



**FINAL INTERIM ACTION REPORT**

**ALLEY AREA OF BLOCK 38 WEST SITE  
BETWEEN REPUBLICAN STEET AND MERCER STREET  
500 THROUGH 536 WESTLAKE AVENUE NORTH  
SEATTLE, WASHINGTON**

**Agreed Order No. DE 17963  
Facility Site Identification No. 62773  
Cleanup Site Identification No. 15008**

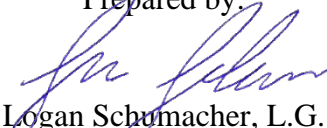
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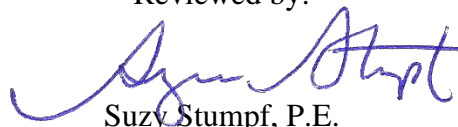
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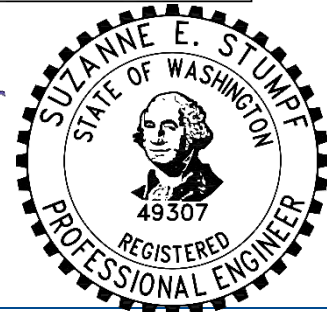
  
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## EXECUTIVE SUMMARY

Farallon Consulting, L.L.C. has prepared this Interim Action Report (IA Report) on behalf of City Investors IX LLC (City Investors IX) to describe the interim action conducted at the Alley (defined below), a portion of which is part of the Block 38 West Site in the South Lake Union Area of Seattle, Washington. This IA Report was prepared in accordance with Section VII.E of Agreed Order No. DE 17963 dated April 20, 2020 (AO) between the Washington State Department of Ecology (Ecology) and City Investors IX. The interim action was implemented in accordance with the Washington State Model Toxics Control Act Cleanup Regulation (MTCRA) and the Ecology-approved *Interim Action Work Plan, Alley Area of Block 38 West Site, Between Republican Street and Mercer Street, Seattle, Washington* dated February 3, 2021, prepared by Farallon (2021) (IAWP).

The Block 38 West Site as defined under the AO is where a hazardous substance, other than a consumer product in consumer use, has been deposited, stored, disposed of, or placed, or otherwise come to be located. The Block 38 West Site, which is listed in Ecology's contaminated sites database as Facility Site Identification (ID) No. 62773 and Cleanup Site ID 15008, is generally located at 500 through 536 Westlake Avenue North in Seattle, Washington (Block 38 West Property) and extends to the east into an adjacent alley that is owned by the City of Seattle (Alley).

The Alley is approximately 415 feet long by 15 feet wide and is used for vehicle access to parking garages on the Block 38 West Property and Block 38 East Property. Improvements to the Alley included placement of structural backfill to support the new concrete road surface and creation of a through-alley that provides access to buildings on the Block 38 West Property and Block 38 East Property from Mercer Street and Republican Street.

Subsurface investigations have been conducted at the Alley since 1998. Based on the results of these subsurface investigations, the following hazardous substances have been detected at concentrations exceeding regulatory screening levels in soil at the Alley: petroleum hydrocarbons, polycyclic aromatic hydrocarbons (PAHs), cadmium, and lead.

The Alley interim action reduced the threat to human health and the environment by removing soil containing concentrations of petroleum hydrocarbons and PAHs, including naphthalenes and carcinogenic PAHs (cPAHs), at concentrations exceeding screening levels within the Alley to



the extent practicable in conjunction with the redevelopment of the Block 38 West Property. Components of the interim action included excavation of shallow soil contamination encountered during utility improvements, roadway resurfacing, and subsurface structural improvements at the southern end of the Alley. The interim action removed soil with hazardous substances detected at concentrations exceeding screening levels to eliminate source material. The base of the excavation was generally at an elevation ranging from 25 to 18 feet North American Vertical Datum of 1988 (NAVD88).

Approximately 2,380 tons of soil containing detectable concentrations of hazardous substances and wood and organic debris was removed from the Alley from March 1 through July 23, 2021. Results of performance soil sampling at the excavation extents indicate that hydrocarbons as oil-range organics (ORO) and combined hydrocarbons of diesel-range and oil-range organics (DRO + ORO), naphthalenes, and/or cPAHs remain in soil along the eastern portion of the Alley at elevations ranging from 28 to 17.5 feet NAVD88. cPAHs remain in soil north of the Alley at elevations ranging from 28 to 26 feet NAVD88 within the soil fill layer identified at the Alley and surrounding area. The Alley interim action was completed with surface restoration activities in March 2022.



## 1.0 INTRODUCTION

Farallon Consulting, L.L.C. (Farallon) has prepared this Interim Action Report (IA Report) on behalf of City Investors IX L.L.C. (City Investors IX) to describe an interim action conducted at the Alley (defined below), a portion of which is part of the Block 38 West Site in the South Lake Union Area of Seattle, Washington (Figure 1). This IA Report was prepared following implementation of the Interim Action Work Plan and in accordance with Section VII.E of Agreed Order No. DE 17963 dated April 20, 2020, between the Washington State Department of Ecology (Ecology) and City Investors IX (AO).

The Block 38 West Site as defined under the AO is where a hazardous substance, other than a consumer product in consumer use, has been deposited, stored, disposed of, or placed, or otherwise come to be located. The Block 38 West Site, which is listed in Ecology's contaminated sites database as Facility Site Identification (ID) No. 62773 and Cleanup Site ID No. 15008, is generally located at 500 through 536 Westlake Avenue North in Seattle, Washington (Block 38 West Property) and extends to the east into a portion of an adjacent Alley that is owned by the City of Seattle (Alley).

The entire city block in which the Alley is located will be referred to in this IA Report as Block 38. This is a name used by City Investors IX to refer to this particular block in Seattle. It is not a denomination by the City of Seattle. Block 38 is comprised of the Block 38 West Property, the north-south-trending Alley that bisects the block, and the parcels at 535 Terry Avenue North and 960 Republican Street (collectively, Block 38 East Property). Block 38 is bordered by Mercer Street to the north, Terry Avenue North to the east, Republican Street to the south, and Westlake Avenue North to the west (Figure 2). For the purposes of this interim action, the Alley is treated as part of the Block 38 West Site remedial action; the extent of the Block 38 West Site will be determined as part of the remedial investigation.

Subsurface investigations have been conducted at the Alley since 1998. Based on the results of these subsurface investigations, the following hazardous substances have been detected at concentrations exceeding regulatory screening levels in soil at the Alley: petroleum hydrocarbons, polycyclic aromatic hydrocarbons (PAHs), cadmium, and lead.

The interim action consisted primarily of removing soil with concentrations of hazardous substances exceeding screening levels during construction activities completed in conjunction with the Block 38 West Property redevelopment. Alley improvements included creating a



through-alley that provides access to buildings on the Block 38 West Property and Block 38 East Property from Mercer Street (elevation 31 feet North American Vertical Datum of 1988 [NAVD88]) and Republican Street (elevation 41 feet NAVD88), utility improvements, roadway resurfacing, and subsurface structural improvements at the southern end of the Alley. The excavation activities within the Alley extended to a depth of approximately 5 feet below ground surface (bgs) or an elevation of 25 to 18 feet NAVD88 (north to south). The interim action was performed consistent with the cleanup requirements of the Washington State Model Toxics Control Act Cleanup Regulation (MTCA), as established in Chapter 173-340 of the Washington Administrative Code (WAC 173-340).

## **1.1 PURPOSE AND OBJECTIVE**

The purpose of this IA Report is to document the interim action conducted to remove soil containing hazardous substances detected at concentrations exceeding applicable screening levels encountered in the Alley in order to reduce the threat to human health and environment within the limits of the construction excavation.

The interim action permanently removed fill material containing concentrations of hazardous substances that exceeded screening levels from the Alley while it was accessible during construction activities and Alley improvements. The interim action was a partial cleanup, as it only addressed part of the Block 38 West Site (and other areas where construction-related activities resulted in the removal of soil containing hazardous substances). This partial cleanup corrected a problem that may have cost substantially more to address if delayed until after the Block 38 West Property was redeveloped (WAC 173-340-430).

The interim action was implemented in accordance with MTCA and the Ecology-approved *Interim Action Work Plan, Alley Area of Block 38 West Site, Between Republican Street and Mercer Street, Seattle, Washington* dated February 3, 2021, prepared by Farallon (2021) (IAWP). The interim action is part of the final cleanup action, which will be evaluated as part of the remedial investigation and feasibility study for the Block 38 West Site under the AO.



## 1.2 DOCUMENT ORGANIZATION

This IA Report has been organized into the following sections:

- **Section 2, Alley Area Description and Background**, provides the Alley description and history, a summary of current and historical uses of adjacent and surrounding lands, regulatory history, and the geology and hydrogeology of the South Lake Union region.
- **Section 3, Summary of Previous Investigations and Independent Remedial Actions**, provides a summary of previous environmental investigations and independent interim actions conducted at the Alley and Block 38 West and East Properties.
- **Section 4, Interim Action Technical Elements**, identifies the applicable or relevant and appropriate requirements (ARARs), media of concern, terrestrial ecological evaluation (TEE), and screening levels and hazardous substances of concern for the Alley.
- **Section 5, Interim Action**, describes the technical approach for the interim action, interim action objectives, performance and confirmation sampling, and soil transport and disposal.
- **Section 6, Interim Action Results**, provides a summary of performance and confirmation soil sampling results, and a summary of soil disposal associated with the Alley.
- **Section 7, Conclusions**, provides a summary of the interim action completed at the Alley.
- **Section 8, Bibliography**, provides a list of the source materials used in preparing this IA Report.
- **Section 9, Limitations**, provides Farallon's standard limitations applicable to this IA Report.



## 2.0 ALLEY AREA DESCRIPTION AND BACKGROUND

This section provides the Alley description and history, a summary of current and historical uses and regulatory status of adjacent Block 38 West and East Properties, and the geology and hydrogeology of the South Lake Union region.

### 2.1 ALLEY

Block 38 is in a commercial and light industrial area zoned as mixed residential and commercial in the South Lake Union area (SM-SLU 175/85-280) approximately 1 mile north of downtown Seattle. The Alley at Block 38 is owned by the City of Seattle. It bisects Block 38 and is accessed from Mercer Street descending from street level to an approximate elevation of 25 feet NAVD88 and is used for vehicle access to a parking garage on the Block 38 West and Block 38 East Properties. The Alley is approximately 415 feet long by 15 feet wide. A historical timber-framed trestle formerly extended north from Republican Street into the alley approximately 120 feet; its constructed height was approximately 18 feet higher than the current elevation of the southern portion of the alley (Figure 2). The trestle was constructed for support of the rail spur that extended out to the former shoreline of South Lake Union (Farallon 2018). As discussed below, the northern portion of Block 38 historically was marshland along the southern shore of Lake Union.

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

Review of historical aerial photographs identified the following previous uses of the Alley:

- The Alley did not appear to be paved in 1953. At that time, it had provided access from Mercer Street to a dirt lot centrally located at the Block 38 West Property and access to a former fueling station and coal storage facility on the northern and central portions and a building on the southern portion of the Block 38 East Property. The railroad trestle was present on the southern portion of the Alley.



- In 1968, the Alley did not appear to be paved; however, the central portion of the Block 38 West Property had been developed from a dirt lot to a commercial building with a rooftop parking lot, and an asphalt parking lot replaced commercial businesses on the northern and central portions of the East property.
- In 2002, the Alley appeared to be paved and the railroad trestle was still present on the southern portion of the Alley.

In late 2019, the railroad trestle was demolished and removed as part of the Block 38 West Property redevelopment activities. The Alley is currently a concrete-paved surface and is accessible from Republican and Mercer Street and is used to access the commercial buildings on Block 38 West and Block East Properties.

A catch basin centrally located at the Alley captures stormwater, which is conveyed to the King County Metro sewer system.

The redevelopment activities on the Block 38 West Property included creating a through-alley that provides access to Block 38 from Mercer Street at an elevation of 31 feet NAVD88 and to Republican Street at an elevation of 41 feet NAVD88. As part of the redevelopment on the Block 38 West Property, City Investors IX has recorded a 2-foot alley dedication to the City of Seattle in coordination with the Seattle Department of Transportation Real Property Group. The Alley construction excavation was completed in July 2021 and improvements were completed in March 2022.

## **2.2 ADJACENT AND SURROUNDING LAND USE**

The Alley is located between the Block 38 West and Block 38 East Properties, each of which has contamination in soil and/or groundwater that abut the Alley. This section summarizes the historical uses and the regulatory status of the Block 38 West and Block 38 East Properties.

### **2.2.1 Block 38 West Property**

The Block 38 West Property at 500 to 536 Westlake Avenue North is west-adjacent to the Alley. The Block 38 West Property historically was undeveloped marshland that extended along the southern shore of Lake Union and onto the north-adjacent property in the late 1880s, as detailed in the draft Phase I Environmental Site Assessment Report (Farallon 2019b) (2019 Phase I Report) and the Preliminary Environmental Assessment Update letter (Hart Crowser, Inc. 1999) (1999 EA Update).



The Block 38 West Property totals approximately 1.06 acres of land that was previously developed with structures formerly used for retail, temporary office space, storage, and parking, and comprises King County Parcel Nos. 1983200196, 1983200180, and 1983200170. Historical operations included a lumber storage yard across the majority of the property from the 1890s until approximately 1920 when the first commercial and retail structures were built. Historical businesses at the property included blacksmith shops, wagon shops, horse stables, warehouse storage, an auto repair facility, a veterinary hospital, a commercial printer, and various retail businesses from the early 1900s through 2019.

Historical operations resulted in the release of hazardous substances that caused contamination of soil and groundwater at the Block 38 West Property. Ecology listed the Block 38 West Site (which includes the Block 38 West Property) as a contaminated site in 2019 with Facility Site ID No. 62773 and Cleanup Site ID 15008.

The former Block 38 West Property structures were demolished as part of the redevelopment. Street elevations adjacent to the Block 38 West Property vary from an approximate elevation of 41 feet NAVD88 on Republican Street adjoining the southern portion of the Block 38 West Property to an approximate elevation of 31 feet NAVD88 on Mercer Street adjoining the northern portion of the Block 38 West Property.

The redevelopment of the Block 38 West Property included construction of a multi-story mixed-use building with 12 stories above street level and four levels of underground parking. The finished floor elevation of the lowest level of parking is -3.25 feet NAVD88, with the bottom of footing elevation for the majority of the foundation at approximately -6.5 feet NAVD88. The excavation extended deeper in areas for footings or elevator pits. The mass excavation, including removal of contaminated soil, was completed in June 2020 and additional structural foundation features were installed through August 2020.

The scope of work described in the *Interim Action Work Plan, Block 38 West Property, 500 through 536 Westlake Avenue North, Seattle, Washington* dated November 8, 2019, prepared by Farallon (2019) (2019 IAWP) was implemented as an independent interim action (independent interim action) conducted in conjunction with the redevelopment of the Block 38 West Property. Upon entry into the AO for the Block 38 West Site, the independent interim action was conducted under the auspices of the AO. The independent interim action described in the 2019 IAWP has been completed and is documented in the *Interim Action Report, Block 38 West Site*,





*500 through 536 Westlake Avenue North, Seattle, Washington* dated December 28, 2023, prepared by Farallon.

### **2.2.2 Block 38 East Property**

The Block 38 East Property at 535 Terry Avenue North and 960 Republican Street is east-adjacent to the Alley (Figure 2). The Block 38 East Property totals approximately 1.08 acres of land that has primarily been used for commercial and light industrial purposes since the late 1800s and comprises King County Parcel Nos. 1983200150 and 1983200160. Figure 2 shows the location of historical features and lot configuration on the Block 38 East Property.

Historical operations on the northern portion of the Block 38 East Property (535 Terry Avenue North) included a lumber mill and yard, gasoline service station, and fuel yard associated with coal storage on the Block 38 East Property through the 1950s. By the late 1960s, this portion of the property was a parking lot until redeveloped in 2009 with a five-story commercial office building and below-grade parking garage known as the Interurban Exchange 2 Building.

Historical operations on the southern portion of the Block 38 East Property (960 Republican Street) included lumber storage until the late 1920s when a three-story commercial office building was constructed. The building, known as the Rosen Building, was used as a warehouse for electrical appliances and general storage through the 1960s and currently is a medical and dental office.

Historical operations resulted in releases of hazardous substances that caused contamination of soil and groundwater, and the Block 38 East Property is currently associated with the Rosen Property Site, also known as the Interurban Exchange 2 Site, listed in Ecology's contaminated sites database as Facility Site ID No. 2500 and Cleanup Site ID 5123.

## **2.3 REGULATORY HISTORY**

The scope of work described in this IA Report for the Alley was performed in accordance with WAC 173-340-430 and the Ecology-approved IAWP (Farallon 2021) and in conjunction with the redevelopment of the Block 38 West Property. For the purposes of this interim action, the Alley was treated as part of the Block 38 West Site remedial action; the extent of the Block 38 West Site will be determined as part of the remedial investigation being conducted under the AO.



Ecology and City Investors IX executed the AO for the Block 38 West Site on April 20, 2020. The AO requires City Investors IX to, among other things, prepare a work plan to conduct a remedial investigation and feasibility study, and prepare a draft cleanup action plan for the Block 38 West Site. In addition, and as noted above, an independent interim action on the Block 38 West Property as described in the 2019 IAWP (Farallon 2019) was commenced prior to the time the AO was executed and was subsequently performed under the auspices of the AO.

On October 14, 2020, City Investors IX submitted the Agency Review Draft Interim Action Work Plan for the Alley Area of the Block 38 West Site to Ecology for review in accordance with the AO. On December 14, 2020, City Investors IX submitted the Public Review Draft Interim Action Work Plan for the Alley Area of the Block 38 West Site to Ecology. On February 3, 2021, City Investors submitted the final IAWP to Ecology for approval and the final Sampling and Analysis Plan was submitted on February 10, 2021. City Investors IX received approval from Ecology on the IAWP on February 4, 2021, and for the final Sampling and Analysis Plan on February 11, 2021.

## **2.4 GEOLOGY AND HYDROGEOLOGY**

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

Block 38 is approximately 600 feet south of Lake Union and in the late 1800s and the early 1900s, the southern end of Lake Union was filled with sawdust and wood waste generated by lumber mill operations and other fill materials. Field observations made during subsurface investigations conducted by Farallon and others confirmed a wood debris layer is present beneath Block 38.



Cross sections depicting the general lithology and hydrogeology of the Alley and Block 38 West Property are presented on Figures 12 through 14, which are based on field observations made during the subsurface investigations conducted by Farallon and others and documented in boring logs. The locations of the cross sections are shown on Figure 3. According to Farallon observations made during subsurface investigations conducted on adjacent properties and at the Block 38 West Site, and a review of boring logs from geotechnical drilling (GeoEngineers, Inc. [GeoEngineers] 2018), three general stratigraphic units are present at Block 38:

- The shallowest unit consists of fill material with recent deposits, including lacustrine sediments, and comprises silt, sandy silt, and sand with variable gravel content. In some areas, this shallowest unit includes wood waste, peat, and organic silt. The shallowest unit is present across Block 38 beneath the Alley and Block 38 East Property. The shallowest unit was removed from the Block 38 West Property as part of the remedial and mass excavations conducted as part of redevelopment activities.
- The fill and recent deposits are underlain by a dense stratum of heterogeneous glacially consolidated deposits comprising dense sand and variable silt and gravel content and very stiff to hard silt with variable sand and gravel content. According to GeoEngineers (2018), the recent glacially consolidated soil contact typically slopes down to the north toward Lake Union. The borings in the Alley were too shallow to encounter glacially consolidated deposits. At the Block 38 West Property, the contact occurs between approximate elevations of 11 to -6 feet NAVD88.
- A poorly graded dense advance glacial outwash sand with minor silt is encountered below the intermediate unit of glacially consolidated soil at elevations ranging from -30 to -40 feet NAVD88. The sand and gravel layer that was observed in the boring for monitoring well FMW-130 at an elevation of -22 feet NAVD88 is likely the transition zone between the intermediate unit of glacially consolidated soil and the poorly graded dense advance glacial outwash sand. In some areas where the intermediate glacially consolidated unit is thin or absent, the top of the outwash sand is encountered at shallower depths.



Based on the subsurface and geotechnical investigations completed at the adjacent Block 38 West and Block 38 East Properties, three general water-bearing zones are present at Block 38 and are referred to as the Shallow Water-Bearing Zone, Intermediate Water-Bearing Zone, and Deep Outwash Aquifer. The interpretation and associated designations established by others are generally consistent with Farallon's observations at Block 38 and are described as follows:

- The uppermost water-bearing zone encountered in the fill and underlying recent deposits is referred to as the Shallow Water-Bearing Zone. The Shallow Water-Bearing Zone varies in thickness from approximately 5 to 15 feet and was encountered at depths ranging from approximately 5 to 8 feet bgs. Monitoring wells formerly located at the Block 38 West Property that were screened within the Shallow Water-Bearing Zone include FMW-132 through FMW-135; those at the Block 38 East Property included former monitoring wells MW-1 and MW-1A through MW-4. Monitoring wells FMW-154 through FMW-156 were installed in the Alley as part of the remedial investigation for the Block 38 West Site and were screened within the Shallow Water-Bearing Zone (Figure 3).
- The Intermediate Water-Bearing Zone is present below the Shallow Water-Bearing Zone in the glacially consolidated soil at approximate elevations of 5 to 10 feet NAVD88 (approximately 15 to 20 feet bgs). The Intermediate Water-Bearing Zone is continuous across Block 38. Based on previous subsurface investigations conducted at the Block 38 West Property, the Shallow Water-Bearing Zone is in direct communication with the Intermediate Water-Bearing Zone (i.e., there is no aquitard, which is a low permeability geologic formation or layer separating groundwater-bearing zones). Monitoring well FMW-157 was installed in the Alley as part of the remedial investigation for the Block 38 West Site and was screened within the Intermediate Water-Bearing Zone (Figure 3).
- The Deep Outwash Aquifer, the top of which is present at approximate elevations of -30 to -40 feet NAVD88 (approximately 55 to 65 feet bgs) at the Block 38 West Property, is in dense advance outwash sand deposits consisting of sand with minor silt. The Deep Outwash Aquifer is continuous across Block 38. The thickness of the Deep Outwash Aquifer is not known. Monitoring wells FMW-137 and FMW-138, on the northern and southern ends of the Alley, respectively, are screened in the outwash sand deposits comprising the Deep Outwash Aquifer.



### **3.0 SUMMARY OF PREVIOUS INVESTIGATIONS AND REMEDIAL ACTIONS**

Results of the subsurface investigations conducted at the Alley and adjacent properties are summarized below. The objectives of the subsurface investigations were to obtain lithologic, hydrogeologic, and analytical data to characterize environmental conditions. Independent remedial actions that were previously conducted at the Block 38 West and Block 38 East Properties are also summarized below.

#### **3.1 ALLEY**

Subsurface investigations have been conducted at the Alley since 1998. This section summarizes the activities and results from previous subsurface investigations at the Alley. Boring locations associated with these investigations are shown on Figure 3. Analytical data are summarized in Tables 1 through 3 and are shown on Figures 4 through 10 and 12 through 14. The variations in feet bgs and elevation for samples collected in the Alley is attributed to the variable surface elevations in the Alley, descending from elevation 31 feet NAVD88 at Mercer Street and elevation 41 feet NAVD88 at Republican Street to elevation 25 feet NAVD88 in the Alley. Copies of boring logs are provided in Appendix A and laboratory analytical reports are provided in Appendix B.

##### **3.1.1 Subsurface Investigations – GeoEngineers, 1998 and 2008**

GeoEngineers of Seattle, Washington conducted subsurface investigations at the Alley in 1998 and 2008 to evaluate potential impacts associated with former operations at the Block 38 East Property (GeoEngineers 2008). GeoEngineers advanced one boring (B-6) and a test pit (TP-10<sup>1</sup>) in the Alley to evaluate soil conditions and provide recommendations for potential cleanup actions (Figure 3).

Boring B-6 was advanced within the southern half of the alley in December 1998, to an approximate depth of 39 feet bgs. Soil samples were collected from the boring at depths of approximately 3 and 13 feet bgs (elevations of 23.6 and 13.6 feet NAVD88) and analyzed for petroleum hydrocarbons as gasoline-range organics (GRO), diesel-range organics (DRO), and

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<sup>1</sup> Identified as “TP-10-4” on the attached figures and tables.



oil-range organics (ORO), and for benzene, toluene, ethylbenzene, and xylenes (BTEX). The results indicated the presence of ORO at a concentration of 850 milligrams per kilogram (mg/kg) in the 3-foot sample. No other analytes were detected in the samples. The analytical data are summarized in Table 1 and shown on Figures 4 through 8.

Test pit TP-10-4 was advanced within the northern half of the Alley in May 2008, to an approximate depth of 4 feet bgs (elevation of 20.5 feet NAVD88). One soil sample was collected from the bottom of the test pit (sample TP-10-4) and analyzed for PAHs and metals. The results indicated the presence of cPAHs with a total cPAHs toxicity equivalent concentration (TEC)<sup>2</sup> of 0.245 mg/kg, and detected concentrations of cadmium and lead at 2.4 and 1,900 mg/kg, respectively. Other PAHs were also detected at low concentrations in the sample, including fluorene, fluoranthene, pyrene, and benzo(g,h,i)perylene ranging from 0.04 mg/kg to 0.33 mg/kg. The analytical data are summarized in Tables 2 and 3 and shown on Figures 9 and 10.

### **3.1.2 Utility Pothole Investigation – Farallon, 2019**

Utility pothole observations were conducted between January 7 and 26, 2019 to support waste profiling for utility locating work coordinated by Gary Merlino Construction Co. of Seattle, Washington and conducted by Applied Professional Services, Inc. of North Bend, Washington.

The utility pothole work was conducted using an air knife and vacuum truck to remove shallow soil to expose the existing utilities. A total of 10 potholes were advanced within the Alley (PH-1, PH-2, PH-4, PH-11, PH-11A, PH-12, PH-13, PH-13A, NGas-1, and NGas-2). A Farallon geologist observed and logged subsurface conditions and retained soil samples from selected intervals for laboratory analysis based on field indications of potential contamination. The information recorded for each pothole log included soil types encountered, visual and olfactory observations (e.g., staining, odor), and volatile organic vapor concentrations as measured using a photoionization detector.

Soil samples were retained from 4 of the 10 utility potholes within the southern half of the alley (PH-4, PH-11A, PH-12, and PH-13) for laboratory analysis based on field observations. Soil samples were collected from non-utility fill material directly beneath the utility backfill at shallow depths ranging from 3 to 4.5 feet bgs (elevations of 22 to 20 feet NAVD88). Soil

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<sup>2</sup> Total cPAH concentration calculated using the toxicity equivalency method in accordance with WAC 173-340-708(8).



samples were collected using a hand auger and transferred directly into laboratory-prepared glass sample containers fitted with Teflon-lined lids in accordance with Farallon's standard sampling procedures.

Soil samples were submitted to OnSite Environmental, Inc. of Redmond, Washington (Onsite) for analysis of one or more of the following analytes using the following laboratory analytical methods:

- GRO by Northwest Method NWTPH-Gx;
- DRO and ORO by Northwest Method NWTPH-Dx; and
- cPAHs by U.S. Environmental Protection Agency (EPA) Method 8270D/SIM.

The analytical results indicated detectable concentrations of GRO, DRO, ORO, and/or cPAHs in three of the four samples. GRO was only detected in the sample from PH-12 at a concentration of 2,100 mg/kg; DRO was detected in the samples from PH-11A and PH-12 at concentrations of 520 and 9,400 mg/kg, respectively; ORO was detected in the samples from PH-11A and PH-12 at concentrations of 1,100 and 21,000 mg/kg, respectively; and cPAHs were detected in the samples from PH-4, PH-11A, and PH-12 at total TECs ranging from 0.14 to 152 mg/kg. No compounds were detected in the sample collected from PH-13. The analytical results are summarized in Tables 1 and 2 and shown on Figures 4 through 10.

### **3.1.3 Supplemental Subsurface Investigation – Farallon, 2020**

Subsurface investigation activities were conducted on September 12 and 13, 2020 at the Alley to address the following data gaps identified from previous investigations (Farallon 2020a):

- Vertical limits of cPAHs- and petroleum-impacted soil;
- Lateral limits of cPAHs-impacted soil north of test pit TP-10-4 and south of utility pothole PH-4; and
- Lateral limits of petroleum-impacted soil east of the Block 38 West Property sidewall and in the vicinity of utility pothole PH-12.

The methodology for the September 2020 subsurface investigation activities in the Alley is summarized below.

Farallon subcontracted Anderson Drilling LLC of Lake Stevens, Washington (Anderson) to advance borings FB-10 through FB-16 in the Alley (Figure 3). Anderson mobilized a limited-





access direct-push drill rig on September 12 and 13, 2020 to advance the borings. All of the borings were advanced to an approximate depth of 15 feet bgs, except for FB-16, which was advanced to an approximate depth of 20 feet bgs, corresponding to elevations ranging from 9.9 to 7.8 feet NAVD88. A Farallon geologist observed subsurface conditions and prepared boring logs (Appendix A).

Soil samples were collected from various depths corresponding to elevations ranging between 15 and 22.5 feet NAVD88 for laboratory analysis. A total of 23 samples were submitted to Onsite and analyzed for one or more of the following constituents using the previously identified analytical methods, unless indicated otherwise: GRO; DRO and ORO; BTEX by EPA Method 8021B; naphthalenes by EPA Method 8270D/SIM; cPAHs; and metals (i.e., arsenic, cadmium, chromium, mercury, and lead) by EPA Series Methods 6010D and 7471B.

Groundwater was not encountered and therefore groundwater samples were not collected.

The majority of detected constituents were encountered from approximate elevations 22.5 to 17.5 feet NAVD88 within the fill soil and/or organic debris material beneath the Alley. The analytical results are summarized below and data are provided in Tables 1 through 3.

DRO + ORO was detected at concentrations ranging from 110 to 2,860 mg/kg in 13 of 15 samples (Figures 6 through 8; Table 1). The laboratory indicated that all six soil samples that detected DRO concentrations were impacted by and attributed to ORO in the samples. The highest concentrations were detected in the soil sample collected from boring FB-13 at a depth of 5.5 feet bgs (elevation of 17.5 feet NAVD88).

Naphthalene, 1-methylnaphthalene, and 2-methylnaphthalene were detected in 7 of 8 samples, with total naphthalenes concentrations (the combined concentrations of the three compounds) ranging from 0.173 to 11.6 mg/kg (Figure 9; Table 2). The highest concentration of total naphthalenes was detected in the soil sample collected from boring FB-13 at an elevation of 22.5 feet NAVD88.

cPAHs were detected in 14 of 22 samples, at total TECs ranging from 0.26 to 32 mg/kg (Figure 10; Table 2). The highest concentration of cPAHs was detected in the soil sample collected from boring FB-13 at an elevation of 22.5 feet NAVD88. The results of the subsurface investigation bounded cPAHs vertically, and the lateral limits to the north of boring FB-16 and south of boring FB-10 in shallow soil were further evaluated during the Alley interim action.





GRO and BTEX constituents were reported non-detect at the laboratory practical quantitation limits (PQLs) in the four samples that were analyzed (two from FB-12 and two from FB-13; see Figures 4 and 5; Table 1). The lateral and vertical limits of petroleum-impacted soil east of the Block 38 West Property sidewall and in the vicinity of utility pothole PH-12 were confirmed.

Metals were generally reported non-detect at the laboratory PQL or were detected at concentrations below applicable screening levels in the eight samples that were analyzed from borings FB-12 through FB-15. The results are included in Table 3.

### **3.1.4 2022 Subsurface Investigation and Monitoring Well Installation**

On February 5 and 6, 2022, Shallow Water-Bearing Zone monitoring wells FMW-154 through FMW-156 and Intermediate Water-Bearing Zone monitoring well FMW-157 were installed and developed in the Alley east of and adjacent to the Block 38 West Property. In addition to the monitoring well installation, boring FB-21 was advanced north of the Alley (Figure 3). Monitoring wells FMW-154 through FMW-157 were screened at the following depths:

- FMW-154: 10 to 15 feet bgs (elevation 12.8 to 7.8 feet NAVD88);
- FMW-155: 10 to 15 feet bgs (elevation 13.9 to 8.9 feet NAVD88);
- FMW-156: 15 to 20 feet bgs (elevation 10.7 to 5.7 feet NAVD88); and
- FMW-157: 30 to 40 feet bgs (elevation -4.1 to -14.1 feet NAVD88).

Boring FB-21 was advanced to a depth of 5 feet bgs (elevation 26 feet NAVD88). Soil samples were collected at elevations 28 and 26 feet NAVD88 for laboratory analysis. Two samples were submitted to Onsite and analyzed for cPAHs using the previously identified analytical methods. cPAHs were detected in one of two samples analyzed, at total TECs ranging from the laboratory PQL to 0.24 mg/kg (Figure 10; Table 2). The highest concentration of cPAHs was detected in the soil sample collected at an elevation of 28 feet NAVD88.

Groundwater samples were not collected from monitoring wells FMW-154 through FMW-157 and OW-1 and OW-2. Groundwater monitoring events were conducted in May, August, and November 2023 in accordance with the Ecology-approved Remedial Investigation Work Plan dated April 26, 2023, prepared by Farallon (2023) (RI Work Plan).



## **3.2 BLOCK 38 WEST SITE**

Subsurface investigations have been conducted on the Block 38 West Site (which includes the Block 38 West Property) since 1999. This section summarizes the activities and results from previous subsurface investigations and independent interim actions conducted at the Block 38 West Site. Boring locations associated with these investigations are shown on Figure 3. Soil data is summarized on Figures 4 through 10, presented in Tables 1 through 3, and discussed below. Copies of boring logs and validated laboratory analytical reports will be provided in the RI Report for the Block 38 West Site.

### **3.2.1 Phase II Soil Investigation – Dames & Moore, 1994**

The 1999 Environmental Assessment Update (Hart Crowser, Inc. 1999) summarized previous work performed, including a Phase II soil investigation performed by Dames & Moore on the Block 38 West Site in 1994. The 1994 soil investigation was performed in the area where a 1,500-gallon heating oil underground storage tank (UST) was removed in 1989 from the sidewalk north-adjacent to Republican Street, along the southern portion of the Block 38 West Property (Figure 2). The results from the 1994 soil investigation indicated that no petroleum-affected soil was present beneath the former heating oil UST; groundwater reportedly was not encountered. Information regarding the sample locations during that investigation was not provided in the documents available for review.

### **3.2.2 Geotechnical Investigation – GeoEngineers, 2018**

GeoEngineers performed geotechnical engineering services at the Site in August 2018. The results of the geotechnical investigation were summarized in the draft *Geotechnical Engineering Services, Block 38, Seattle, Washington* dated September 17, 2018, prepared by GeoEngineers (2018) (2018 Geotechnical Report).



The 2018 Geotechnical Report summarized the subsurface conditions that were observed during the advancement of borings FB-01 through FB-06 and borings for monitoring wells FMW-132 through FMW-136 (Figure 3). The borings were completed to depths ranging from 10 to 51.5 feet bgs. Soil samples collected during the advancement of the borings were evaluated for moisture content, fines content, organic content, and Atterberg limits. Based on the evaluation of the geotechnical data collected for the Block 38 West Site, the following soil conditions were identified by GeoEngineers:

- **Fill:** Fill generally consists of very loose to medium dense silty sand with variable gravel, rubble (brick) and wood fragments, and soft to medium stiff silt and sandy silt. Wood waste was present in the lower portion of the fill soil from approximate elevation 24 to 1 feet NAVD88. The thickness of fill at the Block 38 West Property was observed to be up to approximately 17 feet.
- **Peat/Organic Silt Layer:** A layer of organic material was encountered below the fill and generally consists of very soft to stiff peat, organic silt, and organic clay. The peat/organic silt layer is up to approximately 9-feet thick and generally does not extend below an approximate elevation of 5 to 10 feet NAVD88.
- **Recent Deposits:** Recent deposits were encountered below the peat/organic silt layer and generally consist of medium dense sand with variable silt and gravel content and medium stiff to very stiff silt with variable sand content. The thickness of the recent deposits was observed to be up to approximately 18 feet.
- **Glacially Consolidated Soil:** Glacially consolidated soil was encountered below the recent deposits and generally consists of dense to very dense sand with variable silt and gravel content and very stiff to hard silt with variable sand and gravel content. Glacially consolidated soil represents competent foundation-bearing soil. The contact to glacially consolidated soil typically slopes down to the north toward Lake Union. The contact elevation to glacially consolidated soil ranges from approximate elevations of -6 to -11 feet NAVD88.

According to the 2018 Geotechnical Report, GeoEngineers estimated the regional water table at an elevation of 20 feet NAVD88 based on observed groundwater conditions in monitoring wells installed on adjacent properties and GeoEngineers' experience in the South Lake Union area. GeoEngineers further stated that the regional water table in the vicinity of the Block 38 West Property is influenced by recharge from Queen Anne Hill and Capitol Hill, infiltration of surface



water, temporary dewatering activities, and changes in the water level in Lake Union. The 2018 Geotechnical Report also states that the 72-inch-diameter King County sewer main line in the Republican Street right-of-way and its backfill (Republican Street Drain), south of the Block 38 West Property, influence groundwater levels locally through leakage into the drain (Figure 12).

### **3.2.3 Subsurface Investigations – Farallon Consulting, 2014–2020**

Farallon conducted various subsurface investigations at the Block 38 West Site between 2014 and 2020. The objectives of the subsurface investigations were to obtain lithologic, hydrogeologic, and analytical data to characterize environmental conditions at the Block 38 West Site, and, in part, to facilitate implementation of the independent interim remedial action conducted during the planned redevelopment project under the auspices of the AO. These activities are summarized below.

- **2014 Subsurface Investigation**

The 2014 subsurface investigation included the installation of monitoring well FMW-130 in the Intermediate Water-Bearing Zone (Figure 3). Monitoring well FMW-130 was installed in July 2014 using a sonic drill rig operated by Cascade Drilling, L.P. of Woodinville, Washington. Monitoring well FMW-130 was installed to a depth of 60 feet bgs. A reconnaissance groundwater sample was collected from the Shallow Water-Bearing Zone during the advancement of the boring for monitoring well FMW-130. A temporary well screen was set at a depth of 15 to 20 feet bgs (elevation 6.9 to -3.1 feet NAVD88) prior to collection of the reconnaissance groundwater sample. The permanent well screen for monitoring well FMW-130 was set at a depth of 45 to 55 feet bgs (elevation -22.8 to -32.8 feet NAVD88). Select soil, reconnaissance groundwater, and groundwater samples were submitted for laboratory analysis for one or more of the following: GRO, DRO, ORO, BTEX, PAHs and other semivolatile organic compounds (SVOCs), and volatile organic compounds (VOCs), including chlorinated VOCs (CVOCs).

- **2017 Groundwater Monitoring**

Monitoring well FMW-130 was sampled on July 3, 2017 using EPA low-flow groundwater sampling procedures. The groundwater sample was placed on ice in a cooler under standard chain-of-custody procedures and delivered to Onsite for laboratory



analysis. The groundwater sample was analyzed for the following constituents using the previously identified analytical methods: GRO; BTEX; and CVOCs.

- **2018 Subsurface Investigations and Groundwater Monitoring**

Subsurface investigation activities conducted in 2018 included advancement of six borings (FB-01 through FB-06); collection of reconnaissance groundwater samples from borings FB-01, FB-03, and FB-05; and installation and development of five monitoring wells (FMW-132 through FMW-136) in August 2018; installation of monitoring wells FMW-137 and FMW-138 in November 2018; and groundwater monitoring activities in August and December 2018.

In August, FB-01 through FB-06 and monitoring wells FMW-132 through FMW-135 were installed to assess soil and groundwater conditions in the Shallow Water-Bearing Zone and FMW-136 was installed to assess soil and groundwater conditions in the Intermediate Water-Bearing Zone (Figure 3). The 11 borings were drilled to depths ranging from 10 to 51.5 feet bgs. Monitoring wells FMW-132 through FMW-135 were screened in the Shallow Water-Bearing Zone at depths ranging from approximately 5 feet bgs to 17 feet bgs (elevations between 20.7 and 8.4 feet NAVD88), and monitoring well FMW-136 was screened in the Intermediate Water-Bearing Zone at a depth of 30 to 40 feet bgs (elevation of -5 to -15 feet NAVD88).

Select soil and groundwater samples were collected from the 11 locations and were submitted for analysis for one or more of the following constituents using the previously identified analytical methods, unless indicated otherwise: GRO; DRO and ORO; BTEX; CVOCs; PAHs and other SVOCs, and arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver by EPA Series Methods 200/6000/7000.

In November, Deep Outwash Aquifer monitoring wells FMW-137 and FMW-138 were installed proximate to the northeastern and southeastern corners of the Block 38 West Property to evaluate groundwater quality in the Deep Outwash Aquifer (Figure 3). Monitoring well FMW-137 was screened at a depth of 72 to 85 feet bgs (elevation of -42 to -55 feet NAVD88) and monitoring well FMW-138 was screened at a depth of 90 to 100 feet bgs (elevation of -50 to -60 feet NAVD88). The methodology for the 2018 subsurface investigation and groundwater monitoring of the Deep Outwash Aquifer is summarized in the 2019 IAWP.



Monitoring wells FMW-130 and FMW-132 through FMW-136 were sampled on August 30 and December 28, 2018; and monitoring wells FMW-137 and FMW-138 were sampled on November 20 and December 28, 2018. All of the wells were sampled using EPA low-flow groundwater sampling procedures. Groundwater samples were placed on ice in a cooler under standard chain-of-custody procedures and delivered to Onsite for laboratory analysis. Reconnaissance groundwater samples and the groundwater samples collected from FMW-130 and FMW-132 through FMW-136 were analyzed for GRO, DRO, ORO, BTEX, PAHs and other SVOCs, and CVOCs; the samples from FMW-137 and FMW-138 were only analyzed for CVOCs.

- **2019 Subsurface Investigation and Groundwater Monitoring**

Supplemental subsurface investigation activities conducted in 2019 included advancement of three borings (FB-07 through FB-09) and installation of five monitoring wells (FMW-144 through FMW-147 and FMW-149) in December 2019; and groundwater monitoring activities (Figure 3). Select soil and groundwater samples from the December 2019 subsurface investigation were submitted for analysis for one or more of the following constituents: GRO; DRO and ORO; BTEX; CVOCs; and PAHs and other SVOCs.

Groundwater monitoring events were conducted at monitoring wells FMW-130 and FMW-132 through FMW-136 in March 2019, at monitoring wells FMW-137 and FMW-138 in March (groundwater level measurements only, no groundwater samples were collected), May, and July 2019, and at monitoring wells FMW-144 through FMW-147 and FMW-149 in December 2019. Groundwater monitoring events were conducted at monitoring wells FMW-137 and FMW-138 in October and November 2019. Groundwater sampling was conducted using EPA low-flow groundwater sampling procedures. Samples were analyzed for one or more of the following constituents using the previously identified analytical methods: GRO; DRO and ORO; BTEX; CVOCs; and PAHs and other SVOCs.

- **2019 to 2020 Test Pit Investigation**

Between December 2019 and February 2020, test pits TP-1 through TP-18 were advanced at the Block 38 West Site to support and update the existing conceptual site model, support soil profiles for disposal, and collect performance or confirmation soil samples during the course of the independent interim action (Figure 3). The test pits were



advanced by Hos Bros. of Woodinville, Washington using the bucket of an excavator. Soil samples were collected from 12 of the 18 test pits and submitted for laboratory analysis for one or more of the following constituents: GRO; DRO and ORO; VOCs, including CVOCs and/or BTEX; PAHs, including cPAHs and total naphthalenes; total lead; 1,2-dibromoethane and 1,2-dichloroethane; polychlorinated biphenyls; and methyl tertiary-butyl ether.

The results of these investigations confirmed the presence of detectable GRO, DRO, ORO, BTEX, and PAHs (including cPAHs) in soil at the Block 38 West Site, primarily within the upper 15 feet of fill material. Detected concentrations of ORO, total naphthalenes, and cPAHs appeared to be the most prominent throughout the Block 38 West Property, with ORO as high as 9,000 mg/kg, total naphthalenes as high as 14.3 mg/kg, and total equivalent cPAHs as high as 21 mg/kg. Other compounds were detected in soil, but at a lower frequency and at relatively low concentrations. The lateral distribution of concentrations is illustrated on Figures 4 through 10 and vertical distribution is illustrated on Figures 12 through 14. Additional details and soil analytical data from these activities were provided in the Ecology-approved RI Work Plan.

These investigations also confirmed detectable petroleum hydrocarbons in groundwater within the Shallow and Intermediate Water Bearing Zones beneath the Block 38 West Site. Additional details and data regarding groundwater quality can be found in the RI Work Plan. Groundwater level measurements and corresponding elevations from the monitoring events are presented in Table 4, and interpreted groundwater elevation contours and flow direction in the Shallow Water-Bearing Zone are shown on Figure 11.

- **2020 to 2021 Subsurface Investigation and Monitoring Well Installation**

Between June and July 2020, four new monitoring wells, FMW-150 through FMW-153, were installed at the Block 38 West Property (Figure 3). The monitoring wells were installed concurrent with the redevelopment of the Block 38 West Property through the basement slab of the P4 parking garage level. Monitoring wells FMW-150 through FMW-153 were screened in the Intermediate Water-Bearing Zone at depths of approximately 2 to 7 feet below the P4 parking garage slab (approximate elevations between -8.5 and -14.3 feet NAVD88). The monitoring well casings for FMW-150 through FMW-153 were extended up to the P1 parking garage level, above the pre-redevelopment static water elevation of the Intermediate Water-Bearing Zone. Soil





samples were not retained during the well installation and no groundwater was present at the time of installation to allow for well development. The monitoring wells were developed on February 21 and 24, 2022, prior to initiating compliance groundwater monitoring.

On November 24, 2021, borings FB-18 and FB-19 were advanced west of former soil sample location TP-12 along the western sidewalk at the Block 38 West Property (Figure 3). Borings FB-18 and FB-19 were advanced to a depth of 25 feet bgs (elevation 10.0 feet NAVD88). Select soil samples from borings FB-18 and FB-19 were submitted for analysis for cPAHs.

### **3.2.4 Independent Interim Action**

Investigations conducted at the Block 38 West Site have identified hazardous substances in soil and groundwater at concentrations exceeding screening levels based on MTCA Method A cleanup levels. Those screening levels were selected in general accordance with WAC 173-340-704 due to the limited number of compounds detected at the Block 38 West Site and in consideration of potential exposure pathways identified in the preliminary conceptual site model that was presented in the 2019 IAWP (Farallon 2019b). Hazardous substances that were detected at concentrations exceeding the screening levels were identified as constituents of potential concern (COPCs) for the Block 38 West Site and the independent interim action conducted on the Block 38 West Property. Additional details regarding the preliminary conceptual site model for the Block 38 West Site were provided in the Ecology-approved RI Work Plan.

The independent interim action has reduced the threat to human health and the environment by removal of impacted soil in the Shallow Water-Bearing Zone, and the upper portion of the Intermediate Water-Bearing Zone from within the property boundary during the Block 38 West Property redevelopment project. Components of the independent interim action included excavation of soil with COPCs detected at concentrations exceeding screening levels to eliminate source material, construction dewatering and treatment of contaminated groundwater, installation of a vapor barrier below and around the entire perimeter of the building foundation, and construction of the exterior walls and floor slab for the underground portion of the building using waterproof concrete.

