Remedial Investigation/Feasibility Study/ Cleanup Action Plan

701 South Jackson Property
Seattle, Washington

for
701 South Jackson Partners, LLC
c/o Housing Diversity Corp

April 23, 2021

GeoEngineers
Earth Science + Technology

Remedial Investigation/Feasibility Study/ Cleanup Action Plan

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701 South Jackson Property Seattle, Washington

File No. 24504-001-01

April 23, 2021

Prepared for:

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EXECUTIVE SUMMARY

This report presents the Remedial Investigation/Feasibility Study (RI/FS) and Cleanup Action Plan (CAP) for the Seventh Avenue Service Property (Site), located at 701 South Jackson Street in Seattle, Washington (Property). This RI/FS/CAP is provided to document the current Site conditions and present the evaluation and selection of the cleanup action that will be conducted as part of the planned redevelopment of the Property to meet the requirements of the Model Toxics Control Act (MTCA, Chapter 70A.305 Revised Code of Washington [RCW], Washington Administrative Code [WAC] 173-340). As part of the planned redevelopment project that will consist of a mixed-use building with affordable housing, 701 South Jackson Partners, LLC (South Jackson Partners) will seek a Prospective Purchaser Consent Decree (PPCD) with the Washington State Department of Ecology (Ecology), working with the Assistant Attorney General, Ecology Division (the AGO), to facilitate cleanup as part of project construction.

During initial discussions with Ecology and the AGO regarding a PPCD for the Site, the AGO advised that it is prepared to move forward to a PPCD and directed that the Site be enrolled in the Voluntary Cleanup Program (VCP) for approval of the Remedial Investigation/Feasibility Study (RI/FS) and Cleanup Action Plan (CAP). The Property will then be transitioned to the PPCD track for completion of the Cleanup Action.

Current plans to redevelop the Property include construction of an eight-story building with affordable housing and ground level commercial retail space. The planned redevelopment includes demolition of the existing structures and lot-line to lot-line excavation of soils to a depth of approximately 15 to 20 feet bgs and subsequent construction of the new building. However, data collected to date indicate that soil in the central and western portions of the Property contains gasoline-range total petroleum hydrocarbons, benzene, toluene, ethylbenzene, and xylenes (BTEX) and naphthalene at concentrations greater than the MTCA cleanup levels associated with the former gasoline service station and garage that operated at the Property between the 1930s and 1970s. To address soil contamination, cleanup of the Site is planned as part of construction for Property redevelopment. Based on evaluation of widely used remedial technologies, screened based on effectiveness, implementability during Site redevelopment, and cost, remedial excavation as part of project construction is the most practical cleanup alternative that meets MTCA requirements, has a relatively short restoration timeframe, and is compatible with the planned redevelopment project. As part of the selected cleanup action, contaminant containing soil will be removed from the Property for permitted off-site disposal followed by confirmation sampling to document site conditions at the final construction excavation limit.

As part of construction, a Soil and Groundwater Management Plan will be developed to guide the earthwork contractor with the proper management and handling of the waste streams generated. At the completion of the cleanup action, a Cleanup Action Report will be prepared to document the remedial actions completed and soil conditions at the final construction excavation limits. To supplement existing Site characterization data, a data gaps investigation is proposed to verify conditions related to the extent and chemical quality of shallow fill material from unknown source(s), the depth to groundwater, the extent of contaminant containing soil extending into the adjacent rights-of-way (ROWs) west of the Property boundary, and the potential for soil vapor intrusion into the new building following redevelopment. A focused investigation will be completed to fill these data gaps prior to construction to further evaluate media of concern, potential exposure pathways, and support construction and cleanup action planning, including soil management and disposal.

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

1.0 REMEDIAL INVESTIGATION

1.1. Introduction

This report presents the Remedial Investigation, Feasibility Study and Cleanup Action Plan (RI/FS/CAP) for the Seventh Avenue Service Site (Site). 701 South Jackson Partners, LLC (South Jackson Partners) is planning for redevelopment of the 0.31-acre property located at 701 South Jackson Street (Property) in the Chinatown-International District neighborhood of Seattle, Washington. The Property is shown relative to surrounding physical features on the Vicinity Map, Figure 1. The Property is shown relative to surrounding properties on Figure 2. General project information is summarized below.

GENERAL PROPERTY INFORMATION

Project Contacts	
Property Owner	Dott Mar Inc.
Property Developer	701 South Jackson Partners, LLC. – Brad Padden
Environmental Consultant	GeoEngineers – Tim Syverson (Project Manager) and Robert Trahan (Environmental Scientist)
Property Information and Location	
Site Address	701 South Jackson Street, Seattle, Washington.
Approximate Surface Elevation	Property elevation is approximately 90 feet (NAVD88).
General Description	The 0.31-acre property is located at the southeast corner of South Jackson Street and 7th Avenue South.
Parcel Number	5247802725
GPS Coordinates	47.59899°N, 122.32347°W
Quarter, Section, Township and Range	NW quarter of Section 5, Township 25N, Range 4E, Willamette Meridian
Geologic Setting and Subsurface Conditions	
Geologic Setting	Puget Sound Lowlands
Nearest Surface Water Body	Puget Sound is approximately 0.67-miles to the west
Soil and Geologic Conditions	Glacially deposited sediments
Depth to Groundwater	Greater than 50 feet bgs (elevation 40 feet, NAVD88)
Inferred Direction of Groundwater Flow	Inferred site groundwater flow is to the south/southwest toward Puget Sound based on topography and proximity to Puget Sound.
Regulatory Database	
Cleanup Site ID	NW11348
Facility/Site ID	99187287
UST Site No.	9017
LUST Release No.	592055

Notes:

bgs = below ground surface

NAVD88 = North American Vertical Datum of 1988

Based on investigations conducted from 1992 to 2019 (further discussed in Section 2.4), soil in the western and central portions of the Property contains gasoline-range total petroleum hydrocarbons, benzene, ethylbenzene, toluene, and naphthalene at concentrations greater than the Model Toxics Control Act (MTCA) cleanup levels. Localized moist or wet soil was present, but no continuous water-bearing zones have been encountered during the drilling and sampling completed to depths of up to 41.5 feet below ground surface (bgs) to evaluate the nature and extent of Site contamination. Based on the available information, the first groundwater in the Site area is at a depth greater than 50 feet bgs.

This report is provided to document current Site conditions and provide our evaluation and selection of the cleanup action that will be conducted as part of construction for the planned redevelopment of the Property. The overall project objectives and regulatory framework are discussed in the following sections (1.2 and 1.3).

1.2. Objectives

The objective is to complete a MTCA-compliant cleanup action as part of construction for Property redevelopment in accordance with the requirements of MTCA Chapter 70A.305 Revised Code of Washington (RCW) and Chapter 173-340 of the Washington Administrative Code (WAC). Specifically, this RI/FS/CAP document is provided to:

- Summarize the results of the environmental Site characterization conducted to date (the Remedial Investigation [RI]), including:
    - Identify potential data gaps and present a scope of work for additional environmental data collection.
    - Identify the areas requiring remedial action and the associated cleanup requirements for the Site, including cleanup levels and points of compliance.
- Present an evaluation of cleanup action alternatives for the Site (the Feasibility Study [FS]) based on the results of the RI and the redevelopment plans for the Site.
- Present the selected cleanup action that will be conducted concurrent with construction for Site redevelopment to address the media with contaminant concentrations greater than the MTCA cleanup levels (the Cleanup Action Plan [CAP]).

1.3. Regulatory Framework

As noted above, the Site is listed by Ecology with Facility/Site No. 99187287 and Cleanup Site ID No. 11348 and has been identified as a Leaking Underground Storage Tank (LUST) site (LUST Release No. 592055) for benzene, naphthalene, and gasoline-range petroleum hydrocarbons confirmed in soil at concentrations greater than the MTCA cleanup levels. As part of the planned redevelopment, South Jackson Partners will seek a Prospective Purchaser Consent Decree (PPCD) with the Washington State Department of Ecology (Ecology), working with the Assistant Attorney General, Ecology Division (the AGO), to facilitate cleanup as part of project construction.

During initial discussions with Ecology and the AGO regarding a PPCD for the Site, the AGO advised that it is prepared to move forward to a PPCD and directed that the Site be enrolled in the Voluntary Cleanup Program (VCP) for approval of the Remedial Investigation/Feasibility Study (RI/FS) and Cleanup Action Plan (CAP). The Property will be transitioned to the PPCD track for completion of the Cleanup Action after Ecology approves the preparatory reports. To keep the Site with the same Ecology site manager and plan, the AGO recommended that entry be requested to the standard rather than expedited VCP.

2.0 BACKGROUND

2.1. Site Description and Future Land Use

The Property is bounded by Jackson Street to the north, 7th Avenue South to the west, a mixed-use retail and apartment building (currently vacant) to the south, and a restaurant building (House of Hong) to the east (Figure 2). The Property is currently developed with two single-story structures, including a former gasoline station building in the northwest portion and an "L"-shaped automobile repair garage along the east and south parcel boundaries, and paved parking and drive areas. The buildings are currently vacant.

Redevelopment plans for the Property include a new eight-story building with affordable housing and ground level commercial retail space. The planned redevelopment includes the demolition and removal of the existing buildings and improvements, and lot-line to lot-line excavation of subsurface soils to a depth of approximately 15 to 20 feet bgs and subsequent construction of the new building.

2.2. Site History

Since redevelopment following the Jackson Street regrading project in 1927, the Property has been used for automobile repair and fueling services. During redevelopment, the large "L"-shaped building was constructed along the southern and eastern portions of the Property. As early as 1932, a gasoline service station was added to the northwest portion of the Property until sales of gasoline ceased in the 1970s. The former gasoline service station operations included two gasoline underground storage tanks (USTs) and an associated fuel dispenser/pump island, and vehicle service/repair. In 2010, the gasoline USTs associated with the service station were decommissioned and removed from the Property.

Although the current use of the Property is still listed as a "service station," the buildings on site are largely vacant with the exception of a small portion of the existing garage which houses a retail tea shop.

2.3. Geology and Hydrogeology

Subsurface information provided in the investigation report prepared by CDM in 2012, and data collected by Landau Associates, Inc. (LAI) in 2011 and Farallon Consulting (Farallon) in 2019 are also provided with the VCP application package and summarized in the following sections (2.3.1 and 2.3.2).

2.3.1. Soil Conditions

According to the United States Geological Survey (USGS) Seattle South Quadrangle topographic map, the ground surface of the Property and surrounding area slopes down gently to the southwest toward Elliot Bay (USGS 2011). The underlying soil is identified as pre-Vashon deposits consisting of interbedded sand, gravel, silt, and poorly sorted mixtures that are of unspecified age and origin (Troost, et al 2005). The pre-Vashon deposits are mapped as glacially deposited and are very dense and hard silt, sand, gravel and till, which have been regraded.

Based on investigations completed at the Site (further discussed in Section 2.4), approximately 2 to 6 feet of fill consisting of silty fine to fine sand with silt containing occasional debris (concrete, plastic, metal and brick debris) is locally present beneath the existing structures and improvements and overlying the native soil. Underlying the fill is interbedded fine sand with silt and clayey silt to a depth of approximately 12 feet bgs. Fine to medium silty sand and sand with trace silt underlies the interbedded silt and clayey silt deposits to an approximate depth of 20 feet bgs. Deposits from approximately 20 feet to the maximum depth explored (41.5 feet bgs) consist of fine sand with varying amounts of silt and clayey silt.

2.3.2. Groundwater Conditions

Continuous groundwater has not been encountered during any of the field investigations completed at the Site to the maximum depth explored of 41.5 feet bgs. Localized moist or wet soil was encountered during drilling at depths ranging from 12 to 15 feet and 20 to 26 feet bgs, but no continuous water-bearing zones have been encountered during drilling at the Property. The findings are consistent with the available information indicating that first groundwater in the area is at a depth greater than 50 feet bgs with flow direction to the west southwest toward Puget Sound.

2.4. Environmental Investigation Summary

Service stations and automobile repair activities have a high potential to impact the environment due to their storage and use of petroleum products including fuels, vehicle fluids, and solvents. CDM Smith (CDM) identified the automobile fueling, service and repair operations as a recognized environmental condition (REC) in its Phase I Environmental Site Assessment (ESA) for the Property (CDM 2012, provided in VCP application package). CDM specifically identified the following multiple source areas for contamination: two service pits, an in-floor hydraulic hoist, the former gasoline USTs, the former fuel dispenser island and piping remaining in place between the former USTs and dispensers, and the potential presence of other, unknown USTs.

To evaluate these potential source areas, several environmental investigations were conducted at the Site between 1992 and 2019. The findings of these investigations are summarized below.

- In August 1992, GEO Group Northwest, Inc (GeoGroup) prepared a Site Characterization Report as a follow up to a potential release of a regulated petroleum-based substance at the Property and to characterize the nature and extent of potential soil and groundwater contamination (GeoGroup 1996). The investigation included advancing three soil borings (B-1 through B-3; also referred to as H-1 through H-3 in more recent GeoGroup reports) to depths ranging from approximately 10 to 17.5 bgs in proximity to two abandoned USTs on Property. The approximate locations of the soil borings are shown on Figure 3. As part of this investigation, four soil samples collected from three borings were submitted for analysis for gasoline-range total petroleum hydrocarbons using Northwest Method NWTPH-G, benzene, ethylbenzene, toluene, and xylenes (BTEX) (using United States Environmental Protection Agency (EPA) Method 8020. Boring logs for the 1992 investigation are included in Appendix A.
- In February 2006, GeoGroup conducted a limited Phase II Subsurface Investigation at the Property to further assess the nature and extent of potential contaminated soil (GeoGroup 2006). GeoGroup advanced four soil borings (B-1 through B-4) located along the central and western portion of the Property adjacent to the USTs and along the associated fuel lines. Each boring was completed to a depth of approximately 40 feet bgs. The approximate boring locations are shown on Figure 3. Groundwater was not encountered during the drilling activities. As part of this investigation, six soil samples collected from the three borings (B-1, B-3 and B-4) were submitted for analysis for gasoline- and diesel-range total petroleum hydrocarbons using Northwest Method NWTPH-G and NWTPH-Dx, respectively. In addition, two soil samples were analyzed for volatile organic compounds (VOCs) using EPA Method 8260B. Boring logs for the 2006 investigation are included in Appendix A.
- On November 2, 2010, Environmental Associates, Inc. (EAI) completed UST Removal and Site Assessment for two 6,000-gallon gasoline USTs (UST-1 and UST-2) formerly located centrally near the north portion of the Property (EAI 2010). Each tank was removed from a separate excavation. EAI reported that both USTs were cylindrical, constructed of single wall steel and exhibited moderate to heavy rusting and pitting. The estimated dimensions of the USTs were 16 feet long by 8 feet in diameter.

Two discrete soil samples were collected from the base of each tank excavation (approximately 12 feet bgs) and two composite soil samples were collected from adjacent sidewalls (the north-west and south-east sidewalls) of each excavation. In addition, a three-point composite sample was collected from the stockpiled overburden soil from each UST removal excavation. The soil samples were submitted for analysis for gasoline-range total petroleum hydrocarbons using Northwest Method NWTPH-G and benzene, toluene, ethylbenzene and xylenes (BTEX) using EPA Method 8021B. Fuel dispenser and vent/fuel line removal was not included in the 2010 UST removal activities. The locations of the former USTs are shown on Figure 3. Figure 4 shows the UST removal excavation and soil sampling locations.

- In November 2011, LAI conducted a Focused Phase II Investigation as part of property due diligence related to potential sale of the Property (LAI 2011). LAI advanced six borings; three soil borings located near the northwest, northeast and southeast corners of the site (B-1-11, B-5-11 and B-6-11, respectively) and three soil borings located along 7th Avenue South (B-2-11 through B-4-11). The approximate locations of the soil borings are shown on Figure 3. Soil boring depths ranged from approximately 20 to 40 feet bgs. Groundwater was not encountered during the drilling; however, zones of wet soils were observed in sandy layers between approximately 7 and 15 feet bgs and 20 to 30 feet bgs. As part of this investigation, 11 soil samples were submitted for analysis for gasoline- and diesel-range total petroleum hydrocarbons using NWTPH-G and NWTPH-Dx and BTEX using EPA Method SW8021. In addition, two of the 11 soil samples were also analyzed for lead using EPA Method 6020. Boring logs for the 2011 investigation are included in Appendix A.
- Between October 31 and November 1, 2019, Farallon advanced five borings (FB-3 through FB-7) at the Property to further evaluate soil conditions in potential source areas (i.e., hydraulic hoist, service bay pit and fuel dispenser island). The approximate locations of the soil borings are shown on Figure 3. Soil boring depths ranged from approximately 8 to 40 feet bgs. As part of this investigation, 16 soil samples were submitted for analysis for gasoline-range total petroleum hydrocarbons using NWTPH-G and NWTPH-Dx and BTEX using EPA Method 8021B. Additionally, three of the soil samples were also analyzed for VOCs (including halogenated VOCs [HVOCs]) using EPA Method 8260D, lead using EPA Method 6020, polychlorinated biphenyls (PCBs) using EPA Method 8082 and polycyclic aromatic hydrocarbons (PAHs) using EPA Method 8270E/SIM. Groundwater was not encountered during the drilling activities. Boring logs for the 2019 investigation are included in Appendix A.

2.5. Chemical Analytical Results

Chemical analytical results for the soil samples collected during the investigations described in the previous section (Section 2.4) are presented in Table 1 and discussed in the following sections (2.5.1 and 2.5.2). Primary contaminants of concern (COCs) identified at the Site include gasoline-range total petroleum hydrocarbons, benzene and naphthalene. The nature and extent of contamination related to the primary COCs is presented in plan view on Figures 5 through 7 and in cross-section on Figures 8 through 10 relative to the planned redevelopment construction extent. Laboratory data reports associated with these investigations are included in Appendix B.

2.5.1. Data Quality Analysis

The analytical data for the soil samples from the investigations completed at the Property were reviewed for quality assurance/quality control purposes and for use to evaluate soil conditions and define the nature and extent contamination. Data for which the sample location, sample depth, analytical methods, and chemical analytical results could be verified were considered acceptable for use. Based on our review of the environmental data, no significant data quality exceptions were noted for the laboratory reports for the sample analyses.

2.5.2. Environmental Investigation Analytical Results

The analytical results for the 33 soil samples collected from 14 boring locations completed between 1992 and 2019 are being used to characterize subsurface conditions at the Site. The results of the investigations identified the following:

- Gasoline-range total petroleum hydrocarbons were detected at concentrations greater than the MTCA Method A Cleanup Level (CUL) of 30 milligrams per kilogram (mg/kg) in the presence of detectable benzene, or 100 mg/kg in the absence of benzene, in borings H-1, H-3, B-1, B-3, B-4, B-1-11, B-3-11, FB-3, FB-4 and FB-5 (Figure 5) located in the central and western portions of the Property including the west adjacent right-of-way (ROW) at depths ranging from approximately 10 to 20 feet bgs. At other locations, gasoline-range total petroleum hydrocarbons either were not detected or were detected at concentration less than the MTCA CULs.
- Benzene was detected at concentrations greater than the MTCA Method A CUL of 0.03 mg/kg in borings H-1, H-3, B-1, B-3, B-4, B-1-11, B-2-11, B-4-11, FB-3, FB-4 and FB-5 (Figure 6) located in the central and western portions of the Property including the west adjacent ROW at depths ranging from approximately 5 to 17 feet bgs.
- Naphthalene was detected at a concentration greater than the MTCA Method A CUL of 5 mg/kg in borings B-4, FB-3 and FB-5 (Figure 7) located in the central and western portions of the Property at depths ranging from approximately 10 to 17 feet bgs. Naphthalene was not detected at concentrations greater than the laboratory reporting limits in the remaining samples analyzed.
- Ethylbenzene and/or toluene compounds were detected at concentrations greater than the MTCA Method A CULs (6 and 7 mg/kg, respectively) in borings H-1, H-3, B-1, B-3, B-4, B-1-11, B-3-11, FB-4 and FB-5 (Table 1). At other locations, BTEX compounds either were not detected or were detected at concentration less than the MTCA CULs.

In other samples submitted for chemical analysis, concentrations of diesel- and heavy oil-range total petroleum hydrocarbons, VOCs (not including BTEX), HVOCs, cPAHs, lead and PCBs either were not detected or were detected at concentrations less than the corresponding MTCA CULs.

2.5.3. UST Closure and Removal Results

Eight soil samples were collected during the removal of the two 6,000-gallon USTs (UST-1 and UST-2) in 2010. During UST removal and closure, two discrete soil samples were collected from the base of each tank removal excavation (approximately 12 feet bgs) and two composite soil samples were collected from adjacent sidewalls (the north-west and south-east sidewalls) of each removal excavation. One three-point composite sample was also collected from the stockpiled overburden soil generated from each removal excavation. The sample analytical results for the UST removals are summarized on Figure 4 and described below.

2.5.3.1. Underground Storage Tank No. 1

- Gasoline-range total petroleum hydrocarbons were detected at a concentration greater than the MTCA Method A CUL in the base sample collected beneath UST-1 at approximately 12 feet bgs (UST-1-B-12). Gasoline-range total petroleum hydrocarbons either were not detected or were detected at a concentration less than the MTCA CUL in the other soil samples submitted for chemical analysis.
- BTEX either was not detected or was detected at concentrations less than the MTCA CULs in each of the samples submitted for chemical analysis.

2.5.3.2. Underground Storage Tank No. 2

- Gasoline-range total petroleum hydrocarbons and BTEX were not detected at concentrations greater than the laboratory reporting limits in any of the four samples submitted for chemical analysis.

2.6. Groundwater Elevations

As noted above, continuous groundwater was not encountered in any of the borings at the property to the maximum drilling depth of 41.5 feet bgs.

2.7. Key Findings

- Soil samples collected from investigations completed to evaluate Property conditions were submitted for laboratory analysis for the contaminants of potential concern (COPCs) in general accordance with Table 830-1 for petroleum releases of gasoline range organics (WAC 173-340-900) based on historical use of the property as a gasoline service station. In addition, soil samples collected in the vicinity of the former service bay pit and hydraulic hoist were submitted for listed parameters for waste oils/unknown oils in general accordance with Table 830-1 (WAC 173-340-900) based on historical use. The results of the sample analyses confirmed the presence of gasoline-range total petroleum hydrocarbons and BTEX in soil in the central and western portions of the Property at depths ranging from approximately 5 to 20 feet bgs.
- The areas of soil with concentrations of gasoline-range total petroleum hydrocarbons, BTEX and/or naphthalene greater than the MTCA CULs are located within the area planned for mass soil excavation as part of construction for Property redevelopment.
- The soil with concentrations of gasoline-range total petroleum hydrocarbons, BTEX and/or naphthalene greater than the MTCA CULs extends to the west into the adjacent 7th Avenue South ROW.
- Other COPCs associated with historical use of the Property were not detected at concentrations greater than the MTCA CULs in soil at the Site.
- Continuous groundwater was not encountered at the Property to the maximum drilling depth of 41.5 feet bgs. Based on the available soil analytical data and the reported depth to area groundwater of greater than 50 feet bgs, the potential for groundwater to be affected by the contaminated soil at the Site is considered to be low.

2.8. Data Gaps

The characterization data obtained to date indicates potential data gaps related to characterization of the fill soil conditions, the depth to continuous/area groundwater, the extent of the contaminant containing soil into the adjacent ROW, and the potential for soil vapor intrusion by gasoline-related VOCs following redevelopment. To address these data gaps, a focused investigation is proposed to further evaluate potential media of concern, potential exposure pathways, and support construction and cleanup action planning. Based on a review of the available environmental data, the following approach is planned to fill the identified data gaps and complete Site characterization:

- **Fill material from unknown source(s) –** Shallow soil at the Property consists of fill from unknown source(s) that is present beneath the existing improvements to depths ranging between approximately 2 to 6 feet bgs. Fill materials encountered to date have included various debris (concrete, plastic, metal and brick debris). Four (4) soil borings will be completed to depths of approximately 25 feet bgs using direct-push (DP) drilling methods to further evaluate soil conditions along the north, south and eastern

property boundary. Soil samples representative of the fill material will be collected and submitted for the following chemical analyses:

- Gasoline-range total petroleum hydrocarbons by NWTPH-G.
- Diesel- and heavy oil-range total petroleum hydrocarbons by NWTPH-Dx.
- BTEX by United States Environmental Protection EPA Method 8260.
- PAHs by EPA Method 8270D/SIM.
- Resource Conservation Recovery Act (RCRA) metals by EPA Method 6000/7000 series.
- HVOCs by EPA Method 8260.
- Polychlorinated biphenyl's (PCBs) by EPA Method 8082.

- **Groundwater Depth –** Continuous/area-wide groundwater has not been encountered to a depth of approximately 40 feet bgs during the investigations completed to date. To evaluate and document the depth to groundwater at the Site, a soil boring is proposed to be completed centrally at the Site to a depth of approximately 90 feet bgs using hollow stem auger (HSA) drilling methods. If groundwater is encountered in sufficient quantity for sampling, a grab sample will be collected and submitted for the following chemical analysis:
  - Gasoline-range total petroleum hydrocarbons by NWTPH-G.
  - Diesel- and heavy oil-range total petroleum hydrocarbons by NWTPH-Dx.
  - BTEX by EPA Method 8260.
  - PAHs by EPA Method 8270D/SIM.
  - Total and dissolved MTCA metals by 6000/7000 series and/or 200.7/200.8.

  In addition, soil samples from this boring will also be collected to evaluate fill material and the vertical extent of Site contamination. Selected soil samples from this boring will be submitted for a combination of the following chemical analysis:
  - Gasoline-range total petroleum hydrocarbons by NWTPH-G.
  - Diesel- and heavy oil-range total petroleum hydrocarbons by NWTPH-Dx.
  - BTEX by EPA Method 8260.
  - PAHs by EPA Method 8270D/SIM.
  - RCRA metals by EPA Method 6000/7000 series.
- **Nature and Extent of on-Property Contamination –** Contaminated soil was identified within the central and western portions of the Property. To further evaluate the vertical extent of contamination in this area, two (2) HSA soil borings are proposed to be completed to depths of approximately 25 feet. Soil samples representing the base of contamination based on field screening will be submitted for chemical analyses of gasoline-range total petroleum hydrocarbons by NWTPH-G and BTEX by EPA Method 8260.
- **Nature and extent of off-Property ROW contamination –** Contaminated soil was identified to extend beyond the Property boundary into the west adjacent ROW (7th Avenue South). To further evaluate soil conditions in this area, four (4) DP soil borings are proposed to be completed to depths of approximately 25 feet bgs in the ROW. Soil samples will be submitted for chemical analyses of gasoline-range total petroleum hydrocarbons by NWTPH-G and BTEX by EPA Method 8260.
- **Potential for soil vapor intrusion –** To date, samples have not been collected to evaluate the potential for soil vapor intrusion due to the contaminant containing soil at the Site. To fill this data gap, three (3)

soil vapor samples will be collected from three (3) soil borings completed to an approximate depth of 5 to 10 feet bgs using DP drilling methods. Soil borings will be completed along the west and north Property boundaries. Soil vapor samples will be collected from each boring for the following chemical analysis:

- Petroleum equivalent carbon (EC) fractions including EC5-8 (aliphatics), EC9-12 (aliphatics) and EC9-10 (aromatics) by Modified TO-15 Air-Phase Petroleum Hydrocarbon (APH) analysis.
- Volatile organic compound (VOC) analysis including BTEX and naphthalene by EPA Method TO-15.
- Helium using Modified ASTM D-1496.

Proposed exploration locations to fill identified data gaps are presented on Figure 10.

2.9. Conceptual Site Model

A conceptual site model (CSM) was developed for the Site based on historical land use and the results of the investigations performed to date as discussed in Section 2.4. The CSM includes discussion of the contaminants of concern (COCs), media of concern, and potential exposure pathways that could affect human or environmental health. The CSM is used to develop feasible cleanup options and to select a preferred cleanup action for the Site (discussed in Section 3.0).

2.9.1. Sources of Contamination

Environmental investigations performed at the Site have identified gasoline-range total petroleum hydrocarbons, BTEX and naphthalene as COCs in soil. The available information indicates that the source(s) of these contaminants are associated with the historical land use which has included gasoline service station operations. Investigations to evaluate other potential sources of contamination (other than those identified as data gaps), including service pits, an in-floor hydraulic hoist and automobile repair operations have not identified these as potential sources for the contaminant concentrations greater than the MTCA CULs.

2.9.2. Contaminants of Concern

The COCs for the Site are the potentially hazardous compounds that have been detected in environmental media during the environmental investigations. Based on the chemical analytical results (Table 1) for soil samples obtained during Site investigation, the preliminary COCs for the Site are the contaminants that were detected at concentrations greater than the MTCA CULs as summarized in the following table.

Contaminants of Concern (COCs) in Soil	Contaminant Source
Gasoline-Range Total Petroleum Hydrocarbons	Historical Release(s) at the Property from former Gasoline Service Station operations
BTEX	
Naphthalene	

2.9.3. Media of Concern

Soil is the media of concern at the Site. Groundwater (not encountered at the Site to date) and soil vapor are also potential media of concern.

2.9.4. Potential Exposure Pathways and Receptors

Exposure pathways describe the mechanisms by which an individual or population is exposed, or has the potential to be exposed, to hazardous substances at or originating from a Site (WAC 340-350 (7)(e)(ii)). The following sections summarize potential exposure pathways for the Site.

2.9.4.1. Direct Contact

Soil at the Site with COC concentrations greater than the MTCA CULs is present at depths ranging from near ground surface to approximately 20 feet bgs. This contaminated soil does not present a current direct contact risk because the soil is covered by the existing building and/or pavement (i.e., asphalt paved parking lot and paved building floors). The direct contact to soil pathway will be eliminated by soil excavation during Property redevelopment which will extend beyond the standard point of compliance of 15 feet bgs, and future development will prevent contact with Property soil.

2.9.4.2. Soil Vapor to Indoor Air

Soil vapor (i.e., the air in the pore space between soil grains in the unsaturated zone) can be impacted by volatilization of BTEX and other VOCs from soil. Depending on type and construction of on-site structures, there is the potential for soil vapors contained in soil beyond the construction excavation footprint to impact indoor air through vapor intrusion. However, exposure via the soil vapor to indoor air pathway is not considered a high risk under current or future Site conditions for the following reasons:

- The existing building is vacant,
- VOC-impacted soils within the Property boundary will be removed during construction (and post-excavation conditions will be verified through confirmation sampling), and
- Building construction will limit the ability of soil vapors to enter the proposed building and reach regularly occupied floors (i.e., retail space on the ground floor, moisture and vapor barrier).

Based on the above discussion, the soil vapor to indoor air pathway is not likely a complete exposure pathway.

2.9.4.3. Soil to Groundwater

The soil with COCs at concentrations greater than the MTCA CULs at the Site, which was detected at depths ranging from near ground surface to approximately 20 feet bgs, is above (shallower than) where groundwater is anticipated to be located (greater than 50 feet bgs). In addition, COCs in soil will be removed to approximately 20 feet bgs across the footprint of the Property for the planned redevelopment to eliminate the soil-to-groundwater pathway within the source area.

2.9.4.4. Soil to Surface Water (Runoff)

The concrete foundations from current buildings and the pavement surface of the current Site covers the entire footprint of the Property; therefore, soil is not exposed to precipitation or stormwater. As a result, this potential exposure pathway is not complete, and the subsurface soil contamination does not pose a threat to surface water. Following planned redevelopment, soil containing COCs remaining in the ROWs will be beneath paved surfaces to prevent exposure to precipitation and stormwater.

2.9.5. Terrestrial Ecological Evaluation

A terrestrial ecological evaluation (TEE) is required by MTCA unless an exclusion under Washington Administrative Code (WAC) 173-340-7491(1)(a) through (d) applies to the Site. A TEE determines whether

a release of hazardous substances to soil may pose a threat to the terrestrial environment, characterizes threats to terrestrial plants or animals, and establishes site-specific cleanup standards for the protection of terrestrial plants and animals.

The Site is in a downtown urban area. The entire Site is covered with the foundation of the current on-Site building and the associated paved drive and parking areas and will continue to be covered as part of the planned lot line to lot line redevelopment. The Site qualifies for an exclusion:

1. Under WAC 173-340-7491(1)(a)(i) because contaminated soil is planned to be excavated during redevelopment to a depth of approximately 15 to 20 feet bgs within the Property boundary (below the standard point of compliance for soil of 15 feet bgs for terrestrial ecological receptors [WAC 173-340-7490[4][b]]), and
2. Per WAC 173-340-7491(1)(c)(i) because there is less than 1.5 acres of contiguous undeveloped land on the Site or within 500 feet of the Site.

Based on these exclusions, a TEE is not required and therefore cleanup standards for soil at the Site do not include terrestrial ecological considerations or criteria.

3.0 FOCUSED FEASIBILITY STUDY

The FS documents that the selected cleanup action, which will be implemented as part of construction of the proposed redevelopment at the Site, will be protective of human health and the environment. The primary purpose of the FS is to develop and evaluate cleanup action alternatives and select a preferred alternative that meets the MTCA requirements for cleanup actions. The alternatives evaluation assumes that cleanup will take place during construction for redevelopment of the Site. Current development plans call for construction of an eight-story residential building with affordable housing and ground level commercial retail space and includes mass excavation of Site soil to a depth of approximately 15 to 20 feet across the Property.

3.1. MTCA Requirements for Cleanup Selection

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

3.1.1. Threshold Requirements:

Cleanup actions performed under MTCA must comply with several threshold requirements (WAC 173-340-360(2)(a)):

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

3.1.2. Other Requirements

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

- Use permanent solutions to the maximum extent practicable,
- Provide a reasonable restoration time frame, and
- Consider public concerns.

3.2. Cleanup Standards

Cleanup standards consist of 1) cleanup levels that are protective of human health and the environment, and 2) the point of compliance at which the cleanup levels must be met. Cleanup standards for the Site are presented below.

3.2.1. Soil

Soil cleanup levels for the Site are the MTCA Method A cleanup levels for unrestricted land uses, or MTCA Method B standard formula values for direct contact or the protection of groundwater for compounds that do not have MTCA Method A cleanup levels. The standard point of compliance for soil based on direct contact or the protection of groundwater is throughout the Site (WAC 173-340-740(6)(b)).

The proposed soil CULs are presented in Table 1.

3.3. Cleanup Action Alternatives

This section presents the locations, media and objectives for a Site cleanup action and identifies and screens viable cleanup alternatives that meet the MTCA remedy selection criteria presented in Section 3.1.

3.3.1. Locations and Media Requiring Cleanup Action

Based on the results of the RI, remedial action is warranted to address Site COCs at concentrations greater than the MTCA CULs. The approximate lateral and vertical extent of contaminant containing soil, is shown in plan view on Figures 5 through 7 and in cross section on Figures 8 through 10. The preliminary estimated volume of contaminated soil requiring cleanup (i.e., soil with gasoline-range total petroleum hydrocarbons, BTEX and naphthalene at concentrations exceeding MTCA cleanup levels) is approximately 6,000 in-place cubic yards.

As noted above, the contaminated soil removal will be conducted as part of the construction mass excavation to a depth of approximately 15 to 20 feet across the Property as part of the planned redevelopment. The mass excavation will include the removal and appropriate off-site disposal of soil based on the soil analytical data and disposal facility criteria (further discussed in Section 6.0).

3.3.2. Cleanup Action Objectives

The objective of the proposed cleanup action is to eliminate, reduce, or otherwise control to the extent feasible and practicable, unacceptable risks to human health and the environment posed by hazardous substances (the COCs VOCs and gasoline-range total petroleum hydrocarbons) in soil at the Site in accordance with the MTCA and other applicable regulatory requirements. Specifically, the objective of the cleanup action is to mitigate risks associated with the following potential receptors and exposure routes:

- Direct contact with contaminated soil.
- Leaching/migration of contaminants from soil to groundwater.
- Contaminant migration from soil via vapor intrusion to indoor air.

The cleanup action is planned to mitigate these risks by meeting the soil cleanup standards identified in Section 3.2 within the Property and prevent exposure to residual contamination remaining in place beyond the limits of construction.

3.3.3. Screening Evaluation of Cleanup Action Alternatives

Four general categories of cleanup alternatives were evaluated for the Site through a focused FS: Monitored Natural Attenuation (MNA), contaminated soil removal by remedial excavation, in-situ treatment, and engineering and institutional controls. The alternatives were evaluated relative to MTCA remedy selection criteria and compatibility/implementability with the planned redevelopment of the Site. Cleanup action alternatives evaluated for the Site are described in the table below.

The cleanup alternatives were developed to be generally consistent with widely used remedial technologies, and were screened on the basis of effectiveness, implementability during Site redevelopment, and cost. As described below, remedial excavation is the most practical alternative because it meets the threshold and other requirements of MTCA, has a relatively short restoration timeframe, and is compatible with Site redevelopment.

Cleanup Alternative	Screening Level Evaluation
Monitored Natural Attenuation	Would not likely meet MTCA cleanup standards within a reasonable restoration time frame.
Contaminated Soil Removal by Excavation	Most practical method to address the source with the shortest restoration time frame for soil. Contaminated soil will be readily accessible during construction excavation.
In-situ Treatments	In-situ treatment methods will conflict with excavation for redevelopment of the Site. However, in-situ remediation methods could be incorporated into the cleanup action by applying treatment products into the base of the remedial excavation (if residual contamination remains). However, in-situ treatments generally require contact with saturated soil to activate/spread the reagents. Because groundwater at the Site is located significantly below that base of excavation, in-situ treatments are not expected to be effective.
Engineering and Institutional Controls	Engineering and administrative approaches are insufficient to address the contamination by themselves. However, they could be included into the redevelopment design, as appropriate. For example, vapor barriers integrated into the wall and floor assemblies of the portions of the building that are below grade will mitigate potential for vapor intrusion in the aboveground, occupied portion of the building. Additionally, controls may be appropriate for residual contamination remaining in place beyond the construction excavation footprint in adjacent ROW to prevent exposure.

4.0 PREFERRED CLEANUP REMEDY

Soil excavation and appropriate off-site disposal during building construction was identified as the most effective and permanent remedy to address contaminated soil identified within the Property. This is considered the preferred alternative based on the evaluation notes above and is most compatible with the

redevelopment plan for the Property that includes lot-line to lot-line soil excavation to a depth of approximately 15 to 20 feet bgs. For residual contamination remaining beyond the construction excavation footprint, existing and updated paved surfaces will serve as an engineering control to prevent direct contact, and infiltration and leaching. As discussed in Section 2.9.4, potential soil vapor migration into the new building is not likely to occur due to building construction (i.e., retail space on the ground floor, moisture and vapor barrier).

The selected cleanup action is expected to comply with applicable MTCA requirements for the following reasons:

- The selected alternative meets the "minimum requirements for cleanup actions" (WAC 173-340-360(2)). Specifically, the alternative: 1) could be completed within a relatively short period of time, 2) meets threshold requirements described in MTCA (e.g., protects human health and the environment, complies with the cleanup standards, complies with state and federal laws and provides for compliance monitoring), 3) is expected to be more effective than other available methods in achieving concentrations that are protective of human health and the environment, 4) is permanent, and 5) considers public concerns.
- Excavation and off-site disposal of the contaminated soil is the most permanent and cost-effective cleanup option for the Site, is necessary for the planned Property redevelopment and facilitates effective integration of the construction and cleanup action activities at the Site.
- Existing paved surfaces will serve as Engineering Controls to isolate and prevent human exposure to any residual contaminant containing soil remaining in place in the ROWs following redevelopment

5.0 CLEANUP ACTION PLAN

This section presents an overview and the rationale for the selected cleanup action. Section 6.0 presents a detailed discussion of the components of the selected cleanup action and the sequencing for cleanup action implementation.

5.1. Cleanup Action Objectives

The overall objective is to complete a cleanup action, as part of construction for the planned Site redevelopment, that is compliant with the MTCA and protective of human health and the environment. The following property-specific cleanup action objectives consider the planned Property redevelopment and address the media of concern:

- Complete Site cleanup action evaluation and planning under the Ecology VCP and transition the Property to a PPCD for cleanup action implementation as part of construction for Property redevelopment.
- Remove soil with contaminant concentrations greater than the MTCA CULs from the Site during construction excavation, to meet the cleanup standards.
- Mitigate the potential for exposure to the COCs due to soil vapor intrusion into the new building.

5.2. Cleanup Action Selection Rationale

Based on the evaluation of remedial alternatives presented in the FS, the selected cleanup action consists of soil excavation and off-site disposal of contaminated soil at a permitted facility. This cleanup action was selected because it meets MTCA requirements for a permanent, protective cleanup action and can be implemented concurrent with Property redevelopment. Components of the selected cleanup action alternative have been implemented at other similar sites and are technically feasible within the redevelopment framework and results in a significant overall reduction in Site contaminant mass. Additionally, the proposed cleanup action does not result in a significant addition of short-term risk beyond what is typical for a large construction project in an urban setting.

5.3. Cleanup Action Description

Based on current development plans, soil will be removed from the Property during excavation for the building foundation. The planned area of excavation for the redevelopment will include the entire footprint of the Property. Additionally, shoring will be installed at the Property boundaries to facilitate deep excavation. The construction excavation is planned to extend from property-line to property-line and to comply with City of Seattle requirements. A Soil and Groundwater Management Plan (SGMP), which will be prepared under separate cover, will establish the procedures and sequencing for soil excavation, screening, handling, and transport from the Site for appropriate disposal at a permitted facility. The SGMP will provide for appropriate segregation and disposal of material with 1) contaminant concentrations less than the laboratory reporting limits; 2) contaminant concentrations greater than the laboratory reporting limits but less than the MTCA cleanup levels; or 3) contaminant concentrations greater than the MTCA cleanup levels.

6.0 CLEANUP ACTION IMPLEMENTATION AND SEQUENCING

The cleanup action will be performed concurrent with construction for Property redevelopment. The primary elements of the cleanup action include the following:

6.1. Pre-Construction Actions

The following actions will be performed before construction activities begin on the Site.

6.1.1. Data Gaps Investigation

Data gaps drilling, sampling and analysis (Section 2.8) will be conducted as part of pre-construction planning.

6.1.2. Waste Profile Preparation and Disposal Authorization

Based on the existing soil analytical data, the Site soil does not designate as Dangerous Waste for disposal purposes, and the former Site operations (gasoline service station and automobile repair services) do not indicate that the soil is a listed waste (WAC 173-303). Therefore, a soil waste disposal profile will be prepared for appropriate disposal of Site soil at one or more appropriately permitted disposal facilities based on the soil chemical data obtained. The waste profile will be reviewed by the facilities and authorization for contaminated soil disposal will be issued for the redevelopment project.

6.1.3. Building and Improvements Demolition

The buildings and improvements located on the Site will be demolished and removed before shoring installation and construction excavation begins. Environmental evaluation of the building structures for hazardous materials is a standard procedure prior to demolition and is not included in the scope of this document.

6.2. Cleanup Action During Construction

Cleanup actions to be implemented during project construction include excavation and off-site disposal of contaminant-containing soil within the construction excavation footprint.

6.2.1. Soil Excavation and Disposal

Soil containing COCs at concentrations greater than the MTCA cleanup levels within the Property boundary will be excavated and disposed at a permitted facility. Soil handling and disposal procedures will be described in the SGMP. Based on preliminary estimates, 6,000 in-place cubic yards of contaminated soil is anticipated to be generated during excavation based on the existing chemical data.

6.2.1.1. General Soil Excavation Components

The following general soil excavation components will be implemented during construction:

- Implementation of erosion control and construction safety/security measures.
- Shoring to facilitate the planned construction excavation.
- Remedial excavation of contaminated soil.
- Temporary construction dewatering to capture groundwater seepage in the construction excavation and facilitate soil excavation and construction of foundations. Additionally, stormwater will need to be removed from the excavation for disposal per the SGMP.
- Transportation of excavated contaminated soil and appropriate disposal per the SGMP.
- Transportation of excavated clean soil (soil with no detected concentrations of COCs) for disposal at off-property soil receiving facilities to be agreed upon by the Owner and project team.
- Collection/analysis of confirmation soil samples during excavation to document soil conditions at the lateral and vertical limits of the excavation (i.e., sidewalls and base).

6.2.1.2. Contaminated Soil Excavation

Based on the available data, excavation of contaminated soil is anticipated primarily in the central and western portions of the Site at depths ranging from near ground surface to approximately 20 feet bgs. The approximate lateral and vertical extents of the remedial excavation is shown on Figures 5 through 8. The remedial excavation is anticipated to remove a significate mass of contamination from the Site. However, residual contamination is expected to remain in place within adjacent ROWs. Confirmation soil sampling will be completed at the base and sidewalls of the remedial excavation to document post-cleanup soil conditions.

6.2.1.3. Contaminated Wastewater Management

Wastewater removed from the Site during construction that may contain concentrations of petroleum hydrocarbons, VOCs, PAHs and/or metals will be contained in on-site storage tanks for testing and

treatment, as necessary. It is anticipated that this wastewater stream will be discharged directly to the sanitary sewer in accordance with a King County Discharge Authorization. If wastewater samples collected from the temporary storage tanks during construction exceed the County's discharge limits, treatment with technologies such as filtration and granular activated carbon will be completed prior to discharge to the sanitary sewer to meet King County's discharge criteria. Wastewater that may contain contaminants includes:

- Stormwater that accumulates in the excavation and comes in contact with contaminant-containing soil, and
- Groundwater that seeps into the excavation.

6.3. Schedule

The schedule for construction of the planned redevelopment and concurrent cleanup is being developed. Excavation activities for the redevelopment are anticipated to be completed within approximately 3 to 4 months of the start date.

6.4. Documentation

Cleanup activities will be documented in field reports and a MTCA-compliant cleanup action report.

6.4.1. Cleanup Action Report

At the completion of the redevelopment, a MTCA-compliant cleanup action report will be prepared that meets the requirements of WAC 173-340-515(4)(a)-(b) and submitted to Ecology to document the removal of contaminated soil during construction as well as document soil conditions at the final construction excavation limits. The report will include all chemical data generated during the cleanup action and those data will be submitted to Ecology's Environmental Information Management System (EIM) as required by Policy 840.

