

Remedial Investigation and Feasibility Study

701 South Jackson Property
Seattle, Washington

for

701 S Jackson Partners, LLC
c/o Housing Diversity Corp

September 19, 2022



GEOENGINEERS 

Earth Science + Technology

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File No. 24504-001-01

September 19, 2022


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EXECUTIVE SUMMARY

This report presents the Remedial Investigation and Feasibility Study (RI/FS) for the Seventh Avenue Service site (Site), located at 701 South Jackson Street in Seattle, Washington (Property). This RI/FS 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). 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 Property-line to Property-line excavation of soils to a depth of approximately 15 to 20 feet below ground surface (bgs) and subsequent construction of the new building.

As part of the planned redevelopment project that will consist of a mixed-use building with affordable housing, 701 S Jackson Partners, LLC (South Jackson Partners) is in process of entering a Prospective Purchaser Consent Decree (PPCD) with the Washington State Department of Ecology (Ecology), and the Assistant Attorney General, Ecology Division (the AGO), to facilitate cleanup as part of project construction. Prior to initiating the PPCD process, the Site entered Ecology's Expedited Voluntary Cleanup Program (VCP) on April 23, 2021, to receive Ecology's technical advice and assistance on the independent RI/FS.

Based on environmental investigations conducted between 1992 and 2022, soil in the central and western portions of the Property contain gasoline-range total petroleum hydrocarbons, benzene, toluene, ethylbenzene, and xylenes (BTEX) and naphthalene at concentrations greater than the MTCA cleanup levels (CULs) associated with the former gasoline service station and garage that historically operated at the Property between the 1930s and 1970s. Additionally, localized areas of the shallow fill soil imported to the Property during construction for the existing structures contain lead and carcinogenic polycyclic aromatic hydrocarbons (cPAHs) at concentrations greater than the MTCA CULs. To address the contaminant containing soil, 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 soil conditions at the final construction excavation limit. Because residual soil contamination will remain in place beneath portions of the 7th Avenue South and South Jackson Street Rights-of-Way (ROW) following construction, a vapor barrier will be included in the project design to prevent vapor intrusion by residual contaminants into the occupied spaces of the new building and protect the future residents and retail space workers.

As part of construction, a Contaminated Media Management Plan (CMMP) will be developed to guide the earthwork contractor with the proper management and handling of the waste streams generated and to present the plan for confirmation sampling to document the removal of contaminated soil from within the Property boundary. At the completion of the soil cleanup action, a Cleanup Action Report will be prepared to document the remedial actions completed and soil conditions at the final construction excavation limits. An Environmental Covenant (EC) will be recorded to implement post-cleanup controls and monitoring. An Engineering and Institutional Controls Monitoring and Maintenance Plan (EICMMP) and a Groundwater Compliance Monitoring Plan (CMP) will be included in the EC.

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 and Feasibility Study (RI/FS) for the Seventh Avenue Service site (Site). 701 S 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 S Jackson Partners, LLC. – Brad Padden
Environmental Consultant	GeoEngineers – Tim Syverson (Associate) and Robert Trahan (Project Manager)
Property Information and Location	
Site Address	701 South Jackson Street, Seattle, Washington.
Approximate Surface Elevation	Property elevation ranges between approximately 93 to 106 feet (North American Vertical Datum 1988 [NAVD88]) and slopes to the southwest.
General Description	The 0.31-acre property is located at the southeast corner of South Jackson Street and 7 th 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	Ranges between approximately 61 to 69 feet bgs (Elevation 31 to 34 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	11348
Facility/Site ID	99187287
VCP Project ID	XS0009
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 2022 (further discussed in Section 2.4), soil in the western and central portions of the Property contains gasoline-range total petroleum hydrocarbons, benzene, toluene, ethylbenzene and xylenes (BTEX), and naphthalene at concentrations greater than the Model Toxics Control Act (MTCA) cleanup levels (CULs; Site). Additionally, localized areas of the shallow fill soil imported to the Property during construction for the existing structures contain lead and/or carcinogenic polycyclic aromatic hydrocarbons (cPAHs) at concentrations greater than the MTCA CULs. Within the planned depth of construction (up to 20 feet below ground surface [bgs]), localized moist or wet soil is present, however, no continuous water-bearing zones have been encountered during the drilling and sampling completed to evaluate the nature and extent of Site contamination. Based on the measured depths to groundwater during the drilling of boring GEI-1 in the central portion of the Property and borings GEI-11 and GEI-12 in the west adjacent Right-of-Way (ROW), the regional groundwater is located at a depth ranging from approximately 61 to 69 feet bgs (approximate elevation ranging from 31 to 34 feet NAVD88), which is at least 40 feet below the deepest portion of the planned construction excavation.

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 (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 document is provided to:

- Summarize the results of the environmental Site characterization conducted to date (the RI).
- Present an evaluation of cleanup action alternatives for the Site (the FS) based on the results of the RI and the redevelopment plans for the Site.
- Present the selected cleanup action consisting of contaminated soil removal that will be conducted concurrent with construction for Site redevelopment and post-cleanup controls and monitoring.

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 CULs. As part of the planned redevelopment, South Jackson Partners is in the process of entering into a Prospective Purchaser Consent Decree (PPCD) with the Washington State Department of Ecology (Ecology), and the Assistant Attorney General, Ecology Division (the AGO), to facilitate cleanup as part of project construction.

Prior to initiating the PPCD process, the Site was enrolled in the Ecology Voluntary Cleanup Program (VCP) to receive technical advice and assistance on the independent RI/FS. The Site entered into the Expedited VCP on April 23, 2021, and was assigned VCP No. XS0009. Ecology issued an *Opinion Letter* on May 25, 2022 regarding the independent RI/FS. Upon initiating the PPCD process, the VCP agreement governing Site No. XS0009 was terminated.

2.0 BACKGROUND

2.1. Site Description and Future Land Use

The Property is bounded by South 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 Property boundaries, and paved parking and drive areas. A small building on the southwest corner of the Property is currently used for a storage room for “New Century Tea Gallery”. Other buildings on Property 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 Property-line to Property-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 collected during previous environmental investigations and during the RI (Section 2.4) are summarized in the following sections (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 10 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 (76.5 feet bgs) consist of fine sand with varying amounts of silt and clayey silt.

2.3.2. Groundwater Conditions

Moist and/or wet soil interpreted as shallow perched groundwater was observed in five of the 25 borings completed at the Site at depths ranging from 12 to 15 feet and 20 to 26 feet bgs. However, shallow groundwater was not observed in any of the three temporary shallow monitoring wells completed in the northern, eastern and southern portions of the Property. Based on the investigation results, shallow perched groundwater may be present at the Property and surrounding area; however, the occurrence of this unit is likely discontinuous and not widespread.

The deep regional groundwater is present beneath the Site at a depth ranging from approximately 61 to 69 feet bgs (Elevation 31 to 34 feet NAVD88), based on the depths to groundwater measured in one deep temporary monitoring well in the central portion of the Property, and two deep monitoring wells within the west adjacent ROW. Based on the measured depths to groundwater, proximately of the Property to surrounding surface water bodies (i.e., Puget Sound) and local topography, the inferred regional groundwater flow direction is to the west-southwest.

2.4. Environmental Investigation Summary

2.4.1. Previous Environmental Investigations

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, 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 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, Landau Associates Inc. (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 Consulting (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.

2.4.1.1. Chemical Analytical Results

Chemical analytical results for the soil samples collected during the previous investigations (Section 2.4.1) are presented in Table 1 and discussed below (Section 2.4.1.3). 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.

2.4.1.2. Data Quality Analysis

The analytical data for the soil samples from the previous 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.

2.4.1.3. 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 CUL of 30 milligrams per kilogram (mg/kg) 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 ROW at depths ranging from approximately 6 to 14 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-3-11, 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 17.5 feet bgs.
- Ethylbenzene, toluene and/or xylenes compounds were detected at concentrations greater than the MTCA Method A CULs (6, 7, and 9 mg/kg, respectively) 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 6) located in the central and western portions of the Property including the west adjacent ROW at depths ranging from approximately 7 to 15 feet bgs. At other locations, BTEX compounds either were not detected or were detected at concentration less than the MTCA CULs.
- Naphthalene was detected at a concentration greater than the MTCA Method A CUL of 5 mg/kg in borings FB-3 and FB-5 (Figure 7) located in the central and western portions of the Property at depths ranging from approximately 7 to 10 feet bgs. Naphthalene was not detected at concentrations greater than the laboratory reporting limits in the remaining samples analyzed.

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

2.4.2. 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.

2.4.2.1. 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), and the composite south-east sidewall sample at approximately 8 feet bgs (UST-1-S-8/E-8). 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.

2.4.2.2. 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.

2.4.3. Supplemental Investigation

As part of planning for the Property redevelopment, supplemental investigation activities were performed between May 2021 and April 2022 to further characterize soil, soil vapor and groundwater conditions at the Site. Specifically, supplemental investigation activities were completed to:

- Characterize shallow fill material imported to the Property from unknown source(s).
- Evaluate the occurrence of shallow and deep groundwater at the Property.
- Evaluate the potential for vapor intrusion into the future occupied spaces of the planned new building.
- Evaluate the nature and extent of Site contamination west and northwest of the Property.

The supplemental investigation included the drilling of 12 soil borings (GEI-1 through GEI-12) that were advanced to depths ranging from approximately 15 to 76.5 feet bgs, completion of three soil vapor borings (SSV-1 through SSV-3) that were advanced to depths ranging between approximately 10 and 25 feet bgs, installation of three temporary shallow groundwater monitoring wells at locations GEI-4, GEI-5 and GEI-7, and installation of two permanent monitoring wells at locations GEI-11 and GEI-12. Soil borings were drilled using hollow stem auger (HSA) and direct-push (DP) drilling methods to further evaluate soil, groundwater and soil vapor conditions at the Property. The drilling and sampling locations are shown on Figure 3.

Findings from the supplemental investigation confirm the presence of gasoline-range total petroleum hydrocarbons and BTEX in soil in the central and western portions of the Property at concentrations greater than the MTCA CULs to a maximum depth of approximately 17.5 feet bgs which have the potential to affect the new building through vapor intrusion. Within the adjacent west and northwest ROWs, gasoline-range total petroleum hydrocarbons and BTEX in soil are limited in extent and do not appear to extend beyond the South Jackson Street or 7th Avenue South ROW centerlines. Additionally, the supplemental investigation confirmed the depth to regional groundwater beneath the Property (approximately 61 to 69 feet bgs). Groundwater was not encountered in each of the three temporary monitoring wells installed to a depth of 15 feet bgs.

The results of the supplemental investigation also identified lead and carcinogenic PAHs (cPAHs) at concentrations greater than the MTCA CULs in shallow fill soil (GEI-4 and GEI-6, respectively) which appear to be localized and not widespread within the planned construction excavation footprint. In the vicinity of

the former service bay pit and hydraulic hoist, soil sampling and analysis for VOCs and PCBs did not indicate concentrations greater than the MTCA CULs.

A summary of the supplemental investigation field activities and the exploration logs detailing the soil types encountered and field screening results is presented in Appendix C. The chemical analytical data collected during the supplemental investigation and during the previous environmental investigations are summarized in Tables 1 through 3. Laboratory reports and the findings of a data quality review for the supplemental investigation are presented in Appendix D. The activities conducted to further evaluate and document Property conditions during the supplemental investigation are discussed in the following sections (Sections 2.4.3.1 through 2.4.3.4).

2.4.3.1. Shallow Fill Investigation

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 10 feet bgs. Fill materials encountered to date have included various debris (concrete, plastic, metal, and brick). Based on the results of the previous environmental investigations (Section 2.4.1), characterization of the shallow fill from unknown source(s) was identified as a data gap requiring further evaluation. Subsequently, soil borings GEI-1 through GEI-7 (Figure 3) were completed using HSA and DP drilling methods to further evaluate and document soil conditions within the Property boundary. Soil samples representative of the fill material were 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.

Within the shallow fill at the Property, lead or total cPAHs at concentrations greater than the MTCA CULs were detected at approximately 2.5 feet bgs in two localized areas (GEI-4 and GEI-6, respectively). At other locations, contaminants either were not detected or were detected at concentration less than the MTCA CULs. Chemical analytical results for soil samples representing fill soil at the Property are summarized in Table 1 and shown on Figures 5 through 10.

2.4.3.2. ROW Soil Investigation

Sampling and analysis were performed within portions of the South Jackson Street and 7th Avenue ROWs to evaluate the northwestern, western, and southwestern limits of petroleum hydrocarbon contamination resulting from historical land use. The ROW investigation consisted of the drilling of three shallow borings (approximately 25 feet bgs) in the ROW to the northwest, west and southwest of the Property to document the lateral extent of contamination. In addition, two deep borings in the ROW west of the Property boundary were drilled to evaluate soil at depths where field screening previously identified elevated headspace vapors (i.e., 35-40 feet bgs) and to install new monitoring wells for evaluating deep regional groundwater downgradient of the source area (i.e., former gasoline service station and fuel island). Soil samples were submitted for a combination of the following chemical analyses:

- Gasoline-range total petroleum hydrocarbons by NWTPH-Gx.

- BTEX by EPA Method 8260.
- Naphthalenes by EPA Method 8270.

Based on a review of the chemical analytical data, gasoline-range total petroleum hydrocarbons, BTEX and naphthalenes were not detected at concentrations greater than the laboratory reporting limit in any of the samples with two exceptions. Gasoline-range total petroleum hydrocarbons, benzene, ethylbenzene, and/or naphthalenes were detected at concentrations greater than MTCA CULs in the soil samples collected from boring GEI-11 and GEI-12 at a depth of approximately 15 feet bgs. Chemical analytical results for soil samples are summarized in Table 1 and shown on Figures 5 through 10.

2.4.3.3. Shallow Groundwater Occurrence

Shallow perched and discontinuous groundwater (i.e., wet soil) was observed at depths ranging between 12 to 15 feet and 20 to 26 feet bgs during the previous environmental investigations. Based on the results of the previous environmental investigations (Section 2.4.1), the occurrence of shallow groundwater and its potential for seepage into the planned construction was identified as a data gap requiring further evaluation. Subsequently, three temporary monitoring wells were installed at soil boring locations GEI-4, GEI-5 and GEI-7 (Figure 3) to evaluate and document the occurrence of shallow groundwater and the potential for groundwater seepage into the construction excavation. The temporary wells were positioned along the northern, eastern, and southern Property boundaries to provide spatial coverage and in areas where moist/wet soil was observed during drilling. However, no groundwater was observed in the temporary wells as part of this investigation indicating that the potential for shallow groundwater seepage into the construction excavation is low.

2.4.3.4. Deep Groundwater Occurrence

Continuous/area-wide groundwater was not previously encountered in borings completed to a depth of approximately 41.5 feet bgs. As a result, the occurrence and condition of deep groundwater was identified as a data gap. To evaluate and document the depth to regional groundwater at the Property and its condition, soil boring GEI-1 (Figure 3) was drilled in the central portion of the Property to a depth of approximately 76.5 feet bgs using HSA drilling methods. At this location, a temporary well was set and allowed to recharge to evaluate the occurrence of deep groundwater. In addition, two permanent groundwater monitoring wells (GEI-11 and GEI12) were installed in the west adjacent ROW as described above.

The depth to water within the temporary well was measured at 64.46 feet bgs. Depth to water within the permanent wells ranged between 61.3 and 68.8 feet bgs. To further evaluate groundwater conditions, water samples were collected from the temporary (grab sample) and permanent wells 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.

The analytical results for the samples collected from the deep regional groundwater unit indicate contaminant concentrations either not detected greater than the laboratory reporting limits or detected at concentrations less than the MTCA CULs. Chemical analytical results for the groundwater sample representing deep groundwater beneath the Property is summarized in Table 2.

2.4.3.5. Sub-Slab Soil Gas Investigation

During previous environmental investigations, samples were not collected to evaluate the potential for soil vapor intrusion. To fill this data gap, shallow (5 to 10 feet bgs) and deep (20 to 25 feet bgs) sub-slab soil vapor samples SSV-1 through SSV-3 (Figure 3) were collected using DP drilling methods. Soil vapor samples were collected along the western and north Property boundaries and submitted 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.

The concentrations of total petroleum hydrocarbons (sum of EC5-8 aliphatics, EC9-12 aliphatics and EC9-10 aromatics) detected in shallow sub-slab vapor samples at locations SSV-1 and SSV-2 and deep sub-slab vapor sample locations SSV-2 and SSV-3 were greater than the MTCA Method B soil gas screening levels. In addition, the benzene, 1,2-Dibromoethane (EDB) and naphthalene concentrations were greater than the MTCA Method B soil gas screening values in shallow soil in the northern and southwestern portions of the Property (SSV-1 and SSV-3). Chemical analytical results for the soil vapor samples are summarized in Table 3.

2.5. Key Findings

Key findings for the Property based on the results of the May 2021 and April 2022 supplemental investigation and the previous environmental investigations are as follows:

- 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 17.5 feet bgs.
- The areas of soil with concentrations of gasoline-range total petroleum hydrocarbons, BTEX, lead, cPAHs and/or naphthalenes 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 and/or BTEX greater than the MTCA CULs extends into the adjacent 7th Avenue South and South Jackson Street ROWs, however, is limited in extent and does not appear to extend beyond the South Jackson Street or 7th Avenue South ROW centerlines.

- Other COPCs associated with historical use of the Property were not detected at concentrations greater than the MTCA CULs in soil.
- Only moist and/or wet soil or discontinuous perched/shallow groundwater was encountered at the Property to a depth of 15 feet bgs.
- Deep regional groundwater beneath the Property is located at depths ranging between approximately 61 and 69 feet bgs. Contaminants associated with historical land uses at the Property either were not detected in deep groundwater or were detected at concentrations less than the MTCA CULs.

2.6. 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).

2.6.1. 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. In addition, the supplemental investigation has identified localized areas of lead- and/or cPAH-containing soil in the imported shallow fill material at the Property. Lead and cPAHs are COCs that are not likely associated with the historical gasoline service station operations.

2.6.2. Contaminants of Concern

The COCs for the Site are the potentially hazardous compounds that have been detected in environmental media during the environmental investigations. As part of these investigations, 73 soil samples were collected at 33 locations at depths between 2.5 and 40 feet below ground surface (ft bgs). Cleanup level exceedances in soil (i.e., soil COCs) are summarized in the following Table.

SUMMARY OF CLEANUP LEVEL EXCEEDANCES IN SOIL

Contaminant	MTCA Method A CUL	Maximum Detected Concentration (mg/kg)	Location and depth of Maximum Detected Concentration/Year	Number of CUL Exceedances/ Total Number of Samples Analyzed
Gasoline Range Petroleum Hydrocarbons	30	24,000	B-1-11 @ 12.5'/2011	17/63
Benzene	0.03	110	B-1-11 @ 12.5'/2011	21/63
Toluene	7	1,700	B-1-11 @ 12.5'/2011	8/63
Ethylbenzene	6	470	B-1-11 @ 12.5'/2011	9/63
Xylenes	9	2,400	B-1-11 @ 12.5'/2011	13/63
Naphthalene	5	12.8	FB-5-17 @12.8'/2019	2/15

Contaminant	MTCA Method A CUL	Maximum Detected Concentration (mg/kg)	Location and depth of Maximum Detected Concentration/Year	Number of CUL Exceedances/ Total Number of Samples Analyzed
Total cPAH TEQ	0.1	0.74	GEI-6 @2.5'/2021	1/18
Lead	250	340	GEI-4 @ 2.5'/2021	1/15

Notes:

mg/kg = milligrams per kilogram

TEQ = toxicity equivalency quotient

Based on the chemical analytical results (Table 1) for soil samples obtained during the Site investigation, the COCs for the Site are gasoline-range total petroleum hydrocarbons, BTEX and naphthalene from historical release(s) at the Property from former gasoline service station operations, and lead and total cPAHs from imported fill material from unknown source(s).

2.6.3. Media of Concern

Soil and soil vapor are media of concern at the Site. Although there is the potential for discontinuous shallow perched groundwater to enter the excavation, investigation results did not identify continuous perched water at the Site. In deep groundwater, COCs were not detected at concentrations greater than the MTCA CULs.

2.6.4. 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.

2.6.4.1. 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 17.5 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. Following the planned Property redevelopment, soil containing COCs remaining in the ROW will be beneath paved surfaces to prevent direct exposure.

2.6.4.2. 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, including the vapor barrier, 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 considered a complete exposure pathway.

2.6.4.3. 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 17.5 feet bgs, is above (shallower than) where continuous groundwater is located (i.e., approximately 61 to 69 feet bgs). In addition, COCs in soil will be removed to approximately 15 to 20 feet bgs across the footprint of the Property for the planned redevelopment to eliminate the soil-to-groundwater pathway within the source area.

2.6.4.4. 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.

2.6.5. 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) CULs that are protective of human health and the environment, and (2) the point of compliance at which the CULs must be met. Cleanup standards for the Site are presented below.

3.2.1. Soil

Soil CULs for the Site are the MTCA Method A CULs 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 CULs. The standard point of compliance for soil based on protection of groundwater is throughout the Site (WAC 173-340-740(6)(b)).

The proposed soil CULs are presented in Table 1.

3.2.2. Groundwater

Groundwater CULs for the Site are the MTCA Method A CULs, or MTCA Method B cleanup levels calculated with MTCA Equation 720-1 (for noncarcinogens) and MTCA Equation 720-2 (for carcinogens) for compounds that do not have a MTCA Method A CUL. The standard point of compliance is throughout the Site from the uppermost level of the saturated zone extending vertically to the lowest most depth which could potentially be affected by the Site.

3.2.3. Soil Vapor

Soil vapor (i.e., the air in the pore space between soil grains in the unsaturated zone) can be affected by volatilization of BTEX and other VOCs from soil. The risk of exposure from soil vapor is by intrusion/seepage from the source area into the indoor air and subsequent inhalation by commercial workers, visitors and/or future occupants. The soil vapor CUL for the Site is based on the MTCA Method B indoor air CULs for unrestricted land use, although indoor air screening levels based on a commercial worker scenario are also considered based on current and future land use.

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, naphthalene, cPAHs and lead at concentrations exceeding MTCA CULs) 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). The depth of the soil excavation will be extended, as warranted, to allow for removal of contaminated soils from the Property. Over-excavation (deeper than the redevelopment construction depths) may be conducted in limited areas.

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 gasoline-range total petroleum hydrocarbons, BTEX, naphthalene, lead and cPAHs) 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, including:

- Monitored Natural Attenuation (MNA)
- Contaminated soil removal by remedial excavation
- In-situ treatment
- 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 noted above and is most compatible with the redevelopment plan for the Property that includes Property-line to Property-line soil excavation to a depth of approximately 15 to 20 feet bgs.

Removal of residual contamination remaining beyond the construction excavation footprint would be challenging, and risks from the remaining contamination is better managed through institutional controls in the form of an Environmental Covenant (EC) to prohibit or limit activities that may interfere with the cleanup integrity or result in exposure to contamination. Engineering controls will also be used to prevent contaminated soil direct contact, infiltration, and leaching, as well as the migration of contaminant vapors into the occupied spaces of the new building. The engineering controls will consist of existing and updated paved surfaces, the new building structure, and a vapor barrier (Geo-Seal or similar product; Appendix E) that will be included along the northern, western and southern sidewalls of the excavation limit. A vapor barrier may also be warranted on a portion of the excavation base if confirmation sampling indicates the presence of COCs at concentrations exceeding the CULs.

Long-term monitoring and maintenance will then be performed following the implementation of the soil cleanup action to ensure the effectiveness of the engineering controls (i.e., vapor barrier and paved surfaces). Long-term monitoring of groundwater will also be performed following the implementation of the soil cleanup action to verify compliance with the cleanup standards. Specific details regarding long-term monitoring and maintenance will be described in an Engineering and Institutional Controls Monitoring and Maintenance Plan (EICMMP) and a Groundwater Compliance Monitoring Plan (CMP) that will be prepared following implementation of the soil cleanup action. The EICMMP and Groundwater CMP will be included in the EC.

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 and updated paved surfaces, new building structure, and a vapor barrier 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.
- An EC will serve as an institutional control compliant with the Uniform Environmental Covenants Act to identify the location of and prevent the disturbance of remaining contamination within the ROWs.

- Long-term monitoring and maintenance will ensure that groundwater is in compliance with the cleanup standards and that the function of the engineering controls continue to isolate and prevent human exposure to any residual contamination remaining in place in the ROWs following redevelopment.

5.0 LIMITATIONS

This RI/FS has been prepared for use by 701 S Jackson Partners, LLC and their authorized agents. GeoEngineers has performed the soil and groundwater investigation activities for the Property located at 701 South Jackson Street in Seattle, Washington, in general accordance with our proposal dated January 21, 2021 (revised May 10, 2021, December 6, 2021 and February 9, 2022). Within the limitations of scope, schedule and budget, our services have been executed in accordance with generally accepted environmental science practices in this area at the time this report was prepared. No warranty or other conditions, express or implied, should be understood.

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

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

6.0 REFERENCES

- CDM Smith (CDM). 2012. June 2012 Phase I Environmental Site Assessment Report, Seventh Avenue Service Property, 701 S Jackson Street, Seattle, Washington. June 13, 2012.
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Table 1
Summary of Soil Investigation Chemical Analytical Data
701 South Jackson Street
Seattle, Washington

Sample Location ¹	MTCA Cleanup Levels ³	Natural Background ⁴	H-1	H-2	H-3	B-1		B-3		B-4	
Sample Identification			H-1-12.5	H-2-7.5	H-3-7.5	B-1-5	B-1-12.5	B-3-10	B-3-12.5	B-4-9	B-4-14
Sampled By			GeoGroup	GeoGroup	GeoGroup	GeoGroup	GeoGroup	GeoGroup	GeoGroup	GeoGroup	GeoGroup
Sample Date			08/03/92	08/03/92	08/03/92	02/01/06	02/01/06	02/01/06	02/01/06	02/02/06	02/02/06
Sample Depth (feet bgs)			12.5	7.5	7.5	5.0	12.5	10.0	12.5	9.0	14.0
Petroleum Hydrocarbons by NWPTH-Gx/NWTPH-Dx (mg/kg)											
Gasoline-Range	30	NE	6,000	1.6	1,400	16	12,000	1,300	13 U	10 U	8,300
Diesel-Range	2,000	NE	--	--	--	28 U	560	30 U	27 U	28 U	280
Lube Oil-Range	2,000	NE	--	--	--	57 U	62 U	60 U	54 U	55 U	62 U
Volatile Organic Compounds (VOCs) by EPA 8021/8260 (mg/kg)											
Benzene	0.03	NE	4	0.05 U	0.31	0.020 U	17	1.8	0.093	0.38	15
Toluene	7	NE	55	0.05 U	1.9	0.047 U	7.2	4.5	0.39	0.21	35
Ethylbenzene	6	NE	66	0.05 U	6.2	0.047 U	210	12	0.19	0.12	100
Total Xylenes	9	NE	330	0.05 U	16	0.061	860	35.4	1.08	0.19	440
1,2 Dibromoethane (EDB)	0.005	NE	--	--	--	--	--	--	0.057 U	--	1.1 U
1,2 Dichloroethane (EDC)	1	NE	--	--	--	--	--	--	0.057 U	--	1.1 U
Methyl tertiary-butyl ether (MTBE)	0.1	NE	--	--	--	--	--	--	0.057 U	--	1.1 U
other VOCs ⁵	varies	NE	--	--	--	--	--	--	Detected	--	Detected
Total Metals by EPA 6000 series (mg/kg)											
Arsenic	20	7	--	--	--	--	--	--	--	--	--
Barium	16,000	NE	--	--	--	--	--	--	--	--	--
Cadmium	2	1	--	--	--	--	--	--	--	--	--
Total Chromium	2,000	48	--	--	--	--	--	--	--	--	--
Lead	250	24	1.5	2.2	3.8	--	--	--	--	--	--
Mercury	2	0.07	--	--	--	--	--	--	--	--	--
Selenium	400	NE	--	--	--	--	--	--	--	--	--
Silver	400	NE	--	--	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (PAHs) by EPA 8270D/SIM (mg/kg)											
Acenaphthene	4,800	NE	--	--	--	--	--	--	--	--	--
Acenaphthylene	NE	NE	--	--	--	--	--	--	--	--	--
Anthracene	24,000	NE	--	--	--	--	--	--	--	--	--
Benzo[a]anthracene	NE	NE	--	--	--	--	--	--	--	--	--
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	NE	--	--	--	--	--	--	--	--	--
Fluoranthene	3,200	NE	--	--	--	--	--	--	--	--	--
Fluorene	3,200	NE	--	--	--	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	NE	NE	--	--	--	--	--	--	--	--	--
Naphthalenes	5	NE	--	--	--	--	--	--	--	--	--
Phenanthrene	NE	NE	--	--	--	--	--	--	--	--	--
Pyrene	2,400	NE	--	--	--	--	--	--	--	--	--
cPAHs TEQ ⁶	0.1	NE	--	--	--	--	--	--	--	--	--
Polychlorinated Biphenyls (PCBs) by EPA 8082 (mg/kg)											
Aroclor 1016	NA	NE	--	--	--	--	--	--	--	--	--
Aroclor 1221	NA	NE	--	--	--	--	--	--	--	--	--
Aroclor 1232	NA	NE	--	--	--	--	--	--	--	--	--
Aroclor 1242	NA	NE	--	--	--	--	--	--	--	--	--
Aroclor 1248	NA	NE	--	--	--	--	--	--	--	--	--
Aroclor 1254	NA	NE	--	--	--	--	--	--	--	--	--
Aroclor 1260	NA	NE	--	--	--	--	--	--	--	--	--
Total PCBs	1.0	NE	--	--	--	--	--	--	--	--	--

Notes:

- ¹ Approximate exploration locations shown on Figure 2.
 - ² Boring advanced at an angle of 25 degrees 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 Natural Background soil concentration per Ecology Publication 94-115 (Ecology 1994).
 - ⁵ Refer to Appendix B for a full list of compounds analyzed and their results.
 - ⁶ 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
Farallon = Farallon Consulting
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EAI = Environmental Associates, Inc.
GeoGroup = GEO Group Northwest, Inc.
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NA = Not Applicable
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ND = Not Detected
U = Analyte not detected above the reported sample quantization limit
Bold indicates analyte was detected at a concentration greater than Natural Background.
Yellow shading indicates analyte was detected at a concentration greater than the MTCA cleanup level.

Table 1
Summary of Soil Investigation Chemical Analytical Data

701 South Jackson Street
Seattle, Washington

Sample Location ¹	Sample Identification	Sampled By	Sample Date	Sample Depth (feet bgs)	MTCA Cleanup Levels ³	Natural Background ⁴	UST-1				UST-2				B-1-11
							UST-1-B-12	UST-1-N-8/W-6	UST-1-S-8/E-8	UST-1-OB	UST-2-B-12	UST-2-OB	UST-2-N-8/W-6	UST-2-S-8/E-8	B-1 S-5
							EAI	EAI	EAI	EAI	EAI	EAI	EAI	EAI	Landau
							11/02/10	11/02/10	11/02/10	11/02/10	11/02/10	11/02/10	11/02/10	11/02/10	11/11/11
							12.0	6	8.0	Stockpile	12.0	Stockpile	6	8.0	12.5
Petroleum Hydrocarbons by NWPTH-Gx/NWTPH-Dx (mg/kg)															
Gasoline-Range	30	NE			110	2 U	37	2 U	2 U	2 U	2 U	2 U	2 U	2 U	24,000
Diesel-Range	2,000	NE	--	--	--	--	--	--	--	--	--	--	--	--	120 U
Lube Oil-Range	2,000	NE	--	--	--	--	--	--	--	--	--	--	--	--	50 U
Volatile Organic Compounds (VOCs) by EPA 8021/8260 (mg/kg)															
Benzene	0.03	NE	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	110
Toluene	7	NE	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	1,700
Ethylbenzene	6	NE	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	470
Total Xylenes	9	NE	0.34	0.06 U	1.4	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	2,400
1,2 Dibromoethane (EDB)	0.005	NE	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2 Dichloroethane (EDC)	1	NE	--	--	--	--	--	--	--	--	--	--	--	--	--
Methyl tertiary-butyl ether (MTBE)	0.1	NE	--	--	--	--	--	--	--	--	--	--	--	--	--
other VOCs ⁵	varies	NE	--	--	--	--	--	--	--	--	--	--	--	--	--
Total Metals by EPA 6000 series (mg/kg)															
Arsenic	20	7	--	--	--	--	--	--	--	--	--	--	--	--	--
Barium	16,000	NE	--	--	--	--	--	--	--	--	--	--	--	--	--
Cadmium	2	1	--	--	--	--	--	--	--	--	--	--	--	--	--
Total Chromium	2,000	48	--	--	--	--	--	--	--	--	--	--	--	--	--
Lead	250	24	--	--	--	--	--	--	--	--	--	--	--	--	8.9
Mercury	2	0.07	--	--	--	--	--	--	--	--	--	--	--	--	--
Selenium	400	NE	--	--	--	--	--	--	--	--	--	--	--	--	--
Silver	400	NE	--	--	--	--	--	--	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (PAHs) by EPA 8270D/SIM (mg/kg)															
Acenaphthene	4,800	NE	--	--	--	--	--	--	--	--	--	--	--	--	--
Acenaphthylene	NE	NE	--	--	--	--	--	--	--	--	--	--	--	--	--
Anthracene	24,000	NE	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo[a]anthracene	NE	NE	--	--	--	--	--	--	--	--	--	--	--	--	--
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	NE	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluoranthene	3,200	NE	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluorene	3,200	NE	--	--	--	--	--	--	--	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	NE	NE	--	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalenes	5	NE	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenanthrene	NE	NE	--	--	--	--	--	--	--	--	--	--	--	--	--
Pyrene	2,400	NE	--	--	--	--	--	--	--	--	--	--	--	--	--
cPAHs TEQ ⁶	0.1	NE	--	--	--	--	--	--	--	--	--	--	--	--	--
Polychlorinated Biphenyls (PCBs) by EPA 8082 (mg/kg)															
Aroclor 1016	NA	NE	--	--	--	--	--	--	--	--	--	--	--	--	--
Aroclor 1221	NA	NE	--	--	--	--	--	--	--	--	--	--	--	--	--
Aroclor 1232	NA	NE	--	--	--	--	--	--	--	--	--	--	--	--	--
Aroclor 1242	NA	NE	--	--	--	--	--	--	--	--	--	--	--	--	--
Aroclor 1248	NA	NE	--	--	--	--	--	--	--	--	--	--	--	--	--
Aroclor 1254	NA	NE	--	--	--	--	--	--	--	--	--	--	--	--	--
Aroclor 1260	NA	NE	--	--	--	--	--	--	--	--	--	--	--	--	--
Total PCBs	1.0	NE	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

- ¹ Approximate exploration locations shown on Figure 2.
 - ² Boring advanced at an angle of 25 degrees 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 Natural Background soil concentration per Ecology Publication 94-115 (Ecology 1994).
 - ⁵ Refer to Appendix B for a full list of compounds analyzed and their results.
 - ⁶ 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
Farallon = Farallon Consulting
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NA = Not Applicable
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Bold indicates analyte was detected at a concentration greater than Natural Background.
Yellow shading indicates analyte was detected at a concentration greater than the MTCA cleanup level.

Table 1
Summary of Soil Investigation Chemical Analytical Data

701 South Jackson Street
 Seattle, Washington

Sample Location ¹	MTCA Cleanup Levels ³	Natural Background ⁴	B-1-11	B-2-11		B-3-11		B-4-11		B-5-11	B-6-11	
Sample Identification			B-1 S-7	B-2 S-4	B-2 S-6	B-3 S-4	B-3 S-6	B-4 S-2	B-4 S-6	B-5 S-8	B-6 S-6	
Sampled By			Landau	Landau	Landau	Landau	Landau	Landau	Landau	Landau	Landau	Landau
Sample Date			11/11/11	11/11/11	11/11/11	11/11/11	11/11/11	11/11/11	11/11/11	11/11/11	11/14/11	11/04/11
Sample Depth (feet bgs)			17.5	12.5	17.5	12.5	17.5	5.0	15.0	20.0	15.0	
Petroleum Hydrocarbons by NWPTH-Gx/NWTPH-Dx (mg/kg)												
Gasoline-Range	30	NE	14	14	11	420	6.6	10	26	3.0 U	3.0 U	
Diesel-Range	2,000	NE	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	
Lube Oil-Range	2,000	NE	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	
Volatile Organic Compounds (VOCs) by EPA 8021/8260 (mg/kg)												
Benzene	0.03	NE	0.12	0.044 U	0.051	0.024 U	0.06	0.14	0.38	0.030 U	0.030 U	
Toluene	7	NE	0.51	0.36	0.4	1.0	0.36	0.43	1.0	0.050 U	0.050 U	
Ethylbenzene	6	NE	0.3	0.078	0.08	7.3	0.076	0.12	0.38	0.050 U	0.050 U	
Total Xylenes	9	NE	1.3	0.32	0.32	32	0.39	0.58	2.2	0.20 U	0.20 U	
1,2 Dibromoethane (EDB)	0.005	NE	--	--	--	--	--	--	--	--	--	
1,2 Dichloroethane (EDC)	1	NE	--	--	--	--	--	--	--	--	--	
Methyl tertiary-butyl ether (MTBE)	0.1	NE	--	--	--	--	--	--	--	--	--	
other VOCs ⁵	varies	NE	--	--	--	--	--	--	--	--	--	
Total Metals by EPA 6000 series (mg/kg)												
Arsenic	20	7	--	--	--	--	--	--	--	--	--	
Barium	16,000	NE	--	--	--	--	--	--	--	--	--	
Cadmium	2	1	--	--	--	--	--	--	--	--	--	
Total Chromium	2,000	48	--	--	--	--	--	--	--	--	--	
Lead	250	24	--	--	--	7.4	--	--	--	--	--	
Mercury	2	0.07	--	--	--	--	--	--	--	--	--	
Selenium	400	NE	--	--	--	--	--	--	--	--	--	
Silver	400	NE	--	--	--	--	--	--	--	--	--	
Polycyclic Aromatic Hydrocarbons (PAHs) by EPA 8270D/SIM (mg/kg)												
Acenaphthene	4,800	NE	--	--	--	--	--	--	--	--	--	
Acenaphthylene	NE	NE	--	--	--	--	--	--	--	--	--	
Anthracene	24,000	NE	--	--	--	--	--	--	--	--	--	
Benzo[a]anthracene	NE	NE	--	--	--	--	--	--	--	--	--	
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	NE	--	--	--	--	--	--	--	--	--	
Fluoranthene	3,200	NE	--	--	--	--	--	--	--	--	--	
Fluorene	3,200	NE	--	--	--	--	--	--	--	--	--	
Indeno(1,2,3-cd)pyrene	NE	NE	--	--	--	--	--	--	--	--	--	
Naphthalenes	5	NE	--	--	--	--	--	--	--	--	--	
Phenanthrene	NE	NE	--	--	--	--	--	--	--	--	--	
Pyrene	2,400	NE	--	--	--	--	--	--	--	--	--	
cPAHs TEQ ⁶	0.1	NE	--	--	--	--	--	--	--	--	--	
Polychlorinated Biphenyls (PCBs) by EPA 8082 (mg/kg)												
Aroclor 1016	NA	NE	--	--	--	--	--	--	--	--	--	
Aroclor 1221	NA	NE	--	--	--	--	--	--	--	--	--	
Aroclor 1232	NA	NE	--	--	--	--	--	--	--	--	--	
Aroclor 1242	NA	NE	--	--	--	--	--	--	--	--	--	
Aroclor 1248	NA	NE	--	--	--	--	--	--	--	--	--	
Aroclor 1254	NA	NE	--	--	--	--	--	--	--	--	--	
Aroclor 1260	NA	NE	--	--	--	--	--	--	--	--	--	
Total PCBs	1.0	NE	--	--	--	--	--	--	--	--	--	

Notes:

- ¹ Approximate exploration locations shown on Figure 2.
 - ² Boring advanced at an angle of 25 degrees 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 Natural Background soil concentration per Ecology Publication 94-115 (Ecology 1994).
 - ⁵ Refer to Appendix B for a full list of compounds analyzed and their results.
 - ⁶ 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
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 Yellow shading indicates analyte was detected at a concentration greater than the MTCA cleanup level.

Table 1
Summary of Soil Investigation Chemical Analytical Data

701 South Jackson Street
Seattle, Washington

Sample Location ¹	Sample Identification	MTCA Cleanup Levels ³	Natural Background ⁴	B-6-11	FB-3				FB-4			FB-5 ²
				B-6 S-7	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
Sampled By	Sample Date			Landau	Farallon	Farallon	Farallon	Farallon	Farallon	Farallon	Farallon	Farallon
Sample Depth (feet bgs)				11/04/11	10/31/19	10/31/19	10/31/19	10/31/19	11/01/19	11/01/19	11/01/19	11/01/19
Petroleum Hydrocarbons by NWPTH-Gx/NWTPH-Dx (mg/kg)				20.0	10.0	15.0	20.0	40.0	6.0	10.0	15.0	4.6
Gasoline-Range	30	NE		4.6	1,300	5.2 U	5.6 U	5.0 U	86	450	1,700	17
Diesel-Range	2,000	NE		25 U	980 U	--	--	--	--	--	31 U	33 U
Lube Oil-Range	2,000	NE		50 U	570	--	--	--	--	--	61 U	66 U
Volatile Organic Compounds (VOCs) by EPA 8021/8260 (mg/kg)												
Benzene	0.03	NE		0.030 U	0.021 U	0.060	0.020 U	0.020 U	0.020 U	0.032	1.3	0.020 U
Toluene	7	NE		0.050 U	0.17	0.052 U	0.056 U	0.050 U	0.055 U	0.053 U	21	0.071 U
Ethylbenzene	6	NE		0.078	4.6	0.29	0.056 U	0.050 U	0.12	2.2	21	0.095
Total Xylenes	9	NE		0.20 U	11.2	0.104 U	0.112 U	0.10 U	0.1	2.99	129	0.087
1,2 Dibromoethane (EDB)	0.005	NE		--	0.050 U	--	--	--	--	--	--	--
1,2 Dichloroethane (EDC)	1	NE		--	0.050 U	--	--	--	--	--	--	--
Methyl tertiary-butyl ether (MTBE)	0.1	NE		--	0.050 U	--	--	--	--	--	--	--
other VOCs ⁵	varies	NE		--	ND	--	--	--	--	--	--	--
Total Metals by EPA 6000 series (mg/kg)												
Arsenic	20	7		--	--	--	--	--	--	--	--	--
Barium	16,000	NE		--	--	--	--	--	--	--	--	--
Cadmium	2	1		--	--	--	--	--	--	--	--	--
Total Chromium	2,000	48		--	--	--	--	--	--	--	--	--
Lead	250	24		--	5.7 U	--	--	--	--	--	--	--
Mercury	2	0.07		--	--	--	--	--	--	--	--	--
Selenium	400	NE		--	--	--	--	--	--	--	--	--
Silver	400	NE		--	--	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (PAHs) by EPA 8270D/SIM (mg/kg)												
Acenaphthene	4,800	NE		--	0.022	--	--	--	--	--	--	--
Acenaphthylene	NE	NE		--	0.0076	--	--	--	--	--	--	--
Anthracene	24,000	NE		--	0.025	--	--	--	--	--	--	--
Benzo[a]anthracene	NE	NE		--	0.028	--	--	--	--	--	--	--
Benzo(a)pyrene	0.1	NE		--	0.027	--	--	--	--	--	--	--
Benzo(b)fluoranthene	NE	NE		--	0.028	--	--	--	--	--	--	--
Benzo(g,h,i)perylene	NE	NE		--	0.022	--	--	--	--	--	--	--
Benzo(k)fluoranthene	NE	NE		--	0.0076 U	--	--	--	--	--	--	--
Chrysene	NE	NE		--	0.029	--	--	--	--	--	--	--
Dibenzo(a,h)anthracene	NE	NE		--	0.0076 U	--	--	--	--	--	--	--
Fluoranthene	3,200	NE		--	0.057	--	--	--	--	--	--	--
Fluorene	3,200	NE		--	0.03	--	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	NE	NE		--	0.019	--	--	--	--	--	--	--
Naphthalenes	5	NE		--	10.5	--	--	--	--	--	--	--
Phenanthrene	NE	NE		--	0.098	--	--	--	--	--	--	--
Pyrene	2,400	NE		--	0.063	--	--	--	--	--	--	--
cPAHs TEQ ⁶	0.1	NE		--	0.039	--	--	--	--	--	--	--
Polychlorinated Biphenyls (PCBs) by EPA 8082 (mg/kg)												
Aroclor 1016	NA	NE		--	0.057 U	--	--	--	--	--	--	--
Aroclor 1221	NA	NE		--	0.057 U	--	--	--	--	--	--	--
Aroclor 1232	NA	NE		--	0.057 U	--	--	--	--	--	--	--
Aroclor 1242	NA	NE		--	0.057 U	--	--	--	--	--	--	--
Aroclor 1248	NA	NE		--	0.057 U	--	--	--	--	--	--	--
Aroclor 1254	NA	NE		--	0.057 U	--	--	--	--	--	--	--
Aroclor 1260	NA	NE		--	0.057 U	--	--	--	--	--	--	--
Total PCBs	1.0	NE		--	0.399 U	--	--	--	--	--	--	--

Notes:

¹ Approximate exploration locations shown on Figure 2.

² Boring advanced at an angle of 25 degrees 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 Natural Background soil concentration per Ecology Publication 94-115 (Ecology 1994).

⁵ Refer to Appendix B for a full list of compounds analyzed and their results.

⁶ 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

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Farallon = Farallon Consulting

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Bold indicates analyte was detected at a concentration greater than Natural Background.

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Table 1
Summary of Soil Investigation Chemical Analytical Data

701 South Jackson Street
 Seattle, Washington

Sample Location ¹	Sample Identification	MTCA Cleanup Levels ³	Natural Background ⁴	FB-5 ²		FB-6				FB-7		GEI-1
				FB-5-17.0	FB-5-25.0	FB-6-10.0	FB-6-18.0	FB-6-21.0	FB-6-24.0	FB-7-2.5	FB-7-8.0	GEI-1-5.0
Sample Depth (feet bgs)	Sampled By	Sample Date		Farallon	Farallon	Farallon	Farallon	Farallon	Farallon	Farallon	Farallon	GEI
				11/01/19	11/01/19	11/01/19	11/01/19	11/01/19	11/01/19	10/30/19	10/30/19	05/18/21
				7.2	10.6	10.0	18.0	21.0	24.0	2.5	8.0	5.0
Petroleum Hydrocarbons by NWPTH-Gx/NWTPH-Dx (mg/kg)												
Gasoline-Range	30	NE		4,800	5.9 U	4.7 U	28	6.5 U	5.8 U	5.2 U	5.7 U	5.02 U
Diesel-Range	2,000	NE		590	32 U	--	30 U	--	31 U	31 U	31 U	54.4 U
Lube Oil-Range	2,000	NE		57 U	63 U	--	61 U	--	63 U	170	78	109 U
Volatile Organic Compounds (VOCs) by EPA 8021/8260 (mg/kg)												
Benzene	0.03	NE		1.6	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.0201 U
Toluene	7	NE		18	0.059 U	0.047 U	0.051 U	0.065 U	0.058 U	0.052 U	0.057 U	0.0251 U
Ethylbenzene	6	NE		89	0.059 U	0.047 U	1.2	0.065 U	0.058 U	0.052 U	0.057 U	0.0301 U
Total Xylenes	9	NE		420	0.118 U	0.094 U	0.55	0.13 U	0.068	0.104 U	0.114 U	0.0502 U
1,2 Dibromoethane (EDB)	0.005	NE		1.1 U	--	--	0.00089 U	--	--	--	--	--
1,2 Dichloroethane (EDC)	1	NE		1.1 U	--	--	0.00089 U	--	--	--	--	--
Methyl tertiary-butyl ether (MTBE)	0.1	NE		--	--	--	--	--	--	--	--	--
other VOCs ⁵	varies	NE		ND	--	--	ND	--	--	--	--	--
Total Metals by EPA 6000 series (mg/kg)												
Arsenic	20	7		--	--	--	--	--	--	--	--	1.53
Barium	16,000	NE		--	--	--	--	--	--	--	--	40.1
Cadmium	2	1		--	--	--	--	--	--	--	--	0.171 U
Total Chromium	2,000	48		--	--	--	--	--	--	--	--	27.6
Lead	250	24		--	--	--	--	--	--	--	--	1.57
Mercury	2	0.07		--	--	--	--	--	--	--	--	0.264 U
Selenium	400	NE		--	--	--	--	--	--	--	--	1.01
Silver	400	NE		--	--	--	--	--	--	--	--	0.129 U
Polycyclic Aromatic Hydrocarbons (PAHs) by EPA 8270D/SIM (mg/kg)												
Acenaphthene	4,800	NE		0.025	--	--	0.0081 U	--	--	--	--	0.0209 U
Acenaphthylene	NE	NE		0.025	--	--	0.0081 U	--	--	--	--	0.0209 U
Anthracene	24,000	NE		0.016	--	--	0.0081 U	--	--	--	--	0.0419 U
Benzo[a]anthracene	NE	NE		0.0083	--	--	0.0081 U	--	--	--	--	0.0209 U
Benzo(a)pyrene	0.1	NE		0.0076 U	--	--	0.0081 U	--	--	--	--	0.0209 U
Benzo(b)fluoranthene	NE	NE		0.0076 U	--	--	0.0081 U	--	--	--	--	0.0209 U
Benzo(g,h,i)perylene	NE	NE		0.0076 U	--	--	0.0081 U	--	--	--	--	0.0419 U
Benzo(k)fluoranthene	NE	NE		0.0076 U	--	--	0.0081 U	--	--	--	--	0.0209 U
Chrysene	NE	NE		0.0076 U	--	--	0.0081 U	--	--	--	--	0.0419 U
Dibenzo(a,h)anthracene	NE	NE		0.0076 U	--	--	0.0081 U	--	--	--	--	0.0419 U
Fluoranthene	3,200	NE		0.012	--	--	0.0081 U	--	--	--	--	0.0419 U
Fluorene	3,200	NE		0.053	--	--	0.0081 U	--	--	--	--	0.0209 U
Indeno(1,2,3-cd)pyrene	NE	NE		0.0076 U	--	--	0.0081 U	--	--	--	--	0.0419 U
Naphthalenes	5	NE		12.8	--	--	0.66	--	--	--	--	0.0209 U
Phenanthrene	NE	NE		0.078	--	--	0.0081 U	--	--	--	--	0.0419 U
Pyrene	2,400	NE		0.019	--	--	0.0081 U	--	--	--	--	0.0419 U
cPAHs TEQ ⁶	0.1	NE		0.005	--	--	0.006 U	--	--	--	--	0.016 U
Polychlorinated Biphenyls (PCBs) by EPA 8082 (mg/kg)												
Aroclor 1016	NA	NE		0.057 U	--	--	0.061 U	--	--	--	--	--
Aroclor 1221	NA	NE		0.057 U	--	--	0.061 U	--	--	--	--	--
Aroclor 1232	NA	NE		0.057 U	--	--	0.061 U	--	--	--	--	--
Aroclor 1242	NA	NE		0.057 U	--	--	0.061 U	--	--	--	--	--
Aroclor 1248	NA	NE		0.057 U	--	--	0.061 U	--	--	--	--	--
Aroclor 1254	NA	NE		0.057 U	--	--	0.061 U	--	--	--	--	--
Aroclor 1260	NA	NE		0.057 U	--	--	0.061 U	--	--	--	--	--
Total PCBs	1.0	NE		0.399 U	--	--	0.427 U	--	--	--	--	--

Notes:

- ¹ Approximate exploration locations shown on Figure 2.
 - ² Boring advanced at an angle of 25 degrees 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 Natural Background soil concentration per Ecology Publication 94-115 (Ecology 1994).
 - ⁵ Refer to Appendix B for a full list of compounds analyzed and their results.
 - ⁶ 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
 Farallon = Farallon Consulting
 Landau = Landau Associates
 EAI = Environmental Associates, Inc.
 GeoGroup = GEO Group Northwest, Inc.
 GEI = GeoEngineers 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 at a concentration greater than Natural Background.
 Yellow shading indicates analyte was detected at a concentration greater than the MTCA cleanup level.

Table 1
Summary of Soil Investigation Chemical Analytical Data
701 South Jackson Street
Seattle, Washington

Sample Location ¹	Sample Identification	MTCA Cleanup Levels ³	Natural Background ⁴	GEI-1		GEI-2			GEI-3			GEI-4
				GEI-1-12.5	GEI-1-17.5	GEI-2-10.0	GEI-2-15.0	GEI-2-17.5	GEI-3-5.0	GEI-3-15.0	GEI-3-17.5	GEI-4-2.5
				GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI
				05/18/21	05/18/21	05/19/21	05/19/21	05/19/21	05/19/21	05/19/21	05/19/21	12/29/21
Sample Depth (feet bgs)				12.5	17.5	10.0	15.0	17.5	5.0	15.0	17.5	2.5
Petroleum Hydrocarbons by NWPTH-Gx/NWTPH-Dx (mg/kg)												
Gasoline-Range	30	NE		57.9	4.94 U	1,970	361	5.59 U	4.37 U	10,500	5.80 U	5.17 U
Diesel-Range	2,000	NE		51.8 U	53.6 U	--	--	--	--	--	--	58.1 U
Lube Oil-Range	2,000	NE		104 U	107 U	--	--	--	--	--	--	116 U
Volatile Organic Compounds (VOCs) by EPA 8021/8260 (mg/kg)												
Benzene	0.03	NE		0.0197 U	0.0198 U	0.0207 U	0.129	0.0224 U	0.0175 U	13.2	0.232 U	0.0207 U
Toluene	7	NE		0.92	0.0247 U	0.347	2.21	0.0279 U	0.0219 U	97.2	0.0290 U	0.0310 U
Ethylbenzene	6	NE		0.124	0.0297 U	0.0311 U	0.104	0.0335 U	0.0262 U	87.8	0.0348 U	0.0258 U
Total Xylenes	9	NE		3.252	0.0494 U	0.686	1.315	0.0559 U	0.0437 U	554	0.0580 U	0.0517 U
1,2 Dibromoethane (EDB)	0.005	NE		--	--	--	--	--	--	--	--	--
1,2 Dichloroethane (EDC)	1	NE		--	--	--	--	--	--	--	--	--
Methyl tertiary-butyl ether (MTBE)	0.1	NE		--	--	--	--	--	--	--	--	--
other VOCs ⁵	varies	NE		--	--	--	--	--	--	--	--	--
Total Metals by EPA 6000 series (mg/kg)												
Arsenic	20	7		1.60	3.58	--	--	--	--	--	--	8.35
Barium	16,000	NE		32.0	36.1	--	--	--	--	--	--	0.614
Cadmium	2	1		0.177 U	0.185 U	--	--	--	--	--	--	0.451
Total Chromium	2,000	48		26.6	27.2	--	--	--	--	--	--	53.6
Lead	250	24		1.62	1.64	--	--	--	--	--	--	340
Mercury	2	0.07		0.279 U	0.284 U	--	--	--	--	--	--	0.288 U
Selenium	400	NE		1.07	0.805	--	--	--	--	--	--	1.33
Silver	400	NE		0.132 U	0.139 U	--	--	--	--	--	--	0.165
Polycyclic Aromatic Hydrocarbons (PAHs) by EPA 8270D/SIM (mg/kg)												
Acenaphthene	4,800	NE		0.0194 U	0.0202 U	--	--	--	--	--	--	0.0234 U
Acenaphthylene	NE	NE		0.0194 U	0.0202 U	--	--	--	--	--	--	0.0234 U
Anthracene	24,000	NE		0.0389 U	0.0404 U	--	--	--	--	--	--	0.0234 U
Benzo[a]anthracene	NE	NE		0.0194 U	0.0202 U	--	--	--	--	--	--	0.0458
Benzo(a)pyrene	0.1	NE		0.0194 U	0.0202 U	--	--	--	--	--	--	0.044
Benzo(b)fluoranthene	NE	NE		0.0194 U	0.0202 U	--	--	--	--	--	--	0.0453
Benzo(g,h,i)perylene	NE	NE		0.0389 U	0.0202 U	--	--	--	--	--	--	0.0538
Benzo(k)fluoranthene	NE	NE		0.0194 U	0.0202 U	--	--	--	--	--	--	0.0403
Chrysene	NE	NE		0.0389 U	0.0404 U	--	--	--	--	--	--	0.0476
Dibenzo(a,h)anthracene	NE	NE		0.0389 U	0.0404 U	--	--	--	--	--	--	0.0469 U
Fluoranthene	3,200	NE		0.0389 U	0.0404 U	--	--	--	--	--	--	0.0458
Fluorene	3,200	NE		0.0194 U	0.0202 U	--	--	--	--	--	--	0.0234 U
Indeno(1,2,3-cd)pyrene	NE	NE		0.0389 U	0.0404 U	--	--	--	--	--	--	0.0469 U
Naphthalenes	5	NE		0.0596	0.0202 U	--	--	--	--	--	--	0.0234 U
Phenanthrene	NE	NE		0.0389 U	0.0404 U	--	--	--	--	--	--	0.0234 U
Pyrene	2,400	NE		0.0389 U	0.0404 U	--	--	--	--	--	--	0.0792
cPAHs TEQ ⁶	0.1	NE		0.015 U	0.015 U	--	--	--	--	--	--	0.059 U
Polychlorinated Biphenyls (PCBs) by EPA 8082 (mg/kg)												
Aroclor 1016	NA	NE		--	--	--	--	--	--	--	--	--
Aroclor 1221	NA	NE		--	--	--	--	--	--	--	--	--
Aroclor 1232	NA	NE		--	--	--	--	--	--	--	--	--
Aroclor 1242	NA	NE		--	--	--	--	--	--	--	--	--
Aroclor 1248	NA	NE		--	--	--	--	--	--	--	--	--
Aroclor 1254	NA	NE		--	--	--	--	--	--	--	--	--
Aroclor 1260	NA	NE		--	--	--	--	--	--	--	--	--
Total PCBs	1.0	NE		--	--	--	--	--	--	--	--	--

Notes:

- ¹ Approximate exploration locations shown on Figure 2.
 - ² Boring advanced at an angle of 25 degrees 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 Natural Background soil concentration per Ecology Publication 94-115 (Ecology 1994).
 - ⁵ Refer to Appendix B for a full list of compounds analyzed and their results.
 - ⁶ 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
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Farallon = Farallon Consulting
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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 at a concentration greater than Natural Background.
Yellow shading indicates analyte was detected at a concentration greater than the MTCA cleanup level.

Table 1
Summary of Soil Investigation Chemical Analytical Data

701 South Jackson Street
 Seattle, Washington

Sample Location ¹	Sample Identification	MTCA Cleanup Levels ³	Natural Background ⁴	GEI-4		GEI-5		GEI-6		GEI-7		GEI-8
				GEI-4-12.5	GEI-4-12.5	GEI-5-2.5	GEI-5-10.0	GEI-6-2.5	GEI-6-10.0	GEI-7-2.5	GEI-7-7.5	GEI-7-14.0
Sample Depth (feet bgs)	Sampled By	Sample Date		GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI
				12/29/21	12/29/21	05/19/21	12/29/21	05/19/21	12/29/21	05/19/21	05/19/21	04/04/22
				12.5	2.5	10.0	2.5	10.0	2.5	7.5	14.0	12.5
Petroleum Hydrocarbons by NWPTH-Gx/NWTPH-Dx (mg/kg)												
Gasoline-Range	30	NE		5.27 U	4.93 U	4.86 U	5.35 U	5.57 U	4.86 U	5.46 U	1,370	9.14 U
Diesel-Range	2,000	NE		56.8 U	50.1 U	60.2 U	54.4 U	61 U	57 U	64.7 U	58.5 U	--
Lube Oil-Range	2,000	NE		114 U	100 U	120 U	689	122 U	448	129 U	117 U	--
Volatile Organic Compounds (VOCs) by EPA 8021/8260 (mg/kg)												
Benzene	0.03	NE		0.0211 U	0.0197 U	0.0195 U	0.0214 U	0.0223 U	0.0194 U	0.0218 U	0.15	0.0365 U
Toluene	7	NE		0.0316 U	0.0296 U	0.0292 U	0.0321 U	0.0334 U	0.0291 U	0.0327 U	0.177	0.0548 U
Ethylbenzene	6	NE		0.0263 U	0.0247 U	0.0243 U	0.0267 U	0.0278 U	0.0243 U	0.0273 U	17.1	0.0457 U
Total Xylenes	9	NE		0.0527 U	0.0493 U	0.0486 U	0.0535 U	0.0557 U	0.0486 U	0.0546 U	39.08	0.0914 U
1,2 Dibromoethane (EDB)	0.005	NE		--	--	--	--	--	--	0.0109 U	0.0106 U	--
1,2 Dichloroethane (EDC)	1	NE		--	--	--	--	--	--	0.0251 U	0.0244 U	--
Methyl tertiary-butyl ether (MTBE)	0.1	NE		--	--	--	--	--	--	0.0327 U	0.0318 U	--
other VOCs ⁵	varies	NE		--	--	--	--	--	--	ND	Detected	--
Total Metals by EPA 6000 series (mg/kg)												
Arsenic	20	7		3.01	7.52	1.77	8.21	5.7	4.34	5.85	7.07	--
Barium	16,000	NE		86.1	185	43.7	195	130	160	134	125	--
Cadmium	2	1		0.184 U	0.355	0.199 U	0.635	0.21 U	0.255	0.203 U	0.189	--
Total Chromium	2,000	48		39.3	27.4	25.9	38.2	59.2	34.5	64.1	52.2	--
Lead	250	24		3.28	93.8	2.04	243	4.79	59.5	4.82	6.06	--
Mercury	2	0.07		0.286 U	0.267 U	0.281 U	0.295 U	0.32 U	0.287 U	0.309	0.294 U	--
Selenium	400	NE		1.05	0.861	0.691	1.16	1.45	1	1.62	1.42	--
Silver	400	NE		0.138 U	0.130 U	0.149 U	0.25	0.158 U	0.14 U	0.152 U	0.141 U	--
Polycyclic Aromatic Hydrocarbons (PAHs) by EPA 8270D/SIM (mg/kg)												
Acenaphthene	4,800	NE		0.0232 U	0.0226 U	0.0229 U	0.0327	0.0256 U	0.0221 U	0.0241 U	0.0249 U	--
Acenaphthylene	NE	NE		0.0232 U	0.0226 U	0.0229 U	0.289	0.0256 U	0.0221 U	0.0241 U	0.0249 U	--
Anthracene	24,000	NE		0.0464 U	0.0451 U	0.0458 U	0.767	0.0512 U	0.0442 U	0.0482 U	0.0498 U	--
Benzo[a]anthracene	NE	NE		0.0232 U	0.0226 U	0.0229 U	1.32	0.0256 U	0.0221 U	0.0241 U	0.0249 U	--
Benzo[a]pyrene	0.1	NE		0.0232 U	0.0226 U	0.0229 U	1.12	0.0256 U	0.0221 U	0.0241 U	0.0249 U	--
Benzo[b]fluoranthene	NE	NE		0.0232 U	0.0226 U	0.0229 U	0.825	0.0256 U	0.0221 U	0.0241 U	0.0249 U	--
Benzo[g,h,i]perylene	NE	NE		0.0232 U	0.0226 U	0.0229 U	0.483	0.0256 U	0.0221 U	0.0241 U	0.0249 U	--
Benzo[k]fluoranthene	NE	NE		0.0232 U	0.0226 U	0.0229 U	0.856	0.0256 U	0.0221 U	0.0241 U	0.0249 U	--
Chrysene	NE	NE		0.0464 U	0.0451 U	0.0458 U	1.15	0.0512 U	0.0442 U	0.0482 U	0.0498 U	--
Dibenzo[a,h]anthracene	NE	NE		0.0464 U	0.0451 U	0.0458 U	0.231	0.0512 U	0.0442 U	0.0482 U	0.0498 U	--
Fluoranthene	3,200	NE		0.0464 U	0.0451 U	0.0458 U	2.84	0.0512 U	0.0442 U	0.0482 U	0.0498 U	--
Fluorene	3,200	NE		0.0232 U	0.0226 U	0.0229 U	0.251	0.0256 U	0.0221 U	0.0241 U	0.0249 U	--
Indeno[1,2,3-cd]pyrene	NE	NE		0.0464 U	0.0451 U	0.0458 U	0.473	0.0512 U	0.0442 U	0.0482 U	0.0498 U	--
Naphthalenes	5	NE		0.0232 U	0.0226 U	0.0229 U	0.2537	0.0256 U	0.0221 U	0.0241 U	0.556	22.1 U
Phenanthrene	NE	NE		0.0464 U	0.0451 U	0.0458 U	2.02	0.0512 U	0.0442 U	0.0482 U	0.0498 U	--
Pyrene	2,400	NE		0.0464 U	0.0451 U	0.0458 U	2.65	0.0512 U	0.0442 U	0.0482 U	0.0498 U	--
cPAHs TEQ ⁶	0.1	NE		0.018 U	0.017 U	0.017 U	0.74	0.018 U	0.017 U	0.017 U	0.017 U	--
Polychlorinated Biphenyls (PCBs) by EPA 8082 (mg/kg)												
Aroclor 1016	NA	NE		--	--	--	--	--	--	0.0596 U	0.061 U	--
Aroclor 1221	NA	NE		--	--	--	--	--	--	0.0596 U	0.061 U	--
Aroclor 1232	NA	NE		--	--	--	--	--	--	0.0596 U	0.061 U	--
Aroclor 1242	NA	NE		--	--	--	--	--	--	0.0596 U	0.061 U	--
Aroclor 1248	NA	NE		--	--	--	--	--	--	0.0596 U	0.061 U	--
Aroclor 1254	NA	NE		--	--	--	--	--	--	0.0596 U	0.061 U	--
Aroclor 1260	NA	NE		--	--	--	--	--	--	0.0596 U	0.061 U	--
Total PCBs	1.0	NE		--	--	--	--	--	--	0.0596 U	0.061 U	--

Notes:

- ¹ Approximate exploration locations shown on Figure 2.
 - ² Boring advanced at an angle of 25 degrees 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 Natural Background soil concentration per Ecology Publication 94-115 (Ecology 1994).
 - ⁵ Refer to Appendix B for a full list of compounds analyzed and their results.
 - ⁶ 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
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 Yellow shading indicates analyte was detected at a concentration greater than the MTCA cleanup level.

Table 1
Summary of Soil Investigation Chemical Analytical Data

701 South Jackson Street
Seattle, Washington

Sample Location ¹	Sample Identification	MTCA Cleanup Levels ³	Natural Background ⁴	GEI-8	GEI-9		GEI-10		GEI-11		GEI-12	
				GEI-8-17.0	GEI-9-12.5	GEI-9-17.5	GEI-10-12.5	GEI-10-17.0	GEI-11-15.0	GEI-11-35.0	GEI-12-15.0	GEI-11-40.0
Sample Depth (feet bgs)	Sampled By	Sample Date		GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI
				04/04/22	04/04/22	04/04/22	04/04/22	04/04/22	04/04/22	04/04/22	04/04/22	04/04/22
				17.0	12.5	17.5	12.5	17.0	15.0	35.0	15.0	40.0
Petroleum Hydrocarbons by NWPTH-Gx/NWTPH-Dx (mg/kg)												
Gasoline-Range	30	NE		5.74 U	6.5 U	6.25 U	5.64 U	5.76 U	41.1	5.88 U	3,220	6.05 U
Diesel-Range	2,000	NE		--	--	--	--	--	--	--	--	--
Lube Oil-Range	2,000	NE		--	--	--	--	--	--	--	--	--
Volatile Organic Compounds (VOCs) by EPA 8021/8260 (mg/kg)												
Benzene	0.03	NE		0.0230 U	0.0260 U	0.0250 U	0.0228 U	0.0230 U	1.42	0.0235 U	0.739	0.0242 U
Toluene	7	NE		0.0348 U	0.0390 U	0.0375 U	0.0328 U	0.0346 U	0.418	0.0353 U	0.0403 U	0.0363 U
Ethylbenzene	6	NE		0.0287 U	0.0325 U	0.0312 U	0.0282 U	0.0288 U	1.03	0.0294 U	13	0.0303 U
Total Xylenes	9	NE		0.0574 U	0.0650 U	0.0625 U	0.0564 U	0.0576 U	3.482	0.0588 U	2.39	0.0605 U
1,2 Dibromoethane (EDB)	0.005	NE		--	--	--	--	--	--	--	--	--
1,2 Dichloroethane (EDC)	1	NE		--	--	--	--	--	--	--	--	--
Methyl tertiary-butyl ether (MTBE)	0.1	NE		--	--	--	--	--	--	--	--	--
other VOCs ⁵	varies	NE		--	--	--	--	--	--	--	--	--
Total Metals by EPA 6000 series (mg/kg)												
Arsenic	20	7		--	--	--	--	--	--	--	--	--
Barium	16,000	NE		--	--	--	--	--	--	--	--	--
Cadmium	2	1		--	--	--	--	--	--	--	--	--
Total Chromium	2,000	48		--	--	--	--	--	--	--	--	--
Lead	250	24		--	--	--	--	--	--	--	--	--
Mercury	2	0.07		--	--	--	--	--	--	--	--	--
Selenium	400	NE		--	--	--	--	--	--	--	--	--
Silver	400	NE		--	--	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (PAHs) by EPA 8270D/SIM (mg/kg)												
Acenaphthene	4,800	NE		--	--	--	--	--	--	--	--	--
Acenaphthylene	NE	NE		--	--	--	--	--	--	--	--	--
Anthracene	24,000	NE		--	--	--	--	--	--	--	--	--
Benzo[a]anthracene	NE	NE		--	--	--	--	--	--	--	--	--
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	NE		--	--	--	--	--	--	--	--	--
Fluoranthene	3,200	NE		--	--	--	--	--	--	--	--	--
Fluorene	3,200	NE		--	--	--	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	NE	NE		--	--	--	--	--	--	--	--	--
Naphthalenes	5	NE		24.5 U	21.2 U	24.8 U	22.3 U	24.1 U	571.6	20.1 U	4,375	18.9 U
Phenanthrene	NE	NE		--	--	--	--	--	--	--	--	--
Pyrene	2,400	NE		--	--	--	--	--	--	--	--	--
cPAHs TEQ ⁶	0.1	NE		--	--	--	--	--	--	--	--	--
Polychlorinated Biphenyls (PCBs) by EPA 8082 (mg/kg)												
Aroclor 1016	NA	NE		--	--	--	--	--	--	--	--	--
Aroclor 1221	NA	NE		--	--	--	--	--	--	--	--	--
Aroclor 1232	NA	NE		--	--	--	--	--	--	--	--	--
Aroclor 1242	NA	NE		--	--	--	--	--	--	--	--	--
Aroclor 1248	NA	NE		--	--	--	--	--	--	--	--	--
Aroclor 1254	NA	NE		--	--	--	--	--	--	--	--	--
Aroclor 1260	NA	NE		--	--	--	--	--	--	--	--	--
Total PCBs	1.0	NE		--	--	--	--	--	--	--	--	--

Notes:

- ¹ Approximate exploration locations shown on Figure 2.
 - ² Boring advanced at an angle of 25 degrees 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 Natural Background soil concentration per Ecology Publication 94-115 (Ecology 1994).
 - ⁵ Refer to Appendix B for a full list of compounds analyzed and their results.
 - ⁶ 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
Farallon = Farallon Consulting
Landau = Landau Associates
EAI = Environmental Associates, Inc.
GeoGroup = GEO Group Northwest, Inc.
GEI = GeoEngineers 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 at a concentration greater than Natural Background.
Yellow shading indicates analyte was detected at a concentration greater than the MTCA cleanup level.

Table 2
Summary of Groundwater Investigation Chemical Analytical Data

701 South Jackson Street
 Seattle, Washington

Sample Location ¹	GEI-1	GEI-11	GEI-12	MTCA Cleanup Level ³
Sample Identification	GEI-1-20210518	GEI-11-W-041122	GEI-12-W-041122	
Sample Date	05/18/21	04/11/22	04/11/22	
Depth To Groundwater (feet bgs)	64.1	61.3	68.8	
Groundwater Elevation ² (feet NAVD88)	33.9	32.7	31.2	
Petroleum Hydrocarbons by NWTPH-G/Dx (µg/L)				
Gasoline-Range Petroleum Hydrocarbons	54.6	694	142	800/1,000 ⁴
Diesel-Range Petroleum Hydrocarbons	176	117 U	117 U	500
Heavy Oil-Range Petroleum Hydrocarbons	98.2 U	117 U	117 U	500
Volatile Organic Compounds (VOCs) by EPA 8260D (µg/L)				
Benzene	0.440 U	2.06	0.440 U	5
Toluene	0.750	9.89	0.750 U	100
Ethylbenzene	0.980	8.28	1.06	700
Total Xylenes	3.274	48.9	1.2	1,000
Total Metals by EPA 200.8/245.1 (µg/L)				
Arsenic	6.75	2.94	2.85	8 ⁵
Cadmium	0.247	0.200 U	0.200 U	5
Total Chromium	8.39	1.00 U	1.10	50
Lead	4.61	0.500 U	0.500 U	15
Mercury	0.304	0.100 U	0.100 U	2
Dissolved Metals by EPA 200.8/245.1 (µg/L)				
Arsenic	1.23	2.95	2.91	5
Cadmium	0.125 U	0.125 U	0.125 U	5
Total Chromium	0.750 U	0.750 U	0.752	50
Lead	0.500 U	0.500 U	0.500 U	15
Mercury	0.100 U	0.100 U	0.100 U	2
Polycyclic Aromatic Hydrocarbons (PAHs) by EPA 8270 (µg/L)				
1-Methylnaphthalene	0.105	0.156	0.620	1.5
2-Methylnaphthalene	0.170	0.259	0.799	32
Acenaphthene	0.0994 U	0.099 U	0.0997 U	960
Acenaphthylene	0.0994 U	0.099 U	0.0997 U	NE
Anthracene	0.0994 U	0.099 U	0.0997 U	4,800
Benzo[a]anthracene	0.0994 U	0.099 U	0.0997 U	NE
Benzo(a)pyrene	0.0994 U	0.099 U	0.0997 U	NE
Benzo(b)fluoranthene	0.0994 U	0.099 U	0.0997 U	NE
Benzo(g,h,i)perylene	0.0994 U	0.099 U	0.0997 U	NE
Benzo(k)fluoranthene	0.0994 U	0.099 U	0.0997 U	0.1
Chrysene	0.0994 U	0.099 U	0.0997 U	NE
Dibenzo(a,h)anthracene	0.0994 U	0.099 U	0.0997 U	NE
Fluoranthene	0.0994 U	0.099 U	0.0997 U	640
Fluorene	0.0994 U	0.099 U	0.0997 U	640
Indeno(1,2,3-cd)pyrene	0.0994 U	0.099 U	0.0997 U	NE
Naphthalene	0.263	0.759	0.521	160
Phenanthrene	0.0994 U	0.099 U	0.0997 U	NE
Pyrene	0.0994 U	0.099 U	0.0997 U	480
Total cPAHs TEQ ⁶	0.0994 U	0.099 U	0.0997 U	0.1

Notes:
¹ Approximate sample locations are shown on Figures 1 through 3.
² Groundwater elevation referenced to the approximate ground surface elevation (North American Vertical Datum 1988 [NAVD88]).
³ Washington State Model Toxic Control Act Cleanup Regulation (MTCA) Method A Groundwater Cleanup Levels. 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 800 µg/L. When benzene is not present the gasoline range cleanup level is 1,000 µg/L.
⁵ Natural background concentration for Puget Sound groundwater (Ecology 2021).
⁶ 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
 µg/L = micrograms per liter
 MTCA = Model Toxics Cleanup Act
 EPA = United States Environmental Protection Agency
 U = chemical of concern not detected greater than the laboratory reporting limit shown
 -- = not analyzed
 NE = not established
 - = not analyzed
 NE = not established
 NA = not applicable
Bold font type indicates the chemical of concern was detected.
 Chemical analytical testing by Fremont Analytical of Seattle, Washington.

Table 3
Summary of Sub-Slab Soil Vapor Investigation Chemical Analytical Data

701 South Jackson Street
 Seattle, Washington

Sample Location ¹	SSV-1		SSV-2		SSV-3		Shallow Sub-Slab Soil Gas Screening Level ²	Deep Sub-Slab Soil Gas Screening Level ³
	SSV-1-S	SSV-1-D	SSV-2-S	SSV-2-D	SSV-3-S	SSV-3-D		
Sample Identification	GEI	GEI	GEI	GEI	GEI	GEI		
Sampled By	GEI	GEI	GEI	GEI	GEI	GEI		
Sample Date	12/28/21	12/28/21	12/28/21	12/28/21	12/28/21	12/28/21		
Sample Depth (feet bgs)	5 - 10	20 - 25	5 - 10	20 - 25	5 - 10	20 - 25		
Helium by Modified ASTM D-1496								
Helium (percent)	0.4 U	--	0.4 U	2.04	0.4 U	0.6 U	NE	NE
Petroleum Hydrocarbons by Modified TO-15 (µg/m³)								
Aliphatic Hydrocarbons (EC5-8)	112,000	--	18,500	>28,600	608	1,180 U	NE	NE
Aliphatic Hydrocarbons (EC9-12)	7,970	--	1,090	2,410	294 U	252 U	NE	NE
Aromatic Hydrocarbons (EC9-10)	3,590	--	409,000	>13,200,000	62.9 U	2,280,000	NE	NE
Total Petroleum Hydrocarbons (TPH)	123,560	--	428,590	>13,231,010	608	2,280,000	4,700	14,000
Volatile Organic Compounds (VOCs) by TO-15 (µg/m³)								
Benzene	153	--	67.8 U	1,360 U	8.19	203 U	11	32
Toluene	957	--	1,640 U	32,800 U	16.4 U	4,910 U	76,000	230,000
Ethylbenzene	695 U	--	25.6 U	511 U	0.256 U	76.7 U	15,000	46,000
Xylenes	1,232	--	231 U	4,620 U	2.31 U	693 U	1,500	4,600
(MEK) 2-Butanone	472 U	--	1,740 U	34,700 U	17.4 U	5,210 U	76,000	230,000
1,2-Dibromoethane (EDB)	17.7	--	2.29 U	45.9 U	0.0229 U	6.88 U	0.14	0.42
1,2-Dichloroethane (EDC)	16.2 U	--	1,410 U	28,200 U	14.1 U	4,230 U	3.2	9.6
Methyl tert-butyl ether (MTBE)	72.1 U	--	39.7 U	793 U	0.397 U	119 U	320	960
Naphthalene	99.9	--	247 U	4,950 U	2.97	742 U	2.5	7.4
n-Hexane	3,120	--	383 U	7,660 U	3.83 U	1,150 U	11,000	32,000

Notes:

¹ Approximate exploration locations shown on Figure 3.

² Washington State Model Toxic Control Act Cleanup Regulation (MTCA) Method B soil gas screening level (lowest of carcinogenic and non-carcinogenic).

³ Washington State MTCA Method B deep soil gas screening level (lowest of carcinogenic and non-carcinogenic).

bgs = below ground surface

µg/m³ = micrograms per cubic meter

GEI = GeoEngineers Inc.

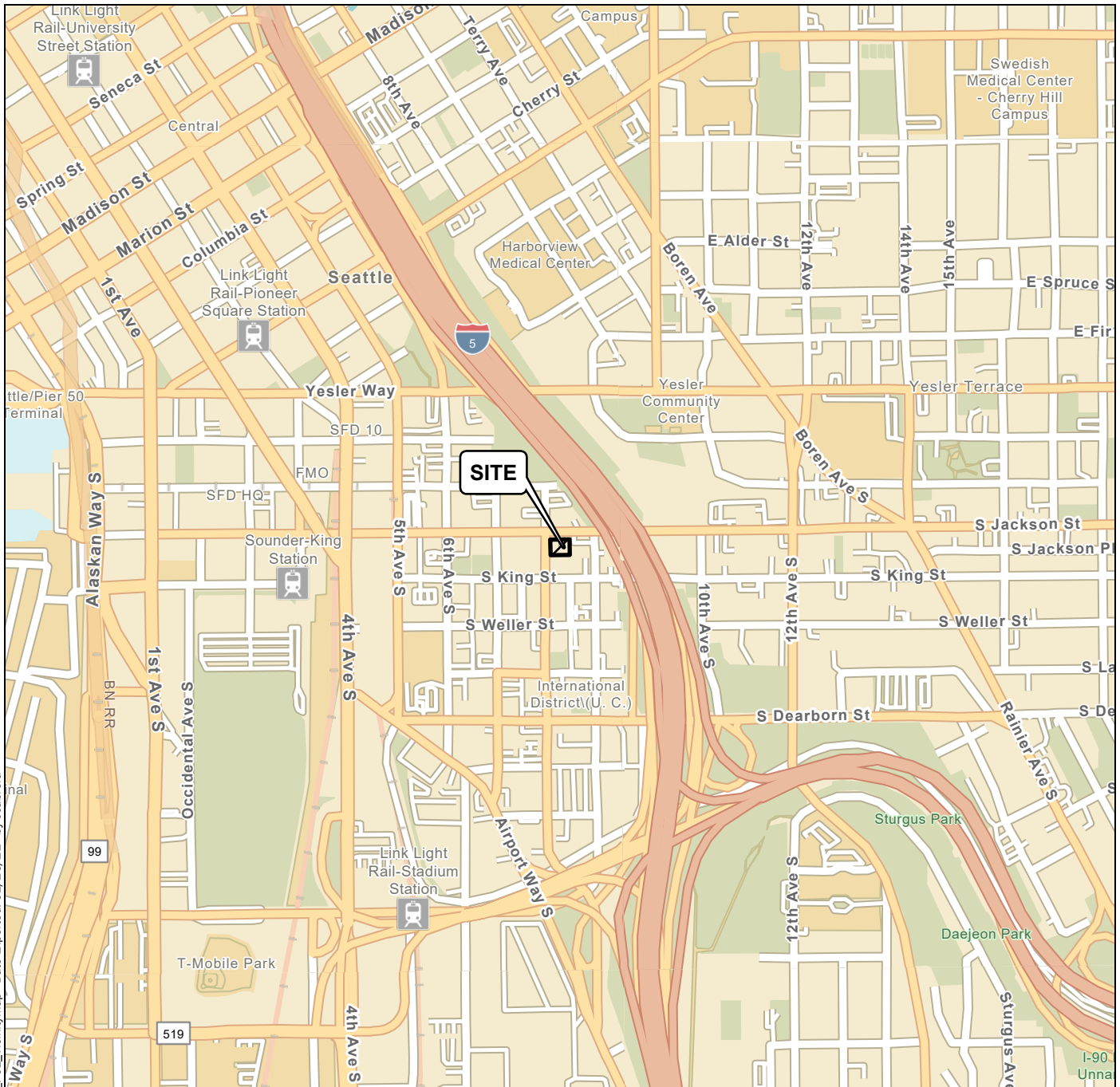
NE = Not Established

"--" = not tested

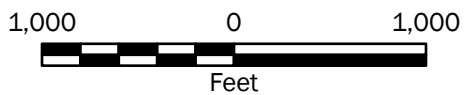
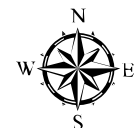
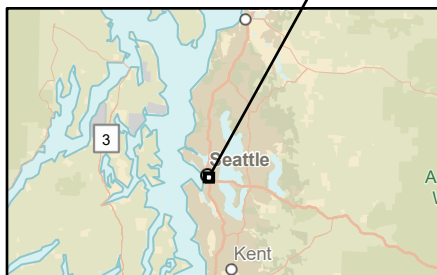
U = Analyte not detected above the reported sample quantization limit

Bold indicates analyte was detected.

Yellow shading indicates analyte was detected at a concentration greater than the MTCA screening level.



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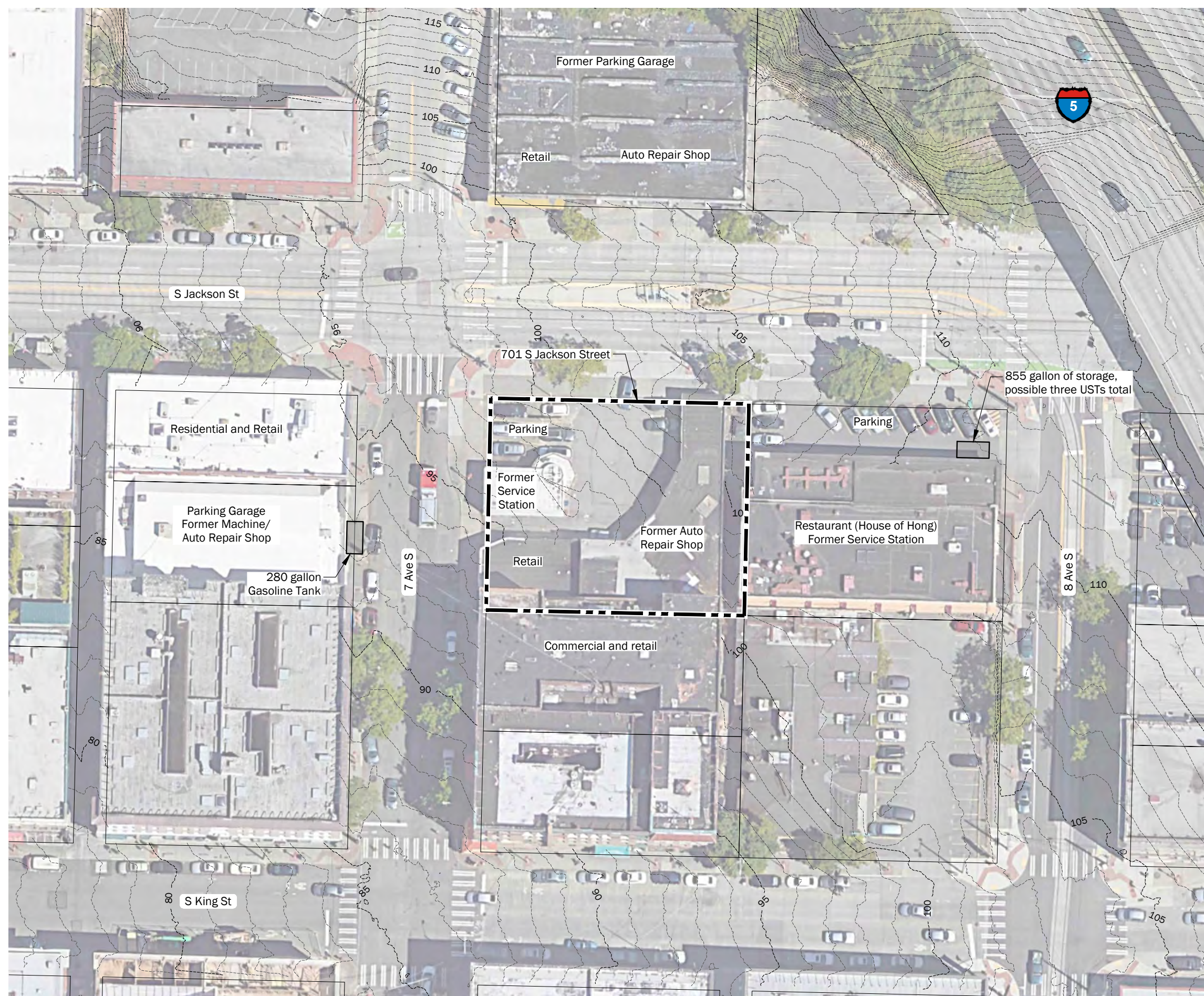
Notes:

1. The locations of all features shown are approximate.
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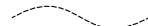

Data Source: ESRI
 Projection: NAD 1983 UTM Zone 10N

Vicinity Map	
701 South Jackson Street Seattle, Washington	
	Figure 1

\\geoengineers.com\WAN\Projects\24\24504001\CAD\01\Draft RI\2450400101_F2_Site Plan.dwg TAB:2 Site Plan Date Exported: 03/05/21 - 14:55 by mwoods



Legend

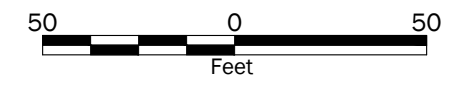
-  Property Boundary
-  Parcel Boundary
-  Existing Grade Major Contour
-  Existing Grade Minor Contour


Notes:

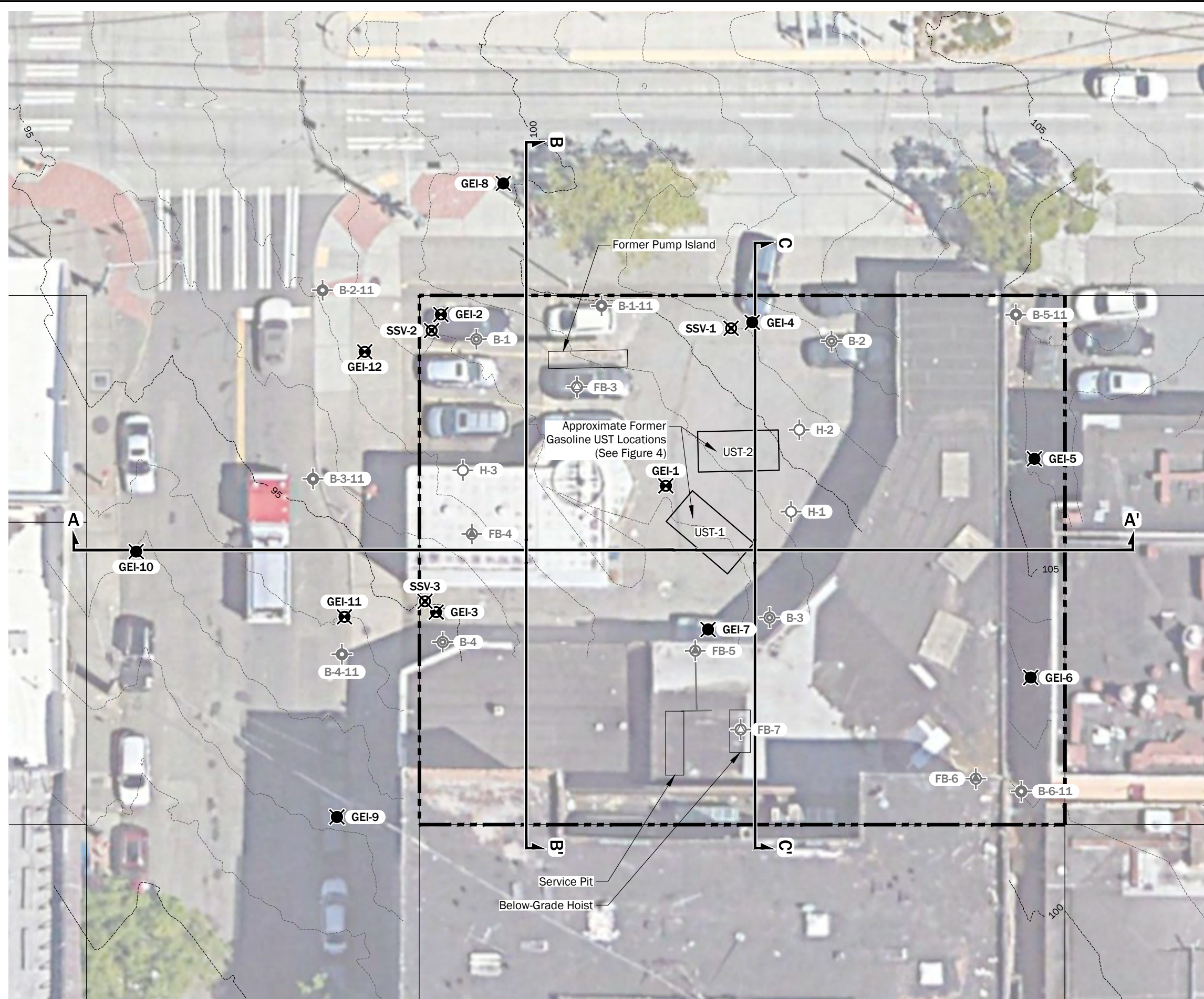
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 Lidar from Puget Sound Lidar Consortium dated 2016.

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



Site Plan	
701 South Jackson Street Seattle, Washington	
	Figure 2

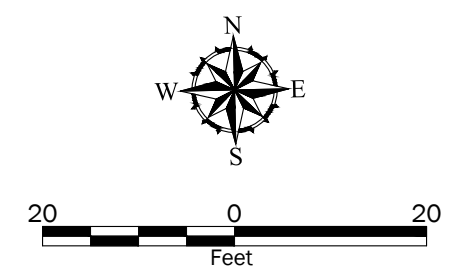


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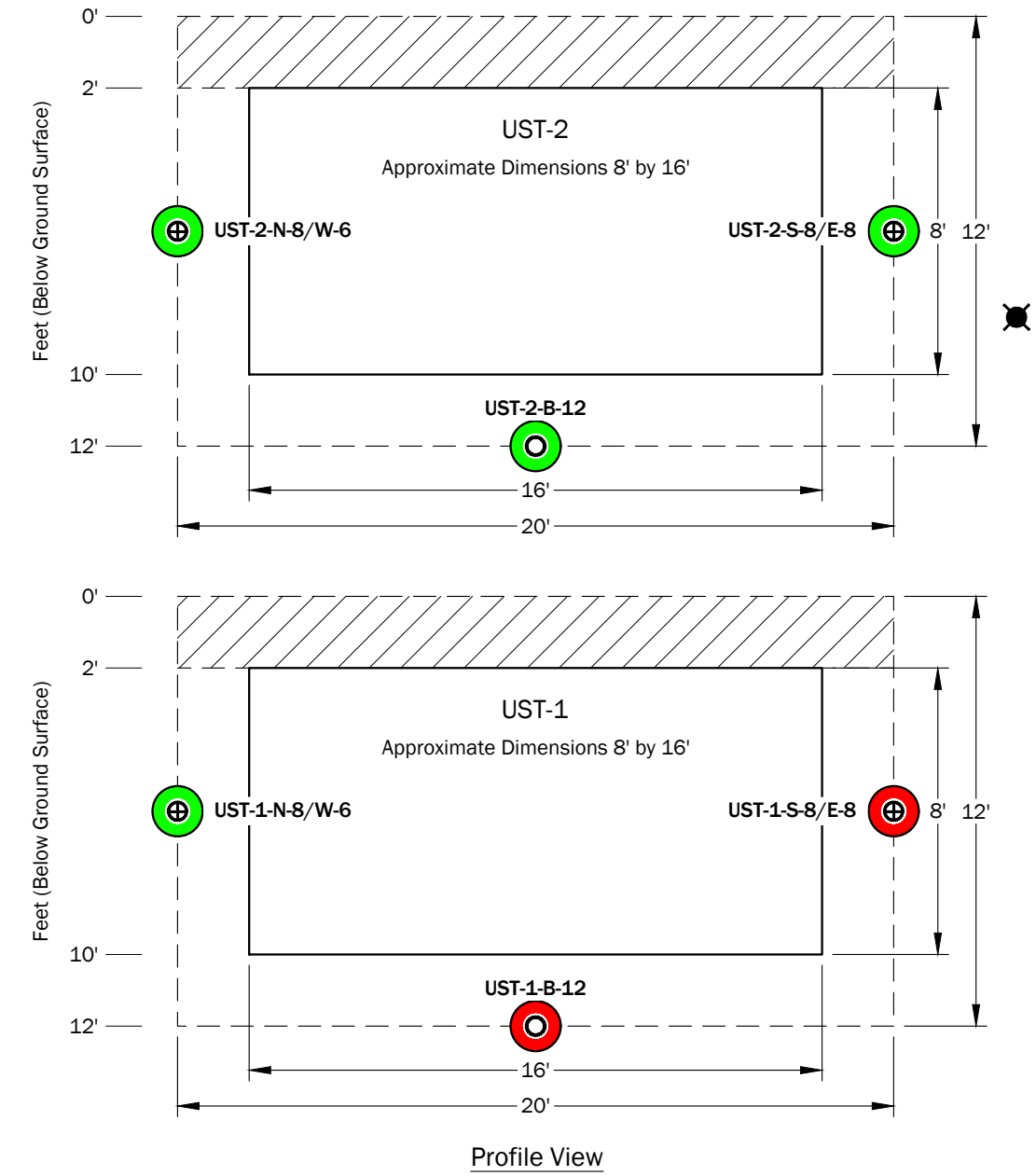
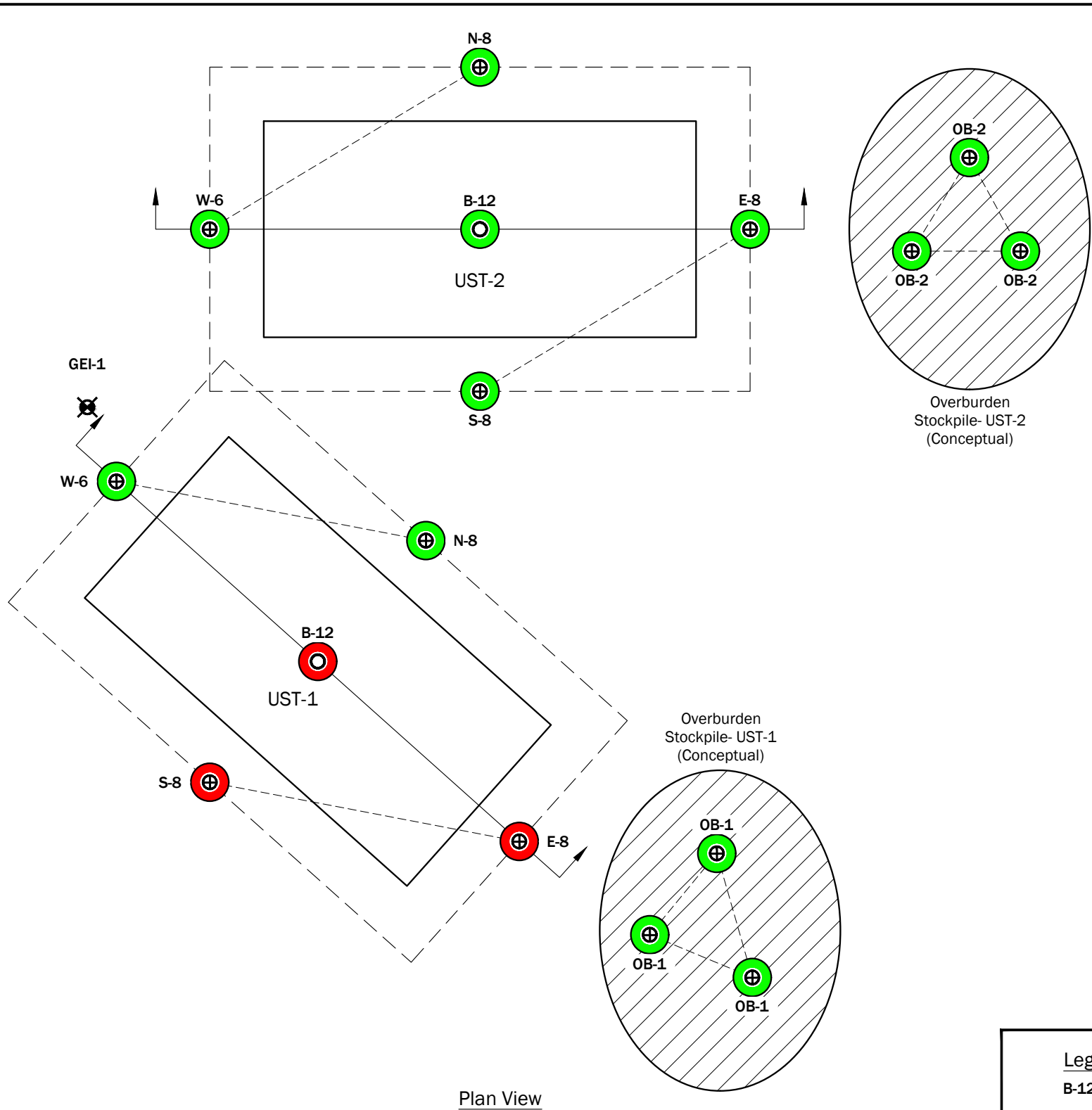
- FB-3 Hollow Stem Auger Boring by Farallon Consulting, 2019
- FB-4 Direct Push Boring by Farallon Consulting, 2019
- FB-5 Direct Push Boring by Farallon Consulting, 2019 Completed at 25 degrees to horizontal
- B-1-11 Hollow Stem Auger Boring by Landau Associates, 2011
- B-1 Hollow Stem Auger Boring by GEO Group Northwest, 2006
- H-1 Hollow Stem Auger Boring by GEO Group Northwest, 1992
- GEI-1 Hollow Stem Auger Boring by GeoEngineers, 2021/2022
- GEI-4 Direct Push Boring by GeoEngineers, 2021/2022
- SSV-1 Soil Vapor Boring by GeoEngineers, 2021
- A A' Cross Section Location

- 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.

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 Lidar from Puget Sound Lidar Consortium dated 2016.
 Projection: NAD83 Washington State Planes, North Zone, US Foot



Environmental Investigation Sampling Locations	
701 South Jackson Street Seattle, Washington	
	Figure 3
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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

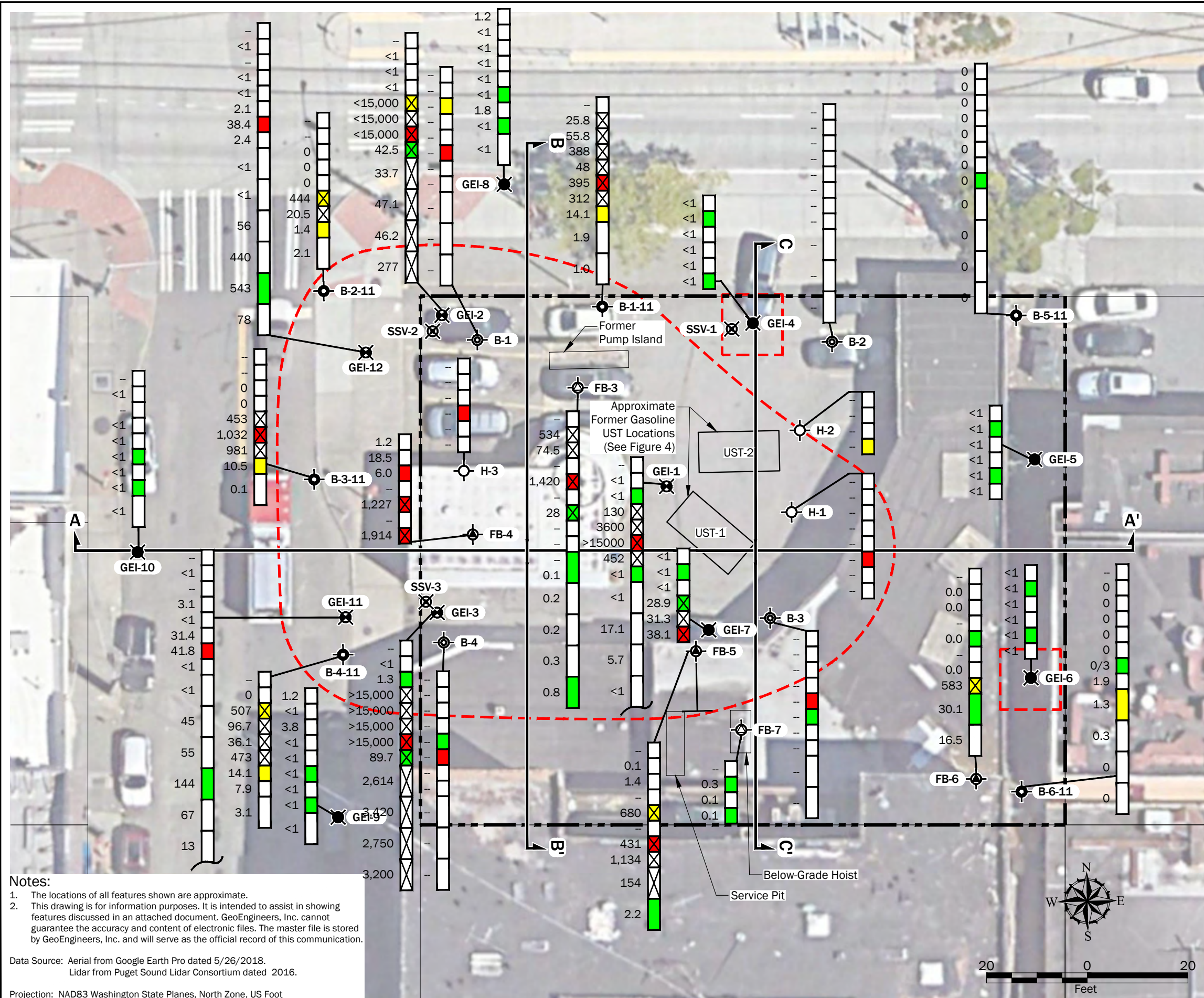
Soil Chemical Analytical Results

- 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	
701 South Jackson Street Seattle, Washington	
	Figure 4
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- 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
- GEI-1 Hollow Stem Auger Boring by GeoEngineers, 2021/2022
- GEI-4 Direct Push Boring by GeoEngineers, 2021/2022
- SSV-1 Soil Vapor Boring by GeoEngineers, 2021

A A' Cross Section Location

Depth Interval of Soil Samples (bgs)

25.8	0-2.5 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.