Installation of shoring piles started in November 2019 and was completed in January 2020. Mass excavation activities started in January 2020 and were completed in June 2020. Approximately





64,200 tons of soil containing detectable concentrations of hazardous substances and wood/organic debris was removed from the Block 38 West Property through June 26, 2020. Of this total, approximately 44,000 tons of soil contained hazardous substances at concentrations exceeding the screening levels. Approximately 50 percent of the 44,000 tons (23,000 tons) of soil with hazardous substances at concentrations exceeding the screening levels was associated with wood and organic debris encountered across the Block 38 West Property.

The construction dewatering and treatment system was shut down on March 24, 2021. During the system operation between January 2020 and March 2021, a total of approximately 189,045,000 gallons of water from the Block 38 West Property construction dewatering system and captured stormwater were collected, treated, and discharged via a private stormwater lateral to the City of Seattle stormwater system or the municipal sanitary sewer.

The independent interim action conducted in conjunction with the redevelopment of the Block 38 West Property has removed the fill soil, wood debris, and soil with hazardous substances detected at concentrations exceeding screening levels from within the limits of the Block 38 West Property. Results of performance soil sampling at the excavation extents indicate that DRO + ORO and cPAHs remain in soil along the eastern property boundary at concentrations exceeding their respective screening levels. The remaining exceedances are primarily at elevation 20 feet NAVD88 in sidewall samples H4-ESW through K4-ESW (Figures 8 and 10; Tables 1 and 2).

### **3.3 BLOCK 38 EAST PROPERTY**

Historical operations on the Block 38 East Property resulted in the release of hazardous substances to soil and groundwater beneath the Block 38 East Property, adjacent rights-of-way, and adjacent properties (Figure 2). Documented releases are associated with the former Jenks Service Station facility (Lot 1) and a former fuel yard that consisted of coal storage and distribution (Lots 2 through 5), where the Interurban Exchange 2 Building currently resides. A reported release from a former heating oil UST (Lot 6) also occurred at the Rosen Building (Lots 6 and 7). Ecology currently associates these releases with the Rosen Property Site in the contaminated sites database (Facility Site ID No. 2500, Cleanup Site ID 5123, as noted previously). Figure 2 shows the location of historical features on the East property and lot configuration. A summary of environmental investigations and remedial actions completed (GeoEngineers 1999, 2008) follows.



Due to the significant amount of data associated with the Rosen Property Site, only select analytical results for soil samples collected from the western sidewall of the remedial excavation that occurred on Lots 1 through 5 – i.e., adjacent to the Alley – are summarized on Figures 4 through 10, presented in Tables 1 through 3, and discussed below.

### **3.3.1 Block 38 East Property – Lots 1 through 5**

Releases of petroleum hydrocarbons, metals (lead and cadmium), and PAHs, including naphthalenes and cPAHs, were confirmed prior to development and construction of the Interurban Exchange 2 Building. Farallon understands that an interim action was conducted in conjunction with redevelopment of the northern and central portions of the Block 38 East Property in 2008, which resulted in the removal of impacted soil and groundwater at Lots 1 through 5. Based on the results of the interim action confirmation soil sampling, GRO, DRO, and ORO were detected at concentrations exceeding MTCA Method A cleanup levels in soil samples collected from the northern sidewall of the excavation on Lot 1, and cPAHs were detected at concentrations exceeding the MTCA Method A cleanup level on the western and southern sidewalls of the excavation on Lots 3 through 5 (GeoEngineers 2008). GRO and BTEX were detected at concentrations exceeding MTCA Method A cleanup levels in groundwater samples collected from dewatering wells on the northern shoring wall during the remedial excavation. No information regarding additional groundwater monitoring on or off the Block 38 East Property after the interim action was available.

The interim action was limited to the area of redevelopment and construction on Lots 1 through 5 of the Block 38 East Property, and impacted soil remained in the adjacent rights-of-way to the north and west, and potentially at Lot 6 on the southern portion of the Block 38 East Property. Based on confirmation samples from the excavation, GRO remained in the west sidewall near the northern end of the alley at a concentration of 11 mg/kg (sidewall sample EX-11-W21; Figure 4; Table 1) and cPAHs remained in the west sidewall along the central portion of the alley at total TECs ranging from 0.07 to 6 mg/kg (EX-19-W5, EX-20-W1.5, EX-40-EL22, and EX-41-EL22; Figure 10; Table 2). Lead also remained in the west sidewall along the central portion of the alley at concentrations ranging from 64 to 1,800 mg/kg (EX-19-W5, EX-20-W1.5, EX-39-EL23, EX-40-EL22, and EX-41-EL22; Table 3).

Ecology (2009) issued a property-specific No Further Action (NFA) determination based upon the results of the 2008 remedial action conducted by GeoEngineers (2008) at Lots 1 through 5 on the Block 38 East Property. The NFA determination was property-specific to Lots 1 through 5



(the portion of the Block 38 East Property containing the Interurban Exchange 2 Building) and Ecology had indicated that “further remedial action is still necessary elsewhere at the Site.”

GeoEngineers (2008) observed that three distinct stratigraphic layers existed under Lots 3 through 5, and that soil samples with PAHs or metals detected at concentrations exceeding MTCA Method A cleanup levels were within the upper soil fill layer. The three layers were described as follows:

- An upper fill layer consisting of sand, silt, wood chips, and coal fragments from the ground surface to a depth of 4 to 6 feet bgs (approximate elevation of 25 to 21 feet NAVD88);
- Underlying wood debris consisting of wood chips and logs that ranged from 7 to 10 feet thick (approximate elevation of 21 to 14 feet NAVD88); and
- Native silt and sand encountered beneath the wood debris layer (elevations deeper than an approximate elevation of 14 feet NAVD88).

### **3.3.2 Block 38 East Property – Lots 6 and 7**

A release from a heating oil UST on Lot 6 associated with the Rosen Building was confirmed during the permanent decommissioning and removal of the UST in 1994 (GeoEngineers 1999). Residual DRO and ORO were detected in soil samples collected north of the former heating oil UST excavation area at concentrations exceeding MTCA cleanup levels established in 1994 but less than current MTCA Method A cleanup levels. The volume of soil associated with the former heating oil UST release that was excavated and disposed of off the Rosen Property Site was not documented. Petroleum hydrocarbons were reported as non-detect in a groundwater sample collected from a monitoring well north of the former heating oil UST excavation area. Based on the information available, it is not clear whether the monitoring well was down-gradient from the UST excavation area. No other information pertaining to this UST release was available for review.



## **4.0 INTERIM ACTION TECHNICAL ELEMENTS**

This section provides a summary of the technical elements applicable to the interim action completed at the Alley. Technical elements included identification of the ARARs, interim action objectives, media of concern, TEE, and appropriate screening levels for hazardous substances of concern for the Alley interim action.

### **4.1 PERMITS AND OTHER REGULATORY REQUIREMENTS**

This section summarizes applicable local, state, and federal laws pertaining to the interim action, and the permitting and substantive requirements applicable to the interim action.

#### **4.1.1 Applicable or Relevant and Appropriate Requirements**

Pursuant to WAC 173-340-710, the interim action was conducted in compliance with applicable local, state, and federal laws, and include applicable regulatory guidelines. The cleanup standards, waste disposal criteria, and documentation standards are:

- MTCA (Chapter 70A.305 of the Revised Code of Washington [RCW]) and WAC 173-340);
- The Hazardous Waste Management Act (RCW 70.105);
- Washington State Solid Waste Management Laws and Regulations (RCW 70.95 and WAC 173-351 and 173-304);
- Dangerous Waste Regulations (WAC 173-303);
- Accreditation of Environmental Laboratories (WAC 173-50);
- The Occupational Safety and Health Act (Part 1910 of Title 29 of the Code of Federal Regulations [29 CFR 1910] and WAC 296-62);
- The State Environmental Policy Act (RCW 43.21C and WAC 197-11 and 173-802);
- Safety Standards for Construction Work (WAC 296-155); and
- Applicable local permits and ordinances indicated by the City of Seattle Municipal Code.



#### 4.1.2 Permitting and Substantive Requirements

The following bullets describe the permitting and substantive requirements applicable to the interim action:

- **State Environmental Policy Act** — The State Environmental Policy Act (SEPA) (WAC 197-11) and the SEPA procedures (WAC 173-802) provide the framework for state agencies to evaluate the environmental consequences of a project and ensure appropriate measures are taken to mitigate environmental impacts. SEPA was applicable to the redevelopment project on the Block 38 West Property, which included the Alley improvements.

Block 38 is in the South Lake Union neighborhood of downtown Seattle for which an Environmental Impact Statement (EIS) was previously prepared. The EIS, which was prepared by the City of Seattle and finalized in 2012, evaluated general environmental impacts and mitigation strategies for development projects within the South Lake Union neighborhood (City of Seattle 2012). City Investors IX prepared and submitted an addendum to the South Lake Union EIS in April 2019 that provided a site-specific analysis of environmental impacts and associated mitigation measures for the Block 38 West Property redevelopment project, including the Alley improvements. The City of Seattle determined that the project will not have a significant adverse impact on the environment<sup>3</sup>.

- **City of Seattle Master Use Permit** — City Investors IX obtained a Master Use Permit from the City of Seattle for the Block 38 West Property redevelopment project, which included the Alley improvements.
- **City of Seattle Grading and Shoring Permits** — City Investors IX obtained a grading permit from the City of Seattle. Substantive requirements of a grading permit included erosion control, which was addressed by implementation of best management practices in accordance with a project-specific temporary erosion and sediment control plan.
- **Historical and Cultural Resource Protections** — As required by state law, appropriate measures were taken to evaluate the potential presence of historical, archaeological, or

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<sup>3</sup> Record No. 3017466-LU, City of Seattle Analysis and Decision of the Director of the Seattle Department of Construction and Inspections; Notice of Decision issued July 2, 2019.



cultural resources. City Investors IX prepared a Cultural Resources Assessment, which was submitted to the Washington State Department of Archaeology and Historic Preservation. The Washington State Department of Archaeology and Historic Preservation concurred with the findings of the Cultural Resources Assessment requiring archeological monitoring during excavations with potential to intersect native soil. In addition, City Investors IX prepared a Monitoring and Inadvertent Discovery Plan for the Block 38 West Property redevelopment project. Monitoring conducted by the archeologist over the course of the redevelopment did not yield any cultural resources of significance.

## **4.2 MEDIA OF CONCERN**

The confirmed medium of concern at the Alley targeted for the interim action is soil. Evaluation of groundwater, indoor air, and surface water (via stormwater discharge) as media of concern was not included as part of the interim action. Potential impacts to groundwater that has migrated from or to the Alley will be assessed during the remedial investigation for the Block 38 West Site. To the extent the potential impacts are associated with releases at the Block 38 West Site, they will be addressed during the feasibility study and final cleanup action. The vapor intrusion to indoor air pathway is not currently a complete pathway for the Alley due to the absence of a building. The independent interim action at the Block 38 West Property included a chemical-resistant vapor barrier to mitigate against the potential indoor air exposure pathway for the building; therefore, it is expected that the vapor intrusion pathway will be mitigated with engineering controls as part of the final remedy (subject to review and approval by Ecology). The conceptual site model, exposure pathways, and media of concern for the Block 38 West Site will be discussed in the RI Report.

Based on the property-specific NFA determination for the Rosen Property Site, the vapor intrusion to indoor air pathway was not considered complete for the residual volatile hazardous substances that remained in the west sidewall post interim action conducted on Lots 1 through 5 of the Block 38 East Property (Ecology 2009).

Stormwater at the Alley is collected at a catch basin and discharges to the King County Metro Sewer system.

Based upon the above considerations, and as more fully discussed below, the medium of concern identified for the interim action conducted at the Alley is soil.



### **4.3 POTENTIAL RECEPTORS AND EXPOSURE PATHWAYS**

The potential exposure risks to human health and the environment associated with the presence of hazardous substances in soil and/or groundwater at the Alley were evaluated. This subsection presents the evaluation and conclusions pertaining to the potential exposure pathways associated with the Alley interim action.

#### **4.3.1 Soil to Groundwater**

Based on subsurface results, the soil to groundwater pathway is potentially complete. The Alley interim action conducted at the Block 38 West Site removed soil with hazardous substances detected at concentrations exceeding screening levels to the maximum extent practicable within the limits of the construction excavation. The soil to groundwater pathway is potentially complete in the Alley and will be evaluated as part of the remedial investigation activities for the Block 38 West Site.

#### **4.3.2 Soil Direct Contact**

Soil containing hazardous substances detected at concentrations exceeding screening levels was removed from the Alley to the maximum extent practicable within the limits of the construction excavation, and limited areas of soil impacted with DRO + ORO and PAHs are present in the Alley at an elevation of 17.5 feet NAVD88 and in a wedge of soil that remains along the eastern sidewall of the Alley excavation and the Block 38 East Property at elevations ranging from 28 to 17.5 feet NAVD88. The standard point of compliance for the direct contact exposure pathway for soil is a depth of 15 feet bgs for human health and 6 feet bgs for terrestrial receptors (WAC 173-340-740[6][d] and WAC 173-340-7490[4][b]). Hazardous substances at concentrations exceeding screening levels were detected in shallow soil, less than 15 feet bgs, ranging in elevation from 28 to 22.5 feet NAVD88 (3 feet bgs and 0.5 foot bgs) at the central and eastern portions of the Alley interim action. This contamination presents a risk of direct contact with soil, which comprises both the dermal contact and ingestion pathways, if the improvements covering the contamination such as concrete roads are removed.

Hazardous substances remaining in soil at the Alley and Block 38 West Site after completion of the independent (Property) interim action and Alley interim action are covered by the current buildings, pavement, and sidewalks, effectively eliminating the direct contact exposure pathway. Institutional controls such as an Ecology-approved Environmental Covenant will be required for maintaining these barriers to eliminate potential exposure.





### **4.3.3 Groundwater Ingestion/Drinking Water Beneficial Use**

Groundwater conditions after the independent interim action at the Block 38 West Property and Alley interim action will be evaluated as part of the remedial investigation activities for the Block 38 West Site. Contact with shallow groundwater during ground intrusive construction work is considered a potential exposure pathway, which can include both incidental ingestion of water and inhalation of volatile vapors. Groundwater in the vicinity of the Block 38 West Site is not a current source of drinking water and its use as such in the future is very unlikely. There are no drinking water production wells proximate to the Block 38 West Site. Service water is collected in the Tolt and Cedar River watersheds and provided by the City of Seattle. Regardless, future use of groundwater as a drinking water source must be presumed, consistent with WAC 173-340-720(1)(a). Therefore, ingestion of contaminated groundwater (drinking water) is a potential future exposure pathway. If remedial investigation activities confirm impacts to groundwater at concentrations exceeding final cleanup levels, an institutional control may need to be implemented to restrict future groundwater use.

### **4.3.4 Terrestrial Ecological Evaluation**

A TEE is required by WAC 173-340-7490 at any site where there has been a release of a hazardous substance to soil. The regulation requires that one of the following actions be taken:

- Documenting a TEE exclusion using the criteria presented in WAC 173-340-7491;
- Conducting a simplified TEE in accordance with WAC 173-340-7492; or
- Conducting a site-specific TEE in accordance with WAC 173-340-7493.

Based on the criteria for TEE exclusion in WAC 173-340-7491(1)(c)(i), the Block 38 West Site is excluded from a TEE because there is less than 1.5 acres of contiguous undeveloped land on the Site or within 500 feet of any area of the Site; the Site is not contaminated with the hazardous substances listed in WAC 173-340-7491(1)(c)(ii); and based on the criteria in WAC 173-340-7491(1)(b), all soil contaminated with hazardous substances is, or will be, covered by buildings, paved roads, pavement, or other physical barriers that will prevent plants or wildlife from being exposed to the soil contamination. No further consideration of ecological impacts is required under MTCA. The Ecology Terrestrial Ecological Evaluation Form is provided in Appendix C.





#### **4.4 SCREENING LEVELS AND HAZARDOUS SUBSTANCES OF CONCERN**

Screening levels are established as a conservative basis for defining the extent of contamination for each hazardous substance exceeding concentrations of potentially applicable cleanup levels and affected media at a site. The screening levels may or may not be selected as the cleanup levels in a cleanup action plan, once the remedial investigation is complete and the conceptual site model is developed. MTCA Method A soil cleanup levels for unrestricted land use are appropriate screening levels for the Alley interim action because there is a limited number of hazardous substances in soil and the current and proposed future land use as a paved through-alley servicing commercial buildings on the West and East properties limits the potential for exposures.

Hazardous substances targeted for this interim action were selected based on the compounds that remain at concentrations exceeding the screening levels within or immediately adjacent to the Alley. The hazardous substances identified for soil and their respective screening levels are:

- GRO: 30 mg/kg;
- DRO: 2,000 mg/kg;
- ORO: 2,000 mg/kg;
- DRO + ORO: 2,000 mg/kg;
- Benzene: 0.03 mg/kg;
- cPAHs: 0.1 mg/kg;
- Total naphthalenes: 5 mg/kg;
- Lead: 250 mg/kg; and
- Cadmium: 2 mg/kg.

#### **4.5 CONFIRMED AND SUSPECTED SOURCES OF CONTAMINATION**

The inferred sources of contamination at the Alley are presented below. Adjacent properties with documented and confirmed releases of hazardous substances associated with historical operations described in Section 3 that potentially have migrated near or to the Alley via soil, surface water runoff, and/or groundwater transport are also summarized below. Although the final determination of sources will be defined in later reports, this section presents preliminary conclusions regarding contaminant sources based upon data gathered during the interim action.



#### 4.5.1 Alley

Based on the results of subsurface investigations, the independent interim action at the Block 38 West Property, and Alley interim action the following historical features were confirmed as sources of soil contamination at the Alley: historical placement of impacted fill soil; wood debris associated with the former lumber mill operations on Block 38; a coal fill layer encountered in the southern and central portions of the Alley; localized impacts associated with former stormwater drain catch basins; and localized impacts associated with the former railroad trestle and supporting structures.

The Alley interim action was conducted in conjunction with the Block 38 West Property redevelopment and removed an impacted fill layer consisting of sand, silt, coal fragments, and wood chips and organic material from approximate elevations of 25 to 18 feet NAVD88 and is attributed to historical fill operations at Block 38 along the original southern shoreline of Lake Union. The Alley interim action removed soil with detectable concentrations of hazardous substances to the north up to the Mercer Street right-of-way, to the east within 1 to 2 feet of the Block 38 East Property boundary, to the south up to the Republican Street right-of-way, and to the west up to the eastern shoring wall on the Block 38 West Property (Figures 16 through 24).

Based on previous subsurface investigations conducted in the Alley the vertical limits of hazardous substances were defined (Figures 4 through 10 and 12 through 14). Soil performance samples collected at the limits of the construction excavation in the alley confirmed the lateral limits of hazardous substances in soil to the south, and soil excavation performance and confirmation samples from the east excavation sidewall at the Block 38 West Property confirmed the lateral limits of hazardous substances to the west. A soil sample, N/A5-NSW, collected from the north sidewall of the construction excavation detected cPAHs at a concentration exceeding screening levels at an elevation of 28 feet NAVD88 and less than screening levels at an elevation of 26 feet NAVD88. Boring FB-21 was advanced in February 2022 approximately 8 feet to the north of soil sample N/A5-NSW to evaluate soil conditions in the Mercer Street right-of-way. cPAHs were detected at a concentration exceeding screening levels in the soil sample collected from FB-21 at an elevation of 28 feet NAVD88 and less than screening levels at an elevation of 26 feet NAVD88. Soil samples collected from the east sidewall confirmed that ORO, DRO + ORO, naphthalenes, and/or cPAHs remain at concentrations exceeding applicable screening levels in the wedge of soil that remains between the Alley and the Block 38 East Property.



Potential impacts from the Alley to groundwater will be further evaluated under the RI for the Block 38 West Site.

#### **4.5.2 Block 38 West Property**

Based on the results of subsurface investigations and the independent interim action completed to date by Farallon, the following historical operations and/or features were confirmed as sources of soil and/or groundwater contamination at the Block 38 West Property: historical placement of impacted fill soil; impacted fill soil located within wood debris associated with the former lumber mill operations on Block 38; former timber pilings associated with historical buildings; oil encountered in a sanitary sewer line at the southeastern portion of the Block 38 West Property (efforts to evaluate the sanitary sewer line indicated no specific point of release or former feature to which the sanitary sewer line was connected); a coal fill layer ranging in thickness from 4 to 6 inches encountered across the east-central and northern portions of the Block 38 West Property at approximate elevation 20 feet NAVD88; and localized impacts associated with former bunker fuel oil USTs encountered in the northwestern portion of the Block 38 West Property. The cPAH impacts in soil detected between elevations 25 and 15 feet NAVD88 adjacent to UST01 and UST02 were similarly observed over the majority of the northern portion of the Block 38 West Property and are associated with fill material. Accordingly, Farallon does not attribute cPAH concentrations detected in soil adjacent to UST01 to be solely related to the release of bunker fuel oil.

Farallon observed that the fill soil layer varied in thickness from 5 to 10 feet, with a coal fill layer observed at shallow depths during the mass excavation and in the east-central mass excavation sidewall. Beneath the fill soil layer, the wood debris layer varied in thickness from 10 to 20 feet, thickest along the north and northeastern Block 38 West Property boundaries, and is attributed to former lumber mill operations and lumber storage on Block 38 and former timber pilings associated with historical buildings. Accordingly, silt and underlying silty sand could potentially contain hazardous substances associated with fill and wood debris (Farallon 2018).

#### **4.5.3 Rosen Property Site**

Based on the results of subsurface investigations completed to date and the independent interim action, the following historical operations and/or features were confirmed as sources of soil and/or groundwater contamination at Lots 1 through 5 of the Block 38 East Property: historical placement of impacted fill soil; wood debris associated with the former lumber mill operations



on Block 38; USTs associated with the former gasoline service station; and the fuel yard associated with coal storage.

Releases of petroleum hydrocarbons, metals (lead and cadmium), and PAHs, including naphthalenes and cPAHs, were confirmed on Lots 1 through 5 at the Block 38 East Property. An impacted fill layer consisting of sand, silt, wood chips, and coal fragments was observed from approximate elevation of 25 to 21 feet NAVD88 and a wood debris layer was encountered at elevations ranging from 21 to 14 feet NAVD88 across Lots 1 through 5 and may be attributed to historical fill operations at this city block along the original southern shoreline of Lake Union. ORO, ORO + DRO, naphthalenes, cPAHs, and/or metals (lead and cadmium) were detected at concentrations exceeding screening levels in the west sidewall of the excavation on Lots 1 through 5 from elevations 23 to 19 feet NAVD88. The alley interim action left a wedge of soil (approximately 1 to 2 feet wide), due to existing utility infrastructure, with ORO, DRO + ORO, naphthalenes, and/or cPAHs detected at concentrations exceeding applicable screening levels from elevation 25 to 17.5 feet NAVD 88 between the alley and the Block 38 East Property.

A release from a heating oil UST associated with the Rosen Building on Lot 6 of the Block 38 East Property was confirmed during the permanent decommissioning and removal of the UST in 1994 (GeoEngineers 1999). Available information indicates that residual DRO and ORO were detected in soil samples collected north of the former heating oil UST excavation area, which exceeded MTCA cleanup levels at that time but do not exceed current MTCA Method A cleanup levels and reportedly were not detected in groundwater (GeoEngineers 1999). Based on the information available, it is not clear whether the monitoring well was down-gradient of the UST excavation area.

DRO and ORO were detected at relatively low concentrations (72 and 470 mg/kg, respectively) in a soil sample collected at an elevation of 20 feet NAVD88 from boring FB-11 advanced west of the former heating oil UST in the alley; the soil with those detections was removed as part of the alley interim action excavation.

Potential impacts from the Block 38 East Property to groundwater will be further evaluated under the RI for the Block 38 West Site.



## **5.0 INTERIM ACTION**

Investigations conducted at the Alley have identified hazardous substances in soil at concentrations exceeding applicable screening levels. The interim action reduced the threat to human health and the environment by removal of impacted soil from within the Alley in conjunction with the redevelopment of the Block 38 West Property. Components of the interim action included excavation of impacted soil to eliminate source material within the Alley in order to place structural backfill to support the new concrete road surface and access utilities.

The interim action has been conducted to meet the requirements of MTCA as defined in WAC 173-340-430. The scope of work for the interim action was developed in accordance with Ecology requirements and guidance, including MTCA, and is set forth in the Ecology-approved IAWP. The interim action did not foreclose reasonable alternatives for the final cleanup action at the Block 38 West Site based upon known conditions at the Block 38 West Site.

Alley improvements were constructed in conjunction with the redevelopment of the Block 38 West Property. Work on the improvements began in February 2021, and the construction excavation was completed in July 2021 with the remaining improvements completed by March 2022. The purpose of the improvements was to create a through-alley that can be accessed by Mercer Street from the north and Republican Street from the south to service commercial buildings on Block 38. Construction at the Alley required excavation across the Alley to approximate elevations of 25 to 18 feet NAVD88 from north to south. All soil removed as part of this element of the construction process was documented and properly disposed of as described below and in accordance with applicable laws and regulations.

### **5.1 INTERIM ACTION OBJECTIVE**

The objective of the interim action was to reduce the threat to human health and the environment via removal of fill material containing hazardous substances from the Alley while it was accessible during construction activities and Alley improvements. Impacted soil was transported off the Alley for disposal at permitted treatment, storage, and disposal facilities.

### **5.2 EXCAVATION OBSERVATION AND SOIL SAMPLING**

Prior to initiating construction excavation activities, the Alley was divided into a 30-foot (north to south) by 20-foot (east to west) grid system to characterize and estimate volumes of



contaminated soil and to guide the collection of soil performance samples throughout the excavation activities. Each excavation cell was assigned alphanumeric identifier row A5 and columns lettered A to N, which correspond to soil samples collected during the excavation. The western boundary of the Alley was supported by the shoring system for the Block 38 West Property. The eastern boundary of the northern half of the Alley abuts the shoring system for the Interurban Exchange 2 Building and associated gas and fiber optic lines. The eastern boundary on the southern half of the Alley abuts the shoring system for the Rosen Building.

Based on previous investigations, soil containing detectable concentrations of hazardous substances extended to an approximate elevation of 17.5 feet NAVD88 at the Alley (Figure 12). The excavation activities within the Alley extended to an elevation ranging from approximately 25 to 16 feet NAVD88 (north to south). The gas and fiber optic lines required a minimum 5-foot offset from the existing Interurban Exchange 2 Building to the west, and required that the base of the fiber optic line not be undermined. The top of the fiber optic line was at an elevation of approximately 28 feet NAVD88 at the north end of the alley and at an elevation of approximately 19 feet NAVD88 in the central portion of the Alley. The footing for the Rosen Building and adjacent gas, fiber optic, and sewer lines in the Alley were exposed as part of the excavation. The excavation in this area required exposing utilities to protect, connect to, and/or modify structural improvements to subgrade soil for construction of a ramp from the Alley to Republican Street.

Soil encountered with detectable concentrations of hazardous substances (i.e., whether exceeding or less than screening levels) were managed and disposed of off-property as a nonhazardous waste at a permitted landfill.

Performance soil samples were collected by Farallon at the Alley during previous investigations and during the interim action. Performance soil sampling points were used as confirmation soil sampling points where analytical results for performance soil samples confirmed that screening levels were attained prior to or at the final limits of the excavation.

Construction excavation activities started in March 2021 and were completed in July 2021. Excavation of soil with detectable concentrations of hazardous substances removed during construction excavation associated with utility connections and resurfacing of the Alley required special handling and disposal measures beyond those used for handling and disposing of clean soil. Soil with detectable concentrations of hazardous substances was excavated, segregated, stored temporarily, and disposed of at a licensed facility in accordance with Washington State



Solid Waste Management Laws and Regulations (RCW 70.95 and WAC 173-351 and 173-304) and the *Guidance for Remediation of Petroleum Contaminated Sites* revised June 2016 (Ecology 2011) (Ecology Guidance).

A summary of the performance soil sample analytical results and the approximate areas of soil containing concentrations of hazardous substances above detection limits are provided on Figures 4 through 10. A summary of confirmation soil sample locations, results, and elevations are provided on Figures 15 through 24. A summary of soil sample analytical results for applicable hazardous substances are provided in Tables 1 through 3. Farallon conducted a Level I Compliance Screening on all the analytical data and a data validation report was prepared in accordance with the QA/QC criteria as recommended in the methods identified in the National Functional Guidelines for Organic and/or Inorganic Methods Data Review (EPA 2017a, 2017b) (Appendix D).

### **5.3 PERFORMANCE MONITORING**

Performance monitoring consisted of collecting soil samples to assist with establishing the lateral and vertical extent of contaminated soil and to classify the soil for segregation and disposal.

#### **5.3.1 Soil Performance Monitoring**

Performance monitoring consisted of collecting soil samples to assist with establishing the lateral and vertical extent of soil with hazardous substances detected at concentrations exceeding screening levels and to classify the soil for segregation and disposal. Performance soil sampling points were used as confirmation soil sampling points where analytical results for performance soil samples confirmed that screening levels were attained vertically and/or laterally prior to or at the final limits of the excavation associated with utility and roadway improvements. A total of 74 performance soil samples were collected by Farallon and others at the Alley during the previous investigations and interim action.

Laboratory analytical results for the performance soil samples are summarized on Figures 4 through 10 and in Tables 1 through 3. Performance samples collected during the Alley excavation are coded with the excavation grid cell in which they were collected. Laboratory analytical reports are provided in Appendix B and a data validation report is provided in Appendix D.



## **5.4 CONFIRMATIONAL MONITORING**

A total of 47 confirmation soil samples were collected from borings and the final limits of the excavation for contaminated soil encountered during the Alley excavation associated with utility and roadway improvements. Performance soil samples were used as confirmation soil samples when analytical results confirmed that screening levels had been attained at the limits of the excavation areas. Additional confirmation soil sampling consisted of collecting soil samples in-situ from the base and sides of the final limits of the completed excavation areas.

Laboratory analytical results for the confirmation soil samples are summarized in Tables 1 through 3. Figures 15 through 24 depict the location and elevation, and results for confirmation soil samples of hazardous substances identified for the interim action. Laboratory analytical reports are provided in Appendix B.

## **5.5 SOIL TRANSPORT AND DISPOSAL**

The transport and disposal of soil encountered with detectable concentrations of hazardous substances (i.e., whether exceeding or less than screening levels) to various permitted landfills were documented by using soil transport and disposal tracking forms.

The analytical results from performance soil sampling were used to establish soil waste profiles with regional permitted landfills. Waste profiles were established with the Waste Management Columbia Ridge Landfill in Arlington, Oregon and Republic Services in Roosevelt, Washington.

Approximately 2,382 tons of soil containing detectable concentrations of hazardous substances and wood and organic debris was removed from the Alley through June 23, 2021 (Appendix E) and disposed of at the following facilities:

- Approximately 14 tons of soil with detectable concentrations of hazardous substances was transported off the Alley for permanent disposal at the Waste Management Columbia Ridge Landfill facility.
- Approximately 2,368 tons of soil with hazardous substances detected at concentrations exceeding screening levels and/or wood or organic debris was transported off the Alley for permanent disposal at the Republic Services Roosevelt Landfill.





A summary of the weekly tonnages and receiving disposal facilities for soil generated during the interim action and mass excavation, including both Impacted Soil and Contaminated Soil, is provided in Appendix E.

## **5.6 ALLEY RESTORATION**

The final Alley improvements were completed in March 2022 with the placement of a concrete surface across the roadway.



## 6.0 INTERIM ACTION RESULTS

Results from the interim action are presented below, including results from the performance and confirmation sampling and the soil transport and disposal activities.

### 6.1 CONFIRMATION SOIL SAMPLING

The construction excavation extended across the entire area of the Alley (Figure 22). Soil encountered during excavation activities with concentrations of hazardous substances exceeding the screening levels was removed to the maximum extent practicable and appropriately managed during utility and structural improvements at the Alley. Some soil containing hazardous substances remained in-place following completion of the interim action, as the construction excavation extents were limited due to structural considerations associated with adjacent buildings and existing utilities. The final limits of soil with hazardous substances detected at concentrations exceeding screening levels and confirmation soil sample locations are shown on Figures 15 through 24. The final excavation depth of the Alley is shown on post-excavation Cross-Section A-A' oriented north-to-south (Figure 22).

The final excavation limits for soil with hazardous substances detected at concentrations exceeding screening levels at the Alley were generally located laterally within a rectangular-shaped area with maximum dimensions of approximately 425 feet north-to-south by 15 feet east-to-west. The majority of hazardous substances detected at concentrations exceeding screening levels were encountered from approximate elevations 28 to 17.5 feet NAVD88 within the fill soil and/or organic debris material in the Alley (Figures 12 to 14). Soil with detectable concentrations of hazardous substances extended to an approximate elevation of 17.5 feet NAVD88 for the northern, southern, and central portions of the Alley. The construction excavation at the Alley was generally advanced to a final elevation of approximately 25 to 17.5 feet NAVD88 (approximately 5 feet bgs) from north to south (Figures 22 through 24).

Confirmation soil samples collected at the construction excavation limits at the Alley demonstrate compliance with the soil screening levels established for the interim action (Figures 15 through 24) in most areas. Hazardous substances were detected at concentrations exceeding screening levels in soil at the final limits of the construction excavation north sidewall (proximate to Mercer Street right-of-way), base of excavation soil sampling grids E/A5 and I/A5, and central portion of the east sidewall of sampling grids E/A5, G/A5, I/A5, J/A5, and L/A5 at



elevations ranging from 25 to 17.5 feet NAVD88 within the fill soil layer identified at the Alley (Figure 22).

GRO was detected at a concentration of 2,100 mg/kg, which exceeds the screening level, in a soil performance sample collected from utility pothole PH-12 at an elevation of 21 feet NAVD88 in the Alley (Figure 4; Table 1). The lateral and vertical extent of GRO detected at concentrations exceeding screening levels in soil adjacent to PH-12 have been defined by soil samples collected from borings B-6, FB-12, and PH-13 and Alley excavation soil samples E/A5-ESW, E/A5-B, and F/A5-B; soil in this area was excavated and removed as part of the interim action. GRO was reported non-detect at the laboratory PQL in the remaining soil performance and confirmation soil samples collected in the Alley during the interim action (Figure 15; Table 1).

Benzene was reported non-detect at the laboratory PQL in the remaining soil performance and confirmation soil samples collected in the Alley during the interim action (Figure 16; Table 1).

DRO + ORO were detected at concentrations exceeding the screening level in soil samples collected from utility pothole PH-12, boring FB-13, and Alley interim action confirmation samples E/A5-B, G/A5-ESW, H/A5-ESW, and I/A5-ESW at elevations ranging from 22.5 to 17.5 feet NAVD88 in the central portion of the Alley (Figures 6 through 8 and 23; Table 1). The lateral extent of DRO + ORO impacts in soil adjacent to PH-12 and in the central portion of the Alley has been defined (Figures 6 through 8 and 12). DRO + ORO impacts in the eastern sidewall of the central portion of the Alley extend laterally to the east of the construction excavation within a 1- to 2-foot wedge of soil that remains abutting the east-adjacent building due to utility obstructions (Figure 19; Table 1). The vertical limits of DRO + ORO impacts in the central portion of the Alley are defined by FB-12, FB-13, and FB-14 and Alley interim action confirmation samples H/A5-B and I/A5-B, at an elevation ranging from 17.5 to 15 feet NAVD88 (Figures 19 and 22). The impacts observed in the central portion of the Alley at elevations ranging from 22.5 to 17.5 feet NAVD88 are likely associated with the former coal fill layer and impacted fill soil within wood debris documented in the Alley at elevations ranging from 22 to 15 feet NAVD88 (Figures 17 through 19 and 22). The vertical limits at PH-12, E/A5B, and G/A5-B are estimated to be approximately 15 feet NAVD88 based on the subsurface investigations and Alley interim action completed (Figures 19 and 22). Potential impacts from residual DRO + ORO concentrations in shallow soil to groundwater quality in the Shallow



Water-Bearing Zone will be further assessed in the remedial investigation for the Block 38 West Site.

Total naphthalenes were detected at concentrations exceeding screening levels in soil samples collected from boring FB-13 and excavation performance samples G/A5-ESW, H/A5-ESW, and I/A5-B at elevations ranging from 22.5 to 17.5 feet NAVD88 in the central portion of the Alley (Figure 9; Table 2). Total naphthalenes detected at concentrations exceeding the screening levels in soil were excavated and removed from within the limits of the Alley construction excavation. The vertical limits at I/A5-B are estimated to be approximately 17.5 to 15 feet NAVD88 based on the subsurface investigations and completed Alley interim action (Figures 20 and 22). Total naphthalenes impacts in the eastern sidewall of the central portion of the Alley extend laterally to the east of the construction excavation within a 1- to 2-foot wedge of soil that remains abutting the east-adjacent building due to utility obstructions (Figure 20; Table 1). Total naphthalenes were either detected at concentrations less than the screening level or reported non-detect at the laboratory PQL in the remaining soil performance and confirmation soil samples collected in the Alley and the western sidewall of the Block 38 East Property (Figure 20; Table 2). Potential impacts from residual total naphthalenes concentrations in shallow soil to groundwater quality in the Shallow Water-Bearing Zone will be further assessed in the remedial investigation for the Block 38 West Site.

cPAHs were detected at concentrations exceeding the screening level in performance soil samples collected throughout the Alley from elevations ranging from 28 to 17.5 feet NAVD88 (Figure 10; Table 2). cPAHs detected at concentrations exceeding the screening levels in soil were excavated and removed from within the northern portion of the Alley at elevations ranging from 28 to 22 feet NAVD88 and from the southern portion of the Alley at elevations ranging from 22.5 to 17.5 feet NAVD88 (Figure 22). The vertical extent of cPAHs was defined in the Alley by borings FB-10 through FB-16 and FB-21. The lateral extent of cPAHs east of the Block 38 West Property were defined to the south by Alley interim action soil confirmation sample A/A5-SSW and to the north by boring FB-21. cPAHs impacts in the eastern sidewall of the central portion of the Alley extend laterally to the east of the construction excavation within a 1- to 2-foot wedge of soil that remains abutting the east-adjacent building due to utility obstructions (Figure 21). The eastern extent of cPAHs was defined by western sidewall samples of the Block 38 East Property mass excavation, EX-19, EX-20, and EX-38 through EX-41 (Figure 21; Table 2).



Cadmium and lead were detected at concentrations of 2.4 and 1,900 mg/kg, respectively, which exceed the screening levels, in the performance soil samples collected at test pit TP-10-4 at an elevation of 20 feet NAVD88 (Figure 3; Table 3). Lead was detected at concentrations ranging from 260 to 21,000 mg/kg, which exceed the screening level, in eastern excavation sidewall performance soil samples in mass excavation soil sampling grids G/A5, H/A5, I/A5, and J/A5 at elevations ranging from 22.5 to 20 feet NAVD88 (Table 3). The vertical and lateral limits of cadmium and lead impacts in soil have been defined by borings FB-12 through FB-15 (Table 3). The eastern extent of cadmium and lead impacts in soil was defined by western sidewall samples of the Block 38 East Property mass excavation EX-19, EX-20, EX-39 through EX-41, and P-4, W-3, and W-4 (Figure 3; Table 2). Cadmium and/or lead were either detected at concentrations less than the screening level or reported non-detect at the laboratory PQL in the remaining soil performance and confirmation soil samples collected in the Alley during the interim action (Table 1).

The interim action conducted in the Alley in conjunction with the redevelopment of the Block 38 West Property has removed fill soil and organic and wood debris with hazardous substances detected at concentrations exceeding screening levels to the extent practicable from within the limits of the Alley (Figures 15 through 24). DRO + ORO, naphthalenes, cPAHs, cadmium, and/or lead were detected in soil at concentrations exceeding screening levels at the final limits of the mass excavation on the eastern and northern portions of the Alley at elevations ranging from 28 to 17.5 feet NAVD88 within the soil fill layer identified at Block 38.

## **6.2 SOIL TRANSPORT AND DISPOSAL**

A total of approximately 2,382 tons of soil containing detectable concentrations of hazardous substances and wood and organic debris was removed from the Alley between March 2021 and July 2021 and transported to various permitted facilities described in Section 5.5 (Appendix E).



## 7.0 CONCLUSIONS

Based on the results of subsurface investigations and interim actions completed to date, the following historical features were confirmed as sources of soil contamination at the Alley: historical placement of impacted fill soil; wood debris associated with the former lumber mill operations on Block 38; a coal fill layer encountered at elevations ranging from 25 to 15 feet NAVD88; localized impacts associated with former stormwater drain catch basins; and localized impacts associated with former railroad trestle and supporting structures.

This IA Report documents the interim action conducted at the Alley to remove soil containing hazardous substances detected at concentrations exceeding screening levels to the extent practicable during Alley improvements. The interim action was conducted in accordance with the cleanup requirements of MTCA as established in WAC 173-340 and the IAWP approved by Ecology.

The laboratory analytical results for confirmation soil samples collected during the interim action confirmed that all soil with concentrations of hazardous substances encountered within the limits of the construction excavation was removed from the Alley for off-property disposal at a permitted disposal facility. Results of confirmation soil sampling at the excavation extents indicate that DRO + ORO, naphthalenes, cPAHs, cadmium, and/or lead remain in a 1-to 2-foot wedge of soil in the east-central portion of the Alley abutting the Interurban Exchange 2 Building at elevations ranging from 22.5 to 17.5 feet NAVD88; cPAHs remain at an elevation of 28 to 27 feet NAVD88 to the north of the Alley in the Mercer Street right-of-way; and isolated areas at the base of the construction excavation with DRO + ORO and total naphthalenes remain in soil from elevations 17.5 to 16 feet NAVD88, within the soil fill layer identified at the Alley. Approximately 2,382 tons of soil containing detectable concentrations of hazardous substances and wood and organic debris was removed from the Alley.

Potential impacts to groundwater quality in the Shallow Water-Bearing Zone from residual concentrations of COPCs in shallow soil will be further assessed during the remedial investigation for the Block 38 West Site. Quarterly groundwater monitoring began in May 2023 in accordance with the Ecology-approved RI Work Plan.



## 8.0 BIBLIOGRAPHY

- City of Seattle. 2012. *Final Environmental Impact Statement, South Lake Union Height and Density Alternatives*. Prepared by City of Seattle Department of Planning and Development. April.
- Farallon Consulting, L.L.C. (Farallon). 2018. *Subsurface Investigation Report and Environmental Media Management Plan, Block 38 West Property, 500 through 536 Westlake Avenue North, Seattle, Washington*. Prepared for City Investors IX LLC. December 28.
- . 2019a. *Interim Action Work Plan (IAWP), Block 38 West Property, 500 through 536 Westlake Avenue North, Seattle, Washington*. Prepared for City Investors IW LLC. November 8.
- . 2019b. *Phase I Environmental Site Assessment, South Lake Union Block 38 West Property, 500 through 536 Westlake Avenue North, Seattle, Washington*. Prepared for City Investors IW LLC. December 13.
- . 2020a. Technical Memorandum Regarding Supplemental Subsurface Investigation and Foundation Elements, Block 38 West Property, 500 through 536 Westlake Avenue North, Seattle, Washington. From Suzy Stumpf and Clifford T. Schmitt. To Tena Seeds, Ecology. June 15.
- . 2020b. Agency Review Draft Remedial Investigation Work Plan, Block 38 West Property, 500 through 536 Westlake Avenue North, Seattle, Washington. Prepared for City Investors IX LLC. July 20.
- . 2021. *Interim Action Work Plan, Alley Area of Block 38 West Site, Between Republican Street and Mercer Street, Seattle, Washington*. Prepared for City Investors IX LLC. February 3.
- . 2023. *Remedial Investigation Work Plan, Block 38 West Site, 500 through 536 Westlake Avenue North, Seattle, Washington*. Prepared for City Investors IX LLC. April 26 .



- Galster, Richard W., and William T. Laprade. 1991. "Geology of Seattle, Washington, United States of America." *Bulletin of the Association of Engineering Geologists* 28 (No. 3): 235-302.
- GeoEngineers, Inc. (GeoEngineers). 1999. *Phase I Environmental Site Assessment and Soil and Groundwater Sampling and Testing, UW-IFAMS Rosen Property, 960-964 Republican, Seattle, Washington, Volume I of II*. Prepared for Schnitzer NW. April 22.
- . 2008. *Cleanup Action Report, Interurban Exchange 2, 535 Terry Avenue North, Seattle, Washington*. Prepared for Lake Union IV, LLC. October 28.
- . 2018. *Geotechnical Engineering Services, Block 38, Seattle, Washington*. Prepared for City Investors IX, LLC. October 17.
- Hart Crowser, Inc. 1999. Letter Regarding Preliminary Environmental Assessment Update, Westlake Avenue Property (428, 500, 510, and 520 Westlake Avenue North), Seattle, Washington. From Rob Roberts and Julie K.W. Wukelic. To City Investors VI LLC c/o Joe Delaney, Foster Pepper & Shefelman. April 5.
- U.S. Environmental Protection Agency (EPA). 2017. National Functional Guidelines for Inorganic Superfund Methods Data Review. OLEM 9355.0-135, EPA-540-R-2017-001. January.
- . 2017a. National Functional Guidelines for Organic Superfund Methods Data Review. OLEM 9355.0-136, EPA-540-R-2017-002. January.
- U.S. Geological Survey. 1909. *Washington Seattle Special Quadrangle Map*. May.
- Washington State Department of Ecology (Ecology). 2009. Letter Regarding No Further Action at the 960 Republican St. Property Associated with a Site. From Joseph M. Hickey. To Janet Donelson, Schnitzer West, LLC. May 28.
- . 2011. *Guidance for Remediation of Petroleum Contaminated Sites*. Publication No. 10-09-057. Revised June 2016. September.