7.0 REFERENCES

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TABLES

GeoEngineers

Table 1

Summary of Soil Investigation Chemical Analytical Data

701 South Jackson Street

Seattle, Washington

Sample Location	FB-3	FB-3	FB-3	FB-3	FB-4	FB-4	FB-4	FB-5[2]	FB-5[2]	FB-5[2]	MTCA Cleanup Levels[3]
Sample Identification[1]	FB-3-10.0	FB-3-15.0	FB-3-20.0	FB-3-40.0	FB-4-6.0	FB-4-10.0	FB-4-15.0	FB-5-11.0	FB-5-17.0	FB-5-25.0	
Sampled By	Farallon	Farallon	Farallon	Farallon	Farallon	Farallon	Farallon	Farallon	Farallon	Farallon	
Sample Date	10/31/19	10/31/19	10/31/19	10/31/19	11/01/19	11/01/19	11/01/19	11/01/19	11/01/19	11/01/19	
Sample Depth (bgs)	10.0	15.0	20.0	40.0	6.0	10.0	15.0	11.0	17.0	25.0	
Petroleum Hydrocarbons by NWPTH-Gx/NWTPH-Dx (mg/kg)											
Gasoline-Range	**1,300**	5.2 U	5.6 U	5.0 U	**86**	**450**	**1,700**	**17**	**4,800**	5.9 U	30/100[4]
Diesel-Range	980 U	--	--	--	--	--	31 U	33 U	**590**	32 U	2,000
Lube Oil-Range	**570**	--	--	--	--	--	61 U	66 U	57 U	63 U	2,000
Volatile Organic Compounds (VOCs) by EPA 8021/8260[5] (mg/kg)											
Benzene	0.021 U	**0.060**	0.020 U	0.020 U	0.020 U	**0.032**	**1.3**	0.020 U	**1.6**	0.020 U	0.03
Ethylbenzene	**4.6**	**0.29**	0.056 U	0.050 U	**0.12**	**2.2**	**21**	**0.095**	**89**	0.059 U	6
Toluene	**0.17**	0.052 U	0.056 U	0.050 U	0.055 U	0.053 U	**21**	0.071 U	**18**	0.059 U	7
Total Xylenes	**11.2**	0.104 U	0.112 U	0.10 U	**0.1**	**2.99**	**129**	**0.087**	**420**	0.118 U	16,000
1,2 Dibromoethane (EDB)	0.050 U	--	--	--	--	--	--	--	1.1 U	--	0.005
1,2 Dichloroethane (EDC)	0.050 U	--	--	--	--	--	--	--	1.1 U	--	480
Methyl tertiary-butyl ether (MTBE)	0.050 U	--	--	--	--	--	--	--	--	--	0
n-Hexane	--	--	--	--	--	--	--	--	--	--	4,800
Naphthalene	--	--	--	--	--	--	--	--	--	--	5
other VOCs	ND	--	--	--	--	--	--	--	ND	--	varies
Total Metals by EPA 6000 series (mg/kg)											
Lead	5.7 U	--	--	--	--	--	--	--	--	--	250[6]
Polycyclic Aromatic Hydrocarbons (PAHs) by EPA 8270D/SIM (mg/kg)											
1-Methylnaphthalene	**1.7**	--	--	--	--	--	--	--	**2.2**	--	34
2-Methylnaphthalene	**3.4**	--	--	--	--	--	--	--	**4.2**	--	320
Acenaphthene	**0.022**	--	--	--	--	--	--	--	**0.025**	--	4,800
Acenaphthylene	**0.0076**	--	--	--	--	--	--	--	**0.025**	--	NE
Anthracene	**0.025**	--	--	--	--	--	--	--	**0.016**	--	24,000
Benzo[a]anthracene	**0.028**	--	--	--	--	--	--	--	**0.0083**	--	NE
Benzo(a)pyrene	**0.027**	--	--	--	--	--	--	--	0.0076 U	--	0.1
Benzo(b)fluoranthene	**0.028**	--	--	--	--	--	--	--	0.0076 U	--	NE
Benzo(g,h,i)perylene	**0.022**	--	--	--	--	--	--	--	0.0076 U	--	NE
Benzo(k)fluoranthene	0.0076 U	--	--	--	--	--	--	--	0.0076 U	--	NE
Chrysene	**0.029**	--	--	--	--	--	--	--	0.0076 U	--	NE
Dibenzo(a,h)anthracene	0.0076 U	--	--	--	--	--	--	--	0.0076 U	--	NE
Fluoranthene	**0.057**	--	--	--	--	--	--	--	**0.012**	--	3,200
Fluorene	**0.03**	--	--	--	--	--	--	--	**0.053**	--	3,200
Indeno(1,2,3-cd)pyrene	**0.019**	--	--	--	--	--	--	--	0.0076 U	--	NE
Naphthalene	**5.4**	--	--	--	--	--	--	--	**6.4**	--	5
Phenanthrene	**0.098**	--	--	--	--	--	--	--	**0.078**	--	NE
Pyrene	**0.063**	--	--	--	--	--	--	--	**0.019**	--	2,400
cPAHs TEQ[7]	**0.036**	--	--	--	--	--	--	--	**0.0062**	--	0.1
Polychlorinated Biphenyls (PCBs) by EPA 8082 (mg/kg)											
Aroclor 1016	0.057 U	--	--	--	--	--	--	--	0.057 U	--	NA
Aroclor 1221	0.057 U	--	--	--	--	--	--	--	0.057 U	--	NA
Aroclor 1232	0.057 U	--	--	--	--	--	--	--	0.057 U	--	NA
Aroclor 1242	0.057 U	--	--	--	--	--	--	--	0.057 U	--	NA
Aroclor 1248	0.057 U	--	--	--	--	--	--	--	0.057 U	--	NA
Aroclor 1254	0.057 U	--	--	--	--	--	--	--	0.057 U	--	NA
Aroclor 1260	0.057 U	--	--	--	--	--	--	--	0.057 U	--	NA
Total PCBs	0.399 U	--	--	--	--	--	--	--	0.399 U	--	1.0

Notes:

[1] Approximate exploration locations shown on Figure 3.

[2] Boring Advanced at an angle of 25 digress from vertical.

[3] Washington State Model Toxic Control Act Cleanup Regulation (MTCA) Method A Soil Cleanup Levels for Unrestricted Land Uses. MTCA Method B cleanup level used when Method A cleanup level has not been established.

[4] When benzene is present, the gasoline range cleanup level is 30 mg/kg. When benzene is not present the gasoline range cleanup level is 100 mg/kg.

[5] For VOCs, only gasoline-range organic constituent compounds are presented in Table 1, for a full list of compounds tested refer to the laboratory reports in Appendix B.

[6] The natural background concentration for lead in soil for the Puget Sound Region is 24 mg/kg.

[7] Total carcinogenic PAHs (cPAHs) calculated using the toxicity equivalency (TEQ) methodology in WAC 173-340-708(8). Non-detections were assigned half the reporting limit for these calculations.

bgs = below ground surface

mg/kg = milligram per kilogram

HVOCs = halogenated VOCs

Farallon = Farallon Consulting

Landau = Landau Associates

EAI = Environmental Associates, Inc.

GeoGroup = GEO Group Northwest, Inc.

NA = Not Applicable

NE = Not Established

"--" = not tested

ND = Not Detected

U = Analyte not detected above the reported sample quantization limit

Bold indicates analyte was detected.

Shading indicates analyte was detected at a concentration greater than the MTCA cleanup level.

Table 1

Summary of Soil Investigation Chemical Analytical Data

701 S Jackson Street

Seattle, Washington

Sample Location	FB-6	FB-6	FB-6	FB-6	FB-7	FB-7	B-1-11	B-1-11	B-2-11	B-2-11	
Sample Identification[1]	FB-6-10.0	FB-6-18.0	FB-6-21.0	FB-6-24.0	FB-7-2.5	FB-7-8.0	B-1 S-5	B-1 S-7	B-2 S-4	B-2 S-6	
Sampled By	Farallon	Farallon	Farallon	Farallon	Farallon	Farallon	Landau	Landau	Landau	Landau	MTCA Cleanup Levels[3]
Sample Date	11/01/19	11/01/19	11/01/19	11/01/19	10/30/19	10/30/19	11/11/11	11/11/11	11/11/11	11/11/11	
Sample Depth	10.0	18.0	21.0	24.0	2.5	8.0	12.5	17.5	12.5	17.5	
Petroleum Hydrocarbons by NWPTH-Gx/NWTPH-Dx (mg/kg)											
Gasoline-Range	4.7 U	**28**	6.5 U	5.8 U	5.2 U	5.7 U	**24,000**	**14**	**14**	**11**	30/100[4]
Diesel-Range	--	30 U	--	31 U	31 U	31 U	120 U	25 U	25 U	25 U	2,000
Lube Oil-Range	--	61 U	--	63 U	**170**	**78**	50 U	50 U	50 U	50 U	2,000
Volatile Organic Compounds (VOCs) by EPA 8021/8260[5] (mg/kg)											
Benzene	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	**110**	**0.12**	0.044 U	**0.051**	0.03
Ethylbenzene	0.047 U	**1.2**	0.065 U	0.058 U	0.052 U	0.057 U	**470**	**0.3**	**0.078**	**0.08**	6
Toluene	0.047 U	0.051 U	0.065 U	0.058 U	0.052 U	0.057 U	**1,700**	**0.51**	**0.36**	**0.4**	7
Total Xylenes	0.094 U	**0.55**	0.13 U	**0.068**	0.104 U	0.114 U	**2,400**	**1.3**	**0.32**	**0.32**	16,000
1,2 Dibromoethane (EDB)	--	0.00089 U	--	--	--	--	--	--	--	--	0.005
1,2 Dichloroethane (EDC)	--	0.00089 U	--	--	--	--	--	--	--	--	480
Methyl tertiary-butyl ether (MTBE)	--	--	--	--	--	--	--	--	--	--	0
n-Hexane	--	--	--	--	--	--	--	--	--	--	4,800
Naphthalene	--	--	--	--	--	--	--	--	--	--	5
other VOCs	--	ND	--	--	--	--	--	--	--	--	varies
Total Metals by EPA 6000 series (mg/kg)											
Lead	--	--	--	--	--	--	**8.9**	--	--	--	250[6]
Polycyclic Aromatic Hydrocarbons (PAHs) by EPA 8270D/SIM (mg/kg)											
1-Methylnaphthalene	--	**0.13**	--	--	--	--	--	--	--	--	34
2-Methylnaphthalene	--	**0.25**	--	--	--	--	--	--	--	--	320
Acenaphthene	--	0.0081 U	--	--	--	--	--	--	--	--	4,800
Acenaphthylene	--	0.0081 U	--	--	--	--	--	--	--	--	NE
Anthracene	--	0.0081 U	--	--	--	--	--	--	--	--	24,000
Benzo[a]anthracene	--	0.0081 U	--	--	--	--	--	--	--	--	NE
Benzo(a)pyrene	--	0.0081 U	--	--	--	--	--	--	--	--	0.1
Benzo(b)fluoranthene	--	0.0081 U	--	--	--	--	--	--	--	--	NE
Benzo(g,h,i)perylene	--	0.0081 U	--	--	--	--	--	--	--	--	NE
Benzo(k)fluoranthene	--	0.0081 U	--	--	--	--	--	--	--	--	NE
Chrysene	--	0.0081 U	--	--	--	--	--	--	--	--	NE
Dibenzo(a,h)anthracene	--	0.0081 U	--	--	--	--	--	--	--	--	NE
Fluoranthene	--	0.0081 U	--	--	--	--	--	--	--	--	3,200
Fluorene	--	0.0081 U	--	--	--	--	--	--	--	--	3,200
Indeno(1,2,3-cd)pyrene	--	0.0081 U	--	--	--	--	--	--	--	--	NE
Naphthalene	--	**0.28**	--	--	--	--	--	--	--	--	5
Phenanthrene	--	0.0081 U	--	--	--	--	--	--	--	--	NE
Pyrene	--	0.0081 U	--	--	--	--	--	--	--	--	2,400
cPAHs TEQ[7]	--	0.0061 U	--	--	--	--	--	--	--	--	0.1
Polychlorinated Biphenyls (PCBs) by EPA 8082 (mg/kg)											
Aroclor 1016	--	0.061 U	--	--	--	--	--	--	--	--	NA
Aroclor 1221	--	0.061 U	--	--	--	--	--	--	--	--	NA
Aroclor 1232	--	0.061 U	--	--	--	--	--	--	--	--	NA
Aroclor 1242	--	0.061 U	--	--	--	--	--	--	--	--	NA
Aroclor 1248	--	0.061 U	--	--	--	--	--	--	--	--	NA
Aroclor 1254	--	0.061 U	--	--	--	--	--	--	--	--	NA
Aroclor 1260	--	0.061 U	--	--	--	--	--	--	--	--	NA
Total PCBs	--	0.427 U	--	--	--	--	--	--	--	--	1.0

Notes:

[1] Approximate exploration locations shown on Figure 3.

[2] Boring Advanced at an angle of 25 digress from vertical.

[3] Washington State Model Toxic Control Act Cleanup Regulation (MTCA) Method A Soil Cleanup Levels for Unrestricted Land Uses. MTCA Method B cleanup level used when Method A cleanup level has not been established.

[4] When benzene is present, the gasoline range cleanup level is 30 mg/kg. When benzene is not present the gasoline range cleanup level is 100 mg/kg.

[5] For VOCs, only gasoline-range organic constituent compounds are presented in Table 1, for a full list of compounds tested refer to the laboratory reports in Appendix B.

[6] The natural background concentration for lead in soil for the Puget Sound Region is 24 mg/kg.

[7] Total carcinogenic PAHs (cPAHs) calculated using the toxicity equivalency (TEQ) methodology in WAC 173-340-708(8). Non-detections were assigned half the reporting limit for these calculations.

bgs = below ground surface

mg/kg = milligram per kilogram

HVOCs = halogenated VOCs

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EAI = Environmental Associates, Inc.

GeoGroup = GEO Group Northwest, Inc.

NA = Not Applicable

NE = Not Established

"--" = not tested

ND = Not Detected

U = Analyte not detected above the reported sample quantization limit

Bold indicates analyte was detected.

Shading indicates analyte was detected at a concentration greater than the MTCA cleanup level.

Table 1

Summary of Soil Investigation Chemical Analytical Data

701 S Jackson Street

Seattle, Washington

Sample Location	B-3-11	B-3-11	B-4-11	B-4-11	B-5-11	B-6-11	B-6-11	UST-1	UST-1	UST-1	MTCA Cleanup Levels[3]
Sample Identification[1]	B-3 S-4	B-3 S-6	B-4 S-2	B-4 S-6	B-5 S-8	B-6 S-6	B-6 S-7	UST-1-B-12	UST-1-N-8/W-6	UST-1-S-8/E-8	
Sampled By	Landau	Landau	Landau	Landau	Landau	Landau	Landau	EAI	EAI	EAI	
Sample Date	11/11/11	11/11/11	11/11/11	11/11/11	11/14/11	11/04/11	11/04/11	11/02/10	11/02/10	11/02/10	
Sample Depth	12.5	17.5	5.0	15.0	20.0	15.0	20.0	12.0	6.0 - 8.0	8.0	
Petroleum Hydrocarbons by NWPTH-Gx/NWTPH-Dx (mg/kg)											
Gasoline-Range	**420**	**6.6**	**10**	**26**	3.0 U	3.0 U	**4.6**	**110**	2 U	**37**	30/100[4]
Diesel-Range	25 U	25 U	25 U	25 U	25 U	25 U	25 U	--	--	--	2,000
Lube Oil-Range	50 U	50 U	50 U	50 U	50 U	50 U	50 U	--	--	--	2,000
Volatile Organic Compounds (VOCs) by EPA 8021/8260[5] (mg/kg)											
Benzene	0.024 U	**0.06**	**0.14**	**0.38**	0.030 U	0.030 U	0.030 U	0.02 U	0.02 U	0.02 U	0.03
Ethylbenzene	**7.3**	**0.076**	**0.12**	**0.38**	0.050 U	0.050 U	**0.078**	0.02 U	0.02 U	0.02 U	6
Toluene	**1.0**	**0.36**	**0.43**	**1.0**	0.050 U	0.050 U	0.050 U	0.02 U	0.02 U	0.02 U	7
Total Xylenes	**32**	**0.39**	**0.58**	**2.2**	0.20 U	0.20 U	0.20 U	**0.34**	0.06 U	**1.4**	16,000
1,2 Dibromoethane (EDB)	--	--	--	--	--	--	--	--	--	--	0.005
1,2 Dichloroethane (EDC)	--	--	--	--	--	--	--	--	--	--	480
Methyl tertiary-butyl ether (MTBE)	--	--	--	--	--	--	--	--	--	--	0
n-Hexane	--	--	--	--	--	--	--	--	--	--	4,800
Naphthalene	--	--	--	--	--	--	--	--	--	--	5
other VOCs	--	--	--	--	--	--	--	--	--	--	varies
Total Metals by EPA 6000 series (mg/kg)											
Lead	**7.4**	--	--	--	--	--	--	--	--	--	250[6]
Polycyclic Aromatic Hydrocarbons (PAHs) by EPA 8270D/SIM (mg/kg)											
1-Methylnaphthalene	--	--	--	--	--	--	--	--	--	--	34
2-Methylnaphthalene	--	--	--	--	--	--	--	--	--	--	320
Acenaphthene	--	--	--	--	--	--	--	--	--	--	4,800
Acenaphthylene	--	--	--	--	--	--	--	--	--	--	NE
Anthracene	--	--	--	--	--	--	--	--	--	--	24,000
Benzo[a]anthracene	--	--	--	--	--	--	--	--	--	--	NE
Benzo(a)pyrene	--	--	--	--	--	--	--	--	--	--	0.1
Benzo(b)fluoranthene	--	--	--	--	--	--	--	--	--	--	NE
Benzo(g,h,i)perylene	--	--	--	--	--	--	--	--	--	--	NE
Benzo(k)fluoranthene	--	--	--	--	--	--	--	--	--	--	NE
Chrysene	--	--	--	--	--	--	--	--	--	--	NE
Dibenzo(a,h)anthracene	--	--	--	--	--	--	--	--	--	--	NE
Fluoranthene	--	--	--	--	--	--	--	--	--	--	3,200
Fluorene	--	--	--	--	--	--	--	--	--	--	3,200
Indeno(1,2,3-cd)pyrene	--	--	--	--	--	--	--	--	--	--	NE
Naphthalene	--	--	--	--	--	--	--	--	--	--	5
Phenanthrene	--	--	--	--	--	--	--	--	--	--	NE
Pyrene	--	--	--	--	--	--	--	--	--	--	2,400
cPAHs TEQ[7]	--	--	--	--	--	--	--	--	--	--	0.1
Polychlorinated Biphenyls (PCBs) by EPA 8082 (mg/kg)											
Aroclor 1016	--	--	--	--	--	--	--	--	--	--	NA
Aroclor 1221	--	--	--	--	--	--	--	--	--	--	NA
Aroclor 1232	--	--	--	--	--	--	--	--	--	--	NA
Aroclor 1242	--	--	--	--	--	--	--	--	--	--	NA
Aroclor 1248	--	--	--	--	--	--	--	--	--	--	NA
Aroclor 1254	--	--	--	--	--	--	--	--	--	--	NA
Aroclor 1260	--	--	--	--	--	--	--	--	--	--	NA
Total PCBs	--	--	--	--	--	--	--	--	--	--	1.0

Notes:

[1] Approximate exploration locations shown on Figure 3.

[2] Boring Advanced at an angle of 25 digress from vertical.

[3] Washington State Model Toxic Control Act Cleanup Regulation (MTCA) Method A Soil Cleanup Levels for Unrestricted Land Uses. MTCA Method B cleanup level used when Method A cleanup level has not been established.

[4] When benzene is present, the gasoline range cleanup level is 30 mg/kg. When benzene is not present the gasoline range cleanup level is 100 mg/kg.

[5] For VOCs, only gasoline-range organic constituent compounds are presented in Table 1, for a full list of compounds tested refer to the laboratory reports in Appendix B.

[6] The natural background concentration for lead in soil for the Puget Sound Region is 24 mg/kg.

[7] Total carcinogenic PAHs (cPAHs) calculated using the toxicity equivalency (TEQ) methodology in WAC 173-340-708(8). Non-detections were assigned half the reporting limit for these calculations.

bgs = below ground surface

mg/kg = milligram per kilogram

HVOCs = halogenated VOCs

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EAI = Environmental Associates, Inc.

GeoGroup = GEO Group Northwest, Inc.

NA = Not Applicable

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"--" = not tested

ND = Not Detected

U = Analyte not detected above the reported sample quantization limit

Bold indicates analyte was detected.

Shading indicates analyte was detected at a concentration greater than the MTCA cleanup level.

Table 1

Summary of Soil Investigation Chemical Analytical Data

701 S Jackson Street

Seattle, Washington

Sample Location	UST-1	UST-2	UST-2	UST-2	UST-2	B-1	B-1	B-3	B-3	B-4	B-4
Sample Identification[1]	UST-1-0B	UST-2-B-12	UST-2-0B	UST-2-N-8/W-6	UST-2-S-8/E-8	B-1-5	B-1-12.5	B-3-10	B-3-12.5	B-4-9	B-4-14
Sampled By	EAI	EAI	EAI	EAI	EAI	GeoGroup	GeoGroup	GeoGroup	GeoGroup	GeoGroup	GeoGroup
Sample Date	11/02/10	11/02/10	11/02/10	11/02/10	11/02/10	02/01/06	02/01/06	02/01/06	02/01/06	02/02/06	02/02/06
Sample Depth	Stockpile	12.0	Stockpile	6.0 - 8.0	8.0	5.0	12.5	10.0	12.5	9.0	14.0
Petroleum Hydrocarbons by NWPTH-Gx/NWTPH-Dx (mg/kg)											
Gasoline-Range	2 U	2 U	2 U	2 U	2 U	**16**	**12,000**	**1,300**	13 U	10 U	**8,300**
Diesel-Range	--	--	--	--	--	28 U	**560**	30 U	27 U	28 U	**280**
Lube Oil-Range	--	--	--	--	--	57 U	62 U	60 U	54 U	55 U	62 U
Volatile Organic Compounds (VOCs) by EPA 8021/8260[5] (mg/kg)											
Benzene	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.020 U	**17**	**1.8**	**0.093**	**0.38**	**15**
Ethylbenzene	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.047 U	**210**	**12**	**0.19**	**0.12**	**100**
Toluene	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.047 U	**7.2**	**4.5**	**0.39**	**0.21**	**35**
Total Xylenes	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	**0.061**	**860**	**35.4**	**1.08**	**0.19**	**440**
1,2 Dibromoethane (EDB)	--	--	--	--	--	--	--	--	0.057 U	--	1.1 U
1,2 Dichloroethane (EDC)	--	--	--	--	--	--	--	--	0.057 U	--	1.1 U
Methyl tertiary-butyl ether (MTBE)	--	--	--	--	--	--	--	--	0.057 U	--	1.1 U
n-Hexane	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	--	--	--	--	--	--	--	--	1.3 U	--	**33**
other VOCs	--	--	--	--	--	--	--	--	**DETECT**	--	**DETECT**
Total Metals by EPA 6000 series (mg/kg)											
Lead	--	--	--	--	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (PAHs) by EPA 8270D/SIM (mg/kg)											
1-Methylnaphthalene	--	--	--	--	--	--	--	--	--	--	--
2-Methylnaphthalene	--	--	--	--	--	--	--	--	--		--
Acenaphthene	--	--	--	--	--	--	--	--	--	--	--
Acenaphthylene	--	--	--	--	--	--	--	--	--	--	--
Anthracene	--	--	--	--	--	--	--	--	--	--	--
Benzo[a]anthracene	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--	--	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--	--	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--	--	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--	--	--	--	--	--	--
Chrysene	--	--	--	--	--	--	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--	--	--	--	--	--	--
Fluoranthene	--	--	--	--	--	--	--	--	--	--	--
Fluorene	--	--	--	--	--	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	--	--	--	--	--	--	--	--	--	--	--
Phenanthrene	--	--	--	--	--	--	--	--	--	--	--
Pyrene	--	--	--	--	--	--	--	--	--	--	--
cPAHs TEQ[7]	--	--	--	--	--	--	--	--	--	--	--
Polychlorinated Biphenyls (PCBs) by EPA 8082 (mg/kg)											
Aroclor 1016	--	--	--	--	--	--	--	--	--	--	--
Aroclor 1221	--	--	--	--	--	--	--	--	--	--	--
Aroclor 1232	--	--	--	--	--	--	--	--	--	--	--
Aroclor 1242	--	--	--	--	--	--	--	--	--	--	--
Aroclor 1248	--	--	--	--	--	--	--	--	--	--	--
Aroclor 1254	--	--	--	--	--	--	--	--	--	--	--
Aroclor 1260	--	--	--	--	--	--	--	--	--	--	--
Total PCBs	--	--	--	--	--	--	--	--	--	--	--

Notes:

[1] Approximate exploration locations shown on Figure 3.

[2] Boring Advanced at an angle of 25 digress from vertical.

[3] Washington State Model Toxic Control Act Cleanup Regulation (MTCA) Method A Soil Cleanup Levels for Unrestricted Land Uses. MTCA Method B cleanup level used when Method A cleanup level has not been established.

[4] When benzene is present, the gasoline range cleanup level is 30 mg/kg. When benzene is not present the gasoline range cleanup level is 100 mg/kg.

[5] For VOCs, only gasoline-range organic constituent compounds are presented in Table 1, for a full list of compounds tested refer to the laboratory reports in Appendix B.

[6] The natural background concentration for lead in soil for the Puget Sound Region is 24 mg/kg.

[7] Total carcinogenic PAHs (cPAHs) calculated using the toxicity equivalency (TEQ) methodology in WAC 173-340-708(8). Non-detections were assigned half the reporting limit for these calculations.

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Bold indicates analyte was detected.

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Table 1

Summary of Soil Investigation Chemical Analytical Data

701 S Jackson Street

Seattle, Washington

MTCA Cleanup Levels[3]	Sample Location	B-1	B-2	B-3	MTCA Cleanup Levels[3]
	Sample Identification[1]	H-1-12.5	H-2-7.5	H-3-7.5	
	Sampled By	GeoGroup	GeoGroup	GeoGroup	
	Sample Date	08/03/92	08/03/92	08/03/92	
	Sample Depth	12.5	7.5	7.5	
	Petroleum Hydrocarbons by NWPTH-Gx/NWTPH-Dx (mg/kg)				
30/100[4]	Gasoline-Range	**6,000**	**1.6**	**1,400**	30/100[4]
2,000	Diesel-Range	--	--	--	2,000
2,000	Lube Oil-Range	--	--	--	2,000
	Volatile Organic Compounds (VOCs) by EPA 8021/8260[5] (mg/kg)				
0.03	Benzene	**4**	0.05 U	**0.31**	0.03
6	Ethylbenzene	**66**	0.05 U	**6.2**	6
7	Toluene	**55**	0.05 U	**1.9**	7
16,000	Total Xylenes	**330**	0.05 U	**16**	16,000
0.005	1,2 Dibromoethane (EDB)	--	--	--	0.005
480	1,2 Dichloroethane (EDC)	--	--	--	480
0	Methyl tertiary-butyl ether (MTBE)	--	--	--	0
4,800	n-Hexane	--	--	--	4,800
5	Naphthalene	--	--	--	5
varies	other VOCs	--	--	--	varies
	Total Metals by EPA 6000 series (mg/kg)				
250[6]	Lead	**1.5**	**2.2**	**3.8**	250[6]
	Polycyclic Aromatic Hydrocarbons (PAHs) by EPA 8270D/SIM (mg/kg)				
34	1-Methylnaphthalene	--	--	--	34
320	2-Methylnaphthalene	--	--	--	320
4,800	Acenaphthene	--	--	--	4,800
NE	Acenaphthylene	--	--	--	NE
24,000	Anthracene	--	--	--	24,000
NE	Benzo[a]anthracene	--	--	--	NE
0.1	Benzo(a)pyrene	--	--	--	0.1
NE	Benzo(b)fluoranthene	--	--	--	NE
NE	Benzo(g,h,i)perylene	--	--	--	NE
NE	Benzo(k)fluoranthene	--	--	--	NE
NE	Chrysene	--	--	--	NE
NE	Dibenzo(a,h)anthracene	--	--	--	NE
3,200	Fluoranthene	--	--	--	3,200
3,200	Fluorene	--	--	--	3,200
NE	Indeno(1,2,3-cd)pyrene	--	--	--	NE
5	Naphthalene	--	--	--	5
NE	Phenanthrene	--	--	--	NE
2,400	Pyrene	--	--	--	2,400
0.1	cPAHs TEQ[7]	--	--	--	0.1
	Polychlorinated Biphenyls (PCBs) by EPA 8082 (mg/kg)				
NA	Aroclor 1016	--	--	--	NA
NA	Aroclor 1221	--	--	--	NA
NA	Aroclor 1232	--	--	--	NA
NA	Aroclor 1242	--	--	--	NA
NA	Aroclor 1248	--	--	--	NA
NA	Aroclor 1254	--	--	--	NA
NA	Aroclor 1260	--	--	--	NA
1.0	Total PCBs	--	--	--	1.0

Notes:

[1] Approximate exploration locations shown on Figure 3.

[2] Boring Advanced at an angle of 25 digress from vertical.

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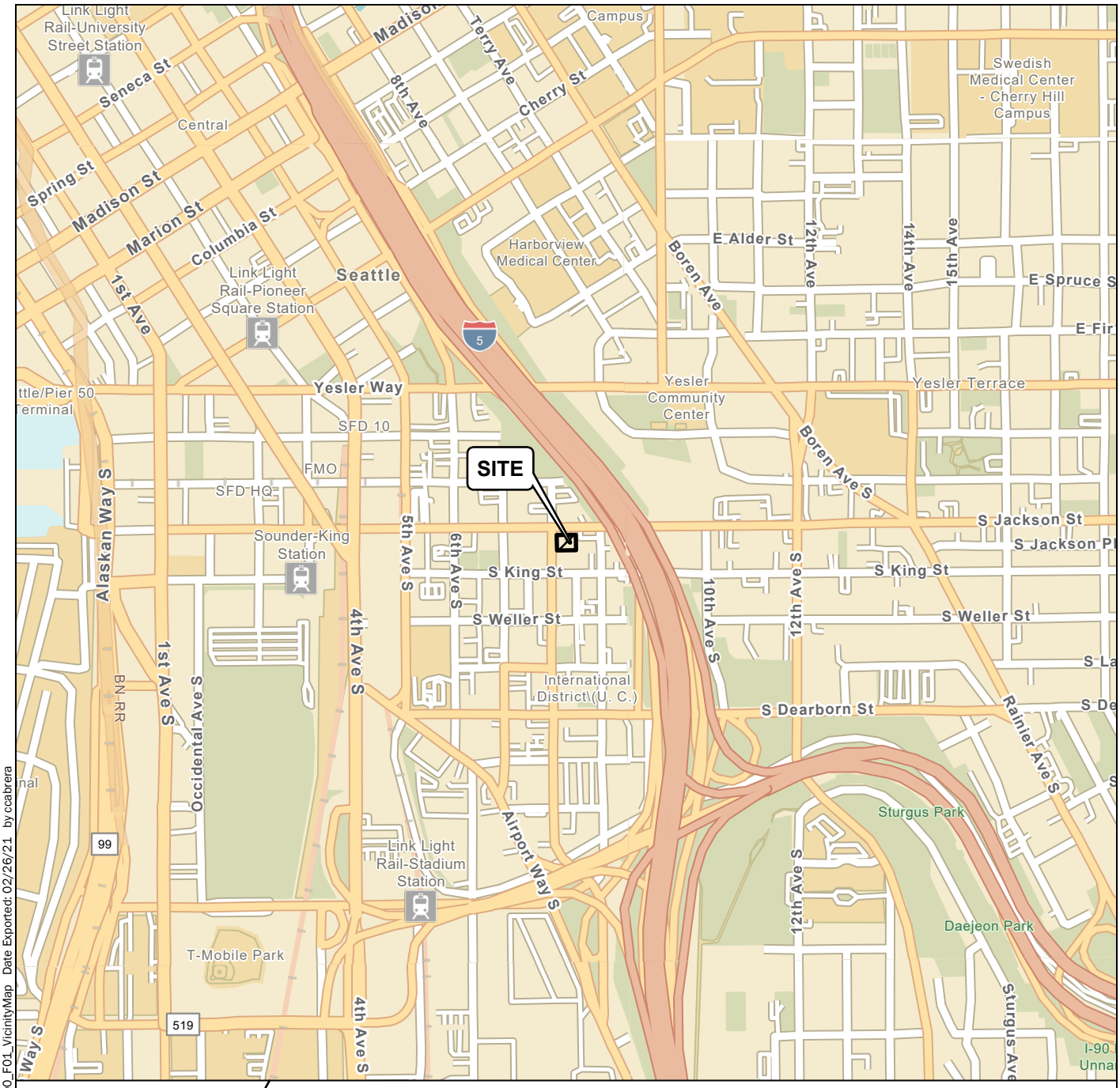
FIGURES

GeoEngineers



Notes:

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

Data Source: ESRI

Projection: NAD 1983 UTM Zone 10N

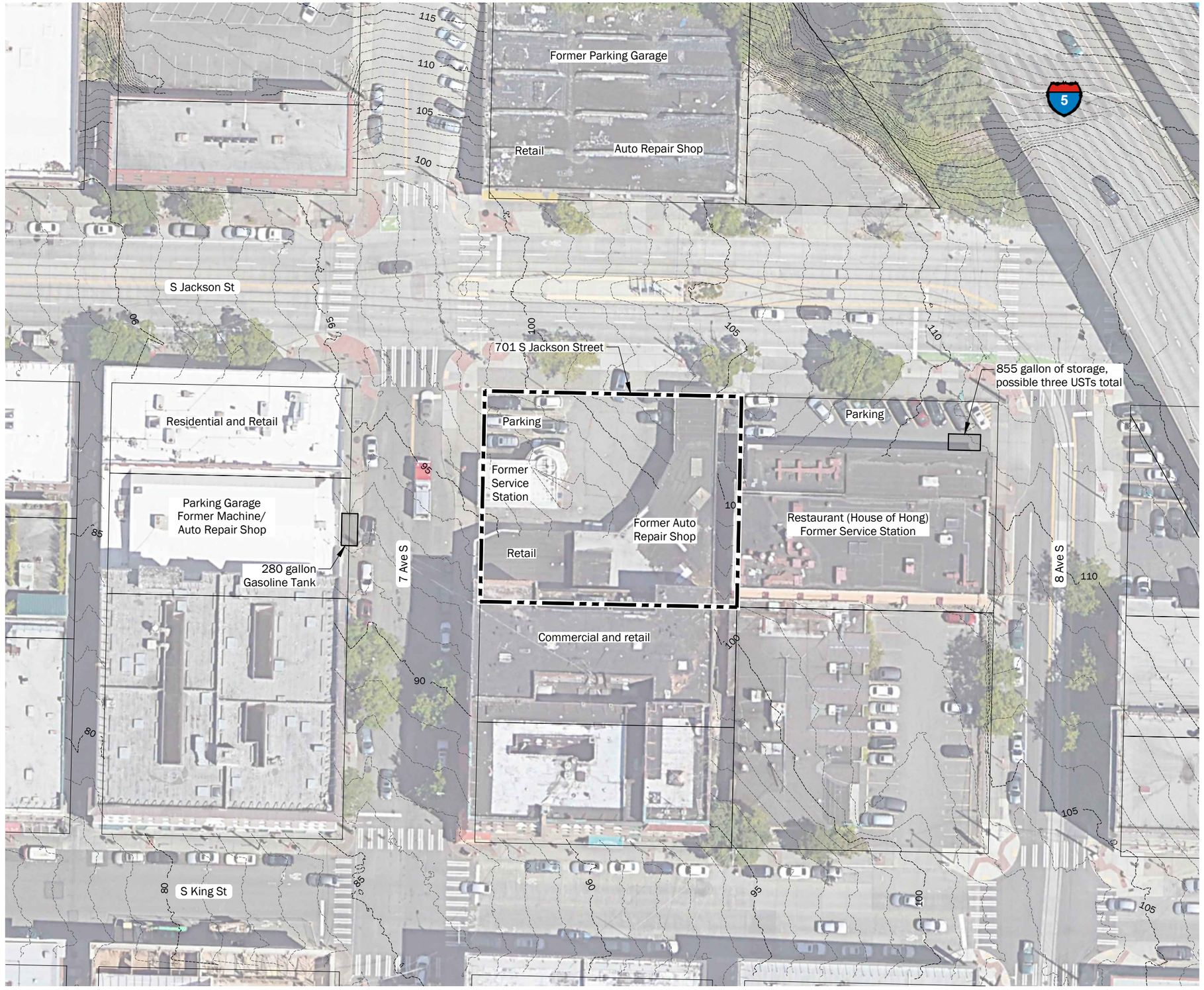
Vicinity Map

701 South Jackson Street
Seattle, Washington

GeoEngineers

Figure 1

P:\24\24504001\GIS\24504001_Project\24504001_Project.aprx\2450400100_F01_VicinityMap Date Exported: 02/26/21 by ccabrera



Legend

- Property Boundary
- Parcel Boundary
- Existing Grade Major Contour
- Existing Grade Minor Contour

Notes:

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Data Source: Aerial from Google Earth Pro dated 5/26/2018.
Lidar from Puget Sound Lidar Consortium dated 2016.

Projection: NAD83 Washington State Planes, North Zone, US Foot

N
W E
S

50 0 50
Feet

Site Plan

701 South Jackson Street
Seattle, Washington

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Figure 2

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Legend

- FB-3 — Hollow Stem Auger Boring by Farallon Consulting, 2019
- FB-4 — Direct Push Boring by Farallon Consulting, 2019
- FB-5 — Direct Push Boring by Farallon Consulting, 2019 Completed at 25 degrees to horizontal
- B-1-11 — Hollow Stem Auger Boring by Landau Associates, 2011
- B-1 — Hollow Stem Auger Boring by GEO Group Northwest, 2006
- H-1 — Hollow Stem Auger Boring by GEO Group Northwest, 1992
- A A' — Cross Section Location

Notes:

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Data Source: Aerial from Google Earth Pro dated 5/26/2018.
Lidar from Puget Sound Lidar Consortium dated 2016.

Projection: NAD83 Washington State Planes, North Zone, US Foot

N W E S

20 0 20
Feet

Environmental Investigation Sampling Locations

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Figure 3

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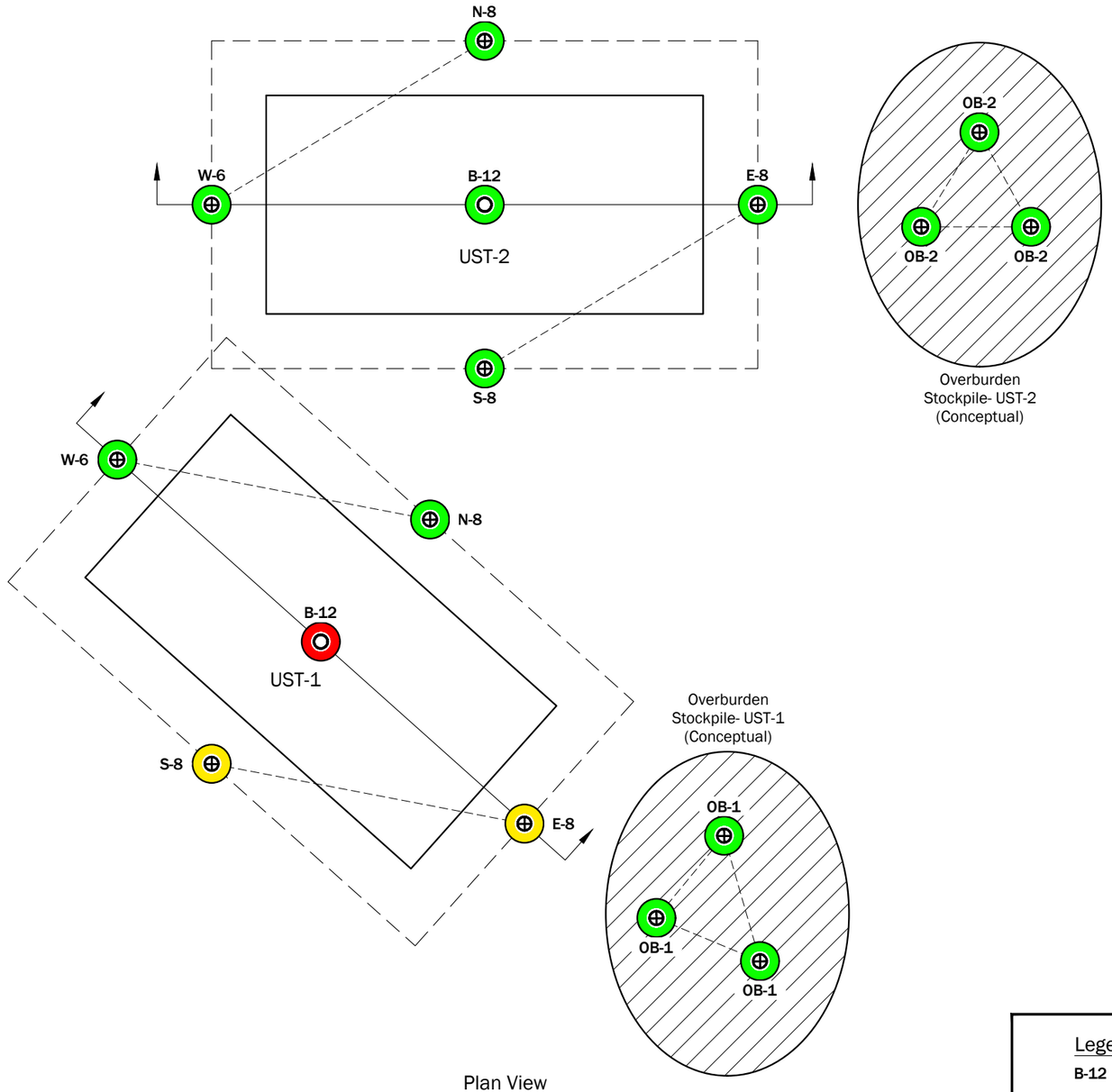
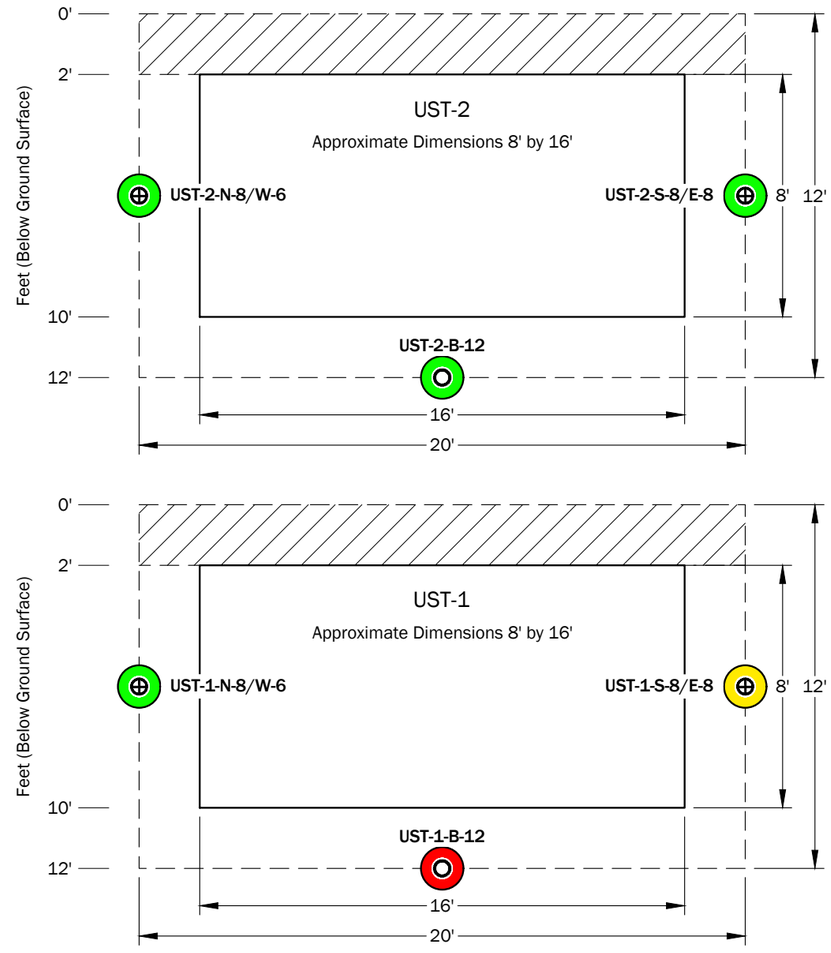
\\geoengineers.com\WAN\Projects\24\24504001\CAD\01\Draft RI\24504001_F3_Exploration Locations.dwg TAB:3 Environmental Investigation Sampling Locations Date Exported: 03/03/21 17:45 by mwoods



Plan View



Profile View

Notes:

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3. Excavation limits inferred from UST Removal and Closure Report In references section "Environmental Associates, Inc. (EAI) 2010. Underground Storage Tank Removal and Soil Testing. 7th Avenue Station, Seattle, Washington. December 16, 2010." in body of report "EAI 2020".