Notes:

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

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

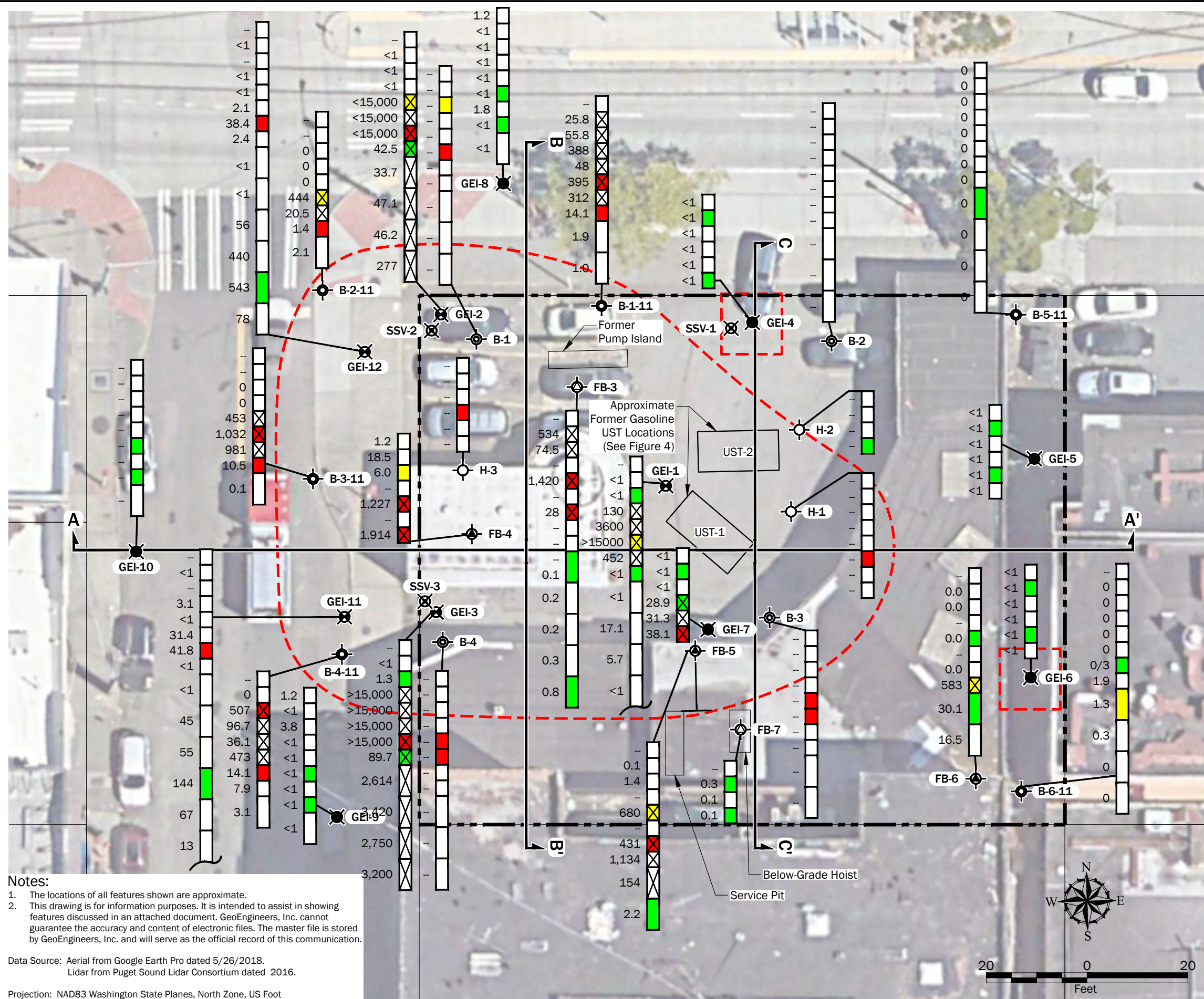
Soil Analytical Results - Gasoline Petroleum

701 South Jackson Street
Seattle, Washington

Figure 5

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- Legend**
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 - 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
 - GEI-1 Hollow Stem Auger Boring by GeoEngineers, 2021/2022
 - GEI-4 Direct Push Boring by GeoEngineers, 2021/2022
 - SSV-1 Soil Vapor Boring by GeoEngineers, 2021
- A A' Cross Section Location

Depth Interval of Soil Samples (bgs)

25.8	0-2.5 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.

Notes:

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

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 - BTEX

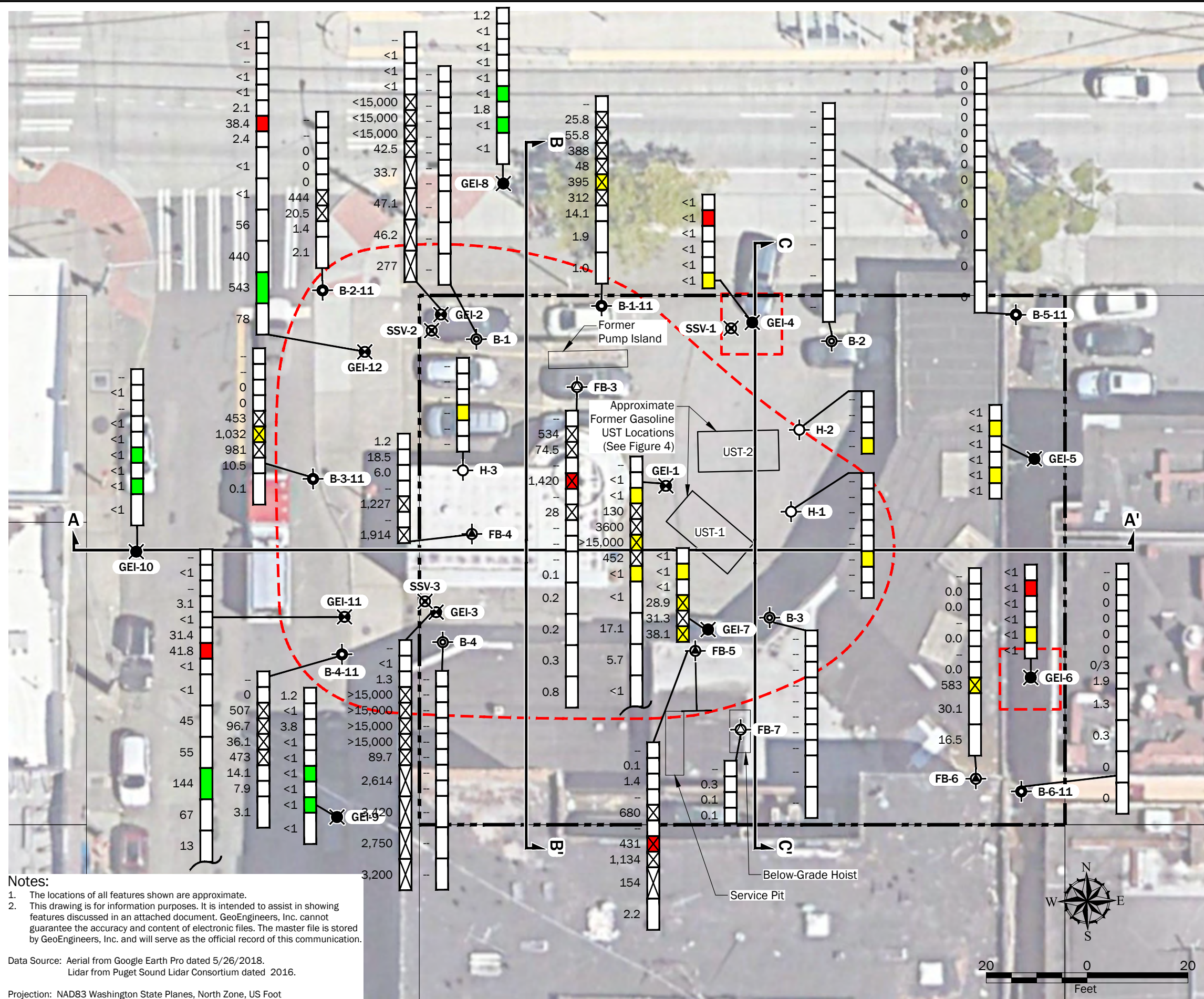
701 South Jackson Street
Seattle, Washington

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Figure 6

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P:\24\24504001\CAD\01\Public Review Draft RIFS-CAP_2450400101_F07_Soil Analytical Results - Naphthalene.dwg TAB:F07 Date Exported: 07/08/22 - 11:29 by gregster



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
- GEI-1 Hollow Stem Auger Boring by GeoEngineers, 2021/2022
- GEI-4 Direct Push Boring by GeoEngineers, 2021/2022
- SSV-1 Soil Vapor Boring by GeoEngineers, 2021

A A' Cross Section Location

Depth Interval of Soil Samples (bgs)

25.8	0-2.5 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.

Notes:

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

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

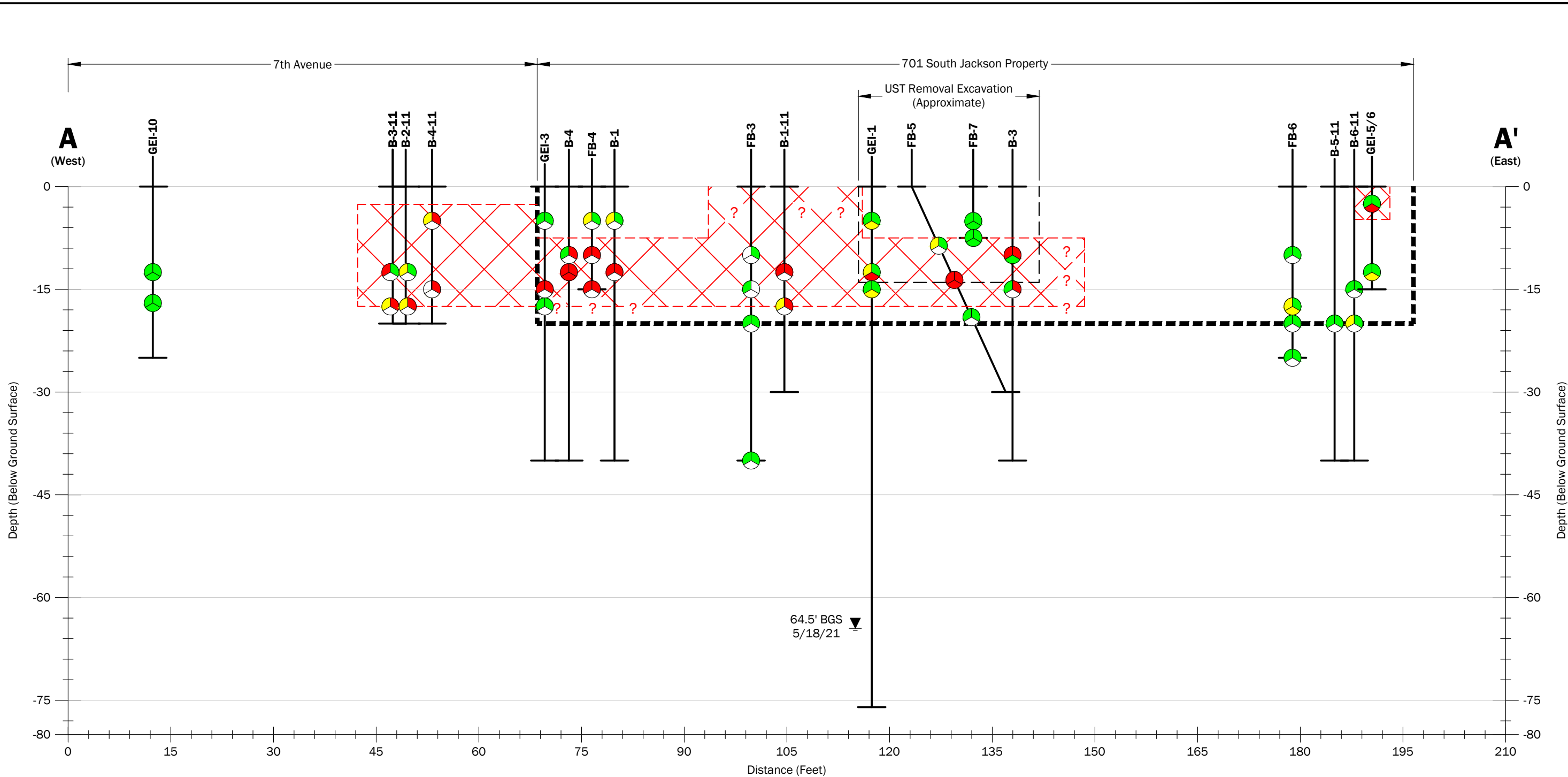
Soil Analytical Results - PAHs and Metals

701 South Jackson Street
 Seattle, Washington

Figure 7

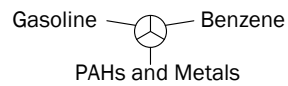
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P:\24\24504001\CAD\01\Public Review Draft RIFS-CAP_2450400101_FB_Cross Section A-A.dwg TAB:8 Cross Section A-A Date Exported: 07/07/22 - 2:13:11 by gregster



Legend

Soil Chemical Analytical Results (mg/kg)

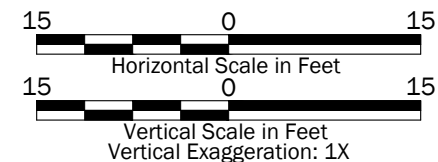


- Contaminants of Concern Not Detected or Detected at Concentration similar to Background Levels
- Contaminants of Concern Detected at Concentrations Less Than MTCA Method A/B Cleanup Levels
- Contaminants of Concern Detected at Concentrations Greater Than the MTCA Method A/B Cleanup Levels

X Approximate Extent of Contaminated Soil Greater than MTCA Cleanup Levels

----- Planned Development Extent

▼ Groundwater Measure Depth

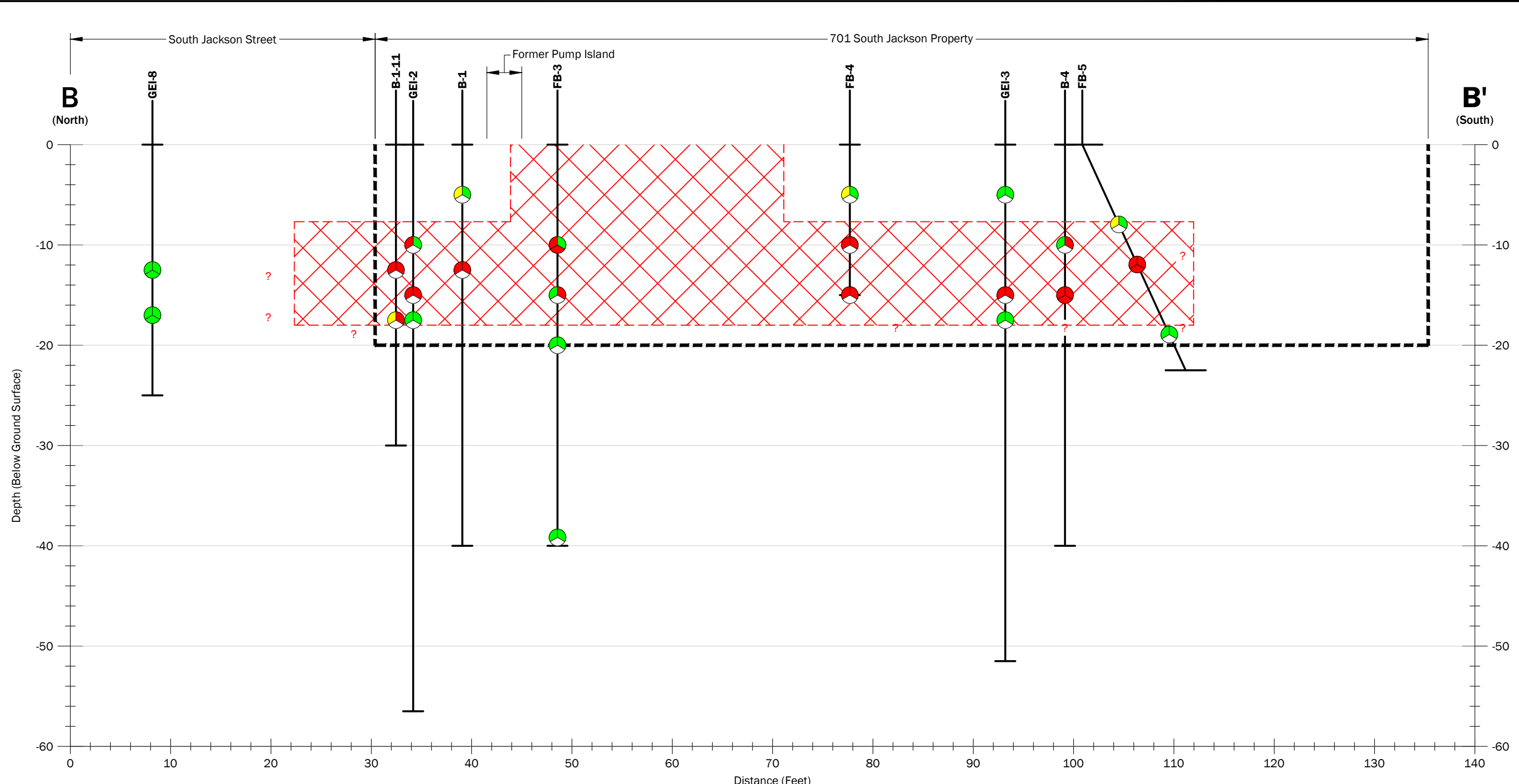


Notes:

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'	
701 South Jackson Street Seattle, Washington	
	Figure 8
WWW.GEOENGINEERS.COM	

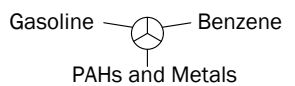
P:\24\24504001\CAD\01\Public Review Draft RIFS-CAP_2450400101_F9_Cross Section B-B'.dwg TAB:9 Cross Section B-B' Date Exported: 07/07/22 - 21:36 by greigster



Legend

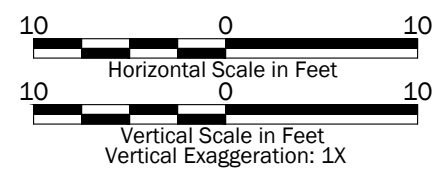
- Soil Chemical Analytical Results (mg/kg)
- Contaminants of Concern Not Detected or Detected at Concentration similar to Background Levels
 - Contaminants of Concern Detected at Concentrations Less Than MTCA Method A/B Cleanup Levels
 - Contaminants of Concern Detected at Concentrations Greater Than the MTCA Method A/B Cleanup Levels

- Approximate Extent of Contaminated Soil Greater than MTCA Cleanup Levels
- Planned Development Extent
- Groundwater Measure Depth



Notes:

- 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.
- 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.



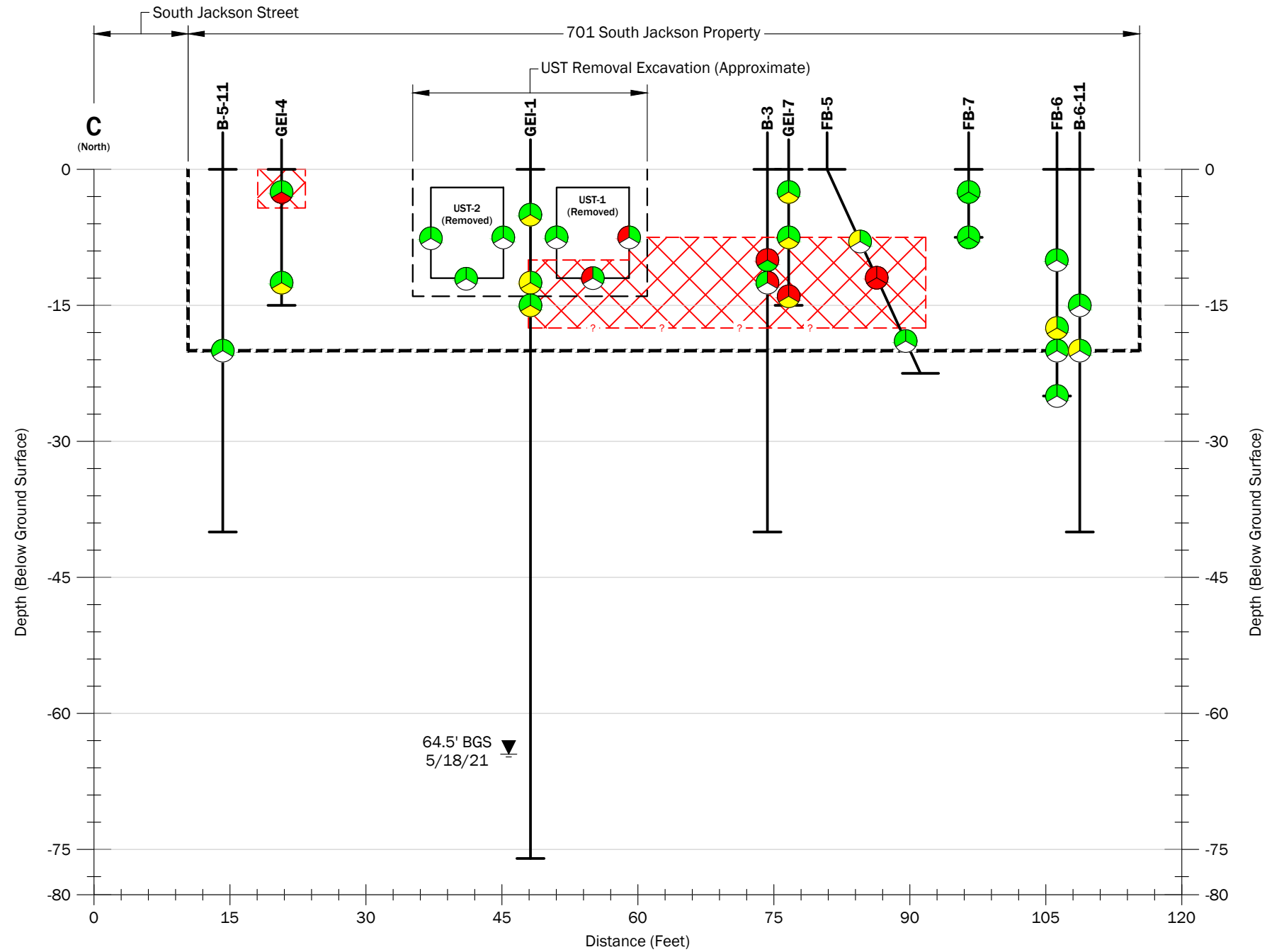
Cross Section B-B'

701 South Jackson Street
Seattle, Washington

Figure 9

WWW.GEOENGINEERS.COM

P:\24\24504001\CAD\01\Revised R\F5\CAP_2022.07.01\24504001.01_F10_Cross Section C-C.dwg TAB:10 Cross Section C-C Date Exported: 07/26/22 - 11:07 by mwwoods



Legend

Soil Chemical Analytical Results (mg/kg)

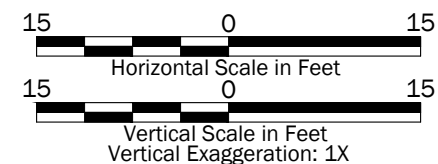


- Contaminants of Concern Not Detected or Detected at Concentration similar to Background Levels
- Contaminants of Concern Detected at Concentrations Less Than MTCA Method A/B Cleanup Levels
- Contaminants of Concern Detected at Concentrations Greater Than the MTCA Method A/B Cleanup Levels

X Approximate Extent of Contaminated Soil Greater than MTCA Cleanup Levels

----- Planned Development Extent

▼ Groundwater Measure Depth



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 C-C'	
701 South Jackson Street Seattle, Washington	
	Figure 10
<small>WWW.GEOENGINEERS.COM</small>	

APPENDIX A
Previous Environmental Investigation Boring Logs

BORING NO. 1

Logged By: DH

Date Drilled: 8/3/92

Surface Elev. N/A

Depth ft.	USCS	Soil Description	Sample		SPT(N) Blows per ft.	Water Content %	Other Test																					
			Type	No.																								
		Asphalt and gravel base																										
5	CL	Gray CLAY, very stiff, moist (FILL)	I	1	21																							
10	SM	Gray silty fine SAND, dense, gasoline odor (FILL)	I	2	41		CA																					
15		Interlayered with clay Gasoline odor	I	3	46		CA																					
20	CL	Gray silty CLAY, very stiff, no gasoline odor.	I	4	34																							
25		End of Boring @ 17.5 feet																										
30		<p>NOTES: USCS = Unified Soil Classification System, See Plate 6 CA = Chemical Analysis Test Results:</p> <table border="1"> <thead> <tr> <th></th> <th>Sample @ 8.5 Ft</th> <th>Sample @ 12.5 Ft</th> </tr> </thead> <tbody> <tr> <td>WTPH-G (ppm)</td> <td>2.2</td> <td>6,000</td> </tr> <tr> <td>Benzene (ppm)</td> <td>ND</td> <td>4</td> </tr> <tr> <td>Toluene (ppm)</td> <td>ND</td> <td>55</td> </tr> <tr> <td>Ethyl-Benzene (ppm)</td> <td>ND</td> <td>66</td> </tr> <tr> <td>Xylene (ppm)</td> <td>0.1</td> <td>330</td> </tr> <tr> <td>Lead (ppm)</td> <td>ND</td> <td>1.5</td> </tr> </tbody> </table> <p>ND=Not Detectable</p>		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					
	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																										
35																												
40																												

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

GROUNDWATER seal
 OBSERVATION WELL: 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		SPT (N) Blows per ft.	Water Content %	Other Test
			Type	No.			
5	CL	Asphalt and gravel base Gray CLAY, stiff, moist, no gasoline odor (FILL)	I	1	12		
	CL	Gray CLAY with red brick debris and gravel, no gasoline odor (FILL)		2			
	SM	Gray silty fine SAND, very dense, no gasoline odor (FILL)		3			
10		GRAVEL with fine sand, no gasoline odor (FILL)	I		75 per 3"		CA
15		End of Boring @ 10 feet					
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
 II 3" O.D. Shelby-Tube Sample
 C 3" O.D. California-Sampler Sample

GROUNDWATER seal
 OBSERVATION WELL:  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

Bellevue, WA 98005
Fax (206) 649-8758

BORING LOG

701 SOUTH JACKSON STREET
SEATTLE, WASHINGTON

JOB NO. E-0260

DATE 8/3/92

PLATE 4

BORING NO. 3

Logged By: DH

Date Drilled: 8/3/92

Surface Elev. N/A

Depth ft.	USCS	Soil Description	Sample		SPT(N) Blows per ft.	Water Content %	Other Test																
			Type	No.																			
		Asphalt and gravel base																					
5	CL	Gray CLAY with gravel, medium soft, moist, unknown odor (FILL)	I	1	5																		
10	SM	Gray silty fine SAND, dense, stinks unkown odor	I	2	33		CA																
15		End of Boring @ 12.5 feet	I	3	34																		
15		End of Boring @ 12.5 feet	I	4	50																		
25		NOTES: USCS = Unified Soil Classification System, See Plate 6 CA = Chemical Analysis Test Results: <table border="1" style="margin-left: 20px;"> <thead> <tr> <th></th> <th>Sample @ 7.5 Ft</th> </tr> </thead> <tbody> <tr><td>WTPH-G (ppm)</td><td>1,400</td></tr> <tr><td>Benzene (ppm)</td><td>0.31</td></tr> <tr><td>Toluene (ppm)</td><td>1.9</td></tr> <tr><td>Ethyl-Benzene (ppm)</td><td>6.2</td></tr> <tr><td>Xylene (ppm)</td><td>16</td></tr> <tr><td>Lead (ppm)</td><td>3.8</td></tr> <tr><td>Heavier Oil (ppm)</td><td>1,800</td></tr> </tbody> </table> ND=Not Detectable		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					
	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																						
30																							
35																							
40																							

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

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

Geo Group Northwest, Inc.
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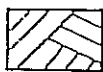
BORING LOG
 701 SOUTH JACKSON STREET
 SEATTLE, WASHINGTON

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 750 SIEVE)	GRAVELS MORE THAN HALF GRAINS LARGER THAN NO. 4 SIEVE	Clean Gravels (little or no fines)	GW		RED	WELL GRADED GRAVELS, LITTLE OR NO FINES	$C_u = \frac{D_{60}}{D_{10}} > 4$ $C_c = \frac{(D_{30})^2}{D_{10} \times D_{60}} = 1 \text{ to } 3$			
		Poorly Graded Gravels, and Gravel-Sand Mixtures, little or no fines	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		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	$C_u = \frac{D_{60}}{D_{10}} > 6$ $C_c = \frac{(D_{30})^2}{D_{10} \times D_{60}} = 1 \text{ to } 3$			
			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		ATTERBERG LIMITS ABOVE "A" LINE P.I. MORE THAN 7		
			FINE-GRAINED SOILS (MORE THAN HALF BY WEIGHT PASSES 750 SIEVE)	SILTS BELOW A LINE IN MICROSCOPIC INORGANIC 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 IN PLASTICITY CHART MICROSCOPIC INORGANIC 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		PI			ORANGE	PEAT AND OTHER HIGHLY ORGANIC SOILS	STRONG COLOR OR ODOR AND OFTEN FIBROUS TEXTURE			

SPECIAL SYMBOLS



BEDROCK
(Undifferentiated)



VOLCANIC ASH

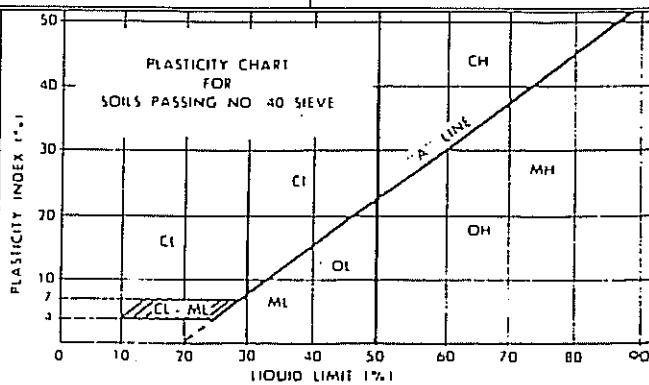
SOIL COMPONENTS

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

OVERSIZE MATERIAL

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

Not rounded
ROCK FRAGMENTS > 76 mm
ROCKS > 0.76 cubic metre
in volume



- ALL SIEVE SIZES MENTIONED ON THIS CHART ARE U.S. STANDARD, A S I M E I I
- 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 17%



Group Northwest, Inc.

Geotechnical Engineers, Geologists &
Environmental Scientists

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 <small>(little or no fines)</small>	GW ::	WELL GRADED GRAVELS, GRAVEL-SAND MIXTURE, LITTLE OR NO FINES	CONTENT OF FINES BELOW 5% $C_u = (D_{60} / D_{10})$ greater than 4 $C_c = (D_{30})^2 / (D_{10} * D_{60})$ between 1 and 3	
		DIRTY GRAVELS <small>(with some fines)</small>	GP	POORLY GRADED GRAVELS, AND GRAVEL-SAND MIXTURES LITTLE OR NO FINES		CLEAN GRAVELS NOT MEETING ABOVE REQUIREMENTS
		SANDS (More Than Half Coarse Fraction Is Smaller Than No. 4 Sieve)	CLEAN SANDS <small>(little or no fines)</small>	SW	WELL GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES	CONTENT OF FINES BELOW 5% $C_u = (D_{60} / D_{10})$ greater than 6 $C_c = (D_{30})^2 / (D_{10} * D_{60})$ between 1 and 3
			DIRTY SANDS <small>(with some fines)</small>	SM	SILTY SANDS, SAND-SILT MIXTURES	
	CLEAN SANDS <small>(with some fines)</small>		SP	POORLY GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES	CONTENT OF FINES EXCEEDS 12%	GC: ATTERBERG LIMITS ABOVE "A" LINE or P.I. MORE THAN 7
	DIRTY SANDS <small>(with some fines)</small>		SC	CLAYEY SANDS, SAND-CLAY MIXTURES		ATTENBERG LIMITS BELOW "A" LINE with P.I. LESS THAN 4
	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		PI	PEAT AND OTHER HIGHLY ORGANIC SOILS			

SOIL PARTICLE SIZE				
FRACTION	U.S. STANDARD SIEVE			
	Passing		Retained	
	Sieve	Size (mm)	Sieve	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 q_u , 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 - 35	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

GEO Group Northwest, Inc.
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Bellevue, WA 98005
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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		Blow Counts per 6"	Water Content %	Comments
				Type	No.			
			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).	I	S1	2,7,9 N=16	28.2	
		ML	Gray SILT, damp, medium dense, moist sand lens in middle part of sample, hydrocarbon odor.	I	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.	I	S3	5,15,13 N=28	4.7	
		SP	Gray SAND, damp to moist, dense, occasional silt lenses, no oxidation stain, hydrocarbon odor.	I	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.	I	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.	I	S6	4,8,13 N=21	27.8	
		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.	I	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.	I	S8	8,11,13 N=24	24.1	
		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.	I	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.	I	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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Geotechnical Engineers, Geologists, &
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BORING LOG

SEVENTH AVENUE SERVICE
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		Blow Counts per 6"	Water Content %	Comments
				Type	No.			
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:

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
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SEVENTH AVENUE SERVICE
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 SEATTLE, WASHINGTON

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		Blow Counts per 6"	Water Content %	Comments
				Type	No.			
	90		Asphalt (2" thick) over concrete (5" to 6" thick).					
5		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	
		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	
10		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	
		SM/ SP	As above, thickly interbedded.	I	S4	9,16,18 N=34	12.8	
15		SP	Olive gray SAND, damp, dense, medium and fine grained, no fines.	I	S5	8,16,19 N=35	8.6	
		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	
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	
35		SM	Olive SILTY SAND, as above.	I	S10	6,11,20 N=31	25.2	
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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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		Blow Counts per 6"	Water Content %	Comments
				Type	No.			
45		SM/ SP	<p>SILTY SAND and SAND, interbedded, damp, dense, silty sand predominates, sand is very fine and fine grained, occasional silt lenses, minor oxidation stain.</p> <p>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.</p> <p>Groundwater not encountered during drilling. No fill encountered.</p>		S11	9,20,25 N=45	17.7	
50								
55								
60								
65								
70								
75								
80								

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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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		Blow Counts per 6"	Water Content %	Comments
				Type	No.			
			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).	I	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.	II	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.	I	S3	6,16,19 N=35	22.1	
10		ML/ SP	As above, medium dense, weak hydrocarbon odor.	I	S4	6,10,18 N=28	28.1	
		ML/ SP	As above, but predominantly sand, fine and medium grained, hydrocarbon odor.	I	S5	9,16,28 N=44	9.0	
15		ML/ SP	As above, dense, frequent olive to olive gray silt layers, hydrocarbon odor.	I	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.	I	S7	5,14,22 N=36	19.4	
		ML/ SM	As above, sand is fine grained, wet lens of clean sand 2" thick.	I	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.	I	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.	I	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

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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		Blow Counts per 6"	Water Content %	Comments
				Type	No.			
45		SM	Olive SILTY SAND, damp, very dense, sand is very fine and fine grained. ::		S11	11,26,32 N=58	19.2	
50			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.					
55			Groundwater not encountered during drilling. No fill encountered.					
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		Blow Counts per 6"	Water Content %	Comments
				Type	No.			
			Asphalt (3" to 4" thick), concrete slab exposed in borehole side.					
5	80	ML/ SM	Olive brown SILT and SILTY SAND, damp to moist, loose, occas. gravel in sample (DISTURBED NATIVE SOIL).	I	S1	1,2,1 N=3	26.8	
		ML/ SM	As above, damp, medium dense, mostly silty sand layers, sand is fine and medium grained, occasional clean sand lenses (NATIVE SOIL).	I	S2	2,5,8 N=13	14.1	
10		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.	I	S3	4,11,18 N=29	13.3	
		ML/ SP	Gray SILT and SAND, interbedded, damp, dense, sand is fine and medium grained, hydrocarbon odor.	I	S4	4,12,19 N=31	--	
15	70	ML	Gray SILT, damp dense, occasional fine sand laminae and thin lenses, weak hydrocarbon odor.	I	S5	5,10,18 N=28	29.6	
		ML/ SM	Gray SILT and SILTY SAND, interbedded, damp, dense, lesser sand layers, sand is fine grained, weak hydrocarbon odor.	I	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.	I	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.	I	S8	8,12,17 N=29	22.3	
		SM/ SP	Olive SILTY SAND and SAND, interbedded, damp, very dense, sand is very fine and fine grained.	I	S9	5,22,33 N=55	16.8	
30		SP	Olive gray SAND, dry to damp, dense, fine grained, massive.	I	S10	8,19,21 N=40	3.5	
35	50	SP	As above, but with some very fine grained sand.	I	S11	7,17,17 N=34	3.6	
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 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		Blow Counts per 6"	Water Content %	Comments
				Type	No.			
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:

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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JOB NO. G-0260

DATE 2/13/06

PLATE A9

Soil Classification System

	MAJOR DIVISIONS	GRAPHIC SYMBOL	LETTER SYMBOL ⁽¹⁾	TYPICAL DESCRIPTIONS ⁽²⁾⁽³⁾
COARSE-GRAINED SOIL <small>(More than 50% of material is larger than No. 200 sieve size)</small>	GRAVEL AND GRAVELLY SOIL <small>(More than 50% of coarse fraction retained on No. 4 sieve)</small>	CLEAN GRAVEL <small>(Little or no fines)</small>		GW Well-graded gravel; gravel/sand mixture(s); little or no fines
		GRAVEL WITH FINES <small>(Appreciable amount of fines)</small>		GP Poorly graded gravel; gravel/sand mixture(s); little or no fines
		GRAVEL WITH FINES <small>(Appreciable amount of fines)</small>		GM Silty gravel; gravel/sand/silt mixture(s)
	SAND AND SANDY SOIL <small>(More than 50% of coarse fraction passed through No. 4 sieve)</small>	CLEAN SAND <small>(Little or no fines)</small>		SW Well-graded sand; gravelly sand; little or no fines
		SAND WITH FINES <small>(Appreciable amount of fines)</small>		SP Poorly graded sand; gravelly sand; little or no fines
		SAND WITH FINES <small>(Appreciable amount of fines)</small>		SM Silty sand; sand/silt mixture(s)
FINE-GRAINED SOIL <small>(More than 50% of material is smaller than No. 200 sieve size)</small>	SILT AND CLAY <small>(Liquid limit less than 50)</small>		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 <small>(Liquid limit greater than 50)</small>		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	
		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:
- 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.
 - 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.
 - 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.
 - 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		Field and Lab Test Data																																																				
SAMPLER TYPE	SAMPLE NUMBER & INTERVAL																																																					
<table style="width: 100%; border-collapse: collapse;"> <tr> <th style="text-align: left;">Code</th> <th style="text-align: left;">Description</th> </tr> <tr><td>a</td><td>3.25-inch O.D., 2.42-inch I.D. Split Spoon</td></tr> <tr><td>b</td><td>2.00-inch O.D., 1.50-inch I.D. Split Spoon</td></tr> <tr><td>c</td><td>Shelby Tube</td></tr> <tr><td>d</td><td>Grab Sample</td></tr> <tr><td>e</td><td>Single-Tube Core Barrel</td></tr> <tr><td>f</td><td>Double-Tube Core Barrel</td></tr> <tr><td>g</td><td>2.50-inch O.D., 2.00-inch I.D. WSDOT</td></tr> <tr><td>h</td><td>3.00-inch O.D., 2.375-inch I.D. Mod. California</td></tr> <tr><td>i</td><td>Other - See text if applicable</td></tr> <tr><td>1</td><td>300-lb Hammer, 30-inch Drop</td></tr> <tr><td>2</td><td>140-lb Hammer, 30-inch Drop</td></tr> <tr><td>3</td><td>Pushed</td></tr> <tr><td>4</td><td>Vibrocore (Rotasonic/Geoprobe)</td></tr> <tr><td>5</td><td>Other - See text if applicable</td></tr> </table>	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 (Rotasonic/Geoprobe)	5	Other - See text if applicable		<table style="width: 100%; border-collapse: collapse;"> <tr> <th style="text-align: left;">Code</th> <th style="text-align: left;">Description</th> </tr> <tr><td>PP = 1.0</td><td>Pocket Penetrometer, tsf</td></tr> <tr><td>TV = 0.5</td><td>Torvane, tsf</td></tr> <tr><td>PID = 100</td><td>Photoionization Detector VOC screening, ppm</td></tr> <tr><td>W = 10</td><td>Moisture Content, %</td></tr> <tr><td>D = 120</td><td>Dry Density, pcf</td></tr> <tr><td>-200 = 60</td><td>Material smaller than No. 200 sieve, %</td></tr> <tr><td>GS</td><td>Grain Size - See separate figure for data</td></tr> <tr><td>AL</td><td>Atterberg Limits - See separate figure for data</td></tr> <tr><td>GT</td><td>Other Geotechnical Testing</td></tr> <tr><td>CA</td><td>Chemical Analysis</td></tr> </table>	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
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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																																																				

B-1-11

SAMPLE DATA

SOIL PROFILE

GROUNDWATER

Depth (ft)	Elevation	Sample Number & Interval	Sampler Type	Blows/Foot	Test Data	Graphic Symbol	USCS Symbol	Description	Groundwater
								Drilling Method: <u>Hollow-Stem Auger</u> Ground Elevation (ft): <u>90</u>	
	90					PC		Concrete (0.3 feet thickness)	Groundwater not encountered.
		S1	b2	17	PID=25.8	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)	
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)	
		S9	b2	38	PID=1.9	ML		Gray and light brown, clayey SILT and thin interbedded silty, fine SAND (hard, moist)	
25	65								
		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)	
30	60								

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.

374014.010.011 7/2/20 \NED\DATA\02\GINT\PROJECTS\374014.010.011.GPJ SOIL BORING LOG W/ ELEV



7th & Jackson Street Property

Log of B-1-11

Figure
A-2

B-2-11

SAMPLE DATA						SOIL PROFILE		GROUNDWATER
Depth (ft)	Elevation	Sample Number & Interval	Sampler Type	Blows/Foot	Test Data	Graphic Symbol	USCS Symbol	
								Drilling Method: <u>Hollow-Stem Auger</u> Ground Elevation (ft): <u>88</u>
85						█	AC	Groundwater not encountered.
5		S1	b2	15	PID=0	█	ML	
80		S2	b2	28	PID=0	█	SP	
10		S3	b2	29	PID=0	█		
75		S4	b2	26	CA PID=444	█		
15		S5	b2	26	PID=20.5	█	SM/ ML	
70		S6	b2	20	CA PID=1.4	█	SM/ ML	
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.

374014.010.011 7/2/20 \MEDDATA\02\GINT\PROJECTS\374014.010.011.GPJ SOIL BORING LOG W/ ELEV



7th & Jackson Street Property

Log of B-2-11

Figure
A-3

B-3-11

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

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.

374014.010.011 7/2/20 \MED\DATA\02\GINT\PROJECTS\374014.010.011.GPJ SOIL BORING LOG W/ ELEV



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: <u>Hollow-Stem Auger</u> Ground Elevation (ft): <u>84</u>	
80		S1	b2	19	PID=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)	
5		S2	b2	28	CA PID=507		SM		
75		S3	b2	32	PID=96.7		ML	Light brown, silty, fine SAND grading to fine SAND with silt, with petroleum odor (medium dense, moist) (FILL) - petroleum odor	
10		S4	b2	26	PID=36.1		SP/ ML	Gray brown, clayey SILT with thin interbedded silty, fine SAND, with thin laminations and iron staining, with petroleum odor (very stiff, moist)	
15		S5	b2	22	PID=473		SM/ ML	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)	
65		S6	b2	24	CA PID=14.1		SM/ ML	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)	
20		S7	b2	25	PID=7.9		SM/ ML	- becoming wet at 12.5 feet	
		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)	
25		Boring Completed 11/11/11 Total Depth of Boring = 21.5 ft.							Light brown, fine sandy SILT to very silty, fine SAND, with slight petroleum odor (very stiff to hard and medium dense to dense, wet)

- 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.

374014.010.011 7/2/20 \MED\DATA\02\GINT\PROJECTS\374014\010\011.GPJ SOIL BORING LOG W/ ELEV



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: <u>Hollow-Stem Auger</u> Ground Elevation (ft): <u>96</u>	
95		S1	b2	13	PID=0	AC ML		Asphalt Pavement (thickness 0.1 feet)	Groundwater not encountered.
5		S2	b2	14	PID=0			Light brown grading to gray, clayey SILT, with thin silt partings and occasional laminations (stiff to very stiff, damp to moist)	
90		S3	b2	12	PID=0				
10		S4	b2	22	PID=0				
85		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		S6	b2	27	PID=0				
20		S7	b2	35	PID=0		SP	Light brown, fine SAND with trace silt (dense, moist)	
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		S9	b2	36	PID=0			- becoming wet at 26 feet, with iron staining and interbedded silty, fine SAND	
30		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		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		S12	b2	50	PID=0				

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.

374014.010.011 7/2/20 \MED\DATA\02\GINT\PROJECTS\374014.010.011.GPJ SOIL BORING LOG W/ ELEV



7th & Jackson Street Property

Log of B-5-11

Figure
A-6

B-6-11

SAMPLE DATA

SOIL PROFILE

GROUNDWATER

Depth (ft)	Elevation	Sample Number & Interval	Sampler Type	Blows/Foot	Test Data	Graphic Symbol	USCS Symbol	Drilling Method: <u>Hollow-Stem Auger</u>	
								Ground Elevation (ft): <u>91.5</u>	
90		S1	b2	12	PID=0	AC SM		Asphalt Pavement (thickness 0.15 feet)	Groundwater not encountered.
85		S2	b2	24	PID=0	ML		Black, very silty, fine to medium SAND with brick, plastic, and metal debris (medium dense, moist)(FILL)	
80		S3	b2	33	PID=0			Light brown, clayey SILT with iron stained fractures (stiff to hard, moist)	
75		S4	b2	52	PID=0			- becoming hard and thin lamination and silt partings	
70		S5	b2	49	PID=0	SM/ ML		- high angle interbed of reddish brown, fine SAND	
65		S6	b2	54	CA PID=0.3	SM		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)	
60		S7	b2	34	CA PID=1.9			Light brown, silty, fine SAND with SILT interbeds, thin laminations (dense and hard, moist to wet)	
55		S8	b2	50	PID=1.3			- strong petroleum odor and staining in soil at approximately 18 feet - becoming wet	
50		S9	b2	45	PID=0.3	ML		Gray, SILT with thin interbedded silty, fine SAND (hard, wet)	
45		S10	b2	51	PID=0	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)	
40		S11	b2	95/ 10"	PID=0	SM		Light brown and reddish brown, very silty, fine SAND (very dense, wet)	

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.

374014.010.011 7/2/20 \MED\DATA02\GINT\PROJECTS\374014.010.011.GPJ SOIL BORING LOG W/ ELEV



7th & Jackson Street Property

Log of B-6-11

Figure
A-7



Log of Boring: FB-3

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

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

Farallon PN: 2194-001

Logged By: Ryan Ostrom

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



Log of Boring: FB-3

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

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

Farallon PN: 2194-001

Logged By: Ryan Ostrom

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	USCS Graphic	% Recovery	Blow Counts 8/8/8	PID (ppm)	Sample ID	Sample Analyzed	Boring/Well Construction Details
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15.0-16.1'	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'	16.1-16.5'	No recovery.								
20.0-21.5'	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
25.0-26.5'	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	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	Unique Well ID:



Log of Boring: FB-3

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

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

Farallon PN: 2194-001

Logged By: Ryan Ostrom

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	USCS Graphic	% Recovery	Blow Counts 8/8/8	PID (ppm)	Sample ID	Sample Analyzed	Boring/Well Construction Details
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		30.0-31.5': 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 odor, no sheen.	SP		100	10, 15, 18	0.8	FB-3-40.0		
45										

Well Construction Information

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



Log of Boring: FB-4

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

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

Farallon PN: 2194-001

Logged By: Ryan Ostrom

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	USCS Graphic	% Recovery	Blow Counts 8/8/8	PID (ppm)	Sample ID	Sample Analyzed	Boring/Well Construction Details
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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							Concrete
	3.0-3.8'	SILT (100% silt), gray-brown, moist, petroleum-like odor, no sheen.	ML		27		1.2	FB-4-2.5		
	3.8-6.0'	No recovery.					18.5	Soil Screen @ 3.0'		
	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					
	10.2-12.0'	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							
	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	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	Unique Well ID:



Log of Boring: FB-5

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

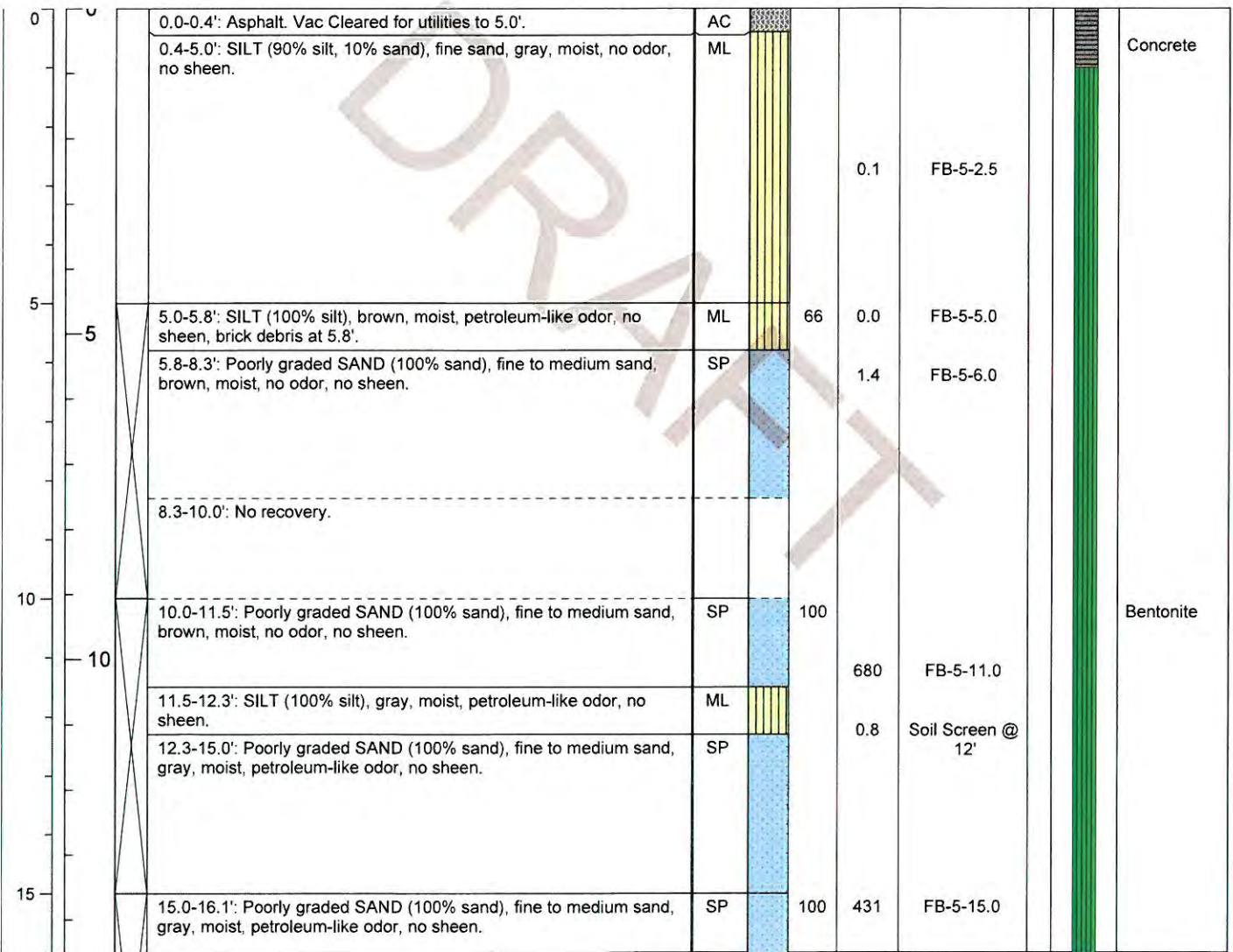
Date/Time Started: 11/1/19 @ 1330
Date/Time Completed: 11/1/19 @ 1445
Equipment: Geoprobe 7822 DT
Drilling Company: Holocene
Drilling Foreman: Chris Perva
Drilling Method: Direct Push

Sampler Type: 5' Macrocore
Drive Hammer (lbs.): Auto
Depth of Water ATD (ft bgs): 16.9
Total Boring Depth (ft bgs): 30.0
Total Well Depth (ft bgs): NA
Boring Drilled at 25° to Vertical

Farallon PN: 2194-001

Logged By: Ryan Ostrom

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



Log of Boring: FB-5

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

Date/Time Started: 11/1/19 @ 1330
Date/Time Completed: 11/1/19 @ 1445
Equipment: Geoprobe 7822 DT
Drilling Company: Holocene
Drilling Foreman: Chris Perva
Drilling Method: Direct Push

Sampler Type: 5' Macrocore
Drive Hammer (lbs.): Auto
Depth of Water ATD (ft bgs): 16.9
Total Boring Depth (ft bgs): 30.0
Total Well Depth (ft bgs): NA
Boring Drilled at 25° to Vertical

Farallon PN: 2194-001

Logged By: Ryan Ostrom

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



Log of Boring: FB-6

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

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

Farallon PN: 2194-001

Logged By: Ryan Ostrom

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	USCS Graphic	% Recovery	Blow Counts 8/8/8	PID (ppm)	Sample ID	Sample Analyzed	Boring/Well Construction Details
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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		
	5.0-5.4'	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
	10.0-12.0'	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							
	13.9-15.0'	Poorly graded SAND (100% sand), fine to medium sand, gray-brown, moist, no odor, no sheen.	SP							
15										

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	Unique Well ID:



Log of Boring: FB-6

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

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

Farallon PN: 2194-001

Logged By: Ryan Ostrom

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		
			SP							
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'.								
17.5-18.0'		SILT (100% silt), gray, moist, no odor, no sheen, fine sand lense at 18.0'.	ML							Bentonite
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		
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		

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	Unique Well ID:



Log of Boring: FB-7

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

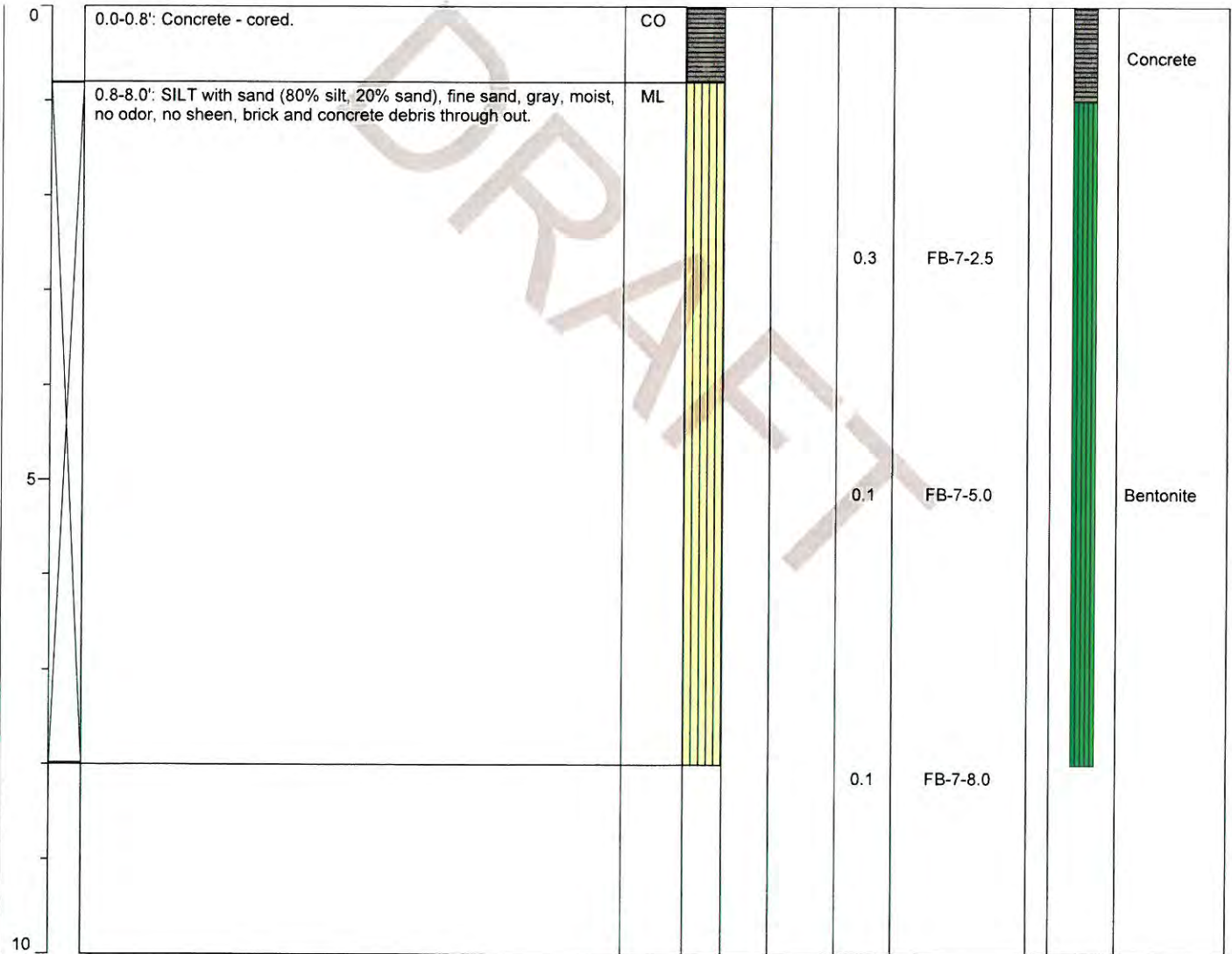
Date/Time Started: 10/30/19 @ 1350
Date/Time Completed: 10/30/19 @ 1420
Equipment: Hand Auger
Drilling Company: Holocene
Drilling Foreman: Chris Perva
Drilling Method: Hand Auger

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

Farallon PN: 2194-001

Logged By: Ryan Ostrom

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

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

APPENDIX B
**Previous Environmental Investigation 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		ANALYSIS REQUESTED: Specify State _____		
PROJECT NAME: E-0260				
CONTACT: DANIEL HUANG				
PHONE NO: 649-8757				
LAB #	SAMPLE I.D.	DATE	TIME	MATRIX
1	H-1 (2.5')	8-3-92	9:30A	Soil
2	H-1 (8.5')		9:49A	
3	H-1 (12.5')		9:50	
4	H-1 (17.5')		10:00	
5	H-2 (2.5')		10:55	
6	H-2 (7.5')		10:10	
7	H-2 (10')		11:20	
8	H-3 (2.5')		11:48	
9	H-3 (7.5')		12:05	
10	H-3 (10')		12:10	
11	H-3 (12.5')		12:20	

HClD	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 501/8010	Aromatic Volatiles EPA 802/8020	Volatile Organics EPA 624/8240 GC/MS	Semi-volatiles EPA 625/8270 GC/MS	Metals	Total Halogens	DELIVERABLES	CLOSURE	
					X	X	X													
					X	X	X													X
					X															X
					X															X
					X															X
					X															X
					X															X
					X															X
					X															X

Relinquished By	Signature	Printed Name	Firm	Time / Date	SPECIAL INSTRUCTIONS/COMMENTS:
	<i>Daniel Huang</i>	DANIEL HUANG	GEO GROUP		
Received By	<i>J. Palmqvist</i>	PALMQUIST	SAS	8-7 10:55A	
Relinquished By	<i>J. Palmqvist</i>	PALMQUIST	SAS	8-7 12:50P	
Received By	<i>Mary Curbiss</i>	Mary Curbiss	SAS	8/7/92 12:50	
Relinquished By					
Received By					

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

Page 1 of 4

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 2.2
(C7 - C12)

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
Page 2 of 4
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
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ICP Metals Per Method 6010

Date Digested: 8-10-92

Date Analyzed: 8-11-92

Lead, mg/kg	1.5	
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Continued

SOUND ANALYTICAL SERVICES, INC.

Geo Group N.W., Inc.
Project: E-0260
Page 3 of 4
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 1.6
(C7-CL2)

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
Page 4 of 4
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	
<u>SURROGATE RECOVERY, %</u> Trifluorotoluene	108	

ICP Metals Per Method 6010

Date Digested: 8-10-92

Date Analyzed: 8-11-92

Lead, mg/kg	3.8
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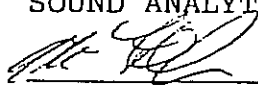
TPH per EPA Method 418.1

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
= $[(S - D) / ((S + D) / 2)] \times 100$

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
<u>SURROGATE RECOVERY, %</u> Trifluorotoluene				X8

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

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
<u>SURROGATE RECOVERY, %</u> 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,

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

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: 2-3&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
:: 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% 75%

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

Page 1 of 2

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



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-naphthalene) 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



OnSite Environmental Inc.
 14848 NE 95th Street • Redmond, WA 98052
 Phone: (425) 883-3881 • Fax: (425) 885-4803

Chain of Custody

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

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

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Cont.	NWTPH-HCID	NWTPH-GW/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 PCRA Metals (B)	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	Comments/Special Instructions:
Relinquished by <u>Keith Johnson</u>	<u>GEO Group NW</u>	<u>2/2/06</u>	<u>12:00</u>	
Received by <u>[Signature]</u>	<u>OnSite Inc</u>	<u>2/2/06</u>	<u>1200</u>	
Relinquished by				
Received by				
Relinquished by				
Received by				
Reviewed by/Date	Reviewed by/Date	Chromatograms with final report <input type="checkbox"/>		

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Charlene Morrow, M.S.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
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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.

<u>Laboratory ID</u>	<u>Environmental Associates, Inc.</u>
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.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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)

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl Benzene</u>	<u>Total Xylenes</u>	<u>Gasoline Range</u>	<u>Surrogate (% Recovery)</u> (Limit 50-150)
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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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	Upper
Holmium	96	Limit:	Limit:
		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	Upper
Holmium	94	Limit:	Limit:
		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	Upper
Holmium	91	Limit:	Limit:
		60	125

Analyte:	Concentration
	mg/kg (ppm)
Lead	1.98

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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
------	------

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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	Upper
Holmium	95	Limit:	Limit:
		60	125

Analyte:	Concentration
	mg/kg (ppm)

Lead	<1
------	----

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

- a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- 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.

Client / Bill Global Diving + Salvage
 011036

SEND REPORT TO Robert 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

SAMPLE CHAIN OF CUSTODY ME 11-03-10

CIE / VS1

SAMPLERS (signature) [Signature]
 PROJECT NAME/NO. 7th + Jackson Gas Station
 PO # Global-Diving + Salvage
 REMARKS Send copy of lab report to EAT
 Bill to Global Diving + Salvage

Page # 1 of 2
 TURNAROUND TIME
 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					Notes	
						TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270		HFS
UST-1-B-12	01 A-B	11/02/2010		Sol	2	X	X	X	X	X		
UST-1-N-8	02 A-B				2	X	X	X	X	X		Composite
UST-1-W-6	03 A-B				2	X	X	X	X	X		
UST-1-S-8	04 A-B				2	X	X	X	X	X		Composite
UST-1-E-8	05 A-B				2	X	X	X	X	X		
UST-1-OB	06 A-B				2	X	X	X	X	X		
UST-2-B-12	07 A-B				2	X	X	X	X	X		
UST-2-OB	08 A-B				2	X	X	X	X	X		
UST-2-N-8	09 A-B				2	X	X	X	X	X		
UST-2-W-6	10 A-B				2	X	X	X	X	X		Composite

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

SIGNATURE [Signature]
 PRINT NAME Robert B Roe
 COMPANY EAT
 DATE 11/03/2010
 TIME 12.50

Relinquished by: [Signature]
 Received by: [Signature]
 Relinquished by: [Signature]
 Received by: [Signature]

Global Diving & Salvage
 Send Report To EAT 0110 86

SAMPLE CHAIN OF CUSTODY ME H-03-10 CI2/KR1

Company _____
 Address _____
 City, State, ZIP _____
 Phone # _____ Fax # _____

SAMPLERS (signature) [Signature] PO # _____
 PROJECT NAME/NO. 7th & Jackson Gas Station
 REMARKS _____

Page # 2 of 2
 TURNAROUND TIME
 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						Notes
						TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	
U85-2-S-8												
U85-2-S-8	11A-B	11/03/10		Soil	2	X						
U85-2-E-8	12A-B			↓	2							Composite

Relinquished by: [Signature] SIGNATURE: Robert B. Roe PRINT NAME: Robert B. Roe COMPANY: EAT DATE: 11/03/10 TIME: 12.50
 Received by: [Signature]
 Relinquished by: [Signature]
 Received by: _____

Friedman & Braga, 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



CERTIFICATE OF ANALYSIS

CLIENT: Landau Associates, Inc. DATE: 11/10/2011
130 - 2nd Ave. S. ALS JOB#: 1111032
Edmonds, WA 98020 ALS SAMPLE#: -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.



CERTIFICATE OF ANALYSIS

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



CERTIFICATE OF ANALYSIS

CLIENT: Landau Associates, Inc. DATE: 11/10/2011
130 - 2nd Ave. S. ALS SDG#: 1111032
Edmonds, WA 98020 WDOE ACCREDITATION: 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



CERTIFICATE OF ANALYSIS

CLIENT: Landau Associates, Inc. DATE: 11/10/2011
130 - 2nd Ave. S. ALS SDG#: 1111032
Edmonds, WA 98020 WDOE ACCREDITATION: 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

ALS ENVIRONMENTAL

Sample Receiving Checklist

Client: Landon Associates ALS Job #: 1111032

Project: 7th Jackson

Received Date: 11-4-11 Received Time: 1530 By: RB

Type of shipping container: Cooler Box Other

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

Were custody seals on outside of sample?

	<u>Yes</u>	<u>No</u>	<u>N/A</u>
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

If yes, how many? 2 Where? Top
Custody seal date: 11/4/11 Seal name: Landon

Was Chain of Custody properly filled out (ink, signed, dated, etc.)?

	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--	-------------------------------------	--------------------------	--------------------------

Did all bottles have labels?

	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--	-------------------------------------	--------------------------	--------------------------

Did all bottle labels and tags agree with Chain of Custody?

	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--	-------------------------------------	--------------------------	--------------------------

Were samples received within hold time?

	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--	-------------------------------------	--------------------------	--------------------------

Did all bottles arrive in good condition (unbroken, etc.)?

	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--	-------------------------------------	--------------------------	--------------------------

Was sufficient amount of sample sent for the tests indicated?

	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--	-------------------------------------	--------------------------	--------------------------

Was correct preservation added to samples?

	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--	-------------------------------------	--------------------------	--------------------------

If no, Sample Control added preservative to the following:

<u>Sample Number</u>	<u>Reagent</u>	<u>Analyte</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____

Per 5035A High kits

Were VOA vials checked for absence of air bubbles?

	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--	--------------------------	--------------------------	-------------------------------------

Bubbles present in sample #: _____

Temperature of cooler upon receipt: 5.6 °C

<input checked="" type="checkbox"/> Cold	<input type="checkbox"/> Cool	<input type="checkbox"/> Ambient	<input type="checkbox"/> N/A
<u>on Ice</u>			

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

1111032

Chain-of-Custody Record

Date 11/4/11
 Page 1 of 1

Project Name <u>Mt Jackson Proj, Seattle</u> Project Location/Event <u>Seattle</u> Sampler's Name <u>Brian Christensen</u> Project Contact <u>Tim Sverson</u> Send Results To <u>Tim Sverson</u>		Project No. <u>371014010011</u>		Testing Parameters <u>NWTPH-GX-DX²O</u> <u>NWTPH-DX²O</u> <u>Lead (total)</u>		Turnaround Time <input checked="" type="checkbox"/> Standard <input type="checkbox"/> Accelerated	
Sample I.D. <u>B-6 5-4</u> <u>B-6 5-6</u> <u>B-6 5-7</u> <u>B-6 5-8</u> <u>B-6 5-9</u>	Date <u>11/4/11</u>	Time <u>0955</u> <u>1030</u> <u>1030</u> <u>1040</u> <u>1050</u>	Matrix <u>50.1</u> <u>1</u> <u>1</u> <u>1</u> <u>1</u>	No. of Containers <u>2</u> <u>2</u> <u>2</u> <u>2</u> <u>2</u>	Observations/Comments <input checked="" type="checkbox"/> Allow water samples to settle, collect aliquot from clear portion <input checked="" type="checkbox"/> 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 <u>ALS carrier</u>				Method of Shipment _____			
Relinquished by Signature <u>[Signature]</u> Printed Name <u>Brian Christensen</u> Company <u>Landau Associates</u> Date <u>11/4/11</u> Time <u>1440</u>		Received by Signature <u>[Signature]</u> Printed Name <u>Carl Mory</u> Company <u>ALS</u> Date <u>11/4/11</u> Time <u>1500</u>		Relinquished by Signature _____ Printed Name _____ Company _____ Date _____ Time _____		Received by Signature _____ Printed Name _____ Company _____ Date _____ Time _____	

WHITE COPY - Project File

YELLOW COPY - Laboratory

PINK COPY - Client Representative



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



CERTIFICATE OF ANALYSIS

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



CERTIFICATE OF ANALYSIS

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



CERTIFICATE OF ANALYSIS

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



CERTIFICATE OF ANALYSIS

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



CERTIFICATE OF ANALYSIS

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



CERTIFICATE OF ANALYSIS

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



CERTIFICATE OF ANALYSIS

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



CERTIFICATE OF ANALYSIS

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



CERTIFICATE OF ANALYSIS

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

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



CERTIFICATE OF ANALYSIS

CLIENT: Landau Associates, Inc. DATE: 11/18/2011
130 - 2nd Ave. S. ALS SDG#: 1111062
Edmonds, WA 98020 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

Table with 7 columns: SPIKED COMPOUND, METHOD, %REC, RPD, QUAL, ANALYSIS DATE, ANALYSIS BY. Rows include TPH-Volatile Range - BS and TPH-Volatile Range - BSD.

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

Table with 7 columns: SPIKED COMPOUND, METHOD, %REC, RPD, QUAL, ANALYSIS DATE, ANALYSIS BY. Rows include TPH-Diesel Range - BS and TPH-Diesel Range - BSD.

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

Table with 7 columns: SPIKED COMPOUND, METHOD, %REC, RPD, QUAL, ANALYSIS DATE, ANALYSIS BY. Rows include Lead - BS and Lead - BSD.

APPROVED BY

Handwritten signature of Paul Bagum

Laboratory Director

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: 4:58 By: Sm

Type of shipping container: Cooler Box Other

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

	Yes	No	N/A
Were custody seals on outside of sample?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If yes, how many? <u>2</u> Where? <u>outside cooler</u>			
Custody seal date: <u>11/11/11</u> Seal name: <u>Landau</u>			

Was Chain of Custody properly filled out (ink, signed, dated, etc.)?

Did all bottles have labels?

Did all bottle labels and tags agree with Chain of Custody?

Were samples received within hold time?

Did all bottles arrive in good condition (unbroken, etc.)?

Was sufficient amount of sample sent for the tests indicated?

Was correct preservation added to samples?

If no, Sample Control added preservative to the following:

<u>Sample Number</u>	<u>Reagent</u>	<u>Analyte</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____

Received per 5035 High Kits

Were VOA vials checked for absence of air bubbles?

Bubbles present in sample #: _____

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

on ice

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

Chain-of-Custody Record

1111062
 Date 11/11/11
 Page 1 of 1

Project Name 7th Jackson Ave Project No. 372/014, 016, 011
 Project Location/Event Seattle, WA
 Sampler's Name Brian Christensen
 Project Contact Tim Sycerson
 Send Results To Tim Sycerson

Sample I.D.	Date	Time	Matrix	No. of Containers	Testing Parameters	Observations/Comments
B-1 S-2	11/11/11	1145	56.1	2		
B-1 S-3		1150		2		
B-1 S-4		1155		2		
B-1 S-5		1200		2		
B-1 S-6		1215		2		
B-1 S-7		1220		2		
B-2 S-4		0920		2		
B-2 S-5		0925		2		
B-2 S-6		0930		2		
B-3 S-3		1005		2		
B-3 S-4		1010		2		
B-3 S-5		1015		2		
B-3 S-6		1020		2		
B-4 S-2		1045		2		
B-4 S-3		1050		2		
B-4 S-4		1055		2		
B-4 S-5		1100		2		
B-4 S-6		1105		2		

Special Shipment/Handling or Storage Requirements ALS Currier

Relinquished by [Signature] Received by [Signature]
 Signature [Signature] Signature [Signature]
 Printed Name Brian Christensen Printed Name Rick Bay
 Company Landau Associates Company ALS

Date 11/11/11 Time 1530 Date 11/11/11 Time 4:05

Relinquished by _____ Received by _____
 Signature _____ Signature _____
 Printed Name _____ Printed Name _____
 Company _____ Company _____

Date _____ Time _____ Date _____ Time _____

Method of Shipment _____

Turnaround Time
 Standard
 Accelerated

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 _____



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



CERTIFICATE OF ANALYSIS

CLIENT: Landau Associates, Inc. DATE: 11/21/2011
130 - 2nd Ave. S. ALS SDG#: 1111071
Edmonds, WA 98020 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



CERTIFICATE OF ANALYSIS

CLIENT: Landau Associates, Inc. DATE: 11/21/2011
130 - 2nd Ave. S. ALS SDG#: 1111071
Edmonds, WA 98020 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

Table with 7 columns: SPIKED COMPOUND, METHOD, %REC, RPD, QUAL, ANALYSIS DATE, ANALYSIS BY. Rows include TPH-Volatile Range - BS and TPH-Volatile Range - BSD.

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

Table with 7 columns: SPIKED COMPOUND, METHOD, %REC, RPD, QUAL, ANALYSIS DATE, ANALYSIS BY. Rows include TPH-Diesel Range - BS and TPH-Diesel Range - BSD.

APPROVED BY

Handwritten signature of Paul Bagum

Laboratory Director

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 by Rick

	Yes	No	N/A
Were custody seals on outside of sample?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If yes, how many? <u>2</u> Where? <u>outside cooler</u>			
Custody seal date: <u>11/14/11</u> Seal name: <u>Landau</u>			

Was Chain of Custody properly filled out (ink, signed, dated, etc.)?

Did all bottles have labels?

Did all bottle labels and tags agree with Chain of Custody?

Were samples received within hold time?

Did all bottles arrive in good condition (unbroken, etc.)?

Was sufficient amount of sample sent for the tests indicated?

Was correct preservation added to samples?

If no, Sample Control added preservative to the following:

<u>Sample Number</u>	<u>Reagent</u>	<u>Analyte</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____

*Received per 5035 High kits but not enough sample in vials.

Were VOA vials checked for absence of air bubbles?
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: _____



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

Chain-of-Custody Record

Date 11/11/07
 Page 1 of 1

Project Name Metrican Project Project No. 37404, 010011 Testing Parameters

Project Location/Event Seattle WA

Sampler's Name Brian Christensen

Project Contact Tim Syverson

Send Results To Tim Syverson

Sample I.D. B5-5-6 Date 11/11/07 Time 1000 Matrix SOI No. of Containers 2

B5-5-7 11/11/07 1005 SOI 2

B5-5-8 11/11/07 1015 SOI 2

*NWTPH-Dx
 NWTPH-Dx + Q
 TOTAL Lead*

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 Currier

Method of Shipment

Relinquished by

Signature _____

Printed Name _____

Company _____

Date _____ Time _____

Received by

Signature _____

Printed Name _____

Company _____

Date _____ Time _____

Received by

Signature _____

Printed Name Pink Begon

Company ALS

Date 11-14-11 Time 9:30

Relinquished by

Signature _____

Printed Name Brian Christensen

Company Landau Assoc

Date 11/11/07 Time 1330



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,

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

David Baumeister
Project Manager

Enclosures



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

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

Date of Report: 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	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	<i>88</i>	<i>58-129</i>				
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	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	<i>83</i>	<i>58-129</i>				
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	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	<i>89</i>	<i>58-129</i>				



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	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
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	
<i>Surrogate:</i>	<i>Percent Recovery</i>		<i>Control Limits</i>			
<i>Fluorobenzene</i>	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	NA	30	
Toluene	ND	ND	NA	NA	NA	NA	NA	NA	30	
Ethyl Benzene	ND	ND	NA	NA	NA	NA	NA	NA	30	
m,p-Xylene	ND	ND	NA	NA	NA	NA	NA	NA	30	
o-Xylene	ND	ND	NA	NA	NA	NA	NA	NA	30	
Gasoline	ND	ND	NA	NA	NA	NA	NA	NA	30	
<i>Surrogate:</i>										
<i>Fluorobenzene</i>					90	93	58-129			



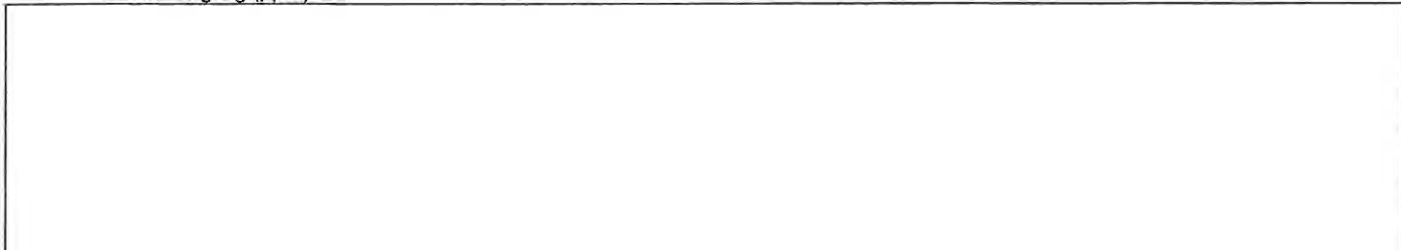
OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

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

Date of Report: 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	
<i>Surrogate:</i>	<i>Percent Recovery</i>		<i>Control Limits</i>			
<i>o-Terphenyl</i>	88		50-150			



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

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

Date of Report: 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			
<i>o</i> -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:								
<i>o</i> -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
 page 1 of 2

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	



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

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Date of Report: November 11, 2019
 Samples Submitted: October 31, 2019
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VOLATILE ORGANICS EPA 8260D
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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				



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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:	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	



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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	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>102</i>	<i>76-131</i>				
<i>Toluene-d8</i>	<i>98</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>92</i>	<i>71-130</i>				



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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	RPD	RPD	Flags
					Recovery	Limits	RPD	Limit		
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	
<i>Surrogate:</i>										
Dibromofluoromethane					103	99	76-131			
Toluene-d8					98	99	78-128			
4-Bromofluorobenzene					92	93	71-130			



Date of Report: November 11, 2019
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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	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	71	40 - 111				
Pyrene-d10	77	40 - 110				
Terphenyl-d14	75	45 - 122				



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**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	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	100	40 - 111				
Pyrene-d10	102	40 - 110				
Terphenyl-d14	100	45 - 122				



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PAHs EPA 8270E/SIM
 QUALITY CONTROL

Matrix: Soil
 Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery	RPD	RPD	Flags
					Recovery	Limits	Limit			
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	
<i>Surrogate:</i>										
2-Fluorobiphenyl					89	89	40 - 111			
Pyrene-d10					93	91	40 - 110			
Terphenyl-d14					89	88	45 - 122			



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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	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
DCB	79	37-122				



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**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			



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**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	



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**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	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



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% 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





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





Analytical Laboratory Testing Services
 14648 NE 95th Street • Redmond, WA 98052
 Phone: (425) 863-3881 • www.onsite-env.com

Chain of Custody

Company: <u>Farallon</u> Project Number: <u>2194-001</u> Project Name: <u>701 South Jackson Street</u> Project Manager: <u>Stuart Brown</u> Sampled by: <u>Ryan Ostrom</u>			Turnaround Request (in working days) (Check One) <input type="checkbox"/> Same Day <input type="checkbox"/> 1 Day <input type="checkbox"/> 2 Days <input type="checkbox"/> 3 Days <input type="checkbox"/> Standard (7 Days) <input type="checkbox"/> _____ (other)			Laboratory Number: <u>10-398</u>																		
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 B260C	Halogenated Volatiles B260C + MTBE	EDB EPA 8011 (Water Only)	Semivolatiles B270D/SIM (with low-level PAHs)	PAHs B270D/SIM (low-level)	PCBs 8062A	Organochlorine Pesticides 8061B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total Metals Metals <u>LEAD</u>	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	Comments/Special Instructions																		
Relinquished		Farallon		10/31/14	12:00	Please Hold PAH Will Call For Analysis																		
Received		OSE		10/31/14	1:00	X - Added 10/31/14 DB (STA)																		
Relinquished																								
Received																								
Relinquished																								
Received						Data Package: Standard <input type="checkbox"/> Level III <input type="checkbox"/> Level IV <input type="checkbox"/>																		
Reviewed/Date		Reviewed/Date		Chromatograms with final report Electronic Data Deliverables (EDDs)																				

Chain of Custody

Company: <u>Furallon</u> Project Number: <u>2194-001</u> Project Name: <u>701 South Jackson Street</u> Project Manager: <u>Stuart Brown</u> Sampled by: <u>Ryan Ostrem</u>			Turnaround Request (in working days) (Check One) <input type="checkbox"/> Same Day <input type="checkbox"/> 1 Day <input type="checkbox"/> 2 Days <input type="checkbox"/> 3 Days <input type="checkbox"/> Standard (7 Days) <input type="checkbox"/> _____ (other)			Laboratory Number: <u>10-398</u>																										
Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gw/BTEX	NWTPH-Gx	NWTPH-Dx (<input type="checkbox"/> Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCHM 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								
Signature		Company			Date	Time	Comments/Special Instructions																									
Relinquished		<u>Furallon</u>			<u>10/31/19</u>	<u>1200</u>	Please Hold. PM W/ 11 Call For Analysis.																									
Received		<u>OSE</u>			<u>10/31/19</u>	<u>1200</u>																										
Relinquished																																
Received																																
Relinquished																																
Received																																
Reviewed/Date		Reviewed/Date			Data Package: Standard <input type="checkbox"/> Level III <input type="checkbox"/> Level IV <input type="checkbox"/> Chromatograms with final report <input type="checkbox"/> Electronic Data Deliverables (EDDs) <input type="checkbox"/>																											



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

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,

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

David Baumeister
Project Manager

Enclosures



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

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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-Bromofluorobenzene 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

				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
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>			
Fluorobenzene	85	58-129			



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

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FB-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	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	86	58-129				



Date of Report: November 11, 2019
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**GASOLINE RANGE ORGANICS/BTEX
 NWTPH-Gx/EPA 8021B
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	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		



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 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
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>			
<i>o-Terphenyl</i>	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
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>			
<i>o-Terphenyl</i>	68	50-150			



Date of Report: November 11, 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:	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	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	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	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	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
<i>Surrogate:</i>								
<i>o-Terphenyl</i>				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
<i>Surrogate:</i>								
<i>o-Terphenyl</i>				88	79	50-150		



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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
page 1 of 2

Matrix: Soil
Units: mg/kg

	Date	Date
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Date of Report: November 11, 2019
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VOLATILE ORGANICS EPA 8260D
page 2 of 2

Date Date

Date	Date
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Date of Report: November 11, 2019
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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	



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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	
1,1,1,2,2-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	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	101	76-131				
<i>Toluene-d8</i>	94	78-128				
<i>4-Bromofluorobenzene</i>	92	71-130				



Date of Report: November 11, 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	RPD	RPD	Flags
					Recovery	Limits	RPD	Limit		
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	
<i>Surrogate:</i>										
Dibromofluoromethane					98	101	76-131			
Toluene-d8					97	97	78-128			
4-Bromofluorobenzene					95	93	71-130			



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Project: 2194-001

PAHs EPA 8270E/SIM

Matrix: Soil
Units: mg/Kg

Date Date

Date	Date
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**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	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
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
					SB	SBD				
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	
<i>Surrogate:</i>										
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	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	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	Date
------	------



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	
<i>Surrogate: Percent Recovery Control Limits</i>						
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
<i>Surrogate:</i>								
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
<i>Surrogate:</i>									
Fluorobenzene					80	81	58-129		



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

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

Date of Report: 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



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



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

Turnaround Request (in working days) (Check One) <input type="checkbox"/> Same Day <input type="checkbox"/> 1 Day <input type="checkbox"/> 2 Days <input type="checkbox"/> 3 Days <input checked="" type="checkbox"/> Standard (7 Days) <input type="checkbox"/> _____ (other)			Number of Containers	Laboratory Number: 10-400																			
Company: <u>Favallon</u> Project Number: <u>2194-001</u> Project Name: <u>701 Soth Jackson Street</u> Project Manager: <u>Stuart Brown</u> Sampled by: <u>Ryan Ostrom</u>				NWTPH-HC/D NWTPH-GX/BTEX NWTPH-Gx NWTPH-Dx (Acid / SG Clean-up) Volatiles B260C Halogenated Volatiles B260C + MTBE EDB EPA 8011 (Waters Only) Semivolatiles B270D/SIM (with low-level PAHs) PAHs B270D/SIM (low-level) PCBs 8082A Organochlorine Pesticides 8081B Organophosphorus Pesticides 8270D/SIM Chlorinated Acid Herbicides B151A Total RCRA Metals Total MEGA Metals LEAD DB TCLP Metals HEM (oil and grease) 1664A Moisture																			
Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HC/D	NWTPH-GX/BTEX	NWTPH-Gx	NWTPH-Dx (Acid / SG Clean-up)	Volatiles B260C	Halogenated Volatiles B260C + MTBE	EDB EPA 8011 (Waters Only)	Semivolatiles B270D/SIM (with low-level PAHs)	PAHs B270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides B151A	Total RCRA Metals	Total MEGA 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	Comments/Special Instructions																	
Relinquished		<u>Ryan Ostrom</u>		<u>Favallon</u>	<u>10/30/19</u>	<u>1630</u>	Please Hold. PAH will call for Analyses. X - Added 10/31/19. DB (STA) (X) Added 11/4/19. DB (STA)																
Received		<u>C.D. Borch</u>		<u>Speedy</u>	<u>10-31-19</u>	<u>0836</u>																	
Relinquished		<u>C.D. Borch</u>		<u>Speedy</u>	<u>10-31-19</u>	<u>1038</u>																	
Received		<u>Nitellu LIBREW</u>		<u>SE</u>	<u>10/31/19</u>	<u>1038</u>																	
Relinquished																							
Received							Data Package: Standard <input type="checkbox"/> Level III <input checked="" type="checkbox"/> Level IV <input type="checkbox"/>																
Reviewed/Date		Reviewed/Date		Chromatograms with final report <input type="checkbox"/> Electronic Data Deliverables (EDDs) <input type="checkbox"/>																			



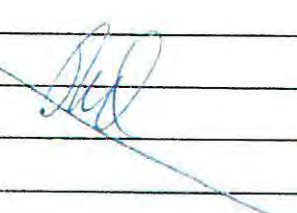
OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street - Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Chain of Custody

Company: Furallon
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-7-25	↓	1405	↓	5		X	X																X
13	FB-7-50	↓	1410	↓	5																			
14	FB-7-8.0	↓	1415	↓	5		X	X																X
																								

	Signature	Company	Date	Time	Comments/Special Instructions
Relinquished	<u>Ryan Ostrom</u>	<u>Furallon</u>	<u>10/30/19</u>	<u>1630</u>	<u>Please Hold PAH will call for analysis.</u> <u>2/3</u>
Received	<u>PB Books</u>	<u>Speedy</u>	<u>10-31-19</u>	<u>0836</u>	
Relinquished	<u>PB Books</u>	<u>Speedy</u>	<u>10-31-19</u>	<u>1038</u>	
Received	<u>William Green</u>	<u>OSE</u>	<u>10/31/19</u>	<u>1038</u>	
Relinquished					
Received					Data Package: Standard <input type="checkbox"/> Level III <input type="checkbox"/> Level IV <input type="checkbox"/>
Reviewed/Date		Reviewed/Date			Chromatograms with final report <input type="checkbox"/> Electronic Data Deliverables (EDDs) <input type="checkbox"/>



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,

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

David Baumeister
Project Manager

Enclosures



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

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

Date of Report: 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

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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

<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>
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	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
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	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
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	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
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	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	<i>86</i>	<i>58-129</i>				
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	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	<i>83</i>	<i>58-129</i>				
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	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	<i>92</i>	<i>58-129</i>				



Date of Report: November 13, 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	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	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	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	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	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	87	58-129				



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

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	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	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	<i>82</i>	<i>58-129</i>				
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	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	<i>80</i>	<i>58-129</i>				



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**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
<i>Surrogate:</i>								
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
<i>Surrogate:</i>								
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
<i>Surrogate:</i>								
Fluorobenzene					80	81	58-129	



Date of Report: November 13, 2019
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 Project: 2194-001

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

Matrix: Soil
 Units: mg/Kg (ppm)

Date Date

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Client ID: FB-6-18.0

Laboratory ID: 11-019-11

Diesel Range Organics	ND	30	NWTPH-Dx	11-5-19	11-5-19
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Lube Oil Range Organics	ND	61	NWTPH-Dx	11-5-19	11-5-19
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Surrogate: Percent Recovery Control Limits

<i>o-Terphenyl</i>	<i>73</i>	<i>50-150</i>			
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Client ID: FB-6-24.0

Laboratory ID: 11-019-13

Diesel Range Organics	ND	31	NWTPH-Dx	11-5-19	11-5-19
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Lube Oil Range Organics	ND	63	NWTPH-Dx	11-5-19	11-5-19
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Surrogate: Percent Recovery Control Limits

<i>o-Terphenyl</i>	<i>91</i>	<i>50-150</i>			
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Client ID: FB-4-15.0

Laboratory ID: 11-019-16

Diesel Range Organics	ND	31	NWTPH-Dx	11-5-19	11-5-19
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Lube Oil Range Organics	ND	61	NWTPH-Dx	11-5-19	11-5-19
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Surrogate: Percent Recovery Control Limits

<i>o-Terphenyl</i>	<i>74</i>	<i>50-150</i>			
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Client ID: FB-5-11.0

Laboratory ID: 11-019-18

Diesel Range Organics	ND	33	NWTPH-Dx	11-5-19	11-5-19
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Lube Oil Range Organics	ND	66	NWTPH-Dx	11-5-19	11-5-19
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Surrogate: Percent Recovery Control Limits

<i>o-Terphenyl</i>	<i>75</i>	<i>50-150</i>			
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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
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Lube Oil Range Organics	ND	57	NWTPH-Dx	11-5-19	11-5-19	
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Surrogate: Percent Recovery Control Limits

<i>o-Terphenyl</i>	<i>98</i>	<i>50-150</i>			
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OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

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

Date of Report: 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	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	<i>85</i>	<i>50-150</i>				



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

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	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	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	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
<i>Surrogate:</i>								
<i>o-Terphenyl</i>				101	81	50-150		



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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	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>130</i>	<i>76-131</i>				
<i>Toluene-d8</i>	<i>117</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>85</i>	<i>71-130</i>				



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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	
1,1,1,2,2-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	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>106</i>	<i>76-131</i>				
<i>Toluene-d8</i>	<i>100</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>93</i>	<i>71-130</i>				



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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	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>111</i>	<i>76-131</i>				
<i>Toluene-d8</i>	<i>97</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>88</i>	<i>71-130</i>				



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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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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	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>99</i>	<i>76-131</i>				
<i>Toluene-d8</i>	<i>97</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>92</i>	<i>71-130</i>				



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**VOLATILE ORGANICS EPA 8260D
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/kg

Analyte	Result		Spike Level		Percent Recovery		Recovery	RPD	RPD	Flags
					Recovery	Limits	RPD	Limit		
SPIKE BLANKS										
Laboratory ID:		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	
<i>Surrogate:</i>										
					110	109	76-131			
					99	98	78-128			
					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	
<i>Surrogate:</i>										
					96	102	76-131			
					94	98	78-128			
					91	90	71-130			



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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	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	76	40 - 111				
Pyrene-d10	91	40 - 110				
Terphenyl-d14	86	45 - 122				



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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				



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**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	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>90</i>	<i>40 - 111</i>				
<i>Pyrene-d10</i>	<i>106</i>	<i>40 - 110</i>				
<i>Terphenyl-d14</i>	<i>99</i>	<i>45 - 122</i>				



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**PAHs EPA 8270E/SIM
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery	RPD	RPD	Flags
					Recovery	Limits	RPD	Limit		
SPIKE BLANKS										
Laboratory ID:	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	
<i>Surrogate:</i>										
<i>2-Fluorobiphenyl</i>					86	95	40 - 111			
<i>Pyrene-d10</i>					105	108	40 - 110			
<i>Terphenyl-d14</i>					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	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>DCB</i>	<i>83</i>	<i>37-122</i>				
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	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>DCB</i>	<i>79</i>	<i>37-122</i>				



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





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

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

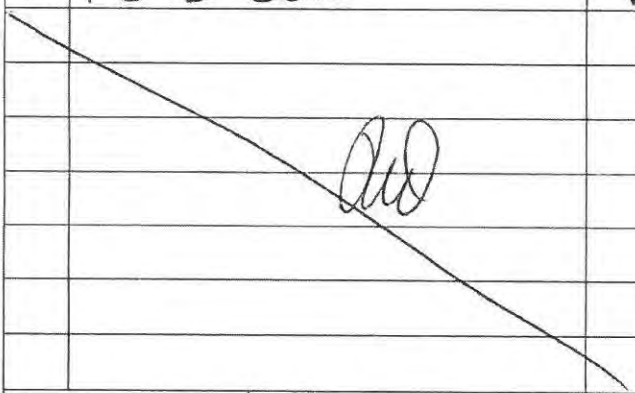
Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Cx/BTEX 802	NWTPH-Gx	NWTPH-Dx (<input type="checkbox"/> Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081E	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total PCRA 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	Comments/Special Instructions
Relinquished	<u>Megan Gri</u>	<u>Farallon</u>	<u>10/1/19</u>	<u>1626</u>	<u>Please Hold. P.M. will call for analysis.</u> <u>X - added 11/4/19. FB (STA)</u>
Received	<u>Allyson Liken</u>	<u>OSE</u>	<u>11/1/19</u>	<u>1626</u>	
Relinquished					
Received					
Relinquished					
Received					Data Package: Standard <input type="checkbox"/> Level III <input type="checkbox"/> Level IV <input type="checkbox"/>
Reviewed/Date		Reviewed/Date			Chromatograms with final report <input type="checkbox"/> Electronic Data Deliverables (EDDs) <input type="checkbox"/>

Chain of Custody

Company: <u>Farallon</u> Project Number: <u>2194-001</u> Project Name: <u>701 South Jackson Street</u> Project Manager: <u>Stuart Brown</u> Sampled by: <u>Ryan Ostrom</u>			Turnaround Request (in working days) (Check One) <input type="checkbox"/> Same Day <input type="checkbox"/> 1 Day <input type="checkbox"/> 2 Days <input type="checkbox"/> 3 Days <input checked="" type="checkbox"/> Standard (7 Days) <input type="checkbox"/> _____ (other)			Laboratory Number: <u>11-019</u>																		
Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX 8021	NWTPH-Gx	NWTPH-Dx <input type="checkbox"/> Acid / SG Clean-up	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semi-volatiles 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) 1864A	% 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-6-6.0		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	Comments/Special Instructions																	
Relinquished	<u>Maya Ari</u>	<u>Farallon</u>			<u>11/1/19</u>	<u>1515</u>																		
Received	<u>Stuart Brown</u>	<u>OSE</u>			<u>11/1/19</u>	<u>1626</u>																		
Relinquished																								
Received																								
Relinquished																								
Received																								
Reviewed/Date					Reviewed/Date		Data Package: Standard <input type="checkbox"/> Level III <input type="checkbox"/> Level IV <input type="checkbox"/>																	
Reviewed/Date					Reviewed/Date		Chromatograms with final report <input type="checkbox"/> Electronic Data Deliverables (EDDs) <input type="checkbox"/>																	

Chain of Custody

Company: <u>Farallon</u> Project Number: <u>2194-001</u> Project Name: <u>701 South Jackson Street</u> Project Manager: <u>Stuart Brown</u> Sampled by: <u>Ryan Ostrom</u>			Turnaround Request (in working days) (Check One) <input type="checkbox"/> Same Day <input type="checkbox"/> 1 Day <input type="checkbox"/> 2 Days <input type="checkbox"/> 3 Days <input checked="" type="checkbox"/> Standard (7 Days) <input type="checkbox"/> _____ (other)			Laboratory Number: <u>11-019</u>																	
			Number of Containers			NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	ED6 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
Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix																			
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	Comments/Special Instructions																
Relinquished		Farallon			11/1/19	1515	Please Hold. PM will call for Analysis →																
Received		OSE			11/1/19	1626																	
Relinquished																							
Received																							
Relinquished																							
Received							Data Package: Standard <input type="checkbox"/> Level III <input type="checkbox"/> Level IV <input type="checkbox"/>																
Reviewed/Date					Reviewed/Date					Chromatograms with final report <input type="checkbox"/> Electronic Data Deliverables (EDDs) <input type="checkbox"/>													

APPENDIX C
Supplemental Investigation Field Program

APPENDIX C SUPPLEMENTAL INVESTIGATION FIELD PROGRAM

Underground Utility Locate

Prior to drilling activities, an underground utility locate was conducted in the area of the proposed boring locations to identify any subsurface utilities and/or potential underground physical hazards. An underground utility check consisting of contacting a local utility alert service and a private utility locating service was also performed.

Soil Sampling

Subsurface conditions at the Site were evaluated by completing five hollow-stem auger (GEI-1 through GEI-3, GEI-11 and GEI-12) and seven direct-push (GEI-4 through GEI-10) soil borings using equipment owned and operated by Cascade Drilling of Woodinville, a Washington state-licensed drilling company. The borings extended to depths ranging from approximately 15 to 76.5 feet below the ground surface (bgs). A representative from our staff classified the soil encountered in each of the borings. Soil in the explorations was visually classified in general accordance with ASTM International (ASTM) D 2488-00. The boring logs are presented in Figures C-2 through C-13.

The sampling equipment was decontaminated before each sampling attempt with a Liqui-Nox® solution wash and a distilled water rinse. Soil samples were obtained for field screening and possible chemical analysis. Soil samples obtained during the exploration activities were collected from the sampler with a decontaminated stainless-steel knife or new nitrile gloves. A portion of each sample was placed in laboratory-prepared sample jars for possible chemical analysis. The remaining portion of each sample was used for field screening.

Samples obtained from the borings are shown on Figures C-2 through C-13. The soil samples were placed in a cooler with ice for transport to Fremont Analytical of Seattle, Washington. Standard chain-of-custody procedures were followed in transporting the soil samples to the laboratory. Samples for volatile organic compound and/or gasoline-range petroleum hydrocarbon analysis were collected using Ecology's 5035A sampling methodology.

Field Screening of Soil Samples

Soil samples obtained from the borings were screened in the field for evidence of contamination using: (1) visual examination; (2) sheen screening; and/or (3) photoionization detector (PID). The results of headspace and sheen screening are included on the attached boring logs.

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

- No Sheen (NS) No visible sheen on water surface.

- Slight Sheen (SS) Light, colorless, dull sheen; spread is irregular, not rapid; sheen dissipates rapidly. Natural organic matter in the soil may produce a slight sheen.
- Moderate Sheen (MS) Light to heavy sheen; may have some color/iridescence; spread is irregular to flowing, may be rapid; few remaining areas of no sheen on water surface.
- Heavy Sheen (HS) Heavy sheen with color/iridescence; spread is rapid; entire water surface may be covered with sheen.

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

Vapor Sampling

Sub-slab soil vapor samples were collected from borings SSV-1 through SSV-3 at depths of 5 to 10 feet and 20 to 25 feet bgs using DP drilling methods using equipment owned and operated by Cascade Drilling of Woodinville, a Washington state-licensed drilling company. Soil vapor samples were collected using Geoprobe's Post-Run Tubing (PRT) system. The PRT tip configuration was driven into the ground to the target depth of 5-10 feet bgs and 20-25 feet bgs at each location. After the PRT tip configuration reached the target depth, the PRT tubing and PRT adapter were inserted down the inside of the probe rod(s) and the adapter was connected with an expendable point holder at the bottom of the rod. The tubing (above ground) was connected to a sampling manifold. Hydrated bentonite was placed around the tooling and tubing where it entered the ground.

After the tubing was connected to the expendable point holder, the probe was retracted approximately 6-inches to allow soil vapor to enter the sampling device. Soil vapor was allowed to equilibrate in the void space, and soil vapor was purged from the system using a syringe prior to sample collection. Soil vapor samples were then collected using laboratory supplied Summa canisters, which were under a vacuum using a flow controller that reduced the flow rate to less than 200 milliliters per minute (mL/min). Air was drawn for about 30 minutes until the cannister was filled, but before atmospheric pressure was reached. The flow controller will automatically stop the flow of air before atmospheric pressure is reached (i.e. 5 to 6 inches of mercury reading on pressure gauge). New sample tubing was used for each sample. The direct push equipment was decontaminated before sample collection.