## 9.0 LIMITATIONS

### 9.1 GENERAL LIMITATIONS

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

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

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

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



## 9.2 LIMITATION ON RELIANCE BY THIRD PARTIES

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

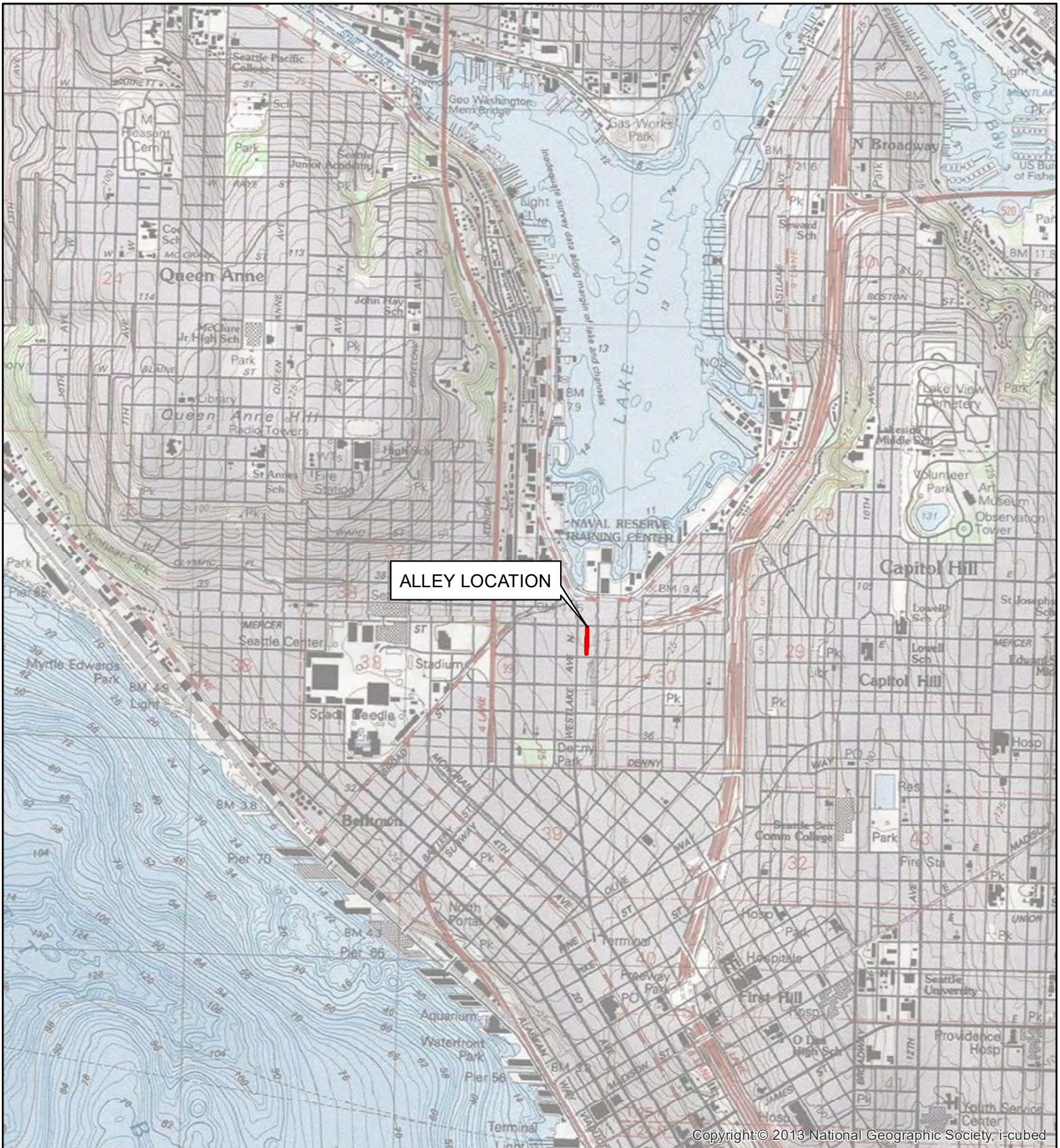
This is not a general grant of reliance. No one other than City Investors IX LLC may rely on this report unless Farallon agrees in advance to such reliance in writing. Any unauthorized use, interpretation, or reliance on this report/assessment is at the sole risk of that party and Farallon will have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

## **FIGURES**

**INTERIM ACTION REPORT**  
**Alley Area of Block 38 West Site**  
**Between Republican Street and Mercer Street**  
**Seattle, Washington**

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



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## FIGURE 1

### VICINITY MAP BLOCK 38 ALLEY SEATTLE, WASHINGTON

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Drawn By: ijones

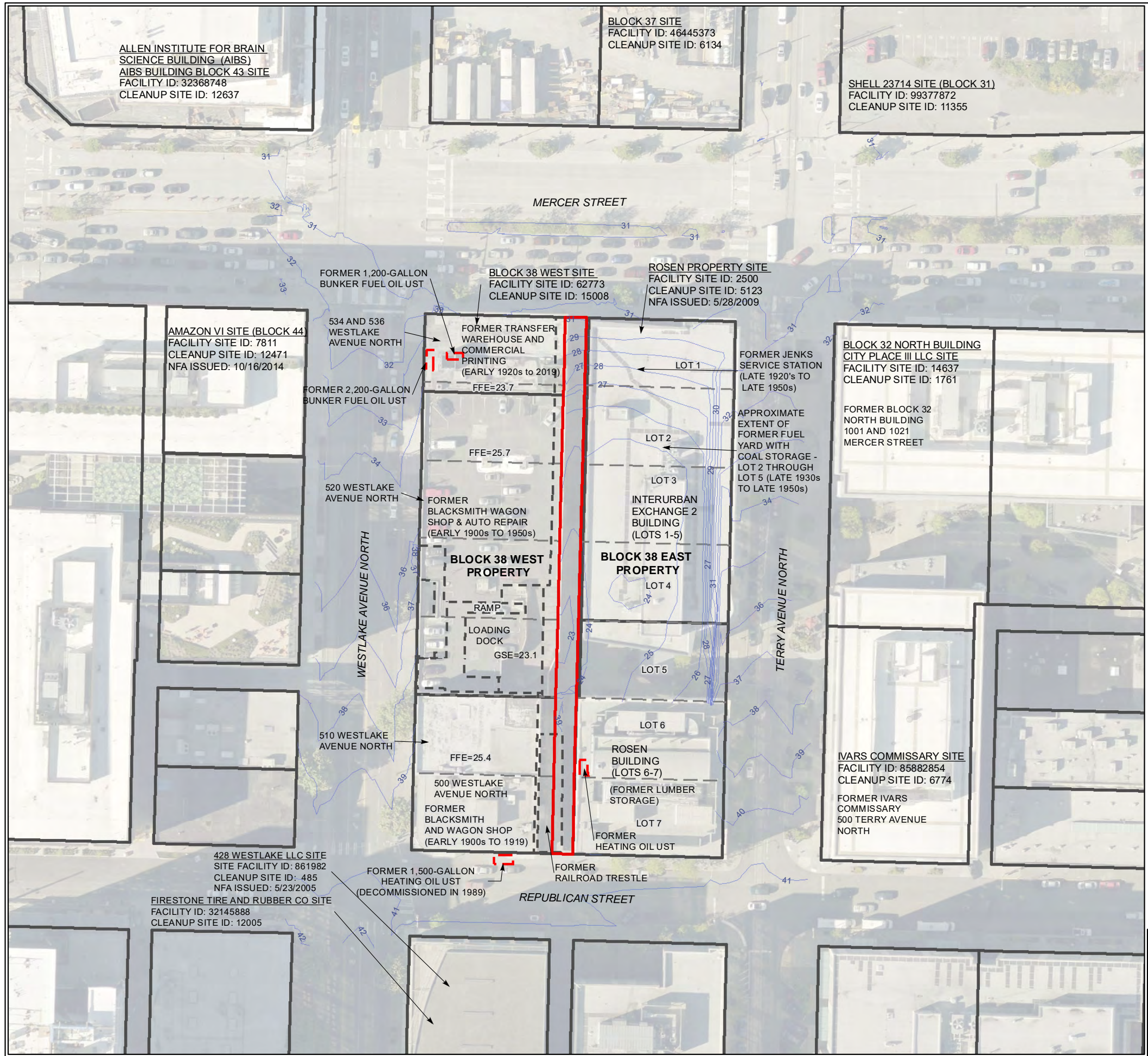
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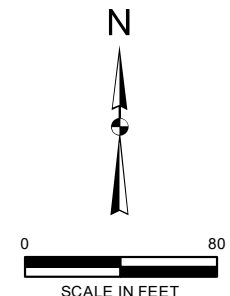


**LEGEND**

- - - BUILDING FEATURES (BUILDINGS ON BLOCK 38 WEST PROPERTY DEMOLISHED IN 2019)
- - - LOT LINE
- 30- GROUND SURFACE ELEVATION CONTOUR
- ALLEY BOUNDARY
- KING COUNTY PARCEL BOUNDARY

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

FFE = APPROXIMATE FINISH FLOOR ELEVATIONS OF GROUND FLOOR OF FORMER BUILDING  
 GSE = APPROXIMATE GROUND SURFACE ELEVATION OF FORMER LOADING DOCK AREA  
 UST = UNDERGROUND STORAGE TANK



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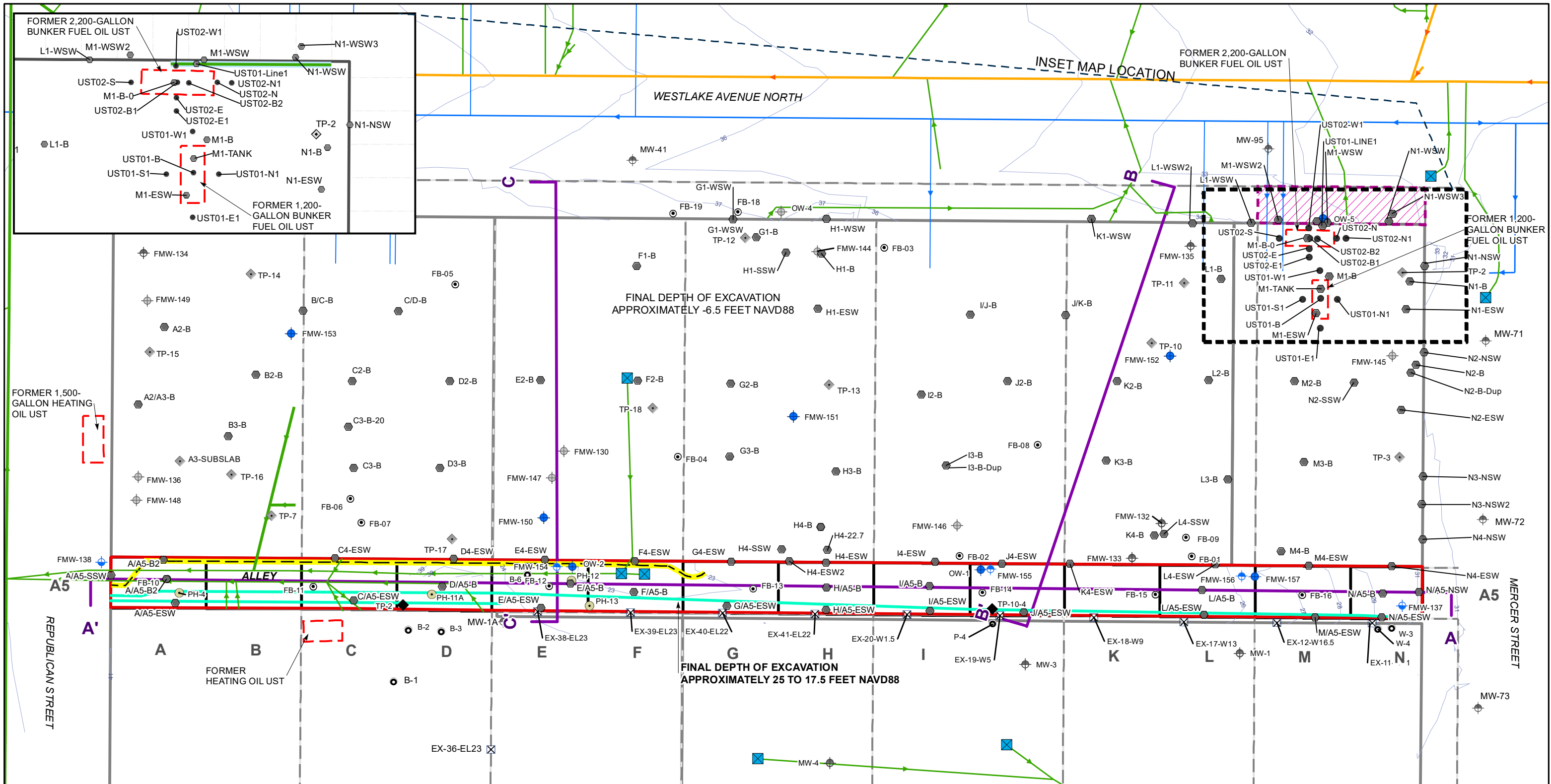
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**FIGURE 2**  
 SITE PLAN WITH NEARBY HISTORICAL FEATURES  
 BLOCK 38 ALLEY  
 SEATTLE, WASHINGTON  
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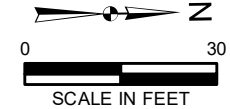
**LEGEND**

- SHALLOW WATER-BEARING ZONE MONITORING WELL
- DECOMMISSIONED SHALLOW WATER-BEARING ZONE MONITORING WELL
- INTERMEDIATE WATER-BEARING ZONE MONITORING WELL / OBSERVATION WELL
- DECOMMISSIONED INTERMEDIATE WATER-BEARING ZONE MONITORING WELL
- DEEP OUTWASH AQUIFER WELL
- BORING (FARALLON)
- BORING (GEOENGINEERS)
- EXCAVATION BORING (FARALLON)
- TEST PIT (GEOENGINEERS)
- POTHOLE (FARALLON)
- UST SAMPLE LOCATION (FARALLON)
- EXCAVATION SAMPLE LOCATION (FARALLON)
- TEST PIT (FARALLON)

- 20' x 30' GRID
- FORMER UNDERGROUND STORAGE TANKS (USTs)
- MECHANICAL EQUIPMENT AREA DECOMMISSIONED AND FILLED WITH CDF
- ALLEY BOUNDARY
- KING COUNTY PARCELS
- LOT LINE
- LINE OF CROSS SECTION

- CATCH BASIN
- SANITARY SEWER MAIN
- WATER LINE
- COMBINED MAIN
- FIBER OPTIC LINE
- GAS LINE

CDF = CONTROLLED DENSITY FILL  
 ELEVATION DATA PRESENTED IN FEET ABOVE MSL  
 IN THE NORTH AMERICAN VERTICAL DATUM OF 1988  
 ELEVATION SOURCE: BUSH, ROED, & HITCHINGS, INC. (2014)



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

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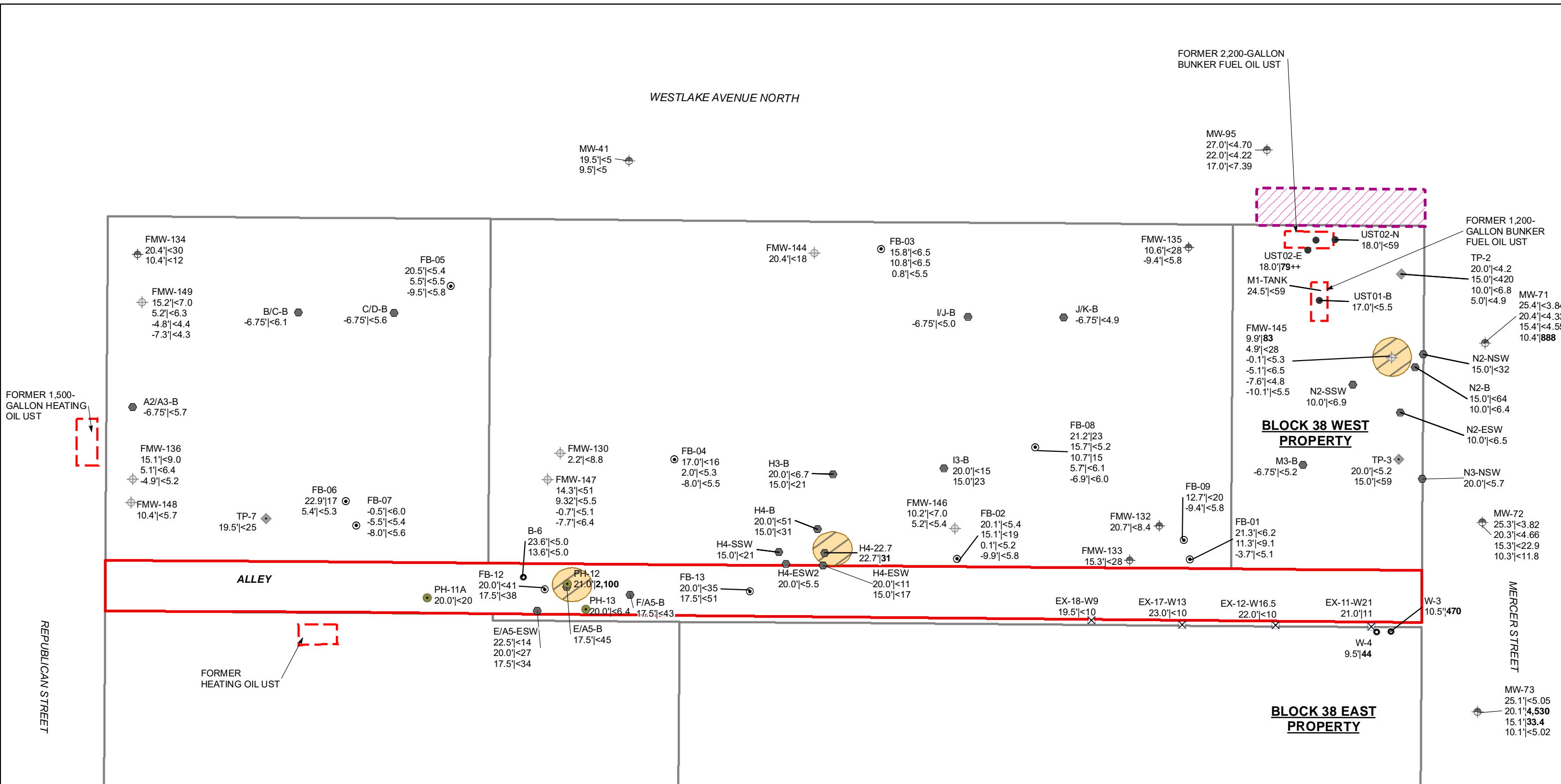
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**FIGURE 3**

**SITE PLAN WITH  
SAMPLE LOCATIONS AND CROSS SECTION LINES  
BLOCK 38 ALLEY  
SEATTLE, WASHINGTON**

FARALLON PN: 397-019



- LEGEND**
- ⊕ DECOMMISSIONED SHALLOW WATER-BEARING ZONE MONITORING WELL
  - ⊕ DECOMMISSIONED INTERMEDIATE WATER-BEARING ZONE MONITORING WELL
  - ⊙ BORING (FARALLON)
  - BORING (GEOENGINEERS)
  - ⊗ EXCAVATION SAMPLE (GEOENGINEERS)
  - POT HOLE (FARALLON)
  - UST SAMPLE LOCATION (FARALLON)
  - EXCAVATION SAMPLE LOCATION (FARALLON)
  - ◆ TEST PIT (FARALLON)

- ESTIMATED EXTENT OF SOIL EXCEEDING THE SCREENING LEVEL THAT WAS EXCAVATED AND REMOVED
- MECHANICAL EQUIPMENT AREA DECOMMISSIONED AND FILLED WITH CDF
- ALLEY BOUNDARY
- FORMER UNDERGROUND STORAGE TANKS (USTs)
- KING COUNTY PARCEL BOUNDARY

**NOTES:**  
 FOR SOIL SAMPLES:  
 ELEVATION IN FEET NAVD88 | GRO  
 ANALYTICAL RESULTS IN MILLIGRAMS PER KILOGRAM (mg/kg)  
 INTERIOR DATA LOCATIONS FOR THE BLOCK 38 WEST PROPERTY ARE SHOWN BASED ON ECOLOGY COMMENTS ON THE ALLEY IAWP (FEBRUARY, 2021)  
**BOLD** = DENOTES CONCENTRATIONS THAT EXCEED THE SCREENING LEVEL (MTCA METHOD A CLEANUP LEVEL)  
 < = DENOTES ANALYTE NOT DETECTED AT OR EXCEEDING THE REPORTING LIMIT LISTED  
 ++ = FUEL PATTERN INDICATIVE OF HEAVY OIL; PRODUCT CONFIRMED AS BUNKER C FUEL OIL  
 CDF = CONTROLLED DENSITY FILL  
 GRO = TOTAL PETROLEUM HYDROCARBONS (TPH) AS GASOLINE-RANGE ORGANICS  
 MTCA = WASHINGTON STATE MODEL TOXICS CONTROL ACT CLEANUP REGULATION  
 NAVD88 = NORTH AMERICAN VERTICAL DATUM OF 1988

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**FIGURE 4**  
 SOIL ANALYTICAL RESULTS  
 FOR GRO  
 BLOCK 38 ALLEY  
 SEATTLE, WASHINGTON

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SCALE IN FEET  
 0 30

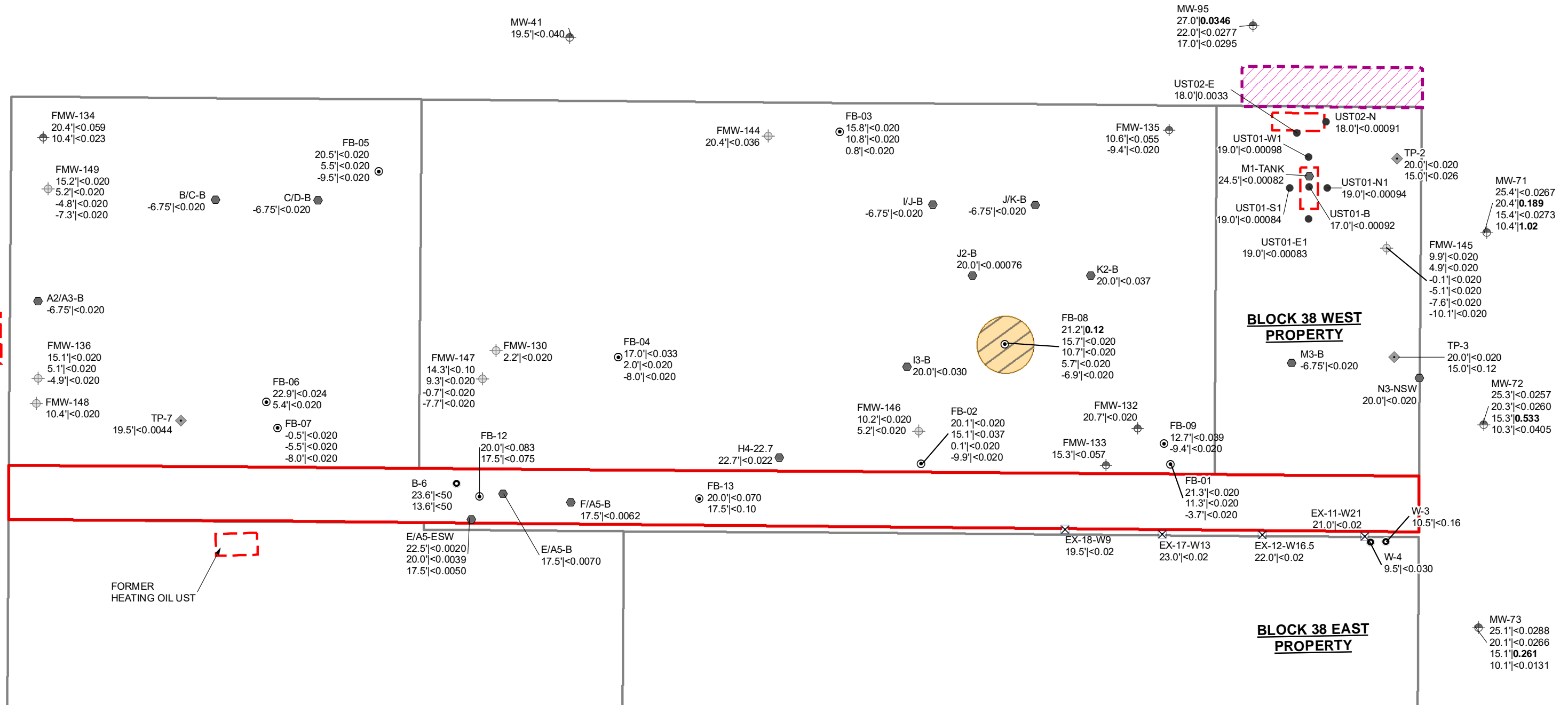
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- LEGEND**
- DECOMMISSIONED SHALLOW WATER-BEARING ZONE MONITORING WELL
  - DECOMMISSIONED INTERMEDIATE WATER-BEARING ZONE MONITORING WELL
  - BORING (FARALLON)
  - BORING (GEOENGINEERS)
  - EXCAVATION SAMPLE (GEOENGINEERS)
  - UST SAMPLE LOCATION (FARALLON)
  - EXCAVATION SAMPLE LOCATION (FARALLON)
  - TEST PIT (FARALLON)

- ESTIMATED EXTENT OF SOIL EXCEEDING THE SCREENING LEVEL THAT WAS EXCAVATED AND REMOVED
- MECHANICAL EQUIPMENT AREA DECOMMISSIONED AND FILLED WITH CDF
- ALLEY BOUNDARY
- FORMER UNDERGROUND STORAGE TANKS (USTs)
- KING COUNTY PARCEL BOUNDARY

**NOTES:**  
 FOR SOIL SAMPLES :  
 ELEVATION IN FEET NAVD88 | BENZENE ANALYTICAL RESULTS IN MILLIGRAMS PER KILOGRAM (mg/kg)  
 INTERIOR DATA LOCATIONS FOR THE BLOCK 38 WEST PROPERTY ARE SHOWN BASED ON ECOLOGY COMMENTS ON THE ALLEY IAWP (FEBRUARY, 2021)

**BOLD** = DENOTES CONCENTRATIONS THAT EXCEED THE SCREENING LEVEL (MTCA METHOD A CLEANUP LEVEL)  
 < = DENOTES ANALYTE NOT DETECTED AT OR EXCEEDING THE REPORTING LIMIT LISTED  
 CDF = CONTROLLED DENSITY FILL  
 MTCA = WASHINGTON STATE MODEL TOXICS CONTROL ACT CLEANUP REGULATION  
 NAVD88 = NORTH AMERICAN VERTICAL DATUM OF 1988

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SCALE IN FEET

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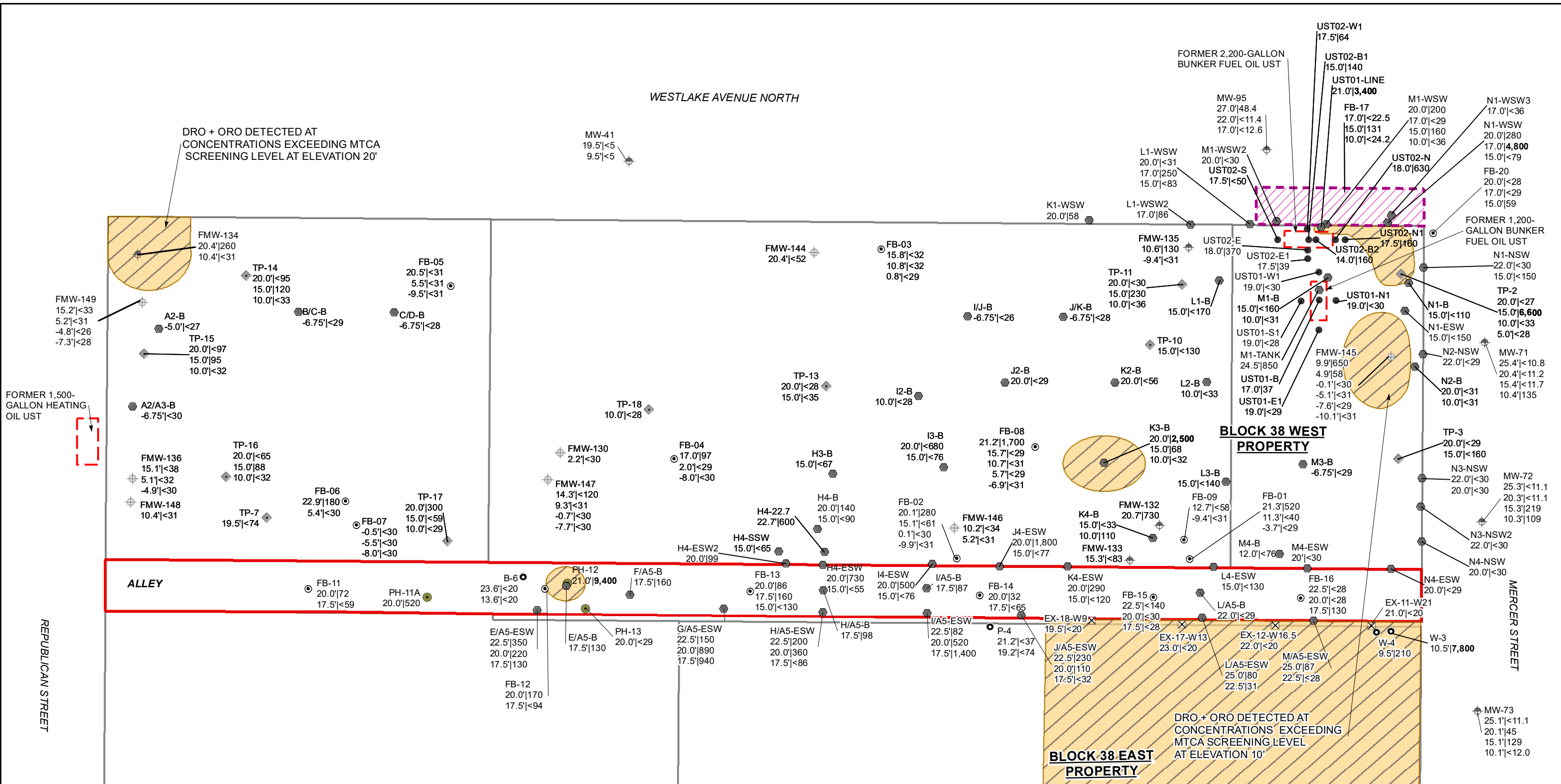
**FIGURE 5**  
 SOIL ANALYTICAL RESULTS FOR BENZENE  
 BLOCK 38 ALLEY  
 SEATTLE, WASHINGTON

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 Oregon Portland | Baker City  
 California Oakland | Irvine

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- LEGEND**
- ◆ DECOMMISSIONED SHALLOW WATER-BEARING ZONE MONITORING WELL
  - ◆ DECOMMISSIONED INTERMEDIATE WATER-BEARING ZONE MONITORING WELL
  - BORING (FARALLON)
  - BORING (GEOENGINEERS)
  - ⊗ EXCAVATION SAMPLE (GEOENGINEERS)
  - POTHOLE (FARALLON)
  - UST SAMPLE LOCATION (FARALLON)
  - EXCAVATION SAMPLE LOCATION (FARALLON)
  - ◆ TEST PIT (FARALLON)

- ESTIMATED EXTENT OF SOIL EXCEEDING THE SCREENING LEVEL THAT WAS EXCAVATED AND REMOVED
- MECHANICAL EQUIPMENT AREA DECOMMISSIONED AND FILLED WITH CDF
- ▭ ALLEY BOUNDARY
- ▭ FORMER UNDERGROUND STORAGE TANKS (USTs)
- ▭ KING COUNTY PARCEL BOUNDARY

**NOTES:**  
 FOR SOIL SAMPLES:  
 ELEVATION IN FEET NAVD88 | DRO  
 ANALYTICAL RESULTS IN MILLIGRAMS PER KILOGRAM (mg/kg)  
 INTERIOR DATA LOCATIONS FOR THE BLOCK 38 WEST PROPERTY ARE SHOWN BASED ON ECOLOGY COMMENTS ON THE ALLEY IAWP (FEBRUARY, 2021)

**BOLD** = DENOTES CONCENTRATIONS THAT EXCEED THE SCREENING LEVEL (MTCA METHOD A CLEANUP LEVEL)  
 < = DENOTES ANALYTE NOT DETECTED AT OR EXCEEDING THE REPORTING LIMIT LISTED

CDF = CONTROLLED DENSITY FILL  
 DRO = TOTAL PETROLEUM HYDROCARBONS (TPH) AS DIESEL-RANGE ORGANICS  
 MTCA = WASHINGTON STATE MODEL TOXICS CONTROL ACT CLEANUP REGULATION  
 NAVD88 = NORTH AMERICAN VERTICAL DATUM OF 1988

SCALE IN FEET

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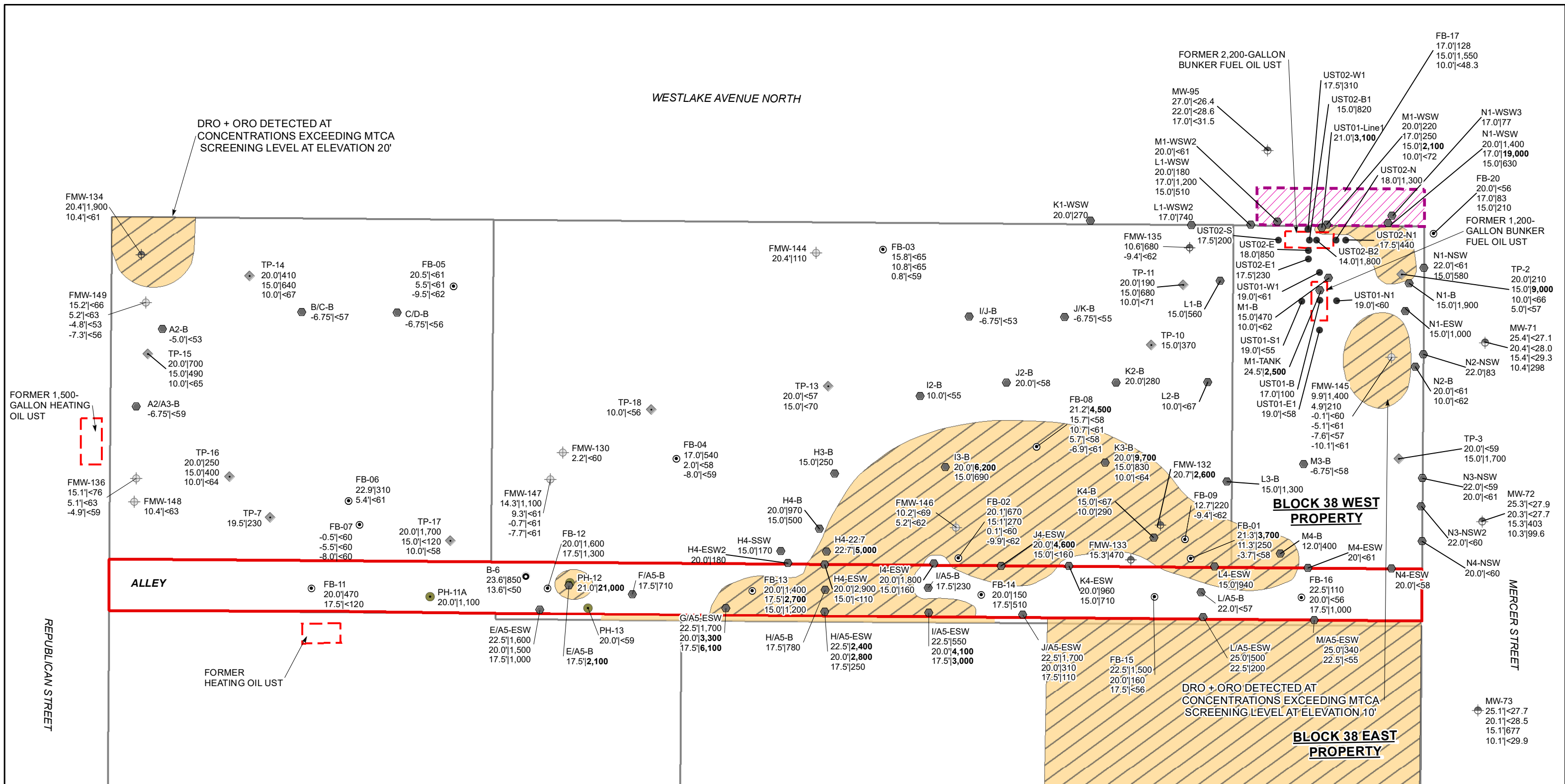
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**FIGURE 6**  
SOIL ANALYTICAL RESULTS  
FOR DRO  
BLOCK 38 ALLEY  
SEATTLE, WASHINGTON

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- LEGEND**
- ◆ DECOMMISSIONED SHALLOW WATER-BEARING ZONE MONITORING WELL
  - ◆ DECOMMISSIONED INTERMEDIATE WATER-BEARING ZONE MONITORING WELL
  - BORING (FARALLON)
  - BORING (GEOENGINEERS)
  - POTHOLE (FARALLON)
  - UST SAMPLE LOCATION (FARALLON)
  - EXCAVATION SAMPLE LOCATION (FARALLON)
  - ◆ TEST PIT (FARALLON)

- 🟡 ESTIMATED EXTENT OF SOIL EXCEEDING THE SCREENING LEVEL THAT WAS EXCAVATED AND REMOVED
- 🟠 ESTIMATED EXTENT OF SOIL EXCEEDING THE SCREENING LEVEL
- 🟪 MECHANICAL EQUIPMENT AREA DECOMMISSIONED AND FILLED WITH CDF
- 🔴 ALLEY BOUNDARY
- 🔵 FORMER UNDERGROUND STORAGE TANKS (USTs)
- 🟩 KING COUNTY PARCEL BOUNDARY

**NOTES:**  
 FOR SOIL SAMPLES:  
 ELEVATION IN FEET NAVD88 | ORO  
 ANALYTICAL RESULTS IN MILLIGRAMS PER KILOGRAM (mg/kg)  
 INTERIOR DATA LOCATIONS FOR THE BLOCK 38 WEST PROPERTY ARE SHOWN BASED ON  
 ECOLOGY COMMENTS ON THE ALLEY IAWP (FEBRUARY, 2021)

**BOLD** = DENOTES CONCENTRATIONS THAT EXCEED THE SCREENING LEVEL (MTCA METHOD A CLEANUP LEVEL)  
 < = DENOTES ANALYTE NOT DETECTED AT OR EXCEEDING THE REPORTING LIMIT LISTED  
 CDF = CONTROLLED DENSITY FILL  
 ORO = TOTAL PETROLEUM HYDROCARBONS (TPH) AS OIL-RANGE ORGANICS  
 MTCA = WASHINGTON STATE MODEL TOXICS CONTROL ACT CLEANUP REGULATION  
 NAVD88 = NORTH AMERICAN VERTICAL DATUM OF 1988

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0 30  
SCALE IN FEET

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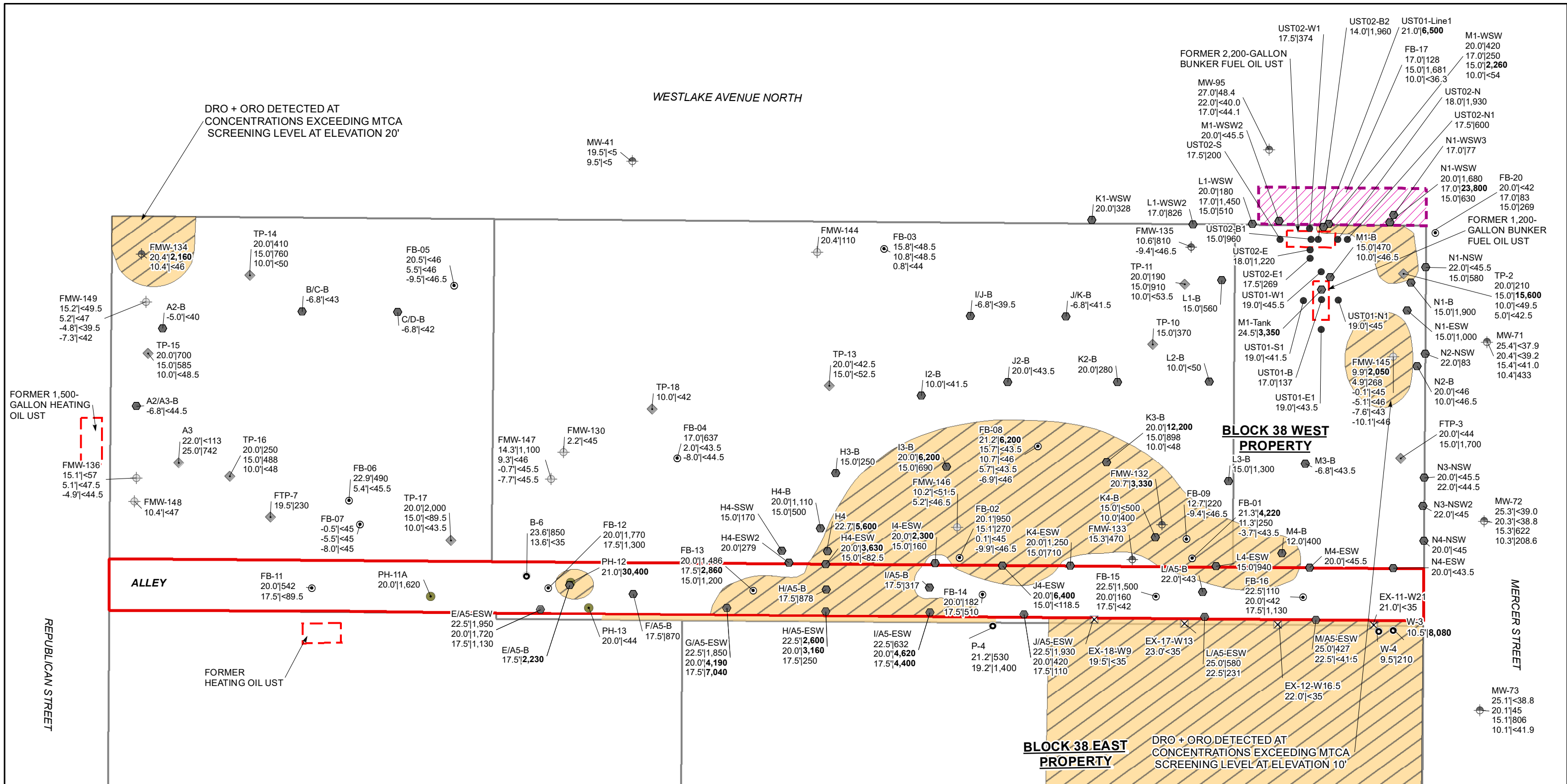
California  
Oakland | Irvine

**FIGURE 7**  
SOIL ANALYTICAL RESULTS  
FOR ORO  
BLOCK 38 ALLEY  
SEATTLE, WASHINGTON

FARALLON PN: 397-019

Drawn By: jones      Checked By: CS      Date: 1/5/2024      Disc Reference: Q:\Projects\397\_VULCAN\019\_Block38\MapFiles\17F2022-06\Figure-07\_Soil-ORO.mxd





- LEGEND**
- ⊕ DECOMMISSIONED SHALLOW WATER-BEARING ZONE MONITORING WELL
  - ⊕ DECOMMISSIONED INTERMEDIATE WATER-BEARING ZONE MONITORING WELL
  - ⊙ BORING (FARALLON)
  - ⊙ BORING (GEOENGINEERS)
  - POTHOLE (FARALLON)
  - UST SAMPLE LOCATION (FARALLON)
  - EXCAVATION SAMPLE LOCATION (FARALLON)
  - ◆ TEST PIT (FARALLON)

- ⬡ ESTIMATED EXTENT OF SOIL EXCEEDING THE SCREENING LEVEL THAT WAS EXCAVATED AND REMOVED
- ⬡ ESTIMATED EXTENT OF SOIL EXCEEDING THE SCREENING LEVEL
- ⬡ MECHANICAL EQUIPMENT AREA DECOMMISSIONED AND FILLED WITH CDF
- ⬡ ALLEY BOUNDARY
- ⬡ FORMER UNDERGROUND STORAGE TANKS (USTs)
- ⬡ KING COUNTY PARCEL BOUNDARY

**NOTES:**  
 FOR SOIL SAMPLES:  
 ELEVATION IN FEET NAVD88 | DRO+ORO ANALYTICAL RESULTS IN MILLIGRAMS PER KILOGRAM (mg/kg)  
 INTERIOR DATA LOCATIONS FOR THE BLOCK 38 WEST PROPERTY ARE SHOWN BASED ON ECOLOGY COMMENTS ON THE ALLEY IAWP (FEBRUARY, 2021)

**BOLD** = DENOTES CONCENTRATIONS THAT EXCEED THE SCREENING LEVEL (MTCA METHOD A CLEANUP LEVEL)  
 < = DENOTES ANALYTE NOT DETECTED AT OR EXCEEDING THE REPORTING LIMIT LISTED

CDF = CONTROLLED DENSITY FILL  
 DRO = TOTAL PETROLEUM HYDROCARBONS (TPH) AS DIESEL-RANGE ORGANICS  
 ORO = TPH AS OIL-RANGE ORGANICS  
 MTCA = WASHINGTON STATE MODEL TOXICS CONTROL ACT CLEANUP REGULATION  
 NAVD88 = NORTH AMERICAN VERTICAL DATUM OF 1988

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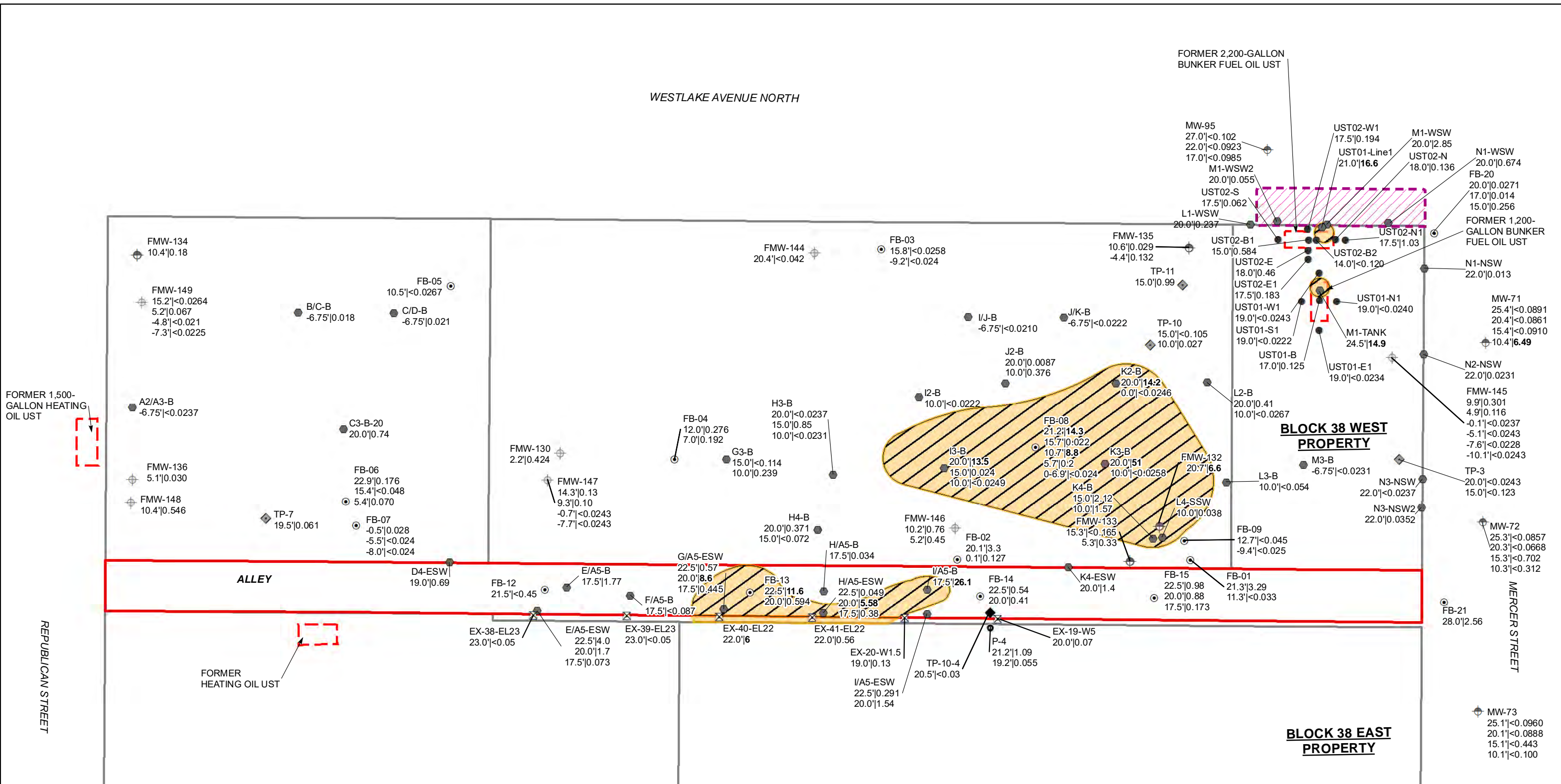
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0 30  
SCALE IN FEET