Legend

B-12 ○ Discrete Soil Sample by Environmental Associates, 2010

N-8 ⊕ Composite Soil Sample by Environmental Associates, 2010

Soil Chemical Analytical Results

- Gasoline-range petroleum hydrocarbons and/or BETX were detected at concentrations greater than the MTCA Cleanup Levels
- Gasoline-range petroleum hydrocarbons and/or BETX were detected at concentrations less than the MTCA Cleanup Levels
- Gasoline-range petroleum hydrocarbons and/or BETX were not detected

BETX= Benzene, Ethylbenzene, Toluene, Xylene

UST Removal and Soil Sample Results

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Figure 4

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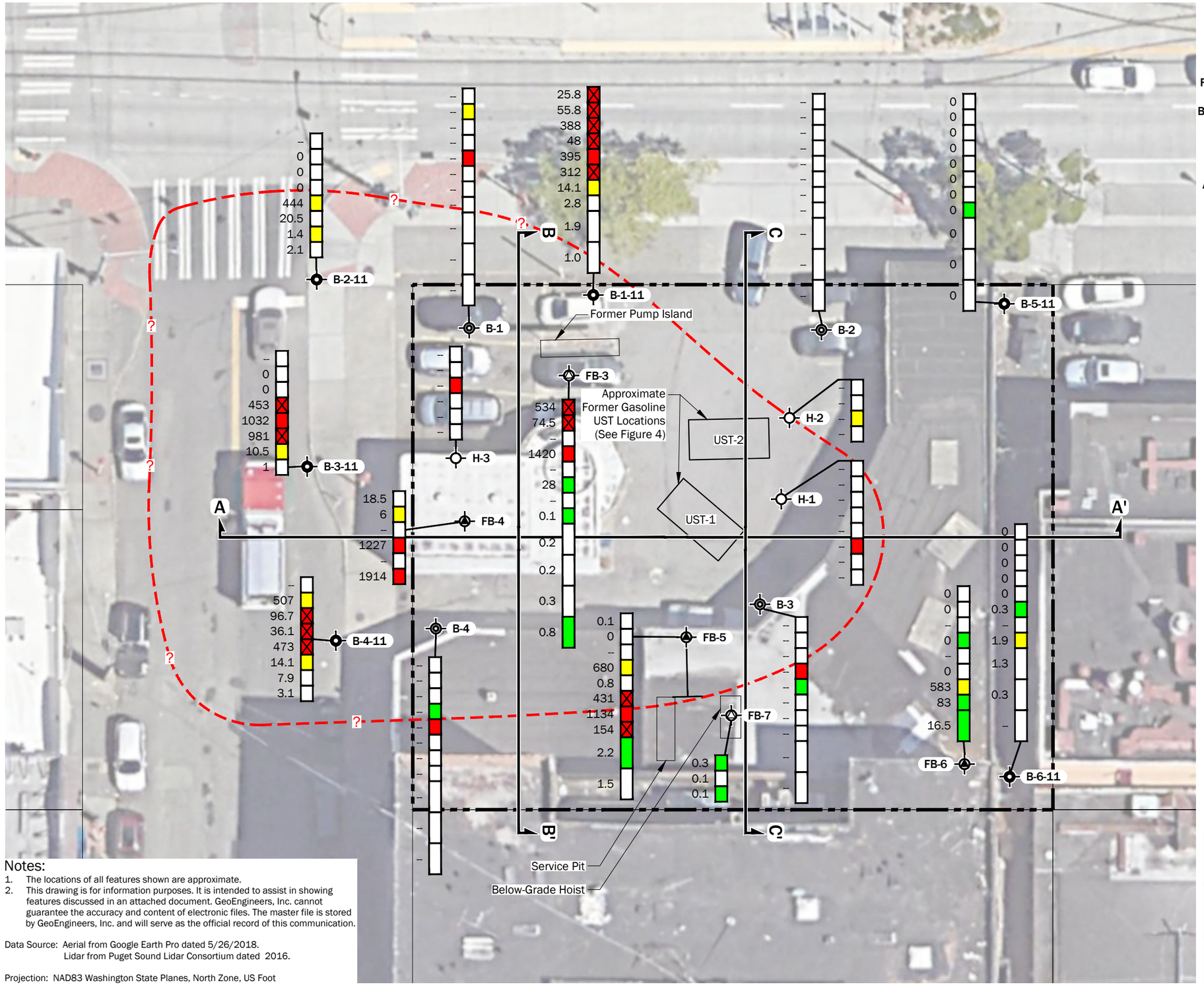

Legend

- FB-3 — Hollow Stem Auger Boring by Farallon Consulting, 2019
- FB-4 — Direct Push Boring by Farallon Consulting, 2019
- FB-5 — Direct Push Boring by Farallon Consulting, 2019 Completed at 25 degrees to horizontal
- B-1-11 — Hollow Stem Auger Boring by Landau Associates, 2011
- B-1 — Hollow Stem Auger Boring by GEO Group Northwest, 2006
- H-1 — Hollow Stem Auger Boring by GEO Group Northwest, 1992
- A A' — Cross Section Location

Depth Interval of Soil Samples (bgs)

Photoionization detector (PID) Field Screening Results in parts per million (ppm)	
25.8	0-2.5.0 Feet
55.8	2.5-5.0 Feet
388	5.0-7.5 Feet
48	7.5-10.0 Feet
395	10.0-12.5 Feet
312	12.5-15.0 Feet
14.1	15.0-17.5 Feet
2.8	17.5-20 Feet
1.9	20-25 Feet
1.0	25-30 Feet
0.1	30-35 Feet
0.1	35-40 Feet

Gasoline-Range Total Petroleum Soil Chemical Analytical Results (mg/kg)

- Not Tested
- Not Detected
- Detected Less than MTCA Method A/B
- Detected Greater than MTCA Method A/B Cleanup Levels
- Elevated Field Screening Indicative of Petroleum Contamination
- Estimated Lateral Extent of Soil with Contaminant Concentrations Greater Than the MTCA Method A/B Cleanup Levels.

N W E S

20 0 20
Feet

Notes:
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Data Source: Aerial from Google Earth Pro dated 5/26/2018.
Lidar from Puget Sound Lidar Consortium dated 2016.

Projection: NAD83 Washington State Planes, North Zone, US Foot

Soil Analytical Results - Gasoline Petroleum

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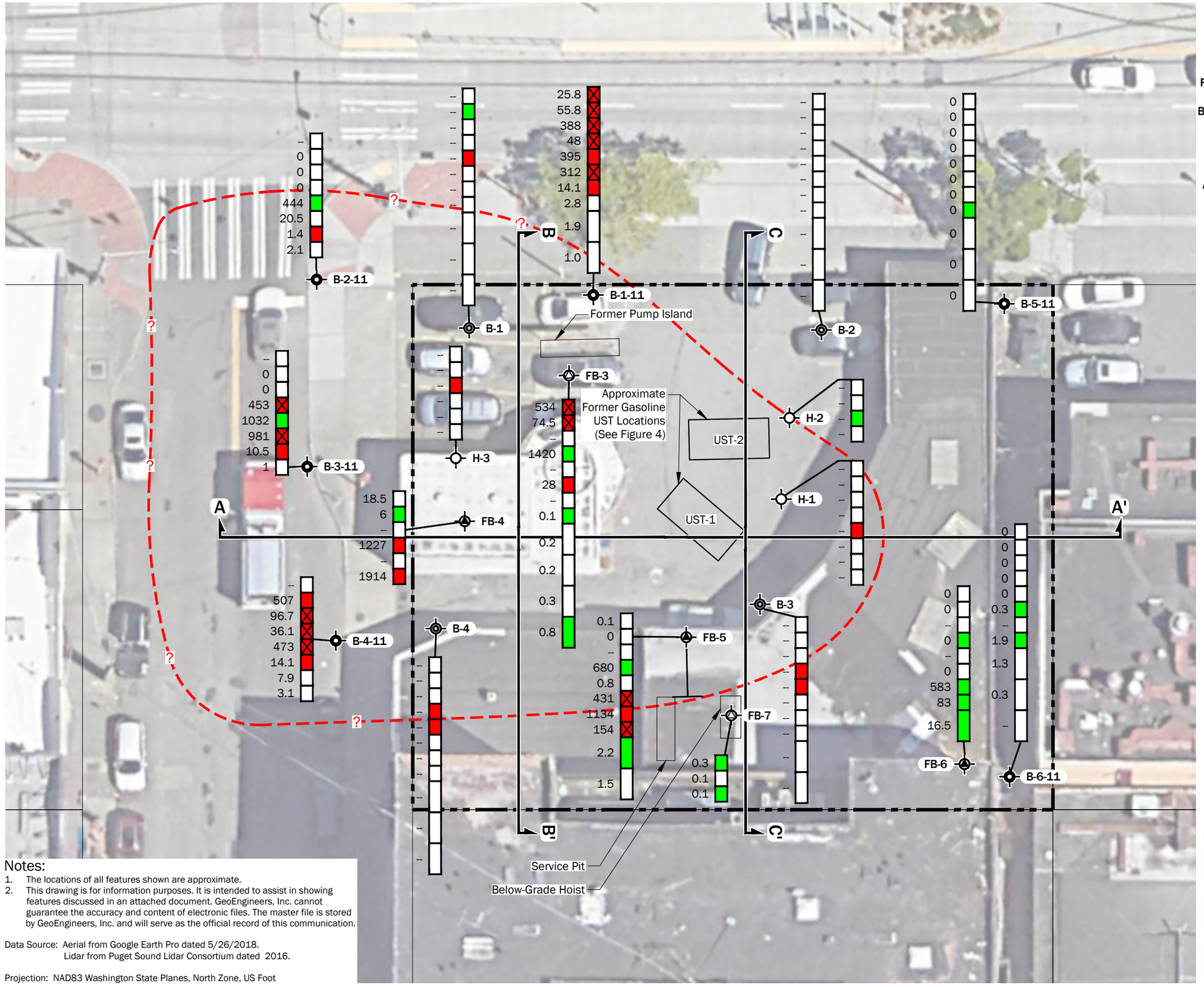
\\geoengineers.com\WAN\Projects\24\24504001\CAD\01\Draft RI\24504001_F5_Soil Analytical Results - Gasoline Petroleum.dwg TAB:5 Soil Analytical Results - Gasoline Petroleum Date Exported: 03/17/21 - 13:39 by mwoods



Legend

- FB-3 — Hollow Stem Auger Boring by Farallon Consulting, 2019
- FB-4 — Direct Push Boring by Farallon Consulting, 2019
- FB-5 — Direct Push Boring by Farallon Consulting, 2019 Completed at 25 degrees to horizontal
- B-1-11 — Hollow Stem Auger Boring by Landau Associates, 2011
- B-1 — Hollow Stem Auger Boring by GEO Group Northwest, 2006
- H-1 — Hollow Stem Auger Boring by GEO Group Northwest, 1992
- A A' — Cross Section Location

Depth Interval of Soil Samples (bgs)

25.8	0-2.5.0 Feet
55.8	2.5-5.0 Feet
388	5.0-7.5 Feet
48	7.5-10.0 Feet
395	10.0-12.5 Feet
312	12.5-15.0 Feet
14.1	15.0-17.5 Feet
2.8	17.5-20 Feet
1.9	20-25 Feet
1.0	25-30 Feet
0.1	30-35 Feet
0.1	35-40 Feet

Photoionization detector (PID) Field Screening Results in parts per million (ppm)

Benzene Soil Chemical Analytical Results (mg/kg)

- Not Tested
- Not Detected
- Detected Less than MTCA Method A/B
- Detected Greater than MTCA Method A/B Cleanup Levels
- Elevated Field Screening Indicative of Petroleum Contamination
- Estimated Lateral Extent of Soil with Contaminant Concentrations Greater Than the MTCA Method A/B Cleanup Levels.

N W E S

20 0 20
Feet

Notes:

1. The locations of all features shown are approximate.
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Data Source: Aerial from Google Earth Pro dated 5/26/2018.
Lidar from Puget Sound Lidar Consortium dated 2016.

Projection: NAD83 Washington State Planes, North Zone, US Foot

Soil Analytical Results - Benzene

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Figure 6

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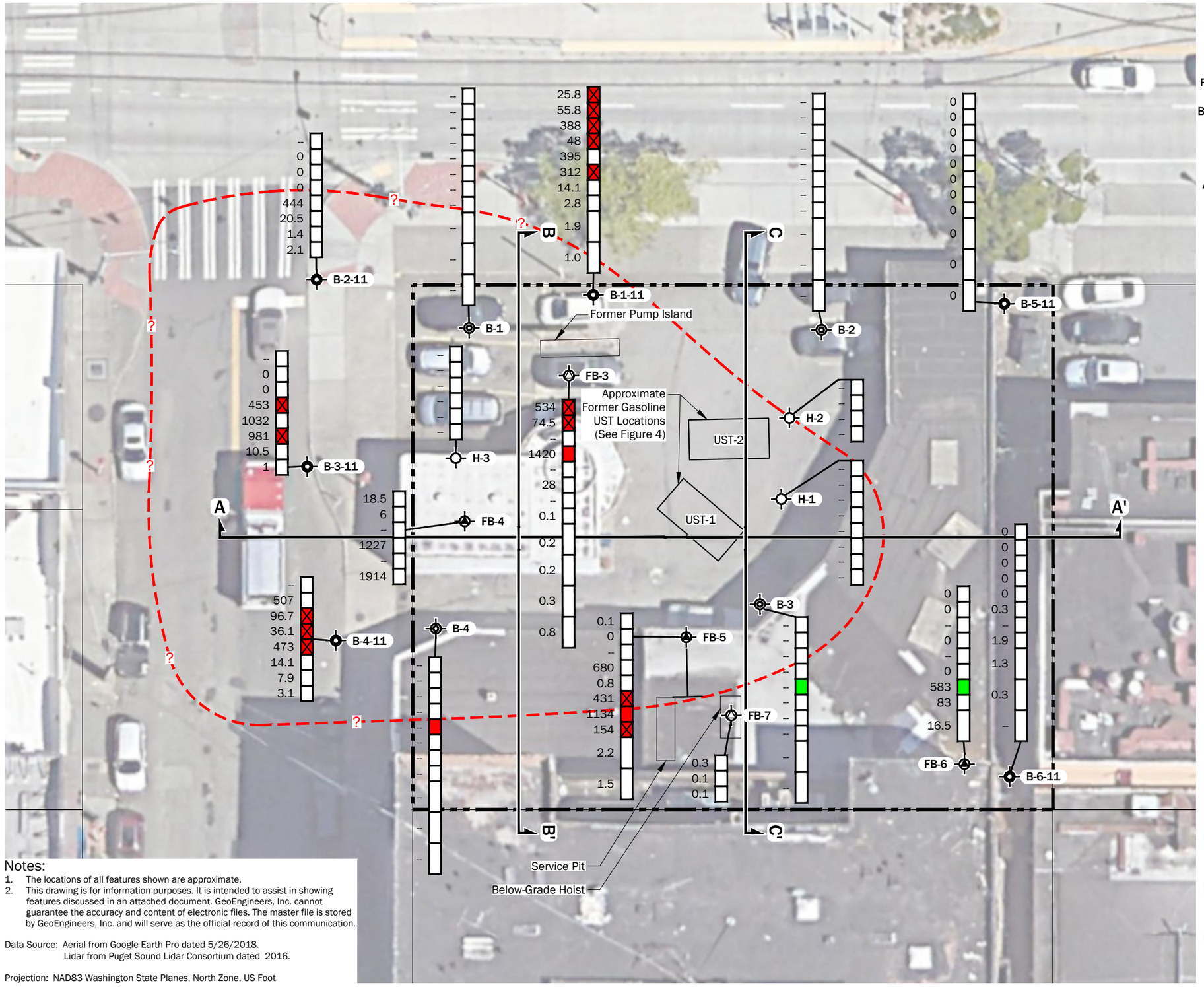
\\geoengineers.com\WAN\Projects\24\24504001\CAD\01\Draft RI\24504001_F6_Soil Analytical Results - Benzene.dwg TAB:10 Soil Analytical Results - Benzene Date Exported: 03/16/21 - 16:23 by mwoods



Legend

- FB-3 — Hollow Stem Auger Boring by Farallon Consulting, 2019
- FB-4 — Direct Push Boring by Farallon Consulting, 2019
- FB-5 — Direct Push Boring by Farallon Consulting, 2019 Completed at 25 degrees to horizontal
- B-1-11 — Hollow Stem Auger Boring by Landau Associates, 2011
- B-1 — Hollow Stem Auger Boring by GEO Group Northwest, 2006
- H-1 — Hollow Stem Auger Boring by GEO Group Northwest, 1992
- A A' — Cross Section Location

Depth Interval of Soil Samples (bgs)

25.8	0-2.5.0 Feet
55.8	2.5-5.0 Feet
388	5.0-7.5 Feet
48	7.5-10.0 Feet
395	10.0-12.5 Feet
312	12.5-15.0 Feet
14.1	15.0-17.5 Feet
2.8	17.5-20 Feet
1.9	20-25 Feet
1.0	25-30 Feet
0.1	30-35 Feet
0.1	35-40 Feet

Photoionization detector (PID) Field Screening Results in parts per million (ppm)

Naphthalene Soil Chemical Analytical Results (mg/kg)

- Not Tested
- Not Detected
- Detected Less than MTCA Method A/B
- Detected Greater than MTCA Method A/B Cleanup Levels
- Elevated Field Screening Indicative of Petroleum Contamination
- Estimated Lateral Extent of Soil with Contaminant Concentrations Greater Than the MTCA Method A/B Cleanup Levels.

N W E S

20 0 20
Feet

Notes:

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Data Source: Aerial from Google Earth Pro dated 5/26/2018.
Lidar from Puget Sound Lidar Consortium dated 2016.

Projection: NAD83 Washington State Planes, North Zone, US Foot

Soil Analytical Results - Naphthalene

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Figure 7

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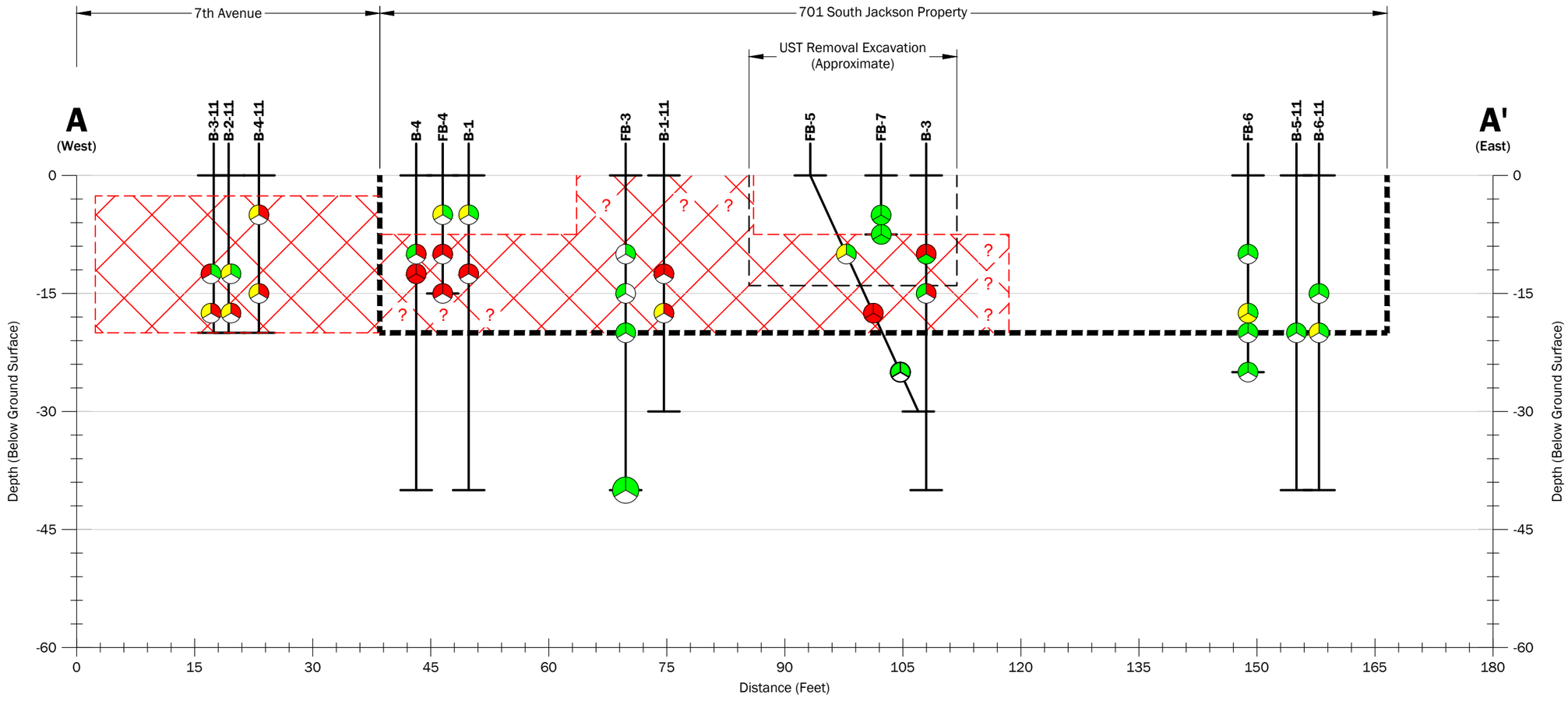

Legend

Soil Chemical Analytical Results (mg/kg)

Gasoline — Benzene — Naphthalene

Contaminants of Concern Not Detected or Detected at Concentration similar to Background Levels

Contaminants of Concern Detected at Concentrations Less Than MTCA Method A/B Cleanup Levels

Contaminants of Concern Detected at Concentrations Greater Than the MTCA Method A/B Cleanup Levels

Approximate Extent of Contaminated Soil Greater than MTCA Cleanup Levels

Planned Development Extent

15 0 15
Horizontal Scale in Feet

15 0 15
Vertical Scale in Feet
Vertical Exaggeration: 1X

Notes:

1. The subsurface conditions shown are based on interpolation between widely spaced explorations and should be considered approximate; actual subsurface conditions may vary from those shown.
2. This figure is for informational purposes only. It is intended to assist in the identification of features discussed in a related document. Data were compiled from sources as listed in this figure. The data sources do not guarantee these data are accurate or complete. There may have been updates to the data since the publication of this figure. This figure is a copy of a master document. The hard copy is stored by GeoEngineers, Inc. and will serve as the official document of record.

Cross Section A-A'

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Figure 8

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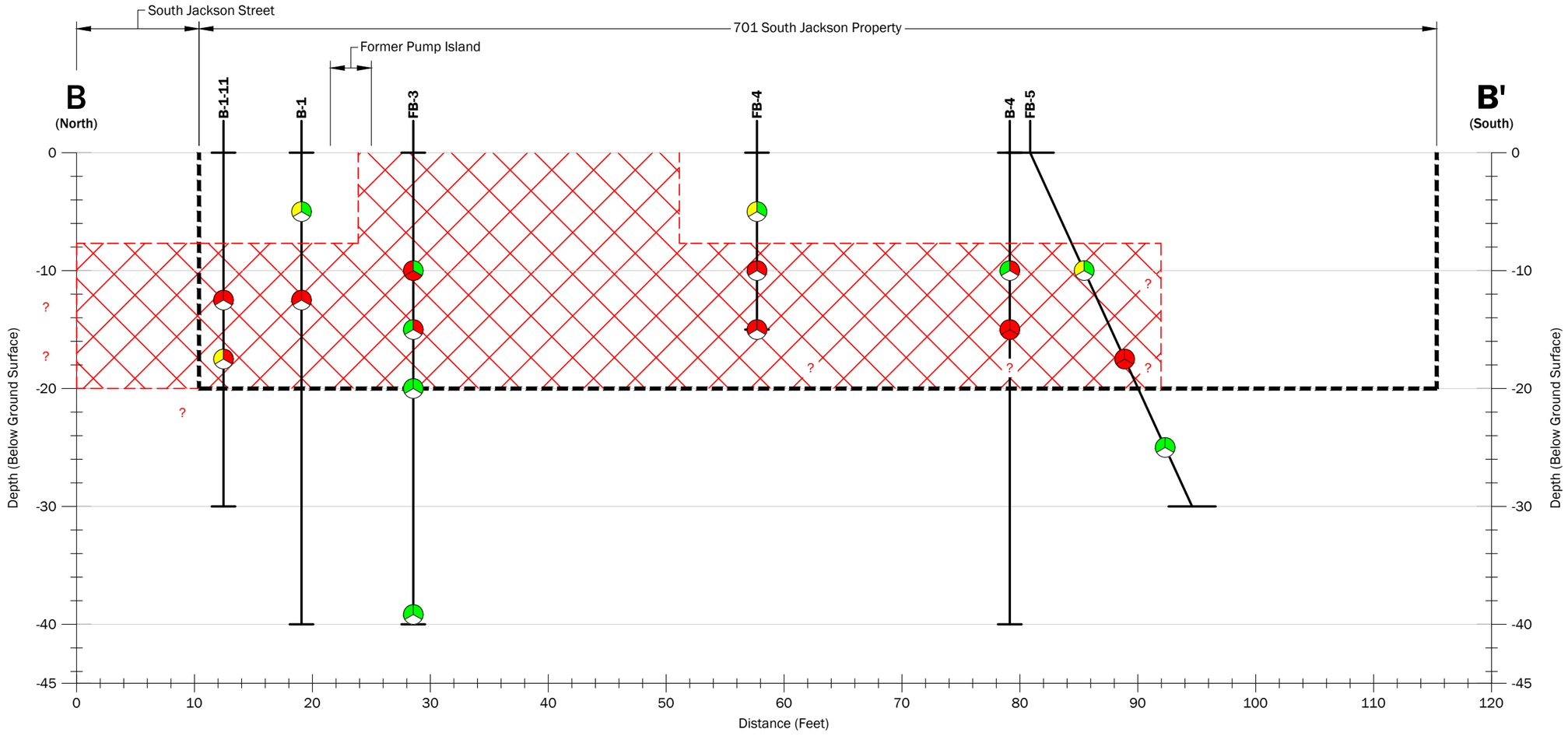

Legend

Soil Chemical Analytical Results (mg/kg)

Gasoline — Benzene

Naphthalene

Contaminants of Concern Not Detected or Detected at Concentration similar to Background Levels

Contaminants of Concern Detected at Concentrations Less Than MTCA Method A/B Cleanup Levels

Contaminants of Concern Detected at Concentrations Greater Than the MTCA Method A/B Cleanup Levels

Approximate Extent of Contaminated Soil Greater than MTCA Cleanup Levels

Planned Development Extent

10 0 10
Horizontal Scale in Feet

10 0 10
Vertical Scale in Feet
Vertical Exaggeration: 1X

Notes:

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2. This figure is for informational purposes only. It is intended to assist in the identification of features discussed in a related document. Data were compiled from sources as listed in this figure. The data sources do not guarantee these data are accurate or complete. There may have been updates to the data since the publication of this figure. This figure is a copy of a master document. The hard copy is stored by GeoEngineers, Inc. and will serve as the official document of record.

Cross Section B-B'

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Figure 9

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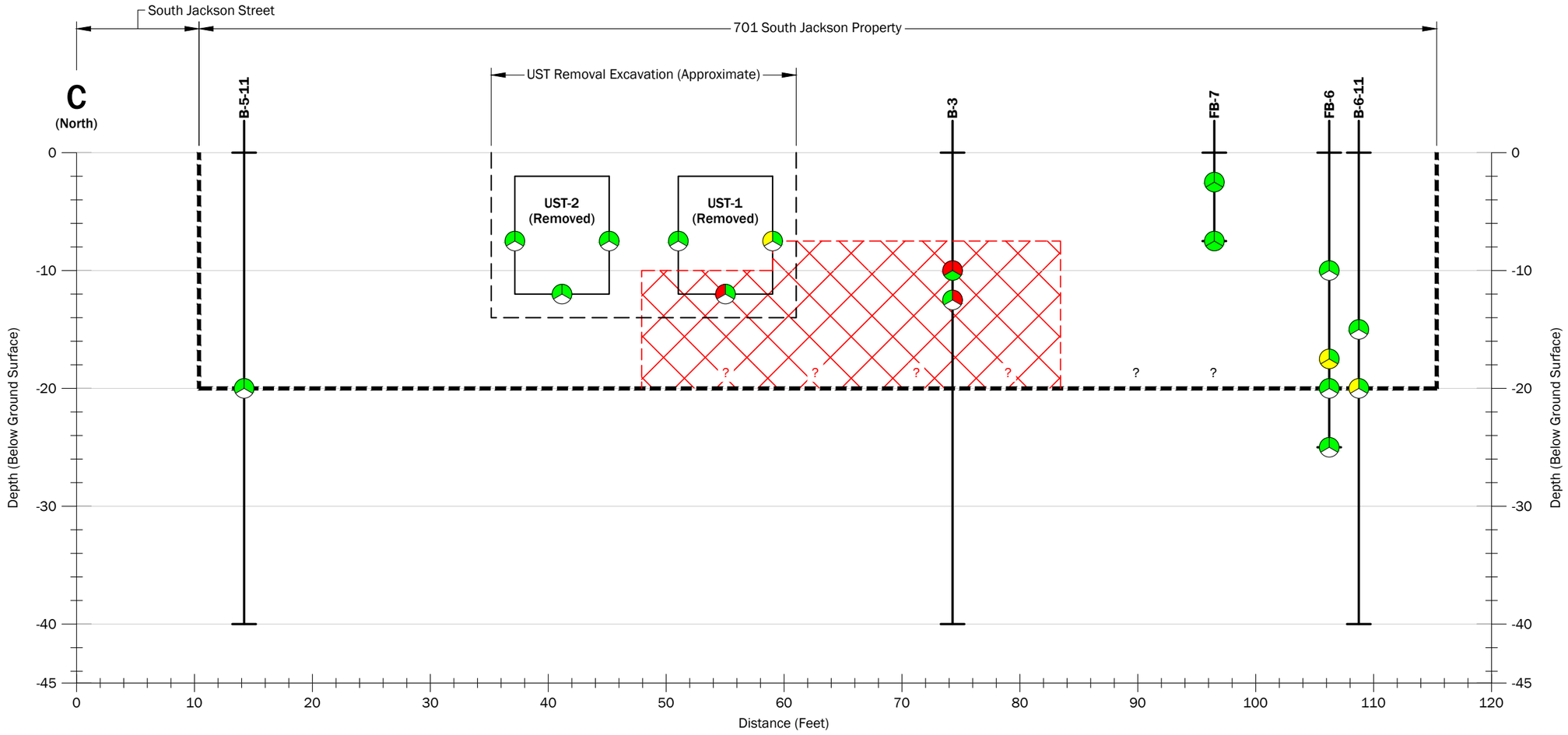

Legend

Soil Chemical Analytical Results (mg/kg)

Gasoline — Benzene

Naphthalene

Contaminants of Concern Not Detected or Detected at Concentration similar to Background Levels

Contaminants of Concern Detected at Concentrations Less Than MTCA Method A/B Cleanup Levels

Contaminants of Concern Detected at Concentrations Greater Than the MTCA Method A/B Cleanup Levels

Approximate Extent of Contaminated Soil Greater than MTCA Cleanup Levels

Planned Development Extent

10 0 10
Horizontal Scale in Feet

10 0 10
Vertical Scale in Feet
Vertical Exaggeration: 1X

Notes:

1. The subsurface conditions shown are based on interpolation between widely spaced explorations and should be considered approximate; actual subsurface conditions may vary from those shown.
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Cross Section C-C'

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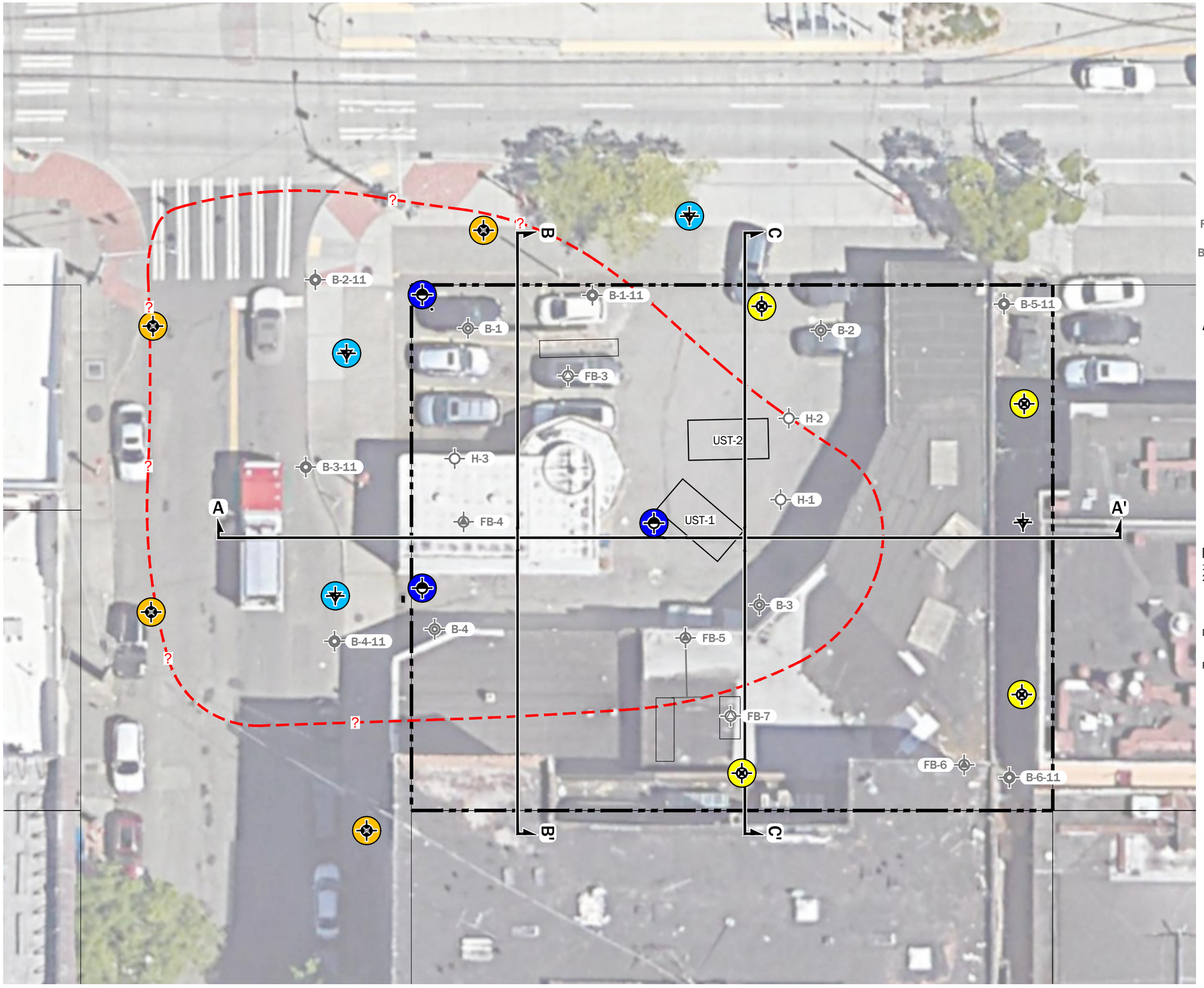
Figure 10



Legend

- Proposed On-Site Direct-Push Boring
- Proposed Hollow-Stem Auger Boring Boring
- Proposed Off-Site Direct-Push Boring
- Proposed Soil Vapor Boring
- FB-3 — Hollow Stem Auger Boring by Farallon Consulting, 2019
- FB-4 — Direct Push Boring by Farallon Consulting, 2019
- FB-5 — Direct Push Boring by Farallon Consulting, 2019 Completed at 25 degrees to horizontal
- B-1-11 — Hollow Stem Auger Boring by Landau Associates, 2011
- B-1 — Hollow Stem Auger Boring by GEO Group Northwest, 2006
- H-1 — Hollow Stem Auger Boring by GEO Group Northwest, 1992
- A A' — Cross Section Location
- Approximate Lateral Extent of Greatere than MTCA Cleanup Levels Contaminated Soil Detected

Notes:

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Lidar from Puget Sound Lidar Consortium dated 2016.

Projection: NAD83 Washington State Planes, North Zone, US Foot

N W E S

20 0 20
Feet

Proposed Exploration Locations

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Figure 11

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\\geoengineers.com\WAN Projects\24\24504001\CAD\01\Draft RI\24504001_F11_Proposed Exploration Locations.dwg TAB:9 Proposed Exploration Locations Date Exported: 03/16/21 16:25 by mwoods

APPENDICES

GeoEngineers

APPENDIX A
Boring Logs

BORING NO. 1

Logged By: DH Date Drilled: 8/3/92 Surface Elev. N/A

Depth ft.	USCS	Soil Description	Sample Type	Sample No.	SPT(N) Blows per ft.	Water Content %	Other Test
		Asphalt and gravel base					
	CL	Gray CLAY, very stiff, moist (FILL)	I	1	21		
5							
	SM	Gray silty fine SAND, dense, gasoline odor (FILL)	I	2	41		CA
10		Interlayered with clay Gasoline odor	I	3	46		CA
15							
	CL	Gray silty CLAY, very stiff, no gasoline odor.	I	4	34		
20		End of Boring @ 17.5 feet					
25							

NOTES:
USCS = Unified Soil Classification System, See Plate 6
CA = Chemical Analysis
Test Results:

	Sample @ 8.5 Ft	Sample @12.5 Ft
WTPH-G (ppm)	2.2	6,000
Benzene (ppm)	ND	4
Toluene (ppm)	ND	55
Ethyl-Benzene (ppm)	ND	66
Xylene (ppm)	0.1	330
Lead (ppm)	ND	1.5

ND=Not Detectable

30 35 40

LEGEND: I 2" O.D. Split-Spoon Sample; II C 3" O.D. California-Sampler Sample; 3" O.D. Shelby-Tube Sample

GROUNDWATER OBSERVATION WELL: seal; measured water level on date indicated; well tip (screen)

Geo Group Northwest, Inc.
Geotechnical Engineers, Geologists & Environmental Scientists
13240 NE 20th Street, Suite 12 Bellevue, WA 98005
Phone (206) 649-8757 Fax (206) 649-8758

BORING LOG
701 SOUTH JACKSON STREET
SEATTLE, WASHINGTON

JOB NO. E-0260 | DATE 9/16/92 | PLATE 3

BORING NO. 2

Logged By: DH Date Drilled: 8/3/92 Surface Elev. N/A

Depth ft.	USCS	Soil Description	Sample Type	Sample No.	SPT(N) Blows per ft.	Water Content %	Other Test
		Asphalt and gravel base					
	CL	Gray CLAY, stiff, moist, no gasoline odor (FILL)	I	1	12		
5	CL	Gray CLAY with red brick debris and gravel, no gasoline odor (FILL)					
	SM	Gray silty fine SAND, very dense, no gasoline odor (FILL)	I	2	51		CA
10		GRAVEL with fine sand, no gasoline odor (FILL)	I	3	75 per 3"		
		End of Boring @ 10 feet					
15							
20							
25							
30							
35							
40							

NOTES:
No hydrocarbon odor or evidence of hydrocarbon contamination found in Boring
USCS = Unified Soil Classification System, See Plate 6
CA = Chemical Analysis
Test Results:

	Sample @ 7.5 Ft
WTPH-G (ppm)	1.6
Benzene (ppm)	ND
Toluene (ppm)	ND
Ethyl-Benzene (ppm)	ND
Xylene (ppm)	ND
Lead (ppm)	2.2

ND=Not Detectable

LEGEND: I 2" O.D. Split-Spoon Sample; I 3" O.D. Shelby-Tube Sample; C 3" O.D. California-Sampler Sample

GROUNDWATER OBSERVATION WELL: seal; measured water level on date indicated; well tip (screen)

Geo Group Northwest, Inc.
Geotechnical Engineers, Geologists & Environmental Scientists
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Phone (206) 649-8757 Fax (206) 649-8758

BORING LOG
701 SOUTH JACKSON STREET
SEATTLE, WASHINGTON

JOB NO. E-0260 | DATE 8/3/92 | PLATE 4

(Form: BORELOG.XLS)

BORING NO. 3

Logged By: DH Date Drilled: 8/3/92 Surface Elev. N/A

Depth ft.	USCS	Soil Description	Sample Type	Sample No.	SPT(N) Blows per ft.	Water Content %	Other Test
		Asphalt and gravel base					
	CL	Gray CLAY with gravel, medium soft, moist, unknown odor (FILL)	I	1	5		
5	SM	Gray silty fine SAND, dense, stinks	I	2	33		CA
10		unkown odor	I	3	34		
			I	4	50		
15		End of Boring @ 12.5 feet					
20							
25							
30							
35							
40							

NOTES:
USCS = Unified Soil Classification System, See Plate 6
CA = Chemical Analysis
Test Results:

	Sample @ 7.5 Ft
WTPH-G (ppm)	1,400
Benzene (ppm)	0.31
Toluene (ppm)	1.9
Ethyl-Benzene (ppm)	6.2
Xylene (ppm)	16
Lead (ppm)	3.8
Heavier Oil (ppm)	1,800

ND=Not Detectable

LEGEND: I 2" O.D. Split-Spoon Sample; II C 3" O.D. California-Sampler Sample; II 3" O.D. Shelby-Tube Sample

GROUNDWATER OBSERVATION WELL: seal; measured water level on date indicated; well tip (screen)

Geo Group Northwest, Inc.
Geotechnical Engineers, Geologists & Environmental Scientists
13240 NE 20th Street, Suite 12, Bellevue, WA 98005
Phone (206) 649-8757 Fax (206) 649-8758

BORING LOG
701 SOUTH JACKSON STREET
SEATTLE, WASHINGTON

JOB NO. E-0260 | DATE 8/3/92 | PLATE 5

MODIFIED UNIFIED CLASSIFICATION SYSTEM FOR SOILS

MAJOR DIVISION			GROUP SYMBOL	GRAPH SYMBOL	COLOR CODE	TYPICAL DESCRIPTION	LABORATORY CLASSIFICATION CRITERIA
COARSE-GRAINED SOILS (MORE THAN HALF BY WEIGHT LARGER THAN 200 SIEVE)	GRAVELS (MORE THAN HALF COARSE GRAINS LARGER THAN NO 4 SIEVE)	CLEAN GRAVELS (LITTLE OR NO FINES)	GW		RED	WELL GRADED GRAVELS, LITTLE OR NO FINES	$C_U = \frac{D_{60}}{D_{10}} > 4$ $C_C = \frac{(D_{30})^2}{D_{10} \times D_{60}} = 1$ to 3
			GP		RED	POORLY GRADED GRAVELS, AND GRAVEL-SAND MIXTURES, LITTLE OR NO FINES	NOT MEETING ABOVE REQUIREMENTS
		DIRTY GRAVELS (WITH SOME FINES)	GM		YELLOW	SILTY GRAVELS, GRAVEL-SAND-SILT MIXTURES	CONTENT OF FINES EXCEEDS 12% — ATTERBERG LIMITS BELOW "A" LINE OR P.I. LESS THAN 4
			GC		YELLOW	CLAYEY GRAVELS, GRAVEL-SAND-CLAY MIXTURES	CONTENT OF FINES EXCEEDS 12% — ATTERBERG LIMITS ABOVE "A" LINE P.I. MORE THAN 7
	SANDS (MORE THAN HALF FINE GRAINS SMALLER THAN NO 4 SIEVE)	CLEAN SANDS (LITTLE OR NO FINES)	SW		RED	WELL GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES	$C_U = \frac{D_{60}}{D_{10}} > 6$ $C_C = \frac{(D_{30})^2}{D_{10} \times D_{60}} = 1$ to 3
			SP		RED	POORLY GRADED SANDS, LITTLE OR NO FINES	NOT MEETING ABOVE REQUIREMENTS
		DIRTY SANDS (WITH SOME FINES)	SM		YELLOW	SILTY SANDS, SAND-SILT MIXTURES	CONTENT OF FINES EXCEEDS 12% — ATTERBERG LIMITS BELOW "A" LINE P.I. LESS THAN 4
			SC		YELLOW	CLAYEY SANDS, SAND-CLAY MIXTURES	CONTENT OF FINES EXCEEDS 12% — ATTERBERG LIMITS ABOVE "A" LINE P.I. MORE THAN 7
FINE-GRAINED SOILS (MORE THAN HALF BY WEIGHT PASSES 200 SIEVE)	SILTS (BELOW A LINE NEGLIGIBLE ORGANIC CONTENT)	$W_L < 50\%$	ML		GREEN	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY SANDS OF SLIGHT PLASTICITY	CLASSIFICATION IS BASED UPON PLASTICITY CHART (see below)
		$W_L > 50\%$	MH		BLUE	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS, FINE SANDY OR SILTY SOILS	
	CLAYS (ABOVE A LINE ON PLASTICITY CHART NEGLIGIBLE ORGANIC CONTENT)	$W_L < 30\%$	CL		GREEN	INORGANIC CLAYS OF LOW PLASTICITY, GRAVELLY, SANDY, OR SILTY CLAYS, LEAN CLAYS	
		$30\% < W_L < 50\%$	CI		GREEN-BLUE	INORGANIC CLAYS OF MEDIUM PLASTICITY, SILTY CLAYS	
		$W_L > 50\%$	CH		BLUE	INORGANIC CLAYS OF HIGH PLASTICITY FAT CLAYS	
	ORGANIC SILTS & CLAYS (BELOW A LINE ON CHART)	$W_L < 50\%$	OL		GREEN	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY	WHENEVER THE NATURE OF THE FINE CONTENT HAS NOT BEEN DETERMINED IT IS DESIGNATED BY THE LETTER "F", E.G. SF IS A MIXTURE OF SAND WITH SILT OR CLAY
		$W_L > 50\%$	OH		BLUE	ORGANIC CLAYS OF HIGH PLASTICITY	
HIGHLY ORGANIC SOILS			Pt		ORANGE	PEAT AND OTHER HIGHLY ORGANIC SOILS	STRONG COLOR OR ODOR AND OFTEN FIBROUS TEXTURE

SPECIAL SYMBOLS

BEDROCK (Undifferentiated)

VOLCANIC ASH

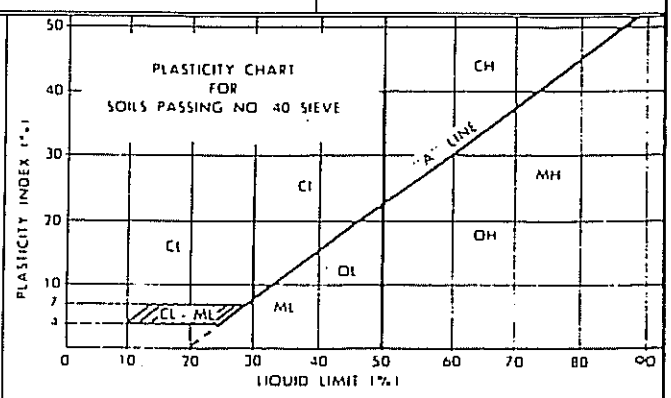
SOIL COMPONENTS

FRACTION	U S STANDARD SIEVE SIZE		DEFINING RANGES OF PERCENTAGE BY WEIGHT OF MINOR COMPONENTS	
	PASSING	RETAINED	PERCENT	DESCRIPTOR
GRAVEL			50 - 35	and
coarse	76 mm	19 mm		
fine	19 mm	No 4		
SAND			35 - 20	some
coarse	4.75 mm	2.00 mm		
medium	2.00 mm	425 μm	20 - 10	little
fine	425 μm	75 μm		
SILT (non plastic) or CLAY (plastic)	75 μm		10 - 1	trace

OVERSIZE MATERIAL

Rounded or subrounded
COBBLES 76 mm to 203 mm
BOULDERS > 203 mm

Not rounded
ROCK FRAGMENTS > 76 mm
ROCKS > 0·76 cubic metre in volume



1 ALL SIEVE SIZES MENTIONED ON THIS CHART ARE U.S. STANDARD, A S T M E 11

2 BOUNDARY CLASSIFICATIONS POSSESSING CHARACTERISTICS OF TWO GROUPS ARE GIVEN COMBINED GROUP SYMBOLS, E.G. GW-GC IS A WELL GRADED GRAVEL SAND MIXTURE WITH CLAY BINDER BETWEEN 5% AND 12%