A tracer gas shroud (clear plastic bag) was placed around the entire sample train during sample collection. The shroud was charged (filled) with a tracer gas (spec-grade 99.995 percent helium gas. To charge the shroud a Teflon tube with a ball valve was inserted under the shroud to connect with the compressed helium bottle. This same tube was used to monitor the helium concentration within the shroud periodically throughout the sampling process. The purpose of the periodic monitoring is to make sure helium is in contact with the sample train and the ground surface while the soil vapor sample is collected.

Groundwater Monitoring

Depth to Groundwater

The depths to the groundwater table relative to ground surface were measured using an electric water level indicator (e-tape) and based on observations from soil samples in borings that were not sampled for groundwater. The e-tape was decontaminated with a Liqui-Nox® solution wash and a distilled water rinse prior to use at each location.

Groundwater Sampling

Groundwater samples were obtained using a bladder pump and new dedicated plastic tubing. The water samples were transferred in the field to laboratory-prepared sample containers and kept cool during transport to Fremont Analytical. The sample containers were filled completely to eliminate headspace in the container. Chain-of-custody procedures were followed in transporting the water samples to the testing laboratory.

Investigative Waste Disposal

Drill cuttings and decontamination/purge water generated during drilling activities were temporarily stored on Site in labeled 35- and/or 55-gallon drums pending off-site disposal to a permitted facility.

SOIL CLASSIFICATION CHART

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

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

Sampler Symbol Descriptions

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

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

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

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

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

ADDITIONAL MATERIAL SYMBOLS

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

Groundwater Contact



Measured groundwater level in exploration, well, or piezometer



Measured free product in well or piezometer

Graphic Log Contact

Distinct contact between soil strata

Approximate contact between soil strata

Material Description Contact

Contact between geologic units

Contact between soil of the same geologic unit

Laboratory / Field Tests

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

Sheen Classification

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

Key to Exploration Logs



Figure C-1

Start Drilled	5/18/2021	End	5/18/2021	Total Depth (ft)	76.5	Logged By	CJG	Checked By	RST	Driller	Cascade Drilling LP	Drilling Method	Hollow-stem Auger
Surface Elevation (ft) Vertical Datum	98 NAVD88			Hammer Data	Autohammer 140 (lbs) / 30 (in) Drop			Drilling Equipment		Truck Mounted Rig			
Latitude	47.598941			System Datum	Decimal Degrees WGS84			See "Remarks" section for groundwater observed					
Longitude	-122.323416			Notes:									

Elevation (feet)	FIELD DATA					Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	Depth (feet)	Interval Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing						
0						AC	Approximately 1 inch of asphalt concrete pavement				
						CR	Approximately 8 inches of base course				
					S1-1	SM	Gray silty fine to coarse sand with fine gravel and trace brick debris (moist)				
5	12	50/6"			GEI-1-2.5	SM	Gray silty fine to medium sand with occasional fine gravel (moist)	NS	<1		
					S2-5 GEI-1-5.0 CA	SP	Gray fine to medium sand with coarse sand and trace silt (moist)				
	18	40						SS	<1		
10	18	50			GEI-1-7.5	SP	Gray medium sand with trace silt (moist)	SS	130		
					S3-10 GEI-1-10.0			SS	3,600		
15	18	37									
					GEI-1-12.5 CA			SS	15,000		
	12	50/6"				ML	Brown silt with fine sand (moist)				
						SP	Gray medium sand with trace silt (moist)				
20	18	42			S4-15 GEI-1-15.0	ML/SP	Gray interbedded silt and gray fine to medium sand (moist)	SS	452		
					GEI-1-17.5 CA	SP-SM	Brown fine to medium sand with silt (wet) Grades to brown medium to coarse sand with silt (wet)	NS	<1		Perched water observed
	18	69									
25	18	29			S5a-20 S5b-20 GEI-1-20.0	SM/SP	Interbedded brown silty sand and fine sand (moist)	NS	<1		
						ML	Gray silt (moist)				
					GEI-1-22.5	ML	Dark gray silt with fine sand (moist)	NS	<1		
	18	70									
30	18	27			S6-25 GEI-1-25.0	SP-SM	Gray-brown fine sand with silt (moist)	SS	17.5		
					GEI-1-27.5	SM	Brown silty fine sand (moist)	SS	5.7		

Note: See Figure C-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on North American Datum 1983 (NAD83). Vertical approximated based on LiDAR from Puget Sound LiDAR Consortium dated 2016.

Log of Boring GEI-1



Project: 701 South Jackson Street
Project Location: Seattle, Washington
Project Number: 24504-001-01

Date: 11/11/22 Path: P:\24_24504\001\GINT\24504-001-01.GPJ DBLibrary\Library\GEOENGINEERS_DF_STD_US_JUNE_2017.GLB\GEB_ENVIRONMENTAL_STANDARD_NO_GW

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Elevation (feet)	FIELD DATA				Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	Depth (feet)	Interval Recovered (in)	Blows/foot	Collected Sample Sample Name Testing						
30	18	48	S7a-30	[Graphic Log: Brown silty fine sand with silt (moist) and Brown fine sand with silt (moist)]	SM	Brown silty fine sand (moist)	NS	<1		
					SP-SM	Brown fine sand with silt (moist)				
35	18	38	S8-35 GEI-1-35.0	[Graphic Log: Gray fine sand with trace silt (moist), Gray fine sand (moist), and Gray silt (moist)]	SP	Gray fine sand with trace silt (moist)	NS	<1		
40	18	33	S9-40 GEI-1-40.0				NS	<1		
50	18	32	S10-50 GEI-1-50.0		SP	Gray fine sand (moist)	NS	<1		
60	18	47	S11a-60 S11b-60 GEI-1-60.0		SP-SM	Brown fine sand with silt (moist)	NS	<1		
					ML	Gray silt (moist)				
65									Groundwater observed at approximately 64½ feet below ground surface during drilling	

Log of Boring GEI-1 (continued)



Project: 701 South Jackson Street
 Project Location: Seattle, Washington
 Project Number: 24504-001-01

Date: 11/11/22 Path: P:\24_24504001\GINT\24504001\01.GPJ DBLibrary\Library\GEOENGINEERS_DF_STD_US_JUNE_2017.GLB\GEB_ENVIRONMENTAL_STANDARD_NO_GW

Elevation (feet)	FIELD DATA					MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	Depth (feet)	Interval Recovered (in)	Blows/foot	Collected Sample	Graphic Log				
60									
70	18	57	S12-70 GEI-1-70.0		SP	Gray fine to medium sand with trace silt (moist)	NS	<1	
					SP-SM	Grades to gray fine sand with silt			
75	18	39	S13-75 GEI-1-75.0		SP	Gray fine to medium sand with trace silt (moist)	NS	<1	
						Silt content increases			

Log of Boring GEI-1 (continued)



Project: 701 South Jackson Street
 Project Location: Seattle, Washington
 Project Number: 24504-001-01

Start Drilled	5/19/2021	End	5/19/2021	Total Depth (ft)	56.5	Logged By	CJG	Checked By	RST	Driller	Cascade Drilling LP	Drilling Method	Hollow-stem Auger
Surface Elevation (ft) Vertical Datum	98.5 NAVD88			Hammer Data	Autohammer 140 (lbs) / 30 (in) Drop			Drilling Equipment		Truck Mounted Rig			
Latitude	47.599053			System Datum	Decimal Degrees WGS84			Groundwater not observed at time of exploration					
Longitude	-122.323614			Notes:									

Elevation (feet)	FIELD DATA					Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	Depth (feet)	Interval Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing						
0						AC	Approximately 3/4 inch of asphalt concrete pavement				
						CC	Approximately 6 inches of portland concrete cement				
						SP-SM	Brown fine to coarse sand with silt and fine gravel (moist)				
5	18	14		GEI-2-2.5		ML	Brown silt with fine sand lenses (moist)	NS	<1		
						SP	Brown fine to medium sand with trace silt (moist)				
						ML	Gray silt (moist)				
5	18	27		GEI-2-5.0		SP	Brown fine to medium sand with trace silt (moist)	SS	<1		
						ML	Gray silt (moist)				
						SP	Brown fine to medium sand with trace silt (moist)	NS	<1		
10	18	26		GEI-2-10		SP	Gray fine sand (moist)	HS	>15,000		
				CA		ML	Silt and sand (moist)				
						SP	Brown fine sand				
						SP	Gray fine to medium sand with trace silt (moist)	HS	>15,000	Strong petroleum like odor	
						SP	Approximate 3-inch silt lens				
						SP	Gray fine to medium sand with trace silt (moist)	HS	>15,000	Strong petroleum like odor	
15	18	57		GEI-2-15.0		SM	Gray fine sand with silt (moist)	SS	42.5		
				CA		SM/ML	Gray fine sand with interbedded silt lenses (moist)				
						SP	Brown fine to medium sand with trace silt (moist)				
20	18	24		GEI-2-20.0		SM/ML	Gray/brown interbedded silty sand and silt (moist)	SS	33.7		
						ML	Gray sandy silt (moist)	NS	13.8		
						ML	Grades to finer gray silt (moist)				
25	18	30		GEI-2-25.0		SM	Brown silty fine sand (moist)	NS	47.1		
						SP-SM	Brown fine sand with silt (moist)	NS	1.2		
							With interbedded silt				

Note: See Figure C-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on North American Datum 1983 (NAD83). Vertical approximated based on LiDAR from Puget Sound LiDAR Consortium dated 2016.

Log of Boring GEI-2



Project: 701 South Jackson Street
Project Location: Seattle, Washington
Project Number: 24504-001-01

Figure C-3
Sheet 1 of 2

Date: 11/11/22 Path: P:\24_24504-001-01.GPJ DBLibrary\Library\GEOENGINEERS_DF_STD_US_JUNE_2017.GLB\GEB_ENVIRONMENTAL_STANDARD_NO_GW

Elevation (feet)	FIELD DATA				Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	Depth (feet)	Interval Recovered (in)	Blows/foot	Collected Sample Sample Name Testing						
30	12	50/6"	GEI-2-30.0	SM	Brown fine sand with silt (moist) With silt lenses	NS	13.5			
65	18	29	GEI-2-32.5	SP	Brown fine to medium sand with trace silt (moist)	NS	4.7			
35	12	50/6"	GEI-2-35.0	SM	Brown silty fine to medium sand (moist)	NS	46.2			
80	12	50/6"	GEI-2-35.0	SP-SM	Brown fine sand with silt (moist)					
40	18	61	GEI-2-40.0	SP-SM	Gray fine sand with silt (moist) Silt content increases	NS	277			
55	18	45	GEI-2-45.0			NS	60.3			
50	12	50/6"	GEI-2-50.0			NS	36.7			
55	18	41	GEI-2-55.0	SP	Gray fine sand with trace silt (moist)	NS	<1			

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Log of Boring GEI-2 (continued)



Project: 701 South Jackson Street
 Project Location: Seattle, Washington
 Project Number: 24504-001-01

Start Drilled	5/19/2021	End	5/19/2021	Total Depth (ft)	51.5	Logged By	CJG	Checked By	RST	Driller	Cascade Drilling LP	Drilling Method	Hollow-stem Auger
Surface Elevation (ft) Vertical Datum	95 NAVD88			Hammer Data	Autohammer 140 (lbs) / 30 (in) Drop			Drilling Equipment		Truck Mounted Rig			
Latitude	47.598877			System Datum	Decimal Degrees WGS84			Groundwater not observed at time of exploration					
Longitude	-122.323613												
Notes:													

Elevation (feet)	FIELD DATA					Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	Depth (feet)	Interval Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing						
0						AC	Approximately 1 inch of asphalt concrete pavement				
						CR	Approximately 8 inches of base coarse/concrete				
						SP-SM	Brown fine to medium sand with coarse sand and trace silt, occasional brick debris				
	18	26			GEI-3-2.5	ML	Gray silt (moist)	NS	<1		
5	18	40			GEI-3-5.0 CA	SP	Brown fine to medium sand with trace silt (moist)	NS	1.3		
	18	35			GEI-3-7.5	ML	Silt lens (moist)	HS	>15,000		
	18	31			GEI-3-10.0	SP	Gray fine to medium sand (moist)	HS	>15,000		
10	18	32			GEI-3-12.5	SP/ML	Interbedded fine sand and silt (moist)	HS	>15,000		
	18	39			GEI-3-15.0 CA		Mostly sand with silt lenses	HS	>15,000		
	18	25			GEI-3-17.5 CA	ML	Gray sandy silt (moist)	NS	89.7		
15	18	28			GEI-3-20.0	SP	Brown fine sand and trace silt (moist)	NS	130		
	18	37			GEI-3-22.5	SM	Gray silty fine sand (moist)	NS	2,614		
	18	48			GEI-3-25.0	SP-SM	Gray fine sand with silt (moist)	NS	3,420		

Note: See Figure C-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on North American Datum 1983 (NAD83). Vertical approximated based on LiDAR from Puget Sound LiDAR Consortium dated 2016.

Log of Boring GEI-3



Project: 701 South Jackson Street
Project Location: Seattle, Washington
Project Number: 24504-001-01

Figure C-4
Sheet 1 of 2

Date: 11/11/22 Path: P:\24_24504\001\GINT\24504-001-01.GPJ DBLibrary\Library\GEOENGINEERS_DF STD_US_JUNE_2017.GLB\GEB_ENVIRONMENTAL_STANDARD_NO_GW

Date: 11/22/22 Path: P:\24_24504001\GINT\24504001\01.GPJ DBLibrary\Library\GEOENGINEERS_DF_STD_US_JUNE_2017.GLB\GEB_ENVIRONMENTAL_STANDARD_NO.GW

Elevation (feet)	FIELD DATA					Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	Depth (feet)	Interval Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing						
30	18	40		GEI-3-30.0		SP	Gray fine sand with trace silt (moist)	SS	2,750		
35	18	30		GEI-3-35.0				SS	3,200		
40	18	40		GEI-3-40.0				NS	220		
45	18	59		GEI-3-45.0				NS	79.2		
50	18	44		S15-50				NS	<1		

Log of Boring GEI-3 (continued)



Project: 701 South Jackson Street
 Project Location: Seattle, Washington
 Project Number: 24504-001-01

Start Drilled	12/29/2021	End	12/29/2021	Total Depth (ft)	15	Logged By	NRS	Checked By	RST	Driller	Cascade Drilling LP	Drilling Method	Direct Push
Surface Elevation (ft)	95			Vertical Datum	NAVD88	Hammer Data	Pneumatic			Drilling Equipment	Truck Mounted Rig		
Latitude	47.59902			Longitude	-122.3234	System Datum	Decimal Degrees WGS84			Groundwater not observed at time of exploration			
Notes:													

Elevation (feet)	Depth (feet)	FIELD DATA					Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
		Interval Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing								
0		36						AC	Approximately 4 inches asphalt concrete				
								SM	Gray-brown silty fine to coarse sand with gravel (dry)	SS	<1		
100								ML	Brown-gray silt with sand (dry)	NS	<1		
	5	60			GEI-4-2.5 CA			ML	Gray silt (dry)	NS	<1		
								SM	Brown-gray silty fine to coarse sand (dry to moist)	NS	<1		
95					GEI-4-5.0			SP	Brown fine to coarse sand (moist)	NS	<1		
								SM	Brown silty fine to coarse sand (moist)	NS	<1		
	10	60			GEI-4-7.5			ML	Brown silt (moist)	NS	<1		
								SM	Brown silty fine to coarse sand (moist)	NS	<1		
90					GEI-4-10.0								
					GEI-4-12.5 CA								
	15				GEI-4-15.0								

Refusal at 15 feet below ground surface

Note: See Figure C-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on North American Datum 1983 (NAD83). Vertical approximated based on LiDAR from Puget Sound LiDAR Consortium dated 2016.

Log of Monitoring Well GEI-4



Project: 701 South Jackson Street
Project Location: Seattle, Washington
Project Number: 24504-001-01

Figure C-5
Sheet 1 of 1


Date: 11/11/22 Path: P:\24_24504\001\GINT\24504-001-01.GPJ DBLibrary\Library\GEOENGINEERS_DF_STD_US_JUNE_2017.GLB\GEB_ENVIRONMENTAL_WELL

Start Drilled	12/29/2021	End	12/29/2021	Total Depth (ft)	15	Logged By	NRS	Checked By	RST	Driller	Cascade Drilling LP	Drilling Method	Direct Push
Surface Elevation (ft)	95			Hammer Data	Pneumatic			Drilling Equipment	Truck Mounted Rig				
Vertical Datum	NAVD88			System Datum	Decimal Degrees WGS84			Groundwater not observed at time of exploration					
Latitude	47.598967												
Longitude	-122.32313												
Notes:													

Elevation (feet)	FIELD DATA						Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	Depth (feet)	Interval Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing	Water Level					
0		26					AC	Approximately 3 inches asphalt concrete			
							SM	Dark brown silty fine to coarse sand with gravel (dry)	NS	2.4	
							SM	Brown silty fine to medium sand with gravel (moist)	SS	1.8	
				GEI-5-2.5 CA			SM	Black silty fine to coarse sand with gravel (moist)			
							ML	Brown silt with sand (moist)	NS	<1	
5		60					ML	Gray silt with sand (moist)	NS	<1	
				GEI-5-5.0							
				GEI-5-7.5							
10		60					ML	Gray silt with sand lens (moist)	NS	<1	
				GEI-5-10.0 CA				Becomes wet			
				GEI-5-12.5			ML	Gray silt	NS	<1	
				GEI-5-14.0				Brown silt			
							SW	Gray-brown fine to coarse sand	NS	<1	
15											

Date: 11/11/22 Path: P:\24\24504001\GINT\24504001\01.GPJ DBLibrary\Library\GEOENGINEERS_DF_STD_US_JUNE_2017.GLB\GEB_ENVIRONMENTAL_WELL

Note: See Figure C-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on North American Datum 1983 (NAD83). Vertical approximated based on LiDAR from Puget Sound LiDAR Consortium dated 2016.

Log of Monitoring Well GEI-5	
	Project: 701 South Jackson Street
	Project Location: Seattle, Washington
	Project Number: 24504-001-01
	Figure C-6 Sheet 1 of 1

Start Drilled	12/29/2021	End	12/29/2021	Total Depth (ft)	15	Logged By	NRS	Checked By	RST	Driller	Cascade Drilling LP	Drilling Method	Direct Push
Surface Elevation (ft)	103			Vertical Datum	NAVD88	Hammer Data	Pneumatic			Drilling Equipment	Tracked Rig		
Latitude	47.598853			Longitude	-122.323131	System Datum	Decimal Degrees WGS84			Groundwater not observed at time of exploration			
Notes:													

Elevation (feet)	Depth (feet)	FIELD DATA					Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
		Interval Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing							
0		31					AC	Approximately 3 inches asphalt concrete				
							SM	Dark brown silty fine to coarse sand (moist)	NS	<1		
							SM	Brick debris observed Black silty fine to coarse sand (moist)	NS	<1		
100							ML	Gray silt with sand (dry to moist)	NS	<1		
5		60			GEI-6-2.5 CA							
					GEI-6-5.0							
					GEI-6-7.5							
95					GEI-6-10.0 CA							
10		60			GEI-6-12.5							
					GEI-6-14.5		SW	Light brown fine to coarse sand with brown silt lens (moist)	NS	<1		
90												
15												

Note: See Figure C-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on North American Datum 1983 (NAD83). Vertical approximated based on LiDAR from Puget Sound LiDAR Consortium dated 2016.

Log of Boring GEI-6



Project: 701 South Jackson Street
Project Location: Seattle, Washington
Project Number: 24504-001-01

Figure C-7
Sheet 1 of 1

Date: 11/11/22 Path: P:\24\24504\001\GINT\24504001\01.GPJ DBLibrary\Library\GEOENGINEERS_DF_STD_US_JUNE_2017.GLB\GEB_ENVIRONMENTAL_STANDARD_NO.GW

Start Drilled	12/29/2021	End	12/29/2021	Total Depth (ft)	15	Logged By	NRS	Checked By	RST	Driller	Cascade Drilling LP	Drilling Method	Direct Push
Surface Elevation (ft)	103			Hammer Data	Pneumatic			Drilling Equipment	Tracked Rig				
Vertical Datum	NAVD88			System Datum	Decimal Degrees WGS84			Groundwater not observed at time of exploration					
Latitude	47.598852												
Longitude	-122.323388												
Notes:													

Elevation (feet)	FIELD DATA						Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	Depth (feet)	Interval Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing	Water Level					
0		43					AC	Approximately 3 inches asphalt cement			
							SM	Gray silty fine to medium sand with brick fragments (dry)	SS	1.4	
							SM	Brown silty fine to coarse sand (dry)	NS	<1	
				GEI-7-2.5 CA			SM	Gray silty fine to coarse sand (moist)	NS	<1	
5		60					ML	Gray silt (moist)	NS	<1	
				GEI-7-5.0			ML	Brown-gray silt (moist)	NS	28.9	
							ML	Gray silt (moist)	NS	29.1	
				GEI-7-7.5 CA			SM	Light gray silty fine to medium sand	NS	31.3	
10		60						Becomes gray			
				GEI-7-10.0			ML	Gray silt	NS	38.1	
				GEI-7-12.5							
				GEI-7-14.0 CA							
15											

Date: 11/22/22 Path: P:\24_24504001\GINT\24504001\01.GPJ DBLibrary\Library\GEOENGINEERS_DF_STD_US_JUNE_2017.GLB\GEB_ENVIRONMENTAL_WELL

Note: See Figure C-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on North American Datum 1983 (NAD83). Vertical approximated based on LiDAR from Puget Sound LiDAR Consortium dated 2016.

Log of Monitoring Well GEI-7



Project: 701 South Jackson Street
Project Location: Seattle, Washington
Project Number: 24504-001-01

Drilled	Start 4/4/2022	End 4/4/2022	Total Depth (ft)	25	Logged By Checked By	NRS RST	Driller	Cascade Drilling LP	Drilling Method	Direct Push
Surface Elevation (ft) Vertical Datum	99.5 NAVD88			Hammer Data	Pneumatic			Drilling Equipment	Track-mounted probe	
Latitude Longitude	47.59912 -122.323548			System Datum	Decimal Degrees WGS84			Groundwater not observed at time of exploration		
Notes:										

Elevation (feet)	FIELD DATA					Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	Depth (feet)	Interval Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing						
0	28					CC	Approximately 6 inches of concrete cement				
						GP	Approximately 6 inches crushed asphalt cement with gravel and sand	SS	1.2		
						GP	Approximately 6 inches crushed concrete cement				
						SM	Brown silty fine to coarse sand with occasional gravel (moist)	NS	<1		
						ML	Gray silt (moist)	NS	<1		
						SM	Gray silty fine to coarse sand (moist)	NS	<1		
						ML	Gray silt (moist)				
5	40										
						SM	Gray-brown silty fine to coarse sand (moist)	NS	<1		
						SM	Brown silty fine to coarse sand (moist)	NS	<1		
						ML	Gray silt with sand lenses (moist)	NS	<1		
						SM	Brown silty fine to coarse sand (moist)	NS	<1		
						SM	Gray silty fine to coarse sand (moist)	NS	<1		
10	39										
						ML	Brown silt (moist)	NS	<1		
						SM	Gray silty fine to coarse sand (moist)	SS	1.8		
						ML	Brown silt with sand lenses (moist)	NS	<1		
						ML	Gray silt (moist)	NS	<1		
						NS		NS	<1		
15											
						SM	Brown silty fine to medium sand (moist)				
20	49										
						ML	Gray silt (moist)	NS	<1		
25											

Note: See Figure C-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on North American Datum 1983 (NAD83). Vertical approximated based on LiDAR from Puget Sound LiDAR Consortium dated 2016.

Log of Boring GEI-8



Project: 701 South Jackson Street
Project Location: Seattle, Washington
Project Number: 24504-001-01

Figure C-9
Sheet 1 of 1

Date: 5/22 Path: P:\24\24504\001\GINT\24504001.GPJ DBL\Library\Library\ENVIRONMENTAL_STANDARD_NO_GW

Drilled	Start 4/4/2022	End 4/4/2022	Total Depth (ft)	25	Logged By Checked By	NRS RST	Driller	Cascade Drilling LP	Drilling Method	Direct Push
Surface Elevation (ft) Vertical Datum	92.5 NAVD88				Hammer Data	Pneumatic			Drilling Equipment	Track-mounted probe
Latitude Longitude	47.598778 -122.322714				System Datum	Decimal Degrees WGS84			Groundwater not observed at time of exploration	
Notes:										

Elevation (feet)	FIELD DATA					Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	Depth (feet)	Interval Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing						
0	39					AC	Approximately 4 inches of asphalt concrete cement				
						Brick	Approximately 2 inches brick		SS	1.2	
						GP	Approximately 2 inches crushed concrete cement and gravel				
5	41					SM	Brown silty fine to coarse sand (moist)				
						ML	Light brown-brown silt with sand lenses (moist)		SS	3.8	
						SM	Brown silty fine to coarse sand with trace gravel (moist)		NS	<1	
10	50			GEI-9-7.5		ML	Brown-tan silt with sand lenses (moist)		NS	<1	
						ML	Gray silty (moist)		NS	<1	
						SM	Brown silty fine to coarse sand (moist)		NS	<1	
				GEI-9-12.5 CA			Becomes wet				
15	46					ML	Brown-tan silt with sand lenses (moist)		NS	<1	
						ML	Gray silt (moist)		NS	<1	
						MI	Brown silt (moist)		NS	<1	
				GEI-9-17.5 CA		ML	Gray silt with sand lenses (moist)		NS	<1	
20	48					ML	Light brown-gray silt (moist)		NS	<1	
				GEI-9-22.5							

Note: See Figure C-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on North American Datum 1983 (NAD83). Vertical approximated based on LiDAR from Puget Sound LiDAR Consortium dated 2016.

Log of Boring GEI-9



Project: 701 South Jackson Street
Project Location: Seattle, Washington
Project Number: 24504-001-01

Figure C-10
Sheet 1 of 1

Date: 5/22 Path: P:\24\24504\001\GINT\24504\001\01.GPJ DBL\library\library\GEOENGINEERS_DF_STD_US_JUNE_2017.GLB\ENVIRONMENTAL_STANDARD_NO_GW

Drilled	Start 4/4/2022	End 4/4/2022	Total Depth (ft)	25	Logged By Checked By	NRS RST	Driller	Cascade Drilling LP	Drilling Method	Direct Push
Surface Elevation (ft) Vertical Datum	92.5 NAVD88				Hammer Data	Pneumatic			Drilling Equipment	Track-mounted probe
Latitude Longitude	47.598907 -122.323848				System Datum	Decimal Degrees WGS84			Groundwater not observed at time of exploration	
Notes: Boring cleared from the ground surface to approximately 7 feet below ground surface (bgs) using an air knife.										

Elevation (feet)	FIELD DATA					Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	Depth (feet)	Interval Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing						
0						AC	Approximately 4 inches of asphalt concrete pavement				
						Brick	Approximately 2 inches of brick				
						CC	Approximately 12 inches of concrete cement				
90		12				NR	No recovery				
						SM	Brown silty fine to coarse sand (moist)	NS	<1		
						NR	No recovery				
85		36			GEI-10-7.5	SM	Brown silty fine to coarse sand (moist)	NS	<1		
						SM	Gray silty fine to coarse sand (moist)	NS	<1		
10		45				ML	Gray silt (moist)	NS	<1		
80					GEI-10-12.5 CA	SM	Brown silty fine to coarse sand with silt lenses (moist)	NS	<1		
						ML	Gray silt (moist)	NS	<1		
						SM	Brown silty fine to medium sand (moist)	NS	<1		
15		60				ML	Gray-brown silt (moist)	NS	<1		
75					GEI-10-17.5 CA	SM	Brown silty fine to coarse sand (moist)	NS	<1		
						SM	Brown silty fine to coarse sand with silt lenses (moist)	NS	<1		
20					GEI-10-22.5	SM	Brown silty fine to coarse sand with silt lenses (moist)	NS	<1		
25											

Note: See Figure C-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on North American Datum 1983 (NAD83). Vertical approximated based on LiDAR from Puget Sound LiDAR Consortium dated 2016.

Log of Boring GEI-10

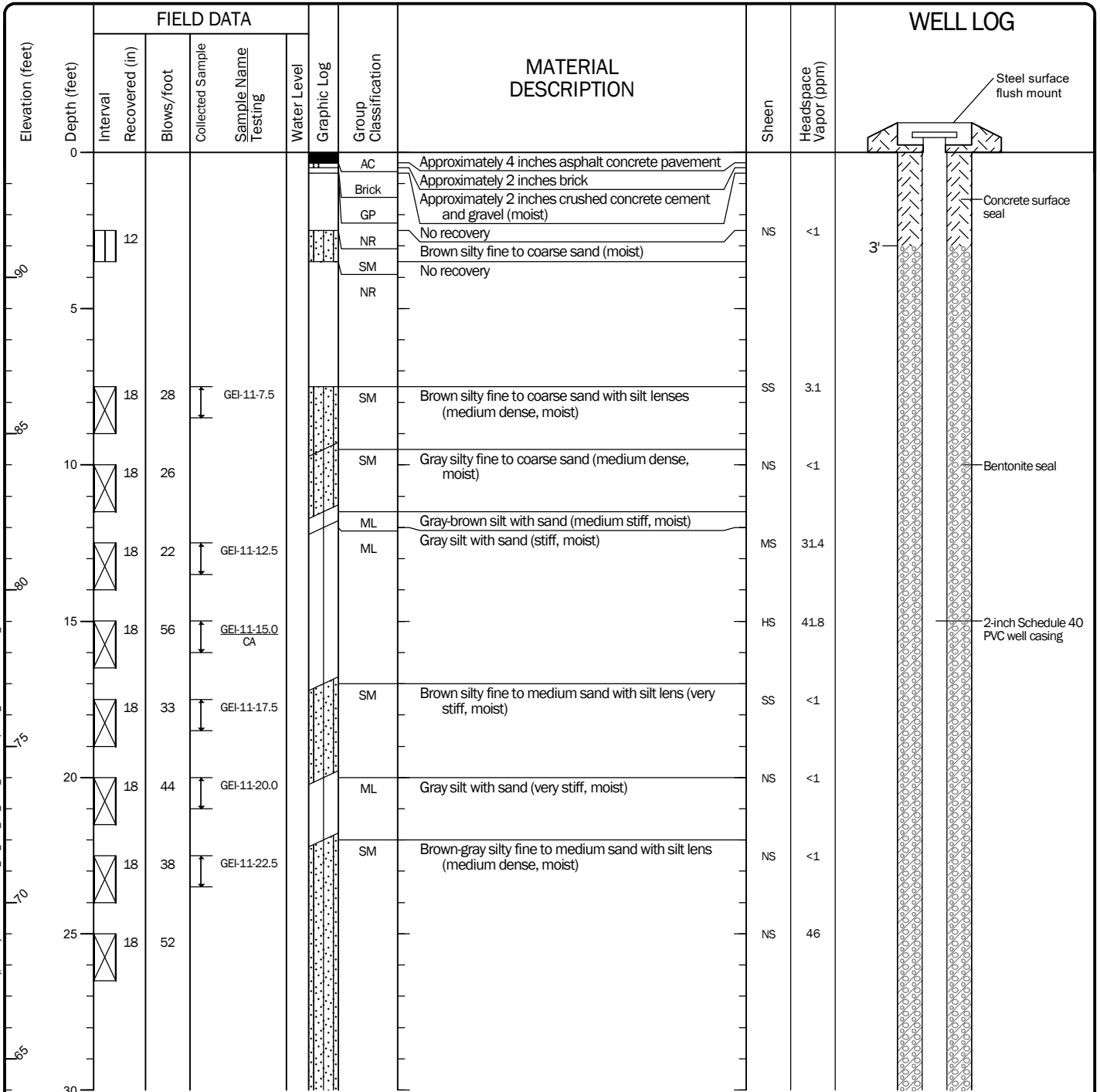


Project: 701 South Jackson Street
Project Location: Seattle, Washington
Project Number: 24504-001-01

Figure C-11
Sheet 1 of 1

Date: 5/22 Path: P:\24\24504\001\GINT\24504\001\01.GPJ DBL:library\library\GEOENGINEERS_DF_STD_US_JUNE_2017.GLB\GEB_ENVIRONMENTAL_STANDARD_NO_GW

Start Drilled 4/5/2022	End 4/5/2022	Total Depth (ft) 71.5	Logged By Checked By NRS RST	Driller Cascade Drilling LP	Drilling Method Hollow-stem Auger
Hammer Data	Autohammer 140 (lbs) / 30 (in) Drop	Drilling Equipment Truck-mounted drill rig	DOE Well I.D.: BNC 885 A 2-in well was installed on 4/5/2022 to a depth of 70 ft.		
Surface Elevation (ft) Vertical Datum	94 NAVD88	Top of Casing Elevation (ft)	Groundwater Date Measured	Depth to Water (ft)	Elevation (ft)
Latitude Longitude	47.598851 -122.323695	Horizontal Datum	Decimal Degrees WGS84	4/5/2022	61.34 32.66
Notes: Boring cleared from the ground surface to approximately 7 feet below ground surface (bgs) using an air knife.					



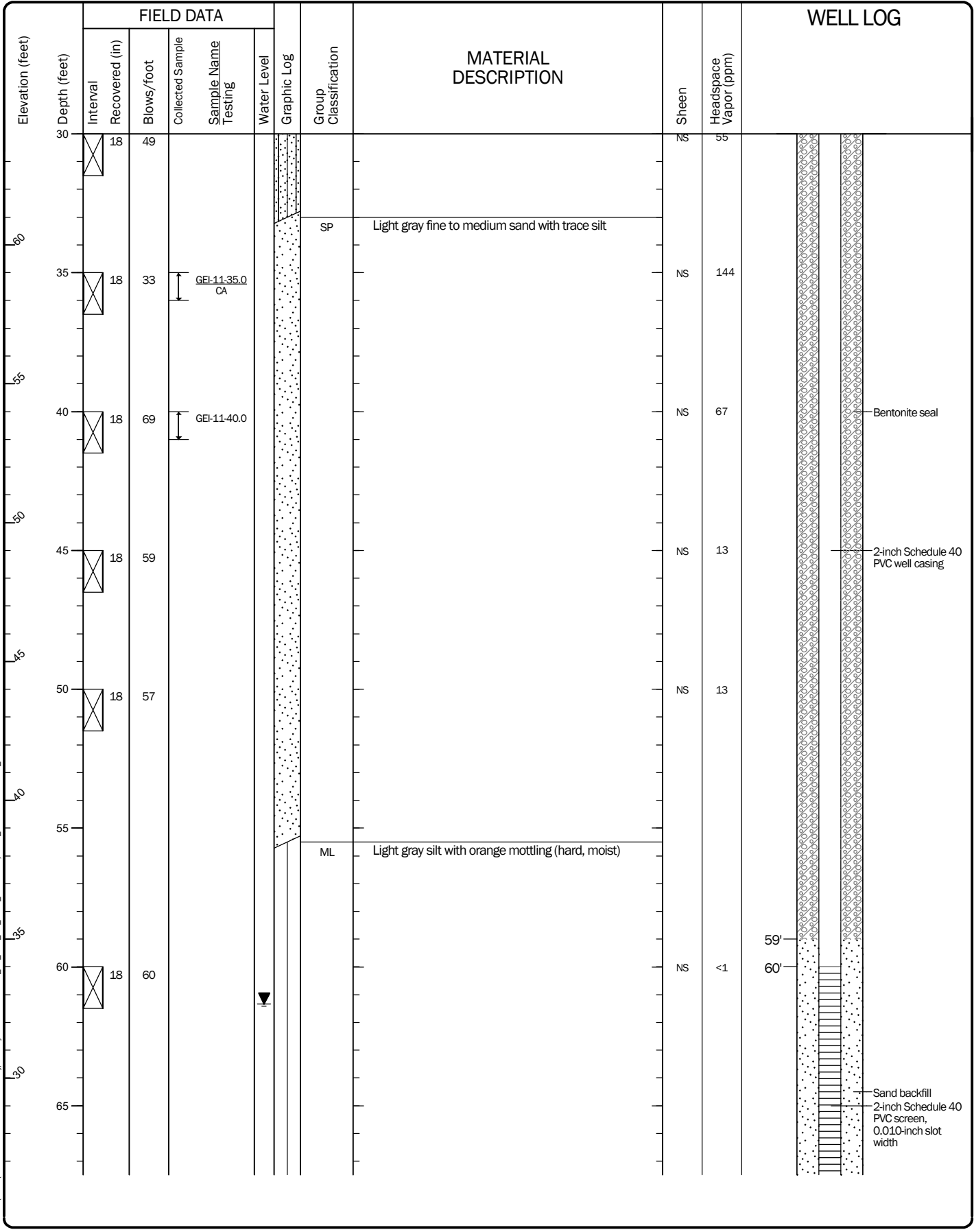
Note: See Figure C-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on North American Datum 1983 (NAD83). Vertical approximated based on LiDAR from Puget Sound LiDAR Consortium dated 2016.

Log of Boring with Monitoring Well GEI-11



Project: 701 South Jackson Street
Project Location: Seattle, Washington
Project Number: 24504-001-01

Date: 5/22 Path: P:\24\24504-001\GINT\24504-001-01.GPJ DBL\library\library\GEOENGINEERS_DF_STD_US_JUNE_2017.GLB\GEB_ENVIRONMENTAL_WELL



Date: 5/22 Path: P:\24\24504001\GINT\24504001.GPJ DBL\library\library\GEOENGINEERS_DF_STD_US_JUNE_2017.GLB\GEBL_ENVIRONMENTAL_WELL

Log of Boring with Monitoring Well GEI-11 (continued)



Project: 701 South Jackson Street
 Project Location: Seattle, Washington
 Project Number: 24504-001-01

Figure C-12
 Sheet 2 of 3

Date: 5/22 Path: P:\24\24504001\GINT\24504001.GPJ DBL\library\library\GEOENGINEERS_DF_STD_US_JUNE_2017.GLB\GEIS_ENVIRONMENTAL_WELL

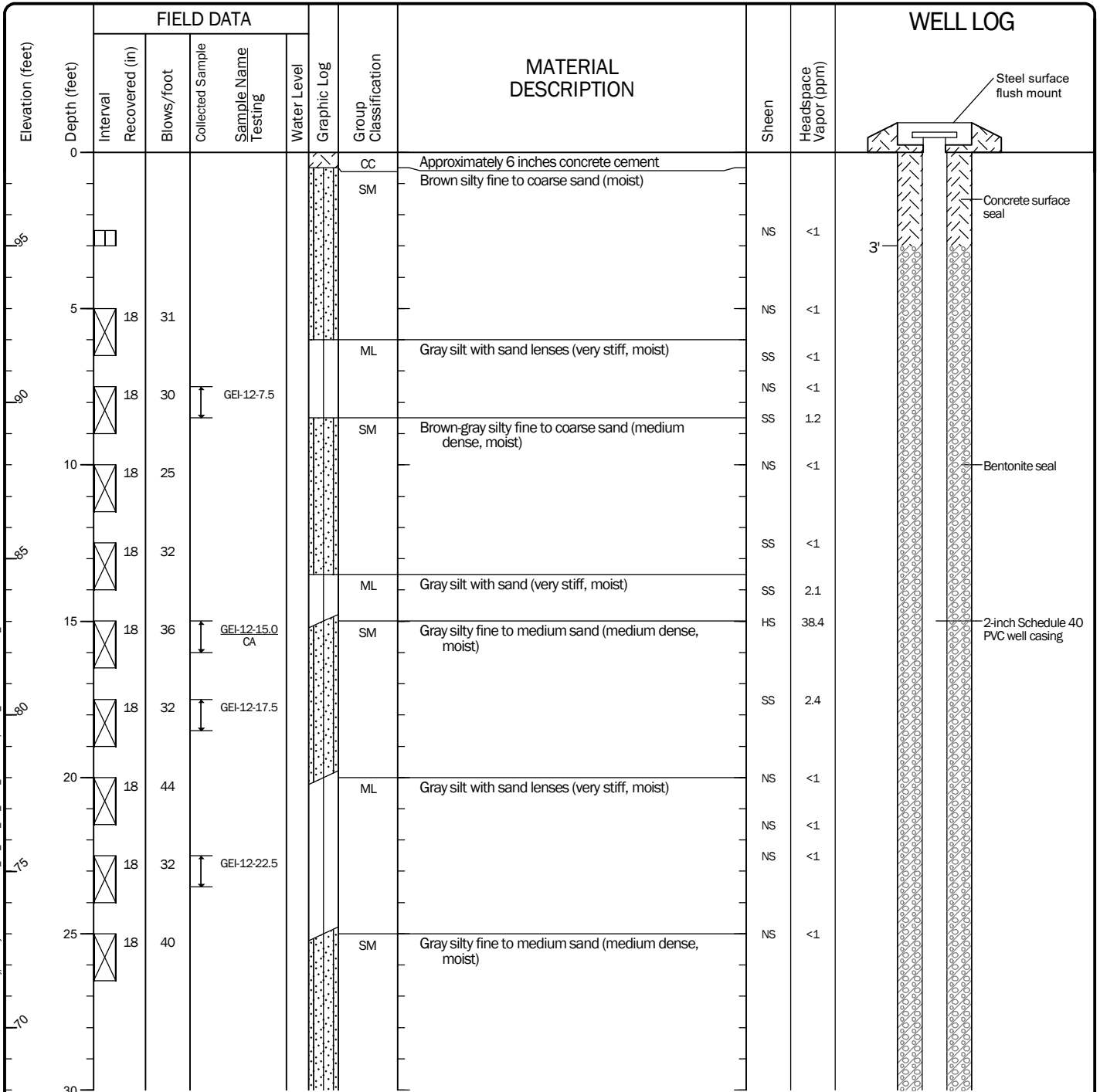
Elevation (feet)	FIELD DATA							MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	WELL LOG
	Depth (feet)	Interval Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing	Water Level	Graphic Log				
70		18	61						NS	<1	

Log of Boring with Monitoring Well GEI-11 (continued)



Project: 701 South Jackson Street
 Project Location: Seattle, Washington
 Project Number: 24504-001-01

Start Drilled 4/6/2022	End 4/6/2022	Total Depth (ft) 75	Logged By Checked By NRS RST	Driller Cascade Drilling LP	Drilling Method Hollow-stem Auger
Hammer Data Autohammer 140 (lbs) / 30 (in) Drop	Drilling Equipment Truck-mounted drill rig		DOE Well I.D.: BNC 886 A 2-in well was installed on 4/6/2022 to a depth of 75 ft.		
Surface Elevation (ft) Vertical Datum 98 NAVD88	Top of Casing Elevation (ft)		Groundwater Date Measured 4/6/2022		
Latitude Longitude 47.599017 -122.323695	Horizontal Datum WGS84		Decimal Degrees	Depth to Water (ft) 66.78	Elevation (ft) 31.22
Notes: Boring cleared from the ground surface to approximately 4 feet below ground surface (bgs) using hand tools.					



Note: See Figure C-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on North American Datum 1983 (NAD83). Vertical approximated based on LiDAR from Puget Sound LiDAR Consortium dated 2016.

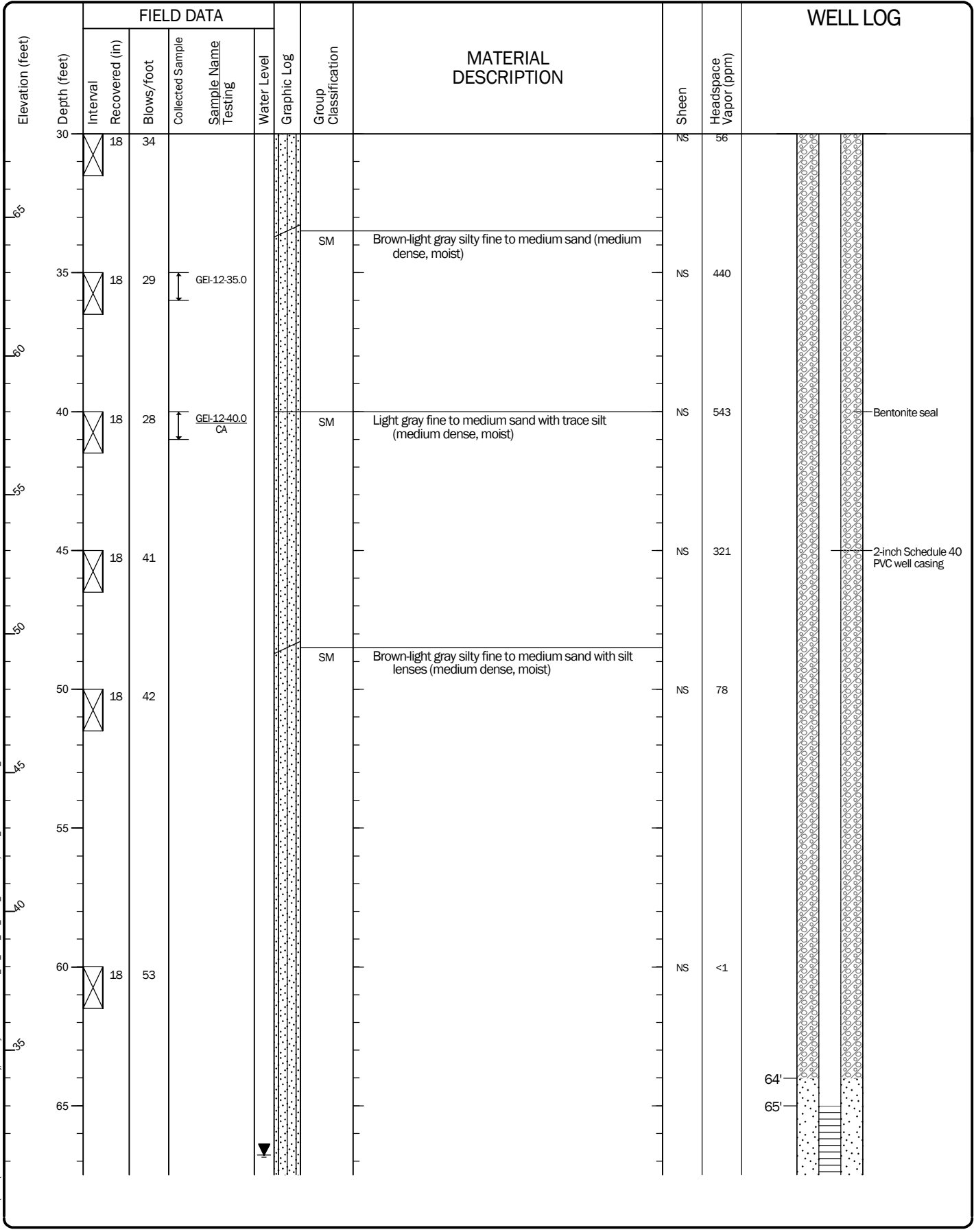
Log of Boring with Monitoring Well GEI-12



Project: 701 South Jackson Street
Project Location: Seattle, Washington
Project Number: 24504-001-01

Figure C-13
Sheet 1 of 3

Date: 5/22 Path: P:\24\24504-001\GINT\24504-001-01.GPJ DBL:library\library\GEOENGINEERS_DF_STD_US_JUNE_2017.GLB\GEB_ENVIRONMENTAL_WELL



Log of Boring with Monitoring Well GEI-12 (continued)

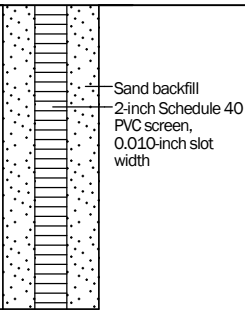


Project: 701 South Jackson Street
 Project Location: Seattle, Washington
 Project Number: 24504-001-01

Date: 5/22 Path: P:\24\24504-001\GINT\24504001.GPJ DBL\library\library\GEOENGINEERS_DF_STD_US_JUNE_2017\GLB\GEI6_ENVIRONMENTAL_WELL

Date: 5/22 Path: P:\24\24504001\GINT\24504001.GPJ DBL\library\library\GEOENGINEERS_DF_STD_US_JUNE_2017.GLB\GEBL_ENVIRONMENTAL_WELL

Elevation (feet)	FIELD DATA						MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	WELL LOG
	Depth (feet)	Interval Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing	Water Level				
80										
70	18	42					SM		NS	<1
75										



Log of Boring with Monitoring Well GEI-12 (continued)



Project: 701 South Jackson Street
 Project Location: Seattle, Washington
 Project Number: 24504-001-01

APPENDIX D
Supplemental Investigation Chemical Analytical Program

APPENDIX D

CHEMICAL ANALYTICAL PROGRAM

Analytical Methods

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

Analytical Data Review

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

Analytical Data Review Summary

Laboratory surrogate recovery limits, matrix spikes, batch QC precision and/or assurance were within control limits based on our review of the laboratory data package. Therefore, in our opinion the data presented in this report are of acceptable quality for their intended use.



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Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

GeoEngineers

Robert Trahan
2101 4th Ave, Suite 950
Seattle, WA 98121

RE: 701 S Jackson
Work Order Number: 2105273

May 25, 2021

Attention Robert Trahan:

Fremont Analytical, Inc. received 20 sample(s) on 5/18/2021 for the analyses presented in the following report.

Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.
Dissolved Mercury by EPA Method 245.1
Dissolved Metals by EPA Method 200.8
Gasoline by NWTPH-Gx
Mercury by EPA Method 245.1
Mercury by EPA Method 7471
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)
Sample Moisture (Percent Moisture)
Total Metals by EPA Method 200.8
Total Metals by EPA Method 6020B
Volatile Organic Compounds by EPA Method 8260D

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

*DoD-ELAP Accreditation #79636 by PJLA, ISO/IEC 17025:2017 and QSM 5.3 for Environmental Testing
ORELAP Certification: WA 100009 (NELAP Recognized) for Environmental Testing
Washington State Department of Ecology Accredited for Environmental Testing, Lab ID C910*

Original



Brianna Barnes
Project Manager

*DoD-ELAP Accreditation #79636 by PJLA, ISO/IEC 17025:2017 and QSM 5.3 for Environmental Testing
ORELAP Certification: WA 100009 (NELAP Recognized) for Environmental Testing
Washington State Department of Ecology Accredited for Environmental Testing, Lab ID C910*

Original

www.fremontanalytical.com



CLIENT: GeoEngineers
Project: 701 S Jackson
Work Order: 2105273

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
2105273-001	GEI-1-2.5	05/18/2021 8:55 AM	05/18/2021 3:44 PM
2105273-002	GEI-1-5.0	05/18/2021 8:55 AM	05/18/2021 3:44 PM
2105273-003	GEI-1-7.5	05/18/2021 9:05 AM	05/18/2021 3:44 PM
2105273-004	GEI-1-10.0	05/18/2021 9:10 AM	05/18/2021 3:44 PM
2105273-005	GEI-1-12.5	05/18/2021 9:20 AM	05/18/2021 3:44 PM
2105273-006	GEI-1-15.0	05/18/2021 9:25 AM	05/18/2021 3:44 PM
2105273-007	GEI-1-17.5	05/18/2021 9:30 AM	05/18/2021 3:44 PM
2105273-008	GEI-1-20.0	05/18/2021 9:35 AM	05/18/2021 3:44 PM
2105273-009	GEI-1-22.5	05/18/2021 9:40 AM	05/18/2021 3:44 PM
2105273-010	GEI-1-25.0	05/18/2021 9:45 AM	05/18/2021 3:44 PM
2105273-011	GEI-1-27.5	05/18/2021 9:50 AM	05/18/2021 3:44 PM
2105273-012	GEI-1-30.0	05/18/2021 10:00 AM	05/18/2021 3:44 PM
2105273-013	GEI-1-35.0	05/18/2021 10:05 AM	05/18/2021 3:44 PM
2105273-014	GEI-1-40.0	05/18/2021 10:15 AM	05/18/2021 3:44 PM
2105273-015	GEI-1-50.0	05/18/2021 10:35 AM	05/18/2021 3:44 PM
2105273-016	GEI-1-60.0	05/18/2021 10:55 AM	05/18/2021 3:44 PM
2105273-017	GEI-1-70.0	05/18/2021 12:15 PM	05/18/2021 3:44 PM
2105273-018	GEI-1-75.0	05/18/2021 12:30 PM	05/18/2021 3:44 PM
2105273-019	GEI-1-20210518	05/18/2021 1:00 PM	05/18/2021 3:44 PM
2105273-020	Trip Blank		05/18/2021 3:44 PM

Note: If no "Time Collected" is supplied, a default of 12:00AM is assigned

CLIENT: GeoEngineers

Project: 701 S Jackson

I. SAMPLE RECEIPT:

Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:

Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:

Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Qualifiers:

- * - Flagged value is not within established control limits
- B - Analyte detected in the associated Method Blank
- D - Dilution was required
- E - Value above quantitation range
- H - Holding times for preparation or analysis exceeded
- I - Analyte with an internal standard that does not meet established acceptance criteria
- J - Analyte detected below Reporting Limit
- N - Tentatively Identified Compound (TIC)
- Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria
- S - Spike recovery outside accepted recovery limits
- ND - Not detected at the Reporting Limit
- R - High relative percent difference observed

Acronyms:

- %Rec - Percent Recovery
- CCB - Continued Calibration Blank
- CCV - Continued Calibration Verification
- DF - Dilution Factor
- DUP - Sample Duplicate
- HEM - Hexane Extractable Material
- ICV - Initial Calibration Verification
- LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
- MCL - Maximum Contaminant Level
- MB or MBLANK - Method Blank
- MDL - Method Detection Limit
- MS/MSD - Matrix Spike / Matrix Spike Duplicate
- PDS - Post Digestion Spike
- Ref Val - Reference Value
- REP - Sample Replicate
- RL - Reporting Limit
- RPD - Relative Percent Difference
- SD - Serial Dilution
- SGT - Silica Gel Treatment
- SPK - Spike
- Surr - Surrogate



Client: GeoEngineers

Collection Date: 5/18/2021 8:55:00 AM

Project: 701 S Jackson

Lab ID: 2105273-002

Matrix: Soil

Client Sample ID: GEI-1-5.0

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.

Batch ID: 32392

Analyst: MM

Diesel (Fuel Oil)	ND	54.4		mg/Kg-dry	1	5/24/2021 12:15:17 PM
Heavy Oil	ND	109		mg/Kg-dry	1	5/24/2021 12:15:17 PM
Total Petroleum Hydrocarbons	ND	163		mg/Kg-dry	1	5/24/2021 12:15:17 PM
Surr: 2-Fluorobiphenyl	98.9	50 - 150		%Rec	1	5/24/2021 12:15:17 PM
Surr: o-Terphenyl	112	50 - 150		%Rec	1	5/24/2021 12:15:17 PM

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 32353

Analyst: SB

Naphthalene	ND	20.9		µg/Kg-dry	1	5/19/2021 9:37:01 PM
2-Methylnaphthalene	ND	20.9		µg/Kg-dry	1	5/19/2021 9:37:01 PM
1-Methylnaphthalene	ND	20.9		µg/Kg-dry	1	5/19/2021 9:37:01 PM
Acenaphthylene	ND	20.9		µg/Kg-dry	1	5/19/2021 9:37:01 PM
Acenaphthene	ND	20.9		µg/Kg-dry	1	5/19/2021 9:37:01 PM
Fluorene	ND	20.9		µg/Kg-dry	1	5/19/2021 9:37:01 PM
Phenanthrene	ND	41.9		µg/Kg-dry	1	5/19/2021 9:37:01 PM
Anthracene	ND	41.9		µg/Kg-dry	1	5/19/2021 9:37:01 PM
Fluoranthene	ND	41.9		µg/Kg-dry	1	5/19/2021 9:37:01 PM
Pyrene	ND	41.9		µg/Kg-dry	1	5/19/2021 9:37:01 PM
Benz(a)anthracene	ND	20.9		µg/Kg-dry	1	5/19/2021 9:37:01 PM
Chrysene	ND	41.9		µg/Kg-dry	1	5/19/2021 9:37:01 PM
Benzo(b)fluoranthene	ND	20.9		µg/Kg-dry	1	5/19/2021 9:37:01 PM
Benzo(k)fluoranthene	ND	20.9		µg/Kg-dry	1	5/19/2021 9:37:01 PM
Benzo(a)pyrene	ND	20.9		µg/Kg-dry	1	5/19/2021 9:37:01 PM
Indeno(1,2,3-cd)pyrene	ND	41.9		µg/Kg-dry	1	5/19/2021 9:37:01 PM
Dibenz(a,h)anthracene	ND	41.9		µg/Kg-dry	1	5/19/2021 9:37:01 PM
Benzo(g,h,i)perylene	ND	20.9		µg/Kg-dry	1	5/19/2021 9:37:01 PM
Surr: 2-Fluorobiphenyl	76.5	19 - 135		%Rec	1	5/19/2021 9:37:01 PM
Surr: Terphenyl-d14 (surr)	98.5	42.9 - 156		%Rec	1	5/19/2021 9:37:01 PM

Gasoline by NWTPH-Gx

Batch ID: 32349

Analyst: KT

Gasoline	ND	5.02		mg/Kg-dry	1	5/19/2021 11:16:50 AM
Surr: Toluene-d8	102	65 - 135		%Rec	1	5/19/2021 11:16:50 AM
Surr: 4-Bromofluorobenzene	99.4	65 - 135		%Rec	1	5/19/2021 11:16:50 AM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 32349

Analyst: KT

Benzene	ND	0.0201		mg/Kg-dry	1	5/19/2021 11:16:50 AM
Toluene	ND	0.0301		mg/Kg-dry	1	5/19/2021 11:16:50 AM



Client: GeoEngineers

Collection Date: 5/18/2021 8:55:00 AM

Project: 701 S Jackson

Lab ID: 2105273-002

Matrix: Soil

Client Sample ID: GEI-1-5.0

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260D

Batch ID: 32349

Analyst: KT

Ethylbenzene	ND	0.0251		mg/Kg-dry	1	5/19/2021 11:16:50 AM
m,p-Xylene	ND	0.0502		mg/Kg-dry	1	5/19/2021 11:16:50 AM
o-Xylene	ND	0.0251		mg/Kg-dry	1	5/19/2021 11:16:50 AM
Surr: Dibromofluoromethane	92.2	81.9 - 113		%Rec	1	5/19/2021 11:16:50 AM
Surr: Toluene-d8	103	82.7 - 115		%Rec	1	5/19/2021 11:16:50 AM
Surr: 1-Bromo-4-fluorobenzene	97.0	87.9 - 109		%Rec	1	5/19/2021 11:16:50 AM

Mercury by EPA Method 7471

Batch ID: 32409

Analyst: LB

Mercury	ND	0.264		mg/Kg-dry	1	5/25/2021 1:14:39 PM
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Total Metals by EPA Method 6020B

Batch ID: 32387

Analyst: EH

Arsenic	1.53	0.103		mg/Kg-dry	1	5/24/2021 5:35:45 PM
Barium	40.1	0.514		mg/Kg-dry	1	5/24/2021 5:35:45 PM
Cadmium	ND	0.171		mg/Kg-dry	1	5/24/2021 5:35:45 PM
Chromium	27.6	0.343		mg/Kg-dry	1	5/24/2021 5:35:45 PM
Lead	1.57	0.171		mg/Kg-dry	1	5/24/2021 5:35:45 PM
Selenium	1.01	0.171		mg/Kg-dry	1	5/24/2021 5:35:45 PM
Silver	ND	0.129		mg/Kg-dry	1	5/24/2021 5:35:45 PM

Sample Moisture (Percent Moisture)

Batch ID: R67415

Analyst: KJ

Percent Moisture	8.87			wt%	1	5/24/2021 9:03:03 AM
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Client: GeoEngineers

Collection Date: 5/18/2021 9:20:00 AM

Project: 701 S Jackson

Lab ID: 2105273-005

Matrix: Soil

Client Sample ID: GEI-1-12.5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.

Batch ID: 32392

Analyst: MM

Diesel (Fuel Oil)	ND	51.8		mg/Kg-dry	1	5/21/2021 8:41:32 PM
Heavy Oil	ND	104		mg/Kg-dry	1	5/21/2021 8:41:32 PM
Total Petroleum Hydrocarbons	ND	156		mg/Kg-dry	1	5/21/2021 8:41:32 PM
Surr: 2-Fluorobiphenyl	73.4	50 - 150		%Rec	1	5/21/2021 8:41:32 PM
Surr: o-Terphenyl	85.1	50 - 150		%Rec	1	5/21/2021 8:41:32 PM

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 32353

Analyst: SB

Naphthalene	26.3	19.4		µg/Kg-dry	1	5/19/2021 9:58:24 PM
2-Methylnaphthalene	33.3	19.4		µg/Kg-dry	1	5/19/2021 9:58:24 PM
1-Methylnaphthalene	ND	19.4		µg/Kg-dry	1	5/19/2021 9:58:24 PM
Acenaphthylene	ND	19.4		µg/Kg-dry	1	5/19/2021 9:58:24 PM
Acenaphthene	ND	19.4		µg/Kg-dry	1	5/19/2021 9:58:24 PM
Fluorene	ND	19.4		µg/Kg-dry	1	5/19/2021 9:58:24 PM
Phenanthrene	ND	38.9		µg/Kg-dry	1	5/19/2021 9:58:24 PM
Anthracene	ND	38.9		µg/Kg-dry	1	5/19/2021 9:58:24 PM
Fluoranthene	ND	38.9		µg/Kg-dry	1	5/19/2021 9:58:24 PM
Pyrene	ND	38.9		µg/Kg-dry	1	5/19/2021 9:58:24 PM
Benz(a)anthracene	ND	19.4		µg/Kg-dry	1	5/19/2021 9:58:24 PM
Chrysene	ND	38.9		µg/Kg-dry	1	5/19/2021 9:58:24 PM
Benzo(b)fluoranthene	ND	19.4		µg/Kg-dry	1	5/19/2021 9:58:24 PM
Benzo(k)fluoranthene	ND	19.4		µg/Kg-dry	1	5/19/2021 9:58:24 PM
Benzo(a)pyrene	ND	19.4		µg/Kg-dry	1	5/19/2021 9:58:24 PM
Indeno(1,2,3-cd)pyrene	ND	38.9		µg/Kg-dry	1	5/19/2021 9:58:24 PM
Dibenz(a,h)anthracene	ND	38.9		µg/Kg-dry	1	5/19/2021 9:58:24 PM
Benzo(g,h,i)perylene	ND	19.4		µg/Kg-dry	1	5/19/2021 9:58:24 PM
Surr: 2-Fluorobiphenyl	80.7	19 - 135		%Rec	1	5/19/2021 9:58:24 PM
Surr: Terphenyl-d14 (surr)	108	42.9 - 156		%Rec	1	5/19/2021 9:58:24 PM

Gasoline by NWTPH-Gx

Batch ID: 32349

Analyst: KT

Gasoline	57.9	49.2	D	mg/Kg-dry	10	5/20/2021 6:50:00 AM
Surr: Toluene-d8	101	65 - 135	D	%Rec	10	5/20/2021 6:50:00 AM
Surr: 4-Bromofluorobenzene	100	65 - 135	D	%Rec	10	5/20/2021 6:50:00 AM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 32349

Analyst: KT

Benzene	ND	0.0197		mg/Kg-dry	1	5/19/2021 2:19:06 PM
Toluene	0.124	0.0295		mg/Kg-dry	1	5/19/2021 2:19:06 PM



Client: GeoEngineers

Collection Date: 5/18/2021 9:20:00 AM

Project: 701 S Jackson

Lab ID: 2105273-005

Matrix: Soil

Client Sample ID: GEI-1-12.5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260D

Batch ID: 32349 Analyst: KT

Ethylbenzene	0.920	0.0246		mg/Kg-dry	1	5/19/2021 2:19:06 PM
m,p-Xylene	2.65	0.0492		mg/Kg-dry	1	5/19/2021 2:19:06 PM
o-Xylene	0.602	0.0246		mg/Kg-dry	1	5/19/2021 2:19:06 PM
Surr: Dibromofluoromethane	95.9	81.9 - 113		%Rec	1	5/19/2021 2:19:06 PM
Surr: Toluene-d8	104	82.7 - 115		%Rec	1	5/19/2021 2:19:06 PM
Surr: 1-Bromo-4-fluorobenzene	105	87.9 - 109		%Rec	1	5/19/2021 2:19:06 PM

Mercury by EPA Method 7471

Batch ID: 32409 Analyst: LB

Mercury	ND	0.279		mg/Kg-dry	1	5/25/2021 1:16:16 PM
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Total Metals by EPA Method 6020B

Batch ID: 32387 Analyst: EH

Arsenic	1.60	0.106		mg/Kg-dry	1	5/24/2021 5:41:18 PM
Barium	32.0	0.530		mg/Kg-dry	1	5/24/2021 5:41:18 PM
Cadmium	ND	0.177		mg/Kg-dry	1	5/24/2021 5:41:18 PM
Chromium	26.6	0.353		mg/Kg-dry	1	5/24/2021 5:41:18 PM
Lead	1.62	0.177		mg/Kg-dry	1	5/24/2021 5:41:18 PM
Selenium	1.07	0.177		mg/Kg-dry	1	5/24/2021 5:41:18 PM
Silver	ND	0.132		mg/Kg-dry	1	5/24/2021 5:41:18 PM

Sample Moisture (Percent Moisture)

Batch ID: R67415 Analyst: KJ

Percent Moisture	12.2			wt%	1	5/24/2021 9:03:03 AM
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Client: GeoEngineers

Collection Date: 5/18/2021 9:30:00 AM

Project: 701 S Jackson

Lab ID: 2105273-007

Matrix: Soil

Client Sample ID: GEI-1-17.5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.

Batch ID: 32392

Analyst: MM

Diesel (Fuel Oil)	ND	53.6		mg/Kg-dry	1	5/21/2021 8:54:10 PM
Heavy Oil	ND	107		mg/Kg-dry	1	5/21/2021 8:54:10 PM
Total Petroleum Hydrocarbons	ND	161		mg/Kg-dry	1	5/21/2021 8:54:10 PM
Surr: 2-Fluorobiphenyl	80.0	50 - 150		%Rec	1	5/21/2021 8:54:10 PM
Surr: o-Terphenyl	88.6	50 - 150		%Rec	1	5/21/2021 8:54:10 PM

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 32353

Analyst: SB

Naphthalene	ND	20.2		µg/Kg-dry	1	5/19/2021 10:19:41 PM
2-Methylnaphthalene	ND	20.2		µg/Kg-dry	1	5/19/2021 10:19:41 PM
1-Methylnaphthalene	ND	20.2		µg/Kg-dry	1	5/19/2021 10:19:41 PM
Acenaphthylene	ND	20.2		µg/Kg-dry	1	5/19/2021 10:19:41 PM
Acenaphthene	ND	20.2		µg/Kg-dry	1	5/19/2021 10:19:41 PM
Fluorene	ND	20.2		µg/Kg-dry	1	5/19/2021 10:19:41 PM
Phenanthrene	ND	40.4		µg/Kg-dry	1	5/19/2021 10:19:41 PM
Anthracene	ND	40.4		µg/Kg-dry	1	5/19/2021 10:19:41 PM
Fluoranthene	ND	40.4		µg/Kg-dry	1	5/19/2021 10:19:41 PM
Pyrene	ND	40.4		µg/Kg-dry	1	5/19/2021 10:19:41 PM
Benz(a)anthracene	ND	20.2		µg/Kg-dry	1	5/19/2021 10:19:41 PM
Chrysene	ND	40.4		µg/Kg-dry	1	5/19/2021 10:19:41 PM
Benzo(b)fluoranthene	ND	20.2		µg/Kg-dry	1	5/19/2021 10:19:41 PM
Benzo(k)fluoranthene	ND	20.2		µg/Kg-dry	1	5/19/2021 10:19:41 PM
Benzo(a)pyrene	ND	20.2		µg/Kg-dry	1	5/19/2021 10:19:41 PM
Indeno(1,2,3-cd)pyrene	ND	40.4		µg/Kg-dry	1	5/19/2021 10:19:41 PM
Dibenz(a,h)anthracene	ND	40.4		µg/Kg-dry	1	5/19/2021 10:19:41 PM
Benzo(g,h,i)perylene	ND	20.2		µg/Kg-dry	1	5/19/2021 10:19:41 PM
Surr: 2-Fluorobiphenyl	75.9	19 - 135		%Rec	1	5/19/2021 10:19:41 PM
Surr: Terphenyl-d14 (surr)	96.2	42.9 - 156		%Rec	1	5/19/2021 10:19:41 PM

Gasoline by NWTPH-Gx

Batch ID: 32349

Analyst: KT

Gasoline	ND	4.94		mg/Kg-dry	1	5/19/2021 12:17:34 PM
Surr: Toluene-d8	102	65 - 135		%Rec	1	5/19/2021 12:17:34 PM
Surr: 4-Bromofluorobenzene	98.8	65 - 135		%Rec	1	5/19/2021 12:17:34 PM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 32349

Analyst: KT

Benzene	ND	0.0198		mg/Kg-dry	1	5/19/2021 12:17:34 PM
Toluene	ND	0.0297		mg/Kg-dry	1	5/19/2021 12:17:34 PM



Client: GeoEngineers

Collection Date: 5/18/2021 9:30:00 AM

Project: 701 S Jackson

Lab ID: 2105273-007

Matrix: Soil

Client Sample ID: GEI-1-17.5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260D

Batch ID: 32349

Analyst: KT

Ethylbenzene	ND	0.0247		mg/Kg-dry	1	5/19/2021 12:17:34 PM
m,p-Xylene	ND	0.0494		mg/Kg-dry	1	5/19/2021 12:17:34 PM
o-Xylene	ND	0.0247		mg/Kg-dry	1	5/19/2021 12:17:34 PM
Surr: Dibromofluoromethane	97.8	81.9 - 113		%Rec	1	5/19/2021 12:17:34 PM
Surr: Toluene-d8	102	82.7 - 115		%Rec	1	5/19/2021 12:17:34 PM
Surr: 1-Bromo-4-fluorobenzene	96.3	87.9 - 109		%Rec	1	5/19/2021 12:17:34 PM

Mercury by EPA Method 7471

Batch ID: 32409

Analyst: LB

Mercury	ND	0.284		mg/Kg-dry	1	5/25/2021 1:21:07 PM
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Total Metals by EPA Method 6020B

Batch ID: 32387

Analyst: EH

Arsenic	3.58	0.111		mg/Kg-dry	1	5/24/2021 5:46:51 PM
Barium	36.1	0.556		mg/Kg-dry	1	5/24/2021 5:46:51 PM
Cadmium	ND	0.185		mg/Kg-dry	1	5/24/2021 5:46:51 PM
Chromium	27.2	0.371		mg/Kg-dry	1	5/24/2021 5:46:51 PM
Lead	1.64	0.185		mg/Kg-dry	1	5/24/2021 5:46:51 PM
Selenium	0.805	0.185		mg/Kg-dry	1	5/24/2021 5:46:51 PM
Silver	ND	0.139		mg/Kg-dry	1	5/24/2021 5:46:51 PM

Sample Moisture (Percent Moisture)

Batch ID: R67415

Analyst: KJ

Percent Moisture	17.0			wt%	1	5/24/2021 9:03:03 AM
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Client: GeoEngineers

Collection Date: 5/18/2021 1:00:00 PM

Project: 701 S Jackson

Lab ID: 2105273-019

Matrix: Groundwater

Client Sample ID: GEI-1-20210518

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.

Batch ID: 32350

Analyst: MM

Diesel (Fuel Oil)	ND	98.2		µg/L	1	5/20/2021 2:23:03 PM
Diesel Range Organics (C12-C24)	176	98.2		µg/L	1	5/20/2021 2:23:03 PM
Heavy Oil	ND	98.2		µg/L	1	5/20/2021 2:23:03 PM
Total Petroleum Hydrocarbons	207	196		µg/L	1	5/20/2021 2:23:03 PM
Surr: 2-Fluorobiphenyl	95.6	50 - 150		%Rec	1	5/20/2021 2:23:03 PM
Surr: o-Terphenyl	96.6	50 - 150		%Rec	1	5/20/2021 2:23:03 PM

NOTES:

Diesel Range Organics - Indicates unresolved compounds in the Diesel range inconsistent with a known petroleum standard.

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 32369

Analyst: SB

Naphthalene	0.263	0.0994		µg/L	1	5/21/2021 3:25:04 PM
2-Methylnaphthalene	0.170	0.0994		µg/L	1	5/21/2021 3:25:04 PM
1-Methylnaphthalene	0.105	0.0994		µg/L	1	5/21/2021 3:25:04 PM
Acenaphthylene	ND	0.0994		µg/L	1	5/21/2021 3:25:04 PM
Acenaphthene	ND	0.0994		µg/L	1	5/21/2021 3:25:04 PM
Fluorene	ND	0.0994		µg/L	1	5/21/2021 3:25:04 PM
Phenanthrene	ND	0.0994		µg/L	1	5/21/2021 3:25:04 PM
Anthracene	ND	0.0994		µg/L	1	5/21/2021 3:25:04 PM
Fluoranthene	ND	0.0994		µg/L	1	5/21/2021 3:25:04 PM
Pyrene	ND	0.0994		µg/L	1	5/21/2021 3:25:04 PM
Benz(a)anthracene	ND	0.0994		µg/L	1	5/21/2021 3:25:04 PM
Chrysene	ND	0.0994		µg/L	1	5/21/2021 3:25:04 PM
Benzo(b)fluoranthene	ND	0.0994		µg/L	1	5/21/2021 3:25:04 PM
Benzo(k)fluoranthene	ND	0.0994		µg/L	1	5/21/2021 3:25:04 PM
Benzo(a)pyrene	ND	0.0994		µg/L	1	5/21/2021 3:25:04 PM
Indeno(1,2,3-cd)pyrene	ND	0.0994		µg/L	1	5/21/2021 3:25:04 PM
Dibenz(a,h)anthracene	ND	0.0994		µg/L	1	5/21/2021 3:25:04 PM
Benzo(g,h,i)perylene	ND	0.0994		µg/L	1	5/21/2021 3:25:04 PM
Surr: 2-Fluorobiphenyl	97.3	33.2 - 139		%Rec	1	5/21/2021 3:25:04 PM
Surr: Terphenyl-d14	88.6	24.6 - 136		%Rec	1	5/21/2021 3:25:04 PM

Gasoline by NWTPH-Gx

Batch ID: 32356

Analyst: CR

Gasoline	54.6	50.0		µg/L	1	5/20/2021 2:42:13 PM
Surr: Toluene-d8	104	65 - 135		%Rec	1	5/20/2021 2:42:13 PM
Surr: 4-Bromofluorobenzene	97.0	65 - 135		%Rec	1	5/20/2021 2:42:13 PM



Client: GeoEngineers

Collection Date: 5/18/2021 1:00:00 PM

Project: 701 S Jackson

Lab ID: 2105273-019

Matrix: Groundwater

Client Sample ID: GEI-1-20210518

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260D

Batch ID: 32356

Analyst: KT

Benzene	ND	0.440		µg/L	1	5/20/2021 2:42:13 PM
Toluene	ND	0.750		µg/L	1	5/20/2021 2:42:13 PM
Ethylbenzene	0.980	0.400		µg/L	1	5/20/2021 2:42:13 PM
m,p-Xylene	2.64	1.00		µg/L	1	5/20/2021 2:42:13 PM
o-Xylene	0.634	0.500		µg/L	1	5/20/2021 2:42:13 PM
Surr: Dibromofluoromethane	105	80.7 - 121		%Rec	1	5/20/2021 2:42:13 PM
Surr: Toluene-d8	104	84.5 - 116		%Rec	1	5/20/2021 2:42:13 PM
Surr: 1-Bromo-4-fluorobenzene	97.6	86 - 108		%Rec	1	5/20/2021 2:42:13 PM

Mercury by EPA Method 245.1

Batch ID: 32388

Analyst: LB

Mercury	0.304	0.100		µg/L	1	5/21/2021 4:33:23 PM
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Dissolved Mercury by EPA Method 245.1

Batch ID: 32433

Analyst: LB

Mercury	ND	0.100		µg/L	1	5/25/2021 4:23:19 PM
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Dissolved Metals by EPA Method 200.8

Batch ID: 32386

Analyst: EH

Arsenic	1.23	1.00		µg/L	1	5/22/2021 12:07:41 AM
Cadmium	ND	0.125		µg/L	1	5/22/2021 12:07:41 AM
Chromium	ND	0.750		µg/L	1	5/22/2021 12:07:41 AM
Lead	ND	0.500		µg/L	1	5/22/2021 12:07:41 AM

Total Metals by EPA Method 200.8

Batch ID: 32346

Analyst: EH

Arsenic	6.75	1.00		µg/L	1	5/24/2021 1:17:30 PM
Cadmium	0.247	0.200		µg/L	1	5/24/2021 1:17:30 PM
Chromium	8.39	1.00		µg/L	1	5/24/2021 1:17:30 PM
Lead	4.61	0.500		µg/L	1	5/24/2021 1:17:30 PM

Work Order: 2105273
 CLIENT: GeoEngineers
 Project: 701 S Jackson

QC SUMMARY REPORT
Dissolved Metals by EPA Method 200.8

Sample ID: MB-32385FB	SampType: MBLK	Units: µg/L			Prep Date: 5/21/2021	RunNo: 67408					
Client ID: MBLKW	Batch ID: 32386				Analysis Date: 5/21/2021	SeqNo: 1359063					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Arsenic	ND	1.00									
Cadmium	ND	0.125									
Chromium	ND	0.750									
Lead	ND	0.500									

Sample ID: MB-32386	SampType: MBLK	Units: µg/L			Prep Date: 5/21/2021	RunNo: 67408					
Client ID: MBLKW	Batch ID: 32386				Analysis Date: 5/21/2021	SeqNo: 1359064					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Arsenic	ND	1.00									
Cadmium	ND	0.125									
Chromium	ND	0.750									
Lead	ND	0.500									

Sample ID: LCS-32386	SampType: LCS	Units: µg/L			Prep Date: 5/21/2021	RunNo: 67408					
Client ID: LCSW	Batch ID: 32386				Analysis Date: 5/21/2021	SeqNo: 1359065					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Arsenic	108	1.00	100.0	0	108	85	115				
Cadmium	4.91	0.125	5.000	0	98.2	85	115				
Chromium	110	0.750	100.0	0	110	85	115				
Lead	50.3	0.500	50.00	0	101	85	115				

Sample ID: 2105221-001CDUP	SampType: DUP	Units: µg/L			Prep Date: 5/21/2021	RunNo: 67408					
Client ID: BATCH	Batch ID: 32386				Analysis Date: 5/21/2021	SeqNo: 1359067					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Arsenic	8.96	1.00						9.302	3.78	30	
Cadmium	ND	0.125						0		30	

Work Order: 2105273
 CLIENT: GeoEngineers
 Project: 701 S Jackson

QC SUMMARY REPORT
Dissolved Metals by EPA Method 200.8

Sample ID: 2105221-001CDUP	SampType: DUP	Units: µg/L			Prep Date: 5/21/2021	RunNo: 67408					
Client ID: BATCH	Batch ID: 32386				Analysis Date: 5/21/2021	SeqNo: 1359067					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium	2.90	0.750						2.962	2.10	30	
Lead	ND	0.500						0		30	

Sample ID: 2105221-001CMS	SampType: MS	Units: µg/L			Prep Date: 5/21/2021	RunNo: 67408					
Client ID: BATCH	Batch ID: 32386				Analysis Date: 5/21/2021	SeqNo: 1359068					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Arsenic	553	1.00	500.0	9.302	109	70	130				
Cadmium	25.0	0.125	25.00	0	100	70	130				
Chromium	562	0.750	500.0	2.962	112	70	130				
Lead	241	0.500	250.0	0	96.3	70	130				

Sample ID: 2105221-001CMSD	SampType: MSD	Units: µg/L			Prep Date: 5/21/2021	RunNo: 67408					
Client ID: BATCH	Batch ID: 32386				Analysis Date: 5/21/2021	SeqNo: 1359069					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Arsenic	573	1.00	500.0	9.302	113	70	130	552.9	3.57	30	
Cadmium	25.3	0.125	25.00	0	101	70	130	25.02	1.10	30	
Chromium	569	0.750	500.0	2.962	113	70	130	561.7	1.24	30	
Lead	245	0.500	250.0	0	98.0	70	130	240.7	1.77	30	

Work Order: 2105273
CLIENT: GeoEngineers
Project: 701 S Jackson

QC SUMMARY REPORT
Total Metals by EPA Method 200.8

Sample ID: MB-32346	SampType: MBLK	Units: µg/L	Prep Date: 5/19/2021	RunNo: 67387							
Client ID: MBLKW	Batch ID: 32346		Analysis Date: 5/20/2021	SeqNo: 1358456							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Arsenic	ND	1.00									
Cadmium	ND	0.200									
Chromium	ND	1.00									
Lead	ND	1.00									

Sample ID: LCS-32346	SampType: LCS	Units: µg/L	Prep Date: 5/19/2021	RunNo: 67387							
Client ID: LCSW	Batch ID: 32346		Analysis Date: 5/20/2021	SeqNo: 1358457							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Arsenic	110	1.00	100.0	0	110	85	115				
Cadmium	5.47	0.200	5.000	0	109	85	115				
Chromium	111	1.00	100.0	0	111	85	115				
Lead	51.3	1.00	50.00	0	103	85	115				

Sample ID: 2105258-001EDUP	SampType: DUP	Units: µg/L	Prep Date: 5/19/2021	RunNo: 67387							
Client ID: BATCH	Batch ID: 32346		Analysis Date: 5/20/2021	SeqNo: 1358459							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Arsenic	ND	1.00						1.912	92.9	30	R
Cadmium	ND	0.200						0		30	
Chromium	7.81	1.00						8.506	8.48	30	
Lead	ND	1.00						0		30	

NOTES:

R - High RPD due to low analyte concentration. In this range, high RPD's may be expected.

Sample ID: 2105258-001EMS	SampType: MS	Units: µg/L	Prep Date: 5/19/2021	RunNo: 67387							
Client ID: BATCH	Batch ID: 32346		Analysis Date: 5/20/2021	SeqNo: 1358460							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Arsenic	527	1.00	500.0	1.912	105	70	130				
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Work Order: 2105273
CLIENT: GeoEngineers
Project: 701 S Jackson

QC SUMMARY REPORT
Total Metals by EPA Method 200.8

Sample ID: 2105258-001EMS		SampType: MS		Units: µg/L		Prep Date: 5/19/2021		RunNo: 67387			
Client ID: BATCH		Batch ID: 32346				Analysis Date: 5/20/2021		SeqNo: 1358460			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Cadmium	27.9	0.200	25.00	0.05000	111	70	130				
Chromium	538	1.00	500.0	8.506	106	70	130				
Lead	252	1.00	250.0	0.3425	101	70	130				

Sample ID: 2105258-001EMSD		SampType: MSD		Units: µg/L		Prep Date: 5/19/2021		RunNo: 67387			
Client ID: BATCH		Batch ID: 32346				Analysis Date: 5/20/2021		SeqNo: 1358461			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Arsenic	554	1.00	500.0	1.912	110	70	130	526.7	5.08	30	
Cadmium	28.0	0.200	25.00	0.05000	112	70	130	27.87	0.347	30	
Chromium	575	1.00	500.0	8.506	113	70	130	538.3	6.60	30	
Lead	254	1.00	250.0	0.3425	101	70	130	252.0	0.622	30	

Work Order: 2105273
 CLIENT: GeoEngineers
 Project: 701 S Jackson

QC SUMMARY REPORT
Mercury by EPA Method 245.1

Sample ID: MB-32388	SampType: MBLK	Units: µg/L	Prep Date: 5/21/2021	RunNo: 67402							
Client ID: MBLKW	Batch ID: 32388		Analysis Date: 5/21/2021	SeqNo: 1359150							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury ND 0.100

Sample ID: LCS-32388	SampType: LCS	Units: µg/L	Prep Date: 5/21/2021	RunNo: 67402							
Client ID: LCSW	Batch ID: 32388		Analysis Date: 5/21/2021	SeqNo: 1359151							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury 2.58 0.100 2.500 0 103 85 115

Sample ID: 2105290-001ADUP	SampType: DUP	Units: µg/L	Prep Date: 5/21/2021	RunNo: 67402							
Client ID: BATCH	Batch ID: 32388		Analysis Date: 5/21/2021	SeqNo: 1359153							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury ND 1.00 0 20

Sample ID: 2105290-001AMS	SampType: MS	Units: µg/L	Prep Date: 5/21/2021	RunNo: 67402							
Client ID: BATCH	Batch ID: 32388		Analysis Date: 5/21/2021	SeqNo: 1359154							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury 25.8 1.00 25.00 0 103 70 130

Sample ID: 2105290-001AMSD	SampType: MSD	Units: µg/L	Prep Date: 5/21/2021	RunNo: 67402							
Client ID: BATCH	Batch ID: 32388		Analysis Date: 5/21/2021	SeqNo: 1359155							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury 25.9 1.00 25.00 0 104 70 130 25.80 0.387 20

Work Order: 2105273
CLIENT: GeoEngineers
Project: 701 S Jackson

QC SUMMARY REPORT
Mercury by EPA Method 245.1

Sample ID: MB-32362FB	SampType: MBLK	Units: µg/L	Prep Date: 5/21/2021	RunNo: 67402							
Client ID: MBLKW	Batch ID: 32388	Analysis Date: 5/21/2021	SeqNo: 1359162								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury	ND	0.100									
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NOTES:
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Work Order: 2105273
CLIENT: GeoEngineers
Project: 701 S Jackson

QC SUMMARY REPORT
Dissolved Mercury by EPA Method 245.1

Sample ID: MB-32433	SampType: MBLK	Units: µg/L	Prep Date: 5/25/2021	RunNo: 67476							
Client ID: MBLKW	Batch ID: 32433		Analysis Date: 5/25/2021	SeqNo: 1361158							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury ND 0.100

Sample ID: LCS-32433	SampType: LCS	Units: µg/L	Prep Date: 5/25/2021	RunNo: 67476							
Client ID: LCSW	Batch ID: 32433		Analysis Date: 5/25/2021	SeqNo: 1361159							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury 2.17 0.100 2.500 0 86.8 85 115

Sample ID: 2105317-001CDUP	SampType: DUP	Units: µg/L	Prep Date: 5/25/2021	RunNo: 67476							
Client ID: BATCH	Batch ID: 32433		Analysis Date: 5/25/2021	SeqNo: 1361161							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury ND 0.100 0 20

Sample ID: 2105317-001CMS	SampType: MS	Units: µg/L	Prep Date: 5/25/2021	RunNo: 67476							
Client ID: BATCH	Batch ID: 32433		Analysis Date: 5/25/2021	SeqNo: 1361162							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury 2.17 0.100 2.500 0 86.8 70 130

Sample ID: 2105317-001CMSD	SampType: MSD	Units: µg/L	Prep Date: 5/25/2021	RunNo: 67476							
Client ID: BATCH	Batch ID: 32433		Analysis Date: 5/25/2021	SeqNo: 1361163							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury 2.17 0.100 2.500 0 86.8 70 130 2.170 0 20

Work Order: 2105273
 CLIENT: GeoEngineers
 Project: 701 S Jackson

QC SUMMARY REPORT
Total Metals by EPA Method 6020B

Sample ID: MB-32387	SampType: MBLK	Units: mg/Kg	Prep Date: 5/21/2021	RunNo: 67432							
Client ID: MBLKS	Batch ID: 32387		Analysis Date: 5/24/2021	SeqNo: 1359783							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.0945									
Barium	ND	0.472									
Cadmium	ND	0.157									
Chromium	ND	0.315									
Lead	ND	0.157									
Selenium	ND	0.157									
Silver	ND	0.118									

Sample ID: LCS-32387	SampType: LCS	Units: mg/Kg	Prep Date: 5/21/2021	RunNo: 67432							
Client ID: LCSS	Batch ID: 32387		Analysis Date: 5/24/2021	SeqNo: 1359784							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	41.4	0.0938	39.06	0	106	80	120				
Barium	42.8	0.469	39.06	0	110	80	120				
Cadmium	2.11	0.156	1.953	0	108	80	120				
Chromium	41.7	0.312	39.06	0	107	80	120				
Lead	20.6	0.156	19.53	0	105	80	120				
Selenium	4.00	0.156	3.906	0	102	80	120				
Silver	2.10	0.117	1.953	0	108	80	120				

Sample ID: 2105245-001AMS	SampType: MS	Units: mg/Kg-dry	Prep Date: 5/21/2021	RunNo: 67432							
Client ID: BATCH	Batch ID: 32387		Analysis Date: 5/24/2021	SeqNo: 1359860							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	48.7	0.112	46.83	5.330	92.7	75	125				
Barium	101	0.562	46.83	56.90	93.7	75	125				
Cadmium	2.65	0.187	2.341	0.06804	110	75	125				
Chromium	75.1	0.375	46.83	25.12	107	75	125				
Lead	27.6	0.187	23.41	5.628	93.8	75	125				

Work Order: 2105273
 CLIENT: GeoEngineers
 Project: 701 S Jackson

QC SUMMARY REPORT
Total Metals by EPA Method 6020B

Sample ID: 2105245-001AMS	SampType: MS	Units: mg/Kg-dry	Prep Date: 5/21/2021	RunNo: 67432							
Client ID: BATCH	Batch ID: 32387	Analysis Date: 5/24/2021	SeqNo: 1359860								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Selenium	6.21	0.187	4.683	1.565	99.1	75	125				
Silver	2.17	0.140	2.341	0.05339	90.4	75	125				

Sample ID: 2105245-001AMSD	SampType: MSD	Units: mg/Kg-dry	Prep Date: 5/21/2021	RunNo: 67432							
Client ID: BATCH	Batch ID: 32387	Analysis Date: 5/24/2021	SeqNo: 1359861								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Arsenic	45.7	0.112	46.83	5.330	86.1	75	125	48.74	6.54	20	
Barium	104	0.562	46.83	56.90	101	75	125	100.8	3.49	20	
Cadmium	2.53	0.187	2.341	0.06804	105	75	125	2.651	4.77	20	
Chromium	73.5	0.375	46.83	25.12	103	75	125	75.10	2.08	20	
Lead	26.6	0.187	23.41	5.628	89.7	75	125	27.60	3.54	20	
Selenium	6.28	0.187	4.683	1.565	101	75	125	6.206	1.16	20	
Silver	2.06	0.140	2.341	0.05339	85.5	75	125	2.170	5.40	20	

Work Order: 2105273
CLIENT: GeoEngineers
Project: 701 S Jackson

QC SUMMARY REPORT
Mercury by EPA Method 7471

Sample ID: MB-32409	SampType: MBLK	Units: mg/Kg	Prep Date: 5/24/2021	RunNo: 67475							
Client ID: MBLKS	Batch ID: 32409		Analysis Date: 5/25/2021	SeqNo: 1360823							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury ND 0.250

Sample ID: LCS-32409	SampType: LCS	Units: mg/Kg	Prep Date: 5/24/2021	RunNo: 67475							
Client ID: LCSS	Batch ID: 32409		Analysis Date: 5/25/2021	SeqNo: 1360824							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury 0.501 0.250 0.5000 0 100 80 120

Sample ID: 2105259-001ADUP	SampType: DUP	Units: mg/Kg-dry	Prep Date: 5/24/2021	RunNo: 67475							
Client ID: BATCH	Batch ID: 32409		Analysis Date: 5/25/2021	SeqNo: 1360826							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury ND 0.263 0 20

Sample ID: 2105259-001AMS	SampType: MS	Units: mg/Kg-dry	Prep Date: 5/24/2021	RunNo: 67475							
Client ID: BATCH	Batch ID: 32409		Analysis Date: 5/25/2021	SeqNo: 1360827							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury 0.545 0.284 0.5681 0.01043 94.2 70 130

Sample ID: 2105259-001AMSD	SampType: MSD	Units: mg/Kg-dry	Prep Date: 5/24/2021	RunNo: 67475							
Client ID: BATCH	Batch ID: 32409		Analysis Date: 5/25/2021	SeqNo: 1360828							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury 0.511 0.273 0.5466 0.01043 91.5 70 130 0.5454 6.59 20

Work Order: 2105273
CLIENT: GeoEngineers
Project: 701 S Jackson

QC SUMMARY REPORT
Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.

Sample ID: MB-32392	SampType: MBLK	Units: mg/Kg				Prep Date: 5/21/2021	RunNo: 67439				
Client ID: MBLKS	Batch ID: 32392					Analysis Date: 5/21/2021	SeqNo: 1359828				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	ND	50.0									
Heavy Oil	ND	100									
Total Petroleum Hydrocarbons	ND	150									
Surr: 2-Fluorobiphenyl	8.18		10.00		81.8	50	150				
Surr: o-Terphenyl	9.07		10.00		90.7	50	150				

Sample ID: LCS-32392	SampType: LCS	Units: mg/Kg				Prep Date: 5/21/2021	RunNo: 67439				
Client ID: LCSS	Batch ID: 32392					Analysis Date: 5/21/2021	SeqNo: 1359829				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	468	50.0	500.0	0	93.6	75.7	116				
Surr: 2-Fluorobiphenyl	8.35		10.00		83.5	50	150				
Surr: o-Terphenyl	10.7		10.00		107	50	150				

Sample ID: 2105336-001AMS	SampType: MS	Units: mg/Kg-dry				Prep Date: 5/21/2021	RunNo: 67439				
Client ID: BATCH	Batch ID: 32392					Analysis Date: 5/21/2021	SeqNo: 1359831				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	550	56.8	568.0	0	96.9	59.6	134				
Surr: 2-Fluorobiphenyl	10.6		11.36		93.0	50	150				
Surr: o-Terphenyl	13.4		11.36		118	50	150				

Sample ID: 2105336-001AMSD	SampType: MSD	Units: mg/Kg-dry				Prep Date: 5/21/2021	RunNo: 67439				
Client ID: BATCH	Batch ID: 32392					Analysis Date: 5/21/2021	SeqNo: 1359832				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	547	54.3	542.7	0	101	59.6	134	550.3	0.677	30	
Surr: 2-Fluorobiphenyl	9.73		10.85		89.6	50	150		0		
Surr: o-Terphenyl	12.5		10.85		116	50	150		0		

Work Order: 2105273
 CLIENT: GeoEngineers
 Project: 701 S Jackson

QC SUMMARY REPORT
Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.

Sample ID: 2105336-001AMSD	SampType: MSD	Units: mg/Kg-dry	Prep Date: 5/21/2021	RunNo: 67439							
Client ID: BATCH	Batch ID: 32392	Analysis Date: 5/21/2021	SeqNo: 1359832								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID: 2105324-004ADUP	SampType: DUP	Units: mg/Kg-dry	Prep Date: 5/21/2021	RunNo: 67439							
Client ID: BATCH	Batch ID: 32392	Analysis Date: 5/24/2021	SeqNo: 1359848								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	ND	50.9						0		30	
Heavy Oil	ND	102						0		30	
Total Petroleum Hydrocarbons	ND	153						0		30	
Surr: 2-Fluorobiphenyl	10.6		10.17		105	50	150		0		
Surr: o-Terphenyl	11.8		10.17		116	50	150		0		

Work Order: 2105273
CLIENT: GeoEngineers
Project: 701 S Jackson

QC SUMMARY REPORT
Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.

Sample ID: MB-32350	SampType: MBLK	Units: µg/L	Prep Date: 5/19/2021	RunNo: 67383							
Client ID: MBLKW	Batch ID: 32350		Analysis Date: 5/20/2021	SeqNo: 1358469							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	ND	99.0									
Heavy Oil	ND	99.0									
Total Petroleum Hydrocarbons	ND	198									
Surr: 2-Fluorobiphenyl	18.7		19.80		94.6	50	150				
Surr: o-Terphenyl	19.1		19.80		96.7	50	150				

Sample ID: LCS-32350	SampType: LCS	Units: µg/L	Prep Date: 5/19/2021	RunNo: 67383							
Client ID: LCSW	Batch ID: 32350		Analysis Date: 5/20/2021	SeqNo: 1358470							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	811	98.2	981.7	0	82.6	31.5	116				
Surr: 2-Fluorobiphenyl	18.0		19.63		91.8	50	150				
Surr: o-Terphenyl	19.0		19.63		96.7	50	150				

Sample ID: 2105195-004BDUP	SampType: DUP	Units: µg/L	Prep Date: 5/19/2021	RunNo: 67383							
Client ID: BATCH	Batch ID: 32350		Analysis Date: 5/20/2021	SeqNo: 1358472							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	ND	103						0		30	
Heavy Oil	ND	103						0		30	
Total Petroleum Hydrocarbons	ND	206						0		30	
Surr: 2-Fluorobiphenyl	17.0		20.57		82.8	50	150		0		
Surr: o-Terphenyl	17.6		20.57		85.4	50	150		0		

Sample ID: 2105258-001BMS	SampType: MS	Units: µg/L	Prep Date: 5/19/2021	RunNo: 67383							
Client ID: BATCH	Batch ID: 32350		Analysis Date: 5/20/2021	SeqNo: 1358474							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	794	98.5	985.1	0	80.6	26.1	121				

Work Order: 2105273
CLIENT: GeoEngineers
Project: 701 S Jackson

QC SUMMARY REPORT
Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.