**FIGURE 8**  
**SOIL ANALYTICAL RESULTS FOR DRO + ORO BLOCK 38 ALLEY SEATTLE, WASHINGTON**

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**LEGEND**

- DECOMMISSIONED SHALLOW WATER-BEARING ZONE MONITORING WELL
- DECOMMISSIONED INTERMEDIATE WATER-BEARING ZONE MONITORING WELL
- BORING (FARALLON)
- BORING (GEOENGINEERS)
- EXCAVATION SAMPLE (GEOENGINEERS)
- TEST PIT (GEOENGINEERS)
- UST SAMPLE LOCATION (FARALLON)
- EXCAVATION SAMPLE LOCATION (FARALLON)
- TEST PIT (FARALLON)
- ESTIMATED EXTENT OF SOIL EXCEEDING THE SCREENING LEVEL THAT WAS EXCAVATED AND REMOVED
- ESTIMATED EXTENT OF SOIL EXCEEDING THE SCREENING LEVEL
- MECHANICAL EQUIPMENT AREA DECOMMISSIONED AND FILLED WITH CDF
- ALLEY BOUNDARY
- FORMER UNDERGROUND STORAGE TANKS (USTs)
- KING COUNTY PARCEL BOUNDARY

NOTES:  
 FOR SOIL SAMPLES:  
 ELEVATION IN FEET NAVD88 | TOTAL NAPHTHALENES  
 ANALYTICAL RESULTS IN MILLIGRAMS PER KILOGRAM (mg/kg)  
 INTERIOR DATA LOCATIONS FOR THE BLOCK 38 WEST PROPERTY ARE SHOWN BASED ON  
 ECOLOGY COMMENTS ON THE ALLEY IAWP (FEBRUARY, 2021)  
**BOLD** = DENOTES CONCENTRATIONS THAT EXCEED THE SCREENING LEVEL  
 (MTCA METHOD A CLEANUP LEVEL)  
 < = DENOTES ANALYTE NOT DETECTED AT OR EXCEEDING THE  
 REPORTING LIMIT LISTED FOR TOTAL TOXIC EQUIVALENT  
 CDF = CONTROLLED DENSITY FILL  
 MTCA = WASHINGTON STATE MODEL TOXICS CONTROL ACT  
 CLEANUP REGULATION  
 NAVD88 = NORTH AMERICAN VERTICAL DATUM OF 1988

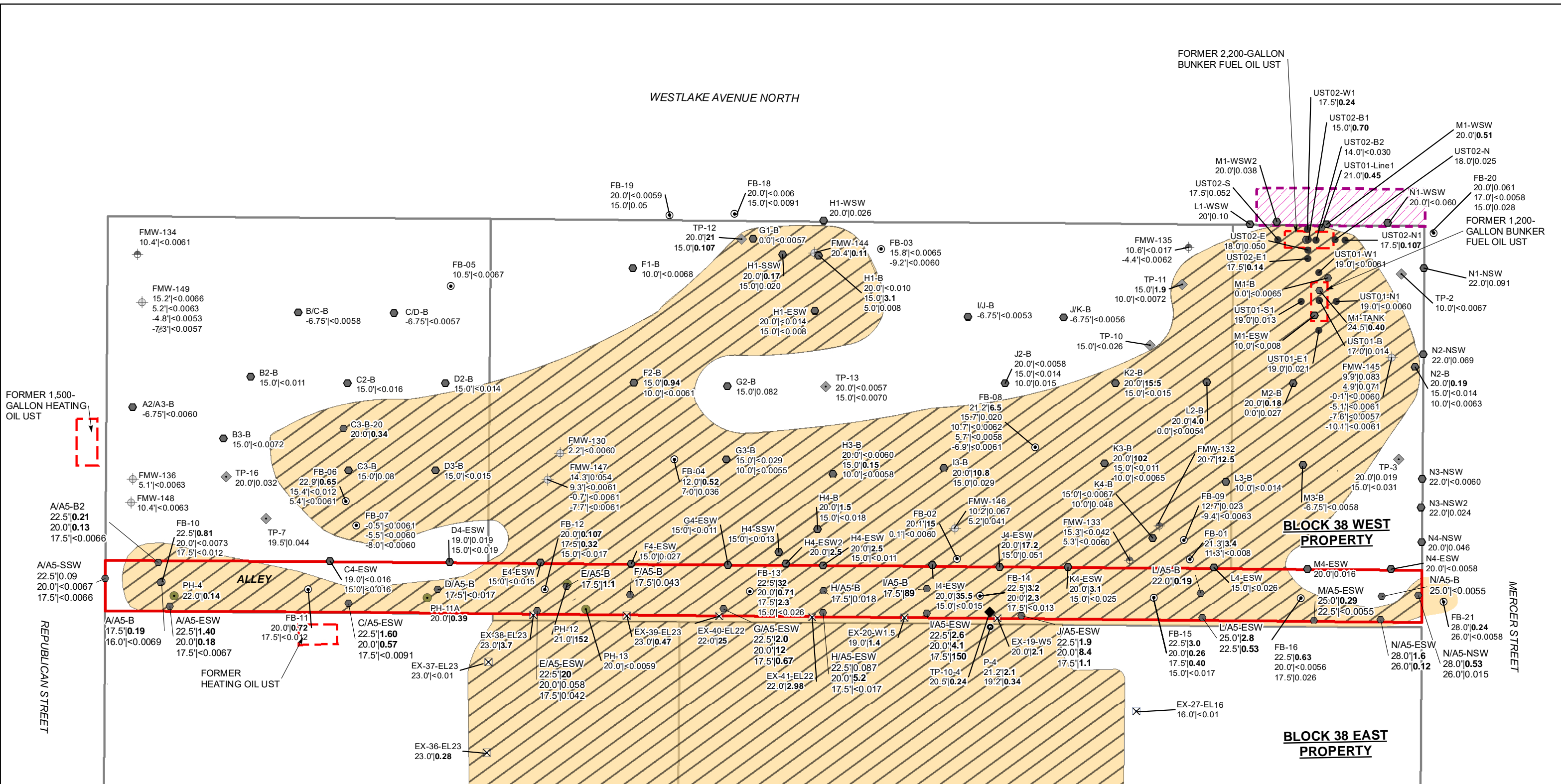
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**FIGURE 9**  
 SOIL ANALYTICAL RESULTS FOR  
 NAPHTHALENES  
 BLOCK 38 ALLEY  
 SEATTLE, WASHINGTON

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- LEGEND**
- ⊕ DECOMMISSIONED SHALLOW WATER-BEARING ZONE MONITORING WELL
  - ⊕ DECOMMISSIONED INTERMEDIATE WATER-BEARING ZONE MONITORING WELL
  - ⊙ BORING (FARALLON)
  - BORING (GEOENGINEERS)
  - ⊗ EXCAVATION SAMPLE (GEOENGINEERS)
  - ◆ TEST PIT (GEOENGINEERS)
  - POT HOLE (FARALLON)
  - UST SAMPLE LOCATION (FARALLON)
  - EXCAVATION SAMPLE LOCATION (FARALLON)
  - ◆ TEST PIT (FARALLON)

- ESTIMATED EXTENT OF SOIL EXCEEDING THE SCREENING LEVEL THAT WAS EXCAVATED AND REMOVED
- ESTIMATED EXTENT OF SOIL EXCEEDING THE SCREENING LEVEL
- MECHANICAL EQUIPMENT AREA DECOMMISSIONED AND FILLED WITH CDF
- ALLEY BOUNDARY
- FORMER UNDERGROUND STORAGE TANKS (USTs)
- KING COUNTY PARCEL BOUNDARY

**NOTES:**  
 FOR SOIL SAMPLES:  
 DEPTH AND CONCENTRATIONS REPORTED AS:  
 ELEVATION IN FEET NAVD88 | cPAH TEC  
 ANALYTICAL RESULTS IN MILLIGRAMS PER KILOGRAM (mg/kg)  
 INTERIOR DATA LOCATIONS FOR THE BLOCK 38 WEST PROPERTY ARE SHOWN BASED ON  
 ECOLOGY COMMENTS ON THE ALLEY IAWP (FEBRUARY, 2021)  
**BOLD** = DENOTES ELEVATION AND CONCENTRATIONS THAT EXCEED THE SCREENING LEVEL (MTCVA METHOD A CLEANUP LEVEL)  
 < = DENOTES ANALYTE NOT DETECTED AT OR EXCEEDING THE REPORTING LIMIT LISTED FOR TOTAL TOXIC EQUIVALENT CONCENTRATION OF BENZO(A)PYRENE (mg/kg)  
 CDF = CONTROLLED DENSITY FILL  
 cPAHs = CARCINOGENIC POLYCYCLIC AROMATIC HYDROCARBONS  
 TEC = TOXIC EQUIVALENT CONCENTRATION OF BENZO(A)PYRENE FOR cPAH MIXTURE  
 MTCVA = WASHINGTON STATE MODEL TOXICS CONTROL ACT CLEANUP REGULATION  
 NAVD88 = NORTH AMERICAN VERTICAL DATUM OF 1988

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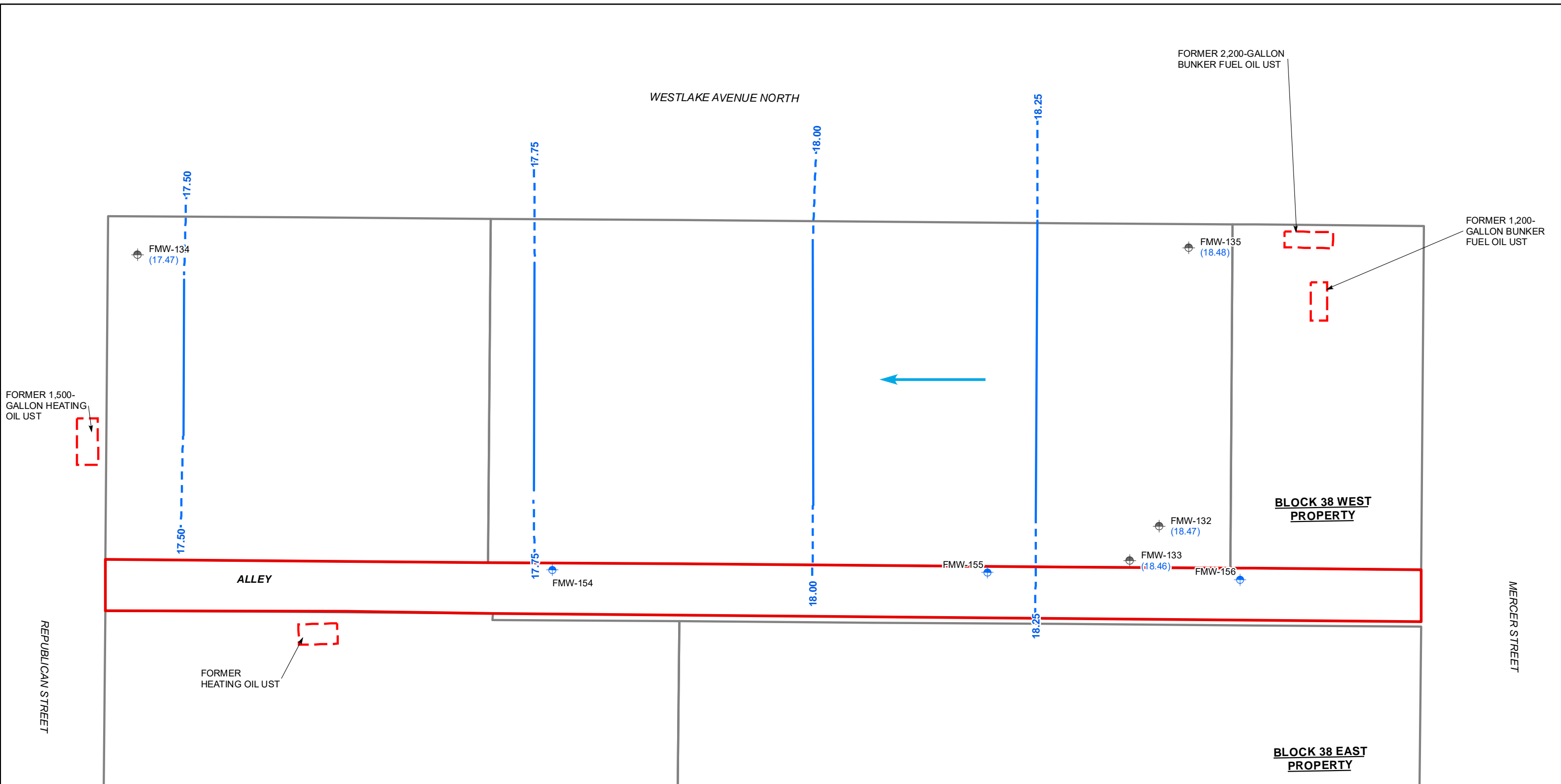
**FIGURE 10**

SOIL ANALYTICAL RESULTS  
FOR cPAH TEC  
BLOCK 38 ALLEY  
SEATTLE, WASHINGTON






FARALLON PN: 397-019




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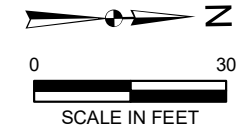
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**LEGEND**

-  DECOMMISSIONED SHALLOW WATER-BEARING ZONE MONITORING WELL
-  SHALLOW WATER-BEARING ZONE MONITORING WELL
-  ALLEY BOUNDARY
-  FORMER UNDERGROUND STORAGE TANKS (USTs)
-  KING COUNTY PARCEL BOUNDARY

-  (18.48) GROUNDWATER ELEVATION (03/26/19) MEASURED IN FEET RELATIVE TO NAVD 88
-  18.00 — APPROXIMATE GROUNDWATER ELEVATION CONTOUR IN FEET NAVD88 (DASHED WHERE INFERRED)
-  —> INFERRED GROUNDWATER FLOW DIRECTION



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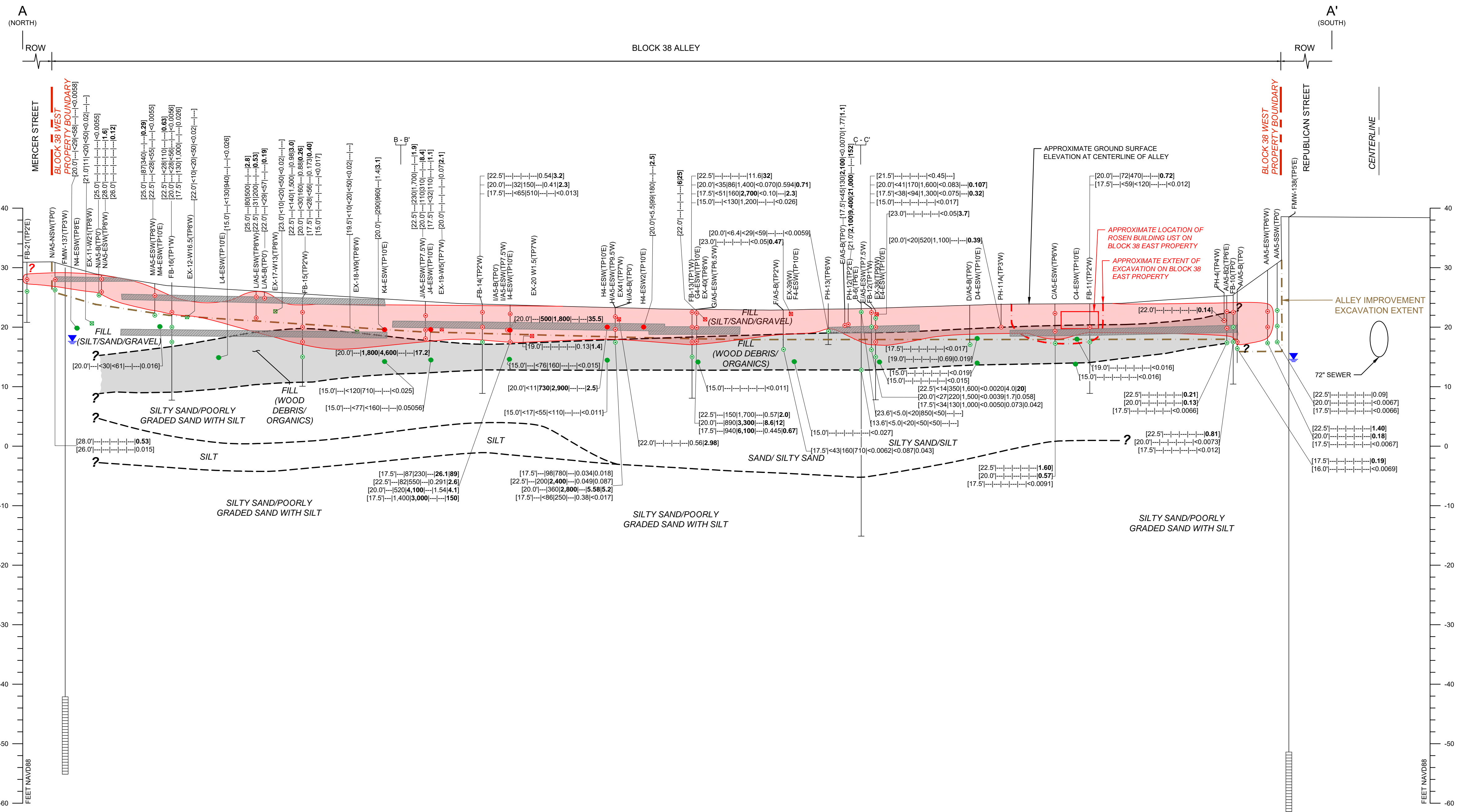
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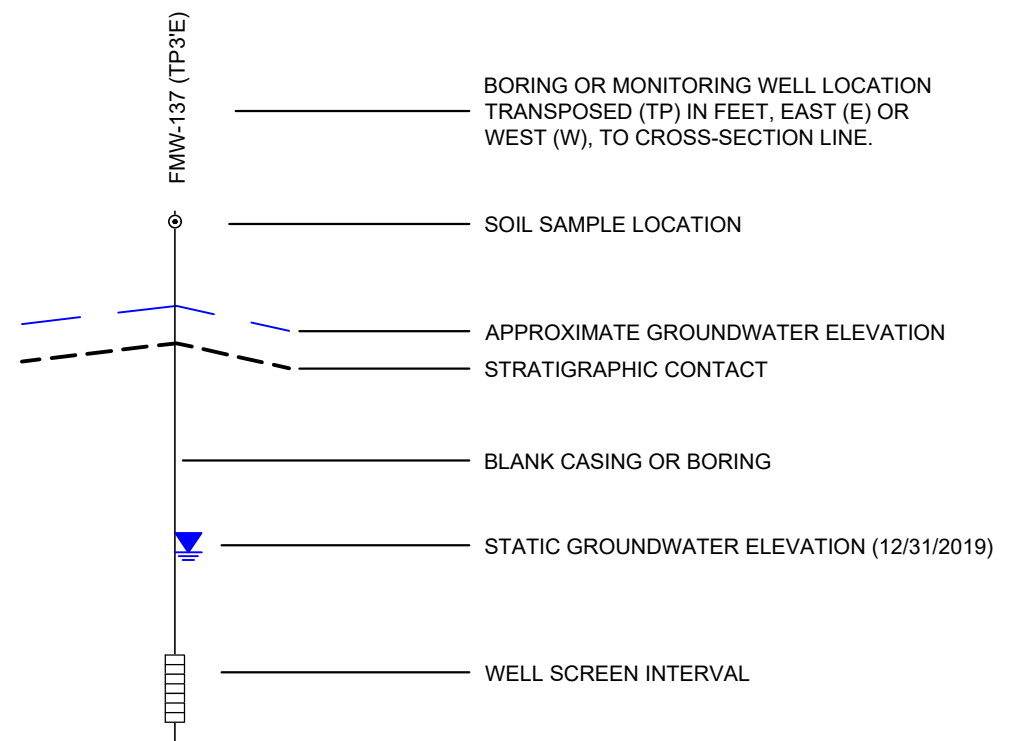
**FIGURE 11**  
GROUNDWATER ELEVATION CONTOURS  
SHALLOW WATER-BEARING ZONE  
FOR MARCH 26, 2019  
BLOCK 38 ALLEY  
SEATTLE, WASHINGTON  
FARALLON PN: 397-019

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





**LEGEND**

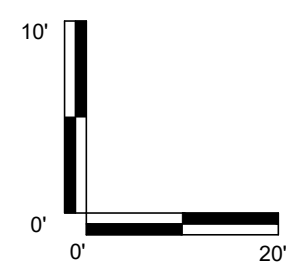


ALL SOIL ANALYTICAL RESULTS IN MILLIGRAMS PER KILOGRAM (mg/kg)  
 SOIL ANALYTICAL RESULT:  
 [ELEVATION NAVD88][GRO][DRO][ORO][BENZENE][TOTAL NAPHTHALENES][cPAH TEC]  
 GRO = TOTAL PETROLEUM HYDROCARBONS (TPH) AS GASOLINE-RANGE ORGANICS  
 DRO = TPH AS DIESEL-RANGE ORGANICS  
 ORO = TPH AS OIL-RANGE ORGANICS  
 TOTAL NAPHTHALENES = SUM OF NAPHTHALENE, 1-METHYLNAPHTHALENE, AND 2-METHYLNAPHTHALENE  
 cPAH TEC = CARCINOGENIC POLYCYCLIC AROMATIC HYDROCARBONS TOXIC EQUIVALENT CONCENTRATION  
**BOLD** = INDICATES CONCENTRATIONS THAT EXCEED THE WASHINGTON STATE MODEL TOXICS CONTROL ACT CLEANUP REGULATION (MTCA) SCREENING LEVELS  
 --- = SAMPLE NOT ANALYZED FOR CONSTITUENT  
 < = DENOTES ANALYTE NOT DETECTED AT OR EXCEEDING THE REPORTING LIMIT LISTED  
 NAVD88 = NORTH AMERICAN VERTICAL DATUM OF 1988

--- --- APPROXIMATE AREA OF WOOD DEBRIS/ORGANICS LAYER  
 --- --- ESTIMATED EXTENT OF SOIL EXCEEDING MTCA SCREENING LEVELS  
 --- --- ESTIMATED EXTENT OF COAL/CHARCOAL LAYER

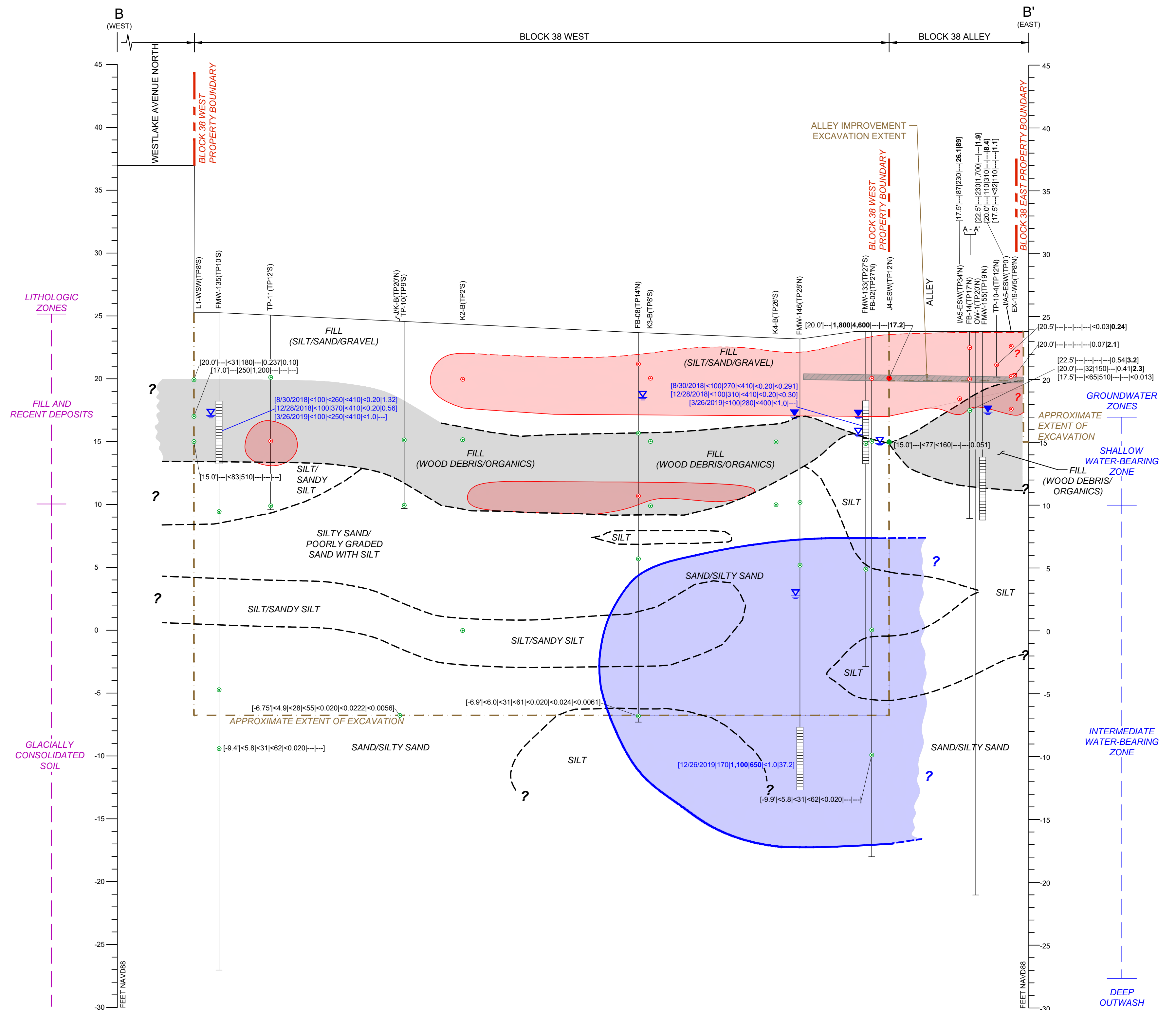
**RED** INDICATES CONCENTRATIONS OF HAZARDOUS SUBSTANCES EXCEEDING THE APPLICABLE MTCA SCREENING LEVELS  
**GREEN** INDICATES HAZARDOUS SUBSTANCES ANALYZED DID NOT EXCEED THE APPLICABLE MTCA SCREENING LEVELS

⊗ EXCAVATION BORING (FARALLON)  
 ● EXCAVATION SAMPLE (FARALLON)



**FIGURE 12**  
 CROSS SECTION A-A'  
 BLOCK 38 ALLEY  
 SEATTLE, WASHINGTON

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**LEGEND**

○ BORING OR MONITORING WELL LOCATION TRANSPosed (TP) IN FEET, NORTH (N) OR SOUTH (S), TO CROSS-SECTION LINE  
 ● SOIL SAMPLE LOCATION  
 - - - APPROXIMATE GROUNDWATER ELEVATION  
 - - - STRATIGRAPHIC CONTACT  
 □ BLANK CASING OR BORING  
 ▽ STATIC GROUNDWATER ELEVATION (12/31/2019)  
 ▽ GROUNDWATER ELEVATION AT TIME OF DRILLING  
 □ WELL SCREEN INTERVAL

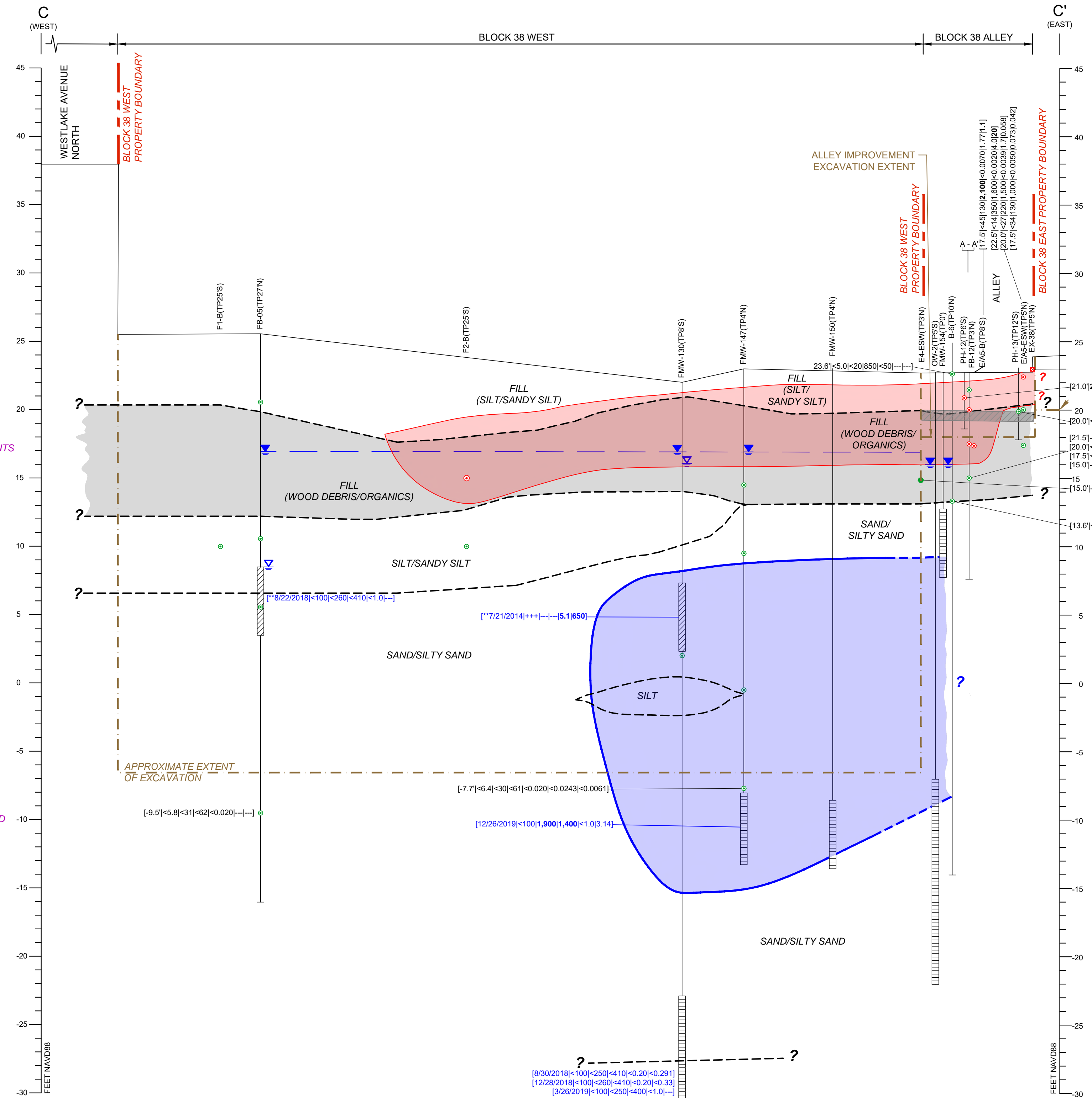
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 [-6.9]6.0[<31]61[<0.020]0.024[<0.0061]

ALL GROUNDWATER ANALYTICAL RESULTS IN MICROGRAMS PER LITER (µg/l)  
 GROUNDWATER ANALYTICAL RESULT [DATE SAMPLED][GRO][DRO][ORO][BENZENE][TOTAL NAPHTHALENES]  
 ALL SOIL ANALYTICAL RESULTS IN MILLIGRAMS PER KILOGRAM (mg/kg)  
 SOIL ANALYTICAL RESULT [ELEVATION IN FEET NAVD88][GRO][DRO][ORO][BENZENE][TOTAL NAPHTHALENES][PAH TEC]  
 GRO = TOTAL PETROLEUM HYDROCARBONS (TPH) AS GASOLINE-RANGE ORGANICS  
 DRO = TPH AS DIESEL-RANGE ORGANICS  
 ORO = TPH AS OIL-RANGE ORGANICS  
 TOTAL NAPHTHALENES = SUM OF NAPHTHALENE, 1-METHYLNAPHTHALENE, AND 2-METHYLNAPHTHALENE  
 PAH TEC = CARCINOGENIC POLYCYCLIC AROMATIC HYDROCARBONS TOXIC EQUIVALENT CONCENTRATION  
**BOLD** = DENOTES CONCENTRATIONS THAT EXCEED THE SCREENING LEVELS (MTCA METHOD A CLEANUP LEVELS)  
 - - - = SAMPLE NOT ANALYZED FOR CONSTITUENT  
 < = DENOTES ANALYTE NOT DETECTED AT OR EXCEEDING THE REPORTING LIMIT LISTED  
 NAVD88 = NORTH AMERICAN VERTICAL DATUM OF 1988

RED INDICATES CONCENTRATIONS OF HAZARDOUS SUBSTANCES EXCEEDING THE APPLICABLE MTCA SCREENING LEVELS  
 GREEN INDICATES HAZARDOUS SUBSTANCES ANALYZED DID NOT EXCEED THE APPLICABLE MTCA SCREENING LEVELS  
 □ EXCAVATION BORING (FARALLON)  
 ● EXCAVATION SAMPLE (FARALLON)

- - - APPROXIMATE AREA OF WOOD DEBRIS/ORGANICS LAYER  
 [Red Shaded Area] ESTIMATED EXTENT OF SOIL EXCEEDING SCREENING LEVELS  
 [Blue Shaded Area] ESTIMATED EXTENT OF GROUNDWATER EXCEEDING SCREENING LEVELS  
 [Hatched Area] ESTIMATED EXTENT OF COAL/CHARCOAL LAYER





LITHOLOGIC ZONES

FILL AND RECENT DEPOSITS

GLACIALLY CONSOLIDATED SOIL

APPROXIMATE LOCATION OF ROSEN BUILDING US ON EAST PROPERTY

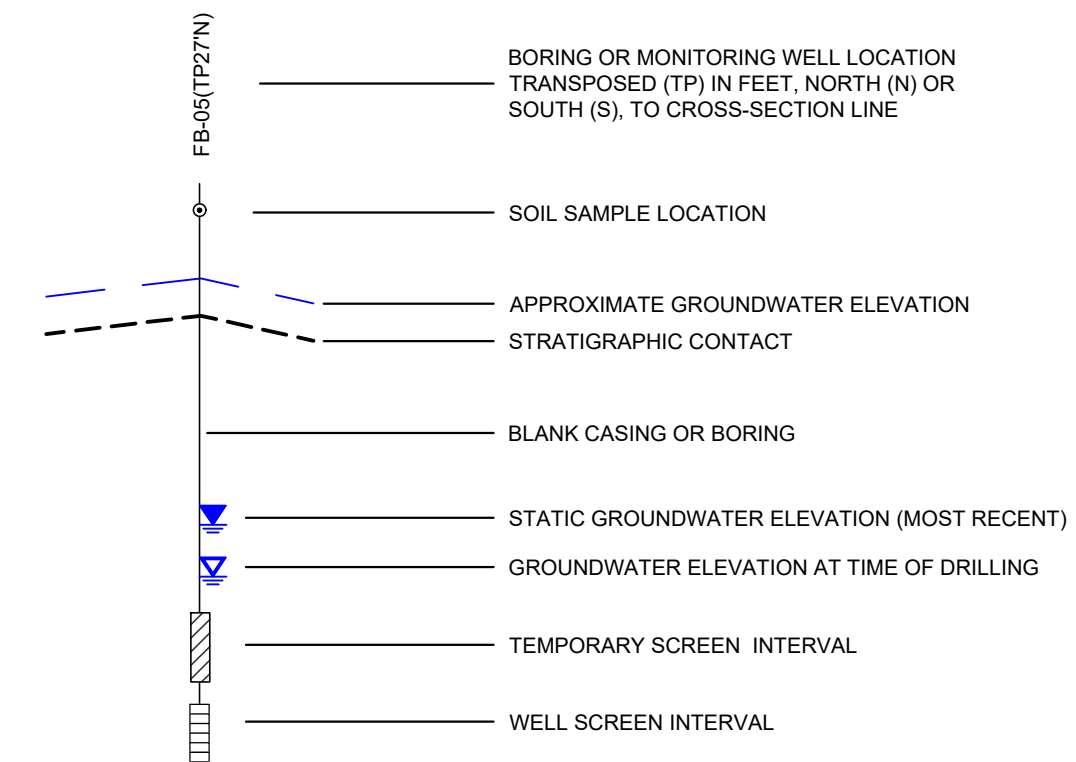
GROUNDWATER ZONES

SHALLOW WATER-BEARING ZONE

INTERMEDIATE WATER-BEARING ZONE

DEEP OUTWASH AQUIFER

**LEGEND**



ALL GROUNDWATER ANALYTICAL RESULTS IN MICROGRAMS PER LITER (µg/l)

GROUNDWATER ANALYTICAL RESULT [DATE SAMPLED][GRO][DRO][ORO][BENZENE][TOTAL NAPHTHALENES]

\*\* DENOTES SAMPLE IS RECONNAISSANCE GROUNDWATER

+++ GRO REPORTED AT CONCENTRATION OF 2,100 µg/l; HOWEVER, RE-EVALUATION BY THE ANALYTICAL LABORATORY INDICATED THAT THE REPORTED CONCENTRATION WAS NOT SIMILAR TO A TYPICAL GAS

SOIL ANALYTICAL RESULT [ELEVATION IN FEET NAVD88][GRO][DRO][ORO][BENZENE][cPAH TEC]

GRO = TOTAL PETROLEUM HYDROCARBONS (TPH) AS GASOLINE-RANGE ORGANICS

DRO = TPH AS DIESEL-RANGE ORGANICS

ORO = TPH AS OIL-RANGE ORGANICS

TOTAL NAPHTHALENES = SUM OF NAPHTHALENE, 1-METHYLNAPHTHALENE, AND 2-METHYLNAPHTHALENE

cPAH TEC = CARCINOGENIC POLYCYCLIC AROMATIC HYDROCARBONS TOXIC EQUIVALENT CONCENTRATION

**BOLD** = DENOTES CONCENTRATIONS THAT EXCEED THE SCREENING LEVELS (MTC METHOD A CLEANUP LEVELS)

--- = SAMPLE NOT ANALYZED FOR CONSTITUENT

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

NAVD88 = NORTH AMERICAN VERTICAL DATUM OF 1988

--- (dashed) = APPROXIMATE AREA OF WOOD DEBRIS/ORGANICS LAYER

■ (red) = ESTIMATED EXTENT OF SOIL EXCEEDING SCREENING LEVELS

■ (blue) = ESTIMATED EXTENT OF GROUNDWATER EXCEEDING SCREENING LEVELS

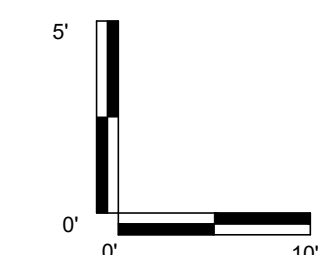
■ (hatched) = ESTIMATED EXTENT OF COAL/CHARCOAL LAYER

RED INDICATES CONCENTRATIONS OF HAZARDOUS SUBSTANCES EXCEEDING THE APPLICABLE MTC SCREENING LEVELS

GREEN INDICATES HAZARDOUS SUBSTANCES ANALYZED DID NOT EXCEED THE APPLICABLE MTC SCREENING LEVELS

⊗ EXCAVATION BORING (FARALLON)

● EXCAVATION SAMPLE (FARALLON)



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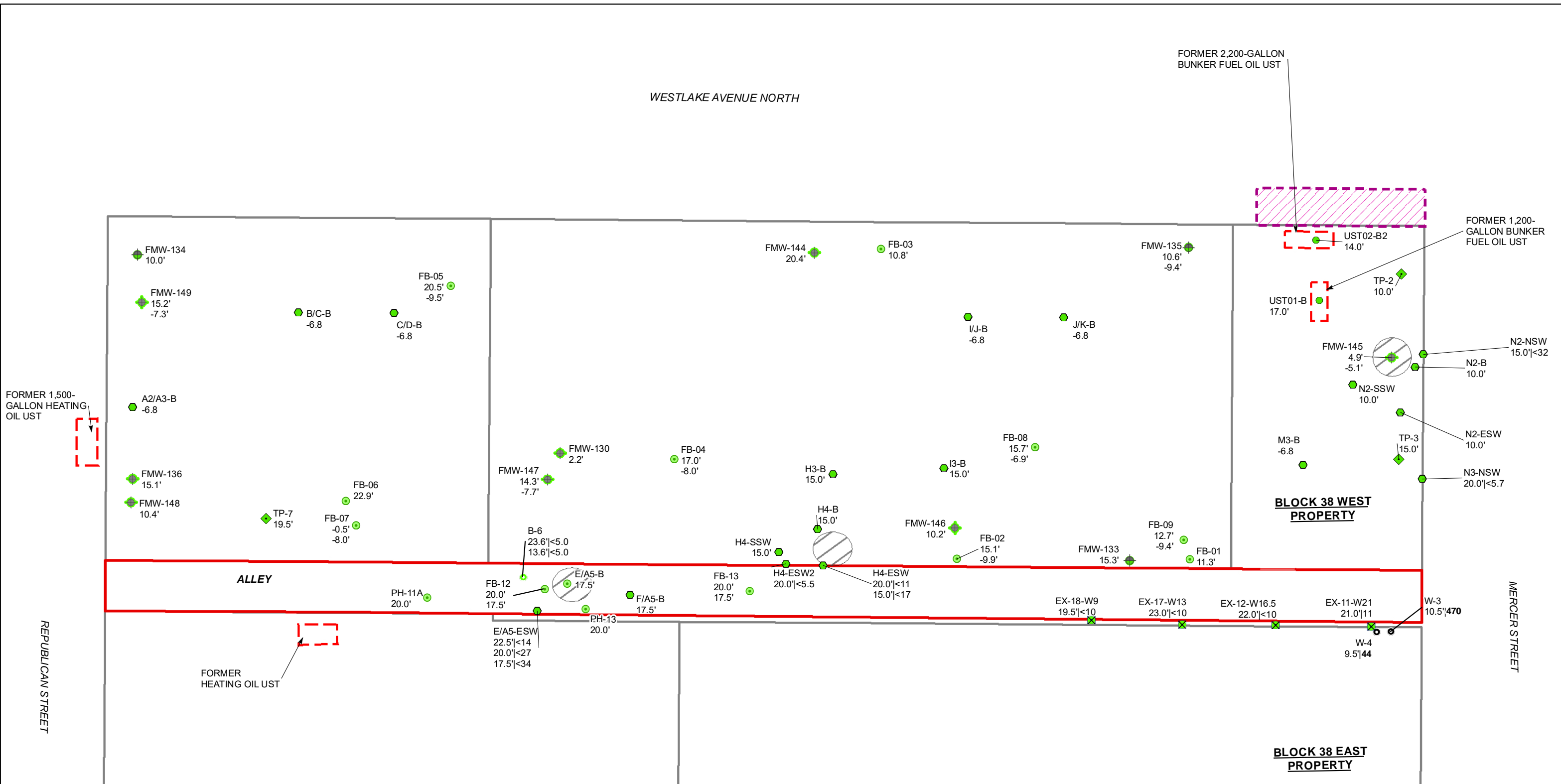
**FIGURE 14**

CROSS SECTION C-C'  
BLOCK 38 ALLEY  
SEATTLE, WASHINGTON

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Date: 08/03/2022

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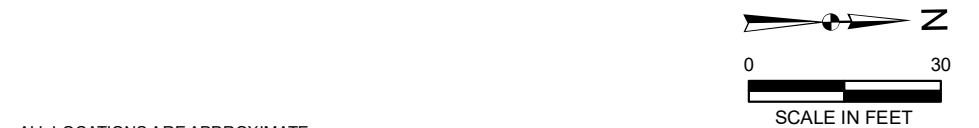
- LEGEND**
- BORING (FARALLON)
  - ⊕ DECOMMISSIONED SHALLOW WATER-BEARING ZONE WELL
  - ⊕ DECOMMISSIONED INTERMEDIATE WATER-BEARING ZONE WELL
  - UST SAMPLE LOCATION (FARALLON)
  - ⊕ EXCAVATION SAMPLE LOCATION (FARALLON)
  - ⊕ TEST PIT (FARALLON)
  - BORING (GEOENGINEERS)
  - ⊕ EXCAVATION SAMPLE (GEOENGINEERS)
  - DENOTES SAMPLE LOCATION AND ELEVATION IN FEET NAVD88 WHERE DRO RESULTS EXCEED THE MTCA SCREENING LEVEL
  - DENOTES SAMPLE LOCATION AND ELEVATION IN FEET NAVD88 WHERE GRO RESULTS ARE LESS THAN THE MTCA SCREENING LEVEL
  - ⊕ ESTIMATED EXTENT OF SOIL EXCEEDING THE SCREENING LEVEL THAT WAS EXCAVATED AND REMOVED
  - ⊕ MECHANICAL EQUIPMENT AREA DECOMMISSIONED AND FILLED WITH CDF
  - ⊕ ALLEY BOUNDARY
  - ⊕ FORMER UNDERGROUND STORAGE TANKS (USTs)
  - ⊕ KING COUNTY PARCEL BOUNDARY

**NOTES:**

FOR BLOCK 38 WEST SOIL SAMPLES:  
 ELEVATION IN FEET NAVD88 | GRO ANALYTICAL RESULTS IN MILLIGRAMS PER KILOGRAM (mg/kg)  
 THE CONFIRMATION SAMPLES WERE SELECTED BASED ON LOWEST ELEVATION WITHIN MASS EXCAVATION (GENERALLY 15-10' NAVD88) AND IF AVAILABLE WE REPORTED A CONFIRMATION SAMPLE AT/BENEATH THE BUILDING FOUNDATION ELEVATION.  
 INTERIOR DATA LOCATIONS FOR THE BLOCK 38 WEST PROPERTY ARE SHOWN BASED ON ECOLOGY COMMENTS ON THE ALLEY IAWP (FEBRUARY, 2021)

FOR BLOCK 38 WEST INTERIOR SAMPLES:  
 15' = DENOTES SAMPLE ELEVATION IN FEET NAVD88  
 < = DENOTES ANALYTE NOT DETECTED AT OR EXCEEDING THE REPORTING LIMIT LISTED FOR TOTAL TOXIC EQUIVALENT

CDF = CONTROLLED DENSITY FILL  
 GRO = TOTAL PETROLEUM HYDROCARBONS (TPH) AS GASOLINE-RANGE ORGANICS  
 MTCA = WASHINGTON STATE MODEL TOXICS CONTROL ACT CLEANUP REGULATION  
 NAVD88 = NORTH AMERICAN VERTICAL DATUM OF 1988



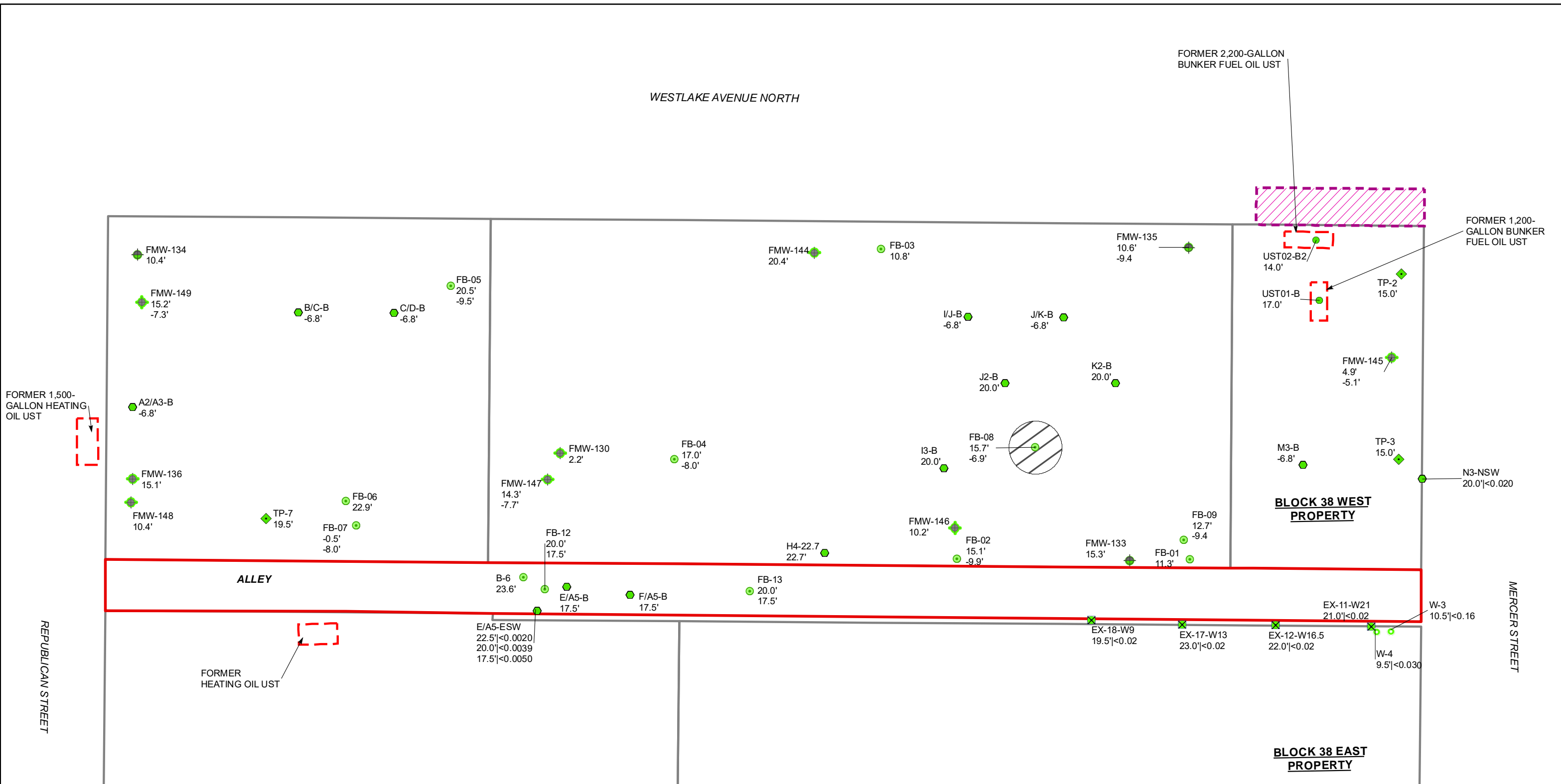
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**FIGURE 15**  
 CONFIRMATION SOIL SAMPLE RESULTS FOR GRO  
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 FARALLON PN: 397-019

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- LEGEND**
- BORING (FARALLON)
  - ⊕ DECOMMISSIONED SHALLOW WATER-BEARING ZONE WELL
  - ⊕ DECOMMISSIONED INTERMEDIATE WATER-BEARING ZONE WELL
  - UST SAMPLE LOCATION (FARALLON)
  - EXCAVATION SAMPLE LOCATION (FARALLON)
  - ◆ TEST PIT (FARALLON)
  - BORING (GEOENGINEERS)
  - ⊗ EXCAVATION SAMPLE (GEOENGINEERS)
  - DENOTES SAMPLE LOCATION AND ELEVATION IN FEET NAVD88 WHERE BENZENE RESULTS ARE LESS THAN THE MTCA SCREENING LEVEL
  - ESTIMATED EXTENT OF SOIL EXCEEDING THE SCREENING LEVEL THAT WAS EXCAVATED AND REMOVED
  - ▨ MECHANICAL EQUIPMENT AREA DECOMMISSIONED AND FILLED WITH CDF
  - ▭ ALLEY BOUNDARY
  - ▭ FORMER UNDERGROUND STORAGE TANKS (USTs)
  - ▭ KING COUNTY PARCEL BOUNDARY

**NOTES:**

FOR BLOCK 38 WEST SOIL SIDEWALL SAMPLES:  
 ELEVATION IN FEET NAVD88 | BENZENE ANALYTICAL RESULTS IN MILLIGRAMS PER KILOGRAM (mg/kg)  
 THE CONFIRMATION SAMPLES WERE SELECTED BASED ON LOWEST ELEVATION WITHIN MASS EXCAVATION (GENERALLY 15-10' NAVD88) AND IF AVAILABLE WE REPORTED A CONFIRMATION SAMPLE AT/BENEATH THE BUILDING FOUNDATION ELEVATION.  
 INTERIOR DATA LOCATIONS FOR THE BLOCK 38 WEST PROPERTY ARE SHOWN BASED ON ECOLOGY COMMENTS ON THE ALLEY IAWP (FEBRUARY, 2021)

FOR BLOCK 38 WEST INTERIOR SAMPLES:  
 15' = DENOTES SAMPLE ELEVATION IN FEET NAVD88

< = DENOTES ANALYTE NOT DETECTED AT OR EXCEEDING THE REPORTING LIMIT LISTED  
 CDF = CONTROLLED DENSITY FILL  
 MTCA = WASHINGTON STATE MODEL TOXICS CONTROL ACT CLEANUP REGULATION  
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**FIGURE 16**

**CONFIRMATION SOIL SAMPLE RESULTS FOR BENZENE**

**BLOCK 38 ALLEY**

**SEATTLE, WASHINGTON**

FARALLON PN: 397-019

Scale: 0 to 30 FEET

Drawn By: jones | Checked By: SS | Date: 8/3/2022 | Disc Reference: Document Path: Q:\Projects\397 VULCAN\019\_Block38\Mapfiles\17F\2022-06\Figure-16\_Soil-Benzene\_Conf.mxd

WESTLAKE AVENUE NORTH

DRO + ORO DETECTED AT CONCENTRATIONS EXCEEDING MTCA SCREENING LEVEL AT ELEVATION 20'

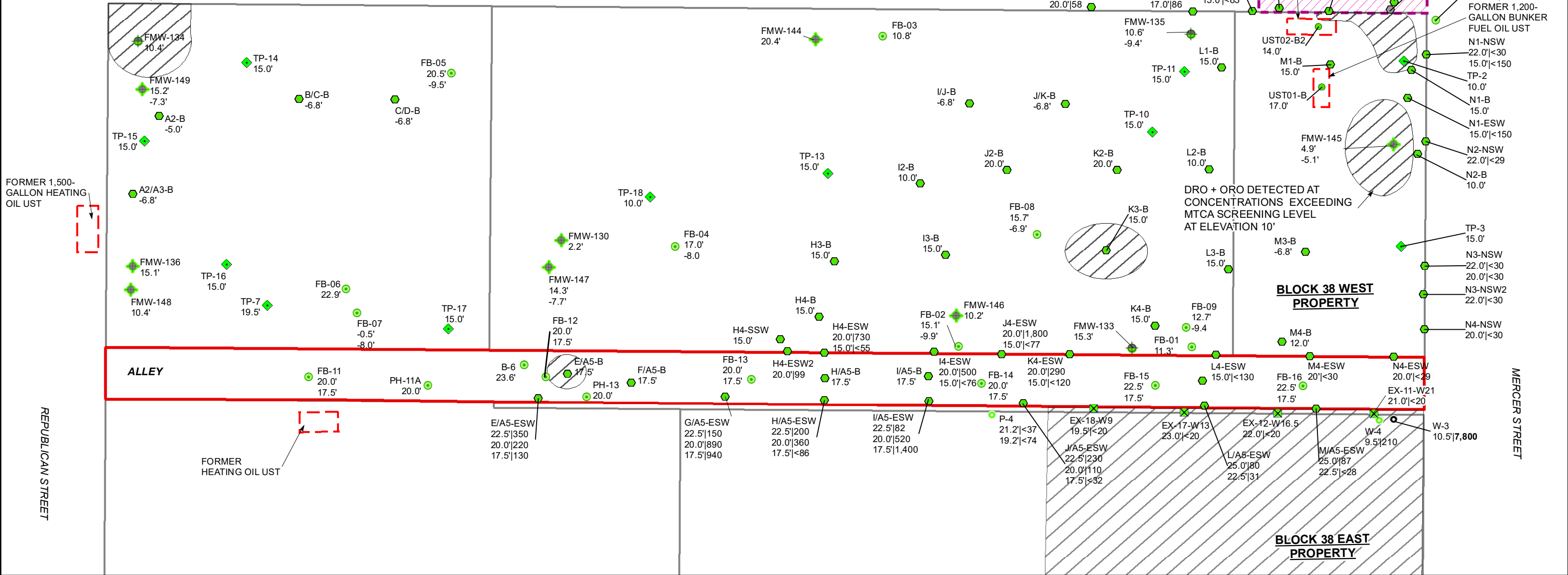
FORMER 2,200-GALLON BUNKER FUEL OIL UST

FORMER 1,500-GALLON HEATING OIL UST

DRO + ORO DETECTED AT CONCENTRATIONS EXCEEDING MTCA SCREENING LEVEL AT ELEVATION 10'

**BLOCK 38 WEST PROPERTY**

**BLOCK 38 EAST PROPERTY**



**LEGEND**

- BORING (FARALLON)
- ⊕ DECOMMISSIONED SHALLOW WATER-BEARING ZONE WELL
- ⊕ DECOMMISSIONED INTERMEDIATE WATER-BEARING ZONE WELL
- UST SAMPLE LOCATION (FARALLON)
- ⊕ EXCAVATION SAMPLE LOCATION (FARALLON)
- ◆ TEST PIT (FARALLON)
- BORING (GEOENGINEERS)
- ⊗ EXCAVATION SAMPLE (GEOENGINEERS)
- ▭ ALLEY BOUNDARY
- ▭ KING COUNTY PARCEL BOUNDARY
- DENOTES SAMPLE LOCATION AND ELEVATION IN FEET NAVD88 WHERE DRO RESULTS ARE LESS THAN THE MTCA SCREENING LEVEL
- DENOTES SAMPLE LOCATIONS WHERE DRO RESULTS EITHER EXCEED OR ARE LESS THAN MTCA SCREENING LEVELS AT DIFFERENT DEPTH ELEVATIONS IN FEET NAVD88
- DENOTES SAMPLE LOCATION AND ELEVATION IN FEET NAVD88 WHERE DRO RESULTS EXCEED THE MTCA SCREENING LEVEL
- ESTIMATED EXTENT OF SOIL EXCEEDING THE SCREENING LEVEL THAT WAS EXCAVATED AND REMOVED
- ▨ MECHANICAL EQUIPMENT AREA DECOMMISSIONED AND FILLED WITH CDF
- ▨ FORMER UNDERGROUND STORAGE TANKS (USTs)

**NOTES:**  
 FOR BLOCK 38 WEST SOIL SAMPLES:  
 ELEVATION IN FEET NAVD88 | DRO ANALYTICAL RESULTS IN MILLIGRAMS PER KILOGRAM (mg/kg)  
 THE CONFIRMATION SAMPLES WERE SELECTED BASED ON LOWEST ELEVATION WITHIN MASS EXCAVATION (GENERALLY 15-10' NAVD88) AND IF AVAILABLE WE REPORTED A CONFIRMATION SAMPLE AT/BENEATH THE BUILDING FOUNDATION ELEVATION.  
 INTERIOR DATA LOCATIONS FOR THE BLOCK 38 WEST PROPERTY ARE SHOWN BASED ON ECOLOGY COMMENTS ON THE ALLEY IAWP (FEBRUARY, 2021)  
 FOR BLOCK 38 WEST INTERIOR SAMPLES:  
 15' = DENOTES SAMPLE ELEVATION IN FEET NAVD88  
**BOLD** = DENOTES CONCENTRATIONS THAT EXCEED THE SCREENING LEVEL (MTCA METHOD A CLEANUP LEVEL)  
 < = DENOTES ANALYTE NOT DETECTED AT OR EXCEEDING THE REPORTING LIMIT LISTED  
 CDF = CONTROLLED DENSITY FILL  
 DRO = TOTAL PETROLEUM HYDROCARBONS (TPH) AS DIESEL-RANGE ORGANICS  
 MTCA = WASHINGTON STATE MODEL TOXICS CONTROL ACT CLEANUP REGULATION  
 NAVD88 = NORTH AMERICAN VERTICAL DATUM OF 1988

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**FIGURE 17**

**CONFIRMATION SOIL SAMPLE RESULTS FOR DRO**

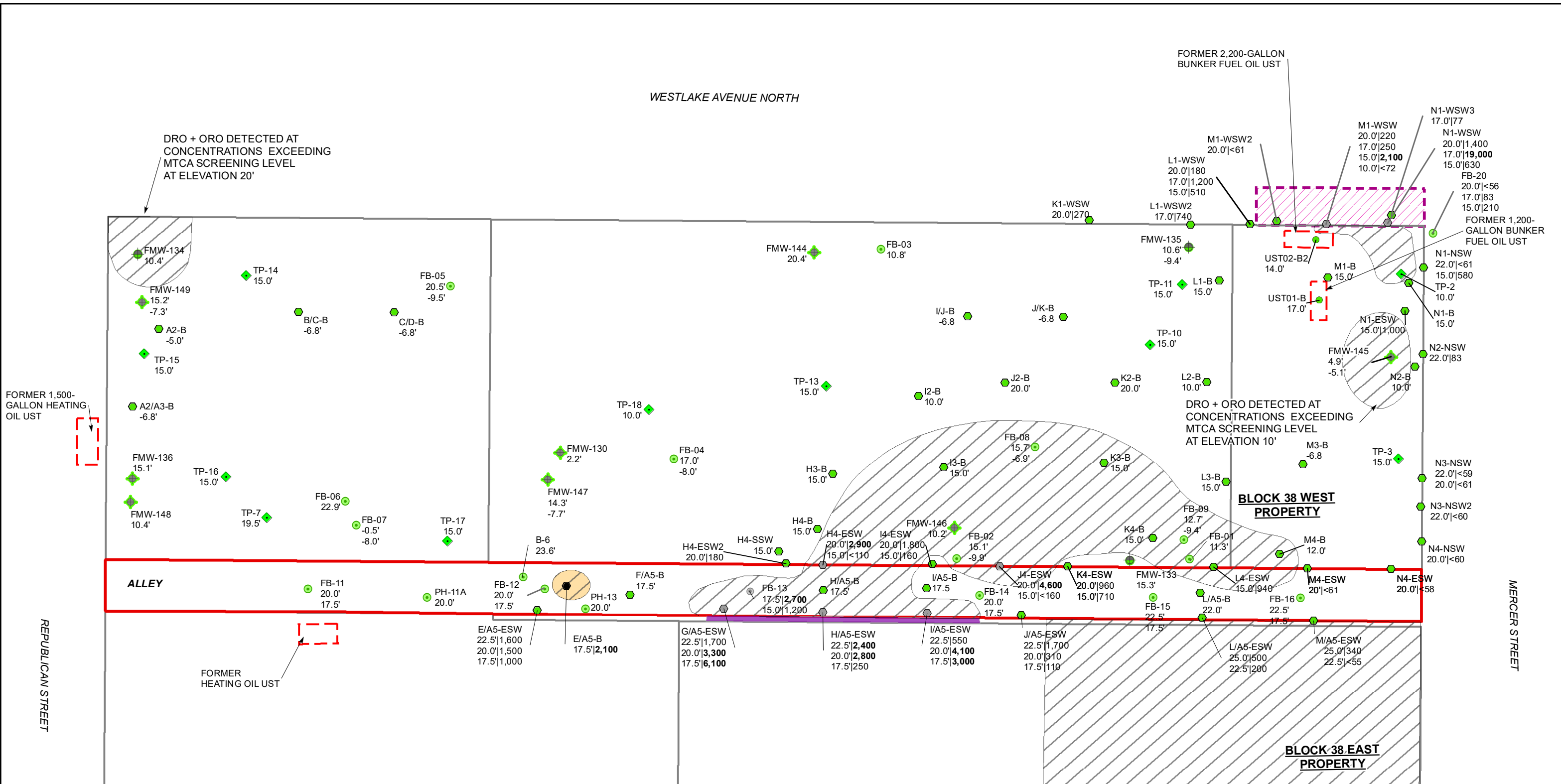
**BLOCK 38 ALLEY**

**SEATTLE, WASHINGTON**

FARALLON PN: 397-019

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LEGEND	
	BORING (FARALLON)
	DECOMMISSIONED SHALLOW WATER-BEARING ZONE WELL
	DECOMMISSIONED INTERMEDIATE WATER-BEARING ZONE WELL
	UST SAMPLE LOCATION (FARALLON)
	EXCAVATION SAMPLE LOCATION (FARALLON)
	TEST PIT (FARALLON)
	MECHANICAL EQUIPMENT AREA DECOMMISSIONED AND FILLED WITH CDF
	ALLEY BOUNDARY
	FORMER UNDERGROUND STORAGE TANKS (USTs)
	KING COUNTY PARCEL BOUNDARY
	DENOTES SAMPLE LOCATION AND ELEVATION IN FEET NAVD88 WHERE ORO RESULTS ARE LESS THAN THE MTCA SCREENING LEVEL
	DENOTES SAMPLE LOCATIONS WHERE ORO RESULTS EITHER EXCEED OR ARE LESS THAN MTCA SCREENING LEVELS AT DIFFERENT DEPTH ELEVATIONS IN FEET NAVD88
	DENOTES SAMPLE LOCATION AND ELEVATION IN FEET NAVD88 WHERE ORO RESULTS EXCEED THE MTCA SCREENING LEVEL
	ESTIMATED EXTENT OF SOIL EXCEEDING THE SCREENING LEVEL AT THE BASE OF THE EXCAVATION
	ESTIMATED EXTENT OF SOIL EXCEEDING THE SCREENING LEVEL THAT WAS EXCAVATED AND REMOVED
	ESTIMATED EXTENT OF 1-2 FOOT WEDGE OF SOIL EXCEEDING THE SCREENING LEVEL DUE TO UTILITY BANK

NOTES:  
 FOR BLOCK 38 WEST SOIL SAMPLES:  
 ELEVATION IN FEET NAVD88 | ORO ANALYTICAL RESULTS IN MILLIGRAMS PER KILOGRAM (mg/kg)  
 THE CONFIRMATION SAMPLES WERE SELECTED BASED ON LOWEST ELEVATION WITHIN MASS EXCAVATION (GENERALLY 15'-10' NAVD88) AND IF AVAILABLE WE REPORTED A CONFIRMATION SAMPLE AT/BENEATH THE BUILDING FOUNDATION ELEVATION.  
 INTERIOR DATA LOCATIONS FOR THE BLOCK 38 WEST PROPERTY ARE SHOWN BASED ON ECOLOGY COMMENTS ON THE ALLEY IAWP (FEBRUARY, 2021)  
 FOR BLOCK 38 WEST INTERIOR SAMPLES:  
 15' = DENOTES SAMPLE ELEVATION IN FEET NAVD88  
**BOLD** = DENOTES CONCENTRATIONS THAT EXCEED THE SCREENING LEVEL (MTCA METHOD A CLEANUP LEVEL)  
 < = DENOTES ANALYTE NOT DETECTED AT OR EXCEEDING THE REPORTING LIMIT LISTED  
 CDF = CONTROLLED DENSITY FILL  
 ORO = TOTAL PETROLEUM HYDROCARBONS (TPH) AS OIL-RANGE ORGANICS  
 MTCA = WASHINGTON STATE MODEL TOXICS CONTROL ACT CLEANUP REGULATION  
 NAVD88 = NORTH AMERICAN VERTICAL DATUM OF 1988

SCALE IN FEET

0 30

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**FIGURE 18**

**CONFIRMATION SOIL SAMPLE RESULTS FOR ORO**

**BLOCK 38 ALLEY**

**SEATTLE, WASHINGTON**

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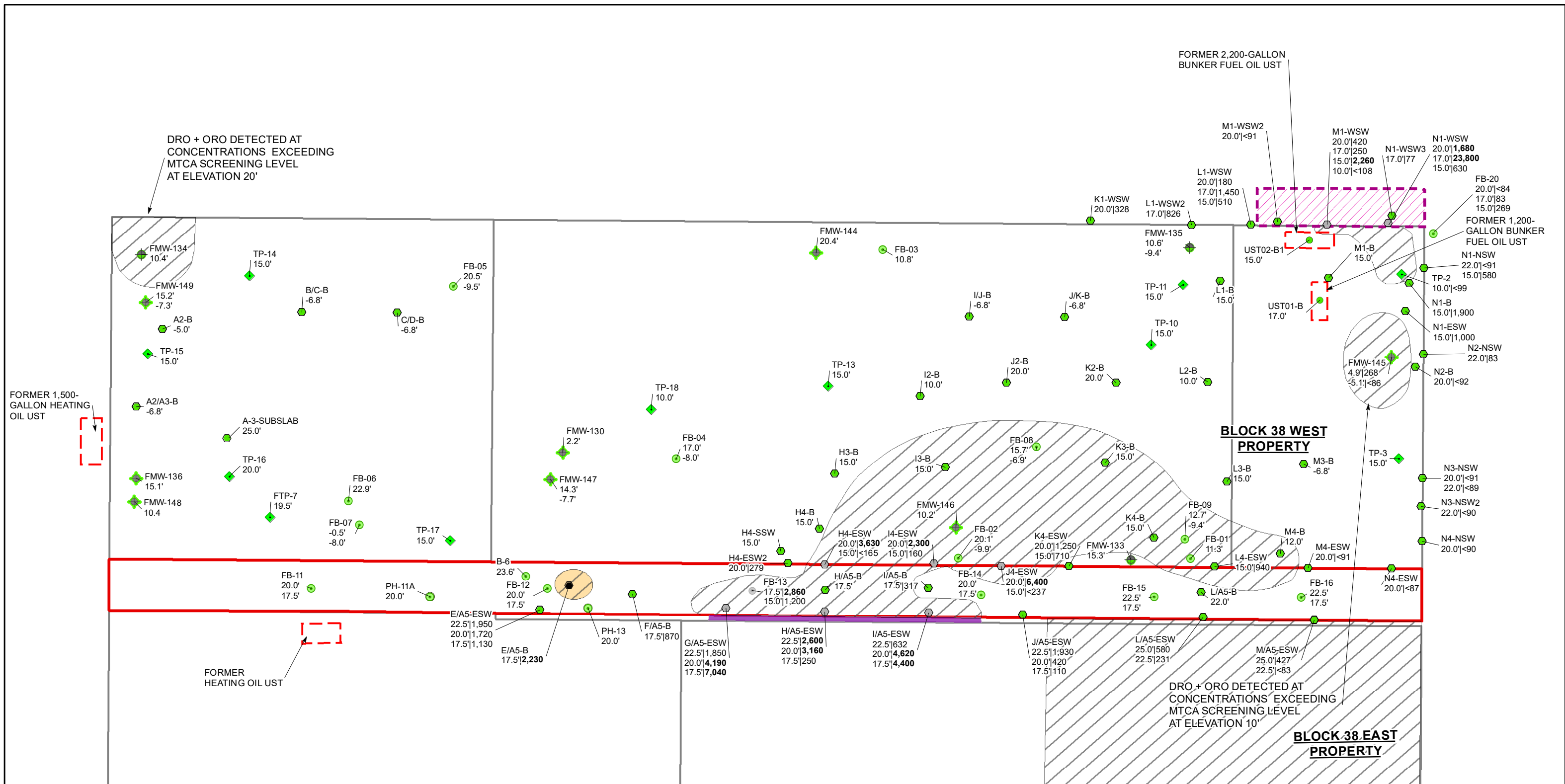
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- LEGEND**
- ⊕ DECOMMISSIONED SHALLOW WATER-BEARING ZONE MONITORING WELL
  - ⊕ DECOMMISSIONED INTERMEDIATE WATER-BEARING ZONE MONITORING WELL
  - ⊙ BORING (FARALLON)
  - POT HOLE (FARALLON)
  - UST SAMPLE LOCATION (FARALLON)
  - ⊕ EXCAVATION SAMPLE LOCATION (FARALLON)
  - ⊕ TEST PIT (FARALLON)
  - ▨ MECHANICAL EQUIPMENT AREA DECOMMISSIONED AND FILLED WITH CDF
  - ▭ ALLEY BOUNDARY
  - ▭ FORMER UNDERGROUND STORAGE TANKS (USTs)
  - ▭ KING COUNTY PARCEL BOUNDARY

- DENOTES SAMPLE LOCATION AND ELEVATION IN FEET NAVD88 WHERE DRO+ORO RESULTS ARE LESS THAN THE MTCA SCREENING LEVEL
- DENOTES SAMPLE LOCATIONS WHERE DRO+ORO RESULTS EITHER EXCEED OR ARE LESS THAN MTCA SCREENING LEVELS AT DIFFERENT DEPTH ELEVATIONS IN FEET NAVD88
- DENOTES SAMPLE LOCATION AND ELEVATION IN FEET NAVD88 WHERE DRO+ORO RESULTS EXCEED THE MTCA SCREENING LEVEL
- ESTIMATED EXTENT OF SOIL EXCEEDING THE SCREENING LEVEL AT THE BASE OF THE EXCAVATION
- ESTIMATED EXTENT OF SOIL EXCEEDING THE SCREENING LEVEL THAT WAS EXCAVATED AND REMOVED
- ESTIMATED EXTENT OF 1-2 FOOT WEDGE OF SOIL EXCEEDING THE SCREENING LEVEL DUE TO UTILITY BANK

**NOTES:**  
 FOR SOIL SAMPLES:  
 ELEVATION IN FEET NAVD88 | DRO+ORO  
 ANALYTICAL RESULTS IN MILLIGRAMS PER KILOGRAM (mg/kg)  
 THE CONFIRMATION SAMPLES WERE SELECTED BASED ON LOWEST ELEVATION WITHIN MASS EXCAVATION (GENERALLY 15'-10' NAVD88) AND IF AVAILABLE WE REPORTED A CONFIRMATION SAMPLE AT/BENEATH THE BUILDING FOUNDATION ELEVATION.  
 INTERIOR DATA LOCATIONS FOR THE BLOCK 38 WEST PROPERTY ARE SHOWN BASED ON ECOLOGY COMMENTS ON THE ALLEY IAWP (FEBRUARY, 2021)

**BOLD** = DENOTES CONCENTRATIONS THAT EXCEED THE SCREENING LEVEL (MTCA METHOD A CLEANUP LEVEL)  
 < = DENOTES ANALYTE NOT DETECTED AT OR EXCEEDING THE REPORTING LIMIT LISTED  
 CDF = CONTROLLED DENSITY FILL  
 DRO = TOTAL PETROLEUM HYDROCARBONS (TPH) AS DIESEL-RANGE ORGANICS  
 ORO = TPH AS OIL-RANGE ORGANICS  
 MTCA = WASHINGTON STATE MODEL TOXICS CONTROL ACT CLEANUP REGULATION  
 NAVD88 = NORTH AMERICAN VERTICAL DATUM OF 1988

SCALE IN FEET  
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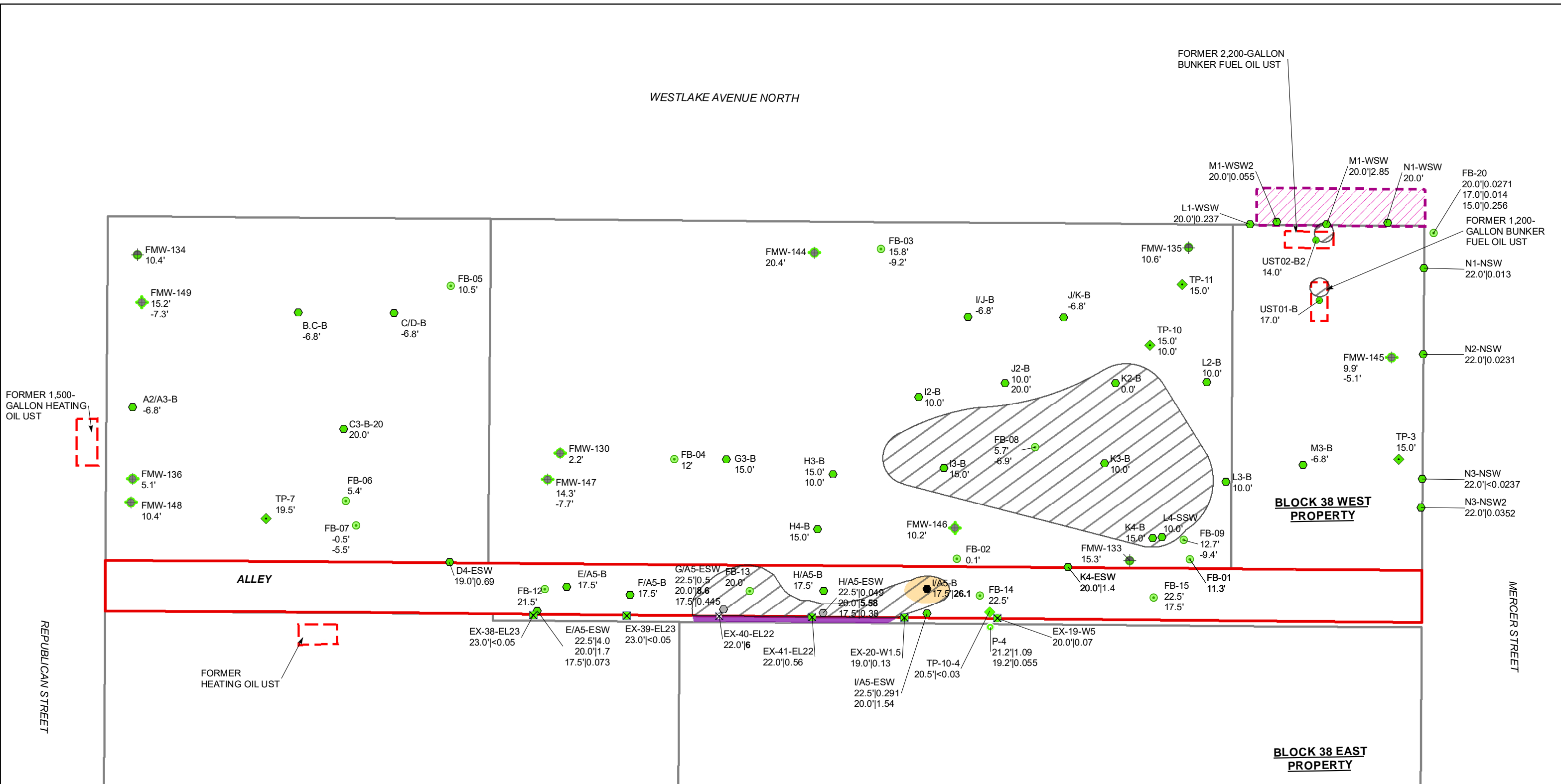
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**FIGURE 19**  
**CONFIRMATION SOIL ANALYTICAL RESULTS FOR DRO + ORO BLOCK 38 ALLEY SEATTLE, WASHINGTON**

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- LEGEND**
- ⊕ DECOMMISSIONED SHALLOW WATER-BEARING ZONE MONITORING WELL
  - ⊕ DECOMMISSIONED INTERMEDIATE WATER-BEARING ZONE MONITORING WELL
  - ⊙ BORING (FARALLON)
  - POT HOLE (FARALLON)
  - UST SAMPLE LOCATION (FARALLON)
  - ⊕ EXCAVATION SAMPLE LOCATION (FARALLON)
  - ⊕ TEST PIT (FARALLON)
  - MECHANICAL EQUIPMENT AREA DECOMMISSIONED AND FILLED WITH CDF
  - ALLEY BOUNDARY
  - FORMER UNDERGROUND STORAGE TANKS (USTs)
  - KING COUNTY PARCEL BOUNDARY

- DENOTES SAMPLE LOCATION AND ELEVATION IN FEET NAVD88 WHERE TOTAL NAPHTHALENES RESULTS ARE LESS THAN THE MTCA SCREENING LEVEL
- DENOTES SAMPLE LOCATIONS WHERE TOTAL NAPHTHALENES RESULTS EITHER EXCEED OR ARE LESS THAN MTCA SCREENING LEVELS AT DIFFERENT DEPTH ELEVATIONS IN FEET NAVD88
- DENOTES SAMPLE LOCATION AND ELEVATION IN FEET NAVD88 WHERE TOTAL NAPHTHALENES RESULTS EXCEED THE MTCA SCREENING LEVEL
- ESTIMATED EXTENT OF SOIL EXCEEDING THE SCREENING LEVEL AT THE BASE OF THE EXCAVATION
- ESTIMATED EXTENT OF SOIL EXCEEDING THE SCREENING LEVEL THAT WAS EXCAVATED AND REMOVED
- ESTIMATED EXTENT OF 1-2 FOOT WEDGE OF SOIL EXCEEDING THE SCREENING LEVEL DUE TO UTILITY BANK

**NOTES:**

FOR BLOCK 38 WEST SOIL SAMPLES:  
 ELEVATION IN FEET NAVD88 | TOTAL NAPHTHALENES ANALYTICAL RESULTS IN MILLIGRAMS PER KILOGRAM (mg/kg)  
 THE CONFIRMATION SAMPLES WERE SELECTED BASED ON LOWEST ELEVATION WITHIN MASS EXCAVATION (GENERALLY 15-10' NAVD88) AND IF AVAILABLE WE REPORTED A CONFIRMATION SAMPLE AT/BENEATH THE BUILDING FOUNDATION ELEVATION.  
 INTERIOR DATA LOCATIONS FOR THE BLOCK 38 WEST PROPERTY ARE SHOWN BASED ON ECOLOGY COMMENTS ON THE ALLEY IAWP (FEBRUARY, 2021)

FOR BLOCK 38 WEST INTERIOR SAMPLES:  
 15' = DENOTES SAMPLE ELEVATION IN FEET NAVD88

< = DENOTES ANALYTE NOT DETECTED AT OR EXCEEDING THE REPORTING LIMIT LISTED FOR TOTAL TOXIC EQUIVALENT  
 CDF = CONTROLLED DENSITY FILL  
 MTCA = WASHINGTON STATE MODEL TOXICS CONTROL ACT CLEANUP REGULATION  
 NAVD88 = NORTH AMERICAN VERTICAL DATUM OF 1988

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**FIGURE 20**

**CONFIRMATION SOIL SAMPLE RESULTS**

**NAPHTHALENES**

**BLOCK 38 ALLEY**

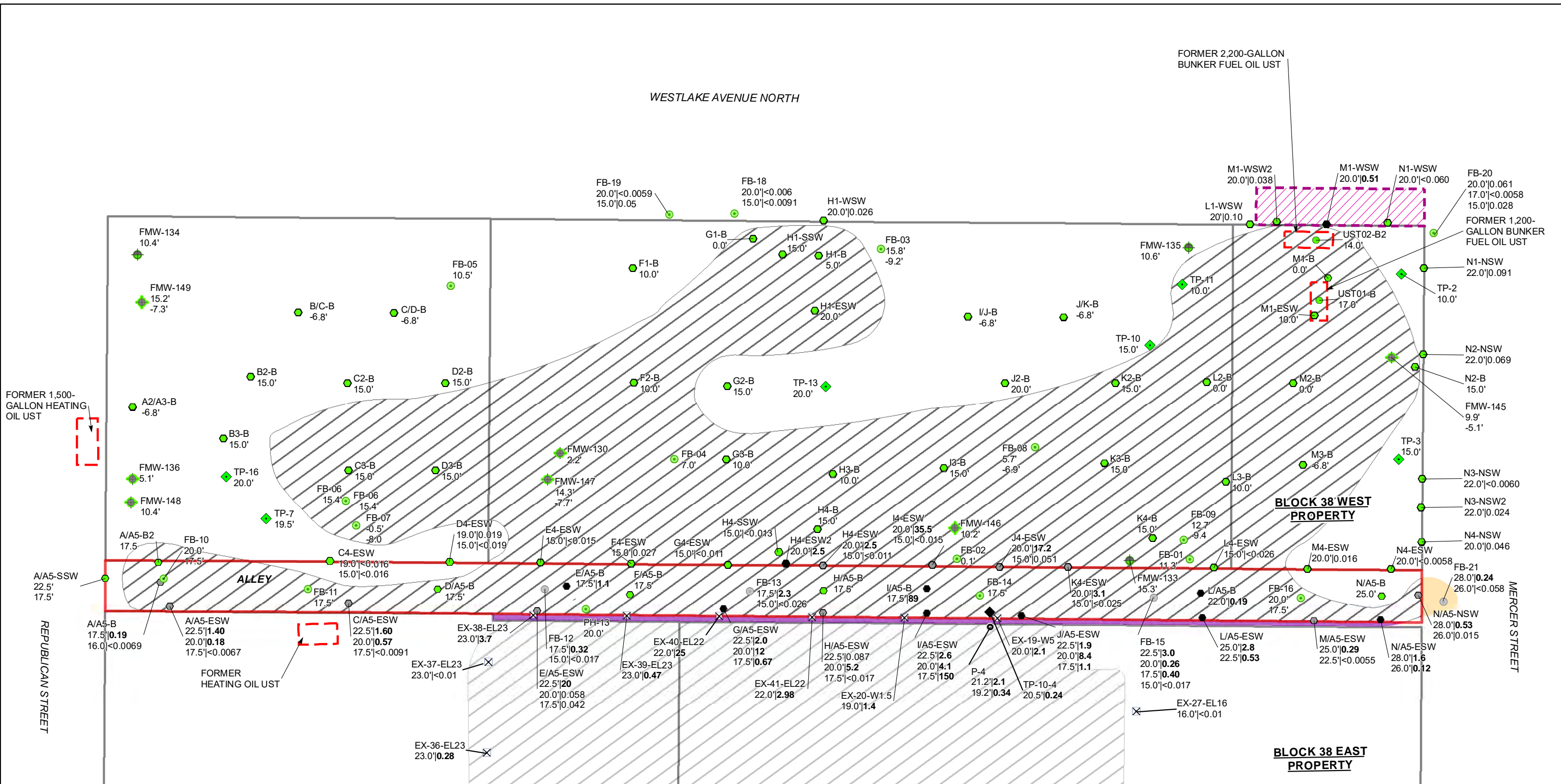
**SEATTLE, WASHINGTON**

FARALLON PN: 397-019

Checked By: CS  
 Date: 8/3/2022  
 Document Path: Q:\Projects\397 VULCAN\019\_Block38\Mapfiles\17\2022-06\Figure-20\_Soil-Naphthalenes\_Conf.mxd

Disc Reference:





- LEGEND**
- BORING (FARALLON)
  - ⊕ DECOMMISSIONED SHALLOW WATER-BEARING ZONE WELL
  - ⊕ DECOMMISSIONED INTERMEDIATE WATER-BEARING ZONE WELL
  - UST SAMPLE LOCATION (FARALLON)
  - EXCAVATION SAMPLE LOCATION (FARALLON)
  - ◆ TEST PIT (FARALLON)
  - ⊗ EXCAVATION SAMPLE (GEOENGINEERS)
  - ▨ MECHANICAL EQUIPMENT AREA DECOMMISSIONED AND FILLED WITH CDF
  - ▭ ALLEY BOUNDARY
  - ▭ FORMER UNDERGROUND STORAGE TANKS (USTs)
  - ▭ KING COUNTY PARCEL BOUNDARY
  - DENOTES SAMPLE LOCATION AND ELEVATION IN FEET NAVD88 WHERE cPAH TEC RESULTS ARE LESS THAN THE MTCA SCREENING LEVEL
  - DENOTES SAMPLE LOCATIONS WHERE cPAH TEC RESULTS EITHER EXCEED OR ARE LESS THAN MTCA SCREENING LEVELS AT DIFFERENT DEPTH ELEVATIONS IN FEET NAVD88
  - DENOTES SAMPLE LOCATION AND ELEVATION IN FEET NAVD88 WHERE cPAH TEC RESULTS EXCEEDED THE MTCA SCREENING LEVEL
  - ESTIMATED EXTENT OF SOIL EXCEEDING THE SCREENING LEVEL AT THE BASE OF THE EXCAVATION
  - ESTIMATED EXTENT OF SOIL EXCEEDING THE SCREENING LEVEL THAT WAS EXCAVATED AND REMOVED
  - ESTIMATED EXTENT OF 1-2 FOOT WEDGE OF SOIL EXCEEDING THE SCREENING LEVEL DUE TO UTILITY BANK

**NOTES:**

FOR BLOCK 38 WEST SOIL SAMPLES:  
 DEPTH AND CONCENTRATIONS REPORTED AS:  
 ELEVATION IN FEET NAVD88 | cPAH TEC ANALYTICAL RESULTS IN MILLIGRAMS PER KILOGRAM (mg/kg)  
 THE CONFIRMATION SAMPLES WERE SELECTED BASED ON LOWEST ELEVATION WITHIN MASS EXCAVATION (GENERALLY 15-10' NAVD88) AND IF AVAILABLE WE REPORTED A CONFIRMATION SAMPLE AT/BENEATH THE BUILDING FOUNDATION ELEVATION.  
 INTERIOR DATA LOCATIONS FOR THE BLOCK 38 WEST PROPERTY ARE SHOWN BASED ON ECOLOGY COMMENTS ON THE ALLEY IAWP (FEBRUARY, 2021)

FOR BLOCK 38 WEST INTERIOR SAMPLES:  
 15' = DENOTES SAMPLE ELEVATION IN FEET NAVD88  
**BOLD** = DENOTES ELEVATION AND CONCENTRATIONS THAT EXCEED THE SCREENING LEVEL (MTCA METHOD A CLEANUP LEVEL)  
 < = DENOTES ANALYTE NOT DETECTED AT OR EXCEEDING THE REPORTING LIMIT LISTED FOR TOTAL TOXIC EQUIVALENT CONCENTRATION OF BENZO(A)PYRENE (mg/kg)

CDF = CONTROLLED DENSITY FILL  
 cPAHs = CARCINOGENIC POLYCYCLIC AROMATIC HYDROCARBONS  
 TEC = TOXIC EQUIVALENT CONCENTRATION OF BENZO(A)PYRENE FOR cPAH MIXTURE  
 MTCA = WASHINGTON STATE MODEL TOXICS CONTROL ACT CLEANUP REGULATION  
 NAVD88 = NORTH AMERICAN VERTICAL DATUM OF 1988

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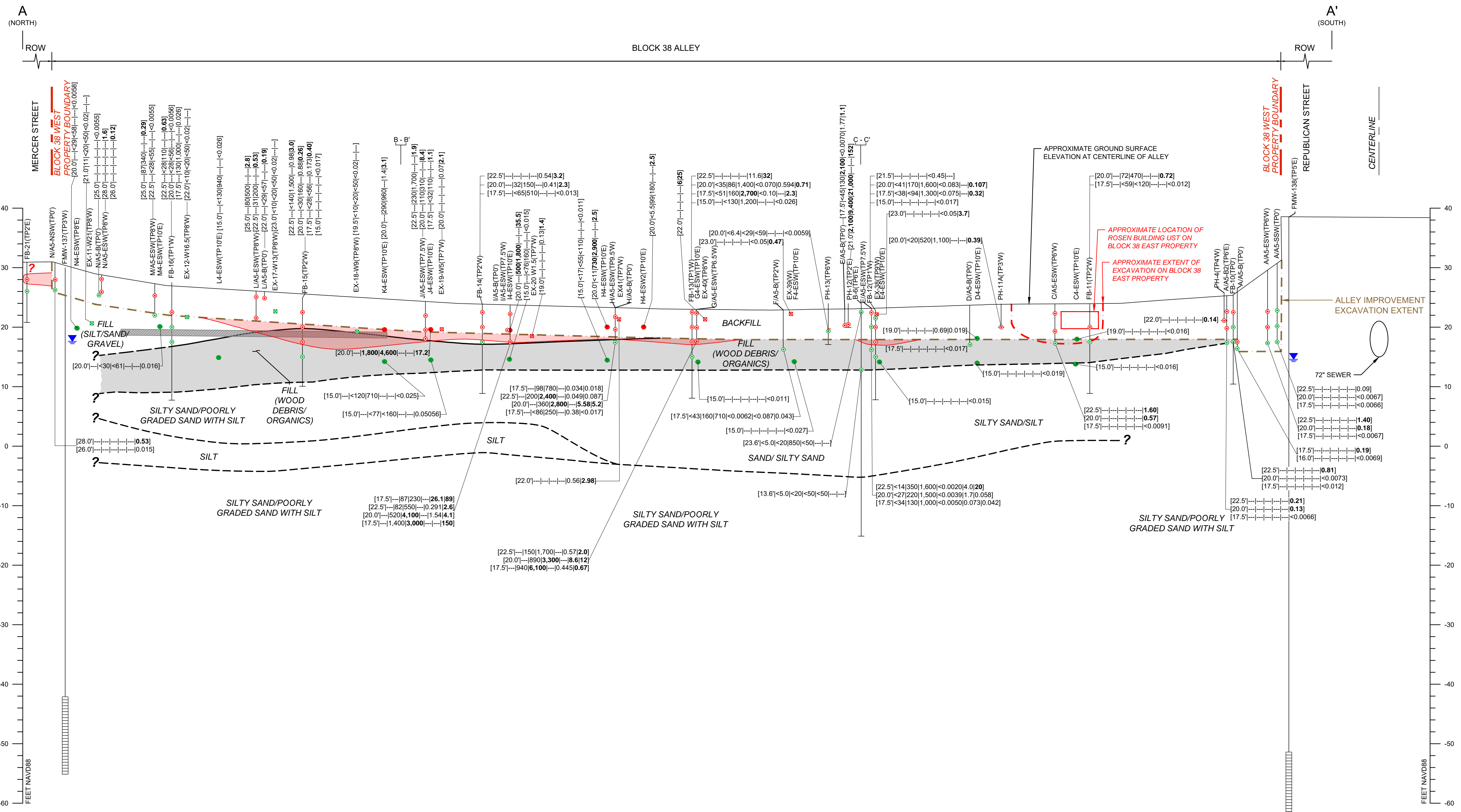
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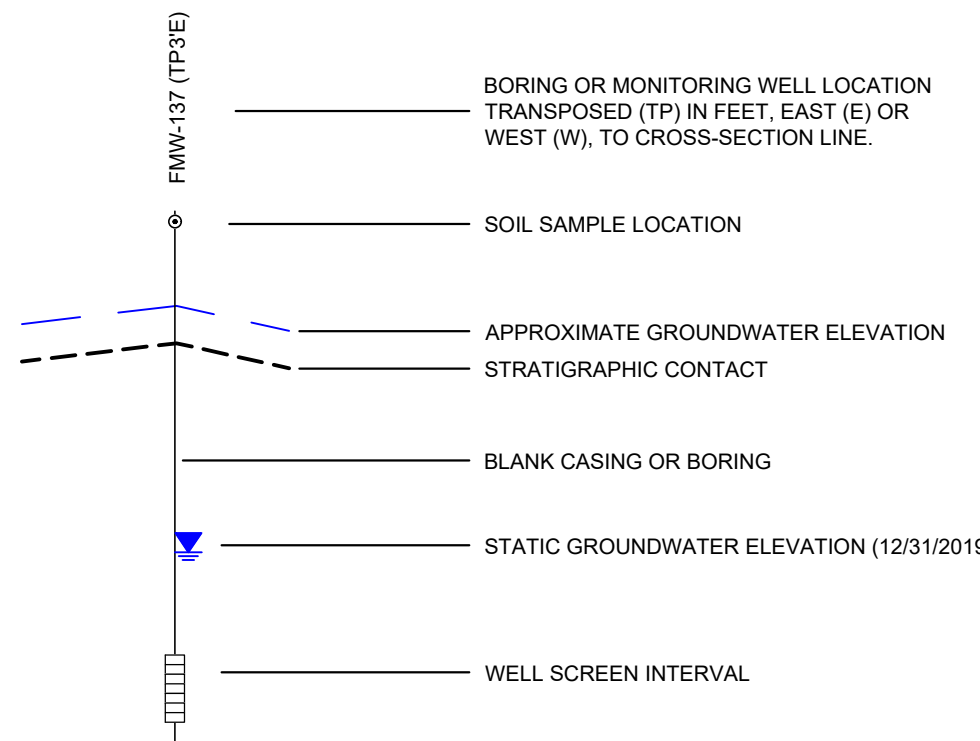
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**FIGURE 21**  
**CONFIRMATION SOIL SAMPLE RESULTS FOR cPAH TEC BLOCK 38 ALLEY SEATTLE, WASHINGTON**  
 FARALLON PN: 397-019





**LEGEND**

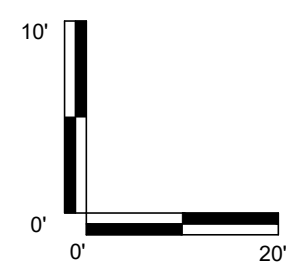


ALL SOIL ANALYTICAL RESULTS IN MILLIGRAMS PER KILOGRAM (mg/kg)  
 SOIL ANALYTICAL RESULT:  
 [ELEVATION NAVD88][GRO][DRO][BENZENE][TOTAL NAPHTHALENES][PAH TEC]  
 GRO = TOTAL PETROLEUM HYDROCARBONS (TPH) AS GASOLINE-RANGE ORGANICS  
 DRO = TPH AS DIESEL-RANGE ORGANICS  
 ORO = TPH AS OIL-RANGE ORGANICS  
 TOTAL NAPHTHALENES = SUM OF NAPHTHALENE, 1-METHYLNAPHTHALENE, AND 2-METHYLNAPHTHALENE  
 cPAH TEC = CARCINOGENIC POLYCYCLIC AROMATIC HYDROCARBONS TOXIC EQUIVALENT CONCENTRATION  
**BOLD** = INDICATES CONCENTRATIONS THAT EXCEEDED THE WASHINGTON STATE MODEL TOXICS CONTROL ACT CLEANUP REGULATION (MTCA) SCREENING LEVELS  
 --- = SAMPLE NOT ANALYZED FOR CONSTITUENT  
 < = DENOTES ANALYTE NOT DETECTED AT OR EXCEEDING THE REPORTING LIMIT LISTED  
 NAVD88 = NORTH AMERICAN VERTICAL DATUM OF 1988

APPROXIMATE AREA OF WOOD DEBRIS/ORGANICS LAYER  
 ESTIMATED EXTENT OF SOIL EXCEEDING MTCA SCREENING LEVELS  
 ESTIMATED EXTENT OF COAL/CHARCOAL LAYER

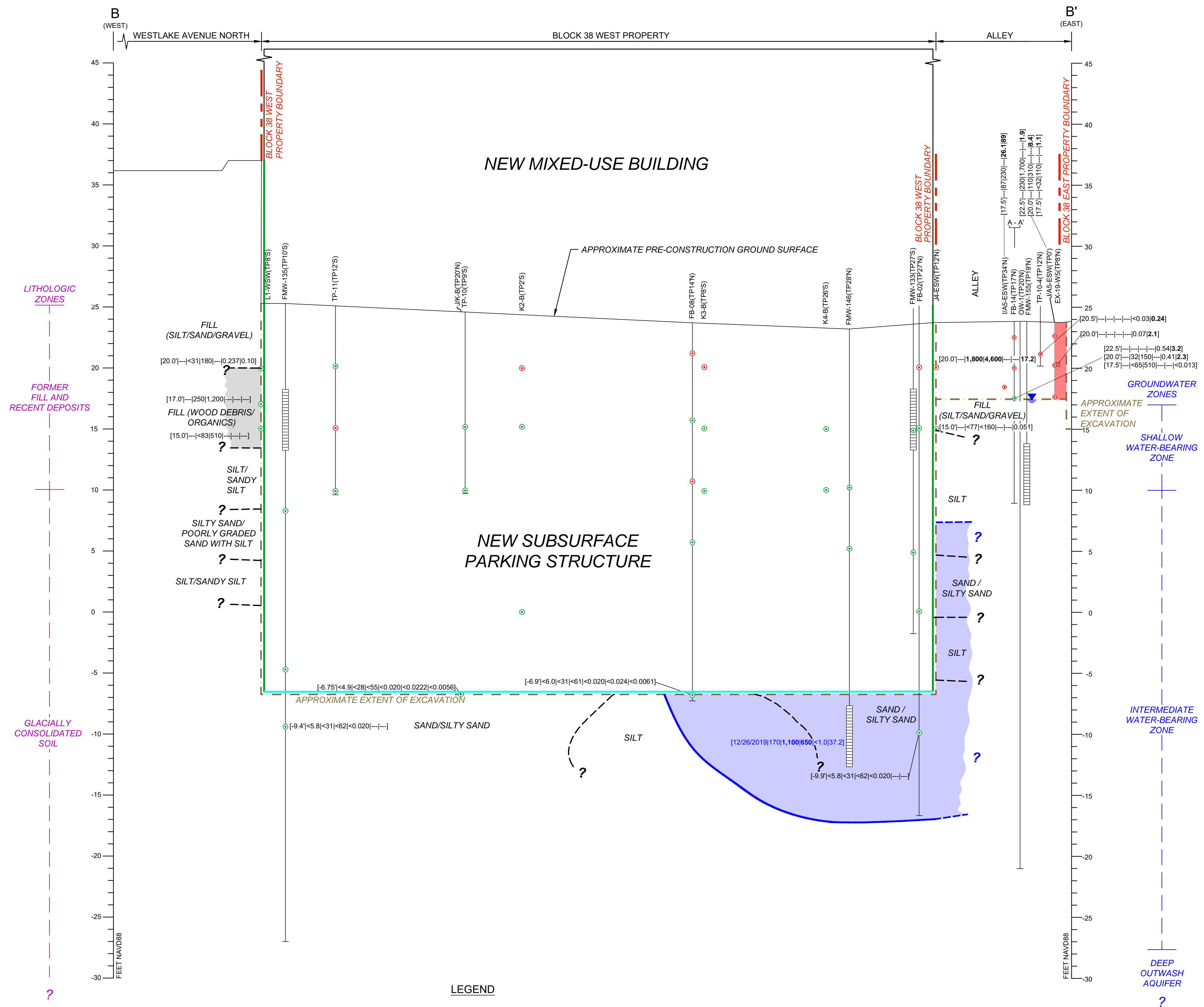
**RED** INDICATES CONCENTRATIONS OF HAZARDOUS SUBSTANCES EXCEEDING THE APPLICABLE MTCA SCREENING LEVELS  
**GREEN** INDICATES HAZARDOUS SUBSTANCES ANALYZED DID NOT EXCEED THE APPLICABLE MTCA SCREENING LEVELS

⊗ EXCAVATION BORING (FARALLON)  
 ● EXCAVATION SAMPLE (FARALLON)



**FIGURE 22**  
 POST-EXCAVATION CROSS SECTION A-A'  
 BLOCK 38 ALLEY  
 SEATTLE, WASHINGTON  
 FARALLON PN-397-019  
 Date: 07/25/2022

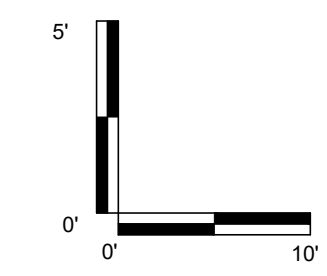
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**LEGEND**

- BORING OR MONITORING WELL LOCATION  
TRANSPOSED (TP) IN FEET, NORTH (N) OR SOUTH (S), TO CROSS-SECTION LINE
- INDICATES CONCENTRATIONS OF ONE OR MORE COPCS EXCEEDED THE APPLICABLE MTCA SCREENING LEVELS
- INDICATES CONCENTRATIONS OF COPCS ANALYZED DID NOT EXCEED THE APPLICABLE MTCA SCREENING LEVELS
- APPROXIMATE GROUNDWATER ELEVATION
- STRATIGRAPHIC CONTACT
- BLANK CASING OR BORING
- WELL SCREEN INTERVAL

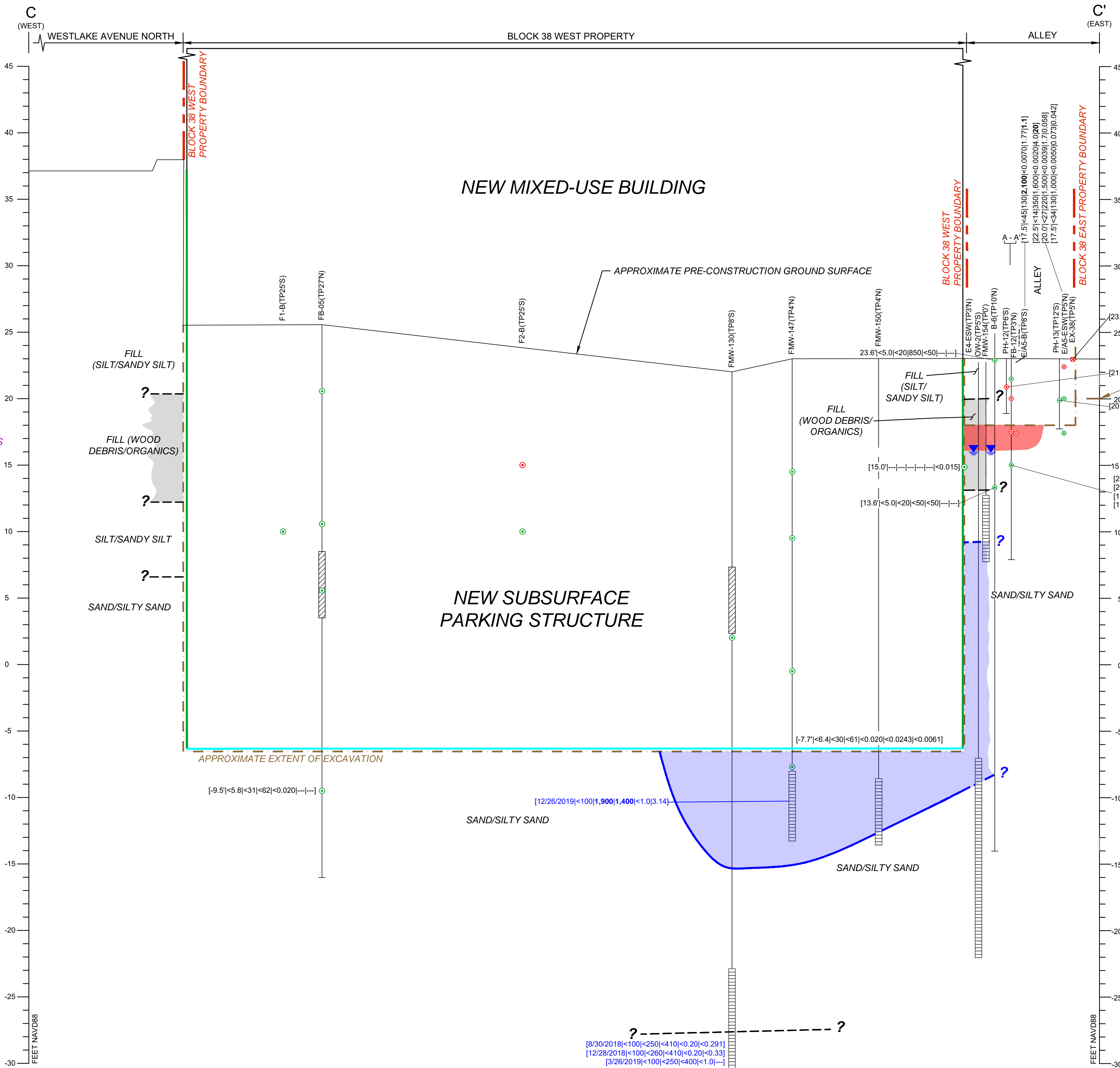
- ESTIMATED EXTENT OF GROUNDWATER EXCEEDING SCREENING LEVELS
  - ESTIMATED EXTENT OF SOIL EXCEEDING MTCA SCREENING LEVELS
  - VERTICAL VAPOR/GROUNDWATER BARRIER SYSTEM
  - SUB-SLAB VAPOR BARRIER SYSTEM
- ALL GROUNDWATER ANALYTICAL RESULTS IN MICROGRAMS PER LITER (µg/l)  
 [12/26/2019]170[1,100]650[<1.0]37.2] GROUNDWATER ANALYTICAL RESULT [DATE SAMPLED]GRO[DRO]ORO[BENZENE]TOTAL NAPHTHALENES]  
 ALL SOIL ANALYTICAL RESULTS IN MILLIGRAMS PER KILOGRAM (mg/kg)  
 [9.9]5.8[<31]62[<0.020]---] SOIL ANALYTICAL RESULT [ELEVATION IN FEET NAVD88]GRO[DRO]ORO[BENZENE]TOTAL NAPHTHALENES;PAH TEC]  
 GRO = TOTAL PETROLEUM HYDROCARBONS (TPH) AS GASOLINE-RANGE ORGANICS  
 DRO = TPH AS DIESEL-RANGE ORGANICS  
 ORO = TPH AS OIL-RANGE ORGANICS  
 TOTAL NAPHTHALENES = SUM OF NAPHTHALENE, 1-METHYLNAPHTHALENE, AND 2-METHYLNAPHTHALENE  
 cPAH TEC = CARCINOGENIC POLYCYCLIC AROMATIC HYDROCARBONS TOXIC EQUIVALENT CONCENTRATION  
**BOLD** = DENOTES CONCENTRATIONS THAT EXCEED THE SCREENING LEVELS (MTCA METHOD A CLEANUP LEVELS)  
 --- = SAMPLE NOT ANALYZED FOR CONSTITUENT  
 < = DENOTES ANALYTE NOT DETECTED AT OR EXCEEDING THE REPORTING LIMIT LISTED  
 NAVD88 = NORTH AMERICAN VERTICAL DATUM OF 1988  
 COPC = CONSTITUENT OF POTENTIAL CONCERN



**FIGURE 23**  
 POST-EXCAVATION CROSS SECTION B-B'  
 BLOCK 38 ALLEY  
 SEATTLE, WASHINGTON  
 FARALLON PN:397-019  
 Date: 08/03/2022

Drawn By: NM Checked By: CS



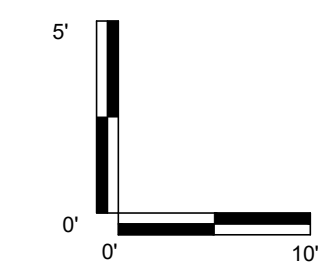


**LEGEND**

ALL GROUNDWATER ANALYTICAL RESULTS IN MICROGRAMS PER LITER (µg/l)  
 [12/26/2019]<100|1,900|1,400|<1.03|14| GROUNDWATER ANALYTICAL RESULT [DATE SAMPLED][GRO][DRO][ORO][BENZENE][TOTAL NAPHTHALENES]  
 ALL SOIL ANALYTICAL RESULTS IN MILLIGRAMS PER KILOGRAM (mg/kg)  
 [9.5|<5.8|<31|<62|<0.020|<1|<1] SOIL ANALYTICAL RESULT [ELEVATION IN FEET NAVD88][GRO][DRO][ORO][BENZENE][TOTAL NAPHTHALENES][PAH TEC]  
 GRO = TOTAL PETROLEUM HYDROCARBONS (TPH) AS GASOLINE-RANGE ORGANICS  
 DRO = TPH AS DIESEL-RANGE ORGANICS  
 ORO = TPH AS OIL-RANGE ORGANICS  
 TOTAL NAPHTHALENES = SUM OF NAPHTHALENE, 1-METHYLNAPHTHALENE, AND 2-METHYLNAPHTHALENE  
 pPAH TEC = CARCINOGENIC POLYCYCLIC AROMATIC HYDROCARBONS TOXIC EQUIVALENT CONCENTRATION  
**BOLD** = DENOTES CONCENTRATIONS THAT EXCEEDED THE SCREENING LEVELS (MTCA METHOD A CLEANUP LEVELS)  
 --- = SAMPLE NOT ANALYZED FOR CONSTITUENT  
 < = DENOTES ANALYTE NOT DETECTED AT OR EXCEEDING THE REPORTING LIMIT LISTED  
 NAVD88 = NORTH AMERICAN VERTICAL DATUM OF 1988  
 COPC = CONSTITUENT OF POTENTIAL CONCERN

- ESTIMATED EXTENT OF GROUNDWATER EXCEEDING SCREENING LEVELS
- ESTIMATED EXTENT OF SOIL EXCEEDING MTCA SCREENING LEVELS
- VERTICAL VAPOR/GROUNDWATER BARRIER SYSTEM
- SUB-SLAB VAPOR BARRIER SYSTEM

- BORING OR MONITORING WELL LOCATION TRANSPOSED (TP) IN FEET, NORTH (N) OR SOUTH (S), TO CROSS-SECTION LINE
- INDICATES CONCENTRATIONS OF ONE OR MORE COPCS EXCEEDED THE APPLICABLE MTCA SCREENING LEVELS
- INDICATES CONCENTRATIONS OF COPCS ANALYZED DID NOT EXCEED THE APPLICABLE MTCA SCREENING LEVELS
- APPROXIMATE GROUNDWATER ELEVATION
- STRATIGRAPHIC CONTACT
- BLANK CASING OR BORING
- WELL SCREEN INTERVAL
- TEMPORARY SCREEN INTERVAL



**FIGURE 24**  
 POST-EXCAVATION CROSS SECTION C-C'  
 BLOCK 38 ALLEY  
 SEATTLE, WASHINGTON  
 FARALLON PN-397-019  
 Date: 08/03/2022

## **TABLES**

**INTERIM ACTION REPORT  
Alley Area of Block 38 West Site  
Between Republican Street and Mercer Street  
Seattle, Washington**

Farallon PN: 397-019

**Table 1**  
**Soil Analytical Results for TPH and BTEX**  
**Alley Area of Block 38 West Site**  
**Seattle, Washington**  
**Farallon PN: 397-019**

Sample Location	Sample Identification	General Location	Sample Type	Sample Location Disposition	Sample Depth (feet) <sup>1</sup>	Sample Elevation (feet NAVD88) <sup>1</sup>	Sample Date	Analytical Results (milligrams per kilogram)									
								NWTPH-Dx <sup>2</sup>		Total NWTPH-Dx <sup>3</sup>	NWTPH-Dx with Silica Gel <sup>2</sup>		NWTPH-Gx <sup>4</sup>	EPA Method 8021B/8260 <sup>5</sup>			
								DRO	ORO		DRO	ORO		GRO	Benzene	Toluene	Ethylbenzene
Alley																	
B-6	B-6-3	Alley	Performance	Removed	3.0	23.6	12/29/1998	< 20	850	850	---	---	< 5.0	< 50	< 50	< 50	< 50
	B-6-13	Alley	Confirmation	Removed	13.0	13.6	12/29/1998	< 20	< 50	< 70	---	---	< 5.0	< 50	< 50	< 50	< 50
FB-11	FB-11-20.0	Alley	Performance	Removed	---	20.0	9/12/2020	72 N	470	542	---	---	---	---	---	---	---
	FB-11-17.5	Alley	Confirmation	Removed	---	17.5	9/12/2020	< 59	< 120	< 179	---	---	---	---	---	---	---
FB-12	FB-12-20.0	Alley	Performance	Removed	---	20.0	9/13/2020	170 N	1,600	1,770	---	---	< 41	< 0.083	< 0.41	< 0.41	< 0.82
	FB-12-17.5	Alley	Confirmation	Removed	---	17.5	9/13/2020	< 94	1,300	1,300	---	---	< 38	< 0.075	< 0.38	< 0.38	< 0.76
FB-13	FB-13-20.0	Alley	Performance	Removed	---	20.0	9/12/2020	86 N	1,400	1,486	---	---	< 35	< 0.070	< 0.35	< 0.35	< 0.70
	FB-13-17.5	Alley	Performance	Removed	---	17.5	9/12/2020	160 N	<b>2,700</b>	<b>2,860</b>	---	---	< 51	< 0.10	< 0.51	< 0.51	< 1.02
	FB-13-15.0	Alley	Confirmation	In Place	---	15.0	9/12/2020	< 130	1,200	1,200	---	---	---	---	---	---	---
FB-14	FB-14-20.0	Alley	Performance	Removed	---	20.0	9/12/2020	32 N	150	182	---	---	---	---	---	---	---
	FB-14-17.5	Alley	Confirmation	Removed	---	17.5	9/13/2020	< 65	510	510	---	---	---	---	---	---	---
FB-15	FB-15-22.5	Alley	Performance	Removed	---	22.5	9/13/2020	< 140	1,500	1,500	---	---	---	---	---	---	---
	FB-15-20.0	Alley	Confirmation	Removed	---	20.0	9/13/2020	< 30	160	160	---	---	---	---	---	---	---
	FB-15-17.5	Alley	Confirmation	In Place	---	17.5	9/13/2020	< 28	< 56	< 84	---	---	---	---	---	---	---
FB-16	FB-16-22.5	Alley	Performance	Removed	---	22.5	9/13/2020	< 28	110	110	---	---	---	---	---	---	---
	FB-16-20.0	Alley	Confirmation	Removed	---	20.0	9/13/2020	< 28	< 56	< 84	---	---	---	---	---	---	---
	FB-16-17.5	Alley	Confirmation	In Place	---	17.5	9/13/2020	130 N	1,000	1,130	---	---	---	---	---	---	---
PH-11A	PH-11A-4.0-011919	Alley	Performance	Removed	4.0	20.0	1/19/2019	520 N	1,100	1,620	---	---	< 20	---	---	---	---
PH-12	PH-12-4.0-011919	Alley	Performance	Removed	4.0	21.0	1/19/2019	<b>9,400 N,M</b>	<b>21,000</b>	<b>30,400</b>	---	---	<b>2,100</b>	---	---	---	---
PH-13	PH-13-3.0-011219	Alley	Performance	Removed	3.0	20.0	1/12/2019	< 29	< 59	< 88	---	---	< 6.4	---	---	---	---
E/A5-B	E/A5-B-17.5	Alley	Confirmation	In Place	---	17.5	6/28/2021	130 N	<b>2,100</b>	<b>2,230</b>	---	---	< 45	< 0.0070	< 0.035	< 0.0070	< 0.021
E/A5-ESW	E/A5-ESW-22.5-050421	Alley	Confirmation	In Place	---	22.5	5/4/2021	350 N	1,600	1,950	---	---	< 14	< 0.0020	< 0.010	< 0.0020	< 0.0061
	E/A5-ESW-20.0-050421	Alley	Confirmation	In Place	---	20.0	5/4/2021	220 N	1,500	1,720	---	---	< 27	< 0.0039	< 0.019	< 0.0039	< 0.0117
	E/A5-ESW-17.5-050421	Alley	Confirmation	In Place	---	17.5	5/4/2021	130 N	1,000	1,130	---	---	< 34	< 0.0050	< 0.025	< 0.0050	< 0.015
F/A5-B	F/A5-B-17.5	Alley	Confirmation	In Place	---	17.5	6/28/2021	160 N	710	870	---	---	< 43	< 0.0062	< 0.031	< 0.0062	< 0.0182
G/A5-ESW	G/A5-ESW-22.5-070621	Alley	Confirmation	In Place	---	22.5	7/6/2021	150 N	1,700	1,850	---	---	---	---	---	---	---
	G/A5-ESW-20.0-070621	Alley	Confirmation	In Place	---	20.0	7/6/2021	890 N	<b>3,300</b>	<b>4,190</b>	---	---	---	---	---	---	---
	G/A5-ESW-17.5-070621	Alley	Confirmation	In Place	---	17.5	7/6/2021	940 N	<b>6,100</b>	<b>7,040</b>	---	---	---	---	---	---	---
H/A5-B	H/A5-B-17.5-070621	Alley	Confirmation	In Place	---	17.5	7/6/2021	98 N	780	878	---	---	---	---	---	---	---
H/A5-ESW	H/A5-ESW-22.5-070621	Alley	Confirmation	In Place	---	22.5	7/6/2021	200 N	<b>2,400</b>	<b>2,600</b>	---	---	---	---	---	---	---
	H/A5-ESW-20.0-070621	Alley	Confirmation	In Place	---	20.0	7/6/2021	360 N	<b>2,800</b>	<b>3,160</b>	---	---	---	---	---	---	---
	H/A5-ESW-17.5-070621	Alley	Confirmation	In Place	---	17.5	7/6/2021	< 86	250	250	---	---	---	---	---	---	---
I/A5-B	I/A5-B-17.5-070921	Alley	Confirmation	In Place	---	17.5	7/9/2021	87 N	230	317	---	---	---	---	---	---	---
I/A5-ESW	I/A5-ESW-22.5-070921	Alley	Confirmation	In Place	---	22.5	7/9/2021	82 N	550	632	---	---	---	---	---	---	---
	I/A5-ESW-20.0-070921	Alley	Confirmation	In Place	---	20.0	7/9/2021	520 N	<b>4,100</b>	<b>4,620</b>	---	---	---	---	---	---	---
	I/A5-ESW-17.5-070921	Alley	Confirmation	In Place	---	17.5	7/9/2021	1,400 N	<b>3,000</b>	<b>4,400</b>	---	---	---	---	---	---	---
J/A5-ESW	J/A5-ESW-22.5-070921	Alley	Confirmation	In Place	---	22.5	7/9/2021	230 N	1,700	1,930	---	---	---	---	---	---	---
	J/A5-ESW-20.0-070921	Alley	Confirmation	In Place	---	20.0	7/9/2021	110 N	310	420	---	---	---	---	---	---	---
	J/A5-ESW-17.5-070921	Alley	Confirmation	In Place	---	17.5	7/9/2021	< 32	110	110	---	---	---	---	---	---	---
L/A5-B	L/A5-B-22.0-071221	Alley	Confirmation	Removed	---	22.0	7/12/2021	< 29	< 57	< 86	---	---	---	---	---	---	
L/A5-ESW	L/A5-ESW-25.0-071221	Alley	Confirmation	In Place	---	25.0	7/12/2021	80 N	500	580	---	---	---	---	---	---	---
	L/A5-ESW-22.5-071221	Alley	Confirmation	In Place	---	22.5	7/12/2021	31 N	200	231	---	---	---	---	---	---	---
M/A5-ESW	M/A5-ESW-25.0-071521	Alley	Confirmation	In Place	---	25.0	7/15/2021	87 N	340	427	---	---	---	---	---	---	---
	M/A5-ESW-22.5-071521	Alley	Confirmation	In Place	---	22.5	7/15/2021	< 28	< 55	< 83	---	---	---	---	---	---	---
<b>Screening Levels<sup>6</sup></b>								<b>2,000</b>	<b>2,000</b>	<b>2,000</b>	<b>2,000</b>		<b>30/100<sup>7</sup></b>	<b>0.03</b>	<b>7</b>	<b>6</b>	<b>9</b>

**Table 1**  
**Soil Analytical Results for TPH and BTEX**  
**Alley Area of Block 38 West Site**  
**Seattle, Washington**  
**Farallon PN: 397-019**

Sample Location	Sample Identification	General Location	Sample Type	Sample Location Disposition	Sample Depth (feet) <sup>1</sup>	Sample Elevation (feet NAVD88) <sup>1</sup>	Sample Date	Analytical Results (milligrams per kilogram)									
								NWTPH-Dx <sup>2</sup>		Total NWTPH-Dx <sup>3</sup>	NWTPH-Dx with Silica Gel <sup>2</sup>		NWTPH-Gx <sup>4</sup>	EPA Method 8021B/8260 <sup>5</sup>			
								DRO	ORO		DRO	ORO		GRO	Benzene	Toluene	Ethylbenzene
<b>Block 38 West Property</b>																	
FB-01	FB-01-5.0-082118	Interior	Performance	Removed	5.0	21.3	8/21/2018	520	<b>3,700</b>	<b>4,220</b>	510 N	1,100	< 6.2	< 0.020	< 0.062	< 0.062	< 0.124
	FB-01-15.0-082118	Interior	Confirmation	Removed	15.0	11.3	8/21/2018	< 40	250	250	< 40	< 81	< 9.1	< 0.020	< 0.091	< 0.091	< 0.182
	FB-01-30.0-082118	Interior	Confirmation	Removed	30.0	-3.7	8/21/2018	< 29	< 58	< 87	---	---	< 5.1	< 0.020	< 0.051	< 0.051	< 0.102
FB-02	FB-02-5.0-082018	Interior	Performance	Removed	5.0	20.1	8/20/2018	280 N	670	950	---	---	< 5.4	< 0.020	< 0.054	< 0.054	< 0.108
	FB-02-10.0-082018	Interior	Confirmation	Removed	10.0	15.1	8/20/2018	< 61	270	270	---	---	< 19	< 0.037	< 0.19	< 0.19	< 0.38
	FB-02-25.0-082018	Interior	Confirmation	Removed	25.0	0.1	8/20/2018	< 30	< 60	< 90	---	---	< 5.2	< 0.020	< 0.052	< 0.052	< 0.104
	FB-02-35.0-082018	Interior	Confirmation	In Place	35.0	-9.9	8/20/2018	< 31	< 62	< 93	---	---	< 5.8	< 0.020	< 0.058	< 0.058	< 0.116
FB-03	FB-03-10.0-082318	Interior	Confirmation	Removed	10.0	15.8	8/23/2018	< 32	< 65	< 97	---	---	< 6.5	< 0.020	< 0.065	< 0.065	< 0.130
	FB-03-15.0-082318	Interior	Confirmation	Removed	15.0	10.8	8/23/2018	< 32	< 65	< 97	---	---	< 6.5	< 0.020	< 0.065	< 0.065	< 0.130
	FB-03-25.0-082318	Interior	Confirmation	Removed	25.0	0.8	8/23/2018	< 29	< 59	< 88	---	---	< 5.5	< 0.020	< 0.055	< 0.055	< 0.110
FB-04	FB-04-5.0-082118	Interior	Confirmation	Removed	5.0	17.0	8/21/2018	97 N	540	637	---	---	< 16	< 0.033	< 0.16	< 0.16	< 0.32
	FB-04-20.0-082118	Interior	Confirmation	Removed	20.0	2.0	8/21/2018	< 29	< 58	< 87	---	---	< 5.3	< 0.020	< 0.053	< 0.053	< 0.106
	FB-04-30.0-082118	Interior	Confirmation	In Place	30.0	-8.0	8/21/2018	< 30	< 59	< 89	---	---	< 5.5	< 0.020	< 0.055	< 0.055	< 0.110
FB-05	FB-05-5.0-082218	Interior	Confirmation	Removed	5.0	20.5	8/22/2018	< 31	< 61	< 92	---	---	< 5.4	< 0.020	< 0.054	< 0.054	< 0.108
	FB-05-20.0-082218	Interior	Confirmation	Removed	20.0	5.5	8/22/2018	< 31	< 61	< 92	---	---	< 5.5	< 0.020	< 0.055	< 0.055	< 0.110
	FB-05-35.0-082218	Interior	Confirmation	In Place	35.0	-9.5	8/22/2018	< 31	< 62	< 93	---	---	< 5.8	< 0.020	< 0.058	< 0.058	< 0.116
FB-06	FB-06-2.5-082218	Interior	Confirmation	Removed	2.5	22.9	8/22/2018	180	310	490	---	---	17 T	< 0.024	< 0.12	< 0.12	< 0.24
	FB-06-20.0-082218	Interior	Confirmation	Removed	20.0	5.4	8/22/2018	< 30	< 61	< 91	---	---	< 5.3	< 0.020	< 0.053	< 0.053	< 0.106
FB-07	FB-07-24	Interior	Confirmation	Removed	24.0	-0.5	12/21/2019	< 30	< 60	< 90	---	---	< 6.0	< 0.020	< 0.060	< 0.060	< 0.12
	FB-07-29	Interior	Confirmation	Removed	29.0	-5.5	12/21/2019	< 30	< 60	< 90	---	---	< 5.4	< 0.020	< 0.054	< 0.054	< 0.108
	FB-07-31.5	Interior	Confirmation	In Place	31.5	-8.0	12/21/2019	< 30	< 60	< 90	---	---	< 5.6	< 0.020	< 0.056	< 0.056	< 0.112
FB-08	FB-08-2.5	Interior	Performance	Removed	2.5	21.2	12/21/2019	1,700 N	<b>4,500</b>	<b>6,200</b>	---	---	23 O	<b>0.12</b>	0.49	0.13	0.94
	FB-08-8	Interior	Confirmation	Removed	8.0	15.7	12/21/2019	< 29	< 58	< 87	---	---	< 5.2	< 0.020	< 0.052	< 0.052	< 0.104
	FB-08-13	Interior	Confirmation	Removed	13.0	10.7	12/21/2019	< 31	< 61	< 92	---	---	15 T	< 0.020	< 0.064	< 0.064	< 0.128
	FB-08-18	Interior	Confirmation	Removed	18.0	5.7	12/21/2019	< 29	< 58	< 87	---	---	< 6.1	< 0.020	< 0.061	< 0.061	< 0.122
	FB-08-30.5	Interior	Confirmation	In Place	30.5	-6.9	12/21/2019	< 31	< 61	< 92	---	---	< 6.0	< 0.020	< 0.060	< 0.060	< 0.12
FB-09	FB-09-11	Interior	Confirmation	Removed	11.0	12.7	12/21/2019	< 58	220	220	---	---	< 20	< 0.039	< 0.20	< 0.20	< 0.4
	FB-09-33	Interior	Confirmation	In Place	33.0	-9.4	12/21/2019	< 31	< 62	< 93	---	---	< 5.8	< 0.020	< 0.058	< 0.058	< 0.116
FB-20	FB-20-12-0	Adjacent	---	In Place	12.0	20.0	2/5/2022	< 28	< 56	< 84	---	---	---	---	---	---	---
	FB-20-15.0	Adjacent	---	In Place	15.0	17.0	2/5/2022	< 29	83	83	---	---	---	---	---	---	---
	FB-20-17.0	Adjacent	---	In Place	17.0	15.0	2/5/2022	59 N	210	269	---	---	---	---	---	---	---
FMW-130	F-MW-130-20.0-072114	Interior	Confirmation	Removed	20.0	2.2	7/21/2014	< 30	< 60	< 90	---	---	< 8.8	< 0.020	< 0.088	< 0.088	< 0.176
FMW-132	FMW-132-5.0-082418	Interior	Performance	Removed	5.0	20.7	8/24/2018	730	<b>2,600</b>	<b>3,330</b>	---	---	< 8.4	< 0.020	< 0.084	< 0.084	< 0.168
FMW-133	FMW-133-10.0-082418	Interior	Confirmation	Removed	10.0	15.3	8/24/2018	< 83	470	470	---	---	< 28	< 0.057	< 0.28	< 0.28	< 0.56
FMW-134	FMW-134-5.0-082318	Interior	Performance	Removed	5.0	20.4	8/23/2018	260	1,900	<b>2,160</b>	---	---	< 30	< 0.059	< 0.30	< 0.30	< 0.60
	FMW-134-15.0-082318	Interior	Confirmation	Removed	15.0	10.4	8/23/2018	< 31	< 61	< 92	---	---	< 12	< 0.023	< 0.12	< 0.12	< 0.24
FMW-135	FMW-135-15.0-082418	Interior	Confirmation	Removed	15.0	10.6	8/24/2018	130	680	810	---	---	< 28	< 0.055	< 0.28	< 0.28	< 0.56
	FMW-135-35.0-082418	Interior	Confirmation	In Place	35.0	-9.4	8/24/2018	< 31	< 62	< 93	---	---	< 5.8	< 0.020	< 0.058	< 0.058	< 0.116
FMW-136	FMW-136-10.0-082218	Interior	Confirmation	Removed	10.0	15.1	8/22/2018	< 38	< 76	< 114	---	---	< 9.0	< 0.020	< 0.090	< 0.090	< 0.18
	FMW-136-20.0-082218	Interior	Confirmation	Removed	20.0	5.1	8/22/2018	< 32	< 63	< 95	---	---	< 6.4	< 0.020	< 0.064	< 0.064	< 0.128
	FMW-136-30.0-082218	Interior	Confirmation	Removed	30.0	-4.9	8/22/2018	< 30	< 59	< 89	---	---	< 5.2	< 0.020	< 0.052	< 0.052	< 0.104
FMW-144	FWM-144-9.0	Interior	Confirmation	Removed	9.0	20.4	12/20/2019	< 52	110	110	---	---	< 18	< 0.036	< 0.18	< 0.18	< 0.36
FMW-145	FMW-145-13.0	Interior	Performance	Removed	13.0	9.9	12/20/2019	650	1,400	<b>2,050</b>	---	---	<b>83 O</b>	< 0.020	< 0.075	< 0.075	< 0.15
	FMW-145-18.0	Interior	Confirmation	Removed	18.0	4.9	12/20/2019	58 N	210	268	---	---	< 28 U1	< 0.020	< 0.080	< 0.080	< 0.16
	FMW-145-23.0	Interior	Confirmation	Removed	23.0	-0.1	12/20/2019	< 30	< 60	< 90	---	---	< 5.3	< 0.020	< 0.053	< 0.053	< 0.106
	FMW-145-28.0	Interior	Confirmation	Removed	28.0	-5.1	12/20/2019	< 31	< 61	< 92	---	---	< 6.5	< 0.020	< 0.065	< 0.065	< 0.13
	FMW-145-30.5	Interior	Confirmation	In Place	30.5	-7.6	12/20/2019	< 29	< 57	< 86	---	---	< 4.8	< 0.020	< 0.048	< 0.048	< 0.096
FMW-145-33.0	Interior	Confirmation	In Place	33.0	-10.1	12/20/2019	< 31	< 61	< 92	---	---	< 5.5	< 0.020	< 0.055	< 0.055	< 0.11	
<b>Screening Levels<sup>6</sup></b>								<b>2,000</b>	<b>2,000</b>	<b>2,000</b>	<b>2,000</b>		<b>30/100<sup>7</sup></b>	<b>0.03</b>	<b>7</b>	<b>6</b>	<b>9</b>

**Table 1**  
**Soil Analytical Results for TPH and BTEX**  
**Alley Area of Block 38 West Site**  
**Seattle, Washington**  
**Farallon PN: 397-019**

Sample Location	Sample Identification	General Location	Sample Type	Sample Location Disposition	Sample Depth (feet) <sup>1</sup>	Sample Elevation (feet NAVD88) <sup>1</sup>	Sample Date	Analytical Results (milligrams per kilogram)									
								NWTPH-Dx <sup>2</sup>		Total NWTPH-Dx <sup>3</sup>	NWTPH-Dx with Silica Gel <sup>2</sup>		NWTPH-Gx <sup>4</sup>	EPA Method 8021B/8260 <sup>5</sup>			
								DRO	ORO		DRO	ORO		GRO	Benzene	Toluene	Ethylbenzene
FMW-146	FMW-146-13.0	Interior	Confirmation	Removed	13.0	10.2	12/21/2019	< 34	< 69	< 103	---	---	< 7.0	< 0.020	< 0.070	< 0.070	< 0.14
	FMW-146-18.0	Interior	Confirmation	Removed	18.0	5.2	12/21/2019	< 31	< 62	< 93	---	---	< 5.4	< 0.020	< 0.054	< 0.054	< 0.108
FMW-147	FMW-147-8.5	Interior	Confirmation	Removed	8.5	14.3	12/21/2019	< 120	1,100	1,100	---	---	< 51	< 0.10	< 0.51	< 0.51	< 1.02
	FMW-147-13.5	Interior	Confirmation	Removed	13.5	9.3	12/21/2019	< 31	< 61	< 92	---	---	< 5.5	< 0.020	< 0.055	< 0.055	< 0.11
	FMW-147-23.5	Interior	Confirmation	Removed	23.5	-0.7	12/21/2019	< 30	< 61	< 91	---	---	< 5.1	< 0.020	< 0.051	< 0.051	< 0.102
	FMW-147-30.5	Interior	Confirmation	In Place	30.5	-7.7	12/21/2019	< 30	< 61	< 91	---	---	< 6.4	< 0.020	< 0.064	< 0.064	< 0.128
FMW-148	FMW-148-27.0	Interior	Confirmation	Removed	27.0	10.4	12/22/2019	< 31	< 63	< 94	---	---	< 5.7	< 0.020	< 0.057	< 0.057	< 0.114
FMW-149	FMW-149-21.0	Interior	Confirmation	Removed	21.0	15.2	12/22/2019	< 33	< 66	< 99	---	---	< 7.0	< 0.020	< 0.070	< 0.070	< 0.14
	FMW-149-31.0	Interior	Confirmation	Removed	31.0	5.2	12/22/2019	< 31	< 63	< 94	---	---	< 6.3	< 0.020	< 0.063	< 0.063	< 0.126
	FMW-149-41.0	Interior	Confirmation	Removed	41.0	-4.8	12/22/2019	< 26	< 53	< 79	---	---	< 4.4	< 0.020	< 0.044	< 0.044	< 0.088
	FMW-149-43.5	Interior	Confirmation	In Place	43.5	-7.3	12/22/2019	< 28	< 56	< 84	---	---	< 4.3	< 0.020	< 0.043	< 0.043	< 0.086
A2-B	A2-B-(-5.0)	Interior	Confirmation	Removed	---	-5.0	4/29/2020	< 27	< 53	< 80	---	---	---	---	---	---	---
A2/A3-B	A2/A3-B-(-6.75)	Interior	Confirmation	In Place	---	-6.75	6/3/2020	< 30	< 59	< 89	---	---	< 5.7	< 0.020	< 0.057	< 0.057	< 0.114
A3-Subslab	A3-SUBSLAB-22-010920	Interior	Performance	Removed	---	22.0	1/9/2020	< 76	< 150	< 226	---	---	---	---	---	---	---
	A3-SUBSLAB-25-010920	Interior	Performance	Removed	---	25.0	1/9/2020	82	660	742	---	---	---	---	---	---	---
B/C-B	B/C-B-(-6.75)	Interior	Confirmation	In Place	---	-6.75	6/3/2020	< 29	< 57	< 86	---	---	< 6.1	< 0.020	< 0.061	< 0.061	< 0.122
C/D-B	C/D-B-(-6.75)	Interior	Confirmation	In Place	---	-6.75	6/3/2020	< 28	< 56	< 84	---	---	< 5.6	< 0.020	< 0.056	< 0.056	< 0.112
H3-B	H3-B-20	Interior	Confirmation	Removed	---	20.0	2/20/2020	---	---	---	---	---	< 6.7	---	---	---	---
	H3-B-15.0	Interior	Confirmation	Removed	---	15.0	2/24/2020	< 67	250	250	---	---	< 21	---	---	---	---
H4-22.7	H4-1.0-121319	Interior	Performance	Removed	1.0	22.7	12/13/2019	600 N	<b>5,000</b>	<b>5,600</b>	---	---	<b>31</b>	< 0.022	< 0.11	< 0.11	< 0.22
H4-B	H4-B-20.0	Interior	Confirmation	Removed	---	20.0	2/19/2020	140 N	970	1,110	---	---	< 51	---	---	---	---
	H4-B-15.0	Interior	Confirmation	Removed	---	15.0	2/19/2020	< 90	500	500	---	---	< 31	---	---	---	---
H4-ESW	H4-ESW-20.0	Sidewall	Confirmation	In Place	---	20.0	2/4/2020	730 N	<b>2,900</b>	<b>3,630</b>	---	---	< 11 H	---	---	---	---
	H4-ESW-15.0	Sidewall	Confirmation	In Place	---	15.0	2/26/2020	< 55	< 110	< 165	---	---	< 17	---	---	---	---
H4-ESW2	H4-ESW2-20.0	Sidewall	Confirmation	In Place	---	20.0	2/4/2020	99 N	180	279	---	---	< 5.5 H	---	---	---	---
H4-SSW	H4-SSW-15.0	Interior	Confirmation	Removed	---	15.0	2/27/2020	< 65	170	170	---	---	< 21	---	---	---	---
I2-B	I2-B-10.0	Interior	Confirmation	Removed	---	10.0	2/28/2020	< 28	< 55	< 83	---	---	---	---	---	---	---
I3-B	I3-B-20.0	Interior	Performance	Removed	---	20.0	2/23/2020	< 680	<b>6,200</b>	<b>6,200</b>	---	---	< 15 H	< 0.030 H	< 0.15 H	< 0.15 H	< 0.30 H
	I3-B-15.0	Interior	Confirmation	Removed	---	15.0	2/23/2020	< 76	690	690	---	---	< 26 H	---	---	---	---
	I3-B-DUP-15.0	Interior	Confirmation	Removed	---	15.0	2/24/2020	---	---	---	---	---	23 T	---	---	---	---
I4-ESW	I4-ESW-20.0	Sidewall	Confirmation	In Place	---	20.0	2/4/2020	500 N	1,800	<b>2,300</b>	---	---	---	---	---	---	---
	I4-ESW-15.0	Sidewall	Confirmation	In Place	---	15.0	2/22/2020	< 76	160	160	---	---	---	---	---	---	---
I/J-B	I/J-B-(-6.75)	Interior	Confirmation	In Place	---	-6.75	6/3/2020	< 26	< 53	< 79	---	---	< 5.0	< 0.020	< 0.050	< 0.050	< 0.100
J2-B	J2-B-20.0	Interior	Confirmation	Removed	---	20.0	2/14/2020	< 29	< 58	< 87	---	---	---	< 0.00076	< 0.0038	< 0.00076	< 0.00226
J4-ESW	J4-ESW-20.0	Sidewall	Confirmation	In Place	---	20.0	2/4/2020	1,800 N	<b>4,600</b>	<b>6,400</b>	---	---	---	---	---	---	---
	J4-ESW-15.0	Sidewall	Confirmation	In Place	---	15.0	2/22/2020	< 77	< 160	< 237	---	---	---	---	---	---	---
J/K-B	J/K-B-(-6.75)	Interior	Confirmation	In Place	---	-6.75	6/2/2020	< 28	< 55	< 83	---	---	< 4.9	< 0.020	< 0.049	< 0.049	< 0.098
K1-WSW	K1-WSW-20.0	Sidewall	Confirmation	In Place	---	20.0	2/4/2020	58 N	270	328	---	---	---	---	---	---	---
K2-B	K2-B-20.0	Interior	Confirmation	Removed	---	20.0	2/6/2020	< 56	280	280	---	---	---	< 0.037	< 0.19	< 0.19	< 0.38
K3-B	K3-B-20.0	Interior	Performance	Removed	---	20.0	2/13/2020	<b>2,500 N</b>	<b>9,700</b>	<b>12,200</b>	---	---	---	---	---	---	---
	K3-B-15.0	Interior	Confirmation	Removed	---	15.0	2/24/2020	68 N	830	898	---	---	---	---	---	---	---
	K3-B-10.0	Interior	Confirmation	Removed	---	10.0	2/28/2020	< 32	< 64	< 96	---	---	---	---	---	---	---
K4-B	K4-B-15.0	Interior	Confirmation	Removed	---	15.0	2/26/2020	< 33	< 67	< 100	---	---	---	---	---	---	---
	K4-B-10.0	Interior	Confirmation	Removed	---	10.0	2/26/2020	110	290	400	---	---	---	---	---	---	---
K4-ESW	K4-ESW-20.0	Sidewall	Confirmation	In Place	---	20.0	2/4/2020	290 N	960	1,250	---	---	---	---	---	---	---
	K4-ESW-15.0	Sidewall	Confirmation	In Place	---	15.0	2/22/2020	< 120	710	710	---	---	---	---	---	---	---
<b>Screening Levels<sup>6</sup></b>								<b>2,000</b>	<b>2,000</b>	<b>2,000</b>	<b>2,000</b>		<b>30/100<sup>7</sup></b>	<b>0.03</b>	<b>7</b>	<b>6</b>	<b>9</b>

**Table 1**  
**Soil Analytical Results for TPH and BTEX**  
**Alley Area of Block 38 West Site**  
**Seattle, Washington**  
**Farallon PN: 397-019**

Sample Location	Sample Identification	General Location	Sample Type	Sample Location Disposition	Sample Depth (feet) <sup>1</sup>	Sample Elevation (feet NAVD88) <sup>1</sup>	Sample Date	Analytical Results (milligrams per kilogram)										
								NWTPH-Dx <sup>2</sup>		Total NWTPH-Dx <sup>3</sup>	NWTPH-Dx with Silica Gel <sup>2</sup>		NWTPH-Gx <sup>4</sup>	EPA Method 8021B/8260 <sup>5</sup>				
								DRO	ORO		DRO	ORO		GRO	Benzene	Toluene	Ethylbenzene	Xylenes
L1-B	L1-B-15.0	Interior	Confirmation	Removed	---	15.0	2/24/2020	< 170	560	560	---	---	---	---	---	---	---	---
L1-WSW	L1-WSW-20.0	Sidewall	Confirmation	In Place	---	20.0	2/3/2020	< 31	180	180	---	---	---	---	---	---	---	---
	L1-WSW-17.0	Sidewall	Confirmation	In Place	---	17.0	2/10/2020	250 N	1,200	1,450	---	---	---	---	---	---	---	---
	L1-WSW-15.0	Sidewall	Confirmation	In Place	---	15.0	2/24/2020	< 83	510	510	---	---	---	---	---	---	---	---
L1-WSW2	L1-WSW2-17.0	Sidewall	Confirmation	In Place	---	17.0	2/10/2020	86 N	740	826	---	---	---	---	---	---	---	---
L2-B	L2-B-10.0	Interior	Confirmation	Removed	---	10.0	2/28/2020	< 33	< 67	< 100	---	---	---	---	---	---	---	---
L3-B	L3-B-15.0	Interior	Confirmation	Removed	---	15.0	2/24/2020	< 140	1,300	1,300	---	---	---	---	---	---	---	---
L4-ESW	L4-ESW-15.0	Sidewall	Confirmation	In Place	---	15.0	2/22/2020	< 130	940	940	---	---	---	---	---	---	---	---
M1-B	M1-B-15.0	Interior	Confirmation	Removed	---	15.0	2/24/2020	< 160	470	470	---	---	---	---	---	---	---	---
	M1-B-10	Interior	Confirmation	Removed	---	10.0	2/25/2020	< 31	< 62	< 93	---	---	---	---	---	---	---	---
M1-WSW	M1-WSW-20.0	Sidewall	Confirmation	In Place	---	20.0	2/3/2020	200	220	420	---	---	---	---	---	---	---	---
	M1-WSW-17.0	Sidewall	Confirmation	In Place	---	17.0	2/10/2020	< 29	250	250	---	---	---	---	---	---	---	---
	M1-WSW-15.0	Sidewall	Confirmation	In Place	---	15.0	2/24/2020	160 N	<b>2,100</b>	<b>2,260</b>	---	---	---	---	---	---	---	---
	M1-WSW-10	Sidewall	Confirmation	In Place	---	10.0	2/25/2020	< 36	< 72	< 108	---	---	---	---	---	---	---	---
M1-WSW2	M1-WSW2-20.0	Sidewall	Confirmation	In Place	---	20.0	2/3/2020	< 30	< 61	< 91	---	---	---	---	---	---	---	---
M3-B	M3-B-(-6.75)	Interior	Confirmation	In Place	---	-6.75	5/28/2020	< 29	< 58	< 87	---	---	< 5.2	< 0.020	< 0.052	< 0.052	< 0.104	< 0.104
M4-B	M4-B-12.0	Interior	Confirmation	Removed	---	12.0	2/22/2020	< 76	400	400	---	---	---	---	---	---	---	---
M4-ESW	M4-ESW-20.0	Sidewall	Confirmation	In Place	---	20.0	2/6/2020	< 30	< 61	< 91	---	---	---	---	---	---	---	---
N1-B	N1-B-15.0	Interior	Confirmation	Removed	---	15.0	2/22/2020	< 110	1,900	1,900	---	---	---	---	---	---	---	---
N1-NSW	N1-NSW-22.0	Sidewall	Confirmation	In Place	---	22.0	1/31/2020	< 30	< 61	< 91	---	---	---	---	---	---	---	---
	N1-NSW-15.0	Sidewall	Confirmation	In Place	---	15.0	2/24/2020	< 150	580	580	---	---	---	---	---	---	---	---
N1-ESW	N1-ESW-15.0	Sidewall	Confirmation	In Place	---	15.0	2/22/2020	< 150	1,000	1,000	---	---	---	---	---	---	---	---
N1-WSW	N1-WSW-20.0	Sidewall	Confirmation	In Place	---	20.0	2/3/2020	280 N	1,400	1,680	---	---	---	---	---	---	---	---
	N1-WSW-17.0	Sidewall	Confirmation	In Place	---	17.0	2/10/2020	<b>4,800 N</b>	<b>19,000</b>	<b>23,800</b>	---	---	---	---	---	---	---	---
	N1-WSW-15.0	Sidewall	Confirmation	In Place	---	15.0	2/24/2020	< 79	630	630	---	---	---	---	---	---	---	---
N1-WSW3	N1-WSW3-170	Sidewall	Confirmation	In Place	---	17.0	2/21/2020	< 36	77	77	---	---	---	---	---	---	---	---
N2-B	N2-B-20.0	Interior	Confirmation	Removed	---	20.0	2/6/2020	< 31	< 61	< 92	---	---	---	---	---	---	---	---
	N2-B-15.0	Interior	Confirmation	Removed	---	15.0	2/23/2020	---	---	---	---	---	< 22 H	---	---	---	---	---
	N2-B-DUP-15.0	Interior	Confirmation	Removed	---	15.0	2/24/2020	---	---	---	---	---	< 64	---	---	---	---	---
	N2-B-10.0	Interior	Confirmation	Removed	---	10.0	2/23/2020	< 31	< 62	< 93	---	---	< 12 H	---	---	---	---	---
	N2-B-DUP-10.0	Interior	Confirmation	Removed	---	10.0	2/24/2020	---	---	---	---	---	< 6.4	---	---	---	---	---
N2-NSW	N2-NSW-22.0	Sidewall	Confirmation	In Place	---	22.0	1/31/2020	< 29	83	83	---	---	---	---	---	---	---	---
	N2-NSW-15.0	Sidewall	Confirmation	In Place	---	15.0	2/24/2020	---	---	---	---	---	< 32	---	---	---	---	---
N2-ESW	N2-ESW-10	Interior	Confirmation	Removed	---	10.0	2/25/2020	---	---	---	---	---	< 6.5	---	---	---	---	---
N2-SSW	N2-SSW-10	Interior	Confirmation	Removed	---	10.0	2/25/2020	---	---	---	---	---	< 6.9	---	---	---	---	---
N3-NSW	N3-NSW-20.0-121019	Sidewall	Confirmation	In Place	---	20.0	12/10/2019	< 30 H	< 61 H	< 91	---	---	< 5.7 H	< 0.020 H	< 0.057 H	< 0.057 H	< 0.114 H	< 0.114 H
	N3-NSW-22.0	Sidewall	Confirmation	In Place	---	22.0	1/31/2020	< 30	< 59	< 89	---	---	---	---	---	---	---	---
N3-NSW2	N3-NSW2-22.0	Sidewall	Confirmation	In Place	---	22.0	1/31/2020	< 30	< 60	< 90	---	---	---	---	---	---	---	---
N4-NSW	N4-NSW-20.0	Sidewall	Confirmation	In Place	---	20.0	2/6/2020	< 30	< 60	< 90	---	---	---	---	---	---	---	---
N4-ESW	N4-ESW-20.0	Sidewall	Confirmation	In Place	---	20.0	2/6/2020	< 29	< 58	< 87	---	---	---	---	---	---	---	---
TP-2	TP-2-20.0-121919	Interior	Confirmation	Removed	5.0	20.0	12/19/2019	< 27	210	210	---	---	< 4.2	< 0.020	< 0.042	< 0.042	< 0.084	< 0.084
	TP-2-15.0-121919	Interior	Confirmation	Removed	10.0	15.0	12/19/2019	<b>6,600</b>	<b>9,000</b>	<b>15,600</b>	---	---	< 420 U1	< 0.026	< 0.13	< 0.13	< 0.26	< 0.26
	TP-2-10.0	Interior	Confirmation	Removed	---	10.0	2/13/2020	< 33	< 66	< 99	---	---	< 6.8	---	---	---	---	---
	TP-2-5.0	Interior	Confirmation	Removed	---	5.0	2/13/2020	< 28	< 57	< 85	---	---	< 4.9	---	---	---	---	---
TP-3	TP-3-20.0-121919	Interior	Confirmation	Removed	5.0	20.0	12/19/2019	< 29	< 59	< 88	---	---	< 5.2	< 0.020	< 0.052	< 0.052	< 0.104	< 0.104
	TP-3-15.0-121919	Interior	Confirmation	Removed	10.0	15.0	12/19/2019	< 160	1,700	1,700	---	---	< 59	< 0.12	< 0.59	< 0.59	< 1.18	< 1.18
TP-7	TP-7-4.0	Interior	Confirmation	Removed	4.0	19.5	12/23/2019	< 74	230	230	---	---	< 25	< 0.0044	< 0.022	< 0.0044	< 0.0132	< 0.0132
<b>Screening Levels<sup>6</sup></b>								<b>2,000</b>	<b>2,000</b>	<b>2,000</b>	<b>2,000</b>	<b>30/100<sup>7</sup></b>	<b>0.03</b>	<b>7</b>	<b>6</b>	<b>9</b>		



**Table 1**  
**Soil Analytical Results for TPH and BTEX**  
**Alley Area of Block 38 West Site**  
**Seattle, Washington**  
**Farallon PN: 397-019**

Sample Location	Sample Identification	General Location	Sample Type	Sample Location Disposition	Sample Depth (feet) <sup>1</sup>	Sample Elevation (feet NAVD88) <sup>1</sup>	Sample Date	Analytical Results (milligrams per kilogram)									
								NWTPH-Dx <sup>2</sup>		Total NWTPH-Dx <sup>3</sup>	NWTPH-Dx with Silica Gel <sup>2</sup>		NWTPH-Gx <sup>4</sup>	EPA Method 8021B/8260 <sup>5</sup>			
								DRO	ORO		DRO	ORO		GRO	Benzene	Toluene	Ethylbenzene
TP-10	TP-10-15.0	Interior	Confirmation	Removed	---	15.0	2/4/2020	< 130	370	370	---	---	---	---	---	---	---
TP-11	TP-11-20.0	Interior	Confirmation	Removed	---	20.0	2/4/2020	< 30	190	190	---	---	---	---	---	---	---
	TP-11-15.0	Interior	Confirmation	Removed	---	15.0	2/4/2020	230	680	910	---	---	---	---	---	---	---
TP-13	TP-11-10.0	Interior	Confirmation	Removed	---	10.0	2/4/2020	< 36	< 71	< 107	---	---	---	---	---	---	---
	TP-13-20.0	Interior	Confirmation	Removed	---	20.0	2/7/2020	< 28	< 57	< 85	---	---	---	---	---	---	---
TP-14	TP-13-15.0	Interior	Confirmation	Removed	---	15.0	2/7/2020	< 35	< 70	< 105	---	---	---	---	---	---	---
	TP-14-20.0	Interior	Confirmation	Removed	---	20.0	2/14/2020	< 95	410	410	---	---	---	---	---	---	---
TP-15	TP-14-15.0	Interior	Confirmation	Removed	---	15.0	2/14/2020	120 N	640	760	---	---	---	---	---	---	---
	TP-14-10.0	Interior	Confirmation	Removed	---	10.0	2/14/2020	< 33	< 67	< 100	---	---	---	---	---	---	---
TP-16	TP-15-20.0	Interior	Confirmation	Removed	---	20.0	2/14/2020	< 97	700	700	---	---	---	---	---	---	---
	TP-15-15.0	Interior	Confirmation	Removed	---	15.0	2/14/2020	95 N	490	585	---	---	---	---	---	---	---
TP-17	TP-15-10.0	Interior	Confirmation	Removed	---	10.0	2/14/2020	< 32	< 65	< 97	---	---	---	---	---	---	---
	TP-16-20.0	Interior	Confirmation	Removed	---	20.0	2/14/2020	< 65	250	250	---	---	---	---	---	---	---
TP-18	TP-16-15.0	Interior	Confirmation	Removed	---	15.0	2/14/2020	88 N	400	488	---	---	---	---	---	---	---
	TP-16-10.0	Interior	Confirmation	Removed	---	10.0	2/14/2020	< 32	< 64	< 96	---	---	---	---	---	---	---
TP-17	TP-17-20.0	Interior	Confirmation	Removed	---	20.0	2/18/2020	300 N	1,700	2,000	---	---	---	---	---	---	---
	TP-17-15	Interior	Confirmation	Removed	---	15.0	2/25/2020	< 59	< 120	< 179	---	---	---	---	---	---	---
TP-18	TP-17-10	Interior	Confirmation	Removed	---	10.0	2/25/2020	< 29	< 58	< 87	---	---	---	---	---	---	---
TP-18	TP-18-10.0	Interior	Confirmation	Removed	---	10.0	2/19/2020	< 28	< 56	< 84	---	---	---	---	---	---	---
<b>Underground Storage Tank Investigation and Decommissioning</b>																	
M1-Product	M1-24.5-PRODUCT	Interior	Performance	Removed	---	24.5	1/17/2020	DETECTED <sup>8</sup>	DETECTED <sup>8</sup>	---	---	---	< 9,200 <sup>8</sup>	---	---	---	---
M1-Prod-Soil	M1-24.5	Interior	Performance	Removed	---	24.5	1/17/2020	<b>8,600</b>	<b>15,000</b>	<b>23,600</b>	---	---	---	---	---	---	---
M1-Tank	M1-TANK-24.5	Interior	Performance	Removed	---	24.5	1/21/2020	850 N	<b>2,500</b>	<b>3,350</b>	---	---	< 59	< 0.00082	< 0.0041	0.00099	0.0116
UST01-B	UST01-B-17	Interior	Confirmation	Removed	---	17.0	1/27/2020	37	100	137	---	---	< 5.5	< 0.00092	< 0.0046	< 0.00092	< 0.00272
UST01-N1	UST01-N1-19	Interior	Confirmation	Removed	---	19.0	1/27/2020	< 30	< 60	< 90	---	---	---	< 0.00094	< 0.0047	< 0.00094	< 0.00284
UST01-E1	UST01-E1-19	Interior	Confirmation	Removed	---	19.0	1/27/2020	< 29	< 58	< 87	---	---	---	< 0.00083	< 0.0042	< 0.00083	< 0.00253
UST01-S1	UST01-S1-19	Interior	Confirmation	Removed	---	19.0	1/27/2020	< 28	< 55	< 83	---	---	---	< 0.00084	< 0.0042	< 0.00084	< 0.00254
UST01-W1	UST01-W1-19	Interior	Confirmation	Removed	---	19.0	1/27/2020	< 30	< 61	< 91	---	---	---	< 0.00098	< 0.0049	< 0.00098	< 0.00298
UST-01-line	UST-01-LINE-21.0	Sidewall	Performance	Removed	---	21.0	1/31/2020	<b>3,400</b>	<b>3,100 N1</b>	<b>6,500</b>	---	---	---	---	---	---	---
UST-02-Product	UST-02-PRODUCT	Interior	Performance	Removed	---	18.0	2/5/2020	DETECTED <sup>8</sup>	DETECTED <sup>8</sup>	---	---	---	< 41,000 <sup>8</sup>	---	---	---	---
UST02-N	UST-02-N	Interior	Performance	Removed	---	18.0	2/5/2020	630	1,300	1,930	---	---	< 59	< 0.00091	< 0.0045	< 0.00091	< 0.00271
UST02-E	UST-02-E	Interior	Performance	Removed	---	18.0	2/5/2020	370	850	1,220	---	---	<b>79 O</b>	0.0033	0.018	0.0075	0.048
UST02-B1	UST02-B1	Interior	Performance	Removed	---	15.0	2/7/2020	140 N	820	960	---	---	---	---	---	---	---
UST02-B2	UST02-B2	Interior	Confirmation	Removed	---	14.0	2/7/2020	160 N	1,800	1,960	---	---	---	---	---	---	---
UST02-N1	UST02-N1	Interior	Confirmation	Removed	---	17.5	2/7/2020	160 N	440	600	---	---	---	---	---	---	---
UST02-E1	UST02-E1	Interior	Confirmation	Removed	---	17.5	2/7/2020	39 N	230	269	---	---	---	---	---	---	---
UST02-S	UST02-S	Interior	Confirmation	Removed	---	17.5	2/7/2020	< 50	200	200	---	---	---	---	---	---	---
UST02-W1	UST02-W1	Interior	Confirmation	Removed	---	17.5	2/7/2020	64 N	310	374	---	---	---	---	---	---	---
<b>Screening Levels<sup>6</sup></b>								<b>2,000</b>	<b>2,000</b>	<b>2,000</b>	<b>2,000</b>		<b>30/100<sup>7</sup></b>	<b>0.03</b>	<b>7</b>	<b>6</b>	<b>9</b>

**Table 1**  
**Soil Analytical Results for TPH and BTEX**  
**Alley Area of Block 38 West Site**  
**Seattle, Washington**  
**Farallon PN: 397-019**

Sample Location	Sample Identification	General Location	Sample Type	Sample Location Disposition	Sample Depth (feet) <sup>1</sup>	Sample Elevation (feet NAVD88) <sup>1</sup>	Sample Date	Analytical Results (milligrams per kilogram)									
								NWTPH-Dx <sup>2</sup>		Total NWTPH-Dx <sup>3</sup>	NWTPH-Dx with Silica Gel <sup>2</sup>		NWTPH-Gx <sup>4</sup>	EPA Method 8021B/8260 <sup>5</sup>			
								DRO	ORO		DRO	ORO		GRO	Benzene	Toluene	Ethylbenzene
<b>Block 38 East Property</b>																	
EX-11-W21 (EL21)	EX-11-W21 (EL21)	B38E	Confirmation	In Place	9.5	21.0	7/2/2008	< 20	< 50	< 70	---	---	11	< 0.02	< 0.05	< 0.05	< 0.15
EX-12-W16.5 (EL22)	EX-12-W16.5 (EL22)	B38E	Confirmation	In Place	7.0	22.0	7/2/2008	< 20	< 50	< 70	---	---	< 10	< 0.02	< 0.05	< 0.05	< 0.15
EX-17-W13 (EL23)	EX-17-W13 (EL23)	B38E	Confirmation	In Place	6.5	23.0	7/3/2008	< 20	< 50	< 70	---	---	< 10	< 0.02	< 0.05	< 0.05	< 0.15
EX-18-W9 (EL19.5)	EX-18-W9 (EL19.5)	B38E	Confirmation	In Place	6.0	19.5	7/3/2008	< 20	< 50	< 70	---	---	< 10	< 0.02	< 0.05	< 0.05	< 0.15
P-4	P-4-3.5	B38E	Performance	Removed	3.5	21.2	6/12/2002	< 37	530	530	---	---	---	---	---	---	---
	P-4-5.5	B38E	Performance	Removed	5.5	19.2	6/12/2002	< 74	1,400	1,400	---	---	---	---	---	---	---
W-3	W-3	B38E	Performance	Removed	10.0	10.5	10/11/1993	<b>7,800</b>	280	<b>8,080</b>	---	---	<b>470</b>	< 0.16	< 0.16	0.19	0.87
W-4	W-4	B38E	Performance	Removed	11.0	9.5	10/11/1993	210	< 49	210	---	---	<b>44</b>	< 0.030	< 0.030	< 0.030	0.063
<b>Screening Levels<sup>6</sup></b>								<b>2,000</b>	<b>2,000</b>	<b>2,000</b>	<b>2,000</b>		<b>30/100<sup>7</sup></b>	<b>0.03</b>	<b>7</b>	<b>6</b>	<b>9</b>
<b>Block 37 Property</b>																	
MW-41	MW-41-3	B37			7.5	19.5	10/28/1991	< 5	---	< 5	---	---	< 5	< 0.040	< 0.040	< 0.040	< 0.040
	MW-41-7	B37			17.5	9.5	10/28/1991	< 5	---	< 5	---	---	< 5	---	---	---	---
MW-71	MW-71-5	B37			5.0	25.4	10/12/2005	< 10.8	< 27.1	< 37.9	---	---	< 3.84	< 0.0267	< 0.0891	< 0.0891	< 0.267
	MW-71-10	B37			10.0	20.4	10/12/2005	< 11.2	< 28.0	< 39.2	---	---	< 4.33	<b>0.189</b>	< 0.0861	0.341	0.262
	MW-71-15	B37			15.0	15.4	10/12/2005	< 11.7	< 29.3	< 41.0	---	---	< 4.55	< 0.0273	< 0.0910	< 0.0910	< 0.273
	MW-71-20	B37			20.0	10.4	10/12/2005	135	298	433	---	---	<b>888</b>	<b>1.02</b>	0.724	<b>9.97</b>	<b>29.1</b>
MW-72	MW-72-5	B37			5.0	25.3	10/12/2005	< 11.1	< 27.9	< 39.0	---	---	< 3.82	< 0.0257	< 0.0857	< 0.0857	< 0.257
	MW-72-10	B37			10.0	20.3	10/12/2005	< 11.1	< 27.7	< 38.8	---	---	< 4.66	< 0.0260	< 0.0868	< 0.0868	< 0.260
	MW-72-15	B37			15.0	15.3	10/12/2005	219	403	622	---	---	< 22.9	<b>0.533</b>	< 0.702	< 0.702	< 2.10
	MW-72-20	B37			20.0	10.3	10/12/2005	109	99.6	208.6	---	---	< 11.8	< 0.0405	< 0.312	< 0.312	< 0.936
MW-73	MW-73-5	B37			5.0	25.1	10/12/2005	< 11.1	< 27.7	< 38.8	---	---	< 5.05	< 0.0288	< 0.0960	< 0.0960	< 0.288
	MW-73-10	B37			10.0	20.1	10/12/2005	45	< 28.5	45	---	---	<b>4,530</b>	< 0.0266	< 0.0888	< 0.0888	< 0.266
	MW-73-16	B37			15.0	15.1	10/12/2005	129	677	806	---	---	<b>33.4</b>	<b>0.261</b>	< 0.443	< 0.443	< 1.33
	MW-73-20	B37			20.0	10.1	10/12/2005	< 12.0	< 29.9	< 41.9	---	---	< 5.02	< 0.0131	< 0.100	< 0.100	< 0.301
MW-95	MW-95-5	B37			5.0	27.0	10/19/2005	48.4	< 26.4	48.4	---	---	< 4.70	<b>0.0346</b>	< 0.0508	< 0.0508	< 0.102
	MW-95-10	B37			10.0	22.0	10/19/2005	< 11.4	< 28.6	< 40.0	---	---	< 4.22	< 0.0277	< 0.0462	< 0.0462	< 0.0923
	MW-95-15	B37			15.0	17.0	10/19/2005	< 12.6	< 31.5	< 44.1	---	---	< 7.39	< 0.0295	< 0.0492	< 0.0492	< 0.0985
<b>Screening Levels<sup>6</sup></b>								<b>2,000</b>	<b>2,000</b>	<b>2,000</b>	<b>2,000</b>		<b>30/100<sup>7</sup></b>	<b>0.03</b>	<b>7</b>	<b>6</b>	<b>9</b>

**NOTES:**

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

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

— denotes sample not analyzed.

<sup>1</sup>Depth in feet below ground surface. Elevation in feet referenced to North American Vertical Datum of 1988 (NAVD88).

<sup>2</sup>Analyzed by Northwest Method NWTPH-Dx, unless otherwise noted. Results denoted as analyzed by NWTPH-Dx with silica gel were analyzed using a sample extract treated with sulfuric acid/silica gel cleanup procedure.

<sup>3</sup>Total is the sum of the DRO and ORO results.

<sup>4</sup>Analyzed by Northwest Method NWTPH-Gx, unless otherwise noted.

<sup>5</sup>Analyzed by U.S. Environmental Protection Agency Method 8021B, 8260C, or 8260D.

<sup>6</sup>Washington State Model Toxics Control Act Cleanup Regulation (MTCA) Method A Soil Cleanup Levels for Unrestricted Land Uses, Table 740-1 of Section 900 of Chapter 173-340 of the Washington Administrative Code, as revised 2013.

<sup>7</sup>Cleanup level is 30 milligrams per kilogram if benzene is detected and 100 milligrams per kilogram if benzene is not detected.

<sup>8</sup>Analyzed by Northwest Method NWTPH-HCID (hydrocarbon identification).

BTEX = benzene, toluene, ethylbenzene, and xylenes

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

GRO = TPH as gasoline-range organics

H = sample analyzed outside of holding time

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

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

N1 = hydrocarbons in the diesel-range are impacting the oil-range result

ORO = TPH as oil-range organics

O = Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

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











**Table 2**  
**Soil Analytical Results for PAHs**  
**Alley Area of Block 38 West Site**  
**Seattle, Washington**  
**Farallon PN: 397-019**

Sample Location	Sample Identification	General Location	Sample Type	Sample Location Disposition	Sample Composition	Sample Depth (feet) <sup>1</sup>	Sample Elevation (feet NAVD88) <sup>1</sup>	Sample Date	Analytical Results (milligrams per kilogram) <sup>2</sup>																					
									Non-Carcinogenic PAHs										Carcinogenic PAHs											
									Naphthalene	1-Methylnaphthalene	2-Methylnaphthalene	Total Naphthalenes <sup>3,5</sup>	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a,h,i)Perylene	Fluoranthene	Fluorene	Phenanthrene	Pyrene	Benzo(a)Pyrene	Benzo(a)Anthracene	Benzo(b)Fluoranthene	Benzo(k)Fluoranthene	Chrysene	Dibenz(a,h)Anthracene	Indeno(1,2,3-cd)Pyrene	Total cPAHs TEC <sup>4,5</sup>		
N1-NSW	N1-NSW-22.0	Sidewall	Confirmation	In Place	Soil	---	22.0	1/31/2020	0.013	<0.0081	<0.0081	0.013	---	---	---	---	---	---	---	---	---	0.070	0.062	0.075	0.022	0.066	<0.0081	0.043	0.091	
N1-WSW	N1-WSW-20.0	Interior	Confirmation	Removed	Soil	---	20.0	2/3/2020	0.094	0.20	0.38	0.674	---	---	---	---	---	---	---	---	---	<0.079	<0.079	<0.079	<0.079	<0.079	<0.079	<0.079	<0.060	
N2-B	N2-B-20.0	Interior	Performance	Removed	Soil	---	20.0	2/6/2020	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
	N2-B-15.0	Interior	Confirmation	Removed	Soil	---	15.0	2/23/2020	---	---	---	---	---	---	---	---	---	---	---	---	---	---	<0.019	<0.019	<0.019	<0.019	<0.019	<0.019	<0.019	<0.014
N2-B	N2-B-10.0	Interior	Confirmation	Removed	Soil	---	10.0	2/23/2020	---	---	---	---	---	---	---	---	---	---	---	---	---	---	<0.0083	<0.0083	<0.0083	<0.0083	<0.0083	<0.0083	<0.0083	<0.0063
N2-NSW	N2-NSW-22.0	Sidewall	Confirmation	In Place	Soil	---	22.0	1/31/2020	0.014	<0.0078	0.0091	0.0231	---	---	---	---	---	---	---	---	---	---	0.053	0.025	0.040	0.012	0.025	0.0090	0.074	0.069
N3-NSW	N3-NSW-22.0	Sidewall	Confirmation	In Place	Soil	---	22.0	1/31/2020	<0.0079	<0.0079	<0.0079	<0.0237	---	---	---	---	---	---	---	---	---	---	<0.0079	<0.0079	<0.0079	<0.0079	<0.0079	<0.0079	<0.0079	<0.0060
N3-NSW2	N3-NSW2-22.0	Sidewall	Confirmation	In Place	Soil	---	22.0	1/31/2020	0.0088	0.0094	0.017	0.0352	---	---	---	---	---	---	---	---	---	---	0.019	0.011	0.018	<0.0080	0.012	<0.0080	0.015	0.024
N4-NSW	N4-NSW-20.0	Sidewall	Confirmation	In Place	Soil	---	20.0	2/6/2020	---	---	---	---	---	---	---	---	---	---	---	---	---	---	0.034	0.024	0.039	0.011	0.027	<0.0080	0.038	0.046
N4-ESW	N4-ESW-20.0	Sidewall	Confirmation	In Place	Soil	---	20.0	2/6/2020	---	---	---	---	---	---	---	---	---	---	---	---	---	---	<0.0077	<0.0077	<0.0077	<0.0077	<0.0077	<0.0077	<0.0077	<0.0058
TP-2	TP-2-10.0	Interior	Confirmation	Removed	Soil	---	10.0	2/13/2020	---	---	---	---	---	---	---	---	---	---	---	---	---	---	<0.0089	<0.0089	<0.0089	<0.0089	<0.0089	<0.0089	<0.0089	<0.0067
TP-3	TP-3-20.0-121919	Interior	Confirmation	Removed	Soil	5.0	20.0	12/19/2019	<0.0078	<0.0078	<0.0078	<0.0234	<0.0078	<0.0078	<0.0078	0.0087	0.026	<0.0078	0.016	0.028	---	---	0.015	0.012	0.014	<0.0078	0.012	<0.0078	0.0089	0.019
	TP-3-15.0-121919	Interior	Confirmation	Removed	Soil	10.0	15.0	12/19/2019	<0.041	<0.041	<0.041	<0.123	<0.041	<0.041	<0.041	<0.041	<0.041	<0.041	<0.041	<0.041	---	---	<0.041	<0.041	<0.041	<0.041	<0.041	<0.041	<0.041	<0.031
TP-7	TP-7-4.0	Interior	Confirmation	Removed	Soil	4.0	19.5	12/23/2019	0.061	<0.020	<0.020	0.061	---	---	---	---	---	---	---	---	---	---	0.031	0.033	0.044	<0.020	0.067	<0.020	0.025	0.044
TP-10	TP-10-15.0	Interior	Confirmation	Removed	Soil	---	15.0	2/4/2020	<0.035	<0.035	<0.035	<0.105	---	---	---	---	---	---	---	---	---	---	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.026
	TP-10-10.0	Interior	Confirmation	Removed	Soil	---	10.0	2/4/2020	0.027	<0.0081	<0.0081	0.027	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
TP-11	TP-11-15.0	Interior	Performance	Removed	Soil	---	15.0	2/4/2020	0.35	0.32	0.32	0.99	---	---	---	---	---	---	---	---	---	---	1.5	1.5	1.3	0.51	1.4	0.15	0.79	1.9
	TP-11-10.0	Interior	Confirmation	Removed	Soil	---	10.0	2/4/2020	---	---	---	---	---	---	---	---	---	---	---	---	---	---	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0072
TP-12	TP-12-20.0	Interior	Performance	Removed	Soil	---	20.0	2/7/2020	---	---	---	---	---	---	---	---	---	---	---	---	---	---	16	19	14	5.7	17	1.6	8.4	21
	TP-12-15.0	Interior	Performance	Removed	Soil	---	15.0	2/7/2020	---	---	---	---	---	---	---	---	---	---	---	---	---	---	0.083	0.084	0.075	0.023	0.078	<0.014	0.043	0.107
TP-13	TP-13-20.0	Interior	Confirmation	Removed	Soil	---	20.0	2/7/2020	---	---	---	---	---	---	---	---	---	---	---	---	---	---	<0.0076	<0.0076	<0.0076	<0.0076	<0.0076	<0.0076	<0.0076	<0.0057
	TP-13-15.0	Interior	Confirmation	Removed	Soil	---	15.0	2/7/2020	---	---	---	---	---	---	---	---	---	---	---	---	---	---	<0.0093	<0.0093	<0.0093	<0.0093	<0.0093	<0.0093	<0.0093	<0.0070
TP-16	TP-16-20.0	Interior	Confirmation	Removed	Soil	---	20.0	2/14/2020	---	---	---	---	---	---	---	---	---	---	---	---	---	---	0.023	0.029	0.029	<0.017	0.029	<0.017	<0.017	0.032
<b>Underground Storage Tank Investigation and Decommissioning</b>																														
M1-Tank	M1-TANK-24.5	Interior	Performance	Removed	Soil	---	24.5	1/21/2020	1.8	5.1	8.0	14.9	---	---	---	---	---	---	---	---	---	0.29	0.39	0.30	<0.082	0.54	0.11	0.17	0.40	
UST01-B	UST01-B-17	Interior	Confirmation	Removed	Soil	---	17.0	1/27/2020	0.029	0.041	0.055	0.125	---	---	---	---	---	---	---	---	---	---	0.011	0.011	0.010	<0.0073	0.014	<0.0073	<0.0073	0.014
UST01-N1	UST01-N1-19	Interior	Confirmation	Removed	Soil	---	19.0	1/27/2020	<0.0080	<0.0080	<0.0080	<0.0240	---	---	---	---	---	---	---	---	---	---	<0.0080	<0.0080	<0.0080	<0.0080	<0.0080	<0.0080	<0.0080	<0.0060
UST01-E1	UST01-E1-19	Interior	Confirmation	Removed	Soil	---	19.0	1/27/2020	<0.0078	<0.0078	<0.0078	<0.0234	---	---	---	---	---	---	---	---	---	---	0.016	0.014	0.016	<0.0078	0.015	<0.0078	0.010	0.021
UST01-S1	UST01-S1-19	Interior	Confirmation	Removed	Soil	---	19.0	1/27/2020	<0.0074	<0.0074	<0.0074	<0.0222	---	---	---	---	---	---	---	---	---	---	0.010	0.0090	0.0096	<0.0074	0.0097	<0.0074	<0.0074	0.013
UST01-W1	UST01-W1-19	Interior	Confirmation	Removed	Soil	---	19.0	1/27/2020	<0.0081	<0.0081	<0.0081	<0.0243	---	---	---	---	---	---	---	---	---	---	<0.0081	<0.0081	<0.0081	<0.0081	<0.0081	<0.0081	<0.0081	<0.0061
UST-01-line	UST-01-LINE-21.0	Sidewall	Performance	Removed	Soil	---	21.0	1/31/2020	0.90	8.5	7.2	16.6	---	---	---	---	---	---	---	---	---	---	0.33	0.53	0.32	<0.080	1.2	<0.080	0.16	0.45
UST02-N	UST-02-N	Interior	Confirmation	Removed	Soil	---	18.0	2/5/2020	0.031	0.062	0.043	0.136	---	---	---	---	---	---	---	---	---	---	0.019	0.029	0.015	<0.0084	0.081	<0.0084	<0.0084	0.025
UST02-E	UST-02-E	Interior	Confirmation	Removed	Soil	---	18.0	2/5/2020	0.12	0.13	0.21	0.46	---	---	---	---	---	---	---	---	---	---	0.039	0.034	0.034	<0.012	0.034	<0.012	0.023	0.050
UST02-B1	UST02-B1	Interior	Performance	Removed	Soil	---	15.0	2/7/2020	0.18	0.31	0.094	0.584	---	---	---	---	---	---	---	---	---	---	0.55	0.54	0.45	0.17	0.48	<0.065	0.29	0.70
UST02-B2	UST02-B2	Interior	Confirmation	Removed	Soil	---	14.0	2/7/2020	<0.040	<0.040	<0.040	<0.120	---	---	---	---	---	---	---	---	---	---	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.030
UST02-N1	UST02-N1	Interior	Performance	Removed	Soil	---	17.5	2/7/2020	0.35	0.29	0.39	1.03	---	---	---	---	---	---	---	---	---	---	0.083	0.071	0.075	0.024	0.077	<0.011	0.058	0.107
UST02-E1	UST02-E1	Interior	Performance	Removed	Soil	---	17.5	2/7/2020	0.096	0.037	0.050	0.183	---	---	---	---	---	---	---	---	---	---	0.11	0.11	0.10	0.034	0.11	0.011	0.069	0.14
UST02-S	UST02-S	Interior	Performance	Removed	Soil	---	17.5	2/7/2020	0.047	<0.013	0.015	0.062	---	---	---	---	---	---	---	---	---	---	0.039	0.022	0.040	0.016	0.022	<0.013	0.039	0.052
UST02-W1	UST02-W1	Interior	Performance	Removed	Soil	---	17.5	2/7/2020	0.12	0.031	0.043	0.194	---	---	---	---	---	---	---	---	---	---	0.19	0.17	0.16	0.062	0.14	0.019	0.11	0.24
Screening Levels <sup>6</sup>									5	4,800 <sup>7</sup>	NE	24,000 <sup>7</sup>	NE	3,200 <sup>7</sup>	3,200 <sup>7</sup>	NE	2,400 <sup>7</sup>											0.1		

**Table 2  
Soil Analytical Results for PAHs  
Alley Area of Block 38 West Site  
Seattle, Washington  
Farallon PN: 397-019**

Sample Location	Sample Identification	General Location	Sample Type	Sample Location Disposition	Sample Composition	Sample Depth (feet) <sup>1</sup>	Sample Elevation (feet NAVD88) <sup>1</sup>	Sample Date	Analytical Results (milligrams per kilogram) <sup>2</sup>																			
									Non-Carcinogenic PAHs										Carcinogenic PAHs									
									Naphthalene	1-Methylnaphthalene	2-Methylnaphthalene	Total Naphthalenes <sup>3,5</sup>	Acenaphthene	Acenaphthylene	Anthracene	Benzo(g,h,i)Perylene	Fluoranthene	Fluorene	Phenanthrene	Pyrene	Benzo(a)Pyrene	Benzo(a)Anthracene	Benzo(b)Fluoranthene	Benzo(k)Fluoranthene	Chrysene	Dibenzo(a,h)Anthracene	Indeno(1,2,3-cd)Pyrene	Total cPAHs TEC <sup>4,5</sup>
<b>Block 38 East Property</b>																												
EX-19-W5	EX-19-W5 (EL20)	Block 38E	Confirmation	In Place	Soil	5.0	20.0	7/3/2008	0.07	---	---	0.07	0.42	0.11	0.98	2.0	2.9	0.30	2.3	3.6	1.7	0.97	1.3	0.55	0.88	0.50	0.78	<b>2.1</b>
EX-20-W1.5	EX-20-W1.5 (EL19.5)	Block 38E	Confirmation	In Place	Soil	5.5	19.0	7/3/2008	0.13	---	---	0.13	0.63	0.12	1.5	3.0	4.4	0.42	4.2	5.5	0.75	1.2	2.1	0.75	1.2	0.76	1.2	<b>1.4</b>
EX-27-EL16	EX-27-EL16	Block 38E	Confirmation	In Place	Soil	17.5	16.0	7/14/2008	< 0.05	---	---	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
EX-36-EL23	EX-36-EL23	Block 38E	Confirmation	In Place	Soil	1.5	23.0	7/18/2008	< 0.05	---	---	< 0.05	< 0.05	< 0.05	0.28	0.34	0.56	< 0.05	0.28	0.56	0.16	0.47	0.33	0.24	0.16	< 0.01	0.17	<b>0.28</b>
EX-37-EL23	EX-37-EL23	Block 38E	Confirmation	In Place	Soil	1.5	23.0	7/18/2008	< 0.05	---	---	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
EX-38-EL23	EX-38-EL23	Block 38E	Confirmation	In Place	Soil	1.0	23.0	7/18/2008	< 0.05	---	---	< 0.05	< 0.05	0.14	1.7	2.9	6.3	0.43	1.7	7.8	2.9	2.7	1.6	1.7	1.4	1.0	1.1	<b>3.7</b>
EX-39-EL23	EX-39-EL23	Block 38E	Confirmation	In Place	Soil	1.0	23.0	7/18/2008	< 0.05	---	---	< 0.05	0.13	< 0.05	0.27	0.39	0.51	0.13	0.27	0.0	0.32	0.73	0.23	0.31	0.21	< 0.01	0.18	<b>0.47</b>
EX-40-EL22	EX-40-EL22	Block 38E	Confirmation	In Place	Soil	2.0	22.0	7/18/2008	6	---	---	6	0.61	7.2	40	12	43	4.9	53	53	19	17	17	20	9.4	1.4	5.7	<b>25</b>
EX-41-EL22	EX-41-EL22	Block 38E	Confirmation	In Place	Soil	3.0	22.0	7/18/2008	0.56	---	---	0.56	0.16	0.49	1.4	1.7	4.1	0.31	3.3	4.7	2.3	2.9	1.3	1.1	2.1	0.62	0.69	<b>2.98</b>
P-4	P-4-3.5	Block 38E	Performance	Removed	Soil/Wood	3.5	21.2	6/12/2002	0.52	0.21	0.36	1.09	0.39	0.39	0.60	1.1	2.4	0.39	3.4	3.5	1.6	1.1	1.1	1.0	1.4	0.34	0.95	<b>2.1</b>
	P-4-5.5	Block 38E	Performance	Removed	Soil/Wood	5.5	19.2	6/12/2002	0.055	< 0.025	< 0.025	0.055	0.047	< 0.025	0.067	0.17	0.36	0.042	0.33	0.24	0.21	0.090	0.56	0.48	0.18	0.026	0.12	<b>0.34</b>
<b>Screening Levels<sup>6</sup></b>									5	4,800 <sup>7</sup>	NE	24,000 <sup>7</sup>	NE	3,200 <sup>7</sup>	3,200 <sup>7</sup>	NE	2,400 <sup>7</sup>									<b>0.1</b>		
<b>Block 37 Property</b>																												
MW-71	MW-71-5	Block 37	Confirmation	In Place	Soil	5.0	25.4	10/12/2005	< 0.0891	---	---	< 0.0891	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	MW-71-10	Block 37	Confirmation	In Place	Soil	10.0	20.4	10/12/2005	< 0.0861	---	---	< 0.0861	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	MW-71-15	Block 37	Confirmation	In Place	Soil	15.0	15.4	10/12/2005	< 0.0910	---	---	< 0.0910	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	MW-71-20	Block 37	Confirmation	In Place	Soil	20.0	10.4	10/12/2005	6.49	---	---	6.49	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-72	MW-72-5	Block 37	Confirmation	In Place	Soil	5.0	25.3	10/12/2005	< 0.0857	---	---	< 0.0857	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	MW-72-10	Block 37	Confirmation	In Place	Soil	10.0	20.3	10/12/2005	< 0.0668	---	---	< 0.0668	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	MW-72-15	Block 37	Confirmation	In Place	Soil	15.0	15.3	10/12/2005	< 0.702	---	---	< 0.702	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	MW-72-20	Block 37	Confirmation	In Place	Soil	20.0	10.3	10/12/2005	< 0.312	---	---	< 0.312	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-73	MW-73-5	Block 37	Confirmation	In Place	Soil	5.0	25.1	10/12/2005	< 0.0960	---	---	< 0.0960	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	MW-73-10	Block 37	Confirmation	In Place	Soil	10.0	20.1	10/12/2005	< 0.0888	---	---	< 0.0888	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	MW-73-16	Block 37	Confirmation	In Place	Soil	15.0	15.1	10/12/2005	< 0.443	---	---	< 0.443	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	MW-73-20	Block 37	Confirmation	In Place	Soil	20.0	10.1	10/12/2005	< 0.100	---	---	< 0.100	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-95	MW-95-5	Block 37	Confirmation	In Place	Soil	5.0	27.0	10/19/2005	< 0.102	---	---	< 0.102	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	MW-95-10	Block 37	Confirmation	In Place	Soil	10.0	22.0	10/19/2005	< 0.0923	---	---	< 0.0923	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	MW-95-15	Block 37	Confirmation	In Place	Soil	15.0	17.0	10/19/2005	< 0.0985	---	---	< 0.0985	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
<b>Screening Levels<sup>6</sup></b>									5	4,800 <sup>7</sup>	NE	24,000 <sup>7</sup>	NE	3,200 <sup>7</sup>	3,200 <sup>7</sup>	NE	2,400 <sup>7</sup>									<b>0.1</b>		
<b>MTCA Method B Levels for Soil Protective of Groundwater Vadose @ 25 Degrees Celsius<sup>8</sup></b>									4.46	NE	NE	NE	97.9	NE	2,270	NE	631	101	NE	655								
<b>MTCA Method B Levels for Soil Protective of Groundwater Vadose @ 13 Degrees Celsius<sup>8</sup></b>									4.45	NE	NE	NE	97.9	NE	NE	NE	NE	101	NE	655								
<b>MTCA Method B Levels for Soil Protective of Groundwater Saturated<sup>8</sup></b>									0.236	NE	NE	NE	4.98	NE	114	NE	31.6	5.12	NE	32.8								

**NOTES:**

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

--- denotes sample not analyzed.

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

<sup>1</sup>Depth in feet below ground surface. Elevation in feet referenced to North American Vertical Datum of 1988 (NAVD88).

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

<sup>3</sup>Sum of naphthalene, 1-methylnaphthalene, and 2-methylnaphthalene.

<sup>4</sup>Total cPAHs derived using the total toxicity equivalency method in Section 708(8) of Chapter 173-340 of the Washington Administrative Code.

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

<sup>6</sup>Washington State Model Toxics Control Act Cleanup Regulation (MTCA) Method A Soil Cleanup Levels for Unrestricted Land Uses, Table 740-1 of Section 900 of Chapter 173-340 of the Washington Administrative Code, as revised 2013, unless otherwise noted.

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

Adapt Engineering = Adapt Engineering, Inc.

cPAHs = carcinogenic polycyclic aromatic hydrocarbons

Enviros = Enviro Group, Ltd.

Farallon = Farallon Consulting, L.L.C.

GeoEngineers = GeoEngineers, Inc.

H = sample analyzed outside of holding time

J = result is an estimate

ND = not detected and reporting limit is not available.

NE = not established

PAHs = polycyclic aromatic hydrocarbons

TEC = toxic equivalent concentration

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

Sample Location	Sample Identification	General Location	Sample Type	Sample Location Disposition	Sample Depth (feet) <sup>1</sup>	Sample Elevation (feet NAVD88) <sup>1</sup>	Sample Date	Analytical Results (milligrams per kilogram) <sup>2</sup>							
								Arsenic	Barium	Cadmium	Chromium	Lead	Mercury	Selenium	Silver
<b>Alley</b>															
FB-12	FB-12-21.5	Alley	Performance	Removed	---	21.5	9/13/2020	---	---	---	---	25	---	---	---
FB-13	FB-13-22.5	Alley	Performance	Removed	---	22.5	9/12/2020	< 11	490	0.73	23	130	< 0.29	< 11	< 1.1
	FB-13-20.0	Alley	Confirmation	Removed	---	20.0	9/12/2020	---	---	< 1.4	---	96	---	---	---
FB-14	FB-14-22.5	Alley	Performance	Removed	---	22.5	9/12/2020	13	68	< 0.55	17	31	< 0.27	< 11	< 1.1
	FB-14-20.0	Alley	Confirmation	Removed	---	20.0	9/12/2020	---	---	< 0.58	---	50	---	---	---
FB-15	FB-15-22.5	Alley	Performance	Removed	---	22.5	9/13/2020	< 11	81	< 0.54	15	120	< 0.27	< 11	< 1.1
	FB-15-20.0	Alley	Confirmation	Removed	---	20.0	9/13/2020	---	---	< 0.59	---	56	---	---	---
	FB-15-17.5	Alley	Confirmation	In Place	---	17.5	9/13/2020	---	---	< 0.56	---	< 5.6	---	---	---
TP-10-4	TP-10-4	Alley	Performance	Removed	4.0	20.5	5/5/2008	---	---	<b>2.4</b>	---	<b>1,900</b>	---	---	---
G/A5-ESW	G/A5-ESW-22.5-070621	Alley	Confirmation	In Place	---	22.5	7/6/2021	---	---	---	---	47	---	---	---
	G/A5-ESW-20.0-070621	Alley	Confirmation	In Place	---	20.0	7/6/2021	---	---	---	---	<b>21,000</b>	---	---	---
	G/A5-ESW-17.5-070621	Alley	Confirmation	In Place	---	17.5	7/6/2021	---	---	---	---	240	---	---	---
H/A5-B	H/A5-B-17.5-070621	Alley	Confirmation	In Place	---	17.5	7/6/2021	---	---	---	---	210	---	---	---
H/A5-ESW	H/A5-ESW-22.5-070621	Alley	Confirmation	In Place	---	22.5	7/6/2021	---	---	---	---	22	---	---	---
	H/A5-ESW-20.0-070621	Alley	Confirmation	In Place	---	20.0	7/6/2021	---	---	---	---	<b>1,300</b>	---	---	---
	H/A5-ESW-17.5-070621	Alley	Confirmation	In Place	---	17.5	7/6/2021	---	---	---	---	96	---	---	---
I/A5-B	I/A5-B-17.5-070921	Alley	Confirmation	In Place	---	17.5	7/9/2021	---	---	---	---	130	---	---	---
I/A5-ESW	I/A5-ESW-22.5-070921	Alley	Confirmation	In Place	---	22.5	7/9/2021	---	---	---	---	<b>260</b>	---	---	---
	I/A5-ESW-20.0-070921	Alley	Confirmation	In Place	---	20.0	7/9/2021	---	---	---	---	<b>2,600</b>	---	---	---
J/A5-ESW	J/A5-ESW-22.5-070921	Alley	Confirmation	In Place	---	22.5	7/9/2021	---	---	0.64	---	<b>260</b>	---	---	---
	J/A5-ESW-20.0-070921	Alley	Confirmation	In Place	---	20.0	7/9/2021	---	---	< 0.91	---	<b>420</b>	---	---	---
<b>Screening Levels <sup>3</sup></b>								<b>20</b>	<b>16,000 <sup>4</sup></b>	<b>2</b>	<b>2,000</b>	<b>250</b>	<b>2</b>	<b>400 <sup>4</sup></b>	<b>400 <sup>4</sup></b>

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

Sample Location	Sample Identification	General Location	Sample Type	Sample Location Disposition	Sample Depth (feet) <sup>1</sup>	Sample Elevation (feet NAVD88) <sup>1</sup>	Sample Date	Analytical Results (milligrams per kilogram) <sup>2</sup>							
								Arsenic	Barium	Cadmium	Chromium	Lead	Mercury	Selenium	Silver
<b>Block 38 West Property</b>															
FB-01	FB-01-15.0-082118	Interior	Confirmation	Removed	15.0	11.3	8/21/2018	< 16	110	< 0.81	60	< 8.1	< 0.40	< 16	< 1.6
FB-02	FB-02-10.0-082018	Interior	Confirmation	Removed	10.0	15.1	8/20/2018	< 12	190	< 1.2	36	24	1.2	< 12	< 2.5
FB-03	FB-03-10.0-082318	Interior	Confirmation	Removed	10.0	15.8	8/23/2018	< 13	230	< 0.65	100	8.9	< 0.32	< 13	< 1.3
	FB-03-35.0-082318	Interior	Confirmation	In Place	35.0	-9.2	8/23/2018	< 12	44	< 0.60	42	< 6.0	< 0.30	< 12	< 1.2
FB-04	FB-04-5.0-082118	Interior	Confirmation	Removed	5.0	17.0	8/21/2018	< 11	290	< 1.1	53	56	< 0.55	< 11	< 2.2
FB-05	FB-05-35.0-082218	Interior	Confirmation	In Place	35.0	-9.5	8/22/2018	< 12	58	< 0.62	38	< 6.2	< 0.31	< 12	< 1.2
FMW-133	FMW-133-10.0-082418	Interior	Confirmation	Removed	10.0	15.3	8/24/2018	< 17	200	< 1.7	29	18	< 0.83	< 17	< 3.3
	FMW-133-20.0-082418	Interior	Confirmation	Removed	20.0	5.3	8/24/2018	< 12	50	< 0.60	27	< 6.0	< 0.30	< 12	< 1.2
FMW-134	FMW-134-5.0-082318	Interior	Confirmation	Removed	5.0	20.4	8/23/2018	< 17	110	< 1.7	19	< 17	< 0.83	< 17	< 3.3
	FMW-134-15.0-082318	Interior	Confirmation	Removed	15.0	10.4	8/23/2018	< 12	48	< 0.61	42	< 6.1	< 0.30	< 12	< 1.2
FMW-135	FMW-135-5.0-082418	Interior	Confirmation	Removed	5.0	20.6	8/24/2018	< 12	120	< 0.61	48	16	< 0.31	< 12	< 1.2
	FMW-135-25.0-082418	Interior	Confirmation	Removed	25.0	0.6	8/24/2018	< 14	120	< 0.69	60	< 6.9	< 0.35	< 14	< 1.4
	FMW-135-30.0-082418	Interior	Confirmation	Removed	30.0	-4.4	8/24/2018	< 12	66	< 0.62	44	< 6.2	< 0.31	< 12	< 1.2
FMW-136	FMW-136-20.0-082218	Interior	Confirmation	Removed	20.0	5.1	8/22/2018	< 13	46	< 0.63	42	< 6.3	< 0.32	< 13	< 1.3
	FMW-136-30.0-082218	Interior	Confirmation	Removed	30.0	-4.9	8/22/2018	< 12	45	< 0.59	41	< 5.9	< 0.30	< 12	< 1.2
M1-WSW	M1-WSW-17.0	Sidewall	Confirmation	In Place	---	17.0	2/10/2020	---	---	---	---	18	---	---	---
N1-WSW	N1-WSW-17.0	Interior	Confirmation	Removed	---	17.0	2/10/2020	---	---	---	---	80	---	---	---
TP-7	TP-7-4.0	Interior	Confirmation	Removed	4.0	19.5	12/23/2019	---	---	---	---	33	---	---	---
<b>Underground Storage Tank Investigation and Decommissioning</b>															
M1-Tank	M1-TANK-24.5	Interior	Confirmation	Removed	---	24.5	1/21/2020	---	---	---	---	46	---	---	---
UST01-B	UST01-B-17	Interior	Confirmation	Removed	---	17.0	1/27/2020	---	---	---	---	13	---	---	---
UST01-N1	UST01-N1-19	Interior	Confirmation	Removed	---	19.0	1/27/2020	---	---	---	---	8.1	---	---	---
UST01-E1	UST01-E1-19	Interior	Confirmation	Removed	---	19.0	1/27/2020	---	---	---	---	25	---	---	---
UST01-S1	UST01-S1-19	Interior	Confirmation	Removed	---	19.0	1/27/2020	---	---	---	---	13	---	---	---
UST01-W1	UST01-W1-19	Interior	Confirmation	Removed	---	19.0	1/27/2020	---	---	---	---	14	---	---	---
UST-01-line	UST-01-LINE-21.0	Sidewall	Confirmation	In Place	---	21.0	1/31/2020	---	---	---	---	100	---	---	---
<b>Screening Levels<sup>3</sup></b>								<b>20</b>	<b>16,000<sup>4</sup></b>	<b>2</b>	<b>2,000</b>	<b>250</b>	<b>2</b>	<b>400<sup>4</sup></b>	<b>400<sup>4</sup></b>

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

Sample Location	Sample Identification	General Location	Sample Type	Sample Location Disposition	Sample Depth (feet) <sup>1</sup>	Sample Elevation (feet NAVD88) <sup>1</sup>	Sample Date	Analytical Results (milligrams per kilogram) <sup>2</sup>							
								Arsenic	Barium	Cadmium	Chromium	Lead	Mercury	Selenium	Silver
<b>Block 38 East Property</b>															
EX-19-W5 (EL20)	EX-19-W5 (EL20)	B38E	Confirmation	In Place	5.0	20.0	7/3/2008	---	---	< 2.0	---	64	---	---	---
EX-20-W1.5 (EL19.5)	EX-20-W1.5 (EL19.5)	B38E	Confirmation	In Place	5.5	19.5	7/3/2008	---	---	< 2.0	---	120	---	---	---
EX-39-EL23	EX-39-EL23	B38E	Confirmation	In Place	1.0	23.0	7/18/2008	---	---	< 2.0	---	86	---	---	---
EX-40-EL22	EX-40-EL22	B38E	Confirmation	In Place	2.0	22.0	7/18/2008	---	---	< 2.0	---	<b>1,800</b>	---	---	---
EX-41-EL22	EX-41-EL22	B38E	Confirmation	In Place	3.0	22.0	7/18/2008	---	---	< 2.0	---	<b>1,200</b>	---	---	---
P-4	P-4-3.5	B38E	Performance	Removed	3.5	21.2	6/12/2002	---	---	<b>2.1</b>	---	<b>1,500</b>	---	---	---
	P-4-5.5	B38E	Performance	Removed	5.5	19.2	6/12/2002	---	---	< 1.5	---	200	---	---	---
W-3	W-3	B38E	Performance	Removed	10.0	10.5	10/11/1993	---	---	---	---	18	---	---	---
W-4	W-4	B38E	Performance	Removed	11.0	9.5	10/11/1993	---	---	---	---	2.4	---	---	---
<b>Block 37 Property</b>															
MW-41	MW-41-3				7.5	19.5	10/28/1991	---	---	---	---	---	---	---	---
	MW-41-7				17.5	9.5	10/28/1991	---	---	---	---	---	---	---	---
MW-71	MW-71-5				5.0	25.4	10/12/2005	---	---	---	---	2.73	---	---	---
	MW-71-10				10.0	20.4	10/12/2005	---	---	---	---	5.39	---	---	---
	MW-71-15				15.0	15.4	10/12/2005	---	---	---	---	4.43	---	---	---
	MW-71-20				20.0	10.4	10/12/2005	---	---	---	---	7.1	---	---	---
MW-72	MW-72-5				5.0	25.3	10/12/2005	---	---	---	---	3.58	---	---	---
	MW-72-10				10.0	20.3	10/12/2005	---	---	---	---	5.42	---	---	---
	MW-72-15				15.0	15.3	10/12/2005	---	---	---	---	124	---	---	---
	MW-72-20				20.0	10.3	10/12/2005	---	---	---	---	20.9	---	---	---
MW-73	MW-73-5				5.0	25.1	10/12/2005	---	---	---	---	5.62	---	---	---
	MW-73-10				10.0	20.1	10/12/2005	---	---	---	---	3.54	---	---	---
	MW-73-16				15.0	15.1	10/12/2005	---	---	---	---	71.9	---	---	---
	MW-73-20				20.0	10.1	10/12/2005	---	---	---	---	20.9	---	---	---
MW-95	MW-95-5				5.0	27.0	10/19/2005	---	---	---	---	4.02	---	---	---
	MW-95-10				10.0	22.0	10/19/2005	---	---	---	---	5.4	---	---	---
	MW-95-15				15.0	17.0	10/19/2005	---	---	---	---	16.8	---	---	---
<b>Screening Levels<sup>3</sup></b>								<b>20</b>	<b>16,000<sup>4</sup></b>	<b>2</b>	<b>2,000</b>	<b>250</b>	<b>2</b>	<b>400<sup>4</sup></b>	<b>400<sup>4</sup></b>

**NOTES:**

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

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

— denotes sample not analyzed.

<sup>1</sup>Depth in feet below ground surface. Elevation in feet referenced to North American Vertical Datum of 1988 (NAVD88).

<sup>2</sup>Analyzed by U.S. Environmental Protection Agency Methods 6010D/6020B/7471B.

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

<sup>4</sup>Washington State Department of Ecology Cleanup Levels and Risk Calculations, under MTCA Standard Method B Formula Values for Soil (Unrestricted Land Use) - Direct Contact (Ingestion Only) and Leaching Pathway, <https://fortress.wa.gov/ecy/clarc/Reporting/ChemicalQuery.aspx>

**Table 4  
Groundwater Elevations  
Alley Area of Block 38 West Site  
Seattle, Washington  
Farallon PN: 397-019**

Location	Water Bearing Zone	Screened Interval (feet bgs) <sup>1</sup>	Screened Interval (feet NAVD88) <sup>2</sup>	Top of Casing Elevation (feet NAVD88) <sup>2</sup>	Monitoring Date	Depth to Water (feet) <sup>3</sup>	Water Level Elevation (feet NAVD88) <sup>2</sup>
<b>Alley</b>							
FMW-154	Shallow	10.0 to 15.0	12.8 to 7.8	22.80	2/14/2022	6.05	16.75
					5/16/2022	5.49	17.31
FMW-155	Shallow	10.0 to 15.0	13.9 to 8.9	23.90	2/14/2022	6.94	16.96
					5/16/2022	6.30	17.60
FMW-156	Shallow	15.0 to 20.0	10.7 to 5.7	25.70	2/14/2022	8.63	17.07
					5/16/2022	8.03	17.67
FMW-157	Intermediate	30.0 to 40.0	-4.1 to -14.1	25.95	2/14/2022	5.87	20.08
					5/16/2022	8.28	17.67
<b>Block 38 West Property</b>							
FMW-130	Intermediate	45.0 to 55.0	-22.8 to -32.8	21.86	8/30/2018	5.14	16.72
					12/28/2018	4.98	16.88
					3/26/2019	4.42	17.44
FMW-132	Shallow	5.0 to 10.0	20.7 to 15.7	25.48	8/30/2018	7.44	18.04
					12/28/2018	6.80	18.68
					3/26/2019	7.01	18.47
FMW-133	Shallow	6.5 to 11.5	18.8 to 13.8	24.87	8/30/2018	6.86	18.01
					12/28/2018	6.21	18.66
					3/26/2019	6.41	18.46
FMW-134	Shallow	12.0 to 17.0	13.4 to 8.4	24.98	8/30/2018	8.66	16.32
					12/28/2018	7.80	17.18
					3/26/2019	7.51	17.47
FMW-135	Shallow	7.0 to 12.0	18.6 to 13.6	25.29	8/30/2018	7.14	18.15
					12/28/2018	6.78	18.51
					3/26/2019	6.81	18.48
FMW-136	Intermediate	30.0 to 40.0	-4.9 to -14.9	24.79	8/30/2018	8.10	16.69
					12/28/2018	7.74	17.05
					3/26/2019	7.41	17.38
FMW-144	Intermediate	38.0 to 43.0	-8.0 to -13.0	29.41	12/23/2019	12.42	16.99
					12/26/2019	12.26	17.15
					12/30/2019	12.33	17.08
					12/30/2019	12.34	17.07
					12/31/2019	12.44	16.97
FMW-145	Intermediate	31.0 to 36.0	-8.0 to -13.0	22.90	12/31/2019	12.27	17.14
					12/23/2019	5.58	17.32
					12/26/2019	5.65	17.25
					12/30/2019	5.80	17.10
					12/30/2019	5.83	17.07
					12/31/2019	5.42	17.48
					12/31/2019	5.63	17.27



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Location	Water Bearing Zone	Screened Interval (feet bgs) <sup>1</sup>	Screened Interval (feet NAVD88) <sup>2</sup>	Top of Casing Elevation (feet NAVD88) <sup>2</sup>	Monitoring Date	Depth to Water (feet) <sup>3</sup>	Water Level Elevation (feet NAVD88) <sup>2</sup>
FMW-146	Intermediate	31.0 to 36.0	-8.0 to -13.0	23.19	12/23/2019	6.38	16.81
					12/26/2019	6.14	17.05
					12/30/2019	6.18	17.01
					12/30/2019	6.24	16.95
					12/31/2019	6.00	17.19
					12/31/2019	5.89	17.30
FMW-147	Intermediate	31.0 to 36.0	-8.0 to -13.0	22.82	12/23/2019	5.78	17.04
					12/26/2019	5.75	17.07
					12/30/2019	5.88	16.94
					12/30/2019	5.82	17.00
					12/31/2019	5.98	16.84
					12/31/2019	5.70	17.12
FMW-149	Intermediate	44.0 to 49.0	-8.0 to -13.0	36.21	12/23/2019	19.01	17.20
					12/26/2019	19.14	17.07
					12/30/2019	19.18	17.03
					12/30/2019	19.13	17.08
					12/31/2019	18.94	17.27
					12/31/2019	18.92	17.29
FMW-150	Intermediate	31.7 to 36.7	-8.5 to -13.5	23.23	2/14/2022	6.50	16.73
					5/16/2022	5.95	17.28
FMW-151	Intermediate	33.1 to 38.1	-9.4 to -14.4	23.74	2/15/2022	7.21	16.53
					5/16/2022	6.34	17.40
FMW-152	Intermediate	31.3 to 36.3	-8.5 to -13.5	22.83	2/14/2022	5.76	17.07
					5/16/2022	5.15	17.68
FMW-153	Intermediate	33.2 to 38.2	-8.5 to -13.5	24.72	2/15/2022	8.50	16.22
					5/16/2022	7.55	17.17

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<b>Block 38 West Construction Dewatering Observation Wells</b>							
OW-1	Intermediate	30.0 to 45.0	-5.8 to -20.8	24.17	1/15/2021	18.48	5.69
					1/19/2021	18.30	5.87
					3/24/2021	18.22	5.95
					3/30/2021	14.89	9.28
					4/2/2021	14.25	9.92
					4/10/2021	13.22	10.95
					4/13/2021	12.99	11.18
					4/19/2021	12.58	11.59
					4/21/2021	12.41	11.76
					4/23/2021	12.29	11.88
					4/27/2021	12.17	12.00
					4/30/2021	11.97	12.20
					5/4/2021	11.84	12.33
					5/17/2021	11.35	12.82
					6/14/2021	10.74	13.43
					6/28/2021	10.33	13.84
					7/12/2021	10.33	13.84
					7/26/2021	10.30	13.87
					8/9/2021	10.27	13.90
					9/22/2021	10.07	14.10
					10/13/2021	9.24	14.93
					10/26/2021	9.02	15.15
					12/1/2021	8.01	16.16
12/13/2021	7.67	16.50					
12/30/2021	--	--					
1/7/2022	7.02	17.15					
1/13/2022	7.03	17.14					
1/27/2022	7.23	16.94					
2/8/2022	7.50	16.67					
2/14/2022	7.42	16.75					

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OW-2	Intermediate	30.0 to 45.0	-7.1 to -22.1	22.91	1/15/2021	20.32	2.59
					1/19/2021	20.07	2.84
					3/24/2021	20.81	2.10
					3/30/2021	14.99	7.92
					4/2/2021	14.24	8.67
					4/10/2021	13.16	9.75
					4/13/2021	12.86	10.05
					4/19/2021	12.42	10.49
					4/21/2021	12.22	10.69
					4/23/2021	12.12	10.79
					4/27/2021	11.99	10.92
					4/30/2021	11.75	11.16
					5/4/2021	11.71	11.20
					5/17/2021	--	--
					6/14/2021	--	--
					6/28/2021	9.97	12.94
					7/12/2021	9.88	13.03
					7/26/2021	9.79	13.12
					8/9/2021	9.73	13.18
					9/22/2021	9.05	13.86
					10/13/2021	8.40	14.51
					10/26/2021	8.10	14.81
					12/1/2021	7.03	15.88
12/13/2021	6.68	16.23					
12/30/2021	--	--					
1/7/2022	5.97	16.94					
1/13/2022	6.04	16.87					
1/27/2022	6.20	16.71					
2/8/2022	6.37	16.54					
2/14/2022	6.07	16.84					

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Location	Water Bearing Zone	Screened Interval (feet bgs) <sup>1</sup>	Screened Interval (feet NAVD88) <sup>2</sup>	Top of Casing Elevation (feet NAVD88) <sup>2</sup>	Monitoring Date	Depth to Water (feet) <sup>3</sup>	Water Level Elevation (feet NAVD88) <sup>2</sup>
OW-3	Intermediate	48.0 to 63.0	-9.2 to -24.2	38.77	1/15/2021	36.11	2.66
					1/19/2021	38.44	0.33
					3/24/2021	35.83	2.94
					3/30/2021	31.35	7.42
					4/2/2021	27.31	11.46
					4/10/2021	29.92	8.85
					4/13/2021	29.66	9.11
				38.91	4/19/2021	29.35	9.56
					4/21/2021	29.18	9.73
					4/23/2021	29.04	9.87
					4/27/2021	28.95	9.96
					4/30/2021	28.61	10.30
					5/4/2021	28.66	10.25
					5/17/2021	27.99	10.92
					6/14/2021	27.23	11.68
					6/28/2021	26.87	12.04
					7/12/2021	--	--
					7/28/2021	26.61	12.30
					8/9/2021	26.29	12.62
					9/22/2021	25.42	13.49
					10/13/2021	24.41	14.50
					10/26/2021	24.05	14.86
					12/1/2021	22.78	16.13
					12/13/2021	22.30	16.61
					12/30/2021	--	--
1/7/2022	21.50	17.41					
1/13/2022	21.58	17.33					
1/27/2022	21.75	17.16					
2/8/2022	21.93	16.98					
2/15/2022	21.88	17.03					

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Location	Water Bearing Zone	Screened Interval (feet bgs) <sup>1</sup>	Screened Interval (feet NAVD88) <sup>2</sup>	Top of Casing Elevation (feet NAVD88) <sup>2</sup>	Monitoring Date	Depth to Water (feet) <sup>3</sup>	Water Level Elevation (feet NAVD88) <sup>2</sup>
OW-4	Intermediate	48.0 to 58.0	-11.7 to -21.7	32.05	1/15/2021	32.05	0.00
					1/19/2021	31.45	-31.45
				36.28	3/24/2021	31.60	4.68
					3/30/2021	31.60	4.68
					4/2/2021	31.11	5.17
					4/10/2021	26.28	10.00
					4/13/2021	25.98	10.30
					4/19/2021	25.57	10.71
					4/21/2021	25.34	10.94
					4/23/2021	25.28	11.00
					4/27/2021	--	--
					4/30/2021	--	--
					5/4/2021	--	--
					5/17/2021	--	--
					6/14/2021	--	--
				6/28/2021	--	--	
				7/12/2021	--	--	
				39.23	7/26/2021	26.28	12.95
					8/9/2021	--	--
					9/22/2021	--	--
					10/13/2021	--	--
					10/26/2021	--	--
					12/1/2021	--	--
12/13/2021	--	--					
12/30/2021	--	--					
1/7/2022	--	--					
1/13/2022	--	--					
1/27/2022	--	--					
2/8/2022	--	--					
2/14/2022	--	--					



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OW-5	Intermediate	44.8 to 54.8	-11.0 to -21.0	33.80	1/15/2021	29.10	4.70
					1/19/2021	28.97	4.83
					3/24/2021	25.32	8.48
					3/30/2021	23.05	10.75
					4/2/2021	22.53	11.27
					4/10/2021	21.72	12.08
					4/13/2021	21.52	12.28
					4/19/2021	21.16	12.64
					4/21/2021	21.00	12.80
					4/23/2021	20.90	12.90
					4/27/2021	20.98	12.82
					4/30/2021	20.80	13.00
					5/4/2021	20.73	13.07
					5/17/2021	20.18	13.62
					6/14/2021	19.52	14.28
					6/28/2021	19.13	14.67
					7/12/2021	18.93	14.87
					7/26/2021	19.01	14.79
				8/9/2021	19.03	14.77	
				9/22/2021	18.53	15.27	
				30.25	10/13/2021	14.57	15.68
				34.57	10/26/2021	18.77	15.80
					12/1/2021	17.57	17.00
					12/13/2021	17.31	17.26
					12/30/2021	--	--
					1/7/2022	16.56	18.01
1/13/2022	16.47	18.10					
1/27/2022	17.01	17.56					
2/8/2022	17.37	17.20					
2/14/2022	17.14	17.43					

**NOTES:**

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

bgs = below ground surface

<sup>2</sup>In feet referenced to North American Vertical Datum of 1988 (NAVD88).

<sup>3</sup>In feet below top of well casing.

**Table 5**  
**Monitoring Wells Construction Details**  
**Alley Area of Block 38 West Site**  
**Seattle, Washington**  
**Farallon PN: 397-019**

<b>Location</b>	<b>Screened Interval (feet bgs)<sup>1</sup></b>	<b>Screened Interval (feet NAVD88)<sup>2</sup></b>	<b>Top of Casing Elevation (feet NAVD88)<sup>2</sup></b>	<b>Monitoring Well Decommissioned</b>	<b>Date Decommissioned</b>
FMW-130	45.0 to 55.0	-22.8 to -32.8	21.86	Yes	11/4/2019
FMW-132	5.0 to 10.0	20.7 to 15.7	25.48	Yes	11/4/2019
FMW-133	6.5 to 11.5	18.8 to 13.8	24.87	Yes	11/4/2019
FMW-134	12.0 to 17.0	13.4 to 8.4	24.98	No	2/13/2020
FMW-135	7.0 to 12.0	18.6 to 13.6	25.29	Yes	1/8/2020
FMW-136	30.0 to 40.0	-4.9 to -14.9	24.79	No	2/13/2020
FMW-137	72.0 to 85.0	-41.9 to -54.9	30.09	No	N/A
FMW-138	90.0 to 100.0	-49.96 to 59.96	40.44	No	N/A
FMW-144	38.0 to 43.0	-8.0 to -13.0	29.41	Yes	1/8/2020
FMW-145	31.0 to 36.0	-8.0 to -13.0	22.90	Yes	1/8/2020
FMW-146	31.0 to 36.0	-8.0 to -13.0	23.19	Yes	1/8/2020
FMW-147	31.0 to 36.0	-8.0 to -13.0	22.82	Yes	1/8/2020
FMW-148	45.0 to 50.0	-8.0 to -13.0	Not surveyed	Yes	12/23/2019
FMW-149	44.0 to 49.0	-8.0 to -13.0	36.21	Yes	1/8/2020

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FMW-150	31.7 to 36.7	-8.5 to -13.5	23.23	No	N/A
FMW-151	33.1 to 38.1	-9.4 to -14.4	23.74	No	N/A
FMW-152	31.3 to 36.3	-8.5 to -13.5	22.83	No	N/A
FMW-153	33.2 to 38.2	-8.5 to -13.5	24.72	No	N/A
FMW-154	10.0 to 15.0	12.8 to 7.8	22.80	No	N/A
FMW-155	10.0 to 15.0	13.9 to 8.9	23.90	No	N/A
FMW-156	15.0 to 20.0	10.7 to 5.7	25.70	No	N/A
FMW-157	30.0 to 40.0	-4.1 to -14.1	25.95	No	N/A
<b>Block 38 West Construction Dewatering Observation Wells</b>					
OW-1	30.0 to 45.0	-6.0 to -21.0	24.17	No	NA
OW-2	30.0 to 45.0	-7.0 to -22.0	22.90	No	NA
OW-3	48.0 to 63.0	-8.0 to -23.0	38.91	No	NA
OW-4	48.0 to 58.0	-11.0 to -21.0	39.23	No	NA
OW-5	44.8 to 54.8	-11.0 to -21.0	34.57	No	NA

**NOTES:**

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

<sup>2</sup>In feet referenced to North American Vertical Datum of 1988 (NAVD88).

<sup>3</sup>In feet below top of well casing.

bgs = below ground surface

N/A = not applicable

**APPENDIX A  
BORING LOGS**

INTERIM ACTION REPORT  
Alley Area of Block 38 West Site  
Between Republican Street and Mercer Street  
Seattle, Washington

Farallon PN: 397-019



# Log of Boring: FB-10

**Client:** City Investors IX  
**Project:** Block 38 West Property  
**Location:** Seattle, Washington

**Date/Time Started:** 9/12/20 @ 1015  
**Date/Time Completed:** 9/12/20 @ 1230  
**Equipment:** Geoprobe  
**Drilling Company:** AEC  
**Drilling Foreman:** Levi  
**Drilling Method:** Direct Push

**Sampler Type:** 5' 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:** 397-019

**Logged By:** G.Peters

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	USCS Graphic	% Recovery	Blow Counts 8/8/8	PID (ppm)	Sample ID	Sample Analyzed	Boring/Well Construction Details
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0	0.0-2.5'	Poorly-graded SAND (90% sand, 5% gravel, 5% silt), fine sand, dark brown, moist, no odor. Concrete, wood and metal debris (Fill)	SP							
	2.5-5.0'	SILT (80% silt, 10% sand, 10% organics), fine sand, dark brown, moist, no odor. Concrete, wood and metal debris. (Fill)	ML				0.0	FB-10-22.5	X	
5	5.0-6.0'	Silty SAND (70% sand, 30% silt), fine sand, gray, moist, no odor. (Fill)	SM		66		0.0	FB-10-20.0	X	Bentonite
	6.0-8.3'	SILT (90% silt, 10% sand), fine sand, light brown to dark brown, moist, no odor. Charcoal debris at 8.0' bgs. (Fill)	ML				0.0	FB-10-17.5	X	
	8.3-10.0'	No recovery.								
10	10.0-11.6'	SILT (90% silt, 10% sand), fine sand, gray, moist, no odor.	ML		80		0.0	FB-10-15.0		
	11.6-14.0'	Silty SAND (85% sand, 15% silt), fine sand, grayish brown, moist, no odor.	SM							
	14.0-15.0'	No recovery.					0.0	FB-10-10.0		
15										

### Well Construction Information

<b>Monument Type:</b> NA	<b>Filter Pack:</b> NA	<b>Ground Surface Elevation (ft):</b> 24.86
<b>Casing Diameter (inches):</b> NA	<b>Surface Seal:</b> Concrete	<b>Top of Casing Elevation (ft):</b> NA
<b>Screen Slot Size (inches):</b> NA	<b>Annular Seal:</b> NA	<b>Surveyed Location:</b> X: NA Y: NA
<b>Screened Interval (ft bgs):</b> NA	<b>Boring Abandonment:</b> Bentonite	<b>Unique Well ID:</b> NA





# Log of Boring: FB-11

**Client:** City Investors IX  
**Project:** Block 38 West Property  
**Location:** Seattle, Washington

**Date/Time Started:** 9/12/20 @ 1240  
**Date/Time Completed:** 9/12/20 @ 1430  
**Equipment:** Geoprobe  
**Drilling Company:** AEC  
**Drilling Foreman:** Levi  
**Drilling Method:** Direct Push

**Sampler Type:** 5' 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:** 397-019

**Logged By:** G.Peters

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	USCS Graphic	% Recovery	Blow Counts 8/8/8	PID (ppm)	Sample ID	Sample Analyzed	Boring/Well Construction Details
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0		0.0-1.5': Well-graded SAND with silt (80% sand, 10% silt, 10% gravel), fine to coarse sand, dark brown, moist, no odor, wood, concrete, metal debris. (Fill)	SW-SM							
		1.5-5.0': ORGANIC SOIL (70% organics, 30% silt), dark brown, soft, moist, hydrocarbon-like odor. (Fill)	OL				0.0	FB-11-22.5		
5		5.0-10.0': SILT (100% silt), light brown, soft, moist, organic odor. Charcoal debris at 8.5' bgs. (Fill)	ML		100		64.2	FB-11-20.0	X	Bentonite
							0.0	FB-11-17.5	X	
10		10.0-12.0': SILT (90% silt, 10% sand), fine sand, gray, moist, no odor.	ML		100		0.1	FB-11-15.0		
		12.0-15.0': Silty SAND (80% sand, 20% silt), fine sand, gray, moist, no odor.	SM				0.3	FB-11-10.0		
15										

### Well Construction Information

<b>Monument Type:</b> NA	<b>Filter Pack:</b> NA	<b>Ground Surface Elevation (ft):</b> 23.88
<b>Casing Diameter (inches):</b> NA	<b>Surface Seal:</b> Concrete	<b>Top of Casing Elevation (ft):</b> NA
<b>Screen Slot Size (inches):</b> NA	<b>Annular Seal:</b> NA	<b>Surveyed Location:</b> X: NA Y: NA
<b>Screened Interval (ft bgs):</b> NA	<b>Boring Abandonment:</b> Bentonite	<b>Unique Well ID:</b> NA



# Log of Boring: FB-12

**Client:** City Investors IX  
**Project:** Block 38 West Property  
**Location:** Seattle, Washington

**Date/Time Started:** 9/13/20 @ 0930  
**Date/Time Completed:** 9/13/20 @ 1030  
**Equipment:** Geoprobe  
**Drilling Company:** AEC  
**Drilling Foreman:** Levi  
**Drilling Method:** Direct Push

**Sampler Type:** 5' 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:** 397-019

**Logged By:** G.Peters

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	USCS Graphic	% Recovery	Blow Counts 8/8/8	PID (ppm)	Sample ID	Sample Analyzed	Boring/Well Construction Details
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0	0.0-1.0': Concrete. Air knife to clear for utilities.	CO								Concrete
	1.0-1.5': Poorly-graded SAND (90% sand, 10% gravel), fine sand, brown, moist, no odor. (Fill)	SP								
	1.5-5.0': ORGANIC SOIL (100% organic soil), dark brown, soft, organic odor. Wood chips, root debris, trace charcoal. (Fill)	OL					0.0	FB-12-21.5	X	
5	5.0-7.0': SILT (60% silt, 40% organics), dark brown, soft, moist, organic odor. Wood debris. (Fill)	ML		100			0.6	FB-12-20.0	X	Bentonite
	7.0-10.0': SILT (80% silt, 20% organics), light to dark brown, soft, moist, organic odor. Trace charcoal at 8.5' bgs. (Fill)	ML					1.0	FB-12-17.5	X	
10	10.0-12.0': SILT (100% silt), gray, moist, no odor.	ML		100			0.0	FB-12-15.0	X	
	12.0-15.0': Poorly-graded SAND with silt (90% sand, 10% silt), fine sand, gray, moist, no odor.	SP-SM					0.0	FB-12-10.0		
15										

### Well Construction Information

<b>Monument Type:</b> NA	<b>Filter Pack:</b> NA	<b>Ground Surface Elevation (ft):</b> 22.79
<b>Casing Diameter (inches):</b> NA	<b>Surface Seal:</b> Concrete	<b>Top of Casing Elevation (ft):</b> NA
<b>Screen Slot Size (inches):</b> NA	<b>Annular Seal:</b> NA	<b>Surveyed Location:</b> X: NA Y: NA
<b>Screened Interval (ft bgs):</b> NA	<b>Boring Abandonment:</b> Bentonite	<b>Unique Well ID:</b> NA



# Log of Boring: FB-13

**Client:** City Investors IX  
**Project:** Block 38 West Property  
**Location:** Seattle, Washington

**Date/Time Started:** 9/12/20 @ 1220  
**Date/Time Completed:** 9/12/20 @ 1600  
**Equipment:** Geoprobe  
**Drilling Company:** AEC  
**Drilling Foreman:** Levi  
**Drilling Method:** Direct Push

**Sampler Type:** 5' 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:** 397-019

**Logged By:** G.Peters

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

0	0.0-1.0'	Concrete. Air knife to clear for utilities.	CO							Concrete
	1.0-1.5'	Well-graded SAND with gravel (70% sand, 25% gravel, 5% silt), fine to coarse sand, fine gravel, dark gray, moist, no odor. (Fill)	SW							Concrete
	1.5-5.0'	ORGANIC SOIL (80% organics, 20% silt), dark brown, moist, organic odor. Wood debris. (Fill)	OL				0.1	FB-13-22.5	X	
5	5.0-10'	SILT (60% silt, 40% organics), dark brown, soft, moist, organic odor. Wood debris. (Fill)	ML		100		2.7	FB-13-20.0	X	
							1.1	FB-13-17.5	X	
10	10.0-15.0'	Silty SAND (80% sand, 20% silt), fine sand, gray, moist, no odor.	SM		100		0.3	FB-13-15.0	X	
							0.0	FB-13-10.0		
15										

### Well Construction Information

<b>Monument Type:</b> NA	<b>Filter Pack:</b> NA	<b>Ground Surface Elevation (ft):</b> 23.00
<b>Casing Diameter (inches):</b> NA	<b>Surface Seal:</b> Concrete	<b>Top of Casing Elevation (ft):</b> NA
<b>Screen Slot Size (inches):</b> NA	<b>Annular Seal:</b> NA	<b>Surveyed Location:</b> X: NA Y: NA
<b>Screened Interval (ft bgs):</b> NA	<b>Boring Abandonment:</b> Bentonite	<b>Unique Well ID:</b> NA



# Log of Boring: FB-14

**Client:** City Investors IX  
**Project:** Block 38 West Property  
**Location:** Seattle, Washington

**Date/Time Started:** 9/12/20 @ 1500  
**Date/Time Completed:** 9/13/20 @ 1045  
**Equipment:** Geoprobe  
**Drilling Company:** AEC  
**Drilling Foreman:** Levi  
**Drilling Method:** Direct Push

**Sampler Type:** 5' 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:** 397-019

**Logged By:** G.Peters

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	USCS Graphic	% Recovery	Blow Counts 8/8/8	PID (ppm)	Sample ID	Sample Analyzed	Boring/Well Construction Details
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0	0.0-0.45'	Concrete. Air knife to clear for utilities.	CO							Concrete
	0.45-1.5'	Poorly-graded SAND with silt (80% sand, 10% silt, 10% gravel), fine sand, gray, moist, no odor. (Fill)	SP-SM							
	1.5-5.0'	Silty SAND (70% sand, 30% silt), fine sand, gray, moist, no odor. (Fill)	SM				1.1	FB-14-22.5	X	
5	5.0-6.2'	SILT (70% silt, 30% organics), brown, soft, moist, organic odor. Wood debris. (Fill)	ML		100		0.5	FB-14-20.0	X	Bentonite
	6.2-10.0'	No recovery.					1.5	FB-14-17.5	X	
10	10.0-11.0'	SILT (80% silt, 20% organics), dark brown, soft, moist, organic odor. Wood debris.	ML		100			FB-14-15.0		
	11.0-12.4'	SILT (100% silt), gray, stiff, moist, no odor.	ML							
	12.4-14.0'	Poorly-graded SAND with silt (90% sand, 10% silt), fine sand, gray, moist, no odor.	SP-SM				0.0	FB-14-10.0		
	14.0-15.0'	No recovery.								
15										

### Well Construction Information

<b>Monument Type:</b> NA	<b>Filter Pack:</b> NA	<b>Ground Surface Elevation (ft):</b> 23.81
<b>Casing Diameter (inches):</b> NA	<b>Surface Seal:</b> Concrete	<b>Top of Casing Elevation (ft):</b> NA
<b>Screen Slot Size (inches):</b> NA	<b>Annular Seal:</b> NA	<b>Surveyed Location:</b> X: NA Y: NA
<b>Screened Interval (ft bgs):</b> NA	<b>Boring Abandonment:</b> Bentonite	<b>Unique Well ID:</b> NA



# Log of Boring: FB-15

**Client:** City Investors IX  
**Project:** Block 38 West Property  
**Location:** Seattle, Washington

**Date/Time Started:** 9/13/20 @ 1045  
**Date/Time Completed:** 9/13/20 @ 1105  
**Equipment:** Geoprobe  
**Drilling Company:** AEC  
**Drilling Foreman:** Levi  
**Drilling Method:** Direct Push

**Sampler Type:** 5' 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:** 397-019

**Logged By:** G.Peters

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	USCS Graphic	% Recovery	Blow Counts 8/8/8	PID (ppm)	Sample ID	Sample Analyzed	Boring/Well Construction Details
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0	0.0-0.25'	Concrete. Air knife to clear for utilities.	CO							Concrete
	0.25-2.0'	Poorly-graded SAND with gravel (80% sand, 20% gravel), fine to medium sand, fine gravel, dark gray, no odor. (Fill)	SP							Concrete
	2.0-5.0'	Poorly-graded SAND (90% sand, 10% gravel), fine sand, grayish brown, moist, no odor. (Fill)	SP				1.5	FB-15-22.5	X	
5	5.0-7.0'	Silty SAND (80% sand, 20% silt), fine sand, grayish brown, moist, no odor. (Fill)	SM		60		0.1	FB-15-20.0	X	Bentonite
	7.0-8.0'	ORGANIC SOIL (90% organics, 20% silt), dark brown, moist, organic odor, strong petroleum-like odor. Wood debris. (Fill)	OL				1.0	FB-15-17.5	X	
	8.0-10.0'	No recovery.								
10	10.0-14.0'	SILT ( 60% silt, 40% organics), dark brown, soft, moist, organic odor.	ML		80		43.6	FB-15-15.0	X	
	14.0-15.0'	No recovery.					0.1	FB-15-10.0		
15										

### Well Construction Information

<b>Monument Type:</b> NA	<b>Filter Pack:</b> NA	<b>Ground Surface Elevation (ft):</b> 24.91
<b>Casing Diameter (inches):</b> NA	<b>Surface Seal:</b> Concrete	<b>Top of Casing Elevation (ft):</b> NA
<b>Screen Slot Size (inches):</b> NA	<b>Annular Seal:</b> NA	<b>Surveyed Location:</b> X: NA Y: NA
<b>Screened Interval (ft bgs):</b> NA	<b>Boring Abandonment:</b> Bentonite	<b>Unique Well ID:</b> NA





# Log of Boring: FB-16

**Client:** City Investors IX  
**Project:** Block 38 West Property  
**Location:** Seattle, Washington

**Date/Time Started:** 9/13/20 @ 1120  
**Date/Time Completed:** 9/13/20 @ 1150  
**Equipment:** Geoprobe  
**Drilling Company:** AEC  
**Drilling Foreman:** Levi  
**Drilling Method:** Direct Push

**Sampler Type:** 5' Macrocore  
**Drive Hammer (lbs.):** Auto  
**Depth of Water ATD (ft bgs):** NE  
**Total Boring Depth (ft bgs):** 20.0  
**Total Well Depth (ft bgs):** NA

**Farallon PN:** 397-019

**Logged By:** G.Peters

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	USCS Graphic	% Recovery	Blow Counts 8/8/8	PID (ppm)	Sample ID	Sample Analyzed	Boring/Well Construction Details
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0	0.0-0.25'	Concrete. Air knife to clear for utilities.	CO							Concrete
	0.5-5.0'	Poorly-graded SAND (90% sand, 10% gravel), fine sand, brown, moist, no odor. (Fill)	SP				0.2	FB-16-22.5	X	
5	5.0-8.0'	Poorly-graded SAND with silt (90% sand, 10% silt), fine sand, brown, moist, no odor. (Fill)	SP-SM		60		0.0	FB-16-20.0	X	Bentonite
	8.0-10.0'	No recovery.					2.7	FB-16-17.5	X	
10	10.0-13.0'	ORGANIC SOIL (90% organics, 10% silt), dark brown, moist, organic odor, Wood debris. (Fill)	OL		100		2.0	FB-16-15.0		
	13.0-15.0'	No recovery.								
15	15.0-18.5'	ORGANIC SOIL (70% organics, 30% silt), dark brown, soft, moist, organic odor. Trace charcoal. (Fill)	OL				0.0	FB-16-10.0		
	18.5-20.0'	Silty SAND (80% sand, 20% silt), fine sand, gray, moist, no odor.	SM							
20										

### Well Construction Information

<b>Monument Type:</b> NA	<b>Filter Pack:</b> NA	<b>Ground Surface Elevation (ft):</b> 27.50
<b>Casing Diameter (inches):</b> NA	<b>Surface Seal:</b> Concrete	<b>Top of Casing Elevation (ft):</b> NA
<b>Screen Slot Size (inches):</b> NA	<b>Annular Seal:</b> NA	<b>Surveyed Location:</b> X: NA Y: NA
<b>Screened Interval (ft bgs):</b> NA	<b>Boring Abandonment:</b> Bentonite	<b>Unique Well ID:</b> NA



# Log of Boring: FB-21

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

**Date/Time Started:** 2/5/2022 @ 1030  
**Date/Time Completed:** 2/5/2022 @ 1115  
**Drilling Company:** Cascade Drilling  
**Drilling Method:** Sonic Drilling  
**Drilling Equipment:** Terrasonic  
**Drilling Operator:** Rico Rodriguez  
**Sampler Type:** 5' PE Bags  
**Drive Hammer (lbs):** NA

**Depth to Water ATD (ft bgs):** NE  
**Boring Diameter (in):** 8.0  
**Total Boring Depth (ft bgs):** 10.0  
**Constructed Well Depth (ft bgs):** NA

**Farallon PN:** 397-019

**Logged By:** G.Peters

**Reviewed By:** Suzy Stumpf

Depth (ft bgs)	Sample Interval	Lithologic Description	USCS	USCS Graphic	Blow Counts	% Recovery	PID (ppmv)	Sample ID	Sample Analyzed	Boring/Well Construction Details
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0	0.0-0.4'	Asphalt. Airknife to 5.0' bgs for utility clearance.	AC							Asphalt
	0.4-5.0'	Silty SAND (80% sand, 20% silt), fine sand, dark brown, moist, no odor, no staining. Wood and charcoal debris (Fill).	SM					0.0	FB-21-3.0	
5	5.0-10.0'	Poorly-graded SAND