



# Transmittal

Date: Friday, September 21, 2018

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Project: AE 0044-12 Federal Way Link Extension

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Subject: AE 0044-12 3.7.N Phase II ESA FL-207 Draft 2

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FWLE Team,

Please find attached the following deliverable:

- AE 0044-12 3.7.N Phase II ESA FL-207 Draft 2

This report was reviewed by Mark Menard and considered final. Let us know if you have any questions.

September 2018

FEDERAL WAY LINK EXTENSION

AE 0044-12 3.7.N  
Phase II Environmental Site  
Assessment  
FL-207 Draft 2

Tax Parcel 2500600465



CENTRAL PUGET SOUND  
REGIONAL TRANSIT AUTHORITY

**Phase II Environmental Site Assessment Report  
Sound Transit – Federal Way Link Extension  
Parcel FL-207  
Former Dry Cleaner and Service Station  
23418 Pacific Highway South  
Kent, Washington**

**File No. 4082-039-01**

**September 21, 2018**

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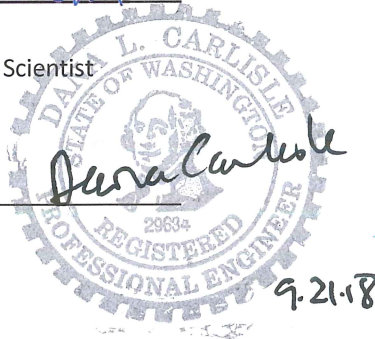
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# Contents

<b>ACRONYMS AND ABBREVIATIONS .....</b>	<b>IV</b>
<b>EXECUTIVE SUMMARY .....</b>	<b>1</b>
SUMMARY OF PHASE I ESA AND PREVIOUS ENVIRONMENTAL STUDIES .....	1
FOCUSED PHASE II ESA FINDINGS AND CONCLUSIONS .....	2
SOUND TRANSIT ACQUISITION AND FUTURE CONSTRUCTION RECOMMENDATIONS .....	6
<b>1.0 INTRODUCTION .....</b>	<b>1-1</b>
1.1 FWLE PROJECT DESCRIPTION .....	1-1
1.2 AUTHORIZATION .....	1-2
1.3 SUMMARY OF PHASE I ESA RECS .....	1-2
1.4 PURPOSE AND SCOPE OF SERVICES .....	1-3
<b>2.0 SITE DESCRIPTION .....</b>	<b>2-1</b>
2.1 LOCATION AND PROPERTY DESCRIPTION .....	2-1
2.2 SITE VICINITY AND GENERAL CHARACTERISTICS .....	2-1
2.3 SITE RECONNAISSANCE .....	2-1
<b>3.0 PHYSICAL SETTING .....</b>	<b>3-1</b>
3.1 TOPOGRAPHY AND HYDROGEOLOGIC SETTING .....	3-1
<b>4.0 CONTAMINANTS OF CONCERN AND CLEANUP LEVELS .....</b>	<b>4-1</b>
4.2 EVALUATION OF TACOMA SMELTER PLUME IMPACTS .....	4-1
<b>5.0 SUBSURFACE EXPLORATIONS .....</b>	<b>5-1</b>
5.1 GENERAL .....	5-1
5.2 SAMPLING AND ANALYSIS PLAN .....	5-1
<b>6.0 FINDINGS .....</b>	<b>6-1</b>
6.1 SUBSURFACE OBSERVATIONS AND FIELD SCREENING .....	6-1
6.2 SOIL ANALYTICAL TESTING RESULTS .....	6-1
<b>7.0 CONCLUSIONS AND RECOMMENDATIONS .....</b>	<b>7-1</b>
7.1 SUMMARY OF PHASE I ESA AND OTHER PREVIOUS STUDIES .....	7-1
7.2 FOCUSED PHASE II ESA FINDINGS AND CONCLUSIONS .....	7-1
7.3 SOUND TRANSIT ACQUISITION AND FUTURE CONSTRUCTION RECOMMENDATIONS .....	7-5
<b>8.0 LIMITATIONS AND GUIDELINES FOR USE .....</b>	<b>8-1</b>
<b>9.0 REFERENCES .....</b>	<b>9-1</b>

## List of Tables

Table 1. Summary of Soil Chemical Analytical Results, Sound Transit – Federal Way Link Extension  
FL-207

## List of Figures

Figure 1. Vicinity Map

Figure 2. Site Plan and Boring Locations – FL-207

Figure 3. Proposed Construction Plan – FL-207



## **List of Appendices**

### **Appendix A. Field Exploration Program**

Figure A-1. Key to Exploration Logs

Figures A-2 through A-14. Logs of Borings

Figures A-15 through A-20. Site Photographs

Sanitary Sewer Record Details

### **Appendix B. Laboratory Reports**

### **Appendix C. December 2017 Focused Subsurface Investigation Report by ECI Environmental Services**

### **Appendix D. Report Limitations and Guidelines for Use**

## RECORD OF REVISIONS



## RECORD OF REVISIONS TO FEDERAL WAY LINK EXTENSION, PHASE 3 QUALITY MANAGEMENT PLAN

[illegible]

## Acronyms and Abbreviations

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AST	aboveground storage tank
ASTM	ASTM International
bgs	below ground surface
CLARC	Cleanup Levels and Risk Calculation
Ecology	Washington State Department of Ecology
EM	electromagnetic
EPA	U.S. Environmental Protection Agency
ESA	Environmental Site Assessment
GPR	ground penetrating radar
HREC	Historical Recognized Environmental Condition
mg/kg	milligrams per kilogram
MTCA	Model Toxics Control Act
NAVD 88	North American Vertical Datum of 1988
PAH	polycyclic aromatic hydrocarbon
PCBs	polychlorinated biphenyls
PCE	tetrachloroethene
PID	photoionization detector
ppm	parts per million
QC	quality control
RCRA	Resource Conservation and Recovery Act
REC	Recognized Environmental Condition
TCLP	Toxicity Characteristic Leaching Procedure
TSP	Tacoma Smelter Plume
UST	underground storage tank
VCP	Voluntary Cleanup Program
VOC	volatile organic compound
WAC	Washington Administrative Code

## EXECUTIVE SUMMARY

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This report summarizes the results of the Focused Phase II Environmental Site Assessment (ESA) of the parcel located at 23418 Pacific Highway South in Kent, Washington, King County, Tax Parcel 2500600465, and identified by Sound Transit as Federal Way Link Extension (FWLE) parcel FL-207 (referred to herein as “property” or “Site”). The property is currently owned by Muscatel Midway Properties, LLC and has been used for retail purposes since the 1960s. A dry cleaner was located on the property from as early as 1970 until at least 2008. A gasoline service station with possible auto repair was located in the southwest corner of the subject property in the 1930s and 1940s.

Based on current design information for the FWLE project (HDR, provided in March 2018), Sound Transit plans to acquire a strip of property adjacent to the eastern property boundary next to 30<sup>th</sup> Avenue South (eastern partial take) and a small triangular-shaped area in the southwest corner of the property (southwest partial take), see Figure 2. A guideway easement is proposed west of the eastern partial take and temporary construction easements (TCE) are proposed west and north of the guideway easement and along the southern and western property boundaries.

This Focused Phase II ESA was conducted to evaluate potential contamination in Sound Transit’s fee takes, guideway easement and TCEs associated with the Recognized Environmental Conditions (RECs) for the property as identified in the Phase I ESA prepared by GeoEngineers, Inc. (GeoEngineers) dated March 2018. The Focused Phase II ESA field investigation activities completed by GeoEngineers were limited to the Sound Transit fee takes, guideway easement and TCE areas and assessed soil to a maximum depth of 31 feet below ground surface (bgs). The depth to groundwater at the subject property is anticipated to be more than 50 feet bgs; therefore, the Focused Phase II ESA explorations did not encounter groundwater.

The multi-tenant building originally constructed on the property in 1962 for retail purposes had a footprint of 28,370 square feet, as shown in Figure 2. In 2016, the western portions of the original building, including where the dry cleaner previously operated, were damaged by fire. The fire-damaged areas of the building were subsequently demolished in late 2017. At the time of the Focused Phase II ESA, a new building was being constructed on the western portion of the property, covering approximately the same footprint as the western portion of the original building.

### Summary of Phase I ESA and Previous Environmental Studies

RECs identified for the subject property included the former on-site dry cleaner located on the property from as early as 1970 up to 2008, the former on-site service station with possible auto repair apparently located in the southwest corner of the subject property in the 1930s and

1940s, historical contaminant migration of petroleum-related constituents originating from the south-adjacent Southgate Oil Model Toxics Control Act (MTCA) cleanup Site, and the Tacoma Smelter Plume (TSP) (areawide).

A Focused Subsurface Investigation of FL-207 was completed in 2017 by ECI Environmental Services, Inc. (ECI) for property owner Muscatel Midway Properties LLC (ECI, December 2017). The subsurface investigation focused on the first three RECs described above. Dry cleaning-related volatile organic compounds (VOCs) were not detected in soil samples from ECI-B1 and ECI-B2 completed north of the building (see Figure 2). Petroleum hydrocarbons and related compounds were not detected in soil samples from six borings (ECI-B3 through ECI-B8) completed in the vicinity of the former service station. The soil samples from ECI-B3 through ECI-B8 were not analyzed for dry cleaning VOCs. The soil sample at 8 feet bgs from ECI-B13 completed along the southern property boundary (see Figure 2) had diesel-range hydrocarbons detected at a concentration greater than the MTCA Method A cleanup level. The diesel-contaminated soil identified in ECI-B13 was suspected to have resulted from releases at the south-adjacent Southgate Oil Site. A copy of ECI's report is presented in Appendix C.

Reports and Ecology correspondence associated with the south-adjacent Southgate Oil Site (Sound Environmental, 2002 and Ecology 2006) identified that residual gasoline- and diesel-range petroleum hydrocarbon-contaminated soil was left along the north property line of Southgate Oil (south property line of FL-207) following UST remedial excavation on Southgate Oil. The location of residual petroleum contamination in soil based on the prior study for Southgate Oil is indicated in Figure 2.

The property is within Ecology's mapped footprint of the TSP where arsenic concentrations in surface/near surface soil are predicted to exceed the MTCA Method A cleanup level for unrestricted land use.

## **Focused Phase II ESA Findings and Conclusions**

### **Purpose and Areas of Potential Concern for Dry Cleaner and Southgate Oil Contaminants**

The purpose of the Focused Phase II ESA was to evaluate the potential for soil impacts in Sound Transit's partial takes and easement areas that may affect Sound Transit's acquisition or future construction. A visual reconnaissance of the property conducted prior to the Focused Phase II ESA did not identify any potential sources of contamination on the property not previously identified. No surface features indicative of possible historic USTs or a septic system were identified during the visual reconnaissance.

The former dry cleaner was located in the central portion of the original building; the tenant space previously occupied by the dry cleaner was not within a future Sound Transit fee take or easement. However, sewer lines, which are common source locations for releases from

historical dry cleaners, are located within the Sound Transit eastern fee take and easements in the eastern portion of the property and north of a portion of the TCE situated along the southern property line (Figure 2). The Focused Phase II ESA included utility research to identify the locations of the sewer drain inside the dry cleaner tenant space, and the sanitary sewer piping between the building and the municipal connection in 30<sup>th</sup> Avenue East. The approximate locations of observed and/or mapped sewer-related features are shown in Figure 2. Sanitary sewer record details are included in Appendix A.

Relative to residual soil contamination associated with the Southgate Oil Site, we note that the surface grades of the southern portion of FL-207 are approximately 2 to 5 feet lower in elevation than the south-adjacent former Southgate Oil Site. Therefore, residual contaminated soil documented to be 10 feet deep on the Southgate Oil Site, would correspond to a depth between approximately 5 and 8 feet below ground surface in the southern portion of FL207.

## **Findings**

The findings presented below are based on the results of eight soil samples obtained from four ECI borings (ECI-B9, ECI-B10, ECI-B12 and ECI-B13) completed within the southern TCE, and 65 soil samples obtained from GeoEngineers' Focused Phase II ESA borings FL207-B14 through FL207-B26 situated within the fee takes, guideway easement and TCE. Figure 2 shows the relationship between the explorations and the partial takes and easements.

Potential contaminants of concern assessed in soil samples from the focused Phase II ESA include VOCs related to former dry cleaning operations, petroleum-hydrocarbons and related constituents (VOCs, PAHs and metals) associated with the former on-site service station in the southwest corner of the property and with the south-adjacent Southgate Oil Site, and arsenic and lead associated with the Tacoma Smelter Plume. Soil samples submitted for analytical testing were selected from depths corresponding to the potential sources of contamination in the areas being assessed. Soil sample analytical results are presented in Table 1 and ECI's Tables 1 through 3 in Appendix C of this Phase II ESA Report. Sample results are also summarized in Figure 2.

Key findings of the Focused Phase II ESA are as follows:

### **Former On-Site Dry Cleaner**

- Possible releases of chlorinated dry cleaning VOCs were assessed by testing one or more samples from all thirteen Focused Phase II ESA borings completed on the property.
- Of the 35 soil samples tested for VOCs, only two soil samples (FL207-B18 at 20 to 20.5 feet bgs and FL207-B23 at 17.5 to 18 feet bgs) had a chlorinated dry cleaning VOC detected (i.e., tetrachloroethylene [PCE]). The concentrations of PCE detected in the samples (0.0015 and 0.001 milligrams per kilogram [mg/kg]) were just above the

laboratory reported detection limits. Boring FL207-B23 was completed near the existing sewer utility from the site building to the main and in the eastern partial take (see Figure 2). No other dry cleaner chlorinated solvents were detected in the soil samples tested.

- None of the petroleum impacts (explained below) identified in soil samples from the property appeared to be related to petroleum solvents that may have been used in dry cleaning. Benzene was detected in the soil sample from FL207-B22 at 2.5-3.5 feet bgs as explained below; although this location is near the sanitary sewer line, the benzene detected is not likely to be related to historical dry cleaner releases based on other petroleum-type compounds detected in this sample.
- Based on these findings, dry cleaner releases to soil at concentrations greater than MTCA cleanup levels were not identified in the Sound Transit fee takes and easements. If soil with detectable PCE (or other dry cleaner-related chlorinated solvents) is removed during future construction, the excavated soil would likely be considered a listed dangerous waste (MTCA 173-303), requiring special handling and disposal at an approved facility.

#### Former Service Station

- Boring FL207-B15 was completed in the southwest partial take near the footprint of the former service station, and borings FL207-B14 and FL207-B16 were completed within the TCE nearest to the footprint of the former service station. Based on the eight soil samples tested for petroleum-related constituents from these borings, the only exceedance of a MTCA screening level was lube oil-range petroleum hydrocarbons (4,200 mg/kg) in a soil sample from FL207-B16 at a depth of 2.5 to 3.5 feet bgs.
- Petroleum-related constituents were not detected in ECI's borings completed within the footprint of the former service station.
- Based on the sample location, depth and type of petroleum identified, the most likely sources of the lube oil contamination identified are the former service station, or possibly a surface release of lube oil associated with truck or vehicle traffic into the loading dock area directly to the east behind the building.
- The available data suggest the lateral and vertical extent of lube oil-contaminated soil exceeding the MTCA Method A cleanup level is localized. The soil at this location is not easily accessible because it is located adjacent to the footings of the new building. On this basis and given the concentration, the type of contaminant and because the area is paved, there does not appear to be a threat to human health or the environment under current conditions. If contaminated soil is accessible for removal in the future, the soil represented by sample FL207-B16-2.5-3.5 could be excavated with confirmation sampling and reporting to Ecology to document a cleanup of an isolated hot spot of contaminated soil. We note that FL207-B16 is situated within the TCE where no construction excavation is likely to occur. The detection of lube oil greater than the MTCA Method A cleanup level may require a remedial cost estimate for Sound Transit

related to the TCE.

#### South-Adjacent Former Southgate Oil

- Borings FL207-B17 through FL207-B22 were completed along the southern property boundary to assess potential contaminant migration from Southgate Oil. Based on 29 soil samples tested for petroleum-related constituents from these borings, only soil samples from FL207-B18 had petroleum-related compounds that may possibly be from past releases at Southgate Oil. Diesel- and/or lube oil-range hydrocarbons were detected in soil samples from FL207-B18 at depths ranging from 0.5 to 6 feet bgs. The concentration of diesel-range hydrocarbons (3,000 mg/kg) in only one sample (FL207-B18-0.5-1) was greater than the MTCA cleanup level of 2,000 mg/kg.
- Petroleum hydrocarbons were not detected in soil samples from borings completed to the east and west of FL207-B18, or to the east and west of ECI boring ECI-B13 (Figure 2) where diesel range-hydrocarbons had been detected at a concentration of 8,800 mg/kg during the ECI study. Residual petroleum contamination was not detected in the three borings completed directly north of the location where residual petroleum-contaminated soil was documented to remain following the Southgate Oil remedial excavation activities (see Figure 2).
- Southgate Oil-related petroleum impacts on FL-207 at concentrations greater than MTCA cleanup levels appear to be relatively limited in extent, and located as indicated in prior reports and Ecology correspondence (see area marked yellow in Figure 2), at FL207-B18, and at ECI-B13.

#### Shallow Benzene in Soil in Eastern Partial Take

- Benzene (0.087 mg/kg) was detected at a concentration greater than the MTCA Method A cleanup level of 0.03 mg/kg in the soil sample from FL207-B22 at 2.5-3.5 feet bgs. Low concentrations of lube oil-range petroleum hydrocarbons (500 mg/kg), BETX and PAHs were also detected in this sample. The detection of benzene in this sample was isolated from a vertical delineation standpoint as benzene was not detected in a sample collected from FL207-B22 at a depth of 5 to 6 feet bgs.
- FL207-B22 is near the sanitary sewer line from the property; however, this boring is not in close proximity to the former on-site service station, dry cleaner tenant location, or documented Southgate Oil impacts.
- Based on the detected benzene concentration being relatively low, and there being no clear and obvious source for the contaminants collectively detected, it is our opinion that these findings do not represent a reportable release under MTCA in our opinion because a threat or potential threat to human health or the environment has not been conclusively identified.
- If soil represented by sample FL207-B22 at 2.5-3.5 feet bgs is excavated in the future, this soil will require special handling and disposal at an approved facility based on the



detected concentrations of petroleum-related constituents.

#### Tacoma Smelter Plume:

- Seventeen surface soil samples from FL207-B14 through FL207-B19 and FL207-B22 through FL207-B26 were analyzed for arsenic and lead. Arsenic was not detected in the samples. Lead was detected in sample FL207-B14-0-0.5 at a concentration greater than the naturally occurring background level in Puget Sound (24 mg/kg); the detected concentration was less than the MTCA Method A cleanup level of 250 mg/kg. Based on the findings of the Focused Phase II ESA, no MTCA cleanup action would be required on the property with regard to the TSP.

### **Sound Transit Acquisition and Future Construction Recommendations**

Based on current design information for the FWLE project (HDR, provided in March 2018), Sound Transit plans to acquire a strip of property adjacent to the eastern property boundary next to 30<sup>th</sup> Avenue South (eastern partial take) and a small area at the southwest corner of the property (southwest partial take). A guideway easement is proposed west of the eastern partial take (Figure 2) and TCEs are proposed west and north of the guideway easement and along the southern and western property boundaries. Based on preliminary design information for the project as of March 2018, Sound Transit's proposed construction and development on the property includes new utilities and sidewalks, the elevated guideway structure and tracks as shown in Figure 3. Proposed uses of the TCE, other than storage and temporary access, are not defined at this time. Proposed construction and development activities by Sound Transit could change as project design is refined.

The detection of lube oil in soil sample FL207-B16-2.5-3.5 at a concentration (4,200 mg/kg) greater than the MTCA Method A cleanup may require a remedial cost estimate for Sound Transit related to the TCE. However, the soil at this location is not planned to be excavated for Sound Transit's construction because the boring location was within the TCE; in addition, the soil is not readily accessible due to its proximity to the footings for the new building under construction on the property.

A remedial cost estimate for MTCA cleanup at FL-207 may be necessary related to petroleum-contaminated soil affected by the south-adjacent Southgate Oil Site. The soil sample most representative of Southgate Oil contamination on FL-207 is ECI-B13 at 8 feet bgs. This finding is not considered discovery of a new release under MTCA.

The findings of the Focused Phase II ESA indicate that a soil handling cost estimate for construction purposes is recommended for FL-207 because impacted or contaminated soil may be encountered in future Sound Transit excavation areas.

We recommend a contaminated and impacted soil handling plan be prepared prior to construction activities that outlines soil segregation, handling, stockpiling and end use/disposal with potential follow-up chemical analytical testing for waste disposal characterization as needed. Ecology's "Guidance for Remediation of Petroleum-Contaminated Soil" should be used as a guidance document for end use options for petroleum-related soil impacts. If soil with detectable PCE (or other dry cleaner-related chlorinated solvents) is removed during future construction, the excavated soil would likely be considered a listed dangerous waste (MTCA 173-303), requiring special handling and disposal at an approved facility.

The table below summarizes the Focused Phase II ESA findings relative to Sound Transit's proposed acquisition and future construction.

Potential Sources of Contamination Identified Nearby	Potential Source Within Acquisition Area (Partial Take)	Potential Source Within Construction Area (Partial Take, TCE, Easement)	Contaminated Soil Present	Impacted Soil Present	Remedial Cost Estimate Necessary for Acquisition	Remedial Cost Estimate Necessary for Construction
On-Site: Former Dry Cleaner	No	No	No	Yes. One of the soil samples with PCE detected (at a concentration less than the MTCA Method A cleanup level) is situated in the eastern partial take.	No	Yes
On-Site: Former Service Station	Yes	Yes	Yes	Yes	Lube oil in soil sample FL207-B16-2.5-3.5 exceeded the MTCA Method A cleanup and may require a remedial cost estimate related to the TCE.	Yes
Off-Site: Former Southgate Oil	No	No	Yes	Yes	A remedial cost estimate for MTCA cleanup at FL-207 may be necessary related to petroleum-contaminated soil affected by the south-adjacent Southgate Oil Site.	Yes

Potential Sources of Contamination Identified Nearby	Potential Source Within Acquisition Area (Partial Take)	Potential Source Within Construction Area (Partial Take, TCE, Easement)	Contaminated Soil Present	Impacted Soil Present	Remedial Cost Estimate Necessary for Acquisition	Remedial Cost Estimate Necessary for Construction
Areawide: Tacoma Smelter Plume	Yes	Yes	No	No	No	No

*This Executive Summary should be used only in the context of the full report for which it is intended.*

# 1.0 Introduction

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This report summarizes the results of the Phase II Environmental Site Assessment (ESA) of the parcel located at 23418 Pacific Highway South in Kent, Washington, King County, Tax Parcel 2500600465, and identified by Sound Transit as Federal Way Link Extension parcel FL-207 (referred to herein as “property” or “Site”). The subject property is currently owned by Muscatel Midway Properties, LLC. The property is currently developed with a multi-tenant retail building that was constructed in 1962. A dry cleaner operated in the building for possibly as long as 40 years. The building was originally 28,370 square feet, however, the western portions of the building were damaged by a fire in November 2016 and were demolished in late 2017. A new building is being constructed on the western portion of the property. The eastern portion of the building is vacant and is currently being renovated. Prior to 1962, a single-family residence and a service station were located in the southwest margin of the property dating back to at least the 1930s. The subject property is shown relative to surrounding physical features in the Vicinity Map, Figure 1. The layout of the subject property and surrounding properties is shown in Figure 2.

Based on current design information for the Federal Way Link Extension (FWLE) project (HDR, provided in March 2018), Sound Transit plans to acquire a strip of property adjacent to the eastern property boundary next to 30<sup>th</sup> Avenue South (eastern partial take) and a small area at the southwest corner of the property (southwest partial take). A guideway easement is proposed west of the eastern partial take (Figure 2) and temporary construction easements (TCE) are proposed west and north of the guideway easement and along the southern and western property boundaries. Based on preliminary design information for the project as of March 2018, Sound Transit’s proposed construction and development on the property includes new utilities and sidewalks, the elevated guideway structure and tracks. Proposed uses of the TCE, other than storage and temporary access, are not defined at this time. Proposed construction and development activities by Sound Transit could change as project design is refined.

The results of this Focused Phase II ESA will be used by Sound Transit as part of their evaluation of potential environmental liabilities associated with ownership of the property and future design and construction of the FWLE. This report has been prepared for the exclusive use of Sound Transit, their agents and project design team. Because this environmental report is not intended for use by others, no one else should rely on this report without first conferring with GeoEngineers, Inc. (GeoEngineers).

Throughout the report, references to “the FWLE,” the “project,” the “proposed project,” “the alignment,” or the “light rail corridor” refer to the alignment selected by the Sound Transit Board in January 2017 after publication of the Final Environmental Impact Statement (FEIS).

## 1.1 FWLE Project Description

Sound Transit intends to extend light rail between the cities of Kent and Federal Way, through the FWLE Preferred Alternative route. The Sound Transit 2 (ST2) Plan, approved by voters in 2008, included

environmental study and design of this extension. This 7.8-mile extension would extend light rail south from the Angle Lake Station terminus of the Central Link system at South 200<sup>th</sup> Street in Kent to the Federal Way Transit Center (FWTC) at South 317<sup>th</sup> Street. The FWLE would travel within the cities of Kent, Des Moines, Kent and Federal Way in King County.

Link Light Rail is currently operating between University of Washington, Seattle and Sea-Tac International Airport. In 2008, the ST2 program was approved by voters. This package added nearly 36 new miles of service to the north, south and east, to Sound Transit's initial light rail line, resulting in 55 miles of light rail open for revenue service by 2023. The ST2 program of projects includes construction of light rail from the Angle Lake Station, just south of Kent Airport, to Kent/Des Moines Station. ST2 funds were also programmed to provide environmental clearance and preliminary engineering design to downtown Federal Way.

In June 2016, the Sound Transit Board unanimously approved to move forward with a November 2016 ballot asking taxpayers to fund Sound Transit 3 (ST3), which was subsequently passed by the taxpayers. ST3 funds the remaining segments from Kent/Des Moines station to the FWTC. Revenue service to the FWTC Station is targeted to open by 2024.

## 1.2 Authorization

This report was prepared under the terms of the subcontract between HDR and GeoEngineers dated August 24, 2012, along with Amendments 1 through 12. The subcontract authorizes GeoEngineers to provide environmental services for the Sound Transit FWLE in accordance with Agreement No. RTA/AE 044-12 between HDR and Sound Transit.

## 1.3 Summary of Phase I ESA RECs

In March 2018, GeoEngineers completed a Phase I ESA for the subject property. The following is a summary of Phase I ESA RECs in connection with the subject property that were the focus of the Focused Phase II ESA explorations:

- **Former Service Station.** A gasoline service station with possible auto repair apparently operated in the southwest corner of the subject property in the 1930s and 1940s. The historical resources reviewed revealed no records pertaining to fuel underground storage tank (UST) removals. The service station also may have used a heating oil tank. The service station garage may have been connected to a septic system. A limited geophysics investigation using electromagnetics (EM) performed by ECI Environmental Services (ECI) in December 2017 did not report a finding of undocumented USTs. Petroleum hydrocarbons and related compounds were not detected in 12 soil samples collected at depths ranging from 5 to 12 feet bgs in six borings completed in the vicinity of the former service station.
- **Former Dry Cleaner.** A dry cleaner operated in a tenant space on the subject property from possibly as early as 1970 until at least 2008. The former dry cleaner is considered a REC for the subject property. At least three different dry cleaner business names were identified in historical

records for the property and one of the dry cleaner businesses was a reported small quantity generator of hazardous waste in the 1990s. A historic drawing of the dry cleaner indicated a floor drain in the central portion of the tenant space. Dry cleaning solvents were not detected in four soil samples from two borings located northeast of the former dry cleaner tenant space. Dry cleaning solvents were not detected in soil samples from 3 and 11 feet bgs in the borings.

- **Petroleum-Contaminated Soil (PCS) Impacts from Southgate Oil Site.** The south-adjacent former Southgate Oil site, a Model Toxics Control Act (MTCA) cleanup site, is considered a REC based on documentation that residual PCS remained at the Southgate Oil north property line (which is the subject property south property line, see Figure 2). A previous UST removal report (Sound Environmental, 2002) for the south-adjacent former Southgate Oil Site identified residual gasoline- and diesel-range petroleum hydrocarbon soil contamination that may have migrated onto FL-207 from the Southgate Oil property. The area of potential residual Southgate-oil petroleum contamination based on the prior study for Southgate Oil is indicated in Figure 2. Soil sample results from the 2017 focused subsurface investigation by ECI identified diesel-contaminated soil (8,800 mg/kg) at a depth of 8 feet bgs in a boring situated just north of the south property boundary, but east of the area of documented residual PCS.
- **Areawide Condition:** The subject property is within Ecology's mapped footprint of the Tacoma Smelter Plume (areawide contamination) where arsenic concentrations in surface/near surface soil are predicted to exceed the MTCA Method A cleanup level for unrestricted land use.

The following non-adjacent properties with known or possible impacts related to past operations were identified as having a low risk of regulatory significance to the subject property and were therefore not explored further for the Focused Phase II ESA: the former Shell Oil gas station located across Pacific Highway South to the west of the subject property; a commercial heating oil UST used for at least 30 years on the north-adjacent property until it was closed in place in the 1980s; historic auto repair (Asia Auto Service in Figure 2) operated to the west across Pacific Highway South in the 1980s; and a former gas station on the property east of 30<sup>th</sup> Avenue South (Former Liberty 909 Gas Station in Figure 2) operated from the early 1970s until the early 1990s.

## 1.4 Purpose and Scope of Services

The purpose of the Focused Phase II ESA is to evaluate the potential for RECs or other potential sources of contamination to affect the subject property and/or to impact soil that may be encountered during Sound Transit construction activities at the site. GeoEngineers' scope of services consisted of the following:

1. Performed a site reconnaissance of the property and met with the property owner's representative.
2. Developed a health and safety plan for use by our field representatives in accordance with WAC 296-24.

3. Coordinated the marking of subsurface utilities at the exploration locations by notifying the one-call locate service for underground utilities in public rights-of-way and a private utility locate service for underground utilities on private property.
4. Retained a drilling subcontractor to advance nine hollow stem auger borings and four direct-push soil borings to evaluate soil conditions in areas of potential soil contamination.
5. Obtained either continuous core soil samples or soil samples at 2.5-foot depth intervals from each of the explorations. Field screened the soil samples for evidence of petroleum and volatiles using visual, water sheen and headspace vapor screening methods. Visually classified the samples in general accordance with ASTM D 2488 and maintained a detailed log of each boring.
6. Submitted select soil samples for chemical analysis of one or more of the following: hydrocarbon identification by NWTPH-HCID, gasoline-range petroleum hydrocarbons by NWTPH-Gx, diesel- and lube oil-range petroleum hydrocarbons by NWTPH-Dx, Resource Conservation and Recovery Act (RCRA) metals, hexavalent chromium, and/or arsenic and lead by U.S. Environmental Protection Agency (EPA) Method 6000/7000 series, PAHs by EPA Method 8270D/SIM, and volatile organic compounds (VOCs) by EPA Method 8260.
7. Evaluated the soil sampling field and chemical analytical data relative to Washington State Department of Ecology (Ecology) Toxics Cleanup Program MTCA cleanup levels and naturally occurring background metals concentrations in Puget Sound region soil.

## 2.0 Site Description

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### 2.1 Location and Property Description

General location and property description information for the subject property are summarized in Table 2-1 below. The location is shown relative to surrounding physical features in Figure 1. The current layout of the subject property and surrounding properties are shown in Figure 2.

**Table 2-1. Subject Property Location and Description**

Quarter/Quarter, Section, Township and Range	NE/SE quarter of Section 16, Township 22, Range 4, Willamette Meridian
Address	Five addresses have been associated with the multi-tenant retail building at times in the past: 23406, 23416, 23418, 23422, and 23424 Pacific Highway South, Kent, King County, Washington.
Tax Parcel Number	King County Parcel 2500600465
Approximate Area	2.27 acres
Existing Use(s)	Multi-tenant retail building, vacant and under construction/renovation as of September 2018.

### 2.2 Site Vicinity and General Characteristics

The subject property is located in an area of commercial and light industrial land uses. Figure 2 shows the configuration of the subject property and surrounding properties.

### 2.3 Site Reconnaissance

GeoEngineers personnel conducted a visual site reconnaissance of the parcel in February and July 2018, to evaluate current conditions on the property for potential RECs not identified previously. Fire-damaged portions of the building had been recently demolished, and the remaining portions of the building were under renovation. A new building was under construction in the western portion of the property in July 2018. Observations made during February and July 2018 site visits are summarized below:

- One approximate 16-gallon drum of soil cuttings from the ECI December 2017 focused subsurface investigation was observed on site.
- A small above-ground cargo lift was observed at the loading dock at the south side of the building.
- Surface grades on FL-207 are approximately 3 feet lower in elevation than the western adjacent sidewalk along Pacific Highway 99, and approximately 2 to 5 feet lower in elevation than the southern adjacent property (FL-209, former Southgate Oil).

No surface features indicative of possible historic USTs or a septic system were identified during the site reconnaissance.



## 3.0 Physical Setting

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### 3.1 Topography and Hydrogeologic Setting

Our knowledge of the general physiographic setting, geology and groundwater occurrence in the vicinity of the subject property is based on our general experience in the area and our recent soil explorations. Subsurface conditions observed during our recent soil explorations are described in the following sections of this report.

#### 3.1.1 Geologic Setting

Glaciation events in the Puget Lowland left thick deposits of glacially-derived and reworked sediments across the region. The upland plateau in the Project area was formed during the latest glacial epoch called the Vashon stade of the continental Fraser glaciation. The advance and retreat of the Vashon-age Puget glacial lobe, approximately 14,000 to 10,000 years ago, deposited most of the near-surface materials and sculpted most of the present landforms within the Puget Lowland.

After the latest glaciation, Holocene-period sediments were deposited over the glacial soils. These deposits typically consist of alluvial soils commonly found in river valleys as well as colluvial deposits (landslide materials) on slopes. Peat and other organic soils occur in numerous depressional areas at the surface. Some of these Holocene-period sediments have been modified by human activity, including placement of roadway embankment fill for construction of Interstate 5.

#### 3.1.2 Groundwater Conditions

Groundwater encountered in the FWLE project area may be grouped into one of three main aquifer types: unconfined, semi-confined and confined artesian. Unconfined aquifers may include groundwater within recent alluvium along streams and creeks, within recessional outwash that is perched above low-permeability glacial till, within discontinuous lenses of permeable layers in glacial till or within advance outwash that is exposed at the ground surface. The semi-confined aquifer is present in the advance outwash where it is overlain by less permeable soil, but the groundwater level is below the confining layer, making the aquifer semi-confined. Confined aquifers encountered in the project area are either flowing artesian (elevated groundwater levels aboveground surface) or sub-artesian (elevated groundwater levels at or near ground surface).

Based on geotechnical explorations completed in the site vicinity, the depth to groundwater is greater than 50 feet bgs; therefore, explorations to assess groundwater conditions were not completed.

## 4.0 Contaminants of Concern and Cleanup Levels

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In addition to contaminants associated with the TSP (i.e., lead and arsenic), potential contaminants identified for soil at the subject property are associated with dry cleaning, fuel storage (petroleum USTs) and auto service and repair. Potential contaminants for the Focused Phase II ESA screening therefore included gasoline-, diesel- and oil-range petroleum hydrocarbons and related constituents such as VOCs, PAHs, and metals; and chlorinated dry cleaning VOCs such as tetrachloroethene (PCE) and trichloroethene (TCE).

The chemical analytical data for samples obtained during this investigation were compared to their respective MTCA Method A cleanup levels. MTCA Method B cleanup levels protective of soil direct contact were used for analytes where MTCA Method A cleanup levels are not established. Where appropriate, detected concentrations of metals in soil also were compared to naturally occurring background metals concentrations in Puget Sound region soil (Ecology, 1994).

### 4.1 Contaminated and Impacted Soil Classifications

For purposes of Sound Transit's property acquisition and future construction activities at FL-207 impacted and contaminated soil are defined as follows:

- **Contaminated Soil:** Soil containing concentrations of contaminants greater than cleanup levels such as MTCA Method A Cleanup Levels for Unrestricted Use, or other relevant cleanup levels established by state, local, or federal regulation, law or permit condition, if no Method A level has been developed.
- **Impacted Soil:** Soil containing detectable concentrations of contaminants that are less than cleanup levels, specifically MTCA Method A Cleanup Levels for Unrestricted Land Use, or other relevant cleanup levels established by state, local, or federal regulation, law or permit condition, if no Method A level has been developed. Also, soil containing detectable concentrations of total metals that are less than MTCA Cleanup Levels but greater than naturally occurring background metals concentrations in Puget Sound region soil (Ecology, 1994). Impacted soil is not considered contaminated, but may be subject to restrictions or conditions for end use at off-site facilities.

### 4.2 Evaluation of Tacoma Smelter Plume Impacts

The "Tacoma Smelter Plume Model Remedies Guidance" (Ecology 2012) was used to evaluate whether a soil cleanup action for Tacoma Smelter Plume (TSP) impacts would be necessary on the subject property in connection with future property redevelopment. Detected concentrations of lead and arsenic from TSP impacts were evaluated according to the following Ecology guidance: discrete soil samples analyzed from within the upper 1-foot with detectable concentrations of either lead or arsenic exceeding MTCA Method A cleanup levels (250 mg/kg and 20 mg/kg, respectively), do not require further action with regard to TSP impacts on a redevelopment property provided that: (a) no single sample has a concentration exceeding twice the corresponding MTCA Method A cleanup level, and (b)

the average<sup>1</sup> concentrations of lead and arsenic for each 6-inch sampling interval (i.e., 0-0.5 foot or 0.5-1 foot bgs) are less than the corresponding MTCA Method A cleanup level.

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<sup>1</sup> Non-detects are assigned a value equal to half the laboratory detection limit for the purpose of calculating this averaged value.

## 5.0 Subsurface Explorations

### 5.1 General

The Focused Phase II ESA explorations included nine hollow stem auger borings and four direct-push soil borings from which soil samples were obtained to characterize subsurface conditions. The field explorations were completed between July 23 and 26, 2018. Holt Services, Inc. performed the hollow stem auger drilling services and Environmental Services Northwest (ESN) performed the direct push drilling services. Ground surface elevations for the boring locations were determined by locational survey. The Focused Phase II ESA activities were limited to the Sound Transit fee takes and easements (see Figures 2 and 3).

Thirteen borings (FL207-B14 through FL207-B26) were completed to depths of 8 to 31 feet bgs. Subsurface boring logs and the field exploration program are presented in Appendix A. Boring locations are shown in Figure 2.

Explorations were monitored by a representative of GeoEngineers who visually classified and field screened soil samples collected from the explorations for evidence of petroleum and volatiles. Subsurface conditions and field screening results are shown in the exploration logs presented in Appendix A. Soil samples were submitted to OnSite Environmental, Inc. in Redmond, Washington for chemical analysis. The soil chemical analytical results are summarized in Table 1. Copies of the laboratory reports are presented in Appendix B.

### 5.2 Sampling and Analysis Plan

Site historical use, prior environmental studies, subsurface conditions and field screening results were evaluated to develop the sampling and analysis plan for the Focused Phase II ESA. The exploration locations are shown in Figure 2. Analyses completed for each exploration are summarized in the table below.

**Table 5.1 Sampling and Analysis Summary**

Boring ID	Analyses Completed					
	Diesel- and Lube Oil-Range PHCs	Gasoline-Range PHCs	VOCs	PAHs	RCRA 8 Metals	As, Pb (surface soil)
FL207-B14	X	X	X	X	X	X
FL207-B15	X	X	X	X	X	X
FL207-B16	X	X	X	X	X	X
FL207-B17	X	X	X	--	---	X
FL207-B18	X	X	X	X	X	X
FL207-B19	X	X	X	X	X	X

Boring ID	Analyses Completed					
	Diesel- and Lube Oil-Range PHCs	Gasoline-Range PHCs	VOCs	PAHs	RCRA 8 Metals	As, Pb (surface soil)
FL207-B20	X	X	X	X	X	--
FL207-B21	X	X	X	X	X	--
FL207-B22	X	X	X	X	X	X
FL207-B23 <sup>1</sup>	X	X	X	--	X	X
FL207-B24	X	X	X	--	--	X
FL207-B25	X	X	X	--	--	X
FL207-B26	X	X	X	--	--	X

Notes:

<sup>1</sup> One soil sample from this boring also analyzed for hexavalent chromium

"X" = Soil Sample Analyzed

"--" = not analyzed

PHCs = Petroleum Hydrocarbons; RCRA = Resource Conservation and Recovery Act

## 6.0 Findings

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### 6.1 Subsurface Observations and Field Screening

Borings FL207-B14 through FL207-B26 were advanced to depths of approximately 8 to 31 feet bgs. Soil samples were collected from each exploration for field screening and possible chemical analysis. Field screening results are shown in the boring logs in Appendix A.

Soil conditions observed consisted of fine to coarse silty sand with gravel, sand with silt and gravel and occasional silt, to the total depths explored (maximum of 31 feet bgs). Definitive evidence of fill material was not observed in the borings with the following exceptions: a wood fragment observed in FL207-B24 at a depth of approximately 4 feet bgs; and silty sand fill with organic matter observed from approximately 0 to 4 feet bgs in FL207-B25. Field screening evidence of petroleum hydrocarbons (slight sheens) were observed in soil samples from borings FL207-B17 (0-2 feet bgs), FL207-B18 (0-13 feet bgs), FL207-B19 (0-1 feet bgs), and FL207-B22 (0-3 feet bgs). A moderate sheen was noted in surface soil at boring FL207-B18.

### 6.2 Soil Analytical Testing Results

Sixty-five soil samples from the Focused Phase II ESA explorations were submitted for chemical analysis of one or more of the following: gasoline-, diesel- and lube oil-range petroleum hydrocarbons, VOCs, PAHs, and total metals. One sample was additionally analyzed for hexavalent chromium. Analytical results are summarized in Table 1.

#### 6.2.1 Petroleum Hydrocarbons

Gasoline-range petroleum hydrocarbons were not detected in 43 samples analyzed from thirteen borings.

Diesel-range petroleum hydrocarbons were detected in two of 43 samples analyzed from thirteen borings. Diesel was detected at a concentration of 3,000 mg/kg in the sample from FL207-B18 collected at 0.5 to 1-foot bgs. This concentration is greater than the MTCA Method A cleanup level of 2,000 mg/kg. Diesel was also detected at a concentration of 160 mg/kg in a sample from FL207-B18 collected at 5 to 6 feet bgs. Lube oil was also detected in three samples at depths ranging from 0.5 to 6 feet bgs in FL207-B18 at concentrations less than the MTCA cleanup level. The diesel and lube oil detections in FL207-B18 are in the general vicinity of the residual contamination impacts from Southgate Oil, but approximately 15 feet beyond (north of) the property boundary. Petroleum hydrocarbons were not detected in soil samples from two borings completed east and west of ECI boring ECI-B13 (Figure 2) where diesel range hydrocarbons were detected at a concentration of 8,800 mg/kg.

Overall, lube oil-range petroleum hydrocarbons were detected in eight of 43 soil samples analyzed (three of the samples were from FL207-B18). Lube oil was detected at a concentration of 4,200 mg/kg in a sample from FL207-B16 at a depth of 2.5 to 3.5 feet bgs which is greater than the MTCA Method A cleanup level of 2,000 mg/kg. Lube oil was also detected at concentrations less than the MTCA Method

A cleanup level in a surface soil sample from FL207-B16 (440 mg/kg at 0 to 0.5 feet bgs and 1,000 mg/kg at 15 to 15.5 feet bgs). Lube oil was not detected in FL207-B16 at 17.5 to 18.5 feet bgs.

### **6.2.2 VOCs**

Thirty five of 65 soil samples analyzed were analyzed for VOCs. Except for benzene in one sample, VOCs were not detected at concentrations greater than MTCA cleanup levels. Benzene was detected in the soil sample from FL207-B22 at a depth of 2.5 to 3.5 feet bgs at a concentration of 0.087 mg/kg, greater than the MTCA Method A cleanup level of 0.03 mg/kg. This sample also had lube oil-range petroleum hydrocarbons detected (500 mg/kg, less than the MTCA Method A cleanup level). The source of lube oil and benzene in soil in this area is unknown.

VOCs detected were generally related to petroleum hydrocarbons, and the samples with detectable petroleum-related VOCs corresponded to samples that also had diesel- and/or lube oil-range petroleum hydrocarbon detections.

Very low concentrations of the chlorinated dry cleaning VOC PCE were detected in soil samples from FL207-B18 (20 to 20.5 feet bgs) and FL207-B23 (17.5 to 18 feet bgs). The detected concentrations were just above the laboratory reported detection limits.

Acetone and 2-butanone that were detected in several samples are common laboratory contaminants.

### **6.2.3 PAHs**

Carcinogenic and noncarcinogenic PAHs typically associated with petroleum products were detected in four of 13 soil samples analyzed, at concentrations less than MTCA screening levels. In each of these samples, diesel- and/or lube oil-range petroleum hydrocarbons were also detected. PAHs were not detected in nine samples analyzed.

### **6.2.4 Metals**

Metals, including arsenic and lead, either were not detected or the detected concentrations were less than the corresponding MTCA cleanup levels in the soil samples analyzed.

Arsenic was not detected in 17 surface soil samples (collected from 0-0.5 feet and 0.5-1-foot bgs) from borings FL207-B14 through FL207-B19 and FL207-B22 through FL207-B26.

Lead was detected in one of 17 surface soil samples analyzed (sample FL207-B14-0-0.5). The detected concentration of 43 mg/kg was greater than the naturally occurring background level in Puget Sound (24 mg/kg).

Chromium was detected in the 13 soil samples analyzed, at concentrations less than the naturally occurring background level in Puget Sound (48 mg/kg) and less than the cleanup level for Chromium III, which is the appropriate chromium cleanup level based on hexavalent chromium being non-detect in the sample analyzed (FL207-B3-2.5-3.5, Table 1).

## 7.0 Conclusions and Recommendations

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The purpose of the Focused Phase II ESA was to evaluate the potential for RECs or other potential sources of contamination to affect the subject property, and/or to impact soil and groundwater that may be encountered during Sound Transit construction activities at the property.

### 7.1 Summary of Phase I ESA and Other Previous Studies

RECs identified for the subject property included the former on-site dry cleaner located on the property from as early as 1970 up to 2008, the former on-site service station with possible auto repair apparently located in the southwest corner of the subject property in the 1930s and 1940s, historical contaminant migration of petroleum-related constituents originating from the south-adjacent Southgate Oil MTCA cleanup Site, and the TSP (areawide).

A Focused Subsurface Investigation of FL-207 was completed in 2017 by ECI for property owner Muscatel Midway Properties LLC (ECI, December 2017). The subsurface investigation focused on the first three RECs described above. Dry cleaning-related VOCs were not detected in soil samples from ECI-B1 and ECI-B2 completed north of the building (see Figure 2). Petroleum hydrocarbons and related compounds were not detected in soil samples from six borings (ECI-B3 through ECI-B8) completed in the vicinity of the former service station. The soil samples from ECI-B3 through ECI-B8 were not analyzed for dry cleaning VOCs. The soil sample at 8 feet bgs from ECI-B13 completed along the southern property boundary (see Figure 2) had diesel-range hydrocarbons detected at a concentration greater than the MTCA Method A cleanup level. The diesel-contaminated soil identified in ECI-B13 was suspected to have resulted from releases at the south-adjacent Southgate Oil Site. A copy of ECI's report is presented in Appendix C.

Reports and Ecology correspondence associated with the south-adjacent Southgate Oil Site (Sound Environmental, 2002 and Ecology, 2006) identified that residual gasoline- and diesel-range petroleum hydrocarbon-contaminated soil was left along the north property line of Southgate Oil (south property line of FL-207) following UST remedial excavation on Southgate Oil. The location of residual petroleum contamination in soil based on the prior study for Southgate Oil is indicated in Figure 2.

The property is within Ecology's mapped footprint of the TSP where arsenic concentrations in surface/near surface soil are predicted to exceed the MTCA Method A cleanup level for unrestricted land use.

### 7.2 Focused Phase II ESA Findings and Conclusions

#### 7.2.1 Purpose and Areas of Potential Concern for Dry Cleaner and Southgate Oil Contaminants

The purpose of the Focused Phase II ESA was to evaluate the potential for soil impacts in Sound Transit's partial takes and easement areas that may affect Sound Transit's acquisition or future



construction. A visual reconnaissance of the property conducted prior to the Focused Phase II ESA did not identify any potential sources of contamination on the property not previously identified. No surface features indicative of possible historic USTs or a septic system were identified during the visual reconnaissance.

The former dry cleaner was located in the central portion of the original building; the tenant space previously occupied by the dry cleaner was not within a future Sound Transit fee take or easement. However, sewer lines, which are common source locations for releases from historical dry cleaners, are located within the Sound Transit eastern fee take and easements in the eastern portion of the property and north of a portion of the TCE situated along the southern property line (Figure 2). The Focused Phase II ESA included utility research to identify the locations of the sewer drain inside the dry cleaner tenant space, and the sanitary sewer piping between the building and the municipal connection in 30<sup>th</sup> Avenue East. The approximate locations of observed and/or mapped sewer-related features are shown in Figure 2. Sanitary sewer record details are included in Appendix A.

Relative to residual soil contamination associated with the Southgate Oil Site, we note that the surface grades of the southern portion of FL-207 are approximately 2 to 5 feet lower in elevation than the south-adjacent former Southgate Oil Site. Therefore, residual contaminated soil documented to be 10 feet deep on the Southgate Oil Site, would correspond to a depth between approximately 5 and 8 feet below ground surface in the southern portion of FL207.

### 7.2.2 Findings

The findings presented below are based on the results of 8 soil samples obtained from four ECI borings (ECI-B9, ECI-B10, ECI-B12 and ECI-B13) completed within the southern TCE, and 65 soil samples obtained from GeoEngineers' Focused Phase II ESA borings FL207-B14 through FL207-B26 situated within the fee takes, guideway easement and TCE. Figure 2 shows the relationship between the explorations and the partial takes and easements.

Potential contaminants of concern assessed in soil samples from the focused Phase II ESA include VOCs related to former dry cleaning operations, petroleum-hydrocarbons and related constituents (VOCs, PAHs and metals) associated with the former on-site service station in the southwest corner of the property and with the south-adjacent Southgate Oil Site, and arsenic and lead associated with the Tacoma Smelter Plume. Soil samples submitted for analytical testing were selected from depths corresponding to the potential sources of contamination in the areas being assessed. Soil sample analytical results are presented in Table 1 and ECI's Tables 1 through 3 in Appendix C of this Phase II ESA Report. Sample results are also summarized in Figure 2.

Key findings of the Focused Phase II ESA are as follows:

#### Former On-Site Dry Cleaner

- Possible releases of chlorinated dry cleaning VOCs were assessed by testing one or more samples from all thirteen Focused Phase II ESA borings completed on the property.

- Of the 35 soil samples tested for VOCs, only two soil samples (FL207-B18 at 20 to 20.5 feet bgs and FL207-B23 at 17.5 to 18 feet bgs) had a chlorinated dry cleaning VOC detected (i.e., PCE). The concentrations of PCE detected in the samples (0.0015 and 0.001 mg/kg) were just above the laboratory reported detection limits. Boring FL207-B23 was completed near the existing sewer utility from the site building to the main and in the eastern partial take (see Figure 2). No other dry cleaner chlorinated solvents were detected in the soil samples tested.
- None of the petroleum impacts (explained below) identified in soil samples from the property appeared to be related to petroleum solvents that may have been used in dry cleaning. Benzene was detected in the soil sample from FL207-B22 at 2.5-3.5 feet bgs as explained below; although this location is near the sanitary sewer line, the benzene detected is not likely to be related to historical dry cleaner releases based on other petroleum-type compounds detected in this sample.
- Based on these findings, dry cleaner releases to soil at concentrations greater than MTCA cleanup levels were not identified in the Sound Transit fee takes and easements. If soil with detectable PCE (or other dry cleaner-related chlorinated solvents) is removed during future construction, the excavated soil would likely be considered a listed dangerous waste (MTCA 173-303), requiring special handling and disposal at an approved facility.

#### Former Service Station

- Boring FL207-B15 was completed in the southwest partial take near the footprint of the former service station, and borings FL207-B14 and FL207-B16 were completed within the TCE nearest to the footprint of the former service station. Based on the eight soil samples tested for petroleum-related constituents from these borings, the only exceedance of a MTCA screening level was lube oil-range petroleum hydrocarbons (4,200 mg/kg) in a soil sample from FL207-B16 at a depth of 2.5 to 3.5 feet bgs.
- Petroleum-related constituents were not detected in ECI's borings completed within the footprint of the former service station.
- Based on the sample location, depth and type of petroleum identified, the most likely sources of the lube oil contamination identified are the former service station, or possibly a surface release of lube oil associated with truck or vehicle traffic into the loading dock area directly to the east behind the building.
- The available data suggest the lateral and vertical extent of lube oil-contaminated soil exceeding the MTCA Method A cleanup level is localized. The soil at this location is not easily accessible because it is located adjacent to the footings of the new building. On this basis and given the concentration, the type of contaminant and because the area is paved, there does not appear to be a threat to human health or the environment under current conditions. If contaminated soil is accessible for removal in the future, the soil represented by sample FL207-B15-2.5-3.5 could be excavated with confirmation sampling and reporting to Ecology to document a cleanup of an isolated hot spot of contaminated soil. We note that FL207-B16 is situated within the TCE where

no construction excavation is likely to occur. The detection of lube oil greater than the MTCA Method A cleanup level may require a remedial cost estimate for Sound Transit related to the TCE.

#### South-Adjacent Former Southgate Oil

- Borings FL207-B17 through FL207-B22 were completed along the southern property boundary to assess potential contaminant migration from Southgate Oil. Based on 29 soil samples tested for petroleum-related constituents from these borings, only soil samples from FL207-B18 had petroleum-related compounds that may possibly be from past releases at Southgate Oil. Diesel- and/or lube oil-range hydrocarbons were detected in soil samples from FL207-B18 at depths ranging from 0.5 to 6 feet bgs. The concentration of diesel-range hydrocarbons (3,000 mg/kg) in only one sample (FL207-B18-0.5-1) was greater than the MTCA cleanup level of 2,000 mg/kg.
- Petroleum hydrocarbons were not detected in soil samples from borings completed to the east and west of FL207-B18, or to the east and west of ECI boring ECI-B13 (Figure 2) where diesel range-hydrocarbons had been detected at a concentration of 8,800 mg/kg during the ECI study. Residual petroleum contamination was not detected in the three borings completed directly north of the location where residual petroleum-contaminated soil was documented to remain following the Southgate Oil remedial excavation activities (see Figure 2).
- Southgate Oil-related petroleum impacts on FL-207 at concentrations greater than MTCA cleanup levels appear to be relatively limited in extent, and located as indicated in prior reports and Ecology correspondence (see area marked yellow in Figure 2), at FL207-B18, and at ECI-B13.

#### Shallow Benzene in Soil in Eastern Partial Take

- Benzene (0.087 mg/kg) was detected at a concentration greater than the MTCA Method A cleanup level of 0.03 mg/kg in the soil sample from FL207-B22 at 2.5-3.5 feet bgs. Low concentrations of lube oil-range petroleum hydrocarbons (500 mg/kg), BETX and PAHs were also detected in this sample. The detection of benzene in this sample was isolated from a vertical delineation standpoint as benzene was not detected in a sample collected from FL207-B22 at a depth of 5 to 6 feet bgs.
- FL207-B22 is near the sanitary sewer line from the property; however, this boring is not in close proximity to the former on-site service station, dry cleaner tenant location, or documented Southgate Oil impacts.
- Based on the detected benzene concentration being relatively low, and there being no clear and obvious source for the contaminants collectively detected, it is our opinion that these findings do not represent a reportable release under MTCA in our opinion because a threat or potential threat to human health or the environment has not been conclusively identified.
- If soil represented by sample FL207-B22 at 2.5-3.5 feet bgs is excavated in the future, this soil will require special handling and disposal at an approved facility based on the detected concentrations of petroleum-related constituents.

### Tacoma Smelter Plume:

- Seventeen surface soil samples from FL207-B14 through FL207-B19 and FL207-B22 through FL207-B26 were analyzed for arsenic and lead. Arsenic was not detected in the samples. Lead was detected in sample FL207-B14-0-0.5 at a concentration greater than the naturally occurring background level in Puget Sound (24 mg/kg); the detected concentration was less than the MTCA Method A cleanup level of 250 mg/kg. Based on the findings of the Focused Phase II ESA, no MTCA cleanup action would be required on the property with regard to the TSP.

## **7.3 Sound Transit Acquisition and Future Construction Recommendations**

Based on current design information for the FWLE project (HDR, provided in March 2018), Sound Transit plans to acquire a strip of property adjacent to the eastern property boundary next to 30<sup>th</sup> Avenue South (eastern partial take) and a small area at the southwest corner of the property (southwest partial take). A guideway easement is proposed west of the eastern partial take (Figure 2) and TCEs are proposed west and north of the guideway easement and along the southern and western property boundaries. Based on preliminary design information for the project as of March 2018, Sound Transit's proposed construction and development on the property includes new utilities and sidewalks, the elevated guideway structure and tracks as shown in Figure 3. Proposed uses of the TCE, other than storage and temporary access, are not defined at this time. Proposed construction and development activities by Sound Transit could change as project design is refined.

The detection of lube oil in soil sample FL207-B16-2.5-3.5 at a concentration (4,200 mg/kg) greater than the MTCA Method A cleanup may require a remedial cost estimate for Sound Transit related to the TCE. However, the soil at this location is not planned to be excavated for Sound Transit's construction because the boring location was within the TCE; in addition, the soil is not readily accessible due to its proximity to the footings for the new building under construction on the property.

A remedial cost estimate for MTCA cleanup at FL-207 may be necessary related to petroleum-contaminated soil affected by the south-adjacent Southgate Oil Site. The soil sample most representative of Southgate Oil contamination on FL-207 is ECI-B13 at 8 feet bgs. This finding is not considered discovery of a new release under MTCA.

The findings of the Focused Phase II ESA indicate that a soil handling cost estimate for construction purposes is recommended for FL-207 because impacted or contaminated soil may be encountered in future Sound Transit excavation areas.

We recommend a contaminated and impacted soil handling plan be prepared prior to construction activities that outlines soil segregation, handling, stockpiling and end use/disposal with potential follow-up chemical analytical testing for waste disposal characterization as needed. Ecology's "Guidance for Remediation of Petroleum-Contaminated Soil" should be used as a guidance document for end use options for petroleum-related soil impacts. If soil with detectable PCE (or other dry cleaner-

related chlorinated solvents) is removed during future construction, the excavated soil would likely be considered a listed dangerous waste (MTCA 173-303), requiring special handling and disposal at an approved facility.

The table below summarizes the Focused Phase II ESA findings relative to Sound Transit's proposed acquisition and future construction.

Potential Sources of Contamination Identified Nearby	Potential Source Within Acquisition Area (Partial Take)	Potential Source Within Construction Area (Partial Take, TCE, Easement)	Contaminated Soil Present	Impacted Soil Present	Remedial Cost Estimate Necessary for Acquisition	Remedial Cost Estimate Necessary for Construction
On-Site: Former Dry Cleaner	No	No	No	Yes. One of the soil samples with PCE detected (at a concentration less than the MTCA Method A cleanup level) is situated in the eastern partial take.	No	Yes
On-Site: Former Service Station	Yes	Yes	Yes	Yes	Lube oil in soil sample FL207-B16-2.5-3.5 exceeded the MTCA Method A cleanup and may require a remedial cost estimate related to the TCE	Yes
Off-Site: Former Southgate Oil	No	No	Yes	Yes	A remedial cost estimate for MTCA cleanup at FL-207 may be necessary related to petroleum-contaminated soil affected by the south-adjacent	Yes

					Southgate Oil Site.	
Areawide: Tacoma Smelter Plume	Yes	Yes	No	No	No	No

## 8.0 Limitations and Guidelines for Use

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These Limitations provide information to help you manage your risks with respect to the use of this report. Some clients, design professionals and contractors may not recognize that the geoscience practices (geotechnical engineering, geology and environmental science) are far less exact than other engineering and natural science disciplines. This lack of understanding can create unrealistic expectations that could lead to disappointments, claims and disputes. GeoEngineers includes these explanatory “limitations” provisions in our reports to help reduce such risks. Please confer with GeoEngineers if you are unclear how these “Limitations and Guidelines for Use” apply to your project or site.

This Phase II ESA has been prepared, in general accordance with the scope and limitations of the subcontract between HDR and GeoEngineers dated August 24, 2012, along with Amendments 1 through 12 and Agreement No. RTA/AE 044-12 between HDR and Sound Transit.

This report has been prepared for the exclusive use of Sound Transit and their agents. This report is not intended for use by others, and the information contained herein is not applicable to other properties. No other party may rely on the product of our services unless we agree in advance to such reliance in writing. This is to provide our firm with reasonable protection against open-ended liability claims by third parties with whom there would otherwise be no contractual limits to their actions. Within the limitations of scope, schedule and budget, our services have been executed in accordance with our Agreement with the Client and generally accepted environmental practices in this area at the time this report was prepared.

Within the limitations of scope, schedule and budget, our services have been executed in accordance with generally accepted environmental science practices in this area at the time this report was prepared. The conclusions and opinions presented in this report are based on our professional knowledge, judgment and experience. No warranty, express or implied, applies to this report.

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

Please refer to the appendix titled “Report Limitations and Guidelines for Use” for additional information pertaining to use of this report.

## 9.0 References

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- ECI Environmental Services, December 18, 2017. Focused Subsurface Investigation Report, 23418 Pacific Highway South, Kent, Washington. Prepared for Muscatel Midway Properties LLC.
- GeoEngineers, Inc. March 2018. Federal Way Link Extension, AE 0044-12 WP 3.S, Phase I Environmental Site Assessment FL-207, Tax Parcel 2500600465.
- HDR - Electronic Design Drawings provided in March 2018.
- Sound Environmental Strategies, Corp. 2002. *DiGiovanni UST Decommissioning Project; 23428 Pacific Highway South; Kent, Washington*. Prepared for Marsilio DiGiovanni. February 25, 2002.
- Sound Transit, August 2017. Basis of Design Geotechnical report.
- Washington State Department of Ecology. 2006. Further Action Determination letter for Southgate Oil. Addressed to Marsilio DiGiovanni. June 9, 2006.
- Washington State Department of Ecology. 2007. Model Toxics Control Act Cleanup Regulation, Chapter 173-340 WAC Washington State Department of Ecology Toxics Cleanup Program. Publication No. 94-06. Issued April 1990, Revised October 12, 2007.
- Washington State Department of Ecology. 2011. "Guidance for Remediation of Petroleum Contaminated Sites" Toxics Cleanup Program Publication No. 10-09-057.
- Washington State Department of Ecology. 2015. "Soil – Method B and Groundwater Protection (unrestricted land use)". Cleanup Levels and Risk Calculation (CLARC). Department of Ecology. Web. Accessed June 20, 2017. <https://fortress.wa.gov/ecy/clarc/CLARCHome.aspx>.



Table 1

Summary of Soil Chemical Analytical Results<sup>1</sup>  
Sound Transit - Federal Way Link Extension FL-207  
Federal Way, Washington

Boring Identification	FL207-B14			FL207-B15				FL207-B16		MTCA Screening Level <sup>12</sup>	Naturally Occurring Background Metals in Puget Sound Soils <sup>16</sup>
Sample Identification <sup>2</sup>	FL207-B14-0.0.5	FL207-B14-2.5-3.5	FL207-B14-7.5-8.5	FL207-B15-0-0.5	FL207-B15-0.5-1	FL207-B15-5.5-6	FL207-B15-12.5-13	FL207-B16-0-0.5	FL207-B16-2.5-3.5 <sup>17</sup>		
Sample Date	7/23/2018	7/23/2018	7/23/2018	7/23/2018	7/23/2018	7/23/2018	7/23/2018	7/20/2018	7/20/2018		
Sample Start Depth (feet bgs)	0.0	2.5	7.5	0.0	0.5	5.5	12.5	0.0	2.5		
Sample End Depth (feet bgs)	0.5	3.5	8.5	0.5	1.0	6.0	13	0.5	3.5		
NWTPH-HCID <sup>3</sup> (mg/kg)											
Gasoline-range hydrocarbons	--	21 U	22 U	--	--	21 U	21 U	22 U	--	30/100 <sup>13</sup>	N/A
Diesel-range hydrocarbons	--	53 U	55 U	--	--	53 U	54 U	54 U	--	2,000	
Lube Oil-range Hydrocarbons	--	110 U	110 U	--	--	110 U	110 U	Detected	--	2,000	
NWTPH-Gx <sup>4</sup> (mg/kg)											
Gasoline-range hydrocarbons	--	--	--	--	--	--	--	--	--	30/100 <sup>13</sup>	N/A
NWTPH-Dx <sup>5</sup> (mg/kg)											
Diesel-range hydrocarbons	--	--	--	--	--	--	--	54 U	260 U	2,000	N/A
Lube Oil-range Hydrocarbons	--	--	--	--	--	--	--	440	4,200	2,000	
Metals <sup>6</sup> (mg/kg)											
Arsenic	5.5 U	--	5.5 U	5.3 U	5.6 U	5.3 U	5.4 U	5.4 U	--	20	7
Barium	--	--	58	--	--	47	43	--	--	16,000	NE
Cadmium	--	--	0.55 U	--	--	0.53 U	0.54 U	--	--	2	1
Chromium	--	--	30	--	--	26	32	--	--	2,000 <sup>14</sup>	48
Chromium, Hexavalent	--	--	--	--	--	--	--	--	--	19	NE
Lead	43	--	5.5 U	5.3 U	5.6 U	5.3 U	5.4 U	5.4 U	--	250	24
Mercury	--	--	0.28 U	--	--	0.27 U	0.27 U	--	--	2	0.07
Selenium	--	--	11 U	--	--	11 U	11 U	--	--	400	NE
Silver	--	--	1.1 U	--	--	1.1 U	1.1 U	--	--	400	NE
VOCs <sup>7</sup> (mg/kg)											
1,1,1,2-Tetrachloroethane	--	0.0014 U	0.0012 U	--	--	0.00093 U	0.00093 U	--	0.0010 U	38.5	N/A
1,1,1-Trichloroethane	--	0.0014 U	0.0012 U	--	--	0.00093 U	0.00093 U	--	0.0010 U	2	
1,1,2,2-Tetrachloroethane	--	0.0014 U	0.0012 U	--	--	0.00093 U	0.00093 U	--	0.0010 U	5	
1,1,2-Trichloroethane	--	0.0014 U	0.0012 U	--	--	0.00093 U	0.00093 U	--	0.0010 U	17.5	
1,1-Dichloroethane	--	0.0014 U	0.0012 U	--	--	0.00093 U	0.00093 U	--	0.0010 U	175	
1,1-Dichloroethene	--	0.0014 U	0.0012 U	--	--	0.00093 U	0.00093 U	--	0.0010 U	4,000	
1,1-Dichloropropene	--	0.0014 U	0.0012 U	--	--	0.00093 U	0.00093 U	--	0.0010 U	NE	
1,2,3-Trichlorobenzene	--	0.0014 U	0.0012 U	--	--	0.00093 U	0.00093 U	--	0.0010 U	NE	
1,2,3-Trichloropropane	--	0.0014 U	0.0012 U	--	--	0.00093 U	0.00093 U	--	0.0010 U	0.0333	
1,2,4-Trichlorobenzene	--	0.0014 U	0.0012 U	--	--	0.00093 U	0.00093 U	--	0.0010 U	34.5	
1,2,4-Trimethylbenzene	--	0.0014 U	0.0012 U	--	--	0.00093 U	0.00093 U	--	0.0013	NE	
1,2-Dibromo-3-Chloropropane	--	0.0069 U	0.0058 U	--	--	0.0047 U	0.0046 U	--	0.0050 U	1.25	
1,2-Dibromoethane	--	0.0014 U	0.0012 U	--	--	0.00093 U	0.00093 U	--	0.0010 U	0.005	
1,2-Dichlorobenzene (o-Dichlorobenzene)	--	0.0014 U	0.0012 U	--	--	0.00093 U	0.00093 U	--	0.0010 U	7,200	
1,2-Dichloroethane	--	0.0014 U	0.0012 U	--	--	0.00093 U	0.00093 U	--	0.0010 U	11	

Boring Identification	FL207-B14			FL207-B15				FL207-B16		MTCA Screening Level <sup>12</sup>	Naturally Occurring Background Metals in Puget Sound Soils <sup>16</sup>
Sample Identification <sup>2</sup>	FL207-B14-0.0.5	FL207-B14-2.5-3.5	FL207-B14-7.5-8.5	FL207-B15-0-0.5	FL207-B15-0.5-1	FL207-B15-5.5-6	FL207-B15-12.5-13	FL207-B16-0-0.5	FL207-B16-2.5-3.5 <sup>17</sup>		
Sample Date	7/23/2018	7/23/2018	7/23/2018	7/23/2018	7/23/2018	7/23/2018	7/23/2018	7/20/2018	7/20/2018		
Sample Start Depth (feet bgs)	0.0	2.5	7.5	0.0	0.5	5.5	12.5	0.0	2.5		
Sample End Depth (feet bgs)	0.5	3.5	8.5	0.5	1.0	6.0	13	0.5	3.5		
1,2-Dichloropropane	--	0.0014 U	0.0012 U	--	--	0.00093 U	0.00093 U	--	0.0010 U	27.8	N/A
1,3,5-Trimethylbenzene	--	0.0014 U	0.0012 U	--	--	0.00093 U	0.00093 U	--	0.0010 U	800	
1,3-Dichlorobenzene (m-Dichlorobenzene)	--	0.0014 U	0.0012 U	--	--	0.00093 U	0.00093 U	--	0.0010 U	NE	
1,3-Dichloropropane	--	0.0014 U	0.0012 U	--	--	0.00093 U	0.00093 U	--	0.0010 U	NE	
1,4-Dichlorobenzene (p-Dichlorobenzene)	--	0.0014 U	0.0012 U	--	--	0.00093 U	0.00093 U	--	0.0010 U	185	
2,2-Dichloropropane	--	0.0014 U	0.0012 U	--	--	0.00093 U	0.00093 U	--	0.0010 U	NE	
2-Butanone (MEK)	--	0.0069 U	0.0058 U	--	--	0.0047 U	0.0046 U	--	0.0056	48,000	
2-Chloroethyl vinyl ether	--	0.0069 U	0.0058 U	--	--	0.0047 U	0.0046 U	--	0.0050 U	NE	
2-Chlorotoluene	--	0.0014 U	0.0012 U	--	--	0.00093 U	0.00093 U	--	0.0010 U	1,600	
2-Hexanone	--	0.0094 U	0.0079 U	--	--	0.0063 U	0.0063 U	--	0.0050 U	NE	
4-Chlorotoluene	--	0.0014 U	0.0012 U	--	--	0.00093 U	0.00093 U	--	0.0010 U	NE	
4-Methyl-2-Pentanone (Methyl isobutyl ketone)	--	0.0069 U	0.0058 U	--	--	0.0047 U	0.0046 U	--	0.0050 U	6,400	
Acetone <sup>8</sup>	--	0.0069 U	0.0058 U	--	--	0.0047 U	0.0046 U	--	0.020	72,000	
Benzene	--	0.0014 U	0.0012 U	--	--	0.00093 U	0.00093 U	--	0.0014	0.03	
Bromobenzene	--	0.0014 U	0.0012 U	--	--	0.00093 U	0.00093 U	--	0.0010 U	NE	
Bromochloromethane	--	0.0014 U	0.0012 U	--	--	0.00093 U	0.00093 U	--	0.0010 U	NE	
Bromodichloromethane	--	0.0014 U	0.0012 U	--	--	0.00093 U	0.00093 U	--	0.0010 U	16.1	
Bromoform (Tribromomethane)	--	0.0069 U	0.0058 U	--	--	0.0047 U	0.0046 U	--	0.0050 U	127	
Bromomethane	--	0.0014 U	0.0012 U	--	--	0.00093 U	0.00093 U	--	0.0010 U	112	
Carbon Disulfide	--	0.0014 U	0.0012 U	--	--	0.00093 U	0.00093 U	--	0.0010 U	8,000	
Carbon Tetrachloride	--	0.0014 U	0.0012 U	--	--	0.00093 U	0.00093 U	--	0.0010 U	14.3	
Chlorobenzene	--	0.0014 U	0.0012 U	--	--	0.00093 U	0.00093 U	--	0.0010 U	1,600	
Chloroethane	--	0.0069 U	0.0058 U	--	--	0.0047 U	0.0046 U	--	0.0050 U	NE	
Chloroform	--	0.0014 U	0.0012 U	--	--	0.00093 U	0.00093 U	--	0.0010 U	32.3	
Chloromethane	--	0.0069 U	0.0058 U	--	--	0.0047 U	0.0046 U	--	0.0050 U	NE	
cis-1,2-Dichloroethene	--	0.0014 U	0.0012 U	--	--	0.00093 U	0.00093 U	--	0.0010 U	160	
cis-1,3-Dichloropropene	--	0.0014 U	0.0012 U	--	--	0.00093 U	0.00093 U	--	0.0010 U	NE	
Dibromochloromethane	--	0.0014 U	0.0012 U	--	--	0.00093 U	0.00093 U	--	0.0010 U	11.9	
Dibromomethane	--	0.0014 U	0.0012 U	--	--	0.00093 U	0.00093 U	--	0.0010 U	800	
Dichlorodifluoromethane (CFC-12)	--	0.0014 U	0.0012 U	--	--	0.00093 U	0.00093 U	--	0.0010 U	16,000	
Ethylbenzene	--	0.0014 U	0.0012 U	--	--	0.00093 U	0.00093 U	--	0.0010 U	6	
Hexachlorobutadiene	--	0.0069 U	0.0058 U	--	--	0.0047 U	0.0046 U	--	0.0050 U	12.8	
Isopropylbenzene (Cumene)	--	0.0014 U	0.0012 U	--	--	0.00093 U	0.00093 U	--	0.0010 U	8,000	
Methyl Iodide (Iodomethane)	--	0.0069 U	0.0058 U	--	--	0.0047 U	0.0046 U	--	0.0050 U	NE	
Methyl t-butyl ether	--	0.0014 U	0.0012 U	--	--	0.00093 U	0.00093 U	--	0.0010 U	0.1	
Methylene Chloride	--	0.0069 U	0.0058 U	--	--	0.0047 U	0.0046 U	--	0.0050 U	0.02	
Naphthalene	--	0.0014 U	0.0012 U	--	--	0.00093 U	0.00093 U	--	0.0028	5	
n-Butylbenzene	--	0.0014 U	0.0012 U	--	--	0.00093 U	0.00093 U	--	0.0010 U	4,000	
n-Propylbenzene	--	0.0014 U	0.0012 U	--	--	0.00093 U	0.00093 U	--	0.0010 U	8,000	

Boring Identification	FL207-B14			FL207-B15				FL207-B16		MTCA Screening Level <sup>12</sup>	Naturally Occurring Background Metals in Puget Sound Soils <sup>16</sup>
Sample Identification <sup>2</sup>	FL207-B14-0.0.5	FL207-B14-2.5-3.5	FL207-B14-7.5-8.5	FL207-B15-0-0.5	FL207-B15-0.5-1	FL207-B15-5.5-6	FL207-B15-12.5-13	FL207-B16-0-0.5	FL207-B16-2.5-3.5 <sup>17</sup>		
Sample Date	7/23/2018	7/23/2018	7/23/2018	7/23/2018	7/23/2018	7/23/2018	7/23/2018	7/20/2018	7/20/2018		
Sample Start Depth (feet bgs)	0.0	2.5	7.5	0.0	0.5	5.5	12.5	0.0	2.5		
Sample End Depth (feet bgs)	0.5	3.5	8.5	0.5	1.0	6.0	13	0.5	3.5		
p-Isopropyltoluene	--	0.0014 U	0.0012 U	--	--	0.00093 U	0.00093 U	--	0.0010 U	NE	N/A
Sec-Butylbenzene	--	0.0014 U	0.0012 U	--	--	0.00093 U	0.00093 U	--	0.0010 U	8,000	
Styrene	--	0.0014 U	0.0012 U	--	--	0.00093 U	0.00093 U	--	0.0010 U	16,000	
Tert-Butylbenzene	--	0.0014 U	0.0012 U	--	--	0.00093 U	0.00093 U	--	0.0010 U	8,000	
Tetrachloroethene	--	0.0014 U	0.0012 U	--	--	0.00093 U	0.00093 U	--	0.0010 U	0.05	
Toluene	--	0.0069 U	0.0058 U	--	--	0.0047 U	0.0046 U	--	0.0050 U	7	
Trans-1,2-Dichloroethene	--	0.0014 U	0.0012 U	--	--	0.00093 U	0.00093 U	--	0.0010 U	1,600	
Trans-1,3-Dichloropropene	--	0.0014 U	0.0012 U	--	--	0.00093 U	0.00093 U	--	0.0010 U	NE	
Trichloroethene	--	0.0014 U	0.0012 U	--	--	0.00093 U	0.00093 U	--	0.0010 U	0.03	
Trichlorofluoromethane (CFC-11)	--	0.0014 U	0.0012 U	--	--	0.00093 U	0.00093 U	--	0.0010 U	24,000	
Vinyl Acetate	--	0.0069 U	0.0058 U	--	--	0.0047 U	0.0046 U	--	0.0050 U	80,000	
Vinyl Chloride	--	0.0014 U	0.0012 U	--	--	0.00093 U	0.00093 U	--	0.0010 U	240	
Xylene, m-,p-	--	0.0069 U	0.0058 U	--	--	0.0047 U	0.0046 U	--	0.0031	9	
Xylene, o-	--	0.0014 U	0.0012 U	--	--	0.00093 U	0.00093 U	--	0.0011		
Total Xylenes <sup>9</sup>	--	0.0069 U	0.0058 U	--	--	0.0047 U	0.0046 U	--	0.0042		
PAHs <sup>10</sup> (mg/kg)											
1-Methylnaphthalene	--	--	0.0073 U	--	--	0.0071 U	--	--	0.035 U	5	N/A
2-Methylnaphthalene	--	--	0.0073 U	--	--	0.0071 U	--	--	0.041		
Naphthalene	--	--	0.0073 U	--	--	0.0071 U	--	--	0.035 U		
Total Naphthalenes <sup>11</sup>	--	--	0.0073 U	--	--	0.0071 U	--	--	0.041		
Acenaphthene	--	--	0.0073 U	--	--	0.0071 U	--	--	0.035 U	4,800	
Acenaphthylene	--	--	0.0073 U	--	--	0.0071 U	--	--	0.035 U	NE	
Anthracene	--	--	0.0073 U	--	--	0.0071 U	--	--	0.035 U	24,000	
Benzo(a)anthracene	--	--	0.0073 U	--	--	0.0071 U	--	--	0.10	See cPAHs	
Benzo(a)pyrene	--	--	0.0073 U	--	--	0.0071 U	--	--	0.086	See cPAHs	
Benzo(b)fluoranthene	--	--	0.0073 U	--	--	0.0071 U	--	--	0.035 U	See cPAHs	
Benzo(g,h,i)perylene	--	--	0.0073 U	--	--	0.0071 U	--	--	0.035 U	NE	
Benzo(j,k)fluoranthene	--	--	0.0073 U	--	--	0.0071 U	--	--	0.035 U	See cPAHs	
Chrysene	--	--	0.0073 U	--	--	0.0071 U	--	--	0.085	See cPAHs	
Dibenzo(a,h)anthracene	--	--	0.0073 U	--	--	0.0071 U	--	--	0.035 U	See cPAHs	
Fluoranthene	--	--	0.0073 U	--	--	0.0071 U	--	--	0.035 U	3,200	
Fluorene	--	--	0.0073 U	--	--	0.0071 U	--	--	0.035 U	3,200	
Indeno(1,2,3-c,d)pyrene	--	--	0.0073 U	--	--	0.0071 U	--	--	0.035 U	See cPAHs	
Phenanthrene	--	--	0.0073 U	--	--	0.0071 U	--	--	0.058	NE	
Pyrene	--	--	0.0073 U	--	--	0.0071 U	--	--	0.048	2,400	
cPAHs (benzo(a)pyrene TEC) <sup>15</sup>	--	--	0.0055 U	--	--	0.0054 U	--	--	0.018	0.1	

Table 1

Summary of Soil Chemical Analytical Results<sup>1</sup>  
Sound Transit - Federal Way Link Extension FL-207  
Federal Way, Washington

Boring Identification	FL207-B16				FL207-B17					MTCA Screening Level <sup>12</sup>	Naturally Occurring Background Metals in Puget Sound Soils <sup>16</sup>
Sample Identification <sup>2</sup>	FL207-B16-5-6	FL207-B16-10-11	FL207-B16-15-15.5	FL207-B16-17.5-18.5	FL207-B17-0-0.5	FL207-B17-0.5-1	FL207-B17-2.5-3.5	FL207-B17-7-8	FL207-B17-12-13		
Sample Date	7/20/2018	7/20/2018	7/20/2018	7/20/2018	7/25/2018	7/25/2018	7/25/2018	7/25/2018	7/25/2018		
Sample Start Depth (feet bgs)	5.0	10	15	17.5	0.0	0.5	2.5	7.0	12		
Sample End Depth (feet bgs)	6.0	11	15.5	18.5	0.5	1.0	3.5	8.0	13		
NWTPH-HCID <sup>3</sup> (mg/kg)											
Gasoline-range hydrocarbons	22 U	22 U	22 U	--	--	--	22 U	22 U	22 U	30/100 <sup>13</sup>	N/A
Diesel-range hydrocarbons	54 U	54 U	55 U	--	--	--	56 U	54 U	54 U	2,000	
Lube Oil-range Hydrocarbons	110 U	110 U	Detected	--	--	--	110 U	110 U	110 U	2,000	
NWTPH-Gx <sup>4</sup> (mg/kg)											
Gasoline-range hydrocarbons	--	--	--	--	--	--	--	--	--	30/100 <sup>13</sup>	N/A
NWTPH-Dx <sup>5</sup> (mg/kg)											
Diesel-range hydrocarbons	--	--	140 U	27 U	--	--	--	--	--	2,000	N/A
Lube Oil-range Hydrocarbons	--	--	1,000	55 U	--	--	--	--	--	2,000	
Metals <sup>6</sup> (mg/kg)											
Arsenic	--	5.4 U	--	--	5.3 U	5.3 U	--	--	--	20	7
Barium	--	44	--	--	--	--	--	--	--	16,000	NE
Cadmium	--	0.54 U	--	--	--	--	--	--	--	2	1
Chromium	--	33	--	--	--	--	--	--	--	2,000 <sup>14</sup>	48
Chromium, Hexavalent	--	--	--	--	--	--	--	--	--	19	NE
Lead	--	5.4 U	--	--	5.3 U	5.3 U	--	--	--	250	24
Mercury	--	0.27 U	--	--	--	--	--	--	--	2	0.07
Selenium	--	11 U	--	--	--	--	--	--	--	400	NE
Silver	--	1.1 U	--	--	--	--	--	--	--	400	NE
VOCs <sup>7</sup> (mg/kg)											
1,1,1,2-Tetrachloroethane	0.00094 U	0.00086 U	0.00090 U	--	--	--	0.0011 U	0.00094 U	0.00089 U	38.5	N/A
1,1,1-Trichloroethane	0.00094 U	0.00086 U	0.00090 U	--	--	--	0.0011 U	0.00094 U	0.00089 U	2	
1,1,2,2-Tetrachloroethane	0.00094 U	0.00086 U	0.00090 U	--	--	--	0.0011 U	0.00094 U	0.00089 U	5	
1,1,2-Trichloroethane	0.00094 U	0.00086 U	0.00090 U	--	--	--	0.0011 U	0.00094 U	0.00089 U	17.5	
1,1-Dichloroethane	0.00094 U	0.00086 U	0.00090 U	--	--	--	0.0011 U	0.00094 U	0.00089 U	175	
1,1-Dichloroethene	0.00094 U	0.00086 U	0.00090 U	--	--	--	0.0011 U	0.00094 U	0.00089 U	4,000	
1,1-Dichloropropene	0.00094 U	0.00086 U	0.00090 U	--	--	--	0.0011 U	0.00094 U	0.00089 U	NE	
1,2,3-Trichlorobenzene	0.00094 U	0.00086 U	0.00090 U	--	--	--	0.0011 U	0.00094 U	0.00089 U	NE	
1,2,3-Trichloropropane	0.00094 U	0.00086 U	0.00090 U	--	--	--	0.0011 U	0.00094 U	0.00089 U	0.0333	
1,2,4-Trichlorobenzene	0.00094 U	0.00086 U	0.00090 U	--	--	--	0.0011 U	0.00094 U	0.00089 U	34.5	
1,2,4-Trimethylbenzene	0.00094 U	0.00086 U	0.00090 U	--	--	--	0.0011 U	0.00094 U	0.00089 U	NE	
1,2-Dibromo-3-Chloropropane	0.0047 U	0.0043 U	0.0045 U	--	--	--	0.0054 U	0.0047 U	0.0045 U	1.25	
1,2-Dibromoethane	0.00094 U	0.00086 U	0.00090 U	--	--	--	0.0011 U	0.00094 U	0.00089 U	0.005	
1,2-Dichlorobenzene (o-Dichlorobenzene)	0.00094 U	0.00086 U	0.00090 U	--	--	--	0.0011 U	0.00094 U	0.00089 U	7,200	
1,2-Dichloroethane	0.00094 U	0.00086 U	0.00090 U	--	--	--	0.0011 U	0.00094 U	0.00089 U	11	

Boring Identification	FL207-B16				FL207-B17					MTCA Screening Level <sup>12</sup>	Naturally Occurring Background Metals in Puget Sound Soils <sup>16</sup>
	FL207-B16-5-6	FL207-B16-10-11	FL207-B16-15-15.5	FL207-B16-17.5-18.5	FL207-B17-0-0.5	FL207-B17-0.5-1	FL207-B17-2.5-3.5	FL207-B17-7-8	FL207-B17-12-13		
	Sample Identification <sup>2</sup>	7/20/2018	7/20/2018	7/20/2018	7/25/2018	7/25/2018	7/25/2018	7/25/2018	7/25/2018		
	Sample Date	7/20/2018	7/20/2018	7/20/2018	7/25/2018	7/25/2018	7/25/2018	7/25/2018	7/25/2018		
	Sample Start Depth (feet bgs)	5.0	10	15	17.5	0.0	0.5	2.5	7.0		
	Sample End Depth (feet bgs)	6.0	11	15.5	18.5	0.5	1.0	3.5	8.0		
1,2-Dichloropropane	0.00094 U	0.00086 U	0.00090 U	--	--	--	0.0011 U	0.00094 U	0.00089 U	27.8	N/A
1,3,5-Trimethylbenzene	0.00094 U	0.00086 U	0.00090 U	--	--	--	0.0011 U	0.00094 U	0.00089 U	800	
1,3-Dichlorobenzene (m-Dichlorobenzene)	0.00094 U	0.00086 U	0.00090 U	--	--	--	0.0011 U	0.00094 U	0.00089 U	NE	
1,3-Dichloropropane	0.00094 U	0.00086 U	0.00090 U	--	--	--	0.0011 U	0.00094 U	0.00089 U	NE	
1,4-Dichlorobenzene (p-Dichlorobenzene)	0.00094 U	0.00086 U	0.00090 U	--	--	--	0.0011 U	0.00094 U	0.00089 U	185	
2,2-Dichloropropane	0.00094 U	0.00086 U	0.00090 U	--	--	--	0.0011 U	0.00094 U	0.00089 U	NE	
2-Butanone (MEK)	0.0047 U	0.0043 U	0.0045 U	--	--	--	0.0054 U	0.0047 U	0.0045 U	48,000	
2-Chloroethyl vinyl ether	0.0047 U	0.0043 U	0.0045 U	--	--	--	0.0054 U	0.0047 U	0.0045 U	NE	
2-Chlorotoluene	0.00094 U	0.00086 U	0.00090 U	--	--	--	0.0011 U	0.00094 U	0.00089 U	1,600	
2-Hexanone	0.0047 U	0.0043 U	0.0045 U	--	--	--	0.0054 U	0.0047 U	0.0045 U	NE	
4-Chlorotoluene	0.00094 U	0.00086 U	0.00090 U	--	--	--	0.0011 U	0.00094 U	0.00089 U	NE	
4-Methyl-2-Pentanone (Methyl isobutyl ketone)	0.0047 U	0.0043 U	0.0045 U	--	--	--	0.0054 U	0.0047 U	0.0045 U	6,400	
Acetone <sup>8</sup>	0.0094 U	0.0086 U	0.0090 U	--	--	--	0.011 U	0.0094 U	0.0089 U	72,000	
Benzene	0.00094 U	0.00086 U	0.00090 U	--	--	--	0.0011 U	0.00094 U	0.00089 U	0.03	
Bromobenzene	0.00094 U	0.00086 U	0.00090 U	--	--	--	0.0011 U	0.00094 U	0.00089 U	NE	
Bromochloromethane	0.00094 U	0.00086 U	0.00090 U	--	--	--	0.0011 U	0.00094 U	0.00089 U	NE	
Bromodichloromethane	0.00094 U	0.00086 U	0.00090 U	--	--	--	0.0011 U	0.00094 U	0.00089 U	16.1	
Bromoform (Tribromomethane)	0.0047 U	0.0043 U	0.0045 U	--	--	--	0.0054 U	0.0047 U	0.0045 U	127	
Bromomethane	0.00094 U	0.00086 U	0.00090 U	--	--	--	0.0011 U	0.00094 U	0.00089 U	112	
Carbon Disulfide	0.00094 U	0.00086 U	0.00090 U	--	--	--	0.0011 U	0.00094 U	0.00089 U	8,000	
Carbon Tetrachloride	0.00094 U	0.00086 U	0.00090 U	--	--	--	0.0011 U	0.00094 U	0.00089 U	14.3	
Chlorobenzene	0.00094 U	0.00086 U	0.00090 U	--	--	--	0.0011 U	0.00094 U	0.00089 U	1,600	
Chloroethane	0.0047 U	0.0043 U	0.0045 U	--	--	--	0.0054 U	0.0047 U	0.0045 U	NE	
Chloroform	0.00094 U	0.00086 U	0.00090 U	--	--	--	0.0011 U	0.00094 U	0.00089 U	32.3	
Chloromethane	0.0047 U	0.0043 U	0.0045 U	--	--	--	0.0054 U	0.0047 U	0.0045 U	NE	
cis-1,2-Dichloroethene	0.00094 U	0.00086 U	0.00090 U	--	--	--	0.0011 U	0.00094 U	0.00089 U	160	
cis-1,3-Dichloropropene	0.00094 U	0.00086 U	0.00090 U	--	--	--	0.0011 U	0.00094 U	0.00089 U	NE	
Dibromochloromethane	0.00094 U	0.00086 U	0.00090 U	--	--	--	0.0011 U	0.00094 U	0.00089 U	11.9	
Dibromomethane	0.00094 U	0.00086 U	0.00090 U	--	--	--	0.0011 U	0.00094 U	0.00089 U	800	
Dichlorodifluoromethane (CFC-12)	0.00094 U	0.00086 U	0.00090 U	--	--	--	0.0011 U	0.00094 U	0.00089 U	16,000	
Ethylbenzene	0.00094 U	0.00086 U	0.00090 U	--	--	--	0.0011 U	0.00094 U	0.00089 U	6	
Hexachlorobutadiene	0.0047 U	0.0043 U	0.0045 U	--	--	--	0.0054 U	0.0047 U	0.0045 U	12.8	
Isopropylbenzene (Cumene)	0.00094 U	0.00086 U	0.00090 U	--	--	--	0.0011 U	0.00094 U	0.00089 U	8,000	
Methyl Iodide (Iodomethane)	0.0047 U	0.0043 U	0.0045 U	--	--	--	0.0054 U	0.0047 U	0.0045 U	NE	
Methyl t-butyl ether	0.00094 U	0.00086 U	0.00090 U	--	--	--	0.0011 U	0.00094 U	0.00089 U	0.1	
Methylene Chloride	0.0047 U	0.0043 U	0.0045 U	--	--	--	0.0054 U	0.0047 U	0.0045 U	0.02	
Naphthalene	0.00094 U	0.00086 U	0.00090 U	--	--	--	0.0011 U	0.00094 U	0.00089 U	5	
n-Butylbenzene	0.00094 U	0.00086 U	0.00090 U	--	--	--	0.0011 U	0.00094 U	0.00089 U	4,000	
n-Propylbenzene	0.00094 U	0.00086 U	0.00090 U	--	--	--	0.0011 U	0.00094 U	0.00089 U	8,000	