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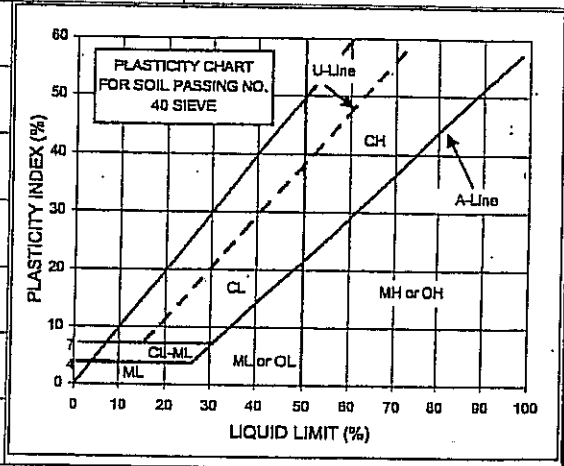
PLATE 6

LEGEND FOR SOIL CLASSIFICATION AND PENETRATION TEST DATA

UNIFIED SOIL CLASSIFICATION SYSTEM (USCS)

MAJOR DIVISION			GROUP SYMBOL	TYPICAL DESCRIPTION	LABORATORY CLASSIFICATION CRITERIA	
COARSE-GRAINED SOILS More Than Half by Weight Larger Than No. 200 Sieve	GRAVELS (More Than Half Coarse Fraction is Larger Than No. 4 Sieve)	CLEAN GRAVELS (little or no fines)	GW	WELL GRADED GRAVELS, GRAVEL-SAND MIXTURE, LITTLE OR NO FINES	CONTENT OF FINES BELOW 5%	Cu = (D60 / D10) greater than 4 Cc = $(D30)^2$ / (D10 * D60) between 1 and 3
			GP	POORLY GRADED GRAVELS, AND GRAVEL-SAND MIXTURES LITTLE OR NO FINES		CLEAN GRAVELS NOT MEETING ABOVE REQUIREMENTS
		DIRTY GRAVELS (with some fines)	GM	SILTY GRAVELS, GRAVEL-SAND-SILT MIXTURES	CONTENT OF FINES EXCEEDS 12%	GM: ATTERBERG LIMITS BELOW "A" LINE, or P.I. LESS THAN 4
			GC	CLAYEY GRAVELS, GRAVEL-SAND-CLAY MIXTURES		GC: ATTERBERG LIMITS ABOVE "A" LINE, or P.I. MORE THAN 7
	SANDS (More Than Half Coarse Fraction is Smaller Than No. 4 Sieve)	CLEAN SANDS (little or no fines)	SW	WELL GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES	CONTENT OF FINES BELOW 5%	Cu = (D60 / D10) greater than 6 Cc = $(D30)^2$ / (D10 * D60) between 1 and 3
			SP	POORLY GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES		CLEAN SANDS NOT MEETING ABOVE REQUIREMENTS
		DIRTY SANDS (with some fines)	SM	SILTY SANDS, SAND-SILT MIXTURES	CONTENT OF FINES EXCEEDS 12%	ATTERBERG LIMITS BELOW "A" LINE with P.I. LESS THAN 4
			SC	CLAYEY SANDS, SAND-CLAY MIXTURES		ATTERBERG LIMITS ABOVE "A" LINE with P.I. MORE THAN 7
FINE-GRAINED SOILS Less Than Half by Weight Larger Than No. 200 Sieve	SILTS (Below A-Line on Plasticity Chart, Negligible Organics)	Liquid Limit < 50%	ML	INORGANIC SILTS, ROCK FLOUR, SANDY SILTS OF SLIGHT PLASTICITY		
		Liquid Limit > 50%	MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS, FINE SANDY OR SILTY SOIL		
	CLAYS (Above A-Line on Plasticity Chart, Negligible Organics)	Liquid Limit < 50%	CL	INORGANIC CLAYS OF LOW PLASTICITY, GRAVELLY, SANDY, OR SILTY CLAYS, CLEAN CLAYS		
		Liquid Limit > 50%	CH	INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS		
	ORGANIC SILTS & CLAYS (Below A-Line on Plasticity Chart)	Liquid Limit < 50%	OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY		
		Liquid Limit > 50%	OH	ORGANIC CLAYS OF HIGH PLASTICITY		
HIGHLY ORGANIC SOILS			Pt	PEAT AND OTHER HIGHLY ORGANIC SOILS		



SOIL PARTICLE SIZE

FRACTION	U.S. STANDARD SIEVE Passing Sieve	Passing Size (mm)	Retained Sieve	Retained Size (mm)
SILT / CLAY	#200	0.075		
SAND				
FINE	#40	0.425	#200	0.075
MEDIUM	#10	2.00	#40	0.425
COARSE	#4	4.75	#10	2.00
GRAVEL				
FINE	0.75"	19	#4	4.75
COARSE	3"	76	0.75"	19
COBBLES	76 mm to 203 mm			
BOULDERS	> 203 mm			
ROCK FRAGMENTS	> 76 mm			
ROCK	>0.76 cubic meter in volume			

GENERAL GUIDANCE FOR ENGINEERING PROPERTIES OF SOILS, BASED ON STANDARD PENETRATION TEST (SPT) DATA

SANDY SOILS				SILTY & CLAYEY SOILS		
Blow Counts N	Relative Density, %	Friction Angle ϕ, degrees	Description	Blow Counts N	Unconfined Strength Qu, tsf	Description
0 - 4	0 - 15		Very Loose	< 2	< 0.25	Very soft
4 - 10	15 - 35	26 - 30	Loose	2 - 4	0.25 - 0.50	Soft
10 - 30	35 - 65	28 - 36	Medium Dense	4 - 8	0.50 - 1.00	Medium Stiff
30 - 50	65 - 85	35 - 42	Dense	8 - 15	1.00 - 2.00	Stiff
> 50	85 - 100	38 - 48	Very Dense	15 - 30	2.00 - 4.00	Very Stiff
				> 30	> 4.00	Hard

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PLATE A1

BORING NO. B-1

Logged By: KJ Date Drilled: 2/1/06 Surface Elev. 89 feet

Depth ft.	El. ft.	USCS Code	Description	Sample Type	Sample No.	Blow Counts per 6"	Water Content %	Comments
			Asphalt (2" thick) over concrete (5" to 6" thick).					
5		ML	Olive gray SILT, damp, medium dense, rare fine sand laminae, some oxidation stain (NATIVE SOIL).		S1	2,7,9 N=16	28.2	
		ML	Gray SILT, damp, medium dense, moist sand lens in middle part of sample, hydrocarbon odor.		S2	5,14,10 N=24	28.4	
	80							
10		ML/ SP	Olive gray SILT and SAND, interbedded, damp, medium dense, trace oxidation stain in sand, thickly interbedded, hydrocarbon odor.		S3	5,15,13 N=28	4.7	
		SP	Gray SAND, damp to moist, dense, occasional silt lenses, no oxidation stain, hydrocarbon odor.		S4	7,16,19 N=35	17.2	
15		ML/ SP	Olive gray SILT and gray SAND, interbedded, damp to moist, dense, weak hydrocarbon odor.		S5	5,11,22 N=33	28.6	
	70							
20		ML	Olive SILT, damp to moist, medium dense, some very fine sandy zones, occasional thin silty sand layers, no hydrocarbon odor.		S6	4,8,13 N=21	27.8	
25		ML/ SM	As above but interbedded with olive gray SILTY SAND and SAND, damp, medium dense, sand is mostly very fine grained, some silt layers contain lesser sand.		S7	4,10,14 N=24	19.8	
	60							
30		SM	Olive gray SILTY SAND, damp, medium dense, sand is very fine and fine grained, light oxidation stain, occasional clean sand laminae.		S8	8,11,13 N=24	24.1	
35		SP-SM	Olive to brownish gray SAND to SILTY SAND, damp, very dense, thinly bedded, sand is very fine and fine grained, occasional silty sand lenses, minor oxidation stain.		S9	8,22,31 N=53	17.1	
	50							
40		SP	Light brown gray SAND, damp, dense, very fine and fine grained, trace oxidation stain.		S10	9,20,21 N=41	7.5	

LEGEND:
- 2" O.D. Split-Spoon Sampler
- 3" O.D. Dames & Moore Sampler
- 3.25" O.D. Dames & Moore Sampler

SPT = Standard Penetration Test

▽ water level during drilling

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BORING LOG

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701 S. JACKSON STREET
SEATTLE, WASHINGTON

JOB NO. G-0260 DATE 2/13/06 PLATE A2

BORING NO. B-1

Logged By: KJ Date Drilled: 2/1/06 Surface Elev. 89 feet

Depth ft.	El. ft.	USCS Code	Description	Sample Type	Sample No.	Blow Counts per 6"	Water Content %	Comments
45			Bottom of boring: 40.5 feet. Drilling Method: Hollow-stem auger. Sampling Method: 2-inch-O.D. SPT sampler driven using a 140 lb. hammer with a 30-inch drop. Groundwater not encountered during drilling. No fill encountered.					
50								
55								
60								
65								
70								
75								
80								

LEGEND:
- 2" O.D. Split-Spoon Sampler
- 3" O.D. Dames & Moore Sampler
- 3.25" O.D. Dames & Moore Sampler

SPT = Standard Penetration Test

▽ water level during drilling

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BORING LOG

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JOB NO. G-0260 DATE 2/13/06 PLATE A3

BORING NO. B-2

Logged By: KJ Date Drilled: 2/1/06 Surface Elev. 93 feet

Depth ft.	El. ft.	USCS Code	Description	Sample Type	Sample No.	Blow Counts per 6"	Water Content %	Comments
			Asphalt (2" thick) over concrete (5" to 6" thick).					
	90	ML	Olive gray SILT with little sand and gravel, damp, loose, crumbly, some oxidation stain (DISTURBED NATIVE SOIL).	I	S1	2,3,4 N=7	22.6	
5		ML	Gray SILT, damp, medium dense, contains an olive gray fine and medium grained sand lens 2" thick, (NATIVE SOIL).	I	S2	4,9,12 N=21	30.1	
		SM/ SP	Olive brown SILTY SAND and SAND, interbedded, damp, dense, trace oxidation stain in sand, sand is fine and medium grained.	I	S3	7,12,18 N=30	8.6	
10		SM/ SP	As above, thickly interbedded.	I	S4	9,16,18 N=34	12.8	
	80	SP	Olive gray SAND, damp, dense, medium and fine grained, no fines.	I	S5	8,16,19 N=35	8.6	
15		SP	As above.	I	S6	7,16,23 N=39	9.3	
20		ML/ SP	Gray SILT and olive gray SAND, interbedded, damp, medium dense, sand is fine and medium grained, some sand layers grade to silty sand.	I	S7	8,10,20 N=30	30.0	
	70							
25		ML/ SM	As above but also interbedded with olive gray SILTY SAND, damp to moist, dense, moist to wet sand lens 3" thick, sand is fine grained.	I	S8	6,14,22 N=36	26.5	
30		SM	Gray SILTY SAND, damp to moist, dense, sand is very fine and fine grained.	I	S9	8,17,26 N=43	24.9	
	60							
35		SM	Olive SILTY SAND, as above.	I	S10	6,11,20 N=31	25.2	
40								

LEGEND:
- I 2" O.D. Split-Spoon Sampler
- II 3" O.D. Dames & Moore Sampler
- III 3.25" O.D. Dames & Moore Sampler

SPT = Standard Penetration Test

▽ water level during drilling

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SEATTLE, WASHINGTON

JOB NO. G-0260 DATE 2/13/06 PLATE A4

BORING NO. B-2

Logged By: KJ Date Drilled: 2/1/06 Surface Elev. 93 feet

Depth ft.	El. ft.	USCS Code	Description	Sample Type	Sample No.	Blow Counts per 6"	Water Content %	Comments
		SM/ SP	SILTY SAND and SAND, interbedded, damp, dense, silty sand predominates, sand is very fine and fine grained, occasional silt lenses, minor oxidation stain.		S11	9,20,25 N=45	17.7	
45			Bottom of boring: 41.5 feet. Drilling Method: Hollow-stem auger. Sampling Method: 2-inch-O.D. SPT sampler driven using a 140 lb. hammer with a 30-inch drop. Groundwater not encountered during drilling. No fill encountered.					
50								
55								
60								
65								
70								
75								
80								

LEGEND:
- 2" O.D. Split-Spoon Sampler
- 3" O.D. Dames & Moore Sampler
- 3.25" O.D. Dames & Moore Sampler

SPT = Standard Penetration Test

▽ water level during drilling

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JOB NO. G-0260 DATE 2/13/06 PLATE A5

BORING NO. B-3

Logged By: KJ Date Drilled: 2/1/06 Surface Elev. 89 feet

Depth ft.	El. ft.	USCS Code	Description	Sample Type	Sample No.	Blow Counts per 6"	Water Content %	Comments
			Asphalt (2" thick) over broken concrete (3" to 4" thick).					
5		ML	Olive SILT, damp, medium dense, some minor very fine to fine sand, occasional brown clean sand lens (NATIVE SOIL).		S1	3,8,9 N=17	32.9	
		SM-SP	Olive brown SAND to SILTY SAND, damp, medium dense, sand is fine and medium grained, occasional thin gray silt lens.		S2	7,13,16 N=29	14.0	
	80	ML/SP	Olive gray to gray SILT and SAND, interbedded, damp, dense, trace oxidation stain, sand is very fine and fine grained.		S3	6,16,19 N=35	22.1	
10		ML/SP	As above, medium dense, weak hydrocarbon odor.		S4	6,10,18 N=28	28.1	
		ML/SP	As above, but predominantly sand, fine and medium grained, hydrocarbon odor.		S5	9,16,28 N=44	9.0	
15		ML/SP	As above, dense, frequent olive to olive gray silt layers, hydrocarbon odor.		S6	8,17,25 N=42	17.5	
	70							
20		ML/SM	Olive to olive gray SILT and SILTY SAND, interbedded, damp to moist, dense, sand is fine and medium grained, some sand layers do not contain fines, light oxidation stain, no hydrocarbon odor.		S7	5,14,22 N=36	19.4	
25		ML/SM	As above, sand is fine grained, wet lens of clean sand 2" thick.		S8	10,16,22 N=38	30.2	
	60							
30		SM	Olive to olive brown SILTY SAND, damp, dense, trace oxidation stain, sand is very fine grained.		S9	6,13,19 N=32	26.6	
35		ML/SM	Olive brown and olive gray SILT and SILTY SAND, damp, dense, sand is fine grained, light oxidation stain, occasional clean grained sand lenses 1" thick.		S10	8,22,25 N=47	19.9	
	50							
40								

LEGEND:
- 2" O.D. Split-Spoon Sampler
- 3" O.D. Dames & Moore Sampler
- 3.25" O.D. Dames & Moore Sampler

SPT = Standard Penetration Test

▽ water level during drilling

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JOB NO. G-0260 DATE 2/13/06 PLATE A6

BORING NO. B-3

Logged By: KJ Date Drilled: 2/1/06 Surface Elev. 89 feet

Depth ft.	El. ft.	USCS Code	Description	Sample Type	Sample No.	Blow Counts per 6"	Water Content %	Comments
		SM	Olive SILTY SAND, damp, very dense, sand is very fine and fine grained.		S11	11,26,32 N=58	19.2	
45			Bottom of boring: 41 feet. Drilling Method: Hollow-stem auger. Sampling Method: 2-inch-O.D. SPT sampler driven using a 140 lb. hammer with a 30-inch drop. Groundwater not encountered during drilling. No fill encountered.					
50								
55								
60								
65								
70								
75								
80								

LEGEND:
- 2" O.D. Split-Spoon Sampler
- 3" O.D. Dames & Moore Sampler
- 3.25" O.D. Dames & Moore Sampler

SPT = Standard Penetration Test

▽ water level during drilling

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JOB NO. G-0260 DATE 2/13/06 PLATE A7

BORING NO. B-4

Logged By: KJ Date Drilled: 2/2/06 Surface Elev. 85 feet

Depth ft.	El. ft.	USCS Code	Description	Sample Type	Sample No.	Blow Counts per 6"	Water Content %	Comments
			Asphalt (3" to 4" thick), concrete slab exposed in borehole side.					
		ML/SM	Olive brown SILT and SILTY SAND, damp to moist, loose, occas. gravel in sample (DISTURBED NATIVE SOIL).		S1	1,2,1 N=3	26.8	
5	80	ML/SM	As above, damp, medium dense, mostly silty sand layers, sand is fine and medium grained, occasional clean sand lenses (NATIVE SOIL).		S2	2,5,8 N=13	14.1	
		SM/SP	Olive brown SILTY SAND and gray SAND, interbedded, damp to moist, medium dense, trace oxidation stain, sand is fine and medium grained, hydrocarbon odor.		S3	4,11,18 N=29	13.3	
10		ML/SP	Gray SILT and SAND, interbedded, damp, dense, sand is fine and medium grained, hydrocarbon odor.		S4	4,12,19 N=31	--	
		ML	Gray SILT, damp dense, occasional fine sand laminae and thin lenses, weak hydrocarbon odor.		S5	5,10,18 N=28	29.6	
15	70	ML/SM	Gray SILT and SILTY SAND, interbedded, damp, dense, lesser sand layers, sand is fine grained, weak hydrocarbon odor.		S6	5,10,11 N=21	22.5	
20		ML	Gray SILT, damp, medium dense, occasional fine sand laminae and thin lenses, no hydrocarbon odor.		S7	5,10,15 N=25	24.6	
25	60	ML/SM	Olive gray SANDY SILT and SILTY SAND, thinly interbedded, damp, medium dense, sand is very fine and fine grained, trace oxidation stain, rare clean sand lenses 2" thick, no hydrocarbon odor.		S8	8,12,17 N=29	22.3	
30		SM/SP	Olive SILTY SAND and SAND, interbedded, damp, very dense, sand is very fine and fine grained.		S9	5,22,33 N=55	16.8	
35	50	SP	Olive gray SAND, dry to damp, dense, fine grained, massive.		S10	8,19,21 N=40	3.5	
40		SP	As above, but with some very fine grained sand.		S11	7,17,17 N=34	3.6	

LEGEND:
- 2" O.D. Split-Spoon Sampler
- 3" O.D. Dames & Moore Sampler
- 3.25" O.D. Dames & Moore Sampler

SPT = Standard Penetration Test

▽ water level during drilling

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JOB NO. G-0260 DATE 2/13/06 PLATE A8

BORING NO. B-4

Logged By: KJ Date Drilled: 2/2/06 Surface Elev. 85 feet

Depth ft.	El. ft.	USCS Code	Description	Sample Type	Sample No.	Blow Counts per 6"	Water Content %	Comments
45			Bottom of boring: 39.5 feet. Drilling Method: Hollow-stem auger. Sampling Method: 2-inch-O.D. SPT sampler driven using a 140 lb. hammer with a 30-inch drop. Groundwater not encountered during drilling. No fill encountered.					
50								
55								
60								
65								
70								
75								
80								

LEGEND:
- 2" O.D. Split-Spoon Sampler
- 3" O.D. Dames & Moore Sampler
- 3.25" O.D. Dames & Moore Sampler

SPT = Standard Penetration Test

▽ water level during drilling

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JOB NO. G-0260 DATE 2/13/06 PLATE A9

Soil Classification System

MAJOR DIVISIONS			GRAPHIC SYMBOL	USCS LETTER SYMBOL[1]	TYPICAL DESCRIPTIONS [2][3]
COARSE-GRAINED SOIL (More than 50% of material is larger than No. 200 sieve size)	GRAVEL AND GRAVELLY SOIL (More than 50% of coarse fraction retained on No. 4 sieve)	CLEAN GRAVEL (Little or no fines)		GW	Well-graded gravel; gravel/sand mixture(s); little or no fines
				GP	Poorly graded gravel; gravel/sand mixture(s); little or no fines
		GRAVEL WITH FINES (Appreciable amount of fines)		GM	Silty gravel; gravel/sand/silt mixture(s)
				GC	Clayey gravel; gravel/sand/clay mixture(s)
	SAND AND SANDY SOIL (More than 50% of coarse fraction passed through No. 4 sieve)	CLEAN SAND (Little or no fines)		SW	Well-graded sand; gravelly sand; little or no fines
				SP	Poorly graded sand; gravelly sand; little or no fines
		SAND WITH FINES (Appreciable amount of fines)		SM	Silty sand; sand/silt mixture(s)
				SC	Clayey sand; sand/clay mixture(s)
FINE-GRAINED SOIL (More than 50% of material is smaller than No. 200 sieve size)	SILT AND CLAY (Liquid limit less than 50)			ML	Inorganic silt and very fine sand; rock flour; silty or clayey fine sand or clayey silt with slight plasticity
				CL	Inorganic clay of low to medium plasticity; gravelly clay; sandy clay; silty clay; lean clay
				OL	Organic silt; organic, silty clay of low plasticity
	SILT AND CLAY (Liquid limit greater than 50)			MH	Inorganic silt; micaceous or diatomaceous fine sand
				CH	Inorganic clay of high plasticity; fat clay
				OH	Organic clay of medium to high plasticity; organic silt
	HIGHLY ORGANIC SOIL			PT	Peat; humus; swamp soil with high organic content

OTHER MATERIALS	GRAPHIC SYMBOL	LETTER SYMBOL	TYPICAL DESCRIPTIONS
PAVEMENT		AC or PC	Asphalt concrete pavement or Portland cement pavement
ROCK		RK	Rock (See Rock Classification)
WOOD		WD	Wood, lumber, wood chips
DEBRIS		DB	Construction debris, garbage

Notes:
1. USCS letter symbols correspond to symbols used by the Unified Soil Classification System and ASTM classification methods. Dual letter symbols (e.g., SP-SM for sand or gravel) indicate soil with an estimated 5-15% fines. Multiple letter symbols (e.g., ML/CL) indicate borderline or multiple soil classifications.
2. Soil descriptions are based on the general approach presented in the Standard Practice for Description and Identification of Soils (Visual-Manual Procedure), outlined in ASTM D 2488. Where laboratory index testing has been conducted, soil classifications are based on the Standard Test Method for Classification of Soils for Engineering Purposes, as outlined in ASTM D 2487.
3. Soil description terminology is based on visual estimates (in the absence of laboratory test data) of the percentages of each soil type and is defined as follows:

Primary Constituent:	> 50% - "GRAVEL," "SAND," "SILT," "CLAY," etc.
Secondary Constituents:	> 30% and ≤ 50% - "very gravelly," "very sandy," "very silty," etc.
	> 15% and ≤ 30% - "gravelly," "sandy," "silty," etc.
Additional Constituents:	> 5% and ≤ 15% - "with gravel," "with sand," "with silt," etc.
	≤ 5% - "with trace gravel," "with trace sand," "with trace silt," etc., or not noted.

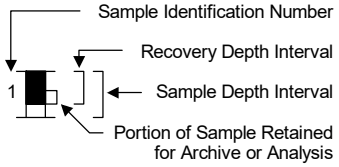
4. Soil density or consistency descriptions are based on judgement using a combination of sampler penetration blow counts, drilling or excavating conditions, field tests, and laboratory tests, as appropriate.

Drilling and Sampling Key

SAMPLER TYPE

Code	Description
a	3.25-inch O.D., 2.42-inch I.D. Split Spoon
b	2.00-inch O.D., 1.50-inch I.D. Split Spoon
c	Shelby Tube
d	Grab Sample
e	Single-Tube Core Barrel
f	Double-Tube Core Barrel
g	2.50-inch O.D., 2.00-inch I.D. WSDOT
h	3.00-inch O.D., 2.375-inch I.D. Mod. California
i	Other - See text if applicable
1	300-lb Hammer, 30-inch Drop
2	140-lb Hammer, 30-inch Drop
3	Pushed
4	Vibrocore (Rotosonic/Geoprobe)
5	Other - See text if applicable

SAMPLE NUMBER & INTERVAL



Field and Lab Test Data

Code	Description
PP = 1.0	Pocket Penetrometer, tsf
TV = 0.5	Torvane, tsf
PID = 100	Photoionization Detector VOC screening, ppm
W = 10	Moisture Content, %
D = 120	Dry Density, pcf
-200 = 60	Material smaller than No. 200 sieve, %
GS	Grain Size - See separate figure for data
AL	Atterberg Limits - See separate figure for data
GT	Other Geotechnical Testing
CA	Chemical Analysis

Groundwater

▽	Approximate water level at time of drilling (ATD)
▼	Approximate water level at time after drilling/excavation/well

LANDAU ASSOCIATES

7th & Jackson Street Property

Soil Classification System and Key

Figure A-1

B-1-11

SAMPLE DATA					SOIL PROFILE			GROUNDWATER
Depth (ft)	Elevation	Sample Number & Interval	Sampler Type	Blows/Foot	Test Data	Graphic Symbol	USCS Symbol	Drilling Method: Hollow-Stem Auger Ground Elevation (ft): 90	
0	90						PC	Concrete (0.3 feet thickness)	Groundwater not encountered.
							SP/ ML	Gray and brown, clayey SILT, thinly laminated, with thin interbedded fine SAND to fine SAND with silt, with petroleum odor (very stiff and medium dense, moist to wet)	
		S1	b2	17	PID=25.8				
5	85	S2	b2	26	PID=55.8				
		S3	b2	19	PID=388		SM/ ML	Light gray brown, fine SAND with silt grading to fine to medium SAND with silt and light brown, clayey SILT, with petroleum odor (medium dense and very stiff, damp)	
10	80	S4	b2	29	PID=48				
		S5	b2	32	CA PID=395		SP/ ML	Light brown, fine to medium SAND with interbedded fine sandy SILT, with petroleum odor (dense and hard, moist to wet)	
15	75	S6	b2	33	PID=312		ML	Light brown and gray brown, clayey SILT, thinly laminated, with thin interbedded fine SAND with silt, with petroleum odor (hard, moist)	
		S7	b2	22	CA PID=14.1				
20	70	S8	b2	23	PID=2.8		SP/ ML	Light brown to brown, fine SAND with trace silt, with iron staining, and interbedded clayey SILT (medium dense and very stiff, moist)	
25	65	S9	b2	38	PID=1.9		ML	Gray and light brown, clayey SILT and thin interbedded silty, fine SAND (hard, moist)	
30	60	S10	b2	35	PID=1.0		SM/ ML	Light brown, silty, fine SAND and interbedded very fine sandy SILT (dense and hard, moist to wet)	
35									
40									
45									

Boring Completed 11/11/11
Total Depth of Boring = 31.5 ft.

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

LANDAU ASSOCIATES

7th & Jackson Street Property

Log of B-1-11

Figure A-2

B-2-11

Depth (ft)	Elevation	Sample Number & Interval	Sampler Type	Blows/Foot	Test Data	Graphic Symbol	USCS Symbol	SOIL PROFILE	GROUNDWATER
								Drilling Method: Hollow-Stem Auger Ground Elevation (ft): 88	
0							AC	Pavement Section: Asphalt (thickness 0.05 feet); Brick (thickness 0.35 feet); Sand (thickness 0.1 feet); and Concrete (thickness 0.5 feet)	Groundwater not encountered.
							ML		
	85							Gray brown, clayey SILT, with thin laminations and some iron staining along laminations, and occasional interbedded fine to medium SAND with silt (stiff to very stiff, moist)	
5		S1	b2	15	PID=0				
	80	S2	b2	28	PID=0		SP	- soil vacuumed to 4 feet to clear for utilities, no samples collected	
10		S3	b2	29	PID=0			Light brown, fine to medium SAND with trace silt, and occasional interbedded clayey SILT, with petroleum odor (medium dense, damp to moist)	
	75	S4	b2	26	CA PID=444			- petroleum odor	
15		S5	b2	26	PID=20.5		SM/ ML	Gray, clayey SILT, thinly laminated, with interbedded silty, fine SAND, with slight petroleum odor (very stiff and medium dense, moist)	
	70	S6	b2	20	CA PID=1.4		SM/ ML	Gray brown, fine sandy SILT, with thin interbedded silty, fine SAND, thinly laminated, with slight petroleum odor (very stiff and medium dense, wet)	
20		S7	b2	29	PID=2.1				

Boring Completed 11/11/11
Total Depth of Boring = 21.5 ft.

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

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7th & Jackson Street Property

Log of B-2-11

Figure A-3

B-3-11

Depth (ft)	Elevation	Sample Number & Interval	Sampler Type	Blows/Foot	Test Data	Graphic Symbol	USCS Symbol	SOIL PROFILE	GROUNDWATER
								Drilling Method: Hollow-Stem Auger Ground Elevation (ft): 86.5	
0	86.5						AC	Pavement Section: Asphalt (thickness 0.15 feet); Brick (thickness 0.35 feet); Sand (thickness 0.05 feet); and Concrete (thickness 0.4 feet)	Groundwater not encountered.
	85						ML	Light brown to gray, clayey SILT, with thin laminations (very stiff, damp)	
5		S1B S1A	b2	26	PID=0		SP-SM	- soil vacuumed to 4 feet to clear for utilities, no samples collected	
	80	S2	b2	24	PID=0			Light brown, fine to medium SAND with trace silt to with silt and occasional thin interbedded clayey SILT, with petroleum odor (medium dense to dense, moist)	
10		S3	b2	37	PID=453			- becoming gray	
	75							- petroleum odors 10 feet to 16 feet	
		S4	b2	22	CA PID=1032		SM/ML	Light brown, silty, fine SAND and interbedded clayey SILT, thinly laminated and fine sandy SILT (medium dense and very stiff, moist to wet)	
15		S5	b2	23	PID=981			- wet at 15 feet	
	70	S6	b2	31	CA PID=10.5		ML	Gray brown, clayey SILT, thinly laminated, and thin interbedded silty, fine SAND, with slight petroleum odor (hard, moist to wet)	
20		S7	b2	32	PID=1.0				
	65								

Boring Completed 11/11/11
Total Depth of Boring = 21.5 ft.

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

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7th & Jackson Street Property

Log of B-3-11

Figure A-4

B-4-11

SAMPLE DATA						SOIL PROFILE			GROUNDWATER
Depth (ft)	Elevation	Sample Number & Interval	Sampler Type	Blows/Foot	Test Data	Graphic Symbol	USCS Symbol	Drilling Method: Hollow-Stem Auger Ground Elevation (ft): 84	
0							AC	Pavement Section: Asphalt (thickness 0.1 feet); Brick (thickness 0.35 feet); Sand (thickness 0.05 feet); and Concrete (thickness 0.45 feet)	Groundwater not encountered.
							SM		
	80	S1	b2	19	PID=0			Light brown, silty, fine SAND grading to fine SAND with silt, with petroleum odor (medium dense, moist) (FILL)	
5		S2	b2	28	CA PID=507		ML	- petroluem odor	
		S3	b2	32	PID=96.7		SP/ ML	Gray brown, clayey SILT with thin interbedded silty, fine SAND, with thin laminations and iron staining, with petroleum odor (very stiff, moist)	
	75								
10		S4	b2	26	PID=36.1			Gray, fine to medium SAND and light brown, clayey SILT with interbedded fine SAND with trace silt and with silt, with petroleum odor (dense to medium dense and hard to very stiff, moist to wet)	
		S5	b2	22	PID=473		SM/ ML		
	70								
15		S6	b2	24	CA PID=14.1			Gray and brown, silty, fine SAND and fine sandy SILT with thin interbedded SILT, with petroleum odor (medium dense and very stiff, moist to wet)	
		S7	b2	25	PID=7.9		SM/ ML	- becoming wet at 12.5 feet	
	65								
20		S8	b2	30	PID=3.1		SM/ ML	Light brown and gray, clayey SILT, with thin laminations and iron staining, with occasional interbedded fine SAND with silt (very stiff and medium dense, moist to wet)	
								Light brown, fine sandy SILT to very silty, fine SAND, with slight petroleum odor (very stiff to hard and medium dense to dense, wet)	
25									
30									
35									
40									
45									

Boring Completed 11/11/11
Total Depth of Boring = 21.5 ft.

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

LANDAU ASSOCIATES

7th & Jackson Street Property

Log of B-4-11

Figure A-5

B-5-11

SAMPLE DATA						SOIL PROFILE			GROUNDWATER
Depth (ft)	Elevation	Sample Number & Interval	Sampler Type	Blows/Foot	Test Data	Graphic Symbol	USCS Symbol	Drilling Method: Hollow-Stem Auger Ground Elevation (ft): 96	
0	95						AC	Asphalt Pavement (thickness 0.1 feet)	
							ML	Light brown grading to gray, clayey SILT, with thin silt partings and occasional laminations (stiff to very stiff, damp to moist)	Groundwater not encountered.
		S1	b2	13	PID=0				
5	90	S2	b2	14	PID=0				
		S3	b2	12	PID=0				
10	85	S4	b2	22	PID=0				
		S5	b2	28	PID=0		SP/ ML	Gray and light brown, clayey SILT, with thin laminations, and interbedded fine to fine to medium SAND with trace silt (very stiff and medium dense, damp to moist)	
15	80	S6	b2	27	PID=0				
		S7	b2	35	PID=0		SP	Light brown, fine SAND with trace silt (dense, moist)	
20	75	S8	b2	45	CA PID=0		SM/ ML	Light brown, clayey SILT, with thin laminations, and interbedded fine SAND with silt (hard and dense, moist to wet)	
25	70	S9	b2	36	PID=0			- becoming wet at 26 feet, with iron staining and interbedded silty, fine SAND	
30	65	S10	b2	47	PID=0		SM/ ML	Gray, SILT, with trace lamination and thin black organic layers and interbedded silty, fine SAND (hard and dense, moist to wet)	
35	60	S11	b2	44	PID=0		SM	Light brown, silty, fine SAND to fine SAND with silt, some iron staining (dense to very dense, moist to wet)	
40	55	S12	b2	50	PID=0				
45									

Boring Completed 11/14/11
Total Depth of Boring = 41.5 ft.

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

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7th & Jackson Street Property

Log of B-5-11

Figure A-6

B-6-11

Drilling Method: Hollow-Stem Auger

Ground Elevation (ft): 91.5

Depth (ft)	Elevation	Sample Number & Interval	Sampler Type	Blows/Foot	Test Data	Graphic Symbol	USCS Symbol	Soil Profile	Groundwater
0							AC	Asphalt Pavement (thickness 0.15 feet)	
	90						SM	Black, very silty, fine to medium SAND with brick, plastic, and metal debris (medium dense, moist)(FILL)	Groundwater not encountered.
		S1	b2	12	PID=0		ML		
5		S2	b2	24	PID=0			Light brown, clayey SILT with iron stained fractures (stiff to hard, moist)	
	85	S3	b2	33	PID=0			- becoming hard and thin lamination and silt partings	
10		S4	b2	52	PID=0			- high angle interbed of reddish brown, fine SAND	
	80						SM/ ML	Light brown, fine SAND with silt and interbedded clayey SILT and very thin laminations of fine sand with silt, iron staining (dense to very dense and hard, moist to wet)	
		S5	b2	49	PID=0				
15		S6	b2	54	CA PID=0.3		SM	Light brown, silty, fine SAND with SILT interbeds, thin laminations (dense and hard, moist to wet)	
	75							- strong petroleum odor and staining in soil at approximately 18 feet	
20		S7	b2	34	CA PID=1.9			- becoming wet	
	70								
25		S8	b2	50	PID=1.3				
	65						ML	Gray, SILT with thin interbedded silty, fine SAND (hard, wet)	
30		S9	b2	45	PID=0.3				
	60						SM/ ML	Light brown, thin interbedded very fine sandy SILT to silty, fine SAND with some iron staining layers (hard and very dense, moist to wet)	
35		S10	b2	51	PID=0				
	55								
							SM	Light brown and reddish brown, very silty, fine SAND (very dense, wet)	
40		S11	b2	95/ 10""	PID=0				
45									

Boring Completed 11/04/11
Total Depth of Boring = 41.4 ft.

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

LANDAU ASSOCIATES

7th & Jackson Street Property

Log of B-6-11

Figure A-7

FARALLON CONSULTING

Log of Boring: FB-3

Client: PortLiving Development Corp.
Project: 701 South Jackson Street
Location: Seattle, Washington

Farallon PN: 2194-001

Logged By: Ryan Ostrom

Date/Time Started: 10/31/19 @ 0910
Date/Time Completed: 10/31/19 @ 1035
Equipment: D50
Drilling Company: Holocene
Drilling Foreman: RJ Ortega
Drilling Method: Hollow Stem Auger

Sampler Type: 1.5' D&M
Drive Hammer (lbs.): 140
Depth of Water ATD (ft bgs): NE
Total Boring Depth (ft bgs): 41.5
Total Well Depth (ft bgs): NA

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	USCS Graphic	% Recovery	Blow Counts 8/8/8	PID (ppm)	Sample ID	Sample Analyzed	Boring/Well Construction Details
0		0.0-0.8': Concrete - cored. Vac cleared to 5.0' for utilities.	AC							Concrete
		0.8-5.0': SILT with sand (80% silt, 10% sand, 10% gravel), fine sand, fine and coarse gravel, gray, moist, petroleum-like odor, sheen present.	ML				534	FB-3-2.5		
5							74.5	FB-3-5.0		
10		10.0-10.3': SILT with sand (80% silt, 10% sand, 10% gravel), fine sand, fine and coarse gravel, gray, moist, petroleum-like odor, sheen present.	ML		93	7, 14, 24	1,420	FB-3-10.0		Bentonite
		10.3-11.4': Poorly graded SAND (95% sand, 5% silt), fine sand, gray, medium dense, moist, petroleum-like odor.	SP							
		11.4-11.5': No recovery.								
15										

Well Construction Information

Monument Type: NA
Casing Diameter (inches): NA
Screen Slot Size (inches): NA
Screened Interval (ft bgs): NA

Filter Pack: NA
Surface Seal: Concrete
Annular Seal: NA
Boring Abandonment: Bentonite

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

FARALLON CONSULTING

Log of Boring: FB-3

Client: PortLiving Development Corp.
Project: 701 South Jackson Street
Location: Seattle, Washington

Farallon PN: 2194-001

Logged By: Ryan Ostrom

Date/Time Started: 10/31/19 @ 0910
Date/Time Completed: 10/31/19 @ 1035
Equipment: D50
Drilling Company: Holocene
Drilling Foreman: RJ Ortega
Drilling Method: Hollow Stem Auger

Sampler Type: 1.5' D&M
Drive Hammer (lbs.): 140
Depth of Water ATD (ft bgs): NE
Total Boring Depth (ft bgs): 41.5
Total Well Depth (ft bgs): NA

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	USCS Graphic	% Recovery	Blow Counts 8/8/8	PID (ppm)	Sample ID	Sample Analyzed	Boring/Well Construction Details
		15.0-16.1': Silty SAND (85% sand, 15% silt), fine sand, gray, dense, moist, petroleum-like odor, no sheen.	SM		73	10, 16, 18	28.0	FB-3-15.0		
		16.1-16.5': No recovery.								
20		20.0-21.5': SIlty SAND (70% sand, 30% silt), fine sand, gray, medium dense, moist, no odor, no sheen.	SM		100	5, 12, 22	0.1	FB-3-20.0		Bentonite
25		25.0-26.5': SIlty SAND (70% sand, 30% silt), fine sand, gray, medium dense, moist, no odor, no sheen.	SM		100	10, 15, 25	0.2	FB-3-25.0		
30										

Well Construction Information

Monument Type: NA
Casing Diameter (inches): NA
Screen Slot Size (inches): NA
Screened Interval (ft bgs): NA

Filter Pack: NA
Surface Seal: Concrete
Annular Seal: NA
Boring Abandonment: Bentonite

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

FARALLON CONSULTING

Log of Boring: FB-3

Client: PortLiving Development Corp.
Project: 701 South Jackson Street
Location: Seattle, Washington

Farallon PN: 2194-001

Logged By: Ryan Ostrom

Date/Time Started: 10/31/19 @ 0910
Date/Time Completed: 10/31/19 @ 1035
Equipment: D50
Drilling Company: Holocene
Drilling Foreman: RJ Ortega
Drilling Method: Hollow Stem Auger

Sampler Type: 1.5' D&M
Drive Hammer (lbs.): 140
Depth of Water ATD (ft bgs): NE
Total Boring Depth (ft bgs): 41.5
Total Well Depth (ft bgs): NA

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	USCS Graphic	% Recovery	Blow Counts 8/8/8	PID (ppm)	Sample ID	Sample Analyzed	Boring/Well Construction Details
		30.0-31.5': Poorly graded SAND with silt (90% sand, 10% silt), fine sand, light brown, medium dense, moist, no odor, no sheen.	SP-SM		100	9, 15, 23	0.2	FB-3-30.0		
35		35.0-36.4': Poorly graded SAND with silt (90% sand, 10% silt), fine sand, light brown, medium dense, moist, no odor, no sheen.	SP-SM		93	12, 20 24	0.3	FB-3-35.0		Bentonite
		36.4-36.5': No recovery.								
40		40.0-41.5': Poorly graded SAND (95% sand, 5% silt), fine sand, gray, medium dense, moist, no oodr, no sheen.	SP		100	10, 15, 18	0.8	FB-3-40.0		
45										

Well Construction Information

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

FARALLON CONSULTING

Log of Boring: FB-4

Client: PortLiving Development Corp.
Project: 701 South Jackson Street
Location: Seattle, Washington

Farallon PN: 2194-001

Logged By: Ryan Ostrom

Date/Time Started: 11/1/19 @ 1215
Date/Time Completed: 11/1/19 @ 1320
Equipment: Geoprobe 7822 DT
Drilling Company: Holocene
Drilling Foreman: Chris Perva
Drilling Method: Direct Push

Sampler Type: 3' Macrocore
Drive Hammer (lbs.): Auto
Depth of Water ATD (ft bgs): NE
Total Boring Depth (ft bgs): 15.0
Total Well Depth (ft bgs): NA

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	USCS Graphic	% Recovery	Blow Counts 8/8/8	PID (ppm)	Sample ID	Sample Analyzed	Boring/Well Construction Details
0		0.0-0.5': Concrete - cored. Vac CLeared for utilities to 3.0'.	CO							Concrete
		0.5-3.0': Gravely SILT (70% silt, 20% gravel, 10% silt), fine sand, fine and coarse gravel, gray, moist, no odor, no sheen, concrete cobbles through out.	ML				1.2	FB-4-2.5		
		3.0-3.8': SILT (100% silt), gray-brown, moist, petroleum-like odor, no sheen.	ML		27		18.5	Soil Screen @ 3.0'		
5		3.8-6.0': No recovery.								
		6.0-7.4': SILT (100% silt), gray-brown, moist, no odor, no sheen.	ML		47		6.0	FB-4-6.0		
		7.4-9.0': No recovery.								
		9.0-10.2': Poorly graded SAND (100% sand), fine to medium sand, gray, moist, petroleum-like odor, no sheen.	SP		100					
10		10.2-12.0': Sandy SILT (60% silt, 40% sand), fine to medium sand, gray, moist, petroleum-like odor, no sheen.	ML				1,227	FB-4-10.0		Bentonite
		12.0-14.1': Poorly graded SAND (100% sand), fine to medium sand, gray, moist, petroleum-like odor, no sheen.	SP		100					
		14.1-14.6': SILT (100% silt), gray-brown, moist, petroleum-like odor, no sheen.	ML							
15		14.6-15.0': Poorly graded SAND (100% sand), fine to medium sand, gray, moist, petroleum-like odor, no sheen.	SP				1,914	FB-4-15.0		

Well Construction Information

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

FARALLON CONSULTING

Log of Boring: FB-5

Client: PortLiving Development Corp.
Project: 701 South Jackson Street
Location: Seattle, Washington

Farallon PN: 2194-001

Logged By: Ryan Ostrom

Date/Time Started:	11/1/19 @ 1330	**Sampler Type:**	5' Macrocore
Date/Time Completed:	11/1/19 @ 1445	**Drive Hammer (lbs.):**	Auto
Equipment:	Geoprobe 7822 DT	**Depth of Water ATD (ft bgs):**	16.9
Drilling Company:	Holocene	**Total Boring Depth (ft bgs):**	30.0
Drilling Foreman:	Chris Perva	**Total Well Depth (ft bgs):**	NA
Drilling Method:	Direct Push	**Boring Drilled at 25° to Vertical**	

Linear feet Logged	Vertical Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	USCS Graphic	% Recovery	PID (ppm)	Sample ID	Sample Analyzed	Boring/Well Construction Details
0	0		0.0-0.4': Asphalt. Vac Cleared for utilities to 5.0'.	AC						Concrete
			0.4-5.0': SILT (90% silt, 10% sand), fine sand, gray, moist, no odor, no sheen.	ML			0.1	FB-5-2.5		
5	5		5.0-5.8': SILT (100% silt), brown, moist, petroleum-like odor, no sheen, brick debris at 5.8'.	ML		66	0.0	FB-5-5.0		
			5.8-8.3': Poorly graded SAND (100% sand), fine to medium sand, brown, moist, no odor, no sheen.	SP			1.4	FB-5-6.0		
			8.3-10.0': No recovery.							
10	10		10.0-11.5': Poorly graded SAND (100% sand), fine to medium sand, brown, moist, no odor, no sheen.	SP		100				Bentonite
			11.5-12.3': SILT (100% silt), gray, moist, petroleum-like odor, no sheen.	ML			680	FB-5-11.0		
			12.3-15.0': Poorly graded SAND (100% sand), fine to medium sand, gray, moist, petroleum-like odor, no sheen.	SP			0.8	Soil Screen @ 12'		
15	15		15.0-16.1': Poorly graded SAND (100% sand), fine to medium sand, gray, moist, petroleum-like odor, no sheen.	SP		100	431	FB-5-15.0		

Well Construction Information

Monument Type:	NA	**Filter Pack:**	NA	**Ground Surface Elevation (ft):**	NA
Casing Diameter (inches):	NA	**Surface Seal:**	Concrete	**Top of Casing Elevation (ft):**	NA
Screen Slot Size (inches):	NA	**Annular Seal:**	NA	**Surveyed Location:** X: NA	Y: NA
Screened Interval (ft bgs):	NA	**Boring Abandonment:**	Bentonite	**Heading:** 177°	

FARALLON CONSULTING

Log of Boring: FB-5

Client: PortLiving Development Corp.
Project: 701 South Jackson Street
Location: Seattle, Washington

Farallon PN: 2194-001

Logged By: Ryan Ostrom

Date/Time Started:	11/1/19 @ 1330	**Sampler Type:**	5' Macrocore
Date/Time Completed:	11/1/19 @ 1445	**Drive Hammer (lbs.):**	Auto
Equipment:	Geoprobe 7822 DT	**Depth of Water ATD (ft bgs):**	16.9
Drilling Company:	Holocene	**Total Boring Depth (ft bgs):**	30.0
Drilling Foreman:	Chris Perva	**Total Well Depth (ft bgs):**	NA
Drilling Method:	Direct Push	**Boring Drilled at 25° to Vertical**	