Sample ID: 2105258-001BMS	SampType: MS	Units: µg/L	Prep Date: 5/19/2021	RunNo: 67383							
Client ID: BATCH	Batch ID: 32350		Analysis Date: 5/20/2021	SeqNo: 1358474							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: 2-Fluorobiphenyl	17.3		19.70		87.7	50	150				
Surr: o-Terphenyl	19.7		19.70		100	50	150				

Work Order: 2105273
 CLIENT: GeoEngineers
 Project: 701 S Jackson

QC SUMMARY REPORT
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: MB-32353	SampType: MBLK	Units: µg/Kg	Prep Date: 5/19/2021	RunNo: 67369							
Client ID: MBLKS	Batch ID: 32353		Analysis Date: 5/19/2021	SeqNo: 1358175							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	ND	20.0									
2-Methylnaphthalene	ND	20.0									
1-Methylnaphthalene	ND	20.0									
Acenaphthylene	ND	20.0									
Acenaphthene	ND	20.0									
Fluorene	ND	20.0									
Phenanthrene	ND	40.0									
Anthracene	ND	40.0									
Fluoranthene	ND	40.0									
Pyrene	ND	40.0									
Benz(a)anthracene	ND	20.0									
Chrysene	ND	40.0									
Benzo(b)fluoranthene	ND	20.0									
Benzo(k)fluoranthene	ND	20.0									
Benzo(a)pyrene	ND	20.0									
Indeno(1,2,3-cd)pyrene	ND	40.0									
Dibenz(a,h)anthracene	ND	40.0									
Benzo(g,h,i)perylene	ND	20.0									
Surr: 2-Fluorobiphenyl	875		1,000		87.5	19	135				
Surr: Terphenyl-d14 (surr)	1,120		1,000		112	42.9	156				

Sample ID: LCS-32353	SampType: LCS	Units: µg/Kg	Prep Date: 5/19/2021	RunNo: 67369							
Client ID: LCSS	Batch ID: 32353		Analysis Date: 5/19/2021	SeqNo: 1358176							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	1,660	20.0	2,000	0	83.1	62.7	127				
2-Methylnaphthalene	1,680	20.0	2,000	0	83.9	62.7	132				
1-Methylnaphthalene	1,710	20.0	2,000	0	85.6	61.4	131				
Acenaphthylene	1,620	20.0	2,000	0	81.0	62	132				
Acenaphthene	1,640	20.0	2,000	0	82.0	59.2	132				

Work Order: 2105273
 CLIENT: GeoEngineers
 Project: 701 S Jackson

QC SUMMARY REPORT
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: LCS-32353	SampType: LCS	Units: µg/Kg				Prep Date: 5/19/2021	RunNo: 67369				
Client ID: LCSS	Batch ID: 32353					Analysis Date: 5/19/2021	SeqNo: 1358176				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluorene	1,720	20.0	2,000	0	86.1	59.1	136				
Phenanthrene	1,740	40.0	2,000	0	87.2	54.1	139				
Anthracene	1,720	40.0	2,000	0	85.9	55.5	136				
Fluoranthene	1,760	40.0	2,000	0	87.8	52.8	149				
Pyrene	1,690	40.0	2,000	0	84.6	53.6	146				
Benz(a)anthracene	1,700	20.0	2,000	0	84.9	49.7	153				
Chrysene	1,730	40.0	2,000	0	86.3	52.6	147				
Benzo(b)fluoranthene	1,750	20.0	2,000	0	87.4	50.6	151				
Benzo(k)fluoranthene	1,730	20.0	2,000	0	86.7	47.1	155				
Benzo(a)pyrene	1,890	20.0	2,000	0	94.5	48.3	169				
Indeno(1,2,3-cd)pyrene	1,830	40.0	2,000	0	91.3	52.3	145				
Dibenz(a,h)anthracene	1,890	40.0	2,000	0	94.5	53	144				
Benzo(g,h,i)perylene	1,720	20.0	2,000	0	85.8	49.7	144				
Surr: 2-Fluorobiphenyl	902		1,000		90.2	19	135				
Surr: Terphenyl-d14 (surr)	1,100		1,000		110	42.9	156				

Sample ID: 2105160-003AMS	SampType: MS	Units: µg/Kg-dry				Prep Date: 5/19/2021	RunNo: 67369				
Client ID: BATCH	Batch ID: 32353					Analysis Date: 5/19/2021	SeqNo: 1358179				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	1,710	21.8	2,183	144.1	71.7	26.5	126				
2-Methylnaphthalene	1,690	21.8	2,183	104.0	72.6	40.5	117				
1-Methylnaphthalene	1,710	21.8	2,183	94.98	73.9	37	118				
Acenaphthylene	1,540	21.8	2,183	0	70.5	34.6	121				
Acenaphthene	1,560	21.8	2,183	20.88	70.7	36.9	114				
Fluorene	1,680	21.8	2,183	40.80	74.9	36.5	120				
Phenanthrene	1,800	43.7	2,183	164.5	75.0	29.2	124				
Anthracene	1,690	43.7	2,183	27.23	76.0	32.9	127				
Fluoranthene	1,740	43.7	2,183	81.73	76.2	33.2	130				
Pyrene	1,690	43.7	2,183	92.33	73.3	32	128				

Work Order: 2105273
 CLIENT: GeoEngineers
 Project: 701 S Jackson

QC SUMMARY REPORT
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: 2105160-003AMS		SampType: MS		Units: µg/Kg-dry		Prep Date: 5/19/2021		RunNo: 67369			
Client ID: BATCH		Batch ID: 32353				Analysis Date: 5/19/2021		SeqNo: 1358179			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benz(a)anthracene	1,640	21.8	2,183	34.58	73.4	33	134				
Chrysene	1,620	43.7	2,183	72.68	70.8	33.1	123				
Benzo(b)fluoranthene	1,620	21.8	2,183	0	74.2	36.3	126				
Benzo(k)fluoranthene	1,630	21.8	2,183	0	74.7	33.2	131				
Benzo(a)pyrene	1,730	21.8	2,183	39.25	77.6	36.2	148				
Indeno(1,2,3-cd)pyrene	1,420	43.7	2,183	21.53	64.0	32.8	124				
Dibenz(a,h)anthracene	1,540	43.7	2,183	0	70.5	31.4	126				
Benzo(g,h,i)perylene	1,240	21.8	2,183	25.18	55.5	25.3	122				
Surr: 2-Fluorobiphenyl	854		1,091		78.2	19	135				
Surr: Terphenyl-d14 (surr)	1,020		1,091		93.2	42.9	156				

Sample ID: 2105160-003AMSD		SampType: MSD		Units: µg/Kg-dry		Prep Date: 5/19/2021		RunNo: 67369			
Client ID: BATCH		Batch ID: 32353				Analysis Date: 5/19/2021		SeqNo: 1358180			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	1,610	21.2	2,117	144.1	69.1	26.5	126	1,710	6.25	30	
2-Methylnaphthalene	1,580	21.2	2,117	104.0	69.7	40.5	117	1,689	6.69	30	
1-Methylnaphthalene	1,600	21.2	2,117	94.98	71.0	37	118	1,708	6.73	30	
Acenaphthylene	1,420	21.2	2,117	0	67.2	34.6	121	1,538	7.80	30	
Acenaphthene	1,460	21.2	2,117	20.88	67.9	36.9	114	1,564	7.06	30	
Fluorene	1,560	21.2	2,117	40.80	71.9	36.5	120	1,676	7.03	30	
Phenanthrene	1,690	42.3	2,117	164.5	72.0	29.2	124	1,801	6.42	30	
Anthracene	1,540	42.3	2,117	27.23	71.7	32.9	127	1,686	8.76	30	
Fluoranthene	1,610	42.3	2,117	81.73	72.1	33.2	130	1,745	8.18	30	
Pyrene	1,540	42.3	2,117	92.33	68.5	32	128	1,692	9.25	30	
Benzo(a)anthracene	1,470	21.2	2,117	34.58	67.8	33	134	1,636	10.6	30	
Chrysene	1,460	42.3	2,117	72.68	65.6	33.1	123	1,618	10.1	30	
Benzo(b)fluoranthene	1,660	21.2	2,117	0	78.5	36.3	126	1,620	2.52	30	
Benzo(k)fluoranthene	1,320	21.2	2,117	0	62.5	33.2	131	1,631	20.8	30	
Benzo(a)pyrene	1,610	21.2	2,117	39.25	74.1	36.2	148	1,733	7.56	30	

Work Order: 2105273
CLIENT: GeoEngineers
Project: 701 S Jackson

QC SUMMARY REPORT
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: 2105160-003AMSD	SampType: MSD	Units: µg/Kg-dry	Prep Date: 5/19/2021	RunNo: 67369							
Client ID: BATCH	Batch ID: 32353		Analysis Date: 5/19/2021	SeqNo: 1358180							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Indeno(1,2,3-cd)pyrene	1,300	42.3	2,117	21.53	60.4	32.8	124	1,417	8.60	30	
Dibenz(a,h)anthracene	1,410	42.3	2,117	0	66.6	31.4	126	1,538	8.77	30	
Benzo(g,h,i)perylene	1,120	21.2	2,117	25.18	51.6	25.3	122	1,237	10.0	30	
Surr: 2-Fluorobiphenyl	804		1,059		75.9	19	135		0		
Surr: Terphenyl-d14 (surr)	919		1,059		86.8	42.9	156		0		

Work Order: 2105273
 CLIENT: GeoEngineers
 Project: 701 S Jackson

QC SUMMARY REPORT
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: MB-32369	SampType: MBLK	Units: µg/L	Prep Date: 5/20/2021	RunNo: 67414							
Client ID: MBLKW	Batch ID: 32369		Analysis Date: 5/21/2021	SeqNo: 1359295							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	ND	0.0993									
2-Methylnaphthalene	ND	0.0993									
1-Methylnaphthalene	ND	0.0993									
Acenaphthylene	ND	0.0993									
Acenaphthene	ND	0.0993									
Fluorene	ND	0.0993									
Phenanthrene	ND	0.0993									
Anthracene	ND	0.0993									
Fluoranthene	ND	0.0993									
Pyrene	ND	0.0993									
Benz(a)anthracene	ND	0.0993									
Chrysene	ND	0.0993									
Benzo(b)fluoranthene	ND	0.0993									
Benzo(k)fluoranthene	ND	0.0993									
Benzo(a)pyrene	ND	0.0993									
Indeno(1,2,3-cd)pyrene	ND	0.0993									
Dibenz(a,h)anthracene	ND	0.0993									
Benzo(g,h,i)perylene	ND	0.0993									
Surr: 2-Fluorobiphenyl	1.59		1.985		79.9	33.2	139				
Surr: Terphenyl-d14	2.04		1.985		103	24.6	136				

Sample ID: LCS-32369	SampType: LCS	Units: µg/L	Prep Date: 5/20/2021	RunNo: 67414							
Client ID: LCSW	Batch ID: 32369		Analysis Date: 5/21/2021	SeqNo: 1359296							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	3.00	0.0993	3.972	0	75.6	24.1	124				
2-Methylnaphthalene	3.08	0.0993	3.972	0	77.5	32	129				
1-Methylnaphthalene	3.16	0.0993	3.972	0	79.5	30.4	125				
Acenaphthylene	3.09	0.0993	3.972	0	77.8	34.5	130				
Acenaphthene	3.09	0.0993	3.972	0	77.9	33.1	126				

Work Order: 2105273
 CLIENT: GeoEngineers
 Project: 701 S Jackson

QC SUMMARY REPORT
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: LCS-32369	SampType: LCS	Units: µg/L			Prep Date: 5/20/2021	RunNo: 67414					
Client ID: LCSW	Batch ID: 32369				Analysis Date: 5/21/2021	SeqNo: 1359296					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluorene	3.31	0.0993	3.972	0	83.4	34.4	134				
Phenanthrene	3.28	0.0993	3.972	0	82.6	41.2	130				
Anthracene	3.24	0.0993	3.972	0	81.7	34.3	127				
Fluoranthene	3.28	0.0993	3.972	0	82.7	42.2	135				
Pyrene	3.15	0.0993	3.972	0	79.4	40.9	133				
Benz(a)anthracene	2.88	0.0993	3.972	0	72.4	33.1	130				
Chrysene	2.53	0.0993	3.972	0	63.8	34.7	113				
Benzo(b)fluoranthene	2.45	0.0993	3.972	0	61.6	24.9	128				
Benzo(k)fluoranthene	2.36	0.0993	3.972	0	59.4	21.3	131				
Benzo(a)pyrene	2.61	0.0993	3.972	0	65.8	23.2	139				
Indeno(1,2,3-cd)pyrene	2.18	0.0993	3.972	0	54.9	14.9	123				
Dibenz(a,h)anthracene	2.26	0.0993	3.972	0	56.8	12.2	125				
Benzo(g,h,i)perylene	1.93	0.0993	3.972	0	48.7	11.8	122				
Surr: 2-Fluorobiphenyl	1.86		1.986		93.6	33.2	139				
Surr: Terphenyl-d14	1.82		1.986		91.8	24.6	136				

Sample ID: LCSD-32369	SampType: LCSD	Units: µg/L			Prep Date: 5/20/2021	RunNo: 67414					
Client ID: LCSW02	Batch ID: 32369				Analysis Date: 5/21/2021	SeqNo: 1359297					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	3.04	0.0993	3.973	0	76.4	24.1	124	3.002	1.13	30	
2-Methylnaphthalene	3.13	0.0993	3.973	0	78.9	32	129	3.079	1.75	30	
1-Methylnaphthalene	3.20	0.0993	3.973	0	80.5	30.4	125	3.158	1.23	30	
Acenaphthylene	3.14	0.0993	3.973	0	79.0	34.5	130	3.090	1.63	30	
Acenaphthene	3.15	0.0993	3.973	0	79.2	33.1	126	3.094	1.71	30	
Fluorene	3.31	0.0993	3.973	0	83.4	34.4	134	3.311	0.0651	30	
Phenanthrene	3.31	0.0993	3.973	0	83.4	41.2	130	3.279	1.06	30	
Anthracene	3.28	0.0993	3.973	0	82.6	34.3	127	3.244	1.21	30	
Fluoranthene	3.38	0.0993	3.973	0	85.1	42.2	135	3.283	2.92	30	
Pyrene	3.23	0.0993	3.973	0	81.3	40.9	133	3.155	2.41	30	

Work Order: 2105273
 CLIENT: GeoEngineers
 Project: 701 S Jackson

QC SUMMARY REPORT
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: LCSD-32369	SampType: LCSD	Units: µg/L				Prep Date: 5/20/2021			RunNo: 67414		
Client ID: LCSW02	Batch ID: 32369					Analysis Date: 5/21/2021			SeqNo: 1359297		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benz(a)anthracene	3.08	0.0993	3.973	0	77.4	33.1	130	2.877	6.69	30	
Chrysene	2.68	0.0993	3.973	0	67.6	34.7	113	2.535	5.74	30	
Benzo(b)fluoranthene	2.84	0.0993	3.973	0	71.6	24.9	128	2.447	15.0	30	
Benzo(k)fluoranthene	2.32	0.0993	3.973	0	58.5	21.3	131	2.358	1.51	30	
Benzo(a)pyrene	2.86	0.0993	3.973	0	71.9	23.2	139	2.611	8.95	30	
Indeno(1,2,3-cd)pyrene	2.47	0.0993	3.973	0	62.3	14.9	123	2.180	12.6	30	
Dibenz(a,h)anthracene	2.56	0.0993	3.973	0	64.5	12.2	125	2.256	12.8	30	
Benzo(g,h,i)perylene	2.25	0.0993	3.973	0	56.7	11.8	122	1.933	15.3	30	
Surr: 2-Fluorobiphenyl	1.89		1.987		95.2	33.2	139		0	0	
Surr: Terphenyl-d14	1.90		1.987		95.6	24.6	136		0	0	

Sample ID: 2105242-004AMS	SampType: MS	Units: µg/L				Prep Date: 5/20/2021			RunNo: 67414		
Client ID: BATCH	Batch ID: 32369					Analysis Date: 5/21/2021			SeqNo: 1359299		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	2.79	0.0989	3.955	0.06568	68.9	25.1	120				
2-Methylnaphthalene	2.84	0.0989	3.955	0.03466	71.0	20.4	134				
1-Methylnaphthalene	2.91	0.0989	3.955	0.03904	72.5	31.5	122				
Acenaphthylene	2.82	0.0989	3.955	0	71.3	34.9	125				
Acenaphthene	2.83	0.0989	3.955	0	71.7	33.2	123				
Fluorene	3.01	0.0989	3.955	0	76.1	41.1	127				
Phenanthrene	2.98	0.0989	3.955	0	75.4	41.6	126				
Anthracene	2.95	0.0989	3.955	0	74.7	34.1	123				
Fluoranthene	3.05	0.0989	3.955	0	77.1	50	126				
Pyrene	2.92	0.0989	3.955	0	73.7	46.7	125				
Benzo(a)anthracene	2.78	0.0989	3.955	0	70.3	25.3	122				
Chrysene	2.47	0.0989	3.955	0	62.5	22.8	111				
Benzo(b)fluoranthene	2.56	0.0989	3.955	0	64.6	8.57	125				
Benzo(k)fluoranthene	2.19	0.0989	3.955	0	55.3	7.05	124				
Benzo(a)pyrene	2.58	0.0989	3.955	0	65.3	9.61	130				

Work Order: 2105273
CLIENT: GeoEngineers
Project: 701 S Jackson

QC SUMMARY REPORT
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: 2105242-004AMS		SampType: MS		Units: µg/L		Prep Date: 5/20/2021		RunNo: 67414			
Client ID: BATCH		Batch ID: 32369				Analysis Date: 5/21/2021		SeqNo: 1359299			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Indeno(1,2,3-cd)pyrene	2.20	0.0989	3.955	0	55.5	5	120				
Dibenz(a,h)anthracene	2.27	0.0989	3.955	0	57.3	5	122				
Benzo(g,h,i)perylene	1.96	0.0989	3.955	0	49.5	5	114				
Surr: 2-Fluorobiphenyl	1.82		1.978		91.9	33.2	139				
Surr: Terphenyl-d14	1.89		1.978		95.6	24.6	136				

Work Order: 2105273
CLIENT: GeoEngineers
Project: 701 S Jackson

QC SUMMARY REPORT
Gasoline by NWTPH-Gx

Sample ID: LCS-32349	SampType: LCS	Units: mg/Kg	Prep Date: 5/19/2021	RunNo: 67363							
Client ID: LCSS	Batch ID: 32349		Analysis Date: 5/19/2021	SeqNo: 1358128							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline	23.6	5.00	25.00	0	94.4	65	135				
Surr: Toluene-d8	1.25		1.250		100	65	135				
Surr: 4-Bromofluorobenzene	1.30		1.250		104	65	135				

Sample ID: MB-32349	SampType: MBLK	Units: mg/Kg	Prep Date: 5/19/2021	RunNo: 67363							
Client ID: MBLKS	Batch ID: 32349		Analysis Date: 5/19/2021	SeqNo: 1358102							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline	ND	5.00									
Surr: Toluene-d8	1.26		1.250		101	65	135				
Surr: 4-Bromofluorobenzene	1.22		1.250		97.5	65	135				

Sample ID: 2105273-002BDUP	SampType: DUP	Units: mg/Kg-dry	Prep Date: 5/19/2021	RunNo: 67363							
Client ID: GEI-1-5.0	Batch ID: 32349		Analysis Date: 5/19/2021	SeqNo: 1358104							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline	ND	5.02						0		30	
Surr: Toluene-d8	1.27		1.255		101	65	135		0		
Surr: 4-Bromofluorobenzene	1.25		1.255		99.4	65	135		0		

Sample ID: 2105276-003BMS	SampType: MS	Units: mg/Kg-dry	Prep Date: 5/19/2021	RunNo: 67363							
Client ID: BATCH	Batch ID: 32349		Analysis Date: 5/19/2021	SeqNo: 1358110							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline	681	49.8	248.9	368.5	125	65	135				D
Surr: Toluene-d8	12.5		12.45		100	65	135				D
Surr: 4-Bromofluorobenzene	12.7		12.45		102	65	135				D

Work Order: 2105273
 CLIENT: GeoEngineers
 Project: 701 S Jackson

QC SUMMARY REPORT
Gasoline by NWTPH-Gx

Sample ID: LCS-32356	SampType: LCS	Units: µg/L			Prep Date: 5/20/2021	RunNo: 67395					
Client ID: LCSW	Batch ID: 32356				Analysis Date: 5/20/2021	SeqNo: 1358888					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline	491	50.0	500.0	0	98.2	65	135				
Surr: Toluene-d8	25.6		25.00		102	65	135				
Surr: 4-Bromofluorobenzene	26.3		25.00		105	65	135				

Sample ID: MB-32356	SampType: MBLK	Units: µg/L			Prep Date: 5/20/2021	RunNo: 67395					
Client ID: MBLKW	Batch ID: 32356				Analysis Date: 5/20/2021	SeqNo: 1358887					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline	ND	50.0									
Surr: Toluene-d8	26.1		25.00		104	65	135				
Surr: 4-Bromofluorobenzene	24.1		25.00		96.3	65	135				

Sample ID: 2105266-001ADUP	SampType: DUP	Units: µg/L			Prep Date: 5/20/2021	RunNo: 67395					
Client ID: BATCH	Batch ID: 32356				Analysis Date: 5/20/2021	SeqNo: 1358864					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline	ND	50.0						0		30	
Surr: Toluene-d8	26.2		25.00		105	65	135		0		
Surr: 4-Bromofluorobenzene	23.6		25.00		94.3	65	135		0		

Sample ID: 2105282-001CDUP	SampType: DUP	Units: µg/L			Prep Date: 5/20/2021	RunNo: 67395					
Client ID: BATCH	Batch ID: 32356				Analysis Date: 5/21/2021	SeqNo: 1358867					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline	ND	50.0						0		30	
Surr: Toluene-d8	25.9		25.00		103	65	135		0		
Surr: 4-Bromofluorobenzene	23.2		25.00		92.7	65	135		0		

Work Order: 2105273
CLIENT: GeoEngineers
Project: 701 S Jackson

QC SUMMARY REPORT
Gasoline by NWTPH-Gx

Sample ID: 2105282-002CMS	SampType: MS	Units: µg/L			Prep Date: 5/20/2021	RunNo: 67395					
Client ID: BATCH	Batch ID: 32356				Analysis Date: 5/21/2021	SeqNo: 1358869					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline	540	50.0	500.0	81.94	91.6	65	135				
Surr: Toluene-d8	25.8		25.00		103	65	135				
Surr: 4-Bromofluorobenzene	26.2		25.00		105	65	135				

Work Order: 2105273
 CLIENT: GeoEngineers
 Project: 701 S Jackson

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260D

Sample ID: LCS-32349	SampType: LCS	Units: mg/Kg				Prep Date: 5/19/2021	RunNo: 67362				
Client ID: LCSS	Batch ID: 32349					Analysis Date: 5/19/2021	SeqNo: 1358100				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	1.08	0.0200	1.000	0	108	80	120				
Toluene	1.12	0.0300	1.000	0	112	80	120				
Ethylbenzene	1.10	0.0250	1.000	0	110	80	120				
m,p-Xylene	2.13	0.0500	2.000	0	107	80	120				
o-Xylene	1.07	0.0250	1.000	0	107	80	120				
Surr: Dibromofluoromethane	1.43		1.250		114	80	120				
Surr: Toluene-d8	1.30		1.250		104	80	120				
Surr: 1-Bromo-4-fluorobenzene	1.31		1.250		105	80	120				

Sample ID: MB-32349	SampType: MBLK	Units: mg/Kg				Prep Date: 5/19/2021	RunNo: 67362				
Client ID: MBLKS	Batch ID: 32349					Analysis Date: 5/19/2021	SeqNo: 1358085				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.0200									
Toluene	ND	0.0300									
Ethylbenzene	ND	0.0250									
m,p-Xylene	ND	0.0500									
o-Xylene	ND	0.0250									
Surr: Dibromofluoromethane	1.30		1.250		104	81.9	113				
Surr: Toluene-d8	1.28		1.250		102	82.7	115				
Surr: 1-Bromo-4-fluorobenzene	1.19		1.250		95.1	87.9	109				

Sample ID: 2105273-002BDUP	SampType: DUP	Units: mg/Kg-dry				Prep Date: 5/19/2021	RunNo: 67362				
Client ID: GEI-1-5.0	Batch ID: 32349					Analysis Date: 5/19/2021	SeqNo: 1358087				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.0201						0		30	
Toluene	ND	0.0301						0		30	
Ethylbenzene	ND	0.0251						0		30	

Work Order: 2105273
 CLIENT: GeoEngineers
 Project: 701 S Jackson

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260D

Sample ID: 2105273-002BDUP	SampType: DUP	Units: mg/Kg-dry	Prep Date: 5/19/2021	RunNo: 67362							
Client ID: GEI-1-5.0	Batch ID: 32349	Analysis Date: 5/19/2021	SeqNo: 1358087								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
m,p-Xylene	ND	0.0502						0		30	
o-Xylene	ND	0.0251						0		30	
Surr: Dibromofluoromethane	1.24		1.255		99.2	81.9	113		0		
Surr: Toluene-d8	1.28		1.255		102	82.7	115		0		
Surr: 1-Bromo-4-fluorobenzene	1.22		1.255		97.0	87.9	109		0		

Sample ID: 2105273-005BMS	SampType: MS	Units: mg/Kg-dry	Prep Date: 5/19/2021	RunNo: 67362							
Client ID: GEI-1-12.5	Batch ID: 32349	Analysis Date: 5/19/2021	SeqNo: 1358093								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	1.12	0.0197	0.9847	0	114	76.8	129				
Toluene	1.26	0.0295	0.9847	0.1244	116	77.8	127				
Ethylbenzene	1.88	0.0246	0.9847	0.9205	97.0	78.7	130				
m,p-Xylene	4.40	0.0492	1.969	2.653	88.7	79.3	127				
o-Xylene	1.66	0.0246	0.9847	0.6017	107	80.7	124				
Surr: Dibromofluoromethane	1.33		1.231		108	81.9	113				
Surr: Toluene-d8	1.28		1.231		104	82.7	115				
Surr: 1-Bromo-4-fluorobenzene	1.28		1.231		104	87.9	109				

Work Order: 2105273
 CLIENT: GeoEngineers
 Project: 701 S Jackson

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260D

Sample ID: LCS-32356	SampType: LCS	Units: µg/L				Prep Date: 5/20/2021	RunNo: 67393				
Client ID: LCSW	Batch ID: 32356					Analysis Date: 5/20/2021	SeqNo: 1358775				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	21.7	0.440	20.00	0	108	80	120				
Toluene	21.1	0.750	20.00	0	106	80	120				
Ethylbenzene	20.4	0.400	20.00	0	102	80	120				
m,p-Xylene	40.4	1.00	40.00	0	101	80	120				
o-Xylene	20.0	0.500	20.00	0	100	80	120				
Surr: Dibromofluoromethane	26.1		25.00		104	80	120				
Surr: Toluene-d8	26.4		25.00		105	80	120				
Surr: 1-Bromo-4-fluorobenzene	26.8		25.00		107	80	120				

Sample ID: MB-32356	SampType: MBLK	Units: µg/L				Prep Date: 5/20/2021	RunNo: 67393				
Client ID: MBLKW	Batch ID: 32356					Analysis Date: 5/20/2021	SeqNo: 1358765				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.440									
Toluene	ND	0.750									
Ethylbenzene	ND	0.400									
m,p-Xylene	ND	1.00									
o-Xylene	ND	0.500									
Surr: Dibromofluoromethane	25.9		25.00		104	80.7	121				
Surr: Toluene-d8	26.3		25.00		105	84.5	116				
Surr: 1-Bromo-4-fluorobenzene	24.2		25.00		96.9	86	108				

Sample ID: 2105266-001ADUP	SampType: DUP	Units: µg/L				Prep Date: 5/20/2021	RunNo: 67393				
Client ID: BATCH	Batch ID: 32356					Analysis Date: 5/20/2021	SeqNo: 1358739				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.440						0		30	
Toluene	ND	0.750						0		30	
Ethylbenzene	ND	0.400						0		30	

Work Order: 2105273
 CLIENT: GeoEngineers
 Project: 701 S Jackson

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260D

Sample ID: 2105266-001ADUP	SampType: DUP	Units: µg/L	Prep Date: 5/20/2021	RunNo: 67393							
Client ID: BATCH	Batch ID: 32356		Analysis Date: 5/20/2021	SeqNo: 1358739							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
m,p-Xylene	ND	1.00						0		30	
o-Xylene	ND	0.500						0		30	
Surr: Dibromofluoromethane	26.3		25.00		105	80.7	121		0		
Surr: Toluene-d8	26.3		25.00		105	84.5	116		0		
Surr: 1-Bromo-4-fluorobenzene	23.7		25.00		94.9	86	108		0		

Sample ID: 2105273-019AMS	SampType: MS	Units: µg/L	Prep Date: 5/20/2021	RunNo: 67393							
Client ID: GEI-1-20210518	Batch ID: 32356		Analysis Date: 5/20/2021	SeqNo: 1358741							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	23.7	0.440	20.00	0	118	79	131				
Toluene	22.9	0.750	20.00	0	114	79.4	132				
Ethylbenzene	23.6	0.400	20.00	0.9799	113	64.2	145				
m,p-Xylene	47.7	1.00	40.00	2.642	113	81	128				
o-Xylene	22.8	0.500	20.00	0.6338	111	82.3	125				
Surr: Dibromofluoromethane	26.3		25.00		105	80.7	121				
Surr: Toluene-d8	25.9		25.00		104	84.5	116				
Surr: 1-Bromo-4-fluorobenzene	26.7		25.00		107	86	108				

Sample ID: 2105282-001CDUP	SampType: DUP	Units: µg/L	Prep Date: 5/20/2021	RunNo: 67393							
Client ID: BATCH	Batch ID: 32356		Analysis Date: 5/21/2021	SeqNo: 1358745							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.440						0		30	
Toluene	ND	0.750						0		30	
Ethylbenzene	ND	0.400						0		30	
m,p-Xylene	ND	1.00						0		30	
o-Xylene	ND	0.500						0		30	
Surr: Dibromofluoromethane	25.8		25.00		103	80.7	121		0		

Work Order: 2105273
CLIENT: GeoEngineers
Project: 701 S Jackson

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260D

Sample ID: 2105282-001CDUP	SampType: DUP	Units: µg/L	Prep Date: 5/20/2021	RunNo: 67393							
Client ID: BATCH	Batch ID: 32356		Analysis Date: 5/21/2021	SeqNo: 1358745							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: Toluene-d8	25.6		25.00		103	84.5	116		0		
Surr: 1-Bromo-4-fluorobenzene	23.3		25.00		93.2	86	108		0		

Client Name: **GEI**
 Logged by: **Gabrielle Coeuille**

Work Order Number: **2105273**
 Date Received: **5/18/2021 3:44:00 PM**

Chain of Custody

1. Is Chain of Custody complete? Yes No Not Present
 2. How was the sample delivered? Client

Log In

3. Coolers are present? Yes No NA
 4. Shipping container/cooler in good condition? Yes No
 5. Custody Seals present on shipping container/cooler?
 (Refer to comments for Custody Seals not intact) Yes No Not Present
 6. Was an attempt made to cool the samples? Yes No NA
 7. Were all items received at a temperature of >2°C to 6°C * Yes No NA
 8. Sample(s) in proper container(s)? Yes No
 9. Sufficient sample volume for indicated test(s)? Yes No
 10. Are samples properly preserved? Yes No
 11. Was preservative added to bottles? Yes No NA
 12. Is there headspace in the VOA vials? Yes No NA
 13. Did all samples containers arrive in good condition(unbroken)? Yes No
 14. Does paperwork match bottle labels? Yes No
 15. Are matrices correctly identified on Chain of Custody? Yes No
 16. Is it clear what analyses were requested? Yes No
 17. Were all holding times able to be met? Yes No

Special Handling (if applicable)

18. Was client notified of all discrepancies with this order? Yes No NA

Person Notified:	<input type="text"/>	Date:	<input type="text"/>
By Whom:	<input type="text"/>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text"/>		
Client Instructions:	<input type="text"/>		

19. Additional remarks:

Item Information

Item #	Temp °C
Sample 1	5.4

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C



3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Chain of Custody Record & Laboratory Services Agreement

Date: 5/18/21 Page: 1 of 2 Laboratory Project No (Internal): 2105273

Project Name: FOL S JACKSON Special Remarks:

Project No: 24504-001-01

Collected by: CJG

Location:

Report To (PM): Robert Tahvan

PM Email: RTahvan@geoenr.com

Sample Disposal: Return to client Disposal by lab (after 30 days)

Client: GEI
Address:
City, State, Zip: SEATTLE, WA
Telephone:
Fax:

Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	# of Cont.	VOCs (EPA 8260 / 624)	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCID)	Diesel/Heavy Oil Range Organics (HX)	SVOCS (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8082 / 608)	Metals** (EPA 6020 / 200.8)	Total (T) Dissolved (D)	Anions (IC)***	EDB (8013)	Comments
1 GEI-1-2.5	5/18/21	0855	S	3	X	X	X	X	X	X	X	X	X	X	X	X	
2 GEI-1-5.0		0906		1	X	X	X	X	X	X	X	X	X	X	X	X	
3 GEI-1-7.5		0905		1	X	X	X	X	X	X	X	X	X	X	X	X	
4 GEI-1-10.0		0910		1	X	X	X	X	X	X	X	X	X	X	X	X	
5 GEI-1-12.5		0920		1	X	X	X	X	X	X	X	X	X	X	X	X	
6 GEI-1-15.0		0925		1	X	X	X	X	X	X	X	X	X	X	X	X	
7 GEI-1-17.5		0930		1	X	X	X	X	X	X	X	X	X	X	X	X	
8 GEI-1-20.0		0935		1	X	X	X	X	X	X	X	X	X	X	X	X	
9 GEI-1-22.5		0940		1	X	X	X	X	X	X	X	X	X	X	X	X	
10 GEI-1-25.0		0945		1	X	X	X	X	X	X	X	X	X	X	X	X	

*Matrix: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water
 **Metals (Circle): MTCA-5 (RCRA-8) Priority Pollutants TAL Individual: Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sb Se Sr Sn Tl Ti V Zn
 ***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate-Nitrite

I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above, that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Relinquished (Signature) *John* Print Name *John* Date/Time *5/18/21 15:35*
 Relinquished (Signature) *Chelsey Gahr* Print Name *Chelsey Gahr* Date/Time *5/18/21 15:35*
 Received (Signature) *Robert Tahvan* Print Name *Robert Tahvan* Date/Time *5/18/21 15:44*

Turn-around Time:
 Standard Next Day
 3 Day Same Day
 2 Day (specify)



3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Chain of Custody Record & Laboratory Services Agreement

Client: SE GE1
 Address:
 City, State, Zip: SEATTLE, WA
 Telephone:
 Fax:

Date: 5/18/21 Page: 2 of 2
 Project Name: FOR S JACKSON
 Project No:
 Collected by: CJG
 Location:
 Report To (PM):
 PM Email:

Laboratory Project No (Internal): 2105273
 Special Remarks: RELA METALS for soil
MTCR METALS for GW
 Sample Disposal: Return to client Disposal by lab (after 30 days)

Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	# of Cont.	Analytes														Comments				
					VOCs (EPA 8260 / 824)	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCID)	Diesel/heavy Oil Range Organics (DX)	SVOCs (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8270 - SIM)	Metals** (EPA 6020 / 200.8)	Total (T) Dissolved (D)	Anions (IC)**	EDB (8011)	HOLD						
1 GE1-1-27.5	5/18/21	0950	S	3										X									
2 GE1-1-30.0		1000		1										X									
3 GE1-1-35.0		1005		1										X									
4 GE1-1-40.0		1015		1										X									
5 GE1-1-50.0		1035		1										X									
6 GE1-1-60.0		1055		1										X									
7 GE1-1-70.0		1215		1										X									
8 GE1-1-75.0		1230		1										X									
9 GE1-1-20210518		1300	GN	7	X	X	X	X	X					X									TOTAL + DISSOLVED MTCR METALS
10																							

Matrix: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water
 **Metals (Circle): MTCR-5 RCR-8 Priority Pollutants TAL Individual: Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sb Se Sr Sn Tl Ti V Zn
 ***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate-Nitrite
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 Turn-around Time:
 Standard Next Day
 3 Day Same Day
 2 Day (specify)

Relinquished (Signature) Chalberg Date/Time 5/18/21 1525
 Print Name Chalberg
 Relinquished (Signature) Chalberg Date/Time 5/18/21 1544
 Print Name Chalberg



3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Chain of Custody Record & Laboratory Services Agreement

Date: 5/18/21 Page: 1 of 2
Project Name: F015 Jackson
Project No: 24504-001-01

Laboratory Project No (Internal): 2105273
Special Remarks: Silica Gel Cleanup on DX soils
Edits per RT 5/19/21 -CG

Client: GEI
Address: SEATTLE, WA
City, State, zip: SEATTLE, WA

Collected by: CJD
Location: Report To (PM): Robert Tahvan
PM Email: RTahvan@geoenr.com

Telephone: Sample Disposal: Return to client Disposal by lab (after 30 days)

Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	# of Cont.	VOCs (EPA 8260 / 624)	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCID)	Diesel/Heavy Oil Range Organics (HX)	SVOCS (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8082 / 608)	Metals** (EPA 6020 / 200.8)	Total (T) Dissolved (D)	Anions (IC)***	EDB (8011)	Comments
1 GEI-1-2.5	5/18/21	0855	S	3													
2 GEI-1-5.0		0906			X	X	X	X	X	X	X	X	X	X	X	X	
3 GEI-1-7.5		0905															
4 GEI-1-10.0		0910															
5 GEI-1-12.5		0920			X	X	X	X	X	X	X	X	X	X	X	X	
6 GEI-1-15.0		0925															
7 GEI-1-17.5		0930			X	X	X	X	X	X	X	X	X	X	X	X	
8 GEI-1-20.0		0935															
9 GEI-1-22.5		0940															
10 GEI-1-25.0		0945			X	X	X	X	X	X	X	X	X	X	X	X	

Matrix: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water
 **Metals (Circle): MTCA-5 (RCRA-8) Priority Pollutants TAL Individual: Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sb Se Sr Sn Tl Ti V Zn
 ***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate-Nitrite
 I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above, that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Turn-around Time:
 Standard Next Day
 3 Day Same Day
 2 Day (specify)

Relinquished (Signature) *John* Print Name Date/Time
 Relequished (Signature) *Chelsey Gahr* Print Name Date/Time
 Received (Signature) *Robert Tahvan* Print Name Date/Time
 Received (Signature) *Dina Khou* Print Name Date/Time



3600 Fremont Ave N.
Seattle, WA 98103
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Chain of Custody Record & Laboratory Services Agreement

Date: 5/18/21 Page: 2 of 2

Project Name: FOR S JACKSON

Special Remarks: RELA METALS FOR SOIL
MTRA METALS FOR GW

Client: SE GEN

Collected by: CUG

Address: SEATTLE, WA

Location: _____

Telephone: _____

Report To (PM): _____

Sample Disposal: Return to client Disposal by lab (after 30 days)

Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	# of Cont.	Analytes											Comments							
					VOCs (EPA 8260 / 824)	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCID)	Diesel/heavy Oil Range Organics (DX)	SVOCs (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8270 - SIM)	Metals** (EPA 6020 / 200.8)	Total (T) Dissolved (D)	Anions (IC)**		EDB (8011)						
1 GE7-1-27.5	5/18/21	0950	S	3																			
2 GE7-1-30.0		1000		1																			
3 GE7-1-35.0		1005		1																			
4 GE7-1-40.0		1015		1																			
5 GE7-1-50.0		1035		1																			
6 GE7-1-60.0		1055		1																			
7 GE7-1-70.0		1215		1																			
8 GE7-1-75.0		1230		1																			
9 GE7-1-20210518		1300	GN	7																			
10																							

Matrix: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water

Metals (Circle): MICA-5 RCM-8 Priority Pollutants TAL Individual: Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sb Se Sr Sn Tl Ti V Zn

Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite

I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above, that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Turn-around Time: Standard Next Day 3 Day Same Day 2 Day _____ (specify)

Relinquished (Signature) [Signature] Print Name Choi 65hr Date/Time 5/18/21 1525

Received (Signature) [Signature] Print Name Oveskov Date/Time 5/18/21 1544



3600 Fremont Ave. N.
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

GeoEngineers

Robert Trahan
2101 4th Ave, Suite 950
Seattle, WA 98121

RE: 701 S Jackson
Work Order Number: 2105302

May 25, 2021

Attention Robert Trahan:

Fremont Analytical, Inc. received 34 sample(s) on 5/19/2021 for the analyses presented in the following report.

Gasoline by NWTPH-Gx
Sample Moisture (Percent Moisture)
Volatile Organic Compounds by EPA Method 8260D

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Brianna Barnes
Project Manager

DoD-ELAP Accreditation #79636 by PJLA, ISO/IEC 17025:2017 and QSM 5.3 for Environmental Testing
ORELAP Certification: WA 100009 (NELAP Recognized) for Environmental Testing
Washington State Department of Ecology Accredited for Environmental Testing, Lab ID C910

Original



CLIENT: GeoEngineers
Project: 701 S Jackson
Work Order: 2105302

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
2105302-001	GEI-2-2.5	05/19/2021 7:50 AM	05/19/2021 4:44 PM
2105302-002	GEI-2-5.0	05/19/2021 7:55 AM	05/19/2021 4:44 PM
2105302-003	GEI-2-7.5	05/19/2021 8:00 AM	05/19/2021 4:44 PM
2105302-004	GEI-2-10.0	05/19/2021 8:05 AM	05/19/2021 4:44 PM
2105302-005	GEI-2-10.5	05/19/2021 8:07 AM	05/19/2021 4:44 PM
2105302-006	GEI-2-12.5	05/19/2021 8:15 AM	05/19/2021 4:44 PM
2105302-007	GEI-2-15.0	05/19/2021 8:20 AM	05/19/2021 4:44 PM
2105302-008	GEI-2-19.0	05/19/2021 8:25 AM	05/19/2021 4:44 PM
2105302-009	GEI-2-20.0	05/19/2021 8:35 AM	05/19/2021 4:44 PM
2105302-010	GEI-2-23.5	05/19/2021 8:45 AM	05/19/2021 4:44 PM
2105302-011	GEI-2-25.0	05/19/2021 8:50 AM	05/19/2021 4:44 PM
2105302-012	GEI-2-27.5	05/19/2021 8:55 AM	05/19/2021 4:44 PM
2105302-013	GEI-2-31	05/19/2021 9:07 AM	05/19/2021 4:44 PM
2105302-014	GEI-2-33	05/19/2021 9:10 AM	05/19/2021 4:44 PM
2105302-015	GEI-2-36	05/19/2021 9:15 AM	05/19/2021 4:44 PM
2105302-016	GEI-2-40	05/19/2021 9:33 AM	05/19/2021 4:44 PM
2105302-017	GEI-2-45	05/19/2021 9:45 AM	05/19/2021 4:44 PM
2105302-018	GEI-2-50	05/19/2021 9:55 AM	05/19/2021 4:44 PM
2105302-019	GEI-2-55	05/19/2021 10:00 AM	05/19/2021 4:44 PM
2105302-020	GEI-3-2.5	05/19/2021 11:25 AM	05/19/2021 4:44 PM
2105302-021	GEI-3-6.0	05/19/2021 11:30 AM	05/19/2021 4:44 PM
2105302-022	GEI-3-7.5	05/19/2021 11:35 AM	05/19/2021 4:44 PM
2105302-023	GEI-3-10.0	05/19/2021 11:40 AM	05/19/2021 4:44 PM
2105302-024	GEI-3-12.5	05/19/2021 11:45 AM	05/19/2021 4:44 PM
2105302-025	GEI-3-15.0	05/19/2021 11:50 AM	05/19/2021 4:44 PM
2105302-026	GEI-3-17.5	05/19/2021 11:55 AM	05/19/2021 4:44 PM
2105302-027	GEI-3-21.5	05/19/2021 12:00 PM	05/19/2021 4:44 PM
2105302-028	GEI-3-23.0	05/19/2021 12:05 PM	05/19/2021 4:44 PM
2105302-029	GEI-3-25.0	05/19/2021 12:15 PM	05/19/2021 4:44 PM
2105302-030	GEI-3-30.0	05/19/2021 12:20 PM	05/19/2021 4:44 PM
2105302-031	GEI-3-35.0	05/19/2021 12:30 PM	05/19/2021 4:44 PM
2105302-032	GEI-3-40.0	05/19/2021 12:35 PM	05/19/2021 4:44 PM
2105302-033	GEI-3-45.0	05/19/2021 12:45 PM	05/19/2021 4:44 PM
2105302-034	GEI-3-50.0	05/19/2021 12:50 PM	05/19/2021 4:44 PM

Note: If no "Time Collected" is supplied, a default of 12:00AM is assigned

CLIENT: GeoEngineers
Project: 701 S Jackson

I. SAMPLE RECEIPT:

Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:

Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:

Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Qualifiers:

- * - Flagged value is not within established control limits
- B - Analyte detected in the associated Method Blank
- D - Dilution was required
- E - Value above quantitation range
- H - Holding times for preparation or analysis exceeded
- I - Analyte with an internal standard that does not meet established acceptance criteria
- J - Analyte detected below Reporting Limit
- N - Tentatively Identified Compound (TIC)
- Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria
- S - Spike recovery outside accepted recovery limits
- ND - Not detected at the Reporting Limit
- R - High relative percent difference observed

Acronyms:

- %Rec - Percent Recovery
- CCB - Continued Calibration Blank
- CCV - Continued Calibration Verification
- DF - Dilution Factor
- DUP - Sample Duplicate
- HEM - Hexane Extractable Material
- ICV - Initial Calibration Verification
- LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
- MCL - Maximum Contaminant Level
- MB or MBLANK - Method Blank
- MDL - Method Detection Limit
- MS/MSD - Matrix Spike / Matrix Spike Duplicate
- PDS - Post Digestion Spike
- Ref Val - Reference Value
- REP - Sample Replicate
- RL - Reporting Limit
- RPD - Relative Percent Difference
- SD - Serial Dilution
- SGT - Silica Gel Treatment
- SPK - Spike
- Surr - Surrogate



Client: GeoEngineers

Collection Date: 5/19/2021 8:25:00 AM

Project: 701 S Jackson

Lab ID: 2105302-008

Matrix: Soil

Client Sample ID: GEI-2-19.0

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Gasoline by NWTPH-Gx

Batch ID: 32381 Analyst: CR

Gasoline	ND	5.59		mg/Kg-dry	1	5/21/2021 12:18:26 PM
Surr: Toluene-d8	98.2	65 - 135		%Rec	1	5/21/2021 12:18:26 PM
Surr: 4-Bromofluorobenzene	105	65 - 135		%Rec	1	5/21/2021 12:18:26 PM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 32381 Analyst: CR

Benzene	ND	0.0224		mg/Kg-dry	1	5/21/2021 12:18:26 PM
Toluene	ND	0.0335		mg/Kg-dry	1	5/21/2021 12:18:26 PM
Ethylbenzene	ND	0.0279		mg/Kg-dry	1	5/21/2021 12:18:26 PM
m,p-Xylene	ND	0.0559		mg/Kg-dry	1	5/21/2021 12:18:26 PM
o-Xylene	ND	0.0279		mg/Kg-dry	1	5/21/2021 12:18:26 PM
Surr: Dibromofluoromethane	91.5	81.9 - 113		%Rec	1	5/21/2021 12:18:26 PM
Surr: Toluene-d8	96.8	82.7 - 115		%Rec	1	5/21/2021 12:18:26 PM
Surr: 1-Bromo-4-fluorobenzene	103	87.9 - 109		%Rec	1	5/21/2021 12:18:26 PM

Sample Moisture (Percent Moisture)

Batch ID: R67444 Analyst: KJ

Percent Moisture	19.4	0.500		wt%	1	5/24/2021 3:59:42 PM
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Client: GeoEngineers

Collection Date: 5/19/2021 11:55:00 AM

Project: 701 S Jackson

Lab ID: 2105302-026

Matrix: Soil

Client Sample ID: GEI-3-17.5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Gasoline by NWTPH-Gx

Batch ID: 32381 Analyst: CR

Gasoline	ND	5.80		mg/Kg-dry	1	5/21/2021 12:48:43 PM
Surr: Toluene-d8	100	65 - 135		%Rec	1	5/21/2021 12:48:43 PM
Surr: 4-Bromofluorobenzene	101	65 - 135		%Rec	1	5/21/2021 12:48:43 PM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 32381 Analyst: CR

Benzene	ND	0.0232		mg/Kg-dry	1	5/21/2021 12:48:43 PM
Toluene	ND	0.0348		mg/Kg-dry	1	5/21/2021 12:48:43 PM
Ethylbenzene	ND	0.0290		mg/Kg-dry	1	5/21/2021 12:48:43 PM
m,p-Xylene	ND	0.0580		mg/Kg-dry	1	5/21/2021 12:48:43 PM
o-Xylene	ND	0.0290		mg/Kg-dry	1	5/21/2021 12:48:43 PM
Surr: Dibromofluoromethane	88.9	81.9 - 113		%Rec	1	5/21/2021 12:48:43 PM
Surr: Toluene-d8	97.3	82.7 - 115		%Rec	1	5/21/2021 12:48:43 PM
Surr: 1-Bromo-4-fluorobenzene	98.8	87.9 - 109		%Rec	1	5/21/2021 12:48:43 PM

Sample Moisture (Percent Moisture)

Batch ID: R67444 Analyst: KJ

Percent Moisture	21.9	0.500		wt%	1	5/24/2021 3:59:42 PM
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Work Order: 2105302
CLIENT: GeoEngineers
Project: 701 S Jackson

QC SUMMARY REPORT
Gasoline by NWTPH-Gx

Sample ID: LCS-32381	SampType: LCS	Units: mg/Kg				Prep Date: 5/21/2021	RunNo: 67421				
Client ID: LCSS	Batch ID: 32381					Analysis Date: 5/21/2021	SeqNo: 1359470				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline	22.8	5.00	25.00	0	91.3	65	135				
Surr: Toluene-d8	1.16		1.250		93.0	65	135				
Surr: 4-Bromofluorobenzene	1.31		1.250		105	65	135				

Sample ID: MB-32381	SampType: MBLK	Units: mg/Kg				Prep Date: 5/21/2021	RunNo: 67421				
Client ID: MBLKS	Batch ID: 32381					Analysis Date: 5/21/2021	SeqNo: 1359471				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline	ND	5.00									
Surr: Toluene-d8	1.18		1.250		94.3	65	135				
Surr: 4-Bromofluorobenzene	1.27		1.250		102	65	135				

Sample ID: 2105302-026BDUP	SampType: DUP	Units: mg/Kg-dry				Prep Date: 5/21/2021	RunNo: 67421				
Client ID: GEI-3-17.5	Batch ID: 32381					Analysis Date: 5/21/2021	SeqNo: 1359474				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline	ND	5.80						0		30	
Surr: Toluene-d8	1.47		1.450		101	65	135		0		
Surr: 4-Bromofluorobenzene	1.47		1.450		101	65	135		0		

Sample ID: 2105322-001BMS	SampType: MS	Units: mg/Kg-dry				Prep Date: 5/21/2021	RunNo: 67421				
Client ID: BATCH	Batch ID: 32381					Analysis Date: 5/21/2021	SeqNo: 1359476				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline	60.8	14.1	70.37	0	86.4	65	135				
Surr: Toluene-d8	3.51		3.519		99.6	65	135				
Surr: 4-Bromofluorobenzene	3.79		3.519		108	65	135				

Work Order: 2105302
 CLIENT: GeoEngineers
 Project: 701 S Jackson

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260D

Sample ID: LCS-32381	SampType: LCS	Units: mg/Kg				Prep Date: 5/21/2021	RunNo: 67420				
Client ID: LCSS	Batch ID: 32381					Analysis Date: 5/21/2021	SeqNo: 1359455				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	0.945	0.0200	1.000	0	94.5	80	120				
Toluene	1.07	0.0300	1.000	0	107	80	120				
Ethylbenzene	1.06	0.0250	1.000	0	106	80	120				
m,p-Xylene	2.05	0.0500	2.000	0	103	80	120				
o-Xylene	1.04	0.0250	1.000	0	104	80	120				
Surr: Dibromofluoromethane	1.28		1.250		103	80	120				
Surr: Toluene-d8	1.28		1.250		102	80	120				
Surr: 1-Bromo-4-fluorobenzene	1.30		1.250		104	80	120				

Sample ID: MB-32381	SampType: MBLK	Units: mg/Kg				Prep Date: 5/21/2021	RunNo: 67420				
Client ID: MBLKS	Batch ID: 32381					Analysis Date: 5/21/2021	SeqNo: 1359456				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.0200									
Toluene	ND	0.0300									
Ethylbenzene	ND	0.0250									
m,p-Xylene	ND	0.0500									
o-Xylene	ND	0.0250									
Surr: Dibromofluoromethane	1.16		1.250		92.5	81.9	113				
Surr: Toluene-d8	1.19		1.250		95.5	82.7	115				
Surr: 1-Bromo-4-fluorobenzene	1.24		1.250		99.0	87.9	109				

Sample ID: 2105283-006BDUP	SampType: DUP	Units: mg/Kg-dry				Prep Date: 5/21/2021	RunNo: 67420				
Client ID: BATCH	Batch ID: 32381					Analysis Date: 5/21/2021	SeqNo: 1359459				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.00880						0		30	
Toluene	ND	0.0132						0		30	
Ethylbenzene	ND	0.0110						0		30	

Work Order: 2105302
 CLIENT: GeoEngineers
 Project: 701 S Jackson

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260D

Sample ID: 2105283-006BDUP	SampType: DUP	Units: mg/Kg-dry				Prep Date: 5/21/2021	RunNo: 67420				
Client ID: BATCH	Batch ID: 32381					Analysis Date: 5/21/2021	SeqNo: 1359459				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
m,p-Xylene	ND	0.0220						0		30	
o-Xylene	ND	0.0110						0		30	
Surr: Dibromofluoromethane	0.491		0.5502		89.3	81.9	113		0		
Surr: Toluene-d8	0.529		0.5502		96.1	82.7	115		0		
Surr: 1-Bromo-4-fluorobenzene	2.46		2.751		89.4	87.9	109		0		

Sample ID: 2105302-026BDUP	SampType: DUP	Units: mg/Kg-dry				Prep Date: 5/21/2021	RunNo: 67420				
Client ID: GEI-3-17.5	Batch ID: 32381					Analysis Date: 5/21/2021	SeqNo: 1359462				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.0232						0		30	
Toluene	ND	0.0348						0		30	
Ethylbenzene	ND	0.0290						0		30	
m,p-Xylene	ND	0.0580						0		30	
o-Xylene	ND	0.0290						0		30	
Surr: Dibromofluoromethane	1.29		1.450		89.0	81.9	113		0		
Surr: Toluene-d8	1.41		1.450		97.3	82.7	115		0		
Surr: 1-Bromo-4-fluorobenzene	1.43		1.450		98.9	87.9	109		0		

Sample ID: 2105302-008BMS	SampType: MS	Units: mg/Kg-dry				Prep Date: 5/21/2021	RunNo: 67420				
Client ID: GEI-2-19.0	Batch ID: 32381					Analysis Date: 5/21/2021	SeqNo: 1359464				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	1.13	0.0224	1.118	0	102	76.8	129				
Toluene	1.18	0.0335	1.118	0	106	77.8	127				
Ethylbenzene	1.21	0.0279	1.118	0	108	78.7	130				
m,p-Xylene	2.34	0.0559	2.235	0	105	79.3	127				
o-Xylene	1.16	0.0279	1.118	0	103	80.7	124				
Surr: Dibromofluoromethane	1.54		1.397		110	81.9	113				

Work Order: 2105302
CLIENT: GeoEngineers
Project: 701 S Jackson

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260D

Sample ID: 2105302-008BMS	SampType: MS	Units: mg/Kg-dry	Prep Date: 5/21/2021	RunNo: 67420							
Client ID: GEI-2-19.0	Batch ID: 32381		Analysis Date: 5/21/2021	SeqNo: 1359464							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: Toluene-d8	1.40		1.397		100	82.7	115				
Surr: 1-Bromo-4-fluorobenzene	1.45		1.397		104	87.9	109				

Client Name: **GEI**
 Logged by: **Gabrielle Coeulle**

Work Order Number: **2105302**
 Date Received: **5/19/2021 4:44:56 PM**

Chain of Custody

1. Is Chain of Custody complete? Yes No Not Present
 2. How was the sample delivered? Client

Log In

3. Coolers are present? Yes No NA
 4. Shipping container/cooler in good condition? Yes No
 5. Custody Seals present on shipping container/cooler?
 (Refer to comments for Custody Seals not intact) Yes No Not Present
 6. Was an attempt made to cool the samples? Yes No NA
 7. Were all items received at a temperature of >2°C to 6°C * Yes No NA
 8. Sample(s) in proper container(s)? Yes No
 9. Sufficient sample volume for indicated test(s)? Yes No
 10. Are samples properly preserved? Yes No
 11. Was preservative added to bottles? Yes No NA
 12. Is there headspace in the VOA vials? Yes No NA
 13. Did all samples containers arrive in good condition(unbroken)? Yes No
 14. Does paperwork match bottle labels? Yes No
 15. Are matrices correctly identified on Chain of Custody? Yes No
 16. Is it clear what analyses were requested? Yes No
 17. Were all holding times able to be met? Yes No

Special Handling (if applicable)

18. Was client notified of all discrepancies with this order? Yes No NA

Person Notified:	<input type="text"/>	Date:	<input type="text"/>
By Whom:	<input type="text"/>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text"/>		
Client Instructions:	<input type="text"/>		

19. Additional remarks:

Item Information

Item #	Temp °C
Sample 1	.4

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C



Fremont Analytical

3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Chain of Custody Record & Laboratory Services Agreement

Date: 5/19/21 Page: 1 of 4

Project Name: 701 S Jackson

Project No: 24504-001-01

Collected by: CJG

Location:

Report To (PM): Robert Tahan

PM Email: rtahan@geopengraders.com

Laboratory Project No (Internal): 2455302

Special Remarks: *DX w/ silica gel cleanup (M14 Fernow)

Sample Disposal: Return to client Disposal by lab (after 30 days)

Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	# of Cont.	VOCs (EPA 8260 / 624)	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCID)	Diesel/Heavy Oil Range Organics (DX)	SVOCs (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8082 / 608)	Metals** (EPA 6020 / 200.8)	Total (T) Dissolved (D)	Anions (C)***	EDB (8011)	Comments
1 GE1-2-2.5	5/19/21	0750	S	3													X
2 GE1-2-5.0		0755		1													
3 GE1-2-7.5		0800															
4 GE1-2-10.0		0805															
5 GE1-2-10.5		0807															
6 GE1-2-12.5		0815															
7 GE1-2-15.0		0820															
8 GE1-2-19.0		0825															
9 GE1-2-20.0		0835															
10 GE1-2-23.5		0845															

*Matrix: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water

**Metals (Circle): MTCA-5 RCRA-8 Priority Pollutants TML Individual: Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sp Se Sr Sn Tl V Zn

***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate-Nitrite

I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above, that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Relinquished (Signature) *[Signature]* Print Name *Chelsey Gohm* Date/Time *5/19/21/1520*

Relinquished (Signature) *[Signature]* Print Name *Robert Tahan* Date/Time *5/19/21/1520*

Relinquished (Signature) *[Signature]* Print Name *Chelsey Gohm* Date/Time *5/19/21/1520*

Relinquished (Signature) *[Signature]* Print Name *Robert Tahan* Date/Time *5/19/21/1520*



3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Chain of Custody Record & Laboratory Services Agreement

Client: GEI
Address: SEA 114, WA
City, State, Zip:
Telephone:
Fax:

Date: 5/19/21 Page: 2 of 4
Project Name: 24504-001-01
Project No:
Collected by:
Location:
Report To (PM):
PM Email:

Laboratory Project No (Internal): 24504-001-01
Special Remarks:
Sample Disposal: Return to client Disposal by lab (after 30 days)

Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	# of Cont.	VOCS (EPA 8260 / 624)	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HClD)	Diesel/Heavy Oil Range Organics (DX)	SVOCs (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8082 / 608)	Metals** (EPA 6020 / 200.8)	Total (T) / Dissolved (D)	Anions (IC)**	EDB (8011)	Comments
1 GEI-2-25-0	5/19/21	0850	S	3													
2 GEI-2-27-5		0855															
3 GEI-2-31		0907															
4 GEI-2-33		0910															
5 GEI-2-36		0915															
6 GEI-2-40		0933															
7 GEI-2-45		0945															
8 GEI-2-50		0955															
9 GEI-2-55		1000															
10 GEI-3-2.5		1125															

Matrix: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water
 Metals (Circle): MTC-A-5 RCA-8 Priority Pollutants TAL Individual: Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sb Se Sr Sn Tl Ti V Zn
 Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide Iodide Nitrate+Nitrite
 Turn-around Time:
 Standard Next Day
 3 Day Same Day
 2 Day (specify)
 I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above, that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.
 Relinquished (Signature) Chelsey Sarin Date/Time 5/19/21/1520 Received (Signature) [Signature] Date/Time 5/19/21
 Print Name Chelsey Sarin Date/Time 5/19/21/1520 Received (Signature) [Signature] Date/Time 5/19/21
 Relinquished (Signature) [Signature] Date/Time 5/19/21/1520 Received (Signature) [Signature] Date/Time 5/19/21
 Print Name Carter Johnson Date/Time 5/19/21



Fremont Analytical

3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Chain of Custody Record & Laboratory Services Agreement

Client: GEI

Address:

City, State, Zip: SeaTac, WA

Telephone:

Fax:

Date: 5/19/21 Page: 3 of 4
Project Name:
Project No: 24504-001-01

Laboratory Project No (Internal): 260302

Location:
Report To (PM):

Sample Disposal: Return to client Disposal by lab (after 30 days)

Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	# of Cont.	VOCs (EPA 8260 / 624)	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCID)	Diesel/Heavy Oil Range Organics (DX)	SVOCs (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8082 / 608)	Metals** (EPA 6020 / 200.8)	Total (T) Dissolved (D)	Anions (IC)***	EDB (8011)	Comments
1. GE1-3-6.0	5/19/21	1130	S	3													
2. GE1-3-7.5		1135															
3. GE1-3-10.0		1140															
4. GE1-3-12.5		1145															
5. GE1-3-15.0		1150															
6. GE1-3-17.5		1155															
7. GE1-3-21.5		1200															
8. GE1-3-23.0		1205															
9. GE1-3-25.0		1215															
10. GE1-3-30.0		1220															

*Matrix: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water
 **Metals (Circle): MTCA-5 RCRA-8 Priority Pollutants TAL Individual: Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sp Sr Sn Tl Ti V Zn
 ***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite

I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above, that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Turn-around Time:
 Standard Next Day
 3 Day Same Day
 2 Day (specify)

Relinquished (Signature) C. Stelm Print Name Print Name Date/Time 5/19/21/1520
 Relinquished (Signature) Chevey bkr Print Name Print Name Date/Time 5/19/21/1520
 Received (Signature) [Signature] Print Name Print Name Date/Time 5/19/21 10:16AM
 Received (Signature) [Signature] Print Name Print Name Date/Time 5/19/21 10:16AM



3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Chain of Custody Record & Laboratory Services Agreement

Date: 5/19/21 Page: 4 of 4
Laboratory Project No (Internal): 2105302

Project Name:
Project No: 24504-001-01
Special Remarks:
Collected by:
Location:
Report To (PM):
PM Email:
Sample Disposal: Return to client Disposal by lab (after 30 days)

Client: GEI
Address:
City, State, zip: Seattle, WA
Telephone:
Fax:

Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	# of Cont.	Analysis													Comments										
					VOCS (EPA 8260 / 624)	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCID)	Diesel/Heavy Oil Range Organics (DX)	SVOCs (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8082 / 608)	Metals** (EPA 6020 / 200.8)	Total (T) Dissolved (D)	Anions (IC)***	EDB (8011)												
1 GEI-3-3S-0	5/19/21	1230	S	3																								
2 GEI-3-40.0		1235																										
3 GEI-3-45.0		1245																										
4 GEI-3-50.0		1250																										
5 GEI-3-50.0																												
6																												
7																												
8																												
9																												
10																												

Matrix: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water
*Metals (Circle): MTCA-5 RCRA-8 Priority Pollutants TAL Individual: Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sp Se Sr Sn Tl V Zn
**Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite

I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above, that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Relinquished (Signature): Print Name: Cheley Boh Date/Time: 5/19/21/1520 Received (Signature): Print Name: Oster Johnson Date/Time: 5/19/21/1644



3600 Fremont Ave. N.
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

GeoEngineers

Robert Trahan
2101 4th Ave, Suite 950
Seattle, WA 98121

RE: 701 S Jackson
Work Order Number: 2105302

June 02, 2021

Attention Robert Trahan:

Fremont Analytical, Inc. received 34 sample(s) on 5/19/2021 for the analyses presented in the following report.

Gasoline by NWTPH-Gx
Sample Moisture (Percent Moisture)
Volatile Organic Compounds by EPA Method 8260D

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Brianna Barnes
Project Manager

DoD-ELAP Accreditation #79636 by PJLA, ISO/IEC 17025:2017 and QSM 5.3 for Environmental Testing
ORELAP Certification: WA 100009 (NELAP Recognized) for Environmental Testing
Washington State Department of Ecology Accredited for Environmental Testing, Lab ID C910

Revision v1

www.fremontanalytical.com



CLIENT: GeoEngineers
Project: 701 S Jackson
Work Order: 2105302

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
2105302-001	GEI-2-2.5	05/19/2021 7:50 AM	05/19/2021 4:44 PM
2105302-002	GEI-2-5.0	05/19/2021 7:55 AM	05/19/2021 4:44 PM
2105302-003	GEI-2-7.5	05/19/2021 8:00 AM	05/19/2021 4:44 PM
2105302-004	GEI-2-10.0	05/19/2021 8:05 AM	05/19/2021 4:44 PM
2105302-005	GEI-2-10.5	05/19/2021 8:07 AM	05/19/2021 4:44 PM
2105302-006	GEI-2-12.5	05/19/2021 8:15 AM	05/19/2021 4:44 PM
2105302-007	GEI-2-15.0	05/19/2021 8:20 AM	05/19/2021 4:44 PM
2105302-008	GEI-2-19.0	05/19/2021 8:25 AM	05/19/2021 4:44 PM
2105302-009	GEI-2-20.0	05/19/2021 8:35 AM	05/19/2021 4:44 PM
2105302-010	GEI-2-23.5	05/19/2021 8:45 AM	05/19/2021 4:44 PM
2105302-011	GEI-2-25.0	05/19/2021 8:50 AM	05/19/2021 4:44 PM
2105302-012	GEI-2-27.5	05/19/2021 8:55 AM	05/19/2021 4:44 PM
2105302-013	GEI-2-31	05/19/2021 9:07 AM	05/19/2021 4:44 PM
2105302-014	GEI-2-33	05/19/2021 9:10 AM	05/19/2021 4:44 PM
2105302-015	GEI-2-36	05/19/2021 9:15 AM	05/19/2021 4:44 PM
2105302-016	GEI-2-40	05/19/2021 9:33 AM	05/19/2021 4:44 PM
2105302-017	GEI-2-45	05/19/2021 9:45 AM	05/19/2021 4:44 PM
2105302-018	GEI-2-50	05/19/2021 9:55 AM	05/19/2021 4:44 PM
2105302-019	GEI-2-55	05/19/2021 10:00 AM	05/19/2021 4:44 PM
2105302-020	GEI-3-2.5	05/19/2021 11:25 AM	05/19/2021 4:44 PM
2105302-021	GEI-3-5.0	05/19/2021 11:30 AM	05/19/2021 4:44 PM
2105302-022	GEI-3-7.5	05/19/2021 11:35 AM	05/19/2021 4:44 PM
2105302-023	GEI-3-10.0	05/19/2021 11:40 AM	05/19/2021 4:44 PM
2105302-024	GEI-3-12.5	05/19/2021 11:45 AM	05/19/2021 4:44 PM
2105302-025	GEI-3-15.0	05/19/2021 11:50 AM	05/19/2021 4:44 PM
2105302-026	GEI-3-17.5	05/19/2021 11:55 AM	05/19/2021 4:44 PM
2105302-027	GEI-3-21.5	05/19/2021 12:00 PM	05/19/2021 4:44 PM
2105302-028	GEI-3-23.0	05/19/2021 12:05 PM	05/19/2021 4:44 PM
2105302-029	GEI-3-25.0	05/19/2021 12:15 PM	05/19/2021 4:44 PM
2105302-030	GEI-3-30.0	05/19/2021 12:20 PM	05/19/2021 4:44 PM
2105302-031	GEI-3-35.0	05/19/2021 12:30 PM	05/19/2021 4:44 PM
2105302-032	GEI-3-40.0	05/19/2021 12:35 PM	05/19/2021 4:44 PM
2105302-033	GEI-3-45.0	05/19/2021 12:45 PM	05/19/2021 4:44 PM
2105302-034	GEI-3-50.0	05/19/2021 12:50 PM	05/19/2021 4:44 PM

Note: If no "Time Collected" is supplied, a default of 12:00AM is assigned

CLIENT: GeoEngineers

Project: 701 S Jackson

I. SAMPLE RECEIPT:

Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:

Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:

Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Revision 1 includes additional analyses requested by the client.

Qualifiers:

- * - Flagged value is not within established control limits
- B - Analyte detected in the associated Method Blank
- D - Dilution was required
- E - Value above quantitation range
- H - Holding times for preparation or analysis exceeded
- I - Analyte with an internal standard that does not meet established acceptance criteria
- J - Analyte detected below Reporting Limit
- N - Tentatively Identified Compound (TIC)
- Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria
- S - Spike recovery outside accepted recovery limits
- ND - Not detected at the Reporting Limit
- R - High relative percent difference observed

Acronyms:

- %Rec - Percent Recovery
- CCB - Continued Calibration Blank
- CCV - Continued Calibration Verification
- DF - Dilution Factor
- DUP - Sample Duplicate
- HEM - Hexane Extractable Material
- ICV - Initial Calibration Verification
- LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
- MCL - Maximum Contaminant Level
- MB or MBLANK - Method Blank
- MDL - Method Detection Limit
- MS/MSD - Matrix Spike / Matrix Spike Duplicate
- PDS - Post Digestion Spike
- Ref Val - Reference Value
- REP - Sample Replicate
- RL - Reporting Limit
- RPD - Relative Percent Difference
- SD - Serial Dilution
- SGT - Silica Gel Treatment
- SPK - Spike
- Surr - Surrogate



Client: GeoEngineers

Collection Date: 5/19/2021 8:05:00 AM

Project: 701 S Jackson

Lab ID: 2105302-004

Matrix: Soil

Client Sample ID: GEI-2-10.0

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Gasoline by NWTPH-Gx

Batch ID: 32485 Analyst: CR

Gasoline	1,970	518	D	mg/Kg-dry	100	6/2/2021 11:34:06 AM
Surr: Toluene-d8	100	65 - 135	D	%Rec	100	6/2/2021 11:34:06 AM
Surr: 4-Bromofluorobenzene	113	65 - 135	D	%Rec	100	6/2/2021 11:34:06 AM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 32485 Analyst: CR

Benzene	ND	0.0207		mg/Kg-dry	1	5/29/2021 11:03:06 AM
Toluene	ND	0.0311		mg/Kg-dry	1	5/29/2021 11:03:06 AM
Ethylbenzene	0.347	0.0259		mg/Kg-dry	1	5/29/2021 11:03:06 AM
m,p-Xylene	0.686	0.0518		mg/Kg-dry	1	5/29/2021 11:03:06 AM
o-Xylene	ND	0.0259		mg/Kg-dry	1	5/29/2021 11:03:06 AM
Surr: Dibromofluoromethane	89.7	81.9 - 113		%Rec	1	5/29/2021 11:03:06 AM
Surr: Toluene-d8	142	82.7 - 115	S	%Rec	1	5/29/2021 11:03:06 AM
Surr: 1-Bromo-4-fluorobenzene	122	87.9 - 109	S	%Rec	1	5/29/2021 11:03:06 AM

NOTES:

S - Outlying surrogate recovery attributed to TPH interference. The method is in control as indicated by the Method Blank (MB) & Laboratory Control Sample (LCS).

Sample Moisture (Percent Moisture)

Batch ID: R67508 Analyst: KJ

Percent Moisture	16.4	0.500		wt%	1	5/26/2021 10:22:30 AM
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Client: GeoEngineers

Collection Date: 5/19/2021 8:20:00 AM

Project: 701 S Jackson

Lab ID: 2105302-007

Matrix: Soil

Client Sample ID: GEI-2-15.0

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Gasoline by NWTPH-Gx

Batch ID: 32485 Analyst: CR

Gasoline	361	105	D	mg/Kg-dry	20	6/2/2021 11:03:54 AM
Surr: Toluene-d8	99.9	65 - 135	D	%Rec	20	6/2/2021 11:03:54 AM
Surr: 4-Bromofluorobenzene	109	65 - 135	D	%Rec	20	6/2/2021 11:03:54 AM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 32485 Analyst: CR

Benzene	0.129	0.0209		mg/Kg-dry	1	5/29/2021 11:33:16 AM
Toluene	0.104	0.0314		mg/Kg-dry	1	5/29/2021 11:33:16 AM
Ethylbenzene	2.21	0.523	D	mg/Kg-dry	20	6/2/2021 11:03:54 AM
m,p-Xylene	1.10	0.0523		mg/Kg-dry	1	5/29/2021 11:33:16 AM
o-Xylene	0.215	0.0262		mg/Kg-dry	1	5/29/2021 11:33:16 AM
Surr: Dibromofluoromethane	91.6	81.9 - 113		%Rec	1	5/29/2021 11:33:16 AM
Surr: Toluene-d8	109	82.7 - 115		%Rec	1	5/29/2021 11:33:16 AM
Surr: 1-Bromo-4-fluorobenzene	96.4	87.9 - 109		%Rec	1	5/29/2021 11:33:16 AM

Sample Moisture (Percent Moisture)

Batch ID: R67523 Analyst: KJ

Percent Moisture	13.2	0.500		wt%	1	5/26/2021 2:54:09 PM
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Client: GeoEngineers

Collection Date: 5/19/2021 8:25:00 AM

Project: 701 S Jackson

Lab ID: 2105302-008

Matrix: Soil

Client Sample ID: GEI-2-19.0

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<u>Gasoline by NWTPH-Gx</u>					Batch ID: 32381	Analyst: CR
Gasoline	ND	5.59		mg/Kg-dry	1	5/21/2021 12:18:26 PM
Surr: Toluene-d8	98.2	65 - 135		%Rec	1	5/21/2021 12:18:26 PM
Surr: 4-Bromofluorobenzene	105	65 - 135		%Rec	1	5/21/2021 12:18:26 PM
<u>Volatile Organic Compounds by EPA Method 8260D</u>					Batch ID: 32381	Analyst: CR
Benzene	ND	0.0224		mg/Kg-dry	1	5/21/2021 12:18:26 PM
Toluene	ND	0.0335		mg/Kg-dry	1	5/21/2021 12:18:26 PM
Ethylbenzene	ND	0.0279		mg/Kg-dry	1	5/21/2021 12:18:26 PM
m,p-Xylene	ND	0.0559		mg/Kg-dry	1	5/21/2021 12:18:26 PM
o-Xylene	ND	0.0279		mg/Kg-dry	1	5/21/2021 12:18:26 PM
Surr: Dibromofluoromethane	91.5	81.9 - 113		%Rec	1	5/21/2021 12:18:26 PM
Surr: Toluene-d8	96.8	82.7 - 115		%Rec	1	5/21/2021 12:18:26 PM
Surr: 1-Bromo-4-fluorobenzene	103	87.9 - 109		%Rec	1	5/21/2021 12:18:26 PM
<u>Sample Moisture (Percent Moisture)</u>					Batch ID: R67444	Analyst: KJ
Percent Moisture	19.4	0.500		wt%	1	5/24/2021 3:59:42 PM



Client: GeoEngineers

Collection Date: 5/19/2021 11:30:00 AM

Project: 701 S Jackson

Lab ID: 2105302-021

Matrix: Soil

Client Sample ID: GEI-3-5.0

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Gasoline by NWTPH-Gx

Batch ID: 32485 Analyst: CR

Gasoline	ND	4.37		mg/Kg-dry	1	6/2/2021 10:33:43 AM
Surr: Toluene-d8	103	65 - 135		%Rec	1	6/2/2021 10:33:43 AM
Surr: 4-Bromofluorobenzene	108	65 - 135		%Rec	1	6/2/2021 10:33:43 AM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 32485 Analyst: CR

Benzene	ND	0.0175		mg/Kg-dry	1	5/29/2021 12:03:25 PM
Toluene	ND	0.0262		mg/Kg-dry	1	5/29/2021 12:03:25 PM
Ethylbenzene	ND	0.0219		mg/Kg-dry	1	5/29/2021 12:03:25 PM
m,p-Xylene	ND	0.0437		mg/Kg-dry	1	5/29/2021 12:03:25 PM
o-Xylene	ND	0.0219		mg/Kg-dry	1	5/29/2021 12:03:25 PM
Surr: Dibromofluoromethane	93.5	81.9 - 113		%Rec	1	5/29/2021 12:03:25 PM
Surr: Toluene-d8	96.4	82.7 - 115		%Rec	1	5/29/2021 12:03:25 PM
Surr: 1-Bromo-4-fluorobenzene	95.8	87.9 - 109		%Rec	1	5/29/2021 12:03:25 PM

Sample Moisture (Percent Moisture)

Batch ID: R67523 Analyst: KJ

Percent Moisture	12.5	0.500		wt%	1	5/26/2021 2:54:09 PM
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Client: GeoEngineers

Collection Date: 5/19/2021 11:50:00 AM

Project: 701 S Jackson

Lab ID: 2105302-025

Matrix: Soil

Client Sample ID: GEI-3-15.0

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Gasoline by NWTPH-Gx

Batch ID: 32485 Analyst: CR

Gasoline	10,500	526	D	mg/Kg-dry	100	5/29/2021 10:32:56 AM
Surr: Toluene-d8	103	65 - 135	D	%Rec	100	5/29/2021 10:32:56 AM
Surr: 4-Bromofluorobenzene	111	65 - 135	D	%Rec	100	5/29/2021 10:32:56 AM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 32485 Analyst: CR

Benzene	13.2	2.11	D	mg/Kg-dry	100	5/29/2021 10:32:56 AM
Toluene	87.8	3.16	D	mg/Kg-dry	100	5/29/2021 10:32:56 AM
Ethylbenzene	97.2	2.63	D	mg/Kg-dry	100	5/29/2021 10:32:56 AM
m,p-Xylene	398	5.26	D	mg/Kg-dry	100	5/29/2021 10:32:56 AM
o-Xylene	156	2.63	D	mg/Kg-dry	100	5/29/2021 10:32:56 AM
Surr: Dibromofluoromethane	89.8	81.9 - 113	D	%Rec	100	5/29/2021 10:32:56 AM
Surr: Toluene-d8	94.9	82.7 - 115	D	%Rec	100	5/29/2021 10:32:56 AM
Surr: 1-Bromo-4-fluorobenzene	98.9	87.9 - 109	D	%Rec	100	5/29/2021 10:32:56 AM

Sample Moisture (Percent Moisture)

Batch ID: R67523 Analyst: KJ

Percent Moisture	17.8	0.500		wt%	1	5/26/2021 2:54:09 PM
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Client: GeoEngineers

Collection Date: 5/19/2021 11:55:00 AM

Project: 701 S Jackson

Lab ID: 2105302-026

Matrix: Soil

Client Sample ID: GEI-3-17.5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Gasoline by NWTPH-Gx

Batch ID: 32381 Analyst: CR

Gasoline	ND	5.80		mg/Kg-dry	1	5/21/2021 12:48:43 PM
Surr: Toluene-d8	100	65 - 135		%Rec	1	5/21/2021 12:48:43 PM
Surr: 4-Bromofluorobenzene	101	65 - 135		%Rec	1	5/21/2021 12:48:43 PM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 32381 Analyst: CR

Benzene	ND	0.0232		mg/Kg-dry	1	5/21/2021 12:48:43 PM
Toluene	ND	0.0348		mg/Kg-dry	1	5/21/2021 12:48:43 PM
Ethylbenzene	ND	0.0290		mg/Kg-dry	1	5/21/2021 12:48:43 PM
m,p-Xylene	ND	0.0580		mg/Kg-dry	1	5/21/2021 12:48:43 PM
o-Xylene	ND	0.0290		mg/Kg-dry	1	5/21/2021 12:48:43 PM
Surr: Dibromofluoromethane	88.9	81.9 - 113		%Rec	1	5/21/2021 12:48:43 PM
Surr: Toluene-d8	97.3	82.7 - 115		%Rec	1	5/21/2021 12:48:43 PM
Surr: 1-Bromo-4-fluorobenzene	98.8	87.9 - 109		%Rec	1	5/21/2021 12:48:43 PM

Sample Moisture (Percent Moisture)

Batch ID: R67444 Analyst: KJ

Percent Moisture	21.9	0.500		wt%	1	5/24/2021 3:59:42 PM
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Work Order: 2105302
CLIENT: GeoEngineers
Project: 701 S Jackson

QC SUMMARY REPORT
Gasoline by NWTPH-Gx

Sample ID: LCS-32381	SampType: LCS	Units: mg/Kg				Prep Date: 5/21/2021	RunNo: 67421				
Client ID: LCSS	Batch ID: 32381					Analysis Date: 5/21/2021	SeqNo: 1359470				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline	22.8	5.00	25.00	0	91.3	65	135				
Surr: Toluene-d8	1.16		1.250		93.0	65	135				
Surr: 4-Bromofluorobenzene	1.31		1.250		105	65	135				

Sample ID: MB-32381	SampType: MBLK	Units: mg/Kg				Prep Date: 5/21/2021	RunNo: 67421				
Client ID: MBLKS	Batch ID: 32381					Analysis Date: 5/21/2021	SeqNo: 1359471				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline	ND	5.00									
Surr: Toluene-d8	1.18		1.250		94.3	65	135				
Surr: 4-Bromofluorobenzene	1.27		1.250		102	65	135				

Sample ID: 2105302-026BDUP	SampType: DUP	Units: mg/Kg-dry				Prep Date: 5/21/2021	RunNo: 67421				
Client ID: GEI-3-17.5	Batch ID: 32381					Analysis Date: 5/21/2021	SeqNo: 1359474				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline	ND	5.80						0		30	
Surr: Toluene-d8	1.47		1.450		101	65	135		0		
Surr: 4-Bromofluorobenzene	1.47		1.450		101	65	135		0		

Sample ID: 2105322-001BMS	SampType: MS	Units: mg/Kg-dry				Prep Date: 5/21/2021	RunNo: 67421				
Client ID: BATCH	Batch ID: 32381					Analysis Date: 5/21/2021	SeqNo: 1359476				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline	60.8	14.1	70.37	0	86.4	65	135				
Surr: Toluene-d8	3.51		3.519		99.6	65	135				
Surr: 4-Bromofluorobenzene	3.79		3.519		108	65	135				

Work Order: 2105302
CLIENT: GeoEngineers
Project: 701 S Jackson

QC SUMMARY REPORT
Gasoline by NWTPH-Gx

Sample ID: LCS-32485	SampType: LCS	Units: mg/Kg				Prep Date: 5/28/2021	RunNo: 67619				
Client ID: LCSS	Batch ID: 32485					Analysis Date: 5/29/2021	SeqNo: 1363937				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline	29.8	5.00	25.00	0	119	65	135				
Surr: Toluene-d8	1.25		1.250		99.8	65	135				
Surr: 4-Bromofluorobenzene	1.23		1.250		98.1	65	135				

Sample ID: MB-32485	SampType: MBLK	Units: mg/Kg				Prep Date: 5/28/2021	RunNo: 67619				
Client ID: MBLKS	Batch ID: 32485					Analysis Date: 5/29/2021	SeqNo: 1363938				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline	ND	5.00									
Surr: Toluene-d8	1.23		1.250		98.7	65	135				
Surr: 4-Bromofluorobenzene	1.19		1.250		95.2	65	135				

Sample ID: 2105463-002BDUP	SampType: DUP	Units: mg/Kg-dry				Prep Date: 5/28/2021	RunNo: 67619				
Client ID: BATCH	Batch ID: 32485					Analysis Date: 5/29/2021	SeqNo: 1363926				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline	ND	5.10						0		30	
Surr: Toluene-d8	1.26		1.276		98.4	65	135		0		
Surr: 4-Bromofluorobenzene	1.20		1.276		94.3	65	135		0		

Sample ID: 2105302-021BDUP	SampType: DUP	Units: mg/Kg-dry				Prep Date: 5/28/2021	RunNo: 67619				
Client ID: GEI-3-5.0	Batch ID: 32485					Analysis Date: 5/29/2021	SeqNo: 1363922				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline	ND	4.37						7.139	64.4	30	
Surr: Toluene-d8	1.07		1.093		98.1	65	135		0		
Surr: 4-Bromofluorobenzene	1.03		1.093		94.0	65	135		0		

Work Order: 2105302
CLIENT: GeoEngineers
Project: 701 S Jackson

QC SUMMARY REPORT
Gasoline by NWTPH-Gx

Sample ID: 2105463-009BMS	SampType: MS	Units: mg/Kg-dry	Prep Date: 5/28/2021	RunNo: 67619							
Client ID: BATCH	Batch ID: 32485	Analysis Date: 5/29/2021	SeqNo: 1363934								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline	35.0	5.25	26.27	0	133	65	135				
Surr: Toluene-d8	1.32		1.314		100	65	135				
Surr: 4-Bromofluorobenzene	1.29		1.314		98.3	65	135				

Work Order: 2105302
 CLIENT: GeoEngineers
 Project: 701 S Jackson

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260D

Sample ID: LCS-32381	SampType: LCS	Units: mg/Kg				Prep Date: 5/21/2021	RunNo: 67420				
Client ID: LCSS	Batch ID: 32381					Analysis Date: 5/21/2021	SeqNo: 1359455				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	0.945	0.0200	1.000	0	94.5	80	120				
Toluene	1.07	0.0300	1.000	0	107	80	120				
Ethylbenzene	1.06	0.0250	1.000	0	106	80	120				
m,p-Xylene	2.05	0.0500	2.000	0	103	80	120				
o-Xylene	1.04	0.0250	1.000	0	104	80	120				
Surr: Dibromofluoromethane	1.28		1.250		103	80	120				
Surr: Toluene-d8	1.28		1.250		102	80	120				
Surr: 1-Bromo-4-fluorobenzene	1.30		1.250		104	80	120				

Sample ID: MB-32381	SampType: MBLK	Units: mg/Kg				Prep Date: 5/21/2021	RunNo: 67420				
Client ID: MBLKS	Batch ID: 32381					Analysis Date: 5/21/2021	SeqNo: 1359456				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.0200									
Toluene	ND	0.0300									
Ethylbenzene	ND	0.0250									
m,p-Xylene	ND	0.0500									
o-Xylene	ND	0.0250									
Surr: Dibromofluoromethane	1.16		1.250		92.5	81.9	113				
Surr: Toluene-d8	1.19		1.250		95.5	82.7	115				
Surr: 1-Bromo-4-fluorobenzene	1.24		1.250		99.0	87.9	109				

Sample ID: 2105283-006BDUP	SampType: DUP	Units: mg/Kg-dry				Prep Date: 5/21/2021	RunNo: 67420				
Client ID: BATCH	Batch ID: 32381					Analysis Date: 5/21/2021	SeqNo: 1359459				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.00880						0		30	
Toluene	ND	0.0132						0		30	
Ethylbenzene	ND	0.0110						0		30	

Work Order: 2105302
 CLIENT: GeoEngineers
 Project: 701 S Jackson

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260D

Sample ID: 2105283-006BDUP	SampType: DUP	Units: mg/Kg-dry				Prep Date: 5/21/2021	RunNo: 67420				
Client ID: BATCH	Batch ID: 32381					Analysis Date: 5/21/2021	SeqNo: 1359459				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
m,p-Xylene	ND	0.0220						0		30	
o-Xylene	ND	0.0110						0		30	
Surr: Dibromofluoromethane	0.491		0.5502		89.3	81.9	113		0		
Surr: Toluene-d8	0.529		0.5502		96.1	82.7	115		0		
Surr: 1-Bromo-4-fluorobenzene	2.46		2.751		89.4	87.9	109		0		

Sample ID: 2105302-026BDUP	SampType: DUP	Units: mg/Kg-dry				Prep Date: 5/21/2021	RunNo: 67420				
Client ID: GEI-3-17.5	Batch ID: 32381					Analysis Date: 5/21/2021	SeqNo: 1359462				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.0232						0		30	
Toluene	ND	0.0348						0		30	
Ethylbenzene	ND	0.0290						0		30	
m,p-Xylene	ND	0.0580						0		30	
o-Xylene	ND	0.0290						0		30	
Surr: Dibromofluoromethane	1.29		1.450		89.0	81.9	113		0		
Surr: Toluene-d8	1.41		1.450		97.3	82.7	115		0		
Surr: 1-Bromo-4-fluorobenzene	1.43		1.450		98.9	87.9	109		0		

Sample ID: 2105302-008BMS	SampType: MS	Units: mg/Kg-dry				Prep Date: 5/21/2021	RunNo: 67420				
Client ID: GEI-2-19.0	Batch ID: 32381					Analysis Date: 5/21/2021	SeqNo: 1359464				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	1.13	0.0224	1.118	0	102	76.8	129				
Toluene	1.18	0.0335	1.118	0	106	77.8	127				
Ethylbenzene	1.21	0.0279	1.118	0	108	78.7	130				
m,p-Xylene	2.34	0.0559	2.235	0	105	79.3	127				
o-Xylene	1.16	0.0279	1.118	0	103	80.7	124				
Surr: Dibromofluoromethane	1.54		1.397		110	81.9	113				

Work Order: 2105302
 CLIENT: GeoEngineers
 Project: 701 S Jackson

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260D

Sample ID: 2105302-008BMS	SampType: MS	Units: mg/Kg-dry	Prep Date: 5/21/2021	RunNo: 67420							
Client ID: GEI-2-19.0	Batch ID: 32381		Analysis Date: 5/21/2021	SeqNo: 1359464							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Surr: Toluene-d8	1.40		1.397		100	82.7	115				
Surr: 1-Bromo-4-fluorobenzene	1.45		1.397		104	87.9	109				

Sample ID: LCS-32485	SampType: LCS	Units: mg/Kg	Prep Date: 5/28/2021	RunNo: 67618							
Client ID: LCSS	Batch ID: 32485		Analysis Date: 5/29/2021	SeqNo: 1363917							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Benzene	1.06	0.0200	1.000	0	106	80	120				
Toluene	1.07	0.0300	1.000	0	107	80	120				
Ethylbenzene	1.19	0.0250	1.000	0	119	80	120				
m,p-Xylene	2.33	0.0500	2.000	0	116	80	120				
o-Xylene	1.16	0.0250	1.000	0	116	80	120				
Surr: Dibromofluoromethane	1.12		1.250		89.7	80	120				
Surr: Toluene-d8	1.14		1.250		91.3	80	120				
Surr: 1-Bromo-4-fluorobenzene	1.23		1.250		98.2	80	120				

Sample ID: MB-32485	SampType: MBLK	Units: mg/Kg	Prep Date: 5/28/2021	RunNo: 67618							
Client ID: MBLKS	Batch ID: 32485		Analysis Date: 5/29/2021	SeqNo: 1363918							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Benzene	ND	0.0200									
Toluene	ND	0.0300									
Ethylbenzene	ND	0.0250									
m,p-Xylene	ND	0.0500									
o-Xylene	ND	0.0250									
Surr: Dibromofluoromethane	1.16		1.250		92.7	81.9	113				
Surr: Toluene-d8	1.18		1.250		94.7	82.7	115				
Surr: 1-Bromo-4-fluorobenzene	1.22		1.250		97.5	87.9	109				

Work Order: 2105302
 CLIENT: GeoEngineers
 Project: 701 S Jackson

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260D

Sample ID: 2105463-002BDUP	SampType: DUP	Units: mg/Kg-dry			Prep Date: 5/28/2021	RunNo: 67618					
Client ID: BATCH	Batch ID: 32485				Analysis Date: 5/29/2021	SeqNo: 1363907					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.0204						0		30	
Toluene	ND	0.0306						0		30	
Ethylbenzene	ND	0.0255						0		30	
m,p-Xylene	ND	0.0510						0		30	
o-Xylene	ND	0.0255						0		30	
Surr: Dibromofluoromethane	1.20		1.276		93.8	81.9	113		0		
Surr: Toluene-d8	1.23		1.276		96.6	82.7	115		0		
Surr: 1-Bromo-4-fluorobenzene	1.23		1.276		96.5	87.9	109		0		

Sample ID: 2105302-021BDUP	SampType: DUP	Units: mg/Kg-dry			Prep Date: 5/28/2021	RunNo: 67618					
Client ID: GEI-3-5.0	Batch ID: 32485				Analysis Date: 5/29/2021	SeqNo: 1363903					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.0175						0		30	
Toluene	ND	0.0262						0		30	
Ethylbenzene	ND	0.0219						0		30	
m,p-Xylene	ND	0.0437						0		30	
o-Xylene	ND	0.0219						0		30	
Surr: Dibromofluoromethane	1.02		1.093		93.0	81.9	113		0		
Surr: Toluene-d8	1.05		1.093		96.1	82.7	115		0		
Surr: 1-Bromo-4-fluorobenzene	1.03		1.093		94.6	87.9	109		0		

Sample ID: 2105302-007BMS	SampType: MS	Units: mg/Kg-dry			Prep Date: 5/28/2021	RunNo: 67618					
Client ID: GEI-2-15.0	Batch ID: 32485				Analysis Date: 5/29/2021	SeqNo: 1363901					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	1.31	0.0209	1.046	0.1287	113	76.8	129				
Toluene	1.37	0.0314	1.046	0.1043	121	77.8	127				
Ethylbenzene	3.74	0.0262	1.046	2.469	121	78.7	130				

Work Order: 2105302
 CLIENT: GeoEngineers
 Project: 701 S Jackson

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260D

Sample ID: 2105302-007BMS	SampType: MS	Units: mg/Kg-dry				Prep Date: 5/28/2021	RunNo: 67618				
Client ID: GEI-2-15.0	Batch ID: 32485					Analysis Date: 5/29/2021	SeqNo: 1363901				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
m,p-Xylene	3.55	0.0523	2.092	1.103	117	79.3	127				
o-Xylene	1.43	0.0262	1.046	0.2146	116	80.7	124				
Surr: Dibromofluoromethane	1.21		1.308		92.3	81.9	113				
Surr: Toluene-d8	1.41		1.308		108	82.7	115				
Surr: 1-Bromo-4-fluorobenzene	1.27		1.308		97.3	87.9	109				

Sample ID: MB-32485	SampType: MBLK	Units: mg/Kg				Prep Date: 5/28/2021	RunNo: 67659				
Client ID: MBLKS	Batch ID: 32485					Analysis Date: 6/2/2021	SeqNo: 1364716				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.0200									
Toluene	ND	0.0300									
Ethylbenzene	ND	0.0250									
m,p-Xylene	ND	0.0500									
o-Xylene	ND	0.0250									
Surr: Dibromofluoromethane	1.13		1.250		90.4	81.9	113				
Surr: Toluene-d8	1.32		1.250		106	82.7	115				
Surr: 1-Bromo-4-fluorobenzene	1.40		1.250		112	87.9	109				S

NOTES:
 S - Outlying surrogate recovery(ies) observed.

Client Name: **GEI**
 Logged by: **Gabrielle Coeulle**

Work Order Number: **2105302**
 Date Received: **5/19/2021 4:44:56 PM**

Chain of Custody

1. Is Chain of Custody complete? Yes No Not Present
 2. How was the sample delivered? Client

Log In

3. Coolers are present? Yes No NA
 4. Shipping container/cooler in good condition? Yes No
 5. Custody Seals present on shipping container/cooler?
 (Refer to comments for Custody Seals not intact) Yes No Not Present
 6. Was an attempt made to cool the samples? Yes No NA
 7. Were all items received at a temperature of >2°C to 6°C * Yes No NA
 8. Sample(s) in proper container(s)? Yes No
 9. Sufficient sample volume for indicated test(s)? Yes No
 10. Are samples properly preserved? Yes No
 11. Was preservative added to bottles? Yes No NA
 12. Is there headspace in the VOA vials? Yes No NA
 13. Did all samples containers arrive in good condition(unbroken)? Yes No
 14. Does paperwork match bottle labels? Yes No
 15. Are matrices correctly identified on Chain of Custody? Yes No
 16. Is it clear what analyses were requested? Yes No
 17. Were all holding times able to be met? Yes No

Special Handling (if applicable)

18. Was client notified of all discrepancies with this order? Yes No NA

Person Notified:	<input type="text"/>	Date:	<input type="text"/>
By Whom:	<input type="text"/>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text"/>		
Client Instructions:	<input type="text"/>		

19. Additional remarks:

Item Information

Item #	Temp °C
Sample 1	0.4

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C



Fremont Analytical

3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Chain of Custody Record & Laboratory Services Agreement

Date: 5/19/21 Page: 1 of 4

Project Name: 701 S Jackson

Project No: 24504-001-01

Collected by: CJG

Location:

Report To (PM): Robert Tahan

PM Email: rtahan@geopengraders.com

Laboratory Project No (Internal): 2455302

Special Remarks: *DX w/ silica gel cleanup (M14 Fernow)

Sample Disposal: Return to client Disposal by lab (after 30 days)

Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	# of Cont.	VOCs (EPA 8260 / 624)	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCID)	Diesel/Heavy Oil Range Organics (DX)	SVOCs (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8082 / 608)	Metals** (EPA 6020 / 200.8)	Total (T) Dissolved (D)	Anions (C)***	EDB (8011)	Comments	
1 GE1-2-2.5	5/19/21	0750	S	3													X	
2 GE1-2-5.0		0755		1														
3 GE1-2-7.5		0800																
4 GE1-2-10.0		0805																
5 GE1-2-10.5		0807																
6 GE1-2-12.5		0815																
7 GE1-2-15.0		0820																
8 GE1-2-19.0		0825																
9 GE1-2-20.0		0835																
10 GE1-2-23.5		0845																

*Matrix: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water

**Metals (Circle): MTCA-5 RCRA-8 Priority Pollutants TML Individual: Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sp Se Sr Sn Tl V Zn

***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate-Nitrite

I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above, that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Relinquished (Signature) *[Signature]* Print Name *Chelsey Gohm* Date/Time *5/19/21/1520*

Relinquished (Signature) *[Signature]* Print Name *Robert Tahan* Date/Time *5/19/21/1520*

Relinquished (Signature) *[Signature]* Print Name *Chelsey Gohm* Date/Time *5/19/21/1520*

Relinquished (Signature) *[Signature]* Print Name *Robert Tahan* Date/Time *5/19/21/1520*



Fremont Analytical

3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Chain of Custody Record & Laboratory Services Agreement

Date: 5/19/12 Page: 2 of: 4
Project Name: 24504-001-01

Laboratory Project No (Internal): 24504-001-01
Special Remarks:

24504-001-01

Client: GE1

Address:

City, State, Zip: Seattle, WA

Collected by:

Report To (PM):
PM Email:
Sample Disposal: Return to client Disposal by lab (after 30 days)

Telephone:

Fax:

Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	# of Cont.	VOCs (EPA 8260 / 624)	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCD)	Diesel/Heavy Oil Range Organics (DX)	SVOCs (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8082 / 608)	Metals** (EPA 6020 / 200.8)	Total (T) / Dissolved (D)	Metals** (IC)**	EDB (8011)	Comments
1 GE1-2-25-0	5/19/12	0850	S	3													
2 GE1-2-27-5		0855															
3 GE1-2-31		0907															
4 GE1-2-33		0910															
5 GE1-2-36		0915															
6 GE1-2-40		0933															
7 GE1-2-45		0945															
8 GE1-2-50		0955															
9 GE1-2-55		1000															
10 GE1-3-2.5		1125															

*Matrix: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water

**Metals (Circle): MTC-A-5 RCA-8 Priority Pollutants TAL Individual: Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sb Se Sr Sn Tl Ti V Zn

***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide Iodide Fluoride Nitrate+Nitrite

I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above, that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Turn-around Time:
 Standard Next Day
 3 Day Same Day
 2 Day (specify)

Relinquished (Signature) [Signature] Date/Time 5/19/12/1520 Received (Signature) [Signature]
 Print Name Chelsea Soren Date/Time 5/19/12/1520 Received (Signature) [Signature]
 Relinquished (Signature) [Signature] Date/Time 5/19/12/1520 Received (Signature) [Signature]
 Print Name Chad Johnson Date/Time 5/19/12/1644 Received (Signature) [Signature]



3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Chain of Custody Record & Laboratory Services Agreement

Date: 5/19/21 Page: 3 of 4

Laboratory Project No (Internal): 2605302

Project Name: GEL
Project No: 24504-001-01

Collected by:

City, State, Zip: SeaTac, WA

Location:

Report To (PM):

Sample Disposal: Return to client Disposal by lab (after 30 days)

Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	# of Cont.	VOCs (EPA 8260 / 624)	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCID)	Diesel/Heavy Oil Range Organics (DX)	SVOCs (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8082 / 608)	Metals** (EPA 6020 / 200.8)	Total (T) Dissolved (D)	Metals (IC)***	Anions (IC)***	EDB (8011)	Comments
1 GEL-3-6.0	5/19/21	1130	S	3														
2 GEL-3-7.5		1135																
3 GEL-3-10.0		1140																
4 GEL-3-12.5		1145																
5 GEL-3-15.0		1150																
6 GEL-3-17.5		1155																
7 GEL-3-21.5		1200																
8 GEL-3-23.0		1205																
9 GEL-3-25.0		1215																
10 GEL-3-30.0		1220																

*Matrix: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water
 **Metals (Circle): MTCA-5 RCRA-8 Priority Pollutants TAL Individual: Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sp Sr Sn Tl Ti V Zn
 ***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite

Turn-around Time:
 Standard Next Day
 3 Day Same Day
 2 Day (specify)

I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above, that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Relinquished (Signature) x C. Jensen	Print Name C. Jensen	Date/Time 5/19/21/1520	Received (Signature) x [Signature]	Print Name Carter Johnson	Date/Time 5/19/21 0 16PM
Relinquished (Signature) x	Print Name	Date/Time	Received (Signature) x	Print Name	Date/Time



Fremont
Analytical

3600 Fremont Ave. N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Chain of Custody Record & Laboratory Services Agreement

Date: 5/19/21 Page: 4 of 4

Laboratory Project No (Internal): 2105302

Project Name:
Project No: 24504-001-01

Collected by:

Location:

Report To (PM):

Sample Disposal: Return to client Disposal by lab (after 30 days)

City, State, zip: Seattle, WA

Address:
Telephone:
Fax:

PM Email:

Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	# of Cont.	VOCS (EPA 8260 / 624)	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCID)	Diesel/Heavy Oil Range Organics (DX)	SVOCs (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8082 / 608)	Metals** (EPA 6020 / 200.8)	Total (T) Dissolved (D)	Anions (C)***	EDB (8011)	Comments
1 GE1-3-35-0	5/19/21	1230	S	3													
2 GE1-3-40-0		1235															
3 GE1-3-45.0		1245															
4 GE1-3-50-0		1250															
5 GE1-3-50-0																	
6																	
7																	
8																	
9																	
10																	

Matrix: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water

**Metals (Circle): MTCA-5 RCRA-8 Priority Pollutants TAL Individual: Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sp Se Sr Sn Tl Ti V Zn

***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite

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Turn-around Time:
 Standard Next Day
 3 Day Same Day
 2 Day (specify)

Relinquished (Signature) Print Name Date/Time Received (Signature) Print Name Date/Time

Relinquished (Signature) Print Name Date/Time Received (Signature) Print Name Date/Time



3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Chain of Custody Record & Laboratory Services Agreement

Date: 5/19/21 Page: 1 of 4 Laboratory Project No (Internal): 2055302
 Project Name: 701 S Jackson
 Project No: 24504-001-01
 Collected by: CJG
 Special Remarks: *DX w/ silica gel cleanup (M14 on 5/25/21)
 Additional analyses requested by CJG on 5/25/21

City, State, Zip: Seattle, WA
 Location: Report To (PM): Robert Tahan
 PM Email: rtahan@geopengraders.com
 Sample Disposal: Return to client Disposal by lab (after 30 days)

Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	# of Cont.	VOCs (EPA 8260 / 624)	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCID)	Diesel/Heavy Oil Range Organics (DX)	SVOCs (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8082 / 608)	Metals** (EPA 6020 / 200.8)	Total (T) Dissolved (D)	Anions (C)***	EDB (8011)	Comments
1 GE1-2-2.5	5/19/21	0750	S	3													
2 GE1-2-5.0		0755		1													
3 GE1-2-7.5		0800															
4 GE1-2-10.0		0805					X	X									
5 GE1-2-10.5		0807															
6 GE1-2-12.5		0815															
7 GE1-2-15.0		0820					X	X									
8 GE1-2-19.0		0825					X	X									
9 GE1-2-20.0		0835															
10 GE1-2-23.5		0845															

*Matrix: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water
 **Metals (Circle): MTCA-5 RCRA-8 Priority Pollutants TML Individual: Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sp Se Sr Sn Tl V Zn
 ***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate-Nitrite
 I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above, that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Relinquished (Signature) *[Signature]* Print Name *Chelsey Gohm* Date/Time *5/19/21/1520*
 Relinquished (Signature) *[Signature]* Print Name *Robert Tahan* Date/Time *5/19/21/1520*
 Turn-around Time: Standard Next Day 3 Day Same Day 2 Day (specify)



Fremont Analytical

3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Chain of Custody Record & Laboratory Services Agreement

Date: 5/19/21 Page: 2 of 4

Laboratory Project No (Internal): 24504-001-D1
Special Remarks: 24504-001-D1

Project Name:

Project No: 24504-001-D1

Collected by:

Location:

Report To (PM):

PM Email:

Sample Disposal: Return to client Disposal by lab (after 30 days)

Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	# of Cont.	VOCS (EPA 8260 / 624)	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCD)	Diesel/Heavy Oil Range Organics (DX)	SVOCs (EPA 8270 / 625)	PCBs (EPA 8270 - SIM)	Metals** (EPA 8082 / 608)	Total (T) / Dissolved (D)	Anions (IC)**	EDB (8011)	Comments
1 GE1-2-25-0	5/19/21	0850	S	3												
2 GE1-2-27-5		0855														
3 GE1-2-31		0907														
4 GE1-2-33		0910														
5 GE1-2-36		0915														
6 GE1-2-40		0933														
7 GE1-2-45		0945														
8 GE1-2-50		0955														
9 GE1-2-55		1000														
10 GE1-3-2.5		1125														

*Matrix: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water

**Metals (Circle): MTCA-5 RCA-8 Priority Pollutants TAL Individual: Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sb Se Sr Sn Tl V Zn

***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite

I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above, that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Turn-around Time:

Standard Next Day
 3 Day Same Day
 2 Day (specify)

Relinquished (Signature) Chelsey Colton Date/Time 5/19/21 Received (Signature) [Signature] Date/Time _____

Print Name Chelsey Colton Date/Time 5/19/21 Received (Signature) [Signature] Date/Time _____

Relinquished (Signature) [Signature] Date/Time _____ Received (Signature) [Signature] Date/Time _____

Print Name Carter Johnson Date/Time 5/19/21 Received (Signature) [Signature] Date/Time _____



3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Chain of Custody Record & Laboratory Services Agreement

Date: 5/19/21 Page: 3 of 4 Laboratory Project No (Internal): 2605302

Project Name: GEI
Project No: 24504-001-01

Collected by:

Client: GEI
Address: Seattle, WA
City, State, zip: Seattle, WA
Telephone: PM Email:

Location: Report To (PM):

Special Remarks:
Sample Disposal: Return to client Disposal by lab (after 30 days)

please change sample name to GEI-3-5.0

Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	# of Cont.	VOCs (EPA 8260 / 6241)	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCID)	Diesel/Heavy Oil Range Organics (DX)	SVOCs (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8082 / 608)	Metals** (EPA 6020 / 200.8)	Total (T) Dissolved (D)	Anions (IC)***	EDS (8011)	Comments
1 GEI-3-6.0	5/19/21	1130	S	3	X	X											
2 GEI-3-7.5		1135															
3 GEI-3-10.0		1140															
4 GEI-3-12.5		1145															
5 GEI-3-15.0		1150															
6 GEI-3-17.5		1155															
7 GEI-3-21.5		1200															
8 GEI-3-23.0		1205															
9 GEI-3-25.0		1215															
10 GEI-3-30.0		1220															

*Matrix: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water
 **Metals (Circle): MTCA-5 RCRA-8 Priority Pollutants TAL Individual: Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sp Sr Sn Tl Ti V Zn
 ***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite
 I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above, that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Turn-around Time:
 Standard Next Day
 3 Day Same Day
 2 Day (specify)

Relinquished (Signature) Print Name Date/Time Received (Signature) Print Name Date/Time
 Relinquished (Signature) Print Name Date/Time Received (Signature) Print Name Date/Time



GeoEngineers

Robert Trahan
2101 4th Ave, Suite 950
Seattle, WA 98121

RE: 701 S Jackson
Work Order Number: 2105302

June 02, 2021

Attention Robert Trahan:

Fremont Analytical, Inc. received 34 sample(s) on 5/19/2021 for the analyses presented in the following report.