Boring Identification	FL207-B16				FL207-B17					MTCA Screening Level <sup>12</sup>	Naturally Occurring Background Metals in Puget Sound Soils <sup>16</sup>
Sample Identification <sup>2</sup>	FL207-B16-5-6	FL207-B16-10-11	FL207-B16-15-15.5	FL207-B16-17.5-18.5	FL207-B17-0-0.5	FL207-B17-0.5-1	FL207-B17-2.5-3.5	FL207-B17-7-8	FL207-B17-12-13		
Sample Date	7/20/2018	7/20/2018	7/20/2018	7/20/2018	7/25/2018	7/25/2018	7/25/2018	7/25/2018	7/25/2018		
Sample Start Depth (feet bgs)	5.0	10	15	17.5	0.0	0.5	2.5	7.0	12		
Sample End Depth (feet bgs)	6.0	11	15.5	18.5	0.5	1.0	3.5	8.0	13		
p-Isopropyltoluene	0.00094 U	0.00086 U	0.00090 U	--	--	--	0.0011 U	0.00094 U	0.00089 U	NE	N/A
Sec-Butylbenzene	0.00094 U	0.00086 U	0.00090 U	--	--	--	0.0011 U	0.00094 U	0.00089 U	8,000	
Styrene	0.00094 U	0.00086 U	0.00090 U	--	--	--	0.0011 U	0.00094 U	0.00089 U	16,000	
Tert-Butylbenzene	0.00094 U	0.00086 U	0.00090 U	--	--	--	0.0011 U	0.00094 U	0.00089 U	8,000	
Tetrachloroethene	0.00094 U	0.00086 U	0.00090 U	--	--	--	0.0011 U	0.00094 U	0.00089 U	0.05	
Toluene	0.0047 U	0.0043 U	0.0045 U	--	--	--	0.0054 U	0.0047 U	0.0045 U	7	
Trans-1,2-Dichloroethene	0.00094 U	0.00086 U	0.00090 U	--	--	--	0.0011 U	0.00094 U	0.00089 U	1,600	
Trans-1,3-Dichloropropene	0.00094 U	0.00086 U	0.00090 U	--	--	--	0.0011 U	0.00094 U	0.00089 U	NE	
Trichloroethene	0.00094 U	0.00086 U	0.00090 U	--	--	--	0.0011 U	0.00094 U	0.00089 U	0.03	
Trichlorofluoromethane (CFC-11)	0.00094 U	0.00086 U	0.00090 U	--	--	--	0.0011 U	0.00094 U	0.00089 U	24,000	
Vinyl Acetate	0.0047 U	0.0043 U	0.0045 U	--	--	--	0.0054 U	0.0047 U	0.0045 U	80,000	
Vinyl Chloride	0.00094 U	0.00086 U	0.00090 U	--	--	--	0.0011 U	0.00094 U	0.00089 U	240	
Xylene, m-,p-	0.0019 U	0.0017 U	0.0018 U	--	--	--	0.0021 U	0.0019 U	0.0018 U	9	
Xylene, o-	0.00094 U	0.00086 U	0.00090 U	--	--	--	0.0011 U	0.00094 U	0.00089 U		
Total Xylenes <sup>9</sup>	0.0019 U	0.0017 U	0.0018 U	--	--	--	0.0021 U	0.0019 U	0.0018 U		
PAHs <sup>10</sup> (mg/kg)											
1-Methylnaphthalene	--	0.0072 U	--	--	--	--	--	--	--	5	N/A
2-Methylnaphthalene	--	0.0072 U	--	--	--	--	--	--	--		
Naphthalene	--	0.0072 U	--	--	--	--	--	--	--		
Total Naphthalenes <sup>11</sup>	--	0.0072 U	--	--	--	--	--	--	--		
Acenaphthene	--	0.0072 U	--	--	--	--	--	--	--	4,800	
Acenaphthylene	--	0.0072 U	--	--	--	--	--	--	--	NE	
Anthracene	--	0.0072 U	--	--	--	--	--	--	--	24,000	
Benzo(a)anthracene	--	0.0072 U	--	--	--	--	--	--	--	See cPAHs	
Benzo(a)pyrene	--	0.0072 U	--	--	--	--	--	--	--	See cPAHs	
Benzo(b)fluoranthene	--	0.0072 U	--	--	--	--	--	--	--	See cPAHs	
Benzo(g,h,i)perylene	--	0.0072 U	--	--	--	--	--	--	--	NE	
Benzo(j,k)fluoranthene	--	0.0072 U	--	--	--	--	--	--	--	See cPAHs	
Chrysene	--	0.0072 U	--	--	--	--	--	--	--	See cPAHs	
Dibenzo(a,h)anthracene	--	0.0072 U	--	--	--	--	--	--	--	See cPAHs	
Fluoranthene	--	0.0072 U	--	--	--	--	--	--	--	3,200	
Fluorene	--	0.0072 U	--	--	--	--	--	--	--	3,200	
Indeno(1,2,3-c,d)pyrene	--	0.0072 U	--	--	--	--	--	--	--	See cPAHs	
Phenanthrene	--	0.0072 U	--	--	--	--	--	--	--	NE	
Pyrene	--	0.0072 U	--	--	--	--	--	--	--	2,400	
cPAHs (benzo(a)pyrene TEC) <sup>15</sup>	--	0.0054 U	--	--	--	--	--	--	--	0.1	

Table 1

Summary of Soil Chemical Analytical Results<sup>1</sup>  
Sound Transit - Federal Way Link Extension FL-207  
Federal Way, Washington

Boring Identification Sample Identification <sup>2</sup> Sample Date Sample Start Depth (feet bgs) Sample End Depth (feet bgs)	FL207-B18									MTCA Screening Level <sup>12</sup>	Naturally Occurring Background Metals in Puget Sound Soils <sup>16</sup>
	FL207-B18-0-0.5	FL207-B18-0.5-1	FL207-B18-2.5-3	FL207-B18-5-6	FL207-B18-7.5-8.5	FL207-B18-10-10.5	FL207-B18-13-14	FL207-B18-15.5-16.5	FL207-B18-20-20.5		
	7/23/2018	7/23/2018	7/23/2018	7/23/2018	7/23/2018	7/23/2018	7/23/2018	7/23/2018	7/23/2018		
	0.0	0.5	2.5	5.0	7.5	10	13	15.5	20		
	0.5	1.0	3.0	6.0	8.5	10.5	14	16.5	20.5		
NWTPH-HCID <sup>3</sup> (mg/kg)											
Gasoline-range hydrocarbons	--	49 U	--	120 U	--	22 U	--	22 U	22 U	30/100 <sup>13</sup>	N/A
Diesel-range hydrocarbons	--	Detected	--	Detected	--	54 U	--	54 U	56 U	2,000	
Lube Oil-range Hydrocarbons	--	Detected	--	Detected	--	110 U	--	110 U	110 U	2,000	
NWTPH-Gx <sup>4</sup> (mg/kg)											
Gasoline-range hydrocarbons	--	--	4.7 U	--	--	--	--	--	--	30/100 <sup>13</sup>	N/A
NWTPH-Dx <sup>5</sup> (mg/kg)											
Diesel-range hydrocarbons	--	3,000	130 U	160	27 U	--	--	--	--	2,000	N/A
Lube Oil-range Hydrocarbons	--	270	870	110	55 U	--	--	--	--	2,000	
Metals <sup>6</sup> (mg/kg)											
Arsenic	5.5 U	5.5 U	--	5.4 U	--	5.4 U	--	5.4 U	--	20	7
Barium	--	67	--	61	--	46	--	47	--	16,000	NE
Cadmium	--	0.55 U	--	0.54 U	--	0.54 U	--	0.54 U	--	2	1
Chromium	--	32	--	30	--	27	--	30	--	2,000 <sup>14</sup>	48
Chromium, Hexavalent	--	--	--	--	--	--	--	--	--	19	NE
Lead	5.5 U	5.5 U	--	5.4 U	--	5.4 U	--	5.4 U	--	250	24
Mercury	--	0.28 U	--	0.27 U	--	0.27 U	--	0.27 U	--	2	0.07
Selenium	--	11 U	--	11 U	--	11 U	--	11 U	--	400	NE
Silver	--	1.1 U	--	1.1 U	--	1.1 U	--	1.1 U	--	400	NE
VOCs <sup>7</sup> (mg/kg)											
1,1,1,2-Tetrachloroethane	--	0.0010 U	0.0013 U	0.00089 U	--	0.0012 U	0.00090 U	0.00086 U	0.0010 U	38.5	N/A
1,1,1-Trichloroethane	--	0.0010 U	0.0013 U	0.00089 U	--	0.0012 U	0.00090 U	0.00086 U	0.0010 U	2	
1,1,2,2-Tetrachloroethane	--	0.0010 U	0.0013 U	0.00089 U	--	0.0012 U	0.00090 U	0.00086 U	0.0010 U	5	
1,1,2-Trichloroethane	--	0.0010 U	0.0013 U	0.00089 U	--	0.0012 U	0.00090 U	0.00086 U	0.0010 U	17.5	
1,1-Dichloroethane	--	0.0010 U	0.0013 U	0.00089 U	--	0.0012 U	0.00090 U	0.00086 U	0.0010 U	175	
1,1-Dichloroethene	--	0.0010 U	0.0013 U	0.00089 U	--	0.0012 U	0.00090 U	0.00086 U	0.0010 U	4,000	
1,1-Dichloropropene	--	0.0010 U	0.0013 U	0.00089 U	--	0.0012 U	0.00090 U	0.00086 U	0.0010 U	NE	
1,2,3-Trichlorobenzene	--	0.0010 U	0.0013 U	0.00089 U	--	0.0012 U	0.00090 U	0.00086 U	0.0010 U	NE	
1,2,3-Trichloropropane	--	0.0010 U	0.0013 U	0.00089 U	--	0.0012 U	0.00090 U	0.00086 U	0.0010 U	0.0333	
1,2,4-Trichlorobenzene	--	0.0010 U	0.0013 U	0.00089 U	--	0.0012 U	0.00090 U	0.00086 U	0.0010 U	34.5	
1,2,4-Trimethylbenzene	--	0.0010 U	0.0013 U	0.0012	--	0.0012 U	0.00090 U	0.00086 U	0.0010 U	NE	
1,2-Dibromo-3-Chloropropane	--	0.0051 U	0.0066 U	0.0045 U	--	0.0058 U	0.0045 U	0.0043 U	0.0050 U	1.25	
1,2-Dibromoethane	--	0.0010 U	0.0013 U	0.00089 U	--	0.0012 U	0.00090 U	0.00086 U	0.0010 U	0.005	
1,2-Dichlorobenzene (o-Dichlorobenzene)	--	0.0010 U	0.0013 U	0.00089 U	--	0.0012 U	0.00090 U	0.00086 U	0.0010 U	7,200	
1,2-Dichloroethane	--	0.0010 U	0.0013 U	0.00089 U	--	0.0012 U	0.00090 U	0.00086 U	0.0010 U	11	

Boring Identification	FL207-B18									MTCA Screening Level <sup>12</sup>	Naturally Occurring Background Metals in Puget Sound Soils <sup>16</sup>
Sample Identification <sup>2</sup>	FL207-B18-0-0.5	FL207-B18-0.5-1	FL207-B18-2.5-3	FL207-B18-5-6	FL207-B18-7.5-8.5	FL207-B18-10-10.5	FL207-B18-13-14	FL207-B18-15.5-16.5	FL207-B18-20-20.5		
Sample Date	7/23/2018	7/23/2018	7/23/2018	7/23/2018	7/23/2018	7/23/2018	7/23/2018	7/23/2018	7/23/2018		
Sample Start Depth (feet bgs)	0.0	0.5	2.5	5.0	7.5	10	13	15.5	20		
Sample End Depth (feet bgs)	0.5	1.0	3.0	6.0	8.5	10.5	14	16.5	20.5		
1,2-Dichloropropane	--	0.0010 U	0.0013 U	0.00089 U	--	0.0012 U	0.00090 U	0.00086 U	0.0010 U	27.8	N/A
1,3,5-Trimethylbenzene	--	0.0010 U	0.0013 U	0.00089 U	--	0.0012 U	0.00090 U	0.00086 U	0.0010 U	800	
1,3-Dichlorobenzene (m-Dichlorobenzene)	--	0.0010 U	0.0013 U	0.00089 U	--	0.0012 U	0.00090 U	0.00086 U	0.0010 U	NE	
1,3-Dichloropropane	--	0.0010 U	0.0013 U	0.00089 U	--	0.0012 U	0.00090 U	0.00086 U	0.0010 U	NE	
1,4-Dichlorobenzene (p-Dichlorobenzene)	--	0.0010 U	0.0013 U	0.00089 U	--	0.0012 U	0.00090 U	0.00086 U	0.0010 U	185	
2,2-Dichloropropane	--	0.0010 U	0.0013 U	0.00089 U	--	0.0012 U	0.00090 U	0.00086 U	0.0010 U	NE	
2-Butanone (MEK)	--	0.0051 U	0.0066 U	0.0045 U	--	0.0058 U	0.0045 U	0.0043 U	0.0050 U	48,000	
2-Chloroethyl vinyl ether	--	0.0051 U	0.0066 U	0.0045 U	--	0.0058 U	0.0045 U	0.0043 U	0.0050 U	NE	
2-Chlorotoluene	--	0.0010 U	0.0013 U	0.00089 U	--	0.0012 U	0.00090 U	0.00086 U	0.0010 U	1,600	
2-Hexanone	--	0.0070 U	0.0089 U	0.0061 U	--	0.0078 U	0.0061 U	0.0059 U	0.0068 U	NE	
4-Chlorotoluene	--	0.0010 U	0.0013 U	0.00089 U	--	0.0012 U	0.00090 U	0.00086 U	0.0010 U	NE	
4-Methyl-2-Pentanone (Methyl isobutyl ketone)	--	0.0051 U	0.0066 U	0.0045 U	--	0.0058 U	0.0045 U	0.0043 U	0.0050 U	6,400	
Acetone <sup>8</sup>	--	<b>0.0067</b>	0.0066 U	<b>0.042</b>	--	0.0058 U	0.0045 U	0.0043 U	0.0050 U	72,000	
Benzene	--	0.0010 U	0.0013 U	0.00089 U	--	0.0012 U	0.00090 U	0.00086 U	0.0010 U	0.03	
Bromobenzene	--	0.0010 U	0.0013 U	0.00089 U	--	0.0012 U	0.00090 U	0.00086 U	0.0010 U	NE	
Bromochloromethane	--	0.0010 U	0.0013 U	0.00089 U	--	0.0012 U	0.00090 U	0.00086 U	0.0010 U	NE	
Bromodichloromethane	--	0.0010 U	0.0013 U	0.00089 U	--	0.0012 U	0.00090 U	0.00086 U	0.0010 U	16.1	
Bromoform (Tribromomethane)	--	0.0051 U	0.0066 U	0.0045 U	--	0.0058 U	0.0045 U	0.0043 U	0.0050 U	127	
Bromomethane	--	0.0010 U	0.0013 U	0.00089 U	--	0.0012 U	0.00090 U	0.00086 U	0.0010 U	112	
Carbon Disulfide	--	0.0010 U	0.0013 U	0.00089 U	--	0.0012 U	0.00090 U	0.00086 U	0.0010 U	8,000	
Carbon Tetrachloride	--	0.0010 U	0.0013 U	0.00089 U	--	0.0012 U	0.00090 U	0.00086 U	0.0010 U	14.3	
Chlorobenzene	--	0.0010 U	0.0013 U	0.00089 U	--	0.0012 U	0.00090 U	0.00086 U	0.0010 U	1,600	
Chloroethane	--	0.0051 U	0.0066 U	0.0045 U	--	0.0058 U	0.0045 U	0.0043 U	0.0050 U	NE	
Chloroform	--	0.0010 U	0.0013 U	0.00089 U	--	0.0012 U	0.00090 U	0.00086 U	0.0010 U	32.3	
Chloromethane	--	0.0051 U	0.0066 U	0.0045 U	--	0.0058 U	0.0045 U	0.0043 U	0.0050 U	NE	
cis-1,2-Dichloroethene	--	0.0010 U	0.0013 U	0.00089 U	--	0.0012 U	0.00090 U	0.00086 U	0.0010 U	160	
cis-1,3-Dichloropropene	--	0.0010 U	0.0013 U	0.00089 U	--	0.0012 U	0.00090 U	0.00086 U	0.0010 U	NE	
Dibromochloromethane	--	0.0010 U	0.0013 U	0.00089 U	--	0.0012 U	0.00090 U	0.00086 U	0.0010 U	11.9	
Dibromomethane	--	0.0010 U	0.0013 U	0.00089 U	--	0.0012 U	0.00090 U	0.00086 U	0.0010 U	800	
Dichlorodifluoromethane (CFC-12)	--	0.0010 U	0.0013 U	0.00089 U	--	0.0012 U	0.00090 U	0.00086 U	0.0010 U	16,000	
Ethylbenzene	--	0.0010 U	<b>0.011</b>	0.00089 U	--	0.0012 U	0.00090 U	0.00086 U	0.0010 U	6	
Hexachlorobutadiene	--	0.0051 U	0.0066 U	0.0045 U	--	0.0058 U	0.0045 U	0.0043 U	0.0050 U	12.8	
Isopropylbenzene (Cumene)	--	0.0010 U	0.0013 U	0.00089 U	--	0.0012 U	0.00090 U	0.00086 U	0.0010 U	8,000	
Methyl Iodide (Iodomethane)	--	0.0051 U	0.0066 U	0.0045 U	--	0.0058 U	0.0045 U	0.0043 U	0.0050 U	NE	
Methyl t-butyl ether	--	0.0010 U	0.0013 U	0.00089 U	--	0.0012 U	0.00090 U	0.00086 U	0.0010 U	0.1	
Methylene Chloride	--	0.0051 U	0.0066 U	0.0045 U	--	0.0058 U	0.0045 U	0.0043 U	0.0050 U	0.02	
Naphthalene	--	0.0010 U	0.0013 U	<b>0.0044</b>	--	0.0012 U	0.00090 U	0.00086 U	0.0010 U	5	
n-Butylbenzene	--	0.0010 U	0.0013 U	0.00089 U	--	0.0012 U	0.00090 U	0.00086 U	0.0010 U	4,000	
n-Propylbenzene	--	0.0010 U	0.0013 U	0.00089 U	--	0.0012 U	0.00090 U	0.00086 U	0.0010 U	8,000	



Boring Identification	FL207-B18									MTCA Screening Level <sup>12</sup>	Naturally Occurring Background Metals in Puget Sound Soils <sup>16</sup>
Sample Identification <sup>2</sup>	FL207-B18-0-0.5	FL207-B18-0.5-1	FL207-B18-2.5-3	FL207-B18-5-6	FL207-B18-7.5-8.5	FL207-B18-10-10.5	FL207-B18-13-14	FL207-B18-15.5-16.5	FL207-B18-20-20.5		
Sample Date	7/23/2018	7/23/2018	7/23/2018	7/23/2018	7/23/2018	7/23/2018	7/23/2018	7/23/2018	7/23/2018		
Sample Start Depth (feet bgs)	0.0	0.5	2.5	5.0	7.5	10	13	15.5	20		
Sample End Depth (feet bgs)	0.5	1.0	3.0	6.0	8.5	10.5	14	16.5	20.5		
p-Isopropyltoluene	--	0.0010 U	0.0013 U	0.00089 U	--	0.0012 U	0.00090 U	0.00086 U	0.0010 U	NE	N/A
Sec-Butylbenzene	--	0.0010 U	0.0013 U	0.00089 U	--	0.0012 U	0.00090 U	0.00086 U	0.0010 U	8,000	
Styrene	--	0.0010 U	0.0013 U	0.00089 U	--	0.0012 U	0.00090 U	0.00086 U	0.0010 U	16,000	
Tert-Butylbenzene	--	0.0010 U	0.0013 U	0.00089 U	--	0.0012 U	0.00090 U	0.00086 U	0.0010 U	8,000	
Tetrachloroethene	--	0.0010 U	0.0013 U	0.00089 U	--	0.0012 U	0.00090 U	0.00086 U	0.0015	0.05	
Toluene	--	0.0051 U	0.0066 U	0.0045 U	--	0.0058 U	0.0045 U	0.0043 U	0.0050 U	7	
Trans-1,2-Dichloroethene	--	0.0010 U	0.0013 U	0.00089 U	--	0.0012 U	0.00090 U	0.00086 U	0.0010 U	1,600	
Trans-1,3-Dichloropropene	--	0.0010 U	0.0013 U	0.00089 U	--	0.0012 U	0.00090 U	0.00086 U	0.0010 U	NE	
Trichloroethene	--	0.0010 U	0.0013 U	0.00089 U	--	0.0012 U	0.00090 U	0.00086 U	0.0010 U	0.03	
Trichlorofluoromethane (CFC-11)	--	0.0010 U	0.0013 U	0.00089 U	--	0.0012 U	0.00090 U	0.00086 U	0.0010 U	24,000	
Vinyl Acetate	--	0.0051 U	0.0066 U	0.0045 U	--	0.0058 U	0.0045 U	0.0043 U	0.0050 U	80,000	
Vinyl Chloride	--	0.0010 U	0.0013 U	0.00089 U	--	0.0012 U	0.00090 U	0.00086 U	0.0010 U	240	
Xylene, m-,p-	--	0.0051 U	0.050	0.0045 U	--	0.0058 U	0.0045 U	0.0043 U	0.0050 U	9	
Xylene, o-	--	0.0010 U	0.016	0.00089 U	--	0.0012 U	0.00090 U	0.00086 U	0.0010 U		
Total Xylenes <sup>9</sup>	--	0.0051 U	0.066	0.0045 U	--	0.0058 U	0.0045 U	0.0043 U	0.0050 U		
PAHs <sup>10</sup> (mg/kg)											
1-Methylnaphthalene	--	0.018 U	--	0.37	--	0.0072 U	--	0.0072 U	--	5	N/A
2-Methylnaphthalene	--	0.0091 U	--	0.37	--	0.0072 U	--	0.0072 U	--		
Naphthalene	--	0.017 U	--	0.17	--	0.0072 U	--	0.0072 U	--		
Total Naphthalenes <sup>11</sup>	--	0.017 U	--	0.91	--	0.0072 U	--	0.0072 U	--		
Acenaphthene	--	0.019 U	--	0.032	--	0.0072 U	--	0.0072 U	--	4,800	
Acenaphthylene	--	0.027 U	--	0.019	--	0.0072 U	--	0.0072 U	--	NE	
Anthracene	--	0.029 U	--	0.0076	--	0.0072 U	--	0.0072 U	--	24,000	
Benzo(a)anthracene	--	0.0074 U	--	0.0073 U	--	0.0072 U	--	0.0072 U	--	See cPAHs	
Benzo(a)pyrene	--	0.0074 U	--	0.0073 U	--	0.0072 U	--	0.0072 U	--	See cPAHs	
Benzo(b)fluoranthene	--	0.0074 U	--	0.0073 U	--	0.0072 U	--	0.0072 U	--	See cPAHs	
Benzo(g,h,i)perylene	--	0.0074 U	--	0.0073 U	--	0.0072 U	--	0.0072 U	--	NE	
Benzo(j,k)fluoranthene	--	0.0074 U	--	0.0073 U	--	0.0072 U	--	0.0072 U	--	See cPAHs	
Chrysene	--	0.0074 U	--	0.0073 U	--	0.0072 U	--	0.0072 U	--	See cPAHs	
Dibenzo(a,h)anthracene	--	0.0074 U	--	0.0073 U	--	0.0072 U	--	0.0072 U	--	See cPAHs	
Fluoranthene	--	0.0074 U	--	0.0073 U	--	0.0072 U	--	0.0072 U	--	3,200	
Fluorene	--	0.056	--	0.10	--	0.0072 U	--	0.0072 U	--	3,200	
Indeno(1,2,3-c,d)pyrene	--	0.0074 U	--	0.0073 U	--	0.0072 U	--	0.0072 U	--	See cPAHs	
Phenanthrene	--	0.081	--	0.085	--	0.0072 U	--	0.0072 U	--	NE	
Pyrene	--	0.017	--	0.0085	--	0.0072 U	--	0.0072 U	--	2,400	
cPAHs (benzo(a)pyrene TEC) <sup>15</sup>	--	0.0056 U	--	0.0055 U	--	0.0054 U	--	0.0054 U	--	0.1	

Table 1

Summary of Soil Chemical Analytical Results<sup>1</sup>  
Sound Transit - Federal Way Link Extension FL-207  
Federal Way, Washington

Boring Identification	FL207-B19									MTCA Screening Level <sup>12</sup>	Naturally Occurring Background Metals in Puget Sound Soils <sup>16</sup>
Sample Identification <sup>2</sup>	FL207-B19-0-0.5	FL207-B19-5-6	FL207-B19-10-11	FL207-B19-15-15.5	FL207-B19-17.5-18	FL207-B19-20.0-20.5	FL207-B19-22.5-23	FL207-B19-25-25.5	FL207-B19-30-30.5		
Sample Date	7/24/2018	7/24/2018	7/24/2018	7/24/2018	7/24/2018	7/24/2018	7/24/2018	7/24/2018	7/24/2018		
Sample Start Depth (feet bgs)	0.0	5.0	10	15	17.5	20	22.5	25	30		
Sample End Depth (feet bgs)	0.5	6.0	11	15.5	18	20.5	23	25.5	30.5		
NWTPH-HCID <sup>3</sup> (mg/kg)											
Gasoline-range hydrocarbons	--	22 U	22 U	22 U	22 U	21 U	21 U	22 U	21 U	30/100 <sup>13</sup>	N/A
Diesel-range hydrocarbons	--	54 U	54 U	55 U	56 U	53 U	53 U	54 U	54 U	2,000	
Lube Oil-range Hydrocarbons	--	110 U	110 U	110 U	110 U	110 U	110 U	110 U	110 U	2,000	
NWTPH-Gx <sup>4</sup> (mg/kg)											
Gasoline-range hydrocarbons	--	--	--	--	--	--	--	--	--	30/100 <sup>13</sup>	N/A
NWTPH-Dx <sup>5</sup> (mg/kg)											
Diesel-range hydrocarbons	--	--	--	--	--	--	--	--	--	2,000	N/A
Lube Oil-range Hydrocarbons	--	--	--	--	--	--	--	--	--	2,000	
Metals <sup>6</sup> (mg/kg)											
Arsenic	5.4 U	--	5.4 U	--	--	--	--	--	--	20	7
Barium	--	--	33	--	--	--	--	--	--	16,000	NE
Cadmium	--	--	0.54 U	--	--	--	--	--	--	2	1
Chromium	--	--	29	--	--	--	--	--	--	2,000 <sup>14</sup>	48
Chromium, Hexavalent	--	--	--	--	--	--	--	--	--	19	NE
Lead	5.4 U	--	5.4 U	--	--	--	--	--	--	250	24
Mercury	--	--	0.27 U	--	--	--	--	--	--	2	0.07
Selenium	--	--	11 U	--	--	--	--	--	--	400	NE
Silver	--	--	1.1 U	--	--	--	--	--	--	400	NE
VOCs <sup>7</sup> (mg/kg)											
1,1,1,2-Tetrachloroethane	--	0.0010 U	0.0010 U	--	--	--	--	--	--	38.5	N/A
1,1,1-Trichloroethane	--	0.0010 U	0.0010 U	--	--	--	--	--	--	2	
1,1,2,2-Tetrachloroethane	--	0.0010 U	0.0010 U	--	--	--	--	--	--	5	
1,1,2-Trichloroethane	--	0.0010 U	0.0010 U	--	--	--	--	--	--	17.5	
1,1-Dichloroethane	--	0.0010 U	0.0010 U	--	--	--	--	--	--	175	
1,1-Dichloroethene	--	0.0010 U	0.0010 U	--	--	--	--	--	--	4,000	
1,1-Dichloropropene	--	0.0010 U	0.0010 U	--	--	--	--	--	--	NE	
1,2,3-Trichlorobenzene	--	0.0010 U	0.0010 U	--	--	--	--	--	--	NE	
1,2,3-Trichloropropane	--	0.0010 U	0.0010 U	--	--	--	--	--	--	0.0333	
1,2,4-Trichlorobenzene	--	0.0010 U	0.0010 U	--	--	--	--	--	--	34.5	
1,2,4-Trimethylbenzene	--	0.0010 U	0.0010 U	--	--	--	--	--	--	NE	
1,2-Dibromo-3-Chloropropane	--	0.0052 U	0.0051 U	--	--	--	--	--	--	1.25	
1,2-Dibromoethane	--	0.0010 U	0.0010 U	--	--	--	--	--	--	0.005	
1,2-Dichlorobenzene (o-Dichlorobenzene)	--	0.0010 U	0.0010 U	--	--	--	--	--	--	7,200	
1,2-Dichloroethane	--	0.0010 U	0.0010 U	--	--	--	--	--	--	11	

Boring Identification	FL207-B19									MTCA Screening Level <sup>12</sup>	Naturally Occurring Background Metals in Puget Sound Soils <sup>16</sup>
Sample Identification <sup>2</sup>	FL207-B19-0-0.5	FL207-B19-5-6	FL207-B19-10-11	FL207-B19-15-15.5	FL207-B19-17.5-18	FL207-B19-20.0-20.5	FL207-B19-22.5-23	FL207-B19-25-25.5	FL207-B19-30-30.5		
Sample Date	7/24/2018	7/24/2018	7/24/2018	7/24/2018	7/24/2018	7/24/2018	7/24/2018	7/24/2018	7/24/2018		
Sample Start Depth (feet bgs)	0.0	5.0	10	15	17.5	20	22.5	25	30		
Sample End Depth (feet bgs)	0.5	6.0	11	15.5	18	20.5	23	25.5	30.5		
1,2-Dichloropropane	--	0.0010 U	0.0010 U	--	--	--	--	--	--	27.8	N/A
1,3,5-Trimethylbenzene	--	0.0010 U	0.0010 U	--	--	--	--	--	--	800	
1,3-Dichlorobenzene (m-Dichlorobenzene)	--	0.0010 U	0.0010 U	--	--	--	--	--	--	NE	
1,3-Dichloropropane	--	0.0010 U	0.0010 U	--	--	--	--	--	--	NE	
1,4-Dichlorobenzene (p-Dichlorobenzene)	--	0.0010 U	0.0010 U	--	--	--	--	--	--	185	
2,2-Dichloropropane	--	0.0010 U	0.0010 U	--	--	--	--	--	--	NE	
2-Butanone (MEK)	--	0.0052 U	0.0051 U	--	--	--	--	--	--	48,000	
2-Chloroethyl vinyl ether	--	0.0052 U	0.0051 U	--	--	--	--	--	--	NE	
2-Chlorotoluene	--	0.0010 U	0.0010 U	--	--	--	--	--	--	1,600	
2-Hexanone	--	0.0052 U	0.0051 U	--	--	--	--	--	--	NE	
4-Chlorotoluene	--	0.0010 U	0.0010 U	--	--	--	--	--	--	NE	
4-Methyl-2-Pentanone (Methyl isobutyl ketone)	--	0.0052 U	0.0051 U	--	--	--	--	--	--	6,400	
Acetone <sup>8</sup>	--	0.010 U	0.010 U	--	--	--	--	--	--	72,000	
Benzene	--	0.0010 U	0.0010 U	--	--	--	--	--	--	0.03	
Bromobenzene	--	0.0010 U	0.0010 U	--	--	--	--	--	--	NE	
Bromochloromethane	--	0.0010 U	0.0010 U	--	--	--	--	--	--	NE	
Bromodichloromethane	--	0.0010 U	0.0010 U	--	--	--	--	--	--	16.1	
Bromoform (Tribromomethane)	--	0.0052 U	0.0051 U	--	--	--	--	--	--	127	
Bromomethane	--	0.0010 U	0.0010 U	--	--	--	--	--	--	112	
Carbon Disulfide	--	0.0010 U	0.0010 U	--	--	--	--	--	--	8,000	
Carbon Tetrachloride	--	0.0010 U	0.0010 U	--	--	--	--	--	--	14.3	
Chlorobenzene	--	0.0010 U	0.0010 U	--	--	--	--	--	--	1,600	
Chloroethane	--	0.0052 U	0.0051 U	--	--	--	--	--	--	NE	
Chloroform	--	0.0010 U	0.0010 U	--	--	--	--	--	--	32.3	
Chloromethane	--	0.0052 U	0.0051 U	--	--	--	--	--	--	NE	
cis-1,2-Dichloroethene	--	0.0010 U	0.0010 U	--	--	--	--	--	--	160	
cis-1,3-Dichloropropene	--	0.0010 U	0.0010 U	--	--	--	--	--	--	NE	
Dibromochloromethane	--	0.0010 U	0.0010 U	--	--	--	--	--	--	11.9	
Dibromomethane	--	0.0010 U	0.0010 U	--	--	--	--	--	--	800	
Dichlorodifluoromethane (CFC-12)	--	0.0010 U	0.0010 U	--	--	--	--	--	--	16,000	
Ethylbenzene	--	0.0010 U	0.0010 U	--	--	--	--	--	--	6	
Hexachlorobutadiene	--	0.0052 U	0.0051 U	--	--	--	--	--	--	12.8	
Isopropylbenzene (Cumene)	--	0.0010 U	0.0010 U	--	--	--	--	--	--	8,000	
Methyl Iodide (Iodomethane)	--	0.0052 U	0.0051 U	--	--	--	--	--	--	NE	
Methyl t-butyl ether	--	0.0010 U	0.0010 U	--	--	--	--	--	--	0.1	
Methylene Chloride	--	0.0052 U	0.0051 U	--	--	--	--	--	--	0.02	
Naphthalene	--	0.0010 U	0.0010 U	--	--	--	--	--	--	5	
n-Butylbenzene	--	0.0010 U	0.0010 U	--	--	--	--	--	--	4,000	
n-Propylbenzene	--	0.0010 U	0.0010 U	--	--	--	--	--	--	8,000	

Boring Identification	FL207-B19									MTCA Screening Level <sup>12</sup>	Naturally Occurring Background Metals in Puget Sound Soils <sup>16</sup>
Sample Identification <sup>2</sup>	FL207-B19-0-0.5	FL207-B19-5-6	FL207-B19-10-11	FL207-B19-15-15.5	FL207-B19-17.5-18	FL207-B19-20.0-20.5	FL207-B19-22.5-23	FL207-B19-25-25.5	FL207-B19-30-30.5		
Sample Date	7/24/2018	7/24/2018	7/24/2018	7/24/2018	7/24/2018	7/24/2018	7/24/2018	7/24/2018	7/24/2018		
Sample Start Depth (feet bgs)	0.0	5.0	10	15	17.5	20	22.5	25	30		
Sample End Depth (feet bgs)	0.5	6.0	11	15.5	18	20.5	23	25.5	30.5		
p-Isopropyltoluene	--	0.0010 U	0.0010 U	--	--	--	--	--	--	NE	N/A
Sec-Butylbenzene	--	0.0010 U	0.0010 U	--	--	--	--	--	--	8,000	
Styrene	--	0.0010 U	0.0010 U	--	--	--	--	--	--	16,000	
Tert-Butylbenzene	--	0.0010 U	0.0010 U	--	--	--	--	--	--	8,000	
Tetrachloroethene	--	0.0010 U	0.0010 U	--	--	--	--	--	--	0.05	
Toluene	--	0.0052 U	0.0051 U	--	--	--	--	--	--	7	
Trans-1,2-Dichloroethene	--	0.0010 U	0.0010 U	--	--	--	--	--	--	1,600	
Trans-1,3-Dichloropropene	--	0.0010 U	0.0010 U	--	--	--	--	--	--	NE	
Trichloroethene	--	0.0010 U	0.0010 U	--	--	--	--	--	--	0.03	
Trichlorofluoromethane (CFC-11)	--	0.0010 U	0.0010 U	--	--	--	--	--	--	24,000	
Vinyl Acetate	--	0.0052 U	0.0051 U	--	--	--	--	--	--	80,000	
Vinyl Chloride	--	0.0010 U	0.0010 U	--	--	--	--	--	--	240	
Xylene, m-,p-	--	0.0021 U	0.0020 U	--	--	--	--	--	--	9	
Xylene, o-	--	0.0010 U	0.0010 U	--	--	--	--	--	--		
Total Xylenes <sup>9</sup>	--	0.0021 U	0.0020 U	--	--	--	--	--	--		
PAHs <sup>10</sup> (mg/kg)											
1-Methylnaphthalene	--	--	0.0072 U	--	--	--	--	--	--	5	N/A
2-Methylnaphthalene	--	--	0.0072 U	--	--	--	--	--	--		
Naphthalene	--	--	0.0072 U	--	--	--	--	--	--		
Total Naphthalenes <sup>11</sup>	--	--	0.0072 U	--	--	--	--	--	--		
Acenaphthene	--	--	0.0072 U	--	--	--	--	--	--	4,800	
Acenaphthylene	--	--	0.0072 U	--	--	--	--	--	--	NE	
Anthracene	--	--	0.0072 U	--	--	--	--	--	--	24,000	
Benzo(a)anthracene	--	--	0.0072 U	--	--	--	--	--	--	See cPAHs	
Benzo(a)pyrene	--	--	0.0072 U	--	--	--	--	--	--	See cPAHs	
Benzo(b)fluoranthene	--	--	0.0072 U	--	--	--	--	--	--	See cPAHs	
Benzo(g,h,i)perylene	--	--	0.0072 U	--	--	--	--	--	--	NE	
Benzo(j,k)fluoranthene	--	--	0.0072 U	--	--	--	--	--	--	See cPAHs	
Chrysene	--	--	0.0072 U	--	--	--	--	--	--	See cPAHs	
Dibenzo(a,h)anthracene	--	--	0.0072 U	--	--	--	--	--	--	See cPAHs	
Fluoranthene	--	--	0.0072 U	--	--	--	--	--	--	3,200	
Fluorene	--	--	0.0072 U	--	--	--	--	--	--	3,200	
Indeno(1,2,3-c,d)pyrene	--	--	0.0072 U	--	--	--	--	--	--	See cPAHs	
Phenanthrene	--	--	0.0072 U	--	--	--	--	--	--	NE	
Pyrene	--	--	0.0072 U	--	--	--	--	--	--	2,400	
cPAHs (benzo(a)pyrene TEC) <sup>15</sup>	--	--	0.0054 U	--	--	--	--	--	--	0.1	

Table 1

Summary of Soil Chemical Analytical Results<sup>1</sup>  
Sound Transit - Federal Way Link Extension FL-207  
Federal Way, Washington

Boring Identification	FL207-B20				FL207-B21				MTCA Screening Level <sup>12</sup>	Naturally Occurring Background Metals in Puget Sound Soils <sup>16</sup>
Sample Identification <sup>2</sup>	FL207-B20-5-6	FL207-B20-12.5-13.5	FL207-B20-20-20.5	FL207-B20-30-30.5	FL207-B21-5-5.5	FL207-B21-7.5-8.5	FL207-B21-10-11	FL207-B21-12.5-13.5		
Sample Date	7/24/2018	7/24/2018	7/24/2018	7/24/2018	7/20/2018	7/20/2018	7/20/2018	7/20/2018		
Sample Start Depth (feet bgs)	5.0	12.5	20	30	5.0	7.5	10	12.5		
Sample End Depth (feet bgs)	6.0	13.5	20.5	30.5	5.5	8.5	11	13.5		
NWTPH-HCID <sup>3</sup> (mg/kg)										
Gasoline-range hydrocarbons	21 U	22 U	24 U	21 U	21 U	22 U	22 U	22 U	30/100 <sup>13</sup>	N/A
Diesel-range hydrocarbons	54 U	56 U	60 U	53 U	53 U	55 U	54 U	55 U	2,000	
Lube Oil-range Hydrocarbons	110 U	110 U	120 U	110 U	110 U	110 U	110 U	110 U	2,000	
NWTPH-Gx <sup>4</sup> (mg/kg)										
Gasoline-range hydrocarbons	--	--	--	--	--	--	--	--	30/100 <sup>13</sup>	N/A
NWTPH-Dx <sup>5</sup> (mg/kg)										
Diesel-range hydrocarbons	--	--	--	--	--	--	--	--	2,000	N/A
Lube Oil-range Hydrocarbons	--	--	--	--	--	--	--	--	2,000	
Metals <sup>6</sup> (mg/kg)										
Arsenic	--	5.6 U	--	--	5.3 U	--	--	--	20	7
Barium	--	49	--	--	61	--	--	--	16,000	NE
Cadmium	--	0.56 U	--	--	0.53 U	--	--	--	2	1
Chromium	--	26	--	--	35	--	--	--	2,000 <sup>14</sup>	48
Chromium, Hexavalent	--	--	--	--	--	--	--	--	19	NE
Lead	--	5.6 U	--	--	5.3 U	--	--	--	250	24
Mercury	--	0.28 U	--	--	0.26 U	--	--	--	2	0.07
Selenium	--	11 U	--	--	11 U	--	--	--	400	NE
Silver	--	1.1 U	--	--	1.1 U	--	--	--	400	NE
VOCs <sup>7</sup> (mg/kg)										
1,1,1,2-Tetrachloroethane	0.00085 U	0.00089 U	--	--	0.0013 U	--	--	--	38.5	N/A
1,1,1-Trichloroethane	0.00085 U	0.00089 U	--	--	0.0013 U	--	--	--	2	
1,1,2,2-Tetrachloroethane	0.00085 U	0.00089 U	--	--	0.0013 U	--	--	--	5	
1,1,2-Trichloroethane	0.00085 U	0.00089 U	--	--	0.0013 U	--	--	--	17.5	
1,1-Dichloroethane	0.00085 U	0.00089 U	--	--	0.0013 U	--	--	--	175	
1,1-Dichloroethene	0.00085 U	0.00089 U	--	--	0.0013 U	--	--	--	4,000	
1,1-Dichloropropene	0.00085 U	0.00089 U	--	--	0.0013 U	--	--	--	NE	
1,2,3-Trichlorobenzene	0.00085 U	0.00089 U	--	--	0.0013 U	--	--	--	NE	
1,2,3-Trichloropropane	0.00085 U	0.00089 U	--	--	0.0013 U	--	--	--	0.0333	
1,2,4-Trichlorobenzene	0.00085 U	0.00089 U	--	--	0.0013 U	--	--	--	34.5	
1,2,4-Trimethylbenzene	0.00085 U	0.00089 U	--	--	0.0013 U	--	--	--	NE	
1,2-Dibromo-3-Chloropropane	0.0043 U	0.0045 U	--	--	0.0063 U	--	--	--	1.25	
1,2-Dibromoethane	0.00085 U	0.00089 U	--	--	0.0013 U	--	--	--	0.005	
1,2-Dichlorobenzene (o-Dichlorobenzene)	0.00085 U	0.00089 U	--	--	0.0013 U	--	--	--	7,200	
1,2-Dichloroethane	0.00085 U	0.00089 U	--	--	0.0013 U	--	--	--	11	

Boring Identification	FL207-B20				FL207-B21				MTCA Screening Level <sup>12</sup>	Naturally Occurring Background Metals in Puget Sound Soils <sup>16</sup>
Sample Identification <sup>2</sup>	FL207-B20-5-6	FL207-B20-12.5-13.5	FL207-B20-20-20.5	FL207-B20-30-30.5	FL207-B21-5-5.5	FL207-B21-7.5-8.5	FL207-B21-10-11	FL207-B21-12.5-13.5		
Sample Date	7/24/2018	7/24/2018	7/24/2018	7/24/2018	7/20/2018	7/20/2018	7/20/2018	7/20/2018		
Sample Start Depth (feet bgs)	5.0	12.5	20	30	5.0	7.5	10	12.5		
Sample End Depth (feet bgs)	6.0	13.5	20.5	30.5	5.5	8.5	11	13.5		
1,2-Dichloropropane	0.00085 U	0.00089 U	--	--	0.0013 U	--	--	--	27.8	N/A
1,3,5-Trimethylbenzene	0.00085 U	0.00089 U	--	--	0.0013 U	--	--	--	800	
1,3-Dichlorobenzene (m-Dichlorobenzene)	0.00085 U	0.00089 U	--	--	0.0013 U	--	--	--	NE	
1,3-Dichloropropane	0.00085 U	0.00089 U	--	--	0.0013 U	--	--	--	NE	
1,4-Dichlorobenzene (p-Dichlorobenzene)	0.00085 U	0.00089 U	--	--	0.0013 U	--	--	--	185	
2,2-Dichloropropane	0.00085 U	0.00089 U	--	--	0.0013 U	--	--	--	NE	
2-Butanone (MEK)	0.0043 U	0.0045 U	--	--	0.0063 U	--	--	--	48,000	
2-Chloroethyl vinyl ether	0.0043 U	0.0045 U	--	--	0.0063 U	--	--	--	NE	
2-Chlorotoluene	0.00085 U	0.00089 U	--	--	0.0013 U	--	--	--	1,600	
2-Hexanone	0.0043 U	0.0045 U	--	--	0.0063 U	--	--	--	NE	
4-Chlorotoluene	0.00085 U	0.00089 U	--	--	0.0013 U	--	--	--	NE	
4-Methyl-2-Pentanone (Methyl isobutyl ketone)	0.0043 U	0.0045 U	--	--	0.0063 U	--	--	--	6,400	
Acetone <sup>8</sup>	0.0085 U	0.0089 U	--	--	0.013 U	--	--	--	72,000	
Benzene	0.00085 U	0.00089 U	--	--	0.0013 U	--	--	--	0.03	
Bromobenzene	0.00085 U	0.00089 U	--	--	0.0013 U	--	--	--	NE	
Bromochloromethane	0.00085 U	0.00089 U	--	--	0.0013 U	--	--	--	NE	
Bromodichloromethane	0.00085 U	0.00089 U	--	--	0.0013 U	--	--	--	16.1	
Bromoform (Tribromomethane)	0.0043 U	0.0045 U	--	--	0.0063 U	--	--	--	127	
Bromomethane	0.00085 U	0.00089 U	--	--	0.0013 U	--	--	--	112	
Carbon Disulfide	0.00085 U	0.00089 U	--	--	0.0013 U	--	--	--	8,000	
Carbon Tetrachloride	0.00085 U	0.00089 U	--	--	0.0013 U	--	--	--	14.3	
Chlorobenzene	0.00085 U	0.00089 U	--	--	0.0013 U	--	--	--	1,600	
Chloroethane	0.0043 U	0.0045 U	--	--	0.0063 U	--	--	--	NE	
Chloroform	0.00085 U	0.00089 U	--	--	0.0013 U	--	--	--	32.3	
Chloromethane	0.0043 U	0.0045 U	--	--	0.0063 U	--	--	--	NE	
cis-1,2-Dichloroethene	0.00085 U	0.00089 U	--	--	0.0013 U	--	--	--	160	
cis-1,3-Dichloropropene	0.00085 U	0.00089 U	--	--	0.0013 U	--	--	--	NE	
Dibromochloromethane	0.00085 U	0.00089 U	--	--	0.0013 U	--	--	--	11.9	
Dibromomethane	0.00085 U	0.00089 U	--	--	0.0013 U	--	--	--	800	
Dichlorodifluoromethane (CFC-12)	0.00085 U	0.00089 U	--	--	0.0013 U	--	--	--	16,000	
Ethylbenzene	0.00085 U	0.00089 U	--	--	0.0013 U	--	--	--	6	
Hexachlorobutadiene	0.0043 U	0.0045 U	--	--	0.0063 U	--	--	--	12.8	
Isopropylbenzene (Cumene)	0.00085 U	0.00089 U	--	--	0.0013 U	--	--	--	8,000	
Methyl Iodide (Iodomethane)	0.0043 U	0.0045 U	--	--	0.0063 U	--	--	--	NE	
Methyl t-butyl ether	0.00085 U	0.00089 U	--	--	0.0013 U	--	--	--	0.1	
Methylene Chloride	0.0043 U	0.0045 U	--	--	0.0063 U	--	--	--	0.02	
Naphthalene	0.00085 U	0.00089 U	--	--	0.0013 U	--	--	--	5	
n-Butylbenzene	0.00085 U	0.00089 U	--	--	0.0013 U	--	--	--	4,000	
n-Propylbenzene	0.00085 U	0.00089 U	--	--	0.0013 U	--	--	--	8,000	

Boring Identification	FL207-B20				FL207-B21				MTCA Screening Level <sup>12</sup>	Naturally Occurring Background Metals in Puget Sound Soils <sup>16</sup>
Sample Identification <sup>2</sup>	FL207-B20-5-6	FL207-B20-12.5-13.5	FL207-B20-20-20.5	FL207-B20-30-30.5	FL207-B21-5-5.5	FL207-B21-7.5-8.5	FL207-B21-10-11	FL207-B21-12.5-13.5		
Sample Date	7/24/2018	7/24/2018	7/24/2018	7/24/2018	7/20/2018	7/20/2018	7/20/2018	7/20/2018		
Sample Start Depth (feet bgs)	5.0	12.5	20	30	5.0	7.5	10	12.5		
Sample End Depth (feet bgs)	6.0	13.5	20.5	30.5	5.5	8.5	11	13.5		
p-Isopropyltoluene	0.00085 U	0.00089 U	--	--	0.0013 U	--	--	--	NE	N/A
Sec-Butylbenzene	0.00085 U	0.00089 U	--	--	0.0013 U	--	--	--	8,000	
Styrene	0.00085 U	0.00089 U	--	--	0.0013 U	--	--	--	16,000	
Tert-Butylbenzene	0.00085 U	0.00089 U	--	--	0.0013 U	--	--	--	8,000	
Tetrachloroethene	0.00085 U	0.00089 U	--	--	0.0013 U	--	--	--	0.05	
Toluene	0.0043 U	0.0045 U	--	--	0.0063 U	--	--	--	7	
Trans-1,2-Dichloroethene	0.00085 U	0.00089 U	--	--	0.0013 U	--	--	--	1,600	
Trans-1,3-Dichloropropene	0.00085 U	0.00089 U	--	--	0.0013 U	--	--	--	NE	
Trichloroethene	0.00085 U	0.00089 U	--	--	0.0013 U	--	--	--	0.03	
Trichlorofluoromethane (CFC-11)	0.00085 U	0.00089 U	--	--	0.0013 U	--	--	--	24,000	
Vinyl Acetate	0.0043 U	0.0045 U	--	--	0.0063 U	--	--	--	80,000	
Vinyl Chloride	0.00085 U	0.00089 U	--	--	0.0013 U	--	--	--	240	
Xylene, m-,p-	0.0017 U	0.0018 U	--	--	0.0025 U	--	--	--	9	
Xylene, o-	0.00085 U	0.00089 U	--	--	0.0013 U	--	--	--		
Total Xylenes <sup>9</sup>	0.0017 U	0.0018 U	--	--	0.0025 U	--	--	--		
PAHs <sup>10</sup> (mg/kg)										
1-Methylnaphthalene	--	0.0074 U	--	--	0.0070 U	--	--	--	5	N/A
2-Methylnaphthalene	--	0.0074 U	--	--	0.0070 U	--	--	--		
Naphthalene	--	0.0074 U	--	--	0.0070 U	--	--	--		
Total Naphthalenes <sup>11</sup>	--	0.0074 U	--	--	0.0070 U	--	--	--		
Acenaphthene	--	0.0074 U	--	--	0.0070 U	--	--	--	4,800	
Acenaphthylene	--	0.0074 U	--	--	0.0070 U	--	--	--	NE	
Anthracene	--	0.0074 U	--	--	0.0070 U	--	--	--	24,000	
Benzo(a)anthracene	--	0.0074 U	--	--	0.0070 U	--	--	--	See cPAHs	
Benzo(a)pyrene	--	0.0074 U	--	--	0.0070 U	--	--	--	See cPAHs	
Benzo(b)fluoranthene	--	0.0074 U	--	--	0.0070 U	--	--	--	See cPAHs	
Benzo(g,h,i)perylene	--	0.0074 U	--	--	0.0070 U	--	--	--	NE	
Benzo(j,k)fluoranthene	--	0.0074 U	--	--	0.0070 U	--	--	--	See cPAHs	
Chrysene	--	0.0074 U	--	--	0.0070 U	--	--	--	See cPAHs	
Dibenzo(a,h)anthracene	--	0.0074 U	--	--	0.0070 U	--	--	--	See cPAHs	
Fluoranthene	--	0.0074 U	--	--	0.0070 U	--	--	--	3,200	
Fluorene	--	0.0074 U	--	--	0.0070 U	--	--	--	3,200	
Indeno(1,2,3-c,d)pyrene	--	0.0074 U	--	--	0.0070 U	--	--	--	See cPAHs	
Phenanthrene	--	0.0074 U	--	--	0.0070 U	--	--	--	NE	
Pyrene	--	0.0074 U	--	--	0.0070 U	--	--	--	2,400	
cPAHs (benzo(a)pyrene TEC) <sup>15</sup>	--	0.0056 U	--	--	0.0053 U	--	--	--	0.1	

Table 1

Summary of Soil Chemical Analytical Results<sup>1</sup>  
Sound Transit - Federal Way Link Extension FL-207  
Federal Way, Washington

Boring Identification	FL207-B22					FL207-B23				MTCA Screening Level <sup>12</sup>	Naturally Occurring Background Metals in Puget Sound Soils <sup>16</sup>
Sample Identification <sup>2</sup>	FL207-B22-0-0.5	FL207-B22-2.5-3.5	FL207-B22-5-6	FL207-B22-7.5-8.5	FL207-B22-12.5-13.5	FL207-B23-0-0.5	FL207-B23-0.5-1	FL207-B23-2.5-3.5	FL207-B23-7.5-8		
Sample Date	7/19/2018	7/19/2018	7/19/2018	7/19/2018	7/19/2018	7/20/2018	7/20/2018	7/20/2018	7/20/2018		
Sample Start Depth (feet bgs)	0.0	2.5	5.0	7.5	12.5	0.0	0.5	2.5	7.5		
Sample End Depth (feet bgs)	0.5	3.5	6.0	8.5	13.5	0.5	1.0	3.5	8.0		
NWTPH-HCID <sup>3</sup> (mg/kg)											
Gasoline-range hydrocarbons	22 U	21 U	22 U	22 U	22 U	--	--	21 U	22 U	30/100 <sup>13</sup>	N/A
Diesel-range hydrocarbons	56 U	53 U	54 U	54 U	54 U	--	--	52 U	54 U	2,000	
Lube Oil-range Hydrocarbons	110 U	Detected	110 U	110 U	110 U	--	--	Detected	110 U	2,000	
NWTPH-Gx <sup>4</sup> (mg/kg)											
Gasoline-range hydrocarbons	--	--	--	--	--	--	--	--	--	30/100 <sup>13</sup>	N/A
NWTPH-Dx <sup>5</sup> (mg/kg)											
Diesel-range hydrocarbons	--	53 U	--	--	--	--	--	52 U	--	2,000	N/A
Lube Oil-range Hydrocarbons	--	500	--	--	--	--	--	440	--	2,000	
Metals <sup>6</sup> (mg/kg)											
Arsenic	5.6 U	5.2 U	--	--	--	5.3 U	5.6 U	5.2 U	--	20	7
Barium	--	63	--	--	--	--	--	69	--	16,000	NE
Cadmium	--	0.52 U	--	--	--	--	--	0.52 U	--	2	1
Chromium	--	29	--	--	--	--	--	43	--	2,000 <sup>14</sup>	48
Chromium, Hexavalent	--	--	--	--	--	--	--	1.0 U	--	19	NE
Lead	5.6 U	5.2 U	--	--	--	5.3 U	5.6 U	5.2 U	--	250	24
Mercury	--	0.26 U	--	--	--	--	--	0.26 U	--	2	0.07
Selenium	--	10 U	--	--	--	--	--	10 U	--	400	NE
Silver	--	1.0 U	--	--	--	--	--	1.0 U	--	400	NE
VOCs <sup>7</sup> (mg/kg)											
1,1,1,2-Tetrachloroethane	--	0.055 U	0.00088 U	--	0.00088 U	--	--	0.0011 U	0.00098 U	38.5	N/A
1,1,1-Trichloroethane	--	0.055 U	0.00088 U	--	0.00088 U	--	--	0.0011 U	0.00098 U	2	
1,1,2,2-Tetrachloroethane	--	0.055 U	0.00088 U	--	0.00088 U	--	--	0.0011 U	0.00098 U	5	
1,1,2-Trichloroethane	--	0.055 U	0.00088 U	--	0.00088 U	--	--	0.0011 U	0.00098 U	17.5	
1,1-Dichloroethane	--	0.055 U	0.00088 U	--	0.00088 U	--	--	0.0011 U	0.00098 U	175	
1,1-Dichloroethene	--	0.055 U	0.00088 U	--	0.00088 U	--	--	0.0011 U	0.00098 U	4,000	
1,1-Dichloropropene	--	0.055 U	0.00088 U	--	0.00088 U	--	--	0.0011 U	0.00098 U	NE	
1,2,3-Trichlorobenzene	--	0.055 U	0.00088 U	--	0.00088 U	--	--	0.0011 U	0.00098 U	NE	
1,2,3-Trichloropropane	--	0.055 U	0.00088 U	--	0.00088 U	--	--	0.0011 U	0.00098 U	0.0333	
1,2,4-Trichlorobenzene	--	0.055 U	0.00088 U	--	0.00088 U	--	--	0.0011 U	0.00098 U	34.5	
1,2,4-Trimethylbenzene	--	3.1	0.00088 U	--	0.00088 U	--	--	0.0011 U	0.00098 U	NE	
1,2-Dibromo-3-Chloropropane	--	0.28 U	0.0044 U	--	0.0044 U	--	--	0.0056 U	0.0049 U	1.25	
1,2-Dibromoethane	--	0.055 U	0.00088 U	--	0.00088 U	--	--	0.0011 U	0.00098 U	0.005	
1,2-Dichlorobenzene (o-Dichlorobenzene)	--	0.055 U	0.00088 U	--	0.00088 U	--	--	0.0011 U	0.00098 U	7,200	
1,2-Dichloroethane	--	0.055 U	0.00088 U	--	0.00088 U	--	--	0.0011 U	0.00098 U	11	



Boring Identification	FL207-B22					FL207-B23				MTCA Screening Level <sup>12</sup>	Naturally Occurring Background Metals in Puget Sound Soils <sup>16</sup>
Sample Identification <sup>2</sup>	FL207-B22-0-0.5	FL207-B22-2.5-3.5	FL207-B22-5-6	FL207-B22-7.5-8.5	FL207-B22-12.5-13.5	FL207-B23-0-0.5	FL207-B23-0.5-1	FL207-B23-2.5-3.5	FL207-B23-7.5-8		
Sample Date	7/19/2018	7/19/2018	7/19/2018	7/19/2018	7/19/2018	7/20/2018	7/20/2018	7/20/2018	7/20/2018		
Sample Start Depth (feet bgs)	0.0	2.5	5.0	7.5	12.5	0.0	0.5	2.5	7.5		
Sample End Depth (feet bgs)	0.5	3.5	6.0	8.5	13.5	0.5	1.0	3.5	8.0		
1,2-Dichloropropane	--	0.055 U	0.00088 U	--	0.00088 U	--	--	0.0011 U	0.00098 U	27.8	N/A
1,3,5-Trimethylbenzene	--	<b>0.96</b>	0.00088 U	--	0.00088 U	--	--	0.0011 U	0.00098 U	800	
1,3-Dichlorobenzene (m-Dichlorobenzene)	--	0.055 U	0.00088 U	--	0.00088 U	--	--	0.0011 U	0.00098 U	NE	
1,3-Dichloropropane	--	0.055 U	0.00088 U	--	0.00088 U	--	--	0.0011 U	0.00098 U	NE	
1,4-Dichlorobenzene (p-Dichlorobenzene)	--	0.055 U	0.00088 U	--	0.00088 U	--	--	0.0011 U	0.00098 U	185	
2,2-Dichloropropane	--	0.055 U	0.00088 U	--	0.00088 U	--	--	0.0011 U	0.00098 U	NE	
2-Butanone (MEK)	--	0.28 U	0.0044 U	--	0.0044 U	--	--	0.0056 U	0.0049 U	48,000	
2-Chloroethyl vinyl ether	--	0.28 U	0.0044 U	--	0.0044 U	--	--	0.0056 U	0.0049 U	NE	
2-Chlorotoluene	--	0.055 U	0.00088 U	--	0.00088 U	--	--	0.0011 U	0.00098 U	1,600	
2-Hexanone	--	0.28 U	0.0044 U	--	0.0044 U	--	--	0.0056 U	0.0049 U	NE	
4-Chlorotoluene	--	0.055 U	0.00088 U	--	0.00088 U	--	--	0.0011 U	0.00098 U	NE	
4-Methyl-2-Pentanone (Methyl isobutyl ketone)	--	0.28 U	0.0044 U	--	0.0044 U	--	--	0.0056 U	0.0049 U	6,400	
Acetone <sup>8</sup>	--	0.55 U	0.0088 U	--	0.0088 U	--	--	0.011 U	0.0098 U	72,000	
Benzene	--	<b>0.087</b>	0.00088 U	--	0.00088 U	--	--	0.0011 U	0.00098 U	0.03	
Bromobenzene	--	0.055 U	0.00088 U	--	0.00088 U	--	--	0.0011 U	0.00098 U	NE	
Bromochloromethane	--	0.055 U	0.00088 U	--	0.00088 U	--	--	0.0011 U	0.00098 U	NE	
Bromodichloromethane	--	0.055 U	0.00088 U	--	0.00088 U	--	--	0.0011 U	0.00098 U	16.1	
Bromoform (Tribromomethane)	--	0.28 U	0.0044 U	--	0.0044 U	--	--	0.0056 U	0.0049 U	127	
Bromomethane	--	0.055 U	0.00088 U	--	0.00088 U	--	--	0.0011 U	0.00098 U	112	
Carbon Disulfide	--	0.055 U	0.00088 U	--	0.00088 U	--	--	0.0011 U	0.00098 U	8,000	
Carbon Tetrachloride	--	0.055 U	0.00088 U	--	0.00088 U	--	--	0.0011 U	0.00098 U	14.3	
Chlorobenzene	--	0.055 U	0.00088 U	--	0.00088 U	--	--	0.0011 U	0.00098 U	1,600	
Chloroethane	--	0.28 U	0.0044 U	--	0.0044 U	--	--	0.0056 U	0.0049 U	NE	
Chloroform	--	0.055 U	0.00088 U	--	0.00088 U	--	--	0.0011 U	0.00098 U	32.3	
Chloromethane	--	0.28 U	0.0044 U	--	0.0044 U	--	--	0.0056 U	0.0049 U	NE	
cis-1,2-Dichloroethene	--	0.055 U	0.00088 U	--	0.00088 U	--	--	0.0011 U	0.00098 U	160	
cis-1,3-Dichloropropene	--	0.055 U	0.00088 U	--	0.00088 U	--	--	0.0011 U	0.00098 U	NE	
Dibromochloromethane	--	0.055 U	0.00088 U	--	0.00088 U	--	--	0.0011 U	0.00098 U	11.9	
Dibromomethane	--	0.055 U	0.00088 U	--	0.00088 U	--	--	0.0011 U	0.00098 U	800	
Dichlorodifluoromethane (CFC-12)	--	0.055 U	0.00088 U	--	0.00088 U	--	--	0.0011 U	0.00098 U	16,000	
Ethylbenzene	--	<b>1.0</b>	0.00088 U	--	0.00088 U	--	--	0.0011 U	0.00098 U	6	
Hexachlorobutadiene	--	0.28 U	0.0044 U	--	0.0044 U	--	--	0.0056 U	0.0049 U	12.8	
Isopropylbenzene (Cumene)	--	<b>0.13</b>	0.00088 U	--	0.00088 U	--	--	0.0011 U	0.00098 U	8,000	
Methyl Iodide (Iodomethane)	--	0.28 U	0.0044 U	--	0.0044 U	--	--	0.0056 U	0.0049 U	NE	
Methyl t-butyl ether	--	0.055 U	0.00088 U	--	0.00088 U	--	--	0.0011 U	0.00098 U	0.1	
Methylene Chloride	--	0.28 U	0.0044 U	--	0.0044 U	--	--	0.0056 U	0.0049 U	0.02	
Naphthalene	--	<b>0.63</b>	0.00088 U	--	0.00088 U	--	--	0.0011 U	0.00098 U	5	
n-Butylbenzene	--	<b>0.20</b>	0.00088 U	--	0.00088 U	--	--	0.0011 U	0.00098 U	4,000	
n-Propylbenzene	--	<b>0.43</b>	0.00088 U	--	0.00088 U	--	--	0.0011 U	0.00098 U	8,000	

Boring Identification	FL207-B22					FL207-B23				MTCA Screening Level <sup>12</sup>	Naturally Occurring Background Metals in Puget Sound Soils <sup>16</sup>
Sample Identification <sup>2</sup>	FL207-B22-0-0.5	FL207-B22-2.5-3.5	FL207-B22-5-6	FL207-B22-7.5-8.5	FL207-B22-12.5-13.5	FL207-B23-0-0.5	FL207-B23-0.5-1	FL207-B23-2.5-3.5	FL207-B23-7.5-8		
Sample Date	7/19/2018	7/19/2018	7/19/2018	7/19/2018	7/19/2018	7/20/2018	7/20/2018	7/20/2018	7/20/2018		
Sample Start Depth (feet bgs)	0.0	2.5	5.0	7.5	12.5	0.0	0.5	2.5	7.5		
Sample End Depth (feet bgs)	0.5	3.5	6.0	8.5	13.5	0.5	1.0	3.5	8.0		
p-Isopropyltoluene	--	0.055 U	0.00088 U	--	0.00088 U	--	--	0.0011 U	0.00098 U	NE	N/A
Sec-Butylbenzene	--	0.055 U	0.00088 U	--	0.00088 U	--	--	0.0011 U	0.00098 U	8,000	
Styrene	--	0.055 U	0.00088 U	--	0.00088 U	--	--	0.0011 U	0.00098 U	16,000	
Tert-Butylbenzene	--	0.055 U	0.00088 U	--	0.00088 U	--	--	0.0011 U	0.00098 U	8,000	
Tetrachloroethene	--	0.055 U	0.00088 U	--	0.00088 U	--	--	0.0011 U	0.00098 U	0.05	
Toluene	--	3.2	0.0044 U	--	0.0044 U	--	--	0.0056 U	0.0049 U	7	
Trans-1,2-Dichloroethene	--	0.055 U	0.00088 U	--	0.00088 U	--	--	0.0011 U	0.00098 U	1,600	
Trans-1,3-Dichloropropene	--	0.055 U	0.00088 U	--	0.00088 U	--	--	0.0011 U	0.00098 U	NE	
Trichloroethene	--	0.055 U	0.00088 U	--	0.00088 U	--	--	0.0011 U	0.00098 U	0.03	
Trichlorofluoromethane (CFC-11)	--	0.055 U	0.00088 U	--	0.00088 U	--	--	0.0011 U	0.00098 U	24,000	
Vinyl Acetate	--	0.28 U	0.0044 U	--	0.0044 U	--	--	0.0056 U	0.0049 U	80,000	
Vinyl Chloride	--	0.055 U	0.00088 U	--	0.00088 U	--	--	0.0011 U	0.00098 U	240	
Xylene, m-,p-	--	5.6	0.0018 U	--	0.0018 U	--	--	0.0022 U	0.0020 U	9	
Xylene, o-	--	2.3	0.00088 U	--	0.00088 U	--	--	0.0011 U	0.00098 U		
Total Xylenes <sup>9</sup>	--	7.9	0.0018 U	--	0.0018 U	--	--	0.0022 U	0.0020 U		
PAHs <sup>10</sup> (mg/kg)											
1-Methylnaphthalene	--	0.091	0.0072 U	--	--	--	--	--	--	5	N/A
2-Methylnaphthalene	--	0.18	0.0072 U	--	--	--	--	--	--		
Naphthalene	--	0.20	0.0072 U	--	--	--	--	--	--		
Total Naphthalenes <sup>11</sup>	--	0.471	0.0072 U	--	--	--	--	--	--		
Acenaphthene	--	0.0070 U	0.0072 U	--	--	--	--	--	--	4,800	
Acenaphthylene	--	0.0070 U	0.0072 U	--	--	--	--	--	--	NE	
Anthracene	--	0.0070 U	0.0072 U	--	--	--	--	--	--	24,000	
Benzo(a)anthracene	--	0.0070 U	0.0072 U	--	--	--	--	--	--	See cPAHs	
Benzo(a)pyrene	--	0.0070 U	0.0072 U	--	--	--	--	--	--	See cPAHs	
Benzo(b)fluoranthene	--	0.0086	0.0072 U	--	--	--	--	--	--	See cPAHs	
Benzo(g,h,i)perylene	--	0.0077	0.0072 U	--	--	--	--	--	--	NE	
Benzo(j,k)fluoranthene	--	0.0070 U	0.0072 U	--	--	--	--	--	--	See cPAHs	
Chrysene	--	0.029	0.0072 U	--	--	--	--	--	--	See cPAHs	
Dibenzo(a,h)anthracene	--	0.0070 U	0.0072 U	--	--	--	--	--	--	See cPAHs	
Fluoranthene	--	0.0070 U	0.0072 U	--	--	--	--	--	--	3,200	
Fluorene	--	0.0070 U	0.0072 U	--	--	--	--	--	--	3,200	
Indeno(1,2,3-c,d)pyrene	--	0.0070 U	0.0072 U	--	--	--	--	--	--	See cPAHs	
Phenanthrene	--	0.015	0.0072 U	--	--	--	--	--	--	NE	
Pyrene	--	0.010	0.0072 U	--	--	--	--	--	--	2,400	
cPAHs (benzo(a)pyrene TEC) <sup>15</sup>	--	0.0061	0.0054 U	--	--	--	--	--	--	0.1	

Table 1

Summary of Soil Chemical Analytical Results<sup>1</sup>  
Sound Transit - Federal Way Link Extension FL-207  
Federal Way, Washington

Boring Identification	FL207-B23			FL207-B24			FL207-B25			FL207-B26			MTCA Screening Level <sup>12</sup>	Naturally Occurring Background Metals in Puget Sound Soils <sup>16</sup>
Sample Identification <sup>2</sup>	FL207-B23-12.5-13	FL207-B23-17.5-18	FL207-B23-20-20.5	FL207-B24-0-0.5	FL207-B24-5-6	FL207-B24-11-12	FL207-B25-0-0.5	FL207-B25-0.5-1	FL207-B25-6-7	FL207-B26-0-0.5	FL207-B26-0.5-1	FL207-B26-7-8		
Sample Date	7/20/2018	7/20/2018	7/20/2018	7/25/2018	7/25/2018	7/25/2018	7/25/2018	7/25/2018	7/25/2018	7/25/2018	7/25/2018	7/25/2018		
Sample Start Depth (feet bgs)	12.5	17.5	20	0.0	5.0	11	0.0	0.5	6.0	0.0	0.5	7.0		
Sample End Depth (feet bgs)	13	18	20.5	0.5	6.0	12	0.5	1.0	7.0	0.5	1.0	8.0		
NWTPH-HCID <sup>3</sup> (mg/kg)														
Gasoline-range hydrocarbons	--	--	--	--	25 U	22 U	--	--	22 U	--	--	21 U	30/100 <sup>13</sup>	N/A
Diesel-range hydrocarbons	--	--	--	--	62 U	55 U	--	--	54 U	--	--	54 U	2,000	
Lube Oil-range Hydrocarbons	--	--	--	--	120 U	110 U	--	--	110 U	--	--	110 U	2,000	
NWTPH-Gx <sup>4</sup> (mg/kg)														
Gasoline-range hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	30/100 <sup>13</sup>	N/A
NWTPH-Dx <sup>5</sup> (mg/kg)														
Diesel-range hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	2,000	N/A
Lube Oil-range Hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	2,000	
Metals <sup>6</sup> (mg/kg)														
Arsenic	--	--	--	5.1 U	--	--	5.5 U	6.0 U	--	5.3 U	5.4 U	--	20	7
Barium	--	--	--	--	--	--	--	--	--	--	--	--	16,000	NE
Cadmium	--	--	--	--	--	--	--	--	--	--	--	--	2	1
Chromium	--	--	--	--	--	--	--	--	--	--	--	--	2,000 <sup>14</sup>	48
Chromium, Hexavalent	--	--	--	--	--	--	--	--	--	--	--	--	19	NE
Lead	--	--	--	12	--	--	5.5 U	6.0 U	--	5.3 U	5.4 U	--	250	24
Mercury	--	--	--	--	--	--	--	--	--	--	--	--	2	0.07
Selenium	--	--	--	--	--	--	--	--	--	--	--	--	400	NE
Silver	--	--	--	--	--	--	--	--	--	--	--	--	400	NE
VOCs <sup>7</sup> (mg/kg)														
1,1,1,2-Tetrachloroethane	0.0011 U	0.00089 U	0.0010 U	--	0.0013 U	0.00088 U	--	--	0.0010 U	--	--	0.0012 U	38.5	N/A
1,1,1-Trichloroethane	0.0011 U	0.00089 U	0.0010 U	--	0.0013 U	0.00088 U	--	--	0.0010 U	--	--	0.0012 U	2	
1,1,2,2-Tetrachloroethane	0.0011 U	0.00089 U	0.0010 U	--	0.0013 U	0.00088 U	--	--	0.0010 U	--	--	0.0012 U	5	
1,1,2-Trichloroethane	0.0011 U	0.00089 U	0.0010 U	--	0.0013 U	0.00088 U	--	--	0.0010 U	--	--	0.0012 U	17.5	
1,1-Dichloroethane	0.0011 U	0.00089 U	0.0010 U	--	0.0013 U	0.00088 U	--	--	0.0010 U	--	--	0.0012 U	175	
1,1-Dichloroethene	0.0011 U	0.00089 U	0.0010 U	--	0.0013 U	0.00088 U	--	--	0.0010 U	--	--	0.0012 U	4,000	
1,1-Dichloropropene	0.0011 U	0.00089 U	0.0010 U	--	0.0013 U	0.00088 U	--	--	0.0010 U	--	--	0.0012 U	NE	
1,2,3-Trichlorobenzene	0.0011 U	0.00089 U	0.0010 U	--	0.0013 U	0.00088 U	--	--	0.0010 U	--	--	0.0012 U	NE	
1,2,3-Trichloropropane	0.0011 U	0.00089 U	0.0010 U	--	0.0013 U	0.00088 U	--	--	0.0010 U	--	--	0.0012 U	0.0333	
1,2,4-Trichlorobenzene	0.0011 U	0.00089 U	0.0010 U	--	0.0013 U	0.00088 U	--	--	0.0010 U	--	--	0.0012 U	34.5	
1,2,4-Trimethylbenzene	0.0011 U	0.00089 U	0.0010 U	--	0.0013 U	0.00088 U	--	--	0.0010 U	--	--	0.0012 U	NE	
1,2-Dibromo-3-Chloropropane	0.0053 U	0.0045 U	0.0050 U	--	0.0065 U	0.0044 U	--	--	0.0052 U	--	--	0.0060 U	1.25	
1,2-Dibromoethane	0.0011 U	0.00089 U	0.0010 U	--	0.0013 U	0.00088 U	--	--	0.0010 U	--	--	0.0012 U	0.005	
1,2-Dichlorobenzene (o-Dichlorobenzene)	0.0011 U	0.00089 U	0.0010 U	--	0.0013 U	0.00088 U	--	--	0.0010 U	--	--	0.0012 U	7,200	
1,2-Dichloroethane	0.0011 U	0.00089 U	0.0010 U	--	0.0013 U	0.00088 U	--	--	0.0010 U	--	--	0.0012 U	11	

Boring Identification	FL207-B23			FL207-B24			FL207-B25			FL207-B26			MTCA Screening Level <sup>12</sup>	Naturally Occurring Background Metals in Puget Sound Soils <sup>16</sup>
Sample Identification <sup>2</sup>	FL207-B23-12.5-13	FL207-B23-17.5-18	FL207-B23-20-20.5	FL207-B24-0-0.5	FL207-B24-5-6	FL207-B24-11-12	FL207-B25-0-0.5	FL207-B25-0.5-1	FL207-B25-6-7	FL207-B26-0-0.5	FL207-B26-0.5-1	FL207-B26-7-8		
Sample Date	7/20/2018	7/20/2018	7/20/2018	7/25/2018	7/25/2018	7/25/2018	7/25/2018	7/25/2018	7/25/2018	7/25/2018	7/25/2018	7/25/2018		
Sample Start Depth (feet bgs)	12.5	17.5	20	0.0	5.0	11	0.0	0.5	6.0	0.0	0.5	7.0		
Sample End Depth (feet bgs)	13	18	20.5	0.5	6.0	12	0.5	1.0	7.0	0.5	1.0	8.0		
1,2-Dichloropropane	0.0011 U	0.00089 U	0.0010 U	--	0.0013 U	0.00088 U	--	--	0.0010 U	--	--	0.0012 U	27.8	N/A
1,3,5-Trimethylbenzene	0.0011 U	0.00089 U	0.0010 U	--	0.0013 U	0.00088 U	--	--	0.0010 U	--	--	0.0012 U	800	
1,3-Dichlorobenzene (m-Dichlorobenzene)	0.0011 U	0.00089 U	0.0010 U	--	0.0013 U	0.00088 U	--	--	0.0010 U	--	--	0.0012 U	NE	
1,3-Dichloropropane	0.0011 U	0.00089 U	0.0010 U	--	0.0013 U	0.00088 U	--	--	0.0010 U	--	--	0.0012 U	NE	
1,4-Dichlorobenzene (p-Dichlorobenzene)	0.0011 U	0.00089 U	0.0010 U	--	0.0013 U	0.00088 U	--	--	0.0010 U	--	--	0.0012 U	185	
2,2-Dichloropropane	0.0011 U	0.00089 U	0.0010 U	--	0.0013 U	0.00088 U	--	--	0.0010 U	--	--	0.0012 U	NE	
2-Butanone (MEK)	0.0053 U	0.0045 U	0.0050 U	--	0.0065 U	0.0044 U	--	--	0.0052 U	--	--	0.0060 U	48,000	
2-Chloroethyl vinyl ether	0.0053 U	0.0045 U	0.0050 U	--	0.0065 U	0.0044 U	--	--	0.0052 U	--	--	0.0060 U	NE	
2-Chlorotoluene	0.0011 U	0.00089 U	0.0010 U	--	0.0013 U	0.00088 U	--	--	0.0010 U	--	--	0.0012 U	1,600	
2-Hexanone	0.0053 U	0.0045 U	0.0050 U	--	0.0065 U	0.0044 U	--	--	0.0052 U	--	--	0.0060 U	NE	
4-Chlorotoluene	0.0011 U	0.00089 U	0.0010 U	--	0.0013 U	0.00088 U	--	--	0.0010 U	--	--	0.0012 U	NE	
4-Methyl-2-Pentanone (Methyl isobutyl ketone)	0.0053 U	0.0045 U	0.0050 U	--	0.0065 U	0.0044 U	--	--	0.0052 U	--	--	0.0060 U	6,400	
Acetone <sup>8</sup>	0.011 U	0.0089 U	0.010 U	--	0.013 U	0.0088 U	--	--	0.010 U	--	--	0.012 U	72,000	
Benzene	0.0011 U	0.00089 U	0.0010 U	--	0.0013 U	0.00088 U	--	--	0.0010 U	--	--	0.0012 U	0.03	
Bromobenzene	0.0011 U	0.00089 U	0.0010 U	--	0.0013 U	0.00088 U	--	--	0.0010 U	--	--	0.0012 U	NE	
Bromochloromethane	0.0011 U	0.00089 U	0.0010 U	--	0.0013 U	0.00088 U	--	--	0.0010 U	--	--	0.0012 U	NE	
Bromodichloromethane	0.0011 U	0.00089 U	0.0010 U	--	0.0013 U	0.00088 U	--	--	0.0010 U	--	--	0.0012 U	16.1	
Bromoform (Tribromomethane)	0.0053 U	0.0045 U	0.0050 U	--	0.0065 U	0.0044 U	--	--	0.0052 U	--	--	0.0060 U	127	
Bromomethane	0.0011 U	0.00089 U	0.0010 U	--	0.0013 U	0.00088 U	--	--	0.0010 U	--	--	0.0012 U	112	
Carbon Disulfide	0.0011 U	0.00089 U	0.0010 U	--	0.0013 U	0.00088 U	--	--	0.0010 U	--	--	0.0012 U	8,000	
Carbon Tetrachloride	0.0011 U	0.00089 U	0.0010 U	--	0.0013 U	0.00088 U	--	--	0.0010 U	--	--	0.0012 U	14.3	
Chlorobenzene	0.0011 U	0.00089 U	0.0010 U	--	0.0013 U	0.00088 U	--	--	0.0010 U	--	--	0.0012 U	1,600	
Chloroethane	0.0053 U	0.0045 U	0.0050 U	--	0.0065 U	0.0044 U	--	--	0.0052 U	--	--	0.0060 U	NE	
Chloroform	0.0011 U	0.00089 U	0.0010 U	--	0.0013 U	0.00088 U	--	--	0.0010 U	--	--	0.0012 U	32.3	
Chloromethane	0.0053 U	0.0045 U	0.0050 U	--	0.0065 U	0.0044 U	--	--	0.0052 U	--	--	0.0060 U	NE	
cis-1,2-Dichloroethene	0.0011 U	0.00089 U	0.0010 U	--	0.0013 U	0.00088 U	--	--	0.0010 U	--	--	0.0012 U	160	
cis-1,3-Dichloropropene	0.0011 U	0.00089 U	0.0010 U	--	0.0013 U	0.00088 U	--	--	0.0010 U	--	--	0.0012 U	NE	
Dibromochloromethane	0.0011 U	0.00089 U	0.0010 U	--	0.0013 U	0.00088 U	--	--	0.0010 U	--	--	0.0012 U	11.9	
Dibromomethane	0.0011 U	0.00089 U	0.0010 U	--	0.0013 U	0.00088 U	--	--	0.0010 U	--	--	0.0012 U	800	
Dichlorodifluoromethane (CFC-12)	0.0011 U	0.00089 U	0.0010 U	--	0.0013 U	0.00088 U	--	--	0.0010 U	--	--	0.0012 U	16,000	
Ethylbenzene	0.0011 U	0.00089 U	0.0010 U	--	0.0013 U	0.00088 U	--	--	0.0010 U	--	--	0.0012 U	6	
Hexachlorobutadiene	0.0053 U	0.0045 U	0.0050 U	--	0.0065 U	0.0044 U	--	--	0.0052 U	--	--	0.0060 U	12.8	
Isopropylbenzene (Cumene)	0.0011 U	0.00089 U	0.0010 U	--	0.0013 U	0.00088 U	--	--	0.0010 U	--	--	0.0012 U	8,000	
Methyl Iodide (Iodomethane)	0.0053 U	0.0045 U	0.0050 U	--	0.0065 U	0.0044 U	--	--	0.0052 U	--	--	0.0060 U	NE	
Methyl t-butyl ether	0.0011 U	0.00089 U	0.0010 U	--	0.0013 U	0.00088 U	--	--	0.0010 U	--	--	0.0012 U	0.1	
Methylene Chloride	0.0053 U	0.0045 U	0.0050 U	--	0.0065 U	0.0044 U	--	--	0.0052 U	--	--	0.0060 U	0.02	
Naphthalene	0.0011 U	0.00089 U	0.0010 U	--	0.0013 U	0.00088 U	--	--	0.0010 U	--	--	0.0012 U	5	
n-Butylbenzene	0.0011 U	0.00089 U	0.0010 U	--	0.0013 U	0.00088 U	--	--	0.0010 U	--	--	0.0012 U	4,000	
n-Propylbenzene	0.0011 U	0.00089 U	0.0010 U	--	0.0013 U	0.00088 U	--	--	0.0010 U	--	--	0.0012 U	8,000	

Boring Identification	FL207-B23			FL207-B24			FL207-B25			FL207-B26			MTCA Screening Level <sup>12</sup>	Naturally Occurring Background Metals in Puget Sound Soils <sup>16</sup>
Sample Identification <sup>2</sup>	FL207-B23-12.5-13	FL207-B23-17.5-18	FL207-B23-20-20.5	FL207-B24-0-0.5	FL207-B24-5-6	FL207-B24-11-12	FL207-B25-0-0.5	FL207-B25-0.5-1	FL207-B25-6-7	FL207-B26-0-0.5	FL207-B26-0.5-1	FL207-B26-7-8		
Sample Date	7/20/2018	7/20/2018	7/20/2018	7/25/2018	7/25/2018	7/25/2018	7/25/2018	7/25/2018	7/25/2018	7/25/2018	7/25/2018	7/25/2018		
Sample Start Depth (feet bgs)	12.5	17.5	20	0.0	5.0	11	0.0	0.5	6.0	0.0	0.5	7.0		
Sample End Depth (feet bgs)	13	18	20.5	0.5	6.0	12	0.5	1.0	7.0	0.5	1.0	8.0		
p-Isopropyltoluene	0.0011 U	0.00089 U	0.0010 U	--	0.0013 U	0.00088 U	--	--	0.0010 U	--	--	0.0012 U	NE	N/A
Sec-Butylbenzene	0.0011 U	0.00089 U	0.0010 U	--	0.0013 U	0.00088 U	--	--	0.0010 U	--	--	0.0012 U	8,000	
Styrene	0.0011 U	0.00089 U	0.0010 U	--	0.0013 U	0.00088 U	--	--	0.0010 U	--	--	0.0012 U	16,000	
Tert-Butylbenzene	0.0011 U	0.00089 U	0.0010 U	--	0.0013 U	0.00088 U	--	--	0.0010 U	--	--	0.0012 U	8,000	
Tetrachloroethene	0.0011 U	0.0010	0.0010 U	--	0.0013 U	0.00088 U	--	--	0.0010 U	--	--	0.0012 U	0.05	
Toluene	0.0053 U	0.0045 U	0.0050 U	--	0.0065 U	0.0044 U	--	--	0.0052 U	--	--	0.0060 U	7	
Trans-1,2-Dichloroethene	0.0011 U	0.00089 U	0.0010 U	--	0.0013 U	0.00088 U	--	--	0.0010 U	--	--	0.0012 U	1,600	
Trans-1,3-Dichloropropene	0.0011 U	0.00089 U	0.0010 U	--	0.0013 U	0.00088 U	--	--	0.0010 U	--	--	0.0012 U	NE	
Trichloroethene	0.0011 U	0.00089 U	0.0010 U	--	0.0013 U	0.00088 U	--	--	0.0010 U	--	--	0.0012 U	0.03	
Trichlorofluoromethane (CFC-11)	0.0011 U	0.00089 U	0.0010 U	--	0.0013 U	0.00088 U	--	--	0.0010 U	--	--	0.0012 U	24,000	
Vinyl Acetate	0.0053 U	0.0045 U	0.0050 U	--	0.0065 U	0.0044 U	--	--	0.0052 U	--	--	0.0060 U	80,000	
Vinyl Chloride	0.0011 U	0.00089 U	0.0010 U	--	0.0013 U	0.00088 U	--	--	0.0010 U	--	--	0.0012 U	240	
Xylene, m-,p-	0.0021 U	0.0018 U	0.0020 U	--	0.0026 U	0.0018 U	--	--	0.0021 U	--	--	0.0024 U	9	
Xylene, o-	0.0011 U	0.00089 U	0.0010 U	--	0.0013 U	0.00088 U	--	--	0.0010 U	--	--	0.0012 U		
Total Xylenes <sup>9</sup>	0.0021 U	0.0018 U	0.0020 U	--	0.0026 U	0.0018 U	--	--	0.0021 U	--	--	0.0024 U		
PAHs <sup>10</sup> (mg/kg)														
1-Methylnaphthalene	--	--	--	--	--	--	--	--	--	--	--	--	5	N/A
2-Methylnaphthalene	--	--	--	--	--	--	--	--	--	--	--	--		
Naphthalene	--	--	--	--	--	--	--	--	--	--	--	--		
Total Naphthalenes <sup>11</sup>	--	--	--	--	--	--	--	--	--	--	--	--		
Acenaphthene	--	--	--	--	--	--	--	--	--	--	--	--	4,800	
Acenaphthylene	--	--	--	--	--	--	--	--	--	--	--	--	NE	
Anthracene	--	--	--	--	--	--	--	--	--	--	--	--	24,000	
Benzo(a)anthracene	--	--	--	--	--	--	--	--	--	--	--	--	See cPAHs	
Benzo(a)pyrene	--	--	--	--	--	--	--	--	--	--	--	--	See cPAHs	
Benzo(b)fluoranthene	--	--	--	--	--	--	--	--	--	--	--	--	See cPAHs	
Benzo(g,h,i)perylene	--	--	--	--	--	--	--	--	--	--	--	--	NE	
Benzo(j,k)fluoranthene	--	--	--	--	--	--	--	--	--	--	--	--	See cPAHs	
Chrysene	--	--	--	--	--	--	--	--	--	--	--	--	See cPAHs	
Dibenzo(a,h)anthracene	--	--	--	--	--	--	--	--	--	--	--	--	See cPAHs	
Fluoranthene	--	--	--	--	--	--	--	--	--	--	--	--	3,200	
Fluorene	--	--	--	--	--	--	--	--	--	--	--	--	3,200	
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--	--	--	--	--	--	--	--	See cPAHs	
Phenanthrene	--	--	--	--	--	--	--	--	--	--	--	--	NE	
Pyrene	--	--	--	--	--	--	--	--	--	--	--	--	2,400	
cPAHs (benzo(a)pyrene TEC) <sup>15</sup>	--	--	--	--	--	--	--	--	--	--	--	--	0.1	

**Notes:**

<sup>1</sup>Chemical analysis performed by OnSite Environmental, Inc., of Redmond, Washington.

<sup>2</sup> Sample ID = Parcel ID - boring number - depth of sample [feet bgs]. FL207-B14-0.0.5 = Boring 1 from Parcel FL207, collected from a depth of 0 to 0.5 feet bgs.

<sup>3</sup> Petroleum Hydrocarbon Identification by Northwest Method NWTPH-HCID.

<sup>4</sup> Gasoline-range petroleum hydrocarbons by Northwest Method NWTPH-Gx.

<sup>5</sup> Diesel- and lube oil-range petroleum hydrocarbons by Northwest Method NWTPH-Dx.

<sup>6</sup> Resource Conservation Recovery Act (RCRA) metals analyzed by EPA 6000/7000 series method.

<sup>7</sup> Volatile organic compounds (VOCs) analyzed by United States Environmental Protection Agency (EPA) Method 8260C.

<sup>8</sup> Acetone is a common laboratory contaminant.

<sup>9</sup>Total xylenes consists of m,p- and o- xylenes. The higher detection limit is used for non-detects.

<sup>10</sup> Polycyclic aromatic hydrocarbons (PAHs) and carcinogenic PAHs (cPAHs) analyzed by EPA Method 8270D/SIM.

<sup>11</sup>Total naphthalenes consists of 1-methylnaphthalene, 2-methylnaphthalene and naphthalene.

<sup>12</sup> MTCA Method A cleanup levels shown if established. Method B cleanup level shown if no Method A cleanup level is established. The MTCA Method B cleanup level shown is the lowest for either carcinogen or non-carcinogen, based on direct contact.

<sup>13</sup> Model Toxics Control Act (MTCA) Method A cleanup level for gasoline is 30 mg/kg if benzene is detected or if the sum of toluene, ethylbenzene and xylenes are greater than or equal to 1% of the total gasoline detection.

<sup>14</sup> MTCA Method A cleanup level for Trivalent Chromium.

<sup>15</sup> Results for cPAHs are shown as the sum of the benzo[a]pyrene toxicity equivalent concentrations, calculated by multiplying each individual cPAH concentration by its corresponding TEF. In this sum, non-detects are represented as ½ of the corresponding analyte reporting limit multiplied by the

<sup>16</sup> 90th Percentile for natural background soil metals concentrations in Puget Sound region, Department of Ecology, publication #94-115, dated October 1994.

<sup>17</sup> Analyses for VOCs and PAHs were performed outside of method holding times.

"\_" = not tested                      bgs = below ground surface

mg/kg = milligrams per kilogram

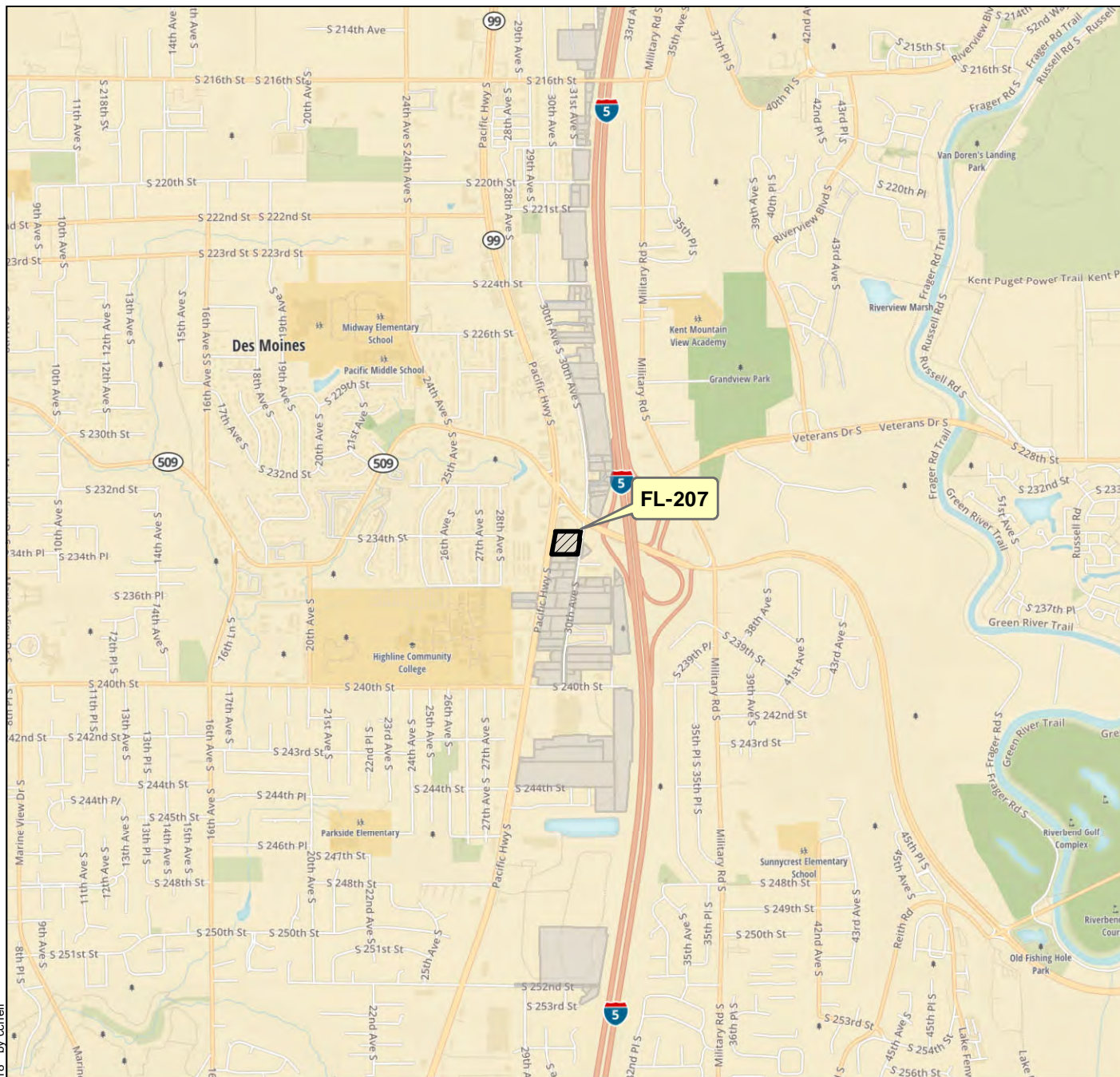
[illegible]

U = Analyte was not detected at or greater than the listed reporting limit.