Linear feet Logged	Vertical Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	USCS Graphic	% Recovery	PID (ppm)	Sample ID	Sample Analyzed	Boring/Well Construction Details
	15		16.1-16.9': SILT (100% silt), gray-brown, moist, strong petroleum-like odor, no sheen.	ML						
			16.9-18.0': Poorly graded SAND (100% sand), fine to medium sand, brown, moist to wet, strong petroleum-like odor, no sheen.	SP			1,134	FB-5-17.0		Water Level
			18.0-20.0': SILT (95% silt, 5% sand), fine sand, gray, moist, petroleum-like odor, no sheen.	ML						
	20		20.0-21.0': Sandy SILT (60% silt, 40% sand), fine sand, gray, moist, petroleum-like odor, no sheen.	ML		100	154	FB-5-20.0		
			21.0-21.8': SILT (90% silt, 10% sand), fine sand, gray, moist, no odor, no sheen.	ML						
	20		21.8-22.5': Poorly graded SAND (100% sand), fine to medium sand, gray, moist, petroleum-like odor, no sheen.	SP						
			22.5-25.0': SILT (100% silt), gray-brown, moist, no odor, no sheen.	ML						
	25		25.0-25.5': Poorly graded SAND (100% sand), fine to medium sand, gray, wet to moist, no odor, no sheen.	SP		100	2.2	FB-5-25.0		Bentonite
			25.5-30.0': SILT (100% silt), gray, moist to wet, no odor, no sheen.	ML						
	25									
	30					100	1.5	FB-5-30.0		

Well Construction Information

Monument Type:	NA	**Filter Pack:**	NA	**Ground Surface Elevation (ft):**	NA
Casing Diameter (inches):	NA	**Surface Seal:**	Concrete	**Top of Casing Elevation (ft):**	NA
Screen Slot Size (inches):	NA	**Annular Seal:**	NA	**Surveyed Location:** X: NA	Y: NA
Screened Interval (ft bgs):	NA	**Boring Abandonment:**	Bentonite	**Heading:** 177°	

FARALLON CONSULTING

Log of Boring: FB-6

Client: PortLiving Development Corp.
Project: 701 South Jackson Street
Location: Seattle, Washington

Farallon PN: 2194-001

Logged By: Ryan Ostrom

Date/Time Started: 11/1/19 @ 0910
Date/Time Completed: 11/1/19 @ 1110
Equipment: Geoprobe 7822 DT
Drilling Company: Holocene
Drilling Foreman: Chris Perva
Drilling Method: Direct Push

Sampler Type: 3' Macrocore
Drive Hammer (lbs.): Auto
Depth of Water ATD (ft bgs): NE
Total Boring Depth (ft bgs): 15.0
Total Well Depth (ft bgs): NA

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	USCS Graphic	% Recovery	Blow Counts 8/8/8	PID (ppm)	Sample ID	Sample Analyzed	Boring/Well Construction Details
0		0.0-0.8': Concrete - cored. Vac Cleared for utilities to 5.0'.	CO							Concrete
		0.8-5.0': SILT (90% silt, 10% sand), fine sand, gray, moist, no odor, no sheen.	ML				0.0	FB-6-2.5		
5		5.0-5.4': SILT (90% silt, 10% sand), fine sand, gray, moist, petroleum-like odor, no sheen.	ML		40		0.0	FB-6-5.0		
		5.4-6.0': No recovery.								
		6.0-8.4': SILT (100% silt), gray to brown at 8.2', moist, no odor, no sheen.	ML		100		0.0	FB-6-6.0		Bentonite
		8.4-9.0': Poorly graded SAND (100% sand), fine to medium sand, brown, moist, no odor, no sheen.	SP							
		9.0-10.0': SILT (100% silt), gray, moist, wet from 9.3' to 9.6', no odor, no sheen.	ML		100					Water Level
10		10.0-12.0': Poorly graded SAND (100% sand), fine to medium sand, gray-brown, moist, no odor, no sheen.	SP				0.0	FB-6-10.0		
		12.0-12.2': SILT (100% silt), gray, moist, no odor, no sheen.	ML		100					
		12.2-13.4': Poorly graded SAND (100% sand), fine to medium sand, gray-brown, moist, no odor, no sheen.	SP							
		13.4-13.9': SILT (100%), gray, moist, no odor, no sheen.	ML							
15		13.9-15.0': Poorly graded SAND (100% sand), fine to medium sand, gray-brown, moist, no odor, no sheen.	SP							

Well Construction Information

Monument Type: NA
Casing Diameter (inches): NA
Screen Slot Size (inches): NA
Screened Interval (ft bgs): NA

Filter Pack: NA
Surface Seal: Concrete
Annular Seal: NA
Boring Abandonment: Bentonite

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

FARALLON CONSULTING

Log of Boring: FB-6

Client: PortLiving Development Corp.
Project: 701 South Jackson Street
Location: Seattle, Washington

Farallon PN: 2194-001

Logged By: Ryan Ostrom

Date/Time Started: 11/1/19 @ 0910
Date/Time Completed: 11/1/19 @ 1110
Equipment: Geoprobe 7822 DT
Drilling Company: Holocene
Drilling Foreman: Chris Perva
Drilling Method: Direct Push

Sampler Type: 3' Macrocore
Drive Hammer (lbs.): Auto
Depth of Water ATD (ft bgs): NE
Total Boring Depth (ft bgs): 15.0
Total Well Depth (ft bgs): NA

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	USCS Graphic	% Recovery	Blow Counts 8/8/8	PID (ppm)	Sample ID	Sample Analyzed	Boring/Well Construction Details
		15.0-15.3': Sandy SILT (60% silt, 40% sand), fine to medium sand, gray-brown, moist, no odor, no sheen.	ML		100		0.0	FB-6-15.0		
		15.3-17.5': Poorly graded SAND (100% sand), fine to medium sand, gray-brown, moist, no odor, no sheen, 2" silt lense at 16.4'.	SP							
		17.5-18.0': SILT (100% silt), gray, moist, no odor, no sheen, fine sand lense at 18.0'.	ML							
		18.0-20.4': Silty SAND (60% sand, 40% silt), fine to medium sand, wet, strong petroleum-like odor, no sheen.	SM		100		583	FB-6-18.0		Bentonite
20		20.4-21.0': SILT (100%), gray, moist, strong petroleum-like odor, no sheen.	ML							
		21.0-24.0': Silty SAND (60% sand, 40% silt), fine to medium sand, wet, strong petroleum-like odor, no sheen.	SM		100		30.1	FB-6-21.0		
					100		83.0	Soil Screen @ 22'		
							16.5	FB-6-24.0		
25										
30										

Well Construction Information

Monument Type: NA
Casing Diameter (inches): NA
Screen Slot Size (inches): NA
Screened Interval (ft bgs): NA

Filter Pack: NA
Surface Seal: Concrete
Annular Seal: NA
Boring Abandonment: Bentonite

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

FARALLON CONSULTING

Log of Boring: FB-7

Client: PortLiving Development Corp.
Project: 701 South Jackson Street
Location: Seattle, Washington

Farallon PN: 2194-001

Logged By: Ryan Ostrom

Date/Time Started: 10/30/19 @ 1350
Date/Time Completed: 10/30/19 @ 1420
Equipment: Hand Auger
Drilling Company: Holocene
Drilling Foreman: Chris Perva
Drilling Method: Hand Auger

Sampler Type: Grab
Drive Hammer (lbs.): NA
Depth of Water ATD (ft bgs): NE
Total Boring Depth (ft bgs): 8.0
Total Well Depth (ft bgs): NA

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	USCS Graphic	% Recovery	Blow Counts 8/8/8	PID (ppm)	Sample ID	Sample Analyzed	Boring/Well Construction Details
0		0.0-0.8': Concrete - cored.	CO							Concrete
		0.8-8.0': SILT with sand (80% silt, 20% sand), fine sand, gray, moist, no odor, no sheen, brick and concrete debris through out.	ML				0.3	FB-7-2.5		
5							0.1	FB-7-5.0		Bentonite
							0.1	FB-7-8.0		
10										

Well Construction Information

Monument Type: NA
Casing Diameter (inches): NA
Screen Slot Size (inches): NA
Screened Interval (ft bgs): NA

Filter Pack: NA
Surface Seal: Concrete
Annular Seal: NA
Boring Abandonment: Bentonite

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

APPENDIX B
Chemical Analytical Reports

SOUND ANALYTICAL SERVICES, INC.
ANALYTICAL & ENVIRONMENTAL CHEMISTS

4813 Pacific Hwy. East
Tacoma, Washington 98424
(206) 922-2310 • FAX (206) 922-5047

UST PARAMETERS
CHAIN OF CUSTODY / REQUEST FOR LABORATORY ANALYSIS

CLIENT: GEO GROUP NW, INC
PROJECT NAME: E-0260
CONTACT: DANIEL HUANG
PHONE NO: 649-8757

ANALYSIS REQUESTED: Specify State _____

LAB #	SAMPLE I.D.	DATE	TIME	MATRIX	# of Containers	HCID	TPH-G	TPH-D	TPH 418.1	BTEX	TPH-G / BTEX	TPH 8015M	Total Lead	TCLP Lead	PCB's	PAH's	Phenols	Halogenated Volatiles EPA 601/8010	Aromatic Volatiles EPA 602/8020	Volatile Organics EPA 624/8240 GC/MS	Semi-volatiles EPA 625/8270 GC/MS	Metals	Total Halogens		Hold		CLOSURE DELIVERABLES
1	H-1 (2.5')	8-3-92	9:30A	SOIL																							
2	H-1 (8.5')		9:40A								X		X												X		
3	H-1 (12.5')		9:50								X		X												X		
4	H-1 (17.5')		10:00																						X		
5	H-2 (2.5')		10:55																						X		
6	H-2 (7.5')		10:10								X		X												X		
7	H-2 (10')		11:20																						X		
8	H-3 (2.5')		11:48																						X		
9	H-3 (7.5')		12:05						X		X		X												X		
10	H-3 (10')		12:10																						X		
11	H-3 (12.5')		12:20																						X		

	Signature	Printed Name	Firm	Time / Date
Relinquished By		DANIEL HUANG	GEO GROUP	
Received By		PALMQUIST	SAS	8-7 10:55A
Relinquished By		PALMQUIST	SAS	8-7 12:50P
Received By	Mary Curtiss	Mary Curtiss	SAS	8/7/92 12:50
Relinquished By				
Received By				

SPECIAL INSTRUCTIONS/COMMENTS:

SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

Report To: Geo Group N.W., Inc. Date: August 21, 1992

Report On: Analysis of Soil Lab No.: 26201

IDENTIFICATION:
Samples received on 08-07-92
Project: E-0260

ANALYSIS:

Lab No. 26201-1 Client ID: H-1 (8.5')

WTPH-G with BTEX by Method 8020
Date Extracted: 8-11-92
Date Analyzed: 8-18-92

Gasoline, mg/kg (C7 - C12)	2.2
Benzene, mg/kg	< 0.05
Toluene, mg/kg	< 0.05
Ethyl Benzene, mg/kg	< 0.05
Xylenes, mg/kg	0.10

SURROGATE RECOVERY, %

Trifluorotoluene	99

ICP Metals Per Method 6010
Date Digested: 8-10-92
Date Analyzed: 8-11-92

Lead, mg/kg	< 1.3

Continued . . .

SOUND ANALYTICAL SERVICES, INC.

Geo Group N.W., Inc.
Project: E-0260

Lab No. 26201
August 21, 1992

Lab No. 26201-2 Client ID: H-1 (12.5')

WTPH-G with BTEX by Method 8020
Date Extracted: 8-11-92
Date Analyzed: 8-18-92

Gasoline, mg/kg (C7 - C12)	6,000	E
Benzene, mg/kg	4.0	
Toluene, mg/kg	55	
Ethyl Benzene, mg/kg	66	
Xylenes, mg/kg	330	E
SURROGATE RECOVERY, %		
Trifluorotoluene		X8

ICP Metals Per Method 6010
Date Digested: 8-10-92
Date Analyzed: 8-11-92

Lead, mg/kg	1.5

Continued . . .

SOUND ANALYTICAL SERVICES, INC.

Geo Group N.W., Inc.
Project: E-0260

Lab No. 26201
August 21, 1992

Lab No. 26201-3 Client ID: H-2 (7.5')

WTPH-G with BTEX by Method 8020
Date Extracted: 8-11-92
Date Analyzed: 8-18-92

Gasoline, mg/kg (C7 - C12)	1.6
Benzene, mg/kg	< 0.05
Toluene, mg/kg	< 0.05
Ethyl Benzene, mg/kg	< 0.05
Xylenes, mg/kg	< 0.05
SURROGATE RECOVERY, %	
Trifluorotoluene	94

ICP Metals Per Method 6010
Date Digested: 8-10-92
Date Analyzed: 8-11-92

Lead, mg/kg	2.2

Continued . . .

SOUND ANALYTICAL SERVICES, INC.

Geo Group N.W., Inc.
Project: E-0260

Lab No. 26201
August 21, 1992

Lab No. 26201-4 Client ID: H-3 (7.5')

WTPH-G with BTEX by Method 8020
Date Extracted: 8-11-92
Date Analyzed: 8-18-92

Gasoline, mg/kg (C7 - C12)	1,400	E
Benzene, mg/kg	0.31	
Toluene, mg/kg	1.9	
Ethyl Benzene, mg/kg	6.2	
Xylenes, mg/kg	16	
SURROGATE RECOVERY, %		
Trifluorotoluene	108	

ICP Metals Per Method 6010
Date Digested: 8-10-92
Date Analyzed: 8-11-92

Lead, mg/kg	3.8

TPH per EPA Method 418.1
Date Extracted: 8-10-92
Date Analyzed: 8-11-92

Total Petroleum Hydrocarbons, mg/kg	1,800

SOUND ANALYTICAL SERVICES

MARTY FRENCH

SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206) 922-2310 - FAX (206) 922-5047

QUALITY CONTROL REPORT

TPH by Method 418.1

Client: GeoGroup N.W., Inc.
Lab No: 26201qc1
Matrix: Soil
Units: mg/kg
Date: August 21, 1992

DUPLICATE

Dup No. 26201-4

Parameter	Sample(S)	Duplicate(D)	RPD
Total Petroleum Hydrocarbons	1,800	1,600	11.8

RPD = Relative Percent Difference
= [(S - D) / ((S + D) / 2] x 100

METHOD BLANK

Parameter	Blank Value
Total Petroleum Hydrocarbons	< 10

SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206) 922-2310 - FAX (206) 922-5047

QUALITY CONTROL REPORT

Total Metals

Client: GeoGroup N.W., Inc.
Lab No: 26201qc2
Units: mg/kg
Date: August 21, 1992

METHOD BLANK

Parameter	Blank Value
Total Lead	< 1.3

SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

QUALITY CONTROL REPORT

WTPH-G with BTEX by EPA SW-846 Method 8020

Client: GeoGroup N.W., Inc.
Lab No: 26201qc3
Units: mg/kg
Date: August 21, 1992

DUPLICATES

Dup No. 26201-2

Parameter	Sample (S)	Duplicate (D)	RPD	FLAGS
Gasoline (C_7-C_{12})	6,000	6,300	4.9	E
Benzene	4.0	3.9	2.5	
Toluene	55	59	7.0	
Ethyl Benzene	66	71	7.3	
Xylenes	330	350	5.9	E
SURROGATE RECOVERY, %				
Trifluorotoluene				X8

RPD = Relative Percent Difference
= [(S - D) / ((S + D) / 2] x 100

METHOD BLANK

Blank No. 92081803

Parameter	Blank Value
Gasoline (C_7-C_{12})	< 1.0
Benzene	< 0.05
Toluene	< 0.05
Ethyl Benzene	< 0.05
Xylenes	< 0.05
SURROGATE RECOVERY, %	
Trifluorotoluene	121

SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206) 922-2310 - FAX (206) 922-5047

DATA QUALIFIER FLAGS

ND: Indicates that the analyte was analyzed for but was not detected. The associated numerical value is the practical quantitation limit, corrected for sample dilution.

J: The analyte was analyzed for and positively identified, but the associated numerical value is an estimated quantity. This qualifier is used when estimating a TIC concentration or when the concentration of the analyte is less than the practical quantitation limit.

C: The identification of this analyte was confirmed by GC/MS.

B: This analyte was also detected in the associated method blank. There is a possibility of blank contamination.

E: The concentration of this analyte exceeded the instrument calibration range.

D: The reported result for this analyte is calculated based on a secondary dilution factor.

A: This TIC is a suspected aldol-condensation product.

X1: Contaminant does not appear to be "typical" product. Elution pattern suggests it may be _____.

X2: Contaminant does not appear to be "typical" product. Further testing is suggested for identification.

X3: Identification and quantification of peaks was complicated by matrix interference; GC/MS confirmation is recommended.

X4: RPD for duplicates outside QC limits. Sample was re-analyzed with similar results. Sample matrix is non-homogeneous.

X5: Matrix spike was diluted out during analysis.

X6: Recovery of matrix spike outside QC limits. Sample was re-analyzed with similar results.

X7: Recovery of matrix spike outside QC limits. Matrix interference is indicated by blank spike recovery data.

X8: Surrogate was diluted out during analysis.

X9: Surrogate recovery outside QC limits due to matrix composition.

X10: Surrogate recovery outside QC limits due to high contaminant levels.

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

February 15, 2006

Keith Johnson
GEO Group Northwest, Inc.
13240 NE 20th Street, Suite 10
Bellevue, WA 98005

Re: Analytical Data for Project E-0260
Laboratory Reference No. 0602-029

Dear Keith:

Enclosed are the analytical results and associated quality control data for samples submitted on February 2, 2006.

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

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

Sincerely,

David Baumeister
Project Manager

Enclosures

Date of Report: February 15, 2006
Samples Submitted: February 2, 2006
Laboratory Reference: 0602-029
Project: E-0260

Case Narrative

Samples were collected on February 1 and 2, 2006 and received by the laboratory on February 2, 2006. They were maintained at the laboratory at a temperature of 2°C to 6°C except as noted below.

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

NWTPH Dx Analysis

The Diesel Fuel results reported for samples B-1 12.5' and B-4 14' are being impacted by the presence of Gasoline Range Hydrocarbons.

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.

Volatiles EPA 8260B Analysis

Per EPA Method 5035A, samples were received by the laboratory in pre-weighed 40 mL VOA vials within 48 hours of sample collection. They were stored in a freezer at between -7°C and -20°C until extraction or analysis.

The value reported for 1,2,4-Trimethylbenzene for sample B-4 14' exceeds the quantitation range and is therefore an estimate.

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.

NWTPH-G/BTEX Analysis

Per EPA Method 5035A, samples were received by the laboratory in pre-weighed 40 mL VOA vials within 48 hours of sample collection. They were stored in a freezer at between -7°C and -20°C until extraction or analysis.

For sample B-4 14', the NWTPH-Gx result did not correlate with the NWTPH-Dx and EPA 8260B results. Therefore, sample B-4 14' was re-analyzed using the EPA 8260B VOA vial instead of the NWTPH-Gx VOA vial.

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: February 15, 2006
Samples Submitted: February 2, 2006
Laboratory Reference: 0602-029
Project: E-0260

NWTPH-Gx/BTEX

Date Extracted:	2-3-06
Date Analyzed:	2-6-06

Matrix: Soil
Units: mg/kg (ppm)

Client ID:	**B-1 5'**			**B-1 12.5'**		
Lab ID:	02-029-01			02-029-02		
	Result	Flags	PQL	**Result**	Flags	PQL
Benzene	**ND**		0.020	**17**		0.24
Toluene	**ND**		0.047	**7.2**		1.2
Ethyl Benzene	**ND**		0.047	**210**	**E**	1.2
m,p-Xylene	**0.061**		0.047	**700**	**E**	1.2
o-Xylene	**ND**		0.047	**160**	**E**	1.2
TPH-Gas	**16**		4.7	**12000**		120
Surrogate Recovery:						
Fluorobenzene	74%			101%		

Date of Report: February 15, 2006
Samples Submitted: February 2, 2006
Laboratory Reference: 0602-029
Project: E-0260

NWTPH-Gx/BTEX

Date Extracted:	2-3-06	
Date Analyzed:	2-3&6-06	
Matrix: Soil		
Units: mg/kg (ppm)		
Client ID:	**B-3 10'**	**B-3 12.5'**
Lab ID:	02-029-03	02-029-04

	Result	Flags	PQL	**Result**	Flags	PQL
Benzene	**1.8**		0.022			
Toluene	**4.5**		0.11			
Ethyl Benzene	**12**		1.1			
m,p-Xylene	**27**		1.1			
o-Xylene	**8.4**		0.11			
TPH-Gas	**1300**		110	**ND**		13
Surrogate Recovery:						
Fluorobenzene	89%			86%		

Date of Report: February 15, 2006
Samples Submitted: February 2, 2006
Laboratory Reference: 0602-029
Project: E-0260

NWTPH-Gx/BTEX

Date Extracted:	2-3-06					
Date Analyzed:	2-3&14-06					
Matrix: Soil						
Units: mg/kg (ppm)						
Client ID:	**B-4 9'**			**B-4 14'**		
Lab ID:	02-029-06			02-029-07		
	Result	Flags	PQL	**Result**	Flags	PQL
Benzene	**0.38**		0.021			
Toluene	**0.21**		0.10			
Ethyl Benzene	**0.12**		0.10			
m,p-Xylene	**0.19**		0.10			
o-Xylene	**ND**		0.10			
TPH-Gas	**ND**		10	**8300**		110
Surrogate Recovery:						
Fluorobenzene	79%			92%		

Date of Report: February 15, 2006
Samples Submitted: February 2, 2006
Laboratory Reference: 0602-029
Project: E-0260

NWTPH-Gx/BTEX
METHOD BLANK QUALITY CONTROL

Date Extracted:	2-3-06
Date Analyzed:	2-3-06
Matrix: Soil	
Units: mg/kg (ppm)	
Lab ID:	MB0203S1

	Result	Flags	PQL
Benzene	**ND**		0.020
Toluene	**ND**		0.050
Ethyl Benzene	**ND**		0.050
m,p-Xylene	**ND**		0.050
o-Xylene	**ND**		0.050
TPH-Gas	**ND**		5.0
Surrogate Recovery:			
Fluorobenzene	86%		

Date of Report: February 15, 2006
Samples Submitted: February 2, 2006
Laboratory Reference: 0602-029
Project: E-0260

NWTPH-Gx/BTEX
DUPLICATE QUALITY CONTROL

Date Extracted: 2-3-06
Date Analyzed: 2-3-06

Matrix: Soil
Units: mg/kg (ppm)

Lab ID:	02-020-02 **Original**	02-020-02 **Duplicate**	**RPD**	**Flags**
Benzene	**ND**	**ND**	NA	
Toluene	**ND**	**ND**	NA	
Ethyl Benzene	**ND**	**ND**	NA	
m,p-Xylene	**ND**	**ND**	NA	
o-Xylene	**ND**	**ND**	NA	
TPH-Gas	**ND**	**ND**	NA	
Surrogate Recovery:				
Fluorobenzene	69%	68%		

Date of Report: February 15, 2006
Samples Submitted: February 2, 2006
Laboratory Reference: 0602-029
Project: E-0260

NWTPH-Gx/BTEX
MS/MSD QUALITY CONTROL

Date Extracted: 2-3-06
Date Analyzed: 2-3-06

Matrix: Soil
Units: mg/kg (ppm)

Spike Level (ppm): 2.50

Lab ID:	02-020-01 MS	Percent Recovery	02-020-01 MSD	Percent Recovery	RPD	Flags
Benzene	**8.40**	**78**	**8.41**	**78**	0	
Toluene	**10.3**	**77**	**10.3**	**78**	0	
Ethyl Benzene	**2.51**	**94**	**2.46**	**92**	2	
m,p-Xylene	**2.69**	**93**	**2.65**	**91**	2	
o-Xylene	**2.55**	**94**	**2.51**	**92**	2	
Surrogate Recovery:						
Fluorobenzene	75%		76%			

Date of Report: February 15, 2006
Samples Submitted: February 2, 2006
Laboratory Reference: 0602-029
Project: E-0260

NWTPH-Dx

Date Extracted:	2-7-06
Date Analyzed:	2-7-06
Matrix:	Soil
Units:	mg/kg (ppm)

Client ID:	**B-1 5'**	**B-1 12.5'**	**B-3 10'**
Lab ID:	02-029-01	02-029-02	02-029-03
Diesel Range:	**ND**	**560**	**ND**
PQL:	28	31	30
Identification:	—	Diesel Fuel#2	—
Lube Oil Range:	**ND**	**ND**	**ND**
PQL:	57	62	60
Identification:	—	—	—
Surrogate Recovery			
o-Terphenyl:	84%	98%	112%
Flags:	Y	Y,Z	Y

Date of Report: February 15, 2006
Samples Submitted: February 2, 2006
Laboratory Reference: 0602-029
Project: E-0260

NWTPH-Dx

Date Extracted:	2-7-06
Date Analyzed:	2-7-06
Matrix:	Soil
Units:	mg/kg (ppm)

Client ID:	**B-3 12.5'**	**B-4 9'**	**B-4 14'**
Lab ID:	02-029-04	02-029-06	02-029-07
Diesel Range:	**ND**	**ND**	**280**
PQL:	27	28	31
Identification:	—	—	Diesel Fuel#2
Lube Oil Range:	**ND**	**ND**	**ND**
PQL:	54	55	62
Identification:	—	—	—
Surrogate Recovery			
o-Terphenyl:	106%	112%	119%
Flags:	Y	Y	Y,Z

Date of Report: February 15, 2006
Samples Submitted: February 2, 2006
Laboratory Reference: 0602-029
Project: E-0260

NWTPH-Dx
METHOD BLANK QUALITY CONTROL

Date Extracted:	2-7-06
Date Analyzed:	2-7-06
Matrix:	Soil
Units:	mg/kg (ppm)
Lab ID:	MB0207S2
Diesel Range:	**ND**
PQL:	25
Identification:	—
Lube Oil Range:	**ND**
PQL:	50
Identification:	—
Surrogate Recovery	
o-Terphenyl:	100%
Flags:	Y

Date of Report: February 15, 2006
Samples Submitted: February 2, 2006
Laboratory Reference: 0602-029
Project: E-0260

NWTPH-Dx
DUPLICATE QUALITY CONTROL

Date Extracted:	2-7-06
Date Analyzed:	2-7-06
Matrix:	Soil
Units:	mg/kg (ppm)

Lab ID:	02-040-01	02-040-01 DUP
Diesel Range:	**10500**	**11200**
PQL:	1300	1300
RPD:	7	
Surrogate Recovery		
o-Terphenyl:	—	—
Flags:	Y,S	Y,S

Date of Report: February 15, 2006
Samples Submitted: February 2, 2006
Laboratory Reference: 0602-029
Project: E-0260

VOLATILES by EPA 8260B

Date Extracted: 2-3-06
Date Analyzed: 2-3-06

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 02-029-04
Client ID: B-3 12.5'

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		0.057
Chloromethane	ND		0.057
Vinyl Chloride	ND		0.057
Bromomethane	ND		0.057
Chloroethane	ND		0.057
Trichlorofluoromethane	ND		0.057
1,1-Dichloroethene	ND		0.057
Acetone	ND		0.28
Iodomethane	ND		0.28
Carbon Disulfide	ND		0.057
Methylene Chloride	ND		0.28
(trans) 1,2-Dichloroethene	ND		0.057
Methyl t-Butyl Ether	ND		0.057
1,1-Dichloroethane	ND		0.057
Vinyl Acetate	ND		0.28
2,2-Dichloropropane	ND		0.057
(cis) 1,2-Dichloroethene	ND		0.057
2-Butanone	ND		0.28
Bromochloromethane	ND		0.057
Chloroform	ND		0.057
1,1,1-Trichloroethane	ND		0.057
Carbon Tetrachloride	ND		0.057
1,1-Dichloropropene	ND		0.057
Benzene	0.093		0.057
1,2-Dichloroethane	ND		0.057
Trichloroethene	ND		0.057
1,2-Dichloropropane	ND		0.057
Dibromomethane	ND		0.057
Bromodichloromethane	ND		0.057
2-Chloroethyl Vinyl Ether	ND		0.28
(cis) 1,3-Dichloropropene	ND		0.057
Methyl Isobutyl Ketone	ND		0.28
Toluene	0.39		0.057
(trans) 1,3-Dichloropropene	ND		0.057

Date of Report: February 15, 2006
Samples Submitted: February 2, 2006
Laboratory Reference: 0602-029
Project: E-0260

VOLATILES by EPA 8260B
Page 2 of 2

Lab ID: 02-029-04
Client ID: B-3 12.5'

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND		0.057
Tetrachloroethene	ND		0.057
1,3-Dichloropropane	ND		0.057
2-Hexanone	ND		0.28
Dibromochloromethane	ND		0.057
1,2-Dibromoethane	ND		0.057
Chlorobenzene	ND		0.057
1,1,1,2-Tetrachloroethane	ND		0.057
Ethylbenzene	0.19		0.057
m,p-Xylene	0.72		0.11
o-Xylene	0.36		0.057
Styrene	ND		0.057
Bromoform	ND		0.057
Isopropylbenzene	ND		0.057
Bromobenzene	ND		0.057
1,1,2,2-Tetrachloroethane	ND		0.057
1,2,3-Trichloropropane	ND		0.057
n-Propylbenzene	ND		0.057
2-Chlorotoluene	ND		0.057
4-Chlorotoluene	ND		0.057
1,3,5-Trimethylbenzene	0.091		0.057
tert-Butylbenzene	ND		0.057
1,2,4-Trimethylbenzene	0.31		0.057
sec-Butylbenzene	ND		0.057
1,3-Dichlorobenzene	ND		0.057
p-Isopropyltoluene	ND		0.057
1,4-Dichlorobenzene	ND		0.057
1,2-Dichlorobenzene	ND		0.057
n-Butylbenzene	ND		0.057
1,2-Dibromo-3-chloropropane	ND		0.28
1,2,4-Trichlorobenzene	ND		0.057
Hexachlorobutadiene	ND		0.28
Naphthalene	ND		0.057
1,2,3-Trichlorobenzene	ND		0.057

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	98	71-126
Toluene, d8	99	73-130
4-Bromofluorobenzene	110	70-130

Date of Report: February 15, 2006
Samples Submitted: February 2, 2006
Laboratory Reference: 0602-029
Project: E-0260

VOLATILES by EPA 8260B
Page 1 of 2

Date Extracted:	2-3-06
Date Analyzed:	2-3-06
Matrix:	Soil
Units:	mg/kg (ppm)
Lab ID:	02-029-07
Client ID:	**B-4 14'**

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		1.1
Chloromethane	ND		1.1
Vinyl Chloride	ND		1.1
Bromomethane	ND		1.1
Chloroethane	ND		1.1
Trichlorofluoromethane	ND		1.1
1,1-Dichloroethene	ND		1.1
Acetone	ND		5.7
Iodomethane	ND		5.7
Carbon Disulfide	ND		1.1
Methylene Chloride	ND		5.7
(trans) 1,2-Dichloroethene	ND		1.1
Methyl t-Butyl Ether	ND		1.1
1,1-Dichloroethane	ND		1.1
Vinyl Acetate	ND		5.7
2,2-Dichloropropane	ND		1.1
(cis) 1,2-Dichloroethene	ND		1.1
2-Butanone	ND		5.7
Bromochloromethane	ND		1.1
Chloroform	ND		1.1
1,1,1-Trichloroethane	ND		1.1
Carbon Tetrachloride	ND		1.1
1,1-Dichloropropene	ND		1.1
Benzene	15		1.1
1,2-Dichloroethane	ND		1.1
Trichloroethene	ND		1.1
1,2-Dichloropropane	ND		1.1
Dibromomethane	ND		1.1
Bromodichloromethane	ND		1.1
2-Chloroethyl Vinyl Ether	ND		5.7
(cis) 1,3-Dichloropropene	ND		1.1
Methyl Isobutyl Ketone	ND		5.7
Toluene	35		1.1
(trans) 1,3-Dichloropropene	ND		1.1

Date of Report: February 15, 2006
Samples Submitted: February 2, 2006
Laboratory Reference: 0602-029
Project: E-0260

VOLATILES by EPA 8260B
Page 2 of 2

Lab ID: 02-029-07
Client ID: B-4 14'

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND		1.1
Tetrachloroethene	ND		1.1
1,3-Dichloropropane	ND		1.1
2-Hexanone	ND		5.7
Dibromochloromethane	ND		1.1
1,2-Dibromoethane	ND		1.1
Chlorobenzene	ND		1.1
1,1,1,2-Tetrachloroethane	ND		1.1
Ethylbenzene	100		1.1
m,p-Xylene	330		2.3
o-Xylene	110		1.1
Styrene	ND		1.1
Bromoform	ND		1.1
Isopropylbenzene	18		1.1
Bromobenzene	ND		1.1
1,1,2,2-Tetrachloroethane	ND		1.1
1,2,3-Trichloropropane	ND		1.1
n-Propylbenzene	69		1.1
2-Chlorotoluene	ND		1.1
4-Chlorotoluene	ND		1.1
1,3,5-Trimethylbenzene	120		1.1
tert-Butylbenzene	ND		1.1
1,2,4-Trimethylbenzene	290	E	1.1
sec-Butylbenzene	11		1.1
1,3-Dichlorobenzene	ND		1.1
p-Isopropyltoluene	5.5		1.1
1,4-Dichlorobenzene	ND		1.1
1,2-Dichlorobenzene	ND		1.1
n-Butylbenzene	31		1.1
1,2-Dibromo-3-chloropropane	ND		5.7
1,2,4-Trichlorobenzene	ND		1.1
Hexachlorobutadiene	ND		5.7
Naphthalene	33		1.1
1,2,3-Trichlorobenzene	ND		1.1

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	99	71-126
Toluene, d8	89	73-130
4-Bromofluorobenzene	104	70-130

Date of Report: February 15, 2006
Samples Submitted: February 2, 2006
Laboratory Reference: 0602-029
Project: E-0260

VOLATILES by EPA 8260B
METHOD BLANK QUALITY CONTROL
Page 1 of 2

Date Extracted:	2-3-06
Date Analyzed:	2-3-06
Matrix:	Soil
Units:	mg/kg (ppm)
Lab ID:	MB0203S1

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		0.0010
Chloromethane	ND		0.0010
Vinyl Chloride	ND		0.0010
Bromomethane	ND		0.0010
Chloroethane	ND		0.0010
Trichlorofluoromethane	ND		0.0010
1,1-Dichloroethene	ND		0.0010
Acetone	ND		0.0050
Iodomethane	ND		0.0050
Carbon Disulfide	ND		0.0010
Methylene Chloride	ND		0.0050
(trans) 1,2-Dichloroethene	ND		0.0010
Methyl t-Butyl Ether	ND		0.0010
1,1-Dichloroethane	ND		0.0010
Vinyl Acetate	ND		0.0050
2,2-Dichloropropane	ND		0.0010
(cis) 1,2-Dichloroethene	ND		0.0010
2-Butanone	ND		0.0050
Bromochloromethane	ND		0.0010
Chloroform	ND		0.0010
1,1,1-Trichloroethane	ND		0.0010
Carbon Tetrachloride	ND		0.0010
1,1-Dichloropropene	ND		0.0010
Benzene	ND		0.0010
1,2-Dichloroethane	ND		0.0010
Trichloroethene	ND		0.0010
1,2-Dichloropropane	ND		0.0010
Dibromomethane	ND		0.0010
Bromodichloromethane	ND		0.0010
2-Chloroethyl Vinyl Ether	ND		0.0050
(cis) 1,3-Dichloropropene	ND		0.0010
Methyl Isobutyl Ketone	ND		0.0050
Toluene	ND		0.0010
(trans) 1,3-Dichloropropene	ND		0.0010

Date of Report: February 15, 2006
Samples Submitted: February 2, 2006
Laboratory Reference: 0602-029
Project: E-0260

VOLATILES by EPA 8260B
METHOD BLANK QUALITY CONTROL
Page 2 of 2

Lab ID: MB0203S1

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND		0.0010
Tetrachloroethene	ND		0.0010
1,3-Dichloropropane	ND		0.0010
2-Hexanone	ND		0.0050
Dibromochloromethane	ND		0.0010
1,2-Dibromoethane	ND		0.0010
Chlorobenzene	ND		0.0010
1,1,1,2-Tetrachloroethane	ND		0.0010
Ethylbenzene	ND		0.0010
m,p-Xylene	ND		0.0020
o-Xylene	ND		0.0010
Styrene	ND		0.0010
Bromoform	ND		0.0010
Isopropylbenzene	ND		0.0010
Bromobenzene	ND		0.0010
1,1,2,2-Tetrachloroethane	ND		0.0010
1,2,3-Trichloropropane	ND		0.0010
n-Propylbenzene	ND		0.0010
2-Chlorotoluene	ND		0.0010
4-Chlorotoluene	ND		0.0010
1,3,5-Trimethylbenzene	ND		0.0010
tert-Butylbenzene	ND		0.0010
1,2,4-Trimethylbenzene	ND		0.0010
sec-Butylbenzene	ND		0.0010
1,3-Dichlorobenzene	ND		0.0010
p-Isopropyltoluene	ND		0.0010
1,4-Dichlorobenzene	ND		0.0010
1,2-Dichlorobenzene	ND		0.0010
n-Butylbenzene	ND		0.0010
1,2-Dibromo-3-chloropropane	ND		0.0050
1,2,4-Trichlorobenzene	ND		0.0010
Hexachlorobutadiene	ND		0.0050
Naphthalene	ND		0.0010
1,2,3-Trichlorobenzene	ND		0.0010

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	91	71-126
Toluene, d8	101	73-130
4-Bromofluorobenzene	109	70-130

Date of Report: February 15, 2006
Samples Submitted: February 2, 2006
Laboratory Reference: 0602-029
Project: E-0260

VOLATILES by EPA 8260B
SB/SBD QUALITY CONTROL

Date Extracted: 2-3-06
Date Analyzed: 2-3-06

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: SB0203S1

Compound	Spike Amount	SB	Percent Recovery	SBD	Percent Recovery	Recovery Limits	Flags
1,1-Dichloroethene	0.0500	0.0492	98	0.0472	94	70-130	
Benzene	0.0500	0.0488	98	0.0464	93	70-130	
Trichloroethene	0.0500	0.0506	101	0.0474	95	70-130	
Toluene	0.0500	0.0503	101	0.0458	92	70-130	
Chlorobenzene	0.0500	0.0511	102	0.0482	96	70-130	

	RPD	RPD Limit	Flags
1,1-Dichloroethene	4	11	
Benzene	5	11	
Trichloroethene	7	13	
Toluene	9	11	
Chlorobenzene	6	12	

Date of Report: February 15, 2006
Samples Submitted: February 2, 2006
Laboratory Reference: 0602-029
Project: E-0260

% MOISTURE

Date Analyzed: 2-3-06

Client ID	Lab ID	% Moisture
B-1 5'	02-029-01	12
B-1 12.5'	02-029-02	19
B-3 10'	02-029-03	17
B-3 12.5'	02-029-04	8
B-4 9'	02-029-06	9
B-4 14'	02-029-07	19

OnSite Environmental Inc.

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.

G - Insufficient sample quantity for duplicate analysis.

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 (toluene-napthalene) are present in the sample.

O - Hydrocarbons indicative of diesel fuel 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.

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 silica gel cleanup procedure.

Y - Sample extract treated with an acid/silica gel cleanup procedure.

Z - The Diesel Range result is being impacted by the presence of Gasoline Range Hydrocarbons.

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

Chain of Custody

OnSite Environmental Inc.
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • Fax: (425) 885-4603

Company: GEO Group Northwest Inc
Project Number: E-0260
Project Name: 701 S. Jackson St, Seattle, WA
Project Manager: Keith Johnson
Sampled by: Keith Johnson

Turnaround Request (in working days)

(Check One)

☐ Same Day ☐ 1 Day
☐ 2 Day ☐ 3 Day
☒ Standard (7 working days)
☐ _____ (other)

Laboratory Number: 02-029

Requested Analysis

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Cont.	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Dx	Volatiles by 8260B	Halogenated Volatiles by 8260B	Semivolatiles by 8270C	PAHs by 8270C / SIM	PCBs by 8082	Pesticides by 8081A	Herbicides by 8151A	Total RCRA Metals (8)	TCLP Metals	HEM by 1664	VPH	EPH				HOLD	% Moisture
1	B-1 5'	2/1/06	10:30	Soil	1 VOA 1 4oz		X	X																	X
2	B-1 12.5'	2/1/06	10:20	Soil	"		X	X																	X
3	B-3 10'	2/1/06	3:10p	Soil	"		X	X																	X
4	B-3 12.5'	2/1/06	3:15p	Soil	2 VOA 1 4oz		X	X	X																X
5	B-4 7.5'	2/2/06	8:30	Soil	" "																			X	
6	B-4 9'	2/2/06	9:00	Soil	1 VOA 1 4oz		X	X																	X
7	B-4 14'	2/2/06	9:40	Soil	2 VOA 1 4oz		X	X	X																X

	Signature	Company	Date	Time
Relinquished by		GEO Group NW	2/2/06	12:00
Received by		Ace Env	2/2/06	1200
Relinquished by				
Received by				
Relinquished by				
Received by				

Comments/Special Instructions:

Reviewed by/Date

Reviewed by/Date

Chromatograms with final report ☐

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
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3012 16th Avenue West
Seattle, WA 98119-2029
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e-mail: fbi@isomedia.com

November 19, 2010

Robert Roe, Project Manager
Environmental Associates, Inc.
1380 112th Ave. NE, 300
Bellevue, WA 98004

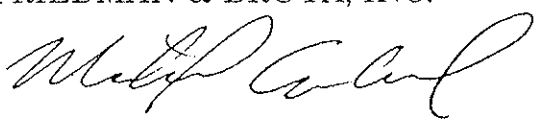
Dear Mr. Roe:

Included are the results from the testing of material submitted on November 3, 2010 from the 7th & Jackson Gas Station, F&BI 011036 project. There are 10 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
EAI1119R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on November 3, 2010 by Friedman & Bruya, Inc. from the Environmental Associates, Inc. 7th & Jackson Gas Station , F&BI 011036 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Environmental Associates, Inc.
011036-01	UST-1-B-12
011036-02	UST-1-N-8
011036-03	UST-1-W-6
011036-04	UST-1-S-8
011036-05	UST-1-E-8
011036-06	UST-1-OB
011036-07	UST-2-B-12
011036-08	UST-2-OB
011036-09	UST-2-N-8
011036-10	UST-2-W-6
011036-11	UST-2-S-8
011036-12	UST-2-E-8

All quality control requirements were acceptable.

Date of Report: 11/19/10
Date Received: 11/03/10
Project: 7th & Jackson Gas Station, F&BI 011036
Date Extracted: 11/04/10
Date Analyzed: 11/08/10 and 11/11/10

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES AND TPH AS GASOLINE USING EPA METHOD 8021B AND NWTPH-Gx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
UST-1-B-12 011036-01	<0.02	<0.02	<0.02	0.34	110	91
UST-1-N-8/W-6 011036-02/03	<0.02	<0.02	<0.02	<0.06	<2	70
UST-1-S-8/E-8 011036-04/05	<0.02	<0.02	<0.02	1.4	37	94
UST-1-OB 011036-06	<0.02	<0.02	<0.02	<0.06	<2	82
UST-2-B-12 011036-07	<0.02	<0.02	<0.02	<0.06	<2	84
UST-2-OB 011036-08	<0.02	<0.02	<0.02	<0.06	<2	88
UST-2-N-8/W-6 011036-09/10	<0.02	<0.02	<0.02	<0.06	<2	90
UST-2-S-8/E-8 011036-11/12	<0.02	<0.02	<0.02	<0.06	<2	80
Method Blank 00-1814 MB	<0.02	<0.02	<0.02	<0.06	<2	86

Analysis For Total Metals By EPA Method 200.8

Client ID:	UST-1-B-12	Client:	Environmental Associates, Inc.
Date Received:	11/03/10	Project:	7th & Jackson Gas Station, F&BI 011036
Date Extracted:	11/04/10	Lab ID:	011036-01
Date Analyzed:	11/04/10	Data File:	011036-01.029
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	96	60	125

Analyte:	Concentration mg/kg (ppm)
Lead	2.22

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	UST-1-OB	Client:	Environmental Associates, Inc.
Date Received:	11/03/10	Project:	7th & Jackson Gas Station, F&BI 011036
Date Extracted:	11/04/10	Lab ID:	011036-06
Date Analyzed:	11/04/10	Data File:	011036-06.035
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	94	60	125

Analyte:	Concentration mg/kg (ppm)
Lead	7.92

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	UST-2-B-12	Client:	Environmental Associates, Inc.
Date Received:	11/03/10	Project:	7th & Jackson Gas Station, F&BI 011036
Date Extracted:	11/04/10	Lab ID:	011036-07
Date Analyzed:	11/04/10	Data File:	011036-07.036
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	91	60	125

Analyte:	Concentration mg/kg (ppm)
Lead	1.98

Analysis For Total Metals By EPA Method 200.8

Client ID:	UST-2-OB	Client:	Environmental Associates, Inc.
Date Received:	11/03/10	Project:	7th & Jackson Gas Station, F&BI 011036
Date Extracted:	11/04/10	Lab ID:	011036-08
Date Analyzed:	11/04/10	Data File:	011036-08.038
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	90	60	125

Analyte:	Concentration mg/kg (ppm)
Lead	13.2

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Environmental Associates, Inc.
Date Received:	NA	Project:	7th & Jackson Gas Station, F&BI 011036
Date Extracted:	11/04/10	Lab ID:	I0-632 mb
Date Analyzed:	11/04/10	Data File:	I0-632 mb.027
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	95	60	125

Analyte:	Concentration mg/kg (ppm)
Lead	<1

Date of Report: 11/19/10
Date Received: 11/03/10
Project: 7th & Jackson Gas Station, F&BI 011036

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: 009202-06 (Duplicate)

Analyte	Reporting Units	(Wet Wt) Sample Result	(Wet Wt) Duplicate Result	Relative Percent Difference (Limit 20)
Benzene	mg/kg (ppm)	7.1	8.3	16
Toluene	mg/kg (ppm)	87	85	2
Ethylbenzene	mg/kg (ppm)	15	15	1
Xylenes	mg/kg (ppm)	94	91	3
Gasoline	mg/kg (ppm)	1,100	1,100	3

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	mg/kg (ppm)	0.5	84	60-120
Toluene	mg/kg (ppm)	0.5	82	60-120
Ethylbenzene	mg/kg (ppm)	0.5	82	60-120
Xylenes	mg/kg (ppm)	1.5	83	60-120
Gasoline	mg/kg (ppm)	20	90	60-120

Date of Report: 11/19/10
Date Received: 11/03/10
Project: 7th & Jackson Gas Station, F&BI 011036

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 200.8

Laboratory Code: 011036-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Lead	mg/kg (ppm)	20	2.22	104	107	65-126	3

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Lead	mg/kg (ppm)	20	105	81-120

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.