Gasoline by NWTPH-Gx
Sample Moisture (Percent Moisture)
Volatile Organic Compounds by EPA Method 8260D

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Brianna Barnes
Project Manager



CLIENT: GeoEngineers
Project: 701 S Jackson
Work Order: 2105302

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
2105302-001	GEI-2-2.5	05/19/2021 7:50 AM	05/19/2021 4:44 PM
2105302-002	GEI-2-5.0	05/19/2021 7:55 AM	05/19/2021 4:44 PM
2105302-003	GEI-2-7.5	05/19/2021 8:00 AM	05/19/2021 4:44 PM
2105302-004	GEI-2-10.0	05/19/2021 8:05 AM	05/19/2021 4:44 PM
2105302-005	GEI-2-10.5	05/19/2021 8:07 AM	05/19/2021 4:44 PM
2105302-006	GEI-2-12.5	05/19/2021 8:15 AM	05/19/2021 4:44 PM
2105302-007	GEI-2-15.0	05/19/2021 8:20 AM	05/19/2021 4:44 PM
2105302-008	GEI-2-17.5	05/19/2021 8:25 AM	05/19/2021 4:44 PM
2105302-009	GEI-2-20.0	05/19/2021 8:35 AM	05/19/2021 4:44 PM
2105302-010	GEI-2-23.5	05/19/2021 8:45 AM	05/19/2021 4:44 PM
2105302-011	GEI-2-25.0	05/19/2021 8:50 AM	05/19/2021 4:44 PM
2105302-012	GEI-2-27.5	05/19/2021 8:55 AM	05/19/2021 4:44 PM
2105302-013	GEI-2-31	05/19/2021 9:07 AM	05/19/2021 4:44 PM
2105302-014	GEI-2-33	05/19/2021 9:10 AM	05/19/2021 4:44 PM
2105302-015	GEI-2-36	05/19/2021 9:15 AM	05/19/2021 4:44 PM
2105302-016	GEI-2-40	05/19/2021 9:33 AM	05/19/2021 4:44 PM
2105302-017	GEI-2-45	05/19/2021 9:45 AM	05/19/2021 4:44 PM
2105302-018	GEI-2-50	05/19/2021 9:55 AM	05/19/2021 4:44 PM
2105302-019	GEI-2-55	05/19/2021 10:00 AM	05/19/2021 4:44 PM
2105302-020	GEI-3-2.5	05/19/2021 11:25 AM	05/19/2021 4:44 PM
2105302-021	GEI-3-5.0	05/19/2021 11:30 AM	05/19/2021 4:44 PM
2105302-022	GEI-3-7.5	05/19/2021 11:35 AM	05/19/2021 4:44 PM
2105302-023	GEI-3-10.0	05/19/2021 11:40 AM	05/19/2021 4:44 PM
2105302-024	GEI-3-12.5	05/19/2021 11:45 AM	05/19/2021 4:44 PM
2105302-025	GEI-3-15.0	05/19/2021 11:50 AM	05/19/2021 4:44 PM
2105302-026	GEI-3-17.5	05/19/2021 11:55 AM	05/19/2021 4:44 PM
2105302-027	GEI-3-21.5	05/19/2021 12:00 PM	05/19/2021 4:44 PM
2105302-028	GEI-3-23.0	05/19/2021 12:05 PM	05/19/2021 4:44 PM
2105302-029	GEI-3-25.0	05/19/2021 12:15 PM	05/19/2021 4:44 PM
2105302-030	GEI-3-30.0	05/19/2021 12:20 PM	05/19/2021 4:44 PM
2105302-031	GEI-3-35.0	05/19/2021 12:30 PM	05/19/2021 4:44 PM
2105302-032	GEI-3-40.0	05/19/2021 12:35 PM	05/19/2021 4:44 PM
2105302-033	GEI-3-45.0	05/19/2021 12:45 PM	05/19/2021 4:44 PM
2105302-034	GEI-3-50.0	05/19/2021 12:50 PM	05/19/2021 4:44 PM

Note: If no "Time Collected" is supplied, a default of 12:00AM is assigned

CLIENT: GeoEngineers

Project: 701 S Jackson

I. SAMPLE RECEIPT:

Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:

Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:

Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Revision 1 includes additional analyses requested by the client.

6/23/21: Revision 2 includes sample name change requested by the client.

Qualifiers:

- * - Flagged value is not within established control limits
- B - Analyte detected in the associated Method Blank
- D - Dilution was required
- E - Value above quantitation range
- H - Holding times for preparation or analysis exceeded
- I - Analyte with an internal standard that does not meet established acceptance criteria
- J - Analyte detected below Reporting Limit
- N - Tentatively Identified Compound (TIC)
- Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria
- S - Spike recovery outside accepted recovery limits
- ND - Not detected at the Reporting Limit
- R - High relative percent difference observed

Acronyms:

- %Rec - Percent Recovery
- CCB - Continued Calibration Blank
- CCV - Continued Calibration Verification
- DF - Dilution Factor
- DUP - Sample Duplicate
- HEM - Hexane Extractable Material
- ICV - Initial Calibration Verification
- LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
- MCL - Maximum Contaminant Level
- MB or MBLANK - Method Blank
- MDL - Method Detection Limit
- MS/MSD - Matrix Spike / Matrix Spike Duplicate
- PDS - Post Digestion Spike
- Ref Val - Reference Value
- REP - Sample Replicate
- RL - Reporting Limit
- RPD - Relative Percent Difference
- SD - Serial Dilution
- SGT - Silica Gel Treatment
- SPK - Spike
- Surr - Surrogate



Client: GeoEngineers

Collection Date: 5/19/2021 8:05:00 AM

Project: 701 S Jackson

Lab ID: 2105302-004

Matrix: Soil

Client Sample ID: GEI-2-10.0

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Gasoline by NWTPH-Gx

Batch ID: 32485 Analyst: CR

Gasoline	1,970	518	D	mg/Kg-dry	100	6/2/2021 11:34:06 AM
Surr: Toluene-d8	100	65 - 135	D	%Rec	100	6/2/2021 11:34:06 AM
Surr: 4-Bromofluorobenzene	113	65 - 135	D	%Rec	100	6/2/2021 11:34:06 AM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 32485 Analyst: CR

Benzene	ND	0.0207		mg/Kg-dry	1	5/29/2021 11:03:06 AM
Toluene	ND	0.0311		mg/Kg-dry	1	5/29/2021 11:03:06 AM
Ethylbenzene	0.347	0.0259		mg/Kg-dry	1	5/29/2021 11:03:06 AM
m,p-Xylene	0.686	0.0518		mg/Kg-dry	1	5/29/2021 11:03:06 AM
o-Xylene	ND	0.0259		mg/Kg-dry	1	5/29/2021 11:03:06 AM
Surr: Dibromofluoromethane	89.7	81.9 - 113		%Rec	1	5/29/2021 11:03:06 AM
Surr: Toluene-d8	142	82.7 - 115	S	%Rec	1	5/29/2021 11:03:06 AM
Surr: 1-Bromo-4-fluorobenzene	122	87.9 - 109	S	%Rec	1	5/29/2021 11:03:06 AM

NOTES:

S - Outlying surrogate recovery attributed to TPH interference. The method is in control as indicated by the Method Blank (MB) & Laboratory Control Sample (LCS).

Sample Moisture (Percent Moisture)

Batch ID: R67508 Analyst: KJ

Percent Moisture	16.4	0.500		wt%	1	5/26/2021 10:22:30 AM
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Client: GeoEngineers

Collection Date: 5/19/2021 8:20:00 AM

Project: 701 S Jackson

Lab ID: 2105302-007

Matrix: Soil

Client Sample ID: GEI-2-15.0

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Gasoline by NWTPH-Gx

Batch ID: 32485 Analyst: CR

Gasoline	361	105	D	mg/Kg-dry	20	6/2/2021 11:03:54 AM
Surr: Toluene-d8	99.9	65 - 135	D	%Rec	20	6/2/2021 11:03:54 AM
Surr: 4-Bromofluorobenzene	109	65 - 135	D	%Rec	20	6/2/2021 11:03:54 AM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 32485 Analyst: CR

Benzene	0.129	0.0209		mg/Kg-dry	1	5/29/2021 11:33:16 AM
Toluene	0.104	0.0314		mg/Kg-dry	1	5/29/2021 11:33:16 AM
Ethylbenzene	2.21	0.523	D	mg/Kg-dry	20	6/2/2021 11:03:54 AM
m,p-Xylene	1.10	0.0523		mg/Kg-dry	1	5/29/2021 11:33:16 AM
o-Xylene	0.215	0.0262		mg/Kg-dry	1	5/29/2021 11:33:16 AM
Surr: Dibromofluoromethane	91.6	81.9 - 113		%Rec	1	5/29/2021 11:33:16 AM
Surr: Toluene-d8	109	82.7 - 115		%Rec	1	5/29/2021 11:33:16 AM
Surr: 1-Bromo-4-fluorobenzene	96.4	87.9 - 109		%Rec	1	5/29/2021 11:33:16 AM

Sample Moisture (Percent Moisture)

Batch ID: R67523 Analyst: KJ

Percent Moisture	13.2	0.500		wt%	1	5/26/2021 2:54:09 PM
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Client: GeoEngineers

Collection Date: 5/19/2021 8:25:00 AM

Project: 701 S Jackson

Lab ID: 2105302-008

Matrix: Soil

Client Sample ID: GEI-2-17.5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Gasoline by NWTPH-Gx

Batch ID: 32381 Analyst: CR

Gasoline	ND	5.59		mg/Kg-dry	1	5/21/2021 12:18:26 PM
Surr: Toluene-d8	98.2	65 - 135		%Rec	1	5/21/2021 12:18:26 PM
Surr: 4-Bromofluorobenzene	105	65 - 135		%Rec	1	5/21/2021 12:18:26 PM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 32381 Analyst: CR

Benzene	ND	0.0224		mg/Kg-dry	1	5/21/2021 12:18:26 PM
Toluene	ND	0.0335		mg/Kg-dry	1	5/21/2021 12:18:26 PM
Ethylbenzene	ND	0.0279		mg/Kg-dry	1	5/21/2021 12:18:26 PM
m,p-Xylene	ND	0.0559		mg/Kg-dry	1	5/21/2021 12:18:26 PM
o-Xylene	ND	0.0279		mg/Kg-dry	1	5/21/2021 12:18:26 PM
Surr: Dibromofluoromethane	91.5	81.9 - 113		%Rec	1	5/21/2021 12:18:26 PM
Surr: Toluene-d8	96.8	82.7 - 115		%Rec	1	5/21/2021 12:18:26 PM
Surr: 1-Bromo-4-fluorobenzene	103	87.9 - 109		%Rec	1	5/21/2021 12:18:26 PM

Sample Moisture (Percent Moisture)

Batch ID: R67444 Analyst: KJ

Percent Moisture	19.4	0.500		wt%	1	5/24/2021 3:59:42 PM
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Client: GeoEngineers

Collection Date: 5/19/2021 11:30:00 AM

Project: 701 S Jackson

Lab ID: 2105302-021

Matrix: Soil

Client Sample ID: GEI-3-5.0

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Gasoline by NWTPH-Gx

Batch ID: 32485 Analyst: CR

Gasoline	ND	4.37		mg/Kg-dry	1	6/2/2021 10:33:43 AM
Surr: Toluene-d8	103	65 - 135		%Rec	1	6/2/2021 10:33:43 AM
Surr: 4-Bromofluorobenzene	108	65 - 135		%Rec	1	6/2/2021 10:33:43 AM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 32485 Analyst: CR

Benzene	ND	0.0175		mg/Kg-dry	1	5/29/2021 12:03:25 PM
Toluene	ND	0.0262		mg/Kg-dry	1	5/29/2021 12:03:25 PM
Ethylbenzene	ND	0.0219		mg/Kg-dry	1	5/29/2021 12:03:25 PM
m,p-Xylene	ND	0.0437		mg/Kg-dry	1	5/29/2021 12:03:25 PM
o-Xylene	ND	0.0219		mg/Kg-dry	1	5/29/2021 12:03:25 PM
Surr: Dibromofluoromethane	93.5	81.9 - 113		%Rec	1	5/29/2021 12:03:25 PM
Surr: Toluene-d8	96.4	82.7 - 115		%Rec	1	5/29/2021 12:03:25 PM
Surr: 1-Bromo-4-fluorobenzene	95.8	87.9 - 109		%Rec	1	5/29/2021 12:03:25 PM

Sample Moisture (Percent Moisture)

Batch ID: R67523 Analyst: KJ

Percent Moisture	12.5	0.500		wt%	1	5/26/2021 2:54:09 PM
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Client: GeoEngineers

Collection Date: 5/19/2021 11:50:00 AM

Project: 701 S Jackson

Lab ID: 2105302-025

Matrix: Soil

Client Sample ID: GEI-3-15.0

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Gasoline by NWTPH-Gx

Batch ID: 32485 Analyst: CR

Gasoline	10,500	526	D	mg/Kg-dry	100	5/29/2021 10:32:56 AM
Surr: Toluene-d8	103	65 - 135	D	%Rec	100	5/29/2021 10:32:56 AM
Surr: 4-Bromofluorobenzene	111	65 - 135	D	%Rec	100	5/29/2021 10:32:56 AM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 32485 Analyst: CR

Benzene	13.2	2.11	D	mg/Kg-dry	100	5/29/2021 10:32:56 AM
Toluene	87.8	3.16	D	mg/Kg-dry	100	5/29/2021 10:32:56 AM
Ethylbenzene	97.2	2.63	D	mg/Kg-dry	100	5/29/2021 10:32:56 AM
m,p-Xylene	398	5.26	D	mg/Kg-dry	100	5/29/2021 10:32:56 AM
o-Xylene	156	2.63	D	mg/Kg-dry	100	5/29/2021 10:32:56 AM
Surr: Dibromofluoromethane	89.8	81.9 - 113	D	%Rec	100	5/29/2021 10:32:56 AM
Surr: Toluene-d8	94.9	82.7 - 115	D	%Rec	100	5/29/2021 10:32:56 AM
Surr: 1-Bromo-4-fluorobenzene	98.9	87.9 - 109	D	%Rec	100	5/29/2021 10:32:56 AM

Sample Moisture (Percent Moisture)

Batch ID: R67523 Analyst: KJ

Percent Moisture	17.8	0.500		wt%	1	5/26/2021 2:54:09 PM
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Client: GeoEngineers

Collection Date: 5/19/2021 11:55:00 AM

Project: 701 S Jackson

Lab ID: 2105302-026

Matrix: Soil

Client Sample ID: GEI-3-17.5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Gasoline by NWTPH-Gx

Batch ID: 32381 Analyst: CR

Gasoline	ND	5.80		mg/Kg-dry	1	5/21/2021 12:48:43 PM
Surr: Toluene-d8	100	65 - 135		%Rec	1	5/21/2021 12:48:43 PM
Surr: 4-Bromofluorobenzene	101	65 - 135		%Rec	1	5/21/2021 12:48:43 PM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 32381 Analyst: CR

Benzene	ND	0.0232		mg/Kg-dry	1	5/21/2021 12:48:43 PM
Toluene	ND	0.0348		mg/Kg-dry	1	5/21/2021 12:48:43 PM
Ethylbenzene	ND	0.0290		mg/Kg-dry	1	5/21/2021 12:48:43 PM
m,p-Xylene	ND	0.0580		mg/Kg-dry	1	5/21/2021 12:48:43 PM
o-Xylene	ND	0.0290		mg/Kg-dry	1	5/21/2021 12:48:43 PM
Surr: Dibromofluoromethane	88.9	81.9 - 113		%Rec	1	5/21/2021 12:48:43 PM
Surr: Toluene-d8	97.3	82.7 - 115		%Rec	1	5/21/2021 12:48:43 PM
Surr: 1-Bromo-4-fluorobenzene	98.8	87.9 - 109		%Rec	1	5/21/2021 12:48:43 PM

Sample Moisture (Percent Moisture)

Batch ID: R67444 Analyst: KJ

Percent Moisture	21.9	0.500		wt%	1	5/24/2021 3:59:42 PM
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Work Order: 2105302
CLIENT: GeoEngineers
Project: 701 S Jackson

QC SUMMARY REPORT
Gasoline by NWTPH-Gx

Sample ID: LCS-32381	SampType: LCS	Units: mg/Kg			Prep Date: 5/21/2021	RunNo: 67421					
Client ID: LCSS	Batch ID: 32381				Analysis Date: 5/21/2021	SeqNo: 1359470					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline	22.8	5.00	25.00	0	91.3	65	135				
Surr: Toluene-d8	1.16		1.250		93.0	65	135				
Surr: 4-Bromofluorobenzene	1.31		1.250		105	65	135				

Sample ID: MB-32381	SampType: MBLK	Units: mg/Kg			Prep Date: 5/21/2021	RunNo: 67421					
Client ID: MBLKS	Batch ID: 32381				Analysis Date: 5/21/2021	SeqNo: 1359471					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline	ND	5.00									
Surr: Toluene-d8	1.18		1.250		94.3	65	135				
Surr: 4-Bromofluorobenzene	1.27		1.250		102	65	135				

Sample ID: 2105302-026BDUP	SampType: DUP	Units: mg/Kg-dry			Prep Date: 5/21/2021	RunNo: 67421					
Client ID: GEI-3-17.5	Batch ID: 32381				Analysis Date: 5/21/2021	SeqNo: 1359474					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline	ND	5.80						0		30	
Surr: Toluene-d8	1.47		1.450		101	65	135		0		
Surr: 4-Bromofluorobenzene	1.47		1.450		101	65	135		0		

Sample ID: 2105322-001BMS	SampType: MS	Units: mg/Kg-dry			Prep Date: 5/21/2021	RunNo: 67421					
Client ID: BATCH	Batch ID: 32381				Analysis Date: 5/21/2021	SeqNo: 1359476					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline	60.8	14.1	70.37	0	86.4	65	135				
Surr: Toluene-d8	3.51		3.519		99.6	65	135				
Surr: 4-Bromofluorobenzene	3.79		3.519		108	65	135				

Work Order: 2105302
CLIENT: GeoEngineers
Project: 701 S Jackson

QC SUMMARY REPORT
Gasoline by NWTPH-Gx

Sample ID: LCS-32485	SampType: LCS	Units: mg/Kg			Prep Date: 5/28/2021	RunNo: 67619					
Client ID: LCSS	Batch ID: 32485				Analysis Date: 5/29/2021	SeqNo: 1363937					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline	29.8	5.00	25.00	0	119	65	135				
Surr: Toluene-d8	1.25		1.250		99.8	65	135				
Surr: 4-Bromofluorobenzene	1.23		1.250		98.1	65	135				

Sample ID: MB-32485	SampType: MBLK	Units: mg/Kg			Prep Date: 5/28/2021	RunNo: 67619					
Client ID: MBLKS	Batch ID: 32485				Analysis Date: 5/29/2021	SeqNo: 1363938					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline	ND	5.00									
Surr: Toluene-d8	1.23		1.250		98.7	65	135				
Surr: 4-Bromofluorobenzene	1.19		1.250		95.2	65	135				

Sample ID: 2105463-002BDUP	SampType: DUP	Units: mg/Kg-dry			Prep Date: 5/28/2021	RunNo: 67619					
Client ID: BATCH	Batch ID: 32485				Analysis Date: 5/29/2021	SeqNo: 1363926					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline	ND	5.10						0		30	
Surr: Toluene-d8	1.26		1.276		98.4	65	135		0		
Surr: 4-Bromofluorobenzene	1.20		1.276		94.3	65	135		0		

Sample ID: 2105302-021BDUP	SampType: DUP	Units: mg/Kg-dry			Prep Date: 5/28/2021	RunNo: 67619					
Client ID: GEI-3-5.0	Batch ID: 32485				Analysis Date: 5/29/2021	SeqNo: 1363922					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline	ND	4.37						7.139	64.4	30	
Surr: Toluene-d8	1.07		1.093		98.1	65	135		0		
Surr: 4-Bromofluorobenzene	1.03		1.093		94.0	65	135		0		

Work Order: 2105302
CLIENT: GeoEngineers
Project: 701 S Jackson

QC SUMMARY REPORT
Gasoline by NWTPH-Gx

Sample ID: 2105463-009BMS	SampType: MS	Units: mg/Kg-dry	Prep Date: 5/28/2021	RunNo: 67619							
Client ID: BATCH	Batch ID: 32485	Analysis Date: 5/29/2021	SeqNo: 1363934								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline	35.0	5.25	26.27	0	133	65	135				
Surr: Toluene-d8	1.32		1.314		100	65	135				
Surr: 4-Bromofluorobenzene	1.29		1.314		98.3	65	135				

Work Order: 2105302
 CLIENT: GeoEngineers
 Project: 701 S Jackson

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260D

Sample ID: LCS-32381	SampType: LCS	Units: mg/Kg				Prep Date: 5/21/2021	RunNo: 67420				
Client ID: LCSS	Batch ID: 32381					Analysis Date: 5/21/2021	SeqNo: 1359455				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	0.945	0.0200	1.000	0	94.5	80	120				
Toluene	1.07	0.0300	1.000	0	107	80	120				
Ethylbenzene	1.06	0.0250	1.000	0	106	80	120				
m,p-Xylene	2.05	0.0500	2.000	0	103	80	120				
o-Xylene	1.04	0.0250	1.000	0	104	80	120				
Surr: Dibromofluoromethane	1.28		1.250		103	80	120				
Surr: Toluene-d8	1.28		1.250		102	80	120				
Surr: 1-Bromo-4-fluorobenzene	1.30		1.250		104	80	120				

Sample ID: MB-32381	SampType: MBLK	Units: mg/Kg				Prep Date: 5/21/2021	RunNo: 67420				
Client ID: MBLKS	Batch ID: 32381					Analysis Date: 5/21/2021	SeqNo: 1359456				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.0200									
Toluene	ND	0.0300									
Ethylbenzene	ND	0.0250									
m,p-Xylene	ND	0.0500									
o-Xylene	ND	0.0250									
Surr: Dibromofluoromethane	1.16		1.250		92.5	81.9	113				
Surr: Toluene-d8	1.19		1.250		95.5	82.7	115				
Surr: 1-Bromo-4-fluorobenzene	1.24		1.250		99.0	87.9	109				

Sample ID: 2105283-006BDUP	SampType: DUP	Units: mg/Kg-dry				Prep Date: 5/21/2021	RunNo: 67420				
Client ID: BATCH	Batch ID: 32381					Analysis Date: 5/21/2021	SeqNo: 1359459				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.00880						0		30	
Toluene	ND	0.0132						0		30	
Ethylbenzene	ND	0.0110						0		30	

Work Order: 2105302
 CLIENT: GeoEngineers
 Project: 701 S Jackson

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260D

Sample ID: 2105283-006BDUP	SampType: DUP	Units: mg/Kg-dry	Prep Date: 5/21/2021	RunNo: 67420							
Client ID: BATCH	Batch ID: 32381		Analysis Date: 5/21/2021	SeqNo: 1359459							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
m,p-Xylene	ND	0.0220						0		30	
o-Xylene	ND	0.0110						0		30	
Surr: Dibromofluoromethane	0.491		0.5502		89.3	81.9	113		0		
Surr: Toluene-d8	0.529		0.5502		96.1	82.7	115		0		
Surr: 1-Bromo-4-fluorobenzene	2.46		2.751		89.4	87.9	109		0		

Sample ID: 2105302-026BDUP	SampType: DUP	Units: mg/Kg-dry	Prep Date: 5/21/2021	RunNo: 67420							
Client ID: GEI-3-17.5	Batch ID: 32381		Analysis Date: 5/21/2021	SeqNo: 1359462							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.0232						0		30	
Toluene	ND	0.0348						0		30	
Ethylbenzene	ND	0.0290						0		30	
m,p-Xylene	ND	0.0580						0		30	
o-Xylene	ND	0.0290						0		30	
Surr: Dibromofluoromethane	1.29		1.450		89.0	81.9	113		0		
Surr: Toluene-d8	1.41		1.450		97.3	82.7	115		0		
Surr: 1-Bromo-4-fluorobenzene	1.43		1.450		98.9	87.9	109		0		

Sample ID: 2105302-008BMS	SampType: MS	Units: mg/Kg-dry	Prep Date: 5/21/2021	RunNo: 67420							
Client ID: GEI-2-17.5	Batch ID: 32381		Analysis Date: 5/21/2021	SeqNo: 1359464							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	1.13	0.0224	1.118	0	102	76.8	129				
Toluene	1.18	0.0335	1.118	0	106	77.8	127				
Ethylbenzene	1.21	0.0279	1.118	0	108	78.7	130				
m,p-Xylene	2.34	0.0559	2.235	0	105	79.3	127				
o-Xylene	1.16	0.0279	1.118	0	103	80.7	124				
Surr: Dibromofluoromethane	1.54		1.397		110	81.9	113				

Work Order: 2105302
CLIENT: GeoEngineers
Project: 701 S Jackson

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260D

Sample ID: 2105302-008BMS	SampType: MS	Units: mg/Kg-dry	Prep Date: 5/21/2021	RunNo: 67420							
Client ID: GEI-2-17.5	Batch ID: 32381		Analysis Date: 5/21/2021	SeqNo: 1359464							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Surr: Toluene-d8	1.40		1.397		100	82.7	115				
Surr: 1-Bromo-4-fluorobenzene	1.45		1.397		104	87.9	109				

Sample ID: LCS-32485	SampType: LCS	Units: mg/Kg	Prep Date: 5/28/2021	RunNo: 67618							
Client ID: LCSS	Batch ID: 32485		Analysis Date: 5/29/2021	SeqNo: 1363917							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Benzene	1.06	0.0200	1.000	0	106	80	120				
Toluene	1.07	0.0300	1.000	0	107	80	120				
Ethylbenzene	1.19	0.0250	1.000	0	119	80	120				
m,p-Xylene	2.33	0.0500	2.000	0	116	80	120				
o-Xylene	1.16	0.0250	1.000	0	116	80	120				
Surr: Dibromofluoromethane	1.12		1.250		89.7	80	120				
Surr: Toluene-d8	1.14		1.250		91.3	80	120				
Surr: 1-Bromo-4-fluorobenzene	1.23		1.250		98.2	80	120				

Sample ID: MB-32485	SampType: MBLK	Units: mg/Kg	Prep Date: 5/28/2021	RunNo: 67618							
Client ID: MBLKS	Batch ID: 32485		Analysis Date: 5/29/2021	SeqNo: 1363918							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Benzene	ND	0.0200									
Toluene	ND	0.0300									
Ethylbenzene	ND	0.0250									
m,p-Xylene	ND	0.0500									
o-Xylene	ND	0.0250									
Surr: Dibromofluoromethane	1.16		1.250		92.7	81.9	113				
Surr: Toluene-d8	1.18		1.250		94.7	82.7	115				
Surr: 1-Bromo-4-fluorobenzene	1.22		1.250		97.5	87.9	109				

Work Order: 2105302
 CLIENT: GeoEngineers
 Project: 701 S Jackson

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260D

Sample ID: 2105463-002BDUP	SampType: DUP	Units: mg/Kg-dry			Prep Date: 5/28/2021	RunNo: 67618					
Client ID: BATCH	Batch ID: 32485				Analysis Date: 5/29/2021	SeqNo: 1363907					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.0204						0		30	
Toluene	ND	0.0306						0		30	
Ethylbenzene	ND	0.0255						0		30	
m,p-Xylene	ND	0.0510						0		30	
o-Xylene	ND	0.0255						0		30	
Surr: Dibromofluoromethane	1.20		1.276		93.8	81.9	113		0		
Surr: Toluene-d8	1.23		1.276		96.6	82.7	115		0		
Surr: 1-Bromo-4-fluorobenzene	1.23		1.276		96.5	87.9	109		0		

Sample ID: 2105302-021BDUP	SampType: DUP	Units: mg/Kg-dry			Prep Date: 5/28/2021	RunNo: 67618					
Client ID: GEI-3-5.0	Batch ID: 32485				Analysis Date: 5/29/2021	SeqNo: 1363903					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.0175						0		30	
Toluene	ND	0.0262						0		30	
Ethylbenzene	ND	0.0219						0		30	
m,p-Xylene	ND	0.0437						0		30	
o-Xylene	ND	0.0219						0		30	
Surr: Dibromofluoromethane	1.02		1.093		93.0	81.9	113		0		
Surr: Toluene-d8	1.05		1.093		96.1	82.7	115		0		
Surr: 1-Bromo-4-fluorobenzene	1.03		1.093		94.6	87.9	109		0		

Sample ID: 2105302-007BMS	SampType: MS	Units: mg/Kg-dry			Prep Date: 5/28/2021	RunNo: 67618					
Client ID: GEI-2-15.0	Batch ID: 32485				Analysis Date: 5/29/2021	SeqNo: 1363901					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	1.31	0.0209	1.046	0.1287	113	76.8	129				
Toluene	1.37	0.0314	1.046	0.1043	121	77.8	127				
Ethylbenzene	3.74	0.0262	1.046	2.469	121	78.7	130				

Work Order: 2105302
CLIENT: GeoEngineers
Project: 701 S Jackson

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260D

Sample ID: 2105302-007BMS	SampType: MS	Units: mg/Kg-dry	Prep Date: 5/28/2021	RunNo: 67618							
Client ID: GEI-2-15.0	Batch ID: 32485		Analysis Date: 5/29/2021	SeqNo: 1363901							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
m,p-Xylene	3.55	0.0523	2.092	1.103	117	79.3	127				
o-Xylene	1.43	0.0262	1.046	0.2146	116	80.7	124				
Surr: Dibromofluoromethane	1.21		1.308		92.3	81.9	113				
Surr: Toluene-d8	1.41		1.308		108	82.7	115				
Surr: 1-Bromo-4-fluorobenzene	1.27		1.308		97.3	87.9	109				

Sample ID: MB-32485	SampType: MBLK	Units: mg/Kg	Prep Date: 5/28/2021	RunNo: 67659							
Client ID: MBLKS	Batch ID: 32485		Analysis Date: 6/2/2021	SeqNo: 1364716							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.0200									
Toluene	ND	0.0300									
Ethylbenzene	ND	0.0250									
m,p-Xylene	ND	0.0500									
o-Xylene	ND	0.0250									
Surr: Dibromofluoromethane	1.13		1.250		90.4	81.9	113				
Surr: Toluene-d8	1.32		1.250		106	82.7	115				
Surr: 1-Bromo-4-fluorobenzene	1.40		1.250		112	87.9	109				S

NOTES:
S - Outlying surrogate recovery(ies) observed.

Client Name: **GEI**
 Logged by: **Gabrielle Coeulle**

Work Order Number: **2105302**
 Date Received: **5/19/2021 4:44:56 PM**

Chain of Custody

1. Is Chain of Custody complete? Yes No Not Present
 2. How was the sample delivered? Client

Log In

3. Coolers are present? Yes No NA
 4. Shipping container/cooler in good condition? Yes No
 5. Custody Seals present on shipping container/cooler?
 (Refer to comments for Custody Seals not intact) Yes No Not Present
 6. Was an attempt made to cool the samples? Yes No NA
 7. Were all items received at a temperature of >2°C to 6°C * Yes No NA
 8. Sample(s) in proper container(s)? Yes No
 9. Sufficient sample volume for indicated test(s)? Yes No
 10. Are samples properly preserved? Yes No
 11. Was preservative added to bottles? Yes No NA
 12. Is there headspace in the VOA vials? Yes No NA
 13. Did all samples containers arrive in good condition(unbroken)? Yes No
 14. Does paperwork match bottle labels? Yes No
 15. Are matrices correctly identified on Chain of Custody? Yes No
 16. Is it clear what analyses were requested? Yes No
 17. Were all holding times able to be met? Yes No

Special Handling (if applicable)

18. Was client notified of all discrepancies with this order? Yes No NA

Person Notified:	<input type="text"/>	Date:	<input type="text"/>
By Whom:	<input type="text"/>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text"/>		
Client Instructions:	<input type="text"/>		

19. Additional remarks:

Item Information

Item #	Temp °C
Sample 1	0.4

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C



Fremont Analytical

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Fax: 206-352-7178

Chain of Custody Record & Laboratory Services Agreement

Date: 5/19/21 Page: 1 of 4

Project Name: 701 S Jackson

Project No: 24504-001-01

Collected by: CJG

Location:

Report To (PM): Robert Tahan

PM Email: rtahan@geopening.com

Laboratory Project No (Internal): 245302

Special Remarks: *DX w/ silica gel cleanup (M14 Fernow)

Sample Disposal: Return to client Disposal by lab (after 30 days)

Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	# of Cont.	VOCs (EPA 8260 / 624)	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCID)	Diesel/Heavy Oil Range Organics (DX)	SVOCs (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8082 / 608)	Metals** (EPA 6020 / 200.8)	Total (T) Dissolved (D)	Anions (C)***	EDB (8011)	Comments
1 GE1-2-2.5	5/19/21	0750	S	3													X
2 GE1-2-5.0		0755		1													
3 GE1-2-7.5		0800															
4 GE1-2-10.0		0805															
5 GE1-2-10.5		0807															
6 GE1-2-12.5		0815															
7 GE1-2-15.0		0820															
8 GE1-2-19.0		0825															
9 GE1-2-20.0		0835															
10 GE1-2-23.5		0845															

*Matrix: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water

**Metals (Circle): MTCA-5 RCRA-8 Priority Pollutants TML Individual: Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sp Se Sr Sn Tl V Zn

***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate-Nitrite

I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above, that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Relinquished (Signature) *[Signature]* Print Name *Chelsey Gohm* Date/Time *5/19/21/1520*

Relinquished (Signature) *[Signature]* Print Name *Robert Tahan* Date/Time *5/19/21/1520*

Turn-around Time: Standard Next Day 3 Day Same Day 2 Day (specify)



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Chain of Custody Record & Laboratory Services Agreement

Date: 5/19/12 Page: 2 of 4

Project Name: 2A504-001-01

Laboratory Project No (Internal): 2605302
Special Remarks:

Collected by:

Location:

Report To (PM):

Sample Disposal: Return to client Disposal by lab (after 30 days)

PM Email:

Client: GEI

Address:

City, State Zip: SeaTac, WA

Telephone:

Fax:

Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	# of Cont.	VOCS (EPA 8260 / 624)	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HClD)	Diesel/Heavy Oil Range Organics (DX)	SVOCs (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8082 / 608)	Metals** (EPA 6020 / 200.8)	Total (T) / Dissolved (D)	Anions (IC)***	EDB (8011)	Comments
1 GEI-2-25-0	5/19/12	0850	S	3													
2 GEI-2-27-5		0855															
3 GEI-2-31		0907															
4 GEI-2-33		0910															
5 GEI-2-36		0915															
6 GEI-2-40		0933															
7 GEI-2-45		0945															
8 GEI-2-50		0955															
9 GEI-2-55		1000															
10 GEI-3-2.5		1125															

*Matrix: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water
 **Metals (Circle): MTC-A-5 RCA-8 Priority Pollutants TAL Individual: Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sb Se Sr Sn Tl Ti V Zn
 ***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide Iodide Nitrate+Nitrite
 I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above, that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Relinquished (Signature) _____ Print Name _____ Date/Time _____ Received (Signature) _____
 x _____ Print Name _____ Date/Time _____
 Relinquished (Signature) _____ Print Name _____ Date/Time _____ Received (Signature) _____
 x _____ Print Name _____ Date/Time _____

Turn-around Time:
 Standard Next Day
 3 Day Same Day
 2 Day _____ (specify)



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Chain of Custody Record & Laboratory Services Agreement

Date: 5/19/21 Page: 3 of 4 Laboratory Project No (internal): 2605302

Project Name: SEALED
Project No: 24504-001-01

Client: GEI
City, State, Zip: SeaTac, WA
Address: _____
Telephone: _____
Location: _____
Report To (PM): _____
Special Remarks: _____
Sample Disposal: Return to client Disposal by lab (after 30 days)

Fax: _____ PM Email: _____

Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	# of Cont.	Analytes											Comments							
					VOCs (EPA 8260 / 624)	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCID)	Diesel/Heavy Oil Range Organics (DX)	SVOCs (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8082 / 608)	Metals** (EPA 6020 / 200.8)	Total (T) Dissolved (D)	Anions (IC)***		EDB (8011)						
1 GEI-3-6.0	5/19/21	1130	S	3																			
2 GEI-3-7.5		1135																					
3 GEI-3-10.0		1140																					
4 GEI-3-12.5		1145																					
5 GEI-3-15.0		1150																					
6 GEI-3-17.5		1155																					
7 GEI-3-21.5		1200																					
8 GEI-3-23.0		1205																					
9 GEI-3-25.0		1215																					
10 GEI-3-30.0		1220																					

*Matrix: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water

**Metals (Circle): MTCA-5 RCRA-8 Priority Pollutants TAL Individual: Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sp Sr Sn Tl Ti V Zn

***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite

I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above, that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Turn-around Time: Standard Next Day 3 Day Same Day 2 Day (specify) _____

Relinquished (Signature) [Signature] Print Name Chervey Ghr Date/Time 5/19/21/1520
 Relinquished (Signature) [Signature] Print Name [Signature] Date/Time _____
 Relinquished (Signature) [Signature] Print Name Gunter Johnson Date/Time 5/19/21 0 10AM



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Chain of Custody Record & Laboratory Services Agreement

Date: 5/19/21 Page: 4 of 4
Project Name:
Project No: 24504-001-01
Collected by:

Laboratory Project No (Internal): 2105302
Special Remarks:

Client: GEI
Address:
City, State, Zip: Seattle, WA
Telephone:

Location:
Report To (PM):
PM Email:

Sample Disposal: Return to client Disposal by lab (after 30 days)

Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	# of Cont.	Analytes														Comments			
					VOCS (EPA 8260 / 624)	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCID)	Diesel/Heavy Oil Range Organics (DX)	SVOCs (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8082 / 608)	Metals** (EPA 6020 / 200.8)	Total (T) Dissolved (D)	Anions (IC)***	EDB (8011)	Fluoride	Other				
1 GEI-3-35-0	5/19/21	1230	S	3																		
2 GEI-3-40-0		1235	S	1																		
3 GEI-3-45.0		1245	S	1																		
4 GEI-3-50-0		1250	S	1																		
5 GEI-3-55-0																						
6																						
7																						
8																						
9																						
10																						

Matrix: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water
Metals (Circle): MTCA-5 RCRA-8 Priority Pollutants TAL Individual: Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sp Sr Sn Tl Ti V Zn
Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide Fluoride Nitrate+Nitrite O-Phosphate
 I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above, that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Relinquished (Signature) _____ Print Name _____ Date/Time _____ Received (Signature) _____
 x _____ x _____
 Relinquished (Signature) _____ Print Name _____ Date/Time _____ Received (Signature) _____
 x _____ x _____

Turn-around Time:
 Standard Next Day
 3 Day Same Day
 2 Day (specify) _____



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Chain of Custody Record & Laboratory Services Agreement

Date: 5/19/21 Page: 1 of 4

Project Name: F01 S JACKSON

Project No: 24504-001-01

Collected by: CJG

Location:

Report To (PM): Robert Tahan

PM Email: RTahan@eggenr.com

Laboratory Project No (Internal): 245302

Special Remarks:
Additional analyses requested by CJG on 5/25/21
*DX w/ silica gel cleanup (M14)

Sample Disposal: Return to client Disposal by lab (after 30 days)

Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	# of Cont.	VOCs (EPA 8260 / 624)	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCID)	Diesel/Heavy Oil Range Organics (DX)	SVOCs (EPA 8270 - SIM)	PAHs (EPA 8270 - 608)	PCBs (EPA 8082 / 608)	Metals** (EPA 6020 / 200.8)	Total (T) Dissolved (D)	Anions (C)***	EDB (8011)	Comments
1 GE1-2-2.5	5/19/21	0750	S	3													
2 GE1-2-5.0		0755		1													
3 GE1-2-7.5		0800															
4 GE1-2-10.0		0805					X										
5 GE1-2-10.5		0807															
6 GE1-2-12.5		0815															
7 GE1-2-15.0		0820					X										
8 GE1-2-19.0		0825					X										
9 GE1-2-20.0		0835															
10 GE1-2-23.5		0845															

*Matrix: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water
 **Metals (Circle): MTCA-5 RCRA-8 Priority Pollutants TML Individual: Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sp Se Sr Sn Tl V Zn
 ***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate-Nitrite

I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above, that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Turn-around Time:
 Standard Next Day
 3 Day Same Day
 2 Day (specify)

Relinquished (Signature) *[Signature]* Print Name *Chelsey Gohm* Date/Time *5/19/21/1520*
 Relinquished (Signature) *[Signature]* Print Name *Robert Tahan* Date/Time *5/19/21/1520*



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Chain of Custody Record & Laboratory Services Agreement

Date: 5/19/21 Page: 2 of 4

Project Name: 2A504-001-D1

Laboratory Project No (Internal): 2605302
Special Remarks:

Client: GEL
Address:
City, State, Zip: SeaTac, WA

Collected by:
Location:
Report To (PM):
PM Email:

Sample Disposal: Return to client Disposal by lab (after 30 days)

Telephone:
Fax:

Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	# of Cont.	VOCS (EPA 8260 / 624)	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCD)	Diesel/Heavy Oil Range Organics (DX)	SVOCs (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8082 / 608)	Metals** (EPA 6020 / 200.8)	Total (T) / Dissolved (D)	Anions (IC)***	EDB (8011)	Comments
1 GEL-2-25-0	5/19/21	0850	S	3													
2 GEL-2-27-5		0855															
3 GEL-2-31		0907															
4 GEL-2-33		0910															
5 GEL-2-36		0915															
6 GEL-2-40		0933															
7 GEL-2-45		0945															
8 GEL-2-50		0955															
9 GEL-2-55		1000															
10 GEL-3-2.5		1125															

*Matrix: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water
 **Metals (Circle): MTCA-5 RCA-8 Priority Pollutants TAL Individual: Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sb Se Sr Sn Tl Ti V Zn
 ***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide Iodide Nitrate+Nitrite
 I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above, that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Relinquished (Signature) *[Signature]* Print Name *Chelsey Sar* Date/Time *5/19/21/1520*
 Received (Signature) *[Signature]* Print Name *Carter Johnson* Date/Time *5/19/21/1644*
 Relinquished (Signature) *[Signature]* Print Name *[Signature]* Date/Time *[Signature]*



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Chain of Custody Record & Laboratory Services Agreement

Date: 5/19/21 Page: 3 of 4 Laboratory Project No (Internal): 2605302

Project Name: GEI
Project No: 24504-001-01

Collected by:

City, State, Zip: SeaTac, WA

Location:

Report To (PM):

Sample Disposal: Return to client Disposal by lab (after 30 days)

please change sample name to GEI-3-5.0

Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	# of Cont.	VOCs (EPA 8260 / 6241)	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCID)	Diesel/Heavy Oil Range Organics (DX)	SVOCs (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8082 / 608)	Metals** (EPA 6020 / 200.8)	Total (T) Dissolved (D)	Anions (IC)***	EDS (8011)	Comments
1 GEI-3-6.0	5/19/21	1130	S	3	X	X											
2 GEI-3-7.5		1135															
3 GEI-3-10.0		1140															
4 GEI-3-12.5		1145															
5 GEI-3-15.0		1150															
6 GEI-3-17.5		1155															
7 GEI-3-21.5		1200															
8 GEI-3-23.0		1205															
9 GEI-3-25.0		1215															
10 GEI-3-30.0		1220															

*Matrix: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water
 **Metals (Circle): MTCA-5 RCRA-8 Priority Pollutants TAL Individual: Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sp Sr Sn Tl Ti V Zn
 ***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite

Turn-around Time:
 Standard Next Day
 3 Day Same Day
 2 Day (specify)

I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above, that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Relinquished (Signature) _____ Date/Time: 5/19/21/1520
 Print Name: Chevey Ghr
 Relinquished (Signature) _____ Date/Time: _____
 Print Name: _____
 Received (Signature) _____ Date/Time: _____
 Print Name: Carter Johnson
 Date/Time: 5/19/21 10:16AM



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Chain of Custody Record & Laboratory Services Agreement

Date: 5/19/21 Page: 4 of 4
Project Name: Laboratory Project No (Internal): 2105302
Project No: 24504-001-01
Special Remarks:

Client: GEI
Address: Seattle, WA
City, State, zip: Seattle, WA
Telephone:
Report To (PM):
Location:
Collected by:
Sample Disposal: Return to client Disposal by lab (after 30 days)

Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	# of Cont.	Analytes										Comments									
					VOCS (EPA 8260 / 624)	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCID)	Diesel/Heavy Oil Range Organics (DX)	SVOCs (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8082 / 608)	Metals** (EPA 6020 / 200.8)	Total (T) Dissolved (D)		Anions (IC)***	EDB (8011)							
1 GEI-3-35-0	5/19/21	1230	S	3																				
2 GEI-3-40-0		1235																						
3 GEI-3-45.0		1245																						
4 GEI-3-50-0		1250																						
5 GEI-3-50-0																								
6																								
7																								
8																								
9																								
10																								

*Matrix: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water

**Metals (Circle): MTCA-5 RCRA-8 Priority Pollutants TAL Individual: Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sp Se Sr Sn Tl Ti V Zn

***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite

I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above, that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Relinquished (Signature) *Chelley Bohner* Print Name Chelley Bohner Date/Time 5/19/21/1520 Received (Signature) *[Signature]* Print Name Carter Johnson Date/Time 5/19/21/1644

Relinquished (Signature) *[Signature]* Print Name [Name] Date/Time [Date/Time]

Turn-around Time:
 Standard Next Day
 3 Day Same Day
 2 Day (specify)



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Chain of Custody Record & Laboratory Services Agreement

Date: 5/19/21 Page: 1 of 4
Project Name: F01 S Jackson
Project No: 24504-001-01
Collected by: CJG
Special Remarks: Additional analyses requested by CJG on 5/25/21
Laboratory Project No (Internal): 2455302
Additional analyses requested by CJG on 5/25/21

Client: GEN
Address: SEATTLE, WA
City, State, zip: SEATTLE, WA

Location:
Report To (PMI): Robert Tahan
PM Email: rtahan@gepengenr.com

Telephone:
Fax:

Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	# of Cont.	VOCs (EPA 8260 / 624)	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCID)	Diesel/Heavy Oil Range Organics (DH)	SVOCs (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8082 / 608)	Metals** (EPA 6020 / 200.8)	Total (T) Dissolved (D)	Anions (IC)***	EDB (801.1)	Comments	
1 GE1-2-2.5	5/19/21	0750	S	3													X	
2 GE1-2-5.0		0755																
3 GE1-2-7.5		0800																X
4 GE1-2-10.0		0805																X
5 GE1-2-10.5		0807																
6 GE1-2-12.5		0815																
7 GE1-2-5.0		0820																X
8 GE1-2-10.0		0825																X
9 GE1-2-20.0		0835																X
10 GE1-2-23.5		0845																X

Name change requested 6/22/21 by CJG

Matrix: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water
 Metals (Circle): MTCAS RCRA-8 Priority Pollutants TAL Individual: Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sp Se Sr Sn Tl Ti V Zn
 Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite
 I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above, that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Turn-around Time:
 Standard Next Day
 3 Day Same Day
 2 Day (specify)

Relinquished (Signature) *[Signature]* Print Name *Cheryl G. G. G.* Date/Time *5/19/21/1520*
 Relinquished (Signature) *[Signature]* Print Name *Coker Johnson* Date/Time *5/19/21/1520*



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Chain of Custody Record & Laboratory Services Agreement

Date: 5/19/21 Page: 3 of 4 Laboratory Project No (Internal): 2605302

Project Name: GEI
Project No: 24504-001-01

Collected by:

City, State, Zip: SeaTac, WA

Location:

Report To (PM):

Sample Disposal: Return to client Disposal by lab (after 30 days)

Please change sample name to GEI-3-5.0

Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	# of Cont.	VOCs (EPA 8260 / 6241)	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCID)	Diesel/Heavy Oil Range Organics (DX)	SVOCs (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8082 / 608)	Metals** (EPA 6020 / 200.8)	Total (T) Dissolved (D)	Anions (IC)***	EDB (8011)	Comments
1 GEI-3-6.0	5/19/21	1130	S	3	X	X											
2 GEI-3-7.5		1135															
3 GEI-3-10.0		1140															
4 GEI-3-12.5		1145															
5 GEI-3-15.0		1150															
6 GEI-3-17.5		1155															
7 GEI-3-21.5		1200															
8 GEI-3-23.0		1205															
9 GEI-3-25.0		1215															
10 GEI-3-30.0		1220															

*Matrix: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water

**Metals (Circle): MTCA-5 RCRA-8 Priority Pollutants TAL Individual: Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sp Sr Sn Tl Ti V Zn

***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite

I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above, that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Turn-around Time:
 Standard Next Day
 3 Day Same Day
 2 Day (specify)

Relinquished (Signature) *[Signature]* Print Name *Cherley Ghr* Date/Time *5/19/21/1520*

Relinquished (Signature) *[Signature]* Print Name *Gretchen Johnson* Date/Time *5/19/21 0 16PM*



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Chain of Custody Record & Laboratory Services Agreement

Date: 5/19/21 Page: 4 of: 4 Laboratory Project No (Internal): 2105302

Project Name: _____
Project No: 24504-001-01
Special Remarks: _____

Client: GEI
Address: _____
City, State, Zip: Seattle, WA
Telephone: _____
Location: _____
Report To (PM): _____
Sample Disposal: Return to client Disposal by lab (after 30 days)

Fax: _____
PM Email: _____

Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	# of Cont.	Analytes										Comments							
					VOCs (EPA 8260 / 624)	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCID)	Diesel/Heavy Oil Range Organics (DX)	SVOCs (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8082 / 608)	Metals** (EPA 6020 / 200.8)	Total (T) Dissolved (D)		Anions (IC)***	EDB (8011)					
1 GEI-3-35-0	5/19/21	1230	S	3																		
2 GEI-3-40-0		1235																				
3 GEI-3-45.0		1245																				
4 GEI-3-50-0		1250																				
5 GEI-3-50-0																						
6																						
7																						
8																						
9																						
10																						

Matrix: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water
 **Metals (Circle): MTCA-5 RCRA-8 Priority Pollutants TAL Individual: Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sp Sr Sn Tl Ti V Zn
 ***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide Iodide Nitrate+Nitrite
 I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above, that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Relinquished (Signature) _____ Print Name _____ Date/Time _____
 Relinquished (Signature) _____ Print Name _____ Date/Time _____
 Received (Signature) _____
 Received (Signature) _____
 Turn-around Time:
 Standard Next Day
 3 Day Same Day
 2 Day (specify) _____



3600 Fremont Ave. N.
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

GeoEngineers

Robert Trahan
2101 4th Ave, Suite 950
Seattle, WA 98121

RE: 701 Jackson Property Site
Work Order Number: 2112437

January 07, 2022

Attention Robert Trahan:

Fremont Analytical, Inc. received 6 sample(s) on 12/28/2021 for the analyses presented in the following report.

Helium by GC/TCD

Petroleum Fractionation by EPA Method TO-15

Volatile Organic Compounds by EPA Method TO-15

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Brianna Barnes
Project Manager

*DoD-ELAP Accreditation #79636 by PJLA, ISO/IEC 17025:2017 and QSM 5.3 for Environmental Testing
ORELAP Certification: WA 100009 (NELAP Recognized) for Environmental Testing
Washington State Department of Ecology Accredited for Environmental Testing, Lab ID C910*

Original

www.fremontanalytical.com



CLIENT: GeoEngineers
Project: 701 Jackson Property Site
Work Order: 2112437

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
2112437-001	SSV-3-D	12/28/2021 11:41 AM	12/28/2021 3:51 PM
2112437-002	SSV-2-S	12/28/2021 1:00 PM	12/28/2021 3:51 PM
2112437-003	SSV-1-S	12/28/2021 2:32 PM	12/28/2021 3:51 PM
2112437-004	SSV-3-S	12/28/2021 11:24 AM	12/28/2021 3:51 PM
2112437-005	SSV-2-D	12/28/2021 1:19 PM	12/28/2021 3:51 PM
2112437-006	SSV-1-D	12/28/2021 2:37 PM	12/28/2021 3:51 PM

Note: If no "Time Collected" is supplied, a default of 12:00AM is assigned

CLIENT: GeoEngineers
Project: 701 Jackson Property Site

I. SAMPLE RECEIPT:

Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:

Air samples are reported in ppbv and ug/m3.

The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:

Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Standard temperature and pressure assumes 24.45 = (25C and 1 atm).

*Acrolein: Reporting Limit noted is the laboratory Limit of Detection (LOD). Any detections below 0.0229 ug/m3 (0.01 ppbv) are considered an estimate.

*1,2-Dibromoethane (EDB): Reporting Limit noted is the Method Detection Limit (MDL). Any detections below 0.00768 ug/m3 (0.001 ppbv) are considered an estimate.

Qualifiers:

- * - Flagged value is not within established control limits
- B - Analyte detected in the associated Method Blank
- D - Dilution was required
- E - Value above quantitation range
- H - Holding times for preparation or analysis exceeded
- I - Analyte with an internal standard that does not meet established acceptance criteria
- J - Analyte detected below Reporting Limit
- N - Tentatively Identified Compound (TIC)
- Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria
- S - Spike recovery outside accepted recovery limits
- ND - Not detected at the Reporting Limit
- R - High relative percent difference observed

Acronyms:

- %Rec - Percent Recovery
- CCB - Continued Calibration Blank
- CCV - Continued Calibration Verification
- DF - Dilution Factor
- DUP - Sample Duplicate
- HEM - Hexane Extractable Material
- ICV - Initial Calibration Verification
- LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
- MCL - Maximum Contaminant Level
- MB or MBLANK - Method Blank
- MDL - Method Detection Limit
- MS/MSD - Matrix Spike / Matrix Spike Duplicate
- PDS - Post Digestion Spike
- Ref Val - Reference Value
- REP - Sample Replicate
- RL - Reporting Limit
- RPD - Relative Percent Difference
- SD - Serial Dilution
- SGT - Silica Gel Treatment
- SPK - Spike
- Surr - Surrogate



CLIENT: GeoEngineers
Project: 701 Jackson Property Site

Lab ID: 2112437-001 **Collection Date:** 12/28/2021 11:41:00 AM
Client Sample ID: SSV-3-D **Matrix:** Soil Gas

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Helium by GC/TCD Batch ID: R72428 Analyst: MS						
Helium	ND	0.600	D	%	3	1/7/2022 11:34:00 AM

Lab ID: 2112437-002 **Collection Date:** 12/28/2021 1:00:00 PM
Client Sample ID: SSV-2-S **Matrix:** Soil Gas

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Helium by GC/TCD Batch ID: R72428 Analyst: MS						
Helium	ND	0.400	D	%	2	1/7/2022 11:40:00 AM

Lab ID: 2112437-003 **Collection Date:** 12/28/2021 2:32:00 PM
Client Sample ID: SSV-1-S **Matrix:** Soil Gas

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Helium by GC/TCD Batch ID: R72428 Analyst: MS						
Helium	ND	0.400	D	%	2	1/7/2022 11:45:00 AM

Lab ID: 2112437-004 **Collection Date:** 12/28/2021 11:24:00 AM
Client Sample ID: SSV-3-S **Matrix:** Soil Gas

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Helium by GC/TCD Batch ID: R72428 Analyst: MS						
Helium	ND	0.400	D	%	2	1/7/2022 11:53:00 AM



CLIENT: GeoEngineers
Project: 701 Jackson Property Site

Lab ID: 2112437-005

Collection Date: 12/28/2021 1:19:00 PM

Client Sample ID: SSV-2-D

Matrix: Soil Gas

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Helium by GC/TCD

Batch ID: R72428 Analyst: MS

Helium	2.04	0.400	D	%	2	1/7/2022 11:59:00 AM
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Client: GeoEngineers
WorkOrder: 2112437
Project: 701 Jackson Property Site

Client Sample ID: SSV-3-D
Lab ID: 2112437-001A
Sample Type: Summa Canister

Date Sampled: 12/28/2021
Date Received: 12/28/2021

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst	
<u>Petroleum Fractionation by EPA Method TO-15</u>								
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)				
Aliphatic Hydrocarbon (EC5-8)	600,000	2,280,000	22,500	85,600	DE	EPA-TO-15	01/06/2022	MS
Aliphatic Hydrocarbon (EC9-12)	<200	<1,180	200	1,180		EPA-TO-15	01/01/2022	MS
Aromatic Hydrocarbon (EC9-10)	<50.0	<252	50.0	252		EPA-TO-15	01/01/2022	MS
Surr: 4-Bromofluorobenzene	93.4 %Rec	--	70-130	--		EPA-TO-15	01/01/2022	MS
<u>Volatile Organic Compounds by EPA Method TO-15</u>								
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)				
1,1,1-Trichloroethane	<150	<819	150	819	D	EPA-TO-15	01/06/2022	MS
1,1,2,2-Tetrachloroethane	<30.0	<206	30.0	206	D	EPA-TO-15	01/06/2022	MS
CFC-113	<150	<1,150	150	1,150	D	EPA-TO-15	01/06/2022	MS
1,1,2-Trichloroethane (TCA)	<30.0	<164	30.0	164	D	EPA-TO-15	01/06/2022	MS
1,1-Dichloroethane	<30.0	<121	30.0	121	D	EPA-TO-15	01/06/2022	MS
1,1-Dichloroethene (DCE)	<30.0	<119	30.0	119	D	EPA-TO-15	01/06/2022	MS
1,2,4-Trichlorobenzene	<300	<2,230	300	2,230	D	EPA-TO-15	01/06/2022	MS
1,2,4-Trimethylbenzene	<1,500	<7,370	1,500	7,370	D	EPA-TO-15	01/06/2022	MS
1,2-Dibromoethane (EDB)*	4.74	36.4	0.893	6.86	D	EPA-TO-15	01/06/2022	MS
1,2-Dichlorobenzene	<30.0	<180	30.0	180	D	EPA-TO-15	01/06/2022	MS
1,2-Dichloroethane	<30.0	<121	30.0	121	D	EPA-TO-15	01/06/2022	MS
1,2-Dichloropropane	<150	<693	150	693	D	EPA-TO-15	01/06/2022	MS
1,3,5-Trimethylbenzene	<1,200	<5,900	1,200	5,900	D	EPA-TO-15	01/06/2022	MS
1,3-Butadiene	295	652	30.0	66.4	D	EPA-TO-15	01/06/2022	MS
1,3-Dichlorobenzene	<30.0	<180	30.0	180	D	EPA-TO-15	01/06/2022	MS
1,4-Dichlorobenzene	<30.0	<180	30.0	180	D	EPA-TO-15	01/06/2022	MS
1,4-Dioxane	<1,200	<4,320	1,200	4,320	D	EPA-TO-15	01/06/2022	MS
(MEK) 2-Butanone	<1,200	<3,540	1,200	3,540	D	EPA-TO-15	01/06/2022	MS
2-Hexanone	<3,000	<12,300	3,000	12,300	D	EPA-TO-15	01/06/2022	MS
Isopropyl Alcohol	<3,000	<7,370	3,000	7,370	D	EPA-TO-15	01/06/2022	MS
4-Methyl-2-pentanone (MIBK)	<3,000	<12,300	3,000	12,300	D	EPA-TO-15	01/06/2022	MS
Acetone	<6,000	<14,300	6,000	14,300	D	EPA-TO-15	01/06/2022	MS
Acrolein*	<3.00	<6.88	3.00	6.88	D	EPA-TO-15	01/06/2022	MS
Benzene	3,130	10,000	30.0	95.8	D	EPA-TO-15	01/06/2022	MS



Client: GeoEngineers
WorkOrder: 2112437
Project: 701 Jackson Property Site

Client Sample ID: SSV-3-D
Lab ID: 2112437-001A
Sample Type: Summa Canister

Date Sampled: 12/28/2021
Date Received: 12/28/2021

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst	
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)				
<u>Volatile Organic Compounds by EPA Method TO-15</u>								
Benzyl chloride	<300	<1,550	300	1,550	D	EPA-TO-15	01/06/2022	MS
Dichlorobromomethane	<300	<2,010	300	2,010	D	EPA-TO-15	01/06/2022	MS
Bromoform	<30.0	<310	30.0	310	D	EPA-TO-15	01/06/2022	MS
Bromomethane	<300	<1,170	300	1,170	D	EPA-TO-15	01/06/2022	MS
Carbon disulfide	<1,200	<3,740	1,200	3,740	D	EPA-TO-15	01/06/2022	MS
Carbon tetrachloride	<30.0	<189	30.0	189	D	EPA-TO-15	01/06/2022	MS
Chlorobenzene	<30.0	<138	30.0	138	D	EPA-TO-15	01/06/2022	MS
Dibromochloromethane	<30.0	<256	30.0	256	D	EPA-TO-15	01/06/2022	MS
Chloroethane	<1,200	<3,170	1,200	3,170	D	EPA-TO-15	01/06/2022	MS
Chloroform	<30.0	<146	30.0	146	D	EPA-TO-15	01/06/2022	MS
Chloromethane	<150	<310	150	310	D	EPA-TO-15	01/06/2022	MS
cis-1,2-Dichloroethene	<300	<1,190	300	1,190	D	EPA-TO-15	01/06/2022	MS
cis-1,3-dichloropropene	<150	<681	150	681	D	EPA-TO-15	01/06/2022	MS
Cyclohexane	7,870	27,100	300	1,030	D	EPA-TO-15	01/06/2022	MS
Dichlorodifluoromethane (CFC-12)	<150	<742	150	742	D	EPA-TO-15	01/06/2022	MS
Dichlorotetrafluoroethane (CFC-114)	<150	<1,050	150	1,050	D	EPA-TO-15	01/06/2022	MS
Ethyl acetate	<1,200	<4,320	1,200	4,320	D	EPA-TO-15	01/06/2022	MS
Ethylbenzene	<1,200	<5,210	1,200	5,210	D	EPA-TO-15	01/06/2022	MS
Heptane	4,860	19,500	1,200	4,820	D	EPA-TO-15	01/06/2022	MS
Hexachlorobutadiene	<300	<3,200	300	3,200	D	EPA-TO-15	01/06/2022	MS
m,p-Xylene	<1,200	<5,210	1,200	5,210	D	EPA-TO-15	01/06/2022	MS
Methyl methacrylate	<1,200	<4,910	1,200	4,910	D	EPA-TO-15	01/06/2022	MS
Methylene chloride	<1,200	<4,170	1,200	4,170	D	EPA-TO-15	01/06/2022	MS
Naphthalene	44.3	232	30.0	157	D	EPA-TO-15	01/06/2022	MS
n-Hexane	22,200	78,400	1,500	5,290	D	EPA-TO-15	01/06/2022	MS
o-Xylene	<300	<1,300	300	1,300	D	EPA-TO-15	01/06/2022	MS
4-Ethyltoluene	<150	<737	150	737	D	EPA-TO-15	01/06/2022	MS
Propylene	2,460	4,240	1,200	2,070	D	EPA-TO-15	01/06/2022	MS
Styrene	<1,200	<5,110	1,200	5,110	D	EPA-TO-15	01/06/2022	MS
Methyl tert-butyl ether (MTBE)	<150	<541	150	541	D	EPA-TO-15	01/06/2022	MS



Client: GeoEngineers
WorkOrder: 2112437
Project: 701 Jackson Property Site

Client Sample ID: SSV-3-D
Lab ID: 2112437-001A
Sample Type: Summa Canister

Date Sampled: 12/28/2021
Date Received: 12/28/2021

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst	
<u>Volatile Organic Compounds by EPA Method TO-15</u>								
	(ppbv)	(ug/m³)	(ppbv)	(ug/m³)				
Tetrachloroethene (PCE)	<30.0	<203	30.0	203	D	EPA-TO-15	01/06/2022	MS
Tetrahydrofuran	<1,200	<3,540	1,200	3,540	D	EPA-TO-15	01/06/2022	MS
Toluene	1,700	6,410	300	1,130	D	EPA-TO-15	01/06/2022	MS
trans-1,2-Dichloroethene	<150	<595	150	595	D	EPA-TO-15	01/06/2022	MS
trans-1,3-dichloropropene	<150	<681	150	681	D	EPA-TO-15	01/06/2022	MS
Trichloroethene (TCE)	<30.0	<161	30.0	161	D	EPA-TO-15	01/06/2022	MS
Trichlorofluoromethane (CFC-11)	<150	<843	150	843	D	EPA-TO-15	01/06/2022	MS
Vinyl acetate	<1,200	<4,230	1,200	4,230	D	EPA-TO-15	01/06/2022	MS
Vinyl chloride	<30.0	<76.7	30.0	76.7	D	EPA-TO-15	01/06/2022	MS
Surr: 4-Bromofluorobenzene	101 %Rec	--	70-130	--	D	EPA-TO-15	01/06/2022	MS



Client: GeoEngineers
WorkOrder: 2112437
Project: 701 Jackson Property Site

Client Sample ID: SSV-2-S
Lab ID: 2112437-002A
Sample Type: Summa Canister

Date Sampled: 12/28/2021
Date Received: 12/28/2021

Analyte	Concentration	Reporting Limit	Qual	Method	Date/Analyst
<u>Petroleum Fractionation by EPA Method TO-15</u>					
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)	
Aliphatic Hydrocarbon (EC5-8)	107,000	409,000	7,500	28,500	D EPA-TO-15 01/06/2022 MS
Aliphatic Hydrocarbon (EC9-12)	3,140	18,500	200	1,180	EPA-TO-15 01/01/2022 MS
Aromatic Hydrocarbon (EC9-10)	217	1,090	50.0	252	EPA-TO-15 01/01/2022 MS
Surr: 4-Bromofluorobenzene	99.1 %Rec	--	70-130	--	EPA-TO-15 01/01/2022 MS
<u>Volatile Organic Compounds by EPA Method TO-15</u>					
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)	
1,1,1-Trichloroethane	<50.0	<273	50.0	273	D EPA-TO-15 01/06/2022 MS
1,1,1,2-Tetrachloroethane	<10.0	<68.7	10.0	68.7	D EPA-TO-15 01/06/2022 MS
CFC-113	<50.0	<383	50.0	383	D EPA-TO-15 01/06/2022 MS
1,1,2-Trichloroethane (TCA)	<10.0	<54.6	10.0	54.6	D EPA-TO-15 01/06/2022 MS
1,1-Dichloroethane	<10.0	<40.5	10.0	40.5	D EPA-TO-15 01/06/2022 MS
1,1-Dichloroethene (DCE)	<10.0	<39.7	10.0	39.7	D EPA-TO-15 01/06/2022 MS
1,2,4-Trichlorobenzene	<100	<742	100	742	D EPA-TO-15 01/06/2022 MS
1,2,4-Trimethylbenzene	<500	<2,460	500	2,460	D EPA-TO-15 01/06/2022 MS
1,2-Dibromoethane (EDB)*	<0.298	<2.29	0.298	2.29	D EPA-TO-15 01/06/2022 MS
1,2-Dichlorobenzene	<10.0	<60.1	10.0	60.1	D EPA-TO-15 01/06/2022 MS
1,2-Dichloroethane	<10.0	<40.5	10.0	40.5	D EPA-TO-15 01/06/2022 MS
1,2-Dichloropropane	<50.0	<231	50.0	231	D EPA-TO-15 01/06/2022 MS
1,3,5-Trimethylbenzene	<400	<1,970	400	1,970	D EPA-TO-15 01/06/2022 MS
1,3-Butadiene	46.1	102	10.0	22.1	D EPA-TO-15 01/06/2022 MS
1,3-Dichlorobenzene	<10.0	<60.1	10.0	60.1	D EPA-TO-15 01/06/2022 MS
1,4-Dichlorobenzene	<10.0	<60.1	10.0	60.1	D EPA-TO-15 01/06/2022 MS
1,4-Dioxane	<400	<1,440	400	1,440	D EPA-TO-15 01/06/2022 MS
(MEK) 2-Butanone	<400	<1,180	400	1,180	D EPA-TO-15 01/06/2022 MS
2-Hexanone	<1,000	<4,100	1,000	4,100	D EPA-TO-15 01/06/2022 MS
Isopropyl Alcohol	<1,000	<2,460	1,000	2,460	D EPA-TO-15 01/06/2022 MS
4-Methyl-2-pentanone (MIBK)	<1,000	<4,100	1,000	4,100	D EPA-TO-15 01/06/2022 MS
Acetone	<2,000	<4,750	2,000	4,750	D EPA-TO-15 01/06/2022 MS
Acrolein*	<1.00	<2.29	1.00	2.29	D EPA-TO-15 01/06/2022 MS
Benzene	254	813	10.0	31.9	D EPA-TO-15 01/06/2022 MS



Client: GeoEngineers
WorkOrder: 2112437
Project: 701 Jackson Property Site

Client Sample ID: SSV-2-S
Lab ID: 2112437-002A
Sample Type: Summa Canister

Date Sampled: 12/28/2021
Date Received: 12/28/2021

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst	
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)				
<u>Volatile Organic Compounds by EPA Method TO-15</u>								
Benzyl chloride	<100	<518	100	518	D	EPA-TO-15	01/06/2022	MS
Dichlorobromomethane	<100	<670	100	670	D	EPA-TO-15	01/06/2022	MS
Bromoform	<10.0	<103	10.0	103	D	EPA-TO-15	01/06/2022	MS
Bromomethane	<100	<388	100	388	D	EPA-TO-15	01/06/2022	MS
Carbon disulfide	<400	<1,250	400	1,250	D	EPA-TO-15	01/06/2022	MS
Carbon tetrachloride	<10.0	<62.9	10.0	62.9	D	EPA-TO-15	01/06/2022	MS
Chlorobenzene	<10.0	<46.0	10.0	46.0	D	EPA-TO-15	01/06/2022	MS
Dibromochloromethane	<10.0	<85.2	10.0	85.2	D	EPA-TO-15	01/06/2022	MS
Chloroethane	<400	<1,060	400	1,060	D	EPA-TO-15	01/06/2022	MS
Chloroform	<10.0	<48.8	10.0	48.8	D	EPA-TO-15	01/06/2022	MS
Chloromethane	<50.0	<103	50.0	103	D	EPA-TO-15	01/06/2022	MS
cis-1,2-Dichloroethene	<100	<396	100	396	D	EPA-TO-15	01/06/2022	MS
cis-1,3-dichloropropene	<50.0	<227	50.0	227	D	EPA-TO-15	01/06/2022	MS
Cyclohexane	843	2,900	100	344	D	EPA-TO-15	01/06/2022	MS
Dichlorodifluoromethane (CFC-12)	<50.0	<247	50.0	247	D	EPA-TO-15	01/06/2022	MS
Dichlorotetrafluoroethane (CFC-114)	<50.0	<350	50.0	350	D	EPA-TO-15	01/06/2022	MS
Ethyl acetate	<400	<1,440	400	1,440	D	EPA-TO-15	01/06/2022	MS
Ethylbenzene	<400	<1,740	400	1,740	D	EPA-TO-15	01/06/2022	MS
Heptane	973	3,910	400	1,610	D	EPA-TO-15	01/06/2022	MS
Hexachlorobutadiene	<100	<1,070	100	1,070	D	EPA-TO-15	01/06/2022	MS
m,p-Xylene	506	2,200	400	1,740	D	EPA-TO-15	01/06/2022	MS
Methyl methacrylate	<400	<1,640	400	1,640	D	EPA-TO-15	01/06/2022	MS
Methylene chloride	<400	<1,390	400	1,390	D	EPA-TO-15	01/06/2022	MS
Naphthalene	<10.0	<52.4	10.0	52.4	D	EPA-TO-15	01/06/2022	MS
n-Hexane	1,150	4,050	500	1,760	D	EPA-TO-15	01/06/2022	MS
o-Xylene	144	627	100	434	D	EPA-TO-15	01/06/2022	MS
4-Ethyltoluene	<50.0	<246	50.0	246	D	EPA-TO-15	01/06/2022	MS
Propylene	1,050	1,800	400	688	D	EPA-TO-15	01/06/2022	MS
Styrene	<400	<1,700	400	1,700	D	EPA-TO-15	01/06/2022	MS
Methyl tert-butyl ether (MTBE)	<50.0	<180	50.0	180	D	EPA-TO-15	01/06/2022	MS



Client: GeoEngineers

WorkOrder: 2112437

Project: 701 Jackson Property Site

Client Sample ID: SSV-2-S

Date Sampled: 12/28/2021

Lab ID: 2112437-002A

Date Received: 12/28/2021

Sample Type: Summa Canister

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst	
<u>Volatile Organic Compounds by EPA Method TO-15</u>								
	(ppbv)	(ug/m³)	(ppbv)	(ug/m³)				
Tetrachloroethene (PCE)	<10.0	<67.8	10.0	67.8	D	EPA-TO-15	01/06/2022	MS
Tetrahydrofuran	<400	<1,180	400	1,180	D	EPA-TO-15	01/06/2022	MS
Toluene	539	2,030	100	377	D	EPA-TO-15	01/06/2022	MS
trans-1,2-Dichloroethene	<50.0	<198	50.0	198	D	EPA-TO-15	01/06/2022	MS
trans-1,3-dichloropropene	<50.0	<227	50.0	227	D	EPA-TO-15	01/06/2022	MS
Trichloroethene (TCE)	<10.0	<53.7	10.0	53.7	D	EPA-TO-15	01/06/2022	MS
Trichlorofluoromethane (CFC-11)	<50.0	<281	50.0	281	D	EPA-TO-15	01/06/2022	MS
Vinyl acetate	<400	<1,410	400	1,410	D	EPA-TO-15	01/06/2022	MS
Vinyl chloride	<10.0	<25.6	10.0	25.6	D	EPA-TO-15	01/06/2022	MS
Surr: 4-Bromofluorobenzene	102 %Rec	--	70-130	--	D	EPA-TO-15	01/06/2022	MS



Client: GeoEngineers

WorkOrder: 2112437

Project: 701 Jackson Property Site

Client Sample ID: SSV-1-S

Date Sampled: 12/28/2021

Lab ID: 2112437-003A

Date Received: 12/28/2021

Sample Type: Summa Canister

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst		
<u>Petroleum Fractionation by EPA Method TO-15</u>									
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)					
Aliphatic Hydrocarbon (EC5-8)	29,500	112,000	3,000	11,400	D	EPA-TO-15	01/06/2022	MS	
Aliphatic Hydrocarbon (EC9-12)	1,350	7,970	200	1,180		EPA-TO-15	01/01/2022	MS	
Aromatic Hydrocarbon (EC9-10)	714	3,590	50.0	252		EPA-TO-15	01/01/2022	MS	
Surr: 4-Bromofluorobenzene	97.0 %Rec	--	70-130	--		EPA-TO-15	01/01/2022	MS	
<u>Volatile Organic Compounds by EPA Method TO-15</u>									
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)					
1,1,1-Trichloroethane	<20.0	<109	20.0	109	D	EPA-TO-15	01/06/2022	MS	
1,1,1,2-Tetrachloroethane	<4.00	<27.5	4.00	27.5	D	EPA-TO-15	01/06/2022	MS	
CFC-113	<20.0	<153	20.0	153	D	EPA-TO-15	01/06/2022	MS	
1,1,2-Trichloroethane (TCA)	<4.00	<21.8	4.00	21.8	D	EPA-TO-15	01/06/2022	MS	
1,1-Dichloroethane	<4.00	<16.2	4.00	16.2	D	EPA-TO-15	01/06/2022	MS	
1,1-Dichloroethene (DCE)	<4.00	<15.9	4.00	15.9	D	EPA-TO-15	01/06/2022	MS	
1,2,4-Trichlorobenzene	<40.0	<297	40.0	297	D	EPA-TO-15	01/06/2022	MS	
1,2,4-Trimethylbenzene	<200	<983	200	983	D	EPA-TO-15	01/06/2022	MS	
1,2-Dibromoethane (EDB)*	2.31	17.7	0.119	0.915	D	EPA-TO-15	01/06/2022	MS	
1,2-Dichlorobenzene	<4.00	<24.0	4.00	24.0	D	EPA-TO-15	01/06/2022	MS	
1,2-Dichloroethane	<4.00	<16.2	4.00	16.2	D	EPA-TO-15	01/06/2022	MS	
1,2-Dichloropropane	<20.0	<92.4	20.0	92.4	D	EPA-TO-15	01/06/2022	MS	
1,3,5-Trimethylbenzene	<160	<787	160	787	D	EPA-TO-15	01/06/2022	MS	
1,3-Butadiene	44.1	97.6	4.00	8.85	D	EPA-TO-15	01/06/2022	MS	
1,3-Dichlorobenzene	<4.00	<24.1	4.00	24.1	D	EPA-TO-15	01/06/2022	MS	
1,4-Dichlorobenzene	<4.00	<24.1	4.00	24.1	D	EPA-TO-15	01/06/2022	MS	
1,4-Dioxane	<160	<577	160	577	D	EPA-TO-15	01/06/2022	MS	
(MEK) 2-Butanone	<160	<472	160	472	D	EPA-TO-15	01/06/2022	MS	
2-Hexanone	<400	<1,640	400	1,640	D	EPA-TO-15	01/06/2022	MS	
Isopropyl Alcohol	<400	<983	400	983	D	EPA-TO-15	01/06/2022	MS	
4-Methyl-2-pentanone (MIBK)	<400	<1,640	400	1,640	D	EPA-TO-15	01/06/2022	MS	
Acetone	1,750	4,160	800	1,900	D	EPA-TO-15	01/06/2022	MS	
Acrolein*	<0.400	<0.917	0.400	0.917	D	EPA-TO-15	01/06/2022	MS	
Benzene	48.0	153	4.00	12.8	D	EPA-TO-15	01/06/2022	MS	



Client: GeoEngineers
WorkOrder: 2112437
Project: 701 Jackson Property Site

Client Sample ID: SSV-1-S
Lab ID: 2112437-003A
Sample Type: Summa Canister

Date Sampled: 12/28/2021
Date Received: 12/28/2021

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst		
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)					
<u>Volatile Organic Compounds by EPA Method TO-15</u>									
Benzyl chloride	<40.0	<207	40.0	207	D	EPA-TO-15	01/06/2022	MS	
Dichlorobromomethane	<40.0	<268	40.0	268	D	EPA-TO-15	01/06/2022	MS	
Bromoform	<4.00	<41.4	4.00	41.4	D	EPA-TO-15	01/06/2022	MS	
Bromomethane	<40.0	<155	40.0	155	D	EPA-TO-15	01/06/2022	MS	
Carbon disulfide	<160	<498	160	498	D	EPA-TO-15	01/06/2022	MS	
Carbon tetrachloride	<4.00	<25.2	4.00	25.2	D	EPA-TO-15	01/06/2022	MS	
Chlorobenzene	<4.00	<18.4	4.00	18.4	D	EPA-TO-15	01/06/2022	MS	
Dibromochloromethane	<4.00	<34.1	4.00	34.1	D	EPA-TO-15	01/06/2022	MS	
Chloroethane	<160	<422	160	422	D	EPA-TO-15	01/06/2022	MS	
Chloroform	<4.00	<19.5	4.00	19.5	D	EPA-TO-15	01/06/2022	MS	
Chloromethane	<20.0	<41.3	20.0	41.3	D	EPA-TO-15	01/06/2022	MS	
cis-1,2-Dichloroethene	<40.0	<159	40.0	159	D	EPA-TO-15	01/06/2022	MS	
cis-1,3-dichloropropene	<20.0	<90.8	20.0	90.8	D	EPA-TO-15	01/06/2022	MS	
Cyclohexane	394	1,360	40.0	138	D	EPA-TO-15	01/06/2022	MS	
Dichlorodifluoromethane (CFC-12)	<20.0	<98.9	20.0	98.9	D	EPA-TO-15	01/06/2022	MS	
Dichlorotetrafluoroethane (CFC-114)	<20.0	<140	20.0	140	D	EPA-TO-15	01/06/2022	MS	
Ethyl acetate	617	2,220	160	577	D	EPA-TO-15	01/06/2022	MS	
Ethylbenzene	<160	<695	160	695	D	EPA-TO-15	01/06/2022	MS	
Heptane	654	2,630	160	643	D	EPA-TO-15	01/06/2022	MS	
Hexachlorobutadiene	<40.0	<427	40.0	427	D	EPA-TO-15	01/06/2022	MS	
m,p-Xylene	228	991	160	695	D	EPA-TO-15	01/06/2022	MS	
Methyl methacrylate	<160	<655	160	655	D	EPA-TO-15	01/06/2022	MS	
Methylene chloride	<160	<556	160	556	D	EPA-TO-15	01/06/2022	MS	
Naphthalene	19.1	99.9	4.00	21.0	D	EPA-TO-15	01/06/2022	MS	
n-Hexane	886	3,120	200	705	D	EPA-TO-15	01/06/2022	MS	
o-Xylene	55.4	241	40.0	174	D	EPA-TO-15	01/06/2022	MS	
4-Ethyltoluene	21.7	106	20.0	98.3	D	EPA-TO-15	01/06/2022	MS	
Propylene	1,400	2,400	160	275	D	EPA-TO-15	01/06/2022	MS	
Styrene	<160	<681	160	681	D	EPA-TO-15	01/06/2022	MS	
Methyl tert-butyl ether (MTBE)	<20.0	<72.1	20.0	72.1	D	EPA-TO-15	01/06/2022	MS	



Client: GeoEngineers

WorkOrder: 2112437

Project: 701 Jackson Property Site

Client Sample ID: SSV-1-S

Date Sampled: 12/28/2021

Lab ID: 2112437-003A

Date Received: 12/28/2021

Sample Type: Summa Canister

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst	
<u>Volatile Organic Compounds by EPA Method TO-15</u>								
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)				
Tetrachloroethene (PCE)	13.2	89.3	4.00	27.1	D	EPA-TO-15	01/06/2022	MS
Tetrahydrofuran	<160	<472	160	472	D	EPA-TO-15	01/06/2022	MS
Toluene	254	957	40.0	151	D	EPA-TO-15	01/06/2022	MS
trans-1,2-Dichloroethene	<20.0	<79.3	20.0	79.3	D	EPA-TO-15	01/06/2022	MS
trans-1,3-dichloropropene	<20.0	<90.8	20.0	90.8	D	EPA-TO-15	01/06/2022	MS
Trichloroethene (TCE)	<4.00	<21.5	4.00	21.5	D	EPA-TO-15	01/06/2022	MS
Trichlorofluoromethane (CFC-11)	<20.0	<112	20.0	112	D	EPA-TO-15	01/06/2022	MS
Vinyl acetate	<160	<563	160	563	D	EPA-TO-15	01/06/2022	MS
Vinyl chloride	<4.00	<10.2	4.00	10.2	D	EPA-TO-15	01/06/2022	MS
Surr: 4-Bromofluorobenzene	97.9 %Rec	--	70-130	--	D	EPA-TO-15	01/06/2022	MS



Client: GeoEngineers
WorkOrder: 2112437
Project: 701 Jackson Property Site

Client Sample ID: SSV-3-S
Lab ID: 2112437-004A
Sample Type: Summa Canister

Date Sampled: 12/28/2021
Date Received: 12/28/2021

Analyte	Concentration	Reporting Limit	Qual	Method	Date/Analyst
<u>Petroleum Fractionation by EPA Method TO-15</u>					
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)	
Aliphatic Hydrocarbon (EC5-8)	160	608	75.0	285	EPA-TO-15 01/01/2022 MS
Aliphatic Hydrocarbon (EC9-12)	<50.0	<294	50.0	294	EPA-TO-15 01/01/2022 MS
Aromatic Hydrocarbon (EC9-10)	<12.5	<62.9	12.5	62.9	EPA-TO-15 01/01/2022 MS
Surr: 4-Bromofluorobenzene	92.8 %Rec	--	70-130	--	EPA-TO-15 01/01/2022 MS
<u>Volatile Organic Compounds by EPA Method TO-15</u>					
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)	
1,1,1-Trichloroethane	<0.500	<2.73	0.500	2.73	EPA-TO-15 01/06/2022 MS
1,1,2,2-Tetrachloroethane	<0.100	<0.687	0.100	0.687	EPA-TO-15 01/06/2022 MS
CFC-113	<0.500	<3.83	0.500	3.83	EPA-TO-15 01/06/2022 MS
1,1,2-Trichloroethane (TCA)	<0.100	<0.546	0.100	0.546	EPA-TO-15 01/06/2022 MS
1,1-Dichloroethane	<0.100	<0.405	0.100	0.405	EPA-TO-15 01/06/2022 MS
1,1-Dichloroethene (DCE)	<0.100	<0.397	0.100	0.397	EPA-TO-15 01/06/2022 MS
1,2,4-Trichlorobenzene	<1.00	<7.42	1.00	7.42	EPA-TO-15 01/06/2022 MS
1,2,4-Trimethylbenzene	<5.00	<24.6	5.00	24.6	EPA-TO-15 01/06/2022 MS
1,2-Dibromoethane (EDB)*	0.0143	0.110	0.00298	0.0229	EPA-TO-15 01/06/2022 MS
1,2-Dichlorobenzene	<0.100	<0.601	0.100	0.601	EPA-TO-15 01/06/2022 MS
1,2-Dichloroethane	<0.100	<0.405	0.100	0.405	EPA-TO-15 01/06/2022 MS
1,2-Dichloropropane	<0.500	<2.31	0.500	2.31	EPA-TO-15 01/06/2022 MS
1,3,5-Trimethylbenzene	<4.00	<19.7	4.00	19.7	EPA-TO-15 01/06/2022 MS
1,3-Butadiene	2.65	5.87	0.100	0.221	EPA-TO-15 01/06/2022 MS
1,3-Dichlorobenzene	<0.100	<0.601	0.100	0.601	EPA-TO-15 01/06/2022 MS
1,4-Dichlorobenzene	<0.100	<0.601	0.100	0.601	EPA-TO-15 01/06/2022 MS
1,4-Dioxane	<4.00	<14.4	4.00	14.4	EPA-TO-15 01/06/2022 MS
(MEK) 2-Butanone	<4.00	<11.8	4.00	11.8	EPA-TO-15 01/06/2022 MS
2-Hexanone	<10.0	<41.0	10.0	41.0	EPA-TO-15 01/06/2022 MS
Isopropyl Alcohol	<10.0	<24.6	10.0	24.6	EPA-TO-15 01/06/2022 MS
4-Methyl-2-pentanone (MIBK)	<10.0	<41.0	10.0	41.0	EPA-TO-15 01/06/2022 MS
Acetone	<20.0	<47.5	20.0	47.5	EPA-TO-15 01/06/2022 MS
Acrolein*	<0.0100	<0.0229	0.0100	0.0229	EPA-TO-15 01/06/2022 MS
Benzene	2.43	7.76	0.100	0.319	EPA-TO-15 01/06/2022 MS



Client: GeoEngineers
WorkOrder: 2112437
Project: 701 Jackson Property Site

Client Sample ID: SSV-3-S
Lab ID: 2112437-004A
Sample Type: Summa Canister

Date Sampled: 12/28/2021
Date Received: 12/28/2021

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst	
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)				
<u>Volatile Organic Compounds by EPA Method TO-15</u>								
Benzyl chloride	<1.00	<5.18	1.00	5.18		EPA-TO-15	01/06/2022	MS
Dichlorobromomethane	<1.00	<6.70	1.00	6.70		EPA-TO-15	01/06/2022	MS
Bromoform	<0.100	<1.03	0.100	1.03		EPA-TO-15	01/06/2022	MS
Bromomethane	<1.00	<3.88	1.00	3.88		EPA-TO-15	01/06/2022	MS
Carbon disulfide	<4.00	<12.5	4.00	12.5		EPA-TO-15	01/06/2022	MS
Carbon tetrachloride	<0.100	<0.629	0.100	0.629		EPA-TO-15	01/06/2022	MS
Chlorobenzene	<0.100	<0.460	0.100	0.460		EPA-TO-15	01/06/2022	MS
Dibromochloromethane	<0.100	<0.852	0.100	0.852		EPA-TO-15	01/06/2022	MS
Chloroethane	<4.00	<10.6	4.00	10.6		EPA-TO-15	01/06/2022	MS
Chloroform	2.50	12.2	0.100	0.488		EPA-TO-15	01/06/2022	MS
Chloromethane	0.595	1.23	0.500	1.03		EPA-TO-15	01/06/2022	MS
cis-1,2-Dichloroethene	<1.00	<3.96	1.00	3.96		EPA-TO-15	01/06/2022	MS
cis-1,3-dichloropropene	<0.500	<2.27	0.500	2.27		EPA-TO-15	01/06/2022	MS
Cyclohexane	6.26	21.6	1.00	3.44		EPA-TO-15	01/06/2022	MS
Dichlorodifluoromethane (CFC-12)	0.600	2.97	0.500	2.47		EPA-TO-15	01/06/2022	MS
Dichlorotetrafluoroethane (CFC-114)	<0.500	<3.50	0.500	3.50		EPA-TO-15	01/06/2022	MS
Ethyl acetate	<4.00	<14.4	4.00	14.4		EPA-TO-15	01/06/2022	MS
Ethylbenzene	<4.00	<17.4	4.00	17.4		EPA-TO-15	01/06/2022	MS
Heptane	7.04	28.3	4.00	16.1		EPA-TO-15	01/06/2022	MS
Hexachlorobutadiene	<1.00	<10.7	1.00	10.7		EPA-TO-15	01/06/2022	MS
m,p-Xylene	<4.00	<17.4	4.00	17.4		EPA-TO-15	01/06/2022	MS
Methyl methacrylate	<4.00	<16.4	4.00	16.4		EPA-TO-15	01/06/2022	MS
Methylene chloride	<4.00	<13.9	4.00	13.9		EPA-TO-15	01/06/2022	MS
Naphthalene	<0.100	<0.524	0.100	0.524		EPA-TO-15	01/06/2022	MS
n-Hexane	17.7	62.5	5.00	17.6		EPA-TO-15	01/06/2022	MS
o-Xylene	<1.00	<4.34	1.00	4.34		EPA-TO-15	01/06/2022	MS
4-Ethyltoluene	<0.500	<2.46	0.500	2.46		EPA-TO-15	01/06/2022	MS
Propylene	41.2	71.0	4.00	6.88		EPA-TO-15	01/06/2022	MS
Styrene	<4.00	<17.0	4.00	17.0		EPA-TO-15	01/06/2022	MS
Methyl tert-butyl ether (MTBE)	<0.500	<1.80	0.500	1.80		EPA-TO-15	01/06/2022	MS



Client: GeoEngineers

WorkOrder: 2112437

Project: 701 Jackson Property Site

Client Sample ID: SSV-3-S

Date Sampled: 12/28/2021

Lab ID: 2112437-004A

Date Received: 12/28/2021

Sample Type: Summa Canister

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst	
<u>Volatile Organic Compounds by EPA Method TO-15</u>								
	(ppbv)	(ug/m³)	(ppbv)	(ug/m³)				
Tetrachloroethene (PCE)	1.21	8.19	0.100	0.678		EPA-TO-15	01/06/2022	MS
Tetrahydrofuran	<4.00	<11.8	4.00	11.8		EPA-TO-15	01/06/2022	MS
Toluene	3.96	14.9	1.00	3.77		EPA-TO-15	01/06/2022	MS
trans-1,2-Dichloroethene	<0.500	<1.98	0.500	1.98		EPA-TO-15	01/06/2022	MS
trans-1,3-dichloropropene	<0.500	<2.27	0.500	2.27		EPA-TO-15	01/06/2022	MS
Trichloroethene (TCE)	0.110	0.593	0.100	0.537		EPA-TO-15	01/06/2022	MS
Trichlorofluoromethane (CFC-11)	<0.500	<2.81	0.500	2.81		EPA-TO-15	01/06/2022	MS
Vinyl acetate	<4.00	<14.1	4.00	14.1		EPA-TO-15	01/06/2022	MS
Vinyl chloride	<0.100	<0.256	0.100	0.256		EPA-TO-15	01/06/2022	MS
Surr: 4-Bromofluorobenzene	95.4 %Rec	--	70-130	--		EPA-TO-15	01/06/2022	MS



Client: GeoEngineers

WorkOrder: 2112437

Project: 701 Jackson Property Site

Client Sample ID: SSV-2-D

Date Sampled: 12/28/2021

Lab ID: 2112437-005A

Date Received: 12/28/2021

Sample Type: Summa Canister

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst	
<u>Petroleum Fractionation by EPA Method TO-15</u>								
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)				
Aliphatic Hydrocarbon (EC5-8)	3,470,000	13,200,000	150,000	571,000	DE	EPA-TO-15	01/06/2022	MS
Aliphatic Hydrocarbon (EC9-12)	4,860	28,600	200	1,180	E	EPA-TO-15	01/01/2022	MS
Aromatic Hydrocarbon (EC9-10)	479	2,410	50.0	252		EPA-TO-15	01/01/2022	MS
Surr: 4-Bromofluorobenzene	105 %Rec	--	70-130	--		EPA-TO-15	01/01/2022	MS
<u>Volatile Organic Compounds by EPA Method TO-15</u>								
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)				
1,1,1-Trichloroethane	<1,000	<5,460	1,000	5,460	D	EPA-TO-15	01/06/2022	MS
1,1,2,2-Tetrachloroethane	<200	<1,370	200	1,370	D	EPA-TO-15	01/06/2022	MS
CFC-113	<1,000	<7,660	1,000	7,660	D	EPA-TO-15	01/06/2022	MS
1,1,2-Trichloroethane (TCA)	<200	<1,090	200	1,090	D	EPA-TO-15	01/06/2022	MS
1,1-Dichloroethane	<200	<810	200	810	D	EPA-TO-15	01/06/2022	MS
1,1-Dichloroethene (DCE)	<200	<793	200	793	D	EPA-TO-15	01/06/2022	MS
1,2,4-Trichlorobenzene	<2,000	<14,800	2,000	14,800	D	EPA-TO-15	01/06/2022	MS
1,2,4-Trimethylbenzene	<10,000	<49,200	10,000	49,200	D	EPA-TO-15	01/06/2022	MS
1,2-Dibromoethane (EDB)*	20.6	158	5.95	45.7	D	EPA-TO-15	01/06/2022	MS
1,2-Dichlorobenzene	<200	<1,200	200	1,200	D	EPA-TO-15	01/06/2022	MS
1,2-Dichloroethane	<200	<809	200	809	D	EPA-TO-15	01/06/2022	MS
1,2-Dichloropropane	<1,000	<4,620	1,000	4,620	D	EPA-TO-15	01/06/2022	MS
1,3,5-Trimethylbenzene	<8,000	<39,300	8,000	39,300	D	EPA-TO-15	01/06/2022	MS
1,3-Butadiene	<200	<442	200	442	D	EPA-TO-15	01/06/2022	MS
1,3-Dichlorobenzene	<200	<1,200	200	1,200	D	EPA-TO-15	01/06/2022	MS
1,4-Dichlorobenzene	<200	<1,200	200	1,200	D	EPA-TO-15	01/06/2022	MS
1,4-Dioxane	<8,000	<28,800	8,000	28,800	D	EPA-TO-15	01/06/2022	MS
(MEK) 2-Butanone	<8,000	<23,600	8,000	23,600	D	EPA-TO-15	01/06/2022	MS
2-Hexanone	<20,000	<81,900	20,000	81,900	D	EPA-TO-15	01/06/2022	MS
Isopropyl Alcohol	<20,000	<49,200	20,000	49,200	D	EPA-TO-15	01/06/2022	MS
4-Methyl-2-pentanone (MIBK)	<20,000	<81,900	20,000	81,900	D	EPA-TO-15	01/06/2022	MS
Acetone	<40,000	<95,000	40,000	95,000	D	EPA-TO-15	01/06/2022	MS
Acrolein*	<20.0	<45.9	20.0	45.9	D	EPA-TO-15	01/06/2022	MS
Benzene	6,260	20,000	200	639	D	EPA-TO-15	01/06/2022	MS



Client: GeoEngineers
WorkOrder: 2112437
Project: 701 Jackson Property Site

Client Sample ID: SSV-2-D
Lab ID: 2112437-005A
Sample Type: Summa Canister

Date Sampled: 12/28/2021
Date Received: 12/28/2021

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst	
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)				
<u>Volatile Organic Compounds by EPA Method TO-15</u>								
Benzyl chloride	<2,000	<10,400	2,000	10,400	D	EPA-TO-15	01/06/2022	MS
Dichlorobromomethane	<2,000	<13,400	2,000	13,400	D	EPA-TO-15	01/06/2022	MS
Bromoform	<200	<2,070	200	2,070	D	EPA-TO-15	01/06/2022	MS
Bromomethane	<2,000	<7,770	2,000	7,770	D	EPA-TO-15	01/06/2022	MS
Carbon disulfide	<8,000	<24,900	8,000	24,900	D	EPA-TO-15	01/06/2022	MS
Carbon tetrachloride	<200	<1,260	200	1,260	D	EPA-TO-15	01/06/2022	MS
Chlorobenzene	<200	<921	200	921	D	EPA-TO-15	01/06/2022	MS
Dibromochloromethane	<200	<1,700	200	1,700	D	EPA-TO-15	01/06/2022	MS
Chloroethane	<8,000	<21,100	8,000	21,100	D	EPA-TO-15	01/06/2022	MS
Chloroform	<200	<977	200	977	D	EPA-TO-15	01/06/2022	MS
Chloromethane	<1,000	<2,070	1,000	2,070	D	EPA-TO-15	01/06/2022	MS
cis-1,2-Dichloroethene	<2,000	<7,930	2,000	7,930	D	EPA-TO-15	01/06/2022	MS
cis-1,3-dichloropropene	<1,000	<4,540	1,000	4,540	D	EPA-TO-15	01/06/2022	MS
Cyclohexane	67,100	231,000	2,000	6,880	D	EPA-TO-15	01/06/2022	MS
Dichlorodifluoromethane (CFC-12)	<1,000	<4,950	1,000	4,950	D	EPA-TO-15	01/06/2022	MS
Dichlorotetrafluoroethane (CFC-114)	<1,000	<6,990	1,000	6,990	D	EPA-TO-15	01/06/2022	MS
Ethyl acetate	<8,000	<28,800	8,000	28,800	D	EPA-TO-15	01/06/2022	MS
Ethylbenzene	<8,000	<34,700	8,000	34,700	D	EPA-TO-15	01/06/2022	MS
Heptane	68,100	273,000	8,000	32,100	D	EPA-TO-15	01/06/2022	MS
Hexachlorobutadiene	<2,000	<21,300	2,000	21,300	D	EPA-TO-15	01/06/2022	MS
m,p-Xylene	<8,000	<34,700	8,000	34,700	D	EPA-TO-15	01/06/2022	MS
Methyl methacrylate	<8,000	<32,800	8,000	32,800	D	EPA-TO-15	01/06/2022	MS
Methylene chloride	<8,000	<27,800	8,000	27,800	D	EPA-TO-15	01/06/2022	MS
Naphthalene	<200	<1,050	200	1,050	D	EPA-TO-15	01/06/2022	MS
n-Hexane	219,000	771,000	10,000	35,200	D	EPA-TO-15	01/06/2022	MS
o-Xylene	<2,000	<8,680	2,000	8,680	D	EPA-TO-15	01/06/2022	MS
4-Ethyltoluene	<1,000	<4,920	1,000	4,920	D	EPA-TO-15	01/06/2022	MS
Propylene	<8,000	<13,800	8,000	13,800	D	EPA-TO-15	01/06/2022	MS
Styrene	<8,000	<34,100	8,000	34,100	D	EPA-TO-15	01/06/2022	MS
Methyl tert-butyl ether (MTBE)	<1,000	<3,610	1,000	3,610	D	EPA-TO-15	01/06/2022	MS



Client: GeoEngineers

WorkOrder: 2112437

Project: 701 Jackson Property Site

Client Sample ID: SSV-2-D

Date Sampled: 12/28/2021

Lab ID: 2112437-005A

Date Received: 12/28/2021

Sample Type: Summa Canister

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst	
<u>Volatile Organic Compounds by EPA Method TO-15</u>								
	(ppbv)	(ug/m³)	(ppbv)	(ug/m³)				
Tetrachloroethene (PCE)	<200	<1,360	200	1,360	D	EPA-TO-15	01/06/2022	MS
Tetrahydrofuran	<8,000	<23,600	8,000	23,600	D	EPA-TO-15	01/06/2022	MS
Toluene	9,930	37,400	2,000	7,540	D	EPA-TO-15	01/06/2022	MS
trans-1,2-Dichloroethene	<1,000	<3,960	1,000	3,960	D	EPA-TO-15	01/06/2022	MS
trans-1,3-dichloropropene	<1,000	<4,540	1,000	4,540	D	EPA-TO-15	01/06/2022	MS
Trichloroethene (TCE)	<200	<1,070	200	1,070	D	EPA-TO-15	01/06/2022	MS
Trichlorofluoromethane (CFC-11)	<1,000	<5,620	1,000	5,620	D	EPA-TO-15	01/06/2022	MS
Vinyl acetate	<8,000	<28,200	8,000	28,200	D	EPA-TO-15	01/06/2022	MS
Vinyl chloride	<200	<511	200	511	D	EPA-TO-15	01/06/2022	MS
Surr: 4-Bromofluorobenzene	96.8 %Rec	--	70-130	--	D	EPA-TO-15	01/06/2022	MS

Work Order: 2112437
CLIENT: GeoEngineers
Project: 701 Jackson Property Site

QC SUMMARY REPORT
Petroleum Fractionation by EPA Method TO-15

Sample ID: LCS-R72326	SampType: LCS	Units: ppbv			Prep Date: 12/31/2021	RunNo: 72326					
Client ID: LCSW	Batch ID: R72326				Analysis Date: 12/31/2021	SeqNo: 1476855					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (EC5-8)	8.53	7.50	12.00	0	71.1	70	130				
Aliphatic Hydrocarbon (EC9-12)	8.47	5.00	12.00	0	70.6	70	130				
Aromatic Hydrocarbon (EC9-10)	9.64	1.25	10.00	0	96.4	70	130				
Surr: 4-Bromofluorobenzene	3.79		4.000		94.8	70	130				

Sample ID: MB-R72326	SampType: MBLK	Units: ppbv			Prep Date: 12/31/2021	RunNo: 72326					
Client ID: MBLKW	Batch ID: R72326				Analysis Date: 12/31/2021	SeqNo: 1476856					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (EC5-8)	ND	7.50									
Aliphatic Hydrocarbon (EC9-12)	ND	5.00									
Aromatic Hydrocarbon (EC9-10)	ND	1.25									
Surr: 4-Bromofluorobenzene	3.65		4.000		91.3	70	130				

Sample ID: 2112437-004AREP	SampType: REP	Units: ppbv			Prep Date: 1/1/2022	RunNo: 72326					
Client ID: SSV-3-S	Batch ID: R72326				Analysis Date: 1/1/2022	SeqNo: 1476871					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (EC5-8)	162	75.0						159.7	1.59	25	
Aliphatic Hydrocarbon (EC9-12)	ND	50.0						0		25	
Aromatic Hydrocarbon (EC9-10)	ND	12.5						0		25	
Surr: 4-Bromofluorobenzene	36.9		40.00		92.3	70	130		0		