TEF = Toxicity Equivalency Factor as defined in WAC 173-340-900 Table 708-2.

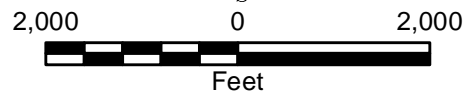
**Bold** font type indicates that the analyte was detected at a concentration greater than the respective laboratory reporting limit.

**Grey shading** indicates that the detected result exceeds the specified MTCA Cleanup Level.



#### Legend

-  Subject Property
-  Project Parcel



#### Vicinity Map FL-207

Phase II ESA  
Federal Way Link Extension  
Kent, Washington



Figure 1

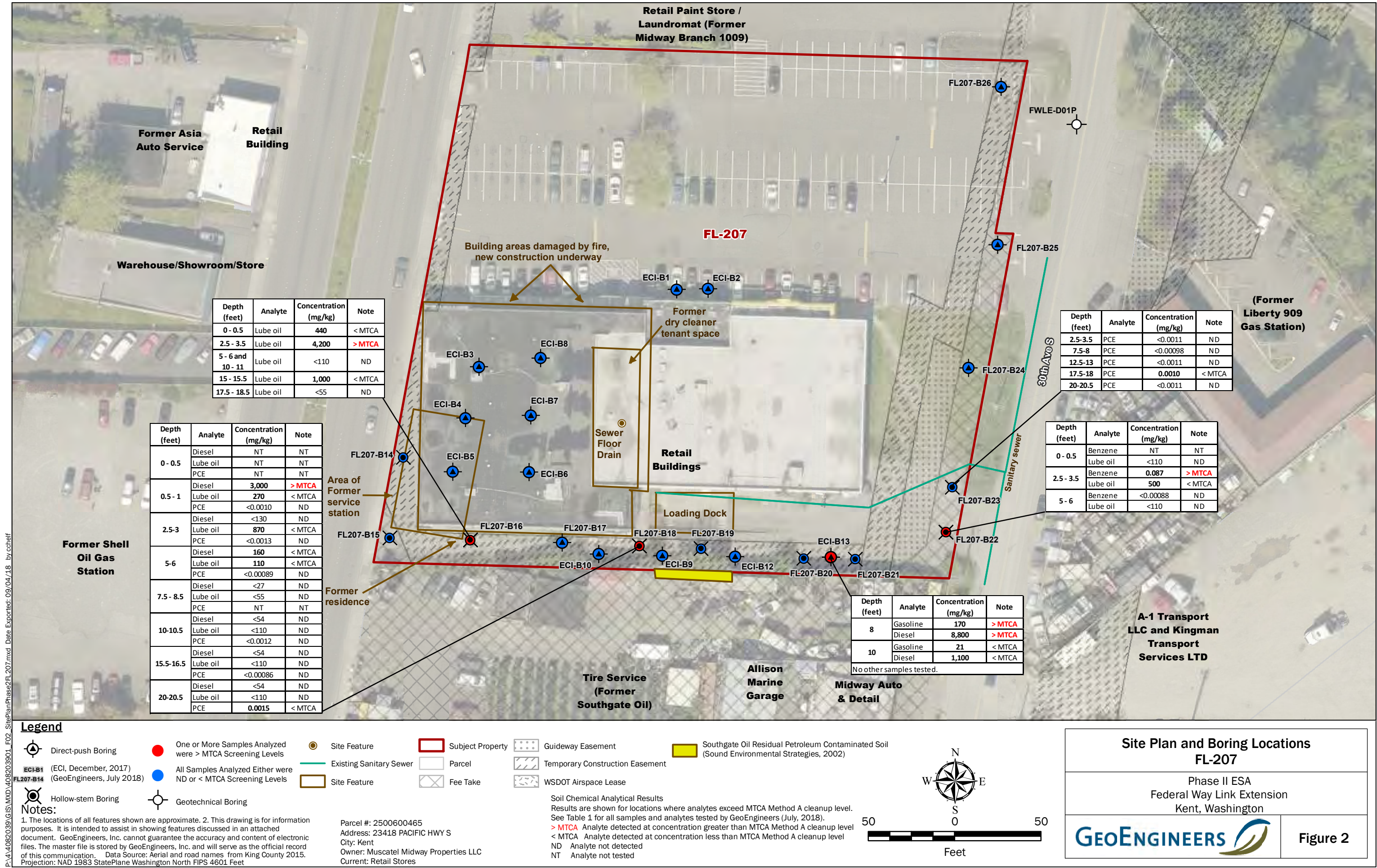
#### Notes:

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

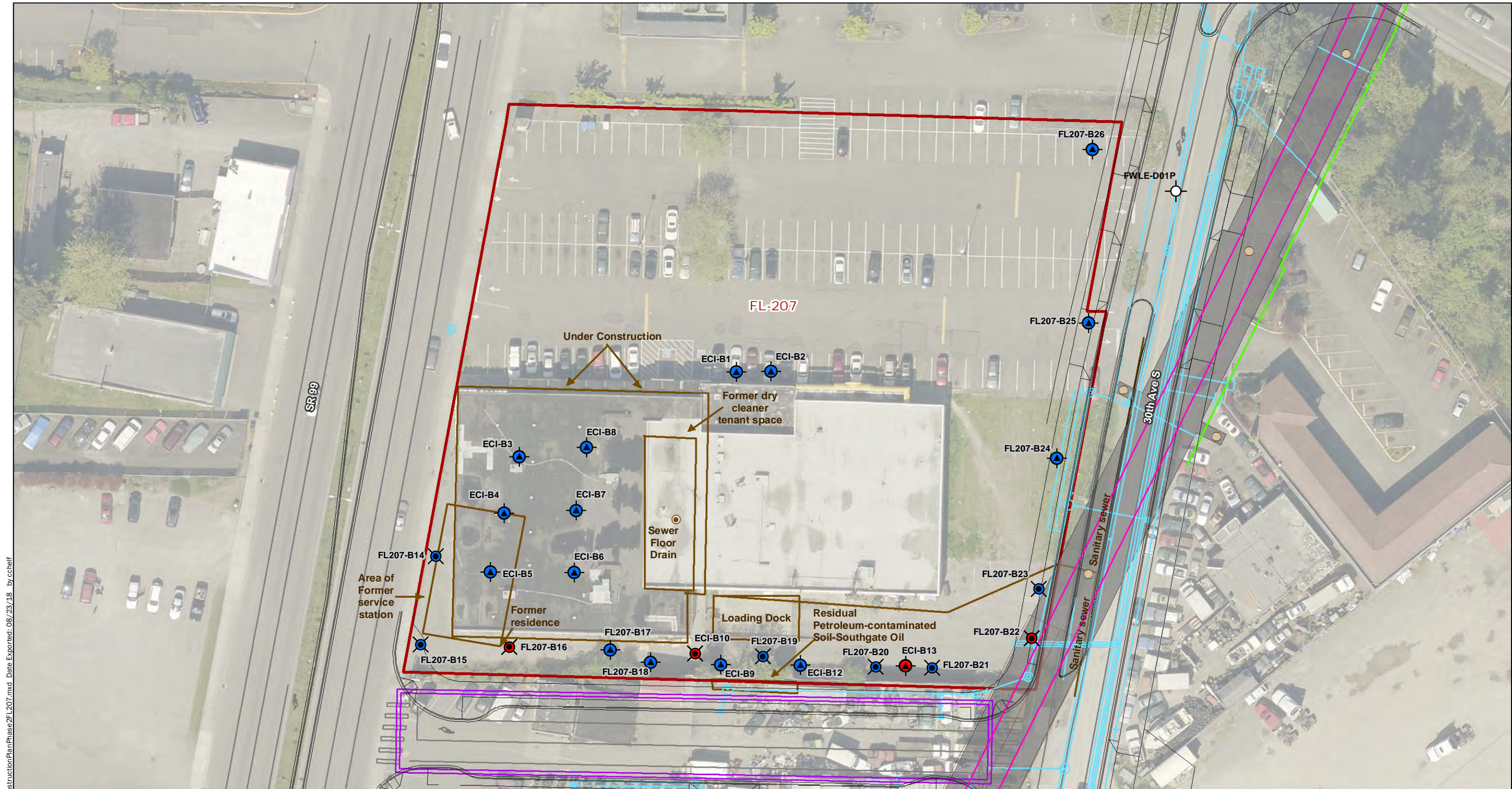
Data Source: Mapbox Open Street Map, 2017

Projection: NAD 1983 UTM Zone 10N









#### Legend

- |                                     |  |                     |                  |
|-------------------------------------|--|---------------------|------------------|
| Direct-push Boring                  | One or More Samples Analyzed were > MTCA Screening Levels      | Geotechnical Boring | Site Feature     |
| ECI-B1 (ECI, December, 2017)        | All Samples Analyzed Either were ND or < MTCA Screening Levels | Site Feature        | Subject Property |
| FL207-B14 (GeoEngineers, July 2018) |  | Site Feature        | Parcel           |
| Hollow-stem Boring                  |  |                     |                  |

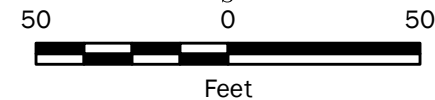
#### Notes:

1. Based on current design information for the FWLE project (HDR provided in March 2018). 2. The locations of all features shown are approximate. 3. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication. Data Source: Aerial and road names from King County 2015. Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

#### Planned Construction Features

- |                             |                              |
|-----------------------------|------------------------------|
| Column                      | Wall                         |
| Track                       | Proposed Sewer               |
| Road/Parking/Sidewalk       | Striping (Pavement Markings) |
| Station (line)              | Structure                    |
| Stormwater Ponds and Vaults |                              |

Parcel #: 2500600465  
Address: 23418 PACIFIC HWY S  
City: Kent  
Owner: Muscatel Midway Properties LLC  
Current: Retail Stores



#### Proposed Construction Plan FL-207

Phase II ESA  
Federal Way Link Extension  
Kent, Washington



Figure 3



**APPENDIX A**  
**FIELD EXPLORATION PROGRAM**

# APPENDIX A

## FIELD PROCEDURES AND BORING LOGS

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### Underground Utility Locate

Prior to drilling activities, an underground utility locate was conducted in the areas of the proposed boring locations to identify subsurface utilities and/or potential underground physical hazards. The underground utility check consisted of contacting a local utility alert service (one-call) and hiring a private utility locating service.

### Soil Sampling

The direct-push explorations were completed using direct-push drilling equipment. Soil samples were obtained using a 5-foot-long core sampler. The sampler was driven into the soil using a pneumatic hammer. The hollow stem auger explorations were completed using hollow-stem auger drilling equipment. Soil samples from the hollow-stem auger borings were obtained using a split spoon sampler. The sampler was driven into the soil using a 140-pound hammer. Upon retrieval, the sampler was opened and a GeoEngineers representative examined the soil and performed field screening tests. The boring logs are presented in Figures A-2 through A-14. Selected photographs taken during the Phase II ESA drilling are presented as Figures A-15 through A-20.

Selected soil samples were obtained in glass jars (supplied by the analytical laboratory), labeled and stored in a cooler with ice pending delivery to the laboratory. VOC samples were collected first, directly from the sample sleeve using the 5035A sampling method (except as noted in Appendix B). Following the VOC sample collection, the remaining soil was placed in sample containers provided by the analytical laboratory. All sampling equipment was decontaminated between samples using a Liqui-Nox® wash solution and distilled water rinse.

Soil samples obtained from the explorations were collected from the samplers with a stainless-steel knife, a stainless-steel trowel and/or new gloves. A portion of each sample was placed in laboratory-prepared sample jars for possible chemical analysis. The remaining portion of each sample was used for field screening.

The samples collected from the hollow-stem auger borings were identified using the following identification system: FL207-B1-6-7, where FL-207 is the identified FWLE parcel on which the boring was located, B1 is the hollow-stem auger boring number and the approximate depth at which the sample was obtained (e.g., FL207-B1-6-7 was collected from the FL-207 parcel at boring B1 at depths of approximately 6 to 7 feet bgs).

Selected samples from the explorations were submitted for chemical analysis based on field screening results. The soil samples were placed in a cooler with ice for transport to the laboratory. Standard chain-of-custody procedures were followed in transporting the soil samples to the laboratory. Drill cuttings were placed in drums pending disposal.

## Field Screening of Soil Samples

Soil samples obtained from the borings were screened in the field for evidence of contamination using: 1) visual examination; 2) sheen screening and 3) vapor headspace screening with a photo-ionization detector (PID). The results of headspace and sheen screening are included in the boring logs.

Visual screening consists of inspecting the soil for stains indicative of petroleum-related contamination. Visual screening is generally more effective when contamination is related to heavy petroleum hydrocarbons, such as motor oil or hydraulic oil, or when hydrocarbon concentrations are high. Sheen screening and headspace vapor screening are more sensitive methods that have been effective in detecting contamination at concentrations less than regulatory cleanup guidelines. Sheen screening involves placing soil in a pan of water and observing the water surface for signs of sheen. Sheen classifications are as follows:

No Sheen (NS)	No visible sheen on water surface.
Slight Sheen (SS)	Light, colorless, dull sheen; spread is irregular, not rapid; sheen dissipates rapidly.
Moderate Sheen (MS)	Light to heavy sheen, may have some color/iridescence; spread is irregular to flowing; few remaining areas of no sheen on water surface.
Heavy Sheen (HS)	Heavy sheen with color/iridescence; spread is rapid; entire water surface may be covered with sheen.

Headspace vapor screening involves placing a soil sample in a plastic sample bag. Air is captured in the bag and the bag is shaken to expose the soil to the air trapped in the bag. The probe of a PID is inserted in the bag and the instrument measures the concentration of combustible vapor in the air removed from the sample headspace. The PID measures concentrations in ppm (parts per million) and is calibrated to isobutylene. The PID is designed to quantify combustible gas and organic vapor concentrations up to 2,500 ppm. A lower threshold of significance of 1 ppm was used in this application. Field screening results are site-specific and vary with soil type, soil moisture content, temperature and type of contaminant.

## SOIL CLASSIFICATION CHART

MAJOR DIVISIONS			SYMBOLS		TYPICAL DESCRIPTIONS	
			GRAPH	LETTER		
COARSE GRAINED SOILS	GRAVEL AND GRAVELLY SOILS	CLEAN GRAVELS  (LITTLE OR NO FINES)		GW	WELL-GRADED GRAVELS, GRAVEL - SAND MIXTURES	
		GRAVELS WITH FINES  (APPRECIABLE AMOUNT OF FINES)		GP	POORLY-GRADED GRAVELS, GRAVEL - SAND MIXTURES	
				GM	SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURES	
			GC	CLAYEY GRAVELS, GRAVEL - SAND - CLAY MIXTURES		
	MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	SAND AND SANDY SOILS	CLEAN SANDS  (LITTLE OR NO FINES)		SW	WELL-GRADED SANDS, GRAVELLY SANDS
			SANDS WITH FINES  (APPRECIABLE AMOUNT OF FINES)		SP	POORLY-GRADED SANDS, GRAVELLY SAND
FINE GRAINED SOILS	SILTS AND CLAYS	LIQUID LIMIT LESS THAN 50			SM	SILTY SANDS, SAND - SILT MIXTURES
				SC	CLAYEY SANDS, SAND - CLAY MIXTURES	
				ML	INORGANIC SILTS, ROCK FLOUR, CLAYEY SILTS WITH SLIGHT PLASTICITY	
	MORE THAN 50% PASSING NO. 200 SIEVE	SILTS AND CLAYS	LIQUID LIMIT GREATER THAN 50		CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
					OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
					MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS SILTY SOILS
HIGHLY ORGANIC SOILS				CH	INORGANIC CLAYS OF HIGH PLASTICITY	
				OH	ORGANIC CLAYS AND SILTS OF MEDIUM TO HIGH PLASTICITY	
				PT	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS	

NOTE: Multiple symbols are used to indicate borderline or dual soil classifications

### Sampler Symbol Descriptions

	2.4-inch I.D. split barrel
	Standard Penetration Test (SPT)
	Shelby tube
	Piston
	Direct-Push
	Bulk or grab
	Continuous Coring

Blowcount is recorded for driven samplers as the number of blows required to advance sampler 12 inches (or distance noted). See exploration log for hammer weight and drop.

"P" indicates sampler pushed using the weight of the drill rig.

"WOH" indicates sampler pushed using the weight of the hammer.

NOTE: The reader must refer to the discussion in the report text and the logs of explorations for a proper understanding of subsurface conditions. Descriptions on the logs apply only at the specific exploration locations and at the time the explorations were made; they are not warranted to be representative of subsurface conditions at other locations or times.

## ADDITIONAL MATERIAL SYMBOLS

SYMBOLS		TYPICAL DESCRIPTIONS
GRAPH	LETTER	
	<b>AC</b>	Asphalt Concrete
	<b>CC</b>	Cement Concrete
	<b>CR</b>	Crushed Rock/Quarry Spalls
	<b>SOD</b>	Sod/Forest Duff
	<b>TS</b>	Topsoil

### Groundwater Contact



Measured groundwater level in exploration, well, or piezometer



Measured free product in well or piezometer

### Graphic Log Contact



Distinct contact between soil strata



Approximate contact between soil strata

### Material Description Contact



Contact between geologic units



Contact between soil of the same geologic unit

### Laboratory / Field Tests

%F	Percent fines
%G	Percent gravel
AL	Atterberg limits
CA	Chemical analysis
CP	Laboratory compaction test
CS	Consolidation test
DD	Dry density
DS	Direct shear
HA	Hydrometer analysis
MC	Moisture content
MD	Moisture density
Mohs	Mohs hardness scale
OC	Organic content
PM	Permeability or hydraulic conductivity
PI	Plasticity index
PP	Pocket penetrometer
SA	Sieve analysis
TX	Triaxial compression
UC	Unconfined compression
VS	Vane shear

### Sheen Classification

NS	No Visible Sheen
SS	Slight Sheen
MS	Moderate Sheen
HS	Heavy Sheen

## Key to Exploration Logs



Figure A-1

Start Drilled 7/23/2018	End 7/23/2018	Total Depth (ft) 10.5	Logged By Checked By CJG DLC	Driller Holt Services, Inc.	Drilling Method Hollow-stem Auger
Surface Elevation (ft) Vertical Datum	394.94 NAVD88	Hammer Data	Autohammer 140 (lbs) / 30 (in) Drop	Drilling Equipment	LDS 115 High Torque
Easting (X) Northing (Y)	1278372.562 146215.6283	System Datum	WA State Plane North NAD83	Groundwater not observed at time of exploration	
Notes:					

Elevation (feet)	FIELD DATA					MATERIAL DESCRIPTION	Shoen	Headspace Vapor (ppm)	REMARKS
	Interval Depth (feet)	Recovered (in)	Blows/foot	Collected Sample Sample Name Testing	Graphic Log	Group Classification			
0	6	15		FL207- B14-0-0.5 CA		AC	NS	<1	
						SP-SM			
	12	74		FL207- B14-2.5-3.5 CA		SP-SM	NS	<1	
5	12	55/3"		FL207- B14-5-6			NS	<1	
	12	50/2"		FL207- B14-7.5-8.5 CA		SM	NS	<1	
10									
									Attempted sample - no recovery

Note: See Figure A-1 for explanation of symbols.

Coordinates Data Source: Horizontal approximated based on GPS (Rec). Vertical approximated based on aerial photography provided by Sound Transit.

### Log of Boring FL207-B14



Project: Sound Transit - Federal Way Link Extension FL-207  
Project Location: 23418 Pacific Highway S, Kent, Washington  
Project Number: 4082-039-01

Figure A-2  
Sheet 1 of 1

Start Drilled 7/23/2018	End 7/23/2018	Total Depth (ft) 13	Logged By Checked By CJG DLC	Driller Holt Services, Inc.	Drilling Method Hollow-stem Auger
Surface Elevation (ft) Vertical Datum	395.6 NAVD88	Hammer Data	Autohammer 140 (lbs) / 30 (in) Drop	Drilling Equipment	LDS 115 High Torque
Easting (X) Northing (Y)	1278364.7 146169.0729	System Datum	WA State Plane North NAD83	Groundwater not observed at time of exploration	
Notes:					

Elevation (feet)	FIELD DATA					Graphic Log	Group Classification	MATERIAL DESCRIPTION	Screen	Headspace Vapor (ppm)	REMARKS
	Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing						
395	0	12	39		FL207-B15-0.0-5 CA		AC	Approximately 2 inches of asphalt concrete pavement	NS	<1	Black debris observed in sampler - soot from fire?
					FL207-B15-0.5-1 CA		SP-SM	Brown fine to coarse sand with silt, fine gravel and organic matter (moist)	NS	<1	
					FL207-B15-0.5-1 CA		SP-SM	Brown fine to coarse sand with silt and fine gravel (moist)	NS	<1	
					FL207-B15-2.5-3.5 CA		SP-SM	Brown fine to coarse sand with silt, fine gravel and occasional coarse gravel (moist)	NS	<1	
390	5	18	71		FL207-B15-5.5-6 CA		SP	Brown fine to coarse sand with fine to coarse gravel (moist)	NS	<1	
					FL207-B15-7.5-8 CA				NS	<1	
					FL207-B15-10-11 CA				NS	<1	
385	10	12	77		FL207-B15-12.5-13 CA		SP	Brown fine to coarse sand with fine to coarse gravel (moist)	NS	<1	
								Boring terminated at approximately 14 feet below ground surface due to refusal			

Note: See Figure A-1 for explanation of symbols.  
Coordinates Data Source: Horizontal approximated based on GPS (Rec). Vertical approximated based on aerial photography provided by Sound Transit.

### Log of Boring FL207-B15



Project: Sound Transit - Federal Way Link Extension FL-207  
Project Location: 23418 Pacific Highway S, Kent, Washington  
Project Number: 4082-039-01

Figure A-3  
Sheet 1 of 1

Start Drilled 7/20/2018	End 7/20/2018	Total Depth (ft) 21	Logged By Checked By CJG DLC	Driller Holt Services, Inc.	Drilling Method Hollow-stem Auger
Surface Elevation (ft) Vertical Datum	392.52 NAVD88	Hammer Data	Autohammer 140 (lbs) / 30 (in) Drop	Drilling Equipment	LDS 115 High Torque
Easting (X) Northing (Y)	1278411.46 146167.921	System Datum	WA State Plane North NAD83	Groundwater not observed at time of exploration	
Notes:					

Elevation (feet)	Depth (feet)	FIELD DATA				Graphic Log	Group Classification	MATERIAL DESCRIPTION	Screen	Headspace Vapor (ppm)	REMARKS
		Interval Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing						
390	0	6	19		FL207-B16-0-0.5 CA		AC	Approximately 2 inches of asphalt concrete pavement	NS	<1	
							SP-SM	Brown fine to coarse sand with silt and fine gravel (moist)			
385	12	63			FL207-B16-2.5-3.5 CA		SP-SM	Brown fine to coarse sand with silt and fine to coarse gravel (moist)	NS	<1	
380	5	12	61		FL207-B16-5-6 CA		SP-SM	Gray fine to coarse sand with silt and occasional fine to coarse gravel (moist)	NS	<1	
375	10	18	77		FL207-B16-10-11 CA		SP-SM	Gray-brown fine to coarse sand with silt, fine gravel and occasional coarse gravel (moist)	NS	<1	
	15	6	50/4"		FL207-B16-12.5-13				NS	<1	
	20	12	50/3"		FL207-B16-15-15.5 CA						
		12	50/5"		FL207-B16-17.5-18.5 CA		SM	Gray-brown silty fine to coarse sand with fine gravel (moist)	NS	<1	
									NS	<1	
		12	50/6"		FL207-B16-20-20.5						

Note: See Figure A-1 for explanation of symbols.  
Coordinates Data Source: Horizontal approximated based on GPS (Rec). Vertical approximated based on aerial photography provided by Sound Transit.

### Log of Boring FL207-B16



Project: Sound Transit - Federal Way Link Extension FL-207  
Project Location: 23418 Pacific Highway S, Kent, Washington  
Project Number: 4082-039-01

Figure A-4  
Sheet 1 of 1



Start Drilled 7/25/2018	End 7/25/2018	Total Depth (ft) 14	Logged By Checked By CJG DLC	Driller Holt Services, Inc.	Drilling Method Direct-Push
Surface Elevation (ft) Vertical Datum	392.26 NAVD88	Hammer Data	Drilling Equipment		Power Probe 9630
Easting (X) Northing (Y)	1278464.658 146166.3466	System Datum	WA State Plane North NAD83		Groundwater not observed at time of exploration
Notes:					

Elevation (feet)	Depth (feet)	FIELD DATA				Graphic Log	Group Classification	MATERIAL DESCRIPTION	Screen	Headspace Vapor (ppm)	REMARKS
		Interval	Recovered (in)	Blows/foot	Collected Sample						
	0		18		FL207-B17-0-0.5 CA		AC	Asphalt concrete pavement, approximately 2 inches	SS	<1	
					FL207-B17-0.5-1 CA		SP-SM	Brown fine to coarse sand with silt, fine gravel and occasional coarse gravel (moist)	SS	<1	
			18		FL207-B17-0.5-1 CA		SP-SM	Brown fine to coarse sand with silt and fine gravel (moist)	SS	<1	
					FL207-B17-2.5-3.5 CA		NR	No recovery	NS	<1	
							SM	Brown silty fine to coarse sand with fine gravel (moist)	NS	<1	
	5		36		FL207-B17-5-6		SP-SM	Brown fine to coarse sand with silt, fine gravel and occasional coarse gravel (moist)	NS	<1	
							NR	No recovery	NS	<1	
					FL207-B17-7-8 CA		SP-SM	Brown medium to coarse sand with silt and fine gravel (moist)	NS	<1	
							NR	Brown silty fine to coarse sand with fine gravel and occasional coarse gravel (moist)	NS	<1	
	10		42		FL207-B17-10-11		SP-SM	No recovery	NS	<1	
								Brown fine to coarse sand with silt and fine to coarse gravel (moist)	NS	<1	
					FL207-B17-12-13 CA		SM	Brown silty fine to medium sand with coarse sand, fine gravel and occasional coarse gravel (moist)	NS	<1	
								No recovery			
								Boring terminated at approximately 14 feet below ground surface due to refusal			

Note: See Figure A-1 for explanation of symbols.  
Coordinates Data Source: Horizontal approximated based on GPS (Rec). Vertical approximated based on aerial photography provided by Sound Transit.

### Log of Direct-Push Boring FL207-B17



Project: Sound Transit - Federal Way Link Extension FL-207  
Project Location: 23418 Pacific Highway S, Kent, Washington  
Project Number: 4082-039-01

Figure A-5  
Sheet 1 of 1

Start Drilled 7/23/2018	End 7/23/2018	Total Depth (ft) 21	Logged By Checked By CJG DLC	Driller Holt Services, Inc.	Drilling Method Hollow-stem Auger
Surface Elevation (ft) Vertical Datum	392.94 NAVD88	Hammer Data	Autohammer 140 (lbs) / 30 (in) Drop	Drilling Equipment	LDS 115 High Torque
Easting (X) Northing (Y)	1278509.409 146164.4046	System Datum	WA State Plane North NAD83	Groundwater not observed at time of exploration	
Notes:					

Elevation (feet)	FIELD DATA					Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing						
0	12	23			FL207-B18-0-0.5 CA		AC	Approximately 2 inches of asphalt concrete pavement	MS	<1	Black staining observed - soot from fire? Petroleum odor noted at approximately 3 to 5 feet below ground surface
					FL207-B18-0.5-1 CA		SP-SM	Brown fine to coarse sand with silt and fine gravel (moist)	SS	1.2	
390	12	31			FL207-B18-0.5-1 CA		SM	Gray silty fine to coarse sand with fine gravel (moist)	SS	1.3	
					FL207-B18-2.5-3 CA						
5	18	74			FL207-B18-5-6 CA				SS	11.2	
385	12	50/6"			FL207-B18-7.5-8.5 CA		SM	Silt content slightly decreases	SS	2.6	
10	12	50/4"			FL207-B18-10-10.5 CA		SP-SM	Gray fine to coarse sand with silt, fine gravel and occasional coarse gravel (moist)	NS	2.1	
380	18	69			FL207-B18-13-14 CA				NS	3.2	
					FL207-B18-15.5-16.5 CA				NS	<1	
15	6	50/4"			FL207-B18-17.5-18 CA		SM	Gray silty fine to coarse sand with fine gravel and occasional coarse gravel (moist)	NS	<1	
375	12	50/6"			FL207-B18-20-20.5 CA		SM	Gray silty fine to coarse sand with fine to coarse gravel (moist) (native)	NS	<1	
20		50/3"									

Note: See Figure A-1 for explanation of symbols.  
Coordinates Data Source: Horizontal approximated based on GPS (Rec). Vertical approximated based on aerial photography provided by Sound Transit.

### Log of Boring FL207-B18



Project: Sound Transit - Federal Way Link Extension FL-207  
Project Location: 23418 Pacific Highway S, Kent, Washington  
Project Number: 4082-039-01

Figure A-6  
Sheet 1 of 1

Start Drilled 7/24/2018	End 7/23/2018	Total Depth (ft) 30.5	Logged By Checked By C/JG DLC	Driller Holt Services, Inc.	Drilling Method Hollow-stem Auger
Surface Elevation (ft) Vertical Datum	393 NAVD88	Hammer Data	Autohammer 140 (lbs) / 30 (in) Drop	Drilling Equipment	LDS 115 High Torque
Easting (X) Northing (Y)	1278545.099 146162.8991	System Datum	WA State Plane North NAD83	Groundwater not observed at time of exploration	
Notes:					

Elevation (feet)	Depth (feet)	FIELD DATA				Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
		Interval Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing						
0	0	12	35		FL207-B19-0.0-0.5 CA FL207-B19-0.5-1		AC SP-SM	Approximately 2 inches of asphalt concrete pavement Brown fine to coarse sand with silt and occasional fine gravel (moist)	SS SS	<1 <1	Lens of medium sand, trace silt observed near 6 feet below ground surface
390	5	12	50/4"		FL207-B19-5.6 CA		SM	Brown silty fine to coarse sand with fine gravel and occasional coarse gravel (moist)	NS	<1	
385		12	50/5"		FL207-B19-7.5-8.5				NS	<1	
380	10	12	50/5"		FL207-B19-10-11 CA				NS	<1	
		6	50/2"		FL207-B19-12.5-13				NS	<1	
375	15	12	50/5"		FL207-B19-15-15.5 CA				NS	<1	
		12	50/1"		FL207-B19-17.5-18 CA				NS	<1	
370	20	12	50/6"		FL207-B19-20-20.5 CA		SM	Brown fine to coarse sand with silt and fine to coarse gravel (moist)	NS	<1	
		6	50/1"		FL207-B19-22.5-23				NS	<1	
365	25	6	50/3"		FL207-B19-25-25.5 CA		SM	Brown silty fine to coarse sand with fine to coarse gravel (moist)	NS	<1	
		6	50/5"		FL207-B19-27.5-28		SP-SM	Brown fine to coarse sand with silt and fine to coarse gravel (moist)	NS	<1	
30	30	6	50/5"		FL207-B19-30-30.5 CA				NS	<1	

Note: See Figure A-1 for explanation of symbols.

Coordinates Data Source: Horizontal approximated based on GPS (Rec). Vertical approximated based on aerial photography provided by Sound Transit.

### Log of Boring FL207-B19



Project: Sound Transit - Federal Way Link Extension FL-207  
Project Location: 23418 Pacific Highway S, Kent, Washington  
Project Number: 4082-039-01

Figure A-7  
Sheet 1 of 1

Start Drilled	7/24/2018	End 7/24/2018	Total Depth (ft)	30.5	Logged By Checked By	CJG DLC	Driller	Holt Services, Inc.	Drilling Method	Hollow-stem Auger	
Surface Elevation (ft) Vertical Datum			392.77 NAVD88		Hammer Data		Autohammer 140 (lbs) / 30 (in) Drop		Drilling Equipment		LDS 115 High Torque
Easting (X) Northing (Y)			1278604.632 146157.2974		System Datum		WA State Plane North NAD83		Groundwater not observed at time of exploration		
Notes:											

Elevation (feet)	Depth (feet)	FIELD DATA				Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sneen	Headspace Vapor (ppm)	REMARKS
		Interval Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing						
0							AC	Approximately 2 inches of asphalt concrete pavement			Driller having difficulty with auger "drifting" at shallow depth 0 to 1 feet; sample not attempted
							NR	Drove through rock - no recovery - no sample			
390		18	50/5"								
		18	50/5"		FL207-B20-5-6 CA		SM	Brown silty fine to coarse sand with fine gravel and occasional coarse gravel (moist)	NS	<1	
385		18	50/5"		FL207-B20-8-9				NS	<1	
		12	50/5"		FL207-B20-10-10.5				NS	<1	
380		12	41		FL207-B20-12-5-13.5 CA		SP	Lenses of brown fine to medium sand, trace silt (moist)	NS	<1	
							SM	Lenses of brown silty fine to medium sand, occasional fine to coarse gravel (moist)	NS	<1	
375		12	50/3"		FL207-B20-15-16		SP-SM	Brown fine to coarse sand with silt and fine gravel (moist)	NS	<1	
							SM	Brown silty fine to medium sand with coarse sand and fine gravel (moist)	NS	<1	
370		18	59		FL207-B20-18-19		SP	Brown medium sand, trace silt (moist)	NS	<1	
		12	50/5"		FL207-B20-20-20.5 CA		ML	Gray silt (moist)	NS	<1	
365		12	50/4"		FL207-B20-22-5-23		SP-SM	Gray medium sand with silt and fine gravel (moist)	NS	<1	
							ML	Gray silt with fine sand (moist) (rock in shoe)	NS	<1	
360					FL207-B20-25-25.5		ML	Gray silt with fine to medium sand, occasional fine gravel (moist)	NS	<1	
355											
350		6	50/4"		FL207-B20-30-30.5 CA		SM	Brown silty fine to coarse sand with fine gravel (moist)			

Note: See Figure A-1 for explanation of symbols.

Coordinates Data Source: Horizontal approximated based on GPS (Rec). Vertical approximated based on aerial photography provided by Sound Transit.

### Log of Boring FL207-B20



Project: Sound Transit - Federal Way Link Extension FL-207  
 Project Location: 23418 Pacific Highway S, Kent, Washington  
 Project Number: 4082-039-01

Figure A-8  
 Sheet 1 of 1

Date: 8/31/18 Path: P:\4 4082039\GINT\408203901 ENV LOGS.GPJ DBLibrary/Library\GEOENGINEERS\_DE STD\_US\_JUNE\_2017 GLB\GEB ENVIRONMENTAL\_STANDARD\_NO\_GW

Start Drilled 7/19/2018	End 7/20/2018	Total Depth (ft) 31	Logged By Checked By CJG DLC	Driller Holt Services, Inc.	Drilling Method Hollow-stem Auger
Surface Elevation (ft) Vertical Datum	393.2 NAVD88	Hammer Data	Autohammer 140 (lbs) / 30 (in) Drop	Drilling Equipment	LDS 115 High Torque
Easting (X) Northing (Y)	1278634.359 146156.7331	System Datum	WA State Plane North NAD83	Groundwater not observed at time of exploration	
Notes:					

Elevation (feet)	Depth (feet)	FIELD DATA					MATERIAL DESCRIPTION	Screen	Headspace Vapor (ppm)	REMARKS
		Interval Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing	Graphic Log				
0							AC			
							GP			
390		12	19		FL207-B21-2.5-3.5		SP-SM	NS	<1	
5		6	50/5"		FL207-B21-5.5-5.5 CA		SP	NS	<1	
385										
		18	71		FL207-B21-7.5-8.5 CA		SP-SM	NS	<1	
								NS	<1	
10			89		FL207-B21-10-11 CA		SP-SM	NS	<1	
							SM	NS	<1	
380		12	50/5"		FL207-B21-12.5-13.5 CA			NS	<1	
15		6	50/4"		FL207-B21-15-15.5		SP-SM	NS	<1	
375										
		6	50/4"		FL207-B21-17-17.5			NS	<1	
20		6	50/4"		FL207-B21-20-20.5		SP-SM	NS	<1	
370										
		12	50/5"		FL207-B21-22.5-23.5		SP-SM	NS	<1	
25		6	50/5"		FL207-B21-25-25.5			NS	<1	
365										
		12	50/4"		FL207-B21-27.5-28.5		SP-SM	NS	<1	
30		6	50/3"		FL207-B21-30-30.5			NS	<1	

Note: See Figure A-1 for explanation of symbols.  
Coordinates Data Source: Horizontal approximated based on GPS (Rec). Vertical approximated based on aerial photography provided by Sound Transit.

### Log of Boring FL207-B21



Project: Sound Transit - Federal Way Link Extension FL-207  
Project Location: 23418 Pacific Highway S, Kent, Washington  
Project Number: 4082-039-01

Figure A-9  
Sheet 1 of 1

Start Drilled 7/19/2018	End 7/19/2018	Total Depth (ft) 26	Logged By Checked By CJG DLC	Driller Holt Services, Inc.	Drilling Method Hollow-stem Auger
Surface Elevation (ft) Vertical Datum	394.92 NAVD88	Hammer Data	Autohammer 140 (lbs) / 30 (in) Drop	Drilling Equipment	LDS 115 High Torque
Easting (X) Northing (Y)	1278686.856 146172.4184	System Datum	WA State Plane North NAD83	Groundwater not observed at time of exploration	
Notes:					

Elevation (feet)	Depth (feet)	FIELD DATA				Graphic Log	Group Classification	MATERIAL DESCRIPTION	Screen	Headspace Vapor (ppm)	REMARKS
		Interval Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing						
0	6	21			FL207-B22-0.0-5 CA		AC	Approximately 2 inches of asphalt concrete pavement	SS	<1	
							SM	Gray silty fine to coarse sand with fine gravel (moist)	SS	<1	
390	12	72			FL207-B22-2.5-3.5 CA		SP-SM	Brown fine to coarse sand with sand and fine to coarse gravel (moist)	NS	15.8	
5	12	54			FL207-B22-5.6 CA		SM	Gray silty fine to coarse sand with fine to coarse gravel (moist)	NS	<1	
385	12	60			FL207-B22-7.5-8.5		SM	Gray silty fine to coarse sand with occasional fine to coarse gravel (moist)	NS	<1	
10	6	50/6"			FL207-B22-10-10.5		SP-SM	Gray fine to coarse sand with silt and fine gravel (moist)	NS	<1	
380	12	50/4"			FL207-B22-12.5-13.5 CA		SM	Gray silty fine to medium sand with coarse sand and occasional fine gravel (moist)	NS	<1	
15	6	50/2"			FL207-B22-15-15.5		SM	Gray silty fine to coarse sand with occasional fine gravel (moist)	NS	<1	
375	6	50/2"			FL207-B22-17.5-18				NS	<1	
20	6	50/4"			FL207-B22-20-20.5		SP-SM	Gray fine to coarse sand with silt and fine to coarse gravel (moist)	NS	<1	
370	12	50/3"			FL207-B22-22.5-23		SM	Gray silty fine to coarse sand with fine gravel (moist)	NS	<1	
25	6	50/3"			FL207-B22-25-25.5				NS	--	

Note: See Figure A-1 for explanation of symbols.  
Coordinates Data Source: Horizontal approximated based on GPS (Rec). Vertical approximated based on aerial photography provided by Sound Transit.

### Log of Boring FL207-B22



Project: Sound Transit - Federal Way Link Extension FL-207  
Project Location: 23418 Pacific Highway S, Kent, Washington  
Project Number: 4082-039-01

Figure A-10  
Sheet 1 of 1

Start Drilled	7/20/2018	End 7/20/2018	Total Depth (ft)	20.75	Logged By Checked By	CJG DLC	Driller	Holt Services, Inc.	Drilling Method	Hollow-stem Auger
Surface Elevation (ft) Vertical Datum	394.41 NAVD88			Hammer Data	Autohammer 140 (lbs) / 30 (in) Drop			Drilling Equipment	LDS 115 High Torque	
Easting (X) Northing (Y)	1278690.466 146198.376			System Datum	WA State Plane North NAD83			Groundwater not observed at time of exploration		
Notes:										

Elevation (feet)	FIELD DATA					Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing						
0	12	21			FL207-B23-0.0-0.5 CA		AC	Approximately 2 inches of asphalt concrete pavement	NS	<1	
					FL207-B23-0.5-1 CA		SP	Brown fine to coarse sand with fine to coarse gravel and trace silt (moist)	NS	1.2	
	12	26			FL207-B23-0.5-1 CA		SM	Gray silty fine to coarse sand with fine gravel (moist)			
					FL207-B23-2.5-3.5 CA		SP	Brown fine to medium sand with trace silt (moist)	NS	<1	
							SP	Brown fine to coarse sand with fine gravel and trace silt (moist to dry)			
5	12	50			FL207-B23-5-6		SP-SM	Brown fine to coarse sand with silt, fine gravel and occasional coarse gravel (moist)	NS	<1	
	6	62			FL207-B23-7.5-8 CA		SM	Gray silty fine to coarse sand with occasional fine to coarse gravel (moist)	NS	<1	
10	18	50/3"			FL207-B23-10-11		SP-SM	Gray fine to coarse sand with silt and occasional fine to coarse gravel (moist)	NS	<1	
	6	50/3"			FL207-B23-12.5-13 CA				NS	<1	
15	12	50/3"			FL207-B23-15-16		SM	Gray silty fine to coarse sand with occasional fine gravel (moist)	NS	<1	
					FL207-B23-17.5-18 CA				NS	--	
20	6	50/3"			FL207-B23-20-20.5 CA		ML	Gray silt with fine to coarse sand (moist)	NS	<1	

Note: See Figure A-1 for explanation of symbols.  
Coordinates Data Source: Horizontal approximated based on GPS (Rec). Vertical approximated based on aerial photography provided by Sound Transit.

### Log of Boring FL207-B23



Project: Sound Transit - Federal Way Link Extension FL-207  
Project Location: 23418 Pacific Highway S, Kent, Washington  
Project Number: 4082-039-01

Figure A-11  
Sheet 1 of 1

Start Drilled 7/25/2018	End 7/25/2018	Total Depth (ft) 14	Logged By Checked By CJG DLC	Driller Holt Services, Inc.	Drilling Method Direct-Push
Surface Elevation (ft) Vertical Datum		393.77 NAVD88	Hammer Data		Drilling Equipment Power Probe 9630
Easting (X) Northing (Y)		1278700.042 146267.4156	System Datum WA State Plane North NAD83		Groundwater not observed at time of exploration
Notes:					

Elevation (feet)	FIELD DATA					MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	Interval Depth (feet)	Recovered (in)	Blows/foot	Collected Sample Sample Name Testing	Graphic Log	Group Classification			
0	6			FL207- B24-0.0-5 CA		SP-SM	NS	<1	Wood fragment at 4 feet below ground surface (fill)
	24			FL207- B24-2.5-3.5		GP-GM	NS	<1	
390						NR	NS	<1	
	42			FL207- B24-5.6 CA		GP-GM	NS	<1	
5						SM	NS	<1	
						SM	NS	<1	
						SM	NS	<1	
						SP	NS	<1	
				FL207- B24-7.5-8.5		SP-SM	NS	<1	
10	36					NR	NS	<1	
				FL207- B24-11-12 CA			NS	<1	

Boring terminated at approximately 14 feet below ground surface due to refusal

Note: See Figure A-1 for explanation of symbols.

Coordinates Data Source: Horizontal approximated based on GPS (Rec). Vertical approximated based on aerial photography provided by Sound Transit.

### Log of Direct-Push Boring FL207-B24



Project: Sound Transit - Federal Way Link Extension FL-207  
Project Location: 23418 Pacific Highway S, Kent, Washington  
Project Number: 4082-039-01

Figure A-12  
Sheet 1 of 1



Start Drilled	7/25/2018	End 7/25/2018	Total Depth (ft)	9	Logged By Checked By	CJG DLC	Driller	Holt Services, Inc.	Drilling Method	Direct-Push	
Surface Elevation (ft) Vertical Datum			391.31 NAVD88		Hammer Data			Drilling Equipment			Power Probe 9630
Easting (X) Northing (Y)		1278716.814 146338.653			System Datum		WA State Plane North NAD83		Groundwater not observed at time of exploration		
Notes:											

Elevation (feet)	Depth (feet)	FIELD DATA				Graphic Log	Group Classification	MATERIAL DESCRIPTION	Shoen	Headspace Vapor (ppm)	REMARKS
		Interval	Recovered (in)	Blows/foot	Collected Sample						
390 385	0	18			FL207- B25-0-0.5 CA		AC	Approximately 2 inches of asphalt concrete pavement	NS	<1	
					FL207- B25-0.5-1 CA		SP-SM	Red-brown fine to coarse sand with silt and occasional fine gravel (moist) (fill)	NS	<1	
		24			FL207- B25-1.5-3.5 CA		SM	Red-brown-gray silty fine to coarse sand with organic matter (black fragments) (mottled) (fill)	NS	<1	
							NR	No recovery	NS	<1	
							SM	Red-brown-gray silty fine to coarse sand with organic matter (black fragments) (mottled) (fill)	NS	<1	
	5	36			FL207- B25-6-7 CA		SP	Gray medium sand with trace silt, oxidation observed (moist) (fill)	NS	<1	
							SP	Gray fine to coarse sand with fine to coarse gravel and trace silt (dry) (crushed rock observed)	NS	<1	
							NR	No recovery	NS	<1	
							SP-SM	Gray fine to coarse sand with silt, fine gravel and occasional coarse gravel (moist)			
							NR	No recovery			

Note: See Figure A-1 for explanation of symbols.  
Coordinates Data Source: Horizontal approximated based on GPS (Rec). Vertical approximated based on aerial photography provided by Sound Transit.

### Log of Direct-Push Boring FL207-B25



Project: Sound Transit - Federal Way Link Extension FL-207  
Project Location: 23418 Pacific Highway S, Kent, Washington  
Project Number: 4082-039-01

Figure A-13  
Sheet 1 of 1

Start Drilled 7/25/2018	End 7/25/2018	Total Depth (ft) 8	Logged By Checked By CJG DLC	Driller Holt Services, Inc.	Drilling Method Direct-Push
Surface Elevation (ft) Vertical Datum		387.15 NAVD88	Hammer Data		Drilling Equipment Power Probe 9630
Easting (X) Northing (Y)		1278718.956 146430.0504	System Datum WA State Plane North NAD83		Groundwater not observed at time of exploration
Notes:					

Elevation (feet)	Depth (feet)	FIELD DATA					MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
		Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing				
385	0	24				FL207-B26-0-0.5 CA	AC	NS	<1	Asphalt concrete pavement
						FL207-B26-0.5-1 CA	SP-SM	NS	<1	
		24				FL207-B26-0.5-1 CA	SP	NS	<1	
						FL207-B26-2.5-3.5		NS	<1	
380	5	36				FL207-B26-5-6	NR	NS	<1	Gray fine to coarse sand with fine gravel and occasional coarse gravel (moist)
								NS	<1	
								NS	<1	
						FL207-B26-7-8 CA		NS	<1	

Boring terminated at approximately 8 feet below ground surface due to refusal

Note: See Figure A-1 for explanation of symbols.

Coordinates Data Source: Horizontal approximated based on GPS (Rec). Vertical approximated based on aerial photography provided by Sound Transit.

### Log of Direct-Push Boring FL207-B26



Project: Sound Transit - Federal Way Link Extension FL-207  
Project Location: 23418 Pacific Highway S, Kent, Washington  
Project Number: 4082-039-01

Figure A-14  
Sheet 1 of 1



Photograph 1 – FL-207 – Boring location FL207-B14 located west of building. View looking north.



Photograph 2 – FL-207 – Boring location FL207-B15 located in southwest corner of property (fee take area). View looking southwest.

### FL-207 Site Photos July 2018

Phase II Environmental Site Assessment  
Federal Way Link Extension  
Kent, Washington



Figure A-15





Photograph 3 – FL-207 – Boring location FL207-B16 located south of building. View looking west.



Photograph 4 – FL-207 – Boring location FL207-B16 showing soil core at 2.5 to 4 feet bgs. The sample from 2.5 to 3.5 feet bgs had a concentration of lube oil-range petroleum hydrocarbons greater than the MTCA Method A cleanup level.

### FL-207 Site Photos July 2018

Phase II Environmental Site Assessment  
Federal Way Link Extension  
Kent, Washington



Figure A-16





Photograph 5 – FL-207 – Boring location FL207-B17 located south of building. View looking west.



Photograph 6 – FL-207 – Boring location FL207-B18 south of loading dock. Soil from 0.5-1 foot bgs had a concentration of lube oil-range petroleum hydrocarbons greater than the MTCA Method A cleanup level.

### FL-207 Site Photos July 2018

Phase II Environmental Site Assessment  
Federal Way Link Extension  
Kent, Washington



Figure A-17





Photograph 7 – FL-207 – Boring location FL207-B19 located south of building. View looking west.



Photograph 8 – FL-207 – Boring locations FL207-B20 and FL207-B21 located south of building.

### FL-207 Site Photos July 2018

Phase II Environmental Site Assessment  
Federal Way Link Extension  
Kent, Washington



Figure A-18





Photograph 9 – FL-207 – Boring location FL207-B22 located in the southeast corner of the property (fee take area). View looking southeast.



Photograph 10 – FL-207 – Boring location FL207-B23 located in eastern fee take area. View looking south.

### FL-207 Site Photos July 2018

Phase II Environmental Site Assessment  
Federal Way Link Extension  
Kent, Washington



Figure A-19





Photograph 11 – FL-207 – Boring location FL207-B24 located in the eastern fee take area. View looking south.



Photograph 12 – FL-207 – Boring location FL207-B26 located in eastern fee take area.

### FL-207 Site Photos July 2018

Phase II Environmental Site Assessment  
Federal Way Link Extension  
Kent, Washington



Figure A-20



CARD NO. 23400

23400 A



30th AVE. S.

KENT - DES MOINES RD.

THE BEST INN  
23408 30<sup>TH</sup> AVE. SO.

MH 70-30<sup>B</sup>  
0+63

MH 70-30  
0+00

MH 70-30<sup>A</sup>  
1+29

MH 70-31  
21+76

Side Sewer at 23418

23418

TYPE OF PIPE - ASSOCIATED  
"A" Gasket

FEDERAL HIGHWAY  
ADDITION

PLAN NOs. - - - - -  
L. I. D.'s - - - - - U.L.I.D. #10 CONT. 70-1 AREA "G"  
BOOKS - - - - - PLAN PAGE 8/8



[illegible]

**APPENDIX B**  
**CHEMICAL ANALYTICAL PROGRAM**

## **APPENDIX B**

### **CHEMICAL ANALYTICAL DATA**

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#### **Analytical Methods**

Chain-of-custody procedures were followed during the transport of the soil and groundwater samples to the analytical laboratory. The samples were held in cold storage pending extraction and/or analysis. The analytical results, analytical methods reference and laboratory quality control (QC) records are included in this appendix. The analytical results are also summarized in the text and tables of this report.

#### **Analytical Data Review**

The laboratory maintains an internal quality assurance program as documented in its laboratory quality assurance manual. The laboratory uses a combination of blanks, surrogate recoveries, duplicates, matrix spike recoveries, matrix spike duplicate recoveries, blank spike recoveries and blank spike duplicate recoveries to evaluate the validity of the analytical results. The laboratory also uses data quality goals for individual chemicals or groups of chemicals based on the long-term performance of the test methods. The data quality goals were included in the laboratory reports. The laboratory compared each group of samples with the existing data quality goals and noted any exceptions in the laboratory report. Data quality exceptions documented by the accredited laboratory were reviewed by GeoEngineers and are addressed in the data quality exception section of this appendix.

#### **Analytical Data Review Summary**

The following data quality exceptions were noted in the laboratory reports during our review.

Lab Report Reference No. 1807-143B:

- Sample FL207-B16-2.5-3.5 analyzed for VOCs by EPA 8260C and PAHs by EPA 8270D/SIM were extracted and analyzed 11 days outside of hold time. Results may be biased low.

Lab Report Reference No. 1807-158:

- The duplicate Relative Percent Difference QC sample analyzed for total metals by EPA 6010D/7471B, was outside of control limits for arsenic due to the inherently high percentage variability of samples that are within five times the detection limit.

Based on our data quality review, it is our opinion that the laboratory data qualifiers listed for the sample above are not significant with regard to the use of the data for screening level site characterization purposes. The samples/results were considered of acceptable quality for their intended use in this report.





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

August 6, 2018

Marsi Beeson  
GeoEngineers, Inc.  
12000 NW Naito Prkway, Suite 180  
Portland, OR 97209

Re: Analytical Data for Project 4082-039-01  
Laboratory Reference No. 1807-158

Dear Marsi:

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

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

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

Sincerely,

A handwritten signature in black ink, appearing to read 'DB', with a long horizontal 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: August 6, 2018  
Samples Submitted: July 23, 2018  
Laboratory Reference: 1807-158  
Project: 4082-039-01

### Case Narrative

Samples were collected on July 23, 2018 and received by the laboratory on July 23, 2018. They were maintained at the laboratory at a temperature of 2°C to 6°C.

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

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

#### Total Metals EPA 6010D/7471B Analysis

The duplicate RPD for Arsenic is outside control limits due to the inherently high percentage variability of samples that are within five times the detection limit.

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: August 6, 2018  
 Samples Submitted: July 23, 2018  
 Laboratory Reference: 1807-158  
 Project: 4082-039-01

#### ANALYTICAL REPORT FOR SAMPLES

Client ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
FL207-B14-0.0.5	07-158-01	Soil	7-23-18	7-23-18	
FL207-B14-2.5-3.5	07-158-02	Soil	7-23-18	7-23-18	
FL207-B14-7.5-8.5	07-158-04	Soil	7-23-18	7-23-18	
FL207-B15-0-0.5	07-158-05	Soil	7-23-18	7-23-18	
FL207-B15-0.5-1	07-158-06	Soil	7-23-18	7-23-18	
FL207-B15-5.5-6	07-158-08	Soil	7-23-18	7-23-18	
FL207-B15-12.5-13	07-158-11	Soil	7-23-18	7-23-18	
FL207-B18-0-0.5	07-158-12	Soil	7-23-18	7-23-18	
FL207-B18-0.5-1	07-158-13	Soil	7-23-18	7-23-18	
FL207-B18-2.5-3	07-158-14	Soil	7-23-18	7-23-18	
FL207-B18-5-6	07-158-15	Soil	7-23-18	7-23-18	
FL207-B18-10-10.5	07-158-17	Soil	7-23-18	7-23-18	
FL207-B18-13-14	07-158-18	Soil	7-23-18	7-23-18	
FL207-B18-15.5-16.5	07-158-19	Soil	7-23-18	7-23-18	
FL207-B18-20-20.5	07-158-21	Soil	7-23-18	7-23-18	



Date of Report: August 6, 2018  
 Samples Submitted: July 23, 2018  
 Laboratory Reference: 1807-158  
 Project: 4082-039-01

### HYDROCARBON IDENTIFICATION NWTPH-HCID

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL207-B14-2.5-3.5</b>					
Laboratory ID:	07-158-02					
Gasoline Range Organics	ND	21	NWTPH-HCID	7-25-18	7-25-18	
Diesel Range Organics	ND	53	NWTPH-HCID	7-25-18	7-25-18	
Lube Oil Range Organics	ND	110	NWTPH-HCID	7-25-18	7-25-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	86	50-150				

<b>Client ID:</b>	<b>FL207-B14-7.5-8.5</b>					
Laboratory ID:	07-158-04					
Gasoline Range Organics	ND	22	NWTPH-HCID	7-25-18	7-25-18	
Diesel Range Organics	ND	55	NWTPH-HCID	7-25-18	7-25-18	
Lube Oil Range Organics	ND	110	NWTPH-HCID	7-25-18	7-25-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	90	50-150				

<b>Client ID:</b>	<b>FL207-B15-5.5-6</b>					
Laboratory ID:	07-158-08					
Gasoline Range Organics	ND	21	NWTPH-HCID	7-25-18	7-25-18	
Diesel Range Organics	ND	53	NWTPH-HCID	7-25-18	7-25-18	
Lube Oil Range Organics	ND	110	NWTPH-HCID	7-25-18	7-25-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	85	50-150				

<b>Client ID:</b>	<b>FL207-B15-12.5-13</b>					
Laboratory ID:	07-158-11					
Gasoline Range Organics	ND	21	NWTPH-HCID	7-25-18	7-25-18	
Diesel Range Organics	ND	54	NWTPH-HCID	7-25-18	7-25-18	
Lube Oil Range Organics	ND	110	NWTPH-HCID	7-25-18	7-25-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	92	50-150				

Client ID:	FL207-B18-0.5-1					
Laboratory ID:	07-158-13					
Gasoline Range Organics	ND	49	NWTPH-HCID	7-25-18	7-25-18	U1
Diesel Fuel #2	Detected	55	NWTPH-HCID	7-25-18	7-25-18	
Lube Oil	Detected	110	NWTPH-HCID	7-25-18	7-25-18	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	93	50-150				





Date of Report: August 6, 2018  
 Samples Submitted: July 23, 2018  
 Laboratory Reference: 1807-158  
 Project: 4082-039-01

### HYDROCARBON IDENTIFICATION NWTPH-HCID

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL207-B18-5-6</b>					
Laboratory ID:	07-158-15					
Gasoline Range Organics	<b>ND</b>	120	NWTPH-HCID	7-25-18	7-25-18	U1
Diesel Fuel #2	<b>Detected</b>	55	NWTPH-HCID	7-25-18	7-25-18	
Lube Oil	<b>Detected</b>	110	NWTPH-HCID	7-25-18	7-25-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	91	50-150				

<b>Client ID:</b>	<b>FL207-B18-10-10.5</b>					
Laboratory ID:	07-158-17					
Gasoline Range Organics	<b>ND</b>	22	NWTPH-HCID	7-25-18	7-25-18	
Diesel Range Organics	<b>ND</b>	54	NWTPH-HCID	7-25-18	7-25-18	
Lube Oil Range Organics	<b>ND</b>	110	NWTPH-HCID	7-25-18	7-25-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	91	50-150				

<b>Client ID:</b>	<b>FL207-B18-15.5-16.5</b>					
Laboratory ID:	07-158-19					
Gasoline Range Organics	<b>ND</b>	22	NWTPH-HCID	7-25-18	7-25-18	
Diesel Range Organics	<b>ND</b>	54	NWTPH-HCID	7-25-18	7-25-18	
Lube Oil Range Organics	<b>ND</b>	110	NWTPH-HCID	7-25-18	7-25-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	93	50-150				

<b>Client ID:</b>	<b>FL207-B18-20-20.5</b>					
Laboratory ID:	07-158-21					
Gasoline Range Organics	<b>ND</b>	22	NWTPH-HCID	7-25-18	7-25-18	
Diesel Range Organics	<b>ND</b>	56	NWTPH-HCID	7-25-18	7-25-18	
Lube Oil Range Organics	<b>ND</b>	110	NWTPH-HCID	7-25-18	7-25-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	95	50-150				



Date of Report: August 6, 2018  
Samples Submitted: July 23, 2018  
Laboratory Reference: 1807-158  
Project: 4082-039-01

**GASOLINE RANGE ORGANICS**  
**NWTPH-Gx**

Matrix: Soil  
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FL207-B18-2.5-3					
Laboratory ID:	07-158-14					
Gasoline	ND	4.7	NWTPH-Gx	7-25-18	7-25-18	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	85	57-129				



Date of Report: August 6, 2018  
 Samples Submitted: July 23, 2018  
 Laboratory Reference: 1807-158  
 Project: 4082-039-01

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

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL207-B18-2.5-3</b>					
Laboratory ID:	07-158-14					
Diesel Range Organics	<b>ND</b>	130	NWTPH-Dx	7-25-18	7-25-18	
Lube Oil	<b>870</b>	270	NWTPH-Dx	7-25-18	7-25-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	87	50-150				



Date of Report: August 6, 2018  
 Samples Submitted: July 23, 2018  
 Laboratory Reference: 1807-158  
 Project: 4082-039-01

**VOLATILE ORGANICS EPA 8260C**  
 page 1 of 2

Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID: FL207-B14-2.5-3.5</b>						
<b>Laboratory ID: 07-158-02</b>						
Dichlorodifluoromethane	ND	0.0014	EPA 8260C	7-25-18	7-25-18	
Chloromethane	ND	0.0069	EPA 8260C	7-25-18	7-25-18	
Vinyl Chloride	ND	0.0014	EPA 8260C	7-25-18	7-25-18	
Bromomethane	ND	0.0014	EPA 8260C	7-25-18	7-25-18	
Chloroethane	ND	0.0069	EPA 8260C	7-25-18	7-25-18	
Trichlorofluoromethane	ND	0.0014	EPA 8260C	7-25-18	7-25-18	
1,1-Dichloroethene	ND	0.0014	EPA 8260C	7-25-18	7-25-18	
Acetone	ND	0.0069	EPA 8260C	7-25-18	7-25-18	
Iodomethane	ND	0.0069	EPA 8260C	7-25-18	7-25-18	
Carbon Disulfide	ND	0.0014	EPA 8260C	7-25-18	7-25-18	
Methylene Chloride	ND	0.0069	EPA 8260C	7-25-18	7-25-18	
(trans) 1,2-Dichloroethene	ND	0.0014	EPA 8260C	7-25-18	7-25-18	
Methyl t-Butyl Ether	ND	0.0014	EPA 8260C	7-25-18	7-25-18	
1,1-Dichloroethane	ND	0.0014	EPA 8260C	7-25-18	7-25-18	
Vinyl Acetate	ND	0.0069	EPA 8260C	7-25-18	7-25-18	
2,2-Dichloropropane	ND	0.0014	EPA 8260C	7-25-18	7-25-18	
(cis) 1,2-Dichloroethene	ND	0.0014	EPA 8260C	7-25-18	7-25-18	
2-Butanone	ND	0.0069	EPA 8260C	7-25-18	7-25-18	
Bromochloromethane	ND	0.0014	EPA 8260C	7-25-18	7-25-18	
Chloroform	ND	0.0014	EPA 8260C	7-25-18	7-25-18	
1,1,1-Trichloroethane	ND	0.0014	EPA 8260C	7-25-18	7-25-18	
Carbon Tetrachloride	ND	0.0014	EPA 8260C	7-25-18	7-25-18	
1,1-Dichloropropene	ND	0.0014	EPA 8260C	7-25-18	7-25-18	
Benzene	ND	0.0014	EPA 8260C	7-25-18	7-25-18	
1,2-Dichloroethane	ND	0.0014	EPA 8260C	7-25-18	7-25-18	
Trichloroethene	ND	0.0014	EPA 8260C	7-25-18	7-25-18	
1,2-Dichloropropane	ND	0.0014	EPA 8260C	7-25-18	7-25-18	
Dibromomethane	ND	0.0014	EPA 8260C	7-25-18	7-25-18	
Bromodichloromethane	ND	0.0014	EPA 8260C	7-25-18	7-25-18	
2-Chloroethyl Vinyl Ether	ND	0.0069	EPA 8260C	7-25-18	7-25-18	
(cis) 1,3-Dichloropropene	ND	0.0014	EPA 8260C	7-25-18	7-25-18	
Methyl Isobutyl Ketone	ND	0.0069	EPA 8260C	7-25-18	7-25-18	
Toluene	ND	0.0069	EPA 8260C	7-25-18	7-25-18	
(trans) 1,3-Dichloropropene	ND	0.0014	EPA 8260C	7-25-18	7-25-18	



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: August 6, 2018  
 Samples Submitted: July 23, 2018  
 Laboratory Reference: 1807-158  
 Project: 4082-039-01

**VOLATILE ORGANICS EPA 8260C**  
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>		<b>FL207-B14-2.5-3.5</b>				
Laboratory ID:		07-158-02				
1,1,2-Trichloroethane	ND	0.0014	EPA 8260C	7-25-18	7-25-18	
Tetrachloroethene	ND	0.0014	EPA 8260C	7-25-18	7-25-18	
1,3-Dichloropropane	ND	0.0014	EPA 8260C	7-25-18	7-25-18	
2-Hexanone	ND	0.0094	EPA 8260C	7-25-18	7-25-18	
Dibromochloromethane	ND	0.0014	EPA 8260C	7-25-18	7-25-18	
1,2-Dibromoethane	ND	0.0014	EPA 8260C	7-25-18	7-25-18	
Chlorobenzene	ND	0.0014	EPA 8260C	7-25-18	7-25-18	
1,1,1,2-Tetrachloroethane	ND	0.0014	EPA 8260C	7-25-18	7-25-18	
Ethylbenzene	ND	0.0014	EPA 8260C	7-25-18	7-25-18	
m,p-Xylene	ND	0.0069	EPA 8260C	7-25-18	7-25-18	
o-Xylene	ND	0.0014	EPA 8260C	7-25-18	7-25-18	
Styrene	ND	0.0014	EPA 8260C	7-25-18	7-25-18	
Bromoform	ND	0.0069	EPA 8260C	7-25-18	7-25-18	
Isopropylbenzene	ND	0.0014	EPA 8260C	7-25-18	7-25-18	
Bromobenzene	ND	0.0014	EPA 8260C	7-25-18	7-25-18	
1,1,2,2-Tetrachloroethane	ND	0.0014	EPA 8260C	7-25-18	7-25-18	
1,2,3-Trichloropropane	ND	0.0014	EPA 8260C	7-25-18	7-25-18	
n-Propylbenzene	ND	0.0014	EPA 8260C	7-25-18	7-25-18	
2-Chlorotoluene	ND	0.0014	EPA 8260C	7-25-18	7-25-18	
4-Chlorotoluene	ND	0.0014	EPA 8260C	7-25-18	7-25-18	
1,3,5-Trimethylbenzene	ND	0.0014	EPA 8260C	7-25-18	7-25-18	
tert-Butylbenzene	ND	0.0014	EPA 8260C	7-25-18	7-25-18	
1,2,4-Trimethylbenzene	ND	0.0014	EPA 8260C	7-25-18	7-25-18	
sec-Butylbenzene	ND	0.0014	EPA 8260C	7-25-18	7-25-18	
1,3-Dichlorobenzene	ND	0.0014	EPA 8260C	7-25-18	7-25-18	
p-Isopropyltoluene	ND	0.0014	EPA 8260C	7-25-18	7-25-18	
1,4-Dichlorobenzene	ND	0.0014	EPA 8260C	7-25-18	7-25-18	
1,2-Dichlorobenzene	ND	0.0014	EPA 8260C	7-25-18	7-25-18	
n-Butylbenzene	ND	0.0014	EPA 8260C	7-25-18	7-25-18	
1,2-Dibromo-3-chloropropane	ND	0.0069	EPA 8260C	7-25-18	7-25-18	
1,2,4-Trichlorobenzene	ND	0.0014	EPA 8260C	7-25-18	7-25-18	
Hexachlorobutadiene	ND	0.0069	EPA 8260C	7-25-18	7-25-18	
Naphthalene	ND	0.0014	EPA 8260C	7-25-18	7-25-18	
1,2,3-Trichlorobenzene	ND	0.0014	EPA 8260C	7-25-18	7-25-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	99	68-139				
<i>Toluene-d8</i>	98	79-128				
<i>4-Bromofluorobenzene</i>	97	71-132				



Date of Report: August 6, 2018  
 Samples Submitted: July 23, 2018  
 Laboratory Reference: 1807-158  
 Project: 4082-039-01

**VOLATILE ORGANICS EPA 8260C**  
 page 1 of 2

Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID: FL207-B14-7.5-8.5</b>						
<b>Laboratory ID: 07-158-04</b>						
Dichlorodifluoromethane	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
Chloromethane	ND	0.0058	EPA 8260C	7-25-18	7-25-18	
Vinyl Chloride	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
Bromomethane	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
Chloroethane	ND	0.0058	EPA 8260C	7-25-18	7-25-18	
Trichlorofluoromethane	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
1,1-Dichloroethene	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
Acetone	ND	0.0058	EPA 8260C	7-25-18	7-25-18	
Iodomethane	ND	0.0058	EPA 8260C	7-25-18	7-25-18	
Carbon Disulfide	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
Methylene Chloride	ND	0.0058	EPA 8260C	7-25-18	7-25-18	
(trans) 1,2-Dichloroethene	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
Methyl t-Butyl Ether	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
1,1-Dichloroethane	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
Vinyl Acetate	ND	0.0058	EPA 8260C	7-25-18	7-25-18	
2,2-Dichloropropane	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
(cis) 1,2-Dichloroethene	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
2-Butanone	ND	0.0058	EPA 8260C	7-25-18	7-25-18	
Bromochloromethane	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
Chloroform	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
1,1,1-Trichloroethane	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
Carbon Tetrachloride	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
1,1-Dichloropropene	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
Benzene	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
1,2-Dichloroethane	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
Trichloroethene	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
1,2-Dichloropropane	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
Dibromomethane	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
Bromodichloromethane	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
2-Chloroethyl Vinyl Ether	ND	0.0058	EPA 8260C	7-25-18	7-25-18	
(cis) 1,3-Dichloropropene	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
Methyl Isobutyl Ketone	ND	0.0058	EPA 8260C	7-25-18	7-25-18	
Toluene	ND	0.0058	EPA 8260C	7-25-18	7-25-18	
(trans) 1,3-Dichloropropene	ND	0.0012	EPA 8260C	7-25-18	7-25-18	



Date of Report: August 6, 2018  
 Samples Submitted: July 23, 2018  
 Laboratory Reference: 1807-158  
 Project: 4082-039-01

**VOLATILE ORGANICS EPA 8260C**  
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID: FL207-B14-7.5-8.5</b>						
Laboratory ID: 07-158-04						
1,1,2-Trichloroethane	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
Tetrachloroethene	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
1,3-Dichloropropane	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
2-Hexanone	ND	0.0079	EPA 8260C	7-25-18	7-25-18	
Dibromochloromethane	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
1,2-Dibromoethane	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
Chlorobenzene	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
1,1,1,2-Tetrachloroethane	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
Ethylbenzene	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
m,p-Xylene	ND	0.0058	EPA 8260C	7-25-18	7-25-18	
o-Xylene	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
Styrene	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
Bromoform	ND	0.0058	EPA 8260C	7-25-18	7-25-18	
Isopropylbenzene	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
Bromobenzene	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
1,1,2,2-Tetrachloroethane	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
1,2,3-Trichloropropane	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
n-Propylbenzene	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
2-Chlorotoluene	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
4-Chlorotoluene	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
1,3,5-Trimethylbenzene	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
tert-Butylbenzene	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
1,2,4-Trimethylbenzene	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
sec-Butylbenzene	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
1,3-Dichlorobenzene	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
p-Isopropyltoluene	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
1,4-Dichlorobenzene	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
1,2-Dichlorobenzene	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
n-Butylbenzene	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
1,2-Dibromo-3-chloropropane	ND	0.0058	EPA 8260C	7-25-18	7-25-18	
1,2,4-Trichlorobenzene	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
Hexachlorobutadiene	ND	0.0058	EPA 8260C	7-25-18	7-25-18	
Naphthalene	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
1,2,3-Trichlorobenzene	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>101</i>	<i>68-139</i>				
<i>Toluene-d8</i>	<i>99</i>	<i>79-128</i>				
<i>4-Bromofluorobenzene</i>	<i>96</i>	<i>71-132</i>				



Date of Report: August 6, 2018  
 Samples Submitted: July 23, 2018  
 Laboratory Reference: 1807-158  
 Project: 4082-039-01

**VOLATILE ORGANICS 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>FL207-B15-5.5-6</b>				
<b>Laboratory ID:</b>		<b>07-158-08</b>				
Dichlorodifluoromethane	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
Chloromethane	ND	0.0047	EPA 8260C	7-25-18	7-25-18	
Vinyl Chloride	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
Bromomethane	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
Chloroethane	ND	0.0047	EPA 8260C	7-25-18	7-25-18	
Trichlorofluoromethane	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
1,1-Dichloroethene	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
Acetone	ND	0.0047	EPA 8260C	7-25-18	7-25-18	
Iodomethane	ND	0.0047	EPA 8260C	7-25-18	7-25-18	
Carbon Disulfide	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
Methylene Chloride	ND	0.0047	EPA 8260C	7-25-18	7-25-18	
(trans) 1,2-Dichloroethene	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
Methyl t-Butyl Ether	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
1,1-Dichloroethane	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
Vinyl Acetate	ND	0.0047	EPA 8260C	7-25-18	7-25-18	
2,2-Dichloropropane	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
(cis) 1,2-Dichloroethene	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
2-Butanone	ND	0.0047	EPA 8260C	7-25-18	7-25-18	
Bromochloromethane	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
Chloroform	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
1,1,1-Trichloroethane	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
Carbon Tetrachloride	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
1,1-Dichloropropene	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
Benzene	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
1,2-Dichloroethane	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
Trichloroethene	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
1,2-Dichloropropane	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
Dibromomethane	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
Bromodichloromethane	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
2-Chloroethyl Vinyl Ether	ND	0.0047	EPA 8260C	7-25-18	7-25-18	
(cis) 1,3-Dichloropropene	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
Methyl Isobutyl Ketone	ND	0.0047	EPA 8260C	7-25-18	7-25-18	
Toluene	ND	0.0047	EPA 8260C	7-25-18	7-25-18	
(trans) 1,3-Dichloropropene	ND	0.00093	EPA 8260C	7-25-18	7-25-18	





Date of Report: August 6, 2018  
 Samples Submitted: July 23, 2018  
 Laboratory Reference: 1807-158  
 Project: 4082-039-01

**VOLATILE ORGANICS EPA 8260C**  
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL207-B15-5.5-6</b>					
Laboratory ID:	07-158-08					
1,1,2-Trichloroethane	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
Tetrachloroethene	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
1,3-Dichloropropane	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
2-Hexanone	ND	0.0063	EPA 8260C	7-25-18	7-25-18	
Dibromochloromethane	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
1,2-Dibromoethane	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
Chlorobenzene	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
1,1,1,2-Tetrachloroethane	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
Ethylbenzene	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
m,p-Xylene	ND	0.0047	EPA 8260C	7-25-18	7-25-18	
o-Xylene	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
Styrene	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
Bromoform	ND	0.0047	EPA 8260C	7-25-18	7-25-18	
Isopropylbenzene	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
Bromobenzene	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
1,1,2,2-Tetrachloroethane	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
1,2,3-Trichloropropane	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
n-Propylbenzene	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
2-Chlorotoluene	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
4-Chlorotoluene	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
1,3,5-Trimethylbenzene	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
tert-Butylbenzene	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
1,2,4-Trimethylbenzene	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
sec-Butylbenzene	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
1,3-Dichlorobenzene	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
p-Isopropyltoluene	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
1,4-Dichlorobenzene	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
1,2-Dichlorobenzene	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
n-Butylbenzene	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
1,2-Dibromo-3-chloropropane	ND	0.0047	EPA 8260C	7-25-18	7-25-18	
1,2,4-Trichlorobenzene	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
Hexachlorobutadiene	ND	0.0047	EPA 8260C	7-25-18	7-25-18	
Naphthalene	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
1,2,3-Trichlorobenzene	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>102</i>	<i>68-139</i>				
<i>Toluene-d8</i>	<i>100</i>	<i>79-128</i>				
<i>4-Bromofluorobenzene</i>	<i>95</i>	<i>71-132</i>				



Date of Report: August 6, 2018  
 Samples Submitted: July 23, 2018  
 Laboratory Reference: 1807-158  
 Project: 4082-039-01

**VOLATILE ORGANICS 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>FL207-B15-12.5-13</b>				
<b>Laboratory ID:</b>		<b>07-158-11</b>				
Dichlorodifluoromethane	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
Chloromethane	ND	0.0046	EPA 8260C	7-25-18	7-25-18	
Vinyl Chloride	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
Bromomethane	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
Chloroethane	ND	0.0046	EPA 8260C	7-25-18	7-25-18	
Trichlorofluoromethane	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
1,1-Dichloroethene	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
Acetone	ND	0.0046	EPA 8260C	7-25-18	7-25-18	
Iodomethane	ND	0.0046	EPA 8260C	7-25-18	7-25-18	
Carbon Disulfide	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
Methylene Chloride	ND	0.0046	EPA 8260C	7-25-18	7-25-18	
(trans) 1,2-Dichloroethene	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
Methyl t-Butyl Ether	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
1,1-Dichloroethane	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
Vinyl Acetate	ND	0.0046	EPA 8260C	7-25-18	7-25-18	
2,2-Dichloropropane	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
(cis) 1,2-Dichloroethene	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
2-Butanone	ND	0.0046	EPA 8260C	7-25-18	7-25-18	
Bromochloromethane	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
Chloroform	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
1,1,1-Trichloroethane	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
Carbon Tetrachloride	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
1,1-Dichloropropene	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
Benzene	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
1,2-Dichloroethane	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
Trichloroethene	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
1,2-Dichloropropane	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
Dibromomethane	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
Bromodichloromethane	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
2-Chloroethyl Vinyl Ether	ND	0.0046	EPA 8260C	7-25-18	7-25-18	
(cis) 1,3-Dichloropropene	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
Methyl Isobutyl Ketone	ND	0.0046	EPA 8260C	7-25-18	7-25-18	
Toluene	ND	0.0046	EPA 8260C	7-25-18	7-25-18	
(trans) 1,3-Dichloropropene	ND	0.00093	EPA 8260C	7-25-18	7-25-18	



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: August 6, 2018  
 Samples Submitted: July 23, 2018  
 Laboratory Reference: 1807-158  
 Project: 4082-039-01

**VOLATILE ORGANICS EPA 8260C**  
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>		<b>FL207-B15-12.5-13</b>				
Laboratory ID:		07-158-11				
1,1,2-Trichloroethane	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
Tetrachloroethene	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
1,3-Dichloropropane	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
2-Hexanone	ND	0.0063	EPA 8260C	7-25-18	7-25-18	
Dibromochloromethane	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
1,2-Dibromoethane	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
Chlorobenzene	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
1,1,1,2-Tetrachloroethane	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
Ethylbenzene	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
m,p-Xylene	ND	0.0046	EPA 8260C	7-25-18	7-25-18	
o-Xylene	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
Styrene	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
Bromoform	ND	0.0046	EPA 8260C	7-25-18	7-25-18	
Isopropylbenzene	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
Bromobenzene	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
1,1,2,2-Tetrachloroethane	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
1,2,3-Trichloropropane	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
n-Propylbenzene	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
2-Chlorotoluene	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
4-Chlorotoluene	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
1,3,5-Trimethylbenzene	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
tert-Butylbenzene	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
1,2,4-Trimethylbenzene	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
sec-Butylbenzene	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
1,3-Dichlorobenzene	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
p-Isopropyltoluene	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
1,4-Dichlorobenzene	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
1,2-Dichlorobenzene	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
n-Butylbenzene	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
1,2-Dibromo-3-chloropropane	ND	0.0046	EPA 8260C	7-25-18	7-25-18	
1,2,4-Trichlorobenzene	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
Hexachlorobutadiene	ND	0.0046	EPA 8260C	7-25-18	7-25-18	
Naphthalene	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
1,2,3-Trichlorobenzene	ND	0.00093	EPA 8260C	7-25-18	7-25-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	99	68-139				
<i>Toluene-d8</i>	101	79-128				
<i>4-Bromofluorobenzene</i>	98	71-132				



Date of Report: August 6, 2018  
 Samples Submitted: July 23, 2018  
 Laboratory Reference: 1807-158  
 Project: 4082-039-01

**VOLATILE ORGANICS EPA 8260C**  
 page 1 of 2

Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID: FL207-B18-0.5-1</b>						
<b>Laboratory ID: 07-158-13</b>						
Dichlorodifluoromethane	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
Chloromethane	ND	0.0051	EPA 8260C	7-25-18	7-25-18	
Vinyl Chloride	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
Bromomethane	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
Chloroethane	ND	0.0051	EPA 8260C	7-25-18	7-25-18	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
Acetone	0.0067	0.0051	EPA 8260C	7-25-18	7-25-18	
Iodomethane	ND	0.0051	EPA 8260C	7-25-18	7-25-18	
Carbon Disulfide	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
Methylene Chloride	ND	0.0051	EPA 8260C	7-25-18	7-25-18	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
Vinyl Acetate	ND	0.0051	EPA 8260C	7-25-18	7-25-18	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
2-Butanone	ND	0.0051	EPA 8260C	7-25-18	7-25-18	
Bromochloromethane	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
Chloroform	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
Benzene	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
Trichloroethene	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
Dibromomethane	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
Bromodichloromethane	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
2-Chloroethyl Vinyl Ether	ND	0.0051	EPA 8260C	7-25-18	7-25-18	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
Methyl Isobutyl Ketone	ND	0.0051	EPA 8260C	7-25-18	7-25-18	
Toluene	ND	0.0051	EPA 8260C	7-25-18	7-25-18	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	7-25-18	7-25-18	



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Date of Report: August 6, 2018  
 Samples Submitted: July 23, 2018  
 Laboratory Reference: 1807-158  
 Project: 4082-039-01

**VOLATILE ORGANICS EPA 8260C**  
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL207-B18-0.5-1</b>					
Laboratory ID:	07-158-13					
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
Tetrachloroethene	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
2-Hexanone	ND	0.0070	EPA 8260C	7-25-18	7-25-18	
Dibromochloromethane	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
Chlorobenzene	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
Ethylbenzene	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
m,p-Xylene	ND	0.0051	EPA 8260C	7-25-18	7-25-18	
o-Xylene	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
Styrene	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
Bromoform	ND	0.0051	EPA 8260C	7-25-18	7-25-18	
Isopropylbenzene	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
Bromobenzene	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
n-Propylbenzene	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
2-Chlorotoluene	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
4-Chlorotoluene	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
1,3,5-Trimethylbenzene	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
tert-Butylbenzene	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
1,2,4-Trimethylbenzene	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
sec-Butylbenzene	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
p-Isopropyltoluene	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
n-Butylbenzene	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
1,2-Dibromo-3-chloropropane	ND	0.0051	EPA 8260C	7-25-18	7-25-18	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
Hexachlorobutadiene	ND	0.0051	EPA 8260C	7-25-18	7-25-18	
Naphthalene	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	92	68-139				
<i>Toluene-d8</i>	99	79-128				
<i>4-Bromofluorobenzene</i>	99	71-132				



Date of Report: August 6, 2018  
 Samples Submitted: July 23, 2018  
 Laboratory Reference: 1807-158  
 Project: 4082-039-01

**VOLATILE ORGANICS EPA 8260C**  
 page 1 of 2

Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID: FL207-B18-2.5-3</b>						
<b>Laboratory ID: 07-158-14</b>						
Dichlorodifluoromethane	ND	0.0013	EPA 8260C	7-25-18	7-25-18	
Chloromethane	ND	0.0066	EPA 8260C	7-25-18	7-25-18	
Vinyl Chloride	ND	0.0013	EPA 8260C	7-25-18	7-25-18	
Bromomethane	ND	0.0013	EPA 8260C	7-25-18	7-25-18	
Chloroethane	ND	0.0066	EPA 8260C	7-25-18	7-25-18	
Trichlorofluoromethane	ND	0.0013	EPA 8260C	7-25-18	7-25-18	
1,1-Dichloroethene	ND	0.0013	EPA 8260C	7-25-18	7-25-18	
Acetone	ND	0.0066	EPA 8260C	7-25-18	7-25-18	
Iodomethane	ND	0.0066	EPA 8260C	7-25-18	7-25-18	
Carbon Disulfide	ND	0.0013	EPA 8260C	7-25-18	7-25-18	
Methylene Chloride	ND	0.0066	EPA 8260C	7-25-18	7-25-18	
(trans) 1,2-Dichloroethene	ND	0.0013	EPA 8260C	7-25-18	7-25-18	
Methyl t-Butyl Ether	ND	0.0013	EPA 8260C	7-25-18	7-25-18	
1,1-Dichloroethane	ND	0.0013	EPA 8260C	7-25-18	7-25-18	
Vinyl Acetate	ND	0.0066	EPA 8260C	7-25-18	7-25-18	
2,2-Dichloropropane	ND	0.0013	EPA 8260C	7-25-18	7-25-18	
(cis) 1,2-Dichloroethene	ND	0.0013	EPA 8260C	7-25-18	7-25-18	
2-Butanone	ND	0.0066	EPA 8260C	7-25-18	7-25-18	
Bromochloromethane	ND	0.0013	EPA 8260C	7-25-18	7-25-18	
Chloroform	ND	0.0013	EPA 8260C	7-25-18	7-25-18	
1,1,1-Trichloroethane	ND	0.0013	EPA 8260C	7-25-18	7-25-18	
Carbon Tetrachloride	ND	0.0013	EPA 8260C	7-25-18	7-25-18	
1,1-Dichloropropene	ND	0.0013	EPA 8260C	7-25-18	7-25-18	
Benzene	ND	0.0013	EPA 8260C	7-25-18	7-25-18	
1,2-Dichloroethane	ND	0.0013	EPA 8260C	7-25-18	7-25-18	
Trichloroethene	ND	0.0013	EPA 8260C	7-25-18	7-25-18	
1,2-Dichloropropane	ND	0.0013	EPA 8260C	7-25-18	7-25-18	
Dibromomethane	ND	0.0013	EPA 8260C	7-25-18	7-25-18	
Bromodichloromethane	ND	0.0013	EPA 8260C	7-25-18	7-25-18	
2-Chloroethyl Vinyl Ether	ND	0.0066	EPA 8260C	7-25-18	7-25-18	
(cis) 1,3-Dichloropropene	ND	0.0013	EPA 8260C	7-25-18	7-25-18	
Methyl Isobutyl Ketone	ND	0.0066	EPA 8260C	7-25-18	7-25-18	
Toluene	ND	0.0066	EPA 8260C	7-25-18	7-25-18	
(trans) 1,3-Dichloropropene	ND	0.0013	EPA 8260C	7-25-18	7-25-18	



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Date of Report: August 6, 2018  
 Samples Submitted: July 23, 2018  
 Laboratory Reference: 1807-158  
 Project: 4082-039-01

**VOLATILE ORGANICS EPA 8260C**  
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>		<b>FL207-B18-2.5-3</b>				
Laboratory ID:		07-158-14				
1,1,2-Trichloroethane	ND	0.0013	EPA 8260C	7-25-18	7-25-18	
Tetrachloroethene	ND	0.0013	EPA 8260C	7-25-18	7-25-18	
1,3-Dichloropropane	ND	0.0013	EPA 8260C	7-25-18	7-25-18	
2-Hexanone	ND	0.0089	EPA 8260C	7-25-18	7-25-18	
Dibromochloromethane	ND	0.0013	EPA 8260C	7-25-18	7-25-18	
1,2-Dibromoethane	ND	0.0013	EPA 8260C	7-25-18	7-25-18	
Chlorobenzene	ND	0.0013	EPA 8260C	7-25-18	7-25-18	
1,1,1,2-Tetrachloroethane	ND	0.0013	EPA 8260C	7-25-18	7-25-18	
Ethylbenzene	0.011	0.0013	EPA 8260C	7-25-18	7-25-18	
m,p-Xylene	0.050	0.0066	EPA 8260C	7-25-18	7-25-18	
o-Xylene	0.016	0.0013	EPA 8260C	7-25-18	7-25-18	
Styrene	ND	0.0013	EPA 8260C	7-25-18	7-25-18	
Bromoform	ND	0.0066	EPA 8260C	7-25-18	7-25-18	
Isopropylbenzene	ND	0.0013	EPA 8260C	7-25-18	7-25-18	
Bromobenzene	ND	0.0013	EPA 8260C	7-25-18	7-25-18	
1,1,2,2-Tetrachloroethane	ND	0.0013	EPA 8260C	7-25-18	7-25-18	
1,2,3-Trichloropropane	ND	0.0013	EPA 8260C	7-25-18	7-25-18	
n-Propylbenzene	ND	0.0013	EPA 8260C	7-25-18	7-25-18	
2-Chlorotoluene	ND	0.0013	EPA 8260C	7-25-18	7-25-18	
4-Chlorotoluene	ND	0.0013	EPA 8260C	7-25-18	7-25-18	
1,3,5-Trimethylbenzene	ND	0.0013	EPA 8260C	7-25-18	7-25-18	
tert-Butylbenzene	ND	0.0013	EPA 8260C	7-25-18	7-25-18	
1,2,4-Trimethylbenzene	ND	0.0013	EPA 8260C	7-25-18	7-25-18	
sec-Butylbenzene	ND	0.0013	EPA 8260C	7-25-18	7-25-18	
1,3-Dichlorobenzene	ND	0.0013	EPA 8260C	7-25-18	7-25-18	
p-Isopropyltoluene	ND	0.0013	EPA 8260C	7-25-18	7-25-18	
1,4-Dichlorobenzene	ND	0.0013	EPA 8260C	7-25-18	7-25-18	
1,2-Dichlorobenzene	ND	0.0013	EPA 8260C	7-25-18	7-25-18	
n-Butylbenzene	ND	0.0013	EPA 8260C	7-25-18	7-25-18	
1,2-Dibromo-3-chloropropane	ND	0.0066	EPA 8260C	7-25-18	7-25-18	
1,2,4-Trichlorobenzene	ND	0.0013	EPA 8260C	7-25-18	7-25-18	
Hexachlorobutadiene	ND	0.0066	EPA 8260C	7-25-18	7-25-18	
Naphthalene	ND	0.0013	EPA 8260C	7-25-18	7-25-18	
1,2,3-Trichlorobenzene	ND	0.0013	EPA 8260C	7-25-18	7-25-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>106</i>	<i>68-139</i>				
<i>Toluene-d8</i>	<i>94</i>	<i>79-128</i>				
<i>4-Bromofluorobenzene</i>	<i>81</i>	<i>71-132</i>				





Date of Report: August 6, 2018  
 Samples Submitted: July 23, 2018  
 Laboratory Reference: 1807-158  
 Project: 4082-039-01

**VOLATILE ORGANICS 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>FL207-B18-5-6</b>				
<b>Laboratory ID:</b>		<b>07-158-15</b>				
Dichlorodifluoromethane	ND	0.00089	EPA 8260C	7-25-18	7-25-18	
Chloromethane	ND	0.0045	EPA 8260C	7-25-18	7-25-18	
Vinyl Chloride	ND	0.00089	EPA 8260C	7-25-18	7-25-18	
Bromomethane	ND	0.00089	EPA 8260C	7-25-18	7-25-18	
Chloroethane	ND	0.0045	EPA 8260C	7-25-18	7-25-18	
Trichlorofluoromethane	ND	0.00089	EPA 8260C	7-25-18	7-25-18	
1,1-Dichloroethene	ND	0.00089	EPA 8260C	7-25-18	7-25-18	
Acetone	0.042	0.0045	EPA 8260C	7-25-18	7-25-18	
Iodomethane	ND	0.0045	EPA 8260C	7-25-18	7-25-18	
Carbon Disulfide	ND	0.00089	EPA 8260C	7-25-18	7-25-18	
Methylene Chloride	ND	0.0045	EPA 8260C	7-25-18	7-25-18	
(trans) 1,2-Dichloroethene	ND	0.00089	EPA 8260C	7-25-18	7-25-18	
Methyl t-Butyl Ether	ND	0.00089	EPA 8260C	7-25-18	7-25-18	
1,1-Dichloroethane	ND	0.00089	EPA 8260C	7-25-18	7-25-18	
Vinyl Acetate	ND	0.0045	EPA 8260C	7-25-18	7-25-18	
2,2-Dichloropropane	ND	0.00089	EPA 8260C	7-25-18	7-25-18	
(cis) 1,2-Dichloroethene	ND	0.00089	EPA 8260C	7-25-18	7-25-18	
2-Butanone	ND	0.0045	EPA 8260C	7-25-18	7-25-18	
Bromochloromethane	ND	0.00089	EPA 8260C	7-25-18	7-25-18	
Chloroform	ND	0.00089	EPA 8260C	7-25-18	7-25-18	
1,1,1-Trichloroethane	ND	0.00089	EPA 8260C	7-25-18	7-25-18	
Carbon Tetrachloride	ND	0.00089	EPA 8260C	7-25-18	7-25-18	
1,1-Dichloropropene	ND	0.00089	EPA 8260C	7-25-18	7-25-18	
Benzene	ND	0.00089	EPA 8260C	7-25-18	7-25-18	
1,2-Dichloroethane	ND	0.00089	EPA 8260C	7-25-18	7-25-18	
Trichloroethene	ND	0.00089	EPA 8260C	7-25-18	7-25-18	
1,2-Dichloropropane	ND	0.00089	EPA 8260C	7-25-18	7-25-18	
Dibromomethane	ND	0.00089	EPA 8260C	7-25-18	7-25-18	
Bromodichloromethane	ND	0.00089	EPA 8260C	7-25-18	7-25-18	
2-Chloroethyl Vinyl Ether	ND	0.0045	EPA 8260C	7-25-18	7-25-18	
(cis) 1,3-Dichloropropene	ND	0.00089	EPA 8260C	7-25-18	7-25-18	
Methyl Isobutyl Ketone	ND	0.0045	EPA 8260C	7-25-18	7-25-18	
Toluene	ND	0.0045	EPA 8260C	7-25-18	7-25-18	
(trans) 1,3-Dichloropropene	ND	0.00089	EPA 8260C	7-25-18	7-25-18	



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 Samples Submitted: July 23, 2018  
 Laboratory Reference: 1807-158  
 Project: 4082-039-01

**VOLATILE ORGANICS EPA 8260C**  
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL207-B18-5-6</b>					
Laboratory ID:	07-158-15					
1,1,2-Trichloroethane	ND	0.00089	EPA 8260C	7-25-18	7-25-18	
Tetrachloroethene	ND	0.00089	EPA 8260C	7-25-18	7-25-18	
1,3-Dichloropropane	ND	0.00089	EPA 8260C	7-25-18	7-25-18	
2-Hexanone	ND	0.0061	EPA 8260C	7-25-18	7-25-18	
Dibromochloromethane	ND	0.00089	EPA 8260C	7-25-18	7-25-18	
1,2-Dibromoethane	ND	0.00089	EPA 8260C	7-25-18	7-25-18	
Chlorobenzene	ND	0.00089	EPA 8260C	7-25-18	7-25-18	
1,1,1,2-Tetrachloroethane	ND	0.00089	EPA 8260C	7-25-18	7-25-18	
Ethylbenzene	ND	0.00089	EPA 8260C	7-25-18	7-25-18	
m,p-Xylene	ND	0.0045	EPA 8260C	7-25-18	7-25-18	
o-Xylene	ND	0.00089	EPA 8260C	7-25-18	7-25-18	
Styrene	ND	0.00089	EPA 8260C	7-25-18	7-25-18	
Bromoform	ND	0.0045	EPA 8260C	7-25-18	7-25-18	
Isopropylbenzene	ND	0.00089	EPA 8260C	7-25-18	7-25-18	
Bromobenzene	ND	0.00089	EPA 8260C	7-25-18	7-25-18	
1,1,2,2-Tetrachloroethane	ND	0.00089	EPA 8260C	7-25-18	7-25-18	
1,2,3-Trichloropropane	ND	0.00089	EPA 8260C	7-25-18	7-25-18	
n-Propylbenzene	ND	0.00089	EPA 8260C	7-25-18	7-25-18	
2-Chlorotoluene	ND	0.00089	EPA 8260C	7-25-18	7-25-18	
4-Chlorotoluene	ND	0.00089	EPA 8260C	7-25-18	7-25-18	
1,3,5-Trimethylbenzene	ND	0.00089	EPA 8260C	7-25-18	7-25-18	
tert-Butylbenzene	ND	0.00089	EPA 8260C	7-25-18	7-25-18	
1,2,4-Trimethylbenzene	0.0012	0.00089	EPA 8260C	7-25-18	7-25-18	
sec-Butylbenzene	ND	0.00089	EPA 8260C	7-25-18	7-25-18	
1,3-Dichlorobenzene	ND	0.00089	EPA 8260C	7-25-18	7-25-18	
p-Isopropyltoluene	ND	0.00089	EPA 8260C	7-25-18	7-25-18	
1,4-Dichlorobenzene	ND	0.00089	EPA 8260C	7-25-18	7-25-18	
1,2-Dichlorobenzene	ND	0.00089	EPA 8260C	7-25-18	7-25-18	
n-Butylbenzene	ND	0.00089	EPA 8260C	7-25-18	7-25-18	
1,2-Dibromo-3-chloropropane	ND	0.0045	EPA 8260C	7-25-18	7-25-18	
1,2,4-Trichlorobenzene	ND	0.00089	EPA 8260C	7-25-18	7-25-18	
Hexachlorobutadiene	ND	0.0045	EPA 8260C	7-25-18	7-25-18	
Naphthalene	0.0044	0.00089	EPA 8260C	7-25-18	7-25-18	
1,2,3-Trichlorobenzene	ND	0.00089	EPA 8260C	7-25-18	7-25-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	93	68-139				
<i>Toluene-d8</i>	99	79-128				
<i>4-Bromofluorobenzene</i>	98	71-132				



Date of Report: August 6, 2018  
 Samples Submitted: July 23, 2018  
 Laboratory Reference: 1807-158  
 Project: 4082-039-01

**VOLATILE ORGANICS 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>FL207-B18-10-10.5</b>				
<b>Laboratory ID:</b>		<b>07-158-17</b>				
Dichlorodifluoromethane	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
Chloromethane	ND	0.0058	EPA 8260C	7-25-18	7-25-18	
Vinyl Chloride	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
Bromomethane	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
Chloroethane	ND	0.0058	EPA 8260C	7-25-18	7-25-18	
Trichlorofluoromethane	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
1,1-Dichloroethene	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
Acetone	ND	0.0058	EPA 8260C	7-25-18	7-25-18	
Iodomethane	ND	0.0058	EPA 8260C	7-25-18	7-25-18	
Carbon Disulfide	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
Methylene Chloride	ND	0.0058	EPA 8260C	7-25-18	7-25-18	
(trans) 1,2-Dichloroethene	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
Methyl t-Butyl Ether	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
1,1-Dichloroethane	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
Vinyl Acetate	ND	0.0058	EPA 8260C	7-25-18	7-25-18	
2,2-Dichloropropane	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
(cis) 1,2-Dichloroethene	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
2-Butanone	ND	0.0058	EPA 8260C	7-25-18	7-25-18	
Bromochloromethane	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
Chloroform	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
1,1,1-Trichloroethane	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
Carbon Tetrachloride	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
1,1-Dichloropropene	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
Benzene	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
1,2-Dichloroethane	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
Trichloroethene	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
1,2-Dichloropropane	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
Dibromomethane	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
Bromodichloromethane	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
2-Chloroethyl Vinyl Ether	ND	0.0058	EPA 8260C	7-25-18	7-25-18	
(cis) 1,3-Dichloropropene	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
Methyl Isobutyl Ketone	ND	0.0058	EPA 8260C	7-25-18	7-25-18	
Toluene	ND	0.0058	EPA 8260C	7-25-18	7-25-18	
(trans) 1,3-Dichloropropene	ND	0.0012	EPA 8260C	7-25-18	7-25-18	



Date of Report: August 6, 2018  
 Samples Submitted: July 23, 2018  
 Laboratory Reference: 1807-158  
 Project: 4082-039-01

**VOLATILE ORGANICS EPA 8260C**  
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>		<b>FL207-B18-10-10.5</b>				
Laboratory ID:		07-158-17				
1,1,2-Trichloroethane	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
Tetrachloroethene	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
1,3-Dichloropropane	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
2-Hexanone	ND	0.0078	EPA 8260C	7-25-18	7-25-18	
Dibromochloromethane	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
1,2-Dibromoethane	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
Chlorobenzene	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
1,1,1,2-Tetrachloroethane	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
Ethylbenzene	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
m,p-Xylene	ND	0.0058	EPA 8260C	7-25-18	7-25-18	
o-Xylene	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
Styrene	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
Bromoform	ND	0.0058	EPA 8260C	7-25-18	7-25-18	
Isopropylbenzene	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
Bromobenzene	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
1,1,2,2-Tetrachloroethane	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
1,2,3-Trichloropropane	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
n-Propylbenzene	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
2-Chlorotoluene	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
4-Chlorotoluene	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
1,3,5-Trimethylbenzene	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
tert-Butylbenzene	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
1,2,4-Trimethylbenzene	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
sec-Butylbenzene	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
1,3-Dichlorobenzene	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
p-Isopropyltoluene	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
1,4-Dichlorobenzene	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
1,2-Dichlorobenzene	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
n-Butylbenzene	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
1,2-Dibromo-3-chloropropane	ND	0.0058	EPA 8260C	7-25-18	7-25-18	
1,2,4-Trichlorobenzene	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
Hexachlorobutadiene	ND	0.0058	EPA 8260C	7-25-18	7-25-18	
Naphthalene	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
1,2,3-Trichlorobenzene	ND	0.0012	EPA 8260C	7-25-18	7-25-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>101</i>	<i>68-139</i>				
<i>Toluene-d8</i>	<i>100</i>	<i>79-128</i>				
<i>4-Bromofluorobenzene</i>	<i>97</i>	<i>71-132</i>				



Date of Report: August 6, 2018  
 Samples Submitted: July 23, 2018  
 Laboratory Reference: 1807-158  
 Project: 4082-039-01

**VOLATILE ORGANICS EPA 8260C**  
 page 1 of 2

Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID: FL207-B18-13-14</b>						
<b>Laboratory ID: 07-158-18</b>						
Dichlorodifluoromethane	ND	0.00090	EPA 8260C	7-25-18	7-25-18	
Chloromethane	ND	0.0045	EPA 8260C	7-25-18	7-25-18	
Vinyl Chloride	ND	0.00090	EPA 8260C	7-25-18	7-25-18	
Bromomethane	ND	0.00090	EPA 8260C	7-25-18	7-25-18	
Chloroethane	ND	0.0045	EPA 8260C	7-25-18	7-25-18	
Trichlorofluoromethane	ND	0.00090	EPA 8260C	7-25-18	7-25-18	
1,1-Dichloroethene	ND	0.00090	EPA 8260C	7-25-18	7-25-18	
Acetone	ND	0.0045	EPA 8260C	7-25-18	7-25-18	
Iodomethane	ND	0.0045	EPA 8260C	7-25-18	7-25-18	
Carbon Disulfide	ND	0.00090	EPA 8260C	7-25-18	7-25-18	
Methylene Chloride	ND	0.0045	EPA 8260C	7-25-18	7-25-18	
(trans) 1,2-Dichloroethene	ND	0.00090	EPA 8260C	7-25-18	7-25-18	
Methyl t-Butyl Ether	ND	0.00090	EPA 8260C	7-25-18	7-25-18	
1,1-Dichloroethane	ND	0.00090	EPA 8260C	7-25-18	7-25-18	
Vinyl Acetate	ND	0.0045	EPA 8260C	7-25-18	7-25-18	
2,2-Dichloropropane	ND	0.00090	EPA 8260C	7-25-18	7-25-18	
(cis) 1,2-Dichloroethene	ND	0.00090	EPA 8260C	7-25-18	7-25-18	
2-Butanone	ND	0.0045	EPA 8260C	7-25-18	7-25-18	
Bromochloromethane	ND	0.00090	EPA 8260C	7-25-18	7-25-18	
Chloroform	ND	0.00090	EPA 8260C	7-25-18	7-25-18	
1,1,1-Trichloroethane	ND	0.00090	EPA 8260C	7-25-18	7-25-18	
Carbon Tetrachloride	ND	0.00090	EPA 8260C	7-25-18	7-25-18	
1,1-Dichloropropene	ND	0.00090	EPA 8260C	7-25-18	7-25-18	
Benzene	ND	0.00090	EPA 8260C	7-25-18	7-25-18	
1,2-Dichloroethane	ND	0.00090	EPA 8260C	7-25-18	7-25-18	
Trichloroethene	ND	0.00090	EPA 8260C	7-25-18	7-25-18	
1,2-Dichloropropane	ND	0.00090	EPA 8260C	7-25-18	7-25-18	
Dibromomethane	ND	0.00090	EPA 8260C	7-25-18	7-25-18	
Bromodichloromethane	ND	0.00090	EPA 8260C	7-25-18	7-25-18	
2-Chloroethyl Vinyl Ether	ND	0.0045	EPA 8260C	7-25-18	7-25-18	
(cis) 1,3-Dichloropropene	ND	0.00090	EPA 8260C	7-25-18	7-25-18	
Methyl Isobutyl Ketone	ND	0.0045	EPA 8260C	7-25-18	7-25-18	
Toluene	ND	0.0045	EPA 8260C	7-25-18	7-25-18	
(trans) 1,3-Dichloropropene	ND	0.00090	EPA 8260C	7-25-18	7-25-18	



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: August 6, 2018  
 Samples Submitted: July 23, 2018  
 Laboratory Reference: 1807-158  
 Project: 4082-039-01

**VOLATILE ORGANICS EPA 8260C**  
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID: FL207-B18-13-14</b>						
Laboratory ID: 07-158-18						
1,1,2-Trichloroethane	ND	0.00090	EPA 8260C	7-25-18	7-25-18	
Tetrachloroethene	ND	0.00090	EPA 8260C	7-25-18	7-25-18	
1,3-Dichloropropane	ND	0.00090	EPA 8260C	7-25-18	7-25-18	
2-Hexanone	ND	0.0061	EPA 8260C	7-25-18	7-25-18	
Dibromochloromethane	ND	0.00090	EPA 8260C	7-25-18	7-25-18	
1,2-Dibromoethane	ND	0.00090	EPA 8260C	7-25-18	7-25-18	
Chlorobenzene	ND	0.00090	EPA 8260C	7-25-18	7-25-18	
1,1,1,2-Tetrachloroethane	ND	0.00090	EPA 8260C	7-25-18	7-25-18	
Ethylbenzene	ND	0.00090	EPA 8260C	7-25-18	7-25-18	
m,p-Xylene	ND	0.0045	EPA 8260C	7-25-18	7-25-18	
o-Xylene	ND	0.00090	EPA 8260C	7-25-18	7-25-18	
Styrene	ND	0.00090	EPA 8260C	7-25-18	7-25-18	
Bromoform	ND	0.0045	EPA 8260C	7-25-18	7-25-18	
Isopropylbenzene	ND	0.00090	EPA 8260C	7-25-18	7-25-18	
Bromobenzene	ND	0.00090	EPA 8260C	7-25-18	7-25-18	
1,1,2,2-Tetrachloroethane	ND	0.00090	EPA 8260C	7-25-18	7-25-18	
1,2,3-Trichloropropane	ND	0.00090	EPA 8260C	7-25-18	7-25-18	
n-Propylbenzene	ND	0.00090	EPA 8260C	7-25-18	7-25-18	
2-Chlorotoluene	ND	0.00090	EPA 8260C	7-25-18	7-25-18	
4-Chlorotoluene	ND	0.00090	EPA 8260C	7-25-18	7-25-18	
1,3,5-Trimethylbenzene	ND	0.00090	EPA 8260C	7-25-18	7-25-18	
tert-Butylbenzene	ND	0.00090	EPA 8260C	7-25-18	7-25-18	
1,2,4-Trimethylbenzene	ND	0.00090	EPA 8260C	7-25-18	7-25-18	
sec-Butylbenzene	ND	0.00090	EPA 8260C	7-25-18	7-25-18	
1,3-Dichlorobenzene	ND	0.00090	EPA 8260C	7-25-18	7-25-18	
p-Isopropyltoluene	ND	0.00090	EPA 8260C	7-25-18	7-25-18	
1,4-Dichlorobenzene	ND	0.00090	EPA 8260C	7-25-18	7-25-18	
1,2-Dichlorobenzene	ND	0.00090	EPA 8260C	7-25-18	7-25-18	
n-Butylbenzene	ND	0.00090	EPA 8260C	7-25-18	7-25-18	
1,2-Dibromo-3-chloropropane	ND	0.0045	EPA 8260C	7-25-18	7-25-18	
1,2,4-Trichlorobenzene	ND	0.00090	EPA 8260C	7-25-18	7-25-18	
Hexachlorobutadiene	ND	0.0045	EPA 8260C	7-25-18	7-25-18	
Naphthalene	ND	0.00090	EPA 8260C	7-25-18	7-25-18	
1,2,3-Trichlorobenzene	ND	0.00090	EPA 8260C	7-25-18	7-25-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	100	68-139				
<i>Toluene-d8</i>	99	79-128				
<i>4-Bromofluorobenzene</i>	95	71-132				



Date of Report: August 6, 2018  
 Samples Submitted: July 23, 2018  
 Laboratory Reference: 1807-158  
 Project: 4082-039-01

**VOLATILE ORGANICS EPA 8260C**  
 page 1 of 2

Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID: FL207-B18-15.5-16.5</b>						
<b>Laboratory ID: 07-158-19</b>						
Dichlorodifluoromethane	ND	0.00086	EPA 8260C	7-25-18	7-25-18	
Chloromethane	ND	0.0043	EPA 8260C	7-25-18	7-25-18	
Vinyl Chloride	ND	0.00086	EPA 8260C	7-25-18	7-25-18	
Bromomethane	ND	0.00086	EPA 8260C	7-25-18	7-25-18	
Chloroethane	ND	0.0043	EPA 8260C	7-25-18	7-25-18	
Trichlorofluoromethane	ND	0.00086	EPA 8260C	7-25-18	7-25-18	
1,1-Dichloroethene	ND	0.00086	EPA 8260C	7-25-18	7-25-18	
Acetone	ND	0.0043	EPA 8260C	7-25-18	7-25-18	
Iodomethane	ND	0.0043	EPA 8260C	7-25-18	7-25-18	
Carbon Disulfide	ND	0.00086	EPA 8260C	7-25-18	7-25-18	
Methylene Chloride	ND	0.0043	EPA 8260C	7-25-18	7-25-18	
(trans) 1,2-Dichloroethene	ND	0.00086	EPA 8260C	7-25-18	7-25-18	
Methyl t-Butyl Ether	ND	0.00086	EPA 8260C	7-25-18	7-25-18	
1,1-Dichloroethane	ND	0.00086	EPA 8260C	7-25-18	7-25-18	
Vinyl Acetate	ND	0.0043	EPA 8260C	7-25-18	7-25-18	
2,2-Dichloropropane	ND	0.00086	EPA 8260C	7-25-18	7-25-18	
(cis) 1,2-Dichloroethene	ND	0.00086	EPA 8260C	7-25-18	7-25-18	
2-Butanone	ND	0.0043	EPA 8260C	7-25-18	7-25-18	
Bromochloromethane	ND	0.00086	EPA 8260C	7-25-18	7-25-18	
Chloroform	ND	0.00086	EPA 8260C	7-25-18	7-25-18	
1,1,1-Trichloroethane	ND	0.00086	EPA 8260C	7-25-18	7-25-18	
Carbon Tetrachloride	ND	0.00086	EPA 8260C	7-25-18	7-25-18	
1,1-Dichloropropene	ND	0.00086	EPA 8260C	7-25-18	7-25-18	
Benzene	ND	0.00086	EPA 8260C	7-25-18	7-25-18	
1,2-Dichloroethane	ND	0.00086	EPA 8260C	7-25-18	7-25-18	
Trichloroethene	ND	0.00086	EPA 8260C	7-25-18	7-25-18	
1,2-Dichloropropane	ND	0.00086	EPA 8260C	7-25-18	7-25-18	
Dibromomethane	ND	0.00086	EPA 8260C	7-25-18	7-25-18	
Bromodichloromethane	ND	0.00086	EPA 8260C	7-25-18	7-25-18	
2-Chloroethyl Vinyl Ether	ND	0.0043	EPA 8260C	7-25-18	7-25-18	
(cis) 1,3-Dichloropropene	ND	0.00086	EPA 8260C	7-25-18	7-25-18	
Methyl Isobutyl Ketone	ND	0.0043	EPA 8260C	7-25-18	7-25-18	
Toluene	ND	0.0043	EPA 8260C	7-25-18	7-25-18	
(trans) 1,3-Dichloropropene	ND	0.00086	EPA 8260C	7-25-18	7-25-18	



Date of Report: August 6, 2018  
 Samples Submitted: July 23, 2018  
 Laboratory Reference: 1807-158  
 Project: 4082-039-01

**VOLATILE ORGANICS EPA 8260C**  
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID: FL207-B18-15.5-16.5</b>						
<b>Laboratory ID: 07-158-19</b>						
1,1,2-Trichloroethane	ND	0.00086	EPA 8260C	7-25-18	7-25-18	
Tetrachloroethene	ND	0.00086	EPA 8260C	7-25-18	7-25-18	
1,3-Dichloropropane	ND	0.00086	EPA 8260C	7-25-18	7-25-18	
2-Hexanone	ND	0.0059	EPA 8260C	7-25-18	7-25-18	
Dibromochloromethane	ND	0.00086	EPA 8260C	7-25-18	7-25-18	
1,2-Dibromoethane	ND	0.00086	EPA 8260C	7-25-18	7-25-18	
Chlorobenzene	ND	0.00086	EPA 8260C	7-25-18	7-25-18	
1,1,1,2-Tetrachloroethane	ND	0.00086	EPA 8260C	7-25-18	7-25-18	
Ethylbenzene	ND	0.00086	EPA 8260C	7-25-18	7-25-18	
m,p-Xylene	ND	0.0043	EPA 8260C	7-25-18	7-25-18	
o-Xylene	ND	0.00086	EPA 8260C	7-25-18	7-25-18	
Styrene	ND	0.00086	EPA 8260C	7-25-18	7-25-18	
Bromoform	ND	0.0043	EPA 8260C	7-25-18	7-25-18	
Isopropylbenzene	ND	0.00086	EPA 8260C	7-25-18	7-25-18	
Bromobenzene	ND	0.00086	EPA 8260C	7-25-18	7-25-18	
1,1,2,2-Tetrachloroethane	ND	0.00086	EPA 8260C	7-25-18	7-25-18	
1,2,3-Trichloropropane	ND	0.00086	EPA 8260C	7-25-18	7-25-18	
n-Propylbenzene	ND	0.00086	EPA 8260C	7-25-18	7-25-18	
2-Chlorotoluene	ND	0.00086	EPA 8260C	7-25-18	7-25-18	
4-Chlorotoluene	ND	0.00086	EPA 8260C	7-25-18	7-25-18	
1,3,5-Trimethylbenzene	ND	0.00086	EPA 8260C	7-25-18	7-25-18	
tert-Butylbenzene	ND	0.00086	EPA 8260C	7-25-18	7-25-18	
1,2,4-Trimethylbenzene	ND	0.00086	EPA 8260C	7-25-18	7-25-18	
sec-Butylbenzene	ND	0.00086	EPA 8260C	7-25-18	7-25-18	
1,3-Dichlorobenzene	ND	0.00086	EPA 8260C	7-25-18	7-25-18	
p-Isopropyltoluene	ND	0.00086	EPA 8260C	7-25-18	7-25-18	
1,4-Dichlorobenzene	ND	0.00086	EPA 8260C	7-25-18	7-25-18	
1,2-Dichlorobenzene	ND	0.00086	EPA 8260C	7-25-18	7-25-18	
n-Butylbenzene	ND	0.00086	EPA 8260C	7-25-18	7-25-18	
1,2-Dibromo-3-chloropropane	ND	0.0043	EPA 8260C	7-25-18	7-25-18	
1,2,4-Trichlorobenzene	ND	0.00086	EPA 8260C	7-25-18	7-25-18	
Hexachlorobutadiene	ND	0.0043	EPA 8260C	7-25-18	7-25-18	
Naphthalene	ND	0.00086	EPA 8260C	7-25-18	7-25-18	
1,2,3-Trichlorobenzene	ND	0.00086	EPA 8260C	7-25-18	7-25-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	96	68-139				
<i>Toluene-d8</i>	98	79-128				
<i>4-Bromofluorobenzene</i>	97	71-132				





Date of Report: August 6, 2018  
 Samples Submitted: July 23, 2018  
 Laboratory Reference: 1807-158  
 Project: 4082-039-01

**VOLATILE ORGANICS 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>FL207-B18-20-20.5</b>				
<b>Laboratory ID:</b>		<b>07-158-21</b>				
Dichlorodifluoromethane	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
Chloromethane	ND	0.0050	EPA 8260C	7-25-18	7-25-18	
Vinyl Chloride	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
Bromomethane	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
Chloroethane	ND	0.0050	EPA 8260C	7-25-18	7-25-18	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
Acetone	ND	0.0050	EPA 8260C	7-25-18	7-25-18	
Iodomethane	ND	0.0050	EPA 8260C	7-25-18	7-25-18	
Carbon Disulfide	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
Methylene Chloride	ND	0.0050	EPA 8260C	7-25-18	7-25-18	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
Vinyl Acetate	ND	0.0050	EPA 8260C	7-25-18	7-25-18	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
2-Butanone	ND	0.0050	EPA 8260C	7-25-18	7-25-18	
Bromochloromethane	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
Chloroform	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
Benzene	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
Trichloroethene	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
Dibromomethane	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
Bromodichloromethane	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260C	7-25-18	7-25-18	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
Methyl Isobutyl Ketone	ND	0.0050	EPA 8260C	7-25-18	7-25-18	
Toluene	ND	0.0050	EPA 8260C	7-25-18	7-25-18	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	7-25-18	7-25-18	



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: August 6, 2018  
 Samples Submitted: July 23, 2018  
 Laboratory Reference: 1807-158  
 Project: 4082-039-01

**VOLATILE ORGANICS EPA 8260C**  
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID: FL207-B18-20-20.5</b>						
Laboratory ID: 07-158-21						
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
Tetrachloroethene	0.0015	0.0010	EPA 8260C	7-25-18	7-25-18	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
2-Hexanone	ND	0.0068	EPA 8260C	7-25-18	7-25-18	
Dibromochloromethane	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
Chlorobenzene	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
Ethylbenzene	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
m,p-Xylene	ND	0.0050	EPA 8260C	7-25-18	7-25-18	
o-Xylene	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
Styrene	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
Bromoform	ND	0.0050	EPA 8260C	7-25-18	7-25-18	
Isopropylbenzene	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
Bromobenzene	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
n-Propylbenzene	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
2-Chlorotoluene	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
4-Chlorotoluene	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
1,3,5-Trimethylbenzene	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
tert-Butylbenzene	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
1,2,4-Trimethylbenzene	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
sec-Butylbenzene	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
p-Isopropyltoluene	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
n-Butylbenzene	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260C	7-25-18	7-25-18	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
Hexachlorobutadiene	ND	0.0050	EPA 8260C	7-25-18	7-25-18	
Naphthalene	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>94</i>	<i>68-139</i>				
<i>Toluene-d8</i>	<i>98</i>	<i>79-128</i>				
<i>4-Bromofluorobenzene</i>	<i>98</i>	<i>71-132</i>				



Date of Report: August 6, 2018  
 Samples Submitted: July 23, 2018  
 Laboratory Reference: 1807-158  
 Project: 4082-039-01

# PAHs EPA 8270D/SIM

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID: FL207-B14-7.5-8.5</b>						
<b>Laboratory ID: 07-158-04</b>						
Naphthalene	ND	0.0073	EPA 8270D/SIM	7-26-18	7-26-18	
2-Methylnaphthalene	ND	0.0073	EPA 8270D/SIM	7-26-18	7-26-18	
1-Methylnaphthalene	ND	0.0073	EPA 8270D/SIM	7-26-18	7-26-18	
Acenaphthylene	ND	0.0073	EPA 8270D/SIM	7-26-18	7-26-18	
Acenaphthene	ND	0.0073	EPA 8270D/SIM	7-26-18	7-26-18	
Fluorene	ND	0.0073	EPA 8270D/SIM	7-26-18	7-26-18	
Phenanthrene	ND	0.0073	EPA 8270D/SIM	7-26-18	7-26-18	
Anthracene	ND	0.0073	EPA 8270D/SIM	7-26-18	7-26-18	
Fluoranthene	ND	0.0073	EPA 8270D/SIM	7-26-18	7-26-18	
Pyrene	ND	0.0073	EPA 8270D/SIM	7-26-18	7-26-18	
Benzo[a]anthracene	ND	0.0073	EPA 8270D/SIM	7-26-18	7-26-18	
Chrysene	ND	0.0073	EPA 8270D/SIM	7-26-18	7-26-18	
Benzo[b]fluoranthene	ND	0.0073	EPA 8270D/SIM	7-26-18	7-26-18	
Benzo(j,k)fluoranthene	ND	0.0073	EPA 8270D/SIM	7-26-18	7-26-18	
Benzo[a]pyrene	ND	0.0073	EPA 8270D/SIM	7-26-18	7-26-18	
Indeno(1,2,3-c,d)pyrene	ND	0.0073	EPA 8270D/SIM	7-26-18	7-26-18	
Dibenz[a,h]anthracene	ND	0.0073	EPA 8270D/SIM	7-26-18	7-26-18	
Benzo[g,h,i]perylene	ND	0.0073	EPA 8270D/SIM	7-26-18	7-26-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	73	40 - 117				
Pyrene-d10	87	38 - 119				
Terphenyl-d14	87	47 - 135				



Date of Report: August 6, 2018  
 Samples Submitted: July 23, 2018  
 Laboratory Reference: 1807-158  
 Project: 4082-039-01

# PAHs EPA 8270D/SIM

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>		<b>FL207-B15-5.5-6</b>				
<b>Laboratory ID:</b>		<b>07-158-08</b>				
Naphthalene	ND	0.0071	EPA 8270D/SIM	7-26-18	7-26-18	
2-Methylnaphthalene	ND	0.0071	EPA 8270D/SIM	7-26-18	7-26-18	
1-Methylnaphthalene	ND	0.0071	EPA 8270D/SIM	7-26-18	7-26-18	
Acenaphthylene	ND	0.0071	EPA 8270D/SIM	7-26-18	7-26-18	
Acenaphthene	ND	0.0071	EPA 8270D/SIM	7-26-18	7-26-18	
Fluorene	ND	0.0071	EPA 8270D/SIM	7-26-18	7-26-18	
Phenanthrene	ND	0.0071	EPA 8270D/SIM	7-26-18	7-26-18	
Anthracene	ND	0.0071	EPA 8270D/SIM	7-26-18	7-26-18	
Fluoranthene	ND	0.0071	EPA 8270D/SIM	7-26-18	7-26-18	
Pyrene	ND	0.0071	EPA 8270D/SIM	7-26-18	7-26-18	
Benzo[a]anthracene	ND	0.0071	EPA 8270D/SIM	7-26-18	7-26-18	
Chrysene	ND	0.0071	EPA 8270D/SIM	7-26-18	7-26-18	
Benzo[b]fluoranthene	ND	0.0071	EPA 8270D/SIM	7-26-18	7-26-18	
Benzo(j,k)fluoranthene	ND	0.0071	EPA 8270D/SIM	7-26-18	7-26-18	
Benzo[a]pyrene	ND	0.0071	EPA 8270D/SIM	7-26-18	7-26-18	
Indeno(1,2,3-c,d)pyrene	ND	0.0071	EPA 8270D/SIM	7-26-18	7-26-18	
Dibenz[a,h]anthracene	ND	0.0071	EPA 8270D/SIM	7-26-18	7-26-18	
Benzo[g,h,i]perylene	ND	0.0071	EPA 8270D/SIM	7-26-18	7-26-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	73	40 - 117				
Pyrene-d10	86	38 - 119				
Terphenyl-d14	86	47 - 135				



Date of Report: August 6, 2018  
 Samples Submitted: July 23, 2018  
 Laboratory Reference: 1807-158  
 Project: 4082-039-01

# PAHs EPA 8270D/SIM

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>		<b>FL207-B18-0.5-1</b>				
Laboratory ID:		07-158-13				
Naphthalene	ND	0.017	EPA 8270D/SIM	7-26-18	7-26-18	U1
2-Methylnaphthalene	ND	0.0091	EPA 8270D/SIM	7-26-18	7-26-18	U1
1-Methylnaphthalene	ND	0.018	EPA 8270D/SIM	7-26-18	7-26-18	U1
Acenaphthylene	ND	0.027	EPA 8270D/SIM	7-26-18	7-26-18	U1
Acenaphthene	ND	0.019	EPA 8270D/SIM	7-26-18	7-26-18	U1
Fluorene	0.056	0.0074	EPA 8270D/SIM	7-26-18	7-26-18	
Phenanthrene	0.081	0.0074	EPA 8270D/SIM	7-26-18	7-26-18	
Anthracene	ND	0.029	EPA 8270D/SIM	7-26-18	7-26-18	U1
Fluoranthene	ND	0.0074	EPA 8270D/SIM	7-26-18	7-26-18	
Pyrene	0.017	0.0074	EPA 8270D/SIM	7-26-18	7-26-18	
Benzo[a]anthracene	ND	0.0074	EPA 8270D/SIM	7-26-18	7-26-18	
Chrysene	ND	0.0074	EPA 8270D/SIM	7-26-18	7-26-18	
Benzo[b]fluoranthene	ND	0.0074	EPA 8270D/SIM	7-26-18	7-26-18	
Benzo[j,k]fluoranthene	ND	0.0074	EPA 8270D/SIM	7-26-18	7-26-18	
Benzo[a]pyrene	ND	0.0074	EPA 8270D/SIM	7-26-18	7-26-18	
Indeno(1,2,3-c,d)pyrene	ND	0.0074	EPA 8270D/SIM	7-26-18	7-26-18	
Dibenz[a,h]anthracene	ND	0.0074	EPA 8270D/SIM	7-26-18	7-26-18	
Benzo[g,h,i]perylene	ND	0.0074	EPA 8270D/SIM	7-26-18	7-26-18	
<i>Surrogate:</i>		<i>Percent Recovery</i>	<i>Control Limits</i>			
2-Fluorobiphenyl		61	40 - 117			
Pyrene-d10		85	38 - 119			
Terphenyl-d14		90	47 - 135			



Date of Report: August 6, 2018  
 Samples Submitted: July 23, 2018  
 Laboratory Reference: 1807-158  
 Project: 4082-039-01

# PAHs EPA 8270D/SIM

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID: FL207-B18-5-6</b>						
<b>Laboratory ID: 07-158-15</b>						
Naphthalene	0.17	0.0073	EPA 8270D/SIM	7-26-18	7-26-18	
2-Methylnaphthalene	0.37	0.0073	EPA 8270D/SIM	7-26-18	7-26-18	
1-Methylnaphthalene	0.37	0.0073	EPA 8270D/SIM	7-26-18	7-26-18	
Acenaphthylene	0.019	0.0073	EPA 8270D/SIM	7-26-18	7-26-18	
Acenaphthene	0.032	0.0073	EPA 8270D/SIM	7-26-18	7-26-18	
Fluorene	0.10	0.0073	EPA 8270D/SIM	7-26-18	7-26-18	
Phenanthrene	0.085	0.0073	EPA 8270D/SIM	7-26-18	7-26-18	
Anthracene	0.0076	0.0073	EPA 8270D/SIM	7-26-18	7-26-18	
Fluoranthene	ND	0.0073	EPA 8270D/SIM	7-26-18	7-26-18	
Pyrene	0.0085	0.0073	EPA 8270D/SIM	7-26-18	7-26-18	
Benzo[a]anthracene	ND	0.0073	EPA 8270D/SIM	7-26-18	7-26-18	
Chrysene	ND	0.0073	EPA 8270D/SIM	7-26-18	7-26-18	
Benzo[b]fluoranthene	ND	0.0073	EPA 8270D/SIM	7-26-18	7-26-18	
Benzo[j,k]fluoranthene	ND	0.0073	EPA 8270D/SIM	7-26-18	7-26-18	
Benzo[a]pyrene	ND	0.0073	EPA 8270D/SIM	7-26-18	7-26-18	
Indeno(1,2,3-c,d)pyrene	ND	0.0073	EPA 8270D/SIM	7-26-18	7-26-18	
Dibenz[a,h]anthracene	ND	0.0073	EPA 8270D/SIM	7-26-18	7-26-18	
Benzo[g,h,i]perylene	ND	0.0073	EPA 8270D/SIM	7-26-18	7-26-18	
<i>Surrogate: Percent Recovery Control Limits</i>						
2-Fluorobiphenyl	63	40 - 117				
Pyrene-d10	70	38 - 119				
Terphenyl-d14	72	47 - 135				



Date of Report: August 6, 2018  
 Samples Submitted: July 23, 2018  
 Laboratory Reference: 1807-158  
 Project: 4082-039-01

# PAHs EPA 8270D/SIM

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID: FL207-B18-10-10.5</b>						
<b>Laboratory ID: 07-158-17</b>						
Naphthalene	ND	0.0072	EPA 8270D/SIM	7-26-18	7-26-18	
2-Methylnaphthalene	ND	0.0072	EPA 8270D/SIM	7-26-18	7-26-18	
1-Methylnaphthalene	ND	0.0072	EPA 8270D/SIM	7-26-18	7-26-18	
Acenaphthylene	ND	0.0072	EPA 8270D/SIM	7-26-18	7-26-18	
Acenaphthene	ND	0.0072	EPA 8270D/SIM	7-26-18	7-26-18	
Fluorene	ND	0.0072	EPA 8270D/SIM	7-26-18	7-26-18	
Phenanthrene	ND	0.0072	EPA 8270D/SIM	7-26-18	7-26-18	
Anthracene	ND	0.0072	EPA 8270D/SIM	7-26-18	7-26-18	
Fluoranthene	ND	0.0072	EPA 8270D/SIM	7-26-18	7-26-18	
Pyrene	ND	0.0072	EPA 8270D/SIM	7-26-18	7-26-18	
Benzo[a]anthracene	ND	0.0072	EPA 8270D/SIM	7-26-18	7-26-18	
Chrysene	ND	0.0072	EPA 8270D/SIM	7-26-18	7-26-18	
Benzo[b]fluoranthene	ND	0.0072	EPA 8270D/SIM	7-26-18	7-26-18	
Benzo(j,k)fluoranthene	ND	0.0072	EPA 8270D/SIM	7-26-18	7-26-18	
Benzo[a]pyrene	ND	0.0072	EPA 8270D/SIM	7-26-18	7-26-18	
Indeno(1,2,3-c,d)pyrene	ND	0.0072	EPA 8270D/SIM	7-26-18	7-26-18	
Dibenz[a,h]anthracene	ND	0.0072	EPA 8270D/SIM	7-26-18	7-26-18	
Benzo[g,h,i]perylene	ND	0.0072	EPA 8270D/SIM	7-26-18	7-26-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	69	40 - 117				
Pyrene-d10	80	38 - 119				
Terphenyl-d14	79	47 - 135				



Date of Report: August 6, 2018  
 Samples Submitted: July 23, 2018  
 Laboratory Reference: 1807-158  
 Project: 4082-039-01

# PAHs EPA 8270D/SIM

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID: FL207-B18-15.5-16.5</b>						
<b>Laboratory ID: 07-158-19</b>						
Naphthalene	ND	0.0072	EPA 8270D/SIM	7-26-18	7-26-18	
2-Methylnaphthalene	ND	0.0072	EPA 8270D/SIM	7-26-18	7-26-18	
1-Methylnaphthalene	ND	0.0072	EPA 8270D/SIM	7-26-18	7-26-18	
Acenaphthylene	ND	0.0072	EPA 8270D/SIM	7-26-18	7-26-18	
Acenaphthene	ND	0.0072	EPA 8270D/SIM	7-26-18	7-26-18	
Fluorene	ND	0.0072	EPA 8270D/SIM	7-26-18	7-26-18	
Phenanthrene	ND	0.0072	EPA 8270D/SIM	7-26-18	7-26-18	
Anthracene	ND	0.0072	EPA 8270D/SIM	7-26-18	7-26-18	
Fluoranthene	ND	0.0072	EPA 8270D/SIM	7-26-18	7-26-18	
Pyrene	ND	0.0072	EPA 8270D/SIM	7-26-18	7-26-18	
Benzo[a]anthracene	ND	0.0072	EPA 8270D/SIM	7-26-18	7-26-18	
Chrysene	ND	0.0072	EPA 8270D/SIM	7-26-18	7-26-18	
Benzo[b]fluoranthene	ND	0.0072	EPA 8270D/SIM	7-26-18	7-26-18	
Benzo(j,k)fluoranthene	ND	0.0072	EPA 8270D/SIM	7-26-18	7-26-18	
Benzo[a]pyrene	ND	0.0072	EPA 8270D/SIM	7-26-18	7-26-18	
Indeno(1,2,3-c,d)pyrene	ND	0.0072	EPA 8270D/SIM	7-26-18	7-26-18	
Dibenz[a,h]anthracene	ND	0.0072	EPA 8270D/SIM	7-26-18	7-26-18	
Benzo[g,h,i]perylene	ND	0.0072	EPA 8270D/SIM	7-26-18	7-26-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	71	40 - 117				
Pyrene-d10	85	38 - 119				
Terphenyl-d14	86	47 - 135				



Date of Report: August 6, 2018  
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 Laboratory Reference: 1807-158  
 Project: 4082-039-01

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

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID: FL207-B14-0.0.5</b>						
Laboratory ID: 07-158-01						
Arsenic	ND	5.5	EPA 6010D	7-27-18	7-27-18	
Lead	43	5.5	EPA 6010D	7-27-18	7-27-18	

**Client ID: FL207-B14-7.5-8.5**  
 Laboratory ID: 07-158-04

Arsenic	ND	5.5	EPA 6010D	7-30-18	7-30-18	
Barium	58	2.8	EPA 6010D	7-30-18	7-30-18	
Cadmium	ND	0.55	EPA 6010D	7-30-18	7-30-18	
Chromium	30	0.55	EPA 6010D	7-30-18	7-30-18	
Lead	ND	5.5	EPA 6010D	7-30-18	7-30-18	
Mercury	ND	0.28	EPA 7471B	7-25-18	7-25-18	
Selenium	ND	11	EPA 6010D	7-30-18	7-30-18	
Silver	ND	1.1	EPA 6010D	7-30-18	7-30-18	

**Client ID: FL207-B15-0-0.5**  
 Laboratory ID: 07-158-05

Arsenic	ND	5.3	EPA 6010D	7-27-18	7-27-18	
Lead	ND	5.3	EPA 6010D	7-27-18	7-27-18	

**Client ID: FL207-B15-0.5-1**  
 Laboratory ID: 07-158-06

Arsenic	ND	5.6	EPA 6010D	7-27-18	7-27-18	
Lead	ND	5.6	EPA 6010D	7-27-18	7-27-18	

**Client ID: FL207-B15-5.5-6**  
 Laboratory ID: 07-158-08

Arsenic	ND	5.3	EPA 6010D	7-30-18	7-30-18	
Barium	47	2.7	EPA 6010D	7-30-18	7-30-18	
Cadmium	ND	0.53	EPA 6010D	7-30-18	7-30-18	
Chromium	26	0.53	EPA 6010D	7-30-18	7-30-18	
Lead	ND	5.3	EPA 6010D	7-30-18	7-30-18	
Mercury	ND	0.27	EPA 7471B	7-25-18	7-25-18	
Selenium	ND	11	EPA 6010D	7-30-18	7-30-18	
Silver	ND	1.1	EPA 6010D	7-30-18	7-30-18	





Date of Report: August 6, 2018  
 Samples Submitted: July 23, 2018  
 Laboratory Reference: 1807-158  
 Project: 4082-039-01

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

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID: FL207-B15-12.5-13</b>						
Laboratory ID: 07-158-11						
Arsenic	ND	5.4	EPA 6010D	8-2-18	8-2-18	
Barium	43	2.7	EPA 6010D	8-2-18	8-2-18	
Cadmium	ND	0.54	EPA 6010D	8-2-18	8-2-18	
Chromium	32	0.54	EPA 6010D	8-2-18	8-2-18	
Lead	ND	5.4	EPA 6010D	8-2-18	8-2-18	
Mercury	ND	0.27	EPA 7471B	7-25-18	7-25-18	
Selenium	ND	11	EPA 6010D	8-2-18	8-2-18	
Silver	ND	1.1	EPA 6010D	8-2-18	8-2-18	

**Client ID: FL207-B18-0-0.5**

Laboratory ID: 07-158-12

Arsenic	ND	5.5	EPA 6010D	7-27-18	7-27-18	
Lead	ND	5.5	EPA 6010D	7-27-18	7-27-18	

**Client ID: FL207-B18-0.5-1**

Laboratory ID: 07-158-13

Arsenic	ND	5.5	EPA 6010D	7-30-18	7-30-18	
Barium	67	2.8	EPA 6010D	7-30-18	7-30-18	
Cadmium	ND	0.55	EPA 6010D	7-30-18	7-30-18	
Chromium	32	0.55	EPA 6010D	7-30-18	7-30-18	
Lead	ND	5.5	EPA 6010D	7-30-18	7-30-18	
Mercury	ND	0.28	EPA 7471B	7-25-18	7-25-18	
Selenium	ND	11	EPA 6010D	7-30-18	7-30-18	
Silver	ND	1.1	EPA 6010D	7-30-18	7-30-18	

**Client ID: FL207-B18-5-6**

Laboratory ID: 07-158-15

Arsenic	ND	5.4	EPA 6010D	7-30-18	7-30-18	
Barium	61	2.7	EPA 6010D	7-30-18	7-30-18	
Cadmium	ND	0.54	EPA 6010D	7-30-18	7-30-18	
Chromium	30	0.54	EPA 6010D	7-30-18	7-30-18	
Lead	ND	5.4	EPA 6010D	7-30-18	7-30-18	
Mercury	ND	0.27	EPA 7471B	7-25-18	7-25-18	
Selenium	ND	11	EPA 6010D	7-30-18	7-30-18	
Silver	ND	1.1	EPA 6010D	7-30-18	7-30-18	



Date of Report: August 6, 2018  
 Samples Submitted: July 23, 2018  
 Laboratory Reference: 1807-158  
 Project: 4082-039-01

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

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID: FL207-B18-10-10.5</b>						
Laboratory ID: 07-158-17						
Arsenic	ND	5.4	EPA 6010D	7-30-18	7-30-18	
Barium	46	2.7	EPA 6010D	7-30-18	7-30-18	
Cadmium	ND	0.54	EPA 6010D	7-30-18	7-30-18	
Chromium	27	0.54	EPA 6010D	7-30-18	7-30-18	
Lead	ND	5.4	EPA 6010D	7-30-18	7-30-18	
Mercury	ND	0.27	EPA 7471B	7-25-18	7-25-18	
Selenium	ND	11	EPA 6010D	7-30-18	7-30-18	
Silver	ND	1.1	EPA 6010D	7-30-18	7-30-18	

**Client ID: FL207-B18-15.5-16.5**

Laboratory ID: 07-158-19

Arsenic	ND	5.4	EPA 6010D	7-30-18	7-30-18	
Barium	47	2.7	EPA 6010D	7-30-18	7-30-18	
Cadmium	ND	0.54	EPA 6010D	7-30-18	7-30-18	
Chromium	30	0.54	EPA 6010D	7-30-18	7-30-18	
Lead	ND	5.4	EPA 6010D	7-30-18	7-30-18	
Mercury	ND	0.27	EPA 7471B	7-25-18	7-25-18	
Selenium	ND	11	EPA 6010D	7-30-18	7-30-18	
Silver	ND	1.1	EPA 6010D	7-30-18	7-30-18	



Date of Report: August 6, 2018  
 Samples Submitted: July 23, 2018  
 Laboratory Reference: 1807-158  
 Project: 4082-039-01

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

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL207-B18-0.5-1</b>					
Laboratory ID:	07-158-13					
Diesel Fuel #2	<b>3000</b>	28	NWTPH-Dx	8-3-18	8-3-18	
Lube Oil	<b>270</b>	55	NWTPH-Dx	8-3-18	8-3-18	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	120	50-150				

<b>Client ID:</b>	<b>FL207-B18-5-6</b>					
Laboratory ID:	07-158-15					
Diesel Fuel #2	<b>160</b>	27	NWTPH-Dx	8-3-18	8-3-18	
Lube Oil	<b>110</b>	55	NWTPH-Dx	8-3-18	8-3-18	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	95	50-150				

<b>Client ID:</b>	<b>FL207-B18-7.5-8.5</b>					
Laboratory ID:	07-158-16					
Diesel Range Organics	<b>ND</b>	27	NWTPH-Dx	8-3-18	8-3-18	
Lube Oil Range Organics	<b>ND</b>	55	NWTPH-Dx	8-3-18	8-3-18	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	75	50-150				



Date of Report: August 6, 2018  
 Samples Submitted: July 23, 2018  
 Laboratory Reference: 1807-158  
 Project: 4082-039-01

**HYDROCARBON IDENTIFICATION  
 NWTPH-HCID  
 QUALITY CONTROL**

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB0725S2					
Gasoline Range Organics	<b>ND</b>	20	NWTPH-HCID	7-25-18	7-25-18	
Diesel Range Organics	<b>ND</b>	50	NWTPH-HCID	7-25-18	7-25-18	
Lube Oil Range Organics	<b>ND</b>	100	NWTPH-HCID	7-25-18	7-25-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	87	50-150				



Date of Report: August 6, 2018  
 Samples Submitted: July 23, 2018  
 Laboratory Reference: 1807-158  
 Project: 4082-039-01

**GASOLINE RANGE ORGANICS  
 NWTPH-Gx  
 QUALITY CONTROL**

Matrix: Soil  
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB0725S1					
Gasoline	<b>ND</b>	5.0	NWTPH-Gx	7-25-18	7-25-18	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	77	57-129				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
<b>DUPLICATE</b>								
Laboratory ID:	07-164-01							
	ORIG	DUP						
Gasoline	<b>ND</b>	<b>ND</b>	NA	NA	NA	NA	30	
Surrogate:								
Fluorobenzene				93	86	57-129		



Date of Report: August 6, 2018  
 Samples Submitted: July 23, 2018  
 Laboratory Reference: 1807-158  
 Project: 4082-039-01

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

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB0725S1					
Diesel Range Organics	<b>ND</b>	25	NWTPH-Dx	7-25-18	7-25-18	
Lube Oil Range Organics	<b>ND</b>	50	NWTPH-Dx	7-25-18	7-25-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	85	50-150				

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE										
Laboratory ID:	07-162-02									
	ORIG	DUP								
Diesel Range	ND	ND	NA	NA		NA	NA	NA	NA	
Lube Oil Range Organics	92.1	64.6	NA	NA		NA	NA	35	NA	
Surrogate:										
o-Terphenyl						83	81	50-150		



Date of Report: August 6, 2018  
 Samples Submitted: July 23, 2018  
 Laboratory Reference: 1807-158  
 Project: 4082-039-01

**VOLATILE ORGANICS EPA 8260C  
 METHOD BLANK QUALITY CONTROL**

page 1 of 2

Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<hr/>						
Laboratory ID:	MB0725S2					
Dichlorodifluoromethane	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
Chloromethane	ND	0.0050	EPA 8260C	7-25-18	7-25-18	
Vinyl Chloride	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
Bromomethane	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
Chloroethane	ND	0.0050	EPA 8260C	7-25-18	7-25-18	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
Acetone	ND	0.0050	EPA 8260C	7-25-18	7-25-18	
Iodomethane	ND	0.0050	EPA 8260C	7-25-18	7-25-18	
Carbon Disulfide	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
Methylene Chloride	ND	0.0050	EPA 8260C	7-25-18	7-25-18	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
Vinyl Acetate	ND	0.0050	EPA 8260C	7-25-18	7-25-18	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
2-Butanone	ND	0.0050	EPA 8260C	7-25-18	7-25-18	
Bromochloromethane	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
Chloroform	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
Benzene	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
Trichloroethene	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
Dibromomethane	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
Bromodichloromethane	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260C	7-25-18	7-25-18	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
Methyl Isobutyl Ketone	ND	0.0050	EPA 8260C	7-25-18	7-25-18	
Toluene	ND	0.0050	EPA 8260C	7-25-18	7-25-18	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	7-25-18	7-25-18	





Date of Report: August 6, 2018  
 Samples Submitted: July 23, 2018  
 Laboratory Reference: 1807-158  
 Project: 4082-039-01

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

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID: MB0725S2						
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
Tetrachloroethene	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
2-Hexanone	ND	0.0068	EPA 8260C	7-25-18	7-25-18	
Dibromochloromethane	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
Chlorobenzene	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
Ethylbenzene	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
m,p-Xylene	ND	0.0020	EPA 8260C	7-25-18	7-25-18	
o-Xylene	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
Styrene	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
Bromoform	ND	0.0050	EPA 8260C	7-25-18	7-25-18	
Isopropylbenzene	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
Bromobenzene	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
n-Propylbenzene	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
2-Chlorotoluene	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
4-Chlorotoluene	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
1,3,5-Trimethylbenzene	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
tert-Butylbenzene	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
1,2,4-Trimethylbenzene	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
sec-Butylbenzene	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
p-Isopropyltoluene	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
n-Butylbenzene	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260C	7-25-18	7-25-18	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
Hexachlorobutadiene	ND	0.0050	EPA 8260C	7-25-18	7-25-18	
Naphthalene	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	7-25-18	7-25-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>100</i>	<i>68-139</i>				
<i>Toluene-d8</i>	<i>100</i>	<i>79-128</i>				
<i>4-Bromofluorobenzene</i>	<i>98</i>	<i>71-132</i>				



Date of Report: August 6, 2018  
 Samples Submitted: July 23, 2018  
 Laboratory Reference: 1807-158  
 Project: 4082-039-01

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

Matrix: Soil  
 Units: mg/kg

Analyte	Result		Spike Level		Percent Recovery		Recovery	RPD	RPD	Flags
					Recovery	Limits	Limits		Limit	
SPIKE BLANKS										
Laboratory ID:	SB0725S2									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	0.0520	0.0514	0.0500	0.0500	104	103	53-141	1	17	
Benzene	0.0531	0.0505	0.0500	0.0500	106	101	70-130	5	15	
Trichloroethene	0.0505	0.0499	0.0500	0.0500	101	100	74-122	1	16	
Toluene	0.0497	0.0498	0.0500	0.0500	99	100	76-130	0	15	
Chlorobenzene	0.0461	0.0440	0.0500	0.0500	92	88	75-120	5	14	
Surrogate:										
Dibromofluoromethane					99	101	68-139			
Toluene-d8					97	100	79-128			
4-Bromofluorobenzene					96	98	71-132			



Date of Report: August 6, 2018  
 Samples Submitted: July 23, 2018  
 Laboratory Reference: 1807-158  
 Project: 4082-039-01

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

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID: MB0726S1						
Naphthalene	ND	0.0067	EPA 8270D/SIM	7-26-18	7-26-18	
2-Methylnaphthalene	ND	0.0067	EPA 8270D/SIM	7-26-18	7-26-18	
1-Methylnaphthalene	ND	0.0067	EPA 8270D/SIM	7-26-18	7-26-18	
Acenaphthylene	ND	0.0067	EPA 8270D/SIM	7-26-18	7-26-18	
Acenaphthene	ND	0.0067	EPA 8270D/SIM	7-26-18	7-26-18	
Fluorene	ND	0.0067	EPA 8270D/SIM	7-26-18	7-26-18	
Phenanthrene	ND	0.0067	EPA 8270D/SIM	7-26-18	7-26-18	
Anthracene	ND	0.0067	EPA 8270D/SIM	7-26-18	7-26-18	
Fluoranthene	ND	0.0067	EPA 8270D/SIM	7-26-18	7-26-18	
Pyrene	ND	0.0067	EPA 8270D/SIM	7-26-18	7-26-18	
Benzo[a]anthracene	ND	0.0067	EPA 8270D/SIM	7-26-18	7-26-18	
Chrysene	ND	0.0067	EPA 8270D/SIM	7-26-18	7-26-18	
Benzo[b]fluoranthene	ND	0.0067	EPA 8270D/SIM	7-26-18	7-26-18	
Benzo[j,k]fluoranthene	ND	0.0067	EPA 8270D/SIM	7-26-18	7-26-18	
Benzo[a]pyrene	ND	0.0067	EPA 8270D/SIM	7-26-18	7-26-18	
Indeno(1,2,3-c,d)pyrene	ND	0.0067	EPA 8270D/SIM	7-26-18	7-26-18	
Dibenz[a,h]anthracene	ND	0.0067	EPA 8270D/SIM	7-26-18	7-26-18	
Benzo[g,h,i]perylene	ND	0.0067	EPA 8270D/SIM	7-26-18	7-26-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	77	40 - 117				
Pyrene-d10	90	38 - 119				
Terphenyl-d14	91	47 - 135				



Date of Report: August 6, 2018  
 Samples Submitted: July 23, 2018  
 Laboratory Reference: 1807-158  
 Project: 4082-039-01

**PAHs 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:	SB0726S1									
	SB	SBD	SB	SBD	SB	SBD				
Naphthalene	0.0730	0.0749	0.0833	0.0833	88	90	54 - 114	3	15	
Acenaphthylene	0.0719	0.0822	0.0833	0.0833	86	99	59 - 119	13	15	
Acenaphthene	0.0742	0.0841	0.0833	0.0833	89	101	58 - 117	13	15	
Fluorene	0.0835	0.0833	0.0833	0.0833	100	100	61 - 122	0	15	
Phenanthrene	0.0758	0.0786	0.0833	0.0833	91	94	58 - 121	4	15	
Anthracene	0.0786	0.0809	0.0833	0.0833	94	97	66 - 126	3	15	
Fluoranthene	0.0793	0.0824	0.0833	0.0833	95	99	62 - 126	4	15	
Pyrene	0.0802	0.0840	0.0833	0.0833	96	101	61 - 126	5	15	
Benzo[a]anthracene	0.0852	0.0895	0.0833	0.0833	102	107	64 - 132	5	15	
Chrysene	0.0792	0.0826	0.0833	0.0833	95	99	64 - 127	4	15	
Benzo[b]fluoranthene	0.0775	0.0814	0.0833	0.0833	93	98	57 - 128	5	15	
Benzo(j,k)fluoranthene	0.0813	0.0856	0.0833	0.0833	98	103	62 - 130	5	15	
Benzo[a]pyrene	0.0778	0.0823	0.0833	0.0833	93	99	62 - 125	6	15	
Indeno(1,2,3-c,d)pyrene	0.0742	0.0796	0.0833	0.0833	89	96	55 - 130	7	15	
Dibenz[a,h]anthracene	0.0732	0.0787	0.0833	0.0833	88	94	58 - 129	7	15	
Benzo[g,h,i]perylene	0.0760	0.0806	0.0833	0.0833	91	97	57 - 129	6	15	
Surrogate:										
2-Fluorobiphenyl					79	84	40 - 117			
Pyrene-d10					89	93	38 - 119			
Terphenyl-d14					89	93	47 - 135			



Date of Report: August 6, 2018  
 Samples Submitted: July 23, 2018  
 Laboratory Reference: 1807-158  
 Project: 4082-039-01

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

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB0727SM1					
Arsenic	ND	5.0	EPA 6010D	7-27-18	7-27-18	
Lead	ND	5.0	EPA 6010D	7-27-18	7-27-18	
<b>METHOD BLANK</b>						
Laboratory ID:	MB0730SM2					
Arsenic	ND	5.0	EPA 6010D	7-30-18	7-30-18	
Barium	ND	2.5	EPA 6010D	7-30-18	7-30-18	
Cadmium	ND	0.50	EPA 6010D	7-30-18	7-30-18	
Chromium	ND	0.50	EPA 6010D	7-30-18	7-30-18	
Lead	ND	5.0	EPA 6010D	7-30-18	7-30-18	
Selenium	ND	10	EPA 6010D	7-30-18	7-30-18	
Silver	ND	1.0	EPA 6010D	7-30-18	7-30-18	
<b>METHOD BLANK</b>						
Laboratory ID:	MB0725S1					
Mercury	ND	0.25	EPA 7471B	7-25-18	7-25-18	
<b>METHOD BLANK</b>						
Laboratory ID:	MB0802SM2					
Arsenic	ND	5.0	EPA 6010D	8-2-18	8-2-18	
Barium	ND	2.5	EPA 6010D	8-2-18	8-2-18	
Cadmium	ND	0.50	EPA 6010D	8-2-18	8-2-18	
Chromium	ND	0.50	EPA 6010D	8-2-18	8-2-18	
Lead	ND	5.0	EPA 6010D	8-2-18	8-2-18	
Selenium	ND	10	EPA 6010D	8-2-18	8-2-18	
Silver	ND	1.0	EPA 6010D	8-2-18	8-2-18	



Date of Report: August 6, 2018  
 Samples Submitted: July 23, 2018  
 Laboratory Reference: 1807-158  
 Project: 4082-039-01

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

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte		Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	Limit	Flags
DUPLICATE											
Laboratory ID:		07-180-01									
		ORIG	DUP								
Arsenic		ND	ND	NA	NA		NA	NA	NA	20	
Lead		ND	ND	NA	NA		NA	NA	NA	20	
Laboratory ID:		07-180-01									
		ORIG	DUP								
Arsenic		ND	ND	NA	NA		NA	NA	NA	20	
Barium		198	217	NA	NA		NA	NA	9	20	
Cadmium		ND	ND	NA	NA		NA	NA	NA	20	
Chromium		46.7	41.8	NA	NA		NA	NA	11	20	
Lead		ND	ND	NA	NA		NA	NA	NA	20	
Selenium		ND	ND	NA	NA		NA	NA	NA	20	
Silver		ND	ND	NA	NA		NA	NA	NA	20	
Laboratory ID:		07-157-01									
Mercury		ND	ND	NA	NA		NA	NA	NA	20	
Laboratory ID:		08-005-02									
		ORIG	DUP								
Arsenic		7.50	5.20	NA	NA		NA	NA	36	20	C
Barium		119	117	NA	NA		NA	NA	1	20	
Cadmium		ND	ND	NA	NA		NA	NA	NA	20	
Chromium		39.9	40.2	NA	NA		NA	NA	1	20	
Lead		16.0	15.7	NA	NA		NA	NA	2	20	
Selenium		ND	ND	NA	NA		NA	NA	NA	20	
Silver		ND	ND	NA	NA		NA	NA	NA	20	



Date of Report: August 6, 2018  
 Samples Submitted: July 23, 2018  
 Laboratory Reference: 1807-158  
 Project: 4082-039-01

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

Matrix: Soil  
 Units: mg/Kg (ppm)

					Source	Percent	Recovery	RPD		
Analyte	Result		Spike Level		Result	Recovery	Limits	RPD	Limit	Flags
MATRIX SPIKES										
Laboratory ID:	07-180-01									
	MS	MSD	MS	MSD		MS	MSD			
Arsenic	97.6	95.9	100	100	ND	98	96	75-125	2	20
Barium	305	311	100	100	198	107	113	75-125	2	20
Cadmium	49.2	47.6	50.0	50.0	ND	98	95	75-125	3	20
Chromium	135	136	100	100	46.7	88	89	75-125	1	20
Lead	253	245	250	250	ND	101	98	75-125	3	20
Selenium	96.8	95.7	100	100	ND	97	96	75-125	1	20
Silver	22.1	21.7	25.0	25.0	ND	88	87	75-125	2	20
Laboratory ID:	07-157-01									
Mercury	0.545	0.542	0.500	0.500	0.0152	106	105	80-120	1	20
Laboratory ID:	08-005-02									
	MS	MSD	MS	MSD		MS	MSD			
Arsenic	98.6	103	100	100	7.50	91	95	75-125	4	20
Barium	229	223	100	100	119	110	104	75-125	3	20
Cadmium	48.4	44.8	50.0	50.0	ND	97	90	75-125	8	20
Chromium	142	133	100	100	39.9	102	93	75-125	6	20
Lead	265	244	250	250	16.0	100	91	75-125	8	20
Selenium	100	99.6	100	100	ND	100	100	75-125	1	20
Silver	23.1	22.4	25.0	25.0	ND	92	89	75-125	3	20
Laboratory ID:	07-180-01									
	MS	MSD	MS	MSD		MS	MSD			
Arsenic	97.6	95.9	100	100	ND	98	96	75-125	2	20
Barium	307	319	100	100	198	110	121	75-125	4	20
Cadmium	49.2	47.6	50.0	50.0	ND	98	95	75-125	3	20
Chromium	135	136	100	100	46.7	88	89	75-125	1	20
Lead	253	245	250	250	ND	101	98	75-125	3	20
Selenium	96.8	95.7	100	100	ND	97	96	75-125	1	20
Silver	22.1	21.7	25.0	25.0	ND	88	87	75-125	2	20
Laboratory ID:	07-157-01									
Mercury	0.545	0.542	0.500	0.500	0.0152	106	105	80-120	1	20





Date of Report: August 6, 2018  
 Samples Submitted: July 23, 2018  
 Laboratory Reference: 1807-158  
 Project: 4082-039-01

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

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB0803S1					
Diesel Range Organics	<b>ND</b>	25	NWTPH-Dx	8-3-18	8-3-18	
Lube Oil Range Organics	<b>ND</b>	50	NWTPH-Dx	8-3-18	8-3-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	91	50-150				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
<b>DUPLICATE</b>								
Laboratory ID:	08-032-06							
	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	
<i>Surrogate:</i>								
<i>o-Terphenyl</i>				92	117	50-150		



Date of Report: August 6, 2018  
 Samples Submitted: July 23, 2018  
 Laboratory Reference: 1807-158  
 Project: 4082-039-01

### % MOISTURE

Date Analyzed: 7-25&8-1&3-18

Client ID	Lab ID	% Moisture
FL207-B14-0.0.5	07-158-01	9
FL207-B14-2.5-3.5	07-158-02	5
FL207-B14-7.5-8.5	07-158-04	9
FL207-B15-0.0.5	07-158-05	5
FL207-B15-0.5-1	07-158-06	10
FL207-B15-5.5-6	07-158-08	6
FL207-B15-12.5-13	07-158-11	7
FL207-B18-0.0.5	07-158-12	8
FL207-B18-0.5-1	07-158-13	9
FL207-B18-2.5-3	07-158-14	6
FL207-B18-5-6	07-158-15	8
FL207-B18-7.5-8.5	07-158-16	9
FL207-B18-10-10.5	07-158-17	7
FL207-B18-13-14	07-158-18	7
FL207-B18-15.5-16.5	07-158-19	7
FL207-B18-20-20.5	07-158-21	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 3

Company: <b>GE</b>		Turnaround Request (in working days)		Laboratory Number: <b>07-158</b>													
Project Number: <b>4082-039-01</b>		(Check One)															
Project Name: <b>FWLE</b>		<input type="checkbox"/> Same Day <input type="checkbox"/> 1 Day															
Project Manager: <b>Marys Beason</b>		<input type="checkbox"/> 2 Days <input type="checkbox"/> 3 Days															
Sampled by: <b>CS6</b>		<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	FW207-B4-0-0.5	7/23/18	927	S	5												
2	FW207-B4-2.5-3.5		930														
3	FW207-B4-5-6		940														
4	FW207-B4-7.5-8.5		956														
5	FW207-B15-0-0.5		1115														
6	FW207-B15-0.5-1		1117														
7	FW207-B15-2.5-3.5		1125														
8	FW207-B15-5.5-6		1135														
9	FW207-B15-7.5-8		1156														
10	FW207-B15-10-11		1200														
Signature		Company		Date	Time	Comments/Special Instructions											
Relinquished		GE		7/23/18	1800	AS - 7 PPM											
Received		OGE		7/23/18	1800	(X) Added 7/24/18. D3 (STA) Added 8/2/18. D3 (STA)											
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"/>													





**Onsite Environmental Inc.**  
Analytical Laboratory Testing Services  
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Phone: (425) 883-3881 • www.onsite-env.com

# Chain of Custody

Page 2 of 3

Company: <u>GE</u>		Turnaround Request (in working days)		Laboratory Number: <b>07-158</b>													
Project Number: <u>4082-039-01</u>		<input type="checkbox"/> Same Day <input type="checkbox"/> 1 Day															
Project Name: <u>FILE</u>		<input type="checkbox"/> 2 Days <input type="checkbox"/> 3 Days															
Project Manager: <u>MARSI BEASON</u>		<input checked="" type="checkbox"/> Standard (7 Days) (TPH analysis 5 Days)															
Sampled by: <u>CSG</u>		<input type="checkbox"/> (other)															
Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers												
11	FL207-B15-12.5-13	7/23/18	1230	S	5												
12	FL207-B18-10-0.5		1455														
13	FL207-B18-0.5-1		1457														
14	FL207-B18-0.5-3		1505														
15	FL207-B18-5-6		1520														
16	FL207-B18-7.5-8.5		1535														
17	FL207-B18-10-10.5		1540														
18	FL207-B18-13-14		1555														
19	FL207-B18-15.5-16.5		1605														
20	FL207-B18-17.5-18		1630														
Signature: <u>[Signature]</u>		Company: <u>GE</u>	Date: <u>7/23/18</u>	Time: <u>1800</u>	Comments/Special Instructions: <u>AS - 7 ppm</u>												
Relinquished																	
Received																	
Relinquished																	
Received																	
Relinquished																	
Received																	
Relinquished																	
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"/>												





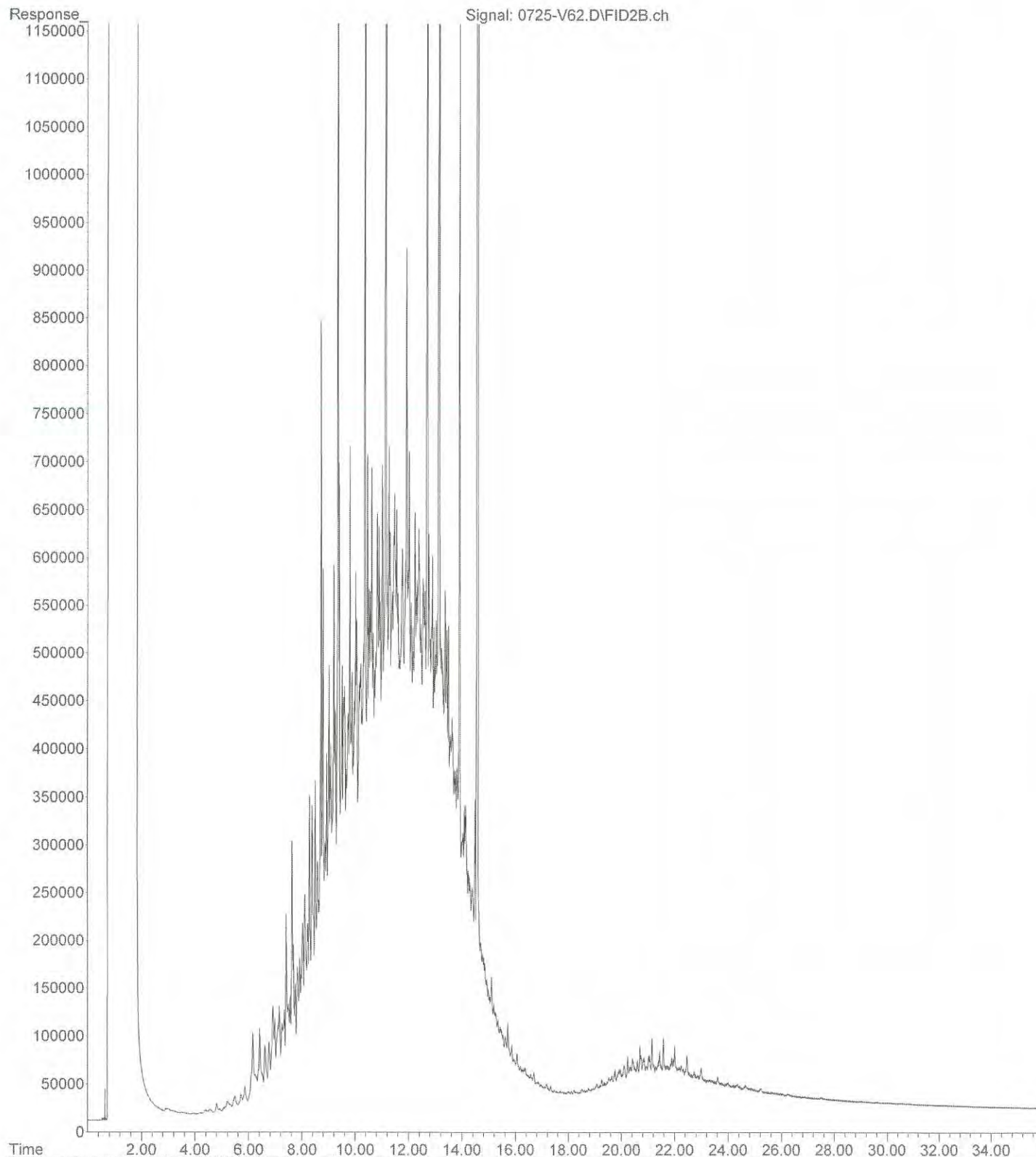
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## Chain of Custody

Page 11 of 11

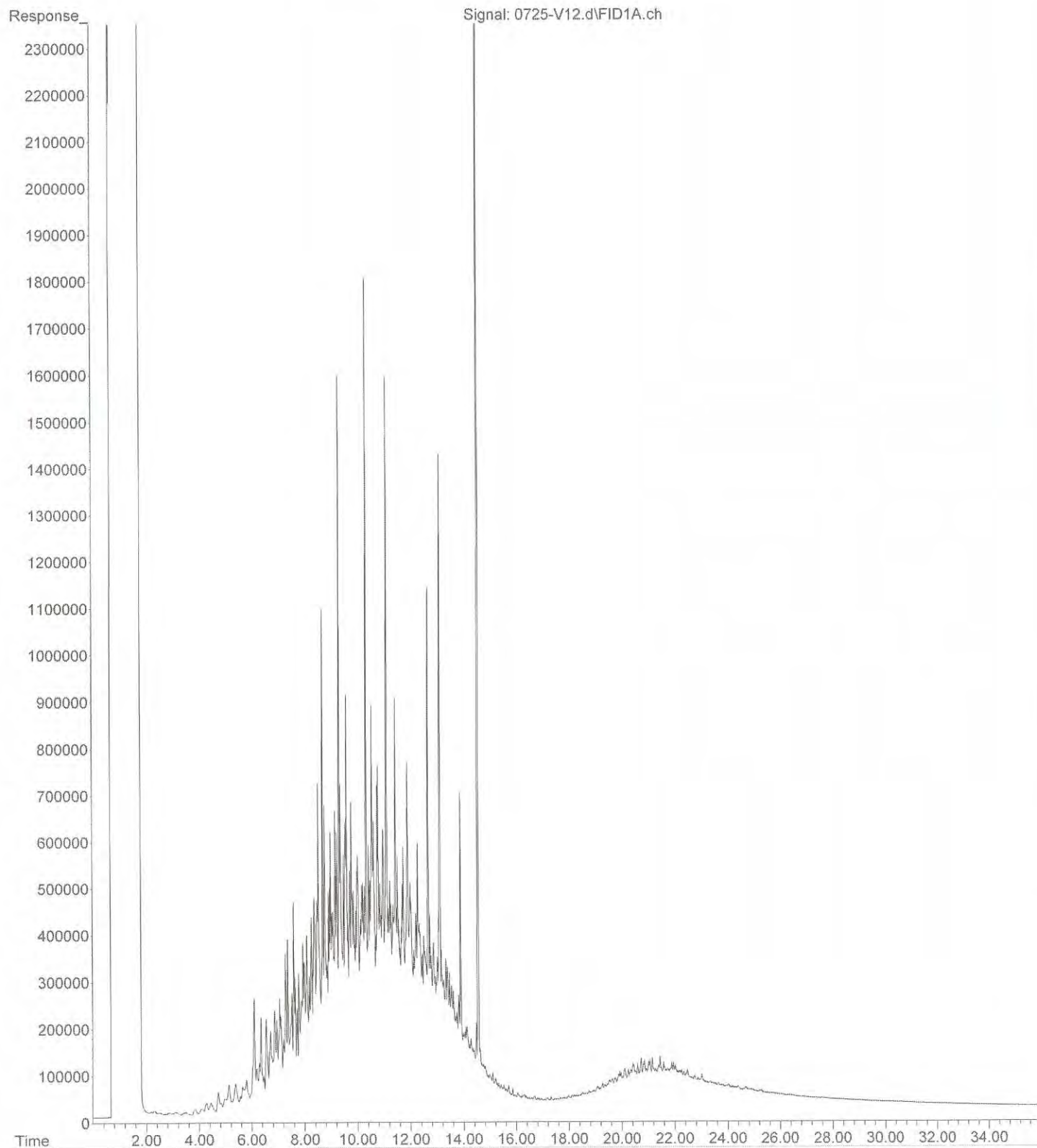
[illegible]

File :X:\DIESELS\VIGO\DATA\V180725.SEC\0725-V62.D  
Operator : JT  
Acquired : 25 Jul 2018 14:51 using AcqMethod V180601F.M  
Instrument : Vigo  
Sample Name: 07-158-13  
Misc Info :  
Vial Number: 62

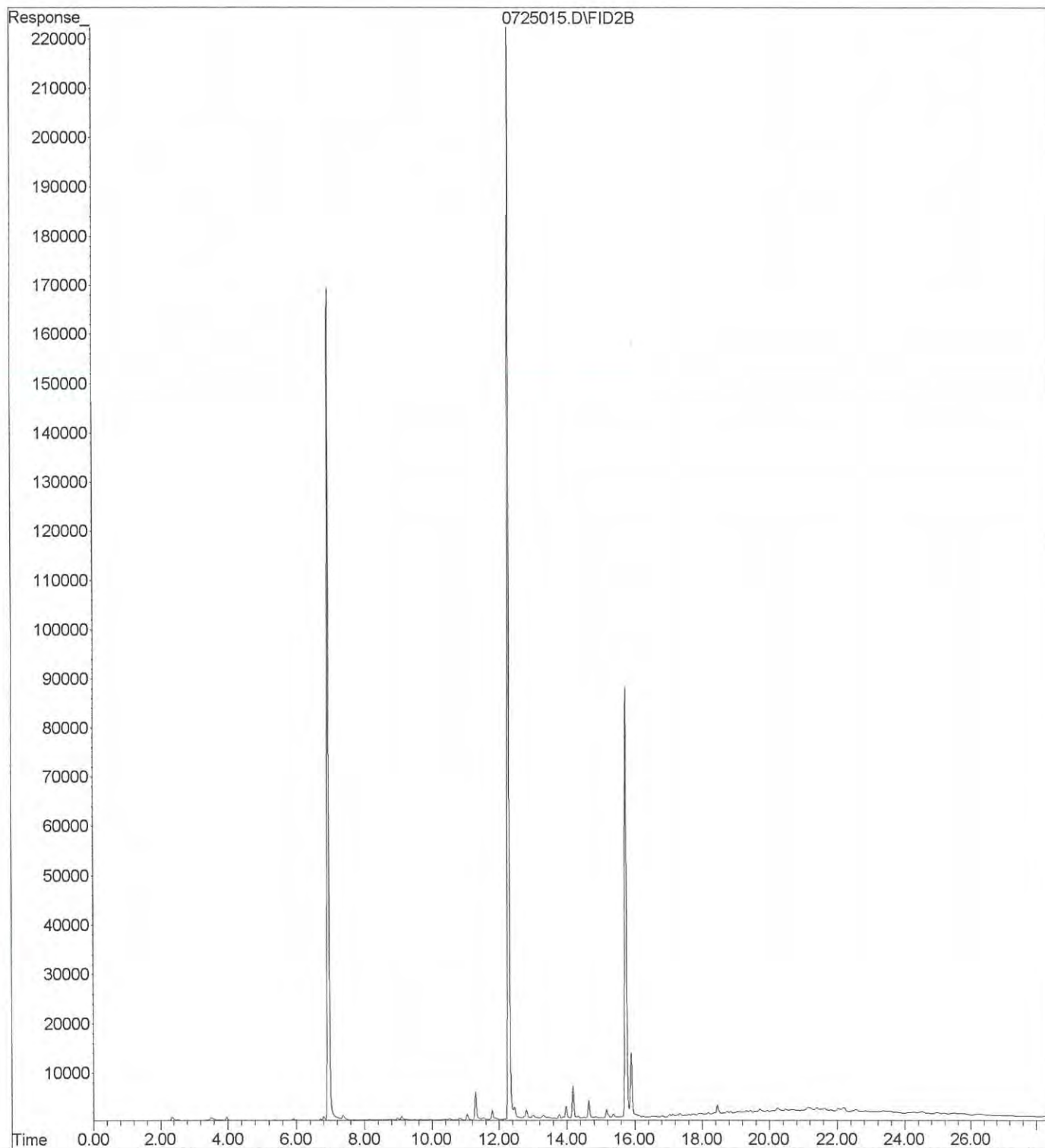




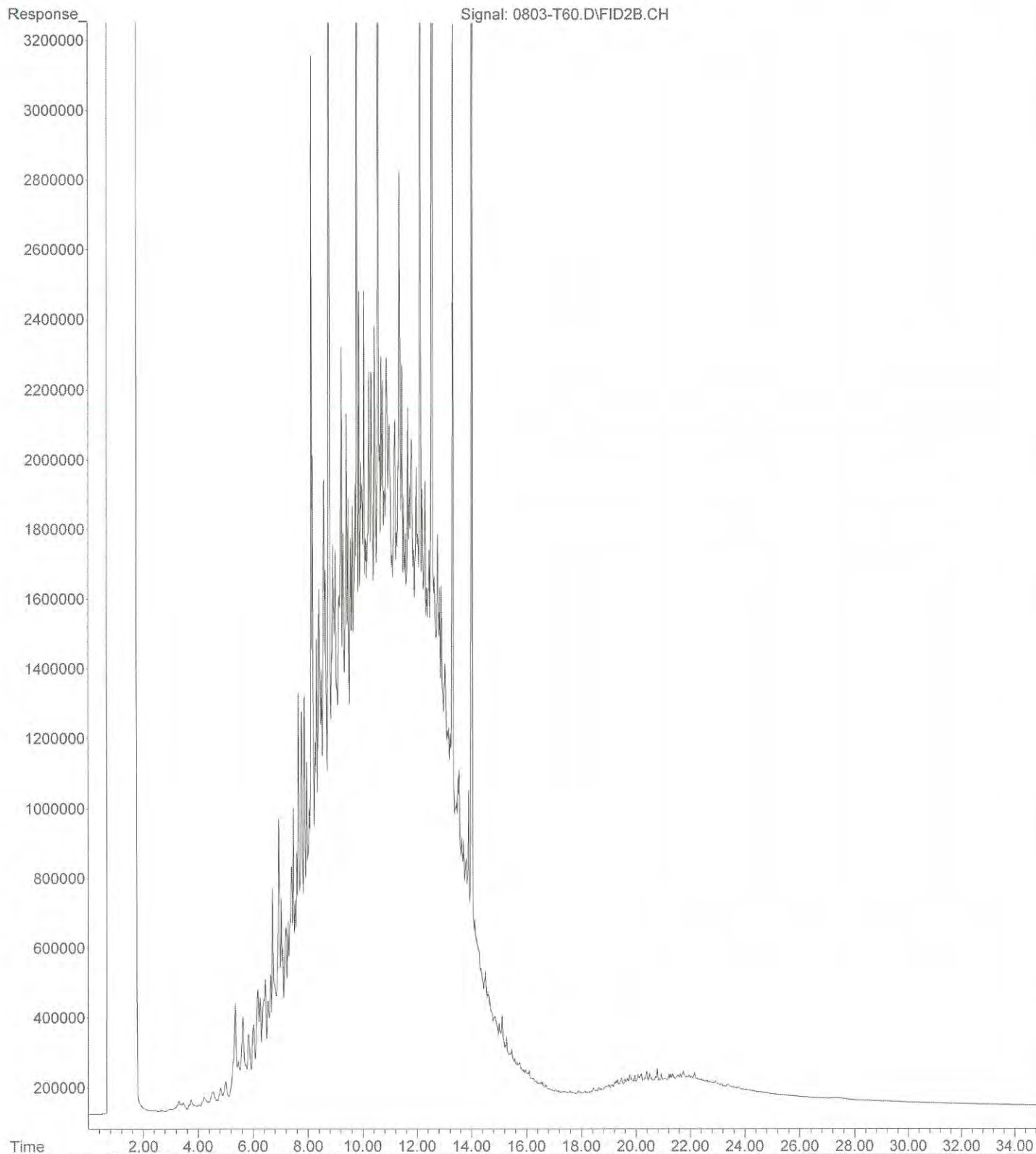
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Operator : JT  
Acquired : 25 Jul 2018 14:51 using AcqMethod V180601F.M  
Instrument : Vigo  
Sample Name: 07-158-15  
Misc Info :  
Vial Number: 12



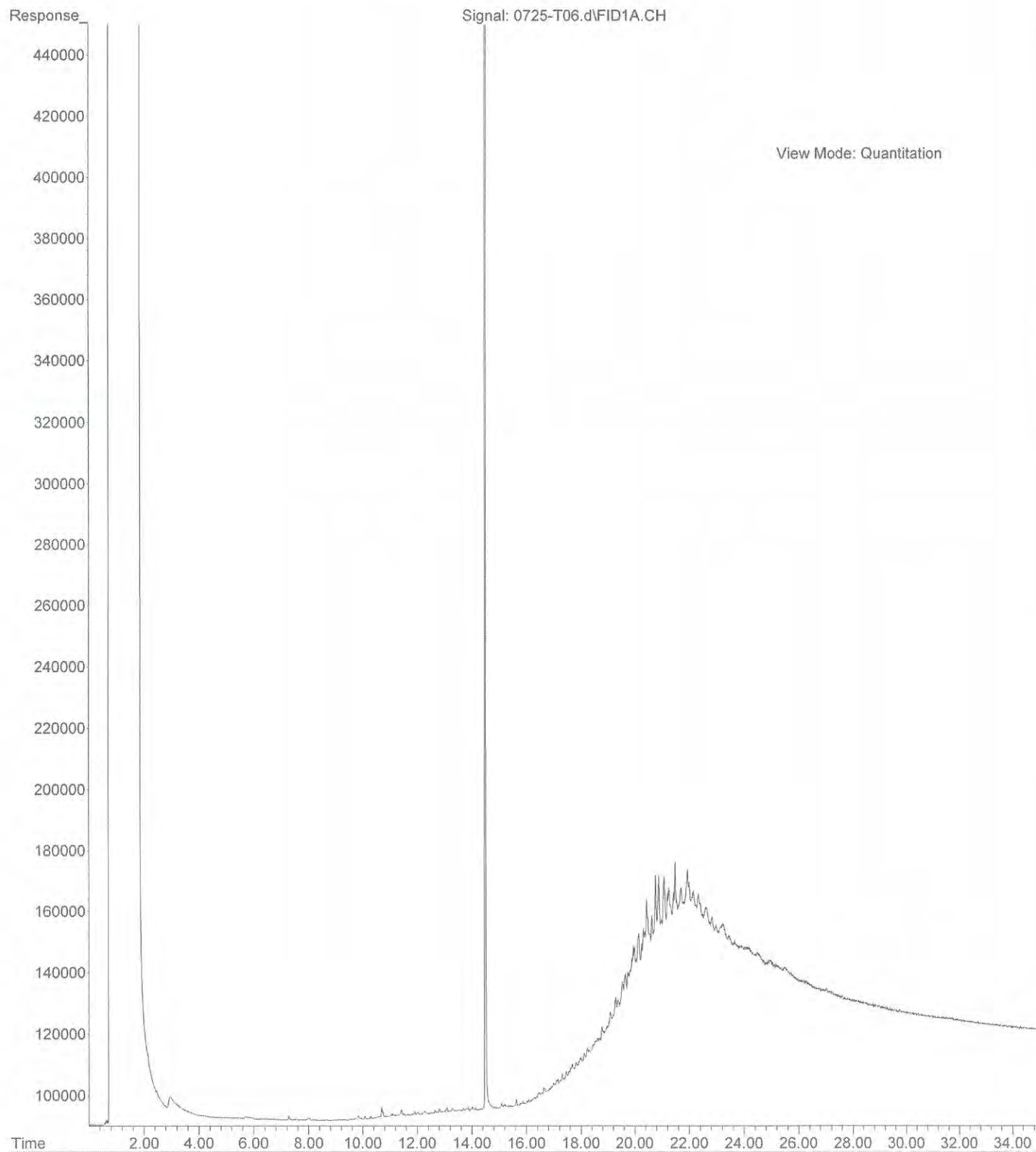
File : X:\BTEX\DARYL\DATA\D180725\0725015.D  
Operator :  
Acquired : 25 Jul 2018 21:31 using AcqMethod 180723B.M  
Instrument : Daryl  
Sample Name: 07-158-14s  
Misc Info :  
Vial Number: 15



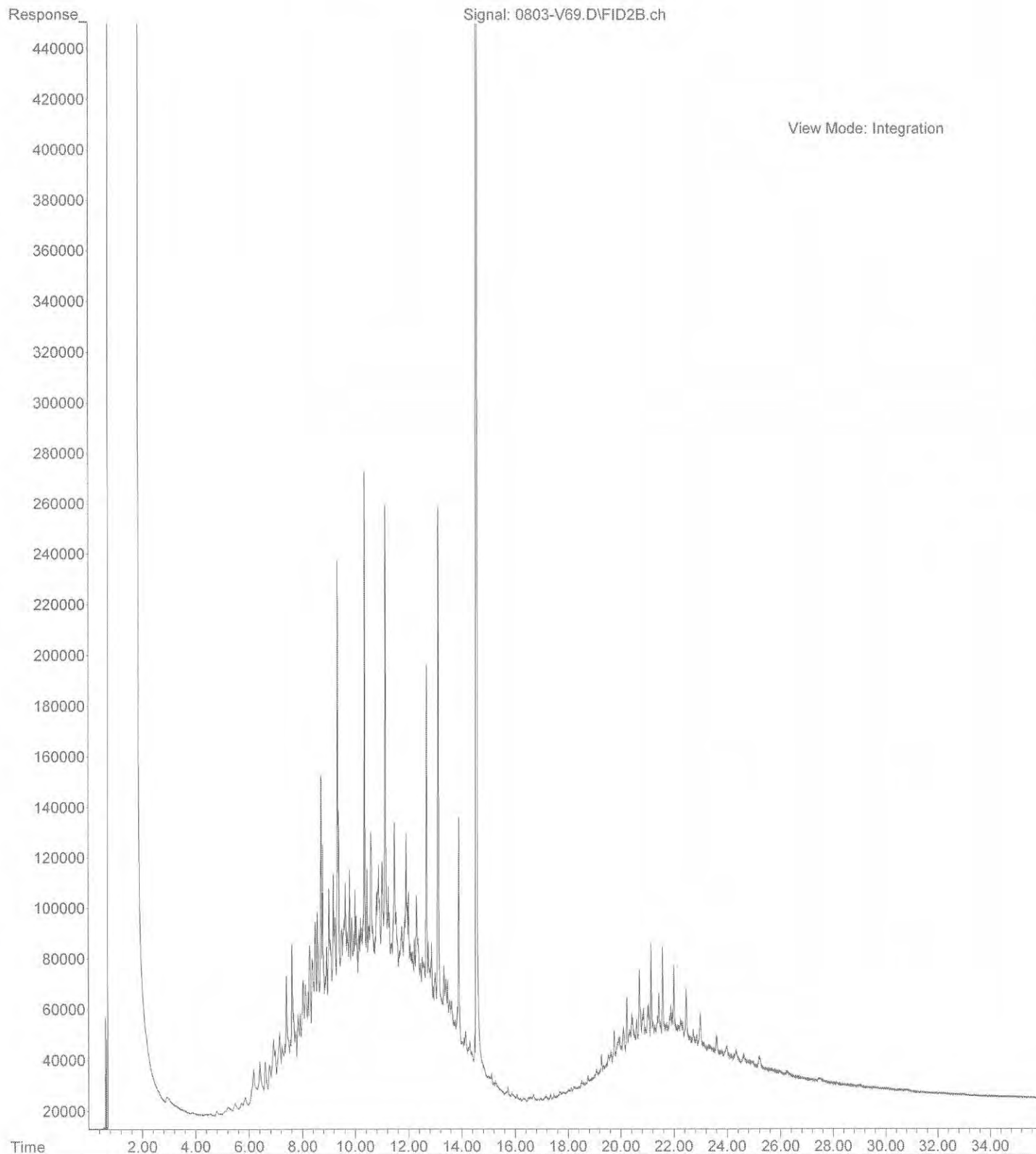
File :C:\msdchem\1\data\T180803.SEC\0803-T60.D  
Operator : JT  
Acquired : 03 Aug 2018 20:20 using AcqMethod T180110F.M  
Instrument : Teri  
Sample Name: 07-158-13  
Misc Info :  
Vial Number: 60



File :X:\DIESELS\TERI\DATA\T180725\0725-T06.d  
Operator : JT  
Acquired : 25 Jul 2018 12:12 using AcqMethod T180110F.M  
Instrument : Teri  
Sample Name: 07-158-14 5X  
Misc Info :  
Vial Number: 6



File :C:\msdchem\2\data\V180803.SEC\0803-V69.D  
Operator : JT  
Acquired : 3 Aug 2018 23:21 using AcqMethod V180601F.M  
Instrument : Vigo  
Sample Name: 07-158-15  
Misc Info :  
Vial Number: 69





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

August 17, 2018

Marsi Beeson  
GeoEngineers, Inc.  
12000 NW Naito Parkway, Suite 180  
Portland, OR 97209

Re: Analytical Data for Project 4082-039-01  
Laboratory Reference No. 1807-143B

Dear Marsi:

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

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

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

Sincerely,

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

David Baumeister  
Project Manager

Enclosures



OnSite Environmental, Inc. 14648 NE 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: August 17, 2018  
Samples Submitted: July 21, 2018  
Laboratory Reference: 1807-143B  
Project: 4082-039-01

### Case Narrative

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

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

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

#### Volatiles EPA 8260C and PAHs EPA 8270D/SIM Analysis

Sample FL207-B16-2.5-3.5 was extracted and analyzed outside of the hold time.

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: August 17, 2018  
Samples Submitted: July 21, 2018  
Laboratory Reference: 1807-143B  
Project: 4082-039-01

#### ANALYTICAL REPORT FOR SAMPLES

Client ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
FL207-B23-2.5-3.5	07-143-14	Soil	7-20-18	7-21-18	
FL207-B16-2.5-3.5	07-143-23	Soil	7-20-18	7-21-18	



Date of Report: August 17, 2018  
Samples Submitted: July 21, 2018  
Laboratory Reference: 1807-143B  
Project: 4082-039-01

**SOLUBLE HEXAVALENT CHROMIUM  
WATER EXTRACTION  
EPA 7196A**

Matrix: Soil  
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FL207-B23-2.5-3.5					
Laboratory ID:	07-143-14					
Hexavalent Chromium	ND	1.0	EPA 7196A mod.	8-14-18	8-14-18	



Date of Report: August 17, 2018  
 Samples Submitted: July 21, 2018  
 Laboratory Reference: 1807-143C  
 Project: 4082-039-01

**VOLATILE ORGANICS 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>FL207-B16-2.5-3.5</b>				
<b>Laboratory ID:</b>		<b>07-143-23</b>				
Dichlorodifluoromethane	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
Chloromethane	ND	0.0050	EPA 8260C	8-14-18	8-14-18	
Vinyl Chloride	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
Bromomethane	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
Chloroethane	ND	0.0050	EPA 8260C	8-14-18	8-14-18	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
Acetone	0.020	0.0050	EPA 8260C	8-14-18	8-14-18	
Iodomethane	ND	0.0050	EPA 8260C	8-14-18	8-14-18	
Carbon Disulfide	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
Methylene Chloride	ND	0.0050	EPA 8260C	8-14-18	8-14-18	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
Vinyl Acetate	ND	0.0050	EPA 8260C	8-14-18	8-14-18	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
2-Butanone	0.0056	0.0050	EPA 8260C	8-14-18	8-14-18	
Bromochloromethane	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
Chloroform	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
Benzene	0.0014	0.0010	EPA 8260C	8-14-18	8-14-18	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
Trichloroethene	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
Dibromomethane	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
Bromodichloromethane	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260C	8-14-18	8-14-18	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
Methyl Isobutyl Ketone	ND	0.0050	EPA 8260C	8-14-18	8-14-18	
Toluene	ND	0.0050	EPA 8260C	8-14-18	8-14-18	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	8-14-18	8-14-18	



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: August 17, 2018  
 Samples Submitted: July 21, 2018  
 Laboratory Reference: 1807-143C  
 Project: 4082-039-01

**VOLATILE ORGANICS EPA 8260C**  
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>		<b>FL207-B16-2.5-3.5</b>				
Laboratory ID:		07-143-23				
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
Tetrachloroethene	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
2-Hexanone	ND	0.0050	EPA 8260C	8-14-18	8-14-18	
Dibromochloromethane	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
Chlorobenzene	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
Ethylbenzene	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
m,p-Xylene	0.0031	0.0020	EPA 8260C	8-14-18	8-14-18	
o-Xylene	0.0011	0.0010	EPA 8260C	8-14-18	8-14-18	
Styrene	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
Bromoform	ND	0.0050	EPA 8260C	8-14-18	8-14-18	
Isopropylbenzene	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
Bromobenzene	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
n-Propylbenzene	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
2-Chlorotoluene	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
4-Chlorotoluene	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
1,3,5-Trimethylbenzene	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
tert-Butylbenzene	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
1,2,4-Trimethylbenzene	0.0013	0.0010	EPA 8260C	8-14-18	8-14-18	
sec-Butylbenzene	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
p-Isopropyltoluene	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
n-Butylbenzene	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260C	8-14-18	8-14-18	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
Hexachlorobutadiene	ND	0.0050	EPA 8260C	8-14-18	8-14-18	
Naphthalene	0.0028	0.0010	EPA 8260C	8-14-18	8-14-18	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>103</i>	<i>68-139</i>				
<i>Toluene-d8</i>	<i>97</i>	<i>79-128</i>				
<i>4-Bromofluorobenzene</i>	<i>84</i>	<i>71-132</i>				



Date of Report: August 17, 2018  
 Samples Submitted: July 21, 2018  
 Laboratory Reference: 1807-143C  
 Project: 4082-039-01

# PAHs EPA 8270D/SIM

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID: FL207-B16-2.5-3.5</b>						
Laboratory ID: 07-143-23						
Naphthalene	ND	0.035	EPA 8270D/SIM	8-14-18	8-15-18	
2-Methylnaphthalene	0.041	0.035	EPA 8270D/SIM	8-14-18	8-15-18	
1-Methylnaphthalene	ND	0.035	EPA 8270D/SIM	8-14-18	8-15-18	
Acenaphthylene	ND	0.035	EPA 8270D/SIM	8-14-18	8-15-18	
Acenaphthene	ND	0.035	EPA 8270D/SIM	8-14-18	8-15-18	
Fluorene	ND	0.035	EPA 8270D/SIM	8-14-18	8-15-18	
Phenanthrene	0.058	0.035	EPA 8270D/SIM	8-14-18	8-15-18	
Anthracene	ND	0.035	EPA 8270D/SIM	8-14-18	8-15-18	
Fluoranthene	ND	0.035	EPA 8270D/SIM	8-14-18	8-15-18	
Pyrene	0.048	0.035	EPA 8270D/SIM	8-14-18	8-15-18	
Benzo[a]anthracene	0.10	0.035	EPA 8270D/SIM	8-14-18	8-15-18	
Chrysene	0.085	0.035	EPA 8270D/SIM	8-14-18	8-15-18	
Benzo[b]fluoranthene	ND	0.035	EPA 8270D/SIM	8-14-18	8-15-18	
Benzo[j,k]fluoranthene	ND	0.035	EPA 8270D/SIM	8-14-18	8-15-18	
Benzo[a]pyrene	0.086	0.035	EPA 8270D/SIM	8-14-18	8-15-18	
Indeno(1,2,3-c,d)pyrene	ND	0.035	EPA 8270D/SIM	8-14-18	8-15-18	
Dibenz[a,h]anthracene	ND	0.035	EPA 8270D/SIM	8-14-18	8-15-18	
Benzo[g,h,i]perylene	ND	0.035	EPA 8270D/SIM	8-14-18	8-15-18	
<i>Surrogate: Percent Recovery Control Limits</i>						
2-Fluorobiphenyl	73	40 - 117				
Pyrene-d10	84	38 - 119				
Terphenyl-d14	74	47 - 135				



Date of Report: August 17, 2018  
 Samples Submitted: July 21, 2018  
 Laboratory Reference: 1807-143B  
 Project: 4082-039-01

**SOLUBLE HEXAVALENT CHROMIUM  
 WATER EXTRACTION  
 EPA 7196A  
 QUALITY CONTROL**

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB0814S1					
Hexavalent Chromium	ND	1.0	EPA 7196A mod.	8-14-18	8-14-18	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
<b>DUPLICATE</b>								
Laboratory ID:	08-145-02							
	ORIG	DUP						
Hexavalent Chromium	ND	ND	NA	NA	NA	NA	20	

<b>DUPLICATE</b>								
Laboratory ID:	08-145-02 MS							
	ORIG	DUP						
Hexavalent Chromium	5.03	5.03	NA	NA	NA	0	20	

<b>SPIKE BLANK</b>								
Laboratory ID:	SB0814S1							
	SB		SB		SB			
Hexavalent Chromium	5.19		5.00	NA	104	75-125	NA	NA



Date of Report: August 17, 2018  
 Samples Submitted: July 21, 2018  
 Laboratory Reference: 1807-143C  
 Project: 4082-039-01

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

Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID: MB0814S1						
Dichlorodifluoromethane	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
Chloromethane	ND	0.0050	EPA 8260C	8-14-18	8-14-18	
Vinyl Chloride	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
Bromomethane	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
Chloroethane	ND	0.0050	EPA 8260C	8-14-18	8-14-18	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
Acetone	ND	0.0050	EPA 8260C	8-14-18	8-14-18	
Iodomethane	ND	0.0050	EPA 8260C	8-14-18	8-14-18	
Carbon Disulfide	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
Methylene Chloride	ND	0.0050	EPA 8260C	8-14-18	8-14-18	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
Vinyl Acetate	ND	0.0050	EPA 8260C	8-14-18	8-14-18	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
2-Butanone	ND	0.0050	EPA 8260C	8-14-18	8-14-18	
Bromochloromethane	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
Chloroform	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
Benzene	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
Trichloroethene	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
Dibromomethane	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
Bromodichloromethane	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260C	8-14-18	8-14-18	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
Methyl Isobutyl Ketone	ND	0.0050	EPA 8260C	8-14-18	8-14-18	
Toluene	ND	0.0050	EPA 8260C	8-14-18	8-14-18	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	8-14-18	8-14-18	





Date of Report: August 17, 2018  
 Samples Submitted: July 21, 2018  
 Laboratory Reference: 1807-143C  
 Project: 4082-039-01

**VOLATILE ORGANICS EPA 8260C  
 METHOD BLANK QUALITY CONTROL**

page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID: MB0814S1						
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
Tetrachloroethene	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
2-Hexanone	ND	0.0050	EPA 8260C	8-14-18	8-14-18	
Dibromochloromethane	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
Chlorobenzene	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
Ethylbenzene	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
m,p-Xylene	ND	0.0020	EPA 8260C	8-14-18	8-14-18	
o-Xylene	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
Styrene	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
Bromoform	ND	0.0050	EPA 8260C	8-14-18	8-14-18	
Isopropylbenzene	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
Bromobenzene	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
n-Propylbenzene	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
2-Chlorotoluene	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
4-Chlorotoluene	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
1,3,5-Trimethylbenzene	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
tert-Butylbenzene	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
1,2,4-Trimethylbenzene	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
sec-Butylbenzene	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
p-Isopropyltoluene	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
n-Butylbenzene	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260C	8-14-18	8-14-18	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
Hexachlorobutadiene	ND	0.0050	EPA 8260C	8-14-18	8-14-18	
Naphthalene	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	8-14-18	8-14-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>103</i>	<i>68-139</i>				
<i>Toluene-d8</i>	<i>101</i>	<i>79-128</i>				
<i>4-Bromofluorobenzene</i>	<i>98</i>	<i>71-132</i>				



Date of Report: August 17, 2018  
 Samples Submitted: July 21, 2018  
 Laboratory Reference: 1807-143C  
 Project: 4082-039-01

**VOLATILE ORGANICS 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:	SB0814S1										
	SB	SBD	SB	SBD	SB	SBD					
1,1-Dichloroethene	0.0452	0.0465	0.0500	0.0500	90	93	53-141	3		17	
Benzene	0.0450	0.0459	0.0500	0.0500	90	92	70-130	2		15	
Trichloroethene	0.0424	0.0434	0.0500	0.0500	85	87	74-122	2		16	
Toluene	0.0443	0.0454	0.0500	0.0500	89	91	76-130	2		15	
Chlorobenzene	0.0394	0.0406	0.0500	0.0500	79	81	75-120	3		14	
Surrogate:											
Dibromofluoromethane					103	102	68-139				
Toluene-d8					103	101	79-128				
4-Bromofluorobenzene					103	100	71-132				



Date of Report: August 17, 2018  
 Samples Submitted: July 21, 2018  
 Laboratory Reference: 1807-143C  
 Project: 4082-039-01

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

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID: MB0814S1						
Naphthalene	ND	0.0067	EPA 8270D/SIM	8-14-18	8-15-18	
2-Methylnaphthalene	ND	0.0067	EPA 8270D/SIM	8-14-18	8-15-18	
1-Methylnaphthalene	ND	0.0067	EPA 8270D/SIM	8-14-18	8-15-18	
Acenaphthylene	ND	0.0067	EPA 8270D/SIM	8-14-18	8-15-18	
Acenaphthene	ND	0.0067	EPA 8270D/SIM	8-14-18	8-15-18	
Fluorene	ND	0.0067	EPA 8270D/SIM	8-14-18	8-15-18	
Phenanthrene	ND	0.0067	EPA 8270D/SIM	8-14-18	8-15-18	
Anthracene	ND	0.0067	EPA 8270D/SIM	8-14-18	8-15-18	
Fluoranthene	ND	0.0067	EPA 8270D/SIM	8-14-18	8-15-18	
Pyrene	ND	0.0067	EPA 8270D/SIM	8-14-18	8-15-18	
Benzo[a]anthracene	ND	0.0067	EPA 8270D/SIM	8-14-18	8-15-18	
Chrysene	ND	0.0067	EPA 8270D/SIM	8-14-18	8-15-18	
Benzo[b]fluoranthene	ND	0.0067	EPA 8270D/SIM	8-14-18	8-15-18	
Benzo[j,k]fluoranthene	ND	0.0067	EPA 8270D/SIM	8-14-18	8-15-18	
Benzo[a]pyrene	ND	0.0067	EPA 8270D/SIM	8-14-18	8-15-18	
Indeno(1,2,3-c,d)pyrene	ND	0.0067	EPA 8270D/SIM	8-14-18	8-15-18	
Dibenz[a,h]anthracene	ND	0.0067	EPA 8270D/SIM	8-14-18	8-15-18	
Benzo[g,h,i]perylene	ND	0.0067	EPA 8270D/SIM	8-14-18	8-15-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	92	40 - 117				
Pyrene-d10	86	38 - 119				
Terphenyl-d14	87	47 - 135				



Date of Report: August 17, 2018  
 Samples Submitted: July 21, 2018  
 Laboratory Reference: 1807-143C  
 Project: 4082-039-01

**PAHs 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:	SB0814S1									
	SB	SBD	SB	SBD	SB	SBD				
Naphthalene	0.0706	0.0674	0.0833	0.0833	85	81	54 - 114	5	15	
Acenaphthylene	0.0667	0.0654	0.0833	0.0833	80	79	59 - 119	2	15	
Acenaphthene	0.0680	0.0692	0.0833	0.0833	82	83	58 - 117	2	15	
Fluorene	0.0744	0.0727	0.0833	0.0833	89	87	61 - 122	2	15	
Phenanthrene	0.0711	0.0696	0.0833	0.0833	85	84	58 - 121	2	15	
Anthracene	0.0727	0.0717	0.0833	0.0833	87	86	66 - 126	1	15	
Fluoranthene	0.0745	0.0736	0.0833	0.0833	89	88	62 - 126	1	15	
Pyrene	0.0731	0.0715	0.0833	0.0833	88	86	61 - 126	2	15	
Benzo[a]anthracene	0.0814	0.0797	0.0833	0.0833	98	96	64 - 132	2	15	
Chrysene	0.0722	0.0734	0.0833	0.0833	87	88	64 - 127	2	15	
Benzo[b]fluoranthene	0.0769	0.0714	0.0833	0.0833	92	86	57 - 128	7	15	
Benzo(j,k)fluoranthene	0.0713	0.0742	0.0833	0.0833	86	89	62 - 130	4	15	
Benzo[a]pyrene	0.0740	0.0730	0.0833	0.0833	89	88	62 - 125	1	15	
Indeno(1,2,3-c,d)pyrene	0.0748	0.0774	0.0833	0.0833	90	93	55 - 130	3	15	
Dibenz[a,h]anthracene	0.0762	0.0745	0.0833	0.0833	91	89	58 - 129	2	15	
Benzo[g,h,i]perylene	0.0719	0.0707	0.0833	0.0833	86	85	57 - 129	2	15	
Surrogate:										
2-Fluorobiphenyl					77	84	40 - 117			
Pyrene-d10					85	83	38 - 119			
Terphenyl-d14					84	82	47 - 135			





### 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 3

## Turnaround Request (in working days)

(Check One)

☐ Same Day ☐ 1 Day

☐ 2 Days ☐ 3 Days

☒ Standard (7 Days)  
(TPH analysis 5 Days)

☐ \_\_\_\_\_  
(other)

## Laboratory Number:

**07-143**

Company:	GE7
Project Number:	4082-039-01
Project Name:	FWE-Sound Transit
Project Manager:	Marsi Beason
Sampled by:	CJG/JD

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix
1	FL207-B21-5-5.5	7/20/18	755	S
2	FL207-B21-7.5-8.5		810	
3	FL207-B21-10-11		820	
4	FL207-B21-12.5-13.5		830	
5	FL207-B21-15-15.5		845	
6	FL207-B21-17-17.5		850	
7	FL207-B21-20-20.5		910	
8	FL207-B21-22.5-23.5		925	
9	FL207-B21-25-25.5		950	
10	FL207-B21-27.5-28.5		1000	

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

Signature	Company	Date	Time	Comments/Special Instructions
	GE7	7/21/18	810	AS-7 PM
	OSI/ET	7/21/18	840	(X) Added 7/23/18. DB (STA) O Added 7/23/18. DB (STA) O Added 7/25/18. DB (STA) O Added 8/7/18. DB (STA)

Relinquished				
Received				
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date				

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





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## Chain of Custody

Page 2 of 3

Company:	GEJ
Project Number:	4082-639-81
Project Name:	FIVE-Sound Transit
Project Manager:	Marsi Beeson
Sampled by:	GGG/JJD

### Turnaround Request (in working days)

(Check One)

☐ Same Day ☐ 1 Day

☐ 2 Days ☐ 3 Days

☒ Standard (7 Days)  
(TPH analysis 5 Days)

☐ (other) \_\_\_\_\_

Lab ID Sample Identification Date Sampled Time Sampled Matrix

### Number of Containers

### Laboratory Number:

**07-143**

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

Relinquished	Signature	Company	Date	Time	Comments/Special Instructions
Relinquished		GEJ	7/24/16	810	
Received		OnSite	7/24/16	810	
Relinquished					
Received					
Relinquished					
Received					
Relinquished					
Received					
Relinquished					
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 3 of 3

### Turnaround Request (in working days)

(Check One)

☐ Same Day ☐ 1 Day

☐ 2 Days ☐ 3 Days

☒ Standard (7 Days)  
(TPH analysis 5 Days)

☐ \_\_\_\_\_  
(other)

### Laboratory Number:

**07-143**

Company: GEI  
Project Number: 4082-039-01  
Project Name: FIVE-Sound Transit  
Project Manager: Marsi Beeson  
Sampled by: GLE/JJD

Lab ID: \_\_\_\_\_  
Sample Identification: \_\_\_\_\_  
Date Sampled: 7/20/18 Time Sampled: 1355 Matrix: S

### Number of Containers

NWTPH-HCID	
NWTPH-Gx/BTEX	
NWTPH-Gx	
NWTPH-Dx ( <input type="checkbox"/> Acid / SG Clean-up)	
Volatiles 8260C	<u>0</u>
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	
<u>TOTAL As, Pb</u>	
% Moisture	

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	<u>TOTAL As, Pb</u>	% Moisture
21	FL207-B23-20-20.5	7/20/18	1355	S	5					0														0
22	FL207-B1b-0-0.5		1435		1																			0
23	FL207-B1b-2.5-3.5		1445		1																			0
24	FL207-B1b-5-6		1450		1																			0
25	FL207-B1b-7.5-8.5		1500		1																			0
26	FL207-B1b-10-11		1510		1																			0
27	FL207-B1b-12.5-13		1520		1																			0
28	FL207-B1b-15-15.5		1530		1																			0
29	FL207-B1b-17.5-18.5		1540		1																			0
30	FL207-B1b-20-20.5		1550		1																			0

Signature: \_\_\_\_\_

Company: GEI

Date: 7/21/18

Time: 810

Comments/Special Instructions: \_\_\_\_\_

Relinquished																								
Received																								
Relinquished																								
Received																								
Relinquished																								
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Relinquished																								
Received																								
Relinquished																								
Reviewed/Date																								

Data Package: Standard ☐ Level III ☐ Level IV ☐

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



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

August 1, 2018

Marsi Beeson  
GeoEngineers, Inc.  
12000 NW Naito Parkway, Suite 180  
Portland, OR 97209

Re: Analytical Data for Project 4082-039-01  
Laboratory Reference No. 1807-143

Dear Marsi:

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

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

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

Sincerely,

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: August 1, 2018  
Samples Submitted: July 21, 2018  
Laboratory Reference: 1807-143  
Project: 4082-039-01

### Case Narrative

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

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

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



Date of Report: August 1, 2018  
 Samples Submitted: July 21, 2018  
 Laboratory Reference: 1807-143  
 Project: 4082-039-01

### ANALYTICAL REPORT FOR SAMPLES

Client ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
FL207-B21-5-5.5	07-143-01	Soil	7-20-18	7-21-18	
FL207-B21-7.5-8.5	07-143-02	Soil	7-20-18	7-21-18	
FL207-B21-10-11	07-143-03	Soil	7-20-18	7-21-18	
FL207-B21-12.5-13.5	07-143-04	Soil	7-20-18	7-21-18	
FL207-B23-0-0.5	07-143-12	Soil	7-20-18	7-21-18	
FL207-B23-0.5-1	07-143-13	Soil	7-20-18	7-21-18	
FL207-B23-2.5-3.5	07-143-14	Soil	7-20-18	7-21-18	
FL207-B23-7.5-8	07-143-16	Soil	7-20-18	7-21-18	
FL207-B23-12.5-13	07-143-18	Soil	7-20-18	7-21-18	
FL207-B23-17.5-18	07-143-20	Soil	7-20-18	7-21-18	
FL207-B23-20-20.5	07-143-21	Soil	7-20-18	7-21-18	
FL207-B16-0-0.5	07-143-22	Soil	7-20-18	7-21-18	
FL207-B16-5-6	07-143-24	Soil	7-20-18	7-21-18	
FL207-B16-10-11	07-143-26	Soil	7-20-18	7-21-18	
FL207-B16-15-15.5	07-143-28	Soil	7-20-18	7-21-18	



Date of Report: August 1, 2018  
 Samples Submitted: July 21, 2018  
 Laboratory Reference: 1807-143  
 Project: 4082-039-01

# **HYDROCARBON IDENTIFICATION NWTPH-HCID**

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL207-B21-5-5.5</b>					
Laboratory ID:	07-143-01					
Gasoline Range Organics	ND	21	NWTPH-HCID	7-24-18	7-24-18	
Diesel Range Organics	ND	53	NWTPH-HCID	7-24-18	7-24-18	
Lube Oil Range Organics	ND	110	NWTPH-HCID	7-24-18	7-24-18	
Surrogate:	Percent Recovery	Control Limits				
<i>o</i> -Terphenyl	93	50-150				

<b>Client ID:</b>	<b>FL207-B21-7.5-8.5</b>					
Laboratory ID:	07-143-02					
Gasoline Range Organics	ND	22	NWTPH-HCID	7-24-18	7-24-18	
Diesel Range Organics	ND	55	NWTPH-HCID	7-24-18	7-24-18	
Lube Oil Range Organics	ND	110	NWTPH-HCID	7-24-18	7-24-18	
Surrogate:	Percent Recovery	Control Limits				
<i>o</i> -Terphenyl	96	50-150				

<b>Client ID:</b>	<b>FL207-B21-10-11</b>					
Laboratory ID:	07-143-03					
Gasoline Range Organics	ND	22	NWTPH-HCID	7-24-18	7-24-18	
Diesel Range Organics	ND	54	NWTPH-HCID	7-24-18	7-24-18	
Lube Oil Range Organics	ND	110	NWTPH-HCID	7-24-18	7-24-18	
Surrogate:	Percent Recovery	Control Limits				
<i>o</i> -Terphenyl	92	50-150				

<b>Client ID:</b>	<b>FL207-B21-12.5-13.5</b>					
Laboratory ID:	07-143-04					
Gasoline Range Organics	ND	22	NWTPH-HCID	7-24-18	7-24-18	
Diesel Range Organics	ND	55	NWTPH-HCID	7-24-18	7-24-18	
Lube Oil Range Organics	ND	110	NWTPH-HCID	7-24-18	7-24-18	
Surrogate:	Percent Recovery	Control Limits				
<i>o</i> -Terphenyl	99	50-150				

<b>Client ID:</b>	<b>FL207-B23-2.5-3.5</b>					
Laboratory ID:	07-143-14					
Gasoline Range Organics	ND	21	NWTPH-HCID	7-24-18	7-24-18	
Diesel Range Organics	ND	52	NWTPH-HCID	7-24-18	7-24-18	
Lube Oil	Detected	100	NWTPH-HCID	7-24-18	7-24-18	
Surrogate:	Percent Recovery	Control Limits				
<i>o</i> -Terphenyl	94	50-150				



Date of Report: August 1, 2018  
 Samples Submitted: July 21, 2018  
 Laboratory Reference: 1807-143  
 Project: 4082-039-01

### HYDROCARBON IDENTIFICATION NWTPH-HCID

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL207-B23-7.5-8</b>					
Laboratory ID:	07-143-16					
Gasoline Range Organics	ND	22	NWTPH-HCID	7-24-18	7-24-18	
Diesel Range Organics	ND	54	NWTPH-HCID	7-24-18	7-24-18	
Lube Oil Range Organics	ND	110	NWTPH-HCID	7-24-18	7-24-18	
Surrogate:	Percent Recovery	Control Limits				
<i>o</i> -Terphenyl	91	50-150				

<b>Client ID:</b>	<b>FL207-B16-0-0.5</b>					
Laboratory ID:	07-143-22					
Gasoline Range Organics	ND	22	NWTPH-HCID	7-24-18	7-24-18	
Diesel Range Organics	ND	54	NWTPH-HCID	7-24-18	7-24-18	
Lube Oil	Detected	110	NWTPH-HCID	7-24-18	7-24-18	
Surrogate:	Percent Recovery	Control Limits				
<i>o</i> -Terphenyl	91	50-150				

<b>Client ID:</b>	<b>FL207-B16-5-6</b>					
Laboratory ID:	07-143-24					
Gasoline Range Organics	ND	22	NWTPH-HCID	7-24-18	7-24-18	
Diesel Range Organics	ND	54	NWTPH-HCID	7-24-18	7-24-18	
Lube Oil Range Organics	ND	110	NWTPH-HCID	7-24-18	7-24-18	
Surrogate:	Percent Recovery	Control Limits				
<i>o</i> -Terphenyl	94	50-150				

<b>Client ID:</b>	<b>FL207-B16-10-11</b>					
Laboratory ID:	07-143-26					
Gasoline Range Organics	ND	22	NWTPH-HCID	7-24-18	7-24-18	
Diesel Range Organics	ND	54	NWTPH-HCID	7-24-18	7-24-18	
Lube Oil Range Organics	ND	110	NWTPH-HCID	7-24-18	7-24-18	
Surrogate:	Percent Recovery	Control Limits				
<i>o</i> -Terphenyl	95	50-150				

<b>Client ID:</b>	<b>FL207-B16-15-15.5</b>					
Laboratory ID:	07-143-28					
Gasoline Range Organics	ND	22	NWTPH-HCID	7-24-18	7-24-18	
Diesel Range Organics	ND	55	NWTPH-HCID	7-24-18	7-24-18	
Lube Oil	Detected	110	NWTPH-HCID	7-24-18	7-24-18	
Surrogate:	Percent Recovery	Control Limits				
<i>o</i> -Terphenyl	99	50-150				





Date of Report: August 1, 2018  
 Samples Submitted: July 21, 2018  
 Laboratory Reference: 1807-143  
 Project: 4082-039-01

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

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID: FL207-B23-2.5-3.5</b>						
Laboratory ID: 07-143-14						
Diesel Range Organics	ND	52	NWTPH-Dx	7-26-18	7-26-18	
Lube Oil	440	100	NWTPH-Dx	7-26-18	7-26-18	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	82	50-150				
<b>Client ID: FL207-B16-0-0.5</b>						
Laboratory ID: 07-143-22						
Diesel Range Organics	ND	54	NWTPH-Dx	7-26-18	7-26-18	
Lube Oil	440	110	NWTPH-Dx	7-26-18	7-26-18	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	76	50-150				
<b>Client ID: FL207-B16-2.5-3.5</b>						
Laboratory ID: 07-143-23						
Diesel Range Organics	ND	260	NWTPH-Dx	7-26-18	7-26-18	
Lube Oil	4200	520	NWTPH-Dx	7-26-18	7-26-18	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	---	50-150				S
<b>Client ID: FL207-B16-15-15.5</b>						
Laboratory ID: 07-143-28						
Diesel Range Organics	ND	140	NWTPH-Dx	7-26-18	7-27-18	
Lube Oil	1000	270	NWTPH-Dx	7-26-18	7-27-18	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	89	50-150				
<b>Client ID: FL207-B16-17.5-18.5</b>						
Laboratory ID: 07-143-29						
Diesel Range Organics	ND	27	NWTPH-Dx	7-26-18	7-26-18	
Lube Oil Range Organics	ND	55	NWTPH-Dx	7-26-18	7-26-18	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	83	50-150				



Date of Report: August 1, 2018  
 Samples Submitted: July 21, 2018  
 Laboratory Reference: 1807-143  
 Project: 4082-039-01

**VOLATILE ORGANICS EPA 8260C**  
 page 1 of 2

Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID: FL207-B21-5-5.5</b>						
<b>Laboratory ID: 07-143-01</b>						
Dichlorodifluoromethane	ND	0.0013	EPA 8260C	7-24-18	7-24-18	
Chloromethane	ND	0.0063	EPA 8260C	7-24-18	7-24-18	
Vinyl Chloride	ND	0.0013	EPA 8260C	7-24-18	7-24-18	
Bromomethane	ND	0.0013	EPA 8260C	7-24-18	7-24-18	
Chloroethane	ND	0.0063	EPA 8260C	7-24-18	7-24-18	
Trichlorofluoromethane	ND	0.0013	EPA 8260C	7-24-18	7-24-18	
1,1-Dichloroethene	ND	0.0013	EPA 8260C	7-24-18	7-24-18	
Acetone	ND	0.013	EPA 8260C	7-24-18	7-24-18	
Iodomethane	ND	0.0063	EPA 8260C	7-24-18	7-24-18	
Carbon Disulfide	ND	0.0013	EPA 8260C	7-24-18	7-24-18	
Methylene Chloride	ND	0.0063	EPA 8260C	7-24-18	7-24-18	
(trans) 1,2-Dichloroethene	ND	0.0013	EPA 8260C	7-24-18	7-24-18	
Methyl t-Butyl Ether	ND	0.0013	EPA 8260C	7-24-18	7-24-18	
1,1-Dichloroethane	ND	0.0013	EPA 8260C	7-24-18	7-24-18	
Vinyl Acetate	ND	0.0063	EPA 8260C	7-24-18	7-24-18	
2,2-Dichloropropane	ND	0.0013	EPA 8260C	7-24-18	7-24-18	
(cis) 1,2-Dichloroethene	ND	0.0013	EPA 8260C	7-24-18	7-24-18	
2-Butanone	ND	0.0063	EPA 8260C	7-24-18	7-24-18	
Bromochloromethane	ND	0.0013	EPA 8260C	7-24-18	7-24-18	
Chloroform	ND	0.0013	EPA 8260C	7-24-18	7-24-18	
1,1,1-Trichloroethane	ND	0.0013	EPA 8260C	7-24-18	7-24-18	
Carbon Tetrachloride	ND	0.0013	EPA 8260C	7-24-18	7-24-18	
1,1-Dichloropropene	ND	0.0013	EPA 8260C	7-24-18	7-24-18	
Benzene	ND	0.0013	EPA 8260C	7-24-18	7-24-18	
1,2-Dichloroethane	ND	0.0013	EPA 8260C	7-24-18	7-24-18	
Trichloroethene	ND	0.0013	EPA 8260C	7-24-18	7-24-18	
1,2-Dichloropropane	ND	0.0013	EPA 8260C	7-24-18	7-24-18	
Dibromomethane	ND	0.0013	EPA 8260C	7-24-18	7-24-18	
Bromodichloromethane	ND	0.0013	EPA 8260C	7-24-18	7-24-18	
2-Chloroethyl Vinyl Ether	ND	0.0063	EPA 8260C	7-24-18	7-24-18	
(cis) 1,3-Dichloropropene	ND	0.0013	EPA 8260C	7-24-18	7-24-18	
Methyl Isobutyl Ketone	ND	0.0063	EPA 8260C	7-24-18	7-24-18	
Toluene	ND	0.0063	EPA 8260C	7-24-18	7-24-18	
(trans) 1,3-Dichloropropene	ND	0.0013	EPA 8260C	7-24-18	7-24-18	



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Date of Report: August 1, 2018  
 Samples Submitted: July 21, 2018  
 Laboratory Reference: 1807-143  
 Project: 4082-039-01

**VOLATILE ORGANICS EPA 8260C**  
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>		<b>FL207-B21-5-5.5</b>				
Laboratory ID:		07-143-01				
1,1,2-Trichloroethane	ND	0.0013	EPA 8260C	7-24-18	7-24-18	
Tetrachloroethene	ND	0.0013	EPA 8260C	7-24-18	7-24-18	
1,3-Dichloropropane	ND	0.0013	EPA 8260C	7-24-18	7-24-18	
2-Hexanone	ND	0.0063	EPA 8260C	7-24-18	7-24-18	
Dibromochloromethane	ND	0.0013	EPA 8260C	7-24-18	7-24-18	
1,2-Dibromoethane	ND	0.0013	EPA 8260C	7-24-18	7-24-18	
Chlorobenzene	ND	0.0013	EPA 8260C	7-24-18	7-24-18	
1,1,1,2-Tetrachloroethane	ND	0.0013	EPA 8260C	7-24-18	7-24-18	
Ethylbenzene	ND	0.0013	EPA 8260C	7-24-18	7-24-18	
m,p-Xylene	ND	0.0025	EPA 8260C	7-24-18	7-24-18	
o-Xylene	ND	0.0013	EPA 8260C	7-24-18	7-24-18	
Styrene	ND	0.0013	EPA 8260C	7-24-18	7-24-18	
Bromoform	ND	0.0063	EPA 8260C	7-24-18	7-24-18	
Isopropylbenzene	ND	0.0013	EPA 8260C	7-24-18	7-24-18	
Bromobenzene	ND	0.0013	EPA 8260C	7-24-18	7-24-18	
1,1,2,2-Tetrachloroethane	ND	0.0013	EPA 8260C	7-24-18	7-24-18	
1,2,3-Trichloropropane	ND	0.0013	EPA 8260C	7-24-18	7-24-18	
n-Propylbenzene	ND	0.0013	EPA 8260C	7-24-18	7-24-18	
2-Chlorotoluene	ND	0.0013	EPA 8260C	7-24-18	7-24-18	
4-Chlorotoluene	ND	0.0013	EPA 8260C	7-24-18	7-24-18	
1,3,5-Trimethylbenzene	ND	0.0013	EPA 8260C	7-24-18	7-24-18	
tert-Butylbenzene	ND	0.0013	EPA 8260C	7-24-18	7-24-18	
1,2,4-Trimethylbenzene	ND	0.0013	EPA 8260C	7-24-18	7-24-18	
sec-Butylbenzene	ND	0.0013	EPA 8260C	7-24-18	7-24-18	
1,3-Dichlorobenzene	ND	0.0013	EPA 8260C	7-24-18	7-24-18	
p-Isopropyltoluene	ND	0.0013	EPA 8260C	7-24-18	7-24-18	
1,4-Dichlorobenzene	ND	0.0013	EPA 8260C	7-24-18	7-24-18	
1,2-Dichlorobenzene	ND	0.0013	EPA 8260C	7-24-18	7-24-18	
n-Butylbenzene	ND	0.0013	EPA 8260C	7-24-18	7-24-18	
1,2-Dibromo-3-chloropropane	ND	0.0063	EPA 8260C	7-24-18	7-24-18	
1,2,4-Trichlorobenzene	ND	0.0013	EPA 8260C	7-24-18	7-24-18	
Hexachlorobutadiene	ND	0.0063	EPA 8260C	7-24-18	7-24-18	
Naphthalene	ND	0.0013	EPA 8260C	7-24-18	7-24-18	
1,2,3-Trichlorobenzene	ND	0.0013	EPA 8260C	7-24-18	7-24-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	98	68-139				
<i>Toluene-d8</i>	98	79-128				
<i>4-Bromofluorobenzene</i>	95	71-132				



Date of Report: August 1, 2018  
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 Laboratory Reference: 1807-143  
 Project: 4082-039-01

**VOLATILE ORGANICS EPA 8260C**  
 page 1 of 2

Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID: FL207-B23-2.5-3.5</b>						
<b>Laboratory ID: 07-143-14</b>						
Dichlorodifluoromethane	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
Chloromethane	ND	0.0056	EPA 8260C	7-24-18	7-24-18	
Vinyl Chloride	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
Bromomethane	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
Chloroethane	ND	0.0056	EPA 8260C	7-24-18	7-24-18	
Trichlorofluoromethane	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
1,1-Dichloroethene	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
Acetone	ND	0.011	EPA 8260C	7-24-18	7-24-18	
Iodomethane	ND	0.0056	EPA 8260C	7-24-18	7-24-18	
Carbon Disulfide	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
Methylene Chloride	ND	0.0056	EPA 8260C	7-24-18	7-24-18	
(trans) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
Methyl t-Butyl Ether	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
1,1-Dichloroethane	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
Vinyl Acetate	ND	0.0056	EPA 8260C	7-24-18	7-24-18	
2,2-Dichloropropane	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
(cis) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
2-Butanone	ND	0.0056	EPA 8260C	7-24-18	7-24-18	
Bromochloromethane	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
Chloroform	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
1,1,1-Trichloroethane	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
Carbon Tetrachloride	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
1,1-Dichloropropene	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
Benzene	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
1,2-Dichloroethane	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
Trichloroethene	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
1,2-Dichloropropane	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
Dibromomethane	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
Bromodichloromethane	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
2-Chloroethyl Vinyl Ether	ND	0.0056	EPA 8260C	7-24-18	7-24-18	
(cis) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
Methyl Isobutyl Ketone	ND	0.0056	EPA 8260C	7-24-18	7-24-18	
Toluene	ND	0.0056	EPA 8260C	7-24-18	7-24-18	
(trans) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	7-24-18	7-24-18	



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 Laboratory Reference: 1807-143  
 Project: 4082-039-01

**VOLATILE ORGANICS EPA 8260C**  
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>		<b>FL207-B23-2.5-3.5</b>				
Laboratory ID:		07-143-14				
1,1,2-Trichloroethane	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
Tetrachloroethene	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
1,3-Dichloropropane	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
2-Hexanone	ND	0.0056	EPA 8260C	7-24-18	7-24-18	
Dibromochloromethane	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
1,2-Dibromoethane	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
Chlorobenzene	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
1,1,1,2-Tetrachloroethane	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
Ethylbenzene	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
m,p-Xylene	ND	0.0022	EPA 8260C	7-24-18	7-24-18	
o-Xylene	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
Styrene	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
Bromoform	ND	0.0056	EPA 8260C	7-24-18	7-24-18	
Isopropylbenzene	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
Bromobenzene	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
1,1,2,2-Tetrachloroethane	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
1,2,3-Trichloropropane	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
n-Propylbenzene	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
2-Chlorotoluene	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
4-Chlorotoluene	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
1,3,5-Trimethylbenzene	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
tert-Butylbenzene	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
1,2,4-Trimethylbenzene	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
sec-Butylbenzene	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
1,3-Dichlorobenzene	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
p-Isopropyltoluene	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
1,4-Dichlorobenzene	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
1,2-Dichlorobenzene	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
n-Butylbenzene	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
1,2-Dibromo-3-chloropropane	ND	0.0056	EPA 8260C	7-24-18	7-24-18	
1,2,4-Trichlorobenzene	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
Hexachlorobutadiene	ND	0.0056	EPA 8260C	7-24-18	7-24-18	
Naphthalene	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
1,2,3-Trichlorobenzene	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	99	68-139				
<i>Toluene-d8</i>	100	79-128				
<i>4-Bromofluorobenzene</i>	96	71-132				



Date of Report: August 1, 2018  
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 Project: 4082-039-01

**VOLATILE ORGANICS 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>FL207-B23-7.5-8</b>				
<b>Laboratory ID:</b>		<b>07-143-16</b>				
Dichlorodifluoromethane	ND	0.00098	EPA 8260C	7-24-18	7-24-18	
Chloromethane	ND	0.0049	EPA 8260C	7-24-18	7-24-18	
Vinyl Chloride	ND	0.00098	EPA 8260C	7-24-18	7-24-18	
Bromomethane	ND	0.00098	EPA 8260C	7-24-18	7-24-18	
Chloroethane	ND	0.0049	EPA 8260C	7-24-18	7-24-18	
Trichlorofluoromethane	ND	0.00098	EPA 8260C	7-24-18	7-24-18	
1,1-Dichloroethene	ND	0.00098	EPA 8260C	7-24-18	7-24-18	
Acetone	ND	0.0098	EPA 8260C	7-24-18	7-24-18	
Iodomethane	ND	0.0049	EPA 8260C	7-24-18	7-24-18	
Carbon Disulfide	ND	0.00098	EPA 8260C	7-24-18	7-24-18	
Methylene Chloride	ND	0.0049	EPA 8260C	7-24-18	7-24-18	
(trans) 1,2-Dichloroethene	ND	0.00098	EPA 8260C	7-24-18	7-24-18	
Methyl t-Butyl Ether	ND	0.00098	EPA 8260C	7-24-18	7-24-18	
1,1-Dichloroethane	ND	0.00098	EPA 8260C	7-24-18	7-24-18	
Vinyl Acetate	ND	0.0049	EPA 8260C	7-24-18	7-24-18	
2,2-Dichloropropane	ND	0.00098	EPA 8260C	7-24-18	7-24-18	
(cis) 1,2-Dichloroethene	ND	0.00098	EPA 8260C	7-24-18	7-24-18	
2-Butanone	ND	0.0049	EPA 8260C	7-24-18	7-24-18	
Bromochloromethane	ND	0.00098	EPA 8260C	7-24-18	7-24-18	
Chloroform	ND	0.00098	EPA 8260C	7-24-18	7-24-18	
1,1,1-Trichloroethane	ND	0.00098	EPA 8260C	7-24-18	7-24-18	
Carbon Tetrachloride	ND	0.00098	EPA 8260C	7-24-18	7-24-18	
1,1-Dichloropropene	ND	0.00098	EPA 8260C	7-24-18	7-24-18	
Benzene	ND	0.00098	EPA 8260C	7-24-18	7-24-18	
1,2-Dichloroethane	ND	0.00098	EPA 8260C	7-24-18	7-24-18	
Trichloroethene	ND	0.00098	EPA 8260C	7-24-18	7-24-18	
1,2-Dichloropropane	ND	0.00098	EPA 8260C	7-24-18	7-24-18	
Dibromomethane	ND	0.00098	EPA 8260C	7-24-18	7-24-18	
Bromodichloromethane	ND	0.00098	EPA 8260C	7-24-18	7-24-18	
2-Chloroethyl Vinyl Ether	ND	0.0049	EPA 8260C	7-24-18	7-24-18	
(cis) 1,3-Dichloropropene	ND	0.00098	EPA 8260C	7-24-18	7-24-18	
Methyl Isobutyl Ketone	ND	0.0049	EPA 8260C	7-24-18	7-24-18	
Toluene	ND	0.0049	EPA 8260C	7-24-18	7-24-18	
(trans) 1,3-Dichloropropene	ND	0.00098	EPA 8260C	7-24-18	7-24-18	



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 Laboratory Reference: 1807-143  
 Project: 4082-039-01

**VOLATILE ORGANICS EPA 8260C**  
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL207-B23-7.5-8</b>					
Laboratory ID:	07-143-16					
1,1,2-Trichloroethane	ND	0.00098	EPA 8260C	7-24-18	7-24-18	
Tetrachloroethene	ND	0.00098	EPA 8260C	7-24-18	7-24-18	
1,3-Dichloropropane	ND	0.00098	EPA 8260C	7-24-18	7-24-18	
2-Hexanone	ND	0.0049	EPA 8260C	7-24-18	7-24-18	
Dibromochloromethane	ND	0.00098	EPA 8260C	7-24-18	7-24-18	
1,2-Dibromoethane	ND	0.00098	EPA 8260C	7-24-18	7-24-18	
Chlorobenzene	ND	0.00098	EPA 8260C	7-24-18	7-24-18	
1,1,1,2-Tetrachloroethane	ND	0.00098	EPA 8260C	7-24-18	7-24-18	
Ethylbenzene	ND	0.00098	EPA 8260C	7-24-18	7-24-18	
m,p-Xylene	ND	0.0020	EPA 8260C	7-24-18	7-24-18	
o-Xylene	ND	0.00098	EPA 8260C	7-24-18	7-24-18	
Styrene	ND	0.00098	EPA 8260C	7-24-18	7-24-18	
Bromoform	ND	0.0049	EPA 8260C	7-24-18	7-24-18	
Isopropylbenzene	ND	0.00098	EPA 8260C	7-24-18	7-24-18	
Bromobenzene	ND	0.00098	EPA 8260C	7-24-18	7-24-18	
1,1,2,2-Tetrachloroethane	ND	0.00098	EPA 8260C	7-24-18	7-24-18	
1,2,3-Trichloropropane	ND	0.00098	EPA 8260C	7-24-18	7-24-18	
n-Propylbenzene	ND	0.00098	EPA 8260C	7-24-18	7-24-18	
2-Chlorotoluene	ND	0.00098	EPA 8260C	7-24-18	7-24-18	
4-Chlorotoluene	ND	0.00098	EPA 8260C	7-24-18	7-24-18	
1,3,5-Trimethylbenzene	ND	0.00098	EPA 8260C	7-24-18	7-24-18	
tert-Butylbenzene	ND	0.00098	EPA 8260C	7-24-18	7-24-18	
1,2,4-Trimethylbenzene	ND	0.00098	EPA 8260C	7-24-18	7-24-18	
sec-Butylbenzene	ND	0.00098	EPA 8260C	7-24-18	7-24-18	
1,3-Dichlorobenzene	ND	0.00098	EPA 8260C	7-24-18	7-24-18	
p-Isopropyltoluene	ND	0.00098	EPA 8260C	7-24-18	7-24-18	
1,4-Dichlorobenzene	ND	0.00098	EPA 8260C	7-24-18	7-24-18	
1,2-Dichlorobenzene	ND	0.00098	EPA 8260C	7-24-18	7-24-18	
n-Butylbenzene	ND	0.00098	EPA 8260C	7-24-18	7-24-18	
1,2-Dibromo-3-chloropropane	ND	0.0049	EPA 8260C	7-24-18	7-24-18	
1,2,4-Trichlorobenzene	ND	0.00098	EPA 8260C	7-24-18	7-24-18	
Hexachlorobutadiene	ND	0.0049	EPA 8260C	7-24-18	7-24-18	
Naphthalene	ND	0.00098	EPA 8260C	7-24-18	7-24-18	
1,2,3-Trichlorobenzene	ND	0.00098	EPA 8260C	7-24-18	7-24-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>102</i>	<i>68-139</i>				
<i>Toluene-d8</i>	<i>99</i>	<i>79-128</i>				
<i>4-Bromofluorobenzene</i>	<i>97</i>	<i>71-132</i>				



Date of Report: August 1, 2018  
 Samples Submitted: July 21, 2018  
 Laboratory Reference: 1807-143  
 Project: 4082-039-01

**VOLATILE ORGANICS 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>FL207-B23-12.5-13</b>				
<b>Laboratory ID:</b>		<b>07-143-18</b>				
Dichlorodifluoromethane	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
Chloromethane	ND	0.0053	EPA 8260C	7-24-18	7-24-18	
Vinyl Chloride	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
Bromomethane	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
Chloroethane	ND	0.0053	EPA 8260C	7-24-18	7-24-18	
Trichlorofluoromethane	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
1,1-Dichloroethene	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
Acetone	ND	0.011	EPA 8260C	7-24-18	7-24-18	
Iodomethane	ND	0.0053	EPA 8260C	7-24-18	7-24-18	
Carbon Disulfide	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
Methylene Chloride	ND	0.0053	EPA 8260C	7-24-18	7-24-18	
(trans) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
Methyl t-Butyl Ether	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
1,1-Dichloroethane	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
Vinyl Acetate	ND	0.0053	EPA 8260C	7-24-18	7-24-18	
2,2-Dichloropropane	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
(cis) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
2-Butanone	ND	0.0053	EPA 8260C	7-24-18	7-24-18	
Bromochloromethane	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
Chloroform	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
1,1,1-Trichloroethane	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
Carbon Tetrachloride	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
1,1-Dichloropropene	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
Benzene	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
1,2-Dichloroethane	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
Trichloroethene	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
1,2-Dichloropropane	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
Dibromomethane	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
Bromodichloromethane	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
2-Chloroethyl Vinyl Ether	ND	0.0053	EPA 8260C	7-24-18	7-24-18	
(cis) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
Methyl Isobutyl Ketone	ND	0.0053	EPA 8260C	7-24-18	7-24-18	
Toluene	ND	0.0053	EPA 8260C	7-24-18	7-24-18	
(trans) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	7-24-18	7-24-18	



Date of Report: August 1, 2018  
 Samples Submitted: July 21, 2018  
 Laboratory Reference: 1807-143  
 Project: 4082-039-01

**VOLATILE ORGANICS EPA 8260C**  
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>		<b>FL207-B23-12.5-13</b>				
Laboratory ID:		07-143-18				
1,1,2-Trichloroethane	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
Tetrachloroethene	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
1,3-Dichloropropane	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
2-Hexanone	ND	0.0053	EPA 8260C	7-24-18	7-24-18	
Dibromochloromethane	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
1,2-Dibromoethane	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
Chlorobenzene	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
1,1,1,2-Tetrachloroethane	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
Ethylbenzene	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
m,p-Xylene	ND	0.0021	EPA 8260C	7-24-18	7-24-18	
o-Xylene	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
Styrene	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
Bromoform	ND	0.0053	EPA 8260C	7-24-18	7-24-18	
Isopropylbenzene	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
Bromobenzene	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
1,1,2,2-Tetrachloroethane	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
1,2,3-Trichloropropane	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
n-Propylbenzene	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
2-Chlorotoluene	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
4-Chlorotoluene	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
1,3,5-Trimethylbenzene	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
tert-Butylbenzene	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
1,2,4-Trimethylbenzene	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
sec-Butylbenzene	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
1,3-Dichlorobenzene	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
p-Isopropyltoluene	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
1,4-Dichlorobenzene	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
1,2-Dichlorobenzene	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
n-Butylbenzene	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
1,2-Dibromo-3-chloropropane	ND	0.0053	EPA 8260C	7-24-18	7-24-18	
1,2,4-Trichlorobenzene	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
Hexachlorobutadiene	ND	0.0053	EPA 8260C	7-24-18	7-24-18	
Naphthalene	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
1,2,3-Trichlorobenzene	ND	0.0011	EPA 8260C	7-24-18	7-24-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	99	68-139				
<i>Toluene-d8</i>	102	79-128				
<i>4-Bromofluorobenzene</i>	96	71-132				



Date of Report: August 1, 2018  
 Samples Submitted: July 21, 2018  
 Laboratory Reference: 1807-143  
 Project: 4082-039-01

**VOLATILE ORGANICS 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>FL207-B23-17.5-18</b>				
<b>Laboratory ID:</b>		<b>07-143-20</b>				
Dichlorodifluoromethane	ND	0.00089	EPA 8260C	7-24-18	7-24-18	
Chloromethane	ND	0.0045	EPA 8260C	7-24-18	7-24-18	
Vinyl Chloride	ND	0.00089	EPA 8260C	7-24-18	7-24-18	
Bromomethane	ND	0.00089	EPA 8260C	7-24-18	7-24-18	
Chloroethane	ND	0.0045	EPA 8260C	7-24-18	7-24-18	
Trichlorofluoromethane	ND	0.00089	EPA 8260C	7-24-18	7-24-18	
1,1-Dichloroethene	ND	0.00089	EPA 8260C	7-24-18	7-24-18	
Acetone	ND	0.0089	EPA 8260C	7-24-18	7-24-18	
Iodomethane	ND	0.0045	EPA 8260C	7-24-18	7-24-18	
Carbon Disulfide	ND	0.00089	EPA 8260C	7-24-18	7-24-18	
Methylene Chloride	ND	0.0045	EPA 8260C	7-24-18	7-24-18	
(trans) 1,2-Dichloroethene	ND	0.00089	EPA 8260C	7-24-18	7-24-18	
Methyl t-Butyl Ether	ND	0.00089	EPA 8260C	7-24-18	7-24-18	
1,1-Dichloroethane	ND	0.00089	EPA 8260C	7-24-18	7-24-18	
Vinyl Acetate	ND	0.0045	EPA 8260C	7-24-18	7-24-18	
2,2-Dichloropropane	ND	0.00089	EPA 8260C	7-24-18	7-24-18	
(cis) 1,2-Dichloroethene	ND	0.00089	EPA 8260C	7-24-18	7-24-18	
2-Butanone	ND	0.0045	EPA 8260C	7-24-18	7-24-18	
Bromochloromethane	ND	0.00089	EPA 8260C	7-24-18	7-24-18	
Chloroform	ND	0.00089	EPA 8260C	7-24-18	7-24-18	
1,1,1-Trichloroethane	ND	0.00089	EPA 8260C	7-24-18	7-24-18	
Carbon Tetrachloride	ND	0.00089	EPA 8260C	7-24-18	7-24-18	
1,1-Dichloropropene	ND	0.00089	EPA 8260C	7-24-18	7-24-18	
Benzene	ND	0.00089	EPA 8260C	7-24-18	7-24-18	
1,2-Dichloroethane	ND	0.00089	EPA 8260C	7-24-18	7-24-18	
Trichloroethene	ND	0.00089	EPA 8260C	7-24-18	7-24-18	
1,2-Dichloropropane	ND	0.00089	EPA 8260C	7-24-18	7-24-18	
Dibromomethane	ND	0.00089	EPA 8260C	7-24-18	7-24-18	
Bromodichloromethane	ND	0.00089	EPA 8260C	7-24-18	7-24-18	
2-Chloroethyl Vinyl Ether	ND	0.0045	EPA 8260C	7-24-18	7-24-18	
(cis) 1,3-Dichloropropene	ND	0.00089	EPA 8260C	7-24-18	7-24-18	
Methyl Isobutyl Ketone	ND	0.0045	EPA 8260C	7-24-18	7-24-18	
Toluene	ND	0.0045	EPA 8260C	7-24-18	7-24-18	
(trans) 1,3-Dichloropropene	ND	0.00089	EPA 8260C	7-24-18	7-24-18	



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

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 Laboratory Reference: 1807-143  
 Project: 4082-039-01

**VOLATILE ORGANICS EPA 8260C**  
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID: FL207-B23-17.5-18</b>						
Laboratory ID: 07-143-20						
1,1,2-Trichloroethane	ND	0.00089	EPA 8260C	7-24-18	7-24-18	
Tetrachloroethene	0.0010	0.00089	EPA 8260C	7-24-18	7-24-18	
1,3-Dichloropropane	ND	0.00089	EPA 8260C	7-24-18	7-24-18	
2-Hexanone	ND	0.0045	EPA 8260C	7-24-18	7-24-18	
Dibromochloromethane	ND	0.00089	EPA 8260C	7-24-18	7-24-18	
1,2-Dibromoethane	ND	0.00089	EPA 8260C	7-24-18	7-24-18	
Chlorobenzene	ND	0.00089	EPA 8260C	7-24-18	7-24-18	
1,1,1,2-Tetrachloroethane	ND	0.00089	EPA 8260C	7-24-18	7-24-18	
Ethylbenzene	ND	0.00089	EPA 8260C	7-24-18	7-24-18	
m,p-Xylene	ND	0.0018	EPA 8260C	7-24-18	7-24-18	
o-Xylene	ND	0.00089	EPA 8260C	7-24-18	7-24-18	
Styrene	ND	0.00089	EPA 8260C	7-24-18	7-24-18	
Bromoform	ND	0.0045	EPA 8260C	7-24-18	7-24-18	
Isopropylbenzene	ND	0.00089	EPA 8260C	7-24-18	7-24-18	
Bromobenzene	ND	0.00089	EPA 8260C	7-24-18	7-24-18	
1,1,2,2-Tetrachloroethane	ND	0.00089	EPA 8260C	7-24-18	7-24-18	
1,2,3-Trichloropropane	ND	0.00089	EPA 8260C	7-24-18	7-24-18	
n-Propylbenzene	ND	0.00089	EPA 8260C	7-24-18	7-24-18	
2-Chlorotoluene	ND	0.00089	EPA 8260C	7-24-18	7-24-18	
4-Chlorotoluene	ND	0.00089	EPA 8260C	7-24-18	7-24-18	
1,3,5-Trimethylbenzene	ND	0.00089	EPA 8260C	7-24-18	7-24-18	
tert-Butylbenzene	ND	0.00089	EPA 8260C	7-24-18	7-24-18	
1,2,4-Trimethylbenzene	ND	0.00089	EPA 8260C	7-24-18	7-24-18	
sec-Butylbenzene	ND	0.00089	EPA 8260C	7-24-18	7-24-18	
1,3-Dichlorobenzene	ND	0.00089	EPA 8260C	7-24-18	7-24-18	
p-Isopropyltoluene	ND	0.00089	EPA 8260C	7-24-18	7-24-18	
1,4-Dichlorobenzene	ND	0.00089	EPA 8260C	7-24-18	7-24-18	
1,2-Dichlorobenzene	ND	0.00089	EPA 8260C	7-24-18	7-24-18	
n-Butylbenzene	ND	0.00089	EPA 8260C	7-24-18	7-24-18	
1,2-Dibromo-3-chloropropane	ND	0.0045	EPA 8260C	7-24-18	7-24-18	
1,2,4-Trichlorobenzene	ND	0.00089	EPA 8260C	7-24-18	7-24-18	
Hexachlorobutadiene	ND	0.0045	EPA 8260C	7-24-18	7-24-18	
Naphthalene	ND	0.00089	EPA 8260C	7-24-18	7-24-18	
1,2,3-Trichlorobenzene	ND	0.00089	EPA 8260C	7-24-18	7-24-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>98</i>	<i>68-139</i>				
<i>Toluene-d8</i>	<i>99</i>	<i>79-128</i>				
<i>4-Bromofluorobenzene</i>	<i>96</i>	<i>71-132</i>				



Date of Report: August 1, 2018  
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 Laboratory Reference: 1807-143  
 Project: 4082-039-01

**VOLATILE ORGANICS 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>FL207-B23-20-20.5</b>				
<b>Laboratory ID:</b>		<b>07-143-21</b>				
Dichlorodifluoromethane	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
Chloromethane	ND	0.0050	EPA 8260C	7-24-18	7-24-18	
Vinyl Chloride	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
Bromomethane	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
Chloroethane	ND	0.0050	EPA 8260C	7-24-18	7-24-18	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
Acetone	ND	0.010	EPA 8260C	7-24-18	7-24-18	
Iodomethane	ND	0.0050	EPA 8260C	7-24-18	7-24-18	
Carbon Disulfide	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
Methylene Chloride	ND	0.0050	EPA 8260C	7-24-18	7-24-18	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
Vinyl Acetate	ND	0.0050	EPA 8260C	7-24-18	7-24-18	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
2-Butanone	ND	0.0050	EPA 8260C	7-24-18	7-24-18	
Bromochloromethane	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
Chloroform	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
Benzene	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
Trichloroethene	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
Dibromomethane	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
Bromodichloromethane	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260C	7-24-18	7-24-18	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
Methyl Isobutyl Ketone	ND	0.0050	EPA 8260C	7-24-18	7-24-18	
Toluene	ND	0.0050	EPA 8260C	7-24-18	7-24-18	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	7-24-18	7-24-18	



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 Samples Submitted: July 21, 2018  
 Laboratory Reference: 1807-143  
 Project: 4082-039-01

**VOLATILE ORGANICS EPA 8260C**  
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID: FL207-B23-20-20.5</b>						
Laboratory ID: 07-143-21						
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
Tetrachloroethene	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
2-Hexanone	ND	0.0050	EPA 8260C	7-24-18	7-24-18	
Dibromochloromethane	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
Chlorobenzene	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
Ethylbenzene	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
m,p-Xylene	ND	0.0020	EPA 8260C	7-24-18	7-24-18	
o-Xylene	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
Styrene	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
Bromoform	ND	0.0050	EPA 8260C	7-24-18	7-24-18	
Isopropylbenzene	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
Bromobenzene	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
n-Propylbenzene	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
2-Chlorotoluene	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
4-Chlorotoluene	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
1,3,5-Trimethylbenzene	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
tert-Butylbenzene	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
1,2,4-Trimethylbenzene	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
sec-Butylbenzene	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
p-Isopropyltoluene	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
n-Butylbenzene	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260C	7-24-18	7-24-18	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
Hexachlorobutadiene	ND	0.0050	EPA 8260C	7-24-18	7-24-18	
Naphthalene	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>100</i>	<i>68-139</i>				
<i>Toluene-d8</i>	<i>100</i>	<i>79-128</i>				
<i>4-Bromofluorobenzene</i>	<i>95</i>	<i>71-132</i>				



Date of Report: August 1, 2018  
 Samples Submitted: July 21, 2018  
 Laboratory Reference: 1807-143  
 Project: 4082-039-01

**VOLATILE ORGANICS 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>FL207-B16-5-6</b>				
<b>Laboratory ID:</b>		<b>07-143-24</b>				
Dichlorodifluoromethane	ND	0.00094	EPA 8260C	7-24-18	7-24-18	
Chloromethane	ND	0.0047	EPA 8260C	7-24-18	7-24-18	
Vinyl Chloride	ND	0.00094	EPA 8260C	7-24-18	7-24-18	
Bromomethane	ND	0.00094	EPA 8260C	7-24-18	7-24-18	
Chloroethane	ND	0.0047	EPA 8260C	7-24-18	7-24-18	
Trichlorofluoromethane	ND	0.00094	EPA 8260C	7-24-18	7-24-18	
1,1-Dichloroethene	ND	0.00094	EPA 8260C	7-24-18	7-24-18	
Acetone	ND	0.0094	EPA 8260C	7-24-18	7-24-18	
Iodomethane	ND	0.0047	EPA 8260C	7-24-18	7-24-18	
Carbon Disulfide	ND	0.00094	EPA 8260C	7-24-18	7-24-18	
Methylene Chloride	ND	0.0047	EPA 8260C	7-24-18	7-24-18	
(trans) 1,2-Dichloroethene	ND	0.00094	EPA 8260C	7-24-18	7-24-18	
Methyl t-Butyl Ether	ND	0.00094	EPA 8260C	7-24-18	7-24-18	
1,1-Dichloroethane	ND	0.00094	EPA 8260C	7-24-18	7-24-18	
Vinyl Acetate	ND	0.0047	EPA 8260C	7-24-18	7-24-18	
2,2-Dichloropropane	ND	0.00094	EPA 8260C	7-24-18	7-24-18	
(cis) 1,2-Dichloroethene	ND	0.00094	EPA 8260C	7-24-18	7-24-18	
2-Butanone	ND	0.0047	EPA 8260C	7-24-18	7-24-18	
Bromochloromethane	ND	0.00094	EPA 8260C	7-24-18	7-24-18	
Chloroform	ND	0.00094	EPA 8260C	7-24-18	7-24-18	
1,1,1-Trichloroethane	ND	0.00094	EPA 8260C	7-24-18	7-24-18	
Carbon Tetrachloride	ND	0.00094	EPA 8260C	7-24-18	7-24-18	
1,1-Dichloropropene	ND	0.00094	EPA 8260C	7-24-18	7-24-18	
Benzene	ND	0.00094	EPA 8260C	7-24-18	7-24-18	
1,2-Dichloroethane	ND	0.00094	EPA 8260C	7-24-18	7-24-18	
Trichloroethene	ND	0.00094	EPA 8260C	7-24-18	7-24-18	
1,2-Dichloropropane	ND	0.00094	EPA 8260C	7-24-18	7-24-18	
Dibromomethane	ND	0.00094	EPA 8260C	7-24-18	7-24-18	
Bromodichloromethane	ND	0.00094	EPA 8260C	7-24-18	7-24-18	
2-Chloroethyl Vinyl Ether	ND	0.0047	EPA 8260C	7-24-18	7-24-18	
(cis) 1,3-Dichloropropene	ND	0.00094	EPA 8260C	7-24-18	7-24-18	
Methyl Isobutyl Ketone	ND	0.0047	EPA 8260C	7-24-18	7-24-18	
Toluene	ND	0.0047	EPA 8260C	7-24-18	7-24-18	
(trans) 1,3-Dichloropropene	ND	0.00094	EPA 8260C	7-24-18	7-24-18	



Date of Report: August 1, 2018  
 Samples Submitted: July 21, 2018  
 Laboratory Reference: 1807-143  
 Project: 4082-039-01

**VOLATILE ORGANICS EPA 8260C**  
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL207-B16-5-6</b>					
Laboratory ID:	07-143-24					
1,1,2-Trichloroethane	ND	0.00094	EPA 8260C	7-24-18	7-24-18	
Tetrachloroethene	ND	0.00094	EPA 8260C	7-24-18	7-24-18	
1,3-Dichloropropane	ND	0.00094	EPA 8260C	7-24-18	7-24-18	
2-Hexanone	ND	0.0047	EPA 8260C	7-24-18	7-24-18	
Dibromochloromethane	ND	0.00094	EPA 8260C	7-24-18	7-24-18	
1,2-Dibromoethane	ND	0.00094	EPA 8260C	7-24-18	7-24-18	
Chlorobenzene	ND	0.00094	EPA 8260C	7-24-18	7-24-18	
1,1,1,2-Tetrachloroethane	ND	0.00094	EPA 8260C	7-24-18	7-24-18	
Ethylbenzene	ND	0.00094	EPA 8260C	7-24-18	7-24-18	
m,p-Xylene	ND	0.0019	EPA 8260C	7-24-18	7-24-18	
o-Xylene	ND	0.00094	EPA 8260C	7-24-18	7-24-18	
Styrene	ND	0.00094	EPA 8260C	7-24-18	7-24-18	
Bromoform	ND	0.0047	EPA 8260C	7-24-18	7-24-18	
Isopropylbenzene	ND	0.00094	EPA 8260C	7-24-18	7-24-18	
Bromobenzene	ND	0.00094	EPA 8260C	7-24-18	7-24-18	
1,1,2,2-Tetrachloroethane	ND	0.00094	EPA 8260C	7-24-18	7-24-18	
1,2,3-Trichloropropane	ND	0.00094	EPA 8260C	7-24-18	7-24-18	
n-Propylbenzene	ND	0.00094	EPA 8260C	7-24-18	7-24-18	
2-Chlorotoluene	ND	0.00094	EPA 8260C	7-24-18	7-24-18	
4-Chlorotoluene	ND	0.00094	EPA 8260C	7-24-18	7-24-18	
1,3,5-Trimethylbenzene	ND	0.00094	EPA 8260C	7-24-18	7-24-18	
tert-Butylbenzene	ND	0.00094	EPA 8260C	7-24-18	7-24-18	
1,2,4-Trimethylbenzene	ND	0.00094	EPA 8260C	7-24-18	7-24-18	
sec-Butylbenzene	ND	0.00094	EPA 8260C	7-24-18	7-24-18	
1,3-Dichlorobenzene	ND	0.00094	EPA 8260C	7-24-18	7-24-18	
p-Isopropyltoluene	ND	0.00094	EPA 8260C	7-24-18	7-24-18	
1,4-Dichlorobenzene	ND	0.00094	EPA 8260C	7-24-18	7-24-18	
1,2-Dichlorobenzene	ND	0.00094	EPA 8260C	7-24-18	7-24-18	
n-Butylbenzene	ND	0.00094	EPA 8260C	7-24-18	7-24-18	
1,2-Dibromo-3-chloropropane	ND	0.0047	EPA 8260C	7-24-18	7-24-18	
1,2,4-Trichlorobenzene	ND	0.00094	EPA 8260C	7-24-18	7-24-18	
Hexachlorobutadiene	ND	0.0047	EPA 8260C	7-24-18	7-24-18	
Naphthalene	ND	0.00094	EPA 8260C	7-24-18	7-24-18	
1,2,3-Trichlorobenzene	ND	0.00094	EPA 8260C	7-24-18	7-24-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	99	68-139				
<i>Toluene-d8</i>	100	79-128				
<i>4-Bromofluorobenzene</i>	99	71-132				



Date of Report: August 1, 2018  
 Samples Submitted: July 21, 2018  
 Laboratory Reference: 1807-143  
 Project: 4082-039-01

**VOLATILE ORGANICS EPA 8260C**  
 page 1 of 2

Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID: FL207-B16-10-11</b>						
<b>Laboratory ID: 07-143-26</b>						
Dichlorodifluoromethane	ND	0.00086	EPA 8260C	7-24-18	7-24-18	
Chloromethane	ND	0.0043	EPA 8260C	7-24-18	7-24-18	
Vinyl Chloride	ND	0.00086	EPA 8260C	7-24-18	7-24-18	
Bromomethane	ND	0.00086	EPA 8260C	7-24-18	7-24-18	
Chloroethane	ND	0.0043	EPA 8260C	7-24-18	7-24-18	
Trichlorofluoromethane	ND	0.00086	EPA 8260C	7-24-18	7-24-18	
1,1-Dichloroethene	ND	0.00086	EPA 8260C	7-24-18	7-24-18	
Acetone	ND	0.0086	EPA 8260C	7-24-18	7-24-18	
Iodomethane	ND	0.0043	EPA 8260C	7-24-18	7-24-18	
Carbon Disulfide	ND	0.00086	EPA 8260C	7-24-18	7-24-18	
Methylene Chloride	ND	0.0043	EPA 8260C	7-24-18	7-24-18	
(trans) 1,2-Dichloroethene	ND	0.00086	EPA 8260C	7-24-18	7-24-18	
Methyl t-Butyl Ether	ND	0.00086	EPA 8260C	7-24-18	7-24-18	
1,1-Dichloroethane	ND	0.00086	EPA 8260C	7-24-18	7-24-18	
Vinyl Acetate	ND	0.0043	EPA 8260C	7-24-18	7-24-18	
2,2-Dichloropropane	ND	0.00086	EPA 8260C	7-24-18	7-24-18	
(cis) 1,2-Dichloroethene	ND	0.00086	EPA 8260C	7-24-18	7-24-18	
2-Butanone	ND	0.0043	EPA 8260C	7-24-18	7-24-18	
Bromochloromethane	ND	0.00086	EPA 8260C	7-24-18	7-24-18	
Chloroform	ND	0.00086	EPA 8260C	7-24-18	7-24-18	
1,1,1-Trichloroethane	ND	0.00086	EPA 8260C	7-24-18	7-24-18	
Carbon Tetrachloride	ND	0.00086	EPA 8260C	7-24-18	7-24-18	
1,1-Dichloropropene	ND	0.00086	EPA 8260C	7-24-18	7-24-18	
Benzene	ND	0.00086	EPA 8260C	7-24-18	7-24-18	
1,2-Dichloroethane	ND	0.00086	EPA 8260C	7-24-18	7-24-18	
Trichloroethene	ND	0.00086	EPA 8260C	7-24-18	7-24-18	
1,2-Dichloropropane	ND	0.00086	EPA 8260C	7-24-18	7-24-18	
Dibromomethane	ND	0.00086	EPA 8260C	7-24-18	7-24-18	
Bromodichloromethane	ND	0.00086	EPA 8260C	7-24-18	7-24-18	
2-Chloroethyl Vinyl Ether	ND	0.0043	EPA 8260C	7-24-18	7-24-18	
(cis) 1,3-Dichloropropene	ND	0.00086	EPA 8260C	7-24-18	7-24-18	
Methyl Isobutyl Ketone	ND	0.0043	EPA 8260C	7-24-18	7-24-18	
Toluene	ND	0.0043	EPA 8260C	7-24-18	7-24-18	
(trans) 1,3-Dichloropropene	ND	0.00086	EPA 8260C	7-24-18	7-24-18	



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: August 1, 2018  
 Samples Submitted: July 21, 2018  
 Laboratory Reference: 1807-143  
 Project: 4082-039-01

**VOLATILE ORGANICS EPA 8260C**  
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>		<b>FL207-B16-10-11</b>				
Laboratory ID:		07-143-26				
1,1,2-Trichloroethane	ND	0.00086	EPA 8260C	7-24-18	7-24-18	
Tetrachloroethene	ND	0.00086	EPA 8260C	7-24-18	7-24-18	
1,3-Dichloropropane	ND	0.00086	EPA 8260C	7-24-18	7-24-18	
2-Hexanone	ND	0.0043	EPA 8260C	7-24-18	7-24-18	
Dibromochloromethane	ND	0.00086	EPA 8260C	7-24-18	7-24-18	
1,2-Dibromoethane	ND	0.00086	EPA 8260C	7-24-18	7-24-18	
Chlorobenzene	ND	0.00086	EPA 8260C	7-24-18	7-24-18	
1,1,1,2-Tetrachloroethane	ND	0.00086	EPA 8260C	7-24-18	7-24-18	
Ethylbenzene	ND	0.00086	EPA 8260C	7-24-18	7-24-18	
m,p-Xylene	ND	0.0017	EPA 8260C	7-24-18	7-24-18	
o-Xylene	ND	0.00086	EPA 8260C	7-24-18	7-24-18	
Styrene	ND	0.00086	EPA 8260C	7-24-18	7-24-18	
Bromoform	ND	0.0043	EPA 8260C	7-24-18	7-24-18	
Isopropylbenzene	ND	0.00086	EPA 8260C	7-24-18	7-24-18	
Bromobenzene	ND	0.00086	EPA 8260C	7-24-18	7-24-18	
1,1,2,2-Tetrachloroethane	ND	0.00086	EPA 8260C	7-24-18	7-24-18	
1,2,3-Trichloropropane	ND	0.00086	EPA 8260C	7-24-18	7-24-18	
n-Propylbenzene	ND	0.00086	EPA 8260C	7-24-18	7-24-18	
2-Chlorotoluene	ND	0.00086	EPA 8260C	7-24-18	7-24-18	
4-Chlorotoluene	ND	0.00086	EPA 8260C	7-24-18	7-24-18	
1,3,5-Trimethylbenzene	ND	0.00086	EPA 8260C	7-24-18	7-24-18	
tert-Butylbenzene	ND	0.00086	EPA 8260C	7-24-18	7-24-18	
1,2,4-Trimethylbenzene	ND	0.00086	EPA 8260C	7-24-18	7-24-18	
sec-Butylbenzene	ND	0.00086	EPA 8260C	7-24-18	7-24-18	
1,3-Dichlorobenzene	ND	0.00086	EPA 8260C	7-24-18	7-24-18	
p-Isopropyltoluene	ND	0.00086	EPA 8260C	7-24-18	7-24-18	
1,4-Dichlorobenzene	ND	0.00086	EPA 8260C	7-24-18	7-24-18	
1,2-Dichlorobenzene	ND	0.00086	EPA 8260C	7-24-18	7-24-18	
n-Butylbenzene	ND	0.00086	EPA 8260C	7-24-18	7-24-18	
1,2-Dibromo-3-chloropropane	ND	0.0043	EPA 8260C	7-24-18	7-24-18	
1,2,4-Trichlorobenzene	ND	0.00086	EPA 8260C	7-24-18	7-24-18	
Hexachlorobutadiene	ND	0.0043	EPA 8260C	7-24-18	7-24-18	
Naphthalene	ND	0.00086	EPA 8260C	7-24-18	7-24-18	
1,2,3-Trichlorobenzene	ND	0.00086	EPA 8260C	7-24-18	7-24-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>98</i>	<i>68-139</i>				
<i>Toluene-d8</i>	<i>100</i>	<i>79-128</i>				
<i>4-Bromofluorobenzene</i>	<i>97</i>	<i>71-132</i>				



Date of Report: August 1, 2018  
 Samples Submitted: July 21, 2018  
 Laboratory Reference: 1807-143  
 Project: 4082-039-01

**VOLATILE ORGANICS 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>FL207-B16-15-15.5</b>				
<b>Laboratory ID:</b>		<b>07-143-28</b>				
Dichlorodifluoromethane	ND	0.00090	EPA 8260C	7-24-18	7-24-18	
Chloromethane	ND	0.0045	EPA 8260C	7-24-18	7-24-18	
Vinyl Chloride	ND	0.00090	EPA 8260C	7-24-18	7-24-18	
Bromomethane	ND	0.00090	EPA 8260C	7-24-18	7-24-18	
Chloroethane	ND	0.0045	EPA 8260C	7-24-18	7-24-18	
Trichlorofluoromethane	ND	0.00090	EPA 8260C	7-24-18	7-24-18	
1,1-Dichloroethene	ND	0.00090	EPA 8260C	7-24-18	7-24-18	
Acetone	ND	0.0090	EPA 8260C	7-24-18	7-24-18	
Iodomethane	ND	0.0045	EPA 8260C	7-24-18	7-24-18	
Carbon Disulfide	ND	0.00090	EPA 8260C	7-24-18	7-24-18	
Methylene Chloride	ND	0.0045	EPA 8260C	7-24-18	7-24-18	
(trans) 1,2-Dichloroethene	ND	0.00090	EPA 8260C	7-24-18	7-24-18	
Methyl t-Butyl Ether	ND	0.00090	EPA 8260C	7-24-18	7-24-18	
1,1-Dichloroethane	ND	0.00090	EPA 8260C	7-24-18	7-24-18	
Vinyl Acetate	ND	0.0045	EPA 8260C	7-24-18	7-24-18	
2,2-Dichloropropane	ND	0.00090	EPA 8260C	7-24-18	7-24-18	
(cis) 1,2-Dichloroethene	ND	0.00090	EPA 8260C	7-24-18	7-24-18	
2-Butanone	ND	0.0045	EPA 8260C	7-24-18	7-24-18	
Bromochloromethane	ND	0.00090	EPA 8260C	7-24-18	7-24-18	
Chloroform	ND	0.00090	EPA 8260C	7-24-18	7-24-18	
1,1,1-Trichloroethane	ND	0.00090	EPA 8260C	7-24-18	7-24-18	
Carbon Tetrachloride	ND	0.00090	EPA 8260C	7-24-18	7-24-18	
1,1-Dichloropropene	ND	0.00090	EPA 8260C	7-24-18	7-24-18	
Benzene	ND	0.00090	EPA 8260C	7-24-18	7-24-18	
1,2-Dichloroethane	ND	0.00090	EPA 8260C	7-24-18	7-24-18	
Trichloroethene	ND	0.00090	EPA 8260C	7-24-18	7-24-18	
1,2-Dichloropropane	ND	0.00090	EPA 8260C	7-24-18	7-24-18	
Dibromomethane	ND	0.00090	EPA 8260C	7-24-18	7-24-18	
Bromodichloromethane	ND	0.00090	EPA 8260C	7-24-18	7-24-18	
2-Chloroethyl Vinyl Ether	ND	0.0045	EPA 8260C	7-24-18	7-24-18	
(cis) 1,3-Dichloropropene	ND	0.00090	EPA 8260C	7-24-18	7-24-18	
Methyl Isobutyl Ketone	ND	0.0045	EPA 8260C	7-24-18	7-24-18	
Toluene	ND	0.0045	EPA 8260C	7-24-18	7-24-18	
(trans) 1,3-Dichloropropene	ND	0.00090	EPA 8260C	7-24-18	7-24-18	



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 Samples Submitted: July 21, 2018  
 Laboratory Reference: 1807-143  
 Project: 4082-039-01

**VOLATILE ORGANICS EPA 8260C**  
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>		<b>FL207-B16-15-15.5</b>				
Laboratory ID:		07-143-28				
1,1,2-Trichloroethane	ND	0.00090	EPA 8260C	7-24-18	7-24-18	
Tetrachloroethene	ND	0.00090	EPA 8260C	7-24-18	7-24-18	
1,3-Dichloropropane	ND	0.00090	EPA 8260C	7-24-18	7-24-18	
2-Hexanone	ND	0.0045	EPA 8260C	7-24-18	7-24-18	
Dibromochloromethane	ND	0.00090	EPA 8260C	7-24-18	7-24-18	
1,2-Dibromoethane	ND	0.00090	EPA 8260C	7-24-18	7-24-18	
Chlorobenzene	ND	0.00090	EPA 8260C	7-24-18	7-24-18	
1,1,1,2-Tetrachloroethane	ND	0.00090	EPA 8260C	7-24-18	7-24-18	
Ethylbenzene	ND	0.00090	EPA 8260C	7-24-18	7-24-18	
m,p-Xylene	ND	0.0018	EPA 8260C	7-24-18	7-24-18	
o-Xylene	ND	0.00090	EPA 8260C	7-24-18	7-24-18	
Styrene	ND	0.00090	EPA 8260C	7-24-18	7-24-18	
Bromoform	ND	0.0045	EPA 8260C	7-24-18	7-24-18	
Isopropylbenzene	ND	0.00090	EPA 8260C	7-24-18	7-24-18	
Bromobenzene	ND	0.00090	EPA 8260C	7-24-18	7-24-18	
1,1,2,2-Tetrachloroethane	ND	0.00090	EPA 8260C	7-24-18	7-24-18	
1,2,3-Trichloropropane	ND	0.00090	EPA 8260C	7-24-18	7-24-18	
n-Propylbenzene	ND	0.00090	EPA 8260C	7-24-18	7-24-18	
2-Chlorotoluene	ND	0.00090	EPA 8260C	7-24-18	7-24-18	
4-Chlorotoluene	ND	0.00090	EPA 8260C	7-24-18	7-24-18	
1,3,5-Trimethylbenzene	ND	0.00090	EPA 8260C	7-24-18	7-24-18	
tert-Butylbenzene	ND	0.00090	EPA 8260C	7-24-18	7-24-18	
1,2,4-Trimethylbenzene	ND	0.00090	EPA 8260C	7-24-18	7-24-18	
sec-Butylbenzene	ND	0.00090	EPA 8260C	7-24-18	7-24-18	
1,3-Dichlorobenzene	ND	0.00090	EPA 8260C	7-24-18	7-24-18	
p-Isopropyltoluene	ND	0.00090	EPA 8260C	7-24-18	7-24-18	
1,4-Dichlorobenzene	ND	0.00090	EPA 8260C	7-24-18	7-24-18	
1,2-Dichlorobenzene	ND	0.00090	EPA 8260C	7-24-18	7-24-18	
n-Butylbenzene	ND	0.00090	EPA 8260C	7-24-18	7-24-18	
1,2-Dibromo-3-chloropropane	ND	0.0045	EPA 8260C	7-24-18	7-24-18	
1,2,4-Trichlorobenzene	ND	0.00090	EPA 8260C	7-24-18	7-24-18	
Hexachlorobutadiene	ND	0.0045	EPA 8260C	7-24-18	7-24-18	
Naphthalene	ND	0.00090	EPA 8260C	7-24-18	7-24-18	
1,2,3-Trichlorobenzene	ND	0.00090	EPA 8260C	7-24-18	7-24-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	99	68-139				
<i>Toluene-d8</i>	102	79-128				
<i>4-Bromofluorobenzene</i>	98	71-132				





Date of Report: August 1, 2018  
 Samples Submitted: July 21, 2018  
 Laboratory Reference: 1807-143  
 Project: 4082-039-01

# PAHs EPA 8270D/SIM

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID: FL207-B21-5-5.5</b>						
<b>Laboratory ID: 07-143-01</b>						
Naphthalene	ND	0.0070	EPA 8270D/SIM	7-24-18	7-24-18	
2-Methylnaphthalene	ND	0.0070	EPA 8270D/SIM	7-24-18	7-24-18	
1-Methylnaphthalene	ND	0.0070	EPA 8270D/SIM	7-24-18	7-24-18	
Acenaphthylene	ND	0.0070	EPA 8270D/SIM	7-24-18	7-24-18	
Acenaphthene	ND	0.0070	EPA 8270D/SIM	7-24-18	7-24-18	
Fluorene	ND	0.0070	EPA 8270D/SIM	7-24-18	7-24-18	
Phenanthrene	ND	0.0070	EPA 8270D/SIM	7-24-18	7-24-18	
Anthracene	ND	0.0070	EPA 8270D/SIM	7-24-18	7-24-18	
Fluoranthene	ND	0.0070	EPA 8270D/SIM	7-24-18	7-24-18	
Pyrene	ND	0.0070	EPA 8270D/SIM	7-24-18	7-24-18	
Benzo[a]anthracene	ND	0.0070	EPA 8270D/SIM	7-24-18	7-24-18	
Chrysene	ND	0.0070	EPA 8270D/SIM	7-24-18	7-24-18	
Benzo[b]fluoranthene	ND	0.0070	EPA 8270D/SIM	7-24-18	7-24-18	
Benzo(j,k)fluoranthene	ND	0.0070	EPA 8270D/SIM	7-24-18	7-24-18	
Benzo[a]pyrene	ND	0.0070	EPA 8270D/SIM	7-24-18	7-24-18	
Indeno(1,2,3-c,d)pyrene	ND	0.0070	EPA 8270D/SIM	7-24-18	7-24-18	
Dibenz[a,h]anthracene	ND	0.0070	EPA 8270D/SIM	7-24-18	7-24-18	
Benzo[g,h,i]perylene	ND	0.0070	EPA 8270D/SIM	7-24-18	7-24-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	88	40 - 117				
Pyrene-d10	98	38 - 119				
Terphenyl-d14	96	47 - 135				



Date of Report: August 1, 2018  
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 Laboratory Reference: 1807-143  
 Project: 4082-039-01

# PAHs EPA 8270D/SIM

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID: FL207-B16-10-11</b>						
<b>Laboratory ID: 07-143-26</b>						
Naphthalene	ND	0.0072	EPA 8270D/SIM	7-24-18	7-24-18	
2-Methylnaphthalene	ND	0.0072	EPA 8270D/SIM	7-24-18	7-24-18	
1-Methylnaphthalene	ND	0.0072	EPA 8270D/SIM	7-24-18	7-24-18	
Acenaphthylene	ND	0.0072	EPA 8270D/SIM	7-24-18	7-24-18	
Acenaphthene	ND	0.0072	EPA 8270D/SIM	7-24-18	7-24-18	
Fluorene	ND	0.0072	EPA 8270D/SIM	7-24-18	7-24-18	
Phenanthrene	ND	0.0072	EPA 8270D/SIM	7-24-18	7-24-18	
Anthracene	ND	0.0072	EPA 8270D/SIM	7-24-18	7-24-18	
Fluoranthene	ND	0.0072	EPA 8270D/SIM	7-24-18	7-24-18	
Pyrene	ND	0.0072	EPA 8270D/SIM	7-24-18	7-24-18	
Benzo[a]anthracene	ND	0.0072	EPA 8270D/SIM	7-24-18	7-24-18	
Chrysene	ND	0.0072	EPA 8270D/SIM	7-24-18	7-24-18	
Benzo[b]fluoranthene	ND	0.0072	EPA 8270D/SIM	7-24-18	7-24-18	
Benzo(j,k)fluoranthene	ND	0.0072	EPA 8270D/SIM	7-24-18	7-24-18	
Benzo[a]pyrene	ND	0.0072	EPA 8270D/SIM	7-24-18	7-24-18	
Indeno(1,2,3-c,d)pyrene	ND	0.0072	EPA 8270D/SIM	7-24-18	7-24-18	
Dibenz[a,h]anthracene	ND	0.0072	EPA 8270D/SIM	7-24-18	7-24-18	
Benzo[g,h,i]perylene	ND	0.0072	EPA 8270D/SIM	7-24-18	7-24-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	88	40 - 117				
Pyrene-d10	96	38 - 119				
Terphenyl-d14	96	47 - 135				



Date of Report: August 1, 2018  
 Samples Submitted: July 21, 2018  
 Laboratory Reference: 1807-143  
 Project: 4082-039-01

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

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID: FL207-B21-5-5.5</b>						
Laboratory ID: 07-143-01						
Arsenic	ND	5.3	EPA 6010D	7-24-18	7-24-18	
Barium	61	2.6	EPA 6010D	7-24-18	7-24-18	
Cadmium	ND	0.53	EPA 6010D	7-24-18	7-24-18	
Chromium	35	0.53	EPA 6010D	7-24-18	7-24-18	
Lead	ND	5.3	EPA 6010D	7-24-18	7-24-18	
Mercury	ND	0.26	EPA 7471B	7-24-18	7-24-18	
Selenium	ND	11	EPA 6010D	7-24-18	7-24-18	
Silver	ND	1.1	EPA 6010D	7-24-18	7-24-18	

**Client ID: FL207-B23-0-0.5**

Laboratory ID: 07-143-12

Arsenic	ND	5.3	EPA 6010D	7-24-18	7-24-18	
Lead	ND	5.3	EPA 6010D	7-24-18	7-24-18	

**Client ID: FL207-B23-0.5-1**

Laboratory ID: 07-143-13

Arsenic	ND	5.6	EPA 6010D	7-24-18	7-24-18	
Lead	ND	5.6	EPA 6010D	7-24-18	7-24-18	



Date of Report: August 1, 2018  
 Samples Submitted: July 21, 2018  
 Laboratory Reference: 1807-143  
 Project: 4082-039-01

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

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID: FL207-B23-2.5-3.5</b>						
Laboratory ID: 07-143-14						
Arsenic	ND	5.2	EPA 6010D	7-24-18	7-24-18	
Barium	69	2.6	EPA 6010D	7-24-18	7-24-18	
Cadmium	ND	0.52	EPA 6010D	7-24-18	7-24-18	
Chromium	43	0.52	EPA 6010D	7-24-18	7-24-18	
Lead	ND	5.2	EPA 6010D	7-24-18	7-24-18	
Mercury	ND	0.26	EPA 7471B	8-1-18	8-1-18	
Selenium	ND	10	EPA 6010D	7-24-18	7-24-18	
Silver	ND	1.0	EPA 6010D	7-24-18	7-24-18	

**Client ID: FL207-B16-0-0.5**

Laboratory ID: 07-143-22

Arsenic	ND	5.4	EPA 6010D	7-24-18	7-24-18	
Lead	ND	5.4	EPA 6010D	7-24-18	7-24-18	

**Client ID: FL207-B16-10-11**

Laboratory ID: 07-143-26

Arsenic	ND	5.4	EPA 6010D	7-24-18	7-24-18	
Barium	44	2.7	EPA 6010D	7-24-18	7-24-18	
Cadmium	ND	0.54	EPA 6010D	7-24-18	7-24-18	
Chromium	33	0.54	EPA 6010D	7-24-18	7-24-18	
Lead	ND	5.4	EPA 6010D	7-24-18	7-24-18	
Mercury	ND	0.27	EPA 7471B	7-24-18	7-24-18	
Selenium	ND	11	EPA 6010D	7-24-18	7-24-18	
Silver	ND	1.1	EPA 6010D	7-24-18	7-24-18	



Date of Report: August 1, 2018  
 Samples Submitted: July 21, 2018  
 Laboratory Reference: 1807-143  
 Project: 4082-039-01

**HYDROCARBON IDENTIFICATION  
 NWTPH-HCID  
 QUALITY CONTROL**

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB0724S1					
Gasoline Range Organics	<b>ND</b>	20	NWTPH-HCID	7-24-18	7-24-18	
Diesel Range Organics	<b>ND</b>	50	NWTPH-HCID	7-24-18	7-24-18	
Lube Oil Range Organics	<b>ND</b>	100	NWTPH-HCID	7-24-18	7-24-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	95	50-150				



Date of Report: August 1, 2018  
 Samples Submitted: July 21, 2018  
 Laboratory Reference: 1807-143  
 Project: 4082-039-01

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

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB0726S1					
Diesel Range Organics	<b>ND</b>	25	NWTPH-Dx	7-26-18	7-26-18	
Lube Oil Range Organics	<b>ND</b>	50	NWTPH-Dx	7-26-18	7-26-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	96	50-150				

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE										
Laboratory ID:	07-143-23									
	ORIG	DUP								
Diesel Range	ND	ND	NA	NA		NA	NA	NA	NA	
Lube Oil	4030	1850	NA	NA		NA	NA	74	NA	
Surrogate:										
o-Terphenyl						---	---	50-150		S,S



Date of Report: August 1, 2018  
 Samples Submitted: July 21, 2018  
 Laboratory Reference: 1807-143  
 Project: 4082-039-01

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

Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<hr/>						
Laboratory ID:	MB0724S1					
Dichlorodifluoromethane	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
Chloromethane	ND	0.0050	EPA 8260C	7-24-18	7-24-18	
Vinyl Chloride	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
Bromomethane	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
Chloroethane	ND	0.0050	EPA 8260C	7-24-18	7-24-18	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
Acetone	ND	0.010	EPA 8260C	7-24-18	7-24-18	
Iodomethane	ND	0.0050	EPA 8260C	7-24-18	7-24-18	
Carbon Disulfide	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
Methylene Chloride	ND	0.0050	EPA 8260C	7-24-18	7-24-18	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
Vinyl Acetate	ND	0.0050	EPA 8260C	7-24-18	7-24-18	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
2-Butanone	ND	0.0050	EPA 8260C	7-24-18	7-24-18	
Bromochloromethane	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
Chloroform	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
Benzene	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
Trichloroethene	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
Dibromomethane	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
Bromodichloromethane	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260C	7-24-18	7-24-18	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
Methyl Isobutyl Ketone	ND	0.0050	EPA 8260C	7-24-18	7-24-18	
Toluene	ND	0.0050	EPA 8260C	7-24-18	7-24-18	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	7-24-18	7-24-18	





Date of Report: August 1, 2018  
 Samples Submitted: July 21, 2018  
 Laboratory Reference: 1807-143  
 Project: 4082-039-01

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

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID: MB0724S1						
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
Tetrachloroethene	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
2-Hexanone	ND	0.0050	EPA 8260C	7-24-18	7-24-18	
Dibromochloromethane	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
Chlorobenzene	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
Ethylbenzene	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
m,p-Xylene	ND	0.0020	EPA 8260C	7-24-18	7-24-18	
o-Xylene	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
Styrene	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
Bromoform	ND	0.0050	EPA 8260C	7-24-18	7-24-18	
Isopropylbenzene	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
Bromobenzene	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
n-Propylbenzene	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
2-Chlorotoluene	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
4-Chlorotoluene	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
1,3,5-Trimethylbenzene	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
tert-Butylbenzene	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
1,2,4-Trimethylbenzene	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
sec-Butylbenzene	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
p-Isopropyltoluene	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
n-Butylbenzene	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260C	7-24-18	7-24-18	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
Hexachlorobutadiene	ND	0.0050	EPA 8260C	7-24-18	7-24-18	
Naphthalene	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>99</i>	<i>68-139</i>				
<i>Toluene-d8</i>	<i>100</i>	<i>79-128</i>				
<i>4-Bromofluorobenzene</i>	<i>99</i>	<i>71-132</i>				



Date of Report: August 1, 2018  
 Samples Submitted: July 21, 2018  
 Laboratory Reference: 1807-143  
 Project: 4082-039-01

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

Matrix: Soil  
 Units: mg/kg

Analyte	Result		Spike Level		Percent Recovery		Recovery	RPD	RPD	Flags
					Recovery	Limits	Limit			
SPIKE BLANKS										
Laboratory ID:	SB0724S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	0.0456	0.0442	0.0500	0.0500	91	88	53-141	3	17	
Benzene	0.0516	0.0474	0.0500	0.0500	103	95	70-130	8	15	
Trichloroethene	0.0513	0.0457	0.0500	0.0500	103	91	74-122	12	16	
Toluene	0.0520	0.0462	0.0500	0.0500	104	92	76-130	12	15	
Chlorobenzene	0.0491	0.0454	0.0500	0.0500	98	91	75-120	8	14	
Surrogate:										
Dibromofluoromethane					99	100	68-139			
Toluene-d8					101	99	79-128			
4-Bromofluorobenzene					100	100	71-132			



Date of Report: August 1, 2018  
 Samples Submitted: July 21, 2018  
 Laboratory Reference: 1807-143  
 Project: 4082-039-01

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

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID: MB0724S1						
Naphthalene	ND	0.0067	EPA 8270D/SIM	7-24-18	7-24-18	
2-Methylnaphthalene	ND	0.0067	EPA 8270D/SIM	7-24-18	7-24-18	
1-Methylnaphthalene	ND	0.0067	EPA 8270D/SIM	7-24-18	7-24-18	
Acenaphthylene	ND	0.0067	EPA 8270D/SIM	7-24-18	7-24-18	
Acenaphthene	ND	0.0067	EPA 8270D/SIM	7-24-18	7-24-18	
Fluorene	ND	0.0067	EPA 8270D/SIM	7-24-18	7-24-18	
Phenanthrene	ND	0.0067	EPA 8270D/SIM	7-24-18	7-24-18	
Anthracene	ND	0.0067	EPA 8270D/SIM	7-24-18	7-24-18	
Fluoranthene	ND	0.0067	EPA 8270D/SIM	7-24-18	7-24-18	
Pyrene	ND	0.0067	EPA 8270D/SIM	7-24-18	7-24-18	
Benzo[a]anthracene	ND	0.0067	EPA 8270D/SIM	7-24-18	7-24-18	
Chrysene	ND	0.0067	EPA 8270D/SIM	7-24-18	7-24-18	
Benzo[b]fluoranthene	ND	0.0067	EPA 8270D/SIM	7-24-18	7-24-18	
Benzo(j,k)fluoranthene	ND	0.0067	EPA 8270D/SIM	7-24-18	7-24-18	
Benzo[a]pyrene	ND	0.0067	EPA 8270D/SIM	7-24-18	7-24-18	
Indeno(1,2,3-c,d)pyrene	ND	0.0067	EPA 8270D/SIM	7-24-18	7-24-18	
Dibenz[a,h]anthracene	ND	0.0067	EPA 8270D/SIM	7-24-18	7-24-18	
Benzo[g,h,i]perylene	ND	0.0067	EPA 8270D/SIM	7-24-18	7-24-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	94	40 - 117				
Pyrene-d10	99	38 - 119				
Terphenyl-d14	101	47 - 135				



Date of Report: August 1, 2018  
 Samples Submitted: July 21, 2018  
 Laboratory Reference: 1807-143  
 Project: 4082-039-01

**PAHs 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
<b>MATRIX SPIKES</b>								
Laboratory ID:	07-143-26							
	MS	MSD	MS	MSD	MS	MSD		
Naphthalene	0.0745	0.0768	0.0833	0.0833	ND	89 92	45 - 114	3 21
Acenaphthylene	0.0833	0.0855	0.0833	0.0833	ND	100 103	49 - 119	3 21
Acenaphthene	0.0850	0.0842	0.0833	0.0833	ND	102 101	47 - 117	1 19
Fluorene	0.0801	0.0844	0.0833	0.0833	ND	96 101	50 - 123	5 20
Phenanthrene	0.0797	0.0826	0.0833	0.0833	ND	96 99	46 - 122	4 20
Anthracene	0.0821	0.0846	0.0833	0.0833	ND	99 102	49 - 130	3 19
Fluoranthene	0.0828	0.0874	0.0833	0.0833	ND	99 105	48 - 127	5 21
Pyrene	0.0843	0.0874	0.0833	0.0833	ND	101 105	43 - 131	4 22
Benzo[a]anthracene	0.0899	0.0937	0.0833	0.0833	ND	108 112	55 - 132	4 20
Chrysene	0.0842	0.0869	0.0833	0.0833	ND	101 104	51 - 126	3 20
Benzo[b]fluoranthene	0.0838	0.0839	0.0833	0.0833	ND	101 101	45 - 133	0 21
Benzo(j,k)fluoranthene	0.0843	0.0888	0.0833	0.0833	ND	101 107	49 - 131	5 24
Benzo[a]pyrene	0.0839	0.0877	0.0833	0.0833	ND	101 105	50 - 127	4 21
Indeno(1,2,3-c,d)pyrene	0.0820	0.0838	0.0833	0.0833	ND	98 101	45 - 133	2 22
Dibenz[a,h]anthracene	0.0843	0.0863	0.0833	0.0833	ND	101 104	46 - 132	2 20
Benzo[g,h,i]perylene	0.0824	0.0854	0.0833	0.0833	ND	99 103	48 - 127	4 20
<i>Surrogate:</i>								
2-Fluorobiphenyl						86 89	40 - 117	
Pyrene-d10						95 98	38 - 119	
Terphenyl-d14						94 97	47 - 135	



Date of Report: August 1, 2018  
 Samples Submitted: July 21, 2018  
 Laboratory Reference: 1807-143  
 Project: 4082-039-01

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

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<hr/>						
Laboratory ID:	MB0724SM1					
Arsenic	ND	5.0	EPA 6010D	7-24-18	7-24-18	
Lead	ND	5.0	EPA 6010D	7-24-18	7-24-18	
<hr/>						
Laboratory ID:	MB0724SM2					
Arsenic	ND	5.0	EPA 6010D	7-24-18	7-24-18	
Barium	ND	2.5	EPA 6010D	7-24-18	7-24-18	
Cadmium	ND	0.50	EPA 6010D	7-24-18	7-24-18	
Chromium	ND	0.50	EPA 6010D	7-24-18	7-24-18	
Lead	ND	5.0	EPA 6010D	7-24-18	7-24-18	
Selenium	ND	10	EPA 6010D	7-24-18	7-24-18	
Silver	ND	1.0	EPA 6010D	7-24-18	7-24-18	
<hr/>						
Laboratory ID:	MB0724S1					
Mercury	ND	0.25	EPA 7471B	7-24-18	7-24-18	
<hr/>						
Laboratory ID:	MB0801S1					
Mercury	ND	0.25	EPA 7471B	8-1-18	8-1-18	



Date of Report: August 1, 2018  
 Samples Submitted: July 21, 2018  
 Laboratory Reference: 1807-143  
 Project: 4082-039-01

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

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE										
Laboratory ID:	07-134-02									
	ORIG	DUP								
Arsenic	ND	ND	NA	NA		NA	NA	NA	20	
Lead	ND	ND	NA	NA		NA	NA	NA	20	
Laboratory ID:	07-238-01									
	ORIG	DUP								
Mercury	ND	ND	NA	NA		NA	NA	NA	20	
Laboratory ID:	07-134-02									
	ORIG	DUP								
Arsenic	ND	ND	NA	NA		NA	NA	NA	20	
Barium	59.7	62.3	NA	NA		NA	NA	4	20	
Cadmium	ND	ND	NA	NA		NA	NA	NA	20	
Chromium	27.8	30.7	NA	NA		NA	NA	10	20	
Lead	ND	ND	NA	NA		NA	NA	NA	20	
Selenium	ND	ND	NA	NA		NA	NA	NA	20	
Silver	ND	ND	NA	NA		NA	NA	NA	20	
Laboratory ID:	07-150-01									
Mercury	ND	ND	NA	NA		NA	NA	NA	20	
MATRIX SPIKES										
Laboratory ID:	07-134-02									
	MS	MSD	MS	MSD		MS	MSD			
Arsenic	95.3	92.7	100	100	ND	95	93	75-125	3	20
Lead	238	237	250	250	ND	95	95	75-125	0	20
Laboratory ID:	07-238-01									
	MS	MSD	MS	MSD		MS	MSD			
Mercury	0.531	0.511	0.500	0.500	0.0123	104	100	80-120	4	20
Laboratory ID:	07-134-02									
	MS	MSD	MS	MSD		MS	MSD			
Arsenic	92.2	89.0	100	100	ND	92	89	75-125	4	20
Barium	159	159	100	100	59.7	100	100	75-125	0	20
Cadmium	47.2	46.7	50.0	50.0	ND	94	93	75-125	1	20
Chromium	124	125	100	100	27.8	96	97	75-125	1	20
Lead	241	238	250	250	ND	97	95	75-125	1	20
Selenium	93.9	93.9	100	100	ND	94	94	75-125	0	20
Silver	20.5	20.2	25.0	25.0	ND	82	81	75-125	1	20
Laboratory ID:	07-150-01									
Mercury	0.547	0.538	0.500	0.500	0.0214	105	103	80-120	2	20



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: August 1, 2018  
 Samples Submitted: July 21, 2018  
 Laboratory Reference: 1807-143  
 Project: 4082-039-01

### % MOISTURE

Date Analyzed: 7-24&26-18

Client ID	Lab ID	% Moisture
FL207-B21-5-5.5	07-143-01	5
FL207-B21-7.5-8.5	07-143-02	8
FL207-B21-10-11	07-143-03	8
FL207-B21-12.5-13.5	07-143-04	9
FL207-B23-0-0.5	07-143-12	5
FL207-B23-0.5-1	07-143-13	10
FL207-B23-2.5-3.5	07-143-14	4
FL207-B23-7.5-8	07-143-16	8
FL207-B23-12.5-13	07-143-18	8
FL207-B23-17.5-18	07-143-20	5
FL207-B23-20-20.5	07-143-21	8
FL207-B16-0-0.5	07-143-22	8
FL207-B16-2.5-3.5	07-143-23	4
FL207-B16-5-6	07-143-24	8
FL207-B16-10-11	07-143-26	7
FL207-B16-15-15.5	07-143-28	9
FL207-B16-17.5-18.5	07-143-29	9







### 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









Company:

5

4682-639-81

Project Name:

## Five-Sound Transit

Project Manager:

~~Mr~~ Masi Beeson

Sampled by:

06/07

## Chain of Custody

Page 2 of 3

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

07-143

Company: GEF		Turnaround Request (in working days)		Laboratory Number: 07-143															
Project Number: 4682-639-81		(Check One)																	
Project Name: FIVE-Sound Transit		<input type="checkbox"/> Same Day <input type="checkbox"/> 1 Day																	
Project Manager: Mersi Beeson		<input type="checkbox"/> 2 Days <input type="checkbox"/> 3 Days																	
Sampled by: GEG/JJD		<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														
11	FL207-B21-30-30.5	7/26/18	1010	S	5														
12	FL207-B23-0-0.5		1127		1														
13	FL207-B23-0.5-1		1130		1														
14	FL207-B23-2.5-3.5		1135		1														
15	FL207-B23-5-6		1145		1														
16	FL207-B23-7.5-8		1200		1														
17	FL207-B23-10-11		1215		1														
18	FL207-B23-12.5-13		1225		1														
19	FL207-B23-15-16		1230		1														
20	FL207-B23-17.5-18		1245		1														
Signature		Company		Date		Time		Comments/Special Instructions											
[Signature]		GEF		7/24/18		810													
Relinquished		[Signature]		7/24/18		810													
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"/>													





**OnSite  
Environmental Inc.**

Analytical Laboratory Testing Services  
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Phone: (425) 883-3881 • www.onsite-env.com

## Chain of Custody

Page 3 of 3

### Turnaround Request (in working days)

(Check One)

☐ Same Day ☐ 1 Day

☐ 2 Days ☐ 3 Days

☒ Standard (7 Days)  
(TPH analysis 5 Days)

☐ \_\_\_\_\_  
(other)

### Laboratory Number:

**07-143**

Company: GEI  
Project Number: 4082-039-01  
Project Name: Five-Sound Transit  
Project Manager: Marsi Beeson  
Sampled by: GLE/JJD

Lab ID: \_\_\_\_\_  
Sample Identification: \_\_\_\_\_  
Date Sampled: 7/20/18  
Time Sampled: 1355  
Matrix: S

### Number of Containers

NWTPH-HCID	
NWTPH-Gx/BTEX	
NWTPH-Gx	
NWTPH-Dx ( <input type="checkbox"/> Acid / SG Clean-up)	
Volatiles 8260C	<u>0</u>
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 As, Pb	<u>(X)</u>
% Moisture	<u>(X)</u>

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	TOTAL As, Pb	% Moisture
21	FL207-B23-20-20.5	7/20/18	1355	S	5																			
22	FL207-B1b-0-0.5		1435			<u>(X)</u>																	<u>(X)</u>	
23	FL207-B1b-2.5-3.5		1445																					
24	FL207-B1b-5-6		1450			<u>(X)</u>																	<u>(X)</u>	
25	FL207-B1b-7.5-8.5		1500																					
26	FL207-B1b-10-11		1510			<u>(X)</u>																	<u>(X)</u>	
27	FL207-B1b-12.5-13		1520																					
28	FL207-B1b-15-15.5		1530																					
29	FL207-B1b-17.5-18.5		1540																					
30	FL207-B1b-20-20.5		1550																					

Signature

Company

Date

Time

Comments/Special Instructions

Relinquished: GEI 7/21/18 810

Received: GEI 7/21/18 810

Relinquished: \_\_\_\_\_

Received: \_\_\_\_\_

Relinquished: \_\_\_\_\_

Received: \_\_\_\_\_

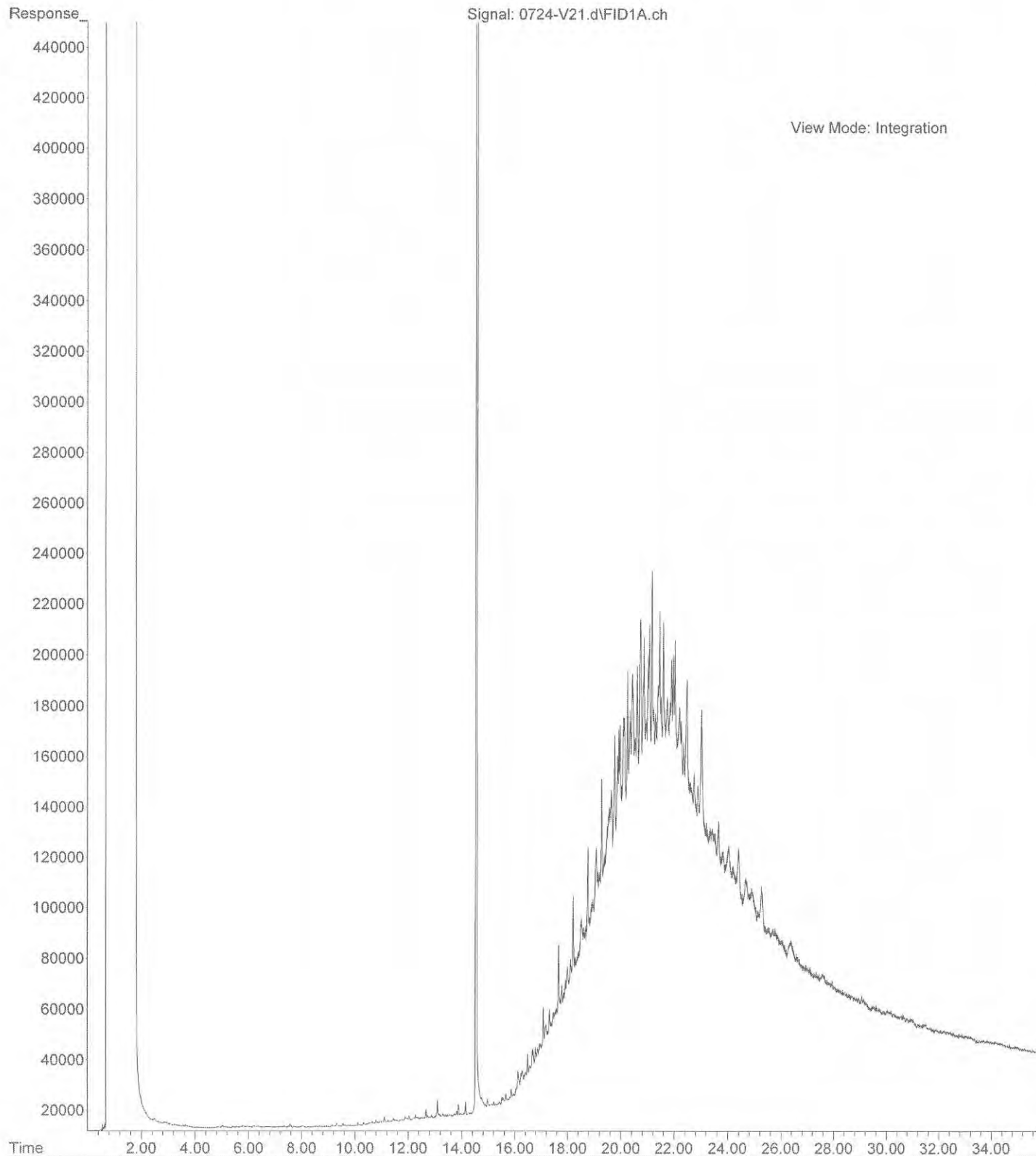
Reviewed/Date: \_\_\_\_\_

Reviewed/Date: \_\_\_\_\_

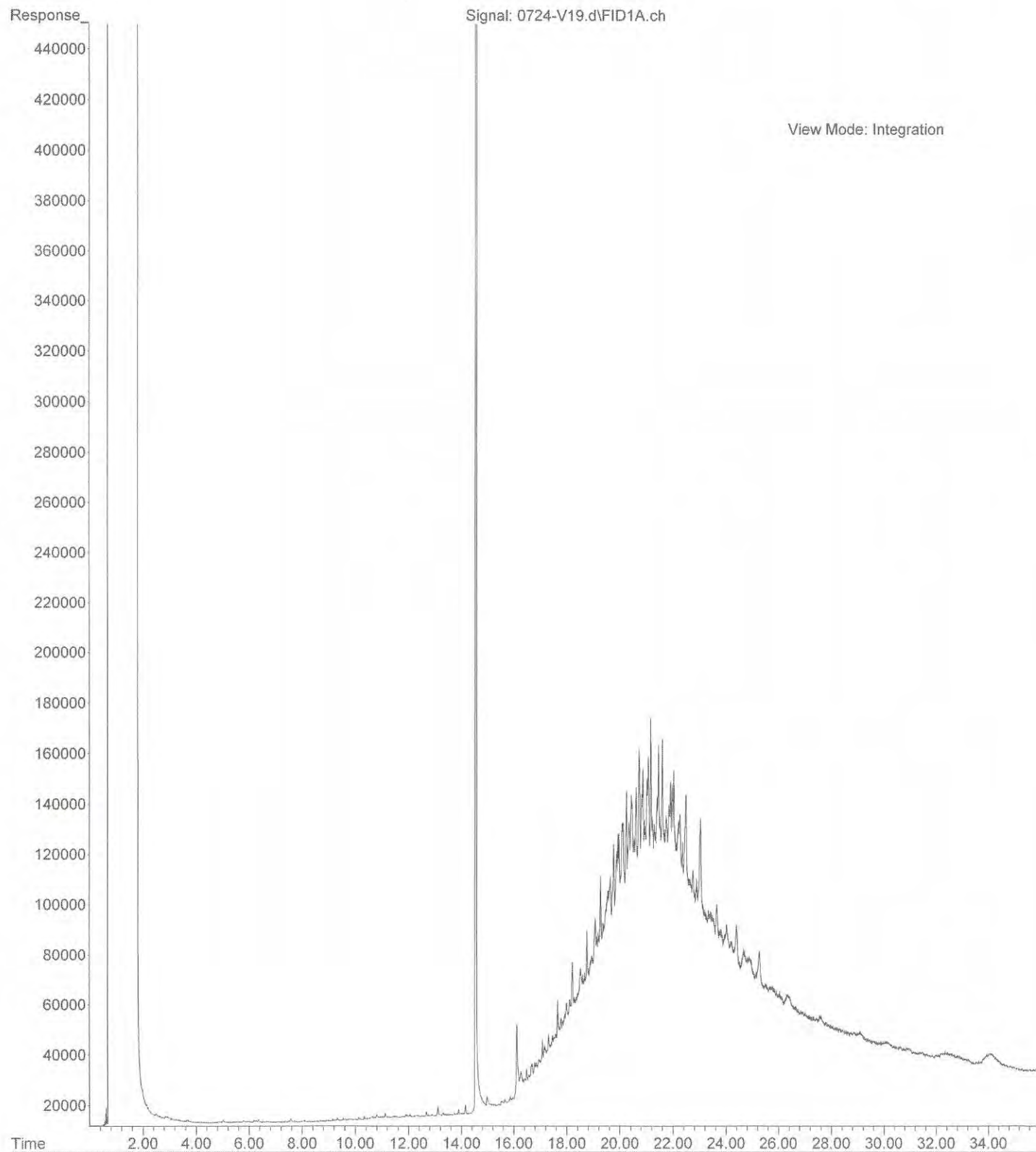
Data Package: Standard ☐ Level III ☐ Level IV ☐

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

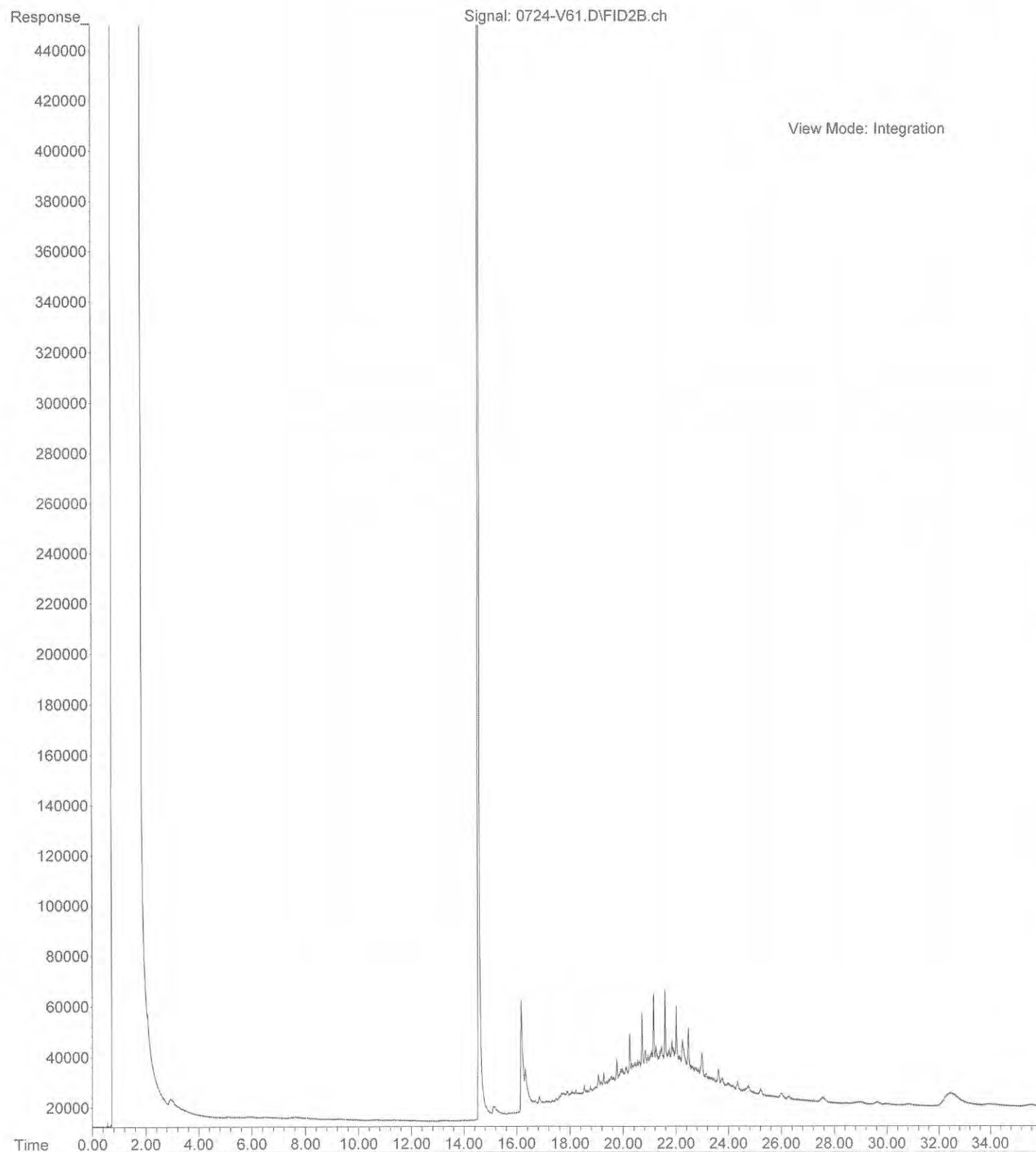
File :X:\DIESELS\VIGO\DATA\V180724\0724-V21.d  
Operator : JT  
Acquired : 24 Jul 2018 21:03 using AcqMethod V180601F.M  
Instrument : Vigo  
Sample Name: 07-143-14  
Misc Info :  
Vial Number: 21



File :X:\DIESELS\VIGO\DATA\V180724\0724-V19.d  
Operator : JT  
Acquired : 24 Jul 2018 19:43 using AcqMethod V180601F.M  
Instrument : Vigo  
Sample Name: 07-143-22  
Misc Info :  
Vial Number: 19



File :X:\DIESELS\VIGO\DATA\V180724.SEC\0724-V61.D  
Operator : JT  
Acquired : 24 Jul 2018 14:20 using AcqMethod V180601F.M  
Instrument : Vigo  
Sample Name: 07-143-28  
Misc Info :  
Vial Number: 61







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

August 3, 2018

Marsi Beeson  
GeoEngineers, Inc.  
12000 NW Naito Parkway, Suite 180  
Portland, OR 97209

Re: Analytical Data for Project 4082-039-01  
Laboratory Reference No. 1807-179

Dear Marsi:

Enclosed are the analytical results and associated quality control data for samples submitted on July 25, 2018.

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

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

Sincerely,

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

David Baumeister  
Project Manager

Enclosures



OnSite Environmental, Inc. 14648 NE 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: August 3, 2018  
Samples Submitted: July 25, 2018  
Laboratory Reference: 1807-179  
Project: 4082-039-01

### Case Narrative

Samples were collected on July 25, 2018 and received by the laboratory on July 25, 2018. They were maintained at the laboratory at a temperature of 2°C to 6°C.

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

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



Date of Report: August 3, 2018  
 Samples Submitted: July 25, 2018  
 Laboratory Reference: 1807-179  
 Project: 4082-039-01

### ANALYTICAL REPORT FOR SAMPLES

Client ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
FL207-B17-0-0.5	07-179-01	Soil	7-25-18	7-25-18	
FL207-B17-0.5-1	07-179-02	Soil	7-25-18	7-25-18	
FL207-B17-2.5-3.5	07-179-03	Soil	7-25-18	7-25-18	
FL207-B17-7-8	07-179-05	Soil	7-25-18	7-25-18	
FL207-B17-12-13	07-179-07	Soil	7-25-18	7-25-18	
FL207-B24-0-0.5	07-179-08	Soil	7-25-18	7-25-18	
FL207-B24-5-6	07-179-10	Soil	7-25-18	7-25-18	
FL207-B24-11-12	07-179-12	Soil	7-25-18	7-25-18	
FL207-B25-0-0.5	07-179-13	Soil	7-25-18	7-25-18	
FL207-B25-0.5-1	07-179-14	Soil	7-25-18	7-25-18	
FL207-B25-6-7	07-179-16	Soil	7-25-18	7-25-18	
FL207-B26-0-0.5	07-179-17	Soil	7-25-18	7-25-18	
FL207-B26-0.5-1	07-179-18	Soil	7-25-18	7-25-18	
FL207-B26-7-8	07-179-21	Soil	7-25-18	7-25-18	



Date of Report: August 3, 2018  
 Samples Submitted: July 25, 2018  
 Laboratory Reference: 1807-179  
 Project: 4082-039-01

### HYDROCARBON IDENTIFICATION NWTPH-HCID

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL207-B17-2.5-3.5</b>					
Laboratory ID:	07-179-03					
Gasoline Range Organics	ND	22	NWTPH-HCID	7-26-18	7-26-18	
Diesel Range Organics	ND	56	NWTPH-HCID	7-26-18	7-26-18	
Lube Oil Range Organics	ND	110	NWTPH-HCID	7-26-18	7-26-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	95	50-150				

<b>Client ID:</b>	<b>FL207-B17-7-8</b>					
Laboratory ID:	07-179-05					
Gasoline Range Organics	ND	22	NWTPH-HCID	7-26-18	7-26-18	
Diesel Range Organics	ND	54	NWTPH-HCID	7-26-18	7-26-18	
Lube Oil Range Organics	ND	110	NWTPH-HCID	7-26-18	7-26-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	93	50-150				

<b>Client ID:</b>	<b>FL207-B17-12-13</b>					
Laboratory ID:	07-179-07					
Gasoline Range Organics	ND	22	NWTPH-HCID	7-26-18	7-26-18	
Diesel Range Organics	ND	54	NWTPH-HCID	7-26-18	7-26-18	
Lube Oil Range Organics	ND	110	NWTPH-HCID	7-26-18	7-26-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	97	50-150				

<b>Client ID:</b>	<b>FL207-B24-5-6</b>					
Laboratory ID:	07-179-10					
Gasoline Range Organics	ND	25	NWTPH-HCID	7-26-18	7-26-18	
Diesel Range Organics	ND	62	NWTPH-HCID	7-26-18	7-26-18	
Lube Oil Range Organics	ND	120	NWTPH-HCID	7-26-18	7-26-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	91	50-150				

<b>Client ID:</b>	<b>FL207-B24-11-12</b>					
Laboratory ID:	07-179-12					
Gasoline Range Organics	ND	22	NWTPH-HCID	7-26-18	7-26-18	
Diesel Range Organics	ND	55	NWTPH-HCID	7-26-18	7-26-18	
Lube Oil Range Organics	ND	110	NWTPH-HCID	7-26-18	7-26-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	98	50-150				



Date of Report: August 3, 2018  
 Samples Submitted: July 25, 2018  
 Laboratory Reference: 1807-179  
 Project: 4082-039-01

### HYDROCARBON IDENTIFICATION NWTPH-HCID

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL207-B25-6-7</b>					
Laboratory ID:	07-179-16					
Gasoline Range Organics	ND	22	NWTPH-HCID	7-26-18	7-26-18	
Diesel Range Organics	ND	54	NWTPH-HCID	7-26-18	7-26-18	
Lube Oil Range Organics	ND	110	NWTPH-HCID	7-26-18	7-26-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	95	50-150				

<b>Client ID:</b>	<b>FL207-B26-7-8</b>					
Laboratory ID:	07-179-21					
Gasoline Range Organics	ND	21	NWTPH-HCID	7-26-18	7-26-18	
Diesel Range Organics	ND	54	NWTPH-HCID	7-26-18	7-26-18	
Lube Oil Range Organics	ND	110	NWTPH-HCID	7-26-18	7-26-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	93	50-150				



Date of Report: August 3, 2018  
 Samples Submitted: July 25, 2018  
 Laboratory Reference: 1807-179  
 Project: 4082-039-01

**VOLATILE ORGANICS EPA 8260C**  
 page 1 of 2

Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID: FL207-B17-2.5-3.5</b>						
<b>Laboratory ID: 07-179-03</b>						
Dichlorodifluoromethane	ND	0.0011	EPA 8260C	7-26-18	7-26-18	
Chloromethane	ND	0.0054	EPA 8260C	7-26-18	7-26-18	
Vinyl Chloride	ND	0.0011	EPA 8260C	7-26-18	7-26-18	
Bromomethane	ND	0.0011	EPA 8260C	7-26-18	7-26-18	
Chloroethane	ND	0.0054	EPA 8260C	7-26-18	7-26-18	
Trichlorofluoromethane	ND	0.0011	EPA 8260C	7-26-18	7-26-18	
1,1-Dichloroethene	ND	0.0011	EPA 8260C	7-26-18	7-26-18	
Acetone	ND	0.011	EPA 8260C	7-26-18	7-26-18	
Iodomethane	ND	0.0054	EPA 8260C	7-26-18	7-26-18	
Carbon Disulfide	ND	0.0011	EPA 8260C	7-26-18	7-26-18	
Methylene Chloride	ND	0.0054	EPA 8260C	7-26-18	7-26-18	
(trans) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	7-26-18	7-26-18	
Methyl t-Butyl Ether	ND	0.0011	EPA 8260C	7-26-18	7-26-18	
1,1-Dichloroethane	ND	0.0011	EPA 8260C	7-26-18	7-26-18	
Vinyl Acetate	ND	0.0054	EPA 8260C	7-26-18	7-26-18	
2,2-Dichloropropane	ND	0.0011	EPA 8260C	7-26-18	7-26-18	
(cis) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	7-26-18	7-26-18	
2-Butanone	ND	0.0054	EPA 8260C	7-26-18	7-26-18	
Bromochloromethane	ND	0.0011	EPA 8260C	7-26-18	7-26-18	
Chloroform	ND	0.0011	EPA 8260C	7-26-18	7-26-18	
1,1,1-Trichloroethane	ND	0.0011	EPA 8260C	7-26-18	7-26-18	
Carbon Tetrachloride	ND	0.0011	EPA 8260C	7-26-18	7-26-18	
1,1-Dichloropropene	ND	0.0011	EPA 8260C	7-26-18	7-26-18	
Benzene	ND	0.0011	EPA 8260C	7-26-18	7-26-18	
1,2-Dichloroethane	ND	0.0011	EPA 8260C	7-26-18	7-26-18	
Trichloroethene	ND	0.0011	EPA 8260C	7-26-18	7-26-18	
1,2-Dichloropropane	ND	0.0011	EPA 8260C	7-26-18	7-26-18	
Dibromomethane	ND	0.0011	EPA 8260C	7-26-18	7-26-18	
Bromodichloromethane	ND	0.0011	EPA 8260C	7-26-18	7-26-18	
2-Chloroethyl Vinyl Ether	ND	0.0054	EPA 8260C	7-26-18	7-26-18	
(cis) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	7-26-18	7-26-18	
Methyl Isobutyl Ketone	ND	0.0054	EPA 8260C	7-26-18	7-26-18	
Toluene	ND	0.0054	EPA 8260C	7-26-18	7-26-18	
(trans) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	7-26-18	7-26-18	



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: August 3, 2018  
 Samples Submitted: July 25, 2018  
 Laboratory Reference: 1807-179  
 Project: 4082-039-01

**VOLATILE ORGANICS EPA 8260C**  
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID: FL207-B17-2.5-3.5</b>						
Laboratory ID: 07-179-03						
1,1,2-Trichloroethane	ND	0.0011	EPA 8260C	7-26-18	7-26-18	
Tetrachloroethene	ND	0.0011	EPA 8260C	7-26-18	7-26-18	
1,3-Dichloropropane	ND	0.0011	EPA 8260C	7-26-18	7-26-18	
2-Hexanone	ND	0.0054	EPA 8260C	7-26-18	7-26-18	
Dibromochloromethane	ND	0.0011	EPA 8260C	7-26-18	7-26-18	
1,2-Dibromoethane	ND	0.0011	EPA 8260C	7-26-18	7-26-18	
Chlorobenzene	ND	0.0011	EPA 8260C	7-26-18	7-26-18	
1,1,1,2-Tetrachloroethane	ND	0.0011	EPA 8260C	7-26-18	7-26-18	
Ethylbenzene	ND	0.0011	EPA 8260C	7-26-18	7-26-18	
m,p-Xylene	ND	0.0021	EPA 8260C	7-26-18	7-26-18	
o-Xylene	ND	0.0011	EPA 8260C	7-26-18	7-26-18	
Styrene	ND	0.0011	EPA 8260C	7-26-18	7-26-18	
Bromoform	ND	0.0054	EPA 8260C	7-26-18	7-26-18	
Isopropylbenzene	ND	0.0011	EPA 8260C	7-26-18	7-26-18	
Bromobenzene	ND	0.0011	EPA 8260C	7-26-18	7-26-18	
1,1,2,2-Tetrachloroethane	ND	0.0011	EPA 8260C	7-26-18	7-26-18	
1,2,3-Trichloropropane	ND	0.0011	EPA 8260C	7-26-18	7-26-18	
n-Propylbenzene	ND	0.0011	EPA 8260C	7-26-18	7-26-18	
2-Chlorotoluene	ND	0.0011	EPA 8260C	7-26-18	7-26-18	
4-Chlorotoluene	ND	0.0011	EPA 8260C	7-26-18	7-26-18	
1,3,5-Trimethylbenzene	ND	0.0011	EPA 8260C	7-26-18	7-26-18	
tert-Butylbenzene	ND	0.0011	EPA 8260C	7-26-18	7-26-18	
1,2,4-Trimethylbenzene	ND	0.0011	EPA 8260C	7-26-18	7-26-18	
sec-Butylbenzene	ND	0.0011	EPA 8260C	7-26-18	7-26-18	
1,3-Dichlorobenzene	ND	0.0011	EPA 8260C	7-26-18	7-26-18	
p-Isopropyltoluene	ND	0.0011	EPA 8260C	7-26-18	7-26-18	
1,4-Dichlorobenzene	ND	0.0011	EPA 8260C	7-26-18	7-26-18	
1,2-Dichlorobenzene	ND	0.0011	EPA 8260C	7-26-18	7-26-18	
n-Butylbenzene	ND	0.0011	EPA 8260C	7-26-18	7-26-18	
1,2-Dibromo-3-chloropropane	ND	0.0054	EPA 8260C	7-26-18	7-26-18	
1,2,4-Trichlorobenzene	ND	0.0011	EPA 8260C	7-26-18	7-26-18	
Hexachlorobutadiene	ND	0.0054	EPA 8260C	7-26-18	7-26-18	
Naphthalene	ND	0.0011	EPA 8260C	7-26-18	7-26-18	
1,2,3-Trichlorobenzene	ND	0.0011	EPA 8260C	7-26-18	7-26-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	96	68-139				
<i>Toluene-d8</i>	101	79-128				
<i>4-Bromofluorobenzene</i>	97	71-132				



Date of Report: August 3, 2018  
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 Laboratory Reference: 1807-179  
 Project: 4082-039-01

**VOLATILE ORGANICS 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>FL207-B17-7-8</b>				
<b>Laboratory ID:</b>		<b>07-179-05</b>				
Dichlorodifluoromethane	ND	0.00094	EPA 8260C	7-26-18	7-26-18	
Chloromethane	ND	0.0047	EPA 8260C	7-26-18	7-26-18	
Vinyl Chloride	ND	0.00094	EPA 8260C	7-26-18	7-26-18	
Bromomethane	ND	0.00094	EPA 8260C	7-26-18	7-26-18	
Chloroethane	ND	0.0047	EPA 8260C	7-26-18	7-26-18	
Trichlorofluoromethane	ND	0.00094	EPA 8260C	7-26-18	7-26-18	
1,1-Dichloroethene	ND	0.00094	EPA 8260C	7-26-18	7-26-18	
Acetone	ND	0.0094	EPA 8260C	7-26-18	7-26-18	
Iodomethane	ND	0.0047	EPA 8260C	7-26-18	7-26-18	
Carbon Disulfide	ND	0.00094	EPA 8260C	7-26-18	7-26-18	
Methylene Chloride	ND	0.0047	EPA 8260C	7-26-18	7-26-18	
(trans) 1,2-Dichloroethene	ND	0.00094	EPA 8260C	7-26-18	7-26-18	
Methyl t-Butyl Ether	ND	0.00094	EPA 8260C	7-26-18	7-26-18	
1,1-Dichloroethane	ND	0.00094	EPA 8260C	7-26-18	7-26-18	
Vinyl Acetate	ND	0.0047	EPA 8260C	7-26-18	7-26-18	
2,2-Dichloropropane	ND	0.00094	EPA 8260C	7-26-18	7-26-18	
(cis) 1,2-Dichloroethene	ND	0.00094	EPA 8260C	7-26-18	7-26-18	
2-Butanone	ND	0.0047	EPA 8260C	7-26-18	7-26-18	
Bromochloromethane	ND	0.00094	EPA 8260C	7-26-18	7-26-18	
Chloroform	ND	0.00094	EPA 8260C	7-26-18	7-26-18	
1,1,1-Trichloroethane	ND	0.00094	EPA 8260C	7-26-18	7-26-18	
Carbon Tetrachloride	ND	0.00094	EPA 8260C	7-26-18	7-26-18	
1,1-Dichloropropene	ND	0.00094	EPA 8260C	7-26-18	7-26-18	
Benzene	ND	0.00094	EPA 8260C	7-26-18	7-26-18	
1,2-Dichloroethane	ND	0.00094	EPA 8260C	7-26-18	7-26-18	
Trichloroethene	ND	0.00094	EPA 8260C	7-26-18	7-26-18	
1,2-Dichloropropane	ND	0.00094	EPA 8260C	7-26-18	7-26-18	
Dibromomethane	ND	0.00094	EPA 8260C	7-26-18	7-26-18	
Bromodichloromethane	ND	0.00094	EPA 8260C	7-26-18	7-26-18	
2-Chloroethyl Vinyl Ether	ND	0.0047	EPA 8260C	7-26-18	7-26-18	
(cis) 1,3-Dichloropropene	ND	0.00094	EPA 8260C	7-26-18	7-26-18	
Methyl Isobutyl Ketone	ND	0.0047	EPA 8260C	7-26-18	7-26-18	
Toluene	ND	0.0047	EPA 8260C	7-26-18	7-26-18	
(trans) 1,3-Dichloropropene	ND	0.00094	EPA 8260C	7-26-18	7-26-18	



Date of Report: August 3, 2018  
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 Laboratory Reference: 1807-179  
 Project: 4082-039-01

**VOLATILE ORGANICS EPA 8260C**  
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL207-B17-7-8</b>					
Laboratory ID:	07-179-05					
1,1,2-Trichloroethane	ND	0.00094	EPA 8260C	7-26-18	7-26-18	
Tetrachloroethene	ND	0.00094	EPA 8260C	7-26-18	7-26-18	
1,3-Dichloropropane	ND	0.00094	EPA 8260C	7-26-18	7-26-18	
2-Hexanone	ND	0.0047	EPA 8260C	7-26-18	7-26-18	
Dibromochloromethane	ND	0.00094	EPA 8260C	7-26-18	7-26-18	
1,2-Dibromoethane	ND	0.00094	EPA 8260C	7-26-18	7-26-18	
Chlorobenzene	ND	0.00094	EPA 8260C	7-26-18	7-26-18	
1,1,1,2-Tetrachloroethane	ND	0.00094	EPA 8260C	7-26-18	7-26-18	
Ethylbenzene	ND	0.00094	EPA 8260C	7-26-18	7-26-18	
m,p-Xylene	ND	0.0019	EPA 8260C	7-26-18	7-26-18	
o-Xylene	ND	0.00094	EPA 8260C	7-26-18	7-26-18	
Styrene	ND	0.00094	EPA 8260C	7-26-18	7-26-18	
Bromoform	ND	0.0047	EPA 8260C	7-26-18	7-26-18	
Isopropylbenzene	ND	0.00094	EPA 8260C	7-26-18	7-26-18	
Bromobenzene	ND	0.00094	EPA 8260C	7-26-18	7-26-18	
1,1,2,2-Tetrachloroethane	ND	0.00094	EPA 8260C	7-26-18	7-26-18	
1,2,3-Trichloropropane	ND	0.00094	EPA 8260C	7-26-18	7-26-18	
n-Propylbenzene	ND	0.00094	EPA 8260C	7-26-18	7-26-18	
2-Chlorotoluene	ND	0.00094	EPA 8260C	7-26-18	7-26-18	
4-Chlorotoluene	ND	0.00094	EPA 8260C	7-26-18	7-26-18	
1,3,5-Trimethylbenzene	ND	0.00094	EPA 8260C	7-26-18	7-26-18	
tert-Butylbenzene	ND	0.00094	EPA 8260C	7-26-18	7-26-18	
1,2,4-Trimethylbenzene	ND	0.00094	EPA 8260C	7-26-18	7-26-18	
sec-Butylbenzene	ND	0.00094	EPA 8260C	7-26-18	7-26-18	
1,3-Dichlorobenzene	ND	0.00094	EPA 8260C	7-26-18	7-26-18	
p-Isopropyltoluene	ND	0.00094	EPA 8260C	7-26-18	7-26-18	
1,4-Dichlorobenzene	ND	0.00094	EPA 8260C	7-26-18	7-26-18	
1,2-Dichlorobenzene	ND	0.00094	EPA 8260C	7-26-18	7-26-18	
n-Butylbenzene	ND	0.00094	EPA 8260C	7-26-18	7-26-18	
1,2-Dibromo-3-chloropropane	ND	0.0047	EPA 8260C	7-26-18	7-26-18	
1,2,4-Trichlorobenzene	ND	0.00094	EPA 8260C	7-26-18	7-26-18	
Hexachlorobutadiene	ND	0.0047	EPA 8260C	7-26-18	7-26-18	
Naphthalene	ND	0.00094	EPA 8260C	7-26-18	7-26-18	
1,2,3-Trichlorobenzene	ND	0.00094	EPA 8260C	7-26-18	7-26-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	98	68-139				
<i>Toluene-d8</i>	99	79-128				
<i>4-Bromofluorobenzene</i>	96	71-132				



Date of Report: August 3, 2018  
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 Laboratory Reference: 1807-179  
 Project: 4082-039-01

**VOLATILE ORGANICS EPA 8260C**  
 page 1 of 2

Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID: FL207-B17-12-13</b>						
<b>Laboratory ID: 07-179-07</b>						
Dichlorodifluoromethane	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
Chloromethane	ND	0.0045	EPA 8260C	7-26-18	7-26-18	
Vinyl Chloride	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
Bromomethane	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
Chloroethane	ND	0.0045	EPA 8260C	7-26-18	7-26-18	
Trichlorofluoromethane	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
1,1-Dichloroethene	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
Acetone	ND	0.0089	EPA 8260C	7-26-18	7-26-18	
Iodomethane	ND	0.0045	EPA 8260C	7-26-18	7-26-18	
Carbon Disulfide	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
Methylene Chloride	ND	0.0045	EPA 8260C	7-26-18	7-26-18	
(trans) 1,2-Dichloroethene	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
Methyl t-Butyl Ether	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
1,1-Dichloroethane	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
Vinyl Acetate	ND	0.0045	EPA 8260C	7-26-18	7-26-18	
2,2-Dichloropropane	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
(cis) 1,2-Dichloroethene	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
2-Butanone	ND	0.0045	EPA 8260C	7-26-18	7-26-18	
Bromochloromethane	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
Chloroform	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
1,1,1-Trichloroethane	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
Carbon Tetrachloride	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
1,1-Dichloropropene	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
Benzene	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
1,2-Dichloroethane	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
Trichloroethene	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
1,2-Dichloropropane	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
Dibromomethane	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
Bromodichloromethane	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
2-Chloroethyl Vinyl Ether	ND	0.0045	EPA 8260C	7-26-18	7-26-18	
(cis) 1,3-Dichloropropene	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
Methyl Isobutyl Ketone	ND	0.0045	EPA 8260C	7-26-18	7-26-18	
Toluene	ND	0.0045	EPA 8260C	7-26-18	7-26-18	
(trans) 1,3-Dichloropropene	ND	0.00089	EPA 8260C	7-26-18	7-26-18	



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 Samples Submitted: July 25, 2018  
 Laboratory Reference: 1807-179  
 Project: 4082-039-01

**VOLATILE ORGANICS EPA 8260C**  
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>		<b>FL207-B17-12-13</b>				
Laboratory ID:		07-179-07				
1,1,2-Trichloroethane	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
Tetrachloroethene	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
1,3-Dichloropropane	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
2-Hexanone	ND	0.0045	EPA 8260C	7-26-18	7-26-18	
Dibromochloromethane	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
1,2-Dibromoethane	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
Chlorobenzene	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
1,1,1,2-Tetrachloroethane	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
Ethylbenzene	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
m,p-Xylene	ND	0.0018	EPA 8260C	7-26-18	7-26-18	
o-Xylene	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
Styrene	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
Bromoform	ND	0.0045	EPA 8260C	7-26-18	7-26-18	
Isopropylbenzene	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
Bromobenzene	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
1,1,2,2-Tetrachloroethane	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
1,2,3-Trichloropropane	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
n-Propylbenzene	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
2-Chlorotoluene	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
4-Chlorotoluene	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
1,3,5-Trimethylbenzene	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
tert-Butylbenzene	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
1,2,4-Trimethylbenzene	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
sec-Butylbenzene	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
1,3-Dichlorobenzene	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
p-Isopropyltoluene	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
1,4-Dichlorobenzene	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
1,2-Dichlorobenzene	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
n-Butylbenzene	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
1,2-Dibromo-3-chloropropane	ND	0.0045	EPA 8260C	7-26-18	7-26-18	
1,2,4-Trichlorobenzene	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
Hexachlorobutadiene	ND	0.0045	EPA 8260C	7-26-18	7-26-18	
Naphthalene	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
1,2,3-Trichlorobenzene	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	98	68-139				
<i>Toluene-d8</i>	99	79-128				
<i>4-Bromofluorobenzene</i>	97	71-132				



Date of Report: August 3, 2018  
 Samples Submitted: July 25, 2018  
 Laboratory Reference: 1807-179  
 Project: 4082-039-01

**VOLATILE ORGANICS 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>FL207-B24-5-6</b>				
<b>Laboratory ID:</b>		<b>07-179-10</b>				
Dichlorodifluoromethane	ND	0.0013	EPA 8260C	7-26-18	7-26-18	
Chloromethane	ND	0.0065	EPA 8260C	7-26-18	7-26-18	
Vinyl Chloride	ND	0.0013	EPA 8260C	7-26-18	7-26-18	
Bromomethane	ND	0.0013	EPA 8260C	7-26-18	7-26-18	
Chloroethane	ND	0.0065	EPA 8260C	7-26-18	7-26-18	
Trichlorofluoromethane	ND	0.0013	EPA 8260C	7-26-18	7-26-18	
1,1-Dichloroethene	ND	0.0013	EPA 8260C	7-26-18	7-26-18	
Acetone	ND	0.013	EPA 8260C	7-26-18	7-26-18	
Iodomethane	ND	0.0065	EPA 8260C	7-26-18	7-26-18	
Carbon Disulfide	ND	0.0013	EPA 8260C	7-26-18	7-26-18	
Methylene Chloride	ND	0.0065	EPA 8260C	7-26-18	7-26-18	
(trans) 1,2-Dichloroethene	ND	0.0013	EPA 8260C	7-26-18	7-26-18	
Methyl t-Butyl Ether	ND	0.0013	EPA 8260C	7-26-18	7-26-18	
1,1-Dichloroethane	ND	0.0013	EPA 8260C	7-26-18	7-26-18	
Vinyl Acetate	ND	0.0065	EPA 8260C	7-26-18	7-26-18	
2,2-Dichloropropane	ND	0.0013	EPA 8260C	7-26-18	7-26-18	
(cis) 1,2-Dichloroethene	ND	0.0013	EPA 8260C	7-26-18	7-26-18	
2-Butanone	ND	0.0065	EPA 8260C	7-26-18	7-26-18	
Bromochloromethane	ND	0.0013	EPA 8260C	7-26-18	7-26-18	
Chloroform	ND	0.0013	EPA 8260C	7-26-18	7-26-18	
1,1,1-Trichloroethane	ND	0.0013	EPA 8260C	7-26-18	7-26-18	
Carbon Tetrachloride	ND	0.0013	EPA 8260C	7-26-18	7-26-18	
1,1-Dichloropropene	ND	0.0013	EPA 8260C	7-26-18	7-26-18	
Benzene	ND	0.0013	EPA 8260C	7-26-18	7-26-18	
1,2-Dichloroethane	ND	0.0013	EPA 8260C	7-26-18	7-26-18	
Trichloroethene	ND	0.0013	EPA 8260C	7-26-18	7-26-18	
1,2-Dichloropropane	ND	0.0013	EPA 8260C	7-26-18	7-26-18	
Dibromomethane	ND	0.0013	EPA 8260C	7-26-18	7-26-18	
Bromodichloromethane	ND	0.0013	EPA 8260C	7-26-18	7-26-18	
2-Chloroethyl Vinyl Ether	ND	0.0065	EPA 8260C	7-26-18	7-26-18	
(cis) 1,3-Dichloropropene	ND	0.0013	EPA 8260C	7-26-18	7-26-18	
Methyl Isobutyl Ketone	ND	0.0065	EPA 8260C	7-26-18	7-26-18	
Toluene	ND	0.0065	EPA 8260C	7-26-18	7-26-18	
(trans) 1,3-Dichloropropene	ND	0.0013	EPA 8260C	7-26-18	7-26-18	



Date of Report: August 3, 2018  
 Samples Submitted: July 25, 2018  
 Laboratory Reference: 1807-179  
 Project: 4082-039-01

**VOLATILE ORGANICS EPA 8260C**  
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL207-B24-5-6</b>					
Laboratory ID:	07-179-10					
1,1,2-Trichloroethane	ND	0.0013	EPA 8260C	7-26-18	7-26-18	
Tetrachloroethene	ND	0.0013	EPA 8260C	7-26-18	7-26-18	
1,3-Dichloropropane	ND	0.0013	EPA 8260C	7-26-18	7-26-18	
2-Hexanone	ND	0.0065	EPA 8260C	7-26-18	7-26-18	
Dibromochloromethane	ND	0.0013	EPA 8260C	7-26-18	7-26-18	
1,2-Dibromoethane	ND	0.0013	EPA 8260C	7-26-18	7-26-18	
Chlorobenzene	ND	0.0013	EPA 8260C	7-26-18	7-26-18	
1,1,1,2-Tetrachloroethane	ND	0.0013	EPA 8260C	7-26-18	7-26-18	
Ethylbenzene	ND	0.0013	EPA 8260C	7-26-18	7-26-18	
m,p-Xylene	ND	0.0026	EPA 8260C	7-26-18	7-26-18	
o-Xylene	ND	0.0013	EPA 8260C	7-26-18	7-26-18	
Styrene	ND	0.0013	EPA 8260C	7-26-18	7-26-18	
Bromoform	ND	0.0065	EPA 8260C	7-26-18	7-26-18	
Isopropylbenzene	ND	0.0013	EPA 8260C	7-26-18	7-26-18	
Bromobenzene	ND	0.0013	EPA 8260C	7-26-18	7-26-18	
1,1,2,2-Tetrachloroethane	ND	0.0013	EPA 8260C	7-26-18	7-26-18	
1,2,3-Trichloropropane	ND	0.0013	EPA 8260C	7-26-18	7-26-18	
n-Propylbenzene	ND	0.0013	EPA 8260C	7-26-18	7-26-18	
2-Chlorotoluene	ND	0.0013	EPA 8260C	7-26-18	7-26-18	
4-Chlorotoluene	ND	0.0013	EPA 8260C	7-26-18	7-26-18	
1,3,5-Trimethylbenzene	ND	0.0013	EPA 8260C	7-26-18	7-26-18	
tert-Butylbenzene	ND	0.0013	EPA 8260C	7-26-18	7-26-18	
1,2,4-Trimethylbenzene	ND	0.0013	EPA 8260C	7-26-18	7-26-18	
sec-Butylbenzene	ND	0.0013	EPA 8260C	7-26-18	7-26-18	
1,3-Dichlorobenzene	ND	0.0013	EPA 8260C	7-26-18	7-26-18	
p-Isopropyltoluene	ND	0.0013	EPA 8260C	7-26-18	7-26-18	
1,4-Dichlorobenzene	ND	0.0013	EPA 8260C	7-26-18	7-26-18	
1,2-Dichlorobenzene	ND	0.0013	EPA 8260C	7-26-18	7-26-18	
n-Butylbenzene	ND	0.0013	EPA 8260C	7-26-18	7-26-18	
1,2-Dibromo-3-chloropropane	ND	0.0065	EPA 8260C	7-26-18	7-26-18	
1,2,4-Trichlorobenzene	ND	0.0013	EPA 8260C	7-26-18	7-26-18	
Hexachlorobutadiene	ND	0.0065	EPA 8260C	7-26-18	7-26-18	
Naphthalene	ND	0.0013	EPA 8260C	7-26-18	7-26-18	
1,2,3-Trichlorobenzene	ND	0.0013	EPA 8260C	7-26-18	7-26-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	99	68-139				
<i>Toluene-d8</i>	102	79-128				
<i>4-Bromofluorobenzene</i>	96	71-132				





Date of Report: August 3, 2018  
 Samples Submitted: July 25, 2018  
 Laboratory Reference: 1807-179  
 Project: 4082-039-01

**VOLATILE ORGANICS EPA 8260C**  
 page 1 of 2

Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID: FL207-B24-11-12</b>						
<b>Laboratory ID: 07-179-12</b>						
Dichlorodifluoromethane	ND	0.00088	EPA 8260C	7-26-18	7-26-18	
Chloromethane	ND	0.0044	EPA 8260C	7-26-18	7-26-18	
Vinyl Chloride	ND	0.00088	EPA 8260C	7-26-18	7-26-18	
Bromomethane	ND	0.00088	EPA 8260C	7-26-18	7-26-18	
Chloroethane	ND	0.0044	EPA 8260C	7-26-18	7-26-18	
Trichlorofluoromethane	ND	0.00088	EPA 8260C	7-26-18	7-26-18	
1,1-Dichloroethene	ND	0.00088	EPA 8260C	7-26-18	7-26-18	
Acetone	ND	0.0088	EPA 8260C	7-26-18	7-26-18	
Iodomethane	ND	0.0044	EPA 8260C	7-26-18	7-26-18	
Carbon Disulfide	ND	0.00088	EPA 8260C	7-26-18	7-26-18	
Methylene Chloride	ND	0.0044	EPA 8260C	7-26-18	7-26-18	
(trans) 1,2-Dichloroethene	ND	0.00088	EPA 8260C	7-26-18	7-26-18	
Methyl t-Butyl Ether	ND	0.00088	EPA 8260C	7-26-18	7-26-18	
1,1-Dichloroethane	ND	0.00088	EPA 8260C	7-26-18	7-26-18	
Vinyl Acetate	ND	0.0044	EPA 8260C	7-26-18	7-26-18	
2,2-Dichloropropane	ND	0.00088	EPA 8260C	7-26-18	7-26-18	
(cis) 1,2-Dichloroethene	ND	0.00088	EPA 8260C	7-26-18	7-26-18	
2-Butanone	ND	0.0044	EPA 8260C	7-26-18	7-26-18	
Bromochloromethane	ND	0.00088	EPA 8260C	7-26-18	7-26-18	
Chloroform	ND	0.00088	EPA 8260C	7-26-18	7-26-18	
1,1,1-Trichloroethane	ND	0.00088	EPA 8260C	7-26-18	7-26-18	
Carbon Tetrachloride	ND	0.00088	EPA 8260C	7-26-18	7-26-18	
1,1-Dichloropropene	ND	0.00088	EPA 8260C	7-26-18	7-26-18	
Benzene	ND	0.00088	EPA 8260C	7-26-18	7-26-18	
1,2-Dichloroethane	ND	0.00088	EPA 8260C	7-26-18	7-26-18	
Trichloroethene	ND	0.00088	EPA 8260C	7-26-18	7-26-18	
1,2-Dichloropropane	ND	0.00088	EPA 8260C	7-26-18	7-26-18	
Dibromomethane	ND	0.00088	EPA 8260C	7-26-18	7-26-18	
Bromodichloromethane	ND	0.00088	EPA 8260C	7-26-18	7-26-18	
2-Chloroethyl Vinyl Ether	ND	0.0044	EPA 8260C	7-26-18	7-26-18	
(cis) 1,3-Dichloropropene	ND	0.00088	EPA 8260C	7-26-18	7-26-18	
Methyl Isobutyl Ketone	ND	0.0044	EPA 8260C	7-26-18	7-26-18	
Toluene	ND	0.0044	EPA 8260C	7-26-18	7-26-18	
(trans) 1,3-Dichloropropene	ND	0.00088	EPA 8260C	7-26-18	7-26-18	



Date of Report: August 3, 2018  
 Samples Submitted: July 25, 2018  
 Laboratory Reference: 1807-179  
 Project: 4082-039-01

**VOLATILE ORGANICS EPA 8260C**  
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>		<b>FL207-B24-11-12</b>				
Laboratory ID:		07-179-12				
1,1,2-Trichloroethane	ND	0.00088	EPA 8260C	7-26-18	7-26-18	
Tetrachloroethene	ND	0.00088	EPA 8260C	7-26-18	7-26-18	
1,3-Dichloropropane	ND	0.00088	EPA 8260C	7-26-18	7-26-18	
2-Hexanone	ND	0.0044	EPA 8260C	7-26-18	7-26-18	
Dibromochloromethane	ND	0.00088	EPA 8260C	7-26-18	7-26-18	
1,2-Dibromoethane	ND	0.00088	EPA 8260C	7-26-18	7-26-18	
Chlorobenzene	ND	0.00088	EPA 8260C	7-26-18	7-26-18	
1,1,1,2-Tetrachloroethane	ND	0.00088	EPA 8260C	7-26-18	7-26-18	
Ethylbenzene	ND	0.00088	EPA 8260C	7-26-18	7-26-18	
m,p-Xylene	ND	0.0018	EPA 8260C	7-26-18	7-26-18	
o-Xylene	ND	0.00088	EPA 8260C	7-26-18	7-26-18	
Styrene	ND	0.00088	EPA 8260C	7-26-18	7-26-18	
Bromoform	ND	0.0044	EPA 8260C	7-26-18	7-26-18	
Isopropylbenzene	ND	0.00088	EPA 8260C	7-26-18	7-26-18	
Bromobenzene	ND	0.00088	EPA 8260C	7-26-18	7-26-18	
1,1,2,2-Tetrachloroethane	ND	0.00088	EPA 8260C	7-26-18	7-26-18	
1,2,3-Trichloropropane	ND	0.00088	EPA 8260C	7-26-18	7-26-18	
n-Propylbenzene	ND	0.00088	EPA 8260C	7-26-18	7-26-18	
2-Chlorotoluene	ND	0.00088	EPA 8260C	7-26-18	7-26-18	
4-Chlorotoluene	ND	0.00088	EPA 8260C	7-26-18	7-26-18	
1,3,5-Trimethylbenzene	ND	0.00088	EPA 8260C	7-26-18	7-26-18	
tert-Butylbenzene	ND	0.00088	EPA 8260C	7-26-18	7-26-18	
1,2,4-Trimethylbenzene	ND	0.00088	EPA 8260C	7-26-18	7-26-18	
sec-Butylbenzene	ND	0.00088	EPA 8260C	7-26-18	7-26-18	
1,3-Dichlorobenzene	ND	0.00088	EPA 8260C	7-26-18	7-26-18	
p-Isopropyltoluene	ND	0.00088	EPA 8260C	7-26-18	7-26-18	
1,4-Dichlorobenzene	ND	0.00088	EPA 8260C	7-26-18	7-26-18	
1,2-Dichlorobenzene	ND	0.00088	EPA 8260C	7-26-18	7-26-18	
n-Butylbenzene	ND	0.00088	EPA 8260C	7-26-18	7-26-18	
1,2-Dibromo-3-chloropropane	ND	0.0044	EPA 8260C	7-26-18	7-26-18	
1,2,4-Trichlorobenzene	ND	0.00088	EPA 8260C	7-26-18	7-26-18	
Hexachlorobutadiene	ND	0.0044	EPA 8260C	7-26-18	7-26-18	
Naphthalene	ND	0.00088	EPA 8260C	7-26-18	7-26-18	
1,2,3-Trichlorobenzene	ND	0.00088	EPA 8260C	7-26-18	7-26-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>97</i>	<i>68-139</i>				
<i>Toluene-d8</i>	<i>102</i>	<i>79-128</i>				
<i>4-Bromofluorobenzene</i>	<i>97</i>	<i>71-132</i>				



Date of Report: August 3, 2018  
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 Laboratory Reference: 1807-179  
 Project: 4082-039-01

**VOLATILE ORGANICS 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>FL207-B25-6-7</b>				
<b>Laboratory ID:</b>		<b>07-179-16</b>				
Dichlorodifluoromethane	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Chloromethane	ND	0.0052	EPA 8260C	7-26-18	7-26-18	
Vinyl Chloride	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Bromomethane	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Chloroethane	ND	0.0052	EPA 8260C	7-26-18	7-26-18	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Acetone	ND	0.010	EPA 8260C	7-26-18	7-26-18	
Iodomethane	ND	0.0052	EPA 8260C	7-26-18	7-26-18	
Carbon Disulfide	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Methylene Chloride	ND	0.0052	EPA 8260C	7-26-18	7-26-18	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Vinyl Acetate	ND	0.0052	EPA 8260C	7-26-18	7-26-18	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
2-Butanone	ND	0.0052	EPA 8260C	7-26-18	7-26-18	
Bromochloromethane	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Chloroform	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Benzene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Trichloroethene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Dibromomethane	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Bromodichloromethane	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
2-Chloroethyl Vinyl Ether	ND	0.0052	EPA 8260C	7-26-18	7-26-18	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Methyl Isobutyl Ketone	ND	0.0052	EPA 8260C	7-26-18	7-26-18	
Toluene	ND	0.0052	EPA 8260C	7-26-18	7-26-18	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	



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: August 3, 2018  
 Samples Submitted: July 25, 2018  
 Laboratory Reference: 1807-179  
 Project: 4082-039-01

**VOLATILE ORGANICS EPA 8260C**  
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL207-B25-6-7</b>					
Laboratory ID:	07-179-16					
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Tetrachloroethene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
2-Hexanone	ND	0.0052	EPA 8260C	7-26-18	7-26-18	
Dibromochloromethane	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Chlorobenzene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Ethylbenzene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
m,p-Xylene	ND	0.0021	EPA 8260C	7-26-18	7-26-18	
o-Xylene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Styrene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Bromoform	ND	0.0052	EPA 8260C	7-26-18	7-26-18	
Isopropylbenzene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Bromobenzene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
n-Propylbenzene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
2-Chlorotoluene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
4-Chlorotoluene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
1,3,5-Trimethylbenzene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
tert-Butylbenzene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
1,2,4-Trimethylbenzene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
sec-Butylbenzene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
p-Isopropyltoluene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
n-Butylbenzene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
1,2-Dibromo-3-chloropropane	ND	0.0052	EPA 8260C	7-26-18	7-26-18	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Hexachlorobutadiene	ND	0.0052	EPA 8260C	7-26-18	7-26-18	
Naphthalene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>100</i>	<i>68-139</i>				
<i>Toluene-d8</i>	<i>100</i>	<i>79-128</i>				
<i>4-Bromofluorobenzene</i>	<i>98</i>	<i>71-132</i>				



Date of Report: August 3, 2018  
 Samples Submitted: July 25, 2018  
 Laboratory Reference: 1807-179  
 Project: 4082-039-01

**VOLATILE ORGANICS 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>FL207-B26-7-8</b>				
<b>Laboratory ID:</b>		<b>07-179-21</b>				
Dichlorodifluoromethane	ND	0.0012	EPA 8260C	7-26-18	7-26-18	
Chloromethane	ND	0.0060	EPA 8260C	7-26-18	7-26-18	
Vinyl Chloride	ND	0.0012	EPA 8260C	7-26-18	7-26-18	
Bromomethane	ND	0.0012	EPA 8260C	7-26-18	7-26-18	
Chloroethane	ND	0.0060	EPA 8260C	7-26-18	7-26-18	
Trichlorofluoromethane	ND	0.0012	EPA 8260C	7-26-18	7-26-18	
1,1-Dichloroethene	ND	0.0012	EPA 8260C	7-26-18	7-26-18	
Acetone	ND	0.012	EPA 8260C	7-26-18	7-26-18	
Iodomethane	ND	0.0060	EPA 8260C	7-26-18	7-26-18	
Carbon Disulfide	ND	0.0012	EPA 8260C	7-26-18	7-26-18	
Methylene Chloride	ND	0.0060	EPA 8260C	7-26-18	7-26-18	
(trans) 1,2-Dichloroethene	ND	0.0012	EPA 8260C	7-26-18	7-26-18	
Methyl t-Butyl Ether	ND	0.0012	EPA 8260C	7-26-18	7-26-18	
1,1-Dichloroethane	ND	0.0012	EPA 8260C	7-26-18	7-26-18	
Vinyl Acetate	ND	0.0060	EPA 8260C	7-26-18	7-26-18	
2,2-Dichloropropane	ND	0.0012	EPA 8260C	7-26-18	7-26-18	
(cis) 1,2-Dichloroethene	ND	0.0012	EPA 8260C	7-26-18	7-26-18	
2-Butanone	ND	0.0060	EPA 8260C	7-26-18	7-26-18	
Bromochloromethane	ND	0.0012	EPA 8260C	7-26-18	7-26-18	
Chloroform	ND	0.0012	EPA 8260C	7-26-18	7-26-18	
1,1,1-Trichloroethane	ND	0.0012	EPA 8260C	7-26-18	7-26-18	
Carbon Tetrachloride	ND	0.0012	EPA 8260C	7-26-18	7-26-18	
1,1-Dichloropropene	ND	0.0012	EPA 8260C	7-26-18	7-26-18	
Benzene	ND	0.0012	EPA 8260C	7-26-18	7-26-18	
1,2-Dichloroethane	ND	0.0012	EPA 8260C	7-26-18	7-26-18	
Trichloroethene	ND	0.0012	EPA 8260C	7-26-18	7-26-18	
1,2-Dichloropropane	ND	0.0012	EPA 8260C	7-26-18	7-26-18	
Dibromomethane	ND	0.0012	EPA 8260C	7-26-18	7-26-18	
Bromodichloromethane	ND	0.0012	EPA 8260C	7-26-18	7-26-18	
2-Chloroethyl Vinyl Ether	ND	0.0060	EPA 8260C	7-26-18	7-26-18	
(cis) 1,3-Dichloropropene	ND	0.0012	EPA 8260C	7-26-18	7-26-18	
Methyl Isobutyl Ketone	ND	0.0060	EPA 8260C	7-26-18	7-26-18	
Toluene	ND	0.0060	EPA 8260C	7-26-18	7-26-18	
(trans) 1,3-Dichloropropene	ND	0.0012	EPA 8260C	7-26-18	7-26-18	



Date of Report: August 3, 2018  
 Samples Submitted: July 25, 2018  
 Laboratory Reference: 1807-179  
 Project: 4082-039-01

**VOLATILE ORGANICS EPA 8260C**  
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL207-B26-7-8</b>					
Laboratory ID:	07-179-21					
1,1,2-Trichloroethane	ND	0.0012	EPA 8260C	7-26-18	7-26-18	
Tetrachloroethene	ND	0.0012	EPA 8260C	7-26-18	7-26-18	
1,3-Dichloropropane	ND	0.0012	EPA 8260C	7-26-18	7-26-18	
2-Hexanone	ND	0.0060	EPA 8260C	7-26-18	7-26-18	
Dibromochloromethane	ND	0.0012	EPA 8260C	7-26-18	7-26-18	
1,2-Dibromoethane	ND	0.0012	EPA 8260C	7-26-18	7-26-18	
Chlorobenzene	ND	0.0012	EPA 8260C	7-26-18	7-26-18	
1,1,1,2-Tetrachloroethane	ND	0.0012	EPA 8260C	7-26-18	7-26-18	
Ethylbenzene	ND	0.0012	EPA 8260C	7-26-18	7-26-18	
m,p-Xylene	ND	0.0024	EPA 8260C	7-26-18	7-26-18	
o-Xylene	ND	0.0012	EPA 8260C	7-26-18	7-26-18	
Styrene	ND	0.0012	EPA 8260C	7-26-18	7-26-18	
Bromoform	ND	0.0060	EPA 8260C	7-26-18	7-26-18	
Isopropylbenzene	ND	0.0012	EPA 8260C	7-26-18	7-26-18	
Bromobenzene	ND	0.0012	EPA 8260C	7-26-18	7-26-18	
1,1,2,2-Tetrachloroethane	ND	0.0012	EPA 8260C	7-26-18	7-26-18	
1,2,3-Trichloropropane	ND	0.0012	EPA 8260C	7-26-18	7-26-18	
n-Propylbenzene	ND	0.0012	EPA 8260C	7-26-18	7-26-18	
2-Chlorotoluene	ND	0.0012	EPA 8260C	7-26-18	7-26-18	
4-Chlorotoluene	ND	0.0012	EPA 8260C	7-26-18	7-26-18	
1,3,5-Trimethylbenzene	ND	0.0012	EPA 8260C	7-26-18	7-26-18	
tert-Butylbenzene	ND	0.0012	EPA 8260C	7-26-18	7-26-18	
1,2,4-Trimethylbenzene	ND	0.0012	EPA 8260C	7-26-18	7-26-18	
sec-Butylbenzene	ND	0.0012	EPA 8260C	7-26-18	7-26-18	
1,3-Dichlorobenzene	ND	0.0012	EPA 8260C	7-26-18	7-26-18	
p-Isopropyltoluene	ND	0.0012	EPA 8260C	7-26-18	7-26-18	
1,4-Dichlorobenzene	ND	0.0012	EPA 8260C	7-26-18	7-26-18	
1,2-Dichlorobenzene	ND	0.0012	EPA 8260C	7-26-18	7-26-18	
n-Butylbenzene	ND	0.0012	EPA 8260C	7-26-18	7-26-18	
1,2-Dibromo-3-chloropropane	ND	0.0060	EPA 8260C	7-26-18	7-26-18	
1,2,4-Trichlorobenzene	ND	0.0012	EPA 8260C	7-26-18	7-26-18	
Hexachlorobutadiene	ND	0.0060	EPA 8260C	7-26-18	7-26-18	
Naphthalene	ND	0.0012	EPA 8260C	7-26-18	7-26-18	
1,2,3-Trichlorobenzene	ND	0.0012	EPA 8260C	7-26-18	7-26-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	98	68-139				
<i>Toluene-d8</i>	100	79-128				
<i>4-Bromofluorobenzene</i>	97	71-132				



Date of Report: August 3, 2018  
 Samples Submitted: July 25, 2018  
 Laboratory Reference: 1807-179  
 Project: 4082-039-01

**TOTAL METALS  
 EPA 6010D**

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL207-B17-0-0.5</b>					
Laboratory ID:	07-179-01					
Arsenic	ND	5.3	EPA 6010D	7-27-18	7-27-18	
Lead	ND	5.3	EPA 6010D	7-27-18	7-27-18	

<b>Client ID:</b>	<b>FL207-B17-0.5-1</b>					
Laboratory ID:	07-179-02					
Arsenic	ND	5.3	EPA 6010D	7-27-18	7-27-18	
Lead	ND	5.3	EPA 6010D	7-27-18	7-27-18	

<b>Client ID:</b>	<b>FL207-B24-0-0.5</b>					
Laboratory ID:	07-179-08					
Arsenic	ND	5.1	EPA 6010D	7-27-18	7-27-18	
Lead	12	5.1	EPA 6010D	7-27-18	7-27-18	

<b>Client ID:</b>	<b>FL207-B25-0-0.5</b>					
Laboratory ID:	07-179-13					
Arsenic	ND	5.5	EPA 6010D	7-27-18	7-27-18	
Lead	ND	5.5	EPA 6010D	7-27-18	7-27-18	

<b>Client ID:</b>	<b>FL207-B25-0.5-1</b>					
Laboratory ID:	07-179-14					
Arsenic	ND	6.0	EPA 6010D	7-27-18	7-27-18	
Lead	ND	6.0	EPA 6010D	7-27-18	7-27-18	

<b>Client ID:</b>	<b>FL207-B26-0-0.5</b>					
Laboratory ID:	07-179-17					
Arsenic	ND	5.3	EPA 6010D	7-27-18	7-27-18	
Lead	ND	5.3	EPA 6010D	7-27-18	7-27-18	

<b>Client ID:</b>	<b>FL207-B26-0.5-1</b>					
Laboratory ID:	07-179-18					
Arsenic	ND	5.4	EPA 6010D	7-27-18	7-27-18	
Lead	ND	5.4	EPA 6010D	7-27-18	7-27-18	





Date of Report: August 3, 2018  
 Samples Submitted: July 25, 2018  
 Laboratory Reference: 1807-179  
 Project: 4082-039-01

**HYDROCARBON IDENTIFICATION  
 NWTPH-HCID  
 QUALITY CONTROL**

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB0726S2					
Gasoline Range Organics	<b>ND</b>	20	NWTPH-HCID	7-26-18	7-26-18	
Diesel Range Organics	<b>ND</b>	50	NWTPH-HCID	7-26-18	7-26-18	
Lube Oil Range Organics	<b>ND</b>	100	NWTPH-HCID	7-26-18	7-26-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	97	50-150				



Date of Report: August 3, 2018  
 Samples Submitted: July 25, 2018  
 Laboratory Reference: 1807-179  
 Project: 4082-039-01

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

Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<hr/>						
Laboratory ID:	MB0726S1					
Dichlorodifluoromethane	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Chloromethane	ND	0.0050	EPA 8260C	7-26-18	7-26-18	
Vinyl Chloride	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Bromomethane	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Chloroethane	ND	0.0050	EPA 8260C	7-26-18	7-26-18	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Acetone	ND	0.010	EPA 8260C	7-26-18	7-26-18	
Iodomethane	ND	0.0050	EPA 8260C	7-26-18	7-26-18	
Carbon Disulfide	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Methylene Chloride	ND	0.0050	EPA 8260C	7-26-18	7-26-18	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Vinyl Acetate	ND	0.0050	EPA 8260C	7-26-18	7-26-18	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
2-Butanone	ND	0.0050	EPA 8260C	7-26-18	7-26-18	
Bromochloromethane	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Chloroform	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Benzene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Trichloroethene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Dibromomethane	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Bromodichloromethane	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260C	7-26-18	7-26-18	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Methyl Isobutyl Ketone	ND	0.0050	EPA 8260C	7-26-18	7-26-18	
Toluene	ND	0.0050	EPA 8260C	7-26-18	7-26-18	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	



Date of Report: August 3, 2018  
 Samples Submitted: July 25, 2018  
 Laboratory Reference: 1807-179  
 Project: 4082-039-01

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

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID: MB0726S1						
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Tetrachloroethene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
2-Hexanone	ND	0.0050	EPA 8260C	7-26-18	7-26-18	
Dibromochloromethane	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Chlorobenzene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Ethylbenzene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
m,p-Xylene	ND	0.0020	EPA 8260C	7-26-18	7-26-18	
o-Xylene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Styrene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Bromoform	ND	0.0050	EPA 8260C	7-26-18	7-26-18	
Isopropylbenzene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Bromobenzene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
n-Propylbenzene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
2-Chlorotoluene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
4-Chlorotoluene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
1,3,5-Trimethylbenzene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
tert-Butylbenzene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
1,2,4-Trimethylbenzene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
sec-Butylbenzene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
p-Isopropyltoluene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
n-Butylbenzene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260C	7-26-18	7-26-18	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Hexachlorobutadiene	ND	0.0050	EPA 8260C	7-26-18	7-26-18	
Naphthalene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>99</i>	<i>68-139</i>				
<i>Toluene-d8</i>	<i>100</i>	<i>79-128</i>				
<i>4-Bromofluorobenzene</i>	<i>96</i>	<i>71-132</i>				



Date of Report: August 3, 2018  
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 Laboratory Reference: 1807-179  
 Project: 4082-039-01

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

Matrix: Soil  
 Units: mg/kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits		RPD	Flags
					Recovery				RPD	
SPIKE BLANKS										
Laboratory ID:	SB0726S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	0.0491	0.0477	0.0500	0.0500	98	95	53-141	3	17	
Benzene	0.0474	0.0473	0.0500	0.0500	95	95	70-130	0	15	
Trichloroethene	0.0465	0.0447	0.0500	0.0500	93	89	74-122	4	16	
Toluene	0.0468	0.0454	0.0500	0.0500	94	91	76-130	3	15	
Chlorobenzene	0.0432	0.0423	0.0500	0.0500	86	85	75-120	2	14	
Surrogate:										
Dibromofluoromethane					102	99	68-139			
Toluene-d8					100	98	79-128			
4-Bromofluorobenzene					100	97	71-132			



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 Samples Submitted: July 25, 2018  
 Laboratory Reference: 1807-179  
 Project: 4082-039-01

**TOTAL METALS  
 EPA 6010D  
 QUALITY CONTROL**

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB0727SM2					
Arsenic	ND	5.0	EPA 6010D	7-27-18	7-27-18	
Lead	ND	5.0	EPA 6010D	7-27-18	7-27-18	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
<b>DUPLICATE</b>								
Laboratory ID:	07-179-08							
	ORIG	DUP						
Arsenic	ND	ND	NA	NA	NA	NA	20	
Lead	11.3	12.9	NA	NA	NA	13	20	

**MATRIX SPIKES**

Laboratory ID:	07-179-08									
	MS	MSD	MS	MSD		MS	MSD			
Arsenic	91.3	83.8	100	100	ND	91	84	75-125	9	20
Lead	247	249	250	250	11.3	94	95	75-125	1	20



Date of Report: August 3, 2018  
 Samples Submitted: July 25, 2018  
 Laboratory Reference: 1807-179  
 Project: 4082-039-01

### % MOISTURE

Date Analyzed: 7-26&27-18

Client ID	Lab ID	% Moisture
FL207-B17-0-0.5	07-179-01	6
FL207-B17-0.5-1	07-179-02	6
FL207-B17-2.5-3.5	07-179-03	10
FL207-B17-7-8	07-179-05	8
FL207-B17-12-13	07-179-07	7
FL207-B24-0-0.5	07-179-08	3
FL207-B24-5-6	07-179-10	20
FL207-B24-11-12	07-179-12	9
FL207-B25-0-0.5	07-179-13	10
FL207-B25-0.5-1	07-179-14	17
FL207-B25-6-7	07-179-16	7
FL207-B26-0-0.5	07-179-17	6
FL207-B26-0.5-1	07-179-18	7
FL207-B26-7-8	07-179-21	7





### 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 3

Turnaround Request (in working days)				Laboratory Number: <b>07-179</b>																				
(Check One)																								
<input type="checkbox"/> Same Day <input type="checkbox"/> 1 Day																								
<input type="checkbox"/> 2 Days <input type="checkbox"/> 3 Days																								
<input checked="" type="checkbox"/> Standard (7 Days) (TPH analysis 5 Days)																								
<input type="checkbox"/> _____ (other)																								
Company:	GEI	Project Number:	4082-039-01	Project Name:	FWUE																			
Project Manager:	Marsi Beeson																							
Sampled by:	Cdg																							
Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers																			
1	FL207-B17-C-0.5	7/25/18	832	S	5	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 As, Pb	% Moisture
2	FL207-B17-0.5-1		835																					
3	FL207-B17-2.5-3.5		845																					
4	FL207-B17-5-6		855																					
5	FL207-B17-7-8		857																					
6	FL207-B17-10-11		960																					
7	FL207-B17-12-13		905																					
8	FL207-B24-0-0.5		952																					
9	FL207-B24-2.5-3.5		955																					
10	FL207-B24-5-6		1005																					
Relinquished	Signature	Company	Date	Time	Comments/Special Instructions																			
Relinquished		GEI	7/25/18	1325	Added 7/26/18. DB (574)																			
Received		QBE	7/25/18	1325	AS-7 ppm																			
Relinquished																								
Received																								
Relinquished																								
Received																								
Relinquished																								
Received																								
Relinquished																								
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"/>																			





**MVA Onsite  
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## Chain of Custody

Page 2 of 3

Company: <u>GE7</u>		<b>Turnaround Request</b> (in working days)																
Project Number: <u>4082-039-01</u>		<input type="checkbox"/> Same Day <input type="checkbox"/> 1 Day																
Project Name: <u>FWLE</u>		<input type="checkbox"/> 2 Days <input type="checkbox"/> 3 Days																
Project Manager: <u>Marsi Beeson</u>		<input checked="" type="checkbox"/> Standard (7 Days) (TPH analysis 5 Days)																
Sampled by: <u>CA6</u>		<input type="checkbox"/> (other) _____																
Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers													
11	FL207-B24-7.5-8.5	7/25/18	1016	S	5													
12	FL207-B24-11-12		1015		1													
13	FL207-B25-0-0.5		1040		1													
14	FL207-B25-0.5-1		1043		1													
15	FL207-B25-2.5-3.5		1050		1													
16	FL207-B25-6-7		1055		1													
17	FL207-B26-0-0.5		1115		1													
18	FL207-B26-0.5-1		1117		1													
19	FL207-B26-2.5-3.5		1120		1													
20	FL207-B26-5-6		1125		1													
Signature: <u>[Signature]</u>		Company: <u>GE7</u>		Date: <u>7/25/18</u>	Time: <u>1325</u>	Comments/Special Instructions												
Relinquished		Relinquished																
Received		Received																
Relinquished		Relinquished																
Received		Received																
Relinquished		Relinquished																
Received		Received																
Relinquished		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"/>												

Laboratory Number: **07-179**

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 As, Pb	
% Moisture	





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# Chain of Custody

Page 3 of 3

Turnaround Request  
(in working days)

(Check One)

☐ Same Day ☐ 1 Day

☐ 2 Days ☐ 3 Days

☒ Standard (7 Days)  
(T/PH analysis 5 Days)

☐ \_\_\_\_\_ (other)

Laboratory Number: **07-179**

Company: GEI  
Project Number: 4082-039-01  
Project Name: FWE  
Project Manager: Marsi Beeson  
Sampled by: CDG

Lab ID: PC207-026-7-8

Number of Containers

Date Sampled: 7/25/18 Time Sampled: 1130 Matrix: S

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

Signature

Company

Date

Time

Comments/Special Instructions

Relinquished

Received

Relinquished

Received

Relinquished

Received

Reviewed/Date

GEI  
7/25/18 1325

GEI  
08E

Data Package: Standard ☐ Level III ☐ Level IV ☐

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



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August 3, 2018

Marsi Beeson  
GeoEngineers, Inc.  
12000 NW Naito Parkway, Suite 180  
Portland, OR 97209

Re: Analytical Data for Project 4082-039-01  
Laboratory Reference No. 1807-167

Dear Marsi:

Enclosed are the analytical results and associated quality control data for samples submitted on July 24, 2018.

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

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

Sincerely,

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

David Baumeister  
Project Manager

Enclosures



OnSite Environmental, Inc. 14648 NE 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: August 3, 2018  
Samples Submitted: July 24, 2018  
Laboratory Reference: 1807-167  
Project: 4082-039-01

### **Case Narrative**

Samples were collected on July 24, 2018 and received by the laboratory on July 24, 2018. They were maintained at the laboratory at a temperature of 2°C to 6°C.

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

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



Date of Report: August 3, 2018  
Samples Submitted: July 24, 2018  
Laboratory Reference: 1807-167  
Project: 4082-039-01

#### ANALYTICAL REPORT FOR SAMPLES

Client ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
FL207-B19-0-0.5	07-167-01	Soil	7-24-18	7-24-18	
FL207-B19-5-6	07-167-02	Soil	7-24-18	7-24-18	
FL207-B19-10-11	07-167-04	Soil	7-24-18	7-24-18	
FL207-B19-15-15.5	07-167-06	Soil	7-24-18	7-24-18	
FL207-B19-17.5	07-167-07	Soil	7-24-18	7-24-18	
FL207-B19-20.0	07-167-08	Soil	7-24-18	7-24-18	
FL207-B19-22.5-30	07-167-09	Soil	7-24-18	7-24-18	
FL207-B19-25-25.5	07-167-10	Soil	7-24-18	7-24-18	
FL207-B19-30-30.5	07-167-12	Soil	7-24-18	7-24-18	
FL207-B20-5-6	07-167-13	Soil	7-24-18	7-24-18	
FL207-B20-12.5-13.5	07-167-16	Soil	7-24-18	7-24-18	
FL207-B20-20-20.5	07-167-19	Soil	7-24-18	7-24-18	
FL207-B20-30-30.5	07-167-22	Soil	7-24-18	7-24-18	



Date of Report: August 3, 2018  
 Samples Submitted: July 24, 2018  
 Laboratory Reference: 1807-167  
 Project: 4082-039-01

### HYDROCARBON IDENTIFICATION NWTPH-HCID

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL207-B19-5-6</b>					
<b>Laboratory ID:</b>	07-167-02					
Gasoline Range Organics	ND	22	NWTPH-HCID	7-26-18	7-26-18	
Diesel Range Organics	ND	54	NWTPH-HCID	7-26-18	7-26-18	
Lube Oil Range Organics	ND	110	NWTPH-HCID	7-26-18	7-26-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	93	50-150				

<b>Client ID:</b>	<b>FL207-B19-10-11</b>					
<b>Laboratory ID:</b>	07-167-04					
Gasoline Range Organics	ND	22	NWTPH-HCID	7-26-18	7-27-18	
Diesel Range Organics	ND	54	NWTPH-HCID	7-26-18	7-27-18	
Lube Oil Range Organics	ND	110	NWTPH-HCID	7-26-18	7-27-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	92	50-150				

<b>Client ID:</b>	<b>FL207-B19-15-15.5</b>					
<b>Laboratory ID:</b>	07-167-06					
Gasoline Range Organics	ND	22	NWTPH-HCID	7-26-18	7-26-18	
Diesel Range Organics	ND	55	NWTPH-HCID	7-26-18	7-26-18	
Lube Oil Range Organics	ND	110	NWTPH-HCID	7-26-18	7-26-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	97	50-150				

<b>Client ID:</b>	<b>FL207-B19-17.5</b>					
<b>Laboratory ID:</b>	07-167-07					
Gasoline Range Organics	ND	22	NWTPH-HCID	7-26-18	7-26-18	
Diesel Range Organics	ND	56	NWTPH-HCID	7-26-18	7-26-18	
Lube Oil Range Organics	ND	110	NWTPH-HCID	7-26-18	7-26-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	97	50-150				

<b>Client ID:</b>	<b>FL207-B19-20.0</b>					
<b>Laboratory ID:</b>	07-167-08					
Gasoline Range Organics	ND	21	NWTPH-HCID	7-26-18	7-26-18	
Diesel Range Organics	ND	53	NWTPH-HCID	7-26-18	7-26-18	
Lube Oil Range Organics	ND	110	NWTPH-HCID	7-26-18	7-26-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	96	50-150				





Date of Report: August 3, 2018  
 Samples Submitted: July 24, 2018  
 Laboratory Reference: 1807-167  
 Project: 4082-039-01

### HYDROCARBON IDENTIFICATION NWTPH-HCID

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL207-B19-22.5-30</b>					
Laboratory ID:	07-167-09					
Gasoline Range Organics	ND	21	NWTPH-HCID	7-26-18	7-26-18	
Diesel Range Organics	ND	53	NWTPH-HCID	7-26-18	7-26-18	
Lube Oil Range Organics	ND	110	NWTPH-HCID	7-26-18	7-26-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	97	50-150				

<b>Client ID:</b>	<b>FL207-B19-25-25.5</b>					
Laboratory ID:	07-167-10					
Gasoline Range Organics	ND	22	NWTPH-HCID	7-26-18	7-26-18	
Diesel Range Organics	ND	54	NWTPH-HCID	7-26-18	7-26-18	
Lube Oil Range Organics	ND	110	NWTPH-HCID	7-26-18	7-26-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	93	50-150				

<b>Client ID:</b>	<b>FL207-B19-30-30.5</b>					
Laboratory ID:	07-167-12					
Gasoline Range Organics	ND	21	NWTPH-HCID	7-26-18	7-26-18	
Diesel Range Organics	ND	54	NWTPH-HCID	7-26-18	7-26-18	
Lube Oil Range Organics	ND	110	NWTPH-HCID	7-26-18	7-26-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	97	50-150				

<b>Client ID:</b>	<b>FL207-B20-5-6</b>					
Laboratory ID:	07-167-13					
Gasoline Range Organics	ND	21	NWTPH-HCID	7-26-18	7-26-18	
Diesel Range Organics	ND	54	NWTPH-HCID	7-26-18	7-26-18	
Lube Oil Range Organics	ND	110	NWTPH-HCID	7-26-18	7-26-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	99	50-150				

<b>Client ID:</b>	<b>FL207-B20-12.5-13.5</b>					
Laboratory ID:	07-167-16					
Gasoline Range Organics	ND	22	NWTPH-HCID	7-26-18	7-26-18	
Diesel Range Organics	ND	56	NWTPH-HCID	7-26-18	7-26-18	
Lube Oil Range Organics	ND	110	NWTPH-HCID	7-26-18	7-26-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	96	50-150				



Date of Report: August 3, 2018  
 Samples Submitted: July 24, 2018  
 Laboratory Reference: 1807-167  
 Project: 4082-039-01

### HYDROCARBON IDENTIFICATION NWTPH-HCID

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL207-B20-20-20.5</b>					
Laboratory ID:	07-167-19					
Gasoline Range Organics	ND	24	NWTPH-HCID	7-26-18	7-26-18	
Diesel Range Organics	ND	60	NWTPH-HCID	7-26-18	7-26-18	
Lube Oil Range Organics	ND	120	NWTPH-HCID	7-26-18	7-26-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	91	50-150				

<b>Client ID:</b>	<b>FL207-B20-30-30.5</b>					
Laboratory ID:	07-167-22					
Gasoline Range Organics	ND	21	NWTPH-HCID	7-26-18	7-26-18	
Diesel Range Organics	ND	53	NWTPH-HCID	7-26-18	7-26-18	
Lube Oil Range Organics	ND	110	NWTPH-HCID	7-26-18	7-26-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	91	50-150				



Date of Report: August 3, 2018  
 Samples Submitted: July 24, 2018  
 Laboratory Reference: 1807-167  
 Project: 4082-039-01

**VOLATILE ORGANICS 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>FL207-B19-5-6</b>				
<b>Laboratory ID:</b>		<b>07-167-02</b>				
Dichlorodifluoromethane	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Chloromethane	ND	0.0052	EPA 8260C	7-26-18	7-26-18	
Vinyl Chloride	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Bromomethane	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Chloroethane	ND	0.0052	EPA 8260C	7-26-18	7-26-18	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Acetone	ND	0.010	EPA 8260C	7-26-18	7-26-18	
Iodomethane	ND	0.0052	EPA 8260C	7-26-18	7-26-18	
Carbon Disulfide	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Methylene Chloride	ND	0.0052	EPA 8260C	7-26-18	7-26-18	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Vinyl Acetate	ND	0.0052	EPA 8260C	7-26-18	7-26-18	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
2-Butanone	ND	0.0052	EPA 8260C	7-26-18	7-26-18	
Bromochloromethane	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Chloroform	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Benzene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Trichloroethene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Dibromomethane	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Bromodichloromethane	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
2-Chloroethyl Vinyl Ether	ND	0.0052	EPA 8260C	7-26-18	7-26-18	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Methyl Isobutyl Ketone	ND	0.0052	EPA 8260C	7-26-18	7-26-18	
Toluene	ND	0.0052	EPA 8260C	7-26-18	7-26-18	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	



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: August 3, 2018  
 Samples Submitted: July 24, 2018  
 Laboratory Reference: 1807-167  
 Project: 4082-039-01

**VOLATILE ORGANICS EPA 8260C**  
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL207-B19-5-6</b>					
Laboratory ID:	07-167-02					
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Tetrachloroethene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
2-Hexanone	ND	0.0052	EPA 8260C	7-26-18	7-26-18	
Dibromochloromethane	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Chlorobenzene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Ethylbenzene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
m,p-Xylene	ND	0.0021	EPA 8260C	7-26-18	7-26-18	
o-Xylene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Styrene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Bromoform	ND	0.0052	EPA 8260C	7-26-18	7-26-18	
Isopropylbenzene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Bromobenzene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
n-Propylbenzene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
2-Chlorotoluene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
4-Chlorotoluene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
1,3,5-Trimethylbenzene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
tert-Butylbenzene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
1,2,4-Trimethylbenzene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
sec-Butylbenzene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
p-Isopropyltoluene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
n-Butylbenzene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
1,2-Dibromo-3-chloropropane	ND	0.0052	EPA 8260C	7-26-18	7-26-18	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Hexachlorobutadiene	ND	0.0052	EPA 8260C	7-26-18	7-26-18	
Naphthalene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>102</i>	<i>68-139</i>				
<i>Toluene-d8</i>	<i>101</i>	<i>79-128</i>				
<i>4-Bromofluorobenzene</i>	<i>98</i>	<i>71-132</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: August 3, 2018  
 Samples Submitted: July 24, 2018  
 Laboratory Reference: 1807-167  
 Project: 4082-039-01

**VOLATILE ORGANICS 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>FL207-B19-10-11</b>				
<b>Laboratory ID:</b>		<b>07-167-04</b>				
Dichlorodifluoromethane	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Chloromethane	ND	0.0051	EPA 8260C	7-26-18	7-26-18	
Vinyl Chloride	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Bromomethane	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Chloroethane	ND	0.0051	EPA 8260C	7-26-18	7-26-18	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Acetone	ND	0.010	EPA 8260C	7-26-18	7-26-18	
Iodomethane	ND	0.0051	EPA 8260C	7-26-18	7-26-18	
Carbon Disulfide	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Methylene Chloride	ND	0.0051	EPA 8260C	7-26-18	7-26-18	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Vinyl Acetate	ND	0.0051	EPA 8260C	7-26-18	7-26-18	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
2-Butanone	ND	0.0051	EPA 8260C	7-26-18	7-26-18	
Bromochloromethane	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Chloroform	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Benzene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Trichloroethene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Dibromomethane	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Bromodichloromethane	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
2-Chloroethyl Vinyl Ether	ND	0.0051	EPA 8260C	7-26-18	7-26-18	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Methyl Isobutyl Ketone	ND	0.0051	EPA 8260C	7-26-18	7-26-18	
Toluene	ND	0.0051	EPA 8260C	7-26-18	7-26-18	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	



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Date of Report: August 3, 2018  
 Samples Submitted: July 24, 2018  
 Laboratory Reference: 1807-167  
 Project: 4082-039-01

**VOLATILE ORGANICS EPA 8260C**  
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>		<b>FL207-B19-10-11</b>				
Laboratory ID:		07-167-04				
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Tetrachloroethene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
2-Hexanone	ND	0.0051	EPA 8260C	7-26-18	7-26-18	
Dibromochloromethane	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Chlorobenzene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Ethylbenzene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
m,p-Xylene	ND	0.0020	EPA 8260C	7-26-18	7-26-18	
o-Xylene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Styrene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Bromoform	ND	0.0051	EPA 8260C	7-26-18	7-26-18	
Isopropylbenzene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Bromobenzene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
n-Propylbenzene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
2-Chlorotoluene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
4-Chlorotoluene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
1,3,5-Trimethylbenzene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
tert-Butylbenzene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
1,2,4-Trimethylbenzene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
sec-Butylbenzene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
p-Isopropyltoluene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
n-Butylbenzene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
1,2-Dibromo-3-chloropropane	ND	0.0051	EPA 8260C	7-26-18	7-26-18	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Hexachlorobutadiene	ND	0.0051	EPA 8260C	7-26-18	7-26-18	
Naphthalene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	99	68-139				
<i>Toluene-d8</i>	99	79-128				
<i>4-Bromofluorobenzene</i>	94	71-132				



Date of Report: August 3, 2018  
 Samples Submitted: July 24, 2018  
 Laboratory Reference: 1807-167  
 Project: 4082-039-01

**VOLATILE ORGANICS 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>FL207-B20-5-6</b>				
<b>Laboratory ID:</b>		<b>07-167-13</b>				
Dichlorodifluoromethane	ND	0.00085	EPA 8260C	7-26-18	7-26-18	
Chloromethane	ND	0.0043	EPA 8260C	7-26-18	7-26-18	
Vinyl Chloride	ND	0.00085	EPA 8260C	7-26-18	7-26-18	
Bromomethane	ND	0.00085	EPA 8260C	7-26-18	7-26-18	
Chloroethane	ND	0.0043	EPA 8260C	7-26-18	7-26-18	
Trichlorofluoromethane	ND	0.00085	EPA 8260C	7-26-18	7-26-18	
1,1-Dichloroethene	ND	0.00085	EPA 8260C	7-26-18	7-26-18	
Acetone	ND	0.0085	EPA 8260C	7-26-18	7-26-18	
Iodomethane	ND	0.0043	EPA 8260C	7-26-18	7-26-18	
Carbon Disulfide	ND	0.00085	EPA 8260C	7-26-18	7-26-18	
Methylene Chloride	ND	0.0043	EPA 8260C	7-26-18	7-26-18	
(trans) 1,2-Dichloroethene	ND	0.00085	EPA 8260C	7-26-18	7-26-18	
Methyl t-Butyl Ether	ND	0.00085	EPA 8260C	7-26-18	7-26-18	
1,1-Dichloroethane	ND	0.00085	EPA 8260C	7-26-18	7-26-18	
Vinyl Acetate	ND	0.0043	EPA 8260C	7-26-18	7-26-18	
2,2-Dichloropropane	ND	0.00085	EPA 8260C	7-26-18	7-26-18	
(cis) 1,2-Dichloroethene	ND	0.00085	EPA 8260C	7-26-18	7-26-18	
2-Butanone	ND	0.0043	EPA 8260C	7-26-18	7-26-18	
Bromochloromethane	ND	0.00085	EPA 8260C	7-26-18	7-26-18	
Chloroform	ND	0.00085	EPA 8260C	7-26-18	7-26-18	
1,1,1-Trichloroethane	ND	0.00085	EPA 8260C	7-26-18	7-26-18	
Carbon Tetrachloride	ND	0.00085	EPA 8260C	7-26-18	7-26-18	
1,1-Dichloropropene	ND	0.00085	EPA 8260C	7-26-18	7-26-18	
Benzene	ND	0.00085	EPA 8260C	7-26-18	7-26-18	
1,2-Dichloroethane	ND	0.00085	EPA 8260C	7-26-18	7-26-18	
Trichloroethene	ND	0.00085	EPA 8260C	7-26-18	7-26-18	
1,2-Dichloropropane	ND	0.00085	EPA 8260C	7-26-18	7-26-18	
Dibromomethane	ND	0.00085	EPA 8260C	7-26-18	7-26-18	
Bromodichloromethane	ND	0.00085	EPA 8260C	7-26-18	7-26-18	
2-Chloroethyl Vinyl Ether	ND	0.0043	EPA 8260C	7-26-18	7-26-18	
(cis) 1,3-Dichloropropene	ND	0.00085	EPA 8260C	7-26-18	7-26-18	
Methyl Isobutyl Ketone	ND	0.0043	EPA 8260C	7-26-18	7-26-18	
Toluene	ND	0.0043	EPA 8260C	7-26-18	7-26-18	
(trans) 1,3-Dichloropropene	ND	0.00085	EPA 8260C	7-26-18	7-26-18	





Date of Report: August 3, 2018  
 Samples Submitted: July 24, 2018  
 Laboratory Reference: 1807-167  
 Project: 4082-039-01

**VOLATILE ORGANICS EPA 8260C**  
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL207-B20-5-6</b>					
Laboratory ID:	07-167-13					
1,1,2-Trichloroethane	ND	0.00085	EPA 8260C	7-26-18	7-26-18	
Tetrachloroethene	ND	0.00085	EPA 8260C	7-26-18	7-26-18	
1,3-Dichloropropane	ND	0.00085	EPA 8260C	7-26-18	7-26-18	
2-Hexanone	ND	0.0043	EPA 8260C	7-26-18	7-26-18	
Dibromochloromethane	ND	0.00085	EPA 8260C	7-26-18	7-26-18	
1,2-Dibromoethane	ND	0.00085	EPA 8260C	7-26-18	7-26-18	
Chlorobenzene	ND	0.00085	EPA 8260C	7-26-18	7-26-18	
1,1,1,2-Tetrachloroethane	ND	0.00085	EPA 8260C	7-26-18	7-26-18	
Ethylbenzene	ND	0.00085	EPA 8260C	7-26-18	7-26-18	
m,p-Xylene	ND	0.0017	EPA 8260C	7-26-18	7-26-18	
o-Xylene	ND	0.00085	EPA 8260C	7-26-18	7-26-18	
Styrene	ND	0.00085	EPA 8260C	7-26-18	7-26-18	
Bromoform	ND	0.0043	EPA 8260C	7-26-18	7-26-18	
Isopropylbenzene	ND	0.00085	EPA 8260C	7-26-18	7-26-18	
Bromobenzene	ND	0.00085	EPA 8260C	7-26-18	7-26-18	
1,1,2,2-Tetrachloroethane	ND	0.00085	EPA 8260C	7-26-18	7-26-18	
1,2,3-Trichloropropane	ND	0.00085	EPA 8260C	7-26-18	7-26-18	
n-Propylbenzene	ND	0.00085	EPA 8260C	7-26-18	7-26-18	
2-Chlorotoluene	ND	0.00085	EPA 8260C	7-26-18	7-26-18	
4-Chlorotoluene	ND	0.00085	EPA 8260C	7-26-18	7-26-18	
1,3,5-Trimethylbenzene	ND	0.00085	EPA 8260C	7-26-18	7-26-18	
tert-Butylbenzene	ND	0.00085	EPA 8260C	7-26-18	7-26-18	
1,2,4-Trimethylbenzene	ND	0.00085	EPA 8260C	7-26-18	7-26-18	
sec-Butylbenzene	ND	0.00085	EPA 8260C	7-26-18	7-26-18	
1,3-Dichlorobenzene	ND	0.00085	EPA 8260C	7-26-18	7-26-18	
p-Isopropyltoluene	ND	0.00085	EPA 8260C	7-26-18	7-26-18	
1,4-Dichlorobenzene	ND	0.00085	EPA 8260C	7-26-18	7-26-18	
1,2-Dichlorobenzene	ND	0.00085	EPA 8260C	7-26-18	7-26-18	
n-Butylbenzene	ND	0.00085	EPA 8260C	7-26-18	7-26-18	
1,2-Dibromo-3-chloropropane	ND	0.0043	EPA 8260C	7-26-18	7-26-18	
1,2,4-Trichlorobenzene	ND	0.00085	EPA 8260C	7-26-18	7-26-18	
Hexachlorobutadiene	ND	0.0043	EPA 8260C	7-26-18	7-26-18	
Naphthalene	ND	0.00085	EPA 8260C	7-26-18	7-26-18	
1,2,3-Trichlorobenzene	ND	0.00085	EPA 8260C	7-26-18	7-26-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>100</i>	<i>68-139</i>				
<i>Toluene-d8</i>	<i>101</i>	<i>79-128</i>				
<i>4-Bromofluorobenzene</i>	<i>97</i>	<i>71-132</i>				



Date of Report: August 3, 2018  
 Samples Submitted: July 24, 2018  
 Laboratory Reference: 1807-167  
 Project: 4082-039-01

**VOLATILE ORGANICS EPA 8260C**  
 page 1 of 2

Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID: FL207-B20-12.5-13.5</b>						
<b>Laboratory ID: 07-167-16</b>						
Dichlorodifluoromethane	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
Chloromethane	ND	0.0045	EPA 8260C	7-26-18	7-26-18	
Vinyl Chloride	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
Bromomethane	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
Chloroethane	ND	0.0045	EPA 8260C	7-26-18	7-26-18	
Trichlorofluoromethane	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
1,1-Dichloroethene	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
Acetone	ND	0.0089	EPA 8260C	7-26-18	7-26-18	
Iodomethane	ND	0.0045	EPA 8260C	7-26-18	7-26-18	
Carbon Disulfide	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
Methylene Chloride	ND	0.0045	EPA 8260C	7-26-18	7-26-18	
(trans) 1,2-Dichloroethene	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
Methyl t-Butyl Ether	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
1,1-Dichloroethane	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
Vinyl Acetate	ND	0.0045	EPA 8260C	7-26-18	7-26-18	
2,2-Dichloropropane	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
(cis) 1,2-Dichloroethene	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
2-Butanone	ND	0.0045	EPA 8260C	7-26-18	7-26-18	
Bromochloromethane	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
Chloroform	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
1,1,1-Trichloroethane	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
Carbon Tetrachloride	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
1,1-Dichloropropene	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
Benzene	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
1,2-Dichloroethane	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
Trichloroethene	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
1,2-Dichloropropane	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
Dibromomethane	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
Bromodichloromethane	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
2-Chloroethyl Vinyl Ether	ND	0.0045	EPA 8260C	7-26-18	7-26-18	
(cis) 1,3-Dichloropropene	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
Methyl Isobutyl Ketone	ND	0.0045	EPA 8260C	7-26-18	7-26-18	
Toluene	ND	0.0045	EPA 8260C	7-26-18	7-26-18	
(trans) 1,3-Dichloropropene	ND	0.00089	EPA 8260C	7-26-18	7-26-18	



Date of Report: August 3, 2018  
 Samples Submitted: July 24, 2018  
 Laboratory Reference: 1807-167  
 Project: 4082-039-01

**VOLATILE ORGANICS EPA 8260C**  
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID: FL207-B20-12.5-13.5</b>						
Laboratory ID: 07-167-16						
1,1,2-Trichloroethane	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
Tetrachloroethene	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
1,3-Dichloropropane	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
2-Hexanone	ND	0.0045	EPA 8260C	7-26-18	7-26-18	
Dibromochloromethane	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
1,2-Dibromoethane	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
Chlorobenzene	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
1,1,1,2-Tetrachloroethane	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
Ethylbenzene	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
m,p-Xylene	ND	0.0018	EPA 8260C	7-26-18	7-26-18	
o-Xylene	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
Styrene	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
Bromoform	ND	0.0045	EPA 8260C	7-26-18	7-26-18	
Isopropylbenzene	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
Bromobenzene	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
1,1,2,2-Tetrachloroethane	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
1,2,3-Trichloropropane	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
n-Propylbenzene	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
2-Chlorotoluene	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
4-Chlorotoluene	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
1,3,5-Trimethylbenzene	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
tert-Butylbenzene	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
1,2,4-Trimethylbenzene	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
sec-Butylbenzene	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
1,3-Dichlorobenzene	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
p-Isopropyltoluene	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
1,4-Dichlorobenzene	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
1,2-Dichlorobenzene	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
n-Butylbenzene	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
1,2-Dibromo-3-chloropropane	ND	0.0045	EPA 8260C	7-26-18	7-26-18	
1,2,4-Trichlorobenzene	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
Hexachlorobutadiene	ND	0.0045	EPA 8260C	7-26-18	7-26-18	
Naphthalene	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
1,2,3-Trichlorobenzene	ND	0.00089	EPA 8260C	7-26-18	7-26-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>100</i>	<i>68-139</i>				
<i>Toluene-d8</i>	<i>101</i>	<i>79-128</i>				
<i>4-Bromofluorobenzene</i>	<i>97</i>	<i>71-132</i>				



Date of Report: August 3, 2018  
 Samples Submitted: July 24, 2018  
 Laboratory Reference: 1807-167  
 Project: 4082-039-01

# PAHs EPA 8270D/SIM

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID: FL207-B19-10-11</b>						
<b>Laboratory ID: 07-167-04</b>						
Naphthalene	ND	0.0072	EPA 8270D/SIM	7-26-18	7-26-18	
2-Methylnaphthalene	ND	0.0072	EPA 8270D/SIM	7-26-18	7-26-18	
1-Methylnaphthalene	ND	0.0072	EPA 8270D/SIM	7-26-18	7-26-18	
Acenaphthylene	ND	0.0072	EPA 8270D/SIM	7-26-18	7-26-18	
Acenaphthene	ND	0.0072	EPA 8270D/SIM	7-26-18	7-26-18	
Fluorene	ND	0.0072	EPA 8270D/SIM	7-26-18	7-26-18	
Phenanthrene	ND	0.0072	EPA 8270D/SIM	7-26-18	7-26-18	
Anthracene	ND	0.0072	EPA 8270D/SIM	7-26-18	7-26-18	
Fluoranthene	ND	0.0072	EPA 8270D/SIM	7-26-18	7-26-18	
Pyrene	ND	0.0072	EPA 8270D/SIM	7-26-18	7-26-18	
Benzo[a]anthracene	ND	0.0072	EPA 8270D/SIM	7-26-18	7-26-18	
Chrysene	ND	0.0072	EPA 8270D/SIM	7-26-18	7-26-18	
Benzo[b]fluoranthene	ND	0.0072	EPA 8270D/SIM	7-26-18	7-26-18	
Benzo(j,k)fluoranthene	ND	0.0072	EPA 8270D/SIM	7-26-18	7-26-18	
Benzo[a]pyrene	ND	0.0072	EPA 8270D/SIM	7-26-18	7-26-18	
Indeno(1,2,3-c,d)pyrene	ND	0.0072	EPA 8270D/SIM	7-26-18	7-26-18	
Dibenz[a,h]anthracene	ND	0.0072	EPA 8270D/SIM	7-26-18	7-26-18	
Benzo[g,h,i]perylene	ND	0.0072	EPA 8270D/SIM	7-26-18	7-26-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	64	40 - 117				
Pyrene-d10	72	38 - 119				
Terphenyl-d14	70	47 - 135				



Date of Report: August 3, 2018  
 Samples Submitted: July 24, 2018  
 Laboratory Reference: 1807-167  
 Project: 4082-039-01

# PAHs EPA 8270D/SIM

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID: FL207-B20-12.5-13.5</b>						
<b>Laboratory ID: 07-167-16</b>						
Naphthalene	ND	0.0074	EPA 8270D/SIM	7-26-18	7-26-18	
2-Methylnaphthalene	ND	0.0074	EPA 8270D/SIM	7-26-18	7-26-18	
1-Methylnaphthalene	ND	0.0074	EPA 8270D/SIM	7-26-18	7-26-18	
Acenaphthylene	ND	0.0074	EPA 8270D/SIM	7-26-18	7-26-18	
Acenaphthene	ND	0.0074	EPA 8270D/SIM	7-26-18	7-26-18	
Fluorene	ND	0.0074	EPA 8270D/SIM	7-26-18	7-26-18	
Phenanthrene	ND	0.0074	EPA 8270D/SIM	7-26-18	7-26-18	
Anthracene	ND	0.0074	EPA 8270D/SIM	7-26-18	7-26-18	
Fluoranthene	ND	0.0074	EPA 8270D/SIM	7-26-18	7-26-18	
Pyrene	ND	0.0074	EPA 8270D/SIM	7-26-18	7-26-18	
Benzo[a]anthracene	ND	0.0074	EPA 8270D/SIM	7-26-18	7-26-18	
Chrysene	ND	0.0074	EPA 8270D/SIM	7-26-18	7-26-18	
Benzo[b]fluoranthene	ND	0.0074	EPA 8270D/SIM	7-26-18	7-26-18	
Benzo(j,k)fluoranthene	ND	0.0074	EPA 8270D/SIM	7-26-18	7-26-18	
Benzo[a]pyrene	ND	0.0074	EPA 8270D/SIM	7-26-18	7-26-18	
Indeno(1,2,3-c,d)pyrene	ND	0.0074	EPA 8270D/SIM	7-26-18	7-26-18	
Dibenz[a,h]anthracene	ND	0.0074	EPA 8270D/SIM	7-26-18	7-26-18	
Benzo[g,h,i]perylene	ND	0.0074	EPA 8270D/SIM	7-26-18	7-26-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	67	40 - 117				
Pyrene-d10	78	38 - 119				
Terphenyl-d14	77	47 - 135				



Date of Report: August 3, 2018  
 Samples Submitted: July 24, 2018  
 Laboratory Reference: 1807-167  
 Project: 4082-039-01

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

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL207-B19-0-0.5</b>					
Laboratory ID:	07-167-01					
Arsenic	ND	5.4	EPA 6010D	7-27-18	7-27-18	
Lead	ND	5.4	EPA 6010D	7-27-18	7-27-18	

**Client ID:** FL207-B19-10-11  
 Laboratory ID: 07-167-04

Arsenic	ND	5.4	EPA 6010D	7-30-18	7-30-18	
Barium	33	2.7	EPA 6010D	7-30-18	7-30-18	
Cadmium	ND	0.54	EPA 6010D	7-30-18	7-30-18	
Chromium	29	0.54	EPA 6010D	7-30-18	7-30-18	
Lead	ND	5.4	EPA 6010D	7-30-18	7-30-18	
Mercury	ND	0.27	EPA 7471B	7-26-18	7-26-18	
Selenium	ND	11	EPA 6010D	7-30-18	7-30-18	
Silver	ND	1.1	EPA 6010D	7-30-18	7-30-18	

**Client ID:** FL207-B20-12.5-13.5  
 Laboratory ID: 07-167-16

Arsenic	ND	5.6	EPA 6010D	7-30-18	7-30-18	
Barium	49	2.8	EPA 6010D	7-30-18	7-30-18	
Cadmium	ND	0.56	EPA 6010D	7-30-18	7-30-18	
Chromium	26	0.56	EPA 6010D	7-30-18	7-30-18	
Lead	ND	5.6	EPA 6010D	7-30-18	7-30-18	
Mercury	ND	0.28	EPA 7471B	7-26-18	7-26-18	
Selenium	ND	11	EPA 6010D	7-30-18	7-30-18	
Silver	ND	1.1	EPA 6010D	7-30-18	7-30-18	



Date of Report: August 3, 2018  
 Samples Submitted: July 24, 2018  
 Laboratory Reference: 1807-167  
 Project: 4082-039-01

**HYDROCARBON IDENTIFICATION  
 NWTPH-HCID  
 QUALITY CONTROL**

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB0726S2					
Gasoline Range Organics	<b>ND</b>	20	NWTPH-HCID	7-26-18	7-26-18	
Diesel Range Organics	<b>ND</b>	50	NWTPH-HCID	7-26-18	7-26-18	
Lube Oil Range Organics	<b>ND</b>	100	NWTPH-HCID	7-26-18	7-26-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	97	50-150				





Date of Report: August 3, 2018  
 Samples Submitted: July 24, 2018  
 Laboratory Reference: 1807-167  
 Project: 4082-039-01

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

Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID: MB0726S1						
Dichlorodifluoromethane	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Chloromethane	ND	0.0050	EPA 8260C	7-26-18	7-26-18	
Vinyl Chloride	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Bromomethane	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Chloroethane	ND	0.0050	EPA 8260C	7-26-18	7-26-18	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Acetone	ND	0.010	EPA 8260C	7-26-18	7-26-18	
Iodomethane	ND	0.0050	EPA 8260C	7-26-18	7-26-18	
Carbon Disulfide	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Methylene Chloride	ND	0.0050	EPA 8260C	7-26-18	7-26-18	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Vinyl Acetate	ND	0.0050	EPA 8260C	7-26-18	7-26-18	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
2-Butanone	ND	0.0050	EPA 8260C	7-26-18	7-26-18	
Bromochloromethane	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Chloroform	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Benzene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Trichloroethene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Dibromomethane	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Bromodichloromethane	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260C	7-26-18	7-26-18	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Methyl Isobutyl Ketone	ND	0.0050	EPA 8260C	7-26-18	7-26-18	
Toluene	ND	0.0050	EPA 8260C	7-26-18	7-26-18	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	



Date of Report: August 3, 2018  
 Samples Submitted: July 24, 2018  
 Laboratory Reference: 1807-167  
 Project: 4082-039-01

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

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID: MB0726S1						
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Tetrachloroethene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
2-Hexanone	ND	0.0050	EPA 8260C	7-26-18	7-26-18	
Dibromochloromethane	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Chlorobenzene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Ethylbenzene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
m,p-Xylene	ND	0.0020	EPA 8260C	7-26-18	7-26-18	
o-Xylene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Styrene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Bromoform	ND	0.0050	EPA 8260C	7-26-18	7-26-18	
Isopropylbenzene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Bromobenzene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
n-Propylbenzene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
2-Chlorotoluene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
4-Chlorotoluene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
1,3,5-Trimethylbenzene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
tert-Butylbenzene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
1,2,4-Trimethylbenzene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
sec-Butylbenzene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
p-Isopropyltoluene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
n-Butylbenzene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260C	7-26-18	7-26-18	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
Hexachlorobutadiene	ND	0.0050	EPA 8260C	7-26-18	7-26-18	
Naphthalene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	7-26-18	7-26-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>99</i>	<i>68-139</i>				
<i>Toluene-d8</i>	<i>100</i>	<i>79-128</i>				
<i>4-Bromofluorobenzene</i>	<i>96</i>	<i>71-132</i>				



Date of Report: August 3, 2018  
 Samples Submitted: July 24, 2018  
 Laboratory Reference: 1807-167  
 Project: 4082-039-01

**VOLATILE ORGANICS 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:	SB0726S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	0.0491	0.0477	0.0500	0.0500	98	95	53-141	3	17	
Benzene	0.0474	0.0473	0.0500	0.0500	95	95	70-130	0	15	
Trichloroethene	0.0465	0.0447	0.0500	0.0500	93	89	74-122	4	16	
Toluene	0.0468	0.0454	0.0500	0.0500	94	91	76-130	3	15	
Chlorobenzene	0.0432	0.0423	0.0500	0.0500	86	85	75-120	2	14	
Surrogate:										
Dibromofluoromethane					102	99	68-139			
Toluene-d8					100	98	79-128			
4-Bromofluorobenzene					100	97	71-132			



Date of Report: August 3, 2018  
 Samples Submitted: July 24, 2018  
 Laboratory Reference: 1807-167  
 Project: 4082-039-01

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

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID: MB0726S1						
Naphthalene	ND	0.0067	EPA 8270D/SIM	7-26-18	7-26-18	
2-Methylnaphthalene	ND	0.0067	EPA 8270D/SIM	7-26-18	7-26-18	
1-Methylnaphthalene	ND	0.0067	EPA 8270D/SIM	7-26-18	7-26-18	
Acenaphthylene	ND	0.0067	EPA 8270D/SIM	7-26-18	7-26-18	
Acenaphthene	ND	0.0067	EPA 8270D/SIM	7-26-18	7-26-18	
Fluorene	ND	0.0067	EPA 8270D/SIM	7-26-18	7-26-18	
Phenanthrene	ND	0.0067	EPA 8270D/SIM	7-26-18	7-26-18	
Anthracene	ND	0.0067	EPA 8270D/SIM	7-26-18	7-26-18	
Fluoranthene	ND	0.0067	EPA 8270D/SIM	7-26-18	7-26-18	
Pyrene	ND	0.0067	EPA 8270D/SIM	7-26-18	7-26-18	
Benzo[a]anthracene	ND	0.0067	EPA 8270D/SIM	7-26-18	7-26-18	
Chrysene	ND	0.0067	EPA 8270D/SIM	7-26-18	7-26-18	
Benzo[b]fluoranthene	ND	0.0067	EPA 8270D/SIM	7-26-18	7-26-18	
Benzo[j,k]fluoranthene	ND	0.0067	EPA 8270D/SIM	7-26-18	7-26-18	
Benzo[a]pyrene	ND	0.0067	EPA 8270D/SIM	7-26-18	7-26-18	
Indeno(1,2,3-c,d)pyrene	ND	0.0067	EPA 8270D/SIM	7-26-18	7-26-18	
Dibenz[a,h]anthracene	ND	0.0067	EPA 8270D/SIM	7-26-18	7-26-18	
Benzo[g,h,i]perylene	ND	0.0067	EPA 8270D/SIM	7-26-18	7-26-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	77	40 - 117				
Pyrene-d10	90	38 - 119				
Terphenyl-d14	91	47 - 135				



Date of Report: August 3, 2018  
 Samples Submitted: July 24, 2018  
 Laboratory Reference: 1807-167  
 Project: 4082-039-01

**PAHs 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:	SB0726S1									
	SB	SBD	SB	SBD	SB	SBD				
Naphthalene	0.0730	0.0749	0.0833	0.0833	88	90	54 - 114	3	15	
Acenaphthylene	0.0719	0.0822	0.0833	0.0833	86	99	59 - 119	13	15	
Acenaphthene	0.0742	0.0841	0.0833	0.0833	89	101	58 - 117	13	15	
Fluorene	0.0835	0.0833	0.0833	0.0833	100	100	61 - 122	0	15	
Phenanthrene	0.0758	0.0786	0.0833	0.0833	91	94	58 - 121	4	15	
Anthracene	0.0786	0.0809	0.0833	0.0833	94	97	66 - 126	3	15	
Fluoranthene	0.0793	0.0824	0.0833	0.0833	95	99	62 - 126	4	15	
Pyrene	0.0802	0.0840	0.0833	0.0833	96	101	61 - 126	5	15	
Benzo[a]anthracene	0.0852	0.0895	0.0833	0.0833	102	107	64 - 132	5	15	
Chrysene	0.0792	0.0826	0.0833	0.0833	95	99	64 - 127	4	15	
Benzo[b]fluoranthene	0.0775	0.0814	0.0833	0.0833	93	98	57 - 128	5	15	
Benzo(j,k)fluoranthene	0.0813	0.0856	0.0833	0.0833	98	103	62 - 130	5	15	
Benzo[a]pyrene	0.0778	0.0823	0.0833	0.0833	93	99	62 - 125	6	15	
Indeno(1,2,3-c,d)pyrene	0.0742	0.0796	0.0833	0.0833	89	96	55 - 130	7	15	
Dibenz[a,h]anthracene	0.0732	0.0787	0.0833	0.0833	88	94	58 - 129	7	15	
Benzo[g,h,i]perylene	0.0760	0.0806	0.0833	0.0833	91	97	57 - 129	6	15	
Surrogate:										
2-Fluorobiphenyl					79	84	40 - 117			
Pyrene-d10					89	93	38 - 119			
Terphenyl-d14					89	93	47 - 135			



Date of Report: August 3, 2018  
 Samples Submitted: July 24, 2018  
 Laboratory Reference: 1807-167  
 Project: 4082-039-01

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

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB0727SM1					
Arsenic	<b>ND</b>	5.0	EPA 6010D	7-27-18	7-27-18	
Lead	<b>ND</b>	5.0	EPA 6010D	7-27-18	7-27-18	
<b>METHOD BLANK</b>						
Laboratory ID:	MB0730SM2					
Arsenic	<b>ND</b>	5.0	EPA 6010D	7-30-18	7-30-18	
Barium	<b>ND</b>	2.5	EPA 6010D	7-30-18	7-30-18	
Cadmium	<b>ND</b>	0.50	EPA 6010D	7-30-18	7-30-18	
Chromium	<b>ND</b>	0.50	EPA 6010D	7-30-18	7-30-18	
Lead	<b>ND</b>	5.0	EPA 6010D	7-30-18	7-30-18	
Selenium	<b>ND</b>	10	EPA 6010D	7-30-18	7-30-18	
Silver	<b>ND</b>	1.0	EPA 6010D	7-30-18	7-30-18	
<b>METHOD BLANK</b>						
Laboratory ID:	MB0726S3					
Mercury	<b>ND</b>	0.25	EPA 7471B	7-26-18	7-26-18	



Date of Report: August 3, 2018  
 Samples Submitted: July 24, 2018  
 Laboratory Reference: 1807-167  
 Project: 4082-039-01

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

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	Limit	Flags
DUPLICATE										
Laboratory ID:	07-180-01									
	ORIG	DUP								
Arsenic	ND	ND	NA	NA		NA	NA	NA	20	
Lead	ND	ND	NA	NA		NA	NA	NA	20	
Laboratory ID:	07-180-01									
	ORIG	DUP								
Arsenic	ND	ND	NA	NA		NA	NA	NA	20	
Barium	198	217	NA	NA		NA	NA	9	20	
Cadmium	ND	ND	NA	NA		NA	NA	NA	20	
Chromium	46.7	41.8	NA	NA		NA	NA	11	20	
Lead	ND	ND	NA	NA		NA	NA	NA	20	
Selenium	ND	ND	NA	NA		NA	NA	NA	20	
Silver	ND	ND	NA	NA		NA	NA	NA	20	
Laboratory ID:	07-180-01									
Mercury	ND	ND	NA	NA		NA	NA	NA	20	
MATRIX SPIKES										
Laboratory ID:	07-180-01									
	MS	MSD	MS	MSD		MS	MSD			
Arsenic	90.3	90.9	100	100	ND	90	91	75-125	1	20
Lead	242	243	250	250	ND	97	97	75-125	0	20
Laboratory ID:	07-180-01									
	MS	MSD	MS	MSD		MS	MSD			
Arsenic	97.6	95.9	100	100	ND	98	96	75-125	2	20
Barium	307	319	100	100	198	110	121	75-125	4	20
Cadmium	49.2	47.6	50.0	50.0	ND	98	95	75-125	3	20
Chromium	135	136	100	100	46.7	88	89	75-125	1	20
Lead	253	245	250	250	ND	101	98	75-125	3	20
Selenium	96.8	95.7	100	100	ND	97	96	75-125	1	20
Silver	22.1	21.7	25.0	25.0	ND	88	87	75-125	2	20
Laboratory ID:	07-180-01									
Mercury	0.531	0.529	0.500	0.500	0.0169	103	102	80-120	0	20





Date of Report: August 3, 2018  
Samples Submitted: July 24, 2018  
Laboratory Reference: 1807-167  
Project: 4082-039-01

**% MOISTURE**

Date Analyzed: 7-26-18

Client ID	Lab ID	% Moisture
FL207-B19-0-0.5	07-167-01	7
FL207-B19-5-6	07-167-02	7
FL207-B19-10-11	07-167-04	8
FL207-B19-15-15.5	07-167-06	8
FL207-B19-17.5	07-167-07	10
FL207-B19-20.0	07-167-08	6
FL207-B19-22.5-30	07-167-09	6
FL207-B19-25-25.5	07-167-10	8
FL207-B19-30-30.5	07-167-12	6
FL207-B20-5-6	07-167-13	7
FL207-B20-12.5-13.5	07-167-16	10
FL207-B20-20-20.5	07-167-19	16
FL207-B20-30-30.5	07-167-22	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  
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## Chain of Custody

Page \_\_\_\_\_ of 3

Company:  
G&E

Project Number:  
4082-039-01

Project Name:  
PMT

Project Manager:  
Marsi Beeson

Sampled by:  
G&E

Turnaround Request  
(in working days)

☐ Same Day

☐ 1 Day

☐ 2 Days

☐ 3 Days

☒ Standard (7 Days)  
(TPH analysis 5 Days)

☐ (other)

Laboratory Number:  
07-167

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	(X) TOTAL As, Pb	% Moisture
1	FL207-B19-0-0.5	7/24/18	902	S	5	(X)				(X)													(X)	(X)
2	FL207-B19-5-6		1020		1	(X)				(X)													(X)	(X)
3	FL207-B19-7.5-8.5		1030		1																			(X)
4	FL207-B19-10-11		1035		1	(X)				(X)			(X)							(X)				(X)
5	FL207-B19-12.5-13		1050		1																			(X)
6	FL207-B19-15-15.5		1100		1	(X)																		(X)
7	FL207-B19-17.5		1110		4	(X)																		(X)
8	FL207-B19-20.0		1125		5	(X)																		(X)
9	FL207-B19-22.5-30		1135		1	(X)																		(X)
10	FL207-B19-25-25.5		1140		1	(X)																		(X)

Signature: [Signature]

Company: G&E

Date: 7/24/18

Time: 1750

Comments/Special Instructions: (X) Added 7/26/18. DB (57A)  
AS-7 ppm

Relinquished

Received

Relinquished

Received

Relinquished

Received

Reviewed/Date

Reviewed/Date

Company: G&E

Project Number: 4082-039-01

Project Name: PMT

Project Manager: Marsi Beeson

Sampled by: G&E

Turnaround Request (in working days): ☒ Standard (7 Days) (TPH analysis 5 Days)

Laboratory Number: 07-167





**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

Company: <u>GEI</u>		Turnaround Request (in working days)		Laboratory Number: <b>07-167</b>													
Project Number: <u>4082-039-01</u>		<input type="checkbox"/> Same Day <input type="checkbox"/> 1 Day															
Project Name: <u>FWLE</u>		<input type="checkbox"/> 2 Days <input type="checkbox"/> 3 Days															
Project Manager: <u>Marsi Beeson</u>		<input checked="" type="checkbox"/> Standard (7 Days) (TPH analysis 5 Days)															
Sampled by: <u>CDG</u>		<input type="checkbox"/> (other) _____															
Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers												
11	FL207-B19-27.5-28	7/24/18	1150	S	S												
12	FL207-B19-30-30.5																
13	FL207-B20-5-6		1350														
14	FL207-B20-8-9		1405														
15	FL207-B20-10-10.5		1415														
16	FL207-B20-12.5-13.5		1425														
17	FL207-B20-15-16		1435														
18	FL207-B20-18-19		1445														
19	FL207-B20-20-20.5		1455														
20	FL207-B20-22.5-30		1507														
Signature: <u>[Signature]</u>		Company: <u>GEI</u>		Date: <u>7/24/18</u>	Time: <u>1750</u>	Comments/Special Instructions											
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

of

[illegible]





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August 1, 2018

Marsi Beeson  
GeoEngineers, Inc.  
12000 NW Naito Parkway, Suite 180  
Portland, OR 97209

Re: Analytical Data for Project 4082-039-01  
Laboratory Reference No. 1807-134

Dear Marsi:

Enclosed are the analytical results and associated quality control data for samples submitted on July 20, 2018.

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

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

Sincerely,

A handwritten signature in black ink, appearing to read "DB", with a long horizontal flourish 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: August 1, 2018  
Samples Submitted: July 20, 2018  
Laboratory Reference: 1807-134  
Project: 4082-039-01

### **Case Narrative**

Samples were collected on July 19, 2018 and received by the laboratory on July 20, 2018. They were maintained at the laboratory at a temperature of 2°C to 6°C.

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

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





Date of Report: August 1, 2018  
Samples Submitted: July 20, 2018  
Laboratory Reference: 1807-134  
Project: 4082-039-01

#### ANALYTICAL REPORT FOR SAMPLES

Client ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
FL207-B22-0-0.5	07-134-01	Soil	7-19-18	7-20-18	
FL207-B22-2.5-3.5	07-134-02	Soil	7-19-18	7-20-18	
FL207-B22-5-6	07-134-03	Soil	7-19-18	7-20-18	
FL207-B22-7.5-8.5	07-134-04	Soil	7-19-18	7-20-18	
FL207-B22-12.5-13.5	07-134-06	Soil	7-19-18	7-20-18	



Date of Report: August 1, 2018  
 Samples Submitted: July 20, 2018  
 Laboratory Reference: 1807-134  
 Project: 4082-039-01

### HYDROCARBON IDENTIFICATION NWTPH-HCID

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL207-B22-0-0.5</b>					
Laboratory ID:	07-134-01					
Gasoline Range Organics	ND	22	NWTPH-HCID	7-24-18	7-24-18	
Diesel Range Organics	ND	56	NWTPH-HCID	7-24-18	7-24-18	
Lube Oil Range Organics	ND	110	NWTPH-HCID	7-24-18	7-24-18	
Surrogate:	Percent Recovery	Control Limits				
<i>o</i> -Terphenyl	95	50-150				

<b>Client ID:</b>	<b>FL207-B22-2.5-3.5</b>					
Laboratory ID:	07-134-02					
Gasoline Range Organics	ND	21	NWTPH-HCID	7-24-18	7-24-18	
Diesel Range Organics	ND	53	NWTPH-HCID	7-24-18	7-24-18	
Lube Oil	Detected	110	NWTPH-HCID	7-24-18	7-24-18	
Surrogate:	Percent Recovery	Control Limits				
<i>o</i> -Terphenyl	98	50-150				

<b>Client ID:</b>	<b>FL207-B22-5-6</b>					
Laboratory ID:	07-134-03					
Gasoline Range Organics	ND	22	NWTPH-HCID	7-24-18	7-24-18	
Diesel Range Organics	ND	54	NWTPH-HCID	7-24-18	7-24-18	
Lube Oil Range Organics	ND	110	NWTPH-HCID	7-24-18	7-24-18	
Surrogate:	Percent Recovery	Control Limits				
<i>o</i> -Terphenyl	96	50-150				

<b>Client ID:</b>	<b>FL207-B22-7.5-8.5</b>					
Laboratory ID:	07-134-04					
Gasoline Range Organics	ND	22	NWTPH-HCID	7-24-18	7-24-18	
Diesel Range Organics	ND	54	NWTPH-HCID	7-24-18	7-24-18	
Lube Oil Range Organics	ND	110	NWTPH-HCID	7-24-18	7-24-18	
Surrogate:	Percent Recovery	Control Limits				
<i>o</i> -Terphenyl	93	50-150				

<b>Client ID:</b>	<b>FL207-B22-12.5-13.5</b>					
Laboratory ID:	07-134-06					
Gasoline Range Organics	ND	22	NWTPH-HCID	7-24-18	7-24-18	
Diesel Range Organics	ND	54	NWTPH-HCID	7-24-18	7-24-18	
Lube Oil Range Organics	ND	110	NWTPH-HCID	7-24-18	7-24-18	
Surrogate:	Percent Recovery	Control Limits				
<i>o</i> -Terphenyl	100	50-150				



Date of Report: August 1, 2018  
 Samples Submitted: July 20, 2018  
 Laboratory Reference: 1807-134  
 Project: 4082-039-01

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

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL207-B22-2.5-3.5</b>					
Laboratory ID:	07-134-02					
Diesel Range Organics	<b>ND</b>	53	NWTPH-Dx	7-26-18	7-26-18	
Lube Oil	<b>500</b>	110	NWTPH-Dx	7-26-18	7-26-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	89	50-150				



Date of Report: August 1, 2018  
 Samples Submitted: July 20, 2018  
 Laboratory Reference: 1807-134  
 Project: 4082-039-01

**VOLATILE ORGANICS EPA 8260C**  
 page 1 of 2

Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID: FL207-B22-2.5-3.5</b>						
<b>Laboratory ID: 07-134-02</b>						
Dichlorodifluoromethane	ND	0.055	EPA 8260C	7-24-18	7-24-18	
Chloromethane	ND	0.28	EPA 8260C	7-24-18	7-24-18	
Vinyl Chloride	ND	0.055	EPA 8260C	7-24-18	7-24-18	
Bromomethane	ND	0.055	EPA 8260C	7-24-18	7-24-18	
Chloroethane	ND	0.28	EPA 8260C	7-24-18	7-24-18	
Trichlorofluoromethane	ND	0.055	EPA 8260C	7-24-18	7-24-18	
1,1-Dichloroethene	ND	0.055	EPA 8260C	7-24-18	7-24-18	
Acetone	ND	0.55	EPA 8260C	7-24-18	7-24-18	
Iodomethane	ND	0.28	EPA 8260C	7-24-18	7-24-18	
Carbon Disulfide	ND	0.055	EPA 8260C	7-24-18	7-24-18	
Methylene Chloride	ND	0.28	EPA 8260C	7-24-18	7-24-18	
(trans) 1,2-Dichloroethene	ND	0.055	EPA 8260C	7-24-18	7-24-18	
Methyl t-Butyl Ether	ND	0.055	EPA 8260C	7-24-18	7-24-18	
1,1-Dichloroethane	ND	0.055	EPA 8260C	7-24-18	7-24-18	
Vinyl Acetate	ND	0.28	EPA 8260C	7-24-18	7-24-18	
2,2-Dichloropropane	ND	0.055	EPA 8260C	7-24-18	7-24-18	
(cis) 1,2-Dichloroethene	ND	0.055	EPA 8260C	7-24-18	7-24-18	
2-Butanone	ND	0.28	EPA 8260C	7-24-18	7-24-18	
Bromochloromethane	ND	0.055	EPA 8260C	7-24-18	7-24-18	
Chloroform	ND	0.055	EPA 8260C	7-24-18	7-24-18	
1,1,1-Trichloroethane	ND	0.055	EPA 8260C	7-24-18	7-24-18	
Carbon Tetrachloride	ND	0.055	EPA 8260C	7-24-18	7-24-18	
1,1-Dichloropropene	ND	0.055	EPA 8260C	7-24-18	7-24-18	
Benzene	0.087	0.055	EPA 8260C	7-24-18	7-24-18	
1,2-Dichloroethane	ND	0.055	EPA 8260C	7-24-18	7-24-18	
Trichloroethene	ND	0.055	EPA 8260C	7-24-18	7-24-18	
1,2-Dichloropropane	ND	0.055	EPA 8260C	7-24-18	7-24-18	
Dibromomethane	ND	0.055	EPA 8260C	7-24-18	7-24-18	
Bromodichloromethane	ND	0.055	EPA 8260C	7-24-18	7-24-18	
2-Chloroethyl Vinyl Ether	ND	0.28	EPA 8260C	7-24-18	7-24-18	
(cis) 1,3-Dichloropropene	ND	0.055	EPA 8260C	7-24-18	7-24-18	
Methyl Isobutyl Ketone	ND	0.28	EPA 8260C	7-24-18	7-24-18	
Toluene	3.2	0.28	EPA 8260C	7-24-18	7-24-18	
(trans) 1,3-Dichloropropene	ND	0.055	EPA 8260C	7-24-18	7-24-18	



Date of Report: August 1, 2018  
 Samples Submitted: July 20, 2018  
 Laboratory Reference: 1807-134  
 Project: 4082-039-01

**VOLATILE ORGANICS EPA 8260C**  
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID: FL207-B22-2.5-3.5</b>						
Laboratory ID: 07-134-02						
1,1,2-Trichloroethane	ND	0.055	EPA 8260C	7-24-18	7-24-18	
Tetrachloroethene	ND	0.055	EPA 8260C	7-24-18	7-24-18	
1,3-Dichloropropane	ND	0.055	EPA 8260C	7-24-18	7-24-18	
2-Hexanone	ND	0.28	EPA 8260C	7-24-18	7-24-18	
Dibromochloromethane	ND	0.055	EPA 8260C	7-24-18	7-24-18	
1,2-Dibromoethane	ND	0.055	EPA 8260C	7-24-18	7-24-18	
Chlorobenzene	ND	0.055	EPA 8260C	7-24-18	7-24-18	
1,1,1,2-Tetrachloroethane	ND	0.055	EPA 8260C	7-24-18	7-24-18	
Ethylbenzene	1.0	0.055	EPA 8260C	7-24-18	7-24-18	
m,p-Xylene	5.6	0.11	EPA 8260C	7-24-18	7-24-18	
o-Xylene	2.3	0.055	EPA 8260C	7-24-18	7-24-18	
Styrene	ND	0.055	EPA 8260C	7-24-18	7-24-18	
Bromoform	ND	0.28	EPA 8260C	7-24-18	7-24-18	
Isopropylbenzene	0.13	0.055	EPA 8260C	7-24-18	7-24-18	
Bromobenzene	ND	0.055	EPA 8260C	7-24-18	7-24-18	
1,1,2,2-Tetrachloroethane	ND	0.055	EPA 8260C	7-24-18	7-24-18	
1,2,3-Trichloropropane	ND	0.055	EPA 8260C	7-24-18	7-24-18	
n-Propylbenzene	0.43	0.055	EPA 8260C	7-24-18	7-24-18	
2-Chlorotoluene	ND	0.055	EPA 8260C	7-24-18	7-24-18	
4-Chlorotoluene	ND	0.055	EPA 8260C	7-24-18	7-24-18	
1,3,5-Trimethylbenzene	0.96	0.055	EPA 8260C	7-24-18	7-24-18	
tert-Butylbenzene	ND	0.055	EPA 8260C	7-24-18	7-24-18	
1,2,4-Trimethylbenzene	3.1	0.055	EPA 8260C	7-24-18	7-24-18	
sec-Butylbenzene	ND	0.055	EPA 8260C	7-24-18	7-24-18	
1,3-Dichlorobenzene	ND	0.055	EPA 8260C	7-24-18	7-24-18	
p-Isopropyltoluene	ND	0.055	EPA 8260C	7-24-18	7-24-18	
1,4-Dichlorobenzene	ND	0.055	EPA 8260C	7-24-18	7-24-18	
1,2-Dichlorobenzene	ND	0.055	EPA 8260C	7-24-18	7-24-18	
n-Butylbenzene	0.20	0.055	EPA 8260C	7-24-18	7-24-18	
1,2-Dibromo-3-chloropropane	ND	0.28	EPA 8260C	7-24-18	7-24-18	
1,2,4-Trichlorobenzene	ND	0.055	EPA 8260C	7-24-18	7-24-18	
Hexachlorobutadiene	ND	0.28	EPA 8260C	7-24-18	7-24-18	
Naphthalene	0.63	0.055	EPA 8260C	7-24-18	7-24-18	
1,2,3-Trichlorobenzene	ND	0.055	EPA 8260C	7-24-18	7-24-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>102</i>	<i>68-139</i>				
<i>Toluene-d8</i>	<i>100</i>	<i>79-128</i>				
<i>4-Bromofluorobenzene</i>	<i>103</i>	<i>71-132</i>				



Date of Report: August 1, 2018  
 Samples Submitted: July 20, 2018  
 Laboratory Reference: 1807-134  
 Project: 4082-039-01

**VOLATILE ORGANICS 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>FL207-B22-5-6</b>				
<b>Laboratory ID:</b>		<b>07-134-03</b>				
Dichlorodifluoromethane	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
Chloromethane	ND	0.0044	EPA 8260C	7-24-18	7-24-18	
Vinyl Chloride	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
Bromomethane	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
Chloroethane	ND	0.0044	EPA 8260C	7-24-18	7-24-18	
Trichlorofluoromethane	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
1,1-Dichloroethene	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
Acetone	ND	0.0088	EPA 8260C	7-24-18	7-24-18	
Iodomethane	ND	0.0044	EPA 8260C	7-24-18	7-24-18	
Carbon Disulfide	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
Methylene Chloride	ND	0.0044	EPA 8260C	7-24-18	7-24-18	
(trans) 1,2-Dichloroethene	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
Methyl t-Butyl Ether	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
1,1-Dichloroethane	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
Vinyl Acetate	ND	0.0044	EPA 8260C	7-24-18	7-24-18	
2,2-Dichloropropane	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
(cis) 1,2-Dichloroethene	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
2-Butanone	ND	0.0044	EPA 8260C	7-24-18	7-24-18	
Bromochloromethane	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
Chloroform	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
1,1,1-Trichloroethane	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
Carbon Tetrachloride	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
1,1-Dichloropropene	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
Benzene	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
1,2-Dichloroethane	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
Trichloroethene	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
1,2-Dichloropropane	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
Dibromomethane	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
Bromodichloromethane	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
2-Chloroethyl Vinyl Ether	ND	0.0044	EPA 8260C	7-24-18	7-24-18	
(cis) 1,3-Dichloropropene	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
Methyl Isobutyl Ketone	ND	0.0044	EPA 8260C	7-24-18	7-24-18	
Toluene	ND	0.0044	EPA 8260C	7-24-18	7-24-18	
(trans) 1,3-Dichloropropene	ND	0.00088	EPA 8260C	7-24-18	7-24-18	



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: August 1, 2018  
 Samples Submitted: July 20, 2018  
 Laboratory Reference: 1807-134  
 Project: 4082-039-01

**VOLATILE ORGANICS EPA 8260C**  
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL207-B22-5-6</b>					
Laboratory ID:	07-134-03					
1,1,2-Trichloroethane	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
Tetrachloroethene	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
1,3-Dichloropropane	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
2-Hexanone	ND	0.0044	EPA 8260C	7-24-18	7-24-18	
Dibromochloromethane	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
1,2-Dibromoethane	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
Chlorobenzene	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
1,1,1,2-Tetrachloroethane	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
Ethylbenzene	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
m,p-Xylene	ND	0.0018	EPA 8260C	7-24-18	7-24-18	
o-Xylene	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
Styrene	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
Bromoform	ND	0.0044	EPA 8260C	7-24-18	7-24-18	
Isopropylbenzene	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
Bromobenzene	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
1,1,2,2-Tetrachloroethane	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
1,2,3-Trichloropropane	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
n-Propylbenzene	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
2-Chlorotoluene	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
4-Chlorotoluene	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
1,3,5-Trimethylbenzene	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
tert-Butylbenzene	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
1,2,4-Trimethylbenzene	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
sec-Butylbenzene	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
1,3-Dichlorobenzene	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
p-Isopropyltoluene	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
1,4-Dichlorobenzene	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
1,2-Dichlorobenzene	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
n-Butylbenzene	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
1,2-Dibromo-3-chloropropane	ND	0.0044	EPA 8260C	7-24-18	7-24-18	
1,2,4-Trichlorobenzene	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
Hexachlorobutadiene	ND	0.0044	EPA 8260C	7-24-18	7-24-18	
Naphthalene	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
1,2,3-Trichlorobenzene	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>100</i>	<i>68-139</i>				
<i>Toluene-d8</i>	<i>99</i>	<i>79-128</i>				
<i>4-Bromofluorobenzene</i>	<i>98</i>	<i>71-132</i>				





Date of Report: August 1, 2018  
 Samples Submitted: July 20, 2018  
 Laboratory Reference: 1807-134  
 Project: 4082-039-01

**VOLATILE ORGANICS EPA 8260C**  
 page 1 of 2

Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID: FL207-B22-12.5-13.5</b>						
<b>Laboratory ID: 07-134-06</b>						
Dichlorodifluoromethane	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
Chloromethane	ND	0.0044	EPA 8260C	7-24-18	7-24-18	
Vinyl Chloride	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
Bromomethane	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
Chloroethane	ND	0.0044	EPA 8260C	7-24-18	7-24-18	
Trichlorofluoromethane	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
1,1-Dichloroethene	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
Acetone	ND	0.0088	EPA 8260C	7-24-18	7-24-18	
Iodomethane	ND	0.0044	EPA 8260C	7-24-18	7-24-18	
Carbon Disulfide	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
Methylene Chloride	ND	0.0044	EPA 8260C	7-24-18	7-24-18	
(trans) 1,2-Dichloroethene	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
Methyl t-Butyl Ether	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
1,1-Dichloroethane	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
Vinyl Acetate	ND	0.0044	EPA 8260C	7-24-18	7-24-18	
2,2-Dichloropropane	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
(cis) 1,2-Dichloroethene	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
2-Butanone	ND	0.0044	EPA 8260C	7-24-18	7-24-18	
Bromochloromethane	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
Chloroform	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
1,1,1-Trichloroethane	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
Carbon Tetrachloride	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
1,1-Dichloropropene	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
Benzene	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
1,2-Dichloroethane	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
Trichloroethene	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
1,2-Dichloropropane	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
Dibromomethane	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
Bromodichloromethane	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
2-Chloroethyl Vinyl Ether	ND	0.0044	EPA 8260C	7-24-18	7-24-18	
(cis) 1,3-Dichloropropene	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
Methyl Isobutyl Ketone	ND	0.0044	EPA 8260C	7-24-18	7-24-18	
Toluene	ND	0.0044	EPA 8260C	7-24-18	7-24-18	
(trans) 1,3-Dichloropropene	ND	0.00088	EPA 8260C	7-24-18	7-24-18	



Date of Report: August 1, 2018  
 Samples Submitted: July 20, 2018  
 Laboratory Reference: 1807-134  
 Project: 4082-039-01

**VOLATILE ORGANICS EPA 8260C**  
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID: FL207-B22-12.5-13.5</b>						
Laboratory ID: 07-134-06						
1,1,2-Trichloroethane	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
Tetrachloroethene	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
1,3-Dichloropropane	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
2-Hexanone	ND	0.0044	EPA 8260C	7-24-18	7-24-18	
Dibromochloromethane	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
1,2-Dibromoethane	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
Chlorobenzene	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
1,1,1,2-Tetrachloroethane	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
Ethylbenzene	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
m,p-Xylene	ND	0.0018	EPA 8260C	7-24-18	7-24-18	
o-Xylene	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
Styrene	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
Bromoform	ND	0.0044	EPA 8260C	7-24-18	7-24-18	
Isopropylbenzene	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
Bromobenzene	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
1,1,2,2-Tetrachloroethane	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
1,2,3-Trichloropropane	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
n-Propylbenzene	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
2-Chlorotoluene	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
4-Chlorotoluene	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
1,3,5-Trimethylbenzene	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
tert-Butylbenzene	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
1,2,4-Trimethylbenzene	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
sec-Butylbenzene	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
1,3-Dichlorobenzene	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
p-Isopropyltoluene	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
1,4-Dichlorobenzene	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
1,2-Dichlorobenzene	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
n-Butylbenzene	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
1,2-Dibromo-3-chloropropane	ND	0.0044	EPA 8260C	7-24-18	7-24-18	
1,2,4-Trichlorobenzene	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
Hexachlorobutadiene	ND	0.0044	EPA 8260C	7-24-18	7-24-18	
Naphthalene	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
1,2,3-Trichlorobenzene	ND	0.00088	EPA 8260C	7-24-18	7-24-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	98	68-139				
<i>Toluene-d8</i>	100	79-128				
<i>4-Bromofluorobenzene</i>	97	71-132				



Date of Report: August 1, 2018  
 Samples Submitted: July 20, 2018  
 Laboratory Reference: 1807-134  
 Project: 4082-039-01

# PAHs EPA 8270D/SIM

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID: FL207-B22-2.5-3.5</b>						
<b>Laboratory ID: 07-134-02</b>						
Naphthalene	<b>0.20</b>	0.0070	EPA 8270D/SIM	7-24-18	7-24-18	
2-Methylnaphthalene	<b>0.18</b>	0.0070	EPA 8270D/SIM	7-24-18	7-24-18	
1-Methylnaphthalene	<b>0.091</b>	0.0070	EPA 8270D/SIM	7-24-18	7-24-18	
Acenaphthylene	<b>ND</b>	0.0070	EPA 8270D/SIM	7-24-18	7-24-18	
Acenaphthene	<b>ND</b>	0.0070	EPA 8270D/SIM	7-24-18	7-24-18	
Fluorene	<b>ND</b>	0.0070	EPA 8270D/SIM	7-24-18	7-24-18	
Phenanthrene	<b>0.015</b>	0.0070	EPA 8270D/SIM	7-24-18	7-24-18	
Anthracene	<b>ND</b>	0.0070	EPA 8270D/SIM	7-24-18	7-24-18	
Fluoranthene	<b>ND</b>	0.0070	EPA 8270D/SIM	7-24-18	7-24-18	
Pyrene	<b>0.010</b>	0.0070	EPA 8270D/SIM	7-24-18	7-24-18	
Benzo[a]anthracene	<b>ND</b>	0.0070	EPA 8270D/SIM	7-24-18	7-24-18	
Chrysene	<b>0.029</b>	0.0070	EPA 8270D/SIM	7-24-18	7-24-18	
Benzo[b]fluoranthene	<b>0.0086</b>	0.0070	EPA 8270D/SIM	7-24-18	7-24-18	
Benzo[j,k]fluoranthene	<b>ND</b>	0.0070	EPA 8270D/SIM	7-24-18	7-24-18	
Benzo[a]pyrene	<b>ND</b>	0.0070	EPA 8270D/SIM	7-24-18	7-24-18	
Indeno(1,2,3-c,d)pyrene	<b>ND</b>	0.0070	EPA 8270D/SIM	7-24-18	7-24-18	
Dibenz[a,h]anthracene	<b>ND</b>	0.0070	EPA 8270D/SIM	7-24-18	7-24-18	
Benzo[g,h,i]perylene	<b>0.0077</b>	0.0070	EPA 8270D/SIM	7-24-18	7-24-18	
<i>Surrogate: Percent Recovery Control Limits</i>						
2-Fluorobiphenyl	80	40 - 117				
Pyrene-d10	96	38 - 119				
Terphenyl-d14	93	47 - 135				



Date of Report: August 1, 2018  
 Samples Submitted: July 20, 2018  
 Laboratory Reference: 1807-134  
 Project: 4082-039-01

# PAHs EPA 8270D/SIM

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID: FL207-B22-5-6</b>						
<b>Laboratory ID: 07-134-03</b>						
Naphthalene	ND	0.0072	EPA 8270D/SIM	7-24-18	7-24-18	
2-Methylnaphthalene	ND	0.0072	EPA 8270D/SIM	7-24-18	7-24-18	
1-Methylnaphthalene	ND	0.0072	EPA 8270D/SIM	7-24-18	7-24-18	
Acenaphthylene	ND	0.0072	EPA 8270D/SIM	7-24-18	7-24-18	
Acenaphthene	ND	0.0072	EPA 8270D/SIM	7-24-18	7-24-18	
Fluorene	ND	0.0072	EPA 8270D/SIM	7-24-18	7-24-18	
Phenanthrene	ND	0.0072	EPA 8270D/SIM	7-24-18	7-24-18	
Anthracene	ND	0.0072	EPA 8270D/SIM	7-24-18	7-24-18	
Fluoranthene	ND	0.0072	EPA 8270D/SIM	7-24-18	7-24-18	
Pyrene	ND	0.0072	EPA 8270D/SIM	7-24-18	7-24-18	
Benzo[a]anthracene	ND	0.0072	EPA 8270D/SIM	7-24-18	7-24-18	
Chrysene	ND	0.0072	EPA 8270D/SIM	7-24-18	7-24-18	
Benzo[b]fluoranthene	ND	0.0072	EPA 8270D/SIM	7-24-18	7-24-18	
Benzo(j,k)fluoranthene	ND	0.0072	EPA 8270D/SIM	7-24-18	7-24-18	
Benzo[a]pyrene	ND	0.0072	EPA 8270D/SIM	7-24-18	7-24-18	
Indeno(1,2,3-c,d)pyrene	ND	0.0072	EPA 8270D/SIM	7-24-18	7-24-18	
Dibenz[a,h]anthracene	ND	0.0072	EPA 8270D/SIM	7-24-18	7-24-18	
Benzo[g,h,i]perylene	ND	0.0072	EPA 8270D/SIM	7-24-18	7-24-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	87	40 - 117				
Pyrene-d10	100	38 - 119				
Terphenyl-d14	101	47 - 135				



Date of Report: August 1, 2018  
 Samples Submitted: July 20, 2018  
 Laboratory Reference: 1807-134  
 Project: 4082-039-01

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

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL207-B22-0-0.5</b>					
Laboratory ID:	07-134-01					
Arsenic	ND	5.6	EPA 6010D	7-24-18	7-24-18	
Lead	ND	5.6	EPA 6010D	7-24-18	7-24-18	

**Client ID:** FL207-B22-2.5-3.5  
 Laboratory ID: 07-134-02

Arsenic	ND	5.2	EPA 6010D	7-24-18	7-24-18	
Barium	63	2.6	EPA 6010D	7-24-18	7-24-18	
Cadmium	ND	0.52	EPA 6010D	7-24-18	7-24-18	
Chromium	29	0.52	EPA 6010D	7-24-18	7-24-18	
Lead	ND	5.2	EPA 6010D	7-24-18	7-24-18	
Mercury	ND	0.26	EPA 7471B	7-23-18	7-23-18	
Selenium	ND	10	EPA 6010D	7-24-18	7-24-18	
Silver	ND	1.0	EPA 6010D	7-24-18	7-24-18	



Date of Report: August 1, 2018  
 Samples Submitted: July 20, 2018  
 Laboratory Reference: 1807-134  
 Project: 4082-039-01

**HYDROCARBON IDENTIFICATION  
 NWTPH-HCID  
 QUALITY CONTROL**

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB0724S1					
Gasoline Range Organics	<b>ND</b>	20	NWTPH-HCID	7-24-18	7-24-18	
Diesel Range Organics	<b>ND</b>	50	NWTPH-HCID	7-24-18	7-24-18	
Lube Oil Range Organics	<b>ND</b>	100	NWTPH-HCID	7-24-18	7-24-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	95	50-150				



Date of Report: August 1, 2018  
 Samples Submitted: July 20, 2018  
 Laboratory Reference: 1807-134  
 Project: 4082-039-01

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

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB0726S1					
Diesel Range Organics	<b>ND</b>	25	NWTPH-Dx	7-26-18	7-26-18	
Lube Oil Range Organics	<b>ND</b>	50	NWTPH-Dx	7-26-18	7-26-18	
Surrogate:	Percent Recovery	Control Limits				
<i>o</i> -Terphenyl	96	50-150				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
<b>DUPLICATE</b>								
Laboratory ID:	07-186-01							
	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				94	87	50-150		





Date of Report: August 1, 2018  
 Samples Submitted: July 20, 2018  
 Laboratory Reference: 1807-134  
 Project: 4082-039-01

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

Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID: MB0724S1						
Dichlorodifluoromethane	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
Chloromethane	ND	0.0050	EPA 8260C	7-24-18	7-24-18	
Vinyl Chloride	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
Bromomethane	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
Chloroethane	ND	0.0050	EPA 8260C	7-24-18	7-24-18	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
Acetone	ND	0.010	EPA 8260C	7-24-18	7-24-18	
Iodomethane	ND	0.0050	EPA 8260C	7-24-18	7-24-18	
Carbon Disulfide	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
Methylene Chloride	ND	0.0050	EPA 8260C	7-24-18	7-24-18	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
Vinyl Acetate	ND	0.0050	EPA 8260C	7-24-18	7-24-18	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
2-Butanone	ND	0.0050	EPA 8260C	7-24-18	7-24-18	
Bromochloromethane	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
Chloroform	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
Benzene	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
Trichloroethene	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
Dibromomethane	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
Bromodichloromethane	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260C	7-24-18	7-24-18	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
Methyl Isobutyl Ketone	ND	0.0050	EPA 8260C	7-24-18	7-24-18	
Toluene	ND	0.0050	EPA 8260C	7-24-18	7-24-18	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	7-24-18	7-24-18	



Date of Report: August 1, 2018  
 Samples Submitted: July 20, 2018  
 Laboratory Reference: 1807-134  
 Project: 4082-039-01

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

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID: MB0724S1						
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
Tetrachloroethene	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
2-Hexanone	ND	0.0050	EPA 8260C	7-24-18	7-24-18	
Dibromochloromethane	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
Chlorobenzene	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
Ethylbenzene	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
m,p-Xylene	ND	0.0020	EPA 8260C	7-24-18	7-24-18	
o-Xylene	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
Styrene	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
Bromoform	ND	0.0050	EPA 8260C	7-24-18	7-24-18	
Isopropylbenzene	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
Bromobenzene	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
n-Propylbenzene	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
2-Chlorotoluene	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
4-Chlorotoluene	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
1,3,5-Trimethylbenzene	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
tert-Butylbenzene	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
1,2,4-Trimethylbenzene	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
sec-Butylbenzene	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
p-Isopropyltoluene	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
n-Butylbenzene	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260C	7-24-18	7-24-18	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
Hexachlorobutadiene	ND	0.0050	EPA 8260C	7-24-18	7-24-18	
Naphthalene	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	7-24-18	7-24-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>99</i>	<i>68-139</i>				
<i>Toluene-d8</i>	<i>100</i>	<i>79-128</i>				
<i>4-Bromofluorobenzene</i>	<i>99</i>	<i>71-132</i>				



Date of Report: August 1, 2018  
 Samples Submitted: July 20, 2018  
 Laboratory Reference: 1807-134  
 Project: 4082-039-01

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

Matrix: Soil  
 Units: mg/kg

Analyte	Result		Spike Level		Percent Recovery		Recovery	RPD	RPD	Flags
					Recovery	Limits	Limits		Limit	
SPIKE BLANKS										
Laboratory ID:	SB0724S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	0.0456	0.0442	0.0500	0.0500	91	88	53-141	3	17	
Benzene	0.0516	0.0474	0.0500	0.0500	103	95	70-130	8	15	
Trichloroethene	0.0513	0.0457	0.0500	0.0500	103	91	74-122	12	16	
Toluene	0.0520	0.0462	0.0500	0.0500	104	92	76-130	12	15	
Chlorobenzene	0.0491	0.0454	0.0500	0.0500	98	91	75-120	8	14	
Surrogate:										
Dibromofluoromethane					99	100	68-139			
Toluene-d8					101	99	79-128			
4-Bromofluorobenzene					100	100	71-132			



Date of Report: August 1, 2018  
 Samples Submitted: July 20, 2018  
 Laboratory Reference: 1807-134  
 Project: 4082-039-01

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

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<hr/>						
Laboratory ID:	MB0724S1					
Naphthalene	ND	0.0067	EPA 8270D/SIM	7-24-18	7-24-18	
2-Methylnaphthalene	ND	0.0067	EPA 8270D/SIM	7-24-18	7-24-18	
1-Methylnaphthalene	ND	0.0067	EPA 8270D/SIM	7-24-18	7-24-18	
Acenaphthylene	ND	0.0067	EPA 8270D/SIM	7-24-18	7-24-18	
Acenaphthene	ND	0.0067	EPA 8270D/SIM	7-24-18	7-24-18	
Fluorene	ND	0.0067	EPA 8270D/SIM	7-24-18	7-24-18	
Phenanthrene	ND	0.0067	EPA 8270D/SIM	7-24-18	7-24-18	
Anthracene	ND	0.0067	EPA 8270D/SIM	7-24-18	7-24-18	
Fluoranthene	ND	0.0067	EPA 8270D/SIM	7-24-18	7-24-18	
Pyrene	ND	0.0067	EPA 8270D/SIM	7-24-18	7-24-18	
Benzo[a]anthracene	ND	0.0067	EPA 8270D/SIM	7-24-18	7-24-18	
Chrysene	ND	0.0067	EPA 8270D/SIM	7-24-18	7-24-18	
Benzo[b]fluoranthene	ND	0.0067	EPA 8270D/SIM	7-24-18	7-24-18	
Benzo(j,k)fluoranthene	ND	0.0067	EPA 8270D/SIM	7-24-18	7-24-18	
Benzo[a]pyrene	ND	0.0067	EPA 8270D/SIM	7-24-18	7-24-18	
Indeno(1,2,3-c,d)pyrene	ND	0.0067	EPA 8270D/SIM	7-24-18	7-24-18	
Dibenz[a,h]anthracene	ND	0.0067	EPA 8270D/SIM	7-24-18	7-24-18	
Benzo[g,h,i]perylene	ND	0.0067	EPA 8270D/SIM	7-24-18	7-24-18	
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Surrogate:	Percent Recovery	Control Limits				
2-Fluorobiphenyl	94	40 - 117				
Pyrene-d10	99	38 - 119				
Terphenyl-d14	101	47 - 135				



Date of Report: August 1, 2018  
 Samples Submitted: July 20, 2018  
 Laboratory Reference: 1807-134  
 Project: 4082-039-01

**PAHs 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
<b>MATRIX SPIKES</b>								
Laboratory ID:	07-143-26							
	MS	MSD	MS	MSD	MS	MSD		
Naphthalene	0.0745	0.0768	0.0833	0.0833	ND	89 92	45 - 114	3 21
Acenaphthylene	0.0833	0.0855	0.0833	0.0833	ND	100 103	49 - 119	3 21
Acenaphthene	0.0850	0.0842	0.0833	0.0833	ND	102 101	47 - 117	1 19
Fluorene	0.0801	0.0844	0.0833	0.0833	ND	96 101	50 - 123	5 20
Phenanthrene	0.0797	0.0826	0.0833	0.0833	ND	96 99	46 - 122	4 20
Anthracene	0.0821	0.0846	0.0833	0.0833	ND	99 102	49 - 130	3 19
Fluoranthene	0.0828	0.0874	0.0833	0.0833	ND	99 105	48 - 127	5 21
Pyrene	0.0843	0.0874	0.0833	0.0833	ND	101 105	43 - 131	4 22
Benzo[a]anthracene	0.0899	0.0937	0.0833	0.0833	ND	108 112	55 - 132	4 20
Chrysene	0.0842	0.0869	0.0833	0.0833	ND	101 104	51 - 126	3 20
Benzo[b]fluoranthene	0.0838	0.0839	0.0833	0.0833	ND	101 101	45 - 133	0 21
Benzo(j,k)fluoranthene	0.0843	0.0888	0.0833	0.0833	ND	101 107	49 - 131	5 24
Benzo[a]pyrene	0.0839	0.0877	0.0833	0.0833	ND	101 105	50 - 127	4 21
Indeno(1,2,3-c,d)pyrene	0.0820	0.0838	0.0833	0.0833	ND	98 101	45 - 133	2 22
Dibenz[a,h]anthracene	0.0843	0.0863	0.0833	0.0833	ND	101 104	46 - 132	2 20
Benzo[g,h,i]perylene	0.0824	0.0854	0.0833	0.0833	ND	99 103	48 - 127	4 20
<i>Surrogate:</i>								
2-Fluorobiphenyl						86 89	40 - 117	
Pyrene-d10						95 98	38 - 119	
Terphenyl-d14						94 97	47 - 135	



Date of Report: August 1, 2018  
 Samples Submitted: July 20, 2018  
 Laboratory Reference: 1807-134  
 Project: 4082-039-01

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

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<hr/>						
Laboratory ID:	MB0724SM1					
Arsenic	ND	5.0	EPA 6010D	7-24-18	7-24-18	
Lead	ND	5.0	EPA 6010D	7-24-18	7-24-18	
<hr/>						
Laboratory ID:	MB0724SM2					
Arsenic	ND	5.0	EPA 6010D	7-24-18	7-24-18	
Barium	ND	2.5	EPA 6010D	7-24-18	7-24-18	
Cadmium	ND	0.50	EPA 6010D	7-24-18	7-24-18	
Chromium	ND	0.50	EPA 6010D	7-24-18	7-24-18	
Lead	ND	5.0	EPA 6010D	7-24-18	7-24-18	
Selenium	ND	10	EPA 6010D	7-24-18	7-24-18	
Silver	ND	1.0	EPA 6010D	7-24-18	7-24-18	
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Laboratory ID:	MB0723S1					
Mercury	ND	0.25	EPA 7471B	7-23-18	7-23-18	



Date of Report: August 1, 2018  
 Samples Submitted: July 20, 2018  
 Laboratory Reference: 1807-134  
 Project: 4082-039-01

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

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
<b>DUPLICATE</b>								
Laboratory ID:	07-134-02							
	ORIG	DUP						
Arsenic	ND	ND	NA	NA	NA	NA	NA	20
Barium	59.7	62.3	NA	NA	NA	NA	4	20
Cadmium	ND	ND	NA	NA	NA	NA	NA	20
Chromium	27.8	30.7	NA	NA	NA	NA	10	20
Lead	ND	ND	NA	NA	NA	NA	NA	20
Selenium	ND	ND	NA	NA	NA	NA	NA	20
Silver	ND	ND	NA	NA	NA	NA	NA	20
Laboratory ID:	07-137-01							
Mercury	ND	ND	NA	NA	NA	NA	NA	20
Laboratory ID:	07-134-02							
	ORIG	DUP						
Arsenic	ND	ND	NA	NA	NA	NA	NA	20
Lead	ND	ND	NA	NA	NA	NA	NA	20
<b>MATRIX SPIKES</b>								
Laboratory ID:	07-134-02							
	MS	MSD	MS	MSD	MS	MSD		
Arsenic	92.2	89.0	100	100	ND	92 89	75-125	4 20
Barium	159	159	100	100	59.7	100 100	75-125	0 20
Cadmium	47.2	46.7	50.0	50.0	ND	94 93	75-125	1 20
Chromium	124	125	100	100	27.8	96 97	75-125	1 20
Lead	241	238	250	250	ND	97 95	75-125	1 20
Selenium	93.9	93.9	100	100	ND	94 94	75-125	0 20
Silver	20.5	20.2	25.0	25.0	ND	82 81	75-125	1 20
Laboratory ID:	07-137-01							
Mercury	0.564	0.561	0.500	0.500	0.0265	108 107	80-120	1 20
Laboratory ID:	07-134-02							
	MS	MSD	MS	MSD	MS	MSD		
Arsenic	95.3	92.7	100	100	ND	95 93	75-125	3 20
Lead	238	237	250	250	ND	95 95	75-125	0 20





Date of Report: August 1, 2018  
Samples Submitted: July 20, 2018  
Laboratory Reference: 1807-134  
Project: 4082-039-01

**% MOISTURE**

Date Analyzed: 7-24-18

Client ID	Lab ID	% Moisture
FL207-B22-0-0.5	07-134-01	11
FL207-B22-2.5-3.5	07-134-02	5
FL207-B22-5-6	07-134-03	7
FL207-B22-7.5-8.5	07-134-04	8
FL207-B22-12.5-13.5	07-134-06	8





### 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) \_\_\_\_\_

Number of Containers

Laboratory Number:

**07-134**

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 AS, Pb	
% Moisture	

Company: GEI

Project Number: 7882-039-01

Project Name: FWLE - Sound Transit

Project Manager: Marsi Beeson/Chelsea Gahr

Sampled by: CSG/DDD

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers
1	FL207-B22-0-0.5	7/19/18	1225	S	5
2	FL207-B22-2.5-3.5		1250		
3	FL207-B22-5-6		1300		
4	FL207-B22-7.5-8.5		1305		
5	FL207-B22-10-10.5		1315		
6	FL207-B22-12.5-13.5		1330		
7	FL207-B22-15-15.5		1340		
8	FL207-B22-17.5-18		1350		
9	FL207-B22-20-20.5		1430		
10	FL207-B22-22.5-23		1445		

Signature: [Signature] Company: GEI

Relinquished: [Signature] Date: 7/26/18 Time: 8:07am

Received: [Signature] Date: 7/20/18 Time: 8:07am

Relinquished: [Signature] Date: 7/20/18 Time: 9:35am

Received: [Signature] Date: 7/20/18 Time: 9:35

Relinquished: [Signature] Date: 7/25/18 Time: 5:14

Received: [Signature] Date: 7/25/18 Time: 5:14

Reviewed/Date: \_\_\_\_\_

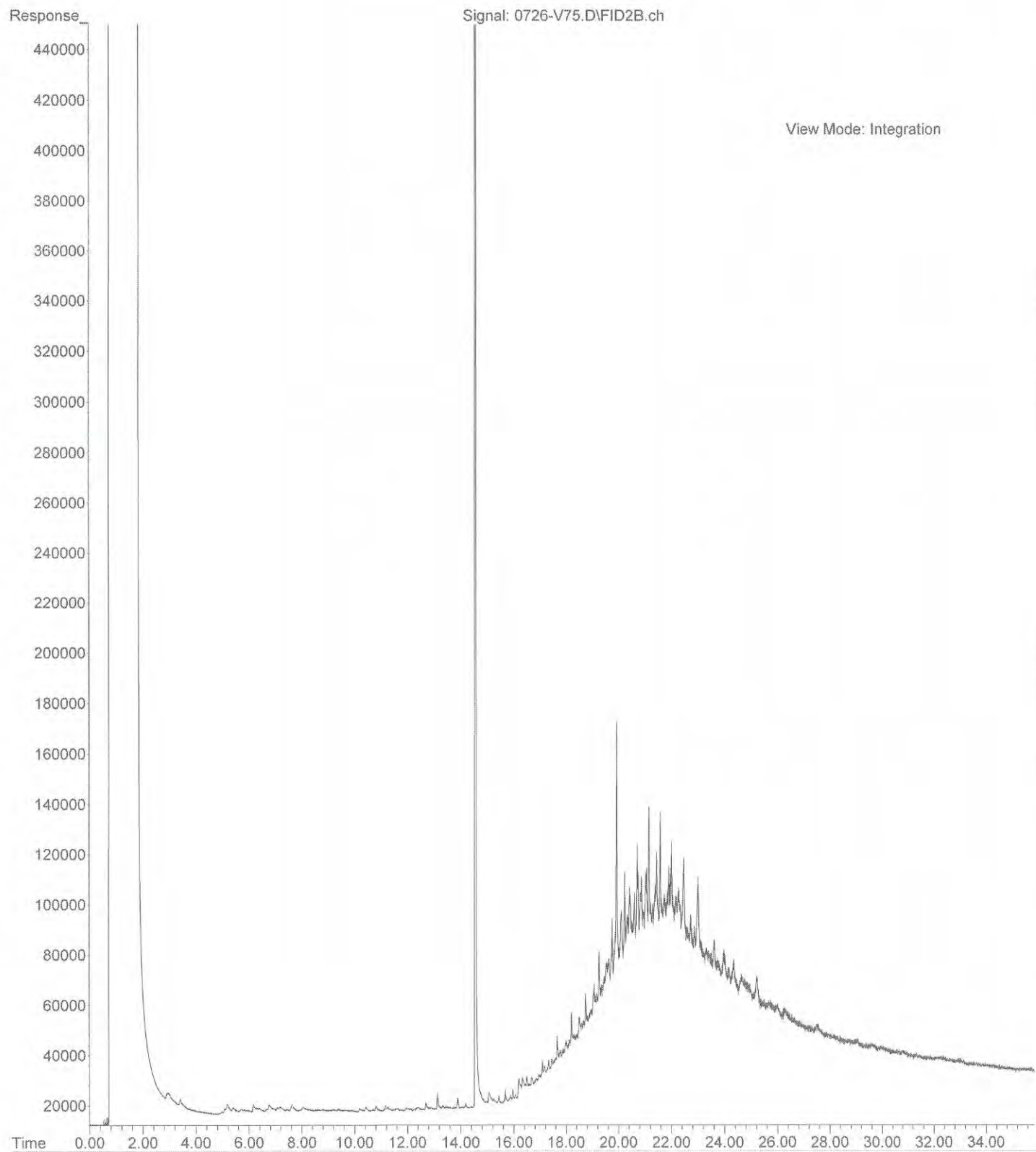
Comments/Special Instructions: AS-7 ppm  
(X) Added 7/23/18. DB (STA)  
(X) Added 7/23/18. DB (STA)  
(X) Added 7/25/18. DB (STA)

Data Package: Standard ☐ Level III ☐ Level IV ☐  
Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐





File :X:\DIESELS\VIGO\DATA\V180726.SEC\0726-V75.D  
Operator : JT  
Acquired : 27 Jul 2018 00:50 using AcqMethod V180601F.M  
Instrument : Vigo  
Sample Name: 07-134-02 2X  
Misc Info :  
Vial Number: 75



**APPENDIX C**  
**DECEMBER 2017 FOCUSED SUBSURFACE INVESTIGATION REPORT BY**  
**ECI ENVIRONMENTAL SERVICES**

# Focused Subsurface Investigation Report

December 18, 2017

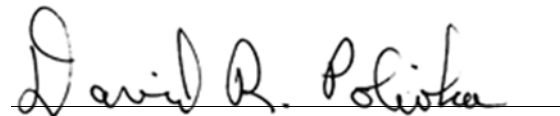
## Site Address:

**23418 Pacific Highway South  
Kent, Washington**

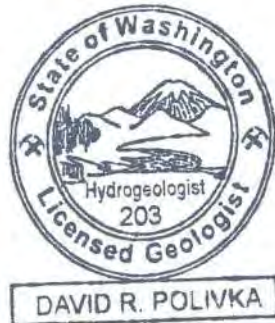
## Prepared for:

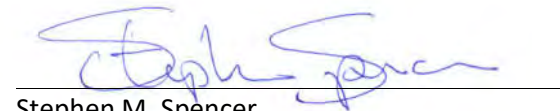
**Muscatel Midway Properties LLC  
C/o Cole Law Firm  
John A. Coe, Esq.  
600 Stewart St. Ste. 620  
Seattle, WA 98101-1261**

## Prepared By:



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ECI Project No.: 0673-01-01



**Table of Contents**

<b>1.0</b>	<b>INTRODUCTION .....</b>	<b>1</b>
1.1	Site Location / Description .....	1
1.2	Previous Environmental Investigations and Remedial Actions.....	2
<b>2.0</b>	<b>PHYSICAL SETTING .....</b>	<b>3</b>
2.1	Geology/ Topography .....	3
2.2	Hydrogeology .....	4
<b>3.0</b>	<b>REGULATORY COMPLIANCE AND CONTAMINANTS OF CONCERN .....</b>	<b>4</b>
3.1	Contaminants of Concern & MTCA-A Cleanup Levels .....	5
3.1.1	Contaminants of Concern .....	5
3.1.2	Cleanup Levels .....	5
<b>4.0</b>	<b>FOCUSED SUBSURFACE INVESTIGATION .....</b>	<b>7</b>
4.1	Limited Geophysical Survey & Utility Locating .....	7
4.2	Soil Borings.....	7
4.3	Sample Collection .....	8
4.3.1	Sample Collection and Handling Procedures .....	8
4.3.2	Sample Analyses.....	8
4.4	Analytical Results .....	9
<b>5.0</b>	<b>SUMMARY and RECOMMENDATIONS.....</b>	<b>9</b>
5.1	Summary .....	9
5.2	Recommendations .....	10
<b>6.0</b>	<b>REFERENCES .....</b>	<b>10</b>

**List of Tables**

Table A: Cleanup Levels for the Constituents of Concern .....	6
Table B: Analyte and Analytical Method.....	8
Table 1: .....	Appendix B
Table 2: .....	Appendix B
Table 3: .....	Appendix B

**List of Appendices**

**Appendix A: Project Figures**

- Figure 1: Site Location Map
- Figure 2: Site Topographic Map
- Figure 3: Boring Location Map
- Figure 4: Site Photographs

**Appendix B: Project Tables**

- Table 1: Area 1
- Table 2: Area 2
- Table 3: Area 3

**List of Appendices (Continued)**

Appendix C: Boring Logs

- Area 1 Boring Logs
- Area 2 Boring Logs
- Area 3 Boring Logs

Appendix D: Laboratory Data Sheets

- Area 1 Laboratory Data Sheets
- Area 2 Laboratory Data Sheets
- Area 3 Laboratory Data Sheets

## **1.0 INTRODUCTION**

EcoCon, Inc. (ECI) has prepared this Focused Subsurface Investigation (FSI) Report for a property located at 23418 Pacific Highway South, in Kent, Washington (Subject Property) (Figures 1 and 2, Appendix A).

The purpose of this report is to present the findings of a Focused Subsurface Investigation performed at the Site to determine if the soil and/or groundwater beneath the Subject Property has been impacted by historical activities of concern on or adjacent to the Subject Property. These activities included:

- A gasoline station historically operated on the southwest corner of the Subject Property, from at least 1941 to an unknown date. No information was provided as to when the station was decommissioned. The former service station was discovered during historical research conducted by others;
- A dry cleaning business (King Dry Cleaners) that operated in a portion of the building located in the southern portion of the Subject Property and addressed as 23416 Pacific Highway South Kent, Washington; and
- A petroleum hydrocarbon soil remediation project in 2002 conducted on the adjacent property to the south (23428 Pacific Highway South, Kent, Washington). As of the date of this report, the site has not received a “No Further Action” (NFA) determination from the Washington State Department of Ecology (Ecology)

The scope of work for this FSI was divided into three areas to specifically address potential impacts from each of the identified activities of concern (Figure 3, Appendix A). These areas are:

- Area 1: The area believed to be occupied by the former service station.
- Area 2: The area on the north side of the building in front of the former dry cleaners.
- Area 3: The area along the southern Subject Property boundary with the adjacent property.

In accordance with the Washington State Model Toxics Control Act (MTCA) Cleanup Regulations as established in Section 200 of Chapter 173-340 of the Washington Administrative Code (WAC 173-340-200), the “Site” is defined by the full lateral and vertical extent of contamination, if present, that has resulted from a historical release of hazardous substances on or adjacent to the Subject Property.

### **1.1 Site Location / Description**

The Subject Property is located at 23418 Pacific Avenue South in Kent, Washington, and consists of a 2.27-acre rectangular shaped parcel (King County parcel number 250060-0465). The Subject Property is located in the Northeast 1/4 of the Southeast 1/4 of Section 16, Township 22 North, Range 4 East, Willamette Meridian.

According to the City of Kent Zoning Map, the western half of the Subject Property is zoned “Midway Transit Community 1” (MTC-1) and the eastern half of the Subject Property is zoned “Midway Transit Community 2” (MTC-2). Both of the zoning designations are:

*“...to provide an area that will encourage the location of moderately dense and varied retail, office, or residential activities in support of rapid light rail and mass transit options, to enhance a pedestrian-oriented character...”*

The only difference in the two zoning designations is that the MTC-1 zoning acknowledges “... *the existing highway corridor character.*”

The Subject Property and is developed with one building on the southern half of the property that was originally built in 1962. Most recently it was divided into five commercial spaces housing from west to east, a Dollar Tree store, a smoke shop, a United States Post Office branch, a small grocery and produce store, and a fitness center. It was reported that the former dry cleaners was located adjacent to the Dollar Tree Store to the east. The building is currently vacant because of a fire that destroyed the western (Dollar Tree) portion of the building in 2015. With the exception of the foundation footings, that portion of the building has been removed. The northern half of the Subject Property is a paved parking lot.

The Subject Property is bound:

- To the North by a Sherwin-Williams Paint store and the White Snow Laundry in what appears to be a former bank building. Beyond this is S Kent- Des Moines Road also known as State Route 516.
- To the South by a retail tire business and a vacant parking lot. Further south are other commercial businesses. tire store and then at, with residences beyond the road;
- To the East by 30<sup>th</sup> Avenue South and then motel to the northeast and an auto body shop to the east and a trucking company storage parking lot to the southeast. Further to the east is Interstate 5; and
- To the West by Pacific Highway South (also known as State Route 99) and then a recreational marijuana retail store and a sea diving shop along with a travel agency. To West and Northwest is a retail strip mall containing various restaurants and other commercial businesses. Further west are multifamily residential developments.

The greater vicinity is occupied primarily commercial developments.

## **1.2 Previous Environmental Investigations and Remedial Actions**

ECI was told that a previous Phase I Environmental Site Assessment (ESA) was conducted on the Subject Property for Sound Transit, who reportedly wants all or a portion of the Subject Property for expansion of the regional light rail system. ECI was not provided a copy of that ESA. However, it was during that ESA that the former service station was identified.

During a review of the Ecology cleanup site database, ECI observed that the adjacent property to the south was listed by Ecology (listed as Southgate Oil) as having had a leaking underground storage tank reported in 2001 and that a remediation was completed and submitted to Ecology in 2002. However, as of the date of this report, the site has not received an NFA determination from Ecology. ECI has not reviewed any other information regarding this site.

## **2.0 PHYSICAL SETTING**

Topographical, geological and hydrogeological conditions can often affect to some extent, the environmental integrity of a property. Underlying soil and bedrock formations may facilitate or impede the migration of chemical contaminants in groundwater, and may even be the source of contaminants such as radon and metals.

This section of the report summarizes the topography, geology and hydrogeology beneath the Subject Property and the surrounding areas. The physical setting information was obtained from ECI's observations during this investigation, from documents produced for other investigations in the area obtained by ECI, and from the Washington State Department of Natural Resources (DNR).

### **2.1 Geology/ Topography**

The Subject Property is located within the Puget Sound Basin, which is classified as unconsolidated Pleistocene continental glacial drift. The glacial deposits predominantly consist of sand and silt, with varying amounts of gravel and cobbles (United States Geological Survey, 2005).

According to the EPA 2015 "Second Five-Year Review Report" for the Midway Landfill Superfund Site located approximately 0.6 miles to the south, the Subject Property is located near the crest of a narrow north-south trending glacier feature known as the Des Moines Drift Plain. This area, referred to as "upland" because of its location above adjacent valleys and sea level, is bordered by Puget Sound on the west and the Green River valley on the east.

Maximum elevations along the crest of the upland generally range from 400 to 450 feet above mean sea level. Puget Sound is at sea level, and the Green River valley floor typically averages about 30 feet above mean sea level. The United States Geological Survey (USGS) Des Moines, WA topographic map (2017), 7.5-minute quadrangle topographic map, shows that the Subject Property is situated at an elevation of approximately 398 feet above Mean Sea Level (MSL).

The upland area is cut with a number of steep-sided stream valleys. Adjacent to the Subject Property, the land surface is relatively flat across Highway 99 with a slight slope to the northwest. It then drops steeply downward approximately 200 feet towards Massey Creek approximately half a mile to the west-northwest.

To the east of the Subject Property the land surface rises slightly for approximately 400 feet and then slopes steeply downward to the east with an elevation change of approximately 300 feet, across some natural and manmade terraces towards the Green River approximately one mile east of the Subject Property. No significant water bodies were identified within one mile of the Subject Property.

The immediate area of the site is underlain by glacial drift consisting of alluvium, an alluvial terrace, and peat. These units were deposited during the Holocene and are characterized by mostly unconsolidated silt, sand, and gravelly valley fill with some clay, which includes low-level terrace, marsh, peat, artificial fill and glacial deposits. The soils encountered in ECIs borings were generally brown to light brown, dry, dense

to very dense, coarse sandy silt with gravel. Boring Logs from this investigation are presented in Appendix C.

The Natural Resources Conservation Service (NRCS) Web Soil Survey describes the soils at the Subject Property as Alderwood. This soil is characterized as gravelly sandy loam, a class C soil with slow infiltration rates that is moderately well drained.

## **2.2 Hydrogeology**

The primary aquifers in the Puget Sound region are typically overlain by relatively impermeable glacial till deposits, that are present at or near the ground surface. Within these till deposits are localized areas or lenses of water-bearing sands and gravels that may result in a shallow, localized, perched water table. Lateral and vertical migration of shallow groundwater may be impeded by the relatively impermeable nature of the till and by the sometimes-discontinuous nature of the perched water-bearing sands and gravel. The hydrogeology of the area is complex due to the topographic ridge in the area

According to the EPA 2015 “Second Five-Year Review Report” for the adjacent Midway Landfill Superfund Site, there is a shallow “Perched Aquifer” which was believed to represent shallow, discontinuous lenses of groundwater perched on low permeability deposits. EPA states that while this groundwater is shallow and discontinuous, it is not always perched. The majority of these shallow zones are found north of the Midway Landfill which includes the Subject Property. Based on a review of well logs in the Ecology online well log database, depth to a shallow aquifer is reported to be from 30 feet below ground surface (bgs) to over 100 feet bgs. Regionally, there are several deeper aquifers located several hundred feet bgs which are reported to flow to the south and southeast.

The shallow groundwater flow in the area is most likely controlled by the topography. Because of the depth to groundwater and topographic ridge upon which the Subject Property is located, the anticipated groundwater flow direction at the Subject Property may be divided between the east and the northwest. Groundwater migration pathways may also follow underground conduits.

## **3.0 REGULATORY COMPLIANCE AND CONTAMINANTS OF CONCERN**

Regulatory compliance for this project is based on the Washington Administrative Code (WAC) 173-340 – Model Toxic Control Act (MTCA) - RCW Chapter 70.105D, implemented by the Washington State Department of Ecology. Pursuant to Chapter 70.105D RCW, Ecology has established procedures for developing cleanup levels and requirements for cleanup actions. The rules establishing these levels and requirements were developed by Ecology in consultation with a Science Advisory Board (established under the Act) and with representatives from local government, citizen, environmental, and business groups. The rules were first published in February 1991, with amendments in January 1996, February 2001, and October 2007.

### **3.1 Contaminants of Concern & MTCA-A Cleanup Levels**

#### **3.1.1 Contaminants of Concern**

Based on ECI's review of historical data, the primary contaminants of concern (COCs) at this Site are divided by area and include:

- Area 1:
  - Gasoline-range Organics (GRO)
  - Benzene, Toluene, Ethylbenzene, and total Xylenes (BTEX)
  - Diesel-Range Organics (DRO), and
  - Heavy Oil-range Organics (ORO)
- Area 2:
  - Volatile Organic Constituents (VOCs)  
(Primarily tetrachloroethylene also known as Perchloroethylene [PCE])
- Area 3:
  - Gasoline-range Organics (GRO)
  - Benzene, Toluene, Ethylbenzene, and total Xylenes (BTEX)
  - Diesel-Range Organics (DRO), and
  - Heavy Oil-range Organics (ORO)

Ecology's WAC 173-340-900 Table 830-1 lists Secondary COC to be analyzed for if the primary COCs are detected above the laboratory reporting limits.

Those Secondary COCs include:

- Carcinogenic Poly-cyclic aromatic hydrocarbons (cPAHs), if DRO or ORO are detected,
- Halogenated Volatile organic compounds (HVOCs), if ORO is detected from waste oil,
- PCB Mixtures, if ORO is detected,
- The gasoline additives Methyl tert-butyl ether (MTBE) Ethylene dibromide (EDB) and 1,2-dichloroethane/ethylene dichloride (EDC), if GRO is detected, and
- Lead, if GRO is detected.

#### **3.1.2 Cleanup Levels**

Pursuant to Chapter 70.105D RCW, Ecology has established procedures for developing cleanup levels and requirements for cleanup actions. The MTCA regulations provide three approaches for establishing cleanup levels:



- **Method A: ARARs and Tables.** This method is to be used where the cleanup action is routine and involves relatively few hazardous substances. The soil and groundwater cleanup levels are set at concentrations at least as stringent as concentrations specified in applicable state and federal laws (ARARs) and are presented in Tables 720-1, 740-1, and 745-1 of the regulations (WAC 173-340).
- **Method B: Universal Method.** Method B is the “universal method” for determining cleanup levels for all media at all sites. Under Method B, cleanup levels for individual hazardous substances are established using applicable state and federal laws and the risk equations and other requirements specified in WAC 173-340.

Method B has two tiers, a “Standard” tier and a “Modified” tier. The “Standard” Method B tier uses generic default assumptions to calculate cleanup levels. The “Modified” Method B tier provides for the use of chemical-specific or site-specific information to change selected default assumptions. These can be established using a quantitative risk assessment process.

- **Method C: Conditional Method.** When compliance with cleanup levels developed under Method A or B are impossible to achieve or may cause greater environmental harm, Method C cleanup levels for individual hazardous substances may be established for surface water, groundwater, and air. Method C industrial soil and air cleanup levels may also be established at industrial properties that meet specific criteria.

Like Method B, Method C is divided into two tiers, a “Standard” and a “Modified” tier. The “Standard” Method C tier uses generic default assumptions to calculate cleanup levels. The “Modified” Method C tier provides for the use of chemical-specific or site-specific information to change selected default assumptions. These can be established using a quantitative risk assessment process.

For this Site ECI has determined that Method A cleanup levels are appropriate. There are a limited number of COCs in each area and any cleanup is routine should they be present. The MTCA Method A Soil Cleanup levels for the COCs at this Site are presented in the following table.

Table A: Cleanup Levels for the Constituents of Concern

Table 830-1 Constituent Method-A Soil Cleanup Levels for Unrestricted Land Use (MTCA Cleanup Regulation 173-340-900: Table 740-1)	
Contaminant of Concern (COCs)	Soil Cleanup Levels (mg/kg)
<b>Primary Contaminants of Concern</b>	
Gasoline Range Organics (GRO)	100/30 <sup>1</sup>
Diesel Range Organics (DRO)	2,000
Oil Range Organics (ORO)	2,000

<sup>1</sup> Gasoline Range Organics in Soil: Gasoline mixtures without benzene and the total of ethylbenzene, toluene and xylene are less than 1% of the gasoline mixture has a soil CUL = 100 mg/kg. All other gasoline mixtures have a soil CUL = 30 mg/kg.

**Focused Subsurface Investigation Report**

23418 Pacific Highway South

Kent, Washington

December 18, 2017

<b>Table 830-1 Constituent Method-A Soil Cleanup Levels for Unrestricted Land Use (MTCA Cleanup Regulation 173-340-900: Table 740-1)</b>	
<b>Contaminant of Concern (COCs)</b>	<b>Soil Cleanup Levels (mg/kg)</b>
Benzene	0.03
Ethylbenzene	6
Toluene	7
Total Xylenes	9
Tetrachloroethylene (PCE)	0.05
<b>Secondary Contaminants of Concern</b>	
cPAHs <sup>2</sup>	0.1
PCB Mixtures	1
EDB	0.005
EDC	--
MTBE	0.1
Arsenic	20
Lead	250

#### **4.0 FOCUSED SUBSURFACE INVESTIGATION**

On November 20 and 21, 2017, ECI conducted a Focused Subsurface Investigation (FSI) at the Subject Property based on the approved proposals submitted on November 8, 2017. ECI installed twelve (12) borings on the Subject Property for the purposes of sampling the soil and groundwater (if encountered) beneath the Subject Property.

##### **4.1 Limited Geophysical Survey & Utility Locating**

Before mobilizing to the Site, ECI contacted the Washington Utility Locating Center to locate the public utilities in the area of the Subject Site. Prior beginning the borings, ECI's locating subcontractor, Mountain View Locating Services L.L.C. of Bonney Lake Washington, conducted a thorough non-invasive geophysical survey of the Subject Property, using electromagnetic survey techniques. The intent of the limited geophysical survey was to locate and trace subsurface utilities and other buried equipment and "clear" each boring location.

##### **4.2 Soil Borings**

Standard Environmental Probe of Tumwater, Washington advanced twelve (12) borings at the Site (Borings B1 through B10 and Borings B12 and B13) using a Geoprobe® drill rig and direct push drilling techniques under the supervision of an ECI environmental professional. The locations of the borings are

---

<sup>2</sup> Total concentration as benzo(a)pyrene using the toxicity equivalency methodology in WAC 173-340-708 (8)

presented on Figure 3 in Appendix A. Six (6) borings were installed in Area 1, two (2) borings were installed in Area 2 and four (4) borings were installed in Area 3.

During drilling, each boring was logged by an ECI professional for lithology and the soils screened for evidence of contamination. The borings were advanced until the probe could not be driven further (“refusal”). The depths of the borings ranged from 7 to 12 feet bgs. The soils encountered in each boring were generally brown to light brown, dry to moist, dense to very dense, coarse sandy silt with gravel to the total depths drilled.

While some moist soils were present in the soil borings, groundwater was not encountered during this investigation. As previously mentioned, groundwater is estimated to be at depths of 30 to over 100 feet bgs. Boring logs for this investigation are presented in Appendix C.

### 4.3 Sample Collection

In each boring two to three samples were collected during drilling. Based on field screening, two samples from each boring analyzed for the respective COCs.

#### 4.3.1 Sample Collection and Handling Procedures

At each sampling location, a two-inch diameter, four-foot long stainless-steel push-probe fitted with four-foot long single-use (disposable) acetate liner was advanced. Relatively undisturbed soil samples were collected directly from the acetate liner extracted from the borings. Samples were transferred into new laboratory-provided analyte specific sample containers and assigned a unique sample ID; those collected for volatile organic compounds (VOCs) were collected using the EPA Method 5035 sampling procedures.

The samples were placed in a climate-controlled container and maintained at or below 4° Celsius until they were delivered to an Ecology accredited laboratory, Friedman & Bruya, Inc. of Seattle, Washington, under industry standard chain of custody protocol.

#### 4.3.2 Sample Analyses

The laboratory analyzed each sample from the borings for the COCs specific to each area.

The analytical methods used are listed below:

Table B: Analyte and Analytical Method

Analyte	Analytical Method
Gasoline Range Organics (GRO)	EPA Method 5035 / NWTPH-Gx
Diesel & Oil Range Organics (DRO & ORO)	NWTPH-Dx Extended
Chlorinated Polycyclic Aromatic Hydrocarbons (cPAHs)	EPA Method 8270D

Volatile Organic Compounds (VOCs)	EPA Method 5035 / EPA Method 8260C
-----------------------------------	------------------------------------

#### 4.4 Analytical Results

Upon receipt of the analytical results and laboratory reporting limits they were compared to the appropriate cleanup level. The analytical results of the samples analyzed revealed that:

- Area 1: The Area 2 COCs (GRO, BTEX, DRO and ORO) were not present above the laboratory reporting limits and the reporting limits were below the respective MTCA Method A CULs.
- Area 2: The Area 2 COCs (VOCs) were not present above the laboratory reporting limits and the reporting limits were below the respective MTCA Method A CULs.
- Area 3: In Area 3, the COCs (GRO, BTEX, DRO and ORO) were not present above the laboratory reporting limits and the reporting limits were below the respective MTCA Method A CULs in three (3) of the four (4) borings (Boring B9, B10, and B12).

In Boring B13, DRO was detected at a depth of 8 feet bgs (Sample B13-8') at a level of 8,800 mg/kg which is above the MTCA Method A cleanup level of 2,000 mg/kg. The laboratory also reported GRO at a level of 170 mg/kg, which is above the MTCA Method A cleanup level of 100 mg/kg. However, according to the laboratory, the GRO reported is not actually GRO but DRO. It is a result of an overlap of the DRO hydrocarbon range with the GRO hydrocarbon range.

Boring B13 is located along the southern property boundary approximately 38 feet south of the building and approximately 240 feet east of the corner of the former building footing (100 feet west of the centerline of 30<sup>th</sup> Avenue South) (Figure 3, Appendix A). The analytical results are presented in Table 1, Appendix B and the laboratory datasheets are presented in Appendix D.

Based on the location of the boring and the depth of the sample, it is believed that the DRO reported maybe from the adjacent property to the south, which has had a cleanup of DRO in 2002.

## 5.0 SUMMARY and RECOMMENDATIONS

### 5.1 Summary

This FSI Report was prepared at the request of Muscatel Midway Properties, LLC for a property located at 23418 Pacific Highway South Kent, Washington. The purpose of this FSI was to determine if soil and/or groundwater underlying the Property has been impacted by historical activities on the Subject Property or immediately adjacent properties. The investigatory activities were divided into three areas to specifically address potential impacts from the activities of concern identified. These areas are:

- Area 1: The area in the southwest portion of the property believed to be occupied by a former service station.
- Area 2: The area on the north side of the building in front of a former dry cleaners.

- Area 3: The area along the southern property boundary with the adjacent property which had a leaking UST in 2002.

ECI installed twelve (12) borings on the Subject Property for the purposes of sampling the soil and groundwater (if encountered) beneath the Subject Property. The analytical results indicated that one of the borings contained DRO in soil at concentrations above the MTCA Method A Cleanup Levels. Groundwater was not encountered during this investigation.

Boring B13, advanced along the southern property boundary approximately 85 feet west of the southeast corner of the Subject Property was reported containing DRO at 8,800 mg/kg, ORO at 1,100 mg/kg and gasoline at 170 mg/kg each exceeding there applicable MTCA Method A cleanup level. It is our understanding that the southern adjacent property underwent a cleanup action in the early to mid-2000's. Based on the location of boring B13 and its proximity to the remediation work completed on the southern adjacent property, the contamination identified appears to be originating from the southern property.

## **5.2 Recommendations**

ECI recommends that further investigation be performed to delineate the extent of the soil contamination on the Subject Property in the area of Boring B13. In addition, it is recommended that the owner of the adjacent property be notified.

Ecology also requires that:

*"...Any owner or operator who has information that a hazardous substance has been released to the environment at the owner or operator's facility and may be a threat to human health or the environment shall report such information to the department within ninety days of discovery..." (WAC 173-340-300).*

As required by this above regulatory citation, it is recommended that Ecology be notified of the findings of this investigation.

## **6.0 REFERENCES**

King County Assessor-Treasurer, 2017 : <http://blue.kingcounty.com/Assessor/eRealProperty/>

Washington State Department of Ecology, 2007, *Model Toxics Control Act Statute and Regulation*, Publication No. 94-06, November 2007.

Washington State Department of Ecology, 2017, *Washington State Well Report Viewer*: <https://fortress.wa.gov/ecy/waterresources/map/WCLWebMap/default.aspx>

Washington State Department of Natural Resources, 2017, *Geologic Information Portal*: <https://www.dnr.wa.gov/geologyportal>

# List of Appendices

## List of Appendices

### **Appendix A: Project Figures**

Figure 1: Site Location Map

Figure 2: Site Topographic Map

Figure 3: Boring Location Map

Figure 4: Site Photographs

### **Appendix B: Project Tables**

Table 1-Area 1 Analytical Results

Table 2-Area 2 Analytical Results

Table 3-Area 3 Analytical Results

### **Appendix C: Project Boring Logs**

### **Appendix D: Laboratory Data Sheets**

## Appendix A: Project Figures

Figure 1: Site Location Map

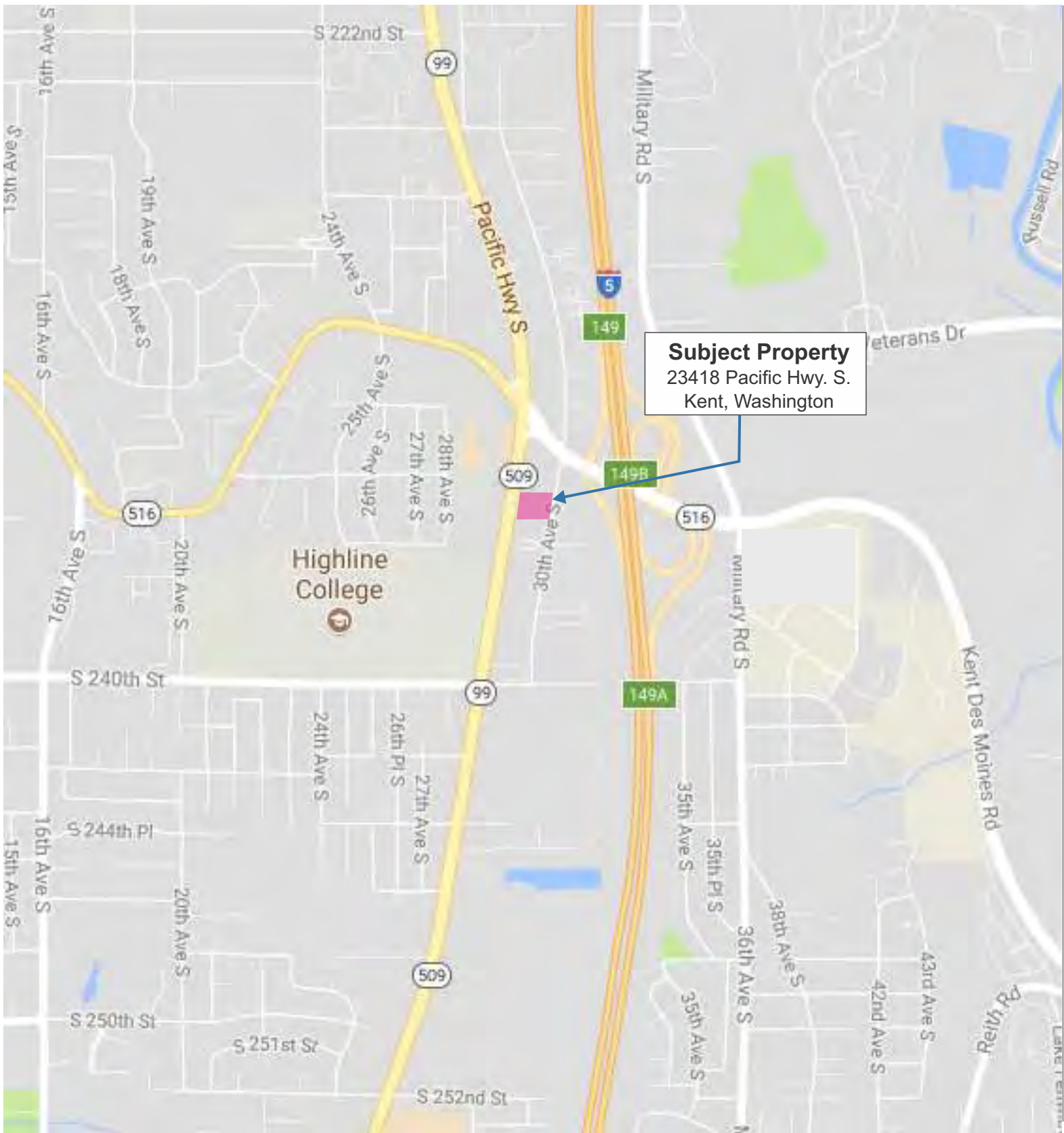
Figure 2: Site Topographic Map

Figure 3: Boring Location Map

Figure 4: Site Photographs

## Appendix A Project Figures





**Subject Property**  
 23418 Pacific Hwy. S.  
 Kent, Washington



**Vicinity Map**  
 Focused Subsurface Investigation  
 23418 Pacific Highway S.  
 Kent, Washington

Date: December 8, 2017  
 Completed By: K. Spencer  
 Reviewed By.: S. Spencer  
 Version: ECI-001  
 Project No.: 0673-01-01

Figure No.:

**01**

Sheet 01 of 04



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**Subject Property**  
23418 Pacific Hwy. S.  
Kent, Washington



**Topographic Map**  
Focused Subsurface Investigation  
23418 Pacific Highway S.  
Kent, Washington

Date: December 8, 2017  
Completed By: K. Spencer  
Reviewed By.: S. Spencer  
Version: ECI-001  
Project No.: 0673-01-01

Figure No.:

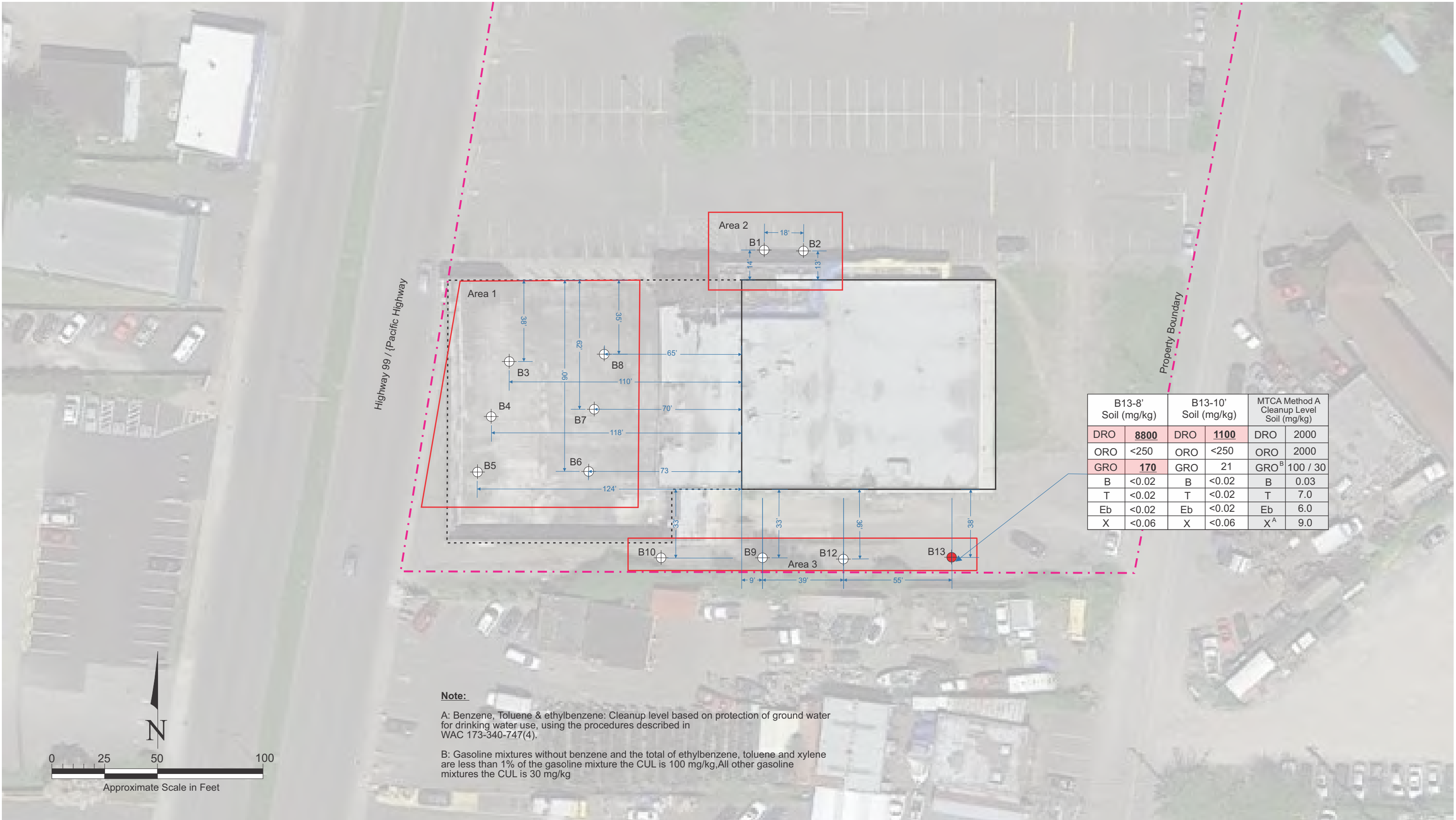
**02**

Sheet 02 of 04



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B13-8' Soil (mg/kg)		B13-10' Soil (mg/kg)		MTCA Method A Cleanup Level Soil (mg/kg)	
DRO	8800	DRO	1100	DRO	2000
ORO	<250	ORO	<250	ORO	2000
GRO	170	GRO	21	GRO <sup>B</sup>	100 / 30
B	<0.02	B	<0.02	B	0.03
T	<0.02	T	<0.02	T	7.0
Eb	<0.02	Eb	<0.02	Eb	6.0
X	<0.06	X	<0.06	X <sup>A</sup>	9.0

**Note:**

A: Benzene, Toluene & ethylbenzene: Cleanup level based on protection of ground water for drinking water use, using the procedures described in WAC 173-340-747(4).

B: Gasoline mixtures without benzene and the total of ethylbenzene, toluene and xylene are less than 1% of the gasoline mixture the CUL is 100 mg/kg, All other gasoline mixtures the CUL is 30 mg/kg

**Area 1:** Target Primary COCs, GRO, DRO, ORO, BTEX, Pb  
Samples to be collected at 4 to 5 foot increments extending to feet extending to 20 feet bgs or water.

**Area 2:** Target Primary COCs - VOCs  
Samples to be collected at 4 to 5 foot increments extending to feet extending to 20 feet bgs or water.

**Area 3:** Target Primary COCs - GRO, DRO, ORO, VOCs  
Samples to be collected at 4 to 5 foot increments extending to feet extending to 20 feet bgs or water.

**Explanation**

- Boring Location Below Cleanup Levels
- Boring Location Above Cleanup Levels
- GRO Gasolene-Range Organics
- DRO Diesel-Range Organics
- ORO Oil-Range Organic
- BTEX Benzene, Toluene, Ethyl benzene, Xylenes
- CUL Cleanup Level

Sample Collection Location Map  
Focused Subsurface Investigation  
23418 Pacific Highway S.  
Kent, Washington

Date: December 8, 2017  
Completed By: K. Spencer  
Reviewed By: S. Spencer  
Version: ECI-001  
Project No.: 0673-01-01

Figure No.:  
**03**  
Sheet 03 of 04



Photograph One: Boring B13



Photograph Two: Boring B9



Photograph Three: Boring B6



Photograph Four: Boring B5



Photograph Five: Boring B8



Photograph Six: Boring B2

**Project Photographs**  
 Focused Subsurface Investigation  
 23418 Pacific Highway S.  
 Kent, Washington

Date: December 8, 2017  
 Completed By: K. Spencer  
 Reviewed By.: S. Spencer  
 Version: ECI-001  
 Project No.: 0673-01-01

Figure No.:  
**04**  
 Sheet 04 of 04

## Appendix B: Project Tables

Table 1-Area 1 Analytical Results

Table 2-Area 2 Analytical Results

Table 3-Area 3 Analytical Results

# Appendix B Project Tables

# Table 1 - Summary of Area 1 Soil Analytical Results

23418 Pacific Highway South

Kent, Washington 98032

Sample Identification Number	Date Sampled	Total Petroleum Hydrocarbons (mg/kg)			Select Volatile Organic Compounds (mg/kg)			
		Diesel Range Organics	Oil Range Organics	Gasoline Range Organics	Benzene	Toluene	Ethylbenzene	Total Xylenes
B3-5	11/20/2017	<50	<250	<5	<0.02	<0.02	<0.02	<0.06
B3-12	11/20/2017	<50	<250	<5	<0.02	<0.02	<0.02	<0.06
B4-5	11/20/2017	<50	<250	<5	<0.02	<0.02	<0.02	<0.06
B4-11	11/20/2017	<50	<250	<5	<0.02	<0.02	<0.02	<0.06
B5-5	11/20/2017	<50	<250	<5	<0.02	<0.02	<0.02	<0.06
B5-7	11/20/2017	<50	<250	<5	<0.02	<0.02	<0.02	<0.06
B6-5	11/20/2017	<50	<250	<5	<0.02	<0.02	<0.02	<0.06
B6-10	11/20/2017	<50	<250	<5	<0.02	<0.02	<0.02	<0.06
B7-5	11/20/2017	<50	<250	<5	<0.02	<0.02	<0.02	<0.06
B7-12	11/20/2017	<50	<250	<5	<0.02	<0.02	<0.02	<0.06
B8-5	11/20/2017	<50	<250	<5	<0.02	<0.02	<0.02	<0.06
B8-12	11/20/2017	<50	<250	<5	<0.02	<0.02	<0.02	<0.06
MTCA Method A Clean Up Levels		2,000	2,000	100/30 <sup>1</sup>	0.03	7	6	9

## Notes:

(mg/kg) = milligrams per kilogram

< Not detected above the specified laboratory reporting limit

**Bold** indicates a detected concentration below Ecology MTCA Method A cleanup levels

**Bold** indicates a detected concentration above Ecology MTCA Method A cleanup levels



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## Table 2 - Summary of Area 2 Soil Analytical Results

23418 Pacific Highway South

Kent, Washington 98032

Sample Identification Number	Date Sampled	Select Volatile Organic Compounds (mg/kg)						
		MTBE	EDC	EDB	Benzene	Toluene	Ethylbenzene	Total Xylenes
B1-3	11/20/2017	<0.05	<0.05	<0.05	<0.03	<0.05	<0.05	<0.05
B1-11	11/20/2017	<0.05	<0.05	<0.05	<0.03	<0.05	<0.05	<0.05
B2-3	11/20/2017	<0.05	<0.05	<0.05	<0.03	<0.05	<0.05	<0.05
B2-11	11/20/2017	<0.05	<0.05	<0.05	<0.03	<0.05	<0.05	<0.05
MTCA Method A Clean Up Levels		0.1	--	0.050	0.03	7	6	9

### Notes:

(mg/kg) = milligrams per kilogram

< Not detected above the specified laboratory reporting limit

**Bold** indicates a detected concentration below Ecology MTCA Method A cleanup levels

**Bold** indicates a detected concentration above Ecology MTCA Method A cleanup levels





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### Table 3 - Summary of Area 3 Soil Analytical Results

23418 Pacific Highway South

Kent, Washington 98032

Sample Identification Number	Date Sampled	Total Petroleum Hydrocarbons (mg/kg)			Select Volatile Organic Compounds (mg/kg)			
		Diesel Range Organics	Oil Range Organics	Gasoline Range Organics	Benzene	Toluene	Ethylbenzene	Total Xylenes
B9-7	11/21/2017	<50	<250	<5	<0.02	<0.02	<0.02	<0.06
B9-10	11/21/2017	<50	<250	<5	<0.02	<0.02	<0.02	<0.06
B10-7	11/21/2017	<50	<250	<5	<0.02	<0.02	<0.02	<0.06
B10-10	11/21/2017	<50	<250	<5	<0.02	<0.02	<0.02	<0.06
B12-7	11/21/2017	<50	<250	<5	<0.02	<0.02	<0.02	<0.06
B12-10	11/21/2017	<50	<250	<5	<0.02	<0.02	<0.02	<0.06
B13-8	11/21/2017	<b>8,800</b>	<250	<b>170*</b>	<0.02	<0.02	<0.02	<0.06
B13-10	11/21/2017	<b>1,100</b>	<250	<b>21</b>	<0.02	<0.02	<0.02	<0.06
MTCA Method A Clean Up Levels		2,000	2,000	100/30 <sup>1</sup>	0.03	7	6	9

Notes:

(mg/kg) = milligrams per kilogram

< Not detected above the specified laboratory reporting limit

**Bold** indicates a detected concentration below Ecology MTCA Method A cleanup levels


**Bold** indicates a detected concentration above Ecology MTCA Method A cleanup levels


\* Indicates that the GRO reported by the laboratory is due to overlap from a middle distillate such as heating oil or diesel





## Area 1 Boring Logs

## Area 1 Boring Logs


 <p><b>ECI</b> environmental services www.ecocononline.com Anchorage   Tacoma   Portland</p>					<b>Project:</b> Focused Subsurface Investigation		<b>Boring ID:</b>		<b>B3</b>																																			
					<b>Location:</b> 23418 Pacific Highway South, Kent, Washington - Area 1		<b>Project Number:</b>		<b>0673-01-01</b>																																			
					<b>Client:</b> Muscatel Midway Properties																																							
<b>Date Start/Finish:</b>		11/20/2017		<b>Drilling Method:</b>		Direct Push		<table border="1"> <tr><th colspan="2">Unified Soil Classification System</th></tr> <tr><td rowspan="8">NON-COHESIVE SOILS</td><td>GW</td><td>WELL-GRADED GRAVEL, FINE TO COARSE GRAVEL</td></tr> <tr><td>GP</td><td>POORLY-GRADED GRAVEL</td></tr> <tr><td>GM</td><td>SILTY GRAVEL</td></tr> <tr><td>GC</td><td>CLAYEY GRAVEL</td></tr> <tr><td>SW</td><td>WELL-GRADED SAND, FINE TO COARSE SAND</td></tr> <tr><td>SP</td><td>POORLY-GRADED SAND</td></tr> <tr><td>SM</td><td>SILTY SAND</td></tr> <tr><td>SC</td><td>CLAYEY SAND</td></tr> <tr><td rowspan="7">COHESIVE SOILS</td><td>ML</td><td>SILT</td></tr> <tr><td>CL</td><td>CLAY</td></tr> <tr><td>OL</td><td>ORGANIC SILT, ORGANIC CLAY</td></tr> <tr><td>MH</td><td>SILT OF HIGH PLASTICITY, ELASTIC SILT</td></tr> <tr><td>CH</td><td>CLAY OF HIGH PLASTICITY, FAT CLAY</td></tr> <tr><td>OH</td><td>ORGANIC CLAY, ORGANIC SILT</td></tr> <tr><td>PT</td><td>PEAT</td></tr> </table>			Unified Soil Classification System		NON-COHESIVE SOILS	GW	WELL-GRADED GRAVEL, FINE TO COARSE GRAVEL	GP	POORLY-GRADED GRAVEL	GM	SILTY GRAVEL	GC	CLAYEY GRAVEL	SW	WELL-GRADED SAND, FINE TO COARSE SAND	SP	POORLY-GRADED SAND	SM	SILTY SAND	SC	CLAYEY SAND	COHESIVE SOILS	ML	SILT	CL	CLAY	OL	ORGANIC SILT, ORGANIC CLAY	MH	SILT OF HIGH PLASTICITY, ELASTIC SILT	CH	CLAY OF HIGH PLASTICITY, FAT CLAY	OH	ORGANIC CLAY, ORGANIC SILT	PT	PEAT
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<b>Coordinates:</b>		--		<b>Water Depth:</b>		--																																						
<b>Weather:</b>		Rain		<b>Boring Depth:</b>		12 feet																																						
Depth (ft bgs)	Sample Number	Time	PID Reading	Remarks	Soil and Rock Description	Unified Classification	Graphical Representation																																					
1				No odor	<div> <div></div> <div>Brown, dry, dense, coarse, sandy silt with gravel</div> <div></div> </div> <div> <div></div> <div>Brown, dry, very dense, coarse, sandy silt with gravel</div> <div></div> </div> <div> <div></div> <div>Brown, dry, very dense, coarse, sandy silt with cobble</div> <div></div> </div>	ML																																						
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6																																												
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8																																												
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10	B3-10	10:50 AM																																										
11				No odor																																								
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 Anchorage   Tacoma   Portland					<b>Project:</b> Focused Subsurface Investigation		<b>Boring ID:</b> B4																																			
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5	B5-5	1:00 PM																																								
6				No odor	Brown, dry, very dense, coarse, sandy silt with gravel	ML																																				
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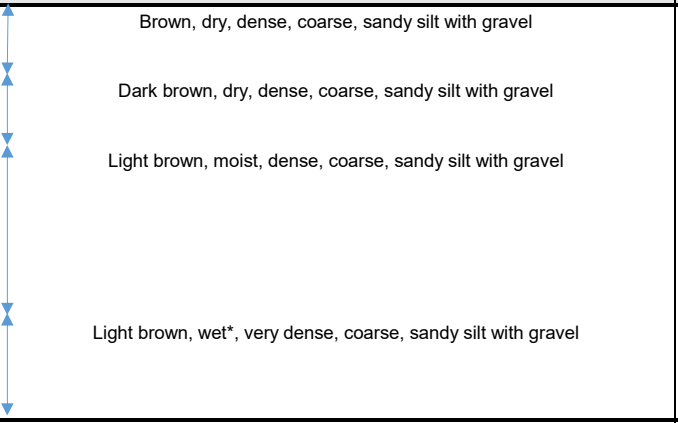


 <p><b>ECI</b> environmental services www.ecocononline.com Anchorage   Tacoma   Portland</p>					<b>Project:</b> Focused Subsurface Investigation		<b>Boring ID:</b> B7																																			
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1				No odor	Brown, dry, dense, coarse, sandy silt with cobble	ML																																				
2																																										
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5	B7-5	2:10 PM																																								
6					Light brown, dry, dense, coarse, sandy silt with gravel	ML																																				
7				No odor																																						
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## Area 2 Boring Logs

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1				No odor	 Brown, dry, dense, coarse, sandy silt with gravel	ML																																				
2																																										
3	B1-3	9:15 AM		No odor		Dark brown, dry, dense, coarse, sandy silt with gravel		ML																																		
4																																										
5				No odor		Light brown, moist, dense, coarse, sandy silt with gravel		ML																																		
6																																										
7	B1-7	9:20 AM																																								
8																																										
9																																										
10				No odor		Light brown, wet*, very dense, coarse, sandy silt with gravel		ML																																		
11	B1-11	9:25 AM																																								
12																																										
13					Termination of boring due to refusal																																					
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Notes: \* the wetness in the boring at 10 to 12 feet is attributed to surface water entring the boring during drilling.


 Anchorage   Tacoma   Portland					<b>Project:</b> Focused Subsurface Investigation		<b>Boring ID:</b> B2																																			
					<b>Location:</b> 23418 Pacific Highway South, Kent, Washington - Area 2																																					
					<b>Client:</b> Muscatel Midway Properties		<b>Project Number:</b> 0673-01-01																																			
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3	B2-3	9:40 AM		No odor																																						
4																																										
5				No odor																																						
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7	B2-7	9:45 AM																																								
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## Area 3 Boring Logs


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1				No odor	Dark brown, dry, dense, coarse, sandy silt with gravel  Brown, dry, dense, coarse, sandy silt with gravel	ML  ML																																				
2																																										
3	B9-3	8:50 AM																																								
4				No odor																																						
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7	B9-7	9:00 AM																																								
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 <p><b>ECI environmental services</b> www.ecocononline.com Anchorage   Tacoma   Portland</p>					<b>Project:</b> Focused Subsurface Investigation		<b>Boring ID:</b> B10																																			
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	GC	CLAYEY GRAVEL																																								
	SW	WELL-GRADED SAND, FINE TO COARSE SAND																																								
	SP	POORLY-GRADED SAND																																								
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OH		ORGANIC CLAY, ORGANIC SILT																																								
PT	PEAT																																									
<b>Logged By:</b> Kaden Reed		<b>Auger ID/OD:</b> --																																								
<b>Checked By:</b> David Polivka		<b>Borehole ID/OD:</b> 2 inches																																								
<b>Contractor:</b> Standard Environmental Probe		<b>Sampler:</b> Macro Core 5																																								
<b>Operator:</b> Chris Ross		<b>Hammer Wt./Fall:</b> --																																								
<b>Boring Location:</b> See Figure 3, Appendix A		<b>Ground Elevation:</b> --																																								
<b>Coordinates:</b> --		<b>Water Depth:</b> --																																								
<b>Weather:</b> Rain		<b>Boring Depth:</b> 10 feet																																								
Depth (ft bgs)	Sample Number	Time	PID Reading	Remarks	Soil and Rock Description	Unified Classification	Graphical Representation																																			
1				No odor	Brown, dry, dense, coarse, sandy silt with cobble	ML																																				
2																																										
3	B12-3	11:20 AM																																								
4					Grayish brown, dry, dense, coarse, sandy silt with cobble	ML																																				
5				No odor																																						
6																																										
7	B12-7	11:30 AM			Dark brown, dry, dense, coarse, sandy silt with cobble	ML																																				
8																																										
9				No odor																																						
10	B12-10	11:35 AM			Termination of boring due to refusal																																					
11																																										
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<b>Notes:</b>																																										

 Anchorage   Tacoma   Portland					<b>Project:</b> Focused Subsurface Investigation		<b>Boring ID:</b> B13																																			
					<b>Location:</b> 23418 Pacific Highway South, Kent, Washington - Area 3																																					
					<b>Client:</b> Muscatel Midway Properties		<b>Project Number:</b> 0673-01-01																																			
<b>Date Start/Finish:</b> 11/21/2017		<b>Drilling Method:</b> Direct Push		<table border="1"> <tr> <th colspan="2">Unified Soil Classification System</th> </tr> <tr> <td rowspan="10">NON-COHESIVE SOILS</td> <td>GW</td> <td>WELL-GRADED GRAVEL, FINE TO COARSE GRAVEL</td> </tr> <tr> <td>GP</td> <td>POORLY-GRADED GRAVEL</td> </tr> <tr> <td>GM</td> <td>SILTY GRAVEL</td> </tr> <tr> <td>GC</td> <td>CLAYEY GRAVEL</td> </tr> <tr> <td>SW</td> <td>WELL-GRADED SAND, FINE TO COARSE SAND</td> </tr> <tr> <td>SP</td> <td>POORLY-GRADED SAND</td> </tr> <tr> <td>SM</td> <td>SILTY SAND</td> </tr> <tr> <td>SC</td> <td>CLAYEY SAND</td> </tr> <tr> <td rowspan="6">COHESIVE SOILS</td> <td>ML</td> <td>SILT</td> </tr> <tr> <td>CL</td> <td>CLAY</td> </tr> <tr> <td>OL</td> <td>ORGANIC SILT, ORGANIC CLAY</td> </tr> <tr> <td>MH</td> <td>SILT OF HIGH PLASTICITY, ELASTIC SILT</td> </tr> <tr> <td>CH</td> <td>CLAY OF HIGH PLASTICITY, FAT CLAY</td> </tr> <tr> <td>OH</td> <td>ORGANIC CLAY, ORGANIC SILT</td> </tr> <tr> <td>PT</td> <td>PEAT</td> </tr> </table>					Unified Soil Classification System		NON-COHESIVE SOILS	GW	WELL-GRADED GRAVEL, FINE TO COARSE GRAVEL	GP	POORLY-GRADED GRAVEL	GM	SILTY GRAVEL	GC	CLAYEY GRAVEL	SW	WELL-GRADED SAND, FINE TO COARSE SAND	SP	POORLY-GRADED SAND	SM	SILTY SAND	SC	CLAYEY SAND	COHESIVE SOILS	ML	SILT	CL	CLAY	OL	ORGANIC SILT, ORGANIC CLAY	MH	SILT OF HIGH PLASTICITY, ELASTIC SILT	CH	CLAY OF HIGH PLASTICITY, FAT CLAY	OH	ORGANIC CLAY, ORGANIC SILT	PT	PEAT
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3	B13-3	12:10 PM																																								
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5																																										
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7																																										
8	B13-8	12:20 PM		Odor	Grayish brown, dry, dense, coarse, sandy silt with cobble		ML																																			
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10	B13-10	12:30 PM		No odor																																						
11					Termination of boring due to refusal																																					
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<b>Notes:</b>																																										



## Area 1 Laboratory Data Sheets

## Area 1 Laboratory Data Sheets

FRIEDMAN & BRUYA, INC.

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ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.  
Yelena Aravkina, M.S.  
Michael Erdahl, B.S.  
Arina Podnozova, B.S.  
Eric Young, B.S.

3012 16th Avenue West  
Seattle, WA 98119-2029  
(206) 285-8282  
fbi@isomedia.com  
www.friedmanandbruya.com

November 30, 2017

David Polivka, Project Manager  
EcoCon, Inc.  
15 S. Oregon Ave, Suite 110  
Tacoma, WA 98409

Dear Mr Polivka:

Included are the results from the testing of material submitted on November 22, 2017 from the Area 1, PO 0673-01-01, F&BI 711424 project. There are 8 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

A handwritten signature in dark ink on a light-colored background, appearing to read "Michael Erdahl".

Michael Erdahl  
Project Manager

Enclosures  
c: Stephen Spencer  
EMS1130R.DOC

# FRIEDMAN & BRUYA, INC.

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## ENVIRONMENTAL CHEMISTS

### CASE NARRATIVE

This case narrative encompasses samples received on November 22, 2017 by Friedman & Bruya, Inc. from the EcoCon Area 1, PO 0673-01-01, F&BI 711424 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>EcoCon</u>
711424 -01	B3-5
711424 -02	B3-10
711424 -03	B3-12
711424 -04	B4-5
711424 -05	B4-11
711424 -06	B5-5
711424 -07	B5-7
711424 -08	B6-5
711424 -09	B6-10
711424 -10	B7-5
711424 -11	B7-10
711424 -12	B7-12
711424 -13	B8-5
711424 -14	B8-10
711424 -15	B8-12

All quality control requirements were acceptable.



FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 11/30/17

Date Received: 11/22/17

Project: Area 1, PO 0673-01-01, F&BI 711424

Date Extracted: 11/28/17

Date Analyzed: 11/28/17

**RESULTS FROM THE ANALYSIS OF SOIL SAMPLES  
FOR BENZENE, TOLUENE, ETHYLBENZENE,  
XYLENES AND TPH AS GASOLINE  
USING METHODS 8021B AND NWTPH-Gx**

Results Reported on a Dry Weight Basis

Results Reported as mg/kg (ppm)

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl Benzene</u>	<u>Total Xylenes</u>	<u>Gasoline Range</u>	<u>Surrogate (% Recovery)</u> (Limit 50-150)
B3-5 711424-01	<0.02	<0.02	<0.02	<0.06	<5	91
B3-12 711424-03	<0.02	<0.02	<0.02	<0.06	<5	94
B4-5 711424-04	<0.02	<0.02	<0.02	<0.06	<5	90
B4-11 711424-05	<0.02	<0.02	<0.02	<0.06	<5	92
B5-5 711424-06	<0.02	<0.02	<0.02	<0.06	<5	93
B5-7 711424-07	<0.02	<0.02	<0.02	<0.06	<5	95
B6-5 711424-08	<0.02	<0.02	<0.02	<0.06	<5	86
B6-10 711424-09	<0.02	<0.02	<0.02	<0.06	<5	98
B7-5 711424-10	<0.02	<0.02	<0.02	<0.06	<5	98
B7-12 711424-12	<0.02	<0.02	<0.02	<0.06	<5	92
B8-5 711424-13	<0.02	<0.02	<0.02	<0.06	<5	91

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 11/30/17

Date Received: 11/22/17

Project: Area 1, PO 0673-01-01, F&BI 711424

Date Extracted: 11/28/17

Date Analyzed: 11/28/17

**RESULTS FROM THE ANALYSIS OF SOIL SAMPLES  
FOR BENZENE, TOLUENE, ETHYLBENZENE,  
XYLENES AND TPH AS GASOLINE  
USING METHODS 8021B AND NWTPH-Gx**

Results Reported on a Dry Weight Basis

Results Reported as mg/kg (ppm)

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl Benzene</u>	<u>Total Xylenes</u>	<u>Gasoline Range</u>	<u>Surrogate (% Recovery)</u> (Limit 50-150)
B8-12 711424-15	<0.02	<0.02	<0.02	<0.06	<5	97
Method Blank 07-2631 MB	<0.02	<0.02	<0.02	<0.06	<5	102

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 11/30/17

Date Received: 11/22/17

Project: Area 1, PO 0673-01-01, F&BI 711424

Date Extracted: 11/28/17

Date Analyzed: 11/28/17 and 11/29/17

**RESULTS FROM THE ANALYSIS OF SOIL SAMPLES  
FOR TOTAL PETROLEUM HYDROCARBONS AS  
DIESEL AND MOTOR OIL  
USING METHOD NWTPH-Dx**

Results Reported on a Dry Weight Basis

Results Reported as mg/kg (ppm)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C <sub>10</sub> -C <sub>25</sub> )	<u>Motor Oil Range</u> (C <sub>25</sub> -C <sub>36</sub> )	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 48-168)
B3-5 711424-01	<50	<250	115
B3-12 711424-03	<50	<250	114
B4-5 711424-04	<50	<250	114
B4-11 711424-05	<50	<250	101
B5-5 711424-06	<50	<250	111
B5-7 711424-07	<50	<250	100
B6-5 711424-08	<50	<250	117
B6-10 711424-09	<50	<250	114
B7-5 711424-10	<50	<250	110
B7-12 711424-12	<50	<250	102
B8-5 711424-13	<50	<250	105

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 11/30/17

Date Received: 11/22/17

Project: Area 1, PO 0673-01-01, F&BI 711424

Date Extracted: 11/28/17

Date Analyzed: 11/28/17 and 11/29/17

**RESULTS FROM THE ANALYSIS OF SOIL SAMPLES  
FOR TOTAL PETROLEUM HYDROCARBONS AS  
DIESEL AND MOTOR OIL  
USING METHOD NWTPH-Dx**

Results Reported on a Dry Weight Basis

Results Reported as mg/kg (ppm)

<u>Sample ID</u>	<u>Diesel Range</u>	<u>Motor Oil Range</u>	<u>Surrogate</u>
Laboratory ID	(C <sub>10</sub> -C <sub>25</sub> )	(C <sub>25</sub> -C <sub>36</sub> )	(% Recovery)
			(Limit 48-168)
B8-12	<50	<250	102
711424-15			
Method Blank	<50	<250	99
07-2669 MB			

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 11/30/17

Date Received: 11/22/17

Project: Area 1, PO 0673-01-01, F&BI 711424

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES  
FOR BENZENE, TOLUENE, ETHYLBENZENE,  
XYLENES, AND TPH AS GASOLINE  
USING EPA METHOD 8021B AND NWTPH-Gx**

Laboratory Code: 711444-02 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (Limit 20)
Benzene	mg/kg (ppm)	<0.02	<0.02	nm
Toluene	mg/kg (ppm)	<0.02	<0.02	nm
Ethylbenzene	mg/kg (ppm)	<0.02	<0.02	nm
Xylenes	mg/kg (ppm)	<0.06	<0.06	nm
Gasoline	mg/kg (ppm)	<5	<5	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	mg/kg (ppm)	0.5	100	69-120
Toluene	mg/kg (ppm)	0.5	99	70-117
Ethylbenzene	mg/kg (ppm)	0.5	102	65-123
Xylenes	mg/kg (ppm)	1.5	97	66-120
Gasoline	mg/kg (ppm)	20	95	71-131

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 11/30/17

Date Received: 11/22/17

Project: Area 1, PO 0673-01-01, F&BI 711424

**QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL  
SAMPLES  
FOR TOTAL PETROLEUM HYDROCARBONS AS  
DIESEL EXTENDED USING METHOD NWTPH-Dx**

Laboratory Code: 711424-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet Wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	96	96	73-135	0

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	96	74-139

**Data Qualifiers & Definitions**

- a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.
- ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.
- c - The presence of the analyte may be due to carryover from previous sample injections.
- cf - The sample was centrifuged prior to analysis.
- d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.
- dv - Insufficient sample volume was available to achieve normal reporting limits.
- f - The sample was laboratory filtered prior to analysis.
- fb - The analyte was detected in the method blank.
- fc - The compound is a common laboratory and field contaminant.
- hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.
- hs - Headspace was present in the container used for analysis.
- ht - The analysis was performed outside the method or client-specified holding time requirement.
- ip - Recovery fell outside of control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.
- j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.
- J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.
- jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.
- js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- lc - The presence of the analyte is likely due to laboratory contamination.
- L - The reported concentration was generated from a library search.
- nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.
- pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.
- ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.
- vo - The value reported fell outside the control limits established for this analyte.
- x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.



7/14/24  
11/22/12  
151/303

SAMPLE CHAIN OF CUSTODY

SAMPLERS (signature)

Report To Daniel Pollock + Stephen Spores

Company ECI

Address PO Box 153

City, State, ZIP Fort Island, WA 98333

Phone 360-266-0000

Email stephen@eciconsulting.com

PROJECT NAME

Area 1

VO #

0673-a-01

REMARKS

INVOICE TO

TURNAROUND TIME

☒ Standard Turnaround

☐ RUSH

Rush charges authorized by: \_\_\_\_\_

SAMPLE DISPOSAL

☐ Dispose after 30 days

☐ Archive Samples

☐ Other

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	ANALYSES REQUESTED							Notes
						TPH-HCID	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260C	SVOCs by 8270D	PAHs 8270D SIM	
B3-5	01 A-E	11/24/17	1040	S	5	X	X	X	X				X-PCDP 11/17/17 ML
B3-10	02		1050										
B3-12	03		1100			X	X	X					
B4-5	04		1120			X	X	X					
B4-11	05		1135			X	X	X					
B5-5	06		1300			X	X	X					
B5-7	07		1310			X	X	X					
B6-5	08		1335			X	X	X					
B6-10	09		1340			X	X	X					
B7-5	10		1410			X	X	X					

SIGNATURE

PRINT NAME

COMPANY

DATE TIME

Relinquished by: \_\_\_\_\_

Received by: \_\_\_\_\_

Relinquished by: \_\_\_\_\_

Received by: \_\_\_\_\_

Friedman & Bryna, Inc.

3012 16<sup>th</sup> Avenue West

Seattle, WA 98119-2029

Ph. (206) 285-8282

Samples received at 15 °C

1561

Page # 2 of 2  
TURNAROUND TIME


☒ Standard Turnaround  
☐ RUSH \_\_\_\_\_

Rush charges authorized by: \_\_\_\_\_

**SAMPLE DISPO**  
☐ Dispose after 30 days



☐ Archive Samples

☐ Other

SAMPLELERS (signature) 		Page # <u>1</u> of <u>1</u>
PROJECT NAME	PO #	TURNAROUND TIME <input checked="" type="checkbox"/> Standard Turnaround <input type="checkbox"/> RUSH Rush charges authorized by: _____
Area 1	0575-01-01	
REMARKS	INVOICE TO	SAMPLE DISPOSAL <input type="checkbox"/> Dispose after 30 days <input type="checkbox"/> Archive Samples <input type="checkbox"/> Other _____

[illegible]

Friedman & Brya, Inc  
3012 16<sup>th</sup> Avenue West  
Seattle, WA 98119-2029  
Ph. (206) 235-8282

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: 	Linda Reed	ECI	11/22/17	1025
Received by: 	VINET	FBI	11/22/17	1025
Relinquished by:				
Received by:				
Samples received at <u>15</u> °C				

## Area 2 Laboratory Data Sheets

## Area 2 Laboratory Data Sheets

FRIEDMAN & BRUYA, INC.

---

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.  
Yelena Aravkina, M.S.  
Michael Erdahl, B.S.  
Arina Podnozova, B.S.  
Eric Young, B.S.

3012 16th Avenue West  
Seattle, WA 98119-2029  
(206) 285-8282  
fbi@isomedia.com  
www.friedmanandbruya.com

December 4, 2017

David Polivka, Project Manager  
EcoCon, Inc.  
15 S. Oregon Ave, Suite 110  
Tacoma, WA 98409

Dear Mr Polivka:

Included are the results from the testing of material submitted on November 22, 2017 from the Area 2, PO 0673-01-01, F&BI 711425 project. There are 9 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

A handwritten signature in dark ink on a light-colored background, appearing to read "Michael Erdahl".

Michael Erdahl  
Project Manager

Enclosures  
c: Stephen Spencer  
EMS1204R.DOC

# FRIEDMAN & BRUYA, INC.

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## ENVIRONMENTAL CHEMISTS

### CASE NARRATIVE

This case narrative encompasses samples received on November 22, 2017 by Friedman & Bruya, Inc. from the EcoCon Area 2, PO 0673-01-01, F&BI 711425 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>EcoCon</u>
711425 -01	B1-3
711425 -02	B1-7
711425 -03	B1-11
711425 -04	B2-3
711425 -05	B2-7
711425 -06	B2-11

All quality control requirements were acceptable.

# FRIEDMAN & BRUYA, INC.

## ENVIRONMENTAL CHEMISTS

### Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	B1-3	Client:	EcoCon
Date Received:	11/22/17	Project:	Area 2, PO 0673-01-01, F&BI 711425
Date Extracted:	11/28/17	Lab ID:	711425-01
Date Analyzed:	11/28/17	Data File:	112823.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	62	142
Toluene-d8	99	55	145
4-Bromofluorobenzene	100	65	139

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Hexane	<0.25	o-Xylene	<0.05
Methylene chloride	<0.5	Styrene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Isopropylbenzene	<0.05
trans-1,2-Dichloroethene	<0.05	Bromoform	<0.05
1,1-Dichloroethane	<0.05	n-Propylbenzene	<0.05
2,2-Dichloropropane	<0.05	Bromobenzene	<0.05
cis-1,2-Dichloroethene	<0.05	1,3,5-Trimethylbenzene	<0.05
Chloroform	<0.05	1,1,2,2-Tetrachloroethane	<0.05
2-Butanone (MEK)	<0.5	1,2,3-Trichloropropane	<0.05
1,2-Dichloroethane (EDC)	<0.05	2-Chlorotoluene	<0.05
1,1,1-Trichloroethane	<0.05	4-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	tert-Butylbenzene	<0.05
Carbon tetrachloride	<0.05	1,2,4-Trimethylbenzene	<0.05
Benzene	<0.03	sec-Butylbenzene	<0.05
Trichloroethene	<0.02	p-Isopropyltoluene	<0.05
1,2-Dichloropropane	<0.05	1,3-Dichlorobenzene	<0.05
Bromodichloromethane	<0.05	1,4-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,2-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dibromo-3-chloropropane	<0.5
cis-1,3-Dichloropropene	<0.05	1,2,4-Trichlorobenzene	<0.25
Toluene	<0.05	Hexachlorobutadiene	<0.25
trans-1,3-Dichloropropene	<0.05	Naphthalene	<0.05
1,1,2-Trichloroethane	<0.05	1,2,3-Trichlorobenzene	<0.25
2-Hexanone	<0.5		

# FRIEDMAN & BRUYA, INC.

## ENVIRONMENTAL CHEMISTS

### Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	B1-11	Client:	EcoCon
Date Received:	11/22/17	Project:	Area 2, PO 0673-01-01, F&BI 711425
Date Extracted:	11/28/17	Lab ID:	711425-03
Date Analyzed:	11/28/17	Data File:	112824.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	62	142
Toluene-d8	99	55	145
4-Bromofluorobenzene	99	65	139

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Hexane	<0.25	o-Xylene	<0.05
Methylene chloride	<0.5	Styrene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Isopropylbenzene	<0.05
trans-1,2-Dichloroethene	<0.05	Bromoform	<0.05
1,1-Dichloroethane	<0.05	n-Propylbenzene	<0.05
2,2-Dichloropropane	<0.05	Bromobenzene	<0.05
cis-1,2-Dichloroethene	<0.05	1,3,5-Trimethylbenzene	<0.05
Chloroform	<0.05	1,1,2,2-Tetrachloroethane	<0.05
2-Butanone (MEK)	<0.5	1,2,3-Trichloropropane	<0.05
1,2-Dichloroethane (EDC)	<0.05	2-Chlorotoluene	<0.05
1,1,1-Trichloroethane	<0.05	4-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	tert-Butylbenzene	<0.05
Carbon tetrachloride	<0.05	1,2,4-Trimethylbenzene	<0.05
Benzene	<0.03	sec-Butylbenzene	<0.05
Trichloroethene	<0.02	p-Isopropyltoluene	<0.05
1,2-Dichloropropane	<0.05	1,3-Dichlorobenzene	<0.05
Bromodichloromethane	<0.05	1,4-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,2-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dibromo-3-chloropropane	<0.5
cis-1,3-Dichloropropene	<0.05	1,2,4-Trichlorobenzene	<0.25
Toluene	<0.05	Hexachlorobutadiene	<0.25
trans-1,3-Dichloropropene	<0.05	Naphthalene	<0.05
1,1,2-Trichloroethane	<0.05	1,2,3-Trichlorobenzene	<0.25
2-Hexanone	<0.5		



# FRIEDMAN & BRUYA, INC.

## ENVIRONMENTAL CHEMISTS

### Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	B2-3	Client:	EcoCon
Date Received:	11/22/17	Project:	Area 2, PO 0673-01-01, F&BI 711425
Date Extracted:	11/28/17	Lab ID:	711425-04
Date Analyzed:	11/28/17	Data File:	112825.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	62	142
Toluene-d8	99	55	145
4-Bromofluorobenzene	100	65	139

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Hexane	<0.25	o-Xylene	<0.05
Methylene chloride	<0.5	Styrene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Isopropylbenzene	<0.05
trans-1,2-Dichloroethene	<0.05	Bromoform	<0.05
1,1-Dichloroethane	<0.05	n-Propylbenzene	<0.05
2,2-Dichloropropane	<0.05	Bromobenzene	<0.05
cis-1,2-Dichloroethene	<0.05	1,3,5-Trimethylbenzene	<0.05
Chloroform	<0.05	1,1,2,2-Tetrachloroethane	<0.05
2-Butanone (MEK)	<0.5	1,2,3-Trichloropropane	<0.05
1,2-Dichloroethane (EDC)	<0.05	2-Chlorotoluene	<0.05
1,1,1-Trichloroethane	<0.05	4-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	tert-Butylbenzene	<0.05
Carbon tetrachloride	<0.05	1,2,4-Trimethylbenzene	<0.05
Benzene	<0.03	sec-Butylbenzene	<0.05
Trichloroethene	<0.02	p-Isopropyltoluene	<0.05
1,2-Dichloropropane	<0.05	1,3-Dichlorobenzene	<0.05
Bromodichloromethane	<0.05	1,4-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,2-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dibromo-3-chloropropane	<0.5
cis-1,3-Dichloropropene	<0.05	1,2,4-Trichlorobenzene	<0.25
Toluene	<0.05	Hexachlorobutadiene	<0.25
trans-1,3-Dichloropropene	<0.05	Naphthalene	<0.05
1,1,2-Trichloroethane	<0.05	1,2,3-Trichlorobenzene	<0.25
2-Hexanone	<0.5		

# FRIEDMAN & BRUYA, INC.

## ENVIRONMENTAL CHEMISTS

### Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	B2-11	Client:	EcoCon
Date Received:	11/22/17	Project:	Area 2, PO 0673-01-01, F&BI 711425
Date Extracted:	11/28/17	Lab ID:	711425-06
Date Analyzed:	11/28/17	Data File:	112826.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	62	142
Toluene-d8	99	55	145
4-Bromofluorobenzene	98	65	139

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Hexane	<0.25	o-Xylene	<0.05
Methylene chloride	<0.5	Styrene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Isopropylbenzene	<0.05
trans-1,2-Dichloroethene	<0.05	Bromoform	<0.05
1,1-Dichloroethane	<0.05	n-Propylbenzene	<0.05
2,2-Dichloropropane	<0.05	Bromobenzene	<0.05
cis-1,2-Dichloroethene	<0.05	1,3,5-Trimethylbenzene	<0.05
Chloroform	<0.05	1,1,2,2-Tetrachloroethane	<0.05
2-Butanone (MEK)	<0.5	1,2,3-Trichloropropane	<0.05
1,2-Dichloroethane (EDC)	<0.05	2-Chlorotoluene	<0.05
1,1,1-Trichloroethane	<0.05	4-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	tert-Butylbenzene	<0.05
Carbon tetrachloride	<0.05	1,2,4-Trimethylbenzene	<0.05
Benzene	<0.03	sec-Butylbenzene	<0.05
Trichloroethene	<0.02	p-Isopropyltoluene	<0.05
1,2-Dichloropropane	<0.05	1,3-Dichlorobenzene	<0.05
Bromodichloromethane	<0.05	1,4-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,2-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dibromo-3-chloropropane	<0.5
cis-1,3-Dichloropropene	<0.05	1,2,4-Trichlorobenzene	<0.25
Toluene	<0.05	Hexachlorobutadiene	<0.25
trans-1,3-Dichloropropene	<0.05	Naphthalene	<0.05
1,1,2-Trichloroethane	<0.05	1,2,3-Trichlorobenzene	<0.25
2-Hexanone	<0.5		

# FRIEDMAN & BRUYA, INC.

## ENVIRONMENTAL CHEMISTS

### Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	EcoCon
Date Received:	Not Applicable	Project:	Area 2, PO 0673-01-01, F&BI 711425
Date Extracted:	11/28/17	Lab ID:	07-2652 mb
Date Analyzed:	11/28/17	Data File:	112808.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	62	142
Toluene-d8	98	55	145
4-Bromofluorobenzene	100	65	139

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Hexane	<0.25	o-Xylene	<0.05
Methylene chloride	<0.5	Styrene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Isopropylbenzene	<0.05
trans-1,2-Dichloroethene	<0.05	Bromoform	<0.05
1,1-Dichloroethane	<0.05	n-Propylbenzene	<0.05
2,2-Dichloropropane	<0.05	Bromobenzene	<0.05
cis-1,2-Dichloroethene	<0.05	1,3,5-Trimethylbenzene	<0.05
Chloroform	<0.05	1,1,2,2-Tetrachloroethane	<0.05
2-Butanone (MEK)	<0.5	1,2,3-Trichloropropane	<0.05
1,2-Dichloroethane (EDC)	<0.05	2-Chlorotoluene	<0.05
1,1,1-Trichloroethane	<0.05	4-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	tert-Butylbenzene	<0.05
Carbon tetrachloride	<0.05	1,2,4-Trimethylbenzene	<0.05
Benzene	<0.03	sec-Butylbenzene	<0.05
Trichloroethene	<0.02	p-Isopropyltoluene	<0.05
1,2-Dichloropropane	<0.05	1,3-Dichlorobenzene	<0.05
Bromodichloromethane	<0.05	1,4-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,2-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dibromo-3-chloropropane	<0.5
cis-1,3-Dichloropropene	<0.05	1,2,4-Trichlorobenzene	<0.25
Toluene	<0.05	Hexachlorobutadiene	<0.25
trans-1,3-Dichloropropene	<0.05	Naphthalene	<0.05
1,1,2-Trichloroethane	<0.05	1,2,3-Trichlorobenzene	<0.25
2-Hexanone	<0.5		

# FRIEDMAN & BRUYA, INC.

## ENVIRONMENTAL CHEMISTS

Date of Report: 12/04/17

Date Received: 11/22/17

Project: Area 2, PO 0673-01-01, F&BI 711425

### QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR VOLATILES BY EPA METHOD 8260C

Laboratory Code: 711427-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Dichlorodifluoromethane	mg/kg (ppm)	2.5	<0.5	23	24	10-142	4
Chloromethane	mg/kg (ppm)	2.5	<0.5	46	46	10-126	0
Vinyl chloride	mg/kg (ppm)	2.5	<0.05	48	48	10-138	0
Bromomethane	mg/kg (ppm)	2.5	<0.5	59	61	10-163	3
Chloroethane	mg/kg (ppm)	2.5	<0.5	57	58	10-176	2
Trichlorofluoromethane	mg/kg (ppm)	2.5	<0.5	55	55	10-176	0
Acetone	mg/kg (ppm)	12.5	<0.5	80	80	10-163	0
1,1-Dichloroethene	mg/kg (ppm)	2.5	<0.05	64	63	10-160	2
Hexane	mg/kg (ppm)	2.5	<0.25	58	56	10-137	4
Methylene chloride	mg/kg (ppm)	2.5	<0.5	76	74	10-156	3
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	2.5	<0.05	76	75	21-145	1
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	<0.05	71	69	14-137	3
1,1-Dichloroethane	mg/kg (ppm)	2.5	<0.05	75	75	19-140	0
2,2-Dichloropropane	mg/kg (ppm)	2.5	<0.05	83	82	10-158	1
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	<0.05	77	77	25-135	0
Chloroform	mg/kg (ppm)	2.5	<0.05	78	77	21-145	1
2-Butanone (MEK)	mg/kg (ppm)	12.5	<0.5	83	83	19-147	0
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	<0.05	77	76	12-160	1
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	<0.05	78	77	10-156	1
1,1-Dichloropropene	mg/kg (ppm)	2.5	<0.05	75	73	17-140	3
Carbon tetrachloride	mg/kg (ppm)	2.5	<0.05	79	78	9-164	1
Benzene	mg/kg (ppm)	2.5	<0.03	75	75	29-129	0
Trichloroethene	mg/kg (ppm)	2.5	<0.02	77	76	21-139	1
1,2-Dichloropropane	mg/kg (ppm)	2.5	<0.05	78	78	30-135	0
Bromodichloromethane	mg/kg (ppm)	2.5	<0.05	80	82	23-155	2
Dibromomethane	mg/kg (ppm)	2.5	<0.05	78	79	23-145	1
4-Methyl-2-pentanone	mg/kg (ppm)	12.5	<0.5	80	84	24-155	5
cis-1,3-Dichloropropene	mg/kg (ppm)	2.5	<0.05	82	82	28-144	0
Toluene	mg/kg (ppm)	2.5	<0.05	79	80	35-130	1
trans-1,3-Dichloropropene	mg/kg (ppm)	2.5	<0.05	84	84	26-149	0
1,1,2-Trichloroethane	mg/kg (ppm)	2.5	<0.05	82	82	10-205	0
2-Hexanone	mg/kg (ppm)	12.5	<0.5	80	82	15-166	2
1,3-Dichloropropane	mg/kg (ppm)	2.5	<0.05	81	81	31-137	0
Tetrachloroethene	mg/kg (ppm)	2.5	0.070	76	76	20-133	0
Dibromochloromethane	mg/kg (ppm)	2.5	<0.05	84	85	28-150	1
1,2-Dibromoethane (EDB)	mg/kg (ppm)	2.5	<0.05	82	84	28-142	2
Chlorobenzene	mg/kg (ppm)	2.5	<0.05	80	81	32-129	1
Ethylbenzene	mg/kg (ppm)	2.5	<0.05	81	82	32-137	1
1,1,1,2-Tetrachloroethane	mg/kg (ppm)	2.5	<0.05	86	85	31-143	1
m,p-Xylene	mg/kg (ppm)	5	<0.1	81	82	34-136	1
o-Xylene	mg/kg (ppm)	2.5	<0.05	80	82	33-134	2
Styrene	mg/kg (ppm)	2.5	<0.05	83	84	35-137	1
Isopropylbenzene	mg/kg (ppm)	2.5	<0.05	84	85	31-142	1
Bromoform	mg/kg (ppm)	2.5	<0.05	85	84	21-156	1
n-Propylbenzene	mg/kg (ppm)	2.5	<0.05	82	83	23-146	1
Bromobenzene	mg/kg (ppm)	2.5	<0.05	82	83	34-130	1
1,3,5-Trimethylbenzene	mg/kg (ppm)	2.5	<0.05	83	84	18-149	1
1,1,2,2-Tetrachloroethane	mg/kg (ppm)	2.5	<0.05	81	82	28-140	1
1,2,3-Trichloropropane	mg/kg (ppm)	2.5	<0.05	79	81	25-144	2
2-Chlorotoluene	mg/kg (ppm)	2.5	<0.05	82	83	31-134	1
4-Chlorotoluene	mg/kg (ppm)	2.5	<0.05	81	82	31-136	1
tert-Butylbenzene	mg/kg (ppm)	2.5	<0.05	84	84	30-137	0
1,2,4-Trimethylbenzene	mg/kg (ppm)	2.5	<0.05	81	82	10-182	1
sec-Butylbenzene	mg/kg (ppm)	2.5	<0.05	84	85	23-145	1
p-Isopropyltoluene	mg/kg (ppm)	2.5	<0.05	84	84	21-149	0
1,3-Dichlorobenzene	mg/kg (ppm)	2.5	<0.05	85	84	30-131	1
1,4-Dichlorobenzene	mg/kg (ppm)	2.5	<0.05	81	82	29-129	1
1,2-Dichlorobenzene	mg/kg (ppm)	2.5	<0.05	83	83	31-132	0
1,2-Dibromo-3-chloropropane	mg/kg (ppm)	2.5	<0.5	91	88	11-161	3
1,2,4-Trichlorobenzene	mg/kg (ppm)	2.5	<0.25	86	86	22-142	0
Hexachlorobutadiene	mg/kg (ppm)	2.5	<0.25	86	87	10-142	1
Naphthalene	mg/kg (ppm)	2.5	<0.05	84	84	14-157	0
1,2,3-Trichlorobenzene	mg/kg (ppm)	2.5	<0.25	87	88	20-144	1

# FRIEDMAN & BRUYA, INC.

## ENVIRONMENTAL CHEMISTS

Date of Report: 12/04/17

Date Received: 11/22/17

Project: Area 2, PO 0673-01-01, F&BI 711425

### QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR VOLATILES BY EPA METHOD 8260C

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Dichlorodifluoromethane	mg/kg (ppm)	2.5	49	10-146
Chloromethane	mg/kg (ppm)	2.5	62	27-133
Vinyl chloride	mg/kg (ppm)	2.5	69	22-139
Bromomethane	mg/kg (ppm)	2.5	75	38-114
Chloroethane	mg/kg (ppm)	2.5	74	10-163
Trichlorofluoromethane	mg/kg (ppm)	2.5	77	10-196
Acetone	mg/kg (ppm)	12.5	94	52-141
1,1-Dichloroethene	mg/kg (ppm)	2.5	79	47-128
Hexane	mg/kg (ppm)	2.5	83	43-142
Methylene chloride	mg/kg (ppm)	2.5	86	42-132
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	2.5	85	60-123
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	82	67-127
1,1-Dichloroethane	mg/kg (ppm)	2.5	87	68-115
2,2-Dichloropropane	mg/kg (ppm)	2.5	102	52-170
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	87	72-113
Chloroform	mg/kg (ppm)	2.5	87	66-120
2-Butanone (MEK)	mg/kg (ppm)	12.5	92	57-123
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	86	56-135
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	90	62-131
1,1-Dichloropropene	mg/kg (ppm)	2.5	86	69-128
Carbon tetrachloride	mg/kg (ppm)	2.5	92	60-139
Benzene	mg/kg (ppm)	2.5	85	68-114
Trichloroethene	mg/kg (ppm)	2.5	87	64-117
1,2-Dichloropropane	mg/kg (ppm)	2.5	88	72-127
Bromodichloromethane	mg/kg (ppm)	2.5	90	72-130
Dibromomethane	mg/kg (ppm)	2.5	87	70-120
4-Methyl-2-pentanone	mg/kg (ppm)	12.5	92	45-145
cis-1,3-Dichloropropene	mg/kg (ppm)	2.5	93	75-136
Toluene	mg/kg (ppm)	2.5	89	66-126
trans-1,3-Dichloropropene	mg/kg (ppm)	2.5	97	72-132
1,1,2-Trichloroethane	mg/kg (ppm)	2.5	93	75-113
2-Hexanone	mg/kg (ppm)	12.5	93	33-152
1,3-Dichloropropane	mg/kg (ppm)	2.5	90	72-130
Tetrachloroethene	mg/kg (ppm)	2.5	90	72-114
Dibromochloromethane	mg/kg (ppm)	2.5	95	74-125
1,2-Dibromoethane (EDB)	mg/kg (ppm)	2.5	93	74-132
Chlorobenzene	mg/kg (ppm)	2.5	90	76-111
Ethylbenzene	mg/kg (ppm)	2.5	91	64-123
1,1,1,2-Tetrachloroethane	mg/kg (ppm)	2.5	98	69-135
m,p-Xylene	mg/kg (ppm)	5	91	78-122
o-Xylene	mg/kg (ppm)	2.5	90	77-124
Styrene	mg/kg (ppm)	2.5	93	74-126
Isopropylbenzene	mg/kg (ppm)	2.5	95	76-127
Bromoform	mg/kg (ppm)	2.5	97	56-132
n-Propylbenzene	mg/kg (ppm)	2.5	91	74-124
Bromobenzene	mg/kg (ppm)	2.5	91	72-122
1,3,5-Trimethylbenzene	mg/kg (ppm)	2.5	93	76-126
1,1,2,2-Tetrachloroethane	mg/kg (ppm)	2.5	89	56-143
1,2,3-Trichloropropane	mg/kg (ppm)	2.5	88	61-137
2-Chlorotoluene	mg/kg (ppm)	2.5	90	74-121
4-Chlorotoluene	mg/kg (ppm)	2.5	89	75-122
tert-Butylbenzene	mg/kg (ppm)	2.5	92	73-130
1,2,4-Trimethylbenzene	mg/kg (ppm)	2.5	90	76-125
sec-Butylbenzene	mg/kg (ppm)	2.5	93	71-130
p-Isopropyltoluene	mg/kg (ppm)	2.5	93	70-132
1,3-Dichlorobenzene	mg/kg (ppm)	2.5	93	75-121
1,4-Dichlorobenzene	mg/kg (ppm)	2.5	89	74-117
1,2-Dichlorobenzene	mg/kg (ppm)	2.5	92	76-121
1,2-Dibromo-3-chloropropane	mg/kg (ppm)	2.5	100	58-138
1,2,4-Trichlorobenzene	mg/kg (ppm)	2.5	95	64-135
Hexachlorobutadiene	mg/kg (ppm)	2.5	97	50-153
Naphthalene	mg/kg (ppm)	2.5	91	63-140
1,2,3-Trichlorobenzene	mg/kg (ppm)	2.5	94	63-138

# FRIEDMAN & BRUYA, INC.

## ENVIRONMENTAL CHEMISTS

### **Data Qualifiers & Definitions**

- a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.
- ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.
- c - The presence of the analyte may be due to carryover from previous sample injections.
- cf - The sample was centrifuged prior to analysis.
- d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.
- dv - Insufficient sample volume was available to achieve normal reporting limits.
- f - The sample was laboratory filtered prior to analysis.
- fb - The analyte was detected in the method blank.
- fc - The compound is a common laboratory and field contaminant.
- hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.
- hs - Headspace was present in the container used for analysis.
- ht - The analysis was performed outside the method or client-specified holding time requirement.
- ip - Recovery fell outside of control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.
- j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.
- J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.
- jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.
- js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- lc - The presence of the analyte is likely due to laboratory contamination.
- L - The reported concentration was generated from a library search.
- nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.
- pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.
- ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.
- vo - The value reported fell outside the control limits established for this analyte.
- x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

# SAMPLE CHAIN OF CUSTODY

ME 11/22/17

152

711425

David Polita + Stefan Spence

Report To

Company

ECI

Address

PO Box 153

City, State, ZIP

Fort Lauderdale, FL 33335

Phone

561-669-0000

Email

stefan.spence@eci.com

PROJECT NAME

Area 2

PO #

067701-01

REMARKS

Hold All

INVOICE TO

TURNAROUND TIME

Standard Turnaround

Rush charges authorized by:

SAMPLE DISPOSAL

- ☐ Standard
- ☐ RUSH
- ☐ Dispose after 30 days
- ☐ Archive Samples
- ☐ Other

## ANALYSES REQUESTED

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	TPH-HCID	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260C	SVOCs by 8270D	PAHs 8270D SIM	VOCs	Notes
B1-3	01 A-D	11/20/17	0915	5	4								X	X-see 11/22/17
B1-7	02		0920										X	
B1-11	03		0925										X	
B2-3	04		0940										X	
B2-7	05		0945										X	
B2-11	06		1000										X	

SIGNATURE

Relinquished by:

[Signature]

PRINT NAME

Karen Reed

COMPANY

ECI

DATE

11/22/17

TIME

1025

Received by:

[Signature]

VINH

FBI

11/22/17

1025

Friedman & Bruya, Inc.  
3012 16th Avenue West  
Seattle, WA 98119-2029

Ph. (206) 285-8282

Samples received at 15:00



## Area 3 Laboratory Data Sheets

## Area 3 Laboratory Data Sheets

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.  
Yelena Aravkina, M.S.  
Michael Erdahl, B.S.  
Arina Podnozova, B.S.  
Eric Young, B.S.

3012 16th Avenue West  
Seattle, WA 98119-2029  
(206) 285-8282  
fbi@isomedia.com  
www.friedmanandbruya.com

December 7, 2017

David Polivka, Project Manager  
EcoCon, Inc.  
15 S. Oregon Ave, Suite 110  
Tacoma, WA 98409

Dear Mr Polivka:

Included is the amended report from the testing of material submitted on November 22, 2017 from the Area 3, PO 0673-01-01, F&BI 711426 project. Per your request, a description of the material detected in the samples has been added to the case narrative.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl  
Project Manager

Enclosures  
c: Stephen Spencer  
EMS1201R.DOC

FRIEDMAN & BRUYA, INC.

---

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.  
Yelena Aravkina, M.S.  
Michael Erdahl, B.S.  
Arina Podnozova, B.S.  
Eric Young, B.S.

3012 16th Avenue West  
Seattle, WA 98119-2029  
(206) 285-8282  
fbi@isomedia.com  
www.friedmanandbruya.com

December 1, 2017

David Polivka, Project Manager  
EcoCon, Inc.  
15 S. Oregon Ave, Suite 110  
Tacoma, WA 98409

Dear Mr Polivka:

Included are the results from the testing of material submitted on November 22, 2017 from the Area 3, PO 0673-01-01, F&BI 711426 project. There are 6 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl  
Project Manager

Enclosures  
c: Stephen Spencer  
EMS1201R.DOC

# FRIEDMAN & BRUYA, INC.

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## ENVIRONMENTAL CHEMISTS

### CASE NARRATIVE

This case narrative encompasses samples received on November 22, 2017 by Friedman & Bruya, Inc. from the EcoCon Area 3, PO 0673-01-01, F&BI 711426 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>EcoCon</u>
711426 -01	B9-3
711426 -02	B9-7
711426 -03	B9-10
711426 -04	B10-3
711426 -05	B10-7
711426 -06	B10-10
711426 -07	B12-3
711426 -08	B12-7
711426 -09	B12-10
711426 -10	B13-3
711426 -11	B13-8
711426 -12	B13-10

The detection in the NWTPH-Gx range of samples B13-8 and B13-10 is due to overlap from a middle distillate such as heating oil or diesel. The data were flagged accordingly.

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/01/17

Date Received: 11/22/17

Project: Area 3, PO 0673-01-01, F&BI 711426

Date Extracted: 11/28/17

Date Analyzed: 11/29/17

**RESULTS FROM THE ANALYSIS OF SOIL SAMPLES  
FOR BENZENE, TOLUENE, ETHYLBENZENE,  
XYLENES AND TPH AS GASOLINE  
USING METHODS 8021B AND NWTPH-Gx**

Results Reported on a Dry Weight Basis

Results Reported as mg/kg (ppm)

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl Benzene</u>	<u>Total Xylenes</u>	<u>Gasoline Range</u>	<u>Surrogate (% Recovery)</u> (Limit 50-150)
B9-7 711426-02	<0.02	<0.02	<0.02	<0.06	<5	90
B9-10 711426-03	<0.02	<0.02	<0.02	<0.06	<5	95
B10-7 711426-05	<0.02	<0.02	<0.02	<0.06	<5	86
B10-10 711426-06	<0.02	<0.02	<0.02	<0.06	<5	93
B12-7 711426-08	<0.02	<0.02	<0.02	<0.06	<5	90
B12-10 711426-09	<0.02	<0.02	<0.02	<0.06	<5	90
B13-8 711426-11	<0.02	<0.02	<0.02	<0.06	170 x	92
B13-10 711426-12	<0.02	<0.02	<0.02	<0.06	21 x	97
Method Blank 07-2633 MB	<0.02	<0.02	<0.02	<0.06	<5	99

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/01/17

Date Received: 11/22/17

Project: Area 3, PO 0673-01-01, F&BI 711426

Date Extracted: 11/28/17

Date Analyzed: 11/28/17

**RESULTS FROM THE ANALYSIS OF SOIL SAMPLES  
FOR TOTAL PETROLEUM HYDROCARBONS AS  
DIESEL AND MOTOR OIL  
USING METHOD NWTPH-Dx**

Results Reported on a Dry Weight Basis

Results Reported as mg/kg (ppm)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C <sub>10</sub> -C <sub>25</sub> )	<u>Motor Oil Range</u> (C <sub>25</sub> -C <sub>36</sub> )	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 48-168)
B9-7 711426-02	<50	<250	105
B9-10 711426-03	<50	<250	112
B10-7 711426-05	<50	<250	100
B10-10 711426-06	<50	<250	103
B12-7 711426-08	<50	<250	107
B12-10 711426-09	<50	<250	102
B13-8 711426-11	8,800	<250	120
B13-10 711426-12	1,100	<250	102
Method Blank 07-2669 MB	<50	<250	99

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/01/17

Date Received: 11/22/17

Project: Area 3, PO 0673-01-01, F&BI 711426

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES  
FOR BENZENE, TOLUENE, ETHYLBENZENE,  
XYLENES, AND TPH AS GASOLINE  
USING EPA METHOD 8021B AND NWTPH-Gx**

Laboratory Code: 711426-02 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (Limit 20)
Benzene	mg/kg (ppm)	<0.02	<0.02	nm
Toluene	mg/kg (ppm)	<0.02	<0.02	nm
Ethylbenzene	mg/kg (ppm)	<0.02	<0.02	nm
Xylenes	mg/kg (ppm)	<0.06	<0.06	nm
Gasoline	mg/kg (ppm)	<5	<5	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	mg/kg (ppm)	0.5	98	69-120
Toluene	mg/kg (ppm)	0.5	97	70-117
Ethylbenzene	mg/kg (ppm)	0.5	100	65-123
Xylenes	mg/kg (ppm)	1.5	95	66-120
Gasoline	mg/kg (ppm)	20	95	71-131



FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/01/17

Date Received: 11/22/17

Project: Area 3, PO 0673-01-01, F&BI 711426

**QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL  
SAMPLES  
FOR TOTAL PETROLEUM HYDROCARBONS AS  
DIESEL EXTENDED USING METHOD NWTPH-Dx**

Laboratory Code: 711424-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet Wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	96	96	73-135	0

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	96	74-139

# FRIEDMAN & BRUYA, INC.

## ENVIRONMENTAL CHEMISTS

### **Data Qualifiers & Definitions**

- a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.
- ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.
- c - The presence of the analyte may be due to carryover from previous sample injections.
- cf - The sample was centrifuged prior to analysis.
- d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.
- dv - Insufficient sample volume was available to achieve normal reporting limits.
- f - The sample was laboratory filtered prior to analysis.
- fb - The analyte was detected in the method blank.
- fc - The compound is a common laboratory and field contaminant.
- hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.
- hs - Headspace was present in the container used for analysis.
- ht - The analysis was performed outside the method or client-specified holding time requirement.
- ip - Recovery fell outside of control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.
- j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.
- J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.
- jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.
- js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- lc - The presence of the analyte is likely due to laboratory contamination.
- L - The reported concentration was generated from a library search.
- nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.
- pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.
- ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.
- vo - The value reported fell outside the control limits established for this analyte.
- x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

7/14/26

SAMPLE CHAIN OF CUSTODY

ME 11/22/17

VS1

Report To **Sam & Patricia + Stefan Spens**

SAMPLERS (continued)

Page # **1** of **32**

TRNAROUND TIME

Company **ECI**

Address **PO Box 153**

City, State, ZIP **For Island 14 98113**

Phone **509-644-9888**  
Email **spens@eciconus.com**

PROJECT NAME **Area 3**

PO #

**0677-01-01**

REMARKS

INVOICE TO

☒ Standard Turnaround  
☐ RUSH  
Rush charges authorized by:

SAMPLE DISPOSAL  
☐ Dispose after 30 days  
☐ Archive Samples  
☐ Other

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	ANALYSES REQUESTED							Notes
						TPH-HCID	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260C	SVOCs by 8270D	PAHs 8270D SIM	
B9-3	01	4/21/17	0850	S	5								X-PR DP
B9-7	02		0900			X	X	X					11/22/17
B9-10	03		0905			X	X	X					MC
B10-3	04		0935										
B10-7	05		0945			X	X	X					
B10-10	06		0950			X	X	X					
B12-3	07		1120										
B12-7	08		1150			X	X	X					
B12-10	09		1135			X	X	X					
B13-3	10		1210										

SIGNATURE

PRINT NAME

COMPANY

DATE

TIME

Friedman & Bruya, Inc.

3012 16th Avenue West

Seattle, WA 98119-2029

Ph. (206) 285-8282

Relinquished by:

Received by:

Relinquished by:

Received by:

**Wade Reed**

**ECI**

**4/21/17**

**1025**

**Wade Reed**

**ECI**

**4/21/17**

**1025**

Samples received at **15** °C

US1/503

Page # 2 of 2

Phone \_\_\_\_\_ Email \_\_\_\_\_

0673-01-01

## □ Archive Samples

☐ Other

## Notes



Ph. (206) 285-8282

## FOIPA ACT

## TIME

10

100

## **APPENDIX D**

### **REPORT LIMITATIONS AND GUIDELINES FOR USE**

# APPENDIX D

## REPORT LIMITATIONS AND GUIDELINES FOR USE<sup>2</sup>

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This appendix provides information to help you manage your risks with respect to the use of this report. Please confer with GeoEngineers if you need to know more about how these “Report Limitations and Guidelines for Use” apply to your project or property.

### Read These Provisions Closely

It is important to recognize that environmental engineering and geoscience practices (geotechnical engineering, geology and environmental science) are less exact than other engineering and natural science disciplines. GeoEngineers includes these explanatory “limitations” provisions in our reports to help reduce the risk of misunderstandings or unrealistic expectations that lead to disappointments, claims and disputes.

### Environmental Services Are Performed for Specific Purposes, Persons and Projects

GeoEngineers has performed this Phase II ESA of the property at 23418 Pacific Highway South in Kent, Washington, King County Tax Parcel 2500600465, identified by Sound Transit as Federal Way Link Extension parcel FL-207, in general accordance with the scope and limitations of the subcontract between HDR and GeoEngineers dated August 24, 2012, along with Amendments 1 through 12 and Agreement No. RTA/AE 044-12 between HDR and Sound Transit. This report has been prepared for the exclusive use of Sound Transit and their authorized agents. This report is not intended for use by others, and the information contained herein is not applicable to other properties.

GeoEngineers structures its services to meet the specific needs of its clients. For example, an ESA study conducted for a property owner may not fulfill the needs of a prospective purchaser of the same property. Because each environmental study is unique, each environmental report is unique, prepared solely for the specific client and property. Use of this report is not recommended for any purpose or project other than as expressly stated in this report.

### This Environmental Report is Based on a Unique Set of Project-Specific Factors

This report has been prepared for the property at 23418 Pacific Highway South in Kent, Washington, King County Tax Parcel 2500600465, identified by Sound Transit as Federal Way Link Extension parcel FL-207. GeoEngineers considered a number of unique, project-specific factors when establishing the scope of services for this Project. Unless GeoEngineers specifically indicates otherwise, it is important not to rely on this report if it was:

- not prepared for you,

---

<sup>2</sup> Developed based on material provided by ASFE, Professional Firms Practicing in the Geosciences; [www.asfe.org](http://www.asfe.org).

- not prepared for your Project,
- not prepared for the specific site explored, or
- completed before Project changes were made.

If changes to the Project or property occur after the date of this report, GeoEngineers cannot be responsible for any consequences of such changes in relation to this report unless we have been given the opportunity to review our interpretations and recommendations in the context of such changes. Based on that review, we can provide written modifications or confirmation, as appropriate.

## **Reliance Conditions for Third Parties**

This report was prepared for the exclusive use of Sound Transit and their authorized agents. No other party may rely on the product of our services unless we agree to such reliance in advance and in writing. Within the limitations of the agreed Project scope, schedule and budget, our services have been executed in accordance with our Agreement with the Client and generally accepted environmental practices in this area at the time this report was prepared.

## **Understand That Geotechnical Issues Have Not Been Addressed**

Unless geotechnical engineering was specifically included in our scope of service, this report does not provide any geotechnical findings, conclusions, or recommendations, including but not limited to, the suitability of subsurface materials for construction purposes.

## **Do Not Separate Documentation from the Report**

Environmental reports often include supplemental documentation, such as maps, figures and tables. Do not separate such documentation from the report. Further, do not, and do not permit any other party to redraw or modify any of the supplemental documentation for incorporation into other professionals' instruments of service.

## **Environmental Regulations Change and Evolve**

Some substances may be present in the vicinity of the subject property in quantities or under conditions that may have led, or may lead, to contamination of the subject property, but are not included in current local, state or federal regulatory definitions of hazardous substances or do not otherwise present current potential liability. GeoEngineers cannot be responsible if the standards for appropriate inquiry, or regulatory definitions of hazardous substances, change or if more stringent environmental standards are developed in the future.

## **Uncertainty May Remain Even After This Phase II ESA is Completed**

Performance of a Phase II ESA is intended to reduce uncertainty regarding the potential for contamination in connection with a property, but no ESA can wholly eliminate that uncertainty. Our interpretation of subsurface conditions in this study is based on field observations and chemical analytical data from widely spaced sampling locations. It is always possible that contamination exists in areas that were not explored, sampled or analyzed.



## **Information Provided by Others**

GeoEngineers has relied upon certain data or information provided or compiled by others in the performance of our services. Although we use sources that we reasonably believe to be trustworthy, GeoEngineers cannot warrant or guarantee the accuracy or completeness of information provided or compiled by others.

## **Subsurface Conditions Can Change**

This environmental report is based on conditions that existed at the time the study was performed. The findings and conclusions of this report may be affected by the passage of time, by man-made events such as construction on or adjacent to the subject property, by new releases of hazardous substances, new information or technology that become available subsequent to the report date, or by natural events such as floods, earthquakes, slope instability or groundwater fluctuations. Please contact GeoEngineers before applying this report for its intended purpose so that GeoEngineers may evaluate whether changed conditions affect the continued applicability of the report.

## **Soil and Groundwater End Use**

The cleanup levels referenced in this report are site- and situation-specific. The cleanup levels may not be applicable for other properties or for other on-site uses of the affected soil and/or groundwater. Note that hazardous substances may be present in some of the on-site soil and/or groundwater at detectable concentrations that are less than the referenced cleanup levels. GeoEngineers should be contacted prior to the export of soil or groundwater from the subject property or reuse of the affected soil or groundwater on-site to evaluate the potential for associated environmental liabilities. GeoEngineers will not assume responsibility for potential environmental liability arising out of the transfer of soil and/or groundwater from the subject property to another location, or the reuse of such soil and/or groundwater on-site in any instances that we did not recommend, know of, or control.

Our interpretations of subsurface conditions are based on field observations and chemical analytical data from widely spaced sampling locations at the subject property. Site exploration identifies subsurface conditions only at those points where subsurface tests are conducted and/or samples are taken. GeoEngineers reviewed field and laboratory data and then applied our professional judgment to render an informed opinion about subsurface conditions throughout the property. Actual subsurface conditions may differ significantly from those indicated in this report. Our report, conclusions and interpretations should not be construed as a warranty of the subsurface conditions.

## **Do Not Redraw the Exploration Logs**

Environmental scientists prepare final exploration logs based upon their interpretation of field logs and laboratory data. To prevent errors or omissions by others, the logs included in an environmental report should never be redrawn for inclusion in other design documents. Only photographic or electronic reproduction that preserves the entire original exploration log is acceptable, but separating logs from the report can create increase the risk of potential misinterpretation.

## Biological Pollutants

GeoEngineers' Scope of Work specifically excludes the investigation, detection, prevention or assessment of the presence of Biological Pollutants. Accordingly, this report does not include any interpretations, recommendations, findings or conclusions regarding the detecting, assessing, preventing or abating of Biological Pollutants, and no conclusions or inferences should be drawn regarding Biological Pollutants as they may relate to this Project. The term "Biological Pollutants" includes, but is not limited to, molds, fungi, spores, bacteria and viruses, and/or any of their byproducts.

A Client that desires these specialized services is advised to obtain them from a consultant who offers services in this specialized field.