A1 – More than one compound of similar molecule structure was identified with equal probability.

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 this range fell outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte indicated may be due to carryover from previous sample injections.

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

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. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j – The result is below normal reporting limits. 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 analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is 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 compound indicated 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 in a container not approved by the method. The value reported should be considered an estimate.

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

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.

lient / Bill Global Diving + Salvage 011036

SAMPLE CHAIN OF CUSTODY ME 11-03-10 CI2 / VS1

Send Report To Roberto Roe

Company Environmental Associates, Inc

Address 1380 - 112th Ave NE, Suite 300

City, State, ZIP Bellevue, WA 98004

Phone # (425) 455-9025 Fax # (425) 455-2316

SAMPLERS (signature)

PROJECT NAME/NO. 7th + Jackson Gas Station

PO # Global - Diving + Salvage

REMARKS Send copy of lab report to EAI
Bill to Global Diving + Salvage

TURNAROUND TIME
- [x] Standard (2 Weeks)
- [ ] RUSH
Rush charges authorized by:

SAMPLE DISPOSAL
- [ ] Dispose after 30 days
- [ ] Return samples
- [ ] Will call with instructions

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	total lead					Notes
						ANALYSES REQUESTED											
UST-1-B-12	01 A-B	11/02/2010		Soil	2		X					X					
UST-1-N-8	02 A-B				2		X										Composite
UST-1-W-6	03 A-B				2		X										
UST-1-S-8	04 A-B				2		X										Composite
UST-1-E-8	05 A-B				2		X										
UST-1-OB	06 A-B				2		X					X					
UST-2-B-12	07 A-B				2		X					X					
UST-2-OB	08 A-B				2		X					X					
UST-2-N-8	09 A-B				2		X										
UST-2-W-6	10 A-B	↓		↓	2		X										Composite

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Robert B Roe	EAI	11/02/2010	
Received by:	DO VO	FedEx	11-03-10	12.50
Relinquished by:				
Received by:				

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

FORMS\COC\COC.DOC

Samples received at 9 °C

Global Diving + Salvage

SAMPLE CHAIN OF CUSTODY ME H-03-10 CI2/KS1

Send Report To EAI 011036

Company

Address

City, State, ZIP

Phone # Fax #

SAMPLERS (signature)

PROJECT NAME/NO. 7th + Jackson Gas Station

PO #

REMARKS

TURNAROUND TIME
- [x] Standard (2 Weeks)
- [ ] RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- [ ] Dispose after 30 days
- [ ] Return samples
- [ ] Will call with instructions

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	ANALYSES REQUESTED: TPH-Diesel	TPH-Gasoline (WTX)	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	Notes
[redacted]												
UST-2-S-8	11A-B	11/02/2010		Soil	2		X					
UST-2-E-8	12A-B	↓		↓	2		X					Composite

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Robert B. Roe	EAI	11/03/2010	
Received by:	DA VO	FEBI	11-03-10	12:50
Relinquished by:				
Received by:				

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

FORMS\COC\COC.DOC

Samples received at 9 °C

November 10, 2011

Mr. Tim Syverson
Landau Associates, Inc.
130 - 2nd Ave. S.
Edmonds, WA 98020

Dear Mr. Syverson,

On November 4th, 5 samples were received by our laboratory and assigned our laboratory project number 1111032. The project was identified as your 7th & Jackson Project / #374014.010.011. The sample identification and requested analyses are outlined on the attached chain of custody record.

No abnormalities or nonconformances were observed during the analyses of the project samples.

Please do not hesitate to call me if you have any questions or if I can be of further assistance.

Sincerely,

ALS Laboratory Group

Rick Bagan
Laboratory Director

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Laboratory Group A Campbell Brothers Limited Company

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	11/10/2011 1111032 -02
CLIENT CONTACT:	Tim Syverson	DATE RECEIVED:	11/4/2011
CLIENT PROJECT:	7th & Jackson Project / #374014.010.011	COLLECTION DATE:	11/4/2011 10:20
CLIENT SAMPLE ID	B-6 S-6	WDOE ACCREDITATION:	C601

DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	U	3.0	0.66	MG/KG	11/09/2011	DLC
TPH-Diesel Range	NWTPH-DX w/ SGA	U	25	1	MG/KG	11/04/2011	EBS
TPH-Oil Range	NWTPH-DX w/ SGA	U	50	1	MG/KG	11/04/2011	EBS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT 0.66X Dilution	NWTPH-GX	**91.3**	11/09/2011	DLC
C25	NWTPH-DX w/ SGA	**117**	11/04/2011	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Laboratory Group A Campbell Brothers Limited Company

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	11/10/2011 1111032 -03
CLIENT CONTACT:	Tim Syverson	DATE RECEIVED:	11/4/2011
CLIENT PROJECT:	7th & Jackson Project / #374014.010.011	COLLECTION DATE:	11/4/2011 10:30
CLIENT SAMPLE ID	B-6 S-7	WDOE ACCREDITATION:	C601

DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	**4.6**	3.0	0.5	MG/KG	11/09/2011	DLC
TPH-Diesel Range	NWTPH-DX w/ SGA	U	25	1	MG/KG	11/04/2011	EBS
TPH-Oil Range	NWTPH-DX w/ SGA	U	50	1	MG/KG	11/04/2011	EBS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT 0.5X Dilution	NWTPH-GX	**79.9**	11/09/2011	DLC
C25	NWTPH-DX w/ SGA	**103**	11/04/2011	EBS

U - Analyte analyzed for but not detected at level above reporting limit.
Chromatogram indicates that it is likely that sample contains highly weathered gasoline.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Laboratory Group A Campbell Brothers Limited Company

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS SDG#: WDOE ACCREDITATION:	11/10/2011 1111032 C601
CLIENT CONTACT:	Tim Syverson		
CLIENT PROJECT:	7th & Jackson Project / #374014.010.011		

LABORATORY BLANK RESULTS

MBG-110711S - Batch 2268 - Soil by NWTPH-GX

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	U	3.0	1	MG/KG	11/08/2011	DLC

MB-110411S - Batch 2262 - Soil by NWTPH-DX

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range	NWTPH-DX	U	25	1	MG/KG	11/04/2011	EBS
TPH-Oil Range	NWTPH-DX	U	50	1	MG/KG	11/04/2011	EBS

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Laboratory Group A Campbell Brothers Limited Company

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS SDG#: WDOE ACCREDITATION:	11/10/2011 1111032 C601
CLIENT CONTACT:	Tim Syverson		
CLIENT PROJECT:	7th & Jackson Project / #374014.010.011		

LABORATORY CONTROL SAMPLE RESULTS

ALS Test Batch ID: 2268 - Soil by NWTPH-GX

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range - BS	NWTPH-GX	**70.7**			11/08/2011	DLC
TPH-Volatile Range - BSD	NWTPH-GX	**69.8**	**1**		11/08/2011	DLC

ALS Test Batch ID: 2262 - Soil by NWTPH-DX

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range - BS	NWTPH-DX	**96.2**			11/04/2011	EBS
TPH-Diesel Range - BSD	NWTPH-DX	**90.5**	**6**		11/04/2011	EBS

APPROVED BY

Laboratory Director

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Laboratory Group A Campbell Brothers Limited Company

ALS ENVIRONMENTAL

Sample Receiving Checklist

Client: Landau Associates ALS Job #: 1111032

Project: 7th & Jackson

Received Date: 11-9-11 Received Time: 1530 By: RB

Type of shipping container: Cooler X Box ___ Other ___

Shipped via: UPS/FedEx ___ US Postal Service ___ Courier ALS Hand Delivered ___

	Yes	No	N/A
Were custody seals on outside of sample?	X	___	___
If yes, how many? 2 Where? Top			
Custody seal date: 11/9/11 Seal name: Landau			
Was Chain of Custody properly filled out (ink, signed, dated, etc.)?	X	___	___
Did all bottles have labels?	X	___	___
Did all bottle labels and tags agree with Chain of Custody?	X	___	___
Were samples received within hold time?	X	___	___
Did all bottles arrive in good condition (unbroken, etc.)?	X	___	___
Was sufficient amount of sample sent for the tests indicated?	X	___	___
Was correct preservation added to samples?	X	___	___

If no, Sample Control added preservative to the following:

Sample Number	Reagent	Analyte

Per 5035A High kits

Were VOA vials checked for absence of air bubbles? ___ ___ X

Bubbles present in sample #: ___

Temperature of cooler upon receipt: 5.6 °C (Cold) Cool Ambient N/A

On Ice

Explain any discrepancies: ___

Was client contacted? ___ Who was called? ___ By whom? ___ Date: ___

Outcome of call: ___

LANDAU ASSOCIATES

- [x] Seattle/Edmonds (425) 778-0907
- [ ] Tacoma (253) 926-2493
- [ ] Spokane (509) 327-9737
- [ ] Portland (503) 542-1080
- [ ] _____

1111032

Date 11/4/11

Page 1 of 1

Chain-of-Custody Record

Project Name 7th & Jackson Project No. 374014.010.011

Project Location/Event Seattle

Sampler's Name Brian Christianson

Project Contact Tim Syverson

Send Results To Tim Syverson

Testing Parameters

Turnaround Time
- [x] Standard
- [ ] Accelerated
- [ ] _____

	Sample I.D.	Date	Time	Matrix	No. of Containers	NWTPH-Gx	NWTPH-Dx & O	Lead (total)
1	B-6 S-4	11/4/11	0955	SO.1	2			
2	B-6 S-6		1020		2			
3	B-6 S-7		1030		2			
4	B-6 S-8		1040		2			
5	B-6 S-9		1050		2			

Observations/Comments

- [x] Allow water samples to settle, collect aliquot from clear portion
- [x] NWTPH-Dx - run acid wash/silica gel cleanup
- [ ] ___ run samples standardized to _____ product
- [ ] ___ Analyze for EPH if no specific product identified

VOC/BTEX/VPH (soil):
- [ ] ___ non-preserved
- [ ] ___ preserved w/methanol
- [ ] ___ preserved w/sodium bisulfate
- [ ] ___ Freeze upon receipt

- [ ] ___ Dissolved metal water samples field filtered

Other _____

Special Shipment/Handling or Storage Requirements ALS Courier

Method of Shipment

Relinquished by	Received by	Relinquished by	Received by
Signature [signature]	Signature [signature]	Signature	Signature
Printed Name Brian E Christianson	Printed Name Carl Mon	Printed Name	Printed Name
Company Landau Associates	Company ALS	Company	Company
Date 11/4/11 Time 1440	Date 11/4/11 Time 1500	Date Time	Date Time

WHITE COPY - Project File YELLOW COPY - Laboratory PINK COPY - Client Representative

Rev 8/09

November 18, 2011

Mr. Tim Syverson
Landau Associates, Inc.
130 - 2nd Ave. S.
Edmonds, WA 98020

Dear Mr. Syverson,

On November 11th, 18 samples were received by our laboratory and assigned our laboratory project number 1111062. The project was identified as your 7th & Jackson Property / #374014.010.011. The sample identification and requested analyses are outlined on the attached chain of custody record.

No abnormalities or nonconformances were observed during the analyses of the project samples.

Please do not hesitate to call me if you have any questions or if I can be of further assistance.

Sincerely,

ALS Laboratory Group

Rick Bagan
Laboratory Director

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Laboratory Group A Campbell Brothers Limited Company

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	11/18/2011 1111062 -04
CLIENT CONTACT:	Tim Syverson	DATE RECEIVED:	11/11/2011
CLIENT PROJECT:	7th & Jackson Property / #374014.010.011	COLLECTION DATE:	11/11/2011 12:00
CLIENT SAMPLE ID	B-1 S-5	WDOE ACCREDITATION:	C601

DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	**24000**	600	200	MG/KG	11/17/2011	DLC
TPH-Diesel Range	NWTPH-DX w/ SGA	U	120	1	MG/KG	11/16/2011	EBS
TPH-Oil Range	NWTPH-DX w/ SGA	U	50	1	MG/KG	11/16/2011	EBS
Lead	EPA-6020	**8.9**	0.58	5	MG/KG	11/17/2011	RAL

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT 200X Dilution	NWTPH-GX	**21.3 DS2**	11/17/2011	DLC
C25	NWTPH-DX w/ SGA	**126**	11/16/2011	EBS

U - Analyte analyzed for but not detected at level above reporting limit.
DS2 - Due to high dilution factor surrogate results should be considered uncontrolled.
Chromatogram indicates that it is likely that sample contains lightly weathered gasoline.
Diesel range product reporting limits raised due to volatile range product overlap.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Laboratory Group A Campbell Brothers Limited Company

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	11/18/2011 1111062 -06
CLIENT CONTACT:	Tim Syverson	DATE RECEIVED:	11/11/2011
CLIENT PROJECT:	7th & Jackson Property / #374014.010.011	COLLECTION DATE:	11/11/2011 12:20
CLIENT SAMPLE ID	B-1 S-7	WDOE ACCREDITATION:	C601

DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	**14**	3.0	1	MG/KG	11/17/2011	DLC
TPH-Diesel Range	NWTPH-DX w/ SGA	U	25	1	MG/KG	11/16/2011	EBS
TPH-Oil Range	NWTPH-DX w/ SGA	U	50	1	MG/KG	11/16/2011	EBS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	**96.8**	11/17/2011	DLC
C25	NWTPH-DX w/ SGA	**123**	11/16/2011	EBS

U - Analyte analyzed for but not detected at level above reporting limit.
Chromatogram indicates that it is likely that sample contains lightly weathered gasoline.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Laboratory Group A Campbell Brothers Limited Company

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	11/18/2011 1111062 -07
CLIENT CONTACT:	Tim Syverson	DATE RECEIVED:	11/11/2011
CLIENT PROJECT:	7th & Jackson Property / #374014.010.011	COLLECTION DATE:	11/11/2011 09:20
CLIENT SAMPLE ID	B-2 S-4	WDOE ACCREDITATION:	C601

DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	**14**	3.0	1	MG/KG	11/17/2011	DLC
TPH-Diesel Range	NWTPH-DX w/ SGA	U	25	1	MG/KG	11/16/2011	EBS
TPH-Oil Range	NWTPH-DX w/ SGA	U	50	1	MG/KG	11/16/2011	EBS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	**109**	11/17/2011	DLC
C25	NWTPH-DX w/ SGA	**117**	11/16/2011	EBS

U - Analyte analyzed for but not detected at level above reporting limit.
Chromatogram indicates that it is likely that sample contains lightly weathered gasoline.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Laboratory Group A Campbell Brothers Limited Company

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	11/18/2011 1111062 -09
CLIENT CONTACT:	Tim Syverson	DATE RECEIVED:	11/11/2011
CLIENT PROJECT:	7th & Jackson Property / #374014.010.011	COLLECTION DATE:	11/11/2011 09:30
CLIENT SAMPLE ID	B-2 S-6	WDOE ACCREDITATION:	C601

DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	**11**	3.0	1	MG/KG	11/17/2011	DLC
TPH-Diesel Range	NWTPH-DX w/ SGA	U	25	1	MG/KG	11/16/2011	EBS
TPH-Oil Range	NWTPH-DX w/ SGA	U	50	1	MG/KG	11/16/2011	EBS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	**116**	11/17/2011	DLC
C25	NWTPH-DX w/ SGA	**90.8**	11/16/2011	EBS

U - Analyte analyzed for but not detected at level above reporting limit.
Chromatogram indicates that it is likely that sample contains lightly weathered gasoline.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Laboratory Group A Campbell Brothers Limited Company

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	11/18/2011 1111062 -11
CLIENT CONTACT:	Tim Syverson	DATE RECEIVED:	11/11/2011
CLIENT PROJECT:	7th & Jackson Property / #374014.010.011	COLLECTION DATE:	11/11/2011 10:10
CLIENT SAMPLE ID	B-3 S-4	WDOE ACCREDITATION:	C601

DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	**420**	15	5	MG/KG	11/17/2011	DLC
TPH-Diesel Range	NWTPH-DX w/ SGA	U	25	1	MG/KG	11/16/2011	EBS
TPH-Oil Range	NWTPH-DX w/ SGA	U	50	1	MG/KG	11/16/2011	EBS
Lead	EPA-6020	**7.4**	0.58	5	MG/KG	11/17/2011	RAL

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT 5X Dilution	NWTPH-GX	**85.4**	11/17/2011	DLC
C25	NWTPH-DX w/ SGA	**107**	11/16/2011	EBS

U - Analyte analyzed for but not detected at level above reporting limit.
Chromatogram indicates that it is likely that sample contains weathered gasoline.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Laboratory Group A Campbell Brothers Limited Company

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	11/18/2011 1111062 -13
CLIENT CONTACT:	Tim Syverson	DATE RECEIVED:	11/11/2011
CLIENT PROJECT:	7th & Jackson Property / #374014.010.011	COLLECTION DATE:	11/11/2011 10:20
CLIENT SAMPLE ID	B-3 S-6	WDOE ACCREDITATION:	C601

DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	**6.6**	3.0	1	MG/KG	11/17/2011	DLC
TPH-Diesel Range	NWTPH-DX w/ SGA	U	25	1	MG/KG	11/16/2011	EBS
TPH-Oil Range	NWTPH-DX w/ SGA	U	50	1	MG/KG	11/16/2011	EBS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	**120**	11/17/2011	DLC
C25	NWTPH-DX w/ SGA	**82.5**	11/16/2011	EBS

U - Analyte analyzed for but not detected at level above reporting limit.
Chromatogram indicates that it is likely that sample contains lightly weathered gasoline.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Laboratory Group A Campbell Brothers Limited Company

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	11/18/2011 1111062 -14
CLIENT CONTACT:	Tim Syverson	DATE RECEIVED:	11/11/2011
CLIENT PROJECT:	7th & Jackson Property / #374014.010.011	COLLECTION DATE:	11/11/2011 10:45
CLIENT SAMPLE ID	B-4 S-2	WDOE ACCREDITATION:	C601

DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	**10**	3.0	1	MG/KG	11/17/2011	DLC
TPH-Diesel Range	NWTPH-DX w/ SGA	U	25	1	MG/KG	11/16/2011	EBS
TPH-Oil Range	NWTPH-DX w/ SGA	U	50	1	MG/KG	11/16/2011	EBS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	**112**	11/17/2011	DLC
C25	NWTPH-DX w/ SGA	**99.1**	11/16/2011	EBS

U - Analyte analyzed for but not detected at level above reporting limit.
Chromatogram indicates that it is likely that sample contains lightly weathered gasoline.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Laboratory Group A Campbell Brothers Limited Company

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	11/18/2011 1111062 -18
CLIENT CONTACT:	Tim Syverson	DATE RECEIVED:	11/11/2011
CLIENT PROJECT:	7th & Jackson Property / #374014.010.011	COLLECTION DATE:	11/11/2011 11:05
CLIENT SAMPLE ID	B-4 S-6	WDOE ACCREDITATION:	C601

DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	**26**	3.0	1	MG/KG	11/17/2011	DLC
TPH-Diesel Range	NWTPH-DX w/ SGA	U	25	1	MG/KG	11/16/2011	EBS
TPH-Oil Range	NWTPH-DX w/ SGA	U	50	1	MG/KG	11/16/2011	EBS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	**109**	11/17/2011	DLC
C25	NWTPH-DX w/ SGA	**98.9**	11/16/2011	EBS

U - Analyte analyzed for but not detected at level above reporting limit.
Chromatogram indicates that it is likely that sample contains lightly weathered gasoline.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Laboratory Group A Campbell Brothers Limited Company

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	11/18/2011
		ALS SDG#:	1111062
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Tim Syverson		
CLIENT PROJECT:	7th & Jackson Property / #374014.010.011		

LABORATORY BLANK RESULTS

MBG-111511S2 - Batch 2286 - Soil by NWTPH-GX

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	U	3.0	1	MG/KG	11/16/2011	DLC

MB-111411S - Batch 2280 - Soil by NWTPH-DX

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range	NWTPH-DX	U	25	1	MG/KG	11/14/2011	EBS
TPH-Oil Range	NWTPH-DX	U	50	1	MG/KG	11/14/2011	EBS

MB-111611S - Batch 2287 - Soil by EPA-6020

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Lead	EPA-6020	U	0.12	1	MG/KG	11/17/2011	RAL

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Laboratory Group A Campbell Brothers Limited Company

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	11/18/2011
		ALS SDG#:	1111062
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Tim Syverson		
CLIENT PROJECT:	7th & Jackson Property / #374014.010.011		

LABORATORY CONTROL SAMPLE RESULTS

ALS Test Batch ID: 2286 - Soil by NWTPH-GX

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range - BS	NWTPH-GX	**63.8**			11/16/2011	DLC
TPH-Volatile Range - BSD	NWTPH-GX	**60.0**	**6**		11/16/2011	DLC

ALS Test Batch ID: 2280 - Soil by NWTPH-DX

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range - BS	NWTPH-DX	**89.7**			11/14/2011	EBS
TPH-Diesel Range - BSD	NWTPH-DX	**88.5**	**1**		11/14/2011	EBS

ALS Test Batch ID: 2287 - Soil by EPA-6020

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	ANALYSIS DATE	ANALYSIS BY
Lead - BS	EPA-6020	**101**			11/17/2011	RAL
Lead - BSD	EPA-6020	**101**	**0**		11/17/2011	RAL

APPROVED BY

Laboratory Director

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Laboratory Group A Campbell Brothers Limited Company

ALS ENVIRONMENTAL

Sample Receiving Checklist

Client: Landau Associates ALS Job #: 1111062

Project: 7th + Jackson Property / # 374014.010.011

Received Date: 11/11/11 Received Time: 4:50 By: SM

Type of shipping container: Cooler X Box ___ Other ___

Shipped via: UPS/FedEx ___ US Postal Service ___ Courier ___ Hand Delivered X By Rick

	Yes	No	N/A
Were custody seals on outside of sample?	X	___	___
If yes, how many? 2 Where? outside cooler			
Custody seal date: 11/11/11 Seal name: Landau			
Was Chain of Custody properly filled out (ink, signed, dated, etc.)?	X	___	___
Did all bottles have labels?	X	___	___
Did all bottle labels and tags agree with Chain of Custody?	X	___	___
Were samples received within hold time?	X	___	___
Did all bottles arrive in good condition (unbroken, etc.)?	X	___	___
Was sufficient amount of sample sent for the tests indicated?	X	___	___
Was correct preservation added to samples?	X	___	___

If no, Sample Control added preservative to the following: Received per 5035 High Kits

Sample Number	Reagent	Analyte

Were VOA vials checked for absence of air bubbles? ___ ___ X

Bubbles present in sample #: ___

Temperature of cooler upon receipt: 8.8°C Cold (Cool) Ambient N/A

on ice

Explain any discrepancies: ___

Was client contacted? ___ Who was called? ___ By whom? ___ Date: ___

Outcome of call: ___

LANDAU ASSOCIATES

☒ Seattle/Edmonds (425) 778-0907
☐ Tacoma (253) 926-2493
☐ Spokane (509) 327-9737
☐ Portland (503) 542-1080
☐ _____

1111062

Date 11/11/11

Page 1 of 1

Chain-of-Custody Record

Project Name 7th & Jackson Property Project No. 374014.010.011

Project Location/Event Seattle, WA

Sampler's Name Brian Christiansen

Project Contact Tim Syverson

Send Results To Tim Syverson

Turnaround Time
☒ Standard
☐ Accelerated
☐ _____

Testing Parameters

	Sample I.D.	Date	Time	Matrix	No. of Containers	NWTPH-Gx	NWTPH-Dx+O	Lead-total
1	B-1 S-2	11/11/11	1145	Soil	2			
2	B-1 S-3		1150		2			
3	B-1 S-4		1155		2			
4	B-1 S-5		1200		2			
5	B-1 S-6		1215		2			
6	B-1 S-7		1220		2			
7	B-2 S-4		0920		2			
8	B-2 S-5		0925		2			
9	B-2 S-6		0930		2			
10	B-3 S-3		1005		2			
11	B-3 S-4		1010		2			
12	B-3 S-5		1015		2			
13	B-3 S-6		1020		2			
14	B-4 S-2		1045		2			
15	B-4 S-3		1050		2			
16	B-4 S-4		1055		2			
17	B-4 S-5	↓	1100		2			
18	B-4 S-6		1105	↓	2			

Observations/Comments

☒ Allow water samples to settle, collect aliquot from clear portion

☒ NWTPH-Dx - run acid wash/silica gel cleanup

___ run samples standardized to _____ product

___ Analyze for EPH if no specific product identified

VOC/BTEX/VPH (soil):
___ non-preserved
___ preserved w/methanol
___ preserved w/sodium bisulfate
___ Freeze upon receipt

___ Dissolved metal water samples field filtered

Other _____

Special Shipment/Handling or Storage Requirements ALS Courier

Method of Shipment

Relinquished by	Received by	Relinquished by	Received by
Signature [signature]	Signature [signature]	Signature	Signature
Printed Name Brian E Christiansen	Printed Name Rick Bay	Printed Name	Printed Name
Company Landau Associates	Company ALS	Company	Company
Date 11/11/11 Time 1530	Date 11-11-11 Time 405	Date Time	Date Time

WHITE COPY - Project File YELLOW COPY - Laboratory PINK COPY - Client Representative

Rev 8/09

November 21, 2011

Mr. Tim Syverson
Landau Associates, Inc.
130 - 2nd Ave. S.
Edmonds, WA 98020

Dear Mr. Syverson,

On November 14th, 3 samples were received by our laboratory and assigned our laboratory project number 1111071. The project was identified as your 7th & Jackson Property / #374014.010.011. The sample identification and requested analyses are outlined on the attached chain of custody record.

No abnormalities or nonconformances were observed during the analyses of the project samples.

Please do not hesitate to call me if you have any questions or if I can be of further assistance.

Sincerely,

ALS Laboratory Group

Rick Bagan
Laboratory Director

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Laboratory Group A Campbell Brothers Limited Company

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	11/21/2011
		ALS SDG#:	1111071
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Tim Syverson		
CLIENT PROJECT:	7th & Jackson Property / #374014.010.011		

LABORATORY BLANK RESULTS

MBG-111411S - Batch 2282 - Soil by NWTPH-GX

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	U	3.0	1	MG/KG	11/14/2011	DLC

MB-111411S - Batch 2280 - Soil by NWTPH-DX

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range	NWTPH-DX	U	25	1	MG/KG	11/14/2011	EBS
TPH-Oil Range	NWTPH-DX	U	50	1	MG/KG	11/14/2011	EBS

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ALS Laboratory Group A Campbell Brothers Limited Company

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	11/21/2011
		ALS SDG#:	1111071
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Tim Syverson		
CLIENT PROJECT:	7th & Jackson Property / #374014.010.011		

LABORATORY CONTROL SAMPLE RESULTS

ALS Test Batch ID: 2282 - Soil by NWTPH-GX

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range - BS	NWTPH-GX	**67.8**			11/14/2011	DLC
TPH-Volatile Range - BSD	NWTPH-GX	**73.3**	**8**		11/14/2011	DLC

ALS Test Batch ID: 2280 - Soil by NWTPH-DX

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range - BS	NWTPH-DX	**89.7**			11/14/2011	EBS
TPH-Diesel Range - BSD	NWTPH-DX	**88.5**	**1**		11/14/2011	EBS

APPROVED BY

Laboratory Director

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Laboratory Group A Campbell Brothers Limited Company

ALS ENVIRONMENTAL

Sample Receiving Checklist

Client: Landau Associates ALS Job #: 1111071

Project: 7th + Jackson Property # 374014.010.011

Received Date: 11/14/11 Received Time: 4:20 pm By: HJK

Type of shipping container: Cooler ✓ Box ___ Other ___

Shipped via: UPS/FedEx ___ US Postal Service ___ Courier ___ Hand Delivered X by Rick

	Yes	No	N/A
Were custody seals on outside of sample?	X		
If yes, how many? 2 Where? outside cooler			
Custody seal date: 11/14/11 Seal name: Landau			
Was Chain of Custody properly filled out (ink, signed, dated, etc.)?	X		
Did all bottles have labels?	X		
Did all bottle labels and tags agree with Chain of Custody?	X		
Were samples received within hold time?	X		
Did all bottles arrive in good condition (unbroken, etc.)?	X		
Was sufficient amount of sample sent for the tests indicated?	X*		
Was correct preservation added to samples?	X		

If no, Sample Control added preservative to the following:

Sample Number	Reagent	Analyte

*Received per 5035 Hgh kits but not enough sample in VOA's.

Were VOA vials checked for absence of air bubbles? ___ ___ X

Bubbles present in sample #: ___

Temperature of cooler upon receipt: 9.9 °C on ice (Cold) Cool Ambient N/A

Explain any discrepancies: ___

Was client contacted? ___ Who was called? ___ By whom? ___ Date: ___

Outcome of call: ___

☒ **Seattle/Edmonds** (425) 778-0907
☐ **Tacoma** (253) 926-2493
☐ **Spokane** (509) 327-9737
☐ **Portland** (503) 542-1080
☐

LANDAU ASSOCIATES

1111071

Date 11/14/11

Page 1 of 1

Chain-of-Custody Record

Project Name Mt Jackson Property Project No. 374014.010.011

Project Location/Event Seattle, WA

Sampler's Name Brian Christiansen

Project Contact Tim Syverson

Send Results To Tim Syverson

Testing Parameters: NWTPH-Gx; NWTPH-Dx+O; Total Lead

Turnaround Time: ☒ Standard ☐ Accelerated ☐

Sample I.D.	Date	Time	Matrix	No. of Containers	NWTPH-Gx	NWTPH-Dx+O	Total Lead
B-5 5-6	11/14/11	1000	Soil	2			
B-5 5-7	11/14/11	1005	Soil	2			
B-5 5-8	11/14/11	1015	Soil	2	/	/	

Observations/Comments

X Allow water samples to settle, collect aliquot from clear portion

X NWTPH-Dx - run acid wash/silica gel cleanup

___ run samples standardized to ______ product

___ Analyze for EPH if no specific product identified

VOC/BTEX/VPH (soil):
___ non-preserved
___ preserved w/methanol
___ preserved w/sodium bisulfate
___ Freeze upon receipt

___ Dissolved metal water samples field filtered

Other

Special Shipment/Handling or Storage Requirements: ALS Courier

Method of Shipment

Relinquished by	Received by	Relinquished by	Received by
Signature [signature]	Signature [signature]	Signature	Signature
Printed Name Brian E. Christiansen	Printed Name Rick Bagan	Printed Name	Printed Name
Company Landau Assoc.	Company ALS	Company	Company
Date 11/14/11 Time 1330	Date 11-14-11 Time 4:00	Date Time	Date Time

WHITE COPY - Project File **YELLOW COPY** - Laboratory **PINK COPY** - Client Representative

Rev 8/09

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

November 11, 2019

Stuart Brown
Farallon Consulting, LLC
975 5th Avenue NW
Issaquah, WA 98027

Re: Analytical Data for Project 2194-001
Laboratory Reference No. 1910-398

Dear Stuart:

Enclosed are the analytical results and associated quality control data for samples submitted on October 31, 2019.

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

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

Sincerely,

David Baumeister
Project Manager

Enclosures

Date of Report: November 11, 2019
Samples Submitted: October 31, 2019
Laboratory Reference: 1910-398
Project: 2194-001

Case Narrative

Samples were collected on October 31, 2019 and received by the laboratory on October 31, 2019. 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 8260D:

Some MTCA Method A cleanup levels are not achievable for sample FB-3-10.0 due to the necessary dilution of the sample.

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

Date of Report: November 11, 2019
Samples Submitted: October 31, 2019
Laboratory Reference: 1910-398
Project: 2194-001

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

Matrix: Soil
Units: mg/kg (ppm)

						Date	Date

Date of Report: November 11, 2019
Samples Submitted: October 31, 2019
Laboratory Reference: 1910-398
Project: 2194-001

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

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**FB-3-10.0**					
Laboratory ID:	10-398-08					
Benzene	**ND**	0.021	EPA 8021B	10-31-19	11-1-19	
Toluene	**0.17**	0.10	EPA 8021B	10-31-19	11-1-19	
Ethyl Benzene	**4.6**	0.10	EPA 8021B	10-31-19	11-1-19	
m,p-Xylene	**9.1**	0.10	EPA 8021B	10-31-19	11-1-19	
o-Xylene	**2.1**	0.10	EPA 8021B	10-31-19	11-1-19	
Gasoline	**1300**	52	NWTPH-Gx	10-31-19	11-1-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*88*	*58-129*				
Client ID:	**FB-3-15.0**					
Laboratory ID:	10-398-09					
Benzene	**0.060**	0.020	EPA 8021B	10-31-19	11-1-19	
Toluene	**ND**	0.052	EPA 8021B	10-31-19	11-1-19	
Ethyl Benzene	**0.29**	0.052	EPA 8021B	10-31-19	11-1-19	
m,p-Xylene	**ND**	0.052	EPA 8021B	10-31-19	11-1-19	
o-Xylene	**ND**	0.052	EPA 8021B	10-31-19	11-1-19	
Gasoline	**ND**	5.2	NWTPH-Gx	10-31-19	11-1-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*83*	*58-129*				
Client ID:	**FB-3-20.0**					
Laboratory ID:	10-398-10					
Benzene	**ND**	0.020	EPA 8021B	10-31-19	11-1-19	
Toluene	**ND**	0.056	EPA 8021B	10-31-19	11-1-19	
Ethyl Benzene	**ND**	0.056	EPA 8021B	10-31-19	11-1-19	
m,p-Xylene	**ND**	0.056	EPA 8021B	10-31-19	11-1-19	
o-Xylene	**ND**	0.056	EPA 8021B	10-31-19	11-1-19	
Gasoline	**ND**	5.6	NWTPH-Gx	10-31-19	11-1-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*89*	*58-129*				

Date of Report: November 11, 2019
Samples Submitted: October 31, 2019
Laboratory Reference: 1910-398
Project: 2194-001

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

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**FB-3-40.0**					
Laboratory ID:	10-398-14					
Benzene	**ND**	0.020	EPA 8021B	10-31-19	11-1-19	
Toluene	**ND**	0.050	EPA 8021B	10-31-19	11-1-19	
Ethyl Benzene	**ND**	0.050	EPA 8021B	10-31-19	11-1-19	
m,p-Xylene	**ND**	0.050	EPA 8021B	10-31-19	11-1-19	
o-Xylene	**ND**	0.050	EPA 8021B	10-31-19	11-1-19	
Gasoline	**ND**	5.0	NWTPH-Gx	10-31-19	11-1-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*82*	*58-129*				

Date of Report: November 11, 2019
Samples Submitted: October 31, 2019
Laboratory Reference: 1910-398
Project: 2194-001

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

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1031S2					
Benzene	**ND**	0.020	EPA 8021B	10-31-19	10-31-19	
Toluene	**ND**	0.050	EPA 8021B	10-31-19	10-31-19	
Ethyl Benzene	**ND**	0.050	EPA 8021B	10-31-19	10-31-19	
m,p-Xylene	**ND**	0.050	EPA 8021B	10-31-19	10-31-19	
o-Xylene	**ND**	0.050	EPA 8021B	10-31-19	10-31-19	
Gasoline	**ND**	5.0	NWTPH-Gx	10-31-19	10-31-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*86*	*58-129*				

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE										
Laboratory ID:	10-389-01									
	ORIG	DUP								
Benzene	**ND**	**ND**	NA	NA		NA	NA	NA	30	
Toluene	**ND**	**ND**	NA	NA		NA	NA	NA	30	
Ethyl Benzene	**ND**	**ND**	NA	NA		NA	NA	NA	30	
m,p-Xylene	**ND**	**ND**	NA	NA		NA	NA	NA	30	
o-Xylene	**ND**	**ND**	NA	NA		NA	NA	NA	30	
Gasoline	**ND**	**ND**	NA	NA		NA	NA	NA	30	
Surrogate:										
Fluorobenzene						*90* *93*	*58-129*			

Date of Report: November 11, 2019
Samples Submitted: October 31, 2019
Laboratory Reference: 1910-398
Project: 2194-001

DIESEL AND HEAVY OIL RANGE ORGANICS
NWTPH-Dx

Matrix: Soil
Units: mg/Kg (ppm)

Client ID:	**FB-3-10.0**					
Laboratory ID:	10-398-08					
Diesel Range Organics	**ND**	980	NWTPH-Dx	11-1-19	11-4-19	U1,M1
Lube Oil	**570**	57	NWTPH-Dx	11-1-19	11-4-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*88*	*50-150*				

Date of Report: November 11, 2019
Samples Submitted: October 31, 2019
Laboratory Reference: 1910-398
Project: 2194-001

DIESEL AND HEAVY OIL RANGE ORGANICS
NWTPH-Dx
QUALITY CONTROL

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1101S2					
Diesel Range Organics	**ND**	25	NWTPH-Dx	11-1-19	11-4-19	
Lube Oil Range Organics	**ND**	50	NWTPH-Dx	11-1-19	11-4-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*84*	*50-150*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	10-398-01										
	ORIG	DUP									
Diesel Range	**ND**	**ND**	NA	NA		NA		NA	NA	NA	
Lube Oil Range	**ND**	**ND**	NA	NA		NA		NA	NA	NA	
Surrogate:											
o-Terphenyl						*84*	*77*	*50-150*			

Date of Report: November 11, 2019
Samples Submitted: October 31, 2019
Laboratory Reference: 1910-398
Project: 2194-001

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

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**FB-3-10.0**					
Laboratory ID:	10-398-08					
Dichlorodifluoromethane	ND	0.091	EPA 8260D	11-1-19	11-4-19	
Chloromethane	ND	0.36	EPA 8260D	11-1-19	11-4-19	
Vinyl Chloride	ND	0.070	EPA 8260D	11-1-19	11-4-19	
Bromomethane	ND	0.050	EPA 8260D	11-1-19	11-4-19	
Chloroethane	ND	0.25	EPA 8260D	11-1-19	11-4-19	
Trichlorofluoromethane	ND	0.050	EPA 8260D	11-1-19	11-4-19	
1,1-Dichloroethene	ND	0.050	EPA 8260D	11-1-19	11-4-19	
Iodomethane	ND	0.25	EPA 8260D	11-1-19	11-4-19	
Methylene Chloride	ND	0.25	EPA 8260D	11-1-19	11-4-19	
(trans) 1,2-Dichloroethene	ND	0.050	EPA 8260D	11-1-19	11-4-19	
Methyl t-Butyl Ether	ND	0.050	EPA 8260D	11-1-19	11-4-19	
1,1-Dichloroethane	ND	0.050	EPA 8260D	11-1-19	11-4-19	
2,2-Dichloropropane	ND	0.050	EPA 8260D	11-1-19	11-4-19	
(cis) 1,2-Dichloroethene	ND	0.050	EPA 8260D	11-1-19	11-4-19	
Bromochloromethane	ND	0.050	EPA 8260D	11-1-19	11-4-19	
Chloroform	ND	0.050	EPA 8260D	11-1-19	11-4-19	
1,1,1-Trichloroethane	ND	0.050	EPA 8260D	11-1-19	11-4-19	
Carbon Tetrachloride	ND	0.050	EPA 8260D	11-1-19	11-4-19	
1,1-Dichloropropene	ND	0.050	EPA 8260D	11-1-19	11-4-19	
1,2-Dichloroethane	ND	0.050	EPA 8260D	11-1-19	11-4-19	
Trichloroethene	ND	0.050	EPA 8260D	11-1-19	11-4-19	
1,2-Dichloropropane	ND	0.050	EPA 8260D	11-1-19	11-4-19	
Dibromomethane	ND	0.050	EPA 8260D	11-1-19	11-4-19	
Bromodichloromethane	ND	0.050	EPA 8260D	11-1-19	11-4-19	
2-Chloroethyl Vinyl Ether	ND	0.25	EPA 8260D	11-1-19	11-4-19	
(cis) 1,3-Dichloropropene	ND	0.050	EPA 8260D	11-1-19	11-4-19	
(trans) 1,3-Dichloropropene	ND	0.050	EPA 8260D	11-1-19	11-4-19	

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**FB-3-10.0**					
Laboratory ID:	10-398-08					
1,1,2-Trichloroethane	ND	0.050	EPA 8260D	11-1-19	11-4-19	
Tetrachloroethene	ND	0.050	EPA 8260D	11-1-19	11-4-19	
1,3-Dichloropropane	ND	0.050	EPA 8260D	11-1-19	11-4-19	
Dibromochloromethane	ND	0.050	EPA 8260D	11-1-19	11-4-19	
1,2-Dibromoethane	ND	0.050	EPA 8260D	11-1-19	11-4-19	
Chlorobenzene	ND	0.050	EPA 8260D	11-1-19	11-4-19	
1,1,1,2-Tetrachloroethane	ND	0.050	EPA 8260D	11-1-19	11-4-19	
Bromoform	ND	0.25	EPA 8260D	11-1-19	11-4-19	
Bromobenzene	ND	0.050	EPA 8260D	11-1-19	11-4-19	
1,1,2,2-Tetrachloroethane	ND	0.050	EPA 8260D	11-1-19	11-4-19	
1,2,3-Trichloropropane	ND	0.050	EPA 8260D	11-1-19	11-4-19	
2-Chlorotoluene	ND	0.050	EPA 8260D	11-1-19	11-4-19	
4-Chlorotoluene	ND	0.050	EPA 8260D	11-1-19	11-4-19	
1,3-Dichlorobenzene	ND	0.050	EPA 8260D	11-1-19	11-4-19	
1,4-Dichlorobenzene	ND	0.050	EPA 8260D	11-1-19	11-4-19	
1,2-Dichlorobenzene	ND	0.050	EPA 8260D	11-1-19	11-4-19	
1,2-Dibromo-3-chloropropane	ND	0.25	EPA 8260D	11-1-19	11-4-19	
1,2,4-Trichlorobenzene	ND	0.050	EPA 8260D	11-1-19	11-4-19	
Hexachlorobutadiene	ND	0.25	EPA 8260D	11-1-19	11-4-19	
1,2,3-Trichlorobenzene	ND	0.050	EPA 8260D	11-1-19	11-4-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*105*	*76-131*				
Toluene-d8	*107*	*78-128*				
4-Bromofluorobenzene	*100*	*71-130*				

Date of Report: November 11, 2019
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Laboratory Reference: 1910-398
Project: 2194-001

VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL
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Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1101S2					
Dichlorodifluoromethane	ND	0.0014	EPA 8260D	11-1-19	11-1-19	
Chloromethane	ND	0.0050	EPA 8260D	11-1-19	11-1-19	
Vinyl Chloride	ND	0.0010	EPA 8260D	11-1-19	11-1-19	
Bromomethane	ND	0.0010	EPA 8260D	11-1-19	11-1-19	
Chloroethane	ND	0.0050	EPA 8260D	11-1-19	11-1-19	
Trichlorofluoromethane	ND	0.0010	EPA 8260D	11-1-19	11-1-19	
1,1-Dichloroethene	ND	0.0010	EPA 8260D	11-1-19	11-1-19	
Iodomethane	ND	0.0050	EPA 8260D	11-1-19	11-1-19	
Methylene Chloride	ND	0.0050	EPA 8260D	11-1-19	11-1-19	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	11-1-19	11-1-19	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260D	11-1-19	11-1-19	
1,1-Dichloroethane	ND	0.0010	EPA 8260D	11-1-19	11-1-19	
2,2-Dichloropropane	ND	0.0010	EPA 8260D	11-1-19	11-1-19	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	11-1-19	11-1-19	
Bromochloromethane	ND	0.0010	EPA 8260D	11-1-19	11-1-19	
Chloroform	ND	0.0010	EPA 8260D	11-1-19	11-1-19	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260D	11-1-19	11-1-19	
Carbon Tetrachloride	ND	0.0010	EPA 8260D	11-1-19	11-1-19	
1,1-Dichloropropene	ND	0.0010	EPA 8260D	11-1-19	11-1-19	
1,2-Dichloroethane	ND	0.0010	EPA 8260D	11-1-19	11-1-19	
Trichloroethene	ND	0.0010	EPA 8260D	11-1-19	11-1-19	
1,2-Dichloropropane	ND	0.0010	EPA 8260D	11-1-19	11-1-19	
Dibromomethane	ND	0.0010	EPA 8260D	11-1-19	11-1-19	
Bromodichloromethane	ND	0.0010	EPA 8260D	11-1-19	11-1-19	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260D	11-1-19	11-1-19	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	11-1-19	11-1-19	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	11-1-19	11-1-19	

Date of Report: November 11, 2019
Samples Submitted: October 31, 2019
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Project: 2194-001

VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1101S2					
1,1,2-Trichloroethane	ND	0.0010	EPA 8260D	11-1-19	11-1-19	
Tetrachloroethene	ND	0.0010	EPA 8260D	11-1-19	11-1-19	
1,3-Dichloropropane	ND	0.0010	EPA 8260D	11-1-19	11-1-19	
Dibromochloromethane	ND	0.0010	EPA 8260D	11-1-19	11-1-19	
1,2-Dibromoethane	ND	0.0010	EPA 8260D	11-1-19	11-1-19	
Chlorobenzene	ND	0.0010	EPA 8260D	11-1-19	11-1-19	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260D	11-1-19	11-1-19	
Bromoform	ND	0.0050	EPA 8260D	11-1-19	11-1-19	
Bromobenzene	ND	0.0010	EPA 8260D	11-1-19	11-1-19	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260D	11-1-19	11-1-19	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260D	11-1-19	11-1-19	
2-Chlorotoluene	ND	0.0010	EPA 8260D	11-1-19	11-1-19	
4-Chlorotoluene	ND	0.0010	EPA 8260D	11-1-19	11-1-19	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260D	11-1-19	11-1-19	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260D	11-1-19	11-1-19	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260D	11-1-19	11-1-19	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260D	11-1-19	11-1-19	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260D	11-1-19	11-1-19	
Hexachlorobutadiene	ND	0.0050	EPA 8260D	11-1-19	11-1-19	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260D	11-1-19	11-1-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*102*	*76-131*				
Toluene-d8	*98*	*78-128*				
4-Bromofluorobenzene	*92*	*71-130*				

Date of Report: November 11, 2019
Samples Submitted: October 31, 2019
Laboratory Reference: 1910-398
Project: 2194-001

VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL

Matrix: Soil
Units: mg/kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB1101S2									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	**0.0488**	**0.0454**	0.0500	0.0500	98	91	57-133	7	18	
Benzene	**0.0464**	**0.0432**	0.0500	0.0500	93	86	71-129	7	16	
Trichloroethene	**0.0504**	**0.0465**	0.0500	0.0500	101	93	71-122	8	16	
Toluene	**0.0469**	**0.0437**	0.0500	0.0500	94	87	74-125	7	15	
Chlorobenzene	**0.0478**	**0.0450**	0.0500	0.0500	96	90	72-120	6	14	
Surrogate:										
Dibromofluoromethane					*103*	*99*	*76-131*			
Toluene-d8					*98*	*99*	*78-128*			
4-Bromofluorobenzene					*92*	*93*	*71-130*			

Date of Report: November 11, 2019
Samples Submitted: October 31, 2019
Laboratory Reference: 1910-398
Project: 2194-001

PAHs EPA 8270E/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**FB-3-10.0**					
Laboratory ID:	10-398-08					
Naphthalene	**5.4**	0.15	EPA 8270E/SIM	11-1-19	11-1-19	
2-Methylnaphthalene	**3.4**	0.15	EPA 8270E/SIM	11-1-19	11-1-19	
1-Methylnaphthalene	**1.7**	0.15	EPA 8270E/SIM	11-1-19	11-1-19	
Acenaphthylene	**0.0076**	0.0076	EPA 8270E/SIM	11-1-19	11-1-19	
Acenaphthene	**0.022**	0.0076	EPA 8270E/SIM	11-1-19	11-1-19	
Fluorene	**0.030**	0.0076	EPA 8270E/SIM	11-1-19	11-1-19	
Phenanthrene	**0.098**	0.0076	EPA 8270E/SIM	11-1-19	11-1-19	
Anthracene	**0.025**	0.0076	EPA 8270E/SIM	11-1-19	11-1-19	
Fluoranthene	**0.057**	0.0076	EPA 8270E/SIM	11-1-19	11-1-19	
Pyrene	**0.063**	0.0076	EPA 8270E/SIM	11-1-19	11-1-19	
Benzo[a]anthracene	**0.028**	0.0076	EPA 8270E/SIM	11-1-19	11-1-19	
Chrysene	**0.029**	0.0076	EPA 8270E/SIM	11-1-19	11-1-19	
Benzo[b]fluoranthene	**0.028**	0.0076	EPA 8270E/SIM	11-1-19	11-1-19	
Benzo(j,k)fluoranthene	**ND**	0.0076	EPA 8270E/SIM	11-1-19	11-1-19	
Benzo[a]pyrene	**0.027**	0.0076	EPA 8270E/SIM	11-1-19	11-1-19	
Indeno(1,2,3-c,d)pyrene	**0.019**	0.0076	EPA 8270E/SIM	11-1-19	11-1-19	
Dibenz[a,h]anthracene	**ND**	0.0076	EPA 8270E/SIM	11-1-19	11-1-19	
Benzo[g,h,i]perylene	**0.022**	0.0076	EPA 8270E/SIM	11-1-19	11-1-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*71*	*40 - 111*				
Pyrene-d10	*77*	*40 - 110*				
Terphenyl-d14	*75*	*45 - 122*				

Date of Report: November 11, 2019
Samples Submitted: October 31, 2019
Laboratory Reference: 1910-398
Project: 2194-001

PAHs EPA 8270E/SIM
QUALITY CONTROL

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1101S1					
Naphthalene	**ND**	0.0067	EPA 8270E/SIM	11-1-19	11-1-19	
2-Methylnaphthalene	**ND**	0.0067	EPA 8270E/SIM	11-1-19	11-1-19	
1-Methylnaphthalene	**ND**	0.0067	EPA 8270E/SIM	11-1-19	11-1-19	
Acenaphthylene	**ND**	0.0067	EPA 8270E/SIM	11-1-19	11-1-19	
Acenaphthene	**ND**	0.0067	EPA 8270E/SIM	11-1-19	11-1-19	
Fluorene	**ND**	0.0067	EPA 8270E/SIM	11-1-19	11-1-19	
Phenanthrene	**ND**	0.0067	EPA 8270E/SIM	11-1-19	11-1-19	
Anthracene	**ND**	0.0067	EPA 8270E/SIM	11-1-19	11-1-19	
Fluoranthene	**ND**	0.0067	EPA 8270E/SIM	11-1-19	11-1-19	
Pyrene	**ND**	0.0067	EPA 8270E/SIM	11-1-19	11-1-19	
Benzo[a]anthracene	**ND**	0.0067	EPA 8270E/SIM	11-1-19	11-1-19	
Chrysene	**ND**	0.0067	EPA 8270E/SIM	11-1-19	11-1-19	
Benzo[b]fluoranthene	**ND**	0.0067	EPA 8270E/SIM	11-1-19	11-1-19	
Benzo(j,k)fluoranthene	**ND**	0.0067	EPA 8270E/SIM	11-1-19	11-1-19	
Benzo[a]pyrene	**ND**	0.0067	EPA 8270E/SIM	11-1-19	11-1-19	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0067	EPA 8270E/SIM	11-1-19	11-1-19	
Dibenz[a,h]anthracene	**ND**	0.0067	EPA 8270E/SIM	11-1-19	11-1-19	
Benzo[g,h,i]perylene	**ND**	0.0067	EPA 8270E/SIM	11-1-19	11-1-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*100*	*40 - 111*				
Pyrene-d10	*102*	*40 - 110*				
Terphenyl-d14	*100*	*45 - 122*				

Date of Report: November 11, 2019
Samples Submitted: October 31, 2019
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Project: 2194-001

PAHs EPA 8270E/SIM
QUALITY CONTROL

Matrix: Soil
Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB1101S1									
	SB	SBD	SB	SBD	SB	SBD				
Naphthalene	**0.0728**	**0.0748**	0.0833	0.0833	87	90	57 - 109	3	15	
Acenaphthylene	**0.0735**	**0.0729**	0.0833	0.0833	88	88	60 - 121	1	15	
Acenaphthene	**0.0746**	**0.0726**	0.0833	0.0833	90	87	59 - 121	3	15	
Fluorene	**0.0773**	**0.0765**	0.0833	0.0833	93	92	63 - 119	1	15	
Phenanthrene	**0.0748**	**0.0739**	0.0833	0.0833	90	89	59 - 114	1	15	
Anthracene	**0.0796**	**0.0785**	0.0833	0.0833	96	94	63 - 119	1	15	
Fluoranthene	**0.0822**	**0.0802**	0.0833	0.0833	99	96	63 - 120	2	15	
Pyrene	**0.0792**	**0.0786**	0.0833	0.0833	95	94	62 - 119	1	15	
Benzo[a]anthracene	**0.0745**	**0.0787**	0.0833	0.0833	89	94	64 - 127	5	15	
Chrysene	**0.0818**	**0.0740**	0.0833	0.0833	98	89	63 - 121	10	15	
Benzo[b]fluoranthene	**0.0837**	**0.0872**	0.0833	0.0833	100	105	61 - 122	4	15	
Benzo(j,k)fluoranthene	**0.0686**	**0.0637**	0.0833	0.0833	82	76	64 - 123	7	15	
Benzo[a]pyrene	**0.0744**	**0.0748**	0.0833	0.0833	89	90	62 - 122	1	15	
Indeno(1,2,3-c,d)pyrene	**0.0765**	**0.0759**	0.0833	0.0833	92	91	59 - 124	1	15	
Dibenz[a,h]anthracene	**0.0738**	**0.0737**	0.0833	0.0833	89	88	61 - 123	0	15	
Benzo[g,h,i]perylene	**0.0760**	**0.0740**	0.0833	0.0833	91	89	61 - 119	3	15	
Surrogate:										
2-Fluorobiphenyl					*89*	*89*	*40 - 111*			
Pyrene-d10					*93*	*91*	*40 - 110*			
Terphenyl-d14					*89*	*88*	*45 - 122*			

Date of Report: November 11, 2019
Samples Submitted: October 31, 2019
Laboratory Reference: 1910-398
Project: 2194-001

PCBs EPA 8082A

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**FB-3-10.0**					
Laboratory ID:	10-398-08					
Aroclor 1016	**ND**	0.057	EPA 8082A	11-4-19	11-4-19	
Aroclor 1221	**ND**	0.057	EPA 8082A	11-4-19	11-4-19	
Aroclor 1232	**ND**	0.057	EPA 8082A	11-4-19	11-4-19	
Aroclor 1242	**ND**	0.057	EPA 8082A	11-4-19	11-4-19	
Aroclor 1248	**ND**	0.057	EPA 8082A	11-4-19	11-4-19	
Aroclor 1254	**ND**	0.057	EPA 8082A	11-4-19	11-4-19	
Aroclor 1260	**ND**	0.057	EPA 8082A	11-4-19	11-4-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*79*	*37-122*				

Date of Report: November 11, 2019
Samples Submitted: October 31, 2019
Laboratory Reference: 1910-398
Project: 2194-001

PCBs EPA 8082A
QUALITY CONTROL

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1104S1					
Aroclor 1016	**ND**	0.050	EPA 8082A	11-4-19	11-4-19	
Aroclor 1221	**ND**	0.050	EPA 8082A	11-4-19	11-4-19	
Aroclor 1232	**ND**	0.050	EPA 8082A	11-4-19	11-4-19	
Aroclor 1242	**ND**	0.050	EPA 8082A	11-4-19	11-4-19	
Aroclor 1248	**ND**	0.050	EPA 8082A	11-4-19	11-4-19	
Aroclor 1254	**ND**	0.050	EPA 8082A	11-4-19	11-4-19	
Aroclor 1260	**ND**	0.050	EPA 8082A	11-4-19	11-4-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*95*	*37-122*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
MATRIX SPIKES											
Laboratory ID:	11-006-01										
	MS	MSD	MS	MSD		MS	MSD				
Aroclor 1260	**0.529**	**0.524**	0.500	0.500	ND	**106**	**105**	38-120	1	15	
Surrogate:											
DCB						*84*	*85*	*37-122*			

Date of Report: November 11, 2019
Samples Submitted: October 31, 2019
Laboratory Reference: 1910-398
Project: 2194-001

TOTAL LEAD
EPA 6010D

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**FB-3-10.0**					
Laboratory ID:	10-398-08					
Lead	**ND**	5.7	EPA 6010D	11-1-19	11-1-19	

Date of Report: November 11, 2019
Samples Submitted: October 31, 2019
Laboratory Reference: 1910-398
Project: 2194-001

TOTAL LEAD
EPA 6010D
QUALITY CONTROL

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1101SM1					
Lead	**ND**	5.0	EPA 6010D	11-1-19	11-1-19	

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	10-400-02										
	ORIG	DUP									
Lead	**5.55**	**ND**	NA	NA		NA		NA	NA	20	
MATRIX SPIKES											
Laboratory ID:	10-400-02										
	MS	MSD	MS	MSD		MS	MSD				
Lead	**242**	**235**	250	250	5.55	**94**	**92**	75-125	3	20	

Date of Report: November 11, 2019
Samples Submitted: October 31, 2019
Laboratory Reference: 1910-398
Project: 2194-001

% MOISTURE

Client ID	Lab ID	% Moisture	Date Analyzed
FB-3-10.0	10-398-08	**12**	11-1-19
FB-3-15.0	10-398-09	**16**	11-4-19
FB-3-20.0	10-398-10	**19**	11-4-19
FB-3-40.0	10-398-14	**3**	11-4-19

OnSite Environmental Inc.

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 methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

Chain of Custody

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

Company: Farallon
Project Number: 2194-001
Project Name: 701 South Jackson Street
Project Manager: Stuart Brown
Sampled by: Ryan Ostrom

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☐ Standard (7 Days)
☐ _____ (other)

Laboratory Number: 10-398

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ Acid / ☐ SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C + MTBE	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 LEAD	TCLP Metals	HEM (oil and grease) 1664A					% Moisture
1	FB-1-10.0	10/31/14	0705	Soil	5		X		X																		X
2	FB-1-15.0		0715		5																						
3	FB-1-20.0		0720		5		X																				X
4	FB-1-25.0		0730		5																						
5	FB-1-30.0		0740		5																						
6	FB-1-35.0		0745		5																						
7	FB-1-40.0		0755		5		X																				X
8	FB-3-10.0		0920		5		X		X		X			X	X						X						X
9	FB-3-15.0		0930		5		X																				X
10	FB-3-20.0		0940		5		X																				X

	Signature	Company	Date	Time
Relinquished	Ryan Ostrom	Farallon	10/31/14	1200
Received	Kellum Liskum	OSE	10/31/14	1200
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions
Please ~~Hold PAH. Will Call For Analysis.~~
X - Added 10/31/14. DB (STA)

Data Package: Standard ☐ Level III ☐ Level IV ☐
Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐

Chain of Custody

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

Company: Farallon
Project Number: 2194-001
Project Name: 701 South Jackson Street
Project Manager: Stuart Brown
Sampled by: Ryan Ostrom

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☐ Standard (7 Days)
☐ _____ (other)

Laboratory Number: 10-398

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	% Moisture
11	FB-3-25.0	10/31/19	0945	Soil	5																		
12	FB-3-30.0	↓	0950	↓	5																		
13	FB-3-35.0	↓	0955	↓	5																		
14	FB-3-40.0	↓	1000	↓	5		X																X

DO

	Signature	Company	Date	Time
Relinquished	Ryan Ostrom	Farallon	10/31/19	1200
Received	Rosemarie Lyons	OSE	10/31/19	1200
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions
~~Please Hold. RM will Call For Analysis.~~

Data Package: Standard ☐ Level III ☐ Level IV ☐

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

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

November 11, 2019

Stuart Brown
Farallon Consulting, LLC
975 5th Avenue NW
Issaquah, WA 98027

Re: Analytical Data for Project 2194-001
Laboratory Reference No. 1910-400

Dear Stuart:

Enclosed are the analytical results and associated quality control data for samples submitted on October 31, 2019.

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

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

Sincerely,

David Baumeister
Project Manager

Enclosures

Date of Report: November 11, 2019
Samples Submitted: October 31, 2019
Laboratory Reference: 1910-400
Project: 2194-001

Case Narrative

Samples were collected on October 30, 2019 and received by the laboratory on October 31, 2019. 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 8260D:

Surrogates Toluene-d8 and 4-Bromoflurobenzene are outside of the control limits for sample FB-1-5.0 due to the high concentration of co-eluting non-target analytes.

PAHs EPA 8270E/SIM:

The method blank and spike blank each had one surrogate recovery out of control limits. This is within allowance of our standard operating procedure as long as the recovery is above 10%.

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

Date of Report: November 11, 2019
Samples Submitted: October 31, 2019
Laboratory Reference: 1910-400
Project: 2194-001

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

Matrix: Soil
Units: mg/kg (ppm)

				Date	Date
Client ID:	**FB-7-2.5**				
Laboratory ID:	10-400-12				
Benzene	**ND**	0.020	EPA 8021B	10-31-19	11-1-19
Toluene	**ND**	0.052	EPA 8021B	10-31-19	11-1-19
Ethyl Benzene	**ND**	0.052	EPA 8021B	10-31-19	11-1-19
m,p-Xylene	**ND**	0.052	EPA 8021B	10-31-19	11-1-19
o-Xylene	**ND**	0.052	EPA 8021B	10-31-19	11-1-19
Gasoline	**ND**	5.2	NWTPH-Gx	10-31-19	11-1-19
Surrogate:	*Percent Recovery*	*Control Limits*			
Fluorobenzene	*85*	*58-129*			

Date of Report: November 11, 2019
Samples Submitted: October 31, 2019
Laboratory Reference: 1910-400
Project: 2194-001

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

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**FB-7-8.0**					
Laboratory ID:	10-400-14					
Benzene	**ND**	0.020	EPA 8021B	10-31-19	11-1-19	
Toluene	**ND**	0.057	EPA 8021B	10-31-19	11-1-19	
Ethyl Benzene	**ND**	0.057	EPA 8021B	10-31-19	11-1-19	
m,p-Xylene	**ND**	0.057	EPA 8021B	10-31-19	11-1-19	
o-Xylene	**ND**	0.057	EPA 8021B	10-31-19	11-1-19	
Gasoline	**ND**	5.7	NWTPH-Gx	10-31-19	11-1-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*86*	*58-129*				

Date of Report: November 11, 2019
Samples Submitted: October 31, 2019
Laboratory Reference: 1910-400
Project: 2194-001

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

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1031S2					
Benzene	**ND**	0.020	EPA 8021B	10-31-19	10-31-19	
Toluene	**ND**	0.050	EPA 8021B	10-31-19	10-31-19	
Ethyl Benzene	**ND**	0.050	EPA 8021B	10-31-19	10-31-19	
m,p-Xylene	**ND**	0.050	EPA 8021B	10-31-19	10-31-19	
o-Xylene	**ND**	0.050	EPA 8021B	10-31-19	10-31-19	
Gasoline	**ND**	5.0	NWTPH-Gx	10-31-19	10-31-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*86*	*58-129*				

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	10-389-01										
	ORIG	DUP									
Benzene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Toluene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Ethyl Benzene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
m,p-Xylene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
o-Xylene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Gasoline	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Surrogate:											
Fluorobenzene						*90*	*93*	*58-129*			
SPIKE BLANKS											
Laboratory ID:	SB1031S1										
	SB	SBD	SB	SBD		SB	SBD				
Benzene	**0.871**	**0.895**	1.00	1.00		**87**	**90**	69-109	3	10	
Toluene	**0.937**	**0.961**	1.00	1.00		**94**	**96**	67-112	3	10	
Ethyl Benzene	**0.946**	**0.968**	1.00	1.00		**95**	**97**	67-113	2	10	
m,p-Xylene	**0.961**	**0.985**	1.00	1.00		**96**	**99**	66-114	2	11	
o-Xylene	**0.949**	**0.978**	1.00	1.00		**95**	**98**	68-112	3	11	
Surrogate:											
Fluorobenzene						*83*	*85*	*58-129*			

Date of Report: November 11, 2019
Samples Submitted: October 31, 2019
Laboratory Reference: 1910-400
Project: 2194-001

DIESEL AND HEAVY OIL RANGE ORGANICS
NWTPH-Dx

Matrix: Soil
Units: mg/Kg (ppm)

				Date	Date
Client ID:	**FB-7-2.5**				
Laboratory ID:	10-400-12				
Diesel Range Organics	**ND**	31	NWTPH-Dx	11-4-19	11-4-19
Lube Oil	**170**	62	NWTPH-Dx	11-4-19	11-4-19
Surrogate:	*Percent Recovery*	*Control Limits*			
o-Terphenyl	*75*	*50-150*			

Client ID:	**FB-7-8.0**				
Laboratory ID:	10-400-14				
Diesel Range Organics	**ND**	31	NWTPH-Dx	11-1-19	11-5-19
Lube Oil	**78**	63	NWTPH-Dx	11-1-19	11-5-19
Surrogate:	*Percent Recovery*	*Control Limits*			
o-Terphenyl	*68*	*50-150*			

Date of Report: November 11, 2019
Samples Submitted: October 31, 2019
Laboratory Reference: 1910-400
Project: 2194-001

DIESEL AND HEAVY OIL RANGE ORGANICS
NWTPH-Dx
QUALITY CONTROL

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1101S2					
Diesel Range Organics	**ND**	25	NWTPH-Dx	11-1-19	11-4-19	
Lube Oil Range Organics	**ND**	50	NWTPH-Dx	11-1-19	11-4-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*84*	*50-150*				
Laboratory ID:	MB1104S1					
Diesel Range Organics	**ND**	25	NWTPH-Dx	11-4-19	11-4-19	
Lube Oil Range Organics	**ND**	50	NWTPH-Dx	11-4-19	11-4-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*94*	*50-150*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	10-398-01										
	ORIG	DUP									
Diesel Range	**ND**	**ND**	NA	NA		NA		NA	NA	NA	
Lube Oil Range	**ND**	**ND**	NA	NA		NA		NA	NA	NA	
Surrogate:											
o-Terphenyl						*84*	*77*	*50-150*			
Laboratory ID:	11-005-14										
	ORIG	DUP									
Diesel Range	**ND**	**ND**	NA	NA		NA		NA	NA	NA	
Lube Oil Range	**ND**	**ND**	NA	NA		NA		NA	NA	NA	
Surrogate:											
o-Terphenyl						*88*	*79*	*50-150*			

Date of Report: November 11, 2019
Samples Submitted: October 31, 2019
Laboratory Reference: 1910-400
Project: 2194-001

VOLATILE ORGANICS EPA 8260D
page 1 of 2

Matrix: Soil
Units: mg/kg

	Date	Date

Date of Report: November 11, 2019
Samples Submitted: October 31, 2019
Laboratory Reference: 1910-400
Project: 2194-001

VOLATILE ORGANICS EPA 8260D
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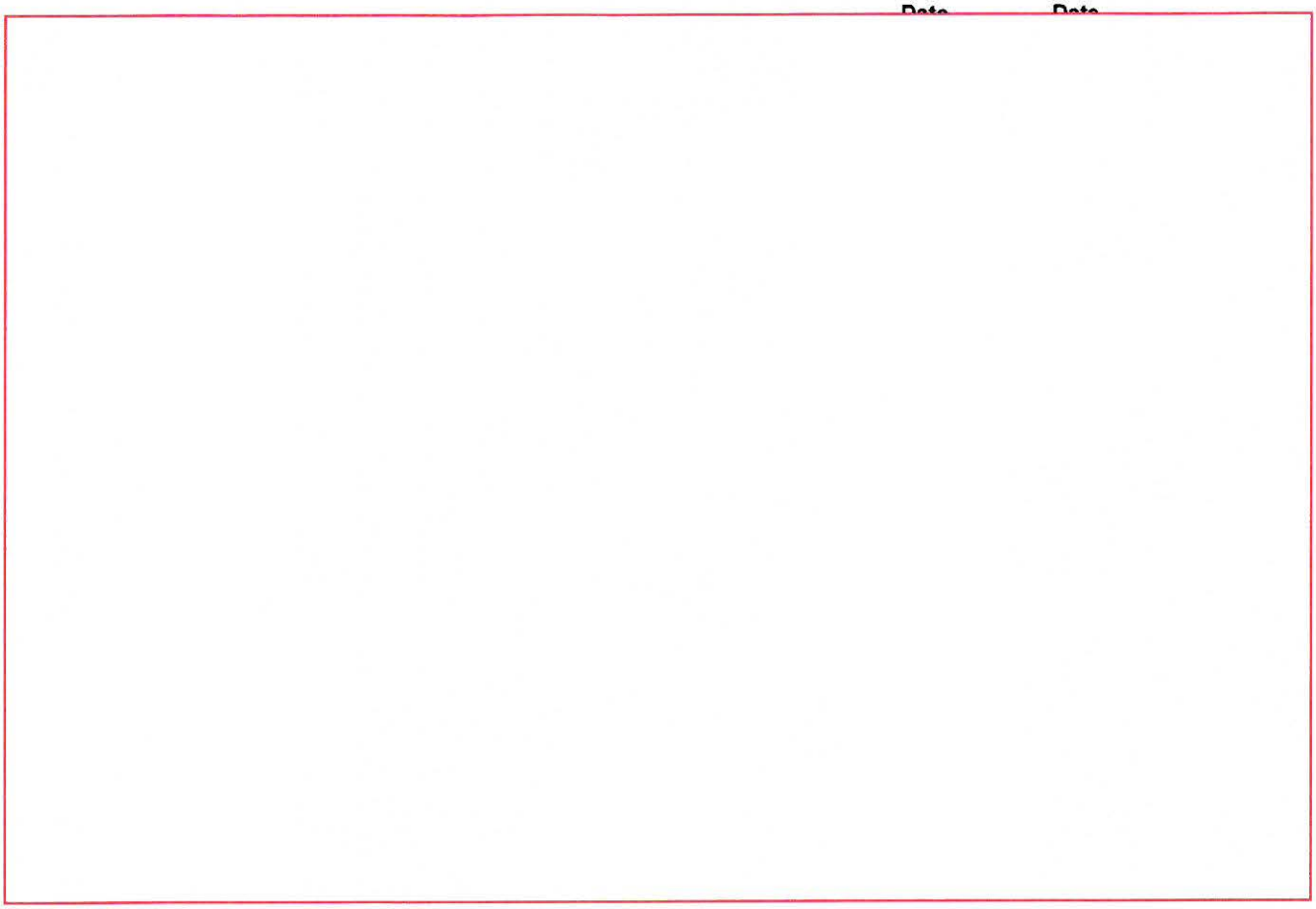

Date of Report: November 11, 2019
Samples Submitted: October 31, 2019
Laboratory Reference: 1910-400
Project: 2194-001

VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL
page 1 of 2

Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1104S1					
Dichlorodifluoromethane	ND	0.0018	EPA 8260D	11-4-19	11-4-19	
Chloromethane	ND	0.0071	EPA 8260D	11-4-19	11-4-19	
Vinyl Chloride	ND	0.0014	EPA 8260D	11-4-19	11-4-19	
Bromomethane	ND	0.0010	EPA 8260D	11-4-19	11-4-19	
Chloroethane	ND	0.0050	EPA 8260D	11-4-19	11-4-19	
Trichlorofluoromethane	ND	0.0010	EPA 8260D	11-4-19	11-4-19	
1,1-Dichloroethene	ND	0.0010	EPA 8260D	11-4-19	11-4-19	
Iodomethane	ND	0.0050	EPA 8260D	11-4-19	11-4-19	
Methylene Chloride	ND	0.0050	EPA 8260D	11-4-19	11-4-19	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	11-4-19	11-4-19	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260D	11-4-19	11-4-19	
1,1-Dichloroethane	ND	0.0010	EPA 8260D	11-4-19	11-4-19	
2,2-Dichloropropane	ND	0.0010	EPA 8260D	11-4-19	11-4-19	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	11-4-19	11-4-19	
Bromochloromethane	ND	0.0010	EPA 8260D	11-4-19	11-4-19	
Chloroform	ND	0.0010	EPA 8260D	11-4-19	11-4-19	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260D	11-4-19	11-4-19	
Carbon Tetrachloride	ND	0.0010	EPA 8260D	11-4-19	11-4-19	
1,1-Dichloropropene	ND	0.0010	EPA 8260D	11-4-19	11-4-19	
1,2-Dichloroethane	ND	0.0010	EPA 8260D	11-4-19	11-4-19	
Trichloroethene	ND	0.0010	EPA 8260D	11-4-19	11-4-19	
1,2-Dichloropropane	ND	0.0010	EPA 8260D	11-4-19	11-4-19	
Dibromomethane	ND	0.0010	EPA 8260D	11-4-19	11-4-19	
Bromodichloromethane	ND	0.0010	EPA 8260D	11-4-19	11-4-19	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260D	11-4-19	11-4-19	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	11-4-19	11-4-19	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	11-4-19	11-4-19	

Date of Report: November 11, 2019
Samples Submitted: October 31, 2019
Laboratory Reference: 1910-400
Project: 2194-001

VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1104S1					
1,1,2-Trichloroethane	ND	0.0010	EPA 8260D	11-4-19	11-4-19	
Tetrachloroethene	ND	0.0010	EPA 8260D	11-4-19	11-4-19	
1,3-Dichloropropane	ND	0.0010	EPA 8260D	11-4-19	11-4-19	
Dibromochloromethane	ND	0.0010	EPA 8260D	11-4-19	11-4-19	
1,2-Dibromoethane	ND	0.0010	EPA 8260D	11-4-19	11-4-19	
Chlorobenzene	ND	0.0010	EPA 8260D	11-4-19	11-4-19	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260D	11-4-19	11-4-19	
Bromoform	ND	0.0050	EPA 8260D	11-4-19	11-4-19	
Bromobenzene	ND	0.0010	EPA 8260D	11-4-19	11-4-19	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260D	11-4-19	11-4-19	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260D	11-4-19	11-4-19	
2-Chlorotoluene	ND	0.0010	EPA 8260D	11-4-19	11-4-19	
4-Chlorotoluene	ND	0.0010	EPA 8260D	11-4-19	11-4-19	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260D	11-4-19	11-4-19	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260D	11-4-19	11-4-19	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260D	11-4-19	11-4-19	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260D	11-4-19	11-4-19	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260D	11-4-19	11-4-19	
Hexachlorobutadiene	ND	0.0050	EPA 8260D	11-4-19	11-4-19	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260D	11-4-19	11-4-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*101*	*76-131*				
Toluene-d8	*94*	*78-128*				
4-Bromofluorobenzene	*92*	*71-130*				

Date of Report: November 11, 2019
Samples Submitted: October 31, 2019
Laboratory Reference: 1910-400
Project: 2194-001

VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL

Matrix: Soil
Units: mg/kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB1104S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	**0.0446**	**0.0479**	0.0500	0.0500	89	96	57-133	7	18	
Benzene	**0.0429**	**0.0478**	0.0500	0.0500	86	96	71-129	11	16	
Trichloroethene	**0.0480**	**0.0512**	0.0500	0.0500	96	102	71-122	6	16	
Toluene	**0.0458**	**0.0478**	0.0500	0.0500	92	96	74-125	4	15	
Chlorobenzene	**0.0468**	**0.0493**	0.0500	0.0500	94	99	72-120	5	14	
Surrogate:										
Dibromofluoromethane					*98*	*101*	*76-131*			
Toluene-d8					*97*	*97*	*78-128*			
4-Bromofluorobenzene					*95*	*93*	*71-130*			

Date of Report: November 11, 2019
Samples Submitted: October 31, 2019
Laboratory Reference: 1910-400
Project: 2194-001

PAHs EPA 8270E/SIM

Matrix: Soil
Units: mg/Kg

	Date	Date

Date of Report: November 11, 2019
Samples Submitted: October 31, 2019
Laboratory Reference: 1910-400
Project: 2194-001

PAHs EPA 8270E/SIM
QUALITY CONTROL

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1105S1					
Naphthalene	**ND**	0.0067	EPA 8270E/SIM	11-5-19	11-5-19	
2-Methylnaphthalene	**ND**	0.0067	EPA 8270E/SIM	11-5-19	11-5-19	
1-Methylnaphthalene	**ND**	0.0067	EPA 8270E/SIM	11-5-19	11-5-19	
Acenaphthylene	**ND**	0.0067	EPA 8270E/SIM	11-5-19	11-5-19	
Acenaphthene	**ND**	0.0067	EPA 8270E/SIM	11-5-19	11-5-19	
Fluorene	**ND**	0.0067	EPA 8270E/SIM	11-5-19	11-5-19	
Phenanthrene	**ND**	0.0067	EPA 8270E/SIM	11-5-19	11-5-19	
Anthracene	**ND**	0.0067	EPA 8270E/SIM	11-5-19	11-5-19	
Fluoranthene	**ND**	0.0067	EPA 8270E/SIM	11-5-19	11-5-19	
Pyrene	**ND**	0.0067	EPA 8270E/SIM	11-5-19	11-5-19	
Benzo[a]anthracene	**ND**	0.0067	EPA 8270E/SIM	11-5-19	11-5-19	
Chrysene	**ND**	0.0067	EPA 8270E/SIM	11-5-19	11-5-19	
Benzo[b]fluoranthene	**ND**	0.0067	EPA 8270E/SIM	11-5-19	11-5-19	
Benzo(j,k)fluoranthene	**ND**	0.0067	EPA 8270E/SIM	11-5-19	11-5-19	
Benzo[a]pyrene	**ND**	0.0067	EPA 8270E/SIM	11-5-19	11-5-19	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0067	EPA 8270E/SIM	11-5-19	11-5-19	
Dibenz[a,h]anthracene	**ND**	0.0067	EPA 8270E/SIM	11-5-19	11-5-19	
Benzo[g,h,i]perylene	**ND**	0.0067	EPA 8270E/SIM	11-5-19	11-5-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*112*	*40 - 111*				Q
Pyrene-d10	*109*	*40 - 110*				
Terphenyl-d14	*112*	*45 - 122*				

Date of Report: November 11, 2019
Samples Submitted: October 31, 2019
Laboratory Reference: 1910-400
Project: 2194-001

PAHs EPA 8270E/SIM
QUALITY CONTROL

Matrix: Soil
Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB1105S1									
	SB	SBD	SB	SBD	SB	SBD				
Naphthalene	**0.0876**	**0.0868**	0.0833	0.0833	105	104	57 - 109	1	15	
Acenaphthylene	**0.0934**	**0.0899**	0.0833	0.0833	112	108	60 - 121	4	15	
Acenaphthene	**0.0889**	**0.0890**	0.0833	0.0833	107	107	59 - 121	0	15	
Fluorene	**0.0950**	**0.0909**	0.0833	0.0833	114	109	63 - 119	4	15	
Phenanthrene	**0.0909**	**0.0871**	0.0833	0.0833	109	105	59 - 114	4	15	
Anthracene	**0.0952**	**0.0926**	0.0833	0.0833	114	111	63 - 119	3	15	
Fluoranthene	**0.0955**	**0.0943**	0.0833	0.0833	115	113	63 - 120	1	15	
Pyrene	**0.0965**	**0.0908**	0.0833	0.0833	116	109	62 - 119	6	15	
Benzo[a]anthracene	**0.103**	**0.0911**	0.0833	0.0833	124	109	64 - 127	12	15	
Chrysene	**0.0905**	**0.0925**	0.0833	0.0833	109	111	63 - 121	2	15	
Benzo[b]fluoranthene	**0.0994**	**0.0944**	0.0833	0.0833	119	113	61 - 122	5	15	
Benzo(j,k)fluoranthene	**0.0959**	**0.0950**	0.0833	0.0833	115	114	64 - 123	1	15	
Benzo[a]pyrene	**0.0987**	**0.0936**	0.0833	0.0833	118	112	62 - 122	5	15	
Indeno(1,2,3-c,d)pyrene	**0.0896**	**0.0858**	0.0833	0.0833	108	103	59 - 124	4	15	
Dibenz[a,h]anthracene	**0.0938**	**0.0883**	0.0833	0.0833	113	106	61 - 123	6	15	
Benzo[g,h,i]perylene	**0.0974**	**0.0924**	0.0833	0.0833	117	111	61 - 119	5	15	
Surrogate:										
2-Fluorobiphenyl					*106*	*104*	*40 - 111*			
Pyrene-d10					*115*	*108*	*40 - 110*			Q
Terphenyl-d14					*118*	*112*	*45 - 122*			

Date of Report: November 11, 2019
Samples Submitted: October 31, 2019
Laboratory Reference: 1910-400
Project: 2194-001

PCBs EPA 8082A

Matrix: Soil
Units: mg/Kg (ppm)

	Date	Date

Date of Report: November 11, 2019
Samples Submitted: October 31, 2019
Laboratory Reference: 1910-400
Project: 2194-001

PCBs EPA 8082A
QUALITY CONTROL

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1104S1					
Aroclor 1016	**ND**	0.050	EPA 8082A	11-4-19	11-4-19	
Aroclor 1221	**ND**	0.050	EPA 8082A	11-4-19	11-4-19	
Aroclor 1232	**ND**	0.050	EPA 8082A	11-4-19	11-4-19	
Aroclor 1242	**ND**	0.050	EPA 8082A	11-4-19	11-4-19	
Aroclor 1248	**ND**	0.050	EPA 8082A	11-4-19	11-4-19	
Aroclor 1254	**ND**	0.050	EPA 8082A	11-4-19	11-4-19	
Aroclor 1260	**ND**	0.050	EPA 8082A	11-4-19	11-4-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*95*	*37-122*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
MATRIX SPIKES											
Laboratory ID:	11-006-01										
	MS	MSD	MS	MSD		MS	MSD				
Aroclor 1260	**0.529**	**0.524**	0.500	0.500	ND	**106**	**105**	38-120	1	15	
Surrogate:											
DCB						*84*	*85*	*37-122*			

Date of Report: November 11, 2019
Samples Submitted: October 31, 2019
Laboratory Reference: 1910-400
Project: 2194-001

TOTAL LEAD
EPA 6010D

Matrix: Soil
Units: mg/Kg (ppm)

Date of Report: November 11, 2019
Samples Submitted: October 31, 2019
Laboratory Reference: 1910-400
Project: 2194-001

TOTAL LEAD
EPA 6010D
QUALITY CONTROL

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1101SM1					
Lead	**ND**	5.0	EPA 6010D	11-1-19	11-1-19	

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	10-400-02										
	ORIG	DUP									
Lead	**5.55**	**ND**	NA	NA		NA		NA	NA	20	
MATRIX SPIKES											
Laboratory ID:	10-400-02										
	MS	MSD	MS	MSD		MS	MSD				
Lead	**242**	**235**	250	250	5.55	**94**	**92**	75-125	3	20	

Date of Report: November 11, 2019
Samples Submitted: October 31, 2019
Laboratory Reference: 1910-400
Project: 2194-001

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

Matrix: Soil
Units: mg/kg (ppm)

Date of Report: November 11, 2019
Samples Submitted: October 31, 2019
Laboratory Reference: 1910-400
Project: 2194-001

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

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1105S1					
Benzene	**ND**	0.020	EPA 8021B	11-5-19	11-5-19	
Toluene	**ND**	0.050	EPA 8021B	11-5-19	11-5-19	
Ethyl Benzene	**ND**	0.050	EPA 8021B	11-5-19	11-5-19	
m,p-Xylene	**ND**	0.050	EPA 8021B	11-5-19	11-5-19	
o-Xylene	**ND**	0.050	EPA 8021B	11-5-19	11-5-19	
Gasoline	**ND**	5.0	NWTPH-Gx	11-5-19	11-5-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*82*	*58-129*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	11-033-01										
	ORIG	DUP									
Benzene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Toluene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Ethyl Benzene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
m,p-Xylene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
o-Xylene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Gasoline	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Surrogate:											
Fluorobenzene						*81*	*82*	*58-129*			
SPIKE BLANKS											
Laboratory ID:	SB1105S1										
	SB	SBD	SB	SBD		SB	SBD				
Benzene	**0.828**	**0.836**	1.00	1.00		**83**	**84**	69-109	1	10	
Toluene	**0.897**	**0.905**	1.00	1.00		**90**	**91**	67-112	1	10	
Ethyl Benzene	**0.907**	**0.917**	1.00	1.00		**91**	**92**	67-113	1	10	
m,p-Xylene	**0.924**	**0.930**	1.00	1.00		**92**	**93**	66-114	1	11	
o-Xylene	**0.931**	**0.940**	1.00	1.00		**93**	**94**	68-112	1	11	
Surrogate:											
Fluorobenzene						*80*	*81*	*58-129*			

Date of Report: November 11, 2019
Samples Submitted: October 31, 2019
Laboratory Reference: 1910-400
Project: 2194-001

% MOISTURE

Client ID	Lab ID	% Moisture	Date Analyzed
FB-7-2.5	10-400-12	**19**	11-1-19
FB-7-8.0	10-400-14	**20**	11-1-19

OnSite Environmental Inc.

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 methods 8260 & 8270, 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

Laboratory Number: 10-400

Company: Farallon
Project Number: 2194-001
Project Name: 701 South Jackson Street
Project Manager: Stuart Brown
Sampled by: Ryan Ostrom

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days)
☐ ______ (other)

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C + MTBE	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 LEAD DB	TCLP Metals	HEM (oil and grease) 1664A					% Moisture
1	FB-1-2.5	10/30/19	0755	Soil	5																						
2	FB-1-5.0	↓	0825	↓	5		X		X		X			X	X					X							X
3	FB-2-2.5		0920		5		X																				
4	FB-2-5.0		0935		5		(X)																				(X)
5	FB-3-2.5		1005		5																						
6	FB-3-5.0		1015		5																						
7	FB-4-2.5		1105		5																						
8	FB-5-2.5		1245		5																						
9	FB-5-5.0		1255		5																						
10	FB-6-2.5	↓	1320	↓	5																						

	Signature	Company	Date	Time
Relinquished	Ryan Ostrom	Farallon	10/30/19	1630
Received	[signature]	Speedy	10-31-19	0836
Relinquished	[signature]	Speedy	10-31-19	1038
Received	[signature]	OSE	10/31/19	1036
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions
~~Please Hold! PM will call for Analyses.~~
X - Added 10/31/19. DB (STA)
(X) Added 11/4/19. DB (STA)

Data Package: Standard ☐ Level III ☐ Level IV ☐

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

Chain of Custody

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

Company: Farallon
Project Number: 2194-001
Project Name: 701 South Jackson Street
Project Manager: Stuart Brown
Sampled by: Ryan Ostrom

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days)
☐ _____ (other)

Laboratory Number: 10-400

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A					% Moisture
11	FB-6-5.0	10/30/19	1335	Soil	5																						
12	FB-7-2.5		1405		5		X		X																		X
13	FB-7-5.0		1410		5																						
14	FB-7-8.0		1415		5		X		X																		X

	Signature	Company	Date	Time
Relinquished	Ryan Ostrom	Farallon	10/30/19	1630
Received	[illegible]	Speedy	10-31-19	0836
Relinquished	[illegible]	Speedy	10-31-19	1038
Received	[illegible]	OSE	10/31/19	1038
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions
Please Hold PAH will call for Analysis.
DJB

Data Package: Standard ☐ Level III ☐ Level IV ☐
Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐

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

November 13, 2019

Stuart Brown
Farallon Consulting, LLC
975 5th Avenue NW
Issaquah, WA 98027

Re: Analytical Data for Project 2194-001
Laboratory Reference No. 1911-019

Dear Stuart:

Enclosed are the analytical results and associated quality control data for samples submitted on November 1, 2019.

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

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

Sincerely,

David Baumeister
Project Manager

Enclosures

Date of Report: November 13, 2019
Samples Submitted: November 1, 2019
Laboratory Reference: 1911-019
Project: 2194-001

Case Narrative

Samples were collected on November 1, 2019 and received by the laboratory on November 1, 2019. 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.

Halogenated Volatiles EPA 8260D:

Some MTCA Method A cleanup levels are non-achievable for sample FB-5-17.0 due to the necessary dilution of the sample.

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

Date of Report: November 13, 2019
Samples Submitted: November 1, 2019
Laboratory Reference: 1911-019
Project: 2194-001

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

Matrix: Soil
Units: mg/kg (ppm)

				Date	Date
Client ID:	**FB-6-10.0**				
Laboratory ID:	11-019-09				
Benzene	**ND**	0.020	EPA 8021B	11-5-19	11-6-19
Toluene	**ND**	0.047	EPA 8021B	11-5-19	11-6-19
Ethyl Benzene	**ND**	0.047	EPA 8021B	11-5-19	11-6-19
m,p-Xylene	**ND**	0.047	EPA 8021B	11-5-19	11-6-19
o-Xylene	**ND**	0.047	EPA 8021B	11-5-19	11-6-19
Gasoline	**ND**	4.7	NWTPH-Gx	11-5-19	11-6-19
Surrogate:	*Percent Recovery*	*Control Limits*			
Fluorobenzene	*81*	*58-129*			

Date of Report: November 13, 2019
Samples Submitted: November 1, 2019
Laboratory Reference: 1911-019
Project: 2194-001

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

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**FB-6-18.0**					
Laboratory ID:	11-019-11					
Benzene	**ND**	0.020	EPA 8021B	11-5-19	11-8-19	
Toluene	**ND**	0.051	EPA 8021B	11-5-19	11-8-19	
Ethyl Benzene	**1.2**	0.051	EPA 8021B	11-5-19	11-8-19	
m,p-Xylene	**0.55**	0.051	EPA 8021B	11-5-19	11-8-19	
o-Xylene	**ND**	0.051	EPA 8021B	11-5-19	11-8-19	
Gasoline	**28**	5.1	NWTPH-Gx	11-5-19	11-8-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*80*	*58-129*				
Client ID:	**FB-6-21.0**					
Laboratory ID:	11-019-12					
Benzene	**ND**	0.020	EPA 8021B	11-5-19	11-6-19	
Toluene	**ND**	0.065	EPA 8021B	11-5-19	11-6-19	
Ethyl Benzene	**ND**	0.065	EPA 8021B	11-5-19	11-6-19	
m,p-Xylene	**ND**	0.065	EPA 8021B	11-5-19	11-6-19	
o-Xylene	**ND**	0.065	EPA 8021B	11-5-19	11-6-19	
Gasoline	**ND**	6.5	NWTPH-Gx	11-5-19	11-6-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*87*	*58-129*				
Client ID:	**FB-6-24.0**					
Laboratory ID:	11-019-13					
Benzene	**ND**	0.020	EPA 8021B	11-5-19	11-6-19	
Toluene	**ND**	0.058	EPA 8021B	11-5-19	11-6-19	
Ethyl Benzene	**ND**	0.058	EPA 8021B	11-5-19	11-6-19	
m,p-Xylene	**0.068**	0.058	EPA 8021B	11-5-19	11-6-19	
o-Xylene	**ND**	0.058	EPA 8021B	11-5-19	11-6-19	
Gasoline	**ND**	5.8	NWTPH-Gx	11-5-19	11-6-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*82*	*58-129*				

Date of Report: November 13, 2019
Samples Submitted: November 1, 2019
Laboratory Reference: 1911-019
Project: 2194-001

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

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**FB-4-6.0**					
Laboratory ID:	11-019-14					
Benzene	**ND**	0.020	EPA 8021B	11-5-19	11-6-19	
Toluene	**ND**	0.055	EPA 8021B	11-5-19	11-6-19	
Ethyl Benzene	**0.12**	0.055	EPA 8021B	11-5-19	11-6-19	
m,p-Xylene	**0.10**	0.055	EPA 8021B	11-5-19	11-6-19	
o-Xylene	**ND**	0.055	EPA 8021B	11-5-19	11-6-19	
Gasoline	**86**	5.5	NWTPH-Gx	11-5-19	11-6-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*86*	*58-129*				
Client ID:	**FB-4-10.0**					
Laboratory ID:	11-019-15					
Benzene	**0.032**	0.020	EPA 8021B	11-5-19	11-8-19	
Toluene	**ND**	0.053	EPA 8021B	11-5-19	11-8-19	
Ethyl Benzene	**2.2**	0.053	EPA 8021B	11-5-19	11-8-19	
m,p-Xylene	**2.7**	0.053	EPA 8021B	11-5-19	11-8-19	
o-Xylene	**0.29**	0.053	EPA 8021B	11-5-19	11-8-19	
Gasoline	**450**	5.3	NWTPH-Gx	11-5-19	11-8-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*83*	*58-129*				
Client ID:	**FB-4-15.0**					
Laboratory ID:	11-019-16					
Benzene	**1.3**	0.023	EPA 8021B	11-5-19	11-6-19	
Toluene	**21**	1.2	EPA 8021B	11-5-19	11-8-19	
Ethyl Benzene	**21**	1.2	EPA 8021B	11-5-19	11-8-19	
m,p-Xylene	**93**	1.2	EPA 8021B	11-5-19	11-8-19	
o-Xylene	**34**	1.2	EPA 8021B	11-5-19	11-8-19	
Gasoline	**1700**	120	NWTPH-Gx	11-5-19	11-8-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*92*	*58-129*				

Date of Report: November 13, 2019
Samples Submitted: November 1, 2019
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Project: 2194-001

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

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**FB-5-11.0**					
Laboratory ID:	11-019-18					
Benzene	**ND**	0.020	EPA 8021B	11-5-19	11-6-19	
Toluene	**ND**	0.071	EPA 8021B	11-5-19	11-6-19	
Ethyl Benzene	**0.095**	0.071	EPA 8021B	11-5-19	11-6-19	
m,p-Xylene	**0.087**	0.071	EPA 8021B	11-5-19	11-6-19	
o-Xylene	**ND**	0.071	EPA 8021B	11-5-19	11-6-19	
Gasoline	**17**	7.1	NWTPH-Gx	11-5-19	11-6-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*87*	*58-129*				
Client ID:	**FB-5-17.0**					
Laboratory ID:	11-019-20					
Benzene	**1.6**	0.21	EPA 8021B	11-5-19	11-6-19	
Toluene	**18**	1.0	EPA 8021B	11-5-19	11-6-19	
Ethyl Benzene	**89**	1.0	EPA 8021B	11-5-19	11-6-19	
m,p-Xylene	**310**	5.2	EPA 8021B	11-5-19	11-6-19	
o-Xylene	**110**	5.2	EPA 8021B	11-5-19	11-6-19	
Gasoline	**4800**	100	NWTPH-Gx	11-5-19	11-6-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*89*	*58-129*				
Client ID:	**FB-5-25.0**					
Laboratory ID:	11-019-22					
Benzene	**ND**	0.020	EPA 8021B	11-5-19	11-6-19	
Toluene	**ND**	0.059	EPA 8021B	11-5-19	11-6-19	
Ethyl Benzene	**ND**	0.059	EPA 8021B	11-5-19	11-6-19	
m,p-Xylene	**ND**	0.059	EPA 8021B	11-5-19	11-6-19	
o-Xylene	**ND**	0.059	EPA 8021B	11-5-19	11-6-19	
Gasoline	**ND**	5.9	NWTPH-Gx	11-5-19	11-6-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*87*	*58-129*				

Date of Report: November 13, 2019
Samples Submitted: November 1, 2019
Laboratory Reference: 1911-019
Project: 2194-001

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

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1105S1					
Benzene	**ND**	0.020	EPA 8021B	11-5-19	11-5-19	
Toluene	**ND**	0.050	EPA 8021B	11-5-19	11-5-19	
Ethyl Benzene	**ND**	0.050	EPA 8021B	11-5-19	11-5-19	
m,p-Xylene	**ND**	0.050	EPA 8021B	11-5-19	11-5-19	
o-Xylene	**ND**	0.050	EPA 8021B	11-5-19	11-5-19	
Gasoline	**ND**	5.0	NWTPH-Gx	11-5-19	11-5-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*82*	*58-129*				
Laboratory ID:	MB1105S2					
Benzene	**ND**	0.020	EPA 8021B	11-5-19	11-5-19	
Toluene	**ND**	0.050	EPA 8021B	11-5-19	11-5-19	
Ethyl Benzene	**ND**	0.050	EPA 8021B	11-5-19	11-5-19	
m,p-Xylene	**ND**	0.050	EPA 8021B	11-5-19	11-5-19	
o-Xylene	**ND**	0.050	EPA 8021B	11-5-19	11-5-19	
Gasoline	**ND**	5.0	NWTPH-Gx	11-5-19	11-5-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*80*	*58-129*				

Date of Report: November 13, 2019
Samples Submitted: November 1, 2019
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Project: 2194-001

GASOLINE RANGE ORGANICS/BTEX
NWTPH-Gx/EPA 8021B
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:	11-033-01										
	ORIG	DUP									
Benzene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Toluene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Ethyl Benzene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
m,p-Xylene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
o-Xylene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Gasoline	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Surrogate:											
Fluorobenzene						*81*	*82*	*58-129*			
Laboratory ID:	11-033-03										
	ORIG	DUP									
Benzene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Toluene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Ethyl Benzene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
m,p-Xylene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
o-Xylene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Gasoline	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Surrogate:											
Fluorobenzene						*82*	*82*	*58-129*			
SPIKE BLANKS											
Laboratory ID:	SB1105S1										
	SB	SBD	SB	SBD		SB	SBD				
Benzene	**0.828**	**0.836**	1.00	1.00		**83**	**84**	69-109	1	10	
Toluene	**0.897**	**0.905**	1.00	1.00		**90**	**91**	67-112	1	10	
Ethyl Benzene	**0.907**	**0.917**	1.00	1.00		**91**	**92**	67-113	1	10	
m,p-Xylene	**0.924**	**0.930**	1.00	1.00		**92**	**93**	66-114	1	11	
o-Xylene	**0.931**	**0.940**	1.00	1.00		**93**	**94**	68-112	1	11	
Surrogate:											
Fluorobenzene						*80*	*81*	*58-129*			

Date of Report: November 13, 2019
Samples Submitted: November 1, 2019
Laboratory Reference: 1911-019
Project: 2194-001

DIESEL AND HEAVY OIL RANGE ORGANICS
NWTPH-Dx

Matrix: Soil
Units: mg/Kg (ppm)

				Date	Date	
Client ID:	**FB-6-18.0**					
Laboratory ID:	11-019-11					
Diesel Range Organics	**ND**	30	NWTPH-Dx	11-5-19	11-5-19	
Lube Oil Range Organics	**ND**	61	NWTPH-Dx	11-5-19	11-5-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*73*	*50-150*				
Client ID:	**FB-6-24.0**					
Laboratory ID:	11-019-13					
Diesel Range Organics	**ND**	31	NWTPH-Dx	11-5-19	11-5-19	
Lube Oil Range Organics	**ND**	63	NWTPH-Dx	11-5-19	11-5-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*91*	*50-150*				
Client ID:	**FB-4-15.0**					
Laboratory ID:	11-019-16					
Diesel Range Organics	**ND**	31	NWTPH-Dx	11-5-19	11-5-19	
Lube Oil Range Organics	**ND**	61	NWTPH-Dx	11-5-19	11-5-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*74*	*50-150*				
Client ID:	**FB-5-11.0**					
Laboratory ID:	11-019-18					
Diesel Range Organics	**ND**	33	NWTPH-Dx	11-5-19	11-5-19	
Lube Oil Range Organics	**ND**	66	NWTPH-Dx	11-5-19	11-5-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*75*	*50-150*				
Client ID:	**FB-5-17.0**					
Laboratory ID:	11-019-20					
Diesel Range Organics	**590**	29	NWTPH-Dx	11-5-19	11-5-19	M1
Lube Oil Range Organics	**ND**	57	NWTPH-Dx	11-5-19	11-5-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*98*	*50-150*				

Date of Report: November 13, 2019
Samples Submitted: November 1, 2019
Laboratory Reference: 1911-019
Project: 2194-001

DIESEL AND HEAVY OIL RANGE ORGANICS
NWTPH-Dx

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**FB-5-25.0**					
Laboratory ID:	11-019-22					
Diesel Range Organics	**ND**	32	NWTPH-Dx	11-5-19	11-5-19	
Lube Oil Range Organics	**ND**	63	NWTPH-Dx	11-5-19	11-5-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*85*	*50-150*				

Date of Report: November 13, 2019
Samples Submitted: November 1, 2019
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DIESEL AND HEAVY OIL RANGE ORGANICS
NWTPH-Dx
QUALITY CONTROL

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1105S1					
Diesel Range Organics	**ND**	25	NWTPH-Dx	11-5-19	11-5-19	
Lube Oil Range Organics	**ND**	50	NWTPH-Dx	11-5-19	11-5-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*105*	*50-150*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	11-019-01										
	ORIG	DUP									
Diesel Range Organics	**63.2**	**49.1**	NA	NA		NA		NA	25	NA	
Lube Oil Range Organics	**50.0**	**ND**	NA	NA		NA		NA	NA	NA	
Surrogate:											
o-Terphenyl						*101*	*81*	*50-150*			

Date of Report: November 13, 2019
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VOLATILE ORGANICS EPA 8260D
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Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**FB-6-18.0**					
Laboratory ID:	11-019-11					
Dichlorodifluoromethane	ND	0.00089	EPA 8260D	11-6-19	11-6-19	
Chloromethane	ND	0.0045	EPA 8260D	11-6-19	11-6-19	
Vinyl Chloride	ND	0.00089	EPA 8260D	11-6-19	11-6-19	
Bromomethane	ND	0.00089	EPA 8260D	11-6-19	11-6-19	
Chloroethane	ND	0.0045	EPA 8260D	11-6-19	11-6-19	
Trichlorofluoromethane	ND	0.00089	EPA 8260D	11-6-19	11-6-19	
1,1-Dichloroethene	ND	0.00089	EPA 8260D	11-6-19	11-6-19	
Iodomethane	ND	0.0045	EPA 8260D	11-6-19	11-6-19	
Methylene Chloride	ND	0.0045	EPA 8260D	11-6-19	11-6-19	
(trans) 1,2-Dichloroethene	ND	0.00089	EPA 8260D	11-6-19	11-6-19	
1,1-Dichloroethane	ND	0.00089	EPA 8260D	11-6-19	11-6-19	
2,2-Dichloropropane	ND	0.00089	EPA 8260D	11-6-19	11-6-19	
(cis) 1,2-Dichloroethene	ND	0.00089	EPA 8260D	11-6-19	11-6-19	
Bromochloromethane	ND	0.00089	EPA 8260D	11-6-19	11-6-19	
Chloroform	ND	0.026	EPA 8260D	11-6-19	11-6-19	U1
1,1,1-Trichloroethane	ND	0.00089	EPA 8260D	11-6-19	11-6-19	
Carbon Tetrachloride	ND	0.00089	EPA 8260D	11-6-19	11-6-19	
1,1-Dichloropropene	ND	0.00089	EPA 8260D	11-6-19	11-6-19	
1,2-Dichloroethane	ND	0.00089	EPA 8260D	11-6-19	11-6-19	
Trichloroethene	ND	0.00089	EPA 8260D	11-6-19	11-6-19	
1,2-Dichloropropane	ND	0.00089	EPA 8260D	11-6-19	11-6-19	
Dibromomethane	ND	0.00089	EPA 8260D	11-6-19	11-6-19	
Bromodichloromethane	ND	0.00089	EPA 8260D	11-6-19	11-6-19	
2-Chloroethyl Vinyl Ether	ND	0.0062	EPA 8260D	11-6-19	11-6-19	
(cis) 1,3-Dichloropropene	ND	0.00089	EPA 8260D	11-6-19	11-6-19	
(trans) 1,3-Dichloropropene	ND	0.00089	EPA 8260D	11-6-19	11-6-19	

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**FB-6-18.0**					
Laboratory ID:	11-019-11					
1,1,2-Trichloroethane	ND	0.00089	EPA 8260D	11-6-19	11-6-19	
Tetrachloroethene	ND	0.00089	EPA 8260D	11-6-19	11-6-19	
1,3-Dichloropropane	ND	0.00089	EPA 8260D	11-6-19	11-6-19	
Dibromochloromethane	ND	0.00089	EPA 8260D	11-6-19	11-6-19	
1,2-Dibromoethane	ND	0.00089	EPA 8260D	11-6-19	11-6-19	
Chlorobenzene	ND	0.00089	EPA 8260D	11-6-19	11-6-19	
1,1,1,2-Tetrachloroethane	ND	0.00089	EPA 8260D	11-6-19	11-6-19	
Bromoform	ND	0.0045	EPA 8260D	11-6-19	11-6-19	
Bromobenzene	ND	0.00089	EPA 8260D	11-6-19	11-6-19	
1,1,2,2-Tetrachloroethane	ND	0.00089	EPA 8260D	11-6-19	11-6-19	
1,2,3-Trichloropropane	ND	0.00089	EPA 8260D	11-6-19	11-6-19	
2-Chlorotoluene	ND	0.00089	EPA 8260D	11-6-19	11-6-19	
4-Chlorotoluene	ND	0.00089	EPA 8260D	11-6-19	11-6-19	
1,3-Dichlorobenzene	ND	0.00089	EPA 8260D	11-6-19	11-6-19	
1,4-Dichlorobenzene	ND	0.00089	EPA 8260D	11-6-19	11-6-19	
1,2-Dichlorobenzene	ND	0.00089	EPA 8260D	11-6-19	11-6-19	
1,2-Dibromo-3-chloropropane	ND	0.0045	EPA 8260D	11-6-19	11-6-19	
1,2,4-Trichlorobenzene	ND	0.00089	EPA 8260D	11-6-19	11-6-19	
Hexachlorobutadiene	ND	0.0045	EPA 8260D	11-6-19	11-6-19	
1,2,3-Trichlorobenzene	ND	0.00089	EPA 8260D	11-6-19	11-6-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*130*	*76-131*				
Toluene-d8	*117*	*78-128*				
4-Bromofluorobenzene	*85*	*71-130*				

Date of Report: November 13, 2019
Samples Submitted: November 1, 2019
Laboratory Reference: 1911-019
Project: 2194-001

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Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**FB-5-17.0**					
Laboratory ID:	11-019-20					
Dichlorodifluoromethane	ND	1.1	EPA 8260D	11-5-19	11-6-19	
Chloromethane	ND	5.5	EPA 8260D	11-5-19	11-6-19	
Vinyl Chloride	ND	1.1	EPA 8260D	11-5-19	11-6-19	
Bromomethane	ND	1.1	EPA 8260D	11-5-19	11-6-19	
Chloroethane	ND	5.5	EPA 8260D	11-5-19	11-6-19	
Trichlorofluoromethane	ND	1.1	EPA 8260D	11-5-19	11-6-19	
1,1-Dichloroethene	ND	1.1	EPA 8260D	11-5-19	11-6-19	
Iodomethane	ND	5.5	EPA 8260D	11-5-19	11-6-19	
Methylene Chloride	ND	5.5	EPA 8260D	11-5-19	11-6-19	
(trans) 1,2-Dichloroethene	ND	1.1	EPA 8260D	11-5-19	11-6-19	
1,1-Dichloroethane	ND	1.1	EPA 8260D	11-5-19	11-6-19	
2,2-Dichloropropane	ND	1.1	EPA 8260D	11-5-19	11-6-19	
(cis) 1,2-Dichloroethene	ND	1.1	EPA 8260D	11-5-19	11-6-19	
Bromochloromethane	ND	1.1	EPA 8260D	11-5-19	11-6-19	
Chloroform	ND	1.1	EPA 8260D	11-5-19	11-6-19	
1,1,1-Trichloroethane	ND	1.1	EPA 8260D	11-5-19	11-6-19	
Carbon Tetrachloride	ND	1.1	EPA 8260D	11-5-19	11-6-19	
1,1-Dichloropropene	ND	1.1	EPA 8260D	11-5-19	11-6-19	
1,2-Dichloroethane	ND	1.1	EPA 8260D	11-5-19	11-6-19	
Trichloroethene	ND	1.1	EPA 8260D	11-5-19	11-6-19	
1,2-Dichloropropane	ND	1.1	EPA 8260D	11-5-19	11-6-19	
Dibromomethane	ND	1.1	EPA 8260D	11-5-19	11-6-19	
Bromodichloromethane	ND	1.1	EPA 8260D	11-5-19	11-6-19	
2-Chloroethyl Vinyl Ether	ND	7.6	EPA 8260D	11-5-19	11-6-19	
(cis) 1,3-Dichloropropene	ND	1.1	EPA 8260D	11-5-19	11-6-19	
(trans) 1,3-Dichloropropene	ND	1.1	EPA 8260D	11-5-19	11-6-19	

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**FB-5-17.0**					
Laboratory ID:	11-019-20					
1,1,2-Trichloroethane	ND	1.1	EPA 8260D	11-5-19	11-6-19	
Tetrachloroethene	ND	1.1	EPA 8260D	11-5-19	11-6-19	
1,3-Dichloropropane	ND	1.1	EPA 8260D	11-5-19	11-6-19	
Dibromochloromethane	ND	1.1	EPA 8260D	11-5-19	11-6-19	
1,2-Dibromoethane	ND	1.1	EPA 8260D	11-5-19	11-6-19	
Chlorobenzene	ND	1.1	EPA 8260D	11-5-19	11-6-19	
1,1,1,2-Tetrachloroethane	ND	1.1	EPA 8260D	11-5-19	11-6-19	
Bromoform	ND	5.5	EPA 8260D	11-5-19	11-6-19	
Bromobenzene	ND	1.1	EPA 8260D	11-5-19	11-6-19	
1,1,2,2-Tetrachloroethane	ND	1.1	EPA 8260D	11-5-19	11-6-19	
1,2,3-Trichloropropane	ND	1.1	EPA 8260D	11-5-19	11-6-19	
2-Chlorotoluene	ND	1.1	EPA 8260D	11-5-19	11-6-19	
4-Chlorotoluene	ND	1.1	EPA 8260D	11-5-19	11-6-19	
1,3-Dichlorobenzene	ND	1.1	EPA 8260D	11-5-19	11-6-19	
1,4-Dichlorobenzene	ND	1.1	EPA 8260D	11-5-19	11-6-19	
1,2-Dichlorobenzene	ND	1.1	EPA 8260D	11-5-19	11-6-19	
1,2-Dibromo-3-chloropropane	ND	5.5	EPA 8260D	11-5-19	11-6-19	
1,2,4-Trichlorobenzene	ND	1.1	EPA 8260D	11-5-19	11-6-19	
Hexachlorobutadiene	ND	5.5	EPA 8260D	11-5-19	11-6-19	
1,2,3-Trichlorobenzene	ND	1.1	EPA 8260D	11-5-19	11-6-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*106*	*76-131*				
Toluene-d8	*100*	*78-128*				
4-Bromofluorobenzene	*93*	*71-130*				

Date of Report: November 13, 2019
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QUALITY CONTROL
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Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1105S2					
Dichlorodifluoromethane	ND	0.0010	EPA 8260D	11-5-19	11-5-19	
Chloromethane	ND	0.0050	EPA 8260D	11-5-19	11-5-19	
Vinyl Chloride	ND	0.0010	EPA 8260D	11-5-19	11-5-19	
Bromomethane	ND	0.0016	EPA 8260D	11-5-19	11-5-19	
Chloroethane	ND	0.0050	EPA 8260D	11-5-19	11-5-19	
Trichlorofluoromethane	ND	0.0010	EPA 8260D	11-5-19	11-5-19	
1,1-Dichloroethene	ND	0.0010	EPA 8260D	11-5-19	11-5-19	
Iodomethane	ND	0.0090	EPA 8260D	11-5-19	11-5-19	
Methylene Chloride	ND	0.0050	EPA 8260D	11-5-19	11-5-19	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	11-5-19	11-5-19	
1,1-Dichloroethane	ND	0.0010	EPA 8260D	11-5-19	11-5-19	
2,2-Dichloropropane	ND	0.0010	EPA 8260D	11-5-19	11-5-19	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	11-5-19	11-5-19	
Bromochloromethane	ND	0.0010	EPA 8260D	11-5-19	11-5-19	
Chloroform	ND	0.0010	EPA 8260D	11-5-19	11-5-19	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260D	11-5-19	11-5-19	
Carbon Tetrachloride	ND	0.0010	EPA 8260D	11-5-19	11-5-19	
1,1-Dichloropropene	ND	0.0010	EPA 8260D	11-5-19	11-5-19	
1,2-Dichloroethane	ND	0.0010	EPA 8260D	11-5-19	11-5-19	
Trichloroethene	ND	0.0010	EPA 8260D	11-5-19	11-5-19	
1,2-Dichloropropane	ND	0.0010	EPA 8260D	11-5-19	11-5-19	
Dibromomethane	ND	0.0010	EPA 8260D	11-5-19	11-5-19	
Bromodichloromethane	ND	0.0010	EPA 8260D	11-5-19	11-5-19	
2-Chloroethyl Vinyl Ether	ND	0.020	EPA 8260D	11-5-19	11-5-19	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	11-5-19	11-5-19	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	11-5-19	11-5-19	

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1105S2					
1,1,2-Trichloroethane	ND	0.0010	EPA 8260D	11-5-19	11-5-19	
Tetrachloroethene	ND	0.0010	EPA 8260D	11-5-19	11-5-19	
1,3-Dichloropropane	ND	0.0010	EPA 8260D	11-5-19	11-5-19	
Dibromochloromethane	ND	0.0010	EPA 8260D	11-5-19	11-5-19	
1,2-Dibromoethane	ND	0.0010	EPA 8260D	11-5-19	11-5-19	
Chlorobenzene	ND	0.0010	EPA 8260D	11-5-19	11-5-19	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260D	11-5-19	11-5-19	
Bromoform	ND	0.0066	EPA 8260D	11-5-19	11-5-19	
Bromobenzene	ND	0.0010	EPA 8260D	11-5-19	11-5-19	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260D	11-5-19	11-5-19	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260D	11-5-19	11-5-19	
2-Chlorotoluene	ND	0.0010	EPA 8260D	11-5-19	11-5-19	
4-Chlorotoluene	ND	0.0010	EPA 8260D	11-5-19	11-5-19	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260D	11-5-19	11-5-19	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260D	11-5-19	11-5-19	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260D	11-5-19	11-5-19	
1,2-Dibromo-3-chloropropane	ND	0.0063	EPA 8260D	11-5-19	11-5-19	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260D	11-5-19	11-5-19	
Hexachlorobutadiene	ND	0.0050	EPA 8260D	11-5-19	11-5-19	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260D	11-5-19	11-5-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*111*	*76-131*				
Toluene-d8	*97*	*78-128*				
4-Bromofluorobenzene	*88*	*71-130*				

Date of Report: November 13, 2019
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QUALITY CONTROL
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Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1106S1					
Dichlorodifluoromethane	ND	0.0010	EPA 8260D	11-6-19	11-6-19	
Chloromethane	ND	0.0050	EPA 8260D	11-6-19	11-6-19	
Vinyl Chloride	ND	0.0010	EPA 8260D	11-6-19	11-6-19	
Bromomethane	ND	0.0010	EPA 8260D	11-6-19	11-6-19	
Chloroethane	ND	0.0050	EPA 8260D	11-6-19	11-6-19	
Trichlorofluoromethane	ND	0.0010	EPA 8260D	11-6-19	11-6-19	
1,1-Dichloroethene	ND	0.0010	EPA 8260D	11-6-19	11-6-19	
Iodomethane	ND	0.0050	EPA 8260D	11-6-19	11-6-19	
Methylene Chloride	ND	0.0050	EPA 8260D	11-6-19	11-6-19	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	11-6-19	11-6-19	
1,1-Dichloroethane	ND	0.0010	EPA 8260D	11-6-19	11-6-19	
2,2-Dichloropropane	ND	0.0010	EPA 8260D	11-6-19	11-6-19	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	11-6-19	11-6-19	
Bromochloromethane	ND	0.0010	EPA 8260D	11-6-19	11-6-19	
Chloroform	ND	0.0010	EPA 8260D	11-6-19	11-6-19	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260D	11-6-19	11-6-19	
Carbon Tetrachloride	ND	0.0010	EPA 8260D	11-6-19	11-6-19	
1,1-Dichloropropene	ND	0.0010	EPA 8260D	11-6-19	11-6-19	
1,2-Dichloroethane	ND	0.0010	EPA 8260D	11-6-19	11-6-19	
Trichloroethene	ND	0.0010	EPA 8260D	11-6-19	11-6-19	
1,2-Dichloropropane	ND	0.0010	EPA 8260D	11-6-19	11-6-19	
Dibromomethane	ND	0.0010	EPA 8260D	11-6-19	11-6-19	
Bromodichloromethane	ND	0.0010	EPA 8260D	11-6-19	11-6-19	
2-Chloroethyl Vinyl Ether	ND	0.0069	EPA 8260D	11-6-19	11-6-19	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	11-6-19	11-6-19	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	11-6-19	11-6-19	

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Project: 2194-001

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QUALITY CONTROL
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1106S1					
1,1,2-Trichloroethane	ND	0.0010	EPA 8260D	11-6-19	11-6-19	
Tetrachloroethene	ND	0.0010	EPA 8260D	11-6-19	11-6-19	
1,3-Dichloropropane	ND	0.0010	EPA 8260D	11-6-19	11-6-19	
Dibromochloromethane	ND	0.0010	EPA 8260D	11-6-19	11-6-19	
1,2-Dibromoethane	ND	0.0010	EPA 8260D	11-6-19	11-6-19	
Chlorobenzene	ND	0.0010	EPA 8260D	11-6-19	11-6-19	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260D	11-6-19	11-6-19	
Bromoform	ND	0.0050	EPA 8260D	11-6-19	11-6-19	
Bromobenzene	ND	0.0010	EPA 8260D	11-6-19	11-6-19	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260D	11-6-19	11-6-19	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260D	11-6-19	11-6-19	
2-Chlorotoluene	ND	0.0010	EPA 8260D	11-6-19	11-6-19	
4-Chlorotoluene	ND	0.0010	EPA 8260D	11-6-19	11-6-19	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260D	11-6-19	11-6-19	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260D	11-6-19	11-6-19	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260D	11-6-19	11-6-19	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260D	11-6-19	11-6-19	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260D	11-6-19	11-6-19	
Hexachlorobutadiene	ND	0.0050	EPA 8260D	11-6-19	11-6-19	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260D	11-6-19	11-6-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*99*	*76-131*				
Toluene-d8	*97*	*78-128*				
4-Bromofluorobenzene	*92*	*71-130*				

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Samples Submitted: November 1, 2019
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Project: 2194-001

VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL

Matrix: Soil
Units: mg/kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB1105S2									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	**0.0452**	**0.0431**	0.0500	0.0500	90	86	57-133	5	18	
Benzene	**0.0522**	**0.0500**	0.0500	0.0500	104	100	71-129	4	16	
Trichloroethene	**0.0511**	**0.0499**	0.0500	0.0500	102	100	71-122	2	16	
Toluene	**0.0496**	**0.0477**	0.0500	0.0500	99	95	74-125	4	15	
Chlorobenzene	**0.0502**	**0.0476**	0.0500	0.0500	100	95	72-120	5	14	
Surrogate:										
Dibromofluoromethane					*110*	*109*	*76-131*			
Toluene-d8					*99*	*98*	*78-128*			
4-Bromofluorobenzene					*89*	*87*	*71-130*			
Laboratory ID:	SB1106S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	**0.0451**	**0.0459**	0.0500	0.0500	90	92	57-133	2	18	
Benzene	**0.0429**	**0.0460**	0.0500	0.0500	86	92	71-129	7	16	
Trichloroethene	**0.0503**	**0.0520**	0.0500	0.0500	101	104	71-122	3	16	
Toluene	**0.0451**	**0.0461**	0.0500	0.0500	90	92	74-125	2	15	
Chlorobenzene	**0.0483**	**0.0474**	0.0500	0.0500	97	95	72-120	2	14	
Surrogate:										
Dibromofluoromethane					*96*	*102*	*76-131*			
Toluene-d8					*94*	*98*	*78-128*			
4-Bromofluorobenzene					*91*	*90*	*71-130*			

Date of Report: November 13, 2019
Samples Submitted: November 1, 2019
Laboratory Reference: 1911-019
Project: 2194-001

PAHs EPA 8270E/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**FB-6-18.0**					
Laboratory ID:	11-019-11					
Naphthalene	**0.28**	0.0081	EPA 8270E/SIM	11-8-19	11-8-19	
2-Methylnaphthalene	**0.25**	0.0081	EPA 8270E/SIM	11-8-19	11-8-19	
1-Methylnaphthalene	**0.13**	0.0081	EPA 8270E/SIM	11-8-19	11-8-19	
Acenaphthylene	**ND**	0.0081	EPA 8270E/SIM	11-8-19	11-8-19	
Acenaphthene	**ND**	0.0081	EPA 8270E/SIM	11-8-19	11-8-19	
Fluorene	**ND**	0.0081	EPA 8270E/SIM	11-8-19	11-8-19	
Phenanthrene	**ND**	0.0081	EPA 8270E/SIM	11-8-19	11-8-19	
Anthracene	**ND**	0.0081	EPA 8270E/SIM	11-8-19	11-8-19	
Fluoranthene	**ND**	0.0081	EPA 8270E/SIM	11-8-19	11-8-19	
Pyrene	**ND**	0.0081	EPA 8270E/SIM	11-8-19	11-8-19	
Benzo[a]anthracene	**ND**	0.0081	EPA 8270E/SIM	11-8-19	11-8-19	
Chrysene	**ND**	0.0081	EPA 8270E/SIM	11-8-19	11-8-19	
Benzo[b]fluoranthene	**ND**	0.0081	EPA 8270E/SIM	11-8-19	11-8-19	
Benzo(j,k)fluoranthene	**ND**	0.0081	EPA 8270E/SIM	11-8-19	11-8-19	
Benzo[a]pyrene	**ND**	0.0081	EPA 8270E/SIM	11-8-19	11-8-19	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0081	EPA 8270E/SIM	11-8-19	11-8-19	
Dibenz[a,h]anthracene	**ND**	0.0081	EPA 8270E/SIM	11-8-19	11-8-19	
Benzo[g,h,i]perylene	**ND**	0.0081	EPA 8270E/SIM	11-8-19	11-8-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*76*	*40 - 111*				
Pyrene-d10	*91*	*40 - 110*				
Terphenyl-d14	*86*	*45 - 122*				

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Project: 2194-001

PAHs EPA 8270E/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**FB-5-17.0**					
Laboratory ID:	11-019-20					
Naphthalene	**6.4**	0.076	EPA 8270E/SIM	11-8-19	11-11-19	
2-Methylnaphthalene	**4.2**	0.076	EPA 8270E/SIM	11-8-19	11-11-19	
1-Methylnaphthalene	**2.2**	0.076	EPA 8270E/SIM	11-8-19	11-11-19	
Acenaphthylene	**0.025**	0.0076	EPA 8270E/SIM	11-8-19	11-8-19	
Acenaphthene	**0.025**	0.0076	EPA 8270E/SIM	11-8-19	11-8-19	
Fluorene	**0.053**	0.0076	EPA 8270E/SIM	11-8-19	11-8-19	
Phenanthrene	**0.078**	0.0076	EPA 8270E/SIM	11-8-19	11-8-19	
Anthracene	**0.016**	0.0076	EPA 8270E/SIM	11-8-19	11-8-19	
Fluoranthene	**0.012**	0.0076	EPA 8270E/SIM	11-8-19	11-8-19	
Pyrene	**0.019**	0.0076	EPA 8270E/SIM	11-8-19	11-8-19	
Benzo[a]anthracene	**0.0083**	0.0076	EPA 8270E/SIM	11-8-19	11-8-19	
Chrysene	**ND**	0.0076	EPA 8270E/SIM	11-8-19	11-8-19	
Benzo[b]fluoranthene	**ND**	0.0076	EPA 8270E/SIM	11-8-19	11-8-19	
Benzo(j,k)fluoranthene	**ND**	0.0076	EPA 8270E/SIM	11-8-19	11-8-19	
Benzo[a]pyrene	**ND**	0.0076	EPA 8270E/SIM	11-8-19	11-8-19	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0076	EPA 8270E/SIM	11-8-19	11-8-19	
Dibenz[a,h]anthracene	**ND**	0.0076	EPA 8270E/SIM	11-8-19	11-8-19	
Benzo[g,h,i]perylene	**ND**	0.0076	EPA 8270E/SIM	11-8-19	11-8-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*85*	*40 - 111*				
Pyrene-d10	*105*	*40 - 110*				
Terphenyl-d14	*97*	*45 - 122*				

Date of Report: November 13, 2019
Samples Submitted: November 1, 2019
Laboratory Reference: 1911-019
Project: 2194-001

PAHs EPA 8270E/SIM
QUALITY CONTROL

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1108S2					
Naphthalene	**ND**	0.0067	EPA 8270E/SIM	11-8-19	11-8-19	
2-Methylnaphthalene	**ND**	0.0067	EPA 8270E/SIM	11-8-19	11-8-19	
1-Methylnaphthalene	**ND**	0.0067	EPA 8270E/SIM	11-8-19	11-8-19	
Acenaphthylene	**ND**	0.0067	EPA 8270E/SIM	11-8-19	11-8-19	
Acenaphthene	**ND**	0.0067	EPA 8270E/SIM	11-8-19	11-8-19	
Fluorene	**ND**	0.0067	EPA 8270E/SIM	11-8-19	11-8-19	
Phenanthrene	**ND**	0.0067	EPA 8270E/SIM	11-8-19	11-8-19	
Anthracene	**ND**	0.0067	EPA 8270E/SIM	11-8-19	11-8-19	
Fluoranthene	**ND**	0.0067	EPA 8270E/SIM	11-8-19	11-8-19	
Pyrene	**ND**	0.0067	EPA 8270E/SIM	11-8-19	11-8-19	
Benzo[a]anthracene	**ND**	0.0067	EPA 8270E/SIM	11-8-19	11-8-19	
Chrysene	**ND**	0.0067	EPA 8270E/SIM	11-8-19	11-8-19	
Benzo[b]fluoranthene	**ND**	0.0067	EPA 8270E/SIM	11-8-19	11-8-19	
Benzo(j,k)fluoranthene	**ND**	0.0067	EPA 8270E/SIM	11-8-19	11-8-19	
Benzo[a]pyrene	**ND**	0.0067	EPA 8270E/SIM	11-8-19	11-8-19	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0067	EPA 8270E/SIM	11-8-19	11-8-19	
Dibenz[a,h]anthracene	**ND**	0.0067	EPA 8270E/SIM	11-8-19	11-8-19	
Benzo[g,h,i]perylene	**ND**	0.0067	EPA 8270E/SIM	11-8-19	11-8-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*90*	*40 - 111*				
Pyrene-d10	*106*	*40 - 110*				
Terphenyl-d14	*99*	*45 - 122*				

Date of Report: November 13, 2019
Samples Submitted: November 1, 2019
Laboratory Reference: 1911-019
Project: 2194-001

PAHs EPA 8270E/SIM
QUALITY CONTROL

Matrix: Soil
Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB1118S2									
	SB	SBD	SB	SBD	SB	SBD				
Naphthalene	**0.0737**	**0.0764**	0.0833	0.0833	88	92	57 - 109	4	15	
Acenaphthylene	**0.0829**	**0.0930**	0.0833	0.0833	100	112	60 - 121	11	15	
Acenaphthene	**0.0727**	**0.0818**	0.0833	0.0833	87	98	59 - 121	12	15	
Fluorene	**0.0771**	**0.0820**	0.0833	0.0833	93	98	63 - 119	6	15	
Phenanthrene	**0.0757**	**0.0780**	0.0833	0.0833	91	94	59 - 114	3	15	
Anthracene	**0.0875**	**0.0891**	0.0833	0.0833	105	107	63 - 119	2	15	
Fluoranthene	**0.0814**	**0.0851**	0.0833	0.0833	98	102	63 - 120	4	15	
Pyrene	**0.0818**	**0.0824**	0.0833	0.0833	98	99	62 - 119	1	15	
Benzo[a]anthracene	**0.0868**	**0.0895**	0.0833	0.0833	104	107	64 - 127	3	15	
Chrysene	**0.0783**	**0.0804**	0.0833	0.0833	94	97	63 - 121	3	15	
Benzo[b]fluoranthene	**0.0868**	**0.0908**	0.0833	0.0833	104	109	61 - 122	5	15	
Benzo(j,k)fluoranthene	**0.0751**	**0.0768**	0.0833	0.0833	90	92	64 - 123	2	15	
Benzo[a]pyrene	**0.0966**	**0.0996**	0.0833	0.0833	116	120	62 - 122	3	15	
Indeno(1,2,3-c,d)pyrene	**0.0958**	**0.101**	0.0833	0.0833	115	121	59 - 124	5	15	
Dibenz[a,h]anthracene	**0.0919**	**0.0946**	0.0833	0.0833	110	114	61 - 123	3	15	
Benzo[g,h,i]perylene	**0.0856**	**0.0888**	0.0833	0.0833	103	107	61 - 119	4	15	
Surrogate:										
2-Fluorobiphenyl					*86*	*95*	*40 - 111*			
Pyrene-d10					*105*	*108*	*40 - 110*			
Terphenyl-d14					*98*	*100*	*45 - 122*			

Date of Report: November 13, 2019
Samples Submitted: November 1, 2019
Laboratory Reference: 1911-019
Project: 2194-001

PCBs EPA 8082A

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**FB-6-18.0**					
Laboratory ID:	11-019-11					
Aroclor 1016	**ND**	0.061	EPA 8082A	11-5-19	11-5-19	
Aroclor 1221	**ND**	0.061	EPA 8082A	11-5-19	11-5-19	
Aroclor 1232	**ND**	0.061	EPA 8082A	11-5-19	11-5-19	
Aroclor 1242	**ND**	0.061	EPA 8082A	11-5-19	11-5-19	
Aroclor 1248	**ND**	0.061	EPA 8082A	11-5-19	11-5-19	
Aroclor 1254	**ND**	0.061	EPA 8082A	11-5-19	11-5-19	
Aroclor 1260	**ND**	0.061	EPA 8082A	11-5-19	11-5-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*83*	*37-122*				
Client ID:	**FB-5-17.0**					
Laboratory ID:	11-019-20					
Aroclor 1016	**ND**	0.057	EPA 8082A	11-5-19	11-5-19	
Aroclor 1221	**ND**	0.057	EPA 8082A	11-5-19	11-5-19	
Aroclor 1232	**ND**	0.057	EPA 8082A	11-5-19	11-5-19	
Aroclor 1242	**ND**	0.057	EPA 8082A	11-5-19	11-5-19	
Aroclor 1248	**ND**	0.057	EPA 8082A	11-5-19	11-5-19	
Aroclor 1254	**ND**	0.057	EPA 8082A	11-5-19	11-5-19	
Aroclor 1260	**ND**	0.057	EPA 8082A	11-5-19	11-5-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*79*	*37-122*				

Date of Report: November 13, 2019
Samples Submitted: November 1, 2019
Laboratory Reference: 1911-019
Project: 2194-001

PCBs EPA 8082A
QUALITY CONTROL

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1105S1					
Aroclor 1016	**ND**	0.050	EPA 8082A	11-5-19	11-5-19	
Aroclor 1221	**ND**	0.050	EPA 8082A	11-5-19	11-5-19	
Aroclor 1232	**ND**	0.050	EPA 8082A	11-5-19	11-5-19	
Aroclor 1242	**ND**	0.050	EPA 8082A	11-5-19	11-5-19	
Aroclor 1248	**ND**	0.050	EPA 8082A	11-5-19	11-5-19	
Aroclor 1254	**ND**	0.050	EPA 8082A	11-5-19	11-5-19	
Aroclor 1260	**ND**	0.050	EPA 8082A	11-5-19	11-5-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*91*	*37-122*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
MATRIX SPIKES											
Laboratory ID:	11-019-20										
	MS	MSD	MS	MSD		MS	MSD				
Aroclor 1260	**0.560**	**0.546**	0.500	0.500	ND	**112**	**109**	38-120	3	15	
Surrogate:											
DCB						*87*	*80*	*37-122*			

Date of Report: November 13, 2019
Samples Submitted: November 1, 2019
Laboratory Reference: 1911-019
Project: 2194-001

% MOISTURE

Client ID	Lab ID	% Moisture	Date Analyzed
FB-6-10.0	11-019-09	**11**	11-5-19
FB-6-18.0	11-019-11	**18**	11-5-19
FB-6-21.0	11-019-12	**22**	11-5-19
FB-6-24.0	11-019-13	**20**	11-5-19
FB-4-6.0	11-019-14	**19**	11-5-19
FB-4-10.0	11-019-15	**9**	11-5-19
FB-4-15.0	11-019-16	**18**	11-5-19
FB-5-11.0	11-019-18	**24**	11-5-19
FB-5-17.0	11-019-20	**13**	11-5-19
FB-5-25.0	11-019-22	**21**	11-5-19

OnSite Environmental Inc.

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 methods 8260 & 8270, 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

Laboratory Number: 11-019

Company: Farallon
Project Number: 2194-001
Project Name: 701 South Jackson Street
Project Manager: Stuart Brown
Sampled by: Ryan Ostrom

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days)
☐ ________ (other)

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX 8021	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A					% Moisture
1	FB-2-10.0	11/1/19	0710	Soil	5		X		X																		X
2	FB-2-15.0		0715		5		X																				X
3	FB-2-20.0		0720		5																						
4	FB-2-25.0		0730		5																						
5	FB-2-30.0		0735		5																						
6	FB-2-35.0		0740		5																						
7	FB-2-40.0		0800		5																						
8	FB-6-6.0		0935		5																						
9	FB-6-10.0		0950		5		X																				X
10	FB-6-15.0		1005		5																						

	Signature	Company	Date	Time
Relinquished	[signature]	Farallon	11/1/19	~~1515~~ 1626
Received	[signature]	OSE	11/1/19	1626
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions
~~Please Hold. PM Will Call for Analysis.~~
X-added 11/4/19. PB (STA)

Data Package: Standard ☐ Level III ☐ Level IV ☐
Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐

Chain of Custody

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

Company: Farallon
Project Number: 2194-001
Project Name: 701 South Jackson Street
Project Manager: Stuart Brown
Sampled by: Ryan Ostrom

Turnaround Request (in working days)

(Check One)

- ☐ Same Day
- ☐ 1 Day
- ☐ 2 Days
- ☐ 3 Days
- ☒ Standard (7 Days)
- ☐ _____ (other)

Laboratory Number: 11-019

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX 8021	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A					% Moisture
11	FB-6-18.0	11/1/19	1025	Soil	5		X		X		X			X	X												X
12	FB-6-21.0		1030		5		X																				X
13	FB-6-24.0		1050		5		X		X																		X
14	FB-4-6.0		1235		5		X																				X
15	FB-4-10.0		1245		5		X																				X
16	FB-4-15.0		1255		5		X		X																		X
17	FB-5-6.0		1345		5																						
18	FB-5-11.0		1400		5		X		X																		X
19	FB-5-15.0		1415		5																						
20	FB-5-17.0	↓	1420	↓	5		X		X		X			X	X												X

	Signature	Company	Date	Time
Relinquished	Megan Gri	Farallon	11/1/19	~~1515~~ 1626
Received	Kaitlin Brown	OSE	11/1/19	1626
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Data Package: Standard ☐ Level III ☐ Level IV ☐

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

Chain of Custody

OnSite Environmental Inc.
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14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: Farallon
Project Number: 2194-001
Project Name: 701 South Jackson Street
Project Manager: Stuart Brown
Sampled by: Ryan Ostrom

Turnaround Request (in working days)

(Check One)

- ☐ Same Day
- ☐ 1 Day
- ☐ 2 Days
- ☐ 3 Days
- ☒ Standard (7 Days)
- ☐ _____ (other)

Laboratory Number: 11-019

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A					% Moisture
21	FB-5-20.0	11/1/19	1425	Soil	5																						
22	FB-5-25.0	↓	1430	↓	5		X		X																		X
23	FB-5-30.0	↓	1440	↓	5																						

	Signature	Company	Date	Time
Relinquished	Megan Gui	Farallon	11/1/19	1515
Received	Jason Lisowski	OSE	11/1/19	1626
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

~~Please Hold. PM will call for Analysis.~~ 3

Data Package: Standard ☐ Level III ☐ Level IV ☐

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

APPENDIX C
Report Limitations and Guidelines for Use

APPENDIX C
REPORT LIMITATIONS AND GUIDELINES FOR USE[1]

This Appendix provides information to help you manage your risks with respect to the use of this report.

Read These Provisions Closely

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 "Report Limitations and Guidelines for Use" apply to your project or site.

Environmental Services Are Performed for Specific Purposes, Persons and Projects

This report has been prepared for 701 South Jackson Partners, LLC. 701 South Jackson Partners, LLC may distribute copies of this report to 701 South Jackson Partners, LLC authorized agents and regulatory agencies as may be required for the project. This report is not intended for use by others, and the information contained herein is not applicable to other sites.

GeoEngineers structures our services to meet the specific needs of our clients. For example, an environmental site assessment or remedial action 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 project site. No one except 701 South Jackson Partners, LLC should rely on this report without first conferring with GeoEngineers. This report should not be applied for any purpose or project except the one originally contemplated.

This Environmental Report Is Based on a Unique Set of Project-Specific Factors

This report applies to the property at 701 South Jackson in Seattle, Washington. GeoEngineers considered a number of unique, project-specific factors when establishing the scope of services for this project and report. Unless GeoEngineers specifically indicates otherwise, do not rely on this report if it was:

- Not prepared for you,
- Not prepared for your project,
- Not prepared for the specific site explored, or
- Completed before important project changes were made.

[1] Developed based on material provided by ASFE, Professional Firms Practicing in the Geosciences; www.asfe.org.

If important changes are made after the date of this remedial action plan, GeoEngineers should be given the opportunity to review our interpretations and recommendations and provide written modifications or confirmation, as appropriate.

Reliance Conditions for Third Parties

No third party may rely on the product of our services unless GeoEngineers agrees in advance, and in writing to such reliance. 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.

Environmental Regulations Are Always Evolving

Some substances may be present in the site vicinity in quantities or under conditions that may have led, or may lead, to contamination of the subject site, 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 substance, change or if more stringent environmental standards are developed in the future.

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 manmade events such as construction on or adjacent to the site, by new releases of hazardous substances, or by natural events such as floods, earthquakes, slope instability or groundwater fluctuations. Always contact GeoEngineers before applying this report to determine if it is still applicable.

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 sites or for other on-site uses of the affected media (soil and/or groundwater). Note that hazardous substances may be present in some of the 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 site or reuse of the affected media on site to evaluate the potential for associated environmental liabilities. We cannot be responsible for potential environmental liability arising out of the transfer of soil and/or groundwater from the subject site to another location or its reuse on site in instances that we were not aware of or could not control.

Most Environmental Findings Are Professional Opinions

Our interpretations of subsurface conditions are based on field observations and chemical analytical data from widely spaced sampling locations at the site. Site exploration identifies subsurface conditions only at those points where subsurface tests are conducted or samples are taken. GeoEngineers reviewed field and laboratory data and then applied our professional judgment to render an opinion about subsurface conditions throughout the site. It is always possible that contamination exists in areas that were not explored, sampled or analyzed. Actual subsurface conditions may differ – sometimes significantly – from those indicated in this report. Our report, conclusions and interpretations should not be construed as a warranty of the subsurface conditions.

Geotechnical, Geologic and Geoenvironmental Reports Should Not Be Interchanged

The equipment, techniques and personnel used to perform an environmental study differ significantly from those used to perform a geotechnical or geologic study and vice versa. For that reason, a geotechnical

engineering or geologic report does not usually relate any environmental findings, conclusions or recommendations; e.g., about the likelihood of encountering underground storage tanks or regulated contaminants. Similarly, environmental reports are not used to address geotechnical or geologic concerns regarding a specific project.

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.

If the client desires these specialized services, they should be obtained from a consultant who offers services in this specialized field.

GeoEngineers