Sample ID: LCS-R72413	SampType: LCS	Units: ppbv			Prep Date: 1/6/2022	RunNo: 72413					
Client ID: LCSW	Batch ID: R72413				Analysis Date: 1/6/2022	SeqNo: 1478354					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (EC5-8)	11.6	7.50	12.00	0	96.5	70	130				
Surr: 4-Bromofluorobenzene	3.93		4.000		98.3	70	130				

Work Order: 2112437
CLIENT: GeoEngineers
Project: 701 Jackson Property Site

QC SUMMARY REPORT
Petroleum Fractionation by EPA Method TO-15

Sample ID: LCS-R72413	SampType: LCS	Units: ppbv	Prep Date: 1/6/2022	RunNo: 72413							
Client ID: LCSW	Batch ID: R72413		Analysis Date: 1/6/2022	SeqNo: 1478354							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID: MB-R72413	SampType: MBLK	Units: ppbv	Prep Date: 1/6/2022	RunNo: 72413							
Client ID: MBLKW	Batch ID: R72413		Analysis Date: 1/6/2022	SeqNo: 1478355							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Aliphatic Hydrocarbon (EC5-8)	ND	7.50								
Surr: 4-Bromofluorobenzene	3.71		4.000		92.7	70	130			

Sample ID: 2112437-004AREP	SampType: REP	Units: ppbv	Prep Date: 1/6/2022	RunNo: 72413							
Client ID: SSV-3-S	Batch ID: R72413		Analysis Date: 1/6/2022	SeqNo: 1478357							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Aliphatic Hydrocarbon (EC5-8)	358	75.0						428.6	18.0	25
Surr: 4-Bromofluorobenzene	39.3		40.00		98.3	70	130		0	

Work Order: 2112437
 CLIENT: GeoEngineers
 Project: 701 Jackson Property Site

QC SUMMARY REPORT
Helium by GC/TCD

Sample ID: LCS-R72428	SampType: LCS	Units: %	Prep Date: 1/7/2022	RunNo: 72428							
Client ID: LCSW	Batch ID: R72428		Analysis Date: 1/7/2022	SeqNo: 1478519							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Helium 5.34 0.200 5.000 0 107 80 120

Sample ID: MB-R72428	SampType: MBLK	Units: %	Prep Date: 1/7/2022	RunNo: 72428							
Client ID: MBLKW	Batch ID: R72428		Analysis Date: 1/7/2022	SeqNo: 1478520							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Helium ND 0.200

Sample ID: 2112437-001AREP	SampType: REP	Units: %	Prep Date: 1/7/2022	RunNo: 72428							
Client ID: SSV-3-D	Batch ID: R72428		Analysis Date: 1/7/2022	SeqNo: 1478514							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Helium ND 0.600 0 30 D

Work Order: 2112437
CLIENT: GeoEngineers
Project: 701 Jackson Property Site

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method TO-15

Sample ID: LCS-R72411	SampType: LCS	Units: ppbv	Prep Date: 1/6/2022	RunNo: 72411
Client ID: LCSW	Batch ID: R72411		Analysis Date: 1/6/2022	SeqNo: 1478300

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Propylene	1.71	0.400	2.000	0	85.4	70	130				
Dichlorodifluoromethane (CFC-12)	1.78	0.0500	2.000	0	89.1	70	130				
Chloromethane	1.72	0.0500	2.000	0	85.9	70	130				
Dichlorotetrafluoroethane (CFC-114)	1.85	0.0500	2.000	0	92.7	70	130				
Vinyl chloride	1.86	0.0100	2.000	0	92.9	70	130				
1,3-Butadiene	1.97	0.0100	2.000	0	98.3	70	130				
Bromomethane	1.77	0.100	2.000	0	88.3	70	130				
Trichlorofluoromethane (CFC-11)	2.06	0.0500	2.000	0	103	70	130				
Chloroethane	1.74	0.400	2.000	0	87.1	70	130				
Acrolein*	1.75	0.00100	2.000	0	87.6	70	130				
1,1-Dichloroethene (DCE)	1.98	0.0100	2.000	0	98.9	70	130				
Acetone	1.91	2.00	2.000	0	95.5	70	130				
Isopropyl Alcohol	1.69	1.00	2.000	0	84.4	70	130				
Methylene chloride	2.42	0.400	2.000	0	121	70	130				
Carbon disulfide	1.91	0.400	2.000	0	95.6	70	130				
trans-1,2-Dichloroethene	2.04	0.0500	2.000	0	102	70	130				
Methyl tert-butyl ether (MTBE)	1.96	0.0500	2.000	0	98.1	70	130				
n-Hexane	1.63	0.500	2.000	0	81.7	70	130				
1,1-Dichloroethane	2.03	0.0100	2.000	0	102	70	130				
Vinyl acetate	1.82	0.400	2.000	0	90.9	70	130				
cis-1,2-Dichloroethene	1.96	0.100	2.000	0	98.2	70	130				
(MEK) 2-Butanone	1.78	0.400	2.000	0	88.8	70	130				
Ethyl acetate	1.93	0.400	2.000	0	96.7	70	130				
Chloroform	1.92	0.0100	2.000	0	96.0	70	130				
Tetrahydrofuran	2.00	0.400	2.000	0	99.8	70	130				
1,1,1-Trichloroethane	2.00	0.0500	2.000	0	100	70	130				
Carbon tetrachloride	2.02	0.0100	2.000	0	101	70	130				
1,2-Dichloroethane	2.06	0.0100	2.000	0	103	70	130				
Benzene	1.76	0.0100	2.000	0	88.0	70	130				
Cyclohexane	1.86	0.100	2.000	0	92.8	70	130				

Work Order: 2112437
 CLIENT: GeoEngineers
 Project: 701 Jackson Property Site

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method TO-15

Sample ID: LCS-R72411	SampType: LCS	Units: ppbv	Prep Date: 1/6/2022	RunNo: 72411							
Client ID: LCSW	Batch ID: R72411		Analysis Date: 1/6/2022	SeqNo: 1478300							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Trichloroethene (TCE)	1.83	0.0100	2.000	0	91.7	70	130				
1,2-Dichloropropane	1.76	0.0500	2.000	0	88.0	70	130				
Methyl methacrylate	1.97	0.400	2.000	0	98.5	70	130				
Dichlorobromomethane	1.93	0.100	2.000	0	96.5	70	130				
1,4-Dioxane	1.97	0.400	2.000	0	98.3	70	130				
cis-1,3-dichloropropene	1.85	0.0500	2.000	0	92.4	70	130				
Toluene	2.01	0.100	2.000	0	101	70	130				
trans-1,3-dichloropropene	2.00	0.0500	2.000	0	100	70	130				
1,1,2-Trichloroethane (TCA)	1.99	0.0100	2.000	0	99.3	70	130				
Tetrachloroethene (PCE)	1.94	0.0100	2.000	0	97.0	70	130				
Dibromochloromethane	2.08	0.0100	2.000	0	104	70	130				
1,2-Dibromoethane (EDB)*	2.03	0.000298	2.000	0	102	70	130				
Chlorobenzene	1.90	0.0100	2.000	0	94.9	70	130				
Ethylbenzene	2.02	0.400	2.000	0	101	70	130				
m,p-Xylene	4.32	0.400	4.000	0	108	70	130				
o-Xylene	2.02	0.100	2.000	0	101	70	130				
Styrene	2.05	0.400	2.000	0	103	70	130				
Bromoform	2.12	0.0100	2.000	0	106	70	130				
1,1,2,2-Tetrachloroethane	1.97	0.0100	2.000	0	98.6	70	130				
1,3,5-Trimethylbenzene	2.12	0.400	2.000	0	106	70	130				
1,2,4-Trimethylbenzene	2.14	0.500	2.000	0	107	70	130				
Benzyl chloride	2.09	0.100	2.000	0	104	70	130				
4-Ethyltoluene	2.16	0.0500	2.000	0	108	70	130				
1,3-Dichlorobenzene	2.15	0.0100	2.000	0	108	70	130				
1,4-Dichlorobenzene	2.07	0.0100	2.000	0	103	70	130				
1,2-Dichlorobenzene	1.96	0.0100	2.000	0	97.8	70	130				
1,2,4-Trichlorobenzene	1.80	0.100	2.000	0	90.2	70	130				
Hexachlorobutadiene	2.20	0.100	2.000	0	110	70	130				
Naphthalene	1.91	0.0100	2.000	0	95.3	70	130				
2-Hexanone	1.80	1.00	2.000	0	89.8	70	130				

Work Order: 2112437
CLIENT: GeoEngineers
Project: 701 Jackson Property Site

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method TO-15

Sample ID: LCS-R72411	SampType: LCS	Units: ppbv	Prep Date: 1/6/2022	RunNo: 72411							
Client ID: LCSW	Batch ID: R72411		Analysis Date: 1/6/2022	SeqNo: 1478300							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
4-Methyl-2-pentanone (MIBK)	1.78	1.00	2.000	0	89.1	70	130				
CFC-113	1.95	0.0500	2.000	0	97.3	70	130				
Heptane	1.77	0.400	2.000	0	88.7	70	130				
Surr: 4-Bromofluorobenzene	4.12		4.000		103	70	130				

Sample ID: MB-R72411	SampType: MBLK	Units: ppbv	Prep Date: 1/6/2022	RunNo: 72411							
Client ID: MBLKW	Batch ID: R72411		Analysis Date: 1/6/2022	SeqNo: 1478310							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Propylene	ND	0.400									
Dichlorodifluoromethane (CFC-12)	ND	0.0500									
Chloromethane	ND	0.0500									
Dichlorotetrafluoroethane (CFC-114)	ND	0.0500									
Vinyl chloride	ND	0.0100									
1,3-Butadiene	ND	0.0100									
Bromomethane	ND	0.100									
Trichlorofluoromethane (CFC-11)	ND	0.0500									
Chloroethane	ND	0.400									
Acrolein*	0.00394	0.00100									
1,1-Dichloroethene (DCE)	ND	0.0100									
Acetone	ND	2.00									
Isopropyl Alcohol	ND	1.00									
Methylene chloride	ND	0.400									
Carbon disulfide	ND	0.400									
trans-1,2-Dichloroethene	ND	0.0500									
Methyl tert-butyl ether (MTBE)	ND	0.0500									
n-Hexane	ND	0.500									
1,1-Dichloroethane	ND	0.0100									
Vinyl acetate	ND	0.400									
cis-1,2-Dichloroethene	ND	0.100									

Work Order: 2112437
CLIENT: GeoEngineers
Project: 701 Jackson Property Site

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method TO-15

Sample ID: MB-R72411	SampType: MBLK	Units: ppbv	Prep Date: 1/6/2022	RunNo: 72411							
Client ID: MBLKW	Batch ID: R72411		Analysis Date: 1/6/2022	SeqNo: 1478310							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

(MEK) 2-Butanone	ND	0.400									
Ethyl acetate	ND	0.400									
Chloroform	ND	0.0100									
Tetrahydrofuran	ND	0.400									
1,1,1-Trichloroethane	ND	0.0500									
Carbon tetrachloride	ND	0.0100									
1,2-Dichloroethane	ND	0.0100									
Benzene	ND	0.0100									
Cyclohexane	ND	0.100									
Trichloroethene (TCE)	ND	0.0100									
1,2-Dichloropropane	ND	0.0500									
Methyl methacrylate	ND	0.400									
Dichlorobromomethane	ND	0.100									
1,4-Dioxane	ND	0.400									
cis-1,3-dichloropropene	ND	0.0500									
Toluene	ND	0.100									
trans-1,3-dichloropropene	ND	0.0500									
1,1,2-Trichloroethane (TCA)	ND	0.0100									
Tetrachloroethene (PCE)	ND	0.0100									
Dibromochloromethane	ND	0.0100									
1,2-Dibromoethane (EDB)*	ND	0.000298									
Chlorobenzene	ND	0.0100									
Ethylbenzene	ND	0.400									
m,p-Xylene	ND	0.400									
o-Xylene	ND	0.100									
Styrene	ND	0.400									
Bromoform	ND	0.0100									
1,1,2,2-Tetrachloroethane	ND	0.0100									
1,3,5-Trimethylbenzene	ND	0.400									
1,2,4-Trimethylbenzene	ND	0.500									

Work Order: 2112437
CLIENT: GeoEngineers
Project: 701 Jackson Property Site

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method TO-15

Sample ID: MB-R72411	SampType: MBLK	Units: ppbv	Prep Date: 1/6/2022	RunNo: 72411							
Client ID: MBLKW	Batch ID: R72411		Analysis Date: 1/6/2022	SeqNo: 1478310							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Benzyl chloride	ND	0.100									
4-Ethyltoluene	ND	0.0500									
1,3-Dichlorobenzene	ND	0.0100									
1,4-Dichlorobenzene	ND	0.0100									
1,2-Dichlorobenzene	ND	0.0100									
1,2,4-Trichlorobenzene	ND	0.100									
Hexachlorobutadiene	ND	0.100									
Naphthalene	ND	0.0100									
2-Hexanone	ND	1.00									
4-Methyl-2-pentanone (MIBK)	ND	1.00									
CFC-113	ND	0.0500									
Heptane	ND	0.400									
Surr: 4-Bromofluorobenzene	3.69		4.000		92.2	70	130				

Sample ID: 2112437-004AREP	SampType: REP	Units: ppbv	Prep Date: 1/6/2022	RunNo: 72411							
Client ID: SSV-3-S	Batch ID: R72411		Analysis Date: 1/6/2022	SeqNo: 1478303							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Propylene	42.2	4.00						41.23	2.22	25	
Dichlorodifluoromethane (CFC-12)	0.580	0.500						0.5997	3.25	25	
Chloromethane	0.540	0.500						0.5947	9.60	25	
Dichlorotetrafluoroethane (CFC-114)	ND	0.500						0		25	
Vinyl chloride	ND	0.100						0		25	
1,3-Butadiene	2.92	0.100						2.655	9.58	25	
Bromomethane	ND	1.00						0		25	
Trichlorofluoromethane (CFC-11)	ND	0.500						0		25	
Chloroethane	ND	4.00						0		25	
Acrolein*	ND	0.0100						0		25	
1,1-Dichloroethene (DCE)	ND	0.100						0		25	
Acetone	ND	20.0						0		25	

Work Order: 2112437
 CLIENT: GeoEngineers
 Project: 701 Jackson Property Site

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method TO-15

Sample ID: 2112437-004AREP	SampType: REP	Units: ppbv	Prep Date: 1/6/2022	RunNo: 72411							
Client ID: SSV-3-S	Batch ID: R72411		Analysis Date: 1/6/2022	SeqNo: 1478303							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Isopropyl Alcohol	ND	10.0						0		25	
Methylene chloride	ND	4.00						0		25	
Carbon disulfide	ND	4.00						0		25	
trans-1,2-Dichloroethene	ND	0.500						0		25	
Methyl tert-butyl ether (MTBE)	ND	0.500						0		25	
n-Hexane	12.0	5.00						17.74	38.3	25	R
1,1-Dichloroethane	ND	0.100						0		25	
Vinyl acetate	ND	4.00						0		25	
cis-1,2-Dichloroethene	ND	1.00						0		25	
(MEK) 2-Butanone	ND	4.00						0		25	
Ethyl acetate	ND	4.00						0		25	
Chloroform	2.54	0.100						2.496	1.76	25	
Tetrahydrofuran	ND	4.00						0		25	
1,1,1-Trichloroethane	ND	0.500						0		25	
Carbon tetrachloride	ND	0.100						0		25	
1,2-Dichloroethane	ND	0.100						0		25	
Benzene	1.78	0.100						2.429	30.8	25	R
Cyclohexane	4.59	1.00						6.263	30.8	25	R
Trichloroethene (TCE)	0.107	0.100						0.1104	2.85	25	
1,2-Dichloropropane	ND	0.500						0		25	
Methyl methacrylate	ND	4.00						0		25	
Dichlorobromomethane	ND	1.00						0		25	
1,4-Dioxane	ND	4.00						0		25	
cis-1,3-dichloropropene	ND	0.500						0		25	
Toluene	1.93	1.00						3.960	68.9	25	R
trans-1,3-dichloropropene	ND	0.500						0		25	
1,1,2-Trichloroethane (TCA)	ND	0.100						0		25	
Tetrachloroethene (PCE)	1.26	0.100						1.207	4.56	25	
Dibromochloromethane	ND	0.100						0		25	
1,2-Dibromoethane (EDB)*	0.0140	0.00298						0.01430	2.12	25	

Work Order: 2112437
 CLIENT: GeoEngineers
 Project: 701 Jackson Property Site

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method TO-15

Sample ID: 2112437-004AREP	SampType: REP	Units: ppbv	Prep Date: 1/6/2022	RunNo: 72411							
Client ID: SSV-3-S	Batch ID: R72411		Analysis Date: 1/6/2022	SeqNo: 1478303							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chlorobenzene	ND	0.100						0		25	
Ethylbenzene	ND	4.00						0		25	
m,p-Xylene	ND	4.00						0		25	
o-Xylene	ND	1.00						0		25	
Styrene	ND	4.00						0		25	
Bromoform	ND	0.100						0		25	
1,1,2,2-Tetrachloroethane	ND	0.100						0		25	
1,3,5-Trimethylbenzene	ND	4.00						0		25	
1,2,4-Trimethylbenzene	ND	5.00						0		25	
Benzyl chloride	ND	1.00						0		25	
4-Ethyltoluene	ND	0.500						0		25	
1,3-Dichlorobenzene	ND	0.100						0		25	
1,4-Dichlorobenzene	ND	0.100						0		25	
1,2-Dichlorobenzene	ND	0.100						0		25	
1,2,4-Trichlorobenzene	ND	1.00						0		25	
Hexachlorobutadiene	ND	1.00						0		25	
Naphthalene	ND	0.100						0		25	
2-Hexanone	ND	10.0						0		25	
4-Methyl-2-pentanone (MIBK)	ND	10.0						0		25	
CFC-113	ND	0.500						0		25	
Heptane	5.34	4.00						7.042	27.4	25	
Surr: 4-Bromofluorobenzene	39.2		40.00		98.1	70	130		0		

NOTES:

R - High RPD observed.

Client Name: GEI	Work Order Number: 2112437
Logged by: Gabrielle Coeuille	Date Received: 12/28/2021 3:51:00 PM

Chain of Custody

1. Is Chain of Custody complete? Yes No Not Present
2. How was the sample delivered? Client

Log In

3. Coolers are present? Yes No NA
- Air Samples**
4. Shipping container/cooler in good condition? Yes No
5. Custody Seals present on shipping container/cooler?
(Refer to comments for Custody Seals not intact) Yes No Not Present
6. Was an attempt made to cool the samples? Yes No NA
7. Were all items received at a temperature of >2°C to 6°C * Yes No NA
8. Sample(s) in proper container(s)? Yes No
9. Sufficient sample volume for indicated test(s)? Yes No
10. Are samples properly preserved? Yes No
11. Was preservative added to bottles? Yes No NA
12. Is there headspace in the VOA vials? Yes No NA
13. Did all samples containers arrive in good condition(unbroken)? Yes No
14. Does paperwork match bottle labels? Yes No
15. Are matrices correctly identified on Chain of Custody? Yes No
16. Is it clear what analyses were requested? Yes No
17. Were all holding times able to be met? Yes No

Special Handling (if applicable)

18. Was client notified of all discrepancies with this order? Yes No NA

Person Notified:	<input type="text"/>	Date:	<input type="text"/>
By Whom:	<input type="text"/>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text"/>		
Client Instructions:	<input type="text"/>		

19. Additional remarks:

Item Information

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C



Fremont
Analytical

3600 Fremont Ave. N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Air Chain of Custody Record & Laboratory Services Agreement

Date: 12/28/2021

Page: 1 of 2

Project Name: 701 S Jackson Parkway Site

Laboratory Project No (Internal):

2112437

Client: GEI Tacoma

Address: 2101 4th Ave Suite 950

City, State, zip: SEATTLE WA

Telephone: 206.728.2674

Fax:

Location: SEATTLE

Collected by: Nathaniel Solomon

Reports to (PM): Robert Travnal

Air samples are disposed of one week after report is submitted to client unless otherwise requested. OK to Dispose Hold (fees may apply)

Sample Name	Canister / Flow Reg Serial #	Sample Type (Matrix)*	Container Type**	Expected Fill Time / Flow Rate	Sample Start Date & Time	Field Initial Sample Pressure ("Hg)	Sample End Date & Time	Field Final Sample Pressure ("Hg)	Analysis							Comments	Final Pressure ("Hg)
									Full list VOCs TO15	Select VOCs TO15 ***	APH TO15	Siloxanes TO15	Sulfur TO15	Major Gases 3C	Helium 3C Mod		
SSV-3-D	5024	S	1L	~25min	12/28/21	-30	12/28/21	-10	✓	✓	✓	✓	✓	✓	✓	✓	-10
	F1																
SSV-2-S	4902	S	1L	~25min	12/28/21	-30	12/28/21	-6	✓	✓	✓	✓	✓	✓	✓	✓	-6
	F16																
SSV-1-S	11410	S	1L	~25min	12/28/21	-30	12/28/21	-8	✓	✓	✓	✓	✓	✓	✓	✓	-7
	4905																
SSV-3-S	11026	S	1L	~25min	12/28/21	-30	12/28/21	-5	✓	✓	✓	✓	✓	✓	✓	✓	-4
	F29																

Matrix Codes: AA = Ambient Air OA = Outdoor Air IA = Indoor Air S = Subslab / Soil Gas SVE = SVE L = Landfill D = Digester

** Container Codes: BV = 1 Liter Bottle Vac 6L = 6L Canister 1L = 1L Canister CVL = High Pressure Cylinder F = Filter S = Sorbent Tube TB = Tedlar Bag

*** Select one: BTEXN & APH PCE & Breakdown Other, specify in comments Vac + PETROLEUM FRACTIONATION

I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above, that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Relinquished (Signature) *Mr. R* Print Name *Nathaniel Solomon* Date/Time *12/28/21*

Relinquished (Signature) *Robert Travnal* Print Name *Robert Travnal* Date/Time *12/28/21*

Relinquished (Signature) *Max Tingo* Print Name *Max Tingo* Date/Time *12/28/21 15:51*

Turn-Around Time: Standard Next Day 3 Day Same Day 2 Day specify



3600 Fremont Ave. N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Air Chain of Custody Record & Laboratory Services Agreement

Date: _____ Page: 2 of 2

Laboratory Project No (Internal): **2112437**

Client: **GEL Tacoma**

Project Name: _____

Special Remarks: _____

Address: _____

Location: _____

City, State, Zip: _____

Collected by: _____

Telephone: _____

Reports to (PM): _____

Air samples are disposed of one week after report is submitted to client unless otherwise requested. OK to Dispose Hold (fees may apply)

Fax: _____

Email (PM): _____

Sample Name	Canister / Flow Reg Serial #	Sample Type (Matrix) *	Container Type **	Expected Fill Time / Flow Rate	Sample Start Date & Time	Field Initial Sample Pressure ("Hg)	Sample End Date & Time	Field Final Sample Pressure ("Hg)	Analysis							Internal Final Pressure ("Hg)			
									Full list VOCs TO15	Select VOCs TO15 ***	APH TO15	Siloxanes TO15	Sulfur TO15	Major Gases 3C	Helium 3C Mod		VOCs B260	GX/BTEX 8260	Comments
SSV-1-D	3486	S	1L	~25min	12-28-21 14:37	-30	12-28-21 15:15	-28	<input checked="checked" type="checkbox"/>	<input checked="checked" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	NO SAMPLE	-28

Matrix Codes: AA = Ambient Air OA = Outdoor Air IA = Indoor Air S = Subslab / Soil Gas SVE = SVE L = Landfill D = Digester											
Container Codes: BV = 1 Liter Bottle Vac 6L = 6L Canister 1L = 1L Canister Cyl = High Pressure Cylinder F = Filter S = Sorbent Tube TB = Tedlar Bag											
*** Select one: <input type="checkbox"/> BTEXN & APH <input type="checkbox"/> PCE & Breakdown <input type="checkbox"/> Other, specify in comments											
I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above, that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.											

Relinquished (Signature) _____	Print Name _____	Date/Time _____
Relinquished (Signature) _____	Print Name _____	Date/Time _____
Received (Signature) <i>Ally Joy</i>	Print Name _____	Date/Time _____
Received (Signature) <i>Alex Tregio</i>	Print Name _____	Date/Time _____



3600 Fremont Ave. N.
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

GeoEngineers

Robert Trahan
2101 4th Ave, Suite 950
Seattle, WA 98121

RE: 701 S Jackson Property Site
Work Order Number: 2112441

January 12, 2022

Attention Robert Trahan:

Fremont Analytical, Inc. received 25 sample(s) on 12/29/2021 for the analyses presented in the following report.

Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.
Gasoline by NWTPH-Gx
Mercury by EPA Method 7471B
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)
Polychlorinated Biphenyls (PCB) by EPA 8082
Sample Moisture (Percent Moisture)
Total Metals by EPA Method 6020B
Volatile Organic Compounds by EPA Method 8260D

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

DoD-ELAP Accreditation #79636 by PJLA, ISO/IEC 17025:2017 and QSM 5.3 for Environmental Testing
ORELAP Certification: WA 100009 (NELAP Recognized) for Environmental Testing
Washington State Department of Ecology Accredited for Environmental Testing, Lab ID C910

Original

Brianna Barnes
Project Manager

*DoD-ELAP Accreditation #79636 by PJLA, ISO/IEC 17025:2017 and QSM 5.3 for Environmental Testing
ORELAP Certification: WA 100009 (NELAP Recognized) for Environmental Testing
Washington State Department of Ecology Accredited for Environmental Testing, Lab ID C910*

Original

www.fremontanalytical.com



CLIENT: GeoEngineers
Project: 701 S Jackson Property Site
Work Order: 2112441

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
2112441-001	GEI-4-2.5	12/29/2021 10:45 AM	12/29/2021 1:25 PM
2112441-002	GEI-4-5.0	12/29/2021 10:50 AM	12/29/2021 1:25 PM
2112441-003	GEI-4-7.5	12/29/2021 10:55 AM	12/29/2021 1:25 PM
2112441-004	GEI-4-10.0	12/29/2021 11:00 AM	12/29/2021 1:25 PM
2112441-005	GEI-4-12.5	12/29/2021 11:05 AM	12/29/2021 1:25 PM
2112441-006	GEI-4-15.0	12/29/2021 11:10 AM	12/29/2021 1:25 PM
2112441-007	GEI-5-2.5	12/29/2021 10:05 AM	12/29/2021 1:25 PM
2112441-008	GEI-5-5.0	12/29/2021 10:10 AM	12/29/2021 1:25 PM
2112441-009	GEI-5-7.5	12/29/2021 10:15 AM	12/29/2021 1:25 PM
2112441-010	GEI-5-10.0	12/29/2021 10:20 AM	12/29/2021 1:25 PM
2112441-011	GEI-5-12.5	12/29/2021 10:25 AM	12/29/2021 1:25 PM
2112441-012	GEI-5-15.0	12/29/2021 10:30 AM	12/29/2021 1:25 PM
2112441-013	GEI-6-2.5	12/29/2021 9:25 AM	12/29/2021 1:25 PM
2112441-014	GEI-6-5.0	12/29/2021 9:30 AM	12/29/2021 1:25 PM
2112441-015	GEI-6-7.5	12/29/2021 9:35 AM	12/29/2021 1:25 PM
2112441-016	GEI-6-10.0	12/29/2021 9:40 AM	12/29/2021 1:25 PM
2112441-017	GEI-6-12.5	12/29/2021 9:45 AM	12/29/2021 1:25 PM
2112441-018	GEI-6-15.0	12/29/2021 9:50 AM	12/29/2021 1:25 PM
2112441-019	GEI-7-2.5	12/29/2021 11:25 AM	12/29/2021 1:25 PM
2112441-020	GEI-7-5.0	12/29/2021 11:30 AM	12/29/2021 1:25 PM
2112441-021	GEI-7-7.5	12/29/2021 11:35 AM	12/29/2021 1:25 PM
2112441-022	GEI-7-10.0	12/29/2021 11:40 AM	12/29/2021 1:25 PM
2112441-023	GEI-7-12.5	12/29/2021 11:45 AM	12/29/2021 1:25 PM
2112441-024	GEI-7-15.0	12/29/2021 11:50 AM	12/29/2021 1:25 PM
2112441-025	Trip Blank		12/29/2021 1:25 PM

Note: If no "Time Collected" is supplied, a default of 12:00AM is assigned

CLIENT: GeoEngineers
Project: 701 S Jackson Property Site

I. SAMPLE RECEIPT:

Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:

Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:

Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Prep Comments for METHOD (PREP-PCB-S), SAMPLE (2112441-021A) required Acid Cleanup Procedure (Using Method No 3665A).

Prep Comments for METHOD (PREP-PCB-S), SAMPLE (2112441-024A) required Acid Cleanup Procedure (Using Method No 3665A).

Prep Comments for METHOD (PREP-PCB-S), SAMPLE (2112441-021A) required Florisil Cleanup Procedure (Using Method No 3620C).

Prep Comments for METHOD (PREP-PCB-S), SAMPLE (2112441-024A) required Florisil Cleanup Procedure (Using Method No 3620C).

Qualifiers:

- * - Flagged value is not within established control limits
- B - Analyte detected in the associated Method Blank
- D - Dilution was required
- E - Value above quantitation range
- H - Holding times for preparation or analysis exceeded
- I - Analyte with an internal standard that does not meet established acceptance criteria
- J - Analyte detected below Reporting Limit
- N - Tentatively Identified Compound (TIC)
- Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria
- S - Spike recovery outside accepted recovery limits
- ND - Not detected at the Reporting Limit
- R - High relative percent difference observed

Acronyms:

- %Rec - Percent Recovery
- CCB - Continued Calibration Blank
- CCV - Continued Calibration Verification
- DF - Dilution Factor
- DUP - Sample Duplicate
- HEM - Hexane Extractable Material
- ICV - Initial Calibration Verification
- LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
- MCL - Maximum Contaminant Level
- MB or MBLANK - Method Blank
- MDL - Method Detection Limit
- MS/MSD - Matrix Spike / Matrix Spike Duplicate
- PDS - Post Digestion Spike
- Ref Val - Reference Value
- REP - Sample Replicate
- RL - Reporting Limit
- RPD - Relative Percent Difference
- SD - Serial Dilution
- SGT - Silica Gel Treatment
- SPK - Spike
- Surr - Surrogate



Client: GeoEngineers

Collection Date: 12/29/2021 10:45:00 AM

Project: 701 S Jackson Property Site

Lab ID: 2112441-001

Matrix: Soil

Client Sample ID: GEI-4-2.5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
----------	--------	----	------	-------	----	---------------

Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.

Batch ID: 34926

Analyst: MM

Diesel (Fuel Oil)	ND	58.1		mg/Kg-dry	1	1/5/2022 3:43:01 PM
Heavy Oil	ND	116		mg/Kg-dry	1	1/5/2022 3:43:01 PM
Total Petroleum Hydrocarbons	ND	174		mg/Kg-dry	1	1/5/2022 3:43:01 PM
Surr: 2-Fluorobiphenyl	66.2	50 - 150		%Rec	1	1/5/2022 3:43:01 PM
Surr: o-Terphenyl	58.7	50 - 150		%Rec	1	1/5/2022 3:43:01 PM

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 34933

Analyst: SB

Naphthalene	ND	23.4		µg/Kg-dry	1	1/5/2022 2:00:06 PM
2-Methylnaphthalene	ND	23.4		µg/Kg-dry	1	1/5/2022 2:00:06 PM
1-Methylnaphthalene	ND	23.4		µg/Kg-dry	1	1/5/2022 2:00:06 PM
Acenaphthylene	ND	23.4		µg/Kg-dry	1	1/5/2022 2:00:06 PM
Acenaphthene	ND	23.4		µg/Kg-dry	1	1/5/2022 2:00:06 PM
Fluorene	ND	23.4		µg/Kg-dry	1	1/5/2022 2:00:06 PM
Phenanthrene	ND	46.9		µg/Kg-dry	1	1/5/2022 2:00:06 PM
Anthracene	ND	46.9		µg/Kg-dry	1	1/5/2022 2:00:06 PM
Fluoranthene	66.1	46.9		µg/Kg-dry	1	1/5/2022 2:00:06 PM
Pyrene	79.2	46.9		µg/Kg-dry	1	1/5/2022 2:00:06 PM
Benz(a)anthracene	45.8	23.4		µg/Kg-dry	1	1/5/2022 2:00:06 PM
Chrysene	47.6	46.9		µg/Kg-dry	1	1/5/2022 2:00:06 PM
Benzo(b)fluoranthene	45.3	23.4		µg/Kg-dry	1	1/5/2022 2:00:06 PM
Benzo(k)fluoranthene	40.3	23.4		µg/Kg-dry	1	1/5/2022 2:00:06 PM
Benzo(a)pyrene	44.0	23.4		µg/Kg-dry	1	1/5/2022 2:00:06 PM
Indeno(1,2,3-cd)pyrene	ND	46.9		µg/Kg-dry	1	1/5/2022 2:00:06 PM
Dibenz(a,h)anthracene	ND	46.9		µg/Kg-dry	1	1/5/2022 2:00:06 PM
Benzo(g,h,i)perylene	53.8	23.4		µg/Kg-dry	1	1/5/2022 2:00:06 PM
Surr: 2-Fluorobiphenyl	67.1	36 - 124		%Rec	1	1/5/2022 2:00:06 PM
Surr: Terphenyl-d14 (surr)	78.1	41.8 - 129		%Rec	1	1/5/2022 2:00:06 PM

Gasoline by NWTPH-Gx

Batch ID: 34944

Analyst: TN

Gasoline	ND	5.17		mg/Kg-dry	1	1/5/2022 10:49:28 PM
Gasoline Range Organics (C6-C12)	5.98	5.17		mg/Kg-dry	1	1/5/2022 10:49:28 PM
Surr: Toluene-d8	96.5	65 - 135		%Rec	1	1/5/2022 10:49:28 PM
Surr: 4-Bromofluorobenzene	104	65 - 135		%Rec	1	1/5/2022 10:49:28 PM

NOTES:

GRO - Indicates the presence of unresolved compounds in the gasoline range.



Client: GeoEngineers

Collection Date: 12/29/2021 10:45:00 AM

Project: 701 S Jackson Property Site

Lab ID: 2112441-001

Matrix: Soil

Client Sample ID: GEI-4-2.5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260D

Batch ID: 34999

Analyst: TN

Benzene	ND	0.0207		mg/Kg-dry	1	1/12/2022 1:15:51 AM
Toluene	ND	0.0310		mg/Kg-dry	1	1/12/2022 1:15:51 AM
Ethylbenzene	ND	0.0258		mg/Kg-dry	1	1/12/2022 1:15:51 AM
m,p-Xylene	ND	0.0517		mg/Kg-dry	1	1/12/2022 1:15:51 AM
o-Xylene	ND	0.0258		mg/Kg-dry	1	1/12/2022 1:15:51 AM
Surr: Dibromofluoromethane	90.9	80 - 120		%Rec	1	1/12/2022 1:15:51 AM
Surr: Toluene-d8	93.4	80 - 120		%Rec	1	1/12/2022 1:15:51 AM
Surr: 1-Bromo-4-fluorobenzene	96.7	80 - 120		%Rec	1	1/12/2022 1:15:51 AM

Mercury by EPA Method 7471B

Batch ID: 34932

Analyst: CH

Mercury	ND	0.288		mg/Kg-dry	1	1/5/2022 10:49:54 AM
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Total Metals by EPA Method 6020B

Batch ID: 34930

Analyst: EH

Arsenic	8.35	0.123		mg/Kg-dry	1	1/5/2022 1:30:03 PM
Barium	172	0.614		mg/Kg-dry	1	1/5/2022 1:30:03 PM
Cadmium	0.451	0.205		mg/Kg-dry	1	1/5/2022 1:30:03 PM
Chromium	53.6	0.409		mg/Kg-dry	1	1/5/2022 1:30:03 PM
Lead	340	2.05	D	mg/Kg-dry	10	1/5/2022 2:22:53 PM
Selenium	1.33	0.205		mg/Kg-dry	1	1/5/2022 1:30:03 PM
Silver	0.165	0.153		mg/Kg-dry	1	1/5/2022 1:30:03 PM

Sample Moisture (Percent Moisture)

Batch ID: R72341

Analyst: cb

Percent Moisture	21.2			wt%	1	1/4/2022 2:42:04 PM
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Client: GeoEngineers

Collection Date: 12/29/2021 11:05:00 AM

Project: 701 S Jackson Property Site

Lab ID: 2112441-005

Matrix: Soil

Client Sample ID: GEI-4-12.5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.

Batch ID: 34926 Analyst: MM

Diesel (Fuel Oil)	ND	56.8		mg/Kg-dry	1	1/5/2022 3:54:54 PM
Heavy Oil	ND	114		mg/Kg-dry	1	1/5/2022 3:54:54 PM
Total Petroleum Hydrocarbons	ND	170		mg/Kg-dry	1	1/5/2022 3:54:54 PM
Surr: 2-Fluorobiphenyl	57.1	50 - 150		%Rec	1	1/5/2022 3:54:54 PM
Surr: o-Terphenyl	58.2	50 - 150		%Rec	1	1/5/2022 3:54:54 PM

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 34933 Analyst: SB

Naphthalene	ND	23.2		µg/Kg-dry	1	1/5/2022 2:21:52 PM
2-Methylnaphthalene	ND	23.2		µg/Kg-dry	1	1/5/2022 2:21:52 PM
1-Methylnaphthalene	ND	23.2		µg/Kg-dry	1	1/5/2022 2:21:52 PM
Acenaphthylene	ND	23.2		µg/Kg-dry	1	1/5/2022 2:21:52 PM
Acenaphthene	ND	23.2		µg/Kg-dry	1	1/5/2022 2:21:52 PM
Fluorene	ND	23.2		µg/Kg-dry	1	1/5/2022 2:21:52 PM
Phenanthrene	ND	46.4		µg/Kg-dry	1	1/5/2022 2:21:52 PM
Anthracene	ND	46.4		µg/Kg-dry	1	1/5/2022 2:21:52 PM
Fluoranthene	ND	46.4		µg/Kg-dry	1	1/5/2022 2:21:52 PM
Pyrene	ND	46.4		µg/Kg-dry	1	1/5/2022 2:21:52 PM
Benz(a)anthracene	ND	23.2		µg/Kg-dry	1	1/5/2022 2:21:52 PM
Chrysene	ND	46.4		µg/Kg-dry	1	1/5/2022 2:21:52 PM
Benzo(b)fluoranthene	ND	23.2		µg/Kg-dry	1	1/5/2022 2:21:52 PM
Benzo(k)fluoranthene	ND	23.2		µg/Kg-dry	1	1/5/2022 2:21:52 PM
Benzo(a)pyrene	ND	23.2		µg/Kg-dry	1	1/5/2022 2:21:52 PM
Indeno(1,2,3-cd)pyrene	ND	46.4		µg/Kg-dry	1	1/5/2022 2:21:52 PM
Dibenz(a,h)anthracene	ND	46.4		µg/Kg-dry	1	1/5/2022 2:21:52 PM
Benzo(g,h,i)perylene	ND	23.2		µg/Kg-dry	1	1/5/2022 2:21:52 PM
Surr: 2-Fluorobiphenyl	71.4	36 - 124		%Rec	1	1/5/2022 2:21:52 PM
Surr: Terphenyl-d14 (surr)	80.6	41.8 - 129		%Rec	1	1/5/2022 2:21:52 PM

Gasoline by NWTPH-Gx

Batch ID: 34944 Analyst: TN

Gasoline	ND	5.27		mg/Kg-dry	1	1/5/2022 11:51:36 PM
Gasoline Range Organics (C6-C12)	5.52	5.27		mg/Kg-dry	1	1/5/2022 11:51:36 PM
Surr: Toluene-d8	97.0	65 - 135		%Rec	1	1/5/2022 11:51:36 PM
Surr: 4-Bromofluorobenzene	104	65 - 135		%Rec	1	1/5/2022 11:51:36 PM

NOTES:

GRO - Indicates the presence of unresolved compounds in the gasoline range.



Client: GeoEngineers

Collection Date: 12/29/2021 11:05:00 AM

Project: 701 S Jackson Property Site

Lab ID: 2112441-005

Matrix: Soil

Client Sample ID: GEI-4-12.5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260D

Batch ID: 34999 Analyst: TN

Benzene	ND	0.0250		mg/Kg-dry	1	1/12/2022 2:28:43 PM
Toluene	ND	0.0376		mg/Kg-dry	1	1/12/2022 2:28:43 PM
Ethylbenzene	ND	0.0313		mg/Kg-dry	1	1/12/2022 2:28:43 PM
m,p-Xylene	ND	0.0626		mg/Kg-dry	1	1/12/2022 2:28:43 PM
o-Xylene	ND	0.0313		mg/Kg-dry	1	1/12/2022 2:28:43 PM
Surr: Dibromofluoromethane	99.4	80 - 120		%Rec	1	1/12/2022 2:28:43 PM
Surr: Toluene-d8	96.0	80 - 120		%Rec	1	1/12/2022 2:28:43 PM
Surr: 1-Bromo-4-fluorobenzene	94.7	80 - 120		%Rec	1	1/12/2022 2:28:43 PM

Mercury by EPA Method 7471B

Batch ID: 34932 Analyst: CH

Mercury	ND	0.286		mg/Kg-dry	1	1/5/2022 10:56:22 AM
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Total Metals by EPA Method 6020B

Batch ID: 34930 Analyst: EH

Arsenic	3.01	0.110		mg/Kg-dry	1	1/5/2022 11:42:14 AM
Barium	86.1	0.551		mg/Kg-dry	1	1/5/2022 11:42:14 AM
Cadmium	ND	0.184		mg/Kg-dry	1	1/5/2022 11:42:14 AM
Chromium	39.3	0.367		mg/Kg-dry	1	1/5/2022 11:42:14 AM
Lead	3.28	0.184		mg/Kg-dry	1	1/5/2022 11:42:14 AM
Selenium	1.05	0.184		mg/Kg-dry	1	1/5/2022 11:42:14 AM
Silver	ND	0.138		mg/Kg-dry	1	1/5/2022 11:42:14 AM

Sample Moisture (Percent Moisture)

Batch ID: R72341 Analyst: cb

Percent Moisture	17.5			wt%	1	1/4/2022 2:42:04 PM
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Client: GeoEngineers

Collection Date: 12/29/2021 10:05:00 AM

Project: 701 S Jackson Property Site

Lab ID: 2112441-007

Matrix: Soil

Client Sample ID: GEI-5-2.5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.

Batch ID: 34926

Analyst: MM

Diesel (Fuel Oil)	ND	50.1		mg/Kg-dry	1	1/5/2022 4:06:44 PM
Heavy Oil	ND	100		mg/Kg-dry	1	1/5/2022 4:06:44 PM
Total Petroleum Hydrocarbons	ND	150		mg/Kg-dry	1	1/5/2022 4:06:44 PM
Surr: 2-Fluorobiphenyl	62.8	50 - 150		%Rec	1	1/5/2022 4:06:44 PM
Surr: o-Terphenyl	62.0	50 - 150		%Rec	1	1/5/2022 4:06:44 PM

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 34933

Analyst: SB

Naphthalene	ND	22.6		µg/Kg-dry	1	1/5/2022 3:28:37 PM
2-Methylnaphthalene	ND	22.6		µg/Kg-dry	1	1/5/2022 3:28:37 PM
1-Methylnaphthalene	ND	22.6		µg/Kg-dry	1	1/5/2022 3:28:37 PM
Acenaphthylene	ND	22.6		µg/Kg-dry	1	1/5/2022 3:28:37 PM
Acenaphthene	ND	22.6		µg/Kg-dry	1	1/5/2022 3:28:37 PM
Fluorene	ND	22.6		µg/Kg-dry	1	1/5/2022 3:28:37 PM
Phenanthrene	ND	45.1		µg/Kg-dry	1	1/5/2022 3:28:37 PM
Anthracene	ND	45.1		µg/Kg-dry	1	1/5/2022 3:28:37 PM
Fluoranthene	ND	45.1		µg/Kg-dry	1	1/5/2022 3:28:37 PM
Pyrene	ND	45.1		µg/Kg-dry	1	1/5/2022 3:28:37 PM
Benz(a)anthracene	ND	22.6		µg/Kg-dry	1	1/5/2022 3:28:37 PM
Chrysene	ND	45.1		µg/Kg-dry	1	1/5/2022 3:28:37 PM
Benzo(b)fluoranthene	ND	22.6		µg/Kg-dry	1	1/5/2022 3:28:37 PM
Benzo(k)fluoranthene	ND	22.6		µg/Kg-dry	1	1/5/2022 3:28:37 PM
Benzo(a)pyrene	ND	22.6		µg/Kg-dry	1	1/5/2022 3:28:37 PM
Indeno(1,2,3-cd)pyrene	ND	45.1		µg/Kg-dry	1	1/5/2022 3:28:37 PM
Dibenz(a,h)anthracene	ND	45.1		µg/Kg-dry	1	1/5/2022 3:28:37 PM
Benzo(g,h,i)perylene	29.3	22.6		µg/Kg-dry	1	1/5/2022 3:28:37 PM
Surr: 2-Fluorobiphenyl	85.9	36 - 124		%Rec	1	1/5/2022 3:28:37 PM
Surr: Terphenyl-d14 (surr)	96.8	41.8 - 129		%Rec	1	1/5/2022 3:28:37 PM

Gasoline by NWTPH-Gx

Batch ID: 34944

Analyst: TN

Gasoline	ND	4.93		mg/Kg-dry	1	1/6/2022 12:22:43 AM
Gasoline Range Organics (C6-C12)	5.05	4.93		mg/Kg-dry	1	1/6/2022 12:22:43 AM
Surr: Toluene-d8	129	65 - 135		%Rec	1	1/6/2022 12:22:43 AM
Surr: 4-Bromofluorobenzene	102	65 - 135		%Rec	1	1/6/2022 12:22:43 AM

NOTES:

GRO - Indicates the presence of unresolved compounds in the gasoline range.



Client: GeoEngineers

Collection Date: 12/29/2021 10:05:00 AM

Project: 701 S Jackson Property Site

Lab ID: 2112441-007

Matrix: Soil

Client Sample ID: GEI-5-2.5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260D

Batch ID: 34944

Analyst: TN

Benzene	ND	0.0197		mg/Kg-dry	1	1/6/2022 12:22:43 AM
Toluene	ND	0.0296		mg/Kg-dry	1	1/6/2022 12:22:43 AM
Ethylbenzene	ND	0.0247		mg/Kg-dry	1	1/6/2022 12:22:43 AM
m,p-Xylene	ND	0.0493		mg/Kg-dry	1	1/6/2022 12:22:43 AM
o-Xylene	ND	0.0247		mg/Kg-dry	1	1/6/2022 12:22:43 AM
Surr: Dibromofluoromethane	108	75.5 - 119		%Rec	1	1/6/2022 12:22:43 AM
Surr: Toluene-d8	102	82.4 - 115		%Rec	1	1/6/2022 12:22:43 AM
Surr: 1-Bromo-4-fluorobenzene	99.8	78.5 - 118		%Rec	1	1/6/2022 12:22:43 AM

Mercury by EPA Method 7471B

Batch ID: 34932

Analyst: CH

Mercury	ND	0.267		mg/Kg-dry	1	1/5/2022 10:57:58 AM
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Total Metals by EPA Method 6020B

Batch ID: 34930

Analyst: EH

Arsenic	7.52	0.104		mg/Kg-dry	1	1/5/2022 1:32:42 PM
Barium	185	0.522		mg/Kg-dry	1	1/5/2022 1:32:42 PM
Cadmium	0.355	0.174		mg/Kg-dry	1	1/5/2022 1:32:42 PM
Chromium	27.4	0.348		mg/Kg-dry	1	1/5/2022 1:32:42 PM
Lead	93.8	0.174		mg/Kg-dry	1	1/5/2022 1:32:42 PM
Selenium	0.861	0.174		mg/Kg-dry	1	1/5/2022 1:32:42 PM
Silver	ND	0.130		mg/Kg-dry	1	1/5/2022 1:32:42 PM

Sample Moisture (Percent Moisture)

Batch ID: R72341

Analyst: cb

Percent Moisture	14.8			wt%	1	1/4/2022 2:42:04 PM
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Client: GeoEngineers

Collection Date: 12/29/2021 10:20:00 AM

Project: 701 S Jackson Property Site

Lab ID: 2112441-010

Matrix: Soil

Client Sample ID: GEI-5-10.0

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.

Batch ID: 34926 Analyst: MM

Diesel (Fuel Oil)	ND	60.2		mg/Kg-dry	1	1/5/2022 4:18:31 PM
Heavy Oil	ND	120		mg/Kg-dry	1	1/5/2022 4:18:31 PM
Total Petroleum Hydrocarbons	ND	181		mg/Kg-dry	1	1/5/2022 4:18:31 PM
Surr: 2-Fluorobiphenyl	76.0	50 - 150		%Rec	1	1/5/2022 4:18:31 PM
Surr: o-Terphenyl	73.0	50 - 150		%Rec	1	1/5/2022 4:18:31 PM

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 34933 Analyst: SB

Naphthalene	ND	22.9		µg/Kg-dry	1	1/5/2022 3:50:22 PM
2-Methylnaphthalene	ND	22.9		µg/Kg-dry	1	1/5/2022 3:50:22 PM
1-Methylnaphthalene	ND	22.9		µg/Kg-dry	1	1/5/2022 3:50:22 PM
Acenaphthylene	ND	22.9		µg/Kg-dry	1	1/5/2022 3:50:22 PM
Acenaphthene	ND	22.9		µg/Kg-dry	1	1/5/2022 3:50:22 PM
Fluorene	ND	22.9		µg/Kg-dry	1	1/5/2022 3:50:22 PM
Phenanthrene	ND	45.8		µg/Kg-dry	1	1/5/2022 3:50:22 PM
Anthracene	ND	45.8		µg/Kg-dry	1	1/5/2022 3:50:22 PM
Fluoranthene	ND	45.8		µg/Kg-dry	1	1/5/2022 3:50:22 PM
Pyrene	ND	45.8		µg/Kg-dry	1	1/5/2022 3:50:22 PM
Benz(a)anthracene	ND	22.9		µg/Kg-dry	1	1/5/2022 3:50:22 PM
Chrysene	ND	45.8		µg/Kg-dry	1	1/5/2022 3:50:22 PM
Benzo(b)fluoranthene	ND	22.9		µg/Kg-dry	1	1/5/2022 3:50:22 PM
Benzo(k)fluoranthene	ND	22.9		µg/Kg-dry	1	1/5/2022 3:50:22 PM
Benzo(a)pyrene	ND	22.9		µg/Kg-dry	1	1/5/2022 3:50:22 PM
Indeno(1,2,3-cd)pyrene	ND	45.8		µg/Kg-dry	1	1/5/2022 3:50:22 PM
Dibenz(a,h)anthracene	ND	45.8		µg/Kg-dry	1	1/5/2022 3:50:22 PM
Benzo(g,h,i)perylene	ND	22.9		µg/Kg-dry	1	1/5/2022 3:50:22 PM
Surr: 2-Fluorobiphenyl	79.4	36 - 124		%Rec	1	1/5/2022 3:50:22 PM
Surr: Terphenyl-d14 (surr)	88.6	41.8 - 129		%Rec	1	1/5/2022 3:50:22 PM

Gasoline by NWTPH-Gx

Batch ID: 34944 Analyst: TN

Gasoline	ND	4.86		mg/Kg-dry	1	1/6/2022 12:53:50 AM
Surr: Toluene-d8	96.1	65 - 135		%Rec	1	1/6/2022 12:53:50 AM
Surr: 4-Bromofluorobenzene	103	65 - 135		%Rec	1	1/6/2022 12:53:50 AM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 34999 Analyst: TN

Benzene	ND	0.0195		mg/Kg-dry	1	1/12/2022 2:18:11 AM
Toluene	ND	0.0292		mg/Kg-dry	1	1/12/2022 2:18:11 AM



Client: GeoEngineers

Collection Date: 12/29/2021 10:20:00 AM

Project: 701 S Jackson Property Site

Lab ID: 2112441-010

Matrix: Soil

Client Sample ID: GEI-5-10.0

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260D

Batch ID: 34999 Analyst: TN

Ethylbenzene	ND	0.0243		mg/Kg-dry	1	1/12/2022 2:18:11 AM
m,p-Xylene	ND	0.0486		mg/Kg-dry	1	1/12/2022 2:18:11 AM
o-Xylene	ND	0.0243		mg/Kg-dry	1	1/12/2022 2:18:11 AM
Surr: Dibromofluoromethane	89.2	80 - 120		%Rec	1	1/12/2022 2:18:11 AM
Surr: Toluene-d8	92.2	80 - 120		%Rec	1	1/12/2022 2:18:11 AM
Surr: 1-Bromo-4-fluorobenzene	95.0	80 - 120		%Rec	1	1/12/2022 2:18:11 AM

Mercury by EPA Method 7471B

Batch ID: 34932 Analyst: CH

Mercury	ND	0.281		mg/Kg-dry	1	1/5/2022 10:59:34 AM
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Total Metals by EPA Method 6020B

Batch ID: 34930 Analyst: EH

Arsenic	1.77	0.119		mg/Kg-dry	1	1/5/2022 1:35:21 PM
Barium	43.7	0.597		mg/Kg-dry	1	1/5/2022 1:35:21 PM
Cadmium	ND	0.199		mg/Kg-dry	1	1/5/2022 1:35:21 PM
Chromium	25.9	0.398		mg/Kg-dry	1	1/5/2022 1:35:21 PM
Lead	2.04	0.199		mg/Kg-dry	1	1/5/2022 1:35:21 PM
Selenium	0.691	0.199		mg/Kg-dry	1	1/5/2022 1:35:21 PM
Silver	ND	0.149		mg/Kg-dry	1	1/5/2022 1:35:21 PM

Sample Moisture (Percent Moisture)

Batch ID: R72341 Analyst: cb

Percent Moisture	17.6			wt%	1	1/4/2022 2:42:04 PM
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Client: GeoEngineers

Collection Date: 12/29/2021 9:25:00 AM

Project: 701 S Jackson Property Site

Lab ID: 2112441-013

Matrix: Soil

Client Sample ID: GEI-6-2.5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.

Batch ID: 34926 Analyst: MM

Diesel (Fuel Oil)	ND	54.4		mg/Kg-dry	1	1/5/2022 4:30:23 PM
Heavy Oil	689	109		mg/Kg-dry	1	1/5/2022 4:30:23 PM
Total Petroleum Hydrocarbons	689	163		mg/Kg-dry	1	1/5/2022 4:30:23 PM
Surr: 2-Fluorobiphenyl	85.1	50 - 150		%Rec	1	1/5/2022 4:30:23 PM
Surr: o-Terphenyl	72.4	50 - 150		%Rec	1	1/5/2022 4:30:23 PM

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 34933 Analyst: SB

Naphthalene	156	23.8		µg/Kg-dry	1	1/5/2022 4:12:02 PM
2-Methylnaphthalene	48.2	23.8		µg/Kg-dry	1	1/5/2022 4:12:02 PM
1-Methylnaphthalene	49.5	23.8		µg/Kg-dry	1	1/5/2022 4:12:02 PM
Acenaphthylene	289	23.8		µg/Kg-dry	1	1/5/2022 4:12:02 PM
Acenaphthene	32.7	23.8		µg/Kg-dry	1	1/5/2022 4:12:02 PM
Fluorene	251	23.8		µg/Kg-dry	1	1/5/2022 4:12:02 PM
Phenanthrene	2,020	47.5		µg/Kg-dry	1	1/5/2022 4:12:02 PM
Anthracene	767	47.5		µg/Kg-dry	1	1/5/2022 4:12:02 PM
Fluoranthene	2,840	47.5		µg/Kg-dry	1	1/5/2022 4:12:02 PM
Pyrene	2,650	47.5		µg/Kg-dry	1	1/5/2022 4:12:02 PM
Benz(a)anthracene	1,320	23.8		µg/Kg-dry	1	1/5/2022 4:12:02 PM
Chrysene	1,150	47.5		µg/Kg-dry	1	1/5/2022 4:12:02 PM
Benzo(b)fluoranthene	825	23.8		µg/Kg-dry	1	1/5/2022 4:12:02 PM
Benzo(k)fluoranthene	856	23.8		µg/Kg-dry	1	1/5/2022 4:12:02 PM
Benzo(a)pyrene	1,120	23.8		µg/Kg-dry	1	1/5/2022 4:12:02 PM
Indeno(1,2,3-cd)pyrene	473	47.5		µg/Kg-dry	1	1/5/2022 4:12:02 PM
Dibenz(a,h)anthracene	231	47.5		µg/Kg-dry	1	1/5/2022 4:12:02 PM
Benzo(g,h,i)perylene	483	23.8		µg/Kg-dry	1	1/5/2022 4:12:02 PM
Surr: 2-Fluorobiphenyl	72.1	36 - 124		%Rec	1	1/5/2022 4:12:02 PM
Surr: Terphenyl-d14 (surr)	78.7	41.8 - 129		%Rec	1	1/5/2022 4:12:02 PM

Gasoline by NWTPH-Gx

Batch ID: 34944 Analyst: TN

Gasoline	ND	5.35		mg/Kg-dry	1	1/6/2022 1:24:50 AM
Surr: Toluene-d8	96.4	65 - 135		%Rec	1	1/6/2022 1:24:50 AM
Surr: 4-Bromofluorobenzene	104	65 - 135		%Rec	1	1/6/2022 1:24:50 AM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 34944 Analyst: TN

Benzene	ND	0.0214		mg/Kg-dry	1	1/6/2022 1:24:50 AM
Toluene	ND	0.0321		mg/Kg-dry	1	1/6/2022 1:24:50 AM



Client: GeoEngineers

Collection Date: 12/29/2021 9:25:00 AM

Project: 701 S Jackson Property Site

Lab ID: 2112441-013

Matrix: Soil

Client Sample ID: GEI-6-2.5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260D

Batch ID: 34944 Analyst: TN

Ethylbenzene	ND	0.0267		mg/Kg-dry	1	1/6/2022 1:24:50 AM
m,p-Xylene	ND	0.0535		mg/Kg-dry	1	1/6/2022 1:24:50 AM
o-Xylene	ND	0.0267		mg/Kg-dry	1	1/6/2022 1:24:50 AM
Surr: Dibromofluoromethane	111	75.5 - 119		%Rec	1	1/6/2022 1:24:50 AM
Surr: Toluene-d8	83.8	82.4 - 115		%Rec	1	1/6/2022 1:24:50 AM
Surr: 1-Bromo-4-fluorobenzene	102	78.5 - 118		%Rec	1	1/6/2022 1:24:50 AM

Mercury by EPA Method 7471B

Batch ID: 34932 Analyst: CH

Mercury	ND	0.295		mg/Kg-dry	1	1/5/2022 11:01:11 AM
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Total Metals by EPA Method 6020B

Batch ID: 34930 Analyst: EH

Arsenic	8.21	0.110		mg/Kg-dry	1	1/5/2022 1:38:00 PM
Barium	195	0.551		mg/Kg-dry	1	1/5/2022 1:38:00 PM
Cadmium	0.635	0.184		mg/Kg-dry	1	1/5/2022 1:38:00 PM
Chromium	38.2	0.367		mg/Kg-dry	1	1/5/2022 1:38:00 PM
Lead	243	1.84	D	mg/Kg-dry	10	1/5/2022 2:27:54 PM
Selenium	1.16	0.184		mg/Kg-dry	1	1/5/2022 1:38:00 PM
Silver	0.250	0.138		mg/Kg-dry	1	1/5/2022 1:38:00 PM

Sample Moisture (Percent Moisture)

Batch ID: R72341 Analyst: cb

Percent Moisture	21.6			wt%	1	1/4/2022 2:42:04 PM
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Client: GeoEngineers

Collection Date: 12/29/2021 9:40:00 AM

Project: 701 S Jackson Property Site

Lab ID: 2112441-016

Matrix: Soil

Client Sample ID: GEI-6-10.0

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.

Batch ID: 34926 Analyst: MM

Diesel (Fuel Oil)	ND	61.0		mg/Kg-dry	1	1/5/2022 4:54:01 PM
Heavy Oil	ND	122		mg/Kg-dry	1	1/5/2022 4:54:01 PM
Total Petroleum Hydrocarbons	ND	183		mg/Kg-dry	1	1/5/2022 4:54:01 PM
Surr: 2-Fluorobiphenyl	64.9	50 - 150		%Rec	1	1/5/2022 4:54:01 PM
Surr: o-Terphenyl	61.5	50 - 150		%Rec	1	1/5/2022 4:54:01 PM

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 34933 Analyst: SB

Naphthalene	ND	25.6		µg/Kg-dry	1	1/5/2022 4:33:41 PM
2-Methylnaphthalene	ND	25.6		µg/Kg-dry	1	1/5/2022 4:33:41 PM
1-Methylnaphthalene	ND	25.6		µg/Kg-dry	1	1/5/2022 4:33:41 PM
Acenaphthylene	ND	25.6		µg/Kg-dry	1	1/5/2022 4:33:41 PM
Acenaphthene	ND	25.6		µg/Kg-dry	1	1/5/2022 4:33:41 PM
Fluorene	ND	25.6		µg/Kg-dry	1	1/5/2022 4:33:41 PM
Phenanthrene	ND	51.2		µg/Kg-dry	1	1/5/2022 4:33:41 PM
Anthracene	ND	51.2		µg/Kg-dry	1	1/5/2022 4:33:41 PM
Fluoranthene	ND	51.2		µg/Kg-dry	1	1/5/2022 4:33:41 PM
Pyrene	ND	51.2		µg/Kg-dry	1	1/5/2022 4:33:41 PM
Benz(a)anthracene	ND	25.6		µg/Kg-dry	1	1/5/2022 4:33:41 PM
Chrysene	ND	51.2		µg/Kg-dry	1	1/5/2022 4:33:41 PM
Benzo(b)fluoranthene	ND	25.6		µg/Kg-dry	1	1/5/2022 4:33:41 PM
Benzo(k)fluoranthene	ND	25.6		µg/Kg-dry	1	1/5/2022 4:33:41 PM
Benzo(a)pyrene	ND	25.6		µg/Kg-dry	1	1/5/2022 4:33:41 PM
Indeno(1,2,3-cd)pyrene	ND	51.2		µg/Kg-dry	1	1/5/2022 4:33:41 PM
Dibenz(a,h)anthracene	ND	51.2		µg/Kg-dry	1	1/5/2022 4:33:41 PM
Benzo(g,h,i)perylene	ND	25.6		µg/Kg-dry	1	1/5/2022 4:33:41 PM
Surr: 2-Fluorobiphenyl	75.1	36 - 124		%Rec	1	1/5/2022 4:33:41 PM
Surr: Terphenyl-d14 (surr)	85.1	41.8 - 129		%Rec	1	1/5/2022 4:33:41 PM

Gasoline by NWTPH-Gx

Batch ID: 34944 Analyst: TN

Gasoline	ND	5.57		mg/Kg-dry	1	1/6/2022 1:55:52 AM
Surr: Toluene-d8	95.7	65 - 135		%Rec	1	1/6/2022 1:55:52 AM
Surr: 4-Bromofluorobenzene	103	65 - 135		%Rec	1	1/6/2022 1:55:52 AM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 34999 Analyst: TN

Benzene	ND	0.0223		mg/Kg-dry	1	1/12/2022 2:49:21 AM
Toluene	ND	0.0334		mg/Kg-dry	1	1/12/2022 2:49:21 AM



Client: GeoEngineers

Collection Date: 12/29/2021 9:40:00 AM

Project: 701 S Jackson Property Site

Lab ID: 2112441-016

Matrix: Soil

Client Sample ID: GEI-6-10.0

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260D

Batch ID: 34999 Analyst: TN

Ethylbenzene	ND	0.0278		mg/Kg-dry	1	1/12/2022 2:49:21 AM
m,p-Xylene	ND	0.0557		mg/Kg-dry	1	1/12/2022 2:49:21 AM
o-Xylene	ND	0.0278		mg/Kg-dry	1	1/12/2022 2:49:21 AM
Surr: Dibromofluoromethane	99.7	80 - 120		%Rec	1	1/12/2022 2:49:21 AM
Surr: Toluene-d8	100	80 - 120		%Rec	1	1/12/2022 2:49:21 AM
Surr: 1-Bromo-4-fluorobenzene	100	78.5 - 118		%Rec	1	1/6/2022 1:55:52 AM

Mercury by EPA Method 7471B

Batch ID: 34932 Analyst: CH

Mercury	ND	0.320		mg/Kg-dry	1	1/5/2022 11:06:07 AM
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Total Metals by EPA Method 6020B

Batch ID: 34930 Analyst: EH

Arsenic	5.70	0.126		mg/Kg-dry	1	1/5/2022 1:40:39 PM
Barium	130	0.631		mg/Kg-dry	1	1/5/2022 1:40:39 PM
Cadmium	ND	0.210		mg/Kg-dry	1	1/5/2022 1:40:39 PM
Chromium	59.2	0.421		mg/Kg-dry	1	1/5/2022 1:40:39 PM
Lead	4.79	0.210		mg/Kg-dry	1	1/5/2022 1:40:39 PM
Selenium	1.45	0.210		mg/Kg-dry	1	1/5/2022 1:40:39 PM
Silver	ND	0.158		mg/Kg-dry	1	1/5/2022 1:40:39 PM

Sample Moisture (Percent Moisture)

Batch ID: R72341 Analyst: cb

Percent Moisture	23.3			wt%	1	1/4/2022 2:42:04 PM
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Client: GeoEngineers

Collection Date: 12/29/2021 11:25:00 AM

Project: 701 S Jackson Property Site

Lab ID: 2112441-019

Matrix: Soil

Client Sample ID: GEI-7-2.5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.

Batch ID: 34926 Analyst: MM

Diesel (Fuel Oil)	ND	57.0		mg/Kg-dry	1	1/5/2022 5:05:49 PM
Heavy Oil	448	114		mg/Kg-dry	1	1/5/2022 5:05:49 PM
Total Petroleum Hydrocarbons	448	171		mg/Kg-dry	1	1/5/2022 5:05:49 PM
Surr: 2-Fluorobiphenyl	68.3	50 - 150		%Rec	1	1/5/2022 5:05:49 PM
Surr: o-Terphenyl	62.3	50 - 150		%Rec	1	1/5/2022 5:05:49 PM

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 34933 Analyst: SB

Naphthalene	ND	22.1		µg/Kg-dry	1	1/5/2022 4:55:23 PM
2-Methylnaphthalene	ND	22.1		µg/Kg-dry	1	1/5/2022 4:55:23 PM
1-Methylnaphthalene	ND	22.1		µg/Kg-dry	1	1/5/2022 4:55:23 PM
Acenaphthylene	ND	22.1		µg/Kg-dry	1	1/5/2022 4:55:23 PM
Acenaphthene	ND	22.1		µg/Kg-dry	1	1/5/2022 4:55:23 PM
Fluorene	ND	22.1		µg/Kg-dry	1	1/5/2022 4:55:23 PM
Phenanthrene	ND	44.2		µg/Kg-dry	1	1/5/2022 4:55:23 PM
Anthracene	ND	44.2		µg/Kg-dry	1	1/5/2022 4:55:23 PM
Fluoranthene	ND	44.2		µg/Kg-dry	1	1/5/2022 4:55:23 PM
Pyrene	ND	44.2		µg/Kg-dry	1	1/5/2022 4:55:23 PM
Benz(a)anthracene	ND	22.1		µg/Kg-dry	1	1/5/2022 4:55:23 PM
Chrysene	ND	44.2		µg/Kg-dry	1	1/5/2022 4:55:23 PM
Benzo(b)fluoranthene	ND	22.1		µg/Kg-dry	1	1/5/2022 4:55:23 PM
Benzo(k)fluoranthene	ND	22.1		µg/Kg-dry	1	1/5/2022 4:55:23 PM
Benzo(a)pyrene	ND	22.1		µg/Kg-dry	1	1/5/2022 4:55:23 PM
Indeno(1,2,3-cd)pyrene	ND	44.2		µg/Kg-dry	1	1/5/2022 4:55:23 PM
Dibenz(a,h)anthracene	ND	44.2		µg/Kg-dry	1	1/5/2022 4:55:23 PM
Benzo(g,h,i)perylene	27.8	22.1		µg/Kg-dry	1	1/5/2022 4:55:23 PM
Surr: 2-Fluorobiphenyl	72.5	36 - 124		%Rec	1	1/5/2022 4:55:23 PM
Surr: Terphenyl-d14 (surr)	81.4	41.8 - 129		%Rec	1	1/5/2022 4:55:23 PM

Gasoline by NWTPH-Gx

Batch ID: 34944 Analyst: TN

Gasoline	ND	4.86		mg/Kg-dry	1	1/6/2022 2:27:00 AM
Gasoline Range Organics (C6-C12)	25.9	4.86		mg/Kg-dry	1	1/6/2022 2:27:00 AM
Surr: Toluene-d8	95.1	65 - 135		%Rec	1	1/6/2022 2:27:00 AM
Surr: 4-Bromofluorobenzene	105	65 - 135		%Rec	1	1/6/2022 2:27:00 AM

NOTES:

GRO - Indicates the presence of unresolved compounds in the gasoline range.



Client: GeoEngineers

Collection Date: 12/29/2021 11:25:00 AM

Project: 701 S Jackson Property Site

Lab ID: 2112441-019

Matrix: Soil

Client Sample ID: GEI-7-2.5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260D

Batch ID: 34944

Analyst: TN

Benzene	ND	0.0194		mg/Kg-dry	1	1/6/2022 2:27:00 AM
Toluene	ND	0.0291		mg/Kg-dry	1	1/6/2022 2:27:00 AM
Ethylbenzene	ND	0.0243		mg/Kg-dry	1	1/6/2022 2:27:00 AM
m,p-Xylene	ND	0.0486		mg/Kg-dry	1	1/6/2022 2:27:00 AM
o-Xylene	ND	0.0243		mg/Kg-dry	1	1/6/2022 2:27:00 AM
Surr: Dibromofluoromethane	108	75.5 - 119		%Rec	1	1/6/2022 2:27:00 AM
Surr: Toluene-d8	84.4	82.4 - 115		%Rec	1	1/6/2022 2:27:00 AM
Surr: 1-Bromo-4-fluorobenzene	103	78.5 - 118		%Rec	1	1/6/2022 2:27:00 AM

Mercury by EPA Method 7471B

Batch ID: 34932

Analyst: CH

Mercury	ND	0.287		mg/Kg-dry	1	1/5/2022 11:07:44 AM
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Total Metals by EPA Method 6020B

Batch ID: 34930

Analyst: EH

Arsenic	4.34	0.112		mg/Kg-dry	1	1/5/2022 1:43:18 PM
Barium	160	0.561		mg/Kg-dry	1	1/5/2022 1:43:18 PM
Cadmium	0.255	0.187		mg/Kg-dry	1	1/5/2022 1:43:18 PM
Chromium	34.5	0.374		mg/Kg-dry	1	1/5/2022 1:43:18 PM
Lead	59.5	0.187		mg/Kg-dry	1	1/5/2022 1:43:18 PM
Selenium	1.00	0.187		mg/Kg-dry	1	1/5/2022 1:43:18 PM
Silver	ND	0.140		mg/Kg-dry	1	1/5/2022 1:43:18 PM

Sample Moisture (Percent Moisture)

Batch ID: R72341

Analyst: cb

Percent Moisture	20.8			wt%	1	1/4/2022 2:42:04 PM
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Analytical Report

Work Order: 2112441
Date Reported: 1/12/2022

Client: GeoEngineers

Collection Date: 12/29/2021 11:35:00 AM

Project: 701 S Jackson Property Site

Lab ID: 2112441-021

Matrix: Soil

Client Sample ID: GEI-7-7.5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Polychlorinated Biphenyls (PCB) by EPA 8082

Batch ID: 34931 Analyst: SB

Aroclor 1016	ND	0.0596		mg/Kg-dry	1	1/5/2022 2:49:38 PM
Aroclor 1221	ND	0.0596		mg/Kg-dry	1	1/5/2022 2:49:38 PM
Aroclor 1232	ND	0.0596		mg/Kg-dry	1	1/5/2022 2:49:38 PM
Aroclor 1242	ND	0.0596		mg/Kg-dry	1	1/5/2022 2:49:38 PM
Aroclor 1248	ND	0.0596		mg/Kg-dry	1	1/5/2022 2:49:38 PM
Aroclor 1254	ND	0.0596		mg/Kg-dry	1	1/5/2022 2:49:38 PM
Aroclor 1260	ND	0.0596		mg/Kg-dry	1	1/5/2022 2:49:38 PM
Aroclor 1262	ND	0.0596		mg/Kg-dry	1	1/5/2022 2:49:38 PM
Aroclor 1268	ND	0.0596		mg/Kg-dry	1	1/5/2022 2:49:38 PM
Total PCBs	ND	0.0596		mg/Kg-dry	1	1/5/2022 2:49:38 PM
Surr: Decachlorobiphenyl	89.3	25.9 - 167		%Rec	1	1/5/2022 2:49:38 PM
Surr: Tetrachloro-m-xylene	113	31.3 - 173		%Rec	1	1/5/2022 2:49:38 PM

Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.

Batch ID: 34926 Analyst: MM

Diesel (Fuel Oil)	ND	64.7		mg/Kg-dry	1	1/5/2022 5:17:41 PM
Heavy Oil	ND	129		mg/Kg-dry	1	1/5/2022 5:17:41 PM
Total Petroleum Hydrocarbons	ND	194		mg/Kg-dry	1	1/5/2022 5:17:41 PM
Surr: 2-Fluorobiphenyl	54.3	50 - 150		%Rec	1	1/5/2022 5:17:41 PM
Surr: o-Terphenyl	54.8	50 - 150		%Rec	1	1/5/2022 5:17:41 PM

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 34933 Analyst: SB

Naphthalene	ND	24.1		µg/Kg-dry	1	1/5/2022 5:17:00 PM
2-Methylnaphthalene	ND	24.1		µg/Kg-dry	1	1/5/2022 5:17:00 PM
1-Methylnaphthalene	ND	24.1		µg/Kg-dry	1	1/5/2022 5:17:00 PM
Acenaphthylene	ND	24.1		µg/Kg-dry	1	1/5/2022 5:17:00 PM
Acenaphthene	ND	24.1		µg/Kg-dry	1	1/5/2022 5:17:00 PM
Fluorene	ND	24.1		µg/Kg-dry	1	1/5/2022 5:17:00 PM
Phenanthrene	ND	48.2		µg/Kg-dry	1	1/5/2022 5:17:00 PM
Anthracene	ND	48.2		µg/Kg-dry	1	1/5/2022 5:17:00 PM
Fluoranthene	ND	48.2		µg/Kg-dry	1	1/5/2022 5:17:00 PM
Pyrene	ND	48.2		µg/Kg-dry	1	1/5/2022 5:17:00 PM
Benz(a)anthracene	ND	24.1		µg/Kg-dry	1	1/5/2022 5:17:00 PM
Chrysene	ND	48.2		µg/Kg-dry	1	1/5/2022 5:17:00 PM
Benzo(b)fluoranthene	ND	24.1		µg/Kg-dry	1	1/5/2022 5:17:00 PM
Benzo(k)fluoranthene	ND	24.1		µg/Kg-dry	1	1/5/2022 5:17:00 PM
Benzo(a)pyrene	ND	24.1		µg/Kg-dry	1	1/5/2022 5:17:00 PM
Indeno(1,2,3-cd)pyrene	ND	48.2		µg/Kg-dry	1	1/5/2022 5:17:00 PM



Client: GeoEngineers
Project: 701 S Jackson Property Site
Lab ID: 2112441-021
Client Sample ID: GEI-7-7.5

Collection Date: 12/29/2021 11:35:00 AM
Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 34933 Analyst: SB

Dibenz(a,h)anthracene	ND	48.2		µg/Kg-dry	1	1/5/2022 5:17:00 PM
Benzo(g,h,i)perylene	ND	24.1		µg/Kg-dry	1	1/5/2022 5:17:00 PM
Surr: 2-Fluorobiphenyl	69.1	36 - 124		%Rec	1	1/5/2022 5:17:00 PM
Surr: Terphenyl-d14 (surr)	78.3	41.8 - 129		%Rec	1	1/5/2022 5:17:00 PM

Gasoline by NWTPH-Gx

Batch ID: 34970 Analyst: TN

Gasoline	ND	5.46		mg/Kg-dry	1	1/7/2022 4:14:50 PM
Surr: Toluene-d8	94.5	65 - 135		%Rec	1	1/7/2022 4:14:50 PM
Surr: 4-Bromofluorobenzene	102	65 - 135		%Rec	1	1/7/2022 4:14:50 PM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 34970 Analyst: TN

Dichlorodifluoromethane (CFC-12)	ND	0.0546		mg/Kg-dry	1	1/7/2022 4:14:50 PM
Chloromethane	ND	0.0873		mg/Kg-dry	1	1/7/2022 4:14:50 PM
Vinyl chloride	ND	0.0273		mg/Kg-dry	1	1/7/2022 4:14:50 PM
Bromomethane	ND	0.164		mg/Kg-dry	1	1/7/2022 4:14:50 PM
Trichlorofluoromethane (CFC-11)	ND	0.0546		mg/Kg-dry	1	1/7/2022 4:14:50 PM
Chloroethane	ND	0.131		mg/Kg-dry	1	1/7/2022 4:14:50 PM
1,1-Dichloroethene	ND	0.109		mg/Kg-dry	1	1/7/2022 4:14:50 PM
Acetone	ND	0.546		mg/Kg-dry	1	1/7/2022 4:14:50 PM
Methylene chloride	ND	0.0164		mg/Kg-dry	1	1/7/2022 4:14:50 PM
trans-1,2-Dichloroethene	ND	0.0327		mg/Kg-dry	1	1/7/2022 4:14:50 PM
Methyl tert-butyl ether (MTBE)	ND	0.0327		mg/Kg-dry	1	1/7/2022 4:14:50 PM
1,1-Dichloroethane	ND	0.0273	Q	mg/Kg-dry	1	1/7/2022 4:14:50 PM
cis-1,2-Dichloroethene	ND	0.0273		mg/Kg-dry	1	1/7/2022 4:14:50 PM
(MEK) 2-Butanone	ND	0.491		mg/Kg-dry	1	1/7/2022 4:14:50 PM
Chloroform	ND	0.0273		mg/Kg-dry	1	1/7/2022 4:14:50 PM
1,1,1-Trichloroethane (TCA)	ND	0.0273		mg/Kg-dry	1	1/7/2022 4:14:50 PM
1,1-Dichloropropene	ND	0.0273		mg/Kg-dry	1	1/7/2022 4:14:50 PM
Carbon tetrachloride	ND	0.0818		mg/Kg-dry	1	1/7/2022 4:14:50 PM
1,2-Dichloroethane (EDC)	ND	0.0251		mg/Kg-dry	1	1/7/2022 4:14:50 PM
Benzene	ND	0.0218		mg/Kg-dry	1	1/7/2022 4:14:50 PM
Trichloroethene (TCE)	ND	0.0218		mg/Kg-dry	1	1/7/2022 4:14:50 PM
1,2-Dichloropropane	ND	0.0218		mg/Kg-dry	1	1/7/2022 4:14:50 PM
Bromodichloromethane	ND	0.0273		mg/Kg-dry	1	1/7/2022 4:14:50 PM
Dibromomethane	ND	0.0218		mg/Kg-dry	1	1/7/2022 4:14:50 PM
cis-1,3-Dichloropropene	ND	0.0873		mg/Kg-dry	1	1/7/2022 4:14:50 PM
Toluene	ND	0.0327		mg/Kg-dry	1	1/7/2022 4:14:50 PM



Analytical Report

Work Order: 2112441
Date Reported: 1/12/2022

Client: GeoEngineers
Project: 701 S Jackson Property Site
Lab ID: 2112441-021
Client Sample ID: GEI-7-7.5

Collection Date: 12/29/2021 11:35:00 AM
Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260D

Batch ID: 34970 Analyst: TN

Trans-1,3-Dichloropropylene	ND	0.0546		mg/Kg-dry	1	1/7/2022 4:14:50 PM
Methyl Isobutyl Ketone (MIBK)	ND	0.0818		mg/Kg-dry	1	1/7/2022 4:14:50 PM
1,1,2-Trichloroethane	ND	0.0186		mg/Kg-dry	1	1/7/2022 4:14:50 PM
1,3-Dichloropropane	ND	0.0218		mg/Kg-dry	1	1/7/2022 4:14:50 PM
Tetrachloroethene (PCE)	ND	0.0437		mg/Kg-dry	1	1/7/2022 4:14:50 PM
Dibromochloromethane	ND	0.0218		mg/Kg-dry	1	1/7/2022 4:14:50 PM
1,2-Dibromoethane (EDB)	ND	0.0109		mg/Kg-dry	1	1/7/2022 4:14:50 PM
2-Hexanone (MBK)	ND	0.0655		mg/Kg-dry	1	1/7/2022 4:14:50 PM
Chlorobenzene	ND	0.0273		mg/Kg-dry	1	1/7/2022 4:14:50 PM
1,1,1,2-Tetrachloroethane	ND	0.0218		mg/Kg-dry	1	1/7/2022 4:14:50 PM
Ethylbenzene	ND	0.0273		mg/Kg-dry	1	1/7/2022 4:14:50 PM
m,p-Xylene	ND	0.0546		mg/Kg-dry	1	1/7/2022 4:14:50 PM
o-Xylene	ND	0.0273		mg/Kg-dry	1	1/7/2022 4:14:50 PM
Styrene	ND	0.0273		mg/Kg-dry	1	1/7/2022 4:14:50 PM
Isopropylbenzene	ND	0.0327		mg/Kg-dry	1	1/7/2022 4:14:50 PM
Bromoform	ND	0.0273		mg/Kg-dry	1	1/7/2022 4:14:50 PM
1,1,2,2-Tetrachloroethane	ND	0.0164		mg/Kg-dry	1	1/7/2022 4:14:50 PM
n-Propylbenzene	ND	0.0327		mg/Kg-dry	1	1/7/2022 4:14:50 PM
Bromobenzene	ND	0.0327		mg/Kg-dry	1	1/7/2022 4:14:50 PM
1,3,5-Trimethylbenzene	ND	0.0273		mg/Kg-dry	1	1/7/2022 4:14:50 PM
2-Chlorotoluene	ND	0.0327		mg/Kg-dry	1	1/7/2022 4:14:50 PM
4-Chlorotoluene	ND	0.0327		mg/Kg-dry	1	1/7/2022 4:14:50 PM
tert-Butylbenzene	ND	0.0327		mg/Kg-dry	1	1/7/2022 4:14:50 PM
1,2,3-Trichloropropane	ND	0.0273		mg/Kg-dry	1	1/7/2022 4:14:50 PM
1,2,4-Trichlorobenzene	ND	0.0437		mg/Kg-dry	1	1/7/2022 4:14:50 PM
sec-Butylbenzene	ND	0.0327		mg/Kg-dry	1	1/7/2022 4:14:50 PM
4-Isopropyltoluene	ND	0.0327		mg/Kg-dry	1	1/7/2022 4:14:50 PM
1,3-Dichlorobenzene	ND	0.0382		mg/Kg-dry	1	1/7/2022 4:14:50 PM
1,4-Dichlorobenzene	ND	0.0327		mg/Kg-dry	1	1/7/2022 4:14:50 PM
n-Butylbenzene	ND	0.0437		mg/Kg-dry	1	1/7/2022 4:14:50 PM
1,2-Dichlorobenzene	ND	0.0327		mg/Kg-dry	1	1/7/2022 4:14:50 PM
1,2-Dibromo-3-chloropropane	ND	0.0655		mg/Kg-dry	1	1/7/2022 4:14:50 PM
1,2,4-Trimethylbenzene	ND	0.0273		mg/Kg-dry	1	1/7/2022 4:14:50 PM
Hexachloro-1,3-butadiene	ND	0.0546		mg/Kg-dry	1	1/7/2022 4:14:50 PM
Naphthalene	ND	0.109		mg/Kg-dry	1	1/7/2022 4:14:50 PM
1,2,3-Trichlorobenzene	ND	0.0546		mg/Kg-dry	1	1/7/2022 4:14:50 PM
Surr: Dibromofluoromethane	98.7	80 - 120		%Rec	1	1/7/2022 4:14:50 PM
Surr: Toluene-d8	91.9	80 - 120		%Rec	1	1/7/2022 4:14:50 PM
Surr: 1-Bromo-4-fluorobenzene	99.6	80 - 120		%Rec	1	1/7/2022 4:14:50 PM



Client: GeoEngineers

Collection Date: 12/29/2021 11:35:00 AM

Project: 701 S Jackson Property Site

Lab ID: 2112441-021

Matrix: Soil

Client Sample ID: GEI-7-7.5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260D

Batch ID: 34970

Analyst: TN

NOTES:

Q - Associated calibration verification is below acceptance criteria. Result may be low-biased.

Mercury by EPA Method 7471B

Batch ID: 34932

Analyst: CH

Mercury	ND	0.309		mg/Kg-dry	1	1/5/2022 11:09:21 AM
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Total Metals by EPA Method 6020B

Batch ID: 34930

Analyst: EH

Arsenic	5.85	0.122		mg/Kg-dry	1	1/5/2022 1:45:57 PM
Barium	134	0.609		mg/Kg-dry	1	1/5/2022 1:45:57 PM
Cadmium	ND	0.203		mg/Kg-dry	1	1/5/2022 1:45:57 PM
Chromium	64.1	0.406		mg/Kg-dry	1	1/5/2022 1:45:57 PM
Lead	4.82	0.203		mg/Kg-dry	1	1/5/2022 1:45:57 PM
Selenium	1.62	0.203		mg/Kg-dry	1	1/5/2022 1:45:57 PM
Silver	ND	0.152		mg/Kg-dry	1	1/5/2022 1:45:57 PM

Sample Moisture (Percent Moisture)

Batch ID: R72341

Analyst: cb

Percent Moisture	23.7			wt%	1	1/4/2022 2:42:04 PM
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Analytical Report

Work Order: 2112441
Date Reported: 1/12/2022

Client: GeoEngineers

Collection Date: 12/29/2021 11:50:00 AM

Project: 701 S Jackson Property Site

Lab ID: 2112441-024

Matrix: Soil

Client Sample ID: GEI-7-15.0

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Polychlorinated Biphenyls (PCB) by EPA 8082

Batch ID: 34931 Analyst: SB

Aroclor 1016	ND	0.0610		mg/Kg-dry	1	1/5/2022 2:59:27 PM
Aroclor 1221	ND	0.0610		mg/Kg-dry	1	1/5/2022 2:59:27 PM
Aroclor 1232	ND	0.0610		mg/Kg-dry	1	1/5/2022 2:59:27 PM
Aroclor 1242	ND	0.0610		mg/Kg-dry	1	1/5/2022 2:59:27 PM
Aroclor 1248	ND	0.0610		mg/Kg-dry	1	1/5/2022 2:59:27 PM
Aroclor 1254	ND	0.0610		mg/Kg-dry	1	1/5/2022 2:59:27 PM
Aroclor 1260	ND	0.0610		mg/Kg-dry	1	1/5/2022 2:59:27 PM
Aroclor 1262	ND	0.0610		mg/Kg-dry	1	1/5/2022 2:59:27 PM
Aroclor 1268	ND	0.0610		mg/Kg-dry	1	1/5/2022 2:59:27 PM
Total PCBs	ND	0.0610		mg/Kg-dry	1	1/5/2022 2:59:27 PM
Surr: Decachlorobiphenyl	100	25.9 - 167		%Rec	1	1/5/2022 2:59:27 PM
Surr: Tetrachloro-m-xylene	111	31.3 - 173		%Rec	1	1/5/2022 2:59:27 PM

Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.

Batch ID: 34926 Analyst: MM

Diesel (Fuel Oil)	ND	58.5		mg/Kg-dry	1	1/5/2022 5:29:41 PM
Heavy Oil	ND	117		mg/Kg-dry	1	1/5/2022 5:29:41 PM
Total Petroleum Hydrocarbons	ND	176		mg/Kg-dry	1	1/5/2022 5:29:41 PM
Surr: 2-Fluorobiphenyl	58.3	50 - 150		%Rec	1	1/5/2022 5:29:41 PM
Surr: o-Terphenyl	58.2	50 - 150		%Rec	1	1/5/2022 5:29:41 PM

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 34933 Analyst: SB

Naphthalene	283	24.9		µg/Kg-dry	1	1/5/2022 5:38:38 PM
2-Methylnaphthalene	185	24.9		µg/Kg-dry	1	1/5/2022 5:38:38 PM
1-Methylnaphthalene	88.0	24.9		µg/Kg-dry	1	1/5/2022 5:38:38 PM
Acenaphthylene	ND	24.9		µg/Kg-dry	1	1/5/2022 5:38:38 PM
Acenaphthene	ND	24.9		µg/Kg-dry	1	1/5/2022 5:38:38 PM
Fluorene	ND	24.9		µg/Kg-dry	1	1/5/2022 5:38:38 PM
Phenanthrene	ND	49.8		µg/Kg-dry	1	1/5/2022 5:38:38 PM
Anthracene	ND	49.8		µg/Kg-dry	1	1/5/2022 5:38:38 PM
Fluoranthene	ND	49.8		µg/Kg-dry	1	1/5/2022 5:38:38 PM
Pyrene	ND	49.8		µg/Kg-dry	1	1/5/2022 5:38:38 PM
Benz(a)anthracene	ND	24.9		µg/Kg-dry	1	1/5/2022 5:38:38 PM
Chrysene	ND	49.8		µg/Kg-dry	1	1/5/2022 5:38:38 PM
Benzo(b)fluoranthene	ND	24.9		µg/Kg-dry	1	1/5/2022 5:38:38 PM
Benzo(k)fluoranthene	ND	24.9		µg/Kg-dry	1	1/5/2022 5:38:38 PM
Benzo(a)pyrene	ND	24.9		µg/Kg-dry	1	1/5/2022 5:38:38 PM
Indeno(1,2,3-cd)pyrene	ND	49.8		µg/Kg-dry	1	1/5/2022 5:38:38 PM



Client: GeoEngineers
Project: 701 S Jackson Property Site
Lab ID: 2112441-024
Client Sample ID: GEI-7-15.0

Collection Date: 12/29/2021 11:50:00 AM
Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 34933 Analyst: SB

Dibenz(a,h)anthracene	ND	49.8		µg/Kg-dry	1	1/5/2022 5:38:38 PM
Benzo(g,h,i)perylene	ND	24.9		µg/Kg-dry	1	1/5/2022 5:38:38 PM
Surr: 2-Fluorobiphenyl	74.1	36 - 124		%Rec	1	1/5/2022 5:38:38 PM
Surr: Terphenyl-d14 (surr)	83.4	41.8 - 129		%Rec	1	1/5/2022 5:38:38 PM

Gasoline by NWTPH-Gx

Batch ID: 34970 Analyst: TN

Gasoline	1,370	265	D	mg/Kg-dry	50	1/11/2022 12:35:10 PM
Surr: Toluene-d8	97.3	65 - 135	D	%Rec	50	1/11/2022 12:35:10 PM
Surr: 4-Bromofluorobenzene	105	65 - 135	D	%Rec	50	1/11/2022 12:35:10 PM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 34970 Analyst: TN

Dichlorodifluoromethane (CFC-12)	ND	0.0530		mg/Kg-dry	1	1/7/2022 6:19:02 PM
Chloromethane	ND	0.0848		mg/Kg-dry	1	1/7/2022 6:19:02 PM
Vinyl chloride	ND	0.0265		mg/Kg-dry	1	1/7/2022 6:19:02 PM
Bromomethane	ND	0.159		mg/Kg-dry	1	1/7/2022 6:19:02 PM
Trichlorofluoromethane (CFC-11)	ND	0.0530		mg/Kg-dry	1	1/7/2022 6:19:02 PM
Chloroethane	ND	0.127		mg/Kg-dry	1	1/7/2022 6:19:02 PM
1,1-Dichloroethene	ND	0.106		mg/Kg-dry	1	1/7/2022 6:19:02 PM
Acetone	ND	0.530		mg/Kg-dry	1	1/7/2022 6:19:02 PM
Methylene chloride	ND	0.0159		mg/Kg-dry	1	1/7/2022 6:19:02 PM
trans-1,2-Dichloroethene	ND	0.0318		mg/Kg-dry	1	1/7/2022 6:19:02 PM
Methyl tert-butyl ether (MTBE)	ND	0.0318		mg/Kg-dry	1	1/7/2022 6:19:02 PM
1,1-Dichloroethane	ND	0.0265	Q	mg/Kg-dry	1	1/7/2022 6:19:02 PM
cis-1,2-Dichloroethene	ND	0.0265		mg/Kg-dry	1	1/7/2022 6:19:02 PM
(MEK) 2-Butanone	ND	0.477		mg/Kg-dry	1	1/7/2022 6:19:02 PM
Chloroform	ND	0.0265		mg/Kg-dry	1	1/7/2022 6:19:02 PM
1,1,1-Trichloroethane (TCA)	ND	0.0265		mg/Kg-dry	1	1/7/2022 6:19:02 PM
1,1-Dichloropropene	ND	0.0265		mg/Kg-dry	1	1/7/2022 6:19:02 PM
Carbon tetrachloride	ND	0.0795		mg/Kg-dry	1	1/7/2022 6:19:02 PM
1,2-Dichloroethane (EDC)	ND	0.0244		mg/Kg-dry	1	1/7/2022 6:19:02 PM
Benzene	0.150	0.0212		mg/Kg-dry	1	1/7/2022 6:19:02 PM
Trichloroethene (TCE)	ND	0.0212		mg/Kg-dry	1	1/7/2022 6:19:02 PM
1,2-Dichloropropane	ND	0.0212		mg/Kg-dry	1	1/7/2022 6:19:02 PM
Bromodichloromethane	ND	0.0265		mg/Kg-dry	1	1/7/2022 6:19:02 PM
Dibromomethane	ND	0.0212		mg/Kg-dry	1	1/7/2022 6:19:02 PM
cis-1,3-Dichloropropene	ND	0.0848		mg/Kg-dry	1	1/7/2022 6:19:02 PM
Toluene	0.177	0.0318		mg/Kg-dry	1	1/7/2022 6:19:02 PM



Analytical Report

Work Order: 2112441
Date Reported: 1/12/2022

Client: GeoEngineers

Collection Date: 12/29/2021 11:50:00 AM

Project: 701 S Jackson Property Site

Lab ID: 2112441-024

Matrix: Soil

Client Sample ID: GEI-7-15.0

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260D

Batch ID: 34970

Analyst: TN

Trans-1,3-Dichloropropylene	ND	0.0530		mg/Kg-dry	1	1/7/2022 6:19:02 PM
Methyl Isobutyl Ketone (MIBK)	ND	0.0795		mg/Kg-dry	1	1/7/2022 6:19:02 PM
1,1,2-Trichloroethane	ND	0.0180		mg/Kg-dry	1	1/7/2022 6:19:02 PM
1,3-Dichloropropane	ND	0.0212		mg/Kg-dry	1	1/7/2022 6:19:02 PM
Tetrachloroethene (PCE)	ND	0.0424		mg/Kg-dry	1	1/7/2022 6:19:02 PM
Dibromochloromethane	ND	0.0212		mg/Kg-dry	1	1/7/2022 6:19:02 PM
1,2-Dibromoethane (EDB)	ND	0.0106		mg/Kg-dry	1	1/7/2022 6:19:02 PM
2-Hexanone (MBK)	ND	0.0636		mg/Kg-dry	1	1/7/2022 6:19:02 PM
Chlorobenzene	ND	0.0265		mg/Kg-dry	1	1/7/2022 6:19:02 PM
1,1,1,2-Tetrachloroethane	ND	0.0212		mg/Kg-dry	1	1/7/2022 6:19:02 PM
Ethylbenzene	17.1	1.32	D	mg/Kg-dry	50	1/7/2022 5:48:00 PM
m,p-Xylene	34.1	2.65	D	mg/Kg-dry	50	1/7/2022 5:48:00 PM
o-Xylene	4.98	1.32	D	mg/Kg-dry	50	1/7/2022 5:48:00 PM
Styrene	ND	0.0265		mg/Kg-dry	1	1/7/2022 6:19:02 PM
Isopropylbenzene	1.51	1.59	JD	mg/Kg-dry	50	1/7/2022 5:48:00 PM
Bromoform	ND	0.0265		mg/Kg-dry	1	1/7/2022 6:19:02 PM
1,1,2,2-Tetrachloroethane	ND	0.0159		mg/Kg-dry	1	1/7/2022 6:19:02 PM
n-Propylbenzene	6.10	1.59	D	mg/Kg-dry	50	1/7/2022 5:48:00 PM
Bromobenzene	ND	0.0318		mg/Kg-dry	1	1/7/2022 6:19:02 PM
1,3,5-Trimethylbenzene	12.7	1.32	D	mg/Kg-dry	50	1/7/2022 5:48:00 PM
2-Chlorotoluene	ND	0.0318		mg/Kg-dry	1	1/7/2022 6:19:02 PM
4-Chlorotoluene	ND	0.0318		mg/Kg-dry	1	1/7/2022 6:19:02 PM
tert-Butylbenzene	ND	0.0318		mg/Kg-dry	1	1/7/2022 6:19:02 PM
1,2,3-Trichloropropane	ND	0.0265		mg/Kg-dry	1	1/7/2022 6:19:02 PM
1,2,4-Trichlorobenzene	ND	0.0424		mg/Kg-dry	1	1/7/2022 6:19:02 PM
sec-Butylbenzene	1.46	0.0318		mg/Kg-dry	1	1/7/2022 6:19:02 PM
4-Isopropyltoluene	0.827	0.0318		mg/Kg-dry	1	1/7/2022 6:19:02 PM
1,3-Dichlorobenzene	ND	0.0371		mg/Kg-dry	1	1/7/2022 6:19:02 PM
1,4-Dichlorobenzene	ND	0.0318		mg/Kg-dry	1	1/7/2022 6:19:02 PM
n-Butylbenzene	ND	0.0424		mg/Kg-dry	1	1/7/2022 6:19:02 PM
1,2-Dichlorobenzene	ND	0.0318		mg/Kg-dry	1	1/7/2022 6:19:02 PM
1,2-Dibromo-3-chloropropane	ND	0.0636		mg/Kg-dry	1	1/7/2022 6:19:02 PM
1,2,4-Trimethylbenzene	40.2	1.32	D	mg/Kg-dry	50	1/7/2022 5:48:00 PM
Hexachloro-1,3-butadiene	ND	0.0530		mg/Kg-dry	1	1/7/2022 6:19:02 PM
Naphthalene	2.87	5.30	JD	mg/Kg-dry	50	1/7/2022 5:48:00 PM
1,2,3-Trichlorobenzene	ND	0.0530		mg/Kg-dry	1	1/7/2022 6:19:02 PM
Surr: Dibromofluoromethane	103	80 - 120		%Rec	1	1/7/2022 6:19:02 PM
Surr: Toluene-d8	90.7	80 - 120		%Rec	1	1/7/2022 6:19:02 PM
Surr: 1-Bromo-4-fluorobenzene	113	80 - 120		%Rec	1	1/7/2022 6:19:02 PM



Client: GeoEngineers

Collection Date: 12/29/2021 11:50:00 AM

Project: 701 S Jackson Property Site

Lab ID: 2112441-024

Matrix: Soil

Client Sample ID: GEI-7-15.0

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260D

Batch ID: 34970

Analyst: TN

NOTES:

Q - Associated calibration verification is below acceptance criteria. Result may be low-biased.

Mercury by EPA Method 7471B

Batch ID: 34932

Analyst: CH

Mercury	ND	0.294		mg/Kg-dry	1	1/5/2022 11:10:58 AM
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Total Metals by EPA Method 6020B

Batch ID: 34930

Analyst: EH

Arsenic	7.07	0.113		mg/Kg-dry	1	1/5/2022 1:48:36 PM
Barium	125	0.566		mg/Kg-dry	1	1/5/2022 1:48:36 PM
Cadmium	ND	0.189		mg/Kg-dry	1	1/5/2022 1:48:36 PM
Chromium	52.2	0.377		mg/Kg-dry	1	1/5/2022 1:48:36 PM
Lead	6.06	0.189		mg/Kg-dry	1	1/5/2022 1:48:36 PM
Selenium	1.42	0.189		mg/Kg-dry	1	1/5/2022 1:48:36 PM
Silver	ND	0.141		mg/Kg-dry	1	1/5/2022 1:48:36 PM

Sample Moisture (Percent Moisture)

Batch ID: R72341

Analyst: cb

Percent Moisture	22.6			wt%	1	1/4/2022 2:42:04 PM
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Work Order: 2112441
CLIENT: GeoEngineers
Project: 701 S Jackson Property Site

QC SUMMARY REPORT
Total Metals by EPA Method 6020B

Sample ID: MB-34930	SampType: MBLK	Units: mg/Kg	Prep Date: 1/4/2022	RunNo: 72359							
Client ID: MBLKS	Batch ID: 34930		Analysis Date: 1/5/2022	SeqNo: 1477408							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Arsenic	ND	0.0984									
Barium	ND	0.492									
Cadmium	ND	0.164									
Chromium	ND	0.328									
Lead	ND	0.164									
Selenium	ND	0.164									
Silver	ND	0.123									

Sample ID: LCS-34930	SampType: LCS	Units: mg/Kg	Prep Date: 1/4/2022	RunNo: 72359							
Client ID: LCSS	Batch ID: 34930		Analysis Date: 1/5/2022	SeqNo: 1477409							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Arsenic	36.1	0.0984	40.98	0	88.1	80	120				
Barium	44.2	0.492	40.98	0	108	80	120				
Cadmium	2.22	0.164	2.049	0	108	80	120				
Chromium	37.6	0.328	40.98	0	91.7	80	120				
Lead	20.9	0.164	20.49	0	102	80	120				
Selenium	3.46	0.164	4.098	0	84.5	80	120				
Silver	2.20	0.123	2.049	0	107	80	120				

Sample ID: 2112441-005AMS	SampType: MS	Units: mg/Kg-dry	Prep Date: 1/4/2022	RunNo: 72359							
Client ID: GEI-4-12.5	Batch ID: 34930		Analysis Date: 1/5/2022	SeqNo: 1477412							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Arsenic	47.0	0.116	48.50	3.011	90.6	75	125				
Barium	141	0.582	48.50	86.05	112	75	125				
Cadmium	2.67	0.194	2.425	0.09447	106	75	125				
Chromium	91.9	0.388	48.50	39.30	108	75	125				
Lead	25.1	0.194	24.25	3.278	90.1	75	125				

Work Order: 2112441
 CLIENT: GeoEngineers
 Project: 701 S Jackson Property Site

QC SUMMARY REPORT
Total Metals by EPA Method 6020B

Sample ID: 2112441-005AMS	SampType: MS	Units: mg/Kg-dry	Prep Date: 1/4/2022	RunNo: 72359							
Client ID: GEI-4-12.5	Batch ID: 34930		Analysis Date: 1/5/2022	SeqNo: 1477412							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Selenium	5.72	0.194	4.850	1.047	96.4	75	125				
Silver	2.28	0.145	2.425	0.04303	92.3	75	125				

Sample ID: 2112441-005AMSD	SampType: MSD	Units: mg/Kg-dry	Prep Date: 1/4/2022	RunNo: 72359							
Client ID: GEI-4-12.5	Batch ID: 34930		Analysis Date: 1/5/2022	SeqNo: 1477413							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Arsenic	48.1	0.117	48.89	3.011	92.3	75	125	46.96	2.49	20
Barium	146	0.587	48.89	86.05	122	75	125	140.6	3.66	20
Cadmium	2.67	0.196	2.444	0.09447	105	75	125	2.670	0.0834	20
Chromium	93.4	0.391	48.89	39.30	111	75	125	91.85	1.66	20
Lead	26.5	0.196	24.44	3.278	95.0	75	125	25.13	5.35	20
Selenium	5.69	0.196	4.889	1.047	94.9	75	125	5.721	0.623	20
Silver	2.23	0.147	2.444	0.04303	89.6	75	125	2.281	2.12	20

Work Order: 2112441
CLIENT: GeoEngineers
Project: 701 S Jackson Property Site

QC SUMMARY REPORT
Mercury by EPA Method 7471B

Sample ID: MB-34932	SampType: MBLK	Units: mg/Kg	Prep Date: 1/4/2022	RunNo: 72344							
Client ID: MBLKS	Batch ID: 34932		Analysis Date: 1/5/2022	SeqNo: 1477547							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury ND 0.250

Sample ID: LCS-34932	SampType: LCS	Units: mg/Kg	Prep Date: 1/4/2022	RunNo: 72344							
Client ID: LCSS	Batch ID: 34932		Analysis Date: 1/5/2022	SeqNo: 1477548							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury 0.496 0.250 0.5000 0 99.2 80 120

Sample ID: 2112441-001ADUP	SampType: DUP	Units: mg/Kg-dry	Prep Date: 1/4/2022	RunNo: 72344							
Client ID: GEI-4-2.5	Batch ID: 34932		Analysis Date: 1/5/2022	SeqNo: 1477550							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury ND 0.299 0 20

Sample ID: 2112441-001AMS	SampType: MS	Units: mg/Kg-dry	Prep Date: 1/4/2022	RunNo: 72344							
Client ID: GEI-4-2.5	Batch ID: 34932		Analysis Date: 1/5/2022	SeqNo: 1477551							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury 0.745 0.305 0.6099 0.1123 104 70 130

Sample ID: 2112441-001AMSD	SampType: MSD	Units: mg/Kg-dry	Prep Date: 1/4/2022	RunNo: 72344							
Client ID: GEI-4-2.5	Batch ID: 34932		Analysis Date: 1/5/2022	SeqNo: 1477552							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury 0.686 0.288 0.5766 0.1123 99.5 70 130 0.7453 8.26 20

Work Order: 2112441
CLIENT: GeoEngineers
Project: 701 S Jackson Property Site

QC SUMMARY REPORT
Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.

Sample ID: MB-34926	SampType: MBLK	Units: mg/Kg	Prep Date: 1/4/2022	RunNo: 72340							
Client ID: MBLKS	Batch ID: 34926		Analysis Date: 1/4/2022	SeqNo: 1477307							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	ND	50.0									
Heavy Oil	ND	100									
Total Petroleum Hydrocarbons	ND	150									
Surr: 2-Fluorobiphenyl	8.18		10.00		81.8	50	150				
Surr: o-Terphenyl	8.34		10.00		83.4	50	150				

Sample ID: LCS-34926	SampType: LCS	Units: mg/Kg	Prep Date: 1/4/2022	RunNo: 72340							
Client ID: LCSS	Batch ID: 34926		Analysis Date: 1/4/2022	SeqNo: 1477308							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Petroleum Hydrocarbons	427	150	500.0	0	85.4	77.7	127				
Surr: 2-Fluorobiphenyl	8.80		10.00		88.0	50	150				
Surr: o-Terphenyl	11.6		10.00		116	50	150				

Sample ID: LCSD-34926	SampType: LCSD	Units: mg/Kg	Prep Date: 1/4/2022	RunNo: 72340							
Client ID: LCSS02	Batch ID: 34926		Analysis Date: 1/4/2022	SeqNo: 1477309							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Petroleum Hydrocarbons	424	150	500.0	0	84.8	77.7	127	427.1	0.681	30	
Surr: 2-Fluorobiphenyl	8.60		10.00		86.0	50	150		0		
Surr: o-Terphenyl	11.6		10.00		116	50	150		0		

Sample ID: 2201001-001AMS	SampType: MS	Units: mg/Kg-dry	Prep Date: 1/4/2022	RunNo: 72340							
Client ID: BATCH	Batch ID: 34926		Analysis Date: 1/4/2022	SeqNo: 1477311							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Petroleum Hydrocarbons	460	169	562.7	0	81.7	64.2	137				
Surr: 2-Fluorobiphenyl	8.65		11.25		76.9	50	150				
Surr: o-Terphenyl	11.6		11.25		103	50	150				

Work Order: 2112441
CLIENT: GeoEngineers
Project: 701 S Jackson Property Site

QC SUMMARY REPORT
Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.

Sample ID: 2201001-001AMS	SampType: MS	Units: mg/Kg-dry	Prep Date: 1/4/2022	RunNo: 72340							
Client ID: BATCH	Batch ID: 34926	Analysis Date: 1/4/2022	SeqNo: 1477311								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID: 2201001-001AMSD	SampType: MSD	Units: mg/Kg-dry	Prep Date: 1/4/2022	RunNo: 72340							
Client ID: BATCH	Batch ID: 34926	Analysis Date: 1/4/2022	SeqNo: 1477312								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Petroleum Hydrocarbons	463	169	563.8	0	82.0	64.2	137	459.9	0.573	30	
Surr: 2-Fluorobiphenyl	9.00		11.28		79.8	50	150		0		
Surr: o-Terphenyl	12.0		11.28		106	50	150		0		

Work Order: 2112441
CLIENT: GeoEngineers
Project: 701 S Jackson Property Site

QC SUMMARY REPORT
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: LCS-34933	SampType: LCS	Units: µg/Kg	Prep Date: 1/4/2022	RunNo: 72362							
Client ID: LCSS	Batch ID: 34933		Analysis Date: 1/5/2022	SeqNo: 1477532							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	1,430	20.0	2,000	0	71.3	62.6	118				
2-Methylnaphthalene	1,440	20.0	2,000	0	72.0	61.2	118				
1-Methylnaphthalene	1,410	20.0	2,000	0	70.3	63.4	117				
Acenaphthylene	1,430	20.0	2,000	0	71.4	60	119				
Acenaphthene	1,340	20.0	2,000	0	67.2	58.5	113				
Fluorene	1,420	20.0	2,000	0	71.1	60.9	120				
Phenanthrene	1,310	40.0	2,000	0	65.3	58.4	117				
Anthracene	1,390	40.0	2,000	0	69.6	58	117				
Fluoranthene	1,480	40.0	2,000	0	73.9	60.5	120				
Pyrene	1,450	40.0	2,000	0	72.5	59.3	118				
Benz(a)anthracene	1,570	20.0	2,000	0	78.7	62.2	120				
Chrysene	1,230	40.0	2,000	0	61.7	56.2	123				
Benzo(b)fluoranthene	1,430	20.0	2,000	0	71.4	54.8	119				
Benzo(k)fluoranthene	1,400	20.0	2,000	0	70.2	53.6	135				
Benzo(a)pyrene	1,330	20.0	2,000	0	66.4	63.6	130				
Indeno(1,2,3-cd)pyrene	1,250	40.0	2,000	0	62.6	56.2	118				
Dibenz(a,h)anthracene	1,320	40.0	2,000	0	66.0	59.3	120				
Benzo(g,h,i)perylene	1,240	20.0	2,000	0	61.9	54	121				
Surr: 2-Fluorobiphenyl	913		1,000		91.3	36	124				
Surr: Terphenyl-d14 (surr)	1,010		1,000		101	41.8	129				

Sample ID: MB-34933	SampType: MBLK	Units: µg/Kg	Prep Date: 1/4/2022	RunNo: 72362							
Client ID: MBLKS	Batch ID: 34933		Analysis Date: 1/5/2022	SeqNo: 1477532							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	ND	20.0									
2-Methylnaphthalene	ND	20.0									
1-Methylnaphthalene	ND	20.0									
Acenaphthylene	ND	20.0									
Acenaphthene	ND	20.0									

Work Order: 2112441
CLIENT: GeoEngineers
Project: 701 S Jackson Property Site

QC SUMMARY REPORT
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: MB-34933	SampType: MBLK	Units: µg/Kg	Prep Date: 1/4/2022	RunNo: 72362							
Client ID: MBLKS	Batch ID: 34933		Analysis Date: 1/5/2022	SeqNo: 1477535							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Fluorene	ND	20.0									
Phenanthrene	ND	40.0									
Anthracene	ND	40.0									
Fluoranthene	ND	40.0									
Pyrene	ND	40.0									
Benz(a)anthracene	ND	20.0									
Chrysene	ND	40.0									
Benzo(b)fluoranthene	ND	20.0									
Benzo(k)fluoranthene	ND	20.0									
Benzo(a)pyrene	ND	20.0									
Indeno(1,2,3-cd)pyrene	ND	40.0									
Dibenz(a,h)anthracene	ND	40.0									
Benzo(g,h,i)perylene	ND	20.0									
Surr: 2-Fluorobiphenyl	1,040		1,000		104	36	124				
Surr: Terphenyl-d14 (surr)	1,200		1,000		120	41.8	129				

Sample ID: 2112441-005AMS	SampType: MS	Units: µg/Kg-dry	Prep Date: 1/4/2022	RunNo: 72362							
Client ID: GEI-4-12.5	Batch ID: 34933		Analysis Date: 1/5/2022	SeqNo: 1479262							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Naphthalene	1,410	23.5	2,350	0	60.1	4.67	152				
2-Methylnaphthalene	1,460	23.5	2,350	0	62.2	36.3	115				
1-Methylnaphthalene	1,430	23.5	2,350	0	61.0	34	120				
Acenaphthylene	1,410	23.5	2,350	0	59.9	36.1	116				
Acenaphthene	1,360	23.5	2,350	0	57.9	31.4	113				
Fluorene	1,500	23.5	2,350	0	64.0	32.3	121				
Phenanthrene	1,290	47.0	2,350	0	54.9	33.5	115				
Anthracene	1,360	47.0	2,350	0	57.7	28.4	121				
Fluoranthene	1,430	47.0	2,350	0	60.9	32.5	120				
Pyrene	1,400	47.0	2,350	0	59.5	31	118				

Work Order: 2112441
CLIENT: GeoEngineers
Project: 701 S Jackson Property Site

QC SUMMARY REPORT
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: 2112441-005AMS	SampType: MS	Units: µg/Kg-dry	Prep Date: 1/4/2022	RunNo: 72362							
Client ID: GEI-4-12.5	Batch ID: 34933		Analysis Date: 1/5/2022	SeqNo: 1479262							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benz(a)anthracene	1,520	23.5	2,350	6.583	64.3	29.7	123				
Chrysene	1,240	47.0	2,350	0	52.9	26.4	122				
Benzo(b)fluoranthene	1,530	23.5	2,350	0	65.0	20	125				
Benzo(k)fluoranthene	1,280	23.5	2,350	0	54.5	22.9	131				
Benzo(a)pyrene	1,330	23.5	2,350	0	56.8	29.4	133				
Indeno(1,2,3-cd)pyrene	1,220	47.0	2,350	0	51.8	14.4	123				
Dibenz(a,h)anthracene	1,280	47.0	2,350	0	54.6	14.8	130				
Benzo(g,h,i)perylene	1,200	23.5	2,350	14.17	50.3	13.5	124				
Surr: 2-Fluorobiphenyl	921		1,175		78.4	36	124				
Surr: Terphenyl-d14 (surr)	979		1,175		83.4	41.8	129				

Sample ID: 2112441-005AMSD	SampType: MSD	Units: µg/Kg-dry	Prep Date: 1/4/2022	RunNo: 72362							
Client ID: GEI-4-12.5	Batch ID: 34933		Analysis Date: 1/5/2022	SeqNo: 1479263							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	1,400	23.8	2,382	0	58.7	4.67	152	1,412	0.984	30	
2-Methylnaphthalene	1,440	23.8	2,382	0	60.4	36.3	115	1,461	1.52	30	
1-Methylnaphthalene	1,420	23.8	2,382	0	59.5	34	120	1,434	1.22	30	
Acenaphthylene	1,390	23.8	2,382	0	58.3	36.1	116	1,407	1.33	30	
Acenaphthene	1,330	23.8	2,382	0	56.0	31.4	113	1,360	1.99	30	
Fluorene	1,460	23.8	2,382	0	61.5	32.3	121	1,505	2.72	30	
Phenanthrene	1,280	47.6	2,382	0	53.6	33.5	115	1,290	1.09	30	
Anthracene	1,350	47.6	2,382	0	56.6	28.4	121	1,355	0.448	30	
Fluoranthene	1,420	47.6	2,382	0	59.6	32.5	120	1,432	0.919	30	
Pyrene	1,390	47.6	2,382	0	58.6	31	118	1,399	0.275	30	
Benz(a)anthracene	1,500	23.8	2,382	6.583	62.7	29.7	123	1,518	1.25	30	
Chrysene	1,220	47.6	2,382	0	51.1	26.4	122	1,242	1.93	30	
Benzo(b)fluoranthene	1,470	23.8	2,382	0	61.7	20	125	1,528	3.87	30	
Benzo(k)fluoranthene	1,270	23.8	2,382	0	53.3	22.9	131	1,280	0.705	30	
Benzo(a)pyrene	1,300	23.8	2,382	0	54.8	29.4	133	1,334	2.21	30	

Work Order: 2112441
CLIENT: GeoEngineers
Project: 701 S Jackson Property Site

QC SUMMARY REPORT
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: 2112441-005AMSD	SampType: MSD	Units: µg/Kg-dry	Prep Date: 1/4/2022	RunNo: 72362							
Client ID: GEI-4-12.5	Batch ID: 34933		Analysis Date: 1/5/2022	SeqNo: 1479263							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Indeno(1,2,3-cd)pyrene	1,190	47.6	2,382	0	50.1	14.4	123	1,218	1.94	30	
Dibenz(a,h)anthracene	1,260	47.6	2,382	0	53.0	14.8	130	1,283	1.67	30	
Benzo(g,h,i)perylene	1,180	23.8	2,382	14.17	49.0	13.5	124	1,196	1.14	30	
Surr: 2-Fluorobiphenyl	885		1,191		74.3	36	124		0		
Surr: Terphenyl-d14 (surr)	967		1,191		81.2	41.8	129		0		

Work Order: 2112441
CLIENT: GeoEngineers
Project: 701 S Jackson Property Site

QC SUMMARY REPORT
Polychlorinated Biphenyls (PCB) by EPA 8082

Sample ID: MB-34931	SampType: MBLK	Units: mg/Kg		Prep Date: 1/4/2022	RunNo: 72381						
Client ID: MBLKS	Batch ID: 34931			Analysis Date: 1/5/2022	SeqNo: 1477867						
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.0500									
Aroclor 1221	ND	0.0500									
Aroclor 1232	ND	0.0500									
Aroclor 1242	ND	0.0500									
Aroclor 1248	ND	0.0500									
Aroclor 1254	ND	0.0500									
Aroclor 1260	ND	0.0500									
Aroclor 1262	ND	0.0500									
Aroclor 1268	ND	0.0500									
Total PCBs	ND	0.0500									
Surr: Decachlorobiphenyl	172		200.0		86.1	25.9	167				
Surr: Tetrachloro-m-xylene	212		200.0		106	31.3	173				

Sample ID: LCS1-34931	SampType: LCS	Units: mg/Kg		Prep Date: 1/4/2022	RunNo: 72381						
Client ID: LCSS	Batch ID: 34931			Analysis Date: 1/5/2022	SeqNo: 1477868						
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	1.19	0.0500	1.000	0	119	54.1	142				
Aroclor 1260	1.26	0.0500	1.000	0	126	51.7	152				
Surr: Decachlorobiphenyl	226		200.0		113	25.9	167				
Surr: Tetrachloro-m-xylene	223		200.0		112	31.3	173				

Sample ID: LCS2-34931	SampType: LCS	Units: mg/Kg		Prep Date: 1/4/2022	RunNo: 72381						
Client ID: LCSS	Batch ID: 34931			Analysis Date: 1/5/2022	SeqNo: 1477869						
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1254	1.00	0.0500	1.000	0	100	55.9	156				
Surr: Decachlorobiphenyl	187		200.0		93.3	25.9	167				
Surr: Tetrachloro-m-xylene	208		200.0		104	31.3	173				

Work Order: 2112441
CLIENT: GeoEngineers
Project: 701 S Jackson Property Site

QC SUMMARY REPORT
Polychlorinated Biphenyls (PCB) by EPA 8082

Sample ID: LCS2-34931	SampType: LCS	Units: mg/Kg	Prep Date: 1/4/2022	RunNo: 72381							
Client ID: LCSS	Batch ID: 34931		Analysis Date: 1/5/2022	SeqNo: 1477869							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID: 2112301-003AMS	SampType: MS	Units: mg/Kg-dry	Prep Date: 1/4/2022	RunNo: 72381							
Client ID: BATCH	Batch ID: 34931		Analysis Date: 1/5/2022	SeqNo: 1477871							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Aroclor 1016	1.74	0.0551	1.102	0	158	26.5	166				
Aroclor 1260	1.89	0.0551	1.102	0	171	29.2	168				S
Surr: Decachlorobiphenyl	267		220.4		121	25.9	167				
Surr: Tetrachloro-m-xylene	290		220.4		132	31.3	173				

NOTES:

S - Outlying spike recovery(ies) observed. A duplicate analysis was performed with similar results indicating a possible matrix effect.

Sample ID: 2112301-003AMSD	SampType: MSD	Units: mg/Kg-dry	Prep Date: 1/4/2022	RunNo: 72381							
Client ID: BATCH	Batch ID: 34931		Analysis Date: 1/5/2022	SeqNo: 1477872							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Aroclor 1016	1.66	0.0532	1.064	0	156	26.5	166	1.739	4.65	30	
Aroclor 1260	1.81	0.0532	1.064	0	170	29.2	168	1.890	4.11	30	S
Surr: Decachlorobiphenyl	203		212.8		95.4	25.9	167		0		
Surr: Tetrachloro-m-xylene	225		212.8		106	31.3	173		0		

NOTES:

S - Outlying spike recovery(ies) observed. A duplicate analysis was performed with similar results indicating a possible matrix effect.

Work Order: 2112441
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QC SUMMARY REPORT
Gasoline by NWTPH-Gx

Sample ID: LCS-34944	SampType: LCS	Units: mg/Kg		Prep Date: 1/5/2022	RunNo: 72378						
Client ID: LCSS	Batch ID: 34944			Analysis Date: 1/5/2022	SeqNo: 1477801						
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline	26.9	5.00	25.00	0	108	65	135				
Surr: Toluene-d8	1.21		1.250		96.6	65	135				
Surr: 4-Bromofluorobenzene	1.26		1.250		101	65	135				

Sample ID: MB-34944	SampType: MBLK	Units: mg/Kg		Prep Date: 1/5/2022	RunNo: 72378						
Client ID: MBLKS	Batch ID: 34944			Analysis Date: 1/5/2022	SeqNo: 1477802						
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline	ND	5.00									
Surr: Toluene-d8	1.22		1.250		97.5	65	135				
Surr: 4-Bromofluorobenzene	1.26		1.250		101	65	135				

Sample ID: 2201033-002BDUP	SampType: DUP	Units: mg/Kg-dry		Prep Date: 1/5/2022	RunNo: 72378						
Client ID: BATCH	Batch ID: 34944			Analysis Date: 1/5/2022	SeqNo: 1477804						
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline	ND	6.94						0		30	
Surr: Toluene-d8	1.68		1.734		96.8	65	135		0		
Surr: 4-Bromofluorobenzene	1.78		1.734		103	65	135		0		

Sample ID: 2112441-001BDUP	SampType: DUP	Units: mg/Kg-dry		Prep Date: 1/5/2022	RunNo: 72378						
Client ID: GEI-4-2.5	Batch ID: 34944			Analysis Date: 1/5/2022	SeqNo: 1477829						
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline	ND	5.17						5.981	53.8	30	
Surr: Toluene-d8	1.24		1.292		96.0	65	135		0		
Surr: 4-Bromofluorobenzene	1.35		1.292		105	65	135		0		

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QC SUMMARY REPORT
Gasoline by NWTPH-Gx

Sample ID: 2112441-005BMS	SampType: MS	Units: mg/Kg-dry	Prep Date: 1/5/2022	RunNo: 72378							
Client ID: GEI-4-12.5	Batch ID: 34944		Analysis Date: 1/6/2022	SeqNo: 1478123							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline	29.2	5.27	26.34	0	111	65	135				
Surr: Toluene-d8	1.23		1.317		93.3	65	135				
Surr: 4-Bromofluorobenzene	1.28		1.317		97.0	65	135				

Sample ID: LCS-34970	SampType: LCS	Units: mg/Kg	Prep Date: 1/7/2022	RunNo: 72451							
Client ID: LCSS	Batch ID: 34970		Analysis Date: 1/7/2022	SeqNo: 1478963							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline	24.5	5.00	25.00	0	98.0	65	135				
Surr: Toluene-d8	1.22		1.250		97.9	65	135				
Surr: 4-Bromofluorobenzene	1.31		1.250		105	65	135				

Sample ID: MB-34970	SampType: MBLK	Units: mg/Kg	Prep Date: 1/7/2022	RunNo: 72451							
Client ID: MBLKS	Batch ID: 34970		Analysis Date: 1/7/2022	SeqNo: 1478964							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline	ND	5.00									
Surr: Toluene-d8	1.22		1.250		97.6	65	135				
Surr: 4-Bromofluorobenzene	1.26		1.250		100	65	135				

Sample ID: 2112441-021BDUP	SampType: DUP	Units: mg/Kg-dry	Prep Date: 1/7/2022	RunNo: 72451							
Client ID: GEI-7-7.5	Batch ID: 34970		Analysis Date: 1/7/2022	SeqNo: 1478966							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline	ND	5.46						0		30	
Surr: Toluene-d8	1.32		1.364		96.9	65	135		0		
Surr: 4-Bromofluorobenzene	1.36		1.364		99.4	65	135		0		

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QC SUMMARY REPORT
Gasoline by NWTPH-Gx

Sample ID: 2201081-001BMS	SampType: MS	Units: mg/Kg-dry	Prep Date: 1/7/2022	RunNo: 72451							
Client ID: BATCH	Batch ID: 34970	Analysis Date: 1/7/2022	SeqNo: 1478970								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline	29.4	6.18	30.92	0	95.2	65	135				
Surr: Toluene-d8	1.44		1.546		93.4	65	135				
Surr: 4-Bromofluorobenzene	1.54		1.546		99.6	65	135				

Work Order: 2112441
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QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260D

Sample ID: LCS-34944	SampType: LCS	Units: mg/Kg	Prep Date: 1/5/2022	RunNo: 72377							
Client ID: LCSS	Batch ID: 34944		Analysis Date: 1/5/2022	SeqNo: 1477796							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	0.946	0.0200	1.000	0	94.6	80	120				
Toluene	0.904	0.0300	1.000	0	90.4	80	120				
Ethylbenzene	0.998	0.0250	1.000	0	99.8	80	120				
m,p-Xylene	1.98	0.0500	2.000	0	99.2	80	120				
o-Xylene	0.999	0.0250	1.000	0	99.9	80	120				
Surr: Dibromofluoromethane	1.34		1.250		107	75.5	120				
Surr: Toluene-d8	1.13		1.250		90.3	80	120				
Surr: 1-Bromo-4-fluorobenzene	1.29		1.250		103	78.5	120				

Sample ID: MB-34944	SampType: MBLK	Units: mg/Kg	Prep Date: 1/5/2022	RunNo: 72377							
Client ID: MBLKS	Batch ID: 34944		Analysis Date: 1/5/2022	SeqNo: 1477792							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.0200									
Toluene	ND	0.0300									
Ethylbenzene	ND	0.0250									
m,p-Xylene	ND	0.0500									
o-Xylene	ND	0.0250									
Surr: Dibromofluoromethane	1.17		1.250		93.5	75.5	119				
Surr: Toluene-d8	1.17		1.250		94.0	82.4	115				
Surr: 1-Bromo-4-fluorobenzene	1.24		1.250		98.9	78.5	118				

Sample ID: 2201033-002BDUP	SampType: DUP	Units: mg/Kg-dry	Prep Date: 1/5/2022	RunNo: 72377							
Client ID: BATCH	Batch ID: 34944		Analysis Date: 1/5/2022	SeqNo: 1477794							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.0278						0		30	
Toluene	ND	0.0416						0		30	
Ethylbenzene	ND	0.0347						0		30	

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QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260D

Sample ID: 2201033-002BDUP	SampType: DUP	Units: mg/Kg-dry	Prep Date: 1/5/2022	RunNo: 72377							
Client ID: BATCH	Batch ID: 34944		Analysis Date: 1/5/2022	SeqNo: 1477794							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
m,p-Xylene	ND	0.0694						0		30	
o-Xylene	ND	0.0347						0		30	
Surr: Dibromofluoromethane	1.67		1.734		96.3	75.5	119		0		
Surr: Toluene-d8	1.37		1.734		79.1	82.4	115		0		S
Surr: 1-Bromo-4-fluorobenzene	1.75		1.734		101	78.5	118		0		

NOTES:

S - Outlying surrogate recovery(ies) observed. A duplicate analysis was performed and recovered within range.

Sample ID: 2112441-001BDUP	SampType: DUP	Units: mg/Kg-dry	Prep Date: 1/5/2022	RunNo: 72377							
Client ID: GEI-4-2.5	Batch ID: 34944		Analysis Date: 1/5/2022	SeqNo: 1477817							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.0207						0		30	
Toluene	ND	0.0310						0		30	
Ethylbenzene	ND	0.0258						0		30	
m,p-Xylene	ND	0.0517						0		30	
o-Xylene	ND	0.0258						0		30	
Surr: Dibromofluoromethane	1.41		1.292		109	75.5	119		0		
Surr: Toluene-d8	1.05		1.292		81.2	82.4	115		0		S
Surr: 1-Bromo-4-fluorobenzene	1.32		1.292		102	78.5	118		0		

NOTES:

S - Outlying surrogate recovery(ies) observed. A duplicate analysis was performed with similar results indicating a possible matrix effect.

Sample ID: 2112441-005BMS	SampType: MS	Units: mg/Kg-dry	Prep Date: 1/5/2022	RunNo: 72377							
Client ID: GEI-4-12.5	Batch ID: 34944		Analysis Date: 1/6/2022	SeqNo: 1478063							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	0.992	0.0211	1.054	0	94.1	79.9	123				
Toluene	0.965	0.0316	1.054	0	91.5	83.6	119				
Ethylbenzene	1.04	0.0263	1.054	0	98.5	79.9	129				
m,p-Xylene	2.09	0.0527	2.107	0	99.4	80.4	129				

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QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260D

Sample ID: 2112441-005BMS	SampType: MS	Units: mg/Kg-dry	Prep Date: 1/5/2022	RunNo: 72377							
Client ID: GEI-4-12.5	Batch ID: 34944		Analysis Date: 1/6/2022	SeqNo: 1478063							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

o-Xylene	1.05	0.0263	1.054	0	99.3	79.2	126				
Surr: Dibromofluoromethane	1.30		1.317		98.5	75.5	119				
Surr: Toluene-d8	1.23		1.317		93.5	82.4	115				
Surr: 1-Bromo-4-fluorobenzene	1.28		1.317		97.0	78.5	118				

Sample ID: LCS-34970	SampType: LCS	Units: mg/Kg	Prep Date: 1/7/2022	RunNo: 72450							
Client ID: LCSS	Batch ID: 34970		Analysis Date: 1/7/2022	SeqNo: 1478974							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Dichlorodifluoromethane (CFC-12)	0.893	0.0500	1.000	0	89.3	80	120				
Chloromethane	1.16	0.0800	1.000	0	116	80	120				
Vinyl chloride	1.17	0.0250	1.000	0	117	80	120				
Bromomethane	0.976	0.150	1.000	0	97.6	80	120				
Trichlorofluoromethane (CFC-11)	0.895	0.0500	1.000	0	89.5	80	120				
Chloroethane	1.04	0.120	1.000	0	104	80	120				
1,1-Dichloroethane	0.876	0.100	1.000	0	87.6	80	120				
Acetone	2.47	0.500	2.500	0	98.8	80	120				
Methylene chloride	1.02	0.0150	1.000	0	102	80	120				
trans-1,2-Dichloroethene	1.05	0.0300	1.000	0	105	80	120				
Methyl tert-butyl ether (MTBE)	1.11	0.0300	1.000	0	111	80	120				
1,1-Dichloroethane	0.776	0.0250	1.000	0	77.6	80	120				S
cis-1,2-Dichloroethene	1.00	0.0250	1.000	0	100	80	120				
(MEK) 2-Butanone	2.64	0.450	2.500	0	106	80	120				
Chloroform	1.00	0.0250	1.000	0	100	80	120				
1,1,1-Trichloroethane (TCA)	0.978	0.0250	1.000	0	97.8	80	120				
1,1-Dichloropropene	0.994	0.0250	1.000	0	99.4	80	120				
Carbon tetrachloride	0.964	0.0750	1.000	0	96.4	80	120				
1,2-Dichloroethane (EDC)	0.976	0.0230	1.000	0	97.6	80	120				
Benzene	1.00	0.0200	1.000	0	100	80	120				
Trichloroethene (TCE)	1.01	0.0200	1.000	0	101	80	120				

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QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260D

Sample ID: LCS-34970	SampType: LCS	Units: mg/Kg	Prep Date: 1/7/2022	RunNo: 72450
Client ID: LCSS	Batch ID: 34970		Analysis Date: 1/7/2022	SeqNo: 1478974

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dichloropropane	1.02	0.0200	1.000	0	102	80	120				
Bromodichloromethane	0.956	0.0250	1.000	0	95.6	80	120				
Dibromomethane	1.04	0.0200	1.000	0	104	80	120				
cis-1,3-Dichloropropene	0.964	0.0800	1.000	0	96.4	80	120				
Toluene	0.971	0.0300	1.000	0	97.1	80	120				
Trans-1,3-Dichloropropylene	0.948	0.0500	1.000	0	94.8	80	120				
Methyl Isobutyl Ketone (MIBK)	2.45	0.0750	2.500	0	98.0	80	120				
1,1,2-Trichloroethane	0.971	0.0170	1.000	0	97.1	80	120				
1,3-Dichloropropane	0.973	0.0200	1.000	0	97.3	80	120				
Tetrachloroethene (PCE)	0.956	0.0400	1.000	0	95.6	80	120				
Dibromochloromethane	0.951	0.0200	1.000	0	95.1	80	120				
1,2-Dibromoethane (EDB)	0.983	0.0100	1.000	0	98.3	80	120				
2-Hexanone (MBK)	2.46	0.0600	2.500	0	98.3	80	120				
Chlorobenzene	1.04	0.0250	1.000	0	104	80	120				
1,1,1,2-Tetrachloroethane	1.04	0.0200	1.000	0	104	80	120				
Ethylbenzene	1.04	0.0250	1.000	0	104	80	120				
m,p-Xylene	2.09	0.0500	2.000	0	104	80	120				
o-Xylene	1.05	0.0250	1.000	0	105	80	120				
Styrene	1.04	0.0250	1.000	0	104	80	120				
Isopropylbenzene	1.05	0.0300	1.000	0	105	80	120				
Bromoform	1.03	0.0250	1.000	0	103	80	120				
1,1,2,2-Tetrachloroethane	1.02	0.0150	1.000	0	102	80	120				
n-Propylbenzene	1.00	0.0300	1.000	0	100	80	120				
Bromobenzene	1.04	0.0300	1.000	0	104	80	120				
1,3,5-Trimethylbenzene	1.03	0.0250	1.000	0	103	80	120				
2-Chlorotoluene	1.02	0.0300	1.000	0	102	80	120				
4-Chlorotoluene	1.00	0.0300	1.000	0	100	80	120				
tert-Butylbenzene	0.984	0.0300	1.000	0	98.4	80	120				
1,2,3-Trichloropropane	1.05	0.0250	1.000	0	105	80	120				
1,2,4-Trichlorobenzene	1.11	0.0400	1.000	0	111	80	120				

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QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260D

Sample ID: LCS-34970	SampType: LCS	Units: mg/Kg	Prep Date: 1/7/2022	RunNo: 72450							
Client ID: LCSS	Batch ID: 34970		Analysis Date: 1/7/2022	SeqNo: 1478974							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

sec-Butylbenzene	0.977	0.0300	1.000	0	97.7	80	120				
4-Isopropyltoluene	1.00	0.0300	1.000	0	100	80	120				
1,3-Dichlorobenzene	1.08	0.0350	1.000	0	108	80	120				
1,4-Dichlorobenzene	1.05	0.0300	1.000	0	105	80	120				
n-Butylbenzene	1.11	0.0400	1.000	0	111	80	120				
1,2-Dichlorobenzene	1.11	0.0300	1.000	0	111	80	120				
1,2-Dibromo-3-chloropropane	1.25	0.0600	1.000	0	125	80	120				S
1,2,4-Trimethylbenzene	0.989	0.0250	1.000	0	98.9	80	120				
Hexachloro-1,3-butadiene	1.16	0.0500	1.000	0	116	80	120				
Naphthalene	1.15	0.100	1.000	0	115	80	120				
1,2,3-Trichlorobenzene	1.00	0.0500	1.000	0	100	80	120				
Surr: Dibromofluoromethane	1.24		1.250		99.3	80	120				
Surr: Toluene-d8	1.17		1.250		93.7	80	120				
Surr: 1-Bromo-4-fluorobenzene	1.27		1.250		102	80	120				

NOTES:

- S - Outlying spike recovery observed (high bias). Samples are non-detect; result meets QC requirements.
- S - Outlying spike recovery observed (low bias) for 1,1-Dichloroethane. Samples will be qualified with a Q.

Sample ID: MB-34970	SampType: MBLK	Units: mg/Kg	Prep Date: 1/7/2022	RunNo: 72450							
Client ID: MBLKS	Batch ID: 34970		Analysis Date: 1/7/2022	SeqNo: 1478949							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Dichlorodifluoromethane (CFC-12)	ND	0.0500									
Chloromethane	ND	0.0800									
Vinyl chloride	ND	0.0250									
Bromomethane	ND	0.150									
Trichlorofluoromethane (CFC-11)	ND	0.0500									
Chloroethane	ND	0.120									
1,1-Dichloroethene	ND	0.100									
Acetone	ND	0.500									
Methylene chloride	0.0219	0.0150									

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QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260D

Sample ID: MB-34970	SampType: MBLK	Units: mg/Kg	Prep Date: 1/7/2022	RunNo: 72450
Client ID: MBLKS	Batch ID: 34970		Analysis Date: 1/7/2022	SeqNo: 1478949

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
trans-1,2-Dichloroethene	ND	0.0300									
Methyl tert-butyl ether (MTBE)	ND	0.0300									
1,1-Dichloroethane	ND	0.0250									Q
cis-1,2-Dichloroethene	ND	0.0250									
(MEK) 2-Butanone	ND	0.450									
Chloroform	ND	0.0250									
1,1,1-Trichloroethane (TCA)	ND	0.0250									
1,1-Dichloropropene	ND	0.0250									
Carbon tetrachloride	ND	0.0750									
1,2-Dichloroethane (EDC)	ND	0.0230									
Benzene	ND	0.0200									
Trichloroethene (TCE)	ND	0.0200									
1,2-Dichloropropane	ND	0.0200									
Bromodichloromethane	ND	0.0250									
Dibromomethane	ND	0.0200									
cis-1,3-Dichloropropene	ND	0.0800									
Toluene	ND	0.0300									
Trans-1,3-Dichloropropylene	ND	0.0500									
Methyl Isobutyl Ketone (MIBK)	ND	0.0750									
1,1,2-Trichloroethane	ND	0.0170									
1,3-Dichloropropane	ND	0.0200									
Tetrachloroethene (PCE)	ND	0.0400									
Dibromochloromethane	ND	0.0200									
1,2-Dibromoethane (EDB)	ND	0.0100									
2-Hexanone (MBK)	ND	0.0600									
Chlorobenzene	ND	0.0250									
1,1,1,2-Tetrachloroethane	ND	0.0200									
Ethylbenzene	ND	0.0250									
m,p-Xylene	ND	0.0500									
o-Xylene	ND	0.0250									

Work Order: 2112441
CLIENT: GeoEngineers
Project: 701 S Jackson Property Site

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260D

Sample ID: MB-34970	SampType: MBLK	Units: mg/Kg	Prep Date: 1/7/2022	RunNo: 72450							
Client ID: MBLKS	Batch ID: 34970		Analysis Date: 1/7/2022	SeqNo: 1478949							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Styrene	ND	0.0250									
Isopropylbenzene	ND	0.0300									
Bromoform	ND	0.0250									
1,1,2,2-Tetrachloroethane	ND	0.0150									
n-Propylbenzene	ND	0.0300									
Bromobenzene	ND	0.0300									
1,3,5-Trimethylbenzene	ND	0.0250									
2-Chlorotoluene	ND	0.0300									
4-Chlorotoluene	ND	0.0300									
tert-Butylbenzene	ND	0.0300									
1,2,3-Trichloropropane	ND	0.0250									
1,2,4-Trichlorobenzene	ND	0.0400									
sec-Butylbenzene	ND	0.0300									
4-Isopropyltoluene	ND	0.0300									
1,3-Dichlorobenzene	ND	0.0350									
1,4-Dichlorobenzene	ND	0.0300									
n-Butylbenzene	ND	0.0400									
1,2-Dichlorobenzene	ND	0.0300									
1,2-Dibromo-3-chloropropane	ND	0.0600									
1,2,4-Trimethylbenzene	ND	0.0250									
Hexachloro-1,3-butadiene	ND	0.0500									
Naphthalene	ND	0.100									
1,2,3-Trichlorobenzene	ND	0.0500									
Surr: Dibromofluoromethane	1.14		1.250		91.0	80	120				
Surr: Toluene-d8	1.17		1.250		93.7	80	120				
Surr: 1-Bromo-4-fluorobenzene	1.23		1.250		98.3	80	120				

NOTES:

Q - Associated calibration verification is below acceptance criteria. Result may be low-biased.

Work Order: 2112441
CLIENT: GeoEngineers
Project: 701 S Jackson Property Site

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260D

Sample ID: 2112441-021BDUP	SampType: DUP	Units: mg/Kg-dry	Prep Date: 1/7/2022	RunNo: 72450							
Client ID: GEI-7-7.5	Batch ID: 34970		Analysis Date: 1/7/2022	SeqNo: 1478956							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Dichlorodifluoromethane (CFC-12)	ND	0.0546						0		30	
Chloromethane	ND	0.0873						0		30	
Vinyl chloride	ND	0.0273						0		30	
Bromomethane	ND	0.164						0		30	
Trichlorofluoromethane (CFC-11)	ND	0.0546						0		30	
Chloroethane	ND	0.131						0		30	
1,1-Dichloroethene	ND	0.109						0		30	
Acetone	ND	0.546						0		30	
Methylene chloride	ND	0.0164						0		30	
trans-1,2-Dichloroethene	ND	0.0327						0		30	
Methyl tert-butyl ether (MTBE)	ND	0.0327						0		30	
1,1-Dichloroethane	ND	0.0273						0		30	Q
cis-1,2-Dichloroethene	ND	0.0273						0		30	
(MEK) 2-Butanone	ND	0.491						0		30	
Chloroform	ND	0.0273						0		30	
1,1,1-Trichloroethane (TCA)	ND	0.0273						0		30	
1,1-Dichloropropene	ND	0.0273						0		30	
Carbon tetrachloride	ND	0.0818						0		30	
1,2-Dichloroethane (EDC)	ND	0.0251						0		30	
Benzene	ND	0.0218						0		30	
Trichloroethene (TCE)	ND	0.0218						0		30	
1,2-Dichloropropane	ND	0.0218						0		30	
Bromodichloromethane	ND	0.0273						0		30	
Dibromomethane	ND	0.0218						0		30	
cis-1,3-Dichloropropene	ND	0.0873						0		30	
Toluene	ND	0.0327						0		30	
Trans-1,3-Dichloropropylene	ND	0.0546						0		30	
Methyl Isobutyl Ketone (MIBK)	ND	0.0818						0		30	
1,1,2-Trichloroethane	ND	0.0186						0		30	
1,3-Dichloropropane	ND	0.0218						0		30	

Work Order: 2112441
CLIENT: GeoEngineers
Project: 701 S Jackson Property Site

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260D

Sample ID: 2112441-021BDUP	SampType: DUP	Units: mg/Kg-dry	Prep Date: 1/7/2022	RunNo: 72450							
Client ID: GEI-7-7.5	Batch ID: 34970		Analysis Date: 1/7/2022	SeqNo: 1478956							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Tetrachloroethene (PCE)	ND	0.0437						0		30	
Dibromochloromethane	ND	0.0218						0		30	
1,2-Dibromoethane (EDB)	ND	0.0109						0		30	
2-Hexanone (MBK)	ND	0.0655						0		30	
Chlorobenzene	ND	0.0273						0		30	
1,1,1,2-Tetrachloroethane	ND	0.0218						0		30	
Ethylbenzene	ND	0.0273						0		30	
m,p-Xylene	ND	0.0546						0		30	
o-Xylene	ND	0.0273						0		30	
Styrene	ND	0.0273						0		30	
Isopropylbenzene	ND	0.0327						0		30	
Bromoform	ND	0.0273						0		30	
1,1,1,2,2-Tetrachloroethane	ND	0.0164						0		30	
n-Propylbenzene	ND	0.0327						0		30	
Bromobenzene	ND	0.0327						0		30	
1,3,5-Trimethylbenzene	ND	0.0273						0		30	
2-Chlorotoluene	ND	0.0327						0		30	
4-Chlorotoluene	ND	0.0327						0		30	
tert-Butylbenzene	ND	0.0327						0		30	
1,2,3-Trichloropropane	ND	0.0273						0		30	
1,2,4-Trichlorobenzene	ND	0.0437						0		30	
sec-Butylbenzene	ND	0.0327						0		30	
4-Isopropyltoluene	ND	0.0327						0		30	
1,3-Dichlorobenzene	ND	0.0382						0		30	
1,4-Dichlorobenzene	ND	0.0327						0		30	
n-Butylbenzene	ND	0.0437						0		30	
1,2-Dichlorobenzene	ND	0.0327						0		30	
1,2-Dibromo-3-chloropropane	ND	0.0655						0		30	
1,2,4-Trimethylbenzene	ND	0.0273						0		30	
Hexachloro-1,3-butadiene	ND	0.0546						0		30	

Work Order: 2112441
CLIENT: GeoEngineers
Project: 701 S Jackson Property Site

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260D

Sample ID: 2112441-021BDUP	SampType: DUP	Units: mg/Kg-dry	Prep Date: 1/7/2022	RunNo: 72450							
Client ID: GEI-7-7.5	Batch ID: 34970		Analysis Date: 1/7/2022	SeqNo: 1478956							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	ND	0.109						0		30	
1,2,3-Trichlorobenzene	ND	0.0546						0		30	
Surr: Dibromofluoromethane	1.22		1.364		89.8	80	120		0		
Surr: Toluene-d8	1.31		1.364		95.7	80	120		0		
Surr: 1-Bromo-4-fluorobenzene	1.33		1.364		97.3	80	120		0		

NOTES:

Q - Associated calibration verification is below acceptance criteria. Result may be low-biased.

Sample ID: 2201081-001BMS	SampType: MS	Units: mg/Kg-dry	Prep Date: 1/7/2022	RunNo: 72450							
Client ID: BATCH	Batch ID: 34970		Analysis Date: 1/7/2022	SeqNo: 1478960							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	0.405	0.0618	1.237	0	32.7	8.09	137				
Chloromethane	0.798	0.0990	1.237	0	64.5	30.4	129				
Vinyl chloride	0.828	0.0309	1.237	0	67.0	47.4	135				
Bromomethane	0.740	0.186	1.237	0	59.8	42.8	175				
Trichlorofluoromethane (CFC-11)	0.786	0.0618	1.237	0	63.5	62.6	137				
Chloroethane	0.802	0.148	1.237	0	64.8	51.8	145				
1,1-Dichloroethene	0.791	0.124	1.237	0	63.9	72.1	129				S
Acetone	2.31	0.618	3.092	0	74.7	68.4	141				
Methylene chloride	0.781	0.0186	1.237	0	63.1	77.5	122				S
trans-1,2-Dichloroethene	0.784	0.0371	1.237	0	63.4	79.7	122				S
Methyl tert-butyl ether (MTBE)	0.884	0.0371	1.237	0	71.4	67.5	140				
1,1-Dichloroethane	0.731	0.0309	1.237	0	59.1	73	128				S
cis-1,2-Dichloroethene	1.32	0.0309	1.237	0	107	80.8	121				
(MEK) 2-Butanone	3.51	0.557	3.092	0	113	64.6	141				
Chloroform	1.38	0.0309	1.237	0	112	79	122				
1,1,1-Trichloroethane (TCA)	1.32	0.0309	1.237	0	107	84.9	122				
1,1-Dichloropropene	1.35	0.0309	1.237	0	109	74.9	128				
Carbon tetrachloride	1.26	0.0928	1.237	0	102	75	128				
1,2-Dichloroethane (EDC)	1.36	0.0284	1.237	0	110	76.5	124				

Work Order: 2112441
 CLIENT: GeoEngineers
 Project: 701 S Jackson Property Site

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260D

Sample ID: 2201081-001BMS	SampType: MS	Units: mg/Kg-dry	Prep Date: 1/7/2022	RunNo: 72450							
Client ID: BATCH	Batch ID: 34970		Analysis Date: 1/7/2022	SeqNo: 1478960							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	1.29	0.0247	1.237	0	104	79.9	123				
Trichloroethene (TCE)	1.02	0.0247	1.237	0	82.4	78.4	129				
1,2-Dichloropropane	1.08	0.0247	1.237	0	87.5	76.1	124				
Bromodichloromethane	0.983	0.0309	1.237	0	79.5	80.3	121				S
Dibromomethane	1.03	0.0247	1.237	0	83.5	78.7	124				
cis-1,3-Dichloropropene	0.908	0.0990	1.237	0	73.4	72.4	123				
Toluene	0.936	0.0371	1.237	0	75.7	83.6	119				S
Trans-1,3-Dichloropropylene	0.884	0.0618	1.237	0	71.4	71.7	124				S
Methyl Isobutyl Ketone (MIBK)	2.59	0.0928	3.092	0	83.9	58.5	144				
1,1,2-Trichloroethane	0.908	0.0210	1.237	0	73.4	74.1	130				S
1,3-Dichloropropane	0.890	0.0247	1.237	0	71.9	74.5	128				S
Tetrachloroethene (PCE)	0.863	0.0495	1.237	0	69.8	81.3	126				S
Dibromochloromethane	0.869	0.0247	1.237	0	70.2	78.5	121				S
1,2-Dibromoethane (EDB)	0.904	0.0124	1.237	0	73.1	77.1	126				S
2-Hexanone (MBK)	2.33	0.0742	3.092	0	75.3	54.9	148				
Chlorobenzene	1.26	0.0309	1.237	0	102	87.7	117				
1,1,1,2-Tetrachloroethane	1.22	0.0247	1.237	0	98.6	78.2	127				
Ethylbenzene	1.24	0.0309	1.237	0	101	79.9	129				
m,p-Xylene	2.57	0.0618	2.474	0	104	80.4	129				
o-Xylene	1.18	0.0309	1.237	0	95.7	79.2	126				
Styrene	1.16	0.0309	1.237	0	93.8	80.7	126				
Isopropylbenzene	1.18	0.0371	1.237	0	95.6	79.2	131				
Bromoform	1.15	0.0309	1.237	0	92.7	65.2	138				
1,1,2,2-Tetrachloroethane	1.10	0.0186	1.237	0	88.6	65.4	136				
n-Propylbenzene	1.12	0.0371	1.237	0	90.2	78.7	134				
Bromobenzene	1.15	0.0371	1.237	0	92.9	78.6	127				
1,3,5-Trimethylbenzene	1.11	0.0309	1.237	0	89.8	77.5	130				
2-Chlorotoluene	1.11	0.0371	1.237	0	89.8	80.1	129				
4-Chlorotoluene	1.08	0.0371	1.237	0	87.5	80.4	127				
tert-Butylbenzene	1.09	0.0371	1.237	0	88.5	84.1	122				

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CLIENT: GeoEngineers
Project: 701 S Jackson Property Site

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260D

Sample ID: 2201081-001BMS	SampType: MS	Units: mg/Kg-dry	Prep Date: 1/7/2022	RunNo: 72450
Client ID: BATCH	Batch ID: 34970		Analysis Date: 1/7/2022	SeqNo: 1478960

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,3-Trichloropropane	1.14	0.0309	1.237	0	92.0	76.7	125				
1,2,4-Trichlorobenzene	1.22	0.0495	1.237	0	98.8	74.3	134				
sec-Butylbenzene	1.05	0.0371	1.237	0	85.2	76.4	134				
4-Isopropyltoluene	1.04	0.0371	1.237	0	84.2	75.9	132				
1,3-Dichlorobenzene	1.29	0.0433	1.237	0	105	80.2	128				
1,4-Dichlorobenzene	1.33	0.0371	1.237	0	108	80.9	128				
n-Butylbenzene	1.33	0.0495	1.237	0	108	74.7	131				
1,2-Dichlorobenzene	1.36	0.0371	1.237	0	110	80.1	129				
1,2-Dibromo-3-chloropropane	1.38	0.0742	1.237	0	112	63.9	142				
1,2,4-Trimethylbenzene	1.08	0.0309	1.237	0	87.4	76.4	130				
Hexachloro-1,3-butadiene	1.22	0.0618	1.237	0	98.9	67.7	139				
Naphthalene	1.18	0.124	1.237	0	95.3	54.8	157				
1,2,3-Trichlorobenzene	1.15	0.0618	1.237	0	92.6	62.7	151				
Surr: Dibromofluoromethane	1.68		1.546		109	80	120				
Surr: Toluene-d8	1.15		1.546		74.6	80	120				S
Surr: 1-Bromo-4-fluorobenzene	1.43		1.546		92.3	80	120				

NOTES:

- S - Spike recovery indicates a possible matrix effect.
- S - Outlying surrogate recovery(ies) observed.

Sample ID: LCS-34999	SampType: LCS	Units: mg/Kg	Prep Date: 1/11/2022	RunNo: 72521
Client ID: LCSS	Batch ID: 34999		Analysis Date: 1/11/2022	SeqNo: 1480145

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	0.983	0.0200	1.000	0	98.3	80	120				
Toluene	0.924	0.0300	1.000	0	92.4	80	120				
Ethylbenzene	0.967	0.0250	1.000	0	96.7	80	120				
m,p-Xylene	1.95	0.0500	2.000	0	97.5	80	120				
o-Xylene	0.984	0.0250	1.000	0	98.4	80	120				
Surr: Dibromofluoromethane	1.22		1.250		98.0	80	120				
Surr: Toluene-d8	1.18		1.250		94.0	80	120				

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CLIENT: GeoEngineers
Project: 701 S Jackson Property Site

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260D

Sample ID: LCS-34999	SampType: LCS	Units: mg/Kg	Prep Date: 1/11/2022	RunNo: 72521							
Client ID: LCSS	Batch ID: 34999		Analysis Date: 1/11/2022	SeqNo: 1480145							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Surr: 1-Bromo-4-fluorobenzene 1.29 1.250 103 80 120

Sample ID: MB-34999	SampType: MBLK	Units: mg/Kg	Prep Date: 1/11/2022	RunNo: 72521							
Client ID: MBLKS	Batch ID: 34999		Analysis Date: 1/12/2022	SeqNo: 1480131							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Benzene	ND	0.0200									
Toluene	ND	0.0300									
Ethylbenzene	ND	0.0250									
m,p-Xylene	ND	0.0500									
o-Xylene	ND	0.0250									
Surr: Dibromofluoromethane	1.24		1.250		99.5	80	120				
Surr: Toluene-d8	0.806		1.250		64.5	80	120				S
Surr: 1-Bromo-4-fluorobenzene	1.10		1.250		88.0	80	120				

NOTES:
S - Outlying surrogate recovery(ies) observed.

Sample ID: 2201145-001BDUP	SampType: DUP	Units: mg/Kg-dry	Prep Date: 1/11/2022	RunNo: 72521							
Client ID: BATCH	Batch ID: 34999		Analysis Date: 1/12/2022	SeqNo: 1480137							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Benzene	ND	0.0210						0		30	
Toluene	ND	0.0315						0		30	
Ethylbenzene	ND	0.0263						0		30	
m,p-Xylene	ND	0.0526						0		30	
o-Xylene	ND	0.0263						0		30	
Surr: Dibromofluoromethane	1.35		1.314		103	80	120		0		
Surr: Toluene-d8	0.889		1.314		67.6	80	120		0		S
Surr: 1-Bromo-4-fluorobenzene	1.31		1.314		99.4	80	120		0		

Work Order: 2112441
 CLIENT: GeoEngineers
 Project: 701 S Jackson Property Site

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260D

Sample ID: 2201145-001BDUP	SampType: DUP	Units: mg/Kg-dry	Prep Date: 1/11/2022	RunNo: 72521							
Client ID: BATCH	Batch ID: 34999		Analysis Date: 1/12/2022	SeqNo: 1480137							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

NOTES:

S - Outlying surrogate recovery(ies) observed. A duplicate analysis was performed and recovered within range.

Sample ID: 2201145-005BMS	SampType: MS	Units: mg/Kg-dry	Prep Date: 1/11/2022	RunNo: 72521							
Client ID: BATCH	Batch ID: 34999		Analysis Date: 1/12/2022	SeqNo: 1480143							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	1.07	0.0197	0.9840	0	108	79.9	123				
Toluene	0.864	0.0295	0.9840	0	87.8	83.6	119				
Ethylbenzene	1.00	0.0246	0.9840	0	102	79.9	129				
m,p-Xylene	1.98	0.0492	1.968	0	101	80.4	129				
o-Xylene	1.00	0.0246	0.9840	0	102	79.2	126				
Surr: Dibromofluoromethane	1.33		1.230		108	80	120				
Surr: Toluene-d8	1.08		1.230		87.6	80	120				
Surr: 1-Bromo-4-fluorobenzene	1.29		1.230		105	80	120				

Client Name: **GEI**

 Work Order Number: **2112441**

 Logged by: **Brianna Barnes**

 Date Received: **12/29/2021 1:25:00 PM**

Chain of Custody

1. Is Chain of Custody complete? Yes No Not Present
2. How was the sample delivered? Client

Log In

3. Coolers are present? Yes No NA
4. Shipping container/cooler in good condition? Yes No
5. Custody Seals present on shipping container/cooler?
(Refer to comments for Custody Seals not intact) Yes No Not Present
6. Was an attempt made to cool the samples? Yes No NA
7. Were all items received at a temperature of >2°C to 6°C * Yes No NA
8. Sample(s) in proper container(s)? Yes No
9. Sufficient sample volume for indicated test(s)? Yes No
10. Are samples properly preserved? Yes No
11. Was preservative added to bottles? Yes No NA
12. Is there headspace in the VOA vials? Yes No NA
13. Did all samples containers arrive in good condition(unbroken)? Yes No
14. Does paperwork match bottle labels? Yes No
15. Are matrices correctly identified on Chain of Custody? Yes No
16. Is it clear what analyses were requested? Yes No
17. Were all holding times able to be met? Yes No

Special Handling (if applicable)

18. Was client notified of all discrepancies with this order? Yes No NA

Person Notified:	<input type="text"/>	Date:	<input type="text"/>
By Whom:	<input type="text"/>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text"/>		
Client Instructions:	<input type="text"/>		

19. Additional remarks:

Item Information

Item #	Temp °C
Sample	2.4

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C



3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Chain of Custody Record & Laboratory Services Agreement

Date: 12-29-2021 Page: 1 of 3

Project Name: 701 S Jackson Property Site

Project No: 24504-001-01

Collected by: Nathaniel Sorenson

Location: Seattle, WA

Report to (PM): Robert Tennant

PM Email: RRTENNANT@GEOENGINEERS.COM

Laboratory Project No (Internal): 2112441

Special Remarks:
PM will call w/ analytical results

Sample Disposal: Return to client Disposal by lab (after 30 days)

Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	# of Cont.	VOCs (EPA 8260 / 624)	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCID)	Diesel/Heavy Oil Range Organics (DH)	SVOCs (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8082 / 608)	Metals** (EPA 6020 / 200.8)	Total (T) Dissolved (D)	Anions (IC)**	EDB (8011)	Comments
1 GEL-4-2.5	12-29-21	1045	SOIL	3													
2 GEL-4-5.0		1050		3													
3 GEL-4-7.5		1055		3													
4 GEL-4-10.0		1100		3													
5 GEL-4-12.5		1105		3													
6 GEL-4-15.0		1110		3													
7 GEL-5-2.5		1205		3													
8 GEL-5-5.0		1010		3													
9 GEL-5-7.5		1015		3													
10		1012		3													

*Matrix: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water

**Metals (Circle): MTCA-5 RCRA-8 Priority Pollutants TAL Individual: Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sb Se Sr Sn Tl Tl V Zn

***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide Iodide O-Phosphate Fluoride Nitrate+Nitrite

I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above, that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Relinquished (Signature) *Nathaniel Sorenson* Print Name: Nathaniel Sorenson Date/Time: 12-29-21 12:51

Received (Signature) *Justine Martz* Print Name: Justine Martz Date/Time: 12/29/21 13:05

Relinquished (Signature) *Nathaniel Sorenson* Print Name: Nathaniel Sorenson Date/Time: 12-29-21 12:51



3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Chain of Custody Record & Laboratory Services Agreement

Date: _____ Page: 2 of 3

Laboratory Project No (Internal): **2112441**

Project Name:

Special Remarks:

Project No:

Collected by:

Location:

Report To (PM):

Sample Disposal: Return to client Disposal by lab (after 30 days)

PM Email:

Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	# of Cont.	VOCs (EPA 8260 / 624)	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCD)	Diesel/Heavy Oil Range Organics (DX)	SVOCs (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8082 / 608)	Metals** (EPA 6020 / 200.8)	Total (T) Dissolved (D)	Anions (C)***	EDB (001)	Comments
1 GEL-5-10.0	12/29/21	1020	Soil	3									X				
2 GEL-5-12.5		1025		3									X				
3 GEL-5-15.0		1030		3									X				
4 GEL-6-2.5		0925		3									X				
5 GEL-6-5.0		0930		3									X				
6 GEL-6-7.5		0935		3									X				
7 GEL-6-10.0		0940		3									X				
8 GEL-6-12.5		0945		3									X				
9 GEL-6-15.0		0950		3									X				
10 GEL-7-2.5		1125		3									X				

*Matrix: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water
 **Metals (Circle): MTCA-5 RCRA-8 Priority Pollutants TAL Individual: Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sb Se Sr Sn Tl Ti V Zn
 ***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite

I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above, that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Relinquished (Signature) _____ Date/Time _____ Received (Signature) _____ Date/Time _____
 Print Name: *William Saumen* Date/Time: *12/29/21 12:51* Print Name: *Justine Martz* Date/Time: *12/29/21 13:25*



3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Chain of Custody Record & Laboratory Services Agreement

Date: 12-29-2021 Page: 1 of 3

Project Name: 701 S Jackson Property Site

Project No: 24504-001-01

Collected by: Nathaniel Sorenson

Location: Seattle, WA

Report to (PM): Robert Tennant

PM Email: RRTENNANT@GEOTECHNICALS.COM

Laboratory Project No (Internal): 2112441

Special Remarks:
PM will call w/ analytical results
Update per RT 1/3/22 - gac

Sample Disposal: Return to client Disposal by lab (after 30 days)

Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	# of Cont.	VOCs (EPA 8260 / 624)	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCID)	Diesel/Heavy Oil Range Organics (DH)	SVOCs (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8082 / 608)	Metals** (EPA 6020 / 200.8)	Total (T) Dissolved (D)	Anions (IC)**	EDB (8011)	Comments
1 GEI-4-2.5	12-29-21	1045	SOIL	3	X	X	X	X	X	X	X	X	X	X	X	X	
2 GEI-4-5.0		1050		3													
3 GEI-4-7.5		1055		3													
4 GEI-4-10.0		1100		3													
5 GEI-4-12.5		1105		3	X	X	X	X	X	X	X	X	X	X	X	X	
6 GEI-4-15.0		1110		3													
7 GEI-5-2.5		1205		3	X	X	X	X	X	X	X	X	X	X	X	X	
8 GEI-5-5.0		1210		3													
9 GEI-5-7.5		1215		3													
10		122															

*Matrix: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water

Metals (Circle): MTCA-5 **RCA-8 Priority Pollutants TAL Individual: Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sb Se Sr Sn Tl Ti V Zn

***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide Iodide O-Phosphate Fluoride Nitrate+Nitrite

I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above, that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Turn-around Time: Standard Next Day 2 Day 3 Day Same Day (specify)

Relinquished (Signature) *Nathaniel Sorenson* Date/Time 12-29-21 12:51
 Relinquished (Signature) *Justine Martz* Date/Time 12/29/21 13:05



3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Chain of Custody Record & Laboratory Services Agreement

Date: _____ Page: 2 of: 3
Project Name: _____

Laboratory Project No (Internal): 2112441
Special Remarks:

Client: _____
Address: _____
City, State, Zip: _____
Telephone: _____
Fax: _____

Collected by: _____

Location: _____

Report To (PM): _____

PM Email: _____
Sample Disposal: Return to client Disposal by lab (after 30 days)

Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	# of Cont.	Analysis Parameters													Comments
					VOCs (EPA 8260 / 624)	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (GX)	Diesel/Heavy Oil Range Organics (HX)	SVOCs (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8270 - SIM)	Metals** (EPA 6020 / 200.8)	Total (T) Dissolved (D)	Anions (IC)**	EDB (8011)		
1 GEL-5-10.0	12/29/21	1020	Soil	3	X	X	X	X	X	X	X	X	X	X	X	X		
2 GEL-5-12.5		1025		3														
3 GEL-5-15.0		1030		3														
4 GEL-6-2.5		0925		3	X	X	X	X	X	X	X	X	X	X	X	X		
5 GEL-6-5.0		0930		3														
6 GEL-6-7.5		0935		3														
7 GEL-6-10.0		0940		3	X	X	X	X	X	X	X	X	X	X	X	X		
8 GEL-6-12.5		0945		3														
9 GEL-6-15.0		0950		3														
10 GEL-7-2.5		1125		3	X	X	X	X	X	X	X	X	X	X	X	X		

*Matrix: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water
 **Metals (Circle): MICA-5 Priority Pollutants TAL Individual: Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sb Se Sr Sn Tl V Zn
 ***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite

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Relinquished (Signature) _____ Date/Time _____
 Print Name _____
 Relinquished (Signature) _____ Date/Time _____
 Print Name _____
 Received (Signature) _____ Date/Time _____
 Print Name _____
 Received (Signature) _____ Date/Time _____
 Print Name _____

Turn-around Time:
 Standard Next Day
 3 Day Same Day
 2 Day _____ (specify)



3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Chain of Custody Record & Laboratory Services Agreement

Date: _____ Page: 3 of 3

Laboratory Project No (Internal): 2112441

Special Remarks:

Project Name:

Project No:

Collected by:

Location:

Report To (PM):

PM Email:

Sample Disposal: Return to client Disposal by lab (after 30 days)

Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	# of Cont.	Analytes														Comments						
					VOCs (EPA 8260 / 624)	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCID)	Diesel/Heavy Oil Range Organics (DX)	SVOCs (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8270 - SIM)	Metals** (EPA 6020 / 200.8)	Total (T) Dissolved (D)	Anions (IC)***	EDB (8011)	HCB								
1 GEL - 7 - 5.0	12.29.21	1130	Soil	3																					
2 GEL - 7 - 7.5		1135		3	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
3 GEL - 7 - 10.0		1140		3																					
4 GEL - 7 - 12.5		1145		3																					
5 GEL - 7 - 15.0		1150		3	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
6																									
7																									
8																									
9																									
10																									

*Matrix: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water

Metals (Circle): MTCA-5 **(CR-AS) Priority Pollutants TAL Individual: Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sp Se Sr Sn Ti Tl V Zn

***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate-Nitrite

I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above, that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Turn-around Time:

Standard Next Day

3 Day Same Day

2 Day _____ (specify)

Relinquished (Signature) _____ Date/Time _____

Print Name: Nathan Brown Date/Time: 12.29.21 12:51

Relinquished (Signature) _____ Date/Time _____

Print Name: Justin Mante Date/Time: 12/29/21 13:25



GeoEngineers

Robert Trahan
2101 4th Ave, Suite 950
Seattle, WA 98121

RE: 701 South Jackson
Work Order Number: 2204073

April 13, 2022

Attention Robert Trahan:

Fremont Analytical, Inc. received 19 sample(s) on 4/5/2022 for the analyses presented in the following report.

Gasoline by NWTPH-Gx
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)
Sample Moisture (Percent Moisture)
Volatile Organic Compounds by EPA Method 8260D

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Brianna Barnes
Project Manager



CLIENT: GeoEngineers
Project: 701 South Jackson
Work Order: 2204073

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
2204073-001	GEI-8-7.5	04/04/2022 10:45 AM	04/05/2022 2:59 PM
2204073-002	GEI-8-12.5	04/04/2022 10:55 AM	04/05/2022 2:59 PM
2204073-003	GEI-8-17.0	04/04/2022 11:05 AM	04/05/2022 2:59 PM
2204073-004	GEI-8-22.5	04/04/2022 11:15 AM	04/05/2022 2:59 PM
2204073-005	GEI-9-7.5	04/04/2022 9:40 AM	04/05/2022 2:59 PM
2204073-006	GEI-9-12.5	04/04/2022 10:05 AM	04/05/2022 2:59 PM
2204073-007	GEI-9-17.5	04/04/2022 10:15 AM	04/05/2022 2:59 PM
2204073-008	GEI-9-22.5	04/04/2022 10:20 AM	04/05/2022 2:59 PM
2204073-009	GEI-10-7.5	04/04/2022 1:35 PM	04/05/2022 2:59 PM
2204073-010	GEI-10-12.5	04/04/2022 1:45 PM	04/05/2022 2:59 PM
2204073-011	GEI-10-17.5	04/04/2022 1:55 PM	04/05/2022 2:59 PM
2204073-012	GEI-10-22.5	04/04/2022 2:05 PM	04/05/2022 2:59 PM
2204073-013	GEI-11-2.5	04/05/2022 9:00 AM	04/05/2022 2:59 PM
2204073-014	GEI-11-12.5	04/05/2022 9:15 AM	04/05/2022 2:59 PM
2204073-015	GEI-11-15.0	04/05/2022 9:20 AM	04/05/2022 2:59 PM
2204073-016	GEI-11-17.5	04/05/2022 9:25 AM	04/05/2022 2:59 PM
2204073-017	GEI-11-22.5	04/05/2022 9:35 AM	04/05/2022 2:59 PM
2204073-018	GEI-11-35.0	04/05/2022 9:50 AM	04/05/2022 2:59 PM
2204073-019	GEI-11-40.0	04/05/2022 10:05 AM	04/05/2022 2:59 PM

Note: If no "Time Collected" is supplied, a default of 12:00AM is assigned

CLIENT: GeoEngineers
Project: 701 South Jackson

I. SAMPLE RECEIPT:

Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:

Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:

Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Qualifiers:

- * - Flagged value is not within established control limits
- B - Analyte detected in the associated Method Blank
- D - Dilution was required
- E - Value above quantitation range
- H - Holding times for preparation or analysis exceeded
- I - Analyte with an internal standard that does not meet established acceptance criteria
- J - Analyte detected below Reporting Limit
- N - Tentatively Identified Compound (TIC)
- Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria
- S - Spike recovery outside accepted recovery limits
- ND - Not detected at the Reporting Limit
- R - High relative percent difference observed

Acronyms:

- %Rec - Percent Recovery
- CCB - Continued Calibration Blank
- CCV - Continued Calibration Verification
- DF - Dilution Factor
- DUP - Sample Duplicate
- HEM - Hexane Extractable Material
- ICV - Initial Calibration Verification
- LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
- MCL - Maximum Contaminant Level
- MB or MBLANK - Method Blank
- MDL - Method Detection Limit
- MS/MSD - Matrix Spike / Matrix Spike Duplicate
- PDS - Post Digestion Spike
- Ref Val - Reference Value
- REP - Sample Replicate
- RL - Reporting Limit
- RPD - Relative Percent Difference
- SD - Serial Dilution
- SGT - Silica Gel Treatment
- SPK - Spike
- Surr - Surrogate



Client: GeoEngineers

Collection Date: 4/4/2022 10:55:00 AM

Project: 701 South Jackson

Lab ID: 2204073-002

Matrix: Soil

Client Sample ID: GEI-8-12.5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 36062 Analyst: OK

Naphthalene	ND	22.1		µg/Kg-dry	1	4/13/2022 4:23:53 AM
2-Methylnaphthalene	ND	22.1		µg/Kg-dry	1	4/13/2022 4:23:53 AM
1-Methylnaphthalene	ND	22.1		µg/Kg-dry	1	4/13/2022 4:23:53 AM
Surr: 2-Fluorobiphenyl	91.9	29.6 - 130		%Rec	1	4/13/2022 4:23:53 AM
Surr: Terphenyl-d14 (surr)	111	38 - 145		%Rec	1	4/13/2022 4:23:53 AM

Gasoline by NWTPH-Gx

Batch ID: 36034 Analyst: TN

Gasoline	ND	9.14		mg/Kg-dry	1	4/7/2022 6:31:46 PM
Surr: Toluene-d8	101	65 - 135		%Rec	1	4/7/2022 6:31:46 PM
Surr: 4-Bromofluorobenzene	100	65 - 135		%Rec	1	4/7/2022 6:31:46 PM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 36034 Analyst: TN

Benzene	ND	0.0365		mg/Kg-dry	1	4/7/2022 6:31:46 PM
Toluene	ND	0.0548		mg/Kg-dry	1	4/7/2022 6:31:46 PM
Ethylbenzene	ND	0.0457		mg/Kg-dry	1	4/7/2022 6:31:46 PM
m,p-Xylene	ND	0.0914		mg/Kg-dry	1	4/7/2022 6:31:46 PM
o-Xylene	ND	0.0457		mg/Kg-dry	1	4/7/2022 6:31:46 PM
Surr: Dibromofluoromethane	86.3	80 - 120		%Rec	1	4/7/2022 6:31:46 PM
Surr: Toluene-d8	98.0	80 - 120		%Rec	1	4/7/2022 6:31:46 PM
Surr: 1-Bromo-4-fluorobenzene	97.0	80 - 120		%Rec	1	4/7/2022 6:31:46 PM

Sample Moisture (Percent Moisture)

Batch ID: R74648 Analyst: ALB

Percent Moisture	12.7	0.500		wt%	1	4/11/2022 10:57:50 AM
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Analytical Report

Work Order: 2204073
Date Reported: 4/13/2022

Client: GeoEngineers
Project: 701 South Jackson
Lab ID: 2204073-003
Client Sample ID: GEI-8-17.0

Collection Date: 4/4/2022 11:05:00 AM

Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 36062 Analyst: OK

Naphthalene	ND	24.5		µg/Kg-dry	1	4/13/2022 4:51:51 AM
2-Methylnaphthalene	ND	24.5		µg/Kg-dry	1	4/13/2022 4:51:51 AM
1-Methylnaphthalene	ND	24.5		µg/Kg-dry	1	4/13/2022 4:51:51 AM
Surr: 2-Fluorobiphenyl	87.9	29.6 - 130		%Rec	1	4/13/2022 4:51:51 AM
Surr: Terphenyl-d14 (surr)	104	38 - 145		%Rec	1	4/13/2022 4:51:51 AM

Gasoline by NWTPH-Gx

Batch ID: 36034 Analyst: TN

Gasoline	ND	5.74		mg/Kg-dry	1	4/7/2022 7:35:46 PM
Surr: Toluene-d8	102	65 - 135		%Rec	1	4/7/2022 7:35:46 PM
Surr: 4-Bromofluorobenzene	101	65 - 135		%Rec	1	4/7/2022 7:35:46 PM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 36034 Analyst: TN

Benzene	ND	0.0230		mg/Kg-dry	1	4/7/2022 7:35:46 PM
Toluene	ND	0.0345		mg/Kg-dry	1	4/7/2022 7:35:46 PM
Ethylbenzene	ND	0.0287		mg/Kg-dry	1	4/7/2022 7:35:46 PM
m,p-Xylene	ND	0.0574		mg/Kg-dry	1	4/7/2022 7:35:46 PM
o-Xylene	ND	0.0287		mg/Kg-dry	1	4/7/2022 7:35:46 PM
Surr: Dibromofluoromethane	93.7	80 - 120		%Rec	1	4/7/2022 7:35:46 PM
Surr: Toluene-d8	99.3	80 - 120		%Rec	1	4/7/2022 7:35:46 PM
Surr: 1-Bromo-4-fluorobenzene	97.5	80 - 120		%Rec	1	4/7/2022 7:35:46 PM

Sample Moisture (Percent Moisture)

Batch ID: R74648 Analyst: ALB

Percent Moisture	22.8	0.500		wt%	1	4/11/2022 10:57:50 AM
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Client: GeoEngineers

Collection Date: 4/4/2022 10:05:00 AM

Project: 701 South Jackson

Lab ID: 2204073-006

Matrix: Soil

Client Sample ID: GEI-9-12.5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 36062 Analyst: OK

Naphthalene	ND	21.2		µg/Kg-dry	1	4/13/2022 5:19:50 AM
2-Methylnaphthalene	ND	21.2		µg/Kg-dry	1	4/13/2022 5:19:50 AM
1-Methylnaphthalene	ND	21.2		µg/Kg-dry	1	4/13/2022 5:19:50 AM
Surr: 2-Fluorobiphenyl	85.7	29.6 - 130		%Rec	1	4/13/2022 5:19:50 AM
Surr: Terphenyl-d14 (surr)	111	38 - 145		%Rec	1	4/13/2022 5:19:50 AM

Gasoline by NWTPH-Gx

Batch ID: 36034 Analyst: TN

Gasoline	ND	6.50		mg/Kg-dry	1	4/7/2022 8:39:24 PM
Surr: Toluene-d8	102	65 - 135		%Rec	1	4/7/2022 8:39:24 PM
Surr: 4-Bromofluorobenzene	101	65 - 135		%Rec	1	4/7/2022 8:39:24 PM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 36034 Analyst: TN

Benzene	ND	0.0260		mg/Kg-dry	1	4/7/2022 8:39:24 PM
Toluene	ND	0.0390		mg/Kg-dry	1	4/7/2022 8:39:24 PM
Ethylbenzene	ND	0.0325		mg/Kg-dry	1	4/7/2022 8:39:24 PM
m,p-Xylene	ND	0.0650		mg/Kg-dry	1	4/7/2022 8:39:24 PM
o-Xylene	ND	0.0325		mg/Kg-dry	1	4/7/2022 8:39:24 PM
Surr: Dibromofluoromethane	94.6	80 - 120		%Rec	1	4/7/2022 8:39:24 PM
Surr: Toluene-d8	99.4	80 - 120		%Rec	1	4/7/2022 8:39:24 PM
Surr: 1-Bromo-4-fluorobenzene	97.7	80 - 120		%Rec	1	4/7/2022 8:39:24 PM

Sample Moisture (Percent Moisture)

Batch ID: R74648 Analyst: ALB

Percent Moisture	21.4	0.500		wt%	1	4/11/2022 10:57:50 AM
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Client: GeoEngineers

Collection Date: 4/4/2022 10:15:00 AM

Project: 701 South Jackson

Lab ID: 2204073-007

Matrix: Soil

Client Sample ID: GEI-9-17.5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 36062 Analyst: OK

Naphthalene	ND	24.8		µg/Kg-dry	1	4/13/2022 5:47:53 AM
2-Methylnaphthalene	ND	24.8		µg/Kg-dry	1	4/13/2022 5:47:53 AM
1-Methylnaphthalene	ND	24.8		µg/Kg-dry	1	4/13/2022 5:47:53 AM
Surr: 2-Fluorobiphenyl	81.7	29.6 - 130		%Rec	1	4/13/2022 5:47:53 AM
Surr: Terphenyl-d14 (surr)	109	38 - 145		%Rec	1	4/13/2022 5:47:53 AM

Gasoline by NWTPH-Gx

Batch ID: 36034 Analyst: TN

Gasoline	ND	6.25		mg/Kg-dry	1	4/7/2022 9:11:16 PM
Surr: Toluene-d8	101	65 - 135		%Rec	1	4/7/2022 9:11:16 PM
Surr: 4-Bromofluorobenzene	102	65 - 135		%Rec	1	4/7/2022 9:11:16 PM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 36034 Analyst: TN

Benzene	ND	0.0250		mg/Kg-dry	1	4/7/2022 9:11:16 PM
Toluene	ND	0.0375		mg/Kg-dry	1	4/7/2022 9:11:16 PM
Ethylbenzene	ND	0.0312		mg/Kg-dry	1	4/7/2022 9:11:16 PM
m,p-Xylene	ND	0.0625		mg/Kg-dry	1	4/7/2022 9:11:16 PM
o-Xylene	ND	0.0312		mg/Kg-dry	1	4/7/2022 9:11:16 PM
Surr: Dibromofluoromethane	96.0	80 - 120		%Rec	1	4/7/2022 9:11:16 PM
Surr: Toluene-d8	100	80 - 120		%Rec	1	4/7/2022 9:11:16 PM
Surr: 1-Bromo-4-fluorobenzene	98.2	80 - 120		%Rec	1	4/7/2022 9:11:16 PM

Sample Moisture (Percent Moisture)

Batch ID: R74648 Analyst: ALB

Percent Moisture	21.7	0.500		wt%	1	4/11/2022 10:57:50 AM
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Client: GeoEngineers
Project: 701 South Jackson
Lab ID: 2204073-010
Client Sample ID: GEI-10-12.5

Collection Date: 4/4/2022 1:45:00 PM
Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 36062 Analyst: OK

Naphthalene	ND	22.3		µg/Kg-dry	1	4/13/2022 6:15:51 AM
2-Methylnaphthalene	ND	22.3		µg/Kg-dry	1	4/13/2022 6:15:51 AM
1-Methylnaphthalene	ND	22.3		µg/Kg-dry	1	4/13/2022 6:15:51 AM
Surr: 2-Fluorobiphenyl	94.6	29.6 - 130		%Rec	1	4/13/2022 6:15:51 AM
Surr: Terphenyl-d14 (surr)	113	38 - 145		%Rec	1	4/13/2022 6:15:51 AM

Gasoline by NWTPH-Gx

Batch ID: 36034 Analyst: TN

Gasoline	ND	5.64		mg/Kg-dry	1	4/7/2022 9:43:02 PM
Surr: Toluene-d8	101	65 - 135		%Rec	1	4/7/2022 9:43:02 PM
Surr: 4-Bromofluorobenzene	99.7	65 - 135		%Rec	1	4/7/2022 9:43:02 PM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 36034 Analyst: TN

Benzene	ND	0.0226		mg/Kg-dry	1	4/7/2022 9:43:02 PM
Toluene	ND	0.0338		mg/Kg-dry	1	4/7/2022 9:43:02 PM
Ethylbenzene	ND	0.0282		mg/Kg-dry	1	4/7/2022 9:43:02 PM
m,p-Xylene	ND	0.0564		mg/Kg-dry	1	4/7/2022 9:43:02 PM
o-Xylene	ND	0.0282		mg/Kg-dry	1	4/7/2022 9:43:02 PM
Surr: Dibromofluoromethane	92.6	80 - 120		%Rec	1	4/7/2022 9:43:02 PM
Surr: Toluene-d8	101	80 - 120		%Rec	1	4/7/2022 9:43:02 PM
Surr: 1-Bromo-4-fluorobenzene	96.5	80 - 120		%Rec	1	4/7/2022 9:43:02 PM

Sample Moisture (Percent Moisture)

Batch ID: R74648 Analyst: ALB

Percent Moisture	16.5	0.500		wt%	1	4/11/2022 10:57:50 AM
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Analytical Report

Work Order: 2204073
Date Reported: 4/13/2022

Client: GeoEngineers
Project: 701 South Jackson
Lab ID: 2204073-011
Client Sample ID: GEI-10-17.5

Collection Date: 4/4/2022 1:55:00 PM
Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 36062 Analyst: OK

Naphthalene	ND	24.1		µg/Kg-dry	1	4/13/2022 6:43:50 AM
2-Methylnaphthalene	ND	24.1		µg/Kg-dry	1	4/13/2022 6:43:50 AM
1-Methylnaphthalene	ND	24.1		µg/Kg-dry	1	4/13/2022 6:43:50 AM
Surr: 2-Fluorobiphenyl	89.4	29.6 - 130		%Rec	1	4/13/2022 6:43:50 AM
Surr: Terphenyl-d14 (surr)	108	38 - 145		%Rec	1	4/13/2022 6:43:50 AM

Gasoline by NWTPH-Gx

Batch ID: 36034 Analyst: TN

Gasoline	ND	5.76		mg/Kg-dry	1	4/7/2022 10:14:45 PM
Surr: Toluene-d8	101	65 - 135		%Rec	1	4/7/2022 10:14:45 PM
Surr: 4-Bromofluorobenzene	101	65 - 135		%Rec	1	4/7/2022 10:14:45 PM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 36034 Analyst: TN

Benzene	ND	0.0230		mg/Kg-dry	1	4/7/2022 10:14:45 PM
Toluene	ND	0.0346		mg/Kg-dry	1	4/7/2022 10:14:45 PM
Ethylbenzene	ND	0.0288		mg/Kg-dry	1	4/7/2022 10:14:45 PM
m,p-Xylene	ND	0.0576		mg/Kg-dry	1	4/7/2022 10:14:45 PM
o-Xylene	ND	0.0288		mg/Kg-dry	1	4/7/2022 10:14:45 PM
Surr: Dibromofluoromethane	95.8	80 - 120		%Rec	1	4/7/2022 10:14:45 PM
Surr: Toluene-d8	100	80 - 120		%Rec	1	4/7/2022 10:14:45 PM
Surr: 1-Bromo-4-fluorobenzene	97.7	80 - 120		%Rec	1	4/7/2022 10:14:45 PM

Sample Moisture (Percent Moisture)

Batch ID: R74648 Analyst: ALB

Percent Moisture	18.7	0.500		wt%	1	4/11/2022 10:57:50 AM
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Client: GeoEngineers
Project: 701 South Jackson
Lab ID: 2204073-015
Client Sample ID: GEI-11-15.0

Collection Date: 4/5/2022 9:20:00 AM
Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 36062 Analyst: OK

Naphthalene	308	23.7		µg/Kg-dry	1	4/13/2022 8:08:00 AM
2-Methylnaphthalene	184	23.7		µg/Kg-dry	1	4/13/2022 8:08:00 AM
1-Methylnaphthalene	79.6	23.7		µg/Kg-dry	1	4/13/2022 8:08:00 AM
Surr: 2-Fluorobiphenyl	90.0	29.6 - 130		%Rec	1	4/13/2022 8:08:00 AM
Surr: Terphenyl-d14 (surr)	109	38 - 145		%Rec	1	4/13/2022 8:08:00 AM

Gasoline by NWTPH-Gx

Batch ID: 36034 Analyst: TN

Gasoline	41.4	4.70		mg/Kg-dry	1	4/7/2022 11:18:14 PM
Surr: Toluene-d8	101	65 - 135		%Rec	1	4/7/2022 11:18:14 PM
Surr: 4-Bromofluorobenzene	103	65 - 135		%Rec	1	4/7/2022 11:18:14 PM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 36034 Analyst: TN

Benzene	1.42	0.0188		mg/Kg-dry	1	4/7/2022 11:18:14 PM
Toluene	0.418	0.0282		mg/Kg-dry	1	4/7/2022 11:18:14 PM
Ethylbenzene	1.03	0.0235		mg/Kg-dry	1	4/7/2022 11:18:14 PM
m,p-Xylene	2.99	0.0470		mg/Kg-dry	1	4/7/2022 11:18:14 PM
o-Xylene	0.492	0.0235		mg/Kg-dry	1	4/7/2022 11:18:14 PM
Surr: Dibromofluoromethane	94.5	80 - 120		%Rec	1	4/7/2022 11:18:14 PM
Surr: Toluene-d8	103	80 - 120		%Rec	1	4/7/2022 11:18:14 PM
Surr: 1-Bromo-4-fluorobenzene	99.3	80 - 120		%Rec	1	4/7/2022 11:18:14 PM

Sample Moisture (Percent Moisture)

Batch ID: R74648 Analyst: ALB

Percent Moisture	17.0	0.500		wt%	1	4/11/2022 10:57:50 AM
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Client: GeoEngineers
Project: 701 South Jackson
Lab ID: 2204073-018
Client Sample ID: GEI-11-35.0

Collection Date: 4/5/2022 9:50:00 AM

Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 36062 Analyst: OK

Naphthalene	ND	20.1		µg/Kg-dry	1	4/13/2022 8:36:18 AM
2-Methylnaphthalene	ND	20.1		µg/Kg-dry	1	4/13/2022 8:36:18 AM
1-Methylnaphthalene	ND	20.1		µg/Kg-dry	1	4/13/2022 8:36:18 AM
Surr: 2-Fluorobiphenyl	94.5	29.6 - 130		%Rec	1	4/13/2022 8:36:18 AM
Surr: Terphenyl-d14 (surr)	118	38 - 145		%Rec	1	4/13/2022 8:36:18 AM

Gasoline by NWTPH-Gx

Batch ID: 36034 Analyst: TN

Gasoline	ND	5.88		mg/Kg-dry	1	4/7/2022 10:46:31 PM
Surr: Toluene-d8	102	65 - 135		%Rec	1	4/7/2022 10:46:31 PM
Surr: 4-Bromofluorobenzene	99.3	65 - 135		%Rec	1	4/7/2022 10:46:31 PM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 36034 Analyst: TN

Benzene	ND	0.0235		mg/Kg-dry	1	4/7/2022 10:46:31 PM
Toluene	ND	0.0353		mg/Kg-dry	1	4/7/2022 10:46:31 PM
Ethylbenzene	ND	0.0294		mg/Kg-dry	1	4/7/2022 10:46:31 PM
m,p-Xylene	ND	0.0588		mg/Kg-dry	1	4/7/2022 10:46:31 PM
o-Xylene	ND	0.0294		mg/Kg-dry	1	4/7/2022 10:46:31 PM
Surr: Dibromofluoromethane	97.7	80 - 120		%Rec	1	4/7/2022 10:46:31 PM
Surr: Toluene-d8	101	80 - 120		%Rec	1	4/7/2022 10:46:31 PM
Surr: 1-Bromo-4-fluorobenzene	96.1	80 - 120		%Rec	1	4/7/2022 10:46:31 PM

Sample Moisture (Percent Moisture)

Batch ID: R74648 Analyst: ALB

Percent Moisture	3.11	0.500		wt%	1	4/11/2022 10:57:50 AM
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Work Order: 2204073
CLIENT: GeoEngineers
Project: 701 South Jackson

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: MB-36062	SampType: MBLK	Units: µg/Kg	Prep Date: 4/11/2022	RunNo: 74713							
Client ID: MBLKS	Batch ID: 36062	Analysis Date: 4/13/2022	SeqNo: 1533082								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	ND	20.0									
2-Methylnaphthalene	ND	20.0									
1-Methylnaphthalene	ND	20.0									
Surr: 2-Fluorobiphenyl	1,070		1,000		107	29.6	130				
Surr: Terphenyl-d14 (surr)	1,280		1,000		128	38	145				

Sample ID: LCS-36062	SampType: LCS	Units: µg/Kg	Prep Date: 4/11/2022	RunNo: 74713							
Client ID: LCSS	Batch ID: 36062	Analysis Date: 4/13/2022	SeqNo: 1533083								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	2,060	20.0	2,000	0	103	60.2	119				
2-Methylnaphthalene	1,960	20.0	2,000	0	98.0	60.4	121				
1-Methylnaphthalene	1,930	20.0	2,000	0	96.3	62	119				
Surr: 2-Fluorobiphenyl	1,150		1,000		115	29.6	130				
Surr: Terphenyl-d14 (surr)	1,280		1,000		128	38	145				

Sample ID: 2204108-021AMS	SampType: MS	Units: µg/Kg-dry	Prep Date: 4/11/2022	RunNo: 74713							
Client ID: BATCH	Batch ID: 36062	Analysis Date: 4/13/2022	SeqNo: 1533085								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	1,690	22.4	2,241	0	75.5	30.2	123				
2-Methylnaphthalene	1,580	22.4	2,241	0	70.5	40.9	115				
1-Methylnaphthalene	1,550	22.4	2,241	0	69.3	35.6	121				
Surr: 2-Fluorobiphenyl	935		1,120		83.4	29.6	130				
Surr: Terphenyl-d14 (surr)	1,040		1,120		93.3	38	145				

Work Order: 2204073
CLIENT: GeoEngineers
Project: 701 South Jackson

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: 2204108-021AMSD	SampType: MSD	Units: µg/Kg-dry		Prep Date: 4/11/2022	RunNo: 74713						
Client ID: BATCH	Batch ID: 36062			Analysis Date: 4/13/2022	SeqNo: 1533086						
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	1,450	22.1	2,206	0	65.8	30.2	123	1,692	15.3	30	
2-Methylnaphthalene	1,340	22.1	2,206	0	60.9	40.9	115	1,581	16.2	30	
1-Methylnaphthalene	1,320	22.1	2,206	0	59.9	35.6	121	1,553	16.1	30	
Surr: 2-Fluorobiphenyl	754		1,103		68.3	29.6	130		0		
Surr: Terphenyl-d14 (surr)	856		1,103		77.6	38	145		0		

Work Order: 2204073
CLIENT: GeoEngineers
Project: 701 South Jackson

QC SUMMARY REPORT
Gasoline by NWTPH-Gx

Sample ID: LCS-36034	SampType: LCS	Units: mg/Kg		Prep Date: 4/7/2022	RunNo: 74627						
Client ID: LCSS	Batch ID: 36034			Analysis Date: 4/7/2022	SeqNo: 1531060						
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline	23.0	5.00	25.00	0	92.2	65	135				
Surr: Toluene-d8	1.25		1.250		100	65	135				
Surr: 4-Bromofluorobenzene	1.29		1.250		103	65	135				

Sample ID: MB-36034	SampType: MBLK	Units: mg/Kg		Prep Date: 4/7/2022	RunNo: 74627						
Client ID: MBLKS	Batch ID: 36034			Analysis Date: 4/7/2022	SeqNo: 1531061						
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline	ND	5.00									
Surr: Toluene-d8	1.26		1.250		101	65	135				
Surr: 4-Bromofluorobenzene	1.26		1.250		101	65	135				

Sample ID: 2204073-002BDUP	SampType: DUP	Units: mg/Kg-dry		Prep Date: 4/7/2022	RunNo: 74627						
Client ID: GEI-8-12.5	Batch ID: 36034			Analysis Date: 4/7/2022	SeqNo: 1531064						
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline	ND	9.14						0		30	
Surr: Toluene-d8	2.32		2.284		102	65	135		0		
Surr: 4-Bromofluorobenzene	2.29		2.284		100	65	135		0		

Sample ID: 2204073-003BDUP	SampType: DUP	Units: mg/Kg-dry		Prep Date: 4/7/2022	RunNo: 74627						
Client ID: GEI-8-17.0	Batch ID: 36034			Analysis Date: 4/7/2022	SeqNo: 1531066						
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline	ND	5.74						0		30	
Surr: Toluene-d8	1.45		1.435		101	65	135		0		
Surr: 4-Bromofluorobenzene	1.43		1.435		99.8	65	135		0		

Work Order: 2204073
CLIENT: GeoEngineers
Project: 701 South Jackson

QC SUMMARY REPORT
Gasoline by NWTPH-Gx

Sample ID: 2204125-001BMS	SampType: MS	Units: mg/Kg-dry	Prep Date: 4/7/2022	RunNo: 74627							
Client ID: BATCH	Batch ID: 36034	Analysis Date: 4/8/2022	SeqNo: 1531073								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline	31.2	5.65	28.23	0	110	65	135				
Surr: Toluene-d8	1.46		1.412		103	65	135				
Surr: 4-Bromofluorobenzene	1.47		1.412		104	65	135				

Work Order: 2204073
 CLIENT: GeoEngineers
 Project: 701 South Jackson

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260D

Sample ID: LCS-36034	SampType: LCS	Units: µg/L	Prep Date: 4/7/2022	RunNo: 74626							
Client ID: LCSS	Batch ID: 36034		Analysis Date: 4/7/2022	SeqNo: 1531057							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	1.04	0.0200	1.000	0	104	80	120				
Toluene	1.02	0.0300	1.000	0	102	80	120				
Ethylbenzene	1.16	0.0250	1.000	0	116	80	120				
m,p-Xylene	2.18	0.0500	2.000	0	109	80	120				
o-Xylene	1.02	0.0250	1.000	0	102	80	120				
Surr: Dibromofluoromethane	1.36		1.250		109	80	120				
Surr: Toluene-d8	1.23		1.250		98.6	80	120				
Surr: 1-Bromo-4-fluorobenzene	1.27		1.250		102	80	120				

Sample ID: MB-36034	SampType: MBLK	Units: mg/Kg	Prep Date: 4/7/2022	RunNo: 74626							
Client ID: MBLKS	Batch ID: 36034		Analysis Date: 4/7/2022	SeqNo: 1531036							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.0200									
Toluene	ND	0.0300									
Ethylbenzene	ND	0.0250									
m,p-Xylene	ND	0.0500									
o-Xylene	ND	0.0250									
Surr: Dibromofluoromethane	1.23		1.250		98.1	80	120				
Surr: Toluene-d8	1.25		1.250		99.8	80	120				
Surr: 1-Bromo-4-fluorobenzene	1.22		1.250		97.3	80	120				

Sample ID: 2204073-002BDUP	SampType: DUP	Units: mg/Kg-dry	Prep Date: 4/7/2022	RunNo: 74626							
Client ID: GEI-8-12.5	Batch ID: 36034		Analysis Date: 4/7/2022	SeqNo: 1531039							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.0365						0		30	
Toluene	ND	0.0548						0		30	
Ethylbenzene	ND	0.0457						0		30	

Work Order: 2204073
CLIENT: GeoEngineers
Project: 701 South Jackson

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260D

Sample ID: 2204073-002BDUP	SampType: DUP	Units: mg/Kg-dry			Prep Date: 4/7/2022	RunNo: 74626					
Client ID: GEI-8-12.5	Batch ID: 36034				Analysis Date: 4/7/2022	SeqNo: 1531039					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
m,p-Xylene	ND	0.0914						0		30	
o-Xylene	ND	0.0457						0		30	
Surr: Dibromofluoromethane	2.18		2.284		95.4	80	120		0		
Surr: Toluene-d8	2.29		2.284		100	80	120		0		
Surr: 1-Bromo-4-fluorobenzene	2.21		2.284		96.9	80	120		0		

Sample ID: 2204073-003BDUP	SampType: DUP	Units: mg/Kg-dry			Prep Date: 4/7/2022	RunNo: 74626					
Client ID: GEI-8-17.0	Batch ID: 36034				Analysis Date: 4/7/2022	SeqNo: 1531041					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.0230						0		30	
Toluene	ND	0.0345						0		30	
Ethylbenzene	ND	0.0287						0		30	
m,p-Xylene	ND	0.0574						0		30	
o-Xylene	ND	0.0287						0		30	
Surr: Dibromofluoromethane	1.27		1.435		88.7	80	120		0		
Surr: Toluene-d8	1.42		1.435		99.0	80	120		0		
Surr: 1-Bromo-4-fluorobenzene	1.39		1.435		96.6	80	120		0		

Sample ID: 2204116-007BMS	SampType: MS	Units: mg/Kg-dry			Prep Date: 4/7/2022	RunNo: 74626					
Client ID: BATCH	Batch ID: 36034				Analysis Date: 4/8/2022	SeqNo: 1531051					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	1.40	0.0246	1.230	0	113	76.9	128				
Toluene	1.35	0.0369	1.230	0	110	79.5	127				
Ethylbenzene	1.48	0.0307	1.230	0	121	81.6	130				
m,p-Xylene	2.76	0.0615	2.460	0	112	80.6	128				
o-Xylene	1.32	0.0307	1.230	0	107	80.1	126				
Surr: Dibromofluoromethane	1.67		1.537		109	80	120				

Work Order: 2204073
CLIENT: GeoEngineers
Project: 701 South Jackson

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260D

Sample ID: 2204116-007BMS	SampType: MS	Units: mg/Kg-dry	Prep Date: 4/7/2022	RunNo: 74626							
Client ID: BATCH	Batch ID: 36034		Analysis Date: 4/8/2022	SeqNo: 1531051							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: Toluene-d8	1.56		1.537		102	80	120				
Surr: 1-Bromo-4-fluorobenzene	1.58		1.537		103	80	120				

Client Name: GEI	Work Order Number: 2204073
Logged by: Brianna Barnes	Date Received: 4/5/2022 2:59:00 PM

Chain of Custody

1. Is Chain of Custody complete? Yes No Not Present
2. How was the sample delivered? Client

Log In

3. Coolers are present? Yes No NA
4. Shipping container/cooler in good condition? Yes No
5. Custody Seals present on shipping container/cooler?
(Refer to comments for Custody Seals not intact) Yes No Not Present
6. Was an attempt made to cool the samples? Yes No NA
7. Were all items received at a temperature of >2°C to 6°C * Yes No NA
8. Sample(s) in proper container(s)? Yes No
9. Sufficient sample volume for indicated test(s)? Yes No
10. Are samples properly preserved? Yes No
11. Was preservative added to bottles? Yes No NA
12. Is there headspace in the VOA vials? Yes No NA
13. Did all samples containers arrive in good condition(unbroken)? Yes No
14. Does paperwork match bottle labels? Yes No
15. Are matrices correctly identified on Chain of Custody? Yes No
16. Is it clear what analyses were requested? Yes No
17. Were all holding times able to be met? Yes No

Special Handling (if applicable)

18. Was client notified of all discrepancies with this order? Yes No NA

Person Notified:	<input type="text"/>	Date:	<input type="text"/>
By Whom:	<input type="text"/>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text"/>		
Client Instructions:	<input type="text"/>		

19. Additional remarks:

Item Information

Item #	Temp °C
Sample	0.8

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C



3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Chain of Custody Record & Laboratory Services Agreement

Date: 4/5/2022 Page: 1 of 2

Laboratory Project No (Internal): **2204673**
Special Remarks: **HOLD SAMPLES PM WILL REQUEST ANALYTICAL**

Client: **GEOENGINEERS INC.**

Project Name: **101 SOUTH JACKSON**

Project No: **24504-001-01**

Address: **SEATTLE WA**

Collected by: **NATHAN SORAN**

City, State, Zip: **SEATTLE WA**

Location: **SEATTLE WA**

Telephone:

Report To (PM): **ROBERT TRAVIN**

Fax:

PM Email:

Sample Disposal: Return to client Disposal by lab (after 30 days)

Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	# of Cont.	VOCS (EPA 8260 / 624)	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCID)	Diesel/Heavy Oil Range Organics (DX)	SVOCs (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8082 / 608)	Metals** (EPA 6020 / 200.8)	Total (T) / Dissolved (D)	Anions (IC)**	EDB (8011)	Comments
1 GEL-8-7.5	4/4/22	1045	Soil	3													
2 GEL-8-12.5		1055		3													
3 GEL-8-17.0		1105		3													
4 GEL-8-22.5		1115		3													
5 GEL-9-7.5		0940		3													
6 GEL-9-12.5		1005		3													
7 GEL-9-17.5		1015		3													
8 GEL-9-22.5		1020		3													
9 GEL-10-7.5		1035		3													
10 GEL-10-12.5		1045		3													

*Matrix: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water

**Metals (Circle): MTCA-5 RCRA-8 Priority Pollutants TAL Individual: Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sb Se Sr Sn Tl Ti V Zn

***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite

I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above, that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Turn-around Time:
 Standard Next Day
 3 Day Same Day
 2 Day _____ (specify)

Relinquished (Signature) *[Signature]* Print Name **NATHAN SORAN** Date/Time **4/5/22 14:08**

Relinquished (Signature) *[Signature]* Print Name **NATHAN SORAN** Date/Time **4/5/22 14:08**

Received (Signature) *[Signature]* Print Name **Robert Travin** Date/Time **4/5/22 14:59**

Received (Signature) *[Signature]* Print Name **Robert Travin** Date/Time **4/5/22 14:59**



3600 Fremont Ave N.
Seattle, WA 98103
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Fax: 206-352-7178

Chain of Custody Record & Laboratory Services Agreement

Date: 4.5.2022 Page: 2 of 2

Laboratory Project No (Internal): 22041613

Project Name: 701 SOUTH JACKSON

Special Remarks:
HOLD SAMPLES FM WILL
REQUEST ANALYTICAL

Collected by: NATHAN SOLOMON

Location: SEATTLE WA.

Report To (PM): ROBERT TRAYNAN

PM Email:

Sample Disposal: Return to client Disposal by lab (after 30 days)

Client: GEONENGINEERS INC.

Address: SEATTLE WA.

City, State, Zip: SEATTLE WA.

Telephone:

Fax:

Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	# of Cont.	Analytes											Comments		
					VOCs (EPA 8260 / 624)	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCID)	Diesel/Heavy Oil Range Organics (HX)	SVOCs (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8082 / 608)	Metals** (EPA 6020 / 200.9)	Total (T) Dissolved (D)	Anions (IC)***		FDB (801)	
1 GE1-10-17.5	4.4.22	1355	SOIL	3													X	
2 GE1-10-22.5	4.5.22	1405		3													X	
3 GE1-11-7.5		0900		3													X	
4 GE1-11-12.5		0915		3													X	
5 GE1-11-15.0		0920		3													X	
6 GE1-11-17.5		0925		3													X	
7 GE1-11-22.5		0935		3													X	
8 GE1-11-35.0		0950		3													X	
9 GE1-11-40.0		1005		3													X	
10																		

*Matrix: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water

**Metals (Circle): MTCA-5 RCRA-8 Priority Pollutants TAL Individual: Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sb Se Sr Sn Tl Ti V Zn

***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite

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Relinquished (Signature) _____ Print Name _____ Date/Time _____

Received (Signature) _____ Print Name _____ Date/Time _____

Turn-around Time: Standard Next Day 3 Day Same Day 2 Day (specify) _____



3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Chain of Custody Record & Laboratory Services Agreement

Client: **GEOENGINEERS INC.**

Address:

City, State, Zip: **SEATTLE WA**

Telephone:

Fax:

Date: **4.5.2022** Page: **1** of: **2**

Laboratory Project No (internal): **2204073**

Project Name: **701 SOUTH JACKSON**

Project No: **24504-001-01**

Collected by: **NATHAN SALOMON**

Location: **SEATTLE WA.**

Report To (PM): **ROBERT TRAHAN**

PM Email:

Special Remarks:
HOLD SAMPLES PM WILL REQUEST ANALYTICAL

Edits per R.T. 4/6/2022 -BB

Sample Disposal: Return to client Disposal by lab (after 30 days)

Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	# of Cont.	Analytical Parameters													Comments										
					VOCs (EPA 8260 / 624)	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCID)	Die-sel/Heavy Oil Range Organics (DX)	SVOCS (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8082 / 608)	Total (T)	(EPA 6020 / 200.8)	Anions (IC)***	EDB (8011)	HOLD *SEE ABOVE											
1 GE1-8-7.5	44.22	1045	Soil	3																								
2 GE1-8-12.5		1055		3		X	X																X					
3 GE1-8-17.0		1105		3		X	X																X					
4 GE1-8-22.5		1115		3																								
5 GE1-9-7.5		0940		3																								
6 GE1-9-12.5		1005		3		X	X																X					
7 GE1-9-17.5		1015		3		X	X																X					
8 GE1-9-22.5		1020		3																								
9 GE1-10-7.5		1335		3																								
10 GE1-10-12.5	✓	1345	✓	3		X	X																X					

*Matrix: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water

**Metals (Circle): MTCA-5 RCRA-8 Priority Pollutants TAL Individual: Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sb Se Sr Sn Ti Tl V Zn

***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite

Turn-around Time:
 Standard
 Next Day
 3 Day Same Day
 2 Day _____ (specify)

I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above, that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Relinquished (Signature) Print Name: **NATHAN SALOMON** Date/Time: **4.5.22 1:40P**

Received (Signature) Print Name: **Elizabeth Samoy** Date/Time: **4/5/22 14:59**



3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Chain of Custody Record & Laboratory Services Agreement

Date: 4.5.2022 Page: 2 of: 2

Laboratory Project No (Internal): 2204673

Project Name: 701 SOUTH JACKSON

Special Remarks:
HOLD SAMPLES PM WILL REQUEST ANALYTICAL

Project No: 24504-001-01

Collected by: NATHAN SOLOMON

Location: SEATTLE WA.

Report To (PM): ROBERT TRAHAN

Sample Disposal: Return to client Disposal by lab (after 30 days)

PM Email:

Client: GEOENGINEERS INC.

Address:

City, State, Zip: SEATTLE WA.

Telephone:

Fax:

Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	# of Cont.	Analytical Parameters													Comments	
					VOCs (EPA 8260 / 624)	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCID)	Diesel/Heavy Oil Range Organics (DX)	SVOCS (EPA 8270 / 625)	PAHs (EPA 8270 / 625)	PCBs (EPA 8270 - SIM)	Metals** (EPA 8082 / 608)	Total (T) (EPA 6020 / 200.8)	Anions (IC)***	EDB (9011)	HOLD * SEE ABOVE		
1 GEI-10-17.5	4.4.22	1355	SOIL	3	X	X											X	X	
2 GEI-10-22.5	↓	1405		3													X		
3 GEI-11-7.5	4.5.22	0900		3													X		
4 GEI-11-12.5		0915		3													X		
5 GEI-11-15.0		0920		3	X	X											X	X	
6 GEI-11-17.5		0925		3													X		
7 GEI-11-22.5		0935		3													X		
8 GEI-11-35.0		0950		3	X	X											X	X	
9 GEI-11-40.0	↓	1005	↓	3													X		
10																			

*Matrix: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water

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***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite

Turn-around Time:

- Standard Next Day
 3 Day Same Day
 2 Day (specify)

I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above, that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Relinquished (Signature) _____ Print Name _____ Date/Time _____

Received (Signature) Elisabeth Samoy Print Name Elisabeth Samoy Date/Time 4/5/22 14:59

Relinquished (Signature) _____ Print Name _____ Date/Time _____

Received (Signature) _____ Print Name _____ Date/Time _____



3600 Fremont Ave. N.
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

GeoEngineers

Robert Trahan
2101 4th Ave, Suite 950
Seattle, WA 98121

RE: 701 South Jackson
Work Order Number: 2204105

April 13, 2022

Attention Robert Trahan:

Fremont Analytical, Inc. received 6 sample(s) on 4/6/2022 for the analyses presented in the following report.

Gasoline by NWTPH-Gx
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)
Sample Moisture (Percent Moisture)
Volatile Organic Compounds by EPA Method 8260D

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Brianna Barnes
Project Manager

DoD-ELAP Accreditation #79636 by PJLA, ISO/IEC 17025:2017 and QSM 5.3 for Environmental Testing
ORELAP Certification: WA 100009 (NELAP Recognized) for Environmental Testing
Washington State Department of Ecology Accredited for Environmental Testing, Lab ID C910

Original



CLIENT: GeoEngineers
Project: 701 South Jackson
Work Order: 2204105

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
2204105-001	GEI-12-7.5	04/06/2022 9:15 AM	04/06/2022 1:04 PM
2204105-002	GEI-12-15.0	04/06/2022 9:20 AM	04/06/2022 1:04 PM
2204105-003	GEI-12-17.5	04/06/2022 9:30 AM	04/06/2022 1:04 PM
2204105-004	GEI-12-22.5	04/06/2022 9:40 AM	04/06/2022 1:04 PM
2204105-005	GEI-12-35.0	04/06/2022 9:55 AM	04/06/2022 1:04 PM
2204105-006	GEI-12-40.0	04/06/2022 10:00 AM	04/06/2022 1:04 PM

Note: If no "Time Collected" is supplied, a default of 12:00AM is assigned

CLIENT: GeoEngineers
Project: 701 South Jackson

I. SAMPLE RECEIPT:

Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:

Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:

Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Qualifiers:

- * - Flagged value is not within established control limits
- B - Analyte detected in the associated Method Blank
- D - Dilution was required
- E - Value above quantitation range
- H - Holding times for preparation or analysis exceeded
- I - Analyte with an internal standard that does not meet established acceptance criteria
- J - Analyte detected below Reporting Limit
- N - Tentatively Identified Compound (TIC)
- Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria
- S - Spike recovery outside accepted recovery limits
- ND - Not detected at the Reporting Limit
- R - High relative percent difference observed

Acronyms:

- %Rec - Percent Recovery
- CCB - Continued Calibration Blank
- CCV - Continued Calibration Verification
- DF - Dilution Factor
- DUP - Sample Duplicate
- HEM - Hexane Extractable Material
- ICV - Initial Calibration Verification
- LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
- MCL - Maximum Contaminant Level
- MB or MBLANK - Method Blank
- MDL - Method Detection Limit
- MS/MSD - Matrix Spike / Matrix Spike Duplicate
- PDS - Post Digestion Spike
- Ref Val - Reference Value
- REP - Sample Replicate
- RL - Reporting Limit
- RPD - Relative Percent Difference
- SD - Serial Dilution
- SGT - Silica Gel Treatment
- SPK - Spike
- Surr - Surrogate



Client: GeoEngineers

Collection Date: 4/6/2022 9:20:00 AM

Project: 701 South Jackson

Lab ID: 2204105-002

Matrix: Soil

Client Sample ID: GEI-12-15.0

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 36062 Analyst: OK

Naphthalene	855	22.3		µg/Kg-dry	1	4/13/2022 9:04:25 AM
2-Methylnaphthalene	2,390	22.3		µg/Kg-dry	1	4/13/2022 9:04:25 AM
1-Methylnaphthalene	1,130	22.3		µg/Kg-dry	1	4/13/2022 9:04:25 AM
Surr: 2-Fluorobiphenyl	103	29.6 - 130		%Rec	1	4/13/2022 9:04:25 AM
Surr: Terphenyl-d14 (surr)	118	38 - 145		%Rec	1	4/13/2022 9:04:25 AM

Gasoline by NWTPH-Gx

Batch ID: 36064 Analyst: MVB

Gasoline	3,220	672	D	mg/Kg-dry	100	4/12/2022 9:22:12 AM
Surr: Toluene-d8	103	65 - 135	D	%Rec	100	4/12/2022 9:22:12 AM
Surr: 4-Bromofluorobenzene	103	65 - 135	D	%Rec	100	4/12/2022 9:22:12 AM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 36064 Analyst: MVB

Benzene	0.739	0.269	D	mg/Kg-dry	10	4/11/2022 8:42:28 PM
Toluene	ND	0.403	D	mg/Kg-dry	10	4/11/2022 8:42:28 PM
Ethylbenzene	13.0	0.336	D	mg/Kg-dry	10	4/11/2022 8:42:28 PM
m,p-Xylene	2.39	0.672	D	mg/Kg-dry	10	4/11/2022 8:42:28 PM
o-Xylene	ND	0.336	D	mg/Kg-dry	10	4/11/2022 8:42:28 PM
Surr: Dibromofluoromethane	92.1	80 - 120	D	%Rec	10	4/11/2022 8:42:28 PM
Surr: Toluene-d8	104	80 - 120	D	%Rec	10	4/11/2022 8:42:28 PM
Surr: 1-Bromo-4-fluorobenzene	102	80 - 120	D	%Rec	10	4/11/2022 8:42:28 PM

Sample Moisture (Percent Moisture)

Batch ID: R74648 Analyst: ALB

Percent Moisture	16.5	0.500		wt%	1	4/11/2022 10:57:50 AM
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Analytical Report

Work Order: 2204105
Date Reported: 4/13/2022

Client: GeoEngineers
Project: 701 South Jackson
Lab ID: 2204105-006
Client Sample ID: GEI-12-40.0

Collection Date: 4/6/2022 10:00:00 AM

Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 36062 Analyst: OK

Naphthalene	ND	18.9		µg/Kg-dry	1	4/13/2022 9:32:34 AM
2-Methylnaphthalene	ND	18.9		µg/Kg-dry	1	4/13/2022 9:32:34 AM
1-Methylnaphthalene	ND	18.9		µg/Kg-dry	1	4/13/2022 9:32:34 AM
Surr: 2-Fluorobiphenyl	96.9	29.6 - 130		%Rec	1	4/13/2022 9:32:34 AM
Surr: Terphenyl-d14 (surr)	101	38 - 145		%Rec	1	4/13/2022 9:32:34 AM

Gasoline by NWTPH-Gx

Batch ID: 36064 Analyst: MVB

Gasoline	ND	6.05		mg/Kg-dry	1	4/11/2022 4:59:44 PM
Surr: Toluene-d8	102	65 - 135		%Rec	1	4/11/2022 4:59:44 PM
Surr: 4-Bromofluorobenzene	99.1	65 - 135		%Rec	1	4/11/2022 4:59:44 PM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 36064 Analyst: MVB

Benzene	ND	0.0242		mg/Kg-dry	1	4/11/2022 4:59:44 PM
Toluene	ND	0.0363		mg/Kg-dry	1	4/11/2022 4:59:44 PM
Ethylbenzene	ND	0.0303		mg/Kg-dry	1	4/11/2022 4:59:44 PM
m,p-Xylene	ND	0.0605		mg/Kg-dry	1	4/11/2022 4:59:44 PM
o-Xylene	ND	0.0303		mg/Kg-dry	1	4/11/2022 4:59:44 PM
Surr: Dibromofluoromethane	75.8	80 - 120	S	%Rec	1	4/11/2022 4:59:44 PM
Surr: Toluene-d8	98.6	80 - 120		%Rec	1	4/11/2022 4:59:44 PM
Surr: 1-Bromo-4-fluorobenzene	95.9	80 - 120		%Rec	1	4/11/2022 4:59:44 PM

NOTES:

S - Outlying surrogate recovery(ies) observed.

Sample Moisture (Percent Moisture)

Batch ID: R74648 Analyst: ALB

Percent Moisture	2.66	0.500		wt%	1	4/11/2022 10:57:50 AM
------------------	------	-------	--	-----	---	-----------------------

Work Order: 2204105
CLIENT: GeoEngineers
Project: 701 South Jackson

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: MB-36062	SampType: MBLK	Units: µg/Kg	Prep Date: 4/11/2022	RunNo: 74713							
Client ID: MBLKS	Batch ID: 36062		Analysis Date: 4/13/2022	SeqNo: 1533082							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	ND	20.0									
2-Methylnaphthalene	ND	20.0									
1-Methylnaphthalene	ND	20.0									
Surr: 2-Fluorobiphenyl	1,070		1,000		107	29.6	130				
Surr: Terphenyl-d14 (surr)	1,280		1,000		128	38	145				

Sample ID: LCS-36062	SampType: LCS	Units: µg/Kg	Prep Date: 4/11/2022	RunNo: 74713							
Client ID: LCSS	Batch ID: 36062		Analysis Date: 4/13/2022	SeqNo: 1533083							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	2,060	20.0	2,000	0	103	60.2	119				
2-Methylnaphthalene	1,960	20.0	2,000	0	98.0	60.4	121				
1-Methylnaphthalene	1,930	20.0	2,000	0	96.3	62	119				
Surr: 2-Fluorobiphenyl	1,150		1,000		115	29.6	130				
Surr: Terphenyl-d14 (surr)	1,280		1,000		128	38	145				

Sample ID: 2204108-021AMS	SampType: MS	Units: µg/Kg-dry	Prep Date: 4/11/2022	RunNo: 74713							
Client ID: BATCH	Batch ID: 36062		Analysis Date: 4/13/2022	SeqNo: 1533085							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	1,690	22.4	2,241	0	75.5	30.2	123				
2-Methylnaphthalene	1,580	22.4	2,241	0	70.5	40.9	115				
1-Methylnaphthalene	1,550	22.4	2,241	0	69.3	35.6	121				
Surr: 2-Fluorobiphenyl	935		1,120		83.4	29.6	130				
Surr: Terphenyl-d14 (surr)	1,040		1,120		93.3	38	145				

Work Order: 2204105
CLIENT: GeoEngineers
Project: 701 South Jackson

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: 2204108-021AMSD	SampType: MSD	Units: µg/Kg-dry				Prep Date: 4/11/2022	RunNo: 74713				
Client ID: BATCH	Batch ID: 36062					Analysis Date: 4/13/2022	SeqNo: 1533086				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	1,450	22.1	2,206	0	65.8	30.2	123	1,692	15.3	30	
2-Methylnaphthalene	1,340	22.1	2,206	0	60.9	40.9	115	1,581	16.2	30	
1-Methylnaphthalene	1,320	22.1	2,206	0	59.9	35.6	121	1,553	16.1	30	
Surr: 2-Fluorobiphenyl	754		1,103		68.3	29.6	130		0		
Surr: Terphenyl-d14 (surr)	856		1,103		77.6	38	145		0		

Work Order: 2204105
CLIENT: GeoEngineers
Project: 701 South Jackson

QC SUMMARY REPORT
Gasoline by NWTPH-Gx

Sample ID: LCS-36064	SampType: LCS	Units: mg/Kg			Prep Date: 4/11/2022	RunNo: 74687					
Client ID: LCSS	Batch ID: 36064				Analysis Date: 4/11/2022	SeqNo: 1532471					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline	25.7	5.00	25.00	0	103	65	135				
Surr: Toluene-d8	1.26		1.250		101	65	135				
Surr: 4-Bromofluorobenzene	1.27		1.250		101	65	135				

Sample ID: MB-36064	SampType: MBLK	Units: mg/Kg			Prep Date: 4/11/2022	RunNo: 74687					
Client ID: MBLKS	Batch ID: 36064				Analysis Date: 4/11/2022	SeqNo: 1532472					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline	ND	5.00									
Surr: Toluene-d8	1.25		1.250		100	65	135				
Surr: 4-Bromofluorobenzene	1.24		1.250		99.4	65	135				

Sample ID: 2204105-002BDUP	SampType: DUP	Units: mg/Kg-dry			Prep Date: 4/11/2022	RunNo: 74687					
Client ID: GEI-12-15.0	Batch ID: 36064				Analysis Date: 4/11/2022	SeqNo: 1532459					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline	3,780	67.2						3,766	0.313	30	DE
Surr: Toluene-d8	17.3		16.80		103	65	135		0		D
Surr: 4-Bromofluorobenzene	18.0		16.80		107	65	135		0		D

Sample ID: 2204144-003BMS	SampType: MS	Units: mg/Kg-dry			Prep Date: 4/11/2022	RunNo: 74687					
Client ID: BATCH	Batch ID: 36064				Analysis Date: 4/11/2022	SeqNo: 1532464					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline	31.5	6.59	32.95	0	95.5	65	135				
Surr: Toluene-d8	1.69		1.648		103	65	135				
Surr: 4-Bromofluorobenzene	1.71		1.648		104	65	135				

Work Order: 2204105
 CLIENT: GeoEngineers
 Project: 701 South Jackson

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260D

Sample ID: LCS-36064	SampType: LCS	Units: µg/L				Prep Date: 4/11/2022	RunNo: 74684				
Client ID: LCSS	Batch ID: 36064					Analysis Date: 4/11/2022	SeqNo: 1532364				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	1.09	0.0200	1.000	0	109	80	120				
Toluene	1.07	0.0300	1.000	0	107	80	120				
Ethylbenzene	1.19	0.0250	1.000	0	119	80	120				
m,p-Xylene	2.24	0.0500	2.000	0	112	80	120				
o-Xylene	1.07	0.0250	1.000	0	107	80	120				
Surr: Dibromofluoromethane	1.36		1.250		109	80	120				
Surr: Toluene-d8	1.25		1.250		100	80	120				
Surr: 1-Bromo-4-fluorobenzene	1.30		1.250		104	80	120				

Sample ID: MB-36064	SampType: MBLK	Units: mg/Kg				Prep Date: 4/11/2022	RunNo: 74684				
Client ID: MBLKS	Batch ID: 36064					Analysis Date: 4/11/2022	SeqNo: 1532363				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.0200									
Toluene	ND	0.0300									
Ethylbenzene	ND	0.0250									
m,p-Xylene	ND	0.0500									
o-Xylene	ND	0.0250									
Surr: Dibromofluoromethane	1.10		1.250		88.1	80	120				
Surr: Toluene-d8	1.24		1.250		99.0	80	120				
Surr: 1-Bromo-4-fluorobenzene	1.20		1.250		96.1	80	120				

Sample ID: 2204105-002BDUP	SampType: DUP	Units: mg/Kg-dry				Prep Date: 4/11/2022	RunNo: 74684				
Client ID: GEI-12-15.0	Batch ID: 36064					Analysis Date: 4/11/2022	SeqNo: 1532351				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	0.761	0.269						0.7393	2.94	30	D
Toluene	ND	0.403						0		30	D
Ethylbenzene	13.2	0.336						13.02	1.67	30	D

Work Order: 2204105
 CLIENT: GeoEngineers
 Project: 701 South Jackson

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260D

Sample ID: 2204105-002BDUP	SampType: DUP	Units: mg/Kg-dry			Prep Date: 4/11/2022	RunNo: 74684					
Client ID: GEI-12-15.0	Batch ID: 36064				Analysis Date: 4/11/2022	SeqNo: 1532351					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
m,p-Xylene	2.45	0.672						2.393	2.21	30	D
o-Xylene	ND	0.336						0		30	D
Surr: Dibromofluoromethane	16.1		16.80		95.6	80	120		0		D
Surr: Toluene-d8	17.5		16.80		104	80	120		0		D
Surr: 1-Bromo-4-fluorobenzene	17.1		16.80		102	80	120		0		D

Sample ID: 2204144-003BMS	SampType: MS	Units: mg/Kg-dry			Prep Date: 4/11/2022	RunNo: 74684					
Client ID: BATCH	Batch ID: 36064				Analysis Date: 4/11/2022	SeqNo: 1532359					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	1.31	0.0264	1.318	0	99.3	76.9	128				
Toluene	1.29	0.0395	1.318	0	98.1	79.5	127				
Ethylbenzene	1.45	0.0330	1.318	0	110	81.6	130				
m,p-Xylene	2.70	0.0659	2.636	0	103	80.6	128				
o-Xylene	1.31	0.0330	1.318	0	99.2	80.1	126				
Surr: Dibromofluoromethane	1.75		1.648		106	80	120				
Surr: Toluene-d8	1.62		1.648		98.2	80	120				
Surr: 1-Bromo-4-fluorobenzene	1.69		1.648		103	80	120				

Client Name: GEI	Work Order Number: 2204105
Logged by: Brianna Barnes	Date Received: 4/6/2022 1:04:00 PM

Chain of Custody

1. Is Chain of Custody complete? Yes No Not Present
2. How was the sample delivered? Client

Log In

3. Coolers are present? Yes No NA
4. Shipping container/cooler in good condition? Yes No
5. Custody Seals present on shipping container/cooler?
(Refer to comments for Custody Seals not intact) Yes No Not Present
6. Was an attempt made to cool the samples? Yes No NA
7. Were all items received at a temperature of >2°C to 6°C * Yes No NA
8. Sample(s) in proper container(s)? Yes No
9. Sufficient sample volume for indicated test(s)? Yes No
10. Are samples properly preserved? Yes No
11. Was preservative added to bottles? Yes No NA
12. Is there headspace in the VOA vials? Yes No NA
13. Did all samples containers arrive in good condition(unbroken)? Yes No
14. Does paperwork match bottle labels? Yes No
15. Are matrices correctly identified on Chain of Custody? Yes No
16. Is it clear what analyses were requested? Yes No
17. Were all holding times able to be met? Yes No

Special Handling (if applicable)

18. Was client notified of all discrepancies with this order? Yes No NA

Person Notified:	<input type="text"/>	Date:	<input type="text"/>
By Whom:	<input type="text"/>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text"/>		
Client Instructions:	<input type="text"/>		

19. Additional remarks:

Item Information

Item #	Temp °C
Sample	4.2

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C



3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Chain of Custody Record & Laboratory Services Agreement

Date: 4.6.2022

Page: 1 of 1

Project Name: 701 SOUTH JACKSON

Project No: 24504 - 001 - 01

Collected by: NATHAN SACOMEN

Location: SEATTLE, WA.

Report To (PM): ROBBER TRAVAN

PM Email:

Laboratory Project No (Internal): 2204105
Special Remarks:
PM WILL CONTACT W/ ANALYTICAL TO RUN

Sample Disposal: Return to client Disposal by lab (after 30 days)

Client: GEOENGINEERS INC.
Address:
City, State, Zip: SEATTLE WA
Telephone:

Fax:

Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	# of Cont.	VOCs (EPA 8260 / 624)	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (GX)	Diesel/Heavy Oil Range Organics (DX)	SVOCs (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8270 - SIM)	Metals** (EPA 6020 / 200.8)	Total (T) / Dissolved (D)	Anions (IC)***	EDB (8011)	Comments
1 GEI-12-7.5	4.6.22	0915	Soil	3									X				
2 GEI-12-15.0		0920		3									X				
3 GEI-12-17.5		0930		3									X				
4 GEI-12-22.5		0940		3									X				
5 GEI-12-35.0		0955		3									X				
6 GEI-12-40.0		10:00		3									X				
7 GEI-12-APC				3									X				
8																	
9																	
10																	

*Matrix: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water

**Metals (Circle): MTCA-5 RCRA-8 Priority Pollutants TAL Individual: Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sb Se Sr Sn Tl Ti V Zn

***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide Iodide O-Phosphate Fluoride Nitrate+Nitrite

I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above, that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Relinquished (Signature)

Print Name

Date/Time

Received (Signature)

Print Name

Date/Time

Turn-around Time:
 Standard Next Day
 3 Day Same Day
 2 Day _____ (specify)

Relinquished (Signature)

Print Name

Date/Time

Received (Signature)

Print Name

Date/Time



GeoEngineers

Robert Trahan
2101 4th Ave, Suite 950
Seattle, WA 98121

RE: 701 South Jackson
Work Order Number: 2204167

April 18, 2022

Attention Robert Trahan:

Fremont Analytical, Inc. received 3 sample(s) on 4/11/2022 for the analyses presented in the following report.

Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.
Dissolved Mercury by EPA Method 245.1
Dissolved Metals by EPA Method 200.8
Gasoline by NWTPH-Gx
Mercury by EPA Method 245.1
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)
Total Metals by EPA Method 200.8
Volatile Organic Compounds by EPA Method 8260D

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

DoD-ELAP Accreditation #79636 by PJLA, ISO/IEC 17025:2017 and QSM 5.3 for Environmental Testing
ORELAP Certification: WA 100009 (NELAP Recognized) for Environmental Testing
Washington State Department of Ecology Accredited for Environmental Testing, Lab ID C910

Original

Brianna Barnes
Project Manager

*DoD-ELAP Accreditation #79636 by PJLA, ISO/IEC 17025:2017 and QSM 5.3 for Environmental Testing
ORELAP Certification: WA 100009 (NELAP Recognized) for Environmental Testing
Washington State Department of Ecology Accredited for Environmental Testing, Lab ID C910*

Original

www.fremontanalytical.com



CLIENT: GeoEngineers
Project: 701 South Jackson
Work Order: 2204167

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
2204167-001	GEI-11-W-041122	04/11/2022 1:10 PM	04/11/2022 4:21 PM
2204167-002	GEI-12-W-041122	04/11/2022 12:00 PM	04/11/2022 4:21 PM
2204167-003	Trip Blank		04/11/2022 4:21 PM

Note: If no "Time Collected" is supplied, a default of 12:00AM is assigned

CLIENT: GeoEngineers
Project: 701 South Jackson

I. SAMPLE RECEIPT:

Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:

Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:

Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Qualifiers:

- * - Flagged value is not within established control limits
- B - Analyte detected in the associated Method Blank
- D - Dilution was required
- E - Value above quantitation range
- H - Holding times for preparation or analysis exceeded
- I - Analyte with an internal standard that does not meet established acceptance criteria
- J - Analyte detected below Reporting Limit
- N - Tentatively Identified Compound (TIC)
- Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria
- S - Spike recovery outside accepted recovery limits
- ND - Not detected at the Reporting Limit
- R - High relative percent difference observed

Acronyms:

- %Rec - Percent Recovery
- CCB - Continued Calibration Blank
- CCV - Continued Calibration Verification
- DF - Dilution Factor
- DUP - Sample Duplicate
- HEM - Hexane Extractable Material
- ICV - Initial Calibration Verification
- LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
- MCL - Maximum Contaminant Level
- MB or MBLANK - Method Blank
- MDL - Method Detection Limit
- MS/MSD - Matrix Spike / Matrix Spike Duplicate
- PDS - Post Digestion Spike
- Ref Val - Reference Value
- REP - Sample Replicate
- RL - Reporting Limit
- RPD - Relative Percent Difference
- SD - Serial Dilution
- SGT - Silica Gel Treatment
- SPK - Spike
- Surr - Surrogate



Client: GeoEngineers

Collection Date: 4/11/2022 1:10:00 PM

Project: 701 South Jackson

Lab ID: 2204167-001

Matrix: Water

Client Sample ID: GEI-11-W-041122

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.

Batch ID: 36079 Analyst: MM

Diesel (Fuel Oil)	ND	117		µg/L	1	4/13/2022 4:04:37 PM
Heavy Oil	ND	117		µg/L	1	4/13/2022 4:04:37 PM
Total Petroleum Hydrocarbons	ND	233		µg/L	1	4/13/2022 4:04:37 PM
Surr: 2-Fluorobiphenyl	80.9	50 - 150		%Rec	1	4/13/2022 4:04:37 PM
Surr: o-Terphenyl	79.8	50 - 150		%Rec	1	4/13/2022 4:04:37 PM

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 36096 Analyst: OK

Naphthalene	0.759	0.0990		µg/L	1	4/14/2022 12:53:30 PM
2-Methylnaphthalene	0.259	0.0990		µg/L	1	4/14/2022 12:53:30 PM
1-Methylnaphthalene	0.156	0.0990		µg/L	1	4/14/2022 12:53:30 PM
Acenaphthylene	ND	0.0990		µg/L	1	4/14/2022 12:53:30 PM
Acenaphthene	ND	0.0990		µg/L	1	4/14/2022 12:53:30 PM
Fluorene	ND	0.0990		µg/L	1	4/14/2022 12:53:30 PM
Phenanthrene	ND	0.0990		µg/L	1	4/14/2022 12:53:30 PM
Anthracene	ND	0.0990		µg/L	1	4/14/2022 12:53:30 PM
Fluoranthene	ND	0.0990		µg/L	1	4/14/2022 12:53:30 PM
Pyrene	ND	0.0990		µg/L	1	4/14/2022 12:53:30 PM
Benz(a)anthracene	ND	0.0990		µg/L	1	4/14/2022 12:53:30 PM
Chrysene	ND	0.0990		µg/L	1	4/14/2022 12:53:30 PM
Benzo(b)fluoranthene	ND	0.0990		µg/L	1	4/14/2022 12:53:30 PM
Benzo(k)fluoranthene	ND	0.0990		µg/L	1	4/14/2022 12:53:30 PM
Benzo(a)pyrene	ND	0.0990		µg/L	1	4/14/2022 12:53:30 PM
Indeno(1,2,3-cd)pyrene	ND	0.0990		µg/L	1	4/14/2022 12:53:30 PM
Dibenz(a,h)anthracene	ND	0.0990		µg/L	1	4/14/2022 12:53:30 PM
Benzo(g,h,i)perylene	ND	0.0990		µg/L	1	4/14/2022 12:53:30 PM
Surr: 2-Fluorobiphenyl	68.9	38.8 - 131		%Rec	1	4/14/2022 12:53:30 PM
Surr: Terphenyl-d14	69.7	46 - 144		%Rec	1	4/14/2022 12:53:30 PM

Gasoline by NWTPH-Gx

Batch ID: 36063 Analyst: MVB

Gasoline	694	50.0		µg/L	1	4/13/2022 12:33:40 AM
Surr: Toluene-d8	104	65 - 135		%Rec	1	4/13/2022 12:33:40 AM
Surr: 4-Bromofluorobenzene	102	65 - 135		%Rec	1	4/13/2022 12:33:40 AM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 36063 Analyst: MVB

Benzene	2.06	0.440		µg/L	1	4/13/2022 12:33:40 AM
Toluene	9.86	0.750		µg/L	1	4/13/2022 12:33:40 AM



Client: GeoEngineers

Collection Date: 4/11/2022 1:10:00 PM

Project: 701 South Jackson

Lab ID: 2204167-001

Matrix: Water

Client Sample ID: GEI-11-W-041122

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260D

Batch ID: 36063

Analyst: MVB

Ethylbenzene	8.28	0.400		µg/L	1	4/13/2022 12:33:40 AM
m,p-Xylene	33.8	1.00		µg/L	1	4/13/2022 12:33:40 AM
o-Xylene	15.1	0.500		µg/L	1	4/13/2022 12:33:40 AM
Surr: Dibromofluoromethane	98.0	80 - 120		%Rec	1	4/13/2022 12:33:40 AM
Surr: Toluene-d8	98.5	80 - 120		%Rec	1	4/13/2022 12:33:40 AM
Surr: 1-Bromo-4-fluorobenzene	101	80 - 120		%Rec	1	4/13/2022 12:33:40 AM

Mercury by EPA Method 245.1

Batch ID: 36086

Analyst: CH

Mercury	ND	0.100		µg/L	1	4/14/2022 10:20:31 AM
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Dissolved Mercury by EPA Method 245.1

Batch ID: 36132

Analyst: CH

Mercury	ND	0.100		µg/L	1	4/18/2022 4:48:26 PM
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Dissolved Metals by EPA Method 200.8

Batch ID: 36082

Analyst: EH

Arsenic	2.95	1.00		µg/L	1	4/14/2022 12:00:10 AM
Cadmium	ND	0.125		µg/L	1	4/14/2022 12:00:10 AM
Chromium	ND	0.750		µg/L	1	4/14/2022 12:00:10 AM
Lead	ND	0.500		µg/L	1	4/14/2022 12:00:10 AM

Total Metals by EPA Method 200.8

Batch ID: 36081

Analyst: EH

Arsenic	2.94	1.00		µg/L	1	4/14/2022 11:42:44 AM
Cadmium	ND	0.200		µg/L	1	4/13/2022 3:31:48 PM
Chromium	ND	1.00		µg/L	1	4/13/2022 3:31:48 PM
Lead	ND	0.500		µg/L	1	4/13/2022 3:31:48 PM



Client: GeoEngineers

Collection Date: 4/11/2022 12:00:00 PM

Project: 701 South Jackson

Lab ID: 2204167-002

Matrix: Water

Client Sample ID: GEI-12-W-041122

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.

Batch ID: 36079

Analyst: MM

Diesel (Fuel Oil)	ND	117		µg/L	1	4/13/2022 4:15:39 PM
Heavy Oil	ND	117		µg/L	1	4/13/2022 4:15:39 PM
Total Petroleum Hydrocarbons	ND	234		µg/L	1	4/13/2022 4:15:39 PM
Surr: 2-Fluorobiphenyl	80.2	50 - 150		%Rec	1	4/13/2022 4:15:39 PM
Surr: o-Terphenyl	86.5	50 - 150		%Rec	1	4/13/2022 4:15:39 PM

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 36096

Analyst: OK

Naphthalene	0.521	0.0997		µg/L	1	4/14/2022 1:22:02 PM
2-Methylnaphthalene	0.799	0.0997		µg/L	1	4/14/2022 1:22:02 PM
1-Methylnaphthalene	0.620	0.0997		µg/L	1	4/14/2022 1:22:02 PM
Acenaphthylene	ND	0.0997		µg/L	1	4/14/2022 1:22:02 PM
Acenaphthene	ND	0.0997		µg/L	1	4/14/2022 1:22:02 PM
Fluorene	ND	0.0997		µg/L	1	4/14/2022 1:22:02 PM
Phenanthrene	ND	0.0997		µg/L	1	4/14/2022 1:22:02 PM
Anthracene	ND	0.0997		µg/L	1	4/14/2022 1:22:02 PM
Fluoranthene	ND	0.0997		µg/L	1	4/14/2022 1:22:02 PM
Pyrene	ND	0.0997		µg/L	1	4/14/2022 1:22:02 PM
Benz(a)anthracene	ND	0.0997		µg/L	1	4/14/2022 1:22:02 PM
Chrysene	ND	0.0997		µg/L	1	4/14/2022 1:22:02 PM
Benzo(b)fluoranthene	ND	0.0997		µg/L	1	4/14/2022 1:22:02 PM
Benzo(k)fluoranthene	ND	0.0997		µg/L	1	4/14/2022 1:22:02 PM
Benzo(a)pyrene	ND	0.0997		µg/L	1	4/14/2022 1:22:02 PM
Indeno(1,2,3-cd)pyrene	ND	0.0997		µg/L	1	4/14/2022 1:22:02 PM
Dibenz(a,h)anthracene	ND	0.0997		µg/L	1	4/14/2022 1:22:02 PM
Benzo(g,h,i)perylene	ND	0.0997		µg/L	1	4/14/2022 1:22:02 PM
Surr: 2-Fluorobiphenyl	58.5	38.8 - 131		%Rec	1	4/14/2022 1:22:02 PM
Surr: Terphenyl-d14	79.0	46 - 144		%Rec	1	4/14/2022 1:22:02 PM

Gasoline by NWTPH-Gx

Batch ID: 36063

Analyst: MVB

Gasoline	ND	50.0		µg/L	1	4/13/2022 1:03:49 AM
Gasoline Range Organics (C6-C12)	142	50.0		µg/L	1	4/13/2022 1:03:49 AM
Surr: Toluene-d8	100	65 - 135		%Rec	1	4/13/2022 1:03:49 AM
Surr: 4-Bromofluorobenzene	95.4	65 - 135		%Rec	1	4/13/2022 1:03:49 AM

NOTES:

GRO - Indicates the presence of unresolved compounds in the gasoline range.



Client: GeoEngineers

Collection Date: 4/11/2022 12:00:00 PM

Project: 701 South Jackson

Lab ID: 2204167-002

Matrix: Water

Client Sample ID: GEI-12-W-041122

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260D

Batch ID: 36063

Analyst: MVB

Benzene	ND	0.440		µg/L	1	4/13/2022 1:03:49 AM
Toluene	ND	0.750		µg/L	1	4/13/2022 1:03:49 AM
Ethylbenzene	1.06	0.400		µg/L	1	4/13/2022 1:03:49 AM
m,p-Xylene	1.20	1.00		µg/L	1	4/13/2022 1:03:49 AM
o-Xylene	ND	0.500		µg/L	1	4/13/2022 1:03:49 AM
Surr: Dibromofluoromethane	106	80 - 120		%Rec	1	4/13/2022 1:03:49 AM
Surr: Toluene-d8	101	80 - 120		%Rec	1	4/13/2022 1:03:49 AM
Surr: 1-Bromo-4-fluorobenzene	93.6	80 - 120		%Rec	1	4/13/2022 1:03:49 AM

Mercury by EPA Method 245.1

Batch ID: 36086

Analyst: CH

Mercury	ND	0.100		µg/L	1	4/14/2022 10:22:12 AM
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Dissolved Mercury by EPA Method 245.1

Batch ID: 36132

Analyst: CH

Mercury	ND	0.100		µg/L	1	4/18/2022 4:50:07 PM
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Dissolved Metals by EPA Method 200.8

Batch ID: 36082

Analyst: EH

Arsenic	2.91	1.00		µg/L	1	4/14/2022 12:05:44 AM
Cadmium	ND	0.125		µg/L	1	4/14/2022 12:05:44 AM
Chromium	0.752	0.750		µg/L	1	4/14/2022 12:05:44 AM
Lead	ND	0.500		µg/L	1	4/14/2022 12:05:44 AM

Total Metals by EPA Method 200.8

Batch ID: 36081

Analyst: EH

Arsenic	2.85	1.00		µg/L	1	4/14/2022 11:45:28 AM
Cadmium	ND	0.200		µg/L	1	4/13/2022 3:34:32 PM
Chromium	1.10	1.00		µg/L	1	4/13/2022 3:34:32 PM
Lead	ND	0.500		µg/L	1	4/13/2022 3:34:32 PM

Work Order: 2204167
 CLIENT: GeoEngineers
 Project: 701 South Jackson

QC SUMMARY REPORT
Dissolved Metals by EPA Method 200.8

Sample ID: MB-36083FB	SampType: MBLK	Units: µg/L			Prep Date: 4/13/2022	RunNo: 74736					
Client ID: MBLKW	Batch ID: 36082				Analysis Date: 4/13/2022	SeqNo: 1533576					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	1.00									
Cadmium	ND	0.125									
Chromium	ND	0.750									
Lead	ND	0.500									

Sample ID: MB-36082	SampType: MBLK	Units: µg/L			Prep Date: 4/13/2022	RunNo: 74736					
Client ID: MBLKW	Batch ID: 36082				Analysis Date: 4/13/2022	SeqNo: 1533577					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	1.00									
Cadmium	ND	0.125									
Chromium	ND	0.750									
Lead	ND	0.500									

Sample ID: LCS-36082	SampType: LCS	Units: µg/L			Prep Date: 4/13/2022	RunNo: 74736					
Client ID: LCSW	Batch ID: 36082				Analysis Date: 4/13/2022	SeqNo: 1533578					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	478	1.00	500.0	0	95.6	85	115				
Cadmium	22.8	0.125	25.00	0	91.0	85	115				
Chromium	494	0.750	500.0	0	98.8	85	115				
Lead	250	0.500	250.0	0	99.9	85	115				

Sample ID: 2204132-001CDUP	SampType: DUP	Units: µg/L			Prep Date: 4/13/2022	RunNo: 74736					
Client ID: BATCH	Batch ID: 36082				Analysis Date: 4/13/2022	SeqNo: 1533580					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	1.00						0		30	
Cadmium	ND	0.125						0		30	

Work Order: 2204167
 CLIENT: GeoEngineers
 Project: 701 South Jackson

QC SUMMARY REPORT
Dissolved Metals by EPA Method 200.8

Sample ID: 2204132-001CDUP	SampType: DUP	Units: µg/L			Prep Date: 4/13/2022	RunNo: 74736					
Client ID: BATCH	Batch ID: 36082				Analysis Date: 4/13/2022	SeqNo: 1533580					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium	ND	0.750						0		30	
Lead	ND	0.500						0		30	

Sample ID: 2204132-001CMS	SampType: MS	Units: µg/L			Prep Date: 4/13/2022	RunNo: 74736					
Client ID: BATCH	Batch ID: 36082				Analysis Date: 4/13/2022	SeqNo: 1533581					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Arsenic	489	1.00	500.0	0	97.9	70	130				
Cadmium	23.6	0.125	25.00	0	94.4	70	130				
Chromium	488	0.750	500.0	0	97.7	70	130				
Lead	243	0.500	250.0	0	97.1	70	130				

Sample ID: 2204185-003CMS	SampType: MS	Units: µg/L			Prep Date: 4/13/2022	RunNo: 74736					
Client ID: BATCH	Batch ID: 36082				Analysis Date: 4/14/2022	SeqNo: 1533596					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Arsenic	500	1.00	500.0	1.004	99.8	70	130				
Cadmium	24.3	0.125	25.00	0	97.2	70	130				
Chromium	478	0.750	500.0	0	95.7	70	130				
Lead	239	0.500	250.0	0	95.6	70	130				

Work Order: 2204167
 CLIENT: GeoEngineers
 Project: 701 South Jackson

QC SUMMARY REPORT
Total Metals by EPA Method 200.8

Sample ID: 2204172-001AMS	SampType: MS	Units: µg/L				Prep Date: 4/13/2022	RunNo: 74721				
Client ID: BATCH	Batch ID: 36081					Analysis Date: 4/13/2022	SeqNo: 1533265				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Arsenic	98.8	1.00	100.0	0.7811	98.0	70	130				
Cadmium	5.01	0.200	5.000	0.01490	99.8	70	130				
Chromium	98.0	1.00	100.0	0.2558	97.7	70	130				
Lead	45.1	0.500	50.00	0.1962	89.8	70	130				

Sample ID: MB-36081	SampType: MBLK	Units: µg/L				Prep Date: 4/13/2022	RunNo: 74721				
Client ID: MBLKW	Batch ID: 36081					Analysis Date: 4/13/2022	SeqNo: 1533282				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Arsenic	ND	1.00									
Cadmium	ND	0.200									
Chromium	ND	1.00									
Lead	ND	0.500									

Sample ID: LCS-36081	SampType: LCS	Units: µg/L				Prep Date: 4/13/2022	RunNo: 74721				
Client ID: LCSW	Batch ID: 36081					Analysis Date: 4/13/2022	SeqNo: 1533283				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Arsenic	103	1.00	100.0	0	103	85	115				
Cadmium	4.95	0.200	5.000	0	99.0	85	115				
Chromium	96.3	1.00	100.0	0	96.3	85	115				
Lead	49.0	0.500	50.00	0	98.1	85	115				

Sample ID: 2204172-001ADUP	SampType: DUP	Units: µg/L				Prep Date: 4/13/2022	RunNo: 74721				
Client ID: BATCH	Batch ID: 36081					Analysis Date: 4/13/2022	SeqNo: 1533285				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Arsenic	ND	1.00						0		30	
Cadmium	ND	0.200						0		30	

Work Order: 2204167
CLIENT: GeoEngineers
Project: 701 South Jackson

QC SUMMARY REPORT
Total Metals by EPA Method 200.8

Sample ID: 2204172-001ADUP	SampType: DUP	Units: µg/L			Prep Date: 4/13/2022	RunNo: 74721					
Client ID: BATCH	Batch ID: 36081				Analysis Date: 4/13/2022	SeqNo: 1533285					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium	ND	1.00						0		30	
Lead	ND	0.500						0		30	

Sample ID: 2204175-005AMS	SampType: MS	Units: µg/L			Prep Date: 4/13/2022	RunNo: 74721					
Client ID: BATCH	Batch ID: 36081				Analysis Date: 4/13/2022	SeqNo: 1533375					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Arsenic	85.0	1.00	100.0	0.8354	84.2	70	130				
Cadmium	4.97	0.200	5.000	0.2590	94.2	70	130				
Chromium	87.6	1.00	100.0	7.082	80.5	70	130				
Lead	61.7	0.500	50.00	16.78	89.7	70	130				

Work Order: 2204167
CLIENT: GeoEngineers
Project: 701 South Jackson

QC SUMMARY REPORT
Mercury by EPA Method 245.1

Sample ID: MB-36086	SampType: MBLK	Units: µg/L	Prep Date: 4/13/2022	RunNo: 74723							
Client ID: MBLKW	Batch ID: 36086		Analysis Date: 4/14/2022	SeqNo: 1533661							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury ND 0.100

Sample ID: LCS-36086	SampType: LCS	Units: µg/L	Prep Date: 4/13/2022	RunNo: 74723							
Client ID: LCSW	Batch ID: 36086		Analysis Date: 4/14/2022	SeqNo: 1533662							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury 2.54 0.100 2.500 0 102 85 115

Sample ID: 2204180-004ADUP	SampType: DUP	Units: µg/L	Prep Date: 4/13/2022	RunNo: 74723							
Client ID: BATCH	Batch ID: 36086		Analysis Date: 4/14/2022	SeqNo: 1533664							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury ND 0.100 0 20

Sample ID: 2204180-004AMS	SampType: MS	Units: µg/L	Prep Date: 4/13/2022	RunNo: 74723							
Client ID: BATCH	Batch ID: 36086		Analysis Date: 4/14/2022	SeqNo: 1533665							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury 2.92 0.100 2.500 0 117 70 130

Sample ID: 2204180-004AMSD	SampType: MSD	Units: µg/L	Prep Date: 4/13/2022	RunNo: 74723							
Client ID: BATCH	Batch ID: 36086		Analysis Date: 4/14/2022	SeqNo: 1533666							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury 2.73 0.100 2.500 0 109 70 130 2.920 6.73 20

Work Order: 2204167
CLIENT: GeoEngineers
Project: 701 South Jackson

QC SUMMARY REPORT
Dissolved Mercury by EPA Method 245.1

Sample ID: MB-36132	SampType: MBLK	Units: µg/L	Prep Date: 4/18/2022	RunNo: 74819							
Client ID: MBLKW	Batch ID: 36132	Analysis Date: 4/18/2022	SeqNo: 1535280								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury ND 0.100

Sample ID: LCS-36132	SampType: LCS	Units: µg/L	Prep Date: 4/18/2022	RunNo: 74819							
Client ID: LCSW	Batch ID: 36132	Analysis Date: 4/18/2022	SeqNo: 1535281								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury 2.31 0.100 2.500 0 92.4 85 115

Sample ID: 2204167-002EDUP	SampType: DUP	Units: µg/L	Prep Date: 4/18/2022	RunNo: 74819							
Client ID: GEI-12-W-041122	Batch ID: 36132	Analysis Date: 4/18/2022	SeqNo: 1535284								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury ND 0.100 0 20

Sample ID: 2204167-002EMS	SampType: MS	Units: µg/L	Prep Date: 4/18/2022	RunNo: 74819							
Client ID: GEI-12-W-041122	Batch ID: 36132	Analysis Date: 4/18/2022	SeqNo: 1535285								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury 2.58 0.100 2.500 0 103 70 130

Sample ID: 2204167-002EMSD	SampType: MSD	Units: µg/L	Prep Date: 4/18/2022	RunNo: 74819							
Client ID: GEI-12-W-041122	Batch ID: 36132	Analysis Date: 4/18/2022	SeqNo: 1535286								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury 2.42 0.100 2.500 0 96.8 70 130 2.580 6.40 20



Date: 4/18/2022

Work Order: 2204167
CLIENT: GeoEngineers
Project: 701 South Jackson

QC SUMMARY REPORT
Dissolved Mercury by EPA Method 245.1

Sample ID: MB-36136-FB	SampType: MBLK	Units: µg/L	Prep Date: 4/18/2022	RunNo: 74819							
Client ID: MBLKW	Batch ID: 36132		Analysis Date: 4/18/2022	SeqNo: 1535287							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.100									

Work Order: 2204167
 CLIENT: GeoEngineers
 Project: 701 South Jackson

QC SUMMARY REPORT
Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.

Sample ID: MB-36079	SampType: MBLK	Units: µg/L			Prep Date: 4/12/2022	RunNo: 74743					
Client ID: MBLKW	Batch ID: 36079				Analysis Date: 4/13/2022	SeqNo: 1533857					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	ND	119									
Heavy Oil	ND	119									
Total Petroleum Hydrocarbons	ND	238									
Surr: 2-Fluorobiphenyl	22.5		23.81		94.7	50	150				
Surr: o-Terphenyl	22.5		23.81		94.5	50	150				

Sample ID: LCS-36079	SampType: LCS	Units: µg/L			Prep Date: 4/12/2022	RunNo: 74743					
Client ID: LCSW	Batch ID: 36079				Analysis Date: 4/13/2022	SeqNo: 1533858					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Petroleum Hydrocarbons	1,140	235	1,176	0	97.3	57.2	125				
Surr: 2-Fluorobiphenyl	16.3		23.52		69.5	50	150				
Surr: o-Terphenyl	27.5		23.52		117	50	150				

Sample ID: 2204169-001BMS	SampType: MS	Units: µg/L			Prep Date: 4/12/2022	RunNo: 74743					
Client ID: BATCH	Batch ID: 36079				Analysis Date: 4/13/2022	SeqNo: 1533863					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Petroleum Hydrocarbons	1,120	238	1,192	0	94.3	40.5	128				
Surr: 2-Fluorobiphenyl	17.1		23.83		71.9	50	150				
Surr: o-Terphenyl	24.2		23.83		102	50	150				

Sample ID: 2204169-001BMSD	SampType: MSD	Units: µg/L			Prep Date: 4/12/2022	RunNo: 74743					
Client ID: BATCH	Batch ID: 36079				Analysis Date: 4/13/2022	SeqNo: 1533864					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Petroleum Hydrocarbons	1,060	235	1,175	0	90.3	40.5	128	1,124	5.68	30	
Surr: 2-Fluorobiphenyl	20.6		23.51		87.7	50	150		0		
Surr: o-Terphenyl	28.5		23.51		121	50	150		0		



Date: 4/18/2022

Work Order: 2204167
CLIENT: GeoEngineers
Project: 701 South Jackson

QC SUMMARY REPORT
Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.

Sample ID: 2204169-001BMSD	SampType: MSD	Units: µg/L	Prep Date: 4/12/2022	RunNo: 74743							
Client ID: BATCH	Batch ID: 36079		Analysis Date: 4/13/2022	SeqNo: 1533864							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Work Order: 2204167
 CLIENT: GeoEngineers
 Project: 701 South Jackson

QC SUMMARY REPORT
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: MB-36096	SampType: MBLK	Units: µg/L	Prep Date: 4/13/2022	RunNo: 74762							
Client ID: MBLKW	Batch ID: 36096		Analysis Date: 4/14/2022	SeqNo: 1534161							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Naphthalene	ND	0.100									
2-Methylnaphthalene	ND	0.100									
1-Methylnaphthalene	ND	0.100									
Acenaphthylene	ND	0.100									
Acenaphthene	ND	0.100									
Fluorene	ND	0.100									
Phenanthrene	ND	0.100									
Anthracene	ND	0.100									
Fluoranthene	ND	0.100									
Pyrene	ND	0.100									
Benz(a)anthracene	ND	0.100									
Chrysene	ND	0.100									
Benzo(b)fluoranthene	ND	0.100									
Benzo(k)fluoranthene	ND	0.100									
Benzo(a)pyrene	ND	0.100									
Indeno(1,2,3-cd)pyrene	ND	0.100									
Dibenz(a,h)anthracene	ND	0.100									
Benzo(g,h,i)perylene	ND	0.100									
Surr: 2-Fluorobiphenyl	1.45		2.000		72.5	38.8	131				
Surr: Terphenyl-d14	1.63		2.000		81.7	46	144				

Sample ID: LCS-36096	SampType: LCS	Units: µg/L	Prep Date: 4/13/2022	RunNo: 74762							
Client ID: LCSW	Batch ID: 36096		Analysis Date: 4/14/2022	SeqNo: 1534162							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Naphthalene	3.25	0.100	4.000	0	81.3	49.4	107				
2-Methylnaphthalene	3.22	0.100	4.000	0	80.5	50.9	107				
1-Methylnaphthalene	3.17	0.100	4.000	0	79.3	51.1	106				
Acenaphthylene	3.22	0.100	4.000	0	80.6	53.5	107				
Acenaphthene	3.26	0.100	4.000	0	81.5	51.2	105				

Work Order: 2204167
 CLIENT: GeoEngineers
 Project: 701 South Jackson

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: LCS-36096	SampType: LCS	Units: µg/L				Prep Date: 4/13/2022	RunNo: 74762				
Client ID: LCSW	Batch ID: 36096					Analysis Date: 4/14/2022	SeqNo: 1534162				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluorene	3.36	0.100	4.000	0	84.0	56	114				
Phenanthrene	3.27	0.100	4.000	0	81.9	56.4	110				
Anthracene	3.13	0.100	4.000	0	78.3	53.2	107				
Fluoranthene	3.34	0.100	4.000	0	83.6	60	115				
Pyrene	3.30	0.100	4.000	0	82.4	59	115				
Benzo(a)anthracene	3.37	0.100	4.000	0	84.3	56.5	119				
Chrysene	3.25	0.100	4.000	0	81.3	56.7	108				
Benzo(b)fluoranthene	3.72	0.100	4.000	0	93.1	51.6	115				
Benzo(k)fluoranthene	3.38	0.100	4.000	0	84.5	52.1	125				
Benzo(a)pyrene	3.28	0.100	4.000	0	81.9	51.6	120				
Indeno(1,2,3-cd)pyrene	3.70	0.100	4.000	0	92.4	46.4	111				
Dibenz(a,h)anthracene	3.76	0.100	4.000	0	94.1	47.7	116				
Benzo(g,h,i)perylene	3.38	0.100	4.000	0	84.6	46.1	117				
Surr: 2-Fluorobiphenyl	1.46		2.000		72.9	38.8	131				
Surr: Terphenyl-d14	1.61		2.000		80.6	46	144				

Sample ID: 2204167-002CDUP	SampType: DUP	Units: µg/L				Prep Date: 4/13/2022	RunNo: 74762				
Client ID: GEI-12-W-041122	Batch ID: 36096					Analysis Date: 4/14/2022	SeqNo: 1534165				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	0.591	0.0996						0.5210	12.5	30	
2-Methylnaphthalene	0.987	0.0996						0.7992	21.0	30	
1-Methylnaphthalene	0.765	0.0996						0.6196	21.0	30	
Acenaphthylene	ND	0.0996						0		30	
Acenaphthene	ND	0.0996						0		30	
Fluorene	ND	0.0996						0		30	
Phenanthrene	ND	0.0996						0		30	
Anthracene	ND	0.0996						0		30	
Fluoranthene	ND	0.0996						0		30	
Pyrene	ND	0.0996						0		30	

Work Order: 2204167
 CLIENT: GeoEngineers
 Project: 701 South Jackson

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: 2204167-002CDUP	SampType: DUP	Units: µg/L			Prep Date: 4/13/2022	RunNo: 74762					
Client ID: GEI-12-W-041122	Batch ID: 36096				Analysis Date: 4/14/2022	SeqNo: 1534165					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benz(a)anthracene	ND	0.0996						0		30	
Chrysene	ND	0.0996						0		30	
Benzo(b)fluoranthene	ND	0.0996						0		30	
Benzo(k)fluoranthene	ND	0.0996						0		30	
Benzo(a)pyrene	ND	0.0996						0		30	
Indeno(1,2,3-cd)pyrene	ND	0.0996						0		30	
Dibenz(a,h)anthracene	ND	0.0996						0		30	
Benzo(g,h,i)perylene	ND	0.0996						0		30	
Surr: 2-Fluorobiphenyl	1.38		1.992		69.2	38.8	131		0		
Surr: Terphenyl-d14	1.54		1.992		77.5	46	144		0		

Sample ID: 2204169-001CMS	SampType: MS	Units: µg/L			Prep Date: 4/13/2022	RunNo: 74762					
Client ID: BATCH	Batch ID: 36096				Analysis Date: 4/14/2022	SeqNo: 1534167					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	3.36	0.0994	3.976	0	84.4	56.4	103				
2-Methylnaphthalene	3.30	0.0994	3.976	0	83.0	55.9	104				
1-Methylnaphthalene	3.25	0.0994	3.976	0	81.7	57.4	102				
Acenaphthylene	3.27	0.0994	3.976	0	82.1	54.6	106				
Acenaphthene	3.37	0.0994	3.976	0	84.7	53.3	105				
Fluorene	3.48	0.0994	3.976	0	87.5	58.3	112				
Phenanthrene	3.38	0.0994	3.976	0	85.1	58	107				
Anthracene	3.11	0.0994	3.976	0	78.2	51.6	108				
Fluoranthene	3.45	0.0994	3.976	0	86.8	57.2	115				
Pyrene	3.40	0.0994	3.976	0	85.5	53.9	115				
Benz(a)anthracene	3.46	0.0994	3.976	0	87.1	49.4	120				
Chrysene	3.37	0.0994	3.976	0	84.7	51.9	106				
Benzo(b)fluoranthene	3.86	0.0994	3.976	0	97.1	44.4	114				
Benzo(k)fluoranthene	3.44	0.0994	3.976	0	86.5	41.8	121				
Benzo(a)pyrene	3.26	0.0994	3.976	0	81.9	37.2	123				

Work Order: 2204167
CLIENT: GeoEngineers
Project: 701 South Jackson

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: 2204169-001CMS	SampType: MS	Units: µg/L	Prep Date: 4/13/2022	RunNo: 74762							
Client ID: BATCH	Batch ID: 36096	Analysis Date: 4/14/2022	SeqNo: 1534167								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Indeno(1,2,3-cd)pyrene	3.59	0.0994	3.976	0	90.2	28.9	112				
Dibenz(a,h)anthracene	3.62	0.0994	3.976	0	91.1	31.1	116				
Benzo(g,h,i)perylene	3.25	0.0994	3.976	0	81.8	29.3	116				
Surr: 2-Fluorobiphenyl	1.44		1.988		72.4	38.8	131				
Surr: Terphenyl-d14	1.59		1.988		80.1	46	144				

Work Order: 2204167
CLIENT: GeoEngineers
Project: 701 South Jackson

QC SUMMARY REPORT
Gasoline by NWTPH-Gx

Sample ID: LCS-36063	SampType: LCS	Units: µg/L			Prep Date: 4/11/2022	RunNo: 74707					
Client ID: LCSW	Batch ID: 36063				Analysis Date: 4/12/2022	SeqNo: 1532940					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline	452	50.0	500.0	0	90.4	65	135				
Surr: Toluene-d8	25.2		25.00		101	65	135				
Surr: 4-Bromofluorobenzene	25.7		25.00		103	65	135				

Sample ID: MB-36063	SampType: MBLK	Units: µg/L			Prep Date: 4/11/2022	RunNo: 74707					
Client ID: MBLKW	Batch ID: 36063				Analysis Date: 4/12/2022	SeqNo: 1532929					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline	ND	50.0									
Surr: Toluene-d8	24.6		25.00		98.3	65	135				
Surr: 4-Bromofluorobenzene	23.0		25.00		92.0	65	135				

Sample ID: 2204121-001ADUP	SampType: DUP	Units: µg/L			Prep Date: 4/11/2022	RunNo: 74707					
Client ID: BATCH	Batch ID: 36063				Analysis Date: 4/12/2022	SeqNo: 1532914					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline	ND	50.0						0		30	
Surr: Toluene-d8	24.5		25.00		97.9	65	135		0		
Surr: 4-Bromofluorobenzene	22.7		25.00		90.8	65	135		0		

Sample ID: 2204161-024ADUP	SampType: DUP	Units: µg/L			Prep Date: 4/11/2022	RunNo: 74707					
Client ID: BATCH	Batch ID: 36063				Analysis Date: 4/13/2022	SeqNo: 1532923					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline Range Organics (C6-C12)	69.7	50.0						103.0	38.6	30	
Surr: Toluene-d8	24.4		25.00		97.5	65	135		0		
Surr: 4-Bromofluorobenzene	23.1		25.00		92.5	65	135		0		

NOTES:

GRO - Indicates the presence of unresolved compounds in the gasoline range.

Work Order: 2204167
CLIENT: GeoEngineers
Project: 701 South Jackson

QC SUMMARY REPORT
Gasoline by NWTPH-Gx

Sample ID: 2204132-003AMS	SampType: MS	Units: µg/L			Prep Date: 4/11/2022	RunNo: 74707					
Client ID: BATCH	Batch ID: 36063				Analysis Date: 4/13/2022	SeqNo: 1532918					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline	2,100	50.0	500.0	1,435	133	65	135				
Surr: Toluene-d8	26.1		25.00		104	65	135				
Surr: 4-Bromofluorobenzene	29.0		25.00		116	65	135				



Work Order: 2204167
 CLIENT: GeoEngineers
 Project: 701 South Jackson

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260D

Sample ID: LCS-36063	SampType: LCS	Units: µg/L				Prep Date: 4/11/2022	RunNo: 74709				
Client ID: LCSW	Batch ID: 36063					Analysis Date: 4/12/2022	SeqNo: 1533002				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	19.6	0.440	20.00	0	98.1	80	120				
Toluene	20.1	0.750	20.00	0	100	80	120				
Ethylbenzene	20.1	0.400	20.00	0	101	80	120				
m,p-Xylene	39.0	1.00	40.00	0	97.5	80	120				
o-Xylene	19.3	0.500	20.00	0	96.4	80	120				
Surr: Dibromofluoromethane	22.1		25.00		88.4	80	120				
Surr: Toluene-d8	25.6		25.00		102	80	120				
Surr: 1-Bromo-4-fluorobenzene	26.7		25.00		107	80	120				

Sample ID: MB-36063	SampType: MBLK	Units: µg/L				Prep Date: 4/11/2022	RunNo: 74709				
Client ID: MBLKW	Batch ID: 36063					Analysis Date: 4/12/2022	SeqNo: 1533001				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.440									
Toluene	ND	0.750									
Ethylbenzene	ND	0.400									
m,p-Xylene	ND	1.00									
o-Xylene	ND	0.500									
Surr: Dibromofluoromethane	25.0		25.00		100	80	120				
Surr: Toluene-d8	25.0		25.00		99.8	80	120				
Surr: 1-Bromo-4-fluorobenzene	23.1		25.00		92.5	80	120				

Sample ID: 2204121-001ADUP	SampType: DUP	Units: µg/L-dry				Prep Date: 4/11/2022	RunNo: 74709				
Client ID: BATCH	Batch ID: 36063					Analysis Date: 4/12/2022	SeqNo: 1532987				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.440						0		30	
Toluene	ND	0.750						0		30	
Ethylbenzene	ND	0.400						0		30	

Work Order: 2204167
 CLIENT: GeoEngineers
 Project: 701 South Jackson

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260D

Sample ID: 2204121-001ADUP	SampType: DUP	Units: µg/L-dry	Prep Date: 4/11/2022	RunNo: 74709							
Client ID: BATCH	Batch ID: 36063	Analysis Date: 4/12/2022	SeqNo: 1532987								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
m,p-Xylene	ND	1.00						0		30	
o-Xylene	ND	0.500						0		30	
Surr: Dibromofluoromethane	28.5		25.00		114	80	120		0		
Surr: Toluene-d8	25.3		25.00		101	80	120		0		
Surr: 1-Bromo-4-fluorobenzene	22.7		25.00		91.0	80	120		0		

Sample ID: 2204132-002AMS	SampType: MS	Units: µg/L	Prep Date: 4/11/2022	RunNo: 74709							
Client ID: BATCH	Batch ID: 36063	Analysis Date: 4/13/2022	SeqNo: 1532990								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	24.0	0.440	20.00	0	120	78.5	133				
Toluene	24.6	0.750	20.00	0	123	77	133				
Ethylbenzene	25.5	0.400	20.00	0	128	77.9	133				
m,p-Xylene	48.7	1.00	40.00	0	122	74.8	133				
o-Xylene	24.2	0.500	20.00	0	121	81.2	126				
Surr: Dibromofluoromethane	23.3		25.00		93.2	80	120				
Surr: Toluene-d8	25.8		25.00		103	80	120				
Surr: 1-Bromo-4-fluorobenzene	27.8		25.00		111	80	120				

Client Name: GEI	Work Order Number: 2204167
Logged by: Gabrielle Coeuille	Date Received: 4/11/2022 4:21:00 PM

Chain of Custody

1. Is Chain of Custody complete? Yes No Not Present
2. How was the sample delivered? Client

Log In

3. Coolers are present? Yes No NA
4. Shipping container/cooler in good condition? Yes No
5. Custody Seals present on shipping container/cooler?
(Refer to comments for Custody Seals not intact) Yes No Not Present
6. Was an attempt made to cool the samples? Yes No NA
7. Were all items received at a temperature of >2°C to 6°C * Yes No NA
8. Sample(s) in proper container(s)? Yes No
9. Sufficient sample volume for indicated test(s)? Yes No
10. Are samples properly preserved? Yes No
11. Was preservative added to bottles? Yes No NA
12. Is there headspace in the VOA vials? Yes No NA
13. Did all samples containers arrive in good condition(unbroken)? Yes No
14. Does paperwork match bottle labels? Yes No
15. Are matrices correctly identified on Chain of Custody? Yes No
16. Is it clear what analyses were requested? Yes No
17. Were all holding times able to be met? Yes No

Special Handling (if applicable)

18. Was client notified of all discrepancies with this order? Yes No NA

Person Notified:	<input style="width: 95%;" type="text"/>	Date:	<input style="width: 95%;" type="text"/>
By Whom:	<input style="width: 95%;" type="text"/>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input style="width: 95%;" type="text"/>		
Client Instructions:	<input style="width: 95%;" type="text"/>		

19. Additional remarks:
 Client did not relinquish chain of custody

Item Information

Item #	Temp °C
Sample 1	3.2

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C



Fremont
Analytical

3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Chain of Custody Record & Laboratory Services Agreement

Date: 4.11.2022 Page: 1 of: 1

Project Name: 701 South Jackson

Project No: 24504-001-01

Collected by: NATHAN SLOMON

Location: SEATTLE WA

Report To (PM): ROBERT TRAYNAD

PM Email:

Laboratory Project No (Internal): 2204167

Special Remarks:

Sample Disposal: Return to client Disposal by lab (after 30 days)

Client: GEOTECHNICAL INC
Address:
City, State, Zip:
Telephone:
Fax:

Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	# of Cont.	Analytes													Comments
					VOCS (EPA 8260 / 624)	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCID)	Diesel/Heavy Oil Range Organics (DX)	SVOCs (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8082 / 608)	Metals** (EPA 6020 / 200.8)	Total (T) Dissolved (D)	Anions (IC)***	EDB (8011)		
1 GEL-11-W-041122	4.11.22	1300	WATER 7	7	X	X	X	X	X	X	X	X	X	X	X			
2 GEL-18-W-041122	4.11.22	1200	WATER 7	7	X	X	X	X	X	X	X	X	X	X	X			
3																		
4																		
5																		
6																		
7																		
8																		
9																		
10																		

*Matrix: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water

**Metals (Circle): MTCAS RCRA-8 Priority Pollutants TAL Individual: Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sb Se Sr Sn Tl Ti V Zn

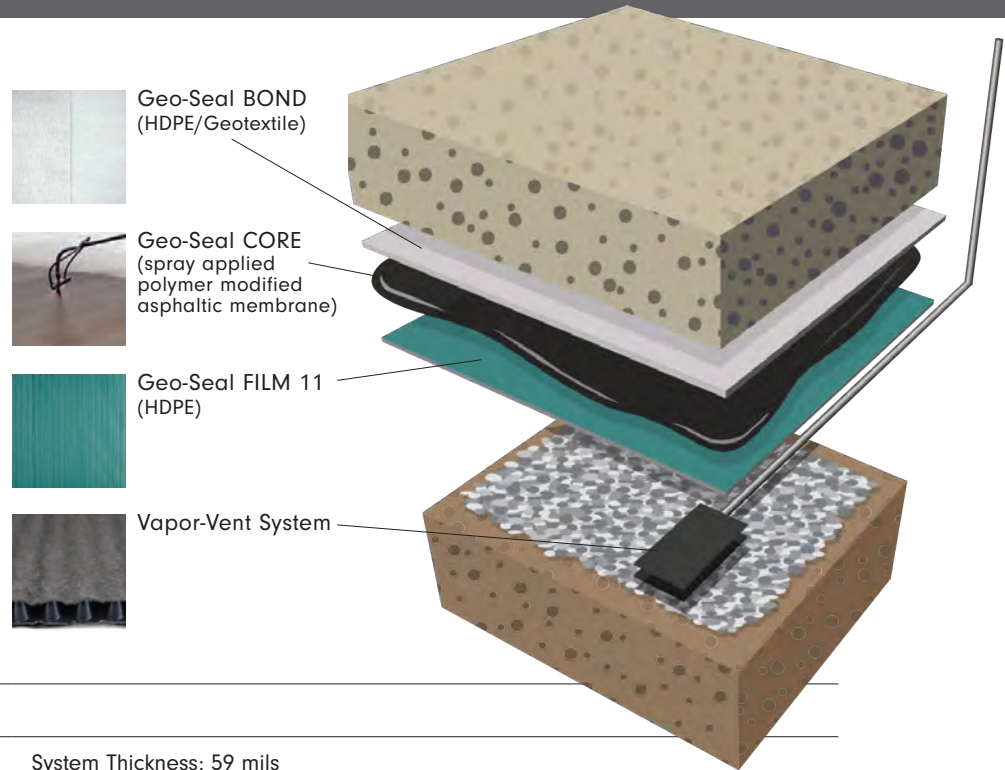
***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide Iodide O-Phosphate Fluoride Nitrate+Nitrite

I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above, that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Relinquished (Signature) _____ Date/Time _____ Turn-around Time: Standard Next Day 3 Day Same Day 2 Day (specify) _____

Relinquished (Signature) Asulll Scovney Elizabeth Scovney Date/Time 4/11/22 16:21

APPENDIX E
Geo Seal Product Information



System: Geo-Seal 60 Vapor Intrusion Barrier

Application: Underslab Contaminant Vapor Barrier System Thickness: 59 mils

	1st Layer	2nd Layer	3rd Layer
Product Name	Geo-Seal FILM 11	Geo-Seal CORE 30 mil	Geo-Seal BOND 18 mil

DESCRIPTION

Geo-Seal® 60 is designed to provide a cost-effective alternative for sites desiring a pre-emptive mitigation solution, but also wish to have a vapor intrusion barrier that is more robust and resistant to construction traffic than simple single sheet membranes. Geo-Seal® consists of three distinct layers, Geo-Seal® FILM 11, Geo-Seal® CORE and Geo-Seal® BOND.

While simple single sheet membranes may be able to provide robust chemical resistance, they often lack the robust seals around penetrations and termination points. They are also more prone to punctures during the construction process.

Geo-Seal® 60 makes the decision easy for those debating whether to employ a simple single sheet membrane or utilize a thicker, more robust barrier to protect human health at similar price points.

BENEFITS

- **Class A:** Class A vapor barrier that alone meets the basic water vapor barrier requirements for new construction.
- **Durable:** Three layers of complementary contaminant vapor barrier materials create a thick and redundant composite system superior to single sheet barrier systems.
- **Chemical Resistant:** Constructed with multiple highly chemical resistant sheets and a polymer-modified asphaltic membrane to form a robust composite barrier.
- **Seamless:** Spray-applied monolithic layer ensures complete sealing of building foundation without mechanical fastening.
- **Bonded:** Mechanically adheres directly to the foundation slab.
- **Single-Source Warranty:** EPRO can be a single point of contact to address building vapor intrusion and waterproofing needs.

LIMITATIONS

- Do not apply below 20°F or to damp, frozen or contaminated surfaces.
- Contact EPRO for waterproofing system recommendations.

SPECIFICATIONS, DRAWINGS, AND TECHNICAL ASSISTANCE

The most current specifications and drawings can be found on www.eproinc.com. For project specific details contact EPRO directly, or your local EPRO representative.

Site conditions, performance goals, and budget determine which system is most appropriate for a given project. For more information regarding product performance, testing, plan review, or general technical assistance, please contact EPRO.

WARRANTY

EPRO provides a wide range of warranty options for Geo-Seal systems. For a project to be eligible for any warranty option beyond a 1-year material warranty, a Geo-Seal Authorized Applicator must be used and the project must be registered and approved by EPRO prior to the commencement of any product application.

Warranty options available for this system include:

- Material warranty
- Longer warranty periods are available. Contact EPRO for more information.

Physical Property	Test Method	Value
Tensile Strength	ASTM D 412.....	527.7 psi
Elongation	ASTM D 412.....	45%
Adhesion to Concrete	ASTM D 903.....	8 lbf/in
Puncture Resistance	ASTM D 1709.....	310 lbf
Hydrostatic Head Resistance.....	ASTM D 5385.....	100 psi (231 ft)
Water Vapor Transmission	ASTM E 96	0.020 perms
PCE Diffusion Rate.....	Geokinetics	$1.16 \times 10^{-17} \text{ m}^2/\text{sec}$
Benzene Diffusion Rate.....	Geokinetics	$2.31 \times 10^{-18} \text{ m}^2/\text{sec}$
Classification.....	ASTM E1745	Class A, B & C



Applications: Slab On Grade Gas Containment Composite Vapor Intrusion Barrier
Spec Version: EproGS60.VB.v1.4.08.20gs
Date issued: September 22, 2020
Note: This specification may be superseded at any time. Check eproinc.com for the most up to date version of this specification.

**SECTION 02 56 16
GAS CONTAINMENT
SECTION 02 56 19.13
FLUID APPLIED GAS BARRIER**

**Geo-Seal 60
Composite Vapor Intrusion Barrier
Guide Specification**

Slab On Grade

Geo-Seal 60 is designed to provide a cost-effective alternative for sites desiring a pre-emptive mitigation solution, but also wish to have a vapor intrusion barrier that is more robust and resistant to construction traffic than simple single sheet membranes. This guide specification has been prepared according to the principles established in the Manual of Practice published by the Construction Specification Institute.

Note: If areas will be subjected to water and/or hydrostatic conditions, contact EPRO for appropriate system recommendations.

For additional questions, your local EPRO technical representative can be contacted through: EPRO Services, Inc., Wichita KS; 1.800.882.1896; www.eproinc.com.

**GEO-SEAL 60 SLAB ON GRADE COMPOSITE VAPOR INTRUSION BARRIER SPECIFICATION
VERSION 1.40**

**SECTION 02 56 16 – GAS CONTAINMENT
SECTION 02 56 19.13 – FLUID-APPLIED GAS BARRIER**

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the contract, including general and supplementary conditions, and Division 1 specification section, apply to this section.

1.2 SECTION INCLUDES

- A. The installation of materials designed to provide vapor intrusion protection when installed per project specification, this section covers the methane mitigation and vapor intrusion membrane, along with the following:
 - 1. Surface preparation and substrate treatment
 - 2. Auxiliary materials
 - 3. Prefabricated drainage mat (if applicable)
 - 4. Foundation drain (if applicable)

1.3 RELATED SECTIONS

- A. Section 02 24 00: Environmental Assessment
- B. Section 02 32 00: Geotechnical Investigation
- C. Section 03 15 00: Concrete Accessories
- D. Section 03 30 00: Cast-in-Place Concrete
- E. Section 03 40 00: Precast Concrete
- F. Section 07 90 00: Joint Protection
- G. Section 31 30 00: Earthwork Methods
- H. Section 33 41 00: Subdrainage

1.4 PERFORMANCE REQUIREMENTS

- A. General: Provide a vapor mitigation system that prevents the passage of methane gas, contaminant vapors including chlorinated solvents and petroleum hydrocarbons, and complies with the physical requirements as demonstrated by testing performed by an independent testing agency.

1.5 SUBMITTALS

- A. Product Data: Submit manufacturer's printed technical data, tested physical and performance properties, instructions for evaluating, preparing, and treating substrates, and installation instructions.
- B. Shop Drawings: Project specific drawings showing locations and extent of vapor intrusion barrier system, details for overlaps, penetrations, transitions, and termination conditions.
- C. Samples: Submit two standard size samples of the each of the following:
 - 1. Individual components of the specified composite vapor intrusion barrier system.
- D. Applicator Certification: Submit written confirmation at the time of bid that applicator is currently approved by the membrane manufacturer.

1.6 QUALITY ASSURANCE

- A. Applicator Qualifications: System applicator shall be an EPRO Authorized Applicator who is trained to perform work that in accordance with EPRO standards and policies.
- B. Manufacturer Qualification: Obtain vapor intrusion barrier materials and system components from a single manufacturer source, EPRO. Manufacturer must have 20 years of experience in the manufacture of vapor intrusion barrier systems.
- C. Third Party Inspection: Independent inspection of the composite system installation may be required based on project conditions and desired warranty coverage, or as required based on local building code/government agency jurisdiction. Inspection reports shall be submitted directly to the composite vapor intrusion barrier manufacturer and made available to other parties per the owner's direction.
- D. Pre-Construction Meeting: A meeting shall be held prior to application of the barrier system to assure proper substrate preparation, confirm installation conditions, and any additional project specific requirements. Attendees of the meeting shall include, but are not limited to the following:
 - 1. EPRO authorized applicator
 - 2. Third party inspector
 - 3. General contractor
 - 4. Owner's representative
 - 5. Architect and Engineer
 - 6. Concrete/Shotcrete contractor
 - 7. Rebar contractor
 - 8. All appropriate related trades
- E. Field Sample: Apply vapor intrusion barrier system field sample to 100 ft² (9.3 m²) of each assembly to demonstrate proper application techniques and standard of workmanship.

1. Notify composite membrane system manufacturer representative, architect, certified inspector, and other appropriate parties one week in advance of the dates and times when field sample will be prepared.
2. If architect and certified inspector determines that field sample does not meet requirements; reapply composite membrane system until field sample is approved.
3. Retain and maintain approved field sample during construction in an undisturbed condition as a standard for judging the completed composite membrane system. An undamaged field sample may become part of the completed work.

1.7 DELIVERY, STORAGE AND HANDLING

- A. Delivery: Deliver materials to site labeled with manufacturer's name, product brand name, material type, and date of manufacture. Upon the arrival of materials to the jobsite, inspect materials to confirm material has not been damaged during transit.
- B. Storage: Proper storage of onsite materials is the responsibility of the certified applicator. Consult product data sheets to confirm storage requirements. Storage area shall be clean, dry, and protected from the elements. If ambient air temperatures are expected to fall below 40°F, precautions will need to be taken to protect any emulsion product from near freezing temperatures. Protect stored materials from direct sunlight.
- C. Disposal: Remove and replace any material that cannot be properly applied in accordance with local regulations and specification section 01 74 19.

1.8 PROJECT CONDITIONS

- A. Substrate Review: Substrates shall be reviewed and accepted by the certified applicator and independent inspector prior to application.
- B. Penetrations: **All plumbing, electrical, mechanical, and structural items to be passing through the composite membrane system shall be properly spaced, positively secured in their proper positions, and appropriately protected prior to system application and throughout the construction phase.** Braided grounding rods are not allowed to pass through the vapor intrusion barrier.
- C. Reinforcement Steel and Concrete Forms: Vapor intrusion barrier shall be installed before placement of reinforcing steel. When penetrations post system installation occurs, it is the responsibility of the general contractor to notify the vapor intrusion barrier applicator to immediately make repairs prior to the placement of overburden, this includes the use of solid plastic "VaporStakes" used to secure concrete forms.
- D. Clearance: Minimum clearance of 24 inches is required for application of spray applied polymer modified asphalt, **Geo-Seal CORE**. For areas with less than 24-inch clearance, the product may be applied by hand using **Geo-Seal CORE Detail**.
- E. Overspray: Protect all adjacent areas not receiving the barrier application. Masking is necessary to prevent unwanted overspray from adhering to, or staining, areas not receiving the membrane. Once **Geo-Seal CORE** adheres to a surface it is extremely difficult to remove.
- F. Weather Limitations: Perform work only when existing and forecast weather conditions are within manufacturer's recommendations.

1. Spray Applied Polymer Modified Asphalt Membrane: Minimum ambient temperature should be 40°F (7°C) and rising. For applications temperatures below 38°F, but greater than +19°F/-7°C, special equipment and material handling is required. Substrate shall be clean and free from standing moisture.
2. EPRO applicators reserve the right not to install product when application conditions might be within manufactures acceptance, but ambient conditions may limit a successful application.

1.9 WARRANTY

- A. Special Warranty: Submit a written warranty signed by vapor intrusion barrier manufacturer agreeing to replace system materials that do not conform to manufacturer's published specifications or are deemed to be defective. Warranty does not include failure of vapor intrusion barrier due to failure of soil substrate prepared and treated according to requirements or formation of new joints and cracks in the concrete that exceed 1/8 inch (3.175 mm) in width.
 1. Warranty Period: 1 years after date of substantial completion. Longer warranty periods are available upon request.
 2. Coverage: Manufacturer will guarantee that the material provided is free of defects for the warranty period.
- B. Additional Warranty Options: Upgraded warranties are available by contacting the manufacturer. These warranties may have additional requirements and approval must be granted in accordance to the manufacturer's warranty requirements. Additional warranty options include:
 1. Standard Labor and Material (Geo-Seal L&M): Manufacturer will provide non-prorated coverage for the warranty term, agreeing to repair or replace material that does not meet requirements or remain vapor tight.
 2. Waterproofing Warranties: For below grade project that require vapor intrusion barriers and below grade waterproofing for foundation walls, single source warranties are available from EPRO.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturer: EPRO Services, Inc. (EPRO), P.O. Box 347; Derby, KS 67037; Tel: (800) 882-1896; www.eproinc.com
- B. Basis of Design: Geo-Seal 60 (58 mils) – **Geo-Seal FILM 11**, **Geo-Seal CORE** (30 mils), **Geo-Seal BOND**

2.2 VAPOR INTRUSION BARRIER MATERIALS

- A. The physical properties listed in this section reflect testing on the entire composite system. Physical properties of the individual system composite can be found in Specification Section 2.3.

1. **Geo-Seal 60 Vapor Intrusion Barrier** consists of a 30 mil layer of **Geo-Seal CORE** (polymer modified asphaltic membrane) sandwiched between two HDPE geocomposite membranes **Geo-Seal FILM 11** layer and **Geo-Seal BOND** protection sheet. **Geo-Seal** is ideal for moisture protection on sites that may also contain methane gas, contaminated soil, or contaminated groundwater.

PROPERTIES	TEST METHOD	VALUE
Tensile Strength	ASTM D412	527.7 psi
Elongation	ASTM D412	45%
Adhesion to Concrete	ASTM D903	8 lbf/in
Puncture Resistance	ASTM D1709	310 lbf
Water Vapor Transmission	ASTM E96	0.020 perms
PCE Diffusion Rate	Geokinetics	1.16×10^{-17} m ² /sec
Benzene Diffusion Rate	Geokinetics	2.31×10^{-18} m ² /sec
Vapor Barrier Classification	ASTM E1745	A, B & C

2.3 VAPOR INTRUSION BARRIER MATERIALS

- A. Polymer Modified Asphalt

1. **Geo-Seal CORE: Geo-Seal CORE** is a non-hazardous, low-viscosity, water-based, anionic asphalt emulsion modified with a blend of synthetic polymerized rubbers and proprietary additives. **Geo-Seal CORE** is highly stable during transit and when properly stored but becomes highly reactive during the spray application to form a rapidly cured membrane with exceptional bonding, elongation, and hydrophobic characteristics.

PROPERTIES	TEST METHOD	VALUE
Color		Brown to Black
Solvent Content		No Solvents
Shelf Life		6 months
Tensile Strength	ASTM 412	32 psi
Elongation	ASTM 412	4140%
Resistance to Decay	ASTM E 154 Section 13	4% Perm Los
Accelerated Aging	ASTM G 23	No Effect
Moisture Vapor Transmission	ASTM E 96	0.026 g./sq. ft./hr.
Hydrostatic Water Pressure	ASTM D 751	26 psi
Perm Rating	ASTM E 96 (US Perms)	0.21
Methane Transmission Rate	ASTM D 1434	0
Adhesion to Concrete & Masonry	ASTM C 836 & C 704	20 lbf./inch
Adhesion to HDPE	ASTM C 836	28.363 lbf./inch
Adhesion to Polypropylene Fabric	ASTM C 836	31.19 lbf./inch
Hardness	ASTM C 836	80
Crack Bridging	ASTM C 836-00	No Cracking
Low Temp. Flexibility		No Cracking at -20° C
Packaging: 55 gallon drum, 275 gallon tote, 330 gallon tote		

2. **Geo-Seal CORE Detail: Geo-Seal CORE Detail** is single component, medium viscosity, water-based, polymer-modified anionic asphalt emulsion, which exhibits exceptional bonding, elongation and hydrophobic characteristics.

PROPERTIES	TEST METHOD	VALUE
Color		Brown to Black
Solvent Content		No Solvents
Shelf Life		6 months
Tensile Strength	ASTM 412	32 psi
Elongation	ASTM 412	3860%
Resistance to Decay	ASTM E 154 SECTION 13	9% Perm Loss
Accelerated Aging	ASTM G 23	No Effect
Moisture Vapor Transmission	ASTM E 96	0.071 g/sq. ft./hr.
Hydrostatic Water Pressure	ASTM D 751	28 psi
Perm Rating	ASTM E 96 (US Perms)	0.17
Methane Transmission Rate	ASTM D 14334	0
Adhesion to Concrete & Masonry	ASTM C 836	1 lbf/inch
Hardness	ASTM C 836	85
Crack Bridging	ASTM C 836	No Cracking
Low Temp. Flexibility	ASTM C 836-00	No Cracking at -20° C
Packaging: 5 gallon bucket		

B. Base Sheet

1. **Geo-Seal FILM 11: Geo-Seal FILM 11** is a base course comprised of an 11 mil HDPE film. The film is cross laminated to create ridges that enhance the bond between the **Geo-Seal FILM 11** and **Geo-Seal CORE**.

PROPERTIES	TEST METHOD	VALUE
Film Material		HDPE
Film Color		Green
Film Thickness		11 Mil
Classification	ASTM E 1745	Exceeds Class A, B, and C
Tensile Strength	ASTM E 154 (ASTM D 882)	50 lbf/in
Puncture Resistance	ASTM D 1709	2400 grams Method A
Life Expectancy	ASTM E 154-93	Indefinite
Chemical Resistance	ASTM E 154-93	Unaffected
Water Permeance	ASTM E 96	0.020 Perms (US)
Dimensions: 12' x 200'		
Weight: 144 pounds		

C. Geocomposite Protection Course

1. **Geo-Seal BOND: Geo-Seal BOND** is an extremely durable, high strength protection course made from the lamination of HDPE film and nonwoven polypropylene geotextile fabric.

PROPERTIES	TEST METHOD	VALUE
Film Material		HDPE
Film Color		White

Fabric Material		Non-woven Polypropylene
Fabric Color		White
Film Thickness		5 Mil
Composite Thickness		18 Mil
Tensile @ ULT	ASTM D 882	TD 32.0 lbs/in MD 37.3 lbs/in
Elongation @ ULT	ASTM D 882	TD 65.3% MD 51.0%
Dart Impact	ASTM D 1709	Method A >1070 grams Method B 894 grams
Modulus	ASTM D 882	TD 270.6 lbs/in MD 295.5 lbs/in
Elmendorf Tear	ASTM D 1922	TD 5,140 grams MD 5,260 grams
Puncture-Prop Tear	ASTM D 2582	TD 13,250 grams Sled: 1-lb MD 11,290 grams Sled: 1-lb
Beach Puncture Tear	ASTM D 751	TD 165 in-lbs MD 160 in-lbs
Water Permeance	ASTM E 96	0.11 perms (US)
Dimensions: 12' x 150'		
Weight: 108 pounds		

2.4 AUXILIARY MATERIALS

- A. General: All accessory products shall be provided by the specified vapor intrusion barrier manufacturer. Auxiliary products used in lieu of, or in addition to, the manufacturer's products must be approved in writing by EPRO prior to installation.
- B. Reinforcement Fabric: Manufacturer's polyester fabric, **Geo-Seal Reinforcement Fabric** is available in 6 inch, 12 inch, and 40 inch widths.
- C. Detailing Material: **Geo-Seal CORE Detail**, a roller applied, water based, high viscosity, polymer modified asphaltic material.
- D. Backer Rod: Closed cell polyethylene foam
- E. Termination Bar: **e.term hd**, or approved alternate

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Comply with project documents, manufacturer's product information, including product application and installation guidelines, pre-job punch list, as well as, manufacturer's shipping and storage recommendations.

3.1.2 SURFACE PREPARATION

- A. The general contractor shall engage the certified vapor intrusion barrier contractor and certified inspector to ensure surfaces are prepared in accordance with manufacturer's instructions. Unless, explicitly stated in the contract documents, the vapor intrusion barrier contractor is not responsible for surface preparation.
- B. Examine all substrates, areas, and conditions under which the composite membrane system will be installed, applicator and inspector must be present. Do not proceed with installation until unsatisfactory conditions have been corrected and surface preparation requirements have been met. If conditions exist that are not addressed in this section, notify inspector and contact EPRO for additional clarification.
- C. Soil and Sand Substrates: Native soil and sand substrates shall be uniformly compacted to meet structural and building code requirements. All surfaces shall be free from protrusions and debris that may compromise the membrane system. Free standing water must be removed prior to application.
- D. Aggregate Substrates: Aggregate substrates shall be compacted to meet structural and building code requirements and then rolled flat to provide a uniform substrate. $\frac{3}{4}$ inch minus aggregate with no more than one fractured face is recommended, but other aggregates substrates may be approved by the manufacturer provided they do not create sharp angular protrusions that may compromise the vapor intrusion system.

- E. Working Slab: Mud slab, rat slab, or other concrete working slab shall have a uniform plane with a light broom or light trowel finish.
- F. Concrete Surfaces: Clean and prepare concrete surface to manufacturer's recommendations. In general, only apply the Geo-Seal CORE material to dry, clean and uniform concrete substrates with a light trowel, light broom, or equivalent finish.
- G. Cast-in-Place or Shotcrete Walls: Application to green concrete is acceptable provided the substrate is prepared in accordance with manufacturers specifications and published instructions.
 - 1. Provide clean, dust-free, and dry substrate for vapor intrusion barrier application.
 - 2. Surfaces shall be power washed to remove grease, oil, form release agents, or any other penetrating contaminants from the concrete.
 - 3. Remove all fins, ridges, and other protrusions.
 - 4. Fill honeycomb, aggregate pockets, tie holes, and other voids with hydraulic cement, or rapid-set grout.

3.2 VAPOR INTRUSION BARRIER INSTALLATION

- A. General: The underslab vapor intrusion system shall be installed under strict accordance with the manufacturer's guideline and project specifications.

3.2.2 BASE COURSE – GEO-SEAL FILM 11

- A. Whenever possible roll out **Geo-Seal FILM 11** in the same direction over the substrate. When multiple pours will occur, extend the **Geo-Seal FILM 11** a minimum of 2 feet past the pour joint.
- B. Overlap **Geo-Seal FILM 11** a minimum of 6 inches.
- C. At the seam overlap, peel back the top layer of **Geo-Seal FILM 11** and apply 60 mils into the overlapping seam, making certain to apply **Geo-Seal CORE** to both the top of the bottom sheet and the bottom of the top sheet. Embed the top sheet into the bottom sheet.
- D. Visually verify there are no gaps/fish-mouths in seams.

3.2.3 TERMINATION SEQUENCE

- A. System Termination: The termination process is appropriate for terminating the membrane onto exterior footings, pile caps, interior footings and grade beams. When terminating the membrane to stem walls or vertical surfaces the same process should be used.
 - 1. Concrete surfaces that are not a light trowel, light broom or equivalent finish, will need to be repaired.
 - 2. Terminations on horizontal and vertical surfaces should extend 6" onto the termination surface. Job specific conditions may prevent a 6" termination. In these conditions exist, contact manufacturer for recommendations.
 - 3. Apply 60 mils of **Geo-Seal CORE** to the terminating surface and then embed the **Geo-Seal FILM 11** layer by pressing it firmly into the **Geo-Seal CORE** layer.
 - 4. Apply 30 mils of **Geo-Seal CORE** to the **Geo-Seal FILM 11** layer.

5. Apply the **Geo-Seal BOND** layer and apply a final 30 mil seal of the **Geo-Seal CORE** layer over the edge of the termination. For further clarification, refer to the termination detail provided by manufacturer.

3.2.4 SEALING OF PENETRATIONS

- A. Sealing of Standard Pipe Penetrations: Prepare membrane penetrations so they are free of any material that will inhibit a direct bond to the penetration surface: foam, insulation, protective coatings, etc.
 1. Trim **Geo-Seal FILM 11** to within 1/8 inch of the penetration.
 2. Apply **Geo-Seal CORE Detail** 3 inches horizontally and 3 inches vertically around the base of the penetration.
 3. Embed **Geo-Seal Reinforcement Fabric** reinforcement fabric 3 inches horizontally and 3 inches vertically around the base of the penetration.
 4. Apply a second layer of **Geo-Seal CORE Detail** to reinforcement fabric until the reinforcement fabric is fully saturated. Secure **Geo-Seal Reinforcement Fabric** reinforcement fabric to penetration with a cable tie. For further clarification, refer to the termination detail provided by manufacturer.

3.2.5 POLYMER MODIFIED ASPHALT MEMBRANE – GEO-SEAL CORE

- A. Mask off adjoining surfaces where unwanted **Geo-Seal CORE** polymer modified asphalt membrane may be exposed on finished surfaces or impact other construction trades.
- B. Commence application of **Geo-Seal CORE** polymer modified asphalt when ambient air temperatures are within manufacturer recommendations.
- C. Surfaces that will receive the membrane must be clean and free from standing moisture.
- D. Start installing **Geo-Seal CORE** in presence of approved 3rd party inspector or required city inspector.
- E. Apply one application of **Geo-Seal CORE** membrane in accordance to manufacturer's instructions in order to obtain a seamless membrane with a minimum dry film thickness of 30 mils (1.5 mm).
- F. Apply **Geo-Seal CORE/Geo-Seal CORE Detail** in and around penetrations and cavities to ensure the formation of monolithic seal around all penetrations.
- G. Apply **Geo-Seal CORE/Geo-Seal CORE Detail** to prepared wall terminations and vertical surfaces to heights indicated according to manufacturer's recommendations and details. (if applicable)
- H. Verify **Geo-Seal CORE** thickness of every 1000 ft² (93 m²), or as required by specifying engineer.

3.2.6 GEOCOMPOSITE PROTECTION COURSE – GEO-SEAL BOND

- A. Sweep off any water that has collected on the surface of the **Geo-Seal CORE** layer, prior to the placement of the **Geo-Seal BOND** layer. Install **Geo-Seal BOND** protection course perpendicular to the direction of the **Geo-Seal BASE**.
- B. Overlap **Geo-Seal BOND** seams a minimum of 6 inches.

- C. Secure the seams of **Geo-Seal BOND** by applying 30 mils of **Geo-Seal CORE** in-between the seam overlap OR by applying a 30 mil layer of **Geo-Seal CORE** on top of the seam overlap, completely covering the seam overlap.
- D. To expedite the construction process, the **Geo-Seal BOND** layer can be placed over the **Geo-Seal CORE** immediately after the spray application is complete, provided the **Geo-Seal CORE** mil thickness has been verified and smoke tested.
- E. Do not penetrate the membrane system once it has been applied. If the vapor intrusion barrier is penetrated, immediately contact the applicator. Failure to bring the breach of the membrane to the applicators attention and not allowing adequate time to make the necessary repair will result in voidance of warranty.

3.3 FIELD QUALITY CONTROL

- A. Smoke Test: Conduct smoke test on all underslab areas upon installation of the **Geo-Seal FILM 11** sheet, the sealing of all penetrations, and application of **Geo-Seal CORE**. All deficient areas shall be noted, marked for repair, and repairs verified. Refer to manufacturer's smoke testing protocol for additional guidance.
 - 1. For projects that will require a Labor and Material warranty, a certified 3rd party inspector is required to inspect and verify the integrity of the membrane
- B. Field Inspection: Contact EPRO for independent certification process.
- C. Thickness Verification: Use a digital mil reading caliper to measure the thickness of coupon samples. To measure coupon samples correctly, the thickness of the systems **Geo-Seal FILM 11** layer must be measured and calibrated in the field when verifying coupon sample thicknesses. Mark coupon sample area for repair. Contact EPRO for coupon sampling protocol.
 - 1. It should be noted that taking too many destructive samples can be detrimental to the membrane. Areas where coupon samples have been removed need to be marked for repair.
- D. Take care to prevent contamination and damage during application stages and curing. Machinery, additional trades, or general construction, shall NOT take place over the membrane until inspection is complete and concrete has been placed. The membrane shall always be properly protected when equipment is operated near the membrane.
- E. Prevent damage during the placement of reinforcement steel and overburden.
- F. Damage Observation: Prior to the placement of concrete a visual inspection to confirm no damage has occurred from construction traffic or during the placement of reinforcement steel is recommended.

3.4 REPAIRS

- A. Underslab:
 - 1. Inspect damaged area to determine which system components have been damaged.
 - 2. If the **Geo-Seal FILM 11** sheet has not been compromised, patch only the areas that have been damaged by re-installing the damaged materials. The patch should extend 6 inches beyond the damaged area in all directions.

3. If the **Geo-Seal FILM 11** sheet has been breached but no additional system components have been installed, install a patch below and above the base sheet that extends 6 inches beyond the damaged area. Area shall be sealed using the specified method for sealing the base sheet.
4. If the damaged area has breached the base sheet and additional components have been installed over the **Geo-Seal FILM 11** sheet, the area will require removal of the overlying components to expose the **Geo-Seal FILM 11** sheet.
5. If the damage is less than 3 inches, the base sheet will need to be opened up to create a minimum 4-inch diameter circle to allow access
6. Place a minimum 8-inch diameter coupon under the base sheet and seal using the specified method for seaming the base sheet. If heat welding the seam, probe the seam to ensure a uniform seal.
7. Apply a reinforcement detail of **Geo-Seal CORE Detail** and reinforcement fabric 6 inches beyond the edge of the repair area.
8. Apply the remaining layers as specified.
9. Refer to manufacturer's detail for further repair clarification.

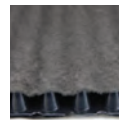
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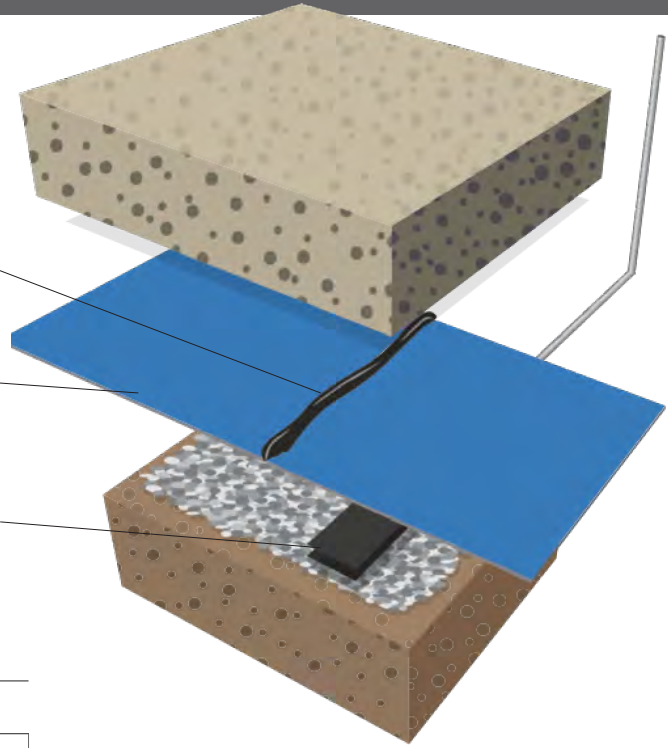

Geo-Seal CORE
(spray applied
polymer modified
asphaltic membrane)



Geo-Seal EV40
(EVOH/Geotextile)



Vapor-Vent System



System: Geo-Seal EV40s

Application: Underslab Contaminant Vapor Barrier System Thickness: 41 mils

	1st Layer	Seaming Material
Product Name	Geo-Seal EV40	Geo-Seal CORE

DESCRIPTION

Geo-Seal® EV40s is a significant improvement over existing single sheet membranes. Geo-Seal EV40s consists of an EVOH membrane combined with a robust geotextile layer to provide a single sheet vapor intrusion barrier that is chemically-resistant and easy to install, while also providing improved protection during the installation process.

Geo-Seal® EV40s is ideal for lower risk sites where site concentrations are lower than state-specific screening levels, large flat and open areas where fast installation times are required, or where active sub-slab ventilation systems are utilized.

BENEFITS

- **Spray Seams:** Geo-Seal® CORE spray membrane to seal seams, detail penetrations and terminate the membrane to concrete surfaces
- **Not Corrosive:** Will not corrodelike metalized film membranes.
- **EVOH:** EVOH provides enhanced chemical vapor protection and lower permeation rates than thicker HDPE membranes.
- **Single-Source Warranty:** EPRO can be a single point of contact to address building vapor intrusion and waterproofing needs.
- **Class A:** Class A vapor barrier that alone will meet the basic water vapor barrier requirements for new construction.

LIMITATIONS

- Do not apply below 20°F or to damp, frozen or contaminated surfaces.
- Contact EPRO for waterproofing system recommendations.

SPECIFICATIONS, DRAWINGS, AND TECHNICAL ASSISTANCE

The most current specifications and drawings can be found on www.eproinc.com. For project specific details contact EPRO directly, or your local EPRO representative.

Site conditions, performance goals, and budget determine which system is most appropriate for a given project. For more information regarding product performance, testing, plan review, or general technical assistance, please contact EPRO.

WARRANTY

EPRO provides a wide range of warranty options for Geo-Seal systems. For a project to be eligible for any warranty option beyond a 1-year material warranty, a Geo-Seal Authorized Applicator must be used and the project must be registered and approved by EPRO prior to the commencement of any product application.

Warranty options available for this system include:

- Material warranty
- Longer warranty periods are available. Contact EPRO for more information.

Physical Property	Test Method	Value
Film Material.....		Polyethylene & EVOH
Film Color.....		White/Blue
Weight.....		618 g/m ²
Tensile Strength	ASTM D 412.....	61 psi
Elongation	ASTM D 412.....	730%
Adhesion to Concrete	ASTM D 903.....	8 lbf/in
Puncture Resistance	ASTM D 1709.....	2600 lbf
Hydrostatic Head Resistance.....	ASTM D 5385.....	100 psi (231 ft)
Water Vapor Transmission	ASTM E 96	0.033 perms
Water Vapor Permeance.....	ASTM E 96	0.0098 perms
Methane Gas Permeance	ASTM D1434.....	3.68 x 10 ⁻¹² m/s
Benzene Gas Permeance	Queens University	1.13 x 10 ⁻¹⁰ m ² /sec
TCE Gas Permeance	Queens University	7.66 x 10 ⁻¹¹ m ² /sec
PCE Gas Permeance.....	Queens University	7.22 x 10 ⁻¹¹ m ² /sec
Classification.....	ASTM E1745	Class A, B & C

APPENDIX F
Report Limitations and Guidelines for Use

APPENDIX F REPORT LIMITATIONS AND GUIDELINES FOR USE¹

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 S Jackson Partners, LLC (South Jackson Partners). South Jackson Partners may distribute copies of this report to South Jackson Partners 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 South Jackson Partners 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 CULs referenced in this report are site- and situation-specific. The CULs 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 CULs. 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.