-29-17	
1,4-Dichlorobenzene	ND	0.00079	EPA 8260C	11-29-17	11-29-17	
1,2-Dichlorobenzene	ND	0.00079	EPA 8260C	11-29-17	11-29-17	
n-Butylbenzene	ND	0.00079	EPA 8260C	11-29-17	11-29-17	
1,2-Dibromo-3-chloropropane	ND	0.0039	EPA 8260C	11-29-17	11-29-17	
1,2,4-Trichlorobenzene	ND	0.00079	EPA 8260C	11-29-17	11-29-17	
Hexachlorobutadiene	ND	0.0039	EPA 8260C	11-29-17	11-29-17	
Naphthalene	ND	0.00079	EPA 8260C	11-29-17	11-29-17	
1,2,3-Trichlorobenzene	ND	0.00079	EPA 8260C	11-29-17	11-29-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>109</i>	<i>75-131</i>				
<i>Toluene-d8</i>	<i>109</i>	<i>83-126</i>				
<i>4-Bromofluorobenzene</i>	<i>111</i>	<i>78-125</i>				



Date of Report: November 29, 2017  
 Samples Submitted: November 17, 2017  
 Laboratory Reference: 1711-232  
 Project: 188-002

**VOLATILES 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:	MB1128S1					
Dichlorodifluoromethane	ND	0.0030	EPA 8260C	11-28-17	11-28-17	
Chloromethane	ND	0.0080	EPA 8260C	11-28-17	11-28-17	
Vinyl Chloride	ND	0.0013	EPA 8260C	11-28-17	11-28-17	
Bromomethane	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
Chloroethane	ND	0.0050	EPA 8260C	11-28-17	11-28-17	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
Acetone	ND	0.0050	EPA 8260C	11-28-17	11-28-17	
Iodomethane	ND	0.0050	EPA 8260C	11-28-17	11-28-17	
Carbon Disulfide	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
Methylene Chloride	ND	0.0050	EPA 8260C	11-28-17	11-28-17	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
Vinyl Acetate	ND	0.0050	EPA 8260C	11-28-17	11-28-17	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
2-Butanone	ND	0.0050	EPA 8260C	11-28-17	11-28-17	
Bromochloromethane	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
Chloroform	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
Benzene	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
Trichloroethene	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
Dibromomethane	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
Bromodichloromethane	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
2-Chloroethyl Vinyl Ether	ND	0.010	EPA 8260C	11-28-17	11-28-17	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
Methyl Isobutyl Ketone	ND	0.0050	EPA 8260C	11-28-17	11-28-17	
Toluene	ND	0.0050	EPA 8260C	11-28-17	11-28-17	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	11-28-17	11-28-17	



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Date of Report: November 29, 2017  
 Samples Submitted: November 17, 2017  
 Laboratory Reference: 1711-232  
 Project: 188-002

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

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID: MB1128S1						
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
Tetrachloroethene	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
2-Hexanone	ND	0.0050	EPA 8260C	11-28-17	11-28-17	
Dibromochloromethane	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
Chlorobenzene	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
Ethylbenzene	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
m,p-Xylene	ND	0.0020	EPA 8260C	11-28-17	11-28-17	
o-Xylene	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
Styrene	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
Bromoform	ND	0.0050	EPA 8260C	11-28-17	11-28-17	
Isopropylbenzene	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
Bromobenzene	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
n-Propylbenzene	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
2-Chlorotoluene	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
4-Chlorotoluene	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
1,3,5-Trimethylbenzene	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
tert-Butylbenzene	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
1,2,4-Trimethylbenzene	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
sec-Butylbenzene	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
p-Isopropyltoluene	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
n-Butylbenzene	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260C	11-28-17	11-28-17	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
Hexachlorobutadiene	ND	0.0050	EPA 8260C	11-28-17	11-28-17	
Naphthalene	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	11-28-17	11-28-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>106</i>	<i>75-131</i>				
<i>Toluene-d8</i>	<i>104</i>	<i>83-126</i>				
<i>4-Bromofluorobenzene</i>	<i>103</i>	<i>78-125</i>				





Date of Report: November 29, 2017  
 Samples Submitted: November 17, 2017  
 Laboratory Reference: 1711-232  
 Project: 188-002

**VOLATILES 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:	MB1129S1					
Dichlorodifluoromethane	ND	0.0010	EPA 8260C	11-29-17	11-29-17	
Chloromethane	ND	0.0050	EPA 8260C	11-29-17	11-29-17	
Vinyl Chloride	ND	0.0010	EPA 8260C	11-29-17	11-29-17	
Bromomethane	ND	0.0010	EPA 8260C	11-29-17	11-29-17	
Chloroethane	ND	0.0050	EPA 8260C	11-29-17	11-29-17	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	11-29-17	11-29-17	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	11-29-17	11-29-17	
Acetone	ND	0.0050	EPA 8260C	11-29-17	11-29-17	
Iodomethane	ND	0.0050	EPA 8260C	11-29-17	11-29-17	
Carbon Disulfide	ND	0.0010	EPA 8260C	11-29-17	11-29-17	
Methylene Chloride	ND	0.0050	EPA 8260C	11-29-17	11-29-17	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	11-29-17	11-29-17	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260C	11-29-17	11-29-17	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	11-29-17	11-29-17	
Vinyl Acetate	ND	0.0050	EPA 8260C	11-29-17	11-29-17	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	11-29-17	11-29-17	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	11-29-17	11-29-17	
2-Butanone	ND	0.0050	EPA 8260C	11-29-17	11-29-17	
Bromochloromethane	ND	0.0010	EPA 8260C	11-29-17	11-29-17	
Chloroform	ND	0.0010	EPA 8260C	11-29-17	11-29-17	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	11-29-17	11-29-17	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	11-29-17	11-29-17	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	11-29-17	11-29-17	
Benzene	ND	0.0010	EPA 8260C	11-29-17	11-29-17	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	11-29-17	11-29-17	
Trichloroethene	ND	0.0010	EPA 8260C	11-29-17	11-29-17	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	11-29-17	11-29-17	
Dibromomethane	ND	0.0010	EPA 8260C	11-29-17	11-29-17	
Bromodichloromethane	ND	0.0010	EPA 8260C	11-29-17	11-29-17	
2-Chloroethyl Vinyl Ether	ND	0.012	EPA 8260C	11-29-17	11-29-17	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	11-29-17	11-29-17	
Methyl Isobutyl Ketone	ND	0.0050	EPA 8260C	11-29-17	11-29-17	
Toluene	ND	0.0050	EPA 8260C	11-29-17	11-29-17	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	11-29-17	11-29-17	



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Date of Report: November 29, 2017  
 Samples Submitted: November 17, 2017  
 Laboratory Reference: 1711-232  
 Project: 188-002

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

Page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID: MB1129S1						
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	11-29-17	11-29-17	
Tetrachloroethene	ND	0.0010	EPA 8260C	11-29-17	11-29-17	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	11-29-17	11-29-17	
2-Hexanone	ND	0.0050	EPA 8260C	11-29-17	11-29-17	
Dibromochloromethane	ND	0.0010	EPA 8260C	11-29-17	11-29-17	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	11-29-17	11-29-17	
Chlorobenzene	ND	0.0010	EPA 8260C	11-29-17	11-29-17	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	11-29-17	11-29-17	
Ethylbenzene	ND	0.0010	EPA 8260C	11-29-17	11-29-17	
m,p-Xylene	ND	0.0020	EPA 8260C	11-29-17	11-29-17	
o-Xylene	ND	0.0010	EPA 8260C	11-29-17	11-29-17	
Styrene	ND	0.0010	EPA 8260C	11-29-17	11-29-17	
Bromoform	ND	0.0050	EPA 8260C	11-29-17	11-29-17	
Isopropylbenzene	ND	0.0010	EPA 8260C	11-29-17	11-29-17	
Bromobenzene	ND	0.0010	EPA 8260C	11-29-17	11-29-17	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	11-29-17	11-29-17	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	11-29-17	11-29-17	
n-Propylbenzene	ND	0.0010	EPA 8260C	11-29-17	11-29-17	
2-Chlorotoluene	ND	0.0010	EPA 8260C	11-29-17	11-29-17	
4-Chlorotoluene	ND	0.0010	EPA 8260C	11-29-17	11-29-17	
1,3,5-Trimethylbenzene	ND	0.0010	EPA 8260C	11-29-17	11-29-17	
tert-Butylbenzene	ND	0.0010	EPA 8260C	11-29-17	11-29-17	
1,2,4-Trimethylbenzene	ND	0.0010	EPA 8260C	11-29-17	11-29-17	
sec-Butylbenzene	ND	0.0010	EPA 8260C	11-29-17	11-29-17	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	11-29-17	11-29-17	
p-Isopropyltoluene	ND	0.0010	EPA 8260C	11-29-17	11-29-17	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	11-29-17	11-29-17	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	11-29-17	11-29-17	
n-Butylbenzene	ND	0.0010	EPA 8260C	11-29-17	11-29-17	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260C	11-29-17	11-29-17	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	11-29-17	11-29-17	
Hexachlorobutadiene	ND	0.0050	EPA 8260C	11-29-17	11-29-17	
Naphthalene	ND	0.0010	EPA 8260C	11-29-17	11-29-17	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	11-29-17	11-29-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>119</i>	<i>75-131</i>				
<i>Toluene-d8</i>	<i>116</i>	<i>83-126</i>				
<i>4-Bromofluorobenzene</i>	<i>116</i>	<i>78-125</i>				



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Date of Report: November 29, 2017  
 Samples Submitted: November 17, 2017  
 Laboratory Reference: 1711-232  
 Project: 188-002

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

Matrix: Soil  
 Units: mg/kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
					Recovery					
SPIKE BLANKS										
Laboratory ID:	SB1128S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	0.0576	0.0537	0.0500	0.0500	115	107	58-126	7	20	
Benzene	0.0572	0.0547	0.0500	0.0500	114	109	72-122	4	19	
Trichloroethene	0.0464	0.0442	0.0500	0.0500	93	88	75-120	5	20	
Toluene	0.0572	0.0541	0.0500	0.0500	114	108	78-123	6	19	
Chlorobenzene	0.0511	0.0490	0.0500	0.0500	102	98	75-120	4	18	
Surrogate:										
Dibromofluoromethane					99	99	75-131			
Toluene-d8					97	99	83-126			
4-Bromofluorobenzene					95	95	78-125			



Date of Report: November 29, 2017  
 Samples Submitted: November 17, 2017  
 Laboratory Reference: 1711-232  
 Project: 188-002

**VOLATILES EPA 8260C  
 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:	SB1129S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	0.0529	0.0544	0.0500	0.0500	106	109	58-126	3	20	
Benzene	0.0543	0.0542	0.0500	0.0500	109	108	72-122	0	19	
Trichloroethene	0.0453	0.0458	0.0500	0.0500	91	92	75-120	1	20	
Toluene	0.0564	0.0570	0.0500	0.0500	113	114	78-123	1	19	
Chlorobenzene	0.0500	0.0495	0.0500	0.0500	100	99	75-120	1	18	
Surrogate:										
Dibromofluoromethane					100	108	75-131			
Toluene-d8					100	108	83-126			
4-Bromofluorobenzene					98	107	78-125			



Date of Report: November 29, 2017  
 Samples Submitted: November 17, 2017  
 Laboratory Reference: 1711-232  
 Project: 188-002

**cPAHs EPA 8270D/SIM**

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>B-13-5.0-111617</b>					
<b>Laboratory ID:</b>	<b>11-232-01</b>					
Benzo[a]anthracene	ND	0.0069	EPA 8270D/SIM	11-20-17	11-21-17	
Chrysene	ND	0.0069	EPA 8270D/SIM	11-20-17	11-21-17	
Benzo[b]fluoranthene	ND	0.0069	EPA 8270D/SIM	11-20-17	11-21-17	
Benzo[j,k]fluoranthene	ND	0.0069	EPA 8270D/SIM	11-20-17	11-21-17	
Benzo[a]pyrene	ND	0.0069	EPA 8270D/SIM	11-20-17	11-21-17	
Indeno(1,2,3-c,d)pyrene	ND	0.0069	EPA 8270D/SIM	11-20-17	11-21-17	
Dibenz[a,h]anthracene	ND	0.0069	EPA 8270D/SIM	11-20-17	11-21-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	79	32 - 115				
Pyrene-d10	86	35 - 129				
Terphenyl-d14	98	33 - 114				



Date of Report: November 29, 2017  
 Samples Submitted: November 17, 2017  
 Laboratory Reference: 1711-232  
 Project: 188-002

**cPAHs EPA 8270D/SIM**

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>B-11-5.0-111617</b>					
<b>Laboratory ID:</b>	<b>11-232-07</b>					
Benzo[a]anthracene	ND	0.0071	EPA 8270D/SIM	11-20-17	11-22-17	
Chrysene	ND	0.0071	EPA 8270D/SIM	11-20-17	11-22-17	
Benzo[b]fluoranthene	ND	0.0071	EPA 8270D/SIM	11-20-17	11-22-17	
Benzo[j,k]fluoranthene	ND	0.0071	EPA 8270D/SIM	11-20-17	11-22-17	
Benzo[a]pyrene	ND	0.0071	EPA 8270D/SIM	11-20-17	11-22-17	
Indeno(1,2,3-c,d)pyrene	ND	0.0071	EPA 8270D/SIM	11-20-17	11-22-17	
Dibenz[a,h]anthracene	ND	0.0071	EPA 8270D/SIM	11-20-17	11-22-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	91	32 - 115				
Pyrene-d10	81	35 - 129				
Terphenyl-d14	100	33 - 114				





Date of Report: November 29, 2017  
 Samples Submitted: November 17, 2017  
 Laboratory Reference: 1711-232  
 Project: 188-002

**cPAHs EPA 8270D/SIM**

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>B-12-9.0-111617</b>					
<b>Laboratory ID:</b>	<b>11-232-10</b>					
Benzo[a]anthracene	ND	0.14	EPA 8270D/SIM	11-20-17	11-28-17	
Chrysene	ND	0.14	EPA 8270D/SIM	11-20-17	11-28-17	
Benzo[b]fluoranthene	ND	0.14	EPA 8270D/SIM	11-20-17	11-28-17	
Benzo[j,k]fluoranthene	ND	0.14	EPA 8270D/SIM	11-20-17	11-28-17	
Benzo[a]pyrene	0.16	0.14	EPA 8270D/SIM	11-20-17	11-28-17	
Indeno(1,2,3-c,d)pyrene	ND	0.14	EPA 8270D/SIM	11-20-17	11-28-17	
Dibenz[a,h]anthracene	ND	0.14	EPA 8270D/SIM	11-20-17	11-28-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	97	32 - 115				
Pyrene-d10	76	35 - 129				
Terphenyl-d14	98	33 - 114				



Date of Report: November 29, 2017  
 Samples Submitted: November 17, 2017  
 Laboratory Reference: 1711-232  
 Project: 188-002

**cPAHs EPA 8270D/SIM**

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID: B-18-10.0-111617</b>						
Laboratory ID: 11-232-16						
Benzo[a]anthracene	<b>0.0088</b>	0.0074	EPA 8270D/SIM	11-20-17	11-22-17	
Chrysene	<b>0.028</b>	0.0074	EPA 8270D/SIM	11-20-17	11-22-17	
Benzo[b]fluoranthene	<b>ND</b>	0.0074	EPA 8270D/SIM	11-20-17	11-22-17	
Benzo[j,k]fluoranthene	<b>ND</b>	0.0074	EPA 8270D/SIM	11-20-17	11-22-17	
Benzo[a]pyrene	<b>ND</b>	0.0074	EPA 8270D/SIM	11-20-17	11-22-17	
Indeno(1,2,3-c,d)pyrene	<b>ND</b>	0.0074	EPA 8270D/SIM	11-20-17	11-22-17	
Dibenz[a,h]anthracene	<b>ND</b>	0.0074	EPA 8270D/SIM	11-20-17	11-22-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	91	32 - 115				
Pyrene-d10	81	35 - 129				
Terphenyl-d14	93	33 - 114				



Date of Report: November 29, 2017  
 Samples Submitted: November 17, 2017  
 Laboratory Reference: 1711-232  
 Project: 188-002

**cPAHs EPA 8270D/SIM  
 METHOD BLANK QUALITY CONTROL**

Matrix: Soil  
 Units: mg/Kg

<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>Method</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Flags</b>
<hr/>						
Laboratory ID:	MB1120S1					
Benzo[a]anthracene	<b>ND</b>	0.0067	EPA 8270D/SIM	11-20-17	11-21-17	
Chrysene	<b>ND</b>	0.0067	EPA 8270D/SIM	11-20-17	11-21-17	
Benzo[b]fluoranthene	<b>ND</b>	0.0067	EPA 8270D/SIM	11-20-17	11-21-17	
Benzo[j,k]fluoranthene	<b>ND</b>	0.0067	EPA 8270D/SIM	11-20-17	11-21-17	
Benzo[a]pyrene	<b>ND</b>	0.0067	EPA 8270D/SIM	11-20-17	11-21-17	
Indeno(1,2,3-c,d)pyrene	<b>ND</b>	0.0067	EPA 8270D/SIM	11-20-17	11-21-17	
Dibenz[a,h]anthracene	<b>ND</b>	0.0067	EPA 8270D/SIM	11-20-17	11-21-17	
<hr/>						
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>85</i>	<i>32 - 115</i>				
<i>Pyrene-d10</i>	<i>95</i>	<i>35 - 129</i>				
<i>Terphenyl-d14</i>	<i>105</i>	<i>33 - 114</i>				



Date of Report: November 29, 2017  
 Samples Submitted: November 17, 2017  
 Laboratory Reference: 1711-232  
 Project: 188-002

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

Matrix: Soil  
 Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB1120S1									
	SB	SBD	SB	SBD	SB	SBD				
Benzo[a]anthracene	0.0881	0.0871	0.0833	0.0833	106	105	64 - 135	1	15	
Chrysene	0.0830	0.0816	0.0833	0.0833	100	98	70 - 119	2	15	
Benzo[b]fluoranthene	0.0799	0.0791	0.0833	0.0833	96	95	54 - 135	1	15	
Benzo(j,k)fluoranthene	0.0865	0.0845	0.0833	0.0833	104	101	66 - 122	2	15	
Benzo[a]pyrene	0.0822	0.0807	0.0833	0.0833	99	97	62 - 125	2	15	
Indeno(1,2,3-c,d)pyrene	0.0837	0.0821	0.0833	0.0833	100	99	55 - 129	2	15	
Dibenz[a,h]anthracene	0.0866	0.0839	0.0833	0.0833	104	101	58 - 125	3	15	
Surrogate:										
2-Fluorobiphenyl					79	87	32 - 115			
Pyrene-d10					90	90	35 - 129			
Terphenyl-d14					98	98	33 - 114			



Date of Report: November 29, 2017  
 Samples Submitted: November 17, 2017  
 Laboratory Reference: 1711-232  
 Project: 188-002

### PCBs EPA 8082A

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	B-13-5.0-111617					
Laboratory ID:	11-232-01					
Aroclor 1016	ND	0.052	EPA 8082A	11-20-17	11-20-17	
Aroclor 1221	ND	0.052	EPA 8082A	11-20-17	11-20-17	
Aroclor 1232	ND	0.052	EPA 8082A	11-20-17	11-20-17	
Aroclor 1242	ND	0.052	EPA 8082A	11-20-17	11-20-17	
Aroclor 1248	ND	0.052	EPA 8082A	11-20-17	11-20-17	
Aroclor 1254	ND	0.052	EPA 8082A	11-20-17	11-20-17	
Aroclor 1260	ND	0.052	EPA 8082A	11-20-17	11-20-17	
Surrogate:	Percent Recovery	Control Limits				
DCB	70	40-134				
Client ID:	B-11-5.0-111617					
Laboratory ID:	11-232-07					
Aroclor 1016	ND	0.053	EPA 8082A	11-20-17	11-20-17	
Aroclor 1221	ND	0.053	EPA 8082A	11-20-17	11-20-17	
Aroclor 1232	ND	0.053	EPA 8082A	11-20-17	11-20-17	
Aroclor 1242	ND	0.053	EPA 8082A	11-20-17	11-20-17	
Aroclor 1248	ND	0.053	EPA 8082A	11-20-17	11-20-17	
Aroclor 1254	ND	0.053	EPA 8082A	11-20-17	11-20-17	
Aroclor 1260	ND	0.053	EPA 8082A	11-20-17	11-20-17	
Surrogate:	Percent Recovery	Control Limits				
DCB	75	40-134				
Client ID:	B-12-9.0-111617					
Laboratory ID:	11-232-10					
Aroclor 1016	ND	0.054	EPA 8082A	11-20-17	11-20-17	
Aroclor 1221	ND	0.054	EPA 8082A	11-20-17	11-20-17	
Aroclor 1232	ND	0.054	EPA 8082A	11-20-17	11-20-17	
Aroclor 1242	ND	0.054	EPA 8082A	11-20-17	11-20-17	
Aroclor 1248	ND	0.054	EPA 8082A	11-20-17	11-20-17	
Aroclor 1254	ND	0.054	EPA 8082A	11-20-17	11-20-17	
Aroclor 1260	ND	0.054	EPA 8082A	11-20-17	11-20-17	
Surrogate:	Percent Recovery	Control Limits				
DCB	69	40-134				



Date of Report: November 29, 2017  
 Samples Submitted: November 17, 2017  
 Laboratory Reference: 1711-232  
 Project: 188-002

### PCBs EPA 8082A

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>B-18-10.0-111617</b>					
Laboratory ID:	11-232-16					
Aroclor 1016	ND	0.055	EPA 8082A	11-20-17	11-20-17	
Aroclor 1221	ND	0.055	EPA 8082A	11-20-17	11-20-17	
Aroclor 1232	ND	0.055	EPA 8082A	11-20-17	11-20-17	
Aroclor 1242	ND	0.055	EPA 8082A	11-20-17	11-20-17	
Aroclor 1248	ND	0.055	EPA 8082A	11-20-17	11-20-17	
Aroclor 1254	ND	0.055	EPA 8082A	11-20-17	11-20-17	
Aroclor 1260	ND	0.055	EPA 8082A	11-20-17	11-20-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
DCB	69	40-134				





Date of Report: November 29, 2017  
 Samples Submitted: November 17, 2017  
 Laboratory Reference: 1711-232  
 Project: 188-002

**PCBs EPA 8082A  
 QUALITY CONTROL**

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB1120S1					
Aroclor 1016	ND	0.050	EPA 8082A	11-20-17	11-20-17	
Aroclor 1221	ND	0.050	EPA 8082A	11-20-17	11-20-17	
Aroclor 1232	ND	0.050	EPA 8082A	11-20-17	11-20-17	
Aroclor 1242	ND	0.050	EPA 8082A	11-20-17	11-20-17	
Aroclor 1248	ND	0.050	EPA 8082A	11-20-17	11-20-17	
Aroclor 1254	ND	0.050	EPA 8082A	11-20-17	11-20-17	
Aroclor 1260	ND	0.050	EPA 8082A	11-20-17	11-20-17	
Surrogate:	Percent Recovery	Control Limits				
DCB	67	40-134				

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB1120S1									
	SB	SBD	SB	SBD		SB	SBD			
Aroclor 1260	0.421	0.461	0.500	0.500	N/A	84	92	56-130	9	15
Surrogate:										
DCB						79	82	40-134		



Date of Report: November 29, 2017  
Samples Submitted: November 17, 2017  
Laboratory Reference: 1711-232  
Project: 188-002

### % MOISTURE

Date Analyzed: 11-20-17

Client ID	Lab ID	% Moisture
B-13-5.0-111617	11-232-01	4
B-13-10.0-111617	11-232-03	6
B-13-17.5-111617	11-232-05	11
B-11-5.0-111617	11-232-07	7
B-12-9.0-111617	11-232-10	7
B-19-10.0-111617	11-232-13	4
B-18-7.5-111617	11-232-15	6
B-18-10.0-111617	11-232-16	10





### 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

Page 1 of 2

Turnaround Request (in working days)				Laboratory Number: <b>11-232</b>														
(Check One)																		
<input type="checkbox"/> Same Day <input type="checkbox"/> 1 Day																		
<input type="checkbox"/> 2 Days <input checked="" type="checkbox"/> 3 Days																		
<input checked="" type="checkbox"/> Standard (7 Days) (TPH analysis 5 Days)																		
<input type="checkbox"/> (other) _____																		
Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers													
1	B-13- <del>10</del> -111617	11/16/17	800	Soil	4													
2	B-13-7.5-111617		805		4													
3	B-13-10.0-111617		812		4													
4	B-13-15.0-111617		830		4													
5	B-13-17.5-111617		840		4													
6	B-13-20.0-111617		850		4													
7	B-11-5.0-111617		955		1													
8	B-11-7.5-111617		1000		1													
9	B-11-10.0-111617		1005		1													
10	B-12-9.0-111617		1050		1													
Signature		Company	Date	Time	Comments/Special Instructions													
[Signature]		Farallon	11/16/17	1749	• B-13-17.5 and B-13-20.0 wet with little soil. (mostly gravel)													
[Signature]		ORE	11/17/17	1335	• PM will call with analysis results													
Relinquished					Data Package: Standard <input type="checkbox"/> Level III <input type="checkbox"/> Level IV <input type="checkbox"/>													
Received					Chromatograms with final report <input type="checkbox"/> Electronic Data Deliverables (EDDs) <input type="checkbox"/>													
Relinquished																		
Received																		
Relinquished																		
Reviewed/Date																		

W/ ACU/SG as well with sent.

C PAHs





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# 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)

Number of Containers

Laboratory Number: **11-232**

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)	<b>C PAHs</b>
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	
WITH ACU / SG as well	
% Moisture	

Company: Farallon Consulting  
Project Number: 188-002  
Project Name: Woodworth Lakeview Facility  
Project Manager: Broni Swister  
Sampled by: Daniel Aguilera

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	WITH ACU / SG as well	% Moisture
11	B-19-5.0-111617	11/16/17	1215	Soil	1																			
12	B-19-7.5-111617		1222		1																			
13	B-19-10.0-111617		1228		1																			
14	B-18-5.0-111617		1300		1																			
15	B-18-7.5-111617		1305		1																			
16	B-18-10.0-111617		1310		1																			
17	Mw-24T-111617**		1448	H2O	6																			

Signature

Company

Date

Time

Comments/Special Instructions

[Signature]

Farallon

11/16/17

1749

B-18-10.0 spot is potentially high concentration

[Signature]

OSI

11/17/17

1335

[Signature]

Please analyze on a 3 day turnaround.

[Signature]

\*\* Hold for extra analysis Thanks

[Signature]

Data Package: Standard ☐ Level III ☒ Level IV ☐

[Signature]

Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐

Reviewed/Date

Reviewed/Date



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

December 15, 2017

Brani Jurista  
Farallon Consulting, LLC  
975 5th Avenue NW  
Issaquah, WA 98027

Re: Analytical Data for Project 188-002  
Laboratory Reference No. 1712-047

Dear Brani:

Enclosed are the analytical results and associated quality control data for samples submitted on December 6, 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 "DeB" followed by a stylized flourish.

David Baumeister  
Project Manager

Enclosures



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OnSite Environmental, Inc. 14648 NE 95<sup>th</sup> 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: December 15, 2017  
Samples Submitted: December 6, 2017  
Laboratory Reference: 1712-047  
Project: 188-002

### Case Narrative

Samples were collected on December 5, 2017 and received by the laboratory on December 6, 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.

#### Nitrate EPA 353.2 Analysis

The reported Nitrate results are a calculated value based on the subtraction of Nitrite from the Nitrate plus Nitrite result. The Nitrite analysis, which has a 48-hour holding time, was performed within the holding time. Immediately after this analysis, an aliquot of the samples was preserved with concentrated sulfuric acid and stored at 4 degrees C. The preserved samples were then analyzed within the maximum 28-day holding time for the Nitrate plus Nitrite analysis.

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.



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### NWTPH-Dx

Matrix: Water  
 Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>MW-5-120517</b>					
Laboratory ID:	12-047-05					
Diesel Range Organics	ND	0.26	NWTPH-Dx	12-12-17	12-12-17	
Lube Oil Range Organics	ND	0.41	NWTPH-Dx	12-12-17	12-12-17	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	83	50-150				

<b>Client ID:</b>	<b>MW-13-120517</b>					
Laboratory ID:	12-047-06					
Diesel Range Organics	0.31	0.26	NWTPH-Dx	12-12-17	12-12-17	
Lube Oil Range Organics	0.58	0.41	NWTPH-Dx	12-12-17	12-12-17	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	83	50-150				

<b>Client ID:</b>	<b>MW-19-120517</b>					
Laboratory ID:	12-047-07					
Diesel Range Organics	ND	0.25	NWTPH-Dx	12-12-17	12-12-17	
Lube Oil Range Organics	ND	0.41	NWTPH-Dx	12-12-17	12-12-17	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	89	50-150				

<b>Client ID:</b>	<b>MW-11B-120517</b>					
Laboratory ID:	12-047-08					
Diesel Range Organics	ND	0.26	NWTPH-Dx	12-12-17	12-12-17	
Lube Oil Range Organics	ND	0.41	NWTPH-Dx	12-12-17	12-12-17	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	95	50-150				

<b>Client ID:</b>	<b>SVE-2-120517</b>					
Laboratory ID:	12-047-10					
Diesel Range Organics	ND	0.26	NWTPH-Dx	12-12-17	12-12-17	
Lube Oil Range Organics	ND	0.41	NWTPH-Dx	12-12-17	12-12-17	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	83	50-150				



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**NWTPH-Dx  
QUALITY CONTROL**

Matrix: Water  
 Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB1212W1					
Diesel Range Organics	<b>ND</b>	0.25	NWTPH-Dx	12-12-17	12-12-17	
Lube Oil Range Organics	<b>ND</b>	0.40	NWTPH-Dx	12-12-17	12-12-17	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	100	50-150				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
<b>DUPLICATE</b>								
Laboratory ID:	12-043-01							
	ORIG	DUP						
Diesel Range Organics	<b>0.782</b>	<b>0.715</b>	NA	NA	NA	NA	9	NA
Lube Oil Range	<b>ND</b>	<b>ND</b>	NA	NA	NA	NA	NA	M
Surrogate:								
o-Terphenyl				104	98	50-150		



Date of Report: December 15, 2017  
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**VOLATILES EPA 8260C**  
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Matrix: Water  
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>		<b>MW-19-120517</b>				
Laboratory ID:		12-047-07				
Dichlorodifluoromethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Chloromethane	ND	1.0	EPA 8260C	12-8-17	12-8-17	
Vinyl Chloride	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Bromomethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Chloroethane	ND	1.0	EPA 8260C	12-8-17	12-8-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Acetone	ND	5.0	EPA 8260C	12-8-17	12-8-17	
Iodomethane	ND	5.0	EPA 8260C	12-8-17	12-8-17	
Carbon Disulfide	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Methylene Chloride	ND	1.0	EPA 8260C	12-8-17	12-8-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Vinyl Acetate	ND	1.0	EPA 8260C	12-8-17	12-8-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
2-Butanone	ND	5.0	EPA 8260C	12-8-17	12-8-17	
Bromochloromethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Chloroform	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Benzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Trichloroethene	ND	0.50	EPA 8260C	12-8-17	12-8-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Dibromomethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Bromodichloromethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	12-8-17	12-8-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260C	12-8-17	12-8-17	
Toluene	ND	1.0	EPA 8260C	12-8-17	12-8-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	12-8-17	12-8-17	



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**VOLATILES EPA 8260C**  
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>MW-19-120517</b>					
<b>Laboratory ID:</b>	<b>12-047-07</b>					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Tetrachloroethene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
2-Hexanone	ND	2.0	EPA 8260C	12-8-17	12-8-17	
Dibromochloromethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Chlorobenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Ethylbenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
m,p-Xylene	ND	0.40	EPA 8260C	12-8-17	12-8-17	
o-Xylene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Styrene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Bromoform	ND	1.0	EPA 8260C	12-8-17	12-8-17	
Isopropylbenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Bromobenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
n-Propylbenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
4-Chlorotoluene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
tert-Butylbenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
sec-Butylbenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
p-Isopropyltoluene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
n-Butylbenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	12-8-17	12-8-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Naphthalene	ND	1.0	EPA 8260C	12-8-17	12-8-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
<b>Surrogate:</b>	<b>Percent Recovery</b>	<b>Control Limits</b>				
<i>Dibromofluoromethane</i>	103	75-127				
<i>Toluene-d8</i>	97	80-127				
<i>4-Bromofluorobenzene</i>	98	78-125				



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# **VOLATILES EPA 8260C**

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Matrix: Water

Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>		<b>SVE-3-120517</b>				
Laboratory ID:		12-047-09				
Dichlorodifluoromethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Chloromethane	ND	1.0	EPA 8260C	12-8-17	12-8-17	
Vinyl Chloride	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Bromomethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Chloroethane	ND	1.0	EPA 8260C	12-8-17	12-8-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Acetone	ND	5.0	EPA 8260C	12-8-17	12-8-17	
Iodomethane	ND	5.0	EPA 8260C	12-8-17	12-8-17	
Carbon Disulfide	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Methylene Chloride	ND	1.0	EPA 8260C	12-8-17	12-8-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Vinyl Acetate	ND	1.0	EPA 8260C	12-8-17	12-8-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
2-Butanone	ND	5.0	EPA 8260C	12-8-17	12-8-17	
Bromochloromethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Chloroform	1.9	0.20	EPA 8260C	12-8-17	12-8-17	
1,1,1-Trichloroethane	0.80	0.20	EPA 8260C	12-8-17	12-8-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Benzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Trichloroethene	3.5	0.50	EPA 8260C	12-8-17	12-8-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Dibromomethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Bromodichloromethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	12-8-17	12-8-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260C	12-8-17	12-8-17	
Toluene	ND	1.0	EPA 8260C	12-8-17	12-8-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	12-8-17	12-8-17	



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 Laboratory Reference: 1712-047  
 Project: 188-002

**VOLATILES EPA 8260C**  
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>SVE-3-120517</b>					
<b>Laboratory ID:</b>	<b>12-047-09</b>					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Tetrachloroethene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
2-Hexanone	ND	2.0	EPA 8260C	12-8-17	12-8-17	
Dibromochloromethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Chlorobenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Ethylbenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
m,p-Xylene	ND	0.40	EPA 8260C	12-8-17	12-8-17	
o-Xylene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Styrene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Bromoform	ND	1.0	EPA 8260C	12-8-17	12-8-17	
Isopropylbenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Bromobenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
n-Propylbenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
4-Chlorotoluene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
tert-Butylbenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
sec-Butylbenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
p-Isopropyltoluene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
n-Butylbenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	12-8-17	12-8-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Naphthalene	ND	1.0	EPA 8260C	12-8-17	12-8-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
<b>Surrogate:</b>	<b>Percent Recovery</b>	<b>Control Limits</b>				
Dibromofluoromethane	103	75-127				
Toluene-d8	99	80-127				
4-Bromofluorobenzene	98	78-125				



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**VOLATILES EPA 8260C**  
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Matrix: Water  
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>		<b>SVE-2-120517</b>				
Laboratory ID:		12-047-10				
Dichlorodifluoromethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Chloromethane	ND	1.0	EPA 8260C	12-8-17	12-8-17	
Vinyl Chloride	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Bromomethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Chloroethane	ND	1.0	EPA 8260C	12-8-17	12-8-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Acetone	ND	5.0	EPA 8260C	12-8-17	12-8-17	
Iodomethane	ND	5.0	EPA 8260C	12-8-17	12-8-17	
Carbon Disulfide	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Methylene Chloride	ND	1.0	EPA 8260C	12-8-17	12-8-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Vinyl Acetate	ND	1.0	EPA 8260C	12-8-17	12-8-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
2-Butanone	ND	5.0	EPA 8260C	12-8-17	12-8-17	
Bromochloromethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Chloroform	0.54	0.20	EPA 8260C	12-8-17	12-8-17	
1,1,1-Trichloroethane	1.6	0.20	EPA 8260C	12-8-17	12-8-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Benzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Trichloroethene	6.6	0.50	EPA 8260C	12-8-17	12-8-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Dibromomethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Bromodichloromethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	12-8-17	12-8-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260C	12-8-17	12-8-17	
Toluene	ND	1.0	EPA 8260C	12-8-17	12-8-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	12-8-17	12-8-17	



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**VOLATILES EPA 8260C**  
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>SVE-2-120517</b>					
<b>Laboratory ID:</b>	<b>12-047-10</b>					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Tetrachloroethene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
2-Hexanone	ND	2.0	EPA 8260C	12-8-17	12-8-17	
Dibromochloromethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Chlorobenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Ethylbenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
m,p-Xylene	ND	0.40	EPA 8260C	12-8-17	12-8-17	
o-Xylene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Styrene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Bromoform	ND	1.0	EPA 8260C	12-8-17	12-8-17	
Isopropylbenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Bromobenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
n-Propylbenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
4-Chlorotoluene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
tert-Butylbenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
sec-Butylbenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
p-Isopropyltoluene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
n-Butylbenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	12-8-17	12-8-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Naphthalene	ND	1.0	EPA 8260C	12-8-17	12-8-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
<b>Surrogate:</b>	<b>Percent Recovery</b>	<b>Control Limits</b>				
Dibromofluoromethane	103	75-127				
Toluene-d8	98	80-127				
4-Bromofluorobenzene	96	78-125				



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**VOLATILES by EPA 8260C**  
**METHOD BLANK QUALITY CONTROL**  
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Matrix: Water  
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<hr/>						
Laboratory ID:	MB1208W1					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Chloromethane	ND	1.0	EPA 8260C	12-8-17	12-8-17	
Vinyl Chloride	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Bromomethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Chloroethane	ND	1.0	EPA 8260C	12-8-17	12-8-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Acetone	ND	5.0	EPA 8260C	12-8-17	12-8-17	
Iodomethane	ND	5.0	EPA 8260C	12-8-17	12-8-17	
Carbon Disulfide	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Methylene Chloride	ND	1.0	EPA 8260C	12-8-17	12-8-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Vinyl Acetate	ND	1.0	EPA 8260C	12-8-17	12-8-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
2-Butanone	ND	5.0	EPA 8260C	12-8-17	12-8-17	
Bromochloromethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Chloroform	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Benzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Trichloroethene	ND	0.50	EPA 8260C	12-8-17	12-8-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Dibromomethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Bromodichloromethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	12-8-17	12-8-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260C	12-8-17	12-8-17	
Toluene	ND	1.0	EPA 8260C	12-8-17	12-8-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	12-8-17	12-8-17	



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**VOLATILES by EPA 8260C**  
**METHOD BLANK QUALITY CONTROL**  
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID: MB1208W1						
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Tetrachloroethene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
2-Hexanone	ND	2.0	EPA 8260C	12-8-17	12-8-17	
Dibromochloromethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Chlorobenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Ethylbenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
m,p-Xylene	ND	0.40	EPA 8260C	12-8-17	12-8-17	
o-Xylene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Styrene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Bromoform	ND	1.0	EPA 8260C	12-8-17	12-8-17	
Isopropylbenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Bromobenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
n-Propylbenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
4-Chlorotoluene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
tert-Butylbenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
sec-Butylbenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
p-Isopropyltoluene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
n-Butylbenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	12-8-17	12-8-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Naphthalene	ND	1.0	EPA 8260C	12-8-17	12-8-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>105</i>	<i>75-127</i>				
<i>Toluene-d8</i>	<i>101</i>	<i>80-127</i>				
<i>4-Bromofluorobenzene</i>	<i>100</i>	<i>78-125</i>				



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

Matrix: Water

Units: ug/L

Analyte	Result		Spike Level		Percent		Recovery		RPD	
					Recovery		Limits		RPD	Limit
SPIKE BLANKS										
Laboratory ID:	SB1208W1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	9.67	8.97	10.0	10.0	97	90	63-126	8	21	
Benzene	10.6	10.0	10.0	10.0	106	100	78-122	6	19	
Trichloroethene	10.7	10.1	10.0	10.0	107	101	63-120	6	20	
Toluene	10.9	10.1	10.0	10.0	109	101	79-124	8	19	
Chlorobenzene	10.8	10.0	10.0	10.0	108	100	78-120	8	19	
Surrogate:										
Dibromofluoromethane					100	103	75-127			
Toluene-d8					101	99	80-127			
4-Bromofluorobenzene					97	96	78-125			





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**TOTAL METALS  
 EPA 200.8**

Matrix: Water  
 Units: ug/L (ppb)

<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>EPA Method</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Flags</b>
<hr/>						
Lab ID:	12-047-01					
<b>Client ID:</b>	<b>MW-32-120517</b>					
Arsenic	<b>ND</b>	3.3	200.8	12-7-17	12-11-17	
Lead	<b>ND</b>	1.1	200.8	12-7-17	12-11-17	
<hr/>						
<hr/>						
Lab ID:	12-047-02					
<b>Client ID:</b>	<b>MW-12-120517</b>					
Arsenic	<b>6.3</b>	3.3	200.8	12-7-17	12-11-17	
Lead	<b>12</b>	1.1	200.8	12-7-17	12-11-17	
<hr/>						
<hr/>						
Lab ID:	12-047-03					
<b>Client ID:</b>	<b>MW-33-120517</b>					
Arsenic	<b>ND</b>	3.3	200.8	12-7-17	12-11-17	
Lead	<b>ND</b>	1.1	200.8	12-7-17	12-11-17	
<hr/>						
<hr/>						
Lab ID:	12-047-04					
<b>Client ID:</b>	<b>MW-31-120517</b>					
Arsenic	<b>22</b>	3.3	200.8	12-7-17	12-11-17	
Lead	<b>20</b>	1.1	200.8	12-7-17	12-11-17	
<hr/>						



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**TOTAL METALS  
EPA 200.8  
METHOD BLANK QUALITY CONTROL**

Date Extracted: 12-7-17  
Date Analyzed: 12-7-17  
  
Matrix: Water  
Units: ug/L (ppb)  
  
Lab ID: MB1207WM1

Analyte	Method	Result	PQL
Arsenic	200.8	<b>ND</b>	3.3
Lead	200.8	<b>ND</b>	1.1



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**TOTAL METALS  
EPA 200.8  
DUPLICATE QUALITY CONTROL**

Date Extracted: 12-7-17

Date Analyzed: 12-7-17

Matrix: Water

Units: ug/L (ppb)

Lab ID: 12-058-03

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	<b>ND</b>	<b>ND</b>	NA	3.3	
Lead	<b>ND</b>	<b>ND</b>	NA	1.1	



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**TOTAL METALS**  
**EPA 200.8**  
**MS/MSD QUALITY CONTROL**

Date Extracted: 12-7-17

Date Analyzed: 12-7-17

Matrix: Water

Units: ug/L (ppb)

Lab ID: 12-058-03

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	111	<b>126</b>	114	<b>128</b>	115	1	
Lead	111	<b>116</b>	104	<b>117</b>	105	1	



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**DISSOLVED METALS**  
**EPA 200.8**

Matrix: Water  
 Units: ug/L (ppb)

<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>EPA Method</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Flags</b>
<hr/>						
Lab ID:	12-047-01					
<b>Client ID:</b>	<b>MW-32-120517</b>					
Arsenic	<b>ND</b>	3.0	200.8	12-6-17	12-11-17	
Lead	<b>ND</b>	1.0	200.8	12-6-17	12-11-17	
<hr/>						
Lab ID:	12-047-02					
<b>Client ID:</b>	<b>MW-12-120517</b>					
Arsenic	<b>6.9</b>	3.0	200.8	12-6-17	12-11-17	
Lead	<b>10</b>	1.0	200.8	12-6-17	12-11-17	
<hr/>						
Lab ID:	12-047-03					
<b>Client ID:</b>	<b>MW-33-120517</b>					
Arsenic	<b>ND</b>	3.0	200.8	12-6-17	12-11-17	
Lead	<b>ND</b>	1.0	200.8	12-6-17	12-11-17	
<hr/>						
Lab ID:	12-047-04					
<b>Client ID:</b>	<b>MW-31-120517</b>					
Arsenic	<b>20</b>	3.0	200.8	12-6-17	12-11-17	
Lead	<b>11</b>	1.0	200.8	12-6-17	12-11-17	



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**DISSOLVED METALS  
EPA 200.8  
METHOD BLANK QUALITY CONTROL**

Date Filtered: 12-6-17  
Date Analyzed: 12-11-17

Matrix: Water  
Units: ug/L (ppb)

Lab ID: MB1206F1

Analyte	Method	Result	PQL
Arsenic	200.8	<b>ND</b>	3.0
Lead	200.8	<b>ND</b>	1.0





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**DISSOLVED METALS  
EPA 200.8  
DUPLICATE QUALITY CONTROL**

Date Filtered: 12-8-17  
Date Analyzed: 12-11-17  
  
Matrix: Water  
Units: ug/L (ppb)  
  
Lab ID: 12-091-02

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	<b>7.14</b>	<b>6.80</b>	5	3.0	
Lead	<b>ND</b>	<b>ND</b>	NA	1.0	



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**DISSOLVED METALS  
EPA 200.8  
MS/MSD QUALITY CONTROL**

Date Filtered: 12-8-17  
Date Analyzed: 12-11-17

Matrix: Water  
Units: ug/L (ppb)

Lab ID: 12-091-02

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	80.0	<b>91.2</b>	105	<b>91.8</b>	106	1	
Lead	80.0	<b>67.4</b>	84	<b>69.0</b>	86	2	



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**NITRATE (as Nitrogen)**  
**EPA 353.2**

Matrix: Water  
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	MW-19-120517					
Laboratory ID:	12-047-07					
Nitrate	0.60	0.050	EPA 353.2	12-12-17	12-12-17	



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**NITRATE (as Nitrogen)**  
**EPA 353.2**  
**QUALITY CONTROL**

Matrix: Water  
 Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB1212W2					
Nitrate	<b>ND</b>	0.050	EPA 353.2	12-12-17	12-12-17	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
<b>DUPLICATE</b>								
Laboratory ID:	12-047-07							
	ORIG	DUP						
Nitrate	<b>0.598</b>	<b>0.591</b>	NA	NA	NA	NA	1	12

**MATRIX SPIKE**

Laboratory ID:	12-047-07							
	MS	MS		MS				
Nitrate	<b>2.77</b>	2.00	0.598	109	94-126	NA	NA	

**SPIKE BLANK**

Laboratory ID:	SB1212W2							
	SB	SB		SB				
Nitrate	<b>2.14</b>	2.00	NA	107	95-120	NA	NA	



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**NITRITE (as Nitrogen)**  
**EPA 353.2**

Matrix: Water  
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	MW-19-120517					
Laboratory ID:	12-047-07					
Nitrite	ND	0.020	EPA 353.2	12-7-17	12-7-17	



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**NITRITE (as Nitrogen)**  
**EPA 353.2**  
**QUALITY CONTROL**

Matrix: Water  
 Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB1207W1					
Nitrite	ND	0.020	EPA 353.2	12-7-17	12-7-17	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
<b>DUPLICATE</b>								
Laboratory ID:	12-047-07							
	ORIG	DUP						
Nitrite	ND	ND	NA	NA	NA	NA	11	

**MATRIX SPIKE**

Laboratory ID:	12-047-07							
	MS	MS		MS				
Nitrite	0.260	0.250	ND	104	75-124	NA	NA	

**SPIKE BLANK**

Laboratory ID:	SB1207W1							
	SB	SB		SB				
Nitrite	0.251	0.250	NA	100	89-113	NA	NA	





Date of Report: December 15, 2017  
Samples Submitted: December 6, 2017  
Laboratory Reference: 1712-047  
Project: 188-002

**SULFATE**  
**ASTM D516-07**

Matrix: Water  
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	MW-19-120517					
Laboratory ID:	12-047-07					
Sulfate	52	25	ASTM D516-07	12-12-17	12-12-17	



Date of Report: December 15, 2017  
 Samples Submitted: December 6, 2017  
 Laboratory Reference: 1712-047  
 Project: 188-002

**SULFATE  
 ASTM D516-07  
 QUALITY CONTROL**

Matrix: Water  
 Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB1212W1					
Sulfate	<b>ND</b>	5.0	ASTM D516-07	12-12-17	12-12-17	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
<b>DUPLICATE</b>								
Laboratory ID:	12-057-01							
	ORIG	DUP						
Sulfate	<b>17.0</b>	<b>17.4</b>	NA	NA	NA	NA	2	10

**MATRIX SPIKE**

Laboratory ID:	12-057-01							
	MS	MS		MS				
Sulfate	<b>37.6</b>	20.0	17.0	103	81-125	NA	NA	

**SPIKE BLANK**

Laboratory ID:	SB1212W1							
	SB	SB		SB				
Sulfate	<b>10.5</b>	10.0	NA	105	91-115	NA	NA	



Date of Report: December 15, 2017  
Samples Submitted: December 6, 2017  
Laboratory Reference: 1712-047  
Project: 188-002

**DISSOLVED GASES**  
**RSK 175**

Matrix: Water  
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	MW-19-120517					
Laboratory ID:	12-047-07					
Methane	1.7	0.50	RSK 175	12-6-17	12-6-17	
Ethane	ND	0.50	RSK 175	12-6-17	12-6-17	
Ethene	ND	0.50	RSK 175	12-6-17	12-6-17	



Date of Report: December 15, 2017  
 Samples Submitted: December 6, 2017  
 Laboratory Reference: 1712-047  
 Project: 188-002

**DISSOLVED GASES  
 RSK 175  
 QUALITY CONTROL**

Matrix: Water  
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB1206W1					
Methane	<b>ND</b>	0.50	RSK 175	12-6-17	12-6-17	
Ethane	<b>ND</b>	0.50	RSK 175	12-6-17	12-6-17	
Ethene	<b>ND</b>	0.50	RSK 175	12-6-17	12-6-17	

Analyte	Result		Spike Level		Source	Percent	Recovery	RPD		
					Result	Recovery	Limits			
SPIKE BLANKS										
Laboratory ID:	SB1206W1									
	SB	SBD	SB	SBD		SB	SBD			
Methane	4.51	4.47	4.42	4.42	N/A	102	101	75-125	1	25
Ethane	8.01	8.38	8.32	8.32	N/A	96	101	75-125	5	25
Ethene	8.08	7.90	7.77	7.77	N/A	104	102	75-125	2	25



Date of Report: December 15, 2017  
Samples Submitted: December 6, 2017  
Laboratory Reference: 1712-047  
Project: 188-002

**TOTAL ORGANIC CARBON**  
**SM 5310B**

Matrix: Water

Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	MW-19-120517					
Laboratory ID:	12-047-07					
Total Organic Carbon	2.1	1.0	SM 5310B	12-11-17	12-11-17	



Date of Report: December 15, 2017  
 Samples Submitted: December 6, 2017  
 Laboratory Reference: 1712-047  
 Project: 188-002

**TOTAL ORGANIC CARBON  
 SM 5310B  
 QUALITY CONTROL**

Matrix: Water  
 Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB1211W1					
Total Organic Carbon	<b>ND</b>	1.0	SM 5310B	12-11-17	12-11-17	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
<b>DUPLICATE</b>								
Laboratory ID:	12-047-07							
	ORIG	DUP						
Total Organic Carbon	<b>2.08</b>	<b>2.00</b>	NA	NA	NA	NA	4	15

**MATRIX SPIKE**

Laboratory ID:	12-047-07							
	MS	MS		MS				
Total Organic Carbon	<b>11.3</b>	10.0	2.08	92	86-122	NA	NA	

**SPIKE BLANK**

Laboratory ID:	SB1211W1							
	SB	SB		SB				
Total Organic Carbon	<b>10.5</b>	10.0	NA	105	99-118	NA	NA	







### 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 95<sup>th</sup> Street, Redmond, WA 98052 • (425) 883-3881

December 18, 2017

Brani Jurista  
Farallon Consulting, LLC  
975 5th Avenue NW  
Issaquah, WA 98027

Re: Analytical Data for Project 188-002  
Laboratory Reference No. 1712-075

Dear Brani:

Enclosed are the analytical results and associated quality control data for samples submitted on December 7, 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 line extending to the right.

David Baumeister  
Project Manager

Enclosures



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OnSite Environmental, Inc. 14648 NE 95<sup>th</sup> 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: December 18, 2017  
Samples Submitted: December 7, 2017  
Laboratory Reference: 1712-075  
Project: 188-002

### Case Narrative

Samples were collected on December 6, 2017 and received by the laboratory on December 7, 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.

#### Nitrate EPA 353.3 Analysis

The reported Nitrate results are a calculated value based on the subtraction of Nitrite from the Nitrate plus Nitrite result. The Nitrite analysis, which has a 48-hour holding time, was performed within the holding time. Immediately after this analysis, an aliquot of the samples was preserved with concentrated sulfuric acid and stored at 4 degrees C. The preserved samples were then analyzed within the maximum 28-day holding time for the Nitrate plus Nitrite analysis.

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: December 18, 2017  
 Samples Submitted: December 7, 2017  
 Laboratory Reference: 1712-075  
 Project: 188-002

### NWTPH-Dx

Matrix: Water  
 Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>MW-16-120617</b>					
Laboratory ID:	12-075-08					
Diesel Range Organics	<b>ND</b>	0.26	NWTPH-Dx	12-12-17	12-12-17	
Lube Oil Range Organics	<b>0.57</b>	0.41	NWTPH-Dx	12-12-17	12-12-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	91	50-150				



Date of Report: December 18, 2017  
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**NWTPH-Dx  
 QUALITY CONTROL**

Matrix: Water  
 Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB1212W1					
Diesel Range Organics	ND	0.25	NWTPH-Dx	12-12-17	12-12-17	
Lube Oil Range Organics	ND	0.40	NWTPH-Dx	12-12-17	12-12-17	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	100	50-150				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
<b>DUPLICATE</b>								
Laboratory ID:	12-043-01							
	ORIG	DUP						
Diesel Range Organics	0.782	0.715	NA	NA	NA	NA	9	NA M
Lube Oil Range	ND	ND	NA	NA	NA	NA	NA	NA
Surrogate:								
o-Terphenyl				104	98	50-150		





Date of Report: December 18, 2017  
 Samples Submitted: December 7, 2017  
 Laboratory Reference: 1712-075  
 Project: 188-002

**VOLATILES EPA 8260C**  
 page 1 of 2

Matrix: Water  
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>MW-25-120617</b>					
<b>Laboratory ID:</b>	<b>12-075-03</b>					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Chloromethane	ND	1.0	EPA 8260C	12-8-17	12-8-17	
Vinyl Chloride	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Bromomethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Chloroethane	ND	1.0	EPA 8260C	12-8-17	12-8-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Acetone	ND	5.0	EPA 8260C	12-8-17	12-8-17	
Iodomethane	ND	5.0	EPA 8260C	12-8-17	12-8-17	
Carbon Disulfide	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Methylene Chloride	ND	1.0	EPA 8260C	12-8-17	12-8-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Vinyl Acetate	ND	1.0	EPA 8260C	12-8-17	12-8-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
2-Butanone	ND	5.0	EPA 8260C	12-8-17	12-8-17	
Bromochloromethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Chloroform	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,1,1-Trichloroethane	0.25	0.20	EPA 8260C	12-8-17	12-8-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Benzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Trichloroethene	3.3	0.50	EPA 8260C	12-8-17	12-8-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Dibromomethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Bromodichloromethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	12-8-17	12-8-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260C	12-8-17	12-8-17	
Toluene	ND	1.0	EPA 8260C	12-8-17	12-8-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	12-8-17	12-8-17	



Date of Report: December 18, 2017  
 Samples Submitted: December 7, 2017  
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 Project: 188-002

**VOLATILES EPA 8260C**  
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>MW-25-120617</b>					
<b>Laboratory ID:</b>	<b>12-075-03</b>					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Tetrachloroethene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
2-Hexanone	ND	2.0	EPA 8260C	12-8-17	12-8-17	
Dibromochloromethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Chlorobenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Ethylbenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
m,p-Xylene	ND	0.40	EPA 8260C	12-8-17	12-8-17	
o-Xylene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Styrene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Bromoform	ND	1.0	EPA 8260C	12-8-17	12-8-17	
Isopropylbenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Bromobenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
n-Propylbenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
4-Chlorotoluene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
tert-Butylbenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
sec-Butylbenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
p-Isopropyltoluene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
n-Butylbenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	12-8-17	12-8-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Naphthalene	ND	1.0	EPA 8260C	12-8-17	12-8-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>101</i>	<i>75-127</i>				
<i>Toluene-d8</i>	<i>99</i>	<i>80-127</i>				
<i>4-Bromofluorobenzene</i>	<i>97</i>	<i>78-125</i>				



Date of Report: December 18, 2017  
 Samples Submitted: December 7, 2017  
 Laboratory Reference: 1712-075  
 Project: 188-002

**VOLATILES EPA 8260C**  
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Matrix: Water  
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>		<b>MW-26-120617</b>				
Laboratory ID:		12-075-04				
Dichlorodifluoromethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Chloromethane	ND	1.0	EPA 8260C	12-8-17	12-8-17	
Vinyl Chloride	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Bromomethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Chloroethane	ND	1.0	EPA 8260C	12-8-17	12-8-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Acetone	ND	5.0	EPA 8260C	12-8-17	12-8-17	
Iodomethane	ND	5.0	EPA 8260C	12-8-17	12-8-17	
Carbon Disulfide	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Methylene Chloride	ND	1.0	EPA 8260C	12-8-17	12-8-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Vinyl Acetate	ND	1.0	EPA 8260C	12-8-17	12-8-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
2-Butanone	ND	5.0	EPA 8260C	12-8-17	12-8-17	
Bromochloromethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Chloroform	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Benzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Trichloroethene	0.71	0.50	EPA 8260C	12-8-17	12-8-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Dibromomethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Bromodichloromethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	12-8-17	12-8-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260C	12-8-17	12-8-17	
Toluene	ND	1.0	EPA 8260C	12-8-17	12-8-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	12-8-17	12-8-17	



Date of Report: December 18, 2017  
 Samples Submitted: December 7, 2017  
 Laboratory Reference: 1712-075  
 Project: 188-002

**VOLATILES EPA 8260C**  
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>MW-26-120617</b>					
<b>Laboratory ID:</b>	<b>12-075-04</b>					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Tetrachloroethene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
2-Hexanone	ND	2.0	EPA 8260C	12-8-17	12-8-17	
Dibromochloromethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Chlorobenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Ethylbenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
m,p-Xylene	ND	0.40	EPA 8260C	12-8-17	12-8-17	
o-Xylene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Styrene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Bromoform	ND	1.0	EPA 8260C	12-8-17	12-8-17	
Isopropylbenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Bromobenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
n-Propylbenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
4-Chlorotoluene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
tert-Butylbenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
sec-Butylbenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
p-Isopropyltoluene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
n-Butylbenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	12-8-17	12-8-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Naphthalene	ND	1.0	EPA 8260C	12-8-17	12-8-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>103</i>	<i>75-127</i>				
<i>Toluene-d8</i>	<i>99</i>	<i>80-127</i>				
<i>4-Bromofluorobenzene</i>	<i>95</i>	<i>78-125</i>				



Date of Report: December 18, 2017  
 Samples Submitted: December 7, 2017  
 Laboratory Reference: 1712-075  
 Project: 188-002

**VOLATILES EPA 8260C**  
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Matrix: Water  
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>MW-15-120617</b>					
<b>Laboratory ID:</b>	<b>12-075-05</b>					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Chloromethane	ND	1.0	EPA 8260C	12-8-17	12-8-17	
Vinyl Chloride	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Bromomethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Chloroethane	ND	1.0	EPA 8260C	12-8-17	12-8-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Acetone	ND	5.0	EPA 8260C	12-8-17	12-8-17	
Iodomethane	ND	5.0	EPA 8260C	12-8-17	12-8-17	
Carbon Disulfide	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Methylene Chloride	ND	1.0	EPA 8260C	12-8-17	12-8-17	
(trans) 1,2-Dichloroethene	0.20	0.20	EPA 8260C	12-8-17	12-8-17	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Vinyl Acetate	ND	1.0	EPA 8260C	12-8-17	12-8-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
(cis) 1,2-Dichloroethene	0.41	0.20	EPA 8260C	12-8-17	12-8-17	
2-Butanone	ND	5.0	EPA 8260C	12-8-17	12-8-17	
Bromochloromethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Chloroform	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Benzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Trichloroethene	3.2	0.50	EPA 8260C	12-8-17	12-8-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Dibromomethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Bromodichloromethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	12-8-17	12-8-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260C	12-8-17	12-8-17	
Toluene	ND	1.0	EPA 8260C	12-8-17	12-8-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	12-8-17	12-8-17	



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**VOLATILES EPA 8260C**  
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>MW-15-120617</b>					
<b>Laboratory ID:</b>	<b>12-075-05</b>					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Tetrachloroethene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
2-Hexanone	ND	2.0	EPA 8260C	12-8-17	12-8-17	
Dibromochloromethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Chlorobenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Ethylbenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
m,p-Xylene	ND	0.40	EPA 8260C	12-8-17	12-8-17	
o-Xylene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Styrene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Bromoform	ND	1.0	EPA 8260C	12-8-17	12-8-17	
Isopropylbenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Bromobenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
n-Propylbenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
4-Chlorotoluene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
tert-Butylbenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
sec-Butylbenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
p-Isopropyltoluene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
n-Butylbenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	12-8-17	12-8-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Naphthalene	ND	1.0	EPA 8260C	12-8-17	12-8-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>103</i>	<i>75-127</i>				
<i>Toluene-d8</i>	<i>101</i>	<i>80-127</i>				
<i>4-Bromofluorobenzene</i>	<i>95</i>	<i>78-125</i>				



OnSite Environmental, Inc. 14648 NE 95<sup>th</sup> 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: December 18, 2017  
 Samples Submitted: December 7, 2017  
 Laboratory Reference: 1712-075  
 Project: 188-002

**VOLATILES EPA 8260C**  
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Matrix: Water  
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>MW-3-120617</b>					
<b>Laboratory ID:</b>	<b>12-075-06</b>					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Chloromethane	ND	1.0	EPA 8260C	12-8-17	12-8-17	
Vinyl Chloride	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Bromomethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Chloroethane	ND	1.0	EPA 8260C	12-8-17	12-8-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Acetone	ND	5.0	EPA 8260C	12-8-17	12-8-17	
Iodomethane	ND	5.0	EPA 8260C	12-8-17	12-8-17	
Carbon Disulfide	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Methylene Chloride	ND	1.0	EPA 8260C	12-8-17	12-8-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Vinyl Acetate	ND	1.0	EPA 8260C	12-8-17	12-8-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
2-Butanone	ND	5.0	EPA 8260C	12-8-17	12-8-17	
Bromochloromethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Chloroform	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,1,1-Trichloroethane	0.28	0.20	EPA 8260C	12-8-17	12-8-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Benzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Trichloroethene	1.4	0.50	EPA 8260C	12-8-17	12-8-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Dibromomethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Bromodichloromethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	12-8-17	12-8-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260C	12-8-17	12-8-17	
Toluene	ND	1.0	EPA 8260C	12-8-17	12-8-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	12-8-17	12-8-17	



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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>MW-3-120617</b>					
<b>Laboratory ID:</b>	<b>12-075-06</b>					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Tetrachloroethene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
2-Hexanone	ND	2.0	EPA 8260C	12-8-17	12-8-17	
Dibromochloromethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Chlorobenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Ethylbenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
m,p-Xylene	ND	0.40	EPA 8260C	12-8-17	12-8-17	
o-Xylene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Styrene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Bromoform	ND	1.0	EPA 8260C	12-8-17	12-8-17	
Isopropylbenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Bromobenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
n-Propylbenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
4-Chlorotoluene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
tert-Butylbenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
sec-Butylbenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
p-Isopropyltoluene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
n-Butylbenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	12-8-17	12-8-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Naphthalene	ND	1.0	EPA 8260C	12-8-17	12-8-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>102</i>	<i>75-127</i>				
<i>Toluene-d8</i>	<i>98</i>	<i>80-127</i>				
<i>4-Bromofluorobenzene</i>	<i>96</i>	<i>78-125</i>				



Date of Report: December 18, 2017  
 Samples Submitted: December 7, 2017  
 Laboratory Reference: 1712-075  
 Project: 188-002

**VOLATILES EPA 8260C**  
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Matrix: Water  
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>		<b>MW-18-120617</b>				
Laboratory ID:		12-075-07				
Dichlorodifluoromethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Chloromethane	ND	1.0	EPA 8260C	12-8-17	12-8-17	
Vinyl Chloride	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Bromomethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Chloroethane	ND	1.0	EPA 8260C	12-8-17	12-8-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,1-Dichloroethene	2.8	0.20	EPA 8260C	12-8-17	12-8-17	
Acetone	ND	5.0	EPA 8260C	12-8-17	12-8-17	
Iodomethane	ND	5.0	EPA 8260C	12-8-17	12-8-17	
Carbon Disulfide	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Methylene Chloride	ND	1.0	EPA 8260C	12-8-17	12-8-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,1-Dichloroethane	2.5	0.20	EPA 8260C	12-8-17	12-8-17	
Vinyl Acetate	ND	1.0	EPA 8260C	12-8-17	12-8-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
2-Butanone	ND	5.0	EPA 8260C	12-8-17	12-8-17	
Bromochloromethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Chloroform	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,1,1-Trichloroethane	6.9	0.20	EPA 8260C	12-8-17	12-8-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Benzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Trichloroethene	ND	0.50	EPA 8260C	12-8-17	12-8-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Dibromomethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Bromodichloromethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	12-8-17	12-8-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260C	12-8-17	12-8-17	
Toluene	ND	1.0	EPA 8260C	12-8-17	12-8-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	12-8-17	12-8-17	



Date of Report: December 18, 2017  
 Samples Submitted: December 7, 2017  
 Laboratory Reference: 1712-075  
 Project: 188-002

**VOLATILES EPA 8260C**  
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>MW-18-120617</b>					
<b>Laboratory ID:</b>	<b>12-075-07</b>					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Tetrachloroethene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
2-Hexanone	ND	2.0	EPA 8260C	12-8-17	12-8-17	
Dibromochloromethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Chlorobenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Ethylbenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
m,p-Xylene	ND	0.40	EPA 8260C	12-8-17	12-8-17	
o-Xylene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Styrene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Bromoform	ND	1.0	EPA 8260C	12-8-17	12-8-17	
Isopropylbenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Bromobenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
n-Propylbenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
4-Chlorotoluene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
tert-Butylbenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
sec-Butylbenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
p-Isopropyltoluene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
n-Butylbenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	12-8-17	12-8-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Naphthalene	ND	1.0	EPA 8260C	12-8-17	12-8-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>102</i>	<i>75-127</i>				
<i>Toluene-d8</i>	<i>99</i>	<i>80-127</i>				
<i>4-Bromofluorobenzene</i>	<i>98</i>	<i>78-125</i>				



Date of Report: December 18, 2017  
 Samples Submitted: December 7, 2017  
 Laboratory Reference: 1712-075  
 Project: 188-002

**VOLATILES EPA 8260C**  
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Matrix: Water  
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>MW-16-120617</b>					
<b>Laboratory ID:</b>	<b>12-075-08</b>					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Chloromethane	ND	1.0	EPA 8260C	12-8-17	12-8-17	
Vinyl Chloride	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Bromomethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Chloroethane	ND	1.0	EPA 8260C	12-8-17	12-8-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Acetone	ND	5.0	EPA 8260C	12-8-17	12-8-17	
Iodomethane	ND	5.0	EPA 8260C	12-8-17	12-8-17	
Carbon Disulfide	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Methylene Chloride	ND	1.0	EPA 8260C	12-8-17	12-8-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Vinyl Acetate	ND	1.0	EPA 8260C	12-8-17	12-8-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
2-Butanone	ND	5.0	EPA 8260C	12-8-17	12-8-17	
Bromochloromethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Chloroform	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Benzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Trichloroethene	ND	0.50	EPA 8260C	12-8-17	12-8-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Dibromomethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Bromodichloromethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	12-8-17	12-8-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260C	12-8-17	12-8-17	
Toluene	ND	1.0	EPA 8260C	12-8-17	12-8-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	12-8-17	12-8-17	



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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>MW-16-120617</b>					
<b>Laboratory ID:</b>	<b>12-075-08</b>					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Tetrachloroethene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
2-Hexanone	ND	2.0	EPA 8260C	12-8-17	12-8-17	
Dibromochloromethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Chlorobenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Ethylbenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
m,p-Xylene	ND	0.40	EPA 8260C	12-8-17	12-8-17	
o-Xylene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Styrene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Bromoform	ND	1.0	EPA 8260C	12-8-17	12-8-17	
Isopropylbenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Bromobenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
n-Propylbenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
4-Chlorotoluene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
tert-Butylbenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
sec-Butylbenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
p-Isopropyltoluene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
n-Butylbenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	12-8-17	12-8-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Naphthalene	ND	1.0	EPA 8260C	12-8-17	12-8-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
<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>99</i>	<i>80-127</i>				
<i>4-Bromofluorobenzene</i>	<i>97</i>	<i>78-125</i>				





Date of Report: December 18, 2017  
 Samples Submitted: December 7, 2017  
 Laboratory Reference: 1712-075  
 Project: 188-002

**VOLATILES EPA 8260C**  
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Matrix: Water  
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>MW-2-120617</b>					
<b>Laboratory ID:</b>	<b>12-075-09</b>					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Chloromethane	ND	1.0	EPA 8260C	12-8-17	12-8-17	
Vinyl Chloride	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Bromomethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Chloroethane	ND	1.0	EPA 8260C	12-8-17	12-8-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Acetone	ND	5.0	EPA 8260C	12-8-17	12-8-17	
Iodomethane	ND	5.0	EPA 8260C	12-8-17	12-8-17	
Carbon Disulfide	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Methylene Chloride	ND	1.0	EPA 8260C	12-8-17	12-8-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Vinyl Acetate	ND	1.0	EPA 8260C	12-8-17	12-8-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
2-Butanone	ND	5.0	EPA 8260C	12-8-17	12-8-17	
Bromochloromethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Chloroform	2.0	0.20	EPA 8260C	12-8-17	12-8-17	
1,1,1-Trichloroethane	0.90	0.20	EPA 8260C	12-8-17	12-8-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Benzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Trichloroethene	12	0.50	EPA 8260C	12-8-17	12-8-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Dibromomethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Bromodichloromethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	12-8-17	12-8-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260C	12-8-17	12-8-17	
Toluene	ND	1.0	EPA 8260C	12-8-17	12-8-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	12-8-17	12-8-17	



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**VOLATILES EPA 8260C**  
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>MW-2-120617</b>					
<b>Laboratory ID:</b>	<b>12-075-09</b>					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Tetrachloroethene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
2-Hexanone	ND	2.0	EPA 8260C	12-8-17	12-8-17	
Dibromochloromethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Chlorobenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Ethylbenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
m,p-Xylene	ND	0.40	EPA 8260C	12-8-17	12-8-17	
o-Xylene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Styrene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Bromoform	ND	1.0	EPA 8260C	12-8-17	12-8-17	
Isopropylbenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Bromobenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
n-Propylbenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
4-Chlorotoluene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
tert-Butylbenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
sec-Butylbenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
p-Isopropyltoluene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
n-Butylbenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	12-8-17	12-8-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Naphthalene	ND	1.0	EPA 8260C	12-8-17	12-8-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>104</i>	<i>75-127</i>				
<i>Toluene-d8</i>	<i>100</i>	<i>80-127</i>				
<i>4-Bromofluorobenzene</i>	<i>96</i>	<i>78-125</i>				



Date of Report: December 18, 2017  
 Samples Submitted: December 7, 2017  
 Laboratory Reference: 1712-075  
 Project: 188-002

**VOLATILES by EPA 8260C**  
**METHOD BLANK QUALITY CONTROL**  
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Matrix: Water  
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<hr/>						
Laboratory ID:	MB1208W1					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Chloromethane	ND	1.0	EPA 8260C	12-8-17	12-8-17	
Vinyl Chloride	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Bromomethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Chloroethane	ND	1.0	EPA 8260C	12-8-17	12-8-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Acetone	ND	5.0	EPA 8260C	12-8-17	12-8-17	
Iodomethane	ND	5.0	EPA 8260C	12-8-17	12-8-17	
Carbon Disulfide	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Methylene Chloride	ND	1.0	EPA 8260C	12-8-17	12-8-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Vinyl Acetate	ND	1.0	EPA 8260C	12-8-17	12-8-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
2-Butanone	ND	5.0	EPA 8260C	12-8-17	12-8-17	
Bromochloromethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Chloroform	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Benzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Trichloroethene	ND	0.50	EPA 8260C	12-8-17	12-8-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Dibromomethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Bromodichloromethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	12-8-17	12-8-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260C	12-8-17	12-8-17	
Toluene	ND	1.0	EPA 8260C	12-8-17	12-8-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	12-8-17	12-8-17	



Date of Report: December 18, 2017  
 Samples Submitted: December 7, 2017  
 Laboratory Reference: 1712-075  
 Project: 188-002

**VOLATILES by EPA 8260C**  
**METHOD BLANK QUALITY CONTROL**  
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID: MB1208W1						
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Tetrachloroethene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
2-Hexanone	ND	2.0	EPA 8260C	12-8-17	12-8-17	
Dibromochloromethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Chlorobenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Ethylbenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
m,p-Xylene	ND	0.40	EPA 8260C	12-8-17	12-8-17	
o-Xylene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Styrene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Bromoform	ND	1.0	EPA 8260C	12-8-17	12-8-17	
Isopropylbenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Bromobenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	12-8-17	12-8-17	
n-Propylbenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
4-Chlorotoluene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
tert-Butylbenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
sec-Butylbenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
p-Isopropyltoluene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
n-Butylbenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	12-8-17	12-8-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
Naphthalene	ND	1.0	EPA 8260C	12-8-17	12-8-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	12-8-17	12-8-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>105</i>	<i>75-127</i>				
<i>Toluene-d8</i>	<i>101</i>	<i>80-127</i>				
<i>4-Bromofluorobenzene</i>	<i>100</i>	<i>78-125</i>				



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

Matrix: Water

Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits		RPD	RPD Limit	Flags
					Recovery						
SPIKE BLANKS											
Laboratory ID:	SB1208W1										
	SB	SBD	SB	SBD	SB	SBD					
1,1-Dichloroethene	9.67	8.97	10.0	10.0	97	90	63-126	8	21		
Benzene	10.6	10.0	10.0	10.0	106	100	78-122	6	19		
Trichloroethene	10.7	10.1	10.0	10.0	107	101	63-120	6	20		
Toluene	10.9	10.1	10.0	10.0	109	101	79-124	8	19		
Chlorobenzene	10.8	10.0	10.0	10.0	108	100	78-120	8	19		
Surrogate:											
Dibromofluoromethane					100	103	75-127				
Toluene-d8					101	99	80-127				
4-Bromofluorobenzene					97	96	78-125				



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**DISSOLVED GASES  
RSK 175**

Matrix: Water  
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>MW-25-120617</b>					
Laboratory ID:	12-075-03					
Methane	<b>440</b>	50	RSK 175	12-12-17	12-12-17	
Ethane	<b>ND</b>	50	RSK 175	12-12-17	12-12-17	
Ethene	<b>ND</b>	50	RSK 175	12-12-17	12-12-17	

<b>Client ID:</b>	<b>MW-18-120617</b>					
Laboratory ID:	12-075-07					
Methane	<b>0.90</b>	0.50	RSK 175	12-12-17	12-12-17	
Ethane	<b>ND</b>	0.50	RSK 175	12-12-17	12-12-17	
Ethene	<b>ND</b>	0.50	RSK 175	12-12-17	12-12-17	

<b>Client ID:</b>	<b>MW-16-120617</b>					
Laboratory ID:	12-075-08					
Methane	<b>ND</b>	0.50	RSK 175	12-12-17	12-12-17	
Ethane	<b>ND</b>	0.50	RSK 175	12-12-17	12-12-17	
Ethene	<b>ND</b>	0.50	RSK 175	12-12-17	12-12-17	

<b>Client ID:</b>	<b>MW-2-120617</b>					
Laboratory ID:	12-075-09					
Methane	<b>ND</b>	0.50	RSK 175	12-12-17	12-12-17	
Ethane	<b>ND</b>	0.50	RSK 175	12-12-17	12-12-17	
Ethene	<b>ND</b>	0.50	RSK 175	12-12-17	12-12-17	





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**DISSOLVED GASES  
 RSK 175  
 QUALITY CONTROL**

Matrix: Water  
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB1212W1					
Methane	ND	0.50	RSK 175	12-12-17	12-12-17	
Ethane	ND	0.50	RSK 175	12-12-17	12-12-17	
Ethene	ND	0.50	RSK 175	12-12-17	12-12-17	

Analyte	Result		Spike Level		Source	Percent	Recovery	RPD		
					Result	Recovery	Limits			
SPIKE BLANKS										
Laboratory ID:	SB1212W1									
	SB	SBD	SB	SBD		SB	SBD			
Methane	4.36	4.56	4.42	4.42	N/A	99	103	75-125	4	25
Ethane	7.82	8.61	8.32	8.32	N/A	94	103	75-125	10	25
Ethene	7.51	8.68	7.77	7.77	N/A	97	112	75-125	14	25



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**NITRATE (as Nitrogen)**  
**EPA 353.2**

Matrix: Water  
 Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>MW-25-120617</b>					
Laboratory ID:	12-075-03					
Nitrate	<b>ND</b>	0.050	EPA 353.2	12-12-17	12-12-17	

<b>Client ID:</b>	<b>MW-18-120617</b>					
Laboratory ID:	12-075-07					
Nitrate	<b>ND</b>	0.050	EPA 353.2	12-12-17	12-12-17	

<b>Client ID:</b>	<b>MW-16-120617</b>					
Laboratory ID:	12-075-08					
Nitrate	<b>0.088</b>	0.050	EPA 353.2	12-12-17	12-12-17	

<b>Client ID:</b>	<b>MW-2-120617</b>					
Laboratory ID:	12-075-09					
Nitrate	<b>0.52</b>	0.050	EPA 353.2	12-12-17	12-12-17	



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**NITRATE (as Nitrogen)**  
**EPA 353.2**  
**QUALITY CONTROL**

Matrix: Water

Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB1212W2					
Nitrate	<b>ND</b>	0.050	EPA 353.2	12-12-17	12-12-17	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
<b>DUPLICATE</b>								
Laboratory ID:	12-047-07							
	ORIG	DUP						
Nitrate	<b>0.598</b>	<b>0.591</b>	NA	NA	NA	NA	1	12

**MATRIX SPIKE**

Laboratory ID:	12-047-07							
	MS	MS		MS				
Nitrate	<b>2.77</b>	2.00	0.598	109	94-126	NA	NA	

**SPIKE BLANK**

Laboratory ID:	SB1212W2							
	SB	SB		SB				
Nitrate	<b>2.14</b>	2.00	NA	107	95-120	NA	NA	



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**NITRITE (as Nitrogen)**  
**EPA 353.2**

Matrix: Water  
 Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>MW-25-120617</b>					
Laboratory ID:	12-075-03					
Nitrite	<b>ND</b>	0.020	EPA 353.2	12-7-17	12-7-17	

<b>Client ID:</b>	<b>MW-18-120617</b>					
Laboratory ID:	12-075-07					
Nitrite	<b>0.076</b>	0.020	EPA 353.2	12-7-17	12-7-17	

<b>Client ID:</b>	<b>MW-16-120617</b>					
Laboratory ID:	12-075-08					
Nitrite	<b>ND</b>	0.020	EPA 353.2	12-7-17	12-7-17	

<b>Client ID:</b>	<b>MW-2-120617</b>					
Laboratory ID:	12-075-09					
Nitrite	<b>0.027</b>	0.020	EPA 353.2	12-7-17	12-7-17	



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**NITRITE (as Nitrogen)  
 EPA 353.2  
 QUALITY CONTROL**

Matrix: Water  
 Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB1207W1					
Nitrite	ND	0.020	EPA 353.2	12-7-17	12-7-17	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
<b>DUPLICATE</b>								
Laboratory ID:	12-047-07							
	ORIG	DUP						
Nitrite	ND	ND	NA	NA	NA	NA	11	

**MATRIX SPIKE**

Laboratory ID:	12-047-07							
	MS	MS		MS				
Nitrite	0.260	0.250	ND	104	75-124	NA	NA	

**SPIKE BLANK**

Laboratory ID:	SB1207W1							
	SB	SB		SB				
Nitrite	0.251	0.250	NA	100	89-113	NA	NA	



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**SULFATE**  
**ASTM D516-07**

Matrix: Water  
 Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>MW-25-120617</b>					
Laboratory ID:	12-075-03					
Sulfate	<b>21</b>	5.0	ASTM D516-07	12-12-17	12-12-17	

<b>Client ID:</b>	<b>MW-18-120617</b>					
Laboratory ID:	12-075-07					
Sulfate	<b>40</b>	25	ASTM D516-07	12-11-17	12-12-17	

<b>Client ID:</b>	<b>MW-16-120617</b>					
Laboratory ID:	12-075-08					
Sulfate	<b>74</b>	25	ASTM D516-07	12-12-17	12-12-17	

<b>Client ID:</b>	<b>MW-2-120617</b>					
Laboratory ID:	12-075-09					
Sulfate	<b>16</b>	5.0	ASTM D516-07	12-11-17	12-12-17	





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**SULFATE  
 ASTM D516-07  
 QUALITY CONTROL**

Matrix: Water

Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB1212W1					
Sulfate	ND	5.0	ASTM D516-07	12-12-17	12-12-17	
Laboratory ID:	MB1211F1					
Sulfate	ND	5.0	ASTM D516-07	12-11-17	12-12-17	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
<b>DUPLICATE</b>								
Laboratory ID:	12-057-01							
	ORIG	DUP						
Sulfate	17.0	17.4	NA	NA	NA	2	10	
Laboratory ID:	12-075-07							
	ORIG	DUP						
Sulfate	40.0	42.4	NA	NA	NA	6	10	

**MATRIX SPIKE**

Laboratory ID:	12-057-01							
	MS	MS		MS				
Sulfate	37.6	20.0	17.0	103	81-125	NA	NA	
Laboratory ID:	12-075-07							
	MS	MS		MS				
Sulfate	96.0	50.0	40.0	112	81-125	NA	NA	

**SPIKE BLANK**

Laboratory ID:	SB1212W1							
	SB	SB		SB				
Sulfate	10.5	10.0	NA	105	91-115	NA	NA	
Laboratory ID:	SB1211F1							
	SB	SB		SB				
Sulfate	9.99	10.0	NA	100	91-115	NA	NA	



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**TOTAL METALS**  
**EPA 200.8**

Matrix: Water  
 Units: ug/L (ppb)

<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>EPA Method</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Flags</b>
<hr/>						
Lab ID:	12-075-01					
<b>Client ID:</b>	<b>MW-34-120617</b>					
<hr/>						
Arsenic	<b>ND</b>	3.0	200.8	12-12-17	12-13-17	
Lead	<b>ND</b>	1.0	200.8	12-12-17	12-13-17	
<hr/>						
Lab ID:	12-075-02					
<b>Client ID:</b>	<b>MW-12B-120617</b>					
<hr/>						
Arsenic	<b>ND</b>	3.0	200.8	12-12-17	12-13-17	
Lead	<b>1.4</b>	1.0	200.8	12-12-17	12-13-17	
<hr/>						



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**TOTAL METALS  
EPA 200.8  
METHOD BLANK QUALITY CONTROL**

Date Extracted: 12-12-17

Date Analyzed: 12-13-17

Matrix: Water

Units: ug/L (ppb)

Lab ID: MB1212WH1

Analyte	Method	Result	PQL
Arsenic	200.8	<b>ND</b>	3.0
Lead	200.8	<b>ND</b>	1.0



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**TOTAL METALS  
EPA 200.8  
DUPLICATE QUALITY CONTROL**

Date Extracted: 12-12-17  
Date Analyzed: 12-13-17  
  
Matrix: Water  
Units: ug/L (ppb)  
  
Lab ID: 11-240-05b

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	ND	ND	NA	3.0	
Lead	ND	ND	NA	1.0	



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**TOTAL METALS  
 EPA 200.8  
 MS/MSD QUALITY CONTROL**

Date Extracted: 12-12-17  
 Date Analyzed: 12-13-17  
  
 Matrix: Water  
 Units: ug/L (ppb)  
  
 Lab ID: 11-240-05b

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	100	<b>101</b>	101	<b>102</b>	102	1	
Lead	100	<b>92.4</b>	92	<b>93.8</b>	94	2	



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**DISSOLVED METALS**  
**EPA 200.8**

Matrix: Water  
 Units: ug/L (ppb)

<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>EPA Method</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Flags</b>
<hr/>						
Lab ID:	12-075-01					
<b>Client ID:</b>	<b>MW-34-120617</b>					
<hr/>						
Arsenic	<b>ND</b>	3.0	200.8	12-7-17	12-11-17	
Lead	<b>ND</b>	1.0	200.8	12-7-17	12-11-17	
<hr/>						
Lab ID:	12-075-02					
<b>Client ID:</b>	<b>MW-12B-120617</b>					
<hr/>						
Arsenic	<b>ND</b>	3.0	200.8	12-7-17	12-11-17	
Lead	<b>ND</b>	1.0	200.8	12-7-17	12-11-17	
<hr/>						





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**DISSOLVED METALS  
EPA 200.8  
METHOD BLANK QUALITY CONTROL**

Date Filtered: 12-7-17  
Date Analyzed: 12-11-17  
  
Matrix: Water  
Units: ug/L (ppb)  
  
Lab ID: MB1207F1

Analyte	Method	Result	PQL
Arsenic	200.8	<b>ND</b>	3.0
Lead	200.8	<b>ND</b>	1.0



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**DISSOLVED METALS  
EPA 200.8  
DUPLICATE QUALITY CONTROL**

Date Filtered: 12-8-17  
Date Analyzed: 12-11-17  
  
Matrix: Water  
Units: ug/L (ppb)  
  
Lab ID: 12-091-02

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	<b>17.9</b>	<b>17.0</b>	5	3.0	
Lead	<b>ND</b>	<b>ND</b>	NA	1.0	



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**DISSOLVED METALS  
EPA 200.8  
MS/MSD QUALITY CONTROL**

Date Filtered: 12-8-17  
Date Analyzed: 12-11-17

Matrix: Water  
Units: ug/L (ppb)

Lab ID: 12-091-02

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	200	<b>228</b>	105	<b>230</b>	106	1	
Lead	200	<b>169</b>	84	<b>173</b>	86	2	



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**TOTAL ORGANIC CARBON  
 SM 5310B**

Matrix: Water

Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>MW-25-120617</b>					
Laboratory ID:	12-075-03					
Total Organic Carbon	<b>1.9</b>	1.0	SM 5310B	12-11-17	12-11-17	

<b>Client ID:</b>	<b>MW-18-120617</b>					
Laboratory ID:	12-075-07					
Total Organic Carbon	<b>2.7</b>	1.0	SM 5310B	12-11-17	12-11-17	

<b>Client ID:</b>	<b>MW-16-120617</b>					
Laboratory ID:	12-075-08					
Total Organic Carbon	<b>6.2</b>	1.0	SM 5310B	12-11-17	12-11-17	

<b>Client ID:</b>	<b>MW-2-120617</b>					
Laboratory ID:	12-075-09					
Total Organic Carbon	<b>1.1</b>	1.0	SM 5310B	12-11-17	12-11-17	



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**TOTAL ORGANIC CARBON  
 SM 5310B  
 QUALITY CONTROL**

Matrix: Water  
 Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB1211W1					
Total Organic Carbon	<b>ND</b>	1.0	SM 5310B	12-11-17	12-11-17	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
<b>DUPLICATE</b>								
Laboratory ID:	12-047-07							
	ORIG	DUP						
Total Organic Carbon	<b>2.08</b>	<b>2.00</b>	NA	NA	NA	NA	4	15

**MATRIX SPIKE**

Laboratory ID:	12-047-07							
	MS	MS		MS				
Total Organic Carbon	<b>11.3</b>	10.0	2.08	92	86-122	NA	NA	

**SPIKE BLANK**

Laboratory ID:	SB1211W1							
	SB	SB		SB				
Total Organic Carbon	<b>10.5</b>	10.0	NA	105	99-118	NA	NA	



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**1,4 DIOXANE**  
**EPA 8270D**

Matrix: Water  
 Units: ug/L

<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>Method</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Flags</b>
<b>Client ID:</b>	<b>MW-2-120617</b>					
Laboratory ID:	12-075-09					
1,4-Dioxane	<b>ND</b>	0.096	EPA 8270D/SIM	12-12-17	12-14-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	81	25 - 107				
Pyrene-d10	97	28 - 103				
Terphenyl-d14	93	36 - 129				



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**1,4 DIOXANE  
 EPA 8270D  
 METHOD BLANK QUALITY CONTROL**

Matrix: Water  
 Units: ug/L

<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>Method</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Flags</b>
<hr/>						
Laboratory ID:	MB1212W1					
1,4-Dioxane	<b>ND</b>	0.10	EPA 8270D/SIM	12-12-17	12-14-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	77	25 - 107				
Pyrene-d10	89	28 - 103				
Terphenyl-d14	92	36 - 129				





Date of Report: December 18, 2017  
 Samples Submitted: December 7, 2017  
 Laboratory Reference: 1712-075  
 Project: 188-002

**1,4 DIOXANE**  
**EPA 8270D**  
**SB/SBD QUALITY CONTROL**

Matrix: Water

Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB1212W1									
	SB	SBD	SB	SBD	SB	SBD				
1,4-Dioxane	0.142	0.131	0.500	0.500	28	26	20 - 120	8	30	
Surrogate:										
2-Fluorobiphenyl					80	77	25 - 107			
Pyrene-d10					93	96	28 - 103			
Terphenyl-d14					95	97	36 - 129			





### 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: **12-075**

Company: **Forellon Consulting**  
Project Number: **188-002**  
Project Name: **Woodworth Lakeview**  
Project Manager: **Brian Surista**  
Sampled by: **Daniel Aguilar / Ryan Ostrom**

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix
1	MW-34-120617	12-6-17	948	H2O
2	MW-12B-120617		1009	
3	MW-25-120617		1057	
4	MW-26-120617		1129	
5	MW-15-120617		1131	
6	MW-3-120617		1218	
7	MW-18-120617		1302	
8	MW-16-120617		1512	
9	MW-2-120617		1834	

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	
Methane, Ethane, Ethene	
Nitrate, Nitrite, Sulfate	
Total and dissolved Pb & As	
1,4 Dioxane	
Total Organic Carbon	

Signature	Company	Date	Time	Comments/Special Instructions
	Forellon	12-6-17	1813	
	ORE	12/21/17	1330	

Relinquished \_\_\_\_\_  
Received \_\_\_\_\_  
Relinquished \_\_\_\_\_  
Received \_\_\_\_\_  
Relinquished \_\_\_\_\_  
Received \_\_\_\_\_  
Reviewed/Date \_\_\_\_\_

Reviewed/Date \_\_\_\_\_

Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐

• Lab to filter for dissolved Pb & As  
• Please hold 1/4 Dioxane sample MW-2-120617.  
• Hold MW-12B-120617 HVOC for future

Data Package: Standard ☐ Level III ☐ Level IV ☐



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

December 15, 2017

Brani Jurista  
Farallon Consulting, LLC  
975 5th Avenue NW  
Issaquah, WA 98027

Re: Analytical Data for Project 188-002  
Laboratory Reference No. 1712-086

Dear Brani:

Enclosed are the analytical results and associated quality control data for samples submitted on December 8, 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 line extending to the right.

David Baumeister  
Project Manager

Enclosures



---

OnSite Environmental, Inc. 14648 NE 95<sup>th</sup> 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: December 15, 2017  
Samples Submitted: December 8, 2017  
Laboratory Reference: 1712-086  
Project: 188-002

### Case Narrative

Samples were collected on December 7, 2017 and received by the laboratory on December 8, 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.

#### Nitrate EPA 353.3 Analysis

The reported Nitrate results are a calculated value based on the subtraction of Nitrite from the Nitrate plus Nitrite result. The Nitrite analysis, which has a 48-hour holding time, was performed within the holding time. Immediately after this analysis, an aliquot of the samples was preserved with concentrated sulfuric acid and stored at 4 degrees C. The preserved samples were then analyzed within the maximum 28-day holding time for the Nitrate plus Nitrite analysis.

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: December 15, 2017  
 Samples Submitted: December 8, 2017  
 Laboratory Reference: 1712-086  
 Project: 188-002

### NWTPH-Dx

Matrix: Water  
 Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>SVE-9-120717</b>					
Laboratory ID:	12-086-03					
Diesel Range Organics	<b>ND</b>	0.26	NWTPH-Dx	12-12-17	12-12-17	
Lube Oil Range Organics	<b>ND</b>	0.41	NWTPH-Dx	12-12-17	12-12-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	98	50-150				
<b>Client ID:</b>	<b>MW-21-120717</b>					
Laboratory ID:	12-086-05					
Diesel Range Organics	<b>ND</b>	0.25	NWTPH-Dx	12-12-17	12-12-17	
Lube Oil Range Organics	<b>ND</b>	0.41	NWTPH-Dx	12-12-17	12-12-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	101	50-150				



Date of Report: December 15, 2017  
 Samples Submitted: December 8, 2017  
 Laboratory Reference: 1712-086  
 Project: 188-002

**NWTPH-Dx  
 QUALITY CONTROL**

Matrix: Water  
 Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB1212W1					
Diesel Range Organics	<b>ND</b>	0.25	NWTPH-Dx	12-12-17	12-12-17	
Lube Oil Range Organics	<b>ND</b>	0.40	NWTPH-Dx	12-12-17	12-12-17	
Surrogate:	Percent Recovery	Control Limits				
<i>o</i> -Terphenyl	100	50-150				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
<b>DUPLICATE</b>								
Laboratory ID:	12-086-05							
	ORIG	DUP						
Diesel Range	<b>ND</b>	<b>ND</b>	NA	NA	NA	NA	NA	NA
Lube Oil Range	<b>ND</b>	<b>ND</b>	NA	NA	NA	NA	NA	NA
Surrogate:								
<i>o</i> -Terphenyl				101	103	50-150		





Date of Report: December 15, 2017  
 Samples Submitted: December 8, 2017  
 Laboratory Reference: 1712-086  
 Project: 188-002

**VOLATILES EPA 8260C**  
 page 1 of 2

Matrix: Water  
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>		<b>MW-23-120717</b>				
Laboratory ID:		12-086-02				
Dichlorodifluoromethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Chloromethane	ND	1.0	EPA 8260C	12-13-17	12-13-17	
Vinyl Chloride	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Bromomethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Chloroethane	ND	1.0	EPA 8260C	12-13-17	12-13-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Acetone	ND	5.0	EPA 8260C	12-13-17	12-13-17	
Iodomethane	ND	1.0	EPA 8260C	12-13-17	12-13-17	
Carbon Disulfide	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Methylene Chloride	ND	1.0	EPA 8260C	12-13-17	12-13-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Vinyl Acetate	ND	1.0	EPA 8260C	12-13-17	12-13-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
2-Butanone	ND	5.0	EPA 8260C	12-13-17	12-13-17	
Bromochloromethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Chloroform	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Benzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Trichloroethene	0.64	0.20	EPA 8260C	12-13-17	12-13-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Dibromomethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Bromodichloromethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
2-Chloroethyl Vinyl Ether	ND	1.3	EPA 8260C	12-13-17	12-13-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Methyl Isobutyl Ketone	ND	2.6	EPA 8260C	12-13-17	12-13-17	
Toluene	ND	1.0	EPA 8260C	12-13-17	12-13-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	12-13-17	12-13-17	



Date of Report: December 15, 2017  
 Samples Submitted: December 8, 2017  
 Laboratory Reference: 1712-086  
 Project: 188-002

**VOLATILES EPA 8260C**  
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>MW-23-120717</b>					
<b>Laboratory ID:</b>	<b>12-086-02</b>					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Tetrachloroethene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
2-Hexanone	ND	2.5	EPA 8260C	12-13-17	12-13-17	
Dibromochloromethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Chlorobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Ethylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
m,p-Xylene	ND	0.40	EPA 8260C	12-13-17	12-13-17	
o-Xylene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Styrene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Bromoform	ND	1.0	EPA 8260C	12-13-17	12-13-17	
Isopropylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Bromobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
n-Propylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
4-Chlorotoluene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
tert-Butylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
sec-Butylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
p-Isopropyltoluene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
n-Butylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	12-13-17	12-13-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Naphthalene	ND	1.3	EPA 8260C	12-13-17	12-13-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	98	75-127				
<i>Toluene-d8</i>	98	80-127				
<i>4-Bromofluorobenzene</i>	95	78-125				



Date of Report: December 15, 2017  
 Samples Submitted: December 8, 2017  
 Laboratory Reference: 1712-086  
 Project: 188-002

**VOLATILES EPA 8260C**  
 page 1 of 2

Matrix: Water  
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID: Industrial_Well-120717</b>						
<b>Laboratory ID: 12-086-04</b>						
Dichlorodifluoromethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Chloromethane	ND	1.0	EPA 8260C	12-13-17	12-13-17	
Vinyl Chloride	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Bromomethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Chloroethane	ND	1.0	EPA 8260C	12-13-17	12-13-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Acetone	ND	5.0	EPA 8260C	12-13-17	12-13-17	
Iodomethane	ND	1.0	EPA 8260C	12-13-17	12-13-17	
Carbon Disulfide	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Methylene Chloride	ND	1.0	EPA 8260C	12-13-17	12-13-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Vinyl Acetate	ND	1.0	EPA 8260C	12-13-17	12-13-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
2-Butanone	ND	5.0	EPA 8260C	12-13-17	12-13-17	
Bromochloromethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Chloroform	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Benzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Trichloroethene	0.39	0.20	EPA 8260C	12-13-17	12-13-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Dibromomethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Bromodichloromethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
2-Chloroethyl Vinyl Ether	ND	1.3	EPA 8260C	12-13-17	12-13-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Methyl Isobutyl Ketone	ND	2.6	EPA 8260C	12-13-17	12-13-17	
Toluene	ND	1.0	EPA 8260C	12-13-17	12-13-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	12-13-17	12-13-17	



OnSite Environmental, Inc. 14648 NE 95<sup>th</sup> 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: December 15, 2017  
 Samples Submitted: December 8, 2017  
 Laboratory Reference: 1712-086  
 Project: 188-002

**VOLATILES EPA 8260C**  
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID: Industrial_Well-120717</b>						
Laboratory ID: 12-086-04						
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Tetrachloroethene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
2-Hexanone	ND	2.5	EPA 8260C	12-13-17	12-13-17	
Dibromochloromethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Chlorobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Ethylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
m,p-Xylene	ND	0.40	EPA 8260C	12-13-17	12-13-17	
o-Xylene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Styrene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Bromoform	ND	1.0	EPA 8260C	12-13-17	12-13-17	
Isopropylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Bromobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
n-Propylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
4-Chlorotoluene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
tert-Butylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
sec-Butylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
p-Isopropyltoluene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
n-Butylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	12-13-17	12-13-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Naphthalene	ND	1.3	EPA 8260C	12-13-17	12-13-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	99	75-127				
<i>Toluene-d8</i>	97	80-127				
<i>4-Bromofluorobenzene</i>	95	78-125				



Date of Report: December 15, 2017  
 Samples Submitted: December 8, 2017  
 Laboratory Reference: 1712-086  
 Project: 188-002

**VOLATILES EPA 8260C**  
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Matrix: Water  
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>		<b>MW-21-120717</b>				
Laboratory ID:		12-086-05				
Dichlorodifluoromethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Chloromethane	ND	1.0	EPA 8260C	12-13-17	12-13-17	
Vinyl Chloride	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Bromomethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Chloroethane	ND	1.0	EPA 8260C	12-13-17	12-13-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Acetone	ND	5.0	EPA 8260C	12-13-17	12-13-17	
Iodomethane	ND	1.0	EPA 8260C	12-13-17	12-13-17	
Carbon Disulfide	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Methylene Chloride	ND	1.0	EPA 8260C	12-13-17	12-13-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Vinyl Acetate	ND	1.0	EPA 8260C	12-13-17	12-13-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
2-Butanone	ND	5.0	EPA 8260C	12-13-17	12-13-17	
Bromochloromethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Chloroform	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,1,1-Trichloroethane	0.20	0.20	EPA 8260C	12-13-17	12-13-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Benzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Trichloroethene	0.32	0.20	EPA 8260C	12-13-17	12-13-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Dibromomethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Bromodichloromethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
2-Chloroethyl Vinyl Ether	ND	1.3	EPA 8260C	12-13-17	12-13-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Methyl Isobutyl Ketone	ND	2.6	EPA 8260C	12-13-17	12-13-17	
Toluene	ND	1.0	EPA 8260C	12-13-17	12-13-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	12-13-17	12-13-17	



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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>MW-21-120717</b>					
<b>Laboratory ID:</b>	<b>12-086-05</b>					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Tetrachloroethene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
2-Hexanone	ND	2.5	EPA 8260C	12-13-17	12-13-17	
Dibromochloromethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Chlorobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Ethylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
m,p-Xylene	ND	0.40	EPA 8260C	12-13-17	12-13-17	
o-Xylene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Styrene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Bromoform	ND	1.0	EPA 8260C	12-13-17	12-13-17	
Isopropylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Bromobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
n-Propylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
4-Chlorotoluene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
tert-Butylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
sec-Butylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
p-Isopropyltoluene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
n-Butylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	12-13-17	12-13-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Naphthalene	ND	1.3	EPA 8260C	12-13-17	12-13-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>101</i>	<i>75-127</i>				
<i>Toluene-d8</i>	<i>98</i>	<i>80-127</i>				
<i>4-Bromofluorobenzene</i>	<i>95</i>	<i>78-125</i>				



Date of Report: December 15, 2017  
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 Project: 188-002

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Matrix: Water  
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>		<b>MW-10B-120717</b>				
Laboratory ID:		12-086-06				
Dichlorodifluoromethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Chloromethane	ND	1.0	EPA 8260C	12-13-17	12-13-17	
Vinyl Chloride	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Bromomethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Chloroethane	ND	1.0	EPA 8260C	12-13-17	12-13-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Acetone	ND	5.0	EPA 8260C	12-13-17	12-13-17	
Iodomethane	ND	1.0	EPA 8260C	12-13-17	12-13-17	
Carbon Disulfide	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Methylene Chloride	ND	1.0	EPA 8260C	12-13-17	12-13-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Vinyl Acetate	ND	1.0	EPA 8260C	12-13-17	12-13-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
2-Butanone	ND	5.0	EPA 8260C	12-13-17	12-13-17	
Bromochloromethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Chloroform	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Benzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Trichloroethene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Dibromomethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Bromodichloromethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
2-Chloroethyl Vinyl Ether	ND	1.3	EPA 8260C	12-13-17	12-13-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Methyl Isobutyl Ketone	ND	2.6	EPA 8260C	12-13-17	12-13-17	
Toluene	ND	1.0	EPA 8260C	12-13-17	12-13-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	12-13-17	12-13-17	





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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID: MW-10B-120717</b>						
Laboratory ID: 12-086-06						
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Tetrachloroethene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
2-Hexanone	ND	2.5	EPA 8260C	12-13-17	12-13-17	
Dibromochloromethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Chlorobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Ethylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
m,p-Xylene	ND	0.40	EPA 8260C	12-13-17	12-13-17	
o-Xylene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Styrene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Bromoform	ND	1.0	EPA 8260C	12-13-17	12-13-17	
Isopropylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Bromobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
n-Propylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
4-Chlorotoluene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
tert-Butylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
sec-Butylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
p-Isopropyltoluene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
n-Butylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	12-13-17	12-13-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Naphthalene	ND	1.3	EPA 8260C	12-13-17	12-13-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
Dibromofluoromethane	101	75-127				
Toluene-d8	100	80-127				
4-Bromofluorobenzene	98	78-125				



Date of Report: December 15, 2017  
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 Project: 188-002

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Matrix: Water  
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>		<b>MW-28-120717</b>				
Laboratory ID:		12-086-08				
Dichlorodifluoromethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Chloromethane	ND	1.0	EPA 8260C	12-13-17	12-13-17	
Vinyl Chloride	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Bromomethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Chloroethane	ND	1.0	EPA 8260C	12-13-17	12-13-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Acetone	ND	5.0	EPA 8260C	12-13-17	12-13-17	
Iodomethane	ND	1.0	EPA 8260C	12-13-17	12-13-17	
Carbon Disulfide	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Methylene Chloride	ND	1.0	EPA 8260C	12-13-17	12-13-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Vinyl Acetate	ND	1.0	EPA 8260C	12-13-17	12-13-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
2-Butanone	ND	5.0	EPA 8260C	12-13-17	12-13-17	
Bromochloromethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Chloroform	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Benzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Trichloroethene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Dibromomethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Bromodichloromethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
2-Chloroethyl Vinyl Ether	ND	1.3	EPA 8260C	12-13-17	12-13-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Methyl Isobutyl Ketone	ND	2.6	EPA 8260C	12-13-17	12-13-17	
Toluene	ND	1.0	EPA 8260C	12-13-17	12-13-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	12-13-17	12-13-17	



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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>MW-28-120717</b>					
<b>Laboratory ID:</b>	<b>12-086-08</b>					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Tetrachloroethene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
2-Hexanone	ND	2.5	EPA 8260C	12-13-17	12-13-17	
Dibromochloromethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Chlorobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Ethylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
m,p-Xylene	ND	0.40	EPA 8260C	12-13-17	12-13-17	
o-Xylene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Styrene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Bromoform	ND	1.0	EPA 8260C	12-13-17	12-13-17	
Isopropylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Bromobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
n-Propylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
4-Chlorotoluene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
tert-Butylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
sec-Butylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
p-Isopropyltoluene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
n-Butylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	12-13-17	12-13-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Naphthalene	ND	1.3	EPA 8260C	12-13-17	12-13-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>101</i>	<i>75-127</i>				
<i>Toluene-d8</i>	<i>99</i>	<i>80-127</i>				
<i>4-Bromofluorobenzene</i>	<i>96</i>	<i>78-125</i>				



Date of Report: December 15, 2017  
 Samples Submitted: December 8, 2017  
 Laboratory Reference: 1712-086  
 Project: 188-002

**VOLATILES EPA 8260C**  
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Matrix: Water  
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>		<b>MW-20-120717</b>				
Laboratory ID:		12-086-09				
Dichlorodifluoromethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Chloromethane	ND	1.0	EPA 8260C	12-13-17	12-13-17	
Vinyl Chloride	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Bromomethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Chloroethane	ND	1.0	EPA 8260C	12-13-17	12-13-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Acetone	ND	5.0	EPA 8260C	12-13-17	12-13-17	
Iodomethane	ND	1.0	EPA 8260C	12-13-17	12-13-17	
Carbon Disulfide	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Methylene Chloride	ND	1.0	EPA 8260C	12-13-17	12-13-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Vinyl Acetate	ND	1.0	EPA 8260C	12-13-17	12-13-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
2-Butanone	ND	5.0	EPA 8260C	12-13-17	12-13-17	
Bromochloromethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Chloroform	0.26	0.20	EPA 8260C	12-13-17	12-13-17	
1,1,1-Trichloroethane	2.1	0.20	EPA 8260C	12-13-17	12-13-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Benzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Trichloroethene	20	0.20	EPA 8260C	12-13-17	12-13-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Dibromomethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Bromodichloromethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
2-Chloroethyl Vinyl Ether	ND	1.3	EPA 8260C	12-13-17	12-13-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Methyl Isobutyl Ketone	ND	2.6	EPA 8260C	12-13-17	12-13-17	
Toluene	ND	1.0	EPA 8260C	12-13-17	12-13-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	12-13-17	12-13-17	



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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>MW-20-120717</b>					
<b>Laboratory ID:</b>	<b>12-086-09</b>					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Tetrachloroethene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
2-Hexanone	ND	2.5	EPA 8260C	12-13-17	12-13-17	
Dibromochloromethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Chlorobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Ethylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
m,p-Xylene	ND	0.40	EPA 8260C	12-13-17	12-13-17	
o-Xylene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Styrene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Bromoform	ND	1.0	EPA 8260C	12-13-17	12-13-17	
Isopropylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Bromobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
n-Propylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
4-Chlorotoluene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
tert-Butylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
sec-Butylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
p-Isopropyltoluene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
n-Butylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	12-13-17	12-13-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Naphthalene	ND	1.3	EPA 8260C	12-13-17	12-13-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>101</i>	<i>75-127</i>				
<i>Toluene-d8</i>	<i>99</i>	<i>80-127</i>				
<i>4-Bromofluorobenzene</i>	<i>98</i>	<i>78-125</i>				



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 Project: 188-002

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Matrix: Water  
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>MW-29-120717</b>					
<b>Laboratory ID:</b>	<b>12-086-10</b>					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Chloromethane	ND	1.0	EPA 8260C	12-13-17	12-13-17	
Vinyl Chloride	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Bromomethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Chloroethane	ND	1.0	EPA 8260C	12-13-17	12-13-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Acetone	ND	5.0	EPA 8260C	12-13-17	12-13-17	
Iodomethane	ND	1.0	EPA 8260C	12-13-17	12-13-17	
Carbon Disulfide	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Methylene Chloride	ND	1.0	EPA 8260C	12-13-17	12-13-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Vinyl Acetate	ND	1.0	EPA 8260C	12-13-17	12-13-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
2-Butanone	ND	5.0	EPA 8260C	12-13-17	12-13-17	
Bromochloromethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Chloroform	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Benzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Trichloroethene	0.31	0.20	EPA 8260C	12-13-17	12-13-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Dibromomethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Bromodichloromethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
2-Chloroethyl Vinyl Ether	ND	1.3	EPA 8260C	12-13-17	12-13-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Methyl Isobutyl Ketone	ND	2.6	EPA 8260C	12-13-17	12-13-17	
Toluene	ND	1.0	EPA 8260C	12-13-17	12-13-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	12-13-17	12-13-17	



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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>MW-29-120717</b>					
<b>Laboratory ID:</b>	<b>12-086-10</b>					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Tetrachloroethene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
2-Hexanone	ND	2.5	EPA 8260C	12-13-17	12-13-17	
Dibromochloromethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Chlorobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Ethylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
m,p-Xylene	ND	0.40	EPA 8260C	12-13-17	12-13-17	
o-Xylene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Styrene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Bromoform	ND	1.0	EPA 8260C	12-13-17	12-13-17	
Isopropylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Bromobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
n-Propylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
4-Chlorotoluene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
tert-Butylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
sec-Butylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
p-Isopropyltoluene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
n-Butylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	12-13-17	12-13-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Naphthalene	ND	1.3	EPA 8260C	12-13-17	12-13-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>102</i>	<i>75-127</i>				
<i>Toluene-d8</i>	<i>99</i>	<i>80-127</i>				
<i>4-Bromofluorobenzene</i>	<i>96</i>	<i>78-125</i>				





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 Project: 188-002

**VOLATILES by EPA 8260C**  
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Matrix: Water  
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>SVE-1-120717</b>					
<b>Laboratory ID:</b>	<b>12-086-11</b>					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Chloromethane	ND	1.0	EPA 8260C	12-13-17	12-13-17	
Vinyl Chloride	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Bromomethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Chloroethane	ND	1.0	EPA 8260C	12-13-17	12-13-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,1-Dichloroethene	0.24	0.20	EPA 8260C	12-13-17	12-13-17	
Acetone	ND	5.0	EPA 8260C	12-13-17	12-13-17	
Iodomethane	ND	1.0	EPA 8260C	12-13-17	12-13-17	
Carbon Disulfide	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Methylene Chloride	ND	1.0	EPA 8260C	12-13-17	12-13-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Vinyl Acetate	ND	1.0	EPA 8260C	12-13-17	12-13-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
2-Butanone	ND	5.0	EPA 8260C	12-13-17	12-13-17	
Bromochloromethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Chloroform	1.3	0.20	EPA 8260C	12-13-17	12-13-17	
1,1,1-Trichloroethane	1.1	0.20	EPA 8260C	12-13-17	12-13-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Benzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Trichloroethene	2.7	0.20	EPA 8260C	12-13-17	12-13-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Dibromomethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Bromodichloromethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
2-Chloroethyl Vinyl Ether	ND	1.3	EPA 8260C	12-13-17	12-13-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Methyl Isobutyl Ketone	ND	2.6	EPA 8260C	12-13-17	12-13-17	
Toluene	ND	1.0	EPA 8260C	12-13-17	12-13-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	12-13-17	12-13-17	



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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>SVE-1-120717</b>					
<b>Laboratory ID:</b>	<b>12-086-11</b>					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Tetrachloroethene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
2-Hexanone	ND	2.5	EPA 8260C	12-13-17	12-13-17	
Dibromochloromethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Chlorobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Ethylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
m,p-Xylene	ND	0.40	EPA 8260C	12-13-17	12-13-17	
o-Xylene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Styrene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Bromoform	ND	1.0	EPA 8260C	12-13-17	12-13-17	
Isopropylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Bromobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
n-Propylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
4-Chlorotoluene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
tert-Butylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
sec-Butylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
p-Isopropyltoluene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
n-Butylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	12-13-17	12-13-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Naphthalene	ND	1.3	EPA 8260C	12-13-17	12-13-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>102</i>	<i>75-127</i>				
<i>Toluene-d8</i>	<i>98</i>	<i>80-127</i>				
<i>4-Bromofluorobenzene</i>	<i>97</i>	<i>78-125</i>				



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**VOLATILES by EPA 8260C**  
**METHOD BLANK QUALITY CONTROL**  
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Matrix: Water  
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<hr/>						
Laboratory ID:	MB1213W1					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Chloromethane	ND	1.0	EPA 8260C	12-13-17	12-13-17	
Vinyl Chloride	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Bromomethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Chloroethane	ND	1.0	EPA 8260C	12-13-17	12-13-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Acetone	ND	5.0	EPA 8260C	12-13-17	12-13-17	
Iodomethane	ND	1.0	EPA 8260C	12-13-17	12-13-17	
Carbon Disulfide	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Methylene Chloride	ND	1.0	EPA 8260C	12-13-17	12-13-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Vinyl Acetate	ND	1.0	EPA 8260C	12-13-17	12-13-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
2-Butanone	ND	5.0	EPA 8260C	12-13-17	12-13-17	
Bromochloromethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Chloroform	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Benzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Trichloroethene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Dibromomethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Bromodichloromethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
2-Chloroethyl Vinyl Ether	ND	1.3	EPA 8260C	12-13-17	12-13-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Methyl Isobutyl Ketone	ND	2.6	EPA 8260C	12-13-17	12-13-17	
Toluene	ND	1.0	EPA 8260C	12-13-17	12-13-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	12-13-17	12-13-17	



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**METHOD BLANK QUALITY CONTROL**  
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID: MB1213W1						
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Tetrachloroethene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
2-Hexanone	ND	2.5	EPA 8260C	12-13-17	12-13-17	
Dibromochloromethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Chlorobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Ethylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
m,p-Xylene	ND	0.40	EPA 8260C	12-13-17	12-13-17	
o-Xylene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Styrene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Bromoform	ND	1.0	EPA 8260C	12-13-17	12-13-17	
Isopropylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Bromobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
n-Propylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
4-Chlorotoluene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
tert-Butylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
sec-Butylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
p-Isopropyltoluene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
n-Butylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	12-13-17	12-13-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Naphthalene	ND	1.3	EPA 8260C	12-13-17	12-13-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>101</i>	<i>75-127</i>				
<i>Toluene-d8</i>	<i>100</i>	<i>80-127</i>				
<i>4-Bromofluorobenzene</i>	<i>97</i>	<i>78-125</i>				



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

Matrix: Water

Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery	RPD	RPD	Flags
					Recovery	Limits	Limit			
SPIKE BLANKS										
Laboratory ID:	SB1213W1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	8.81	8.63	10.0	10.0	88	86	63-126	2	21	
Benzene	9.78	9.76	10.0	10.0	98	98	78-122	0	19	
Trichloroethene	9.34	9.08	10.0	10.0	93	91	63-120	3	20	
Toluene	10.1	10.0	10.0	10.0	101	100	79-124	1	19	
Chlorobenzene	10.3	10.1	10.0	10.0	103	101	78-120	2	19	
Surrogate:										
Dibromofluoromethane					96	98	75-127			
Toluene-d8					98	98	80-127			
4-Bromofluorobenzene					95	97	78-125			



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**TOTAL METALS**  
**EPA 200.8**

Matrix: Water  
Units: ug/L (ppb)

				Date	Date	
Analyte	Result	PQL	EPA Method	Prepared	Analyzed	Flags
Lab ID:	12-086-01					
Client ID:	MW-9-120717					
Arsenic	ND	3.0	200.8	12-12-17	12-13-17	
Lead	ND	1.0	200.8	12-12-17	12-13-17	



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**TOTAL METALS  
EPA 200.8  
METHOD BLANK QUALITY CONTROL**

Date Extracted: 12-12-17

Date Analyzed: 12-13-17

Matrix: Water

Units: ug/L (ppb)

Lab ID: MB1212WH1

Analyte	Method	Result	PQL
Arsenic	200.8	<b>ND</b>	3.0
Lead	200.8	<b>ND</b>	1.0





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**TOTAL METALS  
EPA 200.8  
DUPLICATE QUALITY CONTROL**

Date Extracted: 12-12-17  
Date Analyzed: 12-13-17  
  
Matrix: Water  
Units: ug/L (ppb)  
  
Lab ID: 11-240-05b

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	ND	ND	NA	3.0	
Lead	ND	ND	NA	1.0	



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**TOTAL METALS  
EPA 200.8  
MS/MSD QUALITY CONTROL**

Date Extracted: 12-12-17  
Date Analyzed: 12-13-17  
  
Matrix: Water  
Units: ug/L (ppb)  
  
Lab ID: 11-240-05b

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	100	<b>101</b>	101	<b>102</b>	102	1	
Lead	100	<b>92.4</b>	92	<b>93.8</b>	94	2	



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**DISSOLVED METALS**  
**EPA 200.8**

Matrix: Water  
Units: ug/L (ppb)

Analyte	Result	PQL	EPA Method	Date	Date	Flags
				Prepared	Analyzed	
Lab ID:	12-086-01					
Client ID:	MW-9-120717					
Arsenic	ND	3.0	200.8	12-8-17	12-11-17	
Lead	ND	1.0	200.8	12-8-17	12-11-17	



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**DISSOLVED METALS  
EPA 200.8  
METHOD BLANK QUALITY CONTROL**

Date Filtered: 12-8-17  
Date Analyzed: 12-11-17

Matrix: Water  
Units: ug/L (ppb)

Lab ID: MB1208F1

Analyte	Method	Result	PQL
Arsenic	200.8	<b>ND</b>	3.0
Lead	200.8	<b>ND</b>	1.0



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**DISSOLVED METALS  
EPA 200.8  
DUPLICATE QUALITY CONTROL**

Date Filtered: 12-8-17  
Date Analyzed: 12-11-17  
  
Matrix: Water  
Units: ug/L (ppb)  
  
Lab ID: 12-091-02

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	<b>17.9</b>	<b>17.0</b>	5	3.0	
Lead	<b>ND</b>	<b>ND</b>	NA	1.0	



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**DISSOLVED METALS  
EPA 200.8  
MS/MSD QUALITY CONTROL**

Date Filtered: 12-8-17  
Date Analyzed: 12-11-17

Matrix: Water  
Units: ug/L (ppb)

Lab ID: 12-091-02

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	200	<b>228</b>	105	<b>230</b>	106	1	
Lead	200	<b>169</b>	84	<b>173</b>	86	2	



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**NITRATE (as Nitrogen)**  
**EPA 353.2**

Matrix: Water  
 Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>MW-23-120717</b>					
Laboratory ID:	12-086-02					
Nitrate	<b>ND</b>	0.050	EPA 353.2	12-12-17	12-12-17	

<b>Client ID:</b>	<b>MW-28-120717</b>					
Laboratory ID:	12-086-08					
Nitrate	<b>ND</b>	0.050	EPA 353.2	12-12-17	12-12-17	

<b>Client ID:</b>	<b>MW-20-120717</b>					
Laboratory ID:	12-086-09					
Nitrate	<b>0.10</b>	0.050	EPA 353.2	12-12-17	12-12-17	

<b>Client ID:</b>	<b>SVE-1-120717</b>					
Laboratory ID:	12-086-11					
Nitrate	<b>0.85</b>	0.050	EPA 353.2	12-12-17	12-12-17	





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**NITRATE (as Nitrogen)**  
**EPA 353.2**  
**QUALITY CONTROL**

Matrix: Water  
 Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB1212W2					
Nitrate	<b>ND</b>	0.050	EPA 353.2	12-12-17	12-12-17	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
<b>DUPLICATE</b>								
Laboratory ID:	12-047-07							
	ORIG	DUP						
Nitrate	<b>0.598</b>	<b>0.591</b>	NA	NA	NA	NA	1	12

<b>MATRIX SPIKE</b>								
Laboratory ID:	12-047-07							
	MS	MS		MS				
Nitrate	<b>2.77</b>	2.00	0.598	109	94-126	NA	NA	

<b>SPIKE BLANK</b>								
Laboratory ID:	SB1212W2							
	SB	SB		SB				
Nitrate	<b>2.14</b>	2.00	NA	107	95-120	NA	NA	



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**NITRITE (as Nitrogen)**  
**EPA 353.2**

Matrix: Water  
 Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>MW-23-120717</b>					
Laboratory ID:	12-086-02					
Nitrite	<b>ND</b>	0.020	EPA 353.2	12-8-17	12-8-17	

<b>Client ID:</b>	<b>MW-28-120717</b>					
Laboratory ID:	12-086-08					
Nitrite	<b>0.029</b>	0.020	EPA 353.2	12-8-17	12-8-17	

<b>Client ID:</b>	<b>MW-20-120717</b>					
Laboratory ID:	12-086-09					
Nitrite	<b>0.074</b>	0.020	EPA 353.2	12-8-17	12-8-17	

<b>Client ID:</b>	<b>SVE-1-120717</b>					
Laboratory ID:	12-086-11					
Nitrite	<b>ND</b>	0.020	EPA 353.2	12-8-17	12-8-17	



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**NITRITE (as Nitrogen)  
 EPA 353.2  
 QUALITY CONTROL**

Matrix: Water  
 Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB1208W1					
Nitrite	ND	0.020	EPA 353.2	12-8-17	12-8-17	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
<b>DUPLICATE</b>								
Laboratory ID:	12-086-02							
	ORIG	DUP						
Nitrite	ND	ND	NA	NA	NA	NA	11	

**MATRIX SPIKE**

Laboratory ID:	12-086-02							
	MS	MS		MS				
Nitrite	0.261	0.250	ND	104	75-124	NA	NA	

**SPIKE BLANK**

Laboratory ID:	SB1208W1							
	SB	SB		SB				
Nitrite	0.254	0.250	NA	102	89-113	NA	NA	



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**SULFATE**  
**ASTM D516-07**

Matrix: Water  
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	MW-23-120717					
Laboratory ID:	12-086-02					
Sulfate	38	10	ASTM D516-07	12-12-17	12-12-17	

Client ID:	MW-28-120717					
Laboratory ID:	12-086-08					
Sulfate	23	10	ASTM D516-07	12-11-17	12-12-17	

Client ID:	MW-20-120717					
Laboratory ID:	12-086-09					
Sulfate	10	5.0	ASTM D516-07	12-11-17	12-12-17	

Client ID:	SVE-1-120717					
Laboratory ID:	12-086-11					
Sulfate	20	5.0	ASTM D516-07	12-12-17	12-12-17	



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**SULFATE  
 ASTM D516-07  
 QUALITY CONTROL**

Matrix: Water  
 Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB1212W1					
Sulfate	<b>ND</b>	5.0	ASTM D516-07	12-12-17	12-12-17	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
<b>DUPLICATE</b>								
Laboratory ID:	12-057-01							
	ORIG	DUP						
Sulfate	<b>17.0</b>	<b>17.4</b>	NA	NA	NA	NA	2	10

**MATRIX SPIKE**

Laboratory ID:	12-057-01							
	MS	MS		MS				
Sulfate	<b>37.6</b>	20.0	17.0	103	81-125	NA	NA	

**SPIKE BLANK**

Laboratory ID:	SB1212W1							
	SB	SB		SB				
Sulfate	<b>10.5</b>	10.0	NA	105	91-115	NA	NA	



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**DISSOLVED GASES  
RSK 175**

Matrix: Water  
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>MW-23-120717</b>					
Laboratory ID:	12-086-02					
Methane	<b>79</b>	5.0	RSK 175	12-13-17	12-13-17	
Ethane	<b>ND</b>	5.0	RSK 175	12-13-17	12-13-17	
Ethene	<b>ND</b>	5.0	RSK 175	12-13-17	12-13-17	

<b>Client ID:</b>	<b>MW-28-120717</b>					
Laboratory ID:	12-086-08					
Methane	<b>630</b>	75	RSK 175	12-13-17	12-13-17	
Ethane	<b>ND</b>	75	RSK 175	12-13-17	12-13-17	
Ethene	<b>ND</b>	75	RSK 175	12-13-17	12-13-17	

<b>Client ID:</b>	<b>MW-20-120717</b>					
Laboratory ID:	12-086-09					
Methane	<b>0.58</b>	0.50	RSK 175	12-13-17	12-13-17	
Ethane	<b>ND</b>	0.50	RSK 175	12-13-17	12-13-17	
Ethene	<b>ND</b>	0.50	RSK 175	12-13-17	12-13-17	

<b>Client ID:</b>	<b>SVE-1-120717</b>					
Laboratory ID:	12-086-11					
Methane	<b>ND</b>	0.50	RSK 175	12-13-17	12-13-17	
Ethane	<b>ND</b>	0.50	RSK 175	12-13-17	12-13-17	
Ethene	<b>ND</b>	0.50	RSK 175	12-13-17	12-13-17	



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 Laboratory Reference: 1712-086  
 Project: 188-002

**DISSOLVED GASES  
 RSK 175  
 QUALITY CONTROL**

Matrix: Water  
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB1213W1					
Methane	ND	0.50	RSK 175	12-13-17	12-13-17	
Ethane	ND	0.50	RSK 175	12-13-17	12-13-17	
Ethene	ND	0.50	RSK 175	12-13-17	12-13-17	

Analyte	Result		Spike Level		Source	Percent	Recovery	RPD		
					Result	Recovery	Limits			
SPIKE BLANKS										
Laboratory ID:	SB1213W1									
	SB	SBD	SB	SBD		SB	SBD			
Methane	4.46	4.32	4.42	4.42	N/A	101	98	75-125	3	25
Ethane	8.50	8.32	8.32	8.32	N/A	102	100	75-125	2	25
Ethene	8.93	8.28	7.77	7.77	N/A	115	107	75-125	8	25





Date of Report: December 15, 2017  
 Samples Submitted: December 8, 2017  
 Laboratory Reference: 1712-086  
 Project: 188-002

**TOTAL ORGANIC CARBON  
 SM 5310B**

Matrix: Water

Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>MW-23-120717</b>					
Laboratory ID:	12-086-02					
Total Organic Carbon	<b>3.6</b>	1.0	SM 5310B	12-11-17	12-11-17	

<b>Client ID:</b>	<b>MW-28-120717</b>					
Laboratory ID:	12-086-08					
Total Organic Carbon	<b>3.3</b>	1.0	SM 5310B	12-11-17	12-11-17	

<b>Client ID:</b>	<b>MW-20-120717</b>					
Laboratory ID:	12-086-09					
Total Organic Carbon	<b>1.3</b>	1.0	SM 5310B	12-11-17	12-11-17	

<b>Client ID:</b>	<b>SVE-1-120717</b>					
Laboratory ID:	12-086-11					
Total Organic Carbon	<b>1.2</b>	1.0	SM 5310B	12-11-17	12-11-17	



Date of Report: December 15, 2017  
 Samples Submitted: December 8, 2017  
 Laboratory Reference: 1712-086  
 Project: 188-002

**TOTAL ORGANIC CARBON  
 SM 5310B  
 QUALITY CONTROL**

Matrix: Water  
 Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB1211W1					
Total Organic Carbon	<b>ND</b>	1.0	SM 5310B	12-11-17	12-11-17	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
<b>DUPLICATE</b>								
Laboratory ID:	12-047-07							
	ORIG	DUP						
Total Organic Carbon	<b>2.08</b>	<b>2.00</b>	NA	NA	NA	NA	4	15

**MATRIX SPIKE**

Laboratory ID:	12-047-07							
	MS	MS		MS				
Total Organic Carbon	<b>11.3</b>	10.0	2.08	92	86-122	NA	NA	

**SPIKE BLANK**

Laboratory ID:	SB1211W1							
	SB	SB		SB				
Total Organic Carbon	<b>10.5</b>	10.0	NA	105	99-118	NA	NA	



Date of Report: December 15, 2017  
 Samples Submitted: December 8, 2017  
 Laboratory Reference: 1712-086  
 Project: 188-002

**1,4-DIOXANE**  
**EPA 8270D/SIM**

Matrix: Water  
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>MW-20-120717</b>					
Laboratory ID:	12-086-09					
1,4-Dioxane	<b>ND</b>	0.10	EPA 8270D/SIM	12-12-17	12-14-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	71	25 - 107				
Pyrene-d10	87	28 - 103				
Terphenyl-d14	87	36 - 129				



Date of Report: December 15, 2017  
 Samples Submitted: December 8, 2017  
 Laboratory Reference: 1712-086  
 Project: 188-002

**1,4-DIOXANE**  
**EPA 8270D/SIM**  
**METHOD BLANK QUALITY CONTROL**

Matrix: Water  
 Units: ug/L

<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>Method</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Flags</b>
<hr/>						
Laboratory ID:	MB1212W1					
1,4-Dioxane	<b>ND</b>	0.10	EPA 8270D/SIM	12-12-17	12-14-17	
<hr/>						
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	77	25 - 107				
<i>Pyrene-d10</i>	89	28 - 103				
<i>Terphenyl-d14</i>	92	36 - 129				



Date of Report: December 15, 2017  
 Samples Submitted: December 8, 2017  
 Laboratory Reference: 1712-086  
 Project: 188-002

**1,4-DIOXANE**  
**EPA 8270D/SIM**  
**SB/SBD QUALITY CONTROL**

Matrix: Water

Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB1212W1									
	SB	SBD	SB	SBD	SB	SBD				
1,4-Dioxane	0.142	0.131	0.500	0.500	28	26	20 - 120	8	30	
Surrogate:										
2-Fluorobiphenyl					80	77	25 - 107			
Pyrene-d10					93	96	28 - 103			
Terphenyl-d14					95	97	36 - 129			





### 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  
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Phone: (425) 883-3881 • www.onsite-env.com

# Chain of Custody

Page 1 of 2

Company: **Farrellan Consulting**  
Project Number: **158-002**  
Project Name: **Woodworth Lakeview Facility**  
Project Manager: **Brian Swista**  
Sampled by: **Daniel Aguilar / Bryan Gilson**

Turnaround Request  
(in working days)  
(Check One)  
☐ Same Day ☐ 1 Day  
☐ 2 Days ☐ 3 Days  
☒ Standard (7 Days)  
(TPH analysis 5 Days)

Laboratory Number: **12-086**

Date Sampled: **12/7/17** Time Sampled: **0936** Matrix: **420**  
☐ (other)

## 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	
Total and Dissolved Lead and Arsenic Nitrite, Nitrate, Sulfate	
Dissolved: Methane, Ethane Ethene	
1,4 Dioxane	
% Moisture	
Total Organic Carbon	

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers
1	MW-9-120717	12/7/17	0936	420	2
2	MW-23-120717				7
3	SVF-9-120717				2
4	Industrial - well - 120717				3
5	MW-21-120717				5
6	MW-10B-120717				3
7	MW-9B-120717				3
8	MW-28-120717				7
9	MW-20-120717				9
10	MW-29-120717				3

Signature

Company

Date

Time

Comments/Special Instructions

Please hold MW-9B for VOCs, contingent on results from MW-23.

Added MW-20 for 1,4 Dioxane

Added 12/21/17. DG.

Relinquished		Farrellan	12/7/17	1915	
Received		ALPH	12/6/17	9:45	
Relinquished		ALPH	12/6/17	10:20	
Received		OS	12/6/17	10:20	
Relinquished					
Received					
Reviewed/Date		Reviewed/Date			

Data Package: Standard ☐ Level III ☐ Level IV ☐

Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐





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## Chain of Custody

Page 2 of 2

Company:

Farallon Consulting

Project Number:

188-002

Project Name:

Woodworth Lakeview facility

Project Manager:

Brian Swista

Sampled by:

Daniel Aguilar / Ryan Ostrem

Lab ID

Sample Identification

11 SVE-1-120717

### 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: **12-086**

### 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/ MTCA Metals (circle one)

TCLP Metals

HEM (oil and grease) 1664A

XXXX Nitrite, Nitrate, Sulfate

XXXX Dissolved: Methane, Ethane, Ethene

XXXX Total Organic Carbon

% Moisture

DA

Signature

Relinquished

Received

Relinquished

Received

Relinquished

Received

Reviewed/Date

Company

Farallon

Date

12-7-17

Time

1413

Comments/Special Instructions

Data Package: Level III ☐ Level IV ☐

Electronic Data Deliverables (EDDs) ☐

Chromatograms with final report ☐



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

December 15, 2017

Brani Jurista  
Farallon Consulting, LLC  
975 5th Avenue NW  
Issaquah, WA 98027

Re: Analytical Data for Project 188-002  
Laboratory Reference No. 1712-093

Dear Brani:

Enclosed are the analytical results and associated quality control data for samples submitted on December 8, 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 "DeB" followed by a stylized flourish.

David Baumeister  
Project Manager

Enclosures



---

OnSite Environmental, Inc. 14648 NE 95<sup>th</sup> 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: December 15, 2017  
Samples Submitted: December 8, 2017  
Laboratory Reference: 1712-093  
Project: 188-002

### Case Narrative

Samples were collected on December 8, 2017 and received by the laboratory on December 8, 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.

#### Nitrate EPA 353.2 Analysis

The reported Nitrate results are a calculated value based on the subtraction of Nitrite from the Nitrate plus Nitrite result. The Nitrite analysis, which has a 48-hour holding time, was performed within the holding time. Immediately after this analysis, an aliquot of the samples was preserved with concentrated sulfuric acid and stored at 4 degrees C. The preserved samples were then analyzed within the maximum 28-day holding time for the Nitrate plus Nitrite analysis.

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: December 15, 2017  
 Samples Submitted: December 8, 2017  
 Laboratory Reference: 1712-093  
 Project: 188-002

### NWTPH-Dx

Matrix: Water  
 Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>SVE-5-120817</b>					
Laboratory ID:	12-093-06					
Diesel Range Organics	<b>0.33</b>	0.26	NWTPH-Dx	12-12-17	12-12-17	
Lube Oil Range Organics	<b>0.68</b>	0.41	NWTPH-Dx	12-12-17	12-12-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	88	50-150				



Date of Report: December 15, 2017  
 Samples Submitted: December 8, 2017  
 Laboratory Reference: 1712-093  
 Project: 188-002

**NWTPH-Dx  
 QUALITY CONTROL**

Matrix: Water  
 Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB1212W1					
Diesel Range Organics	<b>ND</b>	0.25	NWTPH-Dx	12-12-17	12-12-17	
Lube Oil Range Organics	<b>ND</b>	0.40	NWTPH-Dx	12-12-17	12-12-17	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	100	50-150				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
<b>DUPLICATE</b>								
Laboratory ID:	12-086-05							
	ORIG	DUP						
Diesel Range	<b>ND</b>	<b>ND</b>	NA	NA	NA	NA	NA	
Lube Oil Range	<b>ND</b>	<b>ND</b>	NA	NA	NA	NA	NA	
Surrogate:								
o-Terphenyl				101	103	50-150		



Date of Report: December 15, 2017  
 Samples Submitted: December 8, 2017  
 Laboratory Reference: 1712-093  
 Project: 188-002

**VOLATILES EPA 8260C**  
 page 1 of 2

Matrix: Water  
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>SVE-12-120817</b>					
<b>Laboratory ID:</b>	<b>12-093-01</b>					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Chloromethane	ND	1.0	EPA 8260C	12-13-17	12-13-17	
Vinyl Chloride	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Bromomethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Chloroethane	ND	1.0	EPA 8260C	12-13-17	12-13-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,1-Dichloroethene	4.3	0.20	EPA 8260C	12-13-17	12-13-17	
Acetone	ND	5.0	EPA 8260C	12-13-17	12-13-17	
Iodomethane	ND	1.0	EPA 8260C	12-13-17	12-13-17	
Carbon Disulfide	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Methylene Chloride	ND	1.0	EPA 8260C	12-13-17	12-13-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,1-Dichloroethane	0.48	0.20	EPA 8260C	12-13-17	12-13-17	
Vinyl Acetate	ND	1.0	EPA 8260C	12-13-17	12-13-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
2-Butanone	ND	5.0	EPA 8260C	12-13-17	12-13-17	
Bromochloromethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Chloroform	0.21	0.20	EPA 8260C	12-13-17	12-13-17	
1,1,1-Trichloroethane	5.8	0.20	EPA 8260C	12-13-17	12-13-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Benzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Trichloroethene	4.2	0.20	EPA 8260C	12-13-17	12-13-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Dibromomethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Bromodichloromethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
2-Chloroethyl Vinyl Ether	ND	1.3	EPA 8260C	12-13-17	12-13-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Methyl Isobutyl Ketone	ND	2.6	EPA 8260C	12-13-17	12-13-17	
Toluene	ND	1.0	EPA 8260C	12-13-17	12-13-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	12-13-17	12-13-17	



Date of Report: December 15, 2017  
 Samples Submitted: December 8, 2017  
 Laboratory Reference: 1712-093  
 Project: 188-002

**VOLATILES EPA 8260C**  
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>SVE-12-120817</b>					
<b>Laboratory ID:</b>	<b>12-093-01</b>					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Tetrachloroethene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
2-Hexanone	ND	2.5	EPA 8260C	12-13-17	12-13-17	
Dibromochloromethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Chlorobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Ethylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
m,p-Xylene	ND	0.40	EPA 8260C	12-13-17	12-13-17	
o-Xylene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Styrene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Bromoform	ND	1.0	EPA 8260C	12-13-17	12-13-17	
Isopropylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Bromobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
n-Propylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
4-Chlorotoluene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
tert-Butylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
sec-Butylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
p-Isopropyltoluene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
n-Butylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	12-13-17	12-13-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Naphthalene	ND	1.3	EPA 8260C	12-13-17	12-13-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>100</i>	<i>75-127</i>				
<i>Toluene-d8</i>	<i>100</i>	<i>80-127</i>				
<i>4-Bromofluorobenzene</i>	<i>99</i>	<i>78-125</i>				





Date of Report: December 15, 2017  
 Samples Submitted: December 8, 2017  
 Laboratory Reference: 1712-093  
 Project: 188-002

**VOLATILES EPA 8260C**  
 page 1 of 2

Matrix: Water  
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>MW-14-120817</b>					
<b>Laboratory ID:</b>	<b>12-093-02</b>					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Chloromethane	ND	1.0	EPA 8260C	12-13-17	12-13-17	
Vinyl Chloride	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Bromomethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Chloroethane	ND	1.0	EPA 8260C	12-13-17	12-13-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,1-Dichloroethene	1.6	0.20	EPA 8260C	12-13-17	12-13-17	
Acetone	ND	5.0	EPA 8260C	12-13-17	12-13-17	
Iodomethane	ND	1.0	EPA 8260C	12-13-17	12-13-17	
Carbon Disulfide	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Methylene Chloride	ND	1.0	EPA 8260C	12-13-17	12-13-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Vinyl Acetate	ND	1.0	EPA 8260C	12-13-17	12-13-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
2-Butanone	ND	5.0	EPA 8260C	12-13-17	12-13-17	
Bromochloromethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Chloroform	0.61	0.20	EPA 8260C	12-13-17	12-13-17	
1,1,1-Trichloroethane	5.1	0.20	EPA 8260C	12-13-17	12-13-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Benzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Trichloroethene	12	0.20	EPA 8260C	12-13-17	12-13-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Dibromomethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Bromodichloromethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
2-Chloroethyl Vinyl Ether	ND	1.3	EPA 8260C	12-13-17	12-13-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Methyl Isobutyl Ketone	ND	2.6	EPA 8260C	12-13-17	12-13-17	
Toluene	ND	1.0	EPA 8260C	12-13-17	12-13-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	12-13-17	12-13-17	



Date of Report: December 15, 2017  
 Samples Submitted: December 8, 2017  
 Laboratory Reference: 1712-093  
 Project: 188-002

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>MW-14-120817</b>					
<b>Laboratory ID:</b>	12-093-02					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Tetrachloroethene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
2-Hexanone	ND	2.5	EPA 8260C	12-13-17	12-13-17	
Dibromochloromethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Chlorobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Ethylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
m,p-Xylene	ND	0.40	EPA 8260C	12-13-17	12-13-17	
o-Xylene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Styrene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Bromoform	ND	1.0	EPA 8260C	12-13-17	12-13-17	
Isopropylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Bromobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
n-Propylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
4-Chlorotoluene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
tert-Butylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
sec-Butylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
p-Isopropyltoluene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
n-Butylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	12-13-17	12-13-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Naphthalene	ND	1.3	EPA 8260C	12-13-17	12-13-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>101</i>	<i>75-127</i>				
<i>Toluene-d8</i>	<i>99</i>	<i>80-127</i>				
<i>4-Bromofluorobenzene</i>	<i>97</i>	<i>78-125</i>				



Date of Report: December 15, 2017  
 Samples Submitted: December 8, 2017  
 Laboratory Reference: 1712-093  
 Project: 188-002

**VOLATILES EPA 8260C**  
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Matrix: Water  
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID: MW-14C-120817</b>						
Laboratory ID: 12-093-03						
Dichlorodifluoromethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Chloromethane	ND	1.0	EPA 8260C	12-13-17	12-13-17	
Vinyl Chloride	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Bromomethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Chloroethane	ND	1.0	EPA 8260C	12-13-17	12-13-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Acetone	ND	5.0	EPA 8260C	12-13-17	12-13-17	
Iodomethane	ND	1.0	EPA 8260C	12-13-17	12-13-17	
Carbon Disulfide	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Methylene Chloride	ND	1.0	EPA 8260C	12-13-17	12-13-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Vinyl Acetate	ND	1.0	EPA 8260C	12-13-17	12-13-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
2-Butanone	ND	5.0	EPA 8260C	12-13-17	12-13-17	
Bromochloromethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Chloroform	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,1,1-Trichloroethane	0.27	0.20	EPA 8260C	12-13-17	12-13-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Benzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Trichloroethene	0.80	0.20	EPA 8260C	12-13-17	12-13-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Dibromomethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Bromodichloromethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
2-Chloroethyl Vinyl Ether	ND	1.3	EPA 8260C	12-13-17	12-13-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Methyl Isobutyl Ketone	ND	2.6	EPA 8260C	12-13-17	12-13-17	
Toluene	ND	1.0	EPA 8260C	12-13-17	12-13-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	12-13-17	12-13-17	



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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>MW-14C-120817</b>					
<b>Laboratory ID:</b>	12-093-03					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Tetrachloroethene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
2-Hexanone	ND	2.5	EPA 8260C	12-13-17	12-13-17	
Dibromochloromethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Chlorobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Ethylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
m,p-Xylene	ND	0.40	EPA 8260C	12-13-17	12-13-17	
o-Xylene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Styrene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Bromoform	ND	1.0	EPA 8260C	12-13-17	12-13-17	
Isopropylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Bromobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
n-Propylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
4-Chlorotoluene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
tert-Butylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
sec-Butylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
p-Isopropyltoluene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
n-Butylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	12-13-17	12-13-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Naphthalene	ND	1.3	EPA 8260C	12-13-17	12-13-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>102</i>	<i>75-127</i>				
<i>Toluene-d8</i>	<i>99</i>	<i>80-127</i>				
<i>4-Bromofluorobenzene</i>	<i>97</i>	<i>78-125</i>				



OnSite Environmental, Inc. 14648 NE 95<sup>th</sup> 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: December 15, 2017  
 Samples Submitted: December 8, 2017  
 Laboratory Reference: 1712-093  
 Project: 188-002

**VOLATILES EPA 8260C**  
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Matrix: Water  
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>AS-1-120817</b>					
<b>Laboratory ID:</b>	<b>12-093-04</b>					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Chloromethane	ND	1.0	EPA 8260C	12-13-17	12-13-17	
Vinyl Chloride	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Bromomethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Chloroethane	ND	1.0	EPA 8260C	12-13-17	12-13-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Acetone	ND	5.0	EPA 8260C	12-13-17	12-13-17	
Iodomethane	ND	1.0	EPA 8260C	12-13-17	12-13-17	
Carbon Disulfide	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Methylene Chloride	ND	1.0	EPA 8260C	12-13-17	12-13-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Vinyl Acetate	ND	1.0	EPA 8260C	12-13-17	12-13-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
2-Butanone	ND	5.0	EPA 8260C	12-13-17	12-13-17	
Bromochloromethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Chloroform	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Benzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Trichloroethene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Dibromomethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Bromodichloromethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
2-Chloroethyl Vinyl Ether	ND	1.3	EPA 8260C	12-13-17	12-13-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Methyl Isobutyl Ketone	ND	2.6	EPA 8260C	12-13-17	12-13-17	
Toluene	ND	1.0	EPA 8260C	12-13-17	12-13-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	12-13-17	12-13-17	



Date of Report: December 15, 2017  
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 Project: 188-002

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>AS-1-120817</b>					
<b>Laboratory ID:</b>	<b>12-093-04</b>					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Tetrachloroethene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
2-Hexanone	ND	2.5	EPA 8260C	12-13-17	12-13-17	
Dibromochloromethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Chlorobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Ethylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
m,p-Xylene	ND	0.40	EPA 8260C	12-13-17	12-13-17	
o-Xylene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Styrene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Bromoform	ND	1.0	EPA 8260C	12-13-17	12-13-17	
Isopropylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Bromobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
n-Propylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
4-Chlorotoluene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
tert-Butylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
sec-Butylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
p-Isopropyltoluene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
n-Butylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	12-13-17	12-13-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Naphthalene	ND	1.3	EPA 8260C	12-13-17	12-13-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>103</i>	<i>75-127</i>				
<i>Toluene-d8</i>	<i>100</i>	<i>80-127</i>				
<i>4-Bromofluorobenzene</i>	<i>99</i>	<i>78-125</i>				



Date of Report: December 15, 2017  
 Samples Submitted: December 8, 2017  
 Laboratory Reference: 1712-093  
 Project: 188-002

**VOLATILES EPA 8260C**  
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Matrix: Water  
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>SVE-6-120817</b>					
<b>Laboratory ID:</b>	<b>12-093-05</b>					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Chloromethane	ND	1.0	EPA 8260C	12-13-17	12-13-17	
Vinyl Chloride	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Bromomethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Chloroethane	ND	1.0	EPA 8260C	12-13-17	12-13-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Acetone	ND	5.0	EPA 8260C	12-13-17	12-13-17	
Iodomethane	ND	1.0	EPA 8260C	12-13-17	12-13-17	
Carbon Disulfide	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Methylene Chloride	ND	1.0	EPA 8260C	12-13-17	12-13-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Vinyl Acetate	ND	1.0	EPA 8260C	12-13-17	12-13-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
2-Butanone	ND	5.0	EPA 8260C	12-13-17	12-13-17	
Bromochloromethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Chloroform	0.35	0.20	EPA 8260C	12-13-17	12-13-17	
1,1,1-Trichloroethane	0.25	0.20	EPA 8260C	12-13-17	12-13-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Benzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Trichloroethene	2.2	0.20	EPA 8260C	12-13-17	12-13-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Dibromomethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Bromodichloromethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
2-Chloroethyl Vinyl Ether	ND	1.3	EPA 8260C	12-13-17	12-13-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Methyl Isobutyl Ketone	ND	2.6	EPA 8260C	12-13-17	12-13-17	
Toluene	ND	1.0	EPA 8260C	12-13-17	12-13-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	12-13-17	12-13-17	





Date of Report: December 15, 2017  
 Samples Submitted: December 8, 2017  
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 Project: 188-002

**VOLATILES EPA 8260C**  
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>SVE-6-120817</b>					
<b>Laboratory ID:</b>	<b>12-093-05</b>					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Tetrachloroethene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
2-Hexanone	ND	2.5	EPA 8260C	12-13-17	12-13-17	
Dibromochloromethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Chlorobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Ethylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
m,p-Xylene	ND	0.40	EPA 8260C	12-13-17	12-13-17	
o-Xylene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Styrene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Bromoform	ND	1.0	EPA 8260C	12-13-17	12-13-17	
Isopropylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Bromobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
n-Propylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
4-Chlorotoluene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
tert-Butylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
sec-Butylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
p-Isopropyltoluene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
n-Butylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	12-13-17	12-13-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Naphthalene	ND	1.3	EPA 8260C	12-13-17	12-13-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>104</i>	<i>75-127</i>				
<i>Toluene-d8</i>	<i>101</i>	<i>80-127</i>				
<i>4-Bromofluorobenzene</i>	<i>98</i>	<i>78-125</i>				



Date of Report: December 15, 2017  
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 Project: 188-002

**VOLATILES by 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: MB1213W1						
Dichlorodifluoromethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Chloromethane	ND	1.0	EPA 8260C	12-13-17	12-13-17	
Vinyl Chloride	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Bromomethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Chloroethane	ND	1.0	EPA 8260C	12-13-17	12-13-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Acetone	ND	5.0	EPA 8260C	12-13-17	12-13-17	
Iodomethane	ND	1.0	EPA 8260C	12-13-17	12-13-17	
Carbon Disulfide	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Methylene Chloride	ND	1.0	EPA 8260C	12-13-17	12-13-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Vinyl Acetate	ND	1.0	EPA 8260C	12-13-17	12-13-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
2-Butanone	ND	5.0	EPA 8260C	12-13-17	12-13-17	
Bromochloromethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Chloroform	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Benzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Trichloroethene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Dibromomethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Bromodichloromethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
2-Chloroethyl Vinyl Ether	ND	1.3	EPA 8260C	12-13-17	12-13-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Methyl Isobutyl Ketone	ND	2.6	EPA 8260C	12-13-17	12-13-17	
Toluene	ND	1.0	EPA 8260C	12-13-17	12-13-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	12-13-17	12-13-17	



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**VOLATILES by EPA 8260C**  
**METHOD BLANK QUALITY CONTROL**  
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID: MB1213W1						
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Tetrachloroethene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
2-Hexanone	ND	2.5	EPA 8260C	12-13-17	12-13-17	
Dibromochloromethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Chlorobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Ethylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
m,p-Xylene	ND	0.40	EPA 8260C	12-13-17	12-13-17	
o-Xylene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Styrene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Bromoform	ND	1.0	EPA 8260C	12-13-17	12-13-17	
Isopropylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Bromobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	12-13-17	12-13-17	
n-Propylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
4-Chlorotoluene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
tert-Butylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
sec-Butylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
p-Isopropyltoluene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
n-Butylbenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	12-13-17	12-13-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
Naphthalene	ND	1.3	EPA 8260C	12-13-17	12-13-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	12-13-17	12-13-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>101</i>	<i>75-127</i>				
<i>Toluene-d8</i>	<i>100</i>	<i>80-127</i>				
<i>4-Bromofluorobenzene</i>	<i>97</i>	<i>78-125</i>				



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 Laboratory Reference: 1712-093  
 Project: 188-002

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

Matrix: Water  
 Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery	RPD	RPD	Flags
					Recovery	Limits	Limit			
SPIKE BLANKS										
Laboratory ID:	SB1213W1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	8.81	8.63	10.0	10.0	88	86	63-126	2	21	
Benzene	9.78	9.76	10.0	10.0	98	98	78-122	0	19	
Trichloroethene	9.34	9.08	10.0	10.0	93	91	63-120	3	20	
Toluene	10.1	10.0	10.0	10.0	101	100	79-124	1	19	
Chlorobenzene	10.3	10.1	10.0	10.0	103	101	78-120	2	19	
Surrogate:										
Dibromofluoromethane					96	98	75-127			
Toluene-d8					98	98	80-127			
4-Bromofluorobenzene					95	97	78-125			



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 Project: 188-002

**NITRATE (as Nitrogen)**  
**EPA 353.2**

Matrix: Water  
 Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>SVE-12-120817</b>					
Laboratory ID:	12-093-01					
Nitrate	<b>0.81</b>	0.050	EPA 353.2	12-12-17	12-12-17	

<b>Client ID:</b>	<b>MW-14-120817</b>					
Laboratory ID:	12-093-02					
Nitrate	<b>0.23</b>	0.050	EPA 353.2	12-12-17	12-12-17	

<b>Client ID:</b>	<b>MW-14C-120817</b>					
Laboratory ID:	12-093-03					
Nitrate	<b>ND</b>	0.050	EPA 353.2	12-12-17	12-12-17	



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 Project: 188-002

**NITRATE (as Nitrogen)**  
**EPA 353.2**  
**QUALITY CONTROL**

Matrix: Water  
 Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB1212W2					
Nitrate	<b>ND</b>	0.050	EPA 353.2	12-12-17	12-12-17	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
<b>DUPLICATE</b>								
Laboratory ID:	12-047-07							
	ORIG	DUP						
Nitrate	<b>0.598</b>	<b>0.591</b>	NA	NA	NA	NA	1	12

<b>MATRIX SPIKE</b>								
Laboratory ID:	12-047-07							
	MS	MS		MS				
Nitrate	<b>2.77</b>	2.00	0.598	109	94-126	NA	NA	

<b>SPIKE BLANK</b>								
Laboratory ID:	SB1212W2							
	SB	SB		SB				
Nitrate	<b>2.14</b>	2.00	NA	107	95-120	NA	NA	



Date of Report: December 15, 2017  
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 Laboratory Reference: 1712-093  
 Project: 188-002

**NITRITE (as Nitrogen)**  
**EPA 353.2**

Matrix: Water  
 Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>SVE-12-120817</b>					
Laboratory ID:	12-093-01					
Nitrite	<b>ND</b>	0.020	EPA 353.2	12-8-17	12-8-17	

<b>Client ID:</b>	<b>MW-14-120817</b>					
Laboratory ID:	12-093-02					
Nitrite	<b>0.056</b>	0.020	EPA 353.2	12-8-17	12-8-17	

<b>Client ID:</b>	<b>MW-14C-120817</b>					
Laboratory ID:	12-093-03					
Nitrite	<b>ND</b>	0.020	EPA 353.2	12-8-17	12-8-17	





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**NITRITE (as Nitrogen)**  
**EPA 353.2**  
**QUALITY CONTROL**

Matrix: Water  
 Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB1208W1					
Nitrite	ND	0.020	EPA 353.2	12-8-17	12-8-17	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
<b>DUPLICATE</b>								
Laboratory ID:	12-086-02							
	ORIG	DUP						
Nitrite	ND	ND	NA	NA	NA	NA	11	

**MATRIX SPIKE**

Laboratory ID:	12-086-02							
	MS	MS		MS				
Nitrite	0.261	0.250	ND	104	75-124	NA	NA	

**SPIKE BLANK**

Laboratory ID:	SB1208W1							
	SB	SB		SB				
Nitrite	0.254	0.250	NA	102	89-113	NA	NA	



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 Project: 188-002

**SULFATE**  
**ASTM D516-07**

Matrix: Water  
 Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>SVE-12-120817</b>					
Laboratory ID:	12-093-01					
Sulfate	<b>21</b>	5.0	ASTM D516-07	12-12-17	12-12-17	

<b>Client ID:</b>	<b>MW-14-120817</b>					
Laboratory ID:	12-093-02					
Sulfate	<b>18</b>	5.0	ASTM D516-07	12-11-17	12-12-17	

<b>Client ID:</b>	<b>MW-14C-120817</b>					
Laboratory ID:	12-093-03					
Sulfate	<b>120</b>	25	ASTM D516-07	12-11-17	12-12-17	



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 Project: 188-002

**SULFATE  
 ASTM D516-07  
 QUALITY CONTROL**

Matrix: Water  
 Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB1212W1					
Sulfate	<b>ND</b>	5.0	ASTM D516-07	12-12-17	12-12-17	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
<b>DUPLICATE</b>								
Laboratory ID:	12-057-01							
	ORIG	DUP						
Sulfate	<b>17.0</b>	<b>17.4</b>	NA	NA	NA	NA	2	10

**MATRIX SPIKE**

Laboratory ID:	12-057-01							
	MS	MS		MS				
Sulfate	<b>37.6</b>	20.0	17.0	103	81-125	NA	NA	

**SPIKE BLANK**

Laboratory ID:	SB1212W1							
	SB	SB		SB				
Sulfate	<b>10.5</b>	10.0	NA	105	91-115	NA	NA	



Date of Report: December 15, 2017  
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 Project: 188-002

**DISSOLVED GASES  
RSK 175**

Matrix: Water  
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>SVE-12-120817</b>					
Laboratory ID:	12-093-01					
Methane	ND	0.50	RSK 175	12-12-17	12-12-17	
Ethane	ND	0.50	RSK 175	12-12-17	12-12-17	
Ethene	ND	0.50	RSK 175	12-12-17	12-12-17	

<b>Client ID:</b>	<b>MW-14-120817</b>					
Laboratory ID:	12-093-02					
Methane	ND	0.50	RSK 175	12-12-17	12-12-17	
Ethane	ND	0.50	RSK 175	12-12-17	12-12-17	
Ethene	ND	0.50	RSK 175	12-12-17	12-12-17	

<b>Client ID:</b>	<b>MW-14C-120817</b>					
Laboratory ID:	12-093-03					
Methane	4.9	0.50	RSK 175	12-12-17	12-12-17	
Ethane	ND	0.50	RSK 175	12-12-17	12-12-17	
Ethene	ND	0.50	RSK 175	12-12-17	12-12-17	



Date of Report: December 15, 2017  
 Samples Submitted: December 8, 2017  
 Laboratory Reference: 1712-093  
 Project: 188-002

**DISSOLVED GASES  
 RSK 175  
 QUALITY CONTROL**

Matrix: Water  
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB1212W1					
Methane	<b>ND</b>	0.50	RSK 175	12-12-17	12-12-17	
Ethane	<b>ND</b>	0.50	RSK 175	12-12-17	12-12-17	
Ethene	<b>ND</b>	0.50	RSK 175	12-12-17	12-12-17	

Analyte	Result		Spike Level		Source	Percent	Recovery	RPD		
					Result	Recovery	Limits			
SPIKE BLANKS										
Laboratory ID:	SB1212W1									
	SB	SBD	SB	SBD		SB	SBD			
Methane	4.36	4.56	4.42	4.42	N/A	99	103	75-125	4	25
Ethane	7.82	8.61	8.32	8.32	N/A	94	103	75-125	10	25
Ethene	7.51	8.68	7.77	7.77	N/A	97	112	75-125	14	25



Date of Report: December 15, 2017  
 Samples Submitted: December 8, 2017  
 Laboratory Reference: 1712-093  
 Project: 188-002

**TOTAL ORGANIC CARBON**  
**SM 5310B**

Matrix: Water  
 Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>SVE-12-120817</b>					
Laboratory ID:	12-093-01					
Total Organic Carbon	<b>1.7</b>	1.0	SM 5310B	12-11-17	12-11-17	

<b>Client ID:</b>	<b>MW-14-120817</b>					
Laboratory ID:	12-093-02					
Total Organic Carbon	<b>1.1</b>	1.0	SM 5310B	12-11-17	12-11-17	

<b>Client ID:</b>	<b>MW-14C-120817</b>					
Laboratory ID:	12-093-03					
Total Organic Carbon	<b>1.7</b>	1.0	SM 5310B	12-11-17	12-11-17	



Date of Report: December 15, 2017  
 Samples Submitted: December 8, 2017  
 Laboratory Reference: 1712-093  
 Project: 188-002

**TOTAL ORGANIC CARBON  
 SM 5310B  
 QUALITY CONTROL**

Matrix: Water  
 Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB1211W1					
Total Organic Carbon	<b>ND</b>	1.0	SM 5310B	12-11-17	12-11-17	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
<b>DUPLICATE</b>								
Laboratory ID:	12-047-07							
	ORIG	DUP						
Total Organic Carbon	<b>2.08</b>	<b>2.00</b>	NA	NA	NA	NA	4	15

**MATRIX SPIKE**

Laboratory ID:	12-047-07							
	MS	MS		MS				
Total Organic Carbon	<b>11.3</b>	10.0	2.08	92	86-122	NA	NA	

**SPIKE BLANK**

Laboratory ID:	SB1211W1							
	SB	SB		SB				
Total Organic Carbon	<b>10.5</b>	10.0	NA	105	99-118	NA	NA	





Date of Report: December 15, 2017  
 Samples Submitted: December 8, 2017  
 Laboratory Reference: 1712-093  
 Project: 188-002

**1,4-DIOXANE**  
**EPA 8270D/SIM**

Matrix: Water  
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>MW-14-120817</b>					
Laboratory ID:	12-093-02					
1,4-Dioxane	<b>ND</b>	0.10	EPA 8270D/SIM	12-12-17	12-14-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	75	25 - 107				
Pyrene-d10	90	28 - 103				
Terphenyl-d14	88	36 - 129				



Date of Report: December 15, 2017  
 Samples Submitted: December 8, 2017  
 Laboratory Reference: 1712-093  
 Project: 188-002

**1,4-DIOXANE  
 EPA 8270D/SIM  
 METHOD BLANK QUALITY CONTROL**

Matrix: Water  
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<hr/>						
Laboratory ID:	MB1212W1					
1,4-Dioxane	<b>ND</b>	0.10	EPA 8270D/SIM	12-12-17	12-14-17	
Surrogate:	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	77	25 - 107				
Pyrene-d10	89	28 - 103				
Terphenyl-d14	92	36 - 129				



Date of Report: December 15, 2017  
 Samples Submitted: December 8, 2017  
 Laboratory Reference: 1712-093  
 Project: 188-002

**1,4-DIOXANE**  
**EPA 8270D/SIM**  
**SB/SBD QUALITY CONTROL**

Matrix: Water

Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB1212W1									
	SB	SBD	SB	SBD	SB	SBD				
1,4-Dioxane	0.142	0.131	0.500	0.500	28	26	20 - 120	8	30	
Surrogate:										
2-Fluorobiphenyl					80	77	25 - 107			
Pyrene-d10					93	96	28 - 103			
Terphenyl-d14					95	97	36 - 129			





### 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

Page 1 of 1

## 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: 12-093

### 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	
Nitrate, Nitrite Sulfate	
Dissolved Methane, Ethane, Ethene	
Total Organic Carbon	
1,4-Dioxane	
% Moisture	

Date Sampled Time Sampled Matrix

12/18/17 0950 W

0951

1155

1233

1235

1314

7

9

7

3

3

2

Signature

Company

Date

Time

Comments/Special Instructions

Hot 1,4-Dioxane

Added 12/17/17 (STA)

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) ☐

**APPENDIX D**  
**DRAFT ENVIRONMENTAL COVENANT**

**ADDENDUM TO FOCUSED FEASIBILITY STUDY/  
DISPROPORTIONATE COST ANALYSIS REPORT**

Lakeview Facility  
2800 104<sup>th</sup> Street Court South  
Lakewood, Washington

Farallon PN: 188-002

After Recording Return  
Original Signed Covenant to:  
**Jason Cook**  
Toxics Cleanup Program  
Department of Ecology  
**Southwest Regional Office**  
**PO Box 47775**  
**Olympia, Washington 98504**

**Environmental Covenant**  
**(5/7/14 version)**

**Grantor: Miles Sand & Gravel Company**

**Grantee:** State of Washington, Department of Ecology

**Brief Legal Description:** NW ¼ and NE ¼ of Section 06 Township 19 North, Range 03 East

**Tax Parcel Nos.:** 0319062075, 0319061135, 0319062076, 0319062081, and 0319061142

**Cross Reference:**

**RECITALS**

**a.** This document is an environmental (restrictive) covenant (hereafter “Covenant”) executed pursuant to the Model Toxics Control Act (“MTCA”), chapter 70.105D RCW and Uniform Environmental Covenants Act (“UECA”), chapter 64.70 RCW.

**b.** The Property that is the subject of this Covenant is part or all of a site commonly known as **Woodworth & Company, Inc. Lakeview Plant (Facility Site ID: 1372)**. The Property is legally described in Exhibit A, and illustrated in Exhibit B, both of which are attached (hereafter “Property”). If there are differences between these two Exhibits, the legal description in Exhibit A shall prevail.

**c.** The Property is the subject of remedial action under MTCA. This Covenant is required because residual contamination remains on the Property after completion of remedial actions. Specifically, the following principle contaminants remain on the Property:

<b>Medium</b>	<b>Principle Contaminants Present</b>
Soil	Total petroleum hydrocarbons as oil-range organics, polycyclic aromatic hydrocarbons
Groundwater	Trichloroethene, arsenic, lead, total petroleum hydrocarbons as oil-range organics

**d.** It is the purpose of this Covenant to restrict certain activities and uses of the Property to protect human health and the environment and the integrity of remedial actions conducted at the site. Records describing the extent of residual contamination and remedial actions conducted are available through the Washington State Department of Ecology.



a. The Remedial Action conducted at the property is described in the following documents:

- *Addendum to Focused Feasibility Study and Disproportionate Cost Analysis Report, Lakeview Facility, 2800 104<sup>th</sup> Street Court South, Lakewood, Washington* dated May 16, 2018, prepared by Farallon Consulting, L.L.C. (Farallon) for Woodworth Capital, Inc.
- Letter regarding Approval of September 25, 2017 Sampling and Analysis Work Plan and November 3, 2017 Revised Addendum to Sampling and Analysis Work Plan for the following Site: 2800 104<sup>th</sup> Street Court South, Tacoma, WA 98499 dated November 16, 2017, from Nicholas Acklam of the Washington State Department of Ecology (Ecology) to Branislav Jurista of Farallon.
- Letter regarding Revised Addendum to Sampling and Analysis Work Plan, Woodworth Lakeview Facility Remediation, 2800 104<sup>th</sup> Street Court South, Lakewood, Washington dated November 3, 2017, from Brani Jurista and Peter Jewett of Farallon to Jeremy Hughes of Ecology.
- Letter regarding Addendum to Sampling and Analysis Work Plan, Woodworth Lakeview Facility Remediation, 2800 104<sup>th</sup> Street Court South, Lakewood, Washington dated October 30, 2017, from Brani Jurista and Peter Jewett of Farallon to Jeremy Hughes of Ecology.
- *Sampling and Analysis Work Plan, Lakeview Facility, 2800 104<sup>th</sup> Street Court South, Lakewood, Washington* dated September 25, 2017, prepared by Farallon or Ecology on behalf of Woodworth Capital, Inc.
- Technical Memorandum regarding Scope of Work, Woodworth Lakeview Facility, Lakewood, Washington dated August 9, 2017, from Peter Jewett and Brani Jurista of Farallon to Jeremy Hughes, Rebecca Larson, and Nick Acklam of Ecology.
- Letter regarding Response to Letter Regarding Ecology Comments and Corrections on Farallon Meeting Summary, Lakeview Facility, 2800 104<sup>th</sup> Street Court South, Lakewood, Washington dated June 28, 2016, from Brani Jurista and Peter Jewett of Farallon to Nicholas Acklam of Ecology.
- Letter regarding Industrial Well Water Sample Results, Lakeview Facility, 2800 104<sup>th</sup> Street Court South, Lakewood, Washington dated August 26, 2014, from Brani Jurista and Peter Jewett of Farallon to Jason Cook of Ecology.
- *Focused Feasibility Study and Disproportionate Cost Analysis Report, Lakeview Facility, 2800 104<sup>th</sup> Street Court South, Lakewood, Washington* dated April 14, 201, prepared by Farallon for Woodworth Capital, Inc.
- Letter Regarding Arsenic and Lead Characterization, Lakeview Facility, 2800 104<sup>th</sup> Street Court South, Lakewood, Washington dated December 22, 2014, from Brani Jurista and Peter Jewett of Farallon to Scott Rose of Ecology.

- *Cleanup Action Status Report, September 2009 Through February 2011, Woodworth Lakeview Facility, 2800 104<sup>th</sup> Street Court South, Lakewood, Washington* dated June 2, 2011, prepared by Farallon for Woodworth Capital, Inc.
- *Soil Excavation Cleanup Action Completion Report, Woodworth Lakeview Facility, 2800 104<sup>th</sup> Street Court South, Lakewood, Washington* dated March 28, 2011, prepared by Farallon for Woodworth Capital, Inc.
- Letter Regarding Risk-Based Cleanup Level Calculation for Petroleum-Contaminated Soil, Woodworth Lakeview Facility, 2800 104<sup>th</sup> Street Court South, Lakewood, Washington dated December 1, 2010, from Brani Jurista and Peter Jewett of Farallon to Chuck Cline of Ecology.
- *Engineering Design Report, Woodworth Capital, Inc., Formerly Known as Woodworth & Company, Inc., Lakeview Facility, 2800 104<sup>th</sup> Street South, Lakewood, Washington* 98499 dated January 20, 2010, prepared by Farallon for Woodworth Capital, Inc.
- *Remedial Investigation/Feasibility Study Report, Woodworth & Company, Inc., Lakeview Facility, 2800 104<sup>th</sup> Street South, Lakewood, Washington* 98499 dated August 19, 2009, prepared by Farallon for Woodworth & Company, Inc.
- *Addendum to Remedial Investigation Work Plan, Woodworth & Company, Inc., Lakeview Facility, 2800 104<sup>th</sup> Street South, Lakewood, Washington* 98499 dated January 30, 2009, prepared by Farallon for Woodworth & Company, Inc.
- *Remedial Investigation Work Plan, Woodworth & Company, Inc., Lakeview Facility, 2800 104<sup>th</sup> Street South, Lakewood, Washington* 98499 dated January 26, 2009, prepared by Farallon for Woodworth & Company, Inc.

These documents are on file at Ecology's Southwest Regional Office.

e. This Covenant grants the Washington State Department of Ecology, as holder of this Covenant, certain rights specified in this Covenant. The right of the Washington State Department of Ecology as a holder is not an ownership interest under MTCA, Chapter 70.105D RCW or the Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA") 42 USC Chapter 103.

## COVENANT

**Miles Sand & Gravel Company**, as Grantor and owner of the Property hereby grants to the Washington State Department of Ecology, and its successors and assignees, (hereafter "Ecology") the following covenants. Furthermore, it is the intent of the Grantor that such covenants shall run with the land and be binding on all current and future owners of any portion of, or interest in, the Property.

### **Section 1. General Restrictions and Requirements.**

The following general restrictions and requirements shall apply to the Property:

- a. Interference with Remedial Action.** With the exception of Grantor's existing operations and site reclamation as noted in Section 7 of this Covenant, the Grantor shall not engage in any activity on the Property that may impact or interfere with the remedial action and any operation, maintenance, inspection or monitoring of that remedial action without prior written approval from Ecology.
- b. Protection of Human Health and the Environment.** The Grantor shall not engage in any activity on the Property that may threaten continued protection of human health or the environment without prior written approval from Ecology. This includes, but is not limited to, any activity that results in the release of residual contamination that was contained as a part of the remedial action or that exacerbates or creates a new exposure to residual contamination remaining on the Property.
- c. Continued Compliance Required.** Grantor shall not convey any interest in any portion of the Property without providing for the continued adequate and complete operation, maintenance and monitoring of remedial actions and continued compliance with this Covenant.
- d. Leases.** Grantor shall restrict any lease for any portion of the Property to uses and activities consistent with this Covenant and notify all lessees of the restrictions on the use of the Property.
- e. Amendment to the Covenant.** Grantor must notify and obtain approval from Ecology at least sixty (60) days in advance of any proposed activity or use of the Property in a manner that is inconsistent with this Covenant. Before approving any proposal, Ecology must issue a public notice and provide an opportunity for the public to comment on the proposal. If Ecology approves the proposal, the Covenant will be amended to reflect the change.

## **Section 2. Specific Prohibitions and Requirements.**

In addition to the general restrictions in Section 1 of this Covenant, the following additional specific restrictions and requirements shall apply to the Property.

- a. Containment of Soil.** The remedial action for the Property is based on containing contaminated soil under a cap consisting of asphalt or concrete or a minimum 15-foot-thick layer of clean soil and located as illustrated in Exhibit C. The primary purpose of this cap is to minimize the potential for contact with contaminated soil. As such, the following restrictions shall apply within the area illustrated in Exhibit C:

Any activity on the Property that will compromise the integrity of the cap, including: grading; excavation; installation of underground utilities; removal of the cap is prohibited without prior written approval by Ecology. The Grantor shall report to Ecology within forty-eight (48) hours of the discovery of any damage to the cap. Unless an alternative plan has been approved by Ecology in writing, the Grantor shall promptly repair the damage and submit a report documenting this work to Ecology within thirty (30) days of completing the repairs.

- b. Groundwater Use.** No groundwater may be taken for drinking water use from the Property.

### Section 3. Access.

- a. The Grantor shall maintain reasonable access to all remedial action components necessary to construct, operate, inspect, monitor and maintain the remedial action.
- b. The Grantor freely and voluntarily grants Ecology and its authorized representatives, upon reasonable notice, the right to enter the Property at reasonable times to evaluate the effectiveness of this Covenant and associated remedial actions, and enforce compliance with this Covenant and those actions, including the right to take samples, inspect any remedial actions conducted on the Property, and to inspect related records limited to the cap areas and areas of groundwater restriction shown on Exhibit C.
- c. No right of access or use by a third party to any portion of the Property is conveyed by this instrument.

### Section 4. Notice Requirements.

- a. **Conveyance of Any Interest.** The Grantor, when conveying any interest **within the area of the Property described/illustrated in Exhibit C**, including but not limited to title, easement, leases, and security or other interests, must:

- i. Notify Ecology at least thirty (30) days in advance of the conveyance.
- ii. Include in the conveying document a notice in substantially the following form, as well as a complete copy of this Covenant:

**NOTICE: THIS PROPERTY IS SUBJECT TO AN ENVIRONMENTAL COVENANT GRANTED TO THE WASHINGTON STATE DEPARTMENT OF ECOLOGY ON [DATE] AND RECORDED WITH THE PIERCE COUNTY AUDITOR UNDER RECORDING NUMBER [RECORDING NUMBER]. USES AND ACTIVITIES ON THIS PROPERTY MUST COMPLY WITH THAT COVENANT, A COMPLETE COPY OF WHICH IS ATTACHED TO THIS DOCUMENT.**

- iii. Unless otherwise agreed to in writing by Ecology, provide Ecology with a complete copy of the executed document within thirty (30) days of the date of execution of such document.
- b. **Reporting Violations.** Should the Grantor become aware of any violation of this Covenant, Grantor shall promptly report such violation to Ecology.
- c. **Emergencies.** For any emergency or significant change in site conditions due to Acts of Nature (for example, flood, fire) resulting in a violation of this Covenant, the Grantor is authorized to respond to such an event in accordance with state and federal law. The Grantor must notify Ecology of the event and response actions planned or taken as soon as practical but no later than within 24 hours of the discovery of the event.
- d. Any required written notice, approval, or communication shall be personally delivered or sent by first class mail to the following persons. Any change in this contact information shall be submitted in writing to all parties to this Covenant.

<b>Walt Miles</b> <b>Miles Sand &amp; Gravel Company</b> <b>400 Valley Avenue Northeast</b> <b>Puyallup, Washington 98372</b> <b>(253) 833.3705</b>	Environmental Covenants Coordinator Washington State Department of Ecology Toxics Cleanup Program P.O. Box 47600 Olympia, WA 98504 – 7600 (360) 407-6000
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As an alternative to providing written notice and change in contact information by mail, these documents may be provided electronically in an agreed upon format at the time of submittal.

## **Section 5. Modification or Termination.**

- a. If the conditions at the site requiring a Covenant have changed or no longer exist, then the Grantor may submit a request to Ecology that this Covenant be amended or terminated. Any amendment or termination of this Covenant must follow the procedures in Chapter 64.70 RCW and Chapter 70.105D RCW and any rules promulgated under these chapters.
- b. By signing this agreement, per RCW 64.70.100, the original signatories to this agreement, other than Ecology, agree to waive all rights to sign amendments to and termination of this Covenant.

## **Section 6. Enforcement and Construction.**

- a. This Covenant is being freely and voluntarily granted by the Grantor.
- b. Grantor shall provide Ecology with an original signed Covenant and proof of recording within ten (10) days of execution of this Covenant.
- c. Ecology shall be entitled to enforce the terms of this Covenant by resort to specific performance or legal process. All remedies available in this Covenant shall be in addition to any and all remedies at law or in equity, including Chapter 70.105D RCW and Chapter 64.70 RCW. Enforcement of the terms of this Covenant shall be at the discretion of Ecology, and any forbearance, delay or omission to exercise its rights under this Covenant in the event of a breach of any term of this Covenant is not a waiver by Ecology of that term or of any subsequent breach of that term, or any other term in this Covenant, or of any rights of Ecology under this Covenant.
- d. The Grantor shall be obligated to pay for Ecology's costs to process a request for any modification or termination of this Covenant and any approval required by this Covenant. The Grantor will pay only for changes proposed by the Grantor.
- e. This Covenant shall be liberally construed to meet the intent of the Model Toxics Control Act, chapter 70.105D RCW and Uniform Environmental Covenants Act, chapter 64.70 RCW.
- f. The provisions of this Covenant shall be severable. If any provision in this Covenant or its application to any person or circumstance is held invalid, the remainder of this Covenant or its application to any person or circumstance is not affected and shall continue in full force and effect as though such void provision had not been contained herein.

g. A heading used at the beginning of any section or paragraph or exhibit of this Covenant may be used to aid in the interpretation of that section or paragraph or exhibit but does not override the specific requirements in that section or paragraph.

## **Section 7. Existing Operations and Reclamation.**

**Grantor currently operates an asphalt plant and other ancillary facilities on the Property. This Covenant will not preclude or hinder any of Grantor's existing uses or operations on the Property. Grantor is in the process of reclaiming the Property in accordance with a Reclamation Plan approved by the Department of Natural Resources and on file with the Department under No. 70-010420 (the Reclamation Plan"). Ecology has reviewed and approved the Reclamation Plan, and agrees that the work described in the Reclamation Plan is not in conflict with the obligations set forth in this paragraph. Nothing in this Covenant shall restrict or limit in any way, directly or indirectly, Grantor's ability to complete the work described in the Reclamation Plan, or require any further notice or approval by Ecology of such work.**

The undersigned Grantor warrants he/she holds the title to the Property and has authority to execute this Covenant.

EXECUTED this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

**Miles Sand & Gravel Company**

**[SIGNATURE]**

**[TITLE]**

Dated: \_\_\_\_\_

STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

**[SECTION MANAGER SIGNATURE - if VCP or Order.]**

**[PROGRAM MANAGER SIGNATURE - if Consent Decree.]**

**[TITLE]**

Dated: \_\_\_\_\_

**[Unless waived under Section 5b above, add the following provision where a covenant is being amended or superseded.]**

The undersigned acknowledge Environmental (Restrictive) Covenant **[# of the original covenant]** filed in **[ ]** County is hereby terminated and replaced with the above Environmental Covenant.

[NAME OF GRANTOR OF ORIGINAL COVENANT]

[SIGNATURE]

[TITLE]

Dated: \_\_\_\_\_



### GRANTOR INDIVIDUAL ACKNOWLEDGMENT

STATE OF \_\_\_\_\_  
COUNTY OF \_\_\_\_\_

On this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_, I certify that \_\_\_\_\_ personally appeared before me, and acknowledged that **he/she** is the individual described herein and who executed the within and foregoing instrument and signed the same at **his/her** free and voluntary act and deed for the uses and purposes therein mentioned.

\_\_\_\_\_  
Notary Public in and for the State of  
Washington, residing at \_\_\_\_\_.  
My appointment expires \_\_\_\_\_.

### GRANTOR CORPORATE ACKNOWLEDGMENT

STATE OF \_\_\_\_\_  
COUNTY OF \_\_\_\_\_

On this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_, I certify that \_\_\_\_\_ personally appeared before me, acknowledged that **he/she** is the \_\_\_\_\_ of the corporation that executed the within and foregoing instrument, and signed said instrument by free and voluntary act and deed of said corporation, for the uses and purposes therein mentioned, and on oath stated that **he/she** was authorized to execute said instrument for said corporation.

\_\_\_\_\_  
Notary Public in and for the State of  
Washington, residing at \_\_\_\_\_.  
My appointment expires \_\_\_\_\_.

## Exhibit A

### LEGAL DESCRIPTION

#### Tax ID No.: 0319062075

Section 06 Township 19 Range 03 Quarter 24 : PARCEL "A" DBLR 96-11-13-0445 DESC AS A PARCEL OF LAND IN GOVT LOTS 2, 3 & 6 & THE NE OF 06-19-03E MORE PARTICULARLY DESC AS FOLL: COM AT NW COR OF NE OF SD SEC 6 TH SLY ALG W LI OF SD NE QTR S 03 DEG 00 MIN 57 SEC W 645.37 FT TO E RT- OF-WY LI OF INTERSTATE 5 & TRUE POB TH CONT S 03 DEG 00 MIN 57 SEC W 463.16 FT TO NW COR OF PARCEL A AS CONVEYED TO WOODWORTH & CO INC SWD AFN 2126385 TH ELY ALG N LI OF SD PARCEL A S 88 DEG 50 MIN 43 SEC E 329.92 FT TO W LI OF PARCEL B AS CONVEYED TO WOODWORTH & CO INC BY SWD AFN 2126385 TH NLY ALG SD W LI N 03 DEG 00 MIN 29 SEC E 6.53 FT TO NW COR SD PARCEL B TH ELY ALG N LI OF SD PARCEL B S 88 DEG 50 MIN 44 SEC E 332.81 FT TO W RT-OF-WY LI OF SALES RD TH SELY ALG SD W RT -OF-WY LI S 29 DEG 32 MIN 17 SEC E 182.52 FT TO N LI OF SW QTR OF NE OF SD SEC 6 TH WLY ALG SD N LI N 89 DEG 24 MIN 56 SEC W 761.29 FT TO NW COR OF LAST SD SUBDIV TH SLY ALG W LI OF LAST SD SUBDIV S 03 DEG 00 MIN 57 SEC W 940.78 FT TO A PT 50 FT N OF AS MEAS AT RT ANGLES N LI OF A PARCEL OF LAND DESC IN EXHIBIT A OF SWD AFN 94-10-13-0136 TH WLY & PAR/W SD N LI N 89 DEG 18 MIN 44 SEC W 786.87 FT TO E RT-OF- WY LI OF INTERSTATE 5 TH ALG SD E RT-OF-WY LI N 02 DEG 21 MIN 16 SEC E 148.14 FT TO BEG OF A CURVE CONCAVE TO E WHOSE RADIUS PT BEARS S 87 DEG 38 MIN 44 SEC E 483.00 FT TH ALG ARC OF SD CURVE 263.51 FT THRU A CENTRAL ANGLE OF 31 DEG 15 MIN 30 SEC TH CONT ALG SD RT-OF-WY N 14 DEG 08 MIN 30 SEC E 94.30 FT TH CONT ALG SD RT-OF-WY N 35 DEG 58 MIN 24 SEC E 1100.00 FT TH CONT ALG SD RT-OF-WY N 54 DEG 01 MIN 36 SEC W 10.00 FT TH CONT ALG SD RT- OF-WY N 35 DEG 58 MIN 24 SEC E 206.76 FT TO POB OUT OF 2-073, 2-074 SEG I0633BL 03-18-97BL

#### Tax ID No.: 0319061135

Section 06 Township 19 Range 03 Quarter 13 : PARCEL "B" DBLR 96-11-13-0445 DESC AS A PARCEL OF LAND IN SW OF NE OF 06-19-03E BEING MORE PARTICULARLY DESC AS FOLL: COM AT NW COR OF NE OF SD SEC 6 TH SLY ALG W LI OF SD NE QTR S 03 DEG 00 MIN 57 SEC W 645.37 FT TO E RT-OF-WY LI OF INTERSTATE 5 TH CONT S 03 DEG 00 MIN 57 SEC W 463.16 FT TO NW COR OF PARCEL "A" AS CONVEYED TO WOODWORTH & CO INC BY SWD AFN 2126385 TH ELY ALG N LI OF SD PARCEL "A" S 88 DEG 50 MIN 43 SEC E 329.92 FT TO W LI OF PARCEL "B" AS CONVEYED TO WOODWORTH & CO INC BY SWD AFN 2126385 TH NLY ALG SD W LI N 03 DEG 00 MIN 29 SEC E 6.53 FT TO NW COR OF SD PARCEL "B" TH ELY ALG N LI OF SD PARCEL "B" S 88 DEG 50 MIN 44 SEC E 332.81 FT TO W RT-OF-WY LI OF SALES RD TH SELY ALG SD W RT-OF-WY LI S 29 DEG 32 MIN 17 SEC E 182.52 FT TO N LI OF SW OF NE OF SD SEC 6 & TRUE POB TH WLY ALG SD N LI N 89 DEG 24 MIN 56 SEC W 761.29 FT TO NW COR OF LAST SD SUBDIV TH SLY ALG W LI OF LAST SD SUBDIV S 03 DEG 00 MIN 57 SEC W 940.78 FT TO A PT 50 FT N OF AS MEAS AT RT ANGLES N LI OF A PAR OF LAND DESC AS EXHIBIT "A" OF SWD AFN 94-10-13-0136 TH WLY & PAR/W S LI OF NW OF SD SEC 6 N 89 DEG 18 MIN 44 SEC W 19.79 FT TO A PT ON W LI EXT NLY OF A PARCEL OF LAND DESC IN EXHIBIT "A" OF SWD AFN 94-10-13-0136 TH SLY ALG SD W LI EXT S 03 DEG 00 MIN 57 SEC W 50.04 FT TO NW COR OF LAST SD PARCEL TH ELY ALG N LI OF LAST SD PARCEL S 89 DEG 18 MIN 44 SEC E 679.08 FT TO E LI OF PARCEL "A" AS CONVEYED TO WOODWORTH & CO INC BY QCD AFN

2785075 TH NLY ALG SD E LI N 03 DEG 03 MIN 42 SEC E 196.48 FT TO S LI OF PARCEL "B" OF CORRECTED DBLR AFN 93-08-06-0508 TH WLY ALG SD S LI N 89 DEG 18 MIN 44 SEC W 1.00 FT TO SW COR OF SD PARCEL "B" TH NLY ALG W LI OF SD PARCEL "B" N 03 DEG 03 MIN 42 SEC E 455.19 FT TO NW COR OF PARCEL "A" OF SD DBLR TH ELY ALG N LI OF SD PARCEL "A" S 89 DEG 26 MIN 53 SEC E 1.00 FT TO E LI OF SD PARCEL "A" AS CONVEYED TO WOODWORTH & CO BY QCD AFN 2785075 TH NLY ALG SD E LI N 03 DEG 03 MIN 42 SEC E 75.07 FT TO SW COR OF PARCEL "C" CONVEYED TO WOODWORTH & CO BY SWD AFN 2126385 TH ELY ALG S LI OF SD PARCEL "C" S 89 DEG 26 MIN 53 SEC E 266.31 FT TO W RT-OF- WY LI OF SALES RD TH NWLY ALG SD RT-OF-WY LI N 29 DEG 32 MIN 17 SEC W 306.27 FT TO POB OUT OF 1-133 1-134 & 2-073 SEG I0633BL 03-19-97BL

**Tax ID No.: 0319062076**

Section 06 Township 19 Range 03 Quarter 24 : PARCEL "C" DBLR 96-11-13-0445 DESC AS A PARCEL OF LAND IN NW & SW OF 06-19-03E BEING MORE PARTICULARLY DESC AS FOLL: COM AT SW COR OF NE OF SD SEC 6 TH ELY ALG S LI OF LAST SD SUBDIV S 89 DEG 18 MIN 44 SEC E 60.05 FT TO A PT 60.00 FT E OF AS MEAS AT RT ANGLES THE W LI OF LAST SD SUBDIV TH NLY & PAR/W SD W LI N 03 DEG 00 MIN 57 SEC E 60.05 FT TO A PT 60.00 FT N OF AS MEAS AT RT ANGLES THE S LI OF LAST SD SUBDIV TH WLY & PAR/W SD S LI N 89 DEG 18 MIN 44 SEC W 70.59 FT TO AN ANGLE PT IN W LI OF A PARCEL OF LAND DESC AS EXHIBIT A SWD AFN 9410130136 & TRUE POB TH N 03 DEG 35 MIN 01 SEC W 80.37 FT TO AN ANGLE PT IN SD W LI TH NLY ALG SD W LI N 03 DEG 00 MIN 57 SEC E 193.95 FT TO NW COR OF LAST SD PARCEL TH CONT N 03 DEG 00 MIN 57 SEC E 50.04 FT TH WLY & PAR/W N LI OF SW OF SD SEC 6 N 89 DEG 18 MIN 44 SEC W 767.08 FT TO E RT-OF-WY LI OF INTERSTATE 5 TH SLY ALG SD E RT-OF -WY LI S 02 DEG 21 MIN 16 SEC W 48.66 FT TH CONT ALG SD E RT-OF-WY LI N 87 DEG 38 MIN 44 SEC W 10.00 FT TH CONT ALG SD E RT-OF-WY LI S 02 DEG 21 MIN 16 SEC W 174.30 FT TO BEG OF A CURVE CONCAVE TO NE WHOSE RADIUS PT BEARS S 87 DEG 38 MIN 44 SEC E 329.30 FT TH CONT ALG SD E RT-OF-WY LI ALG THE ARC OF SD CURVE 373.82 FT THRU A CENTRAL ANGLE OF 65 DEG 02 MIN 30 SEC TH CONT ALG SD E RT-OF-WY LI S 62 DEG 41 MIN 14 SEC E 207.11 FT TH CONT ALG SD E RT-OF-WY LI S 68 DEG 23 SEC 44 MIN E 433.72 FT TO E LI OF SW OF SD SEC 6 TH NLY ALG SD E LI N 03 DEG 00 MIN 57 SEC E 390.58 FT TO NE QTR OF SD SW TH WLY ALG N LI OF SD SW N 89 DEG 18 MIN 44 SEC W 131.48 FT TO W LI EXT SLY OF A PARCEL OF LAND CONVEYED TO WOODWORTH & CO BY SWD AFN 2300842 TH NLY ALG SD EXT W LI N 03 DEG 00 MIN 57 SEC E 60.05 FT TO SW COR OF LAST SD PARCEL TH ELY ALG S LI OF LAST SD PARCEL S 89 DEG 18 MIN 44 SEC E 120.94 FT TO POB OUT OF 2-073, 2-074 & 3-024 SEG I0633BL 03-19-97BL

**Tax ID No.: 0319061142**

Section 06 Township 19 Range 03 Quarter 13 PARCEL "D" OF DBLR 96-11-13-0445 DESC AS COM AT SW COR OF NE TH E ALG S LI SD SUBD 60.05 FT TO POB TH N 03 DEG 00 MIN 57 SEC E 60.05 FT TH N 89 DEG 18 MIN 44 SEC W 70.59 FT TH N 03 DEG 35 MIN 01 SEC W 80.37 FT TH N 03 DEG 00 MIN 57 SEC E 193.95 FT TH S 89 DEG 18 MIN 44 SEC E 679.08 FT TH S 03 DEG 03 MIN 42 SEC W 334.22 FT TH S 89 DEG 18 MIN 44 SEC E 0.52 FT TH S 03 DEG 00 MIN 40 SEC W 136.27 FT TO N LI OF 104TH ST CT S TH W ALG SD R/W LI 599.5 FT TH N 03 DEG 00 MIN 57 SEC E 136.14 FT TO POB COMB OF 1-132 (BLDG) & 1-136 (LAND) SEG 2010-0025 JU 7/23/09JU

**Exhibit B**  
**PROPERTY MAP**



# EXHIBIT B: PROPERTY MAP



Disclaimer: Map features are approximate and have not been surveyed. Additional features not yet mapped may be present. Pierce County assumes no liability for variations ascertained by formal survey. 4/30/2018

**Exhibit C**

**MAP ILLUSTRATING LOCATION OF RESTRICTIONS**



**ENVIRONMENTAL COVENANT:**  
1.) THE RESTRICTION ON GROUNDWATER USE WILL BE ON ALL FIVE PIERCE COUNTY PARCELS COMPRISING THE LAKEVIEW FACILITY  
2.) ENGINEERING CONTROLS WILL INCLUDE A CAP (PAVEMENT OR A MINIMUM OF 15 FEET OF CLEAN FILL) IN AREAS SHOWN IN GREEN

**CONDITIONAL POINTS OF COMPLIANCE FOR GROUNDWATER:**

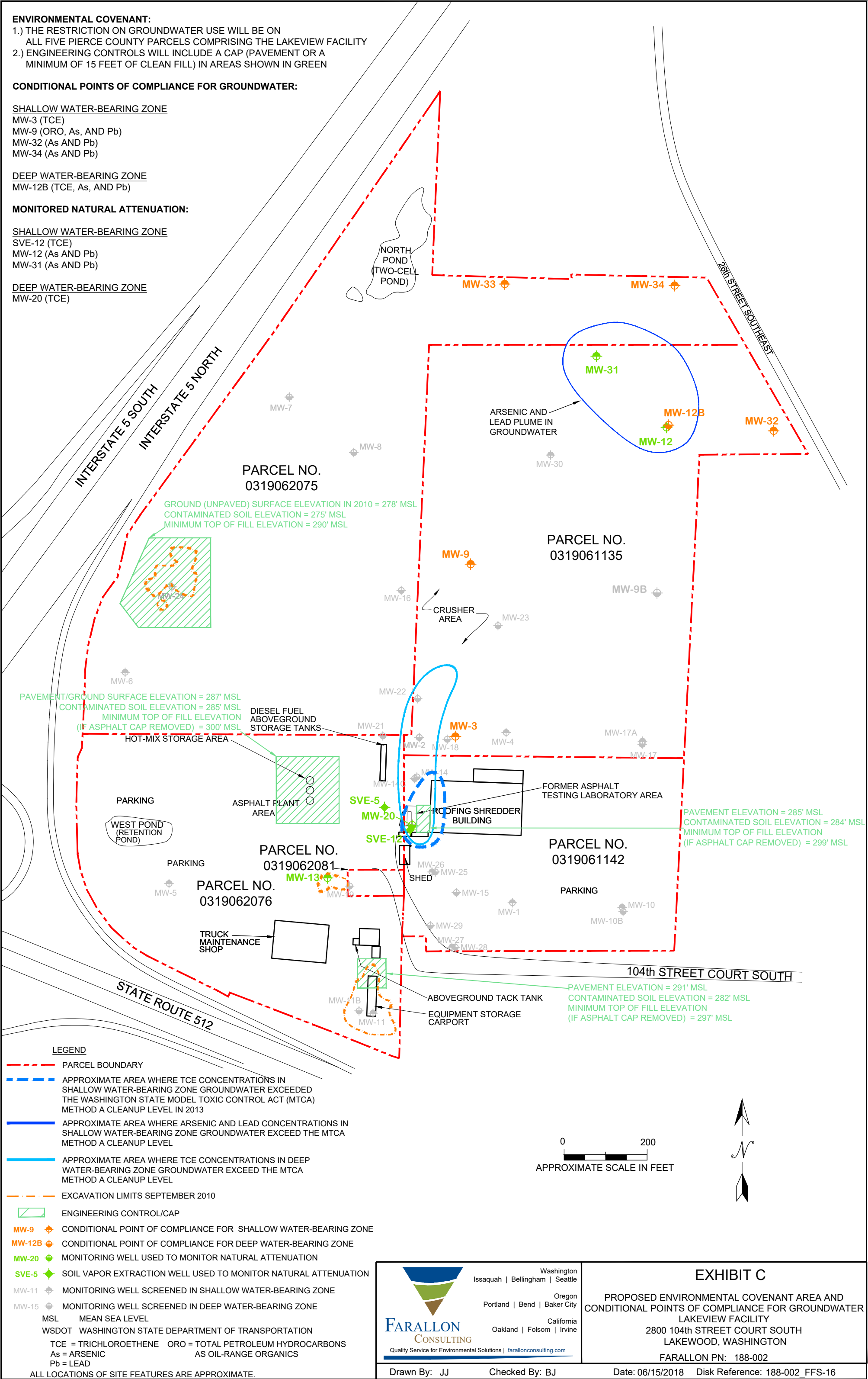
SHALLOW WATER-BEARING ZONE  
MW-3 (TCE)  
MW-9 (ORO, As, AND Pb)  
MW-32 (As AND Pb)  
MW-34 (As AND Pb)

DEEP WATER-BEARING ZONE  
MW-12B (TCE, As, AND Pb)

**MONITORED NATURAL ATTENUATION:**

SHALLOW WATER-BEARING ZONE  
SVE-12 (TCE)  
MW-12 (As AND Pb)  
MW-31 (As AND Pb)

DEEP WATER-BEARING ZONE  
MW-20 (TCE)





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**EXHIBIT C**

PROPOSED ENVIRONMENTAL COVENANT AREA AND  
CONDITIONAL POINTS OF COMPLIANCE FOR GROUNDWATER  
LAKEVIEW FACILITY  
2800 104th STREET COURT SOUTH  
LAKEWOOD, WASHINGTON

FARALLON PN: 188-002

Drawn By: JJ

Checked By: BJ

Date: 06/15/2018

Disk Reference: 188-002\_FFS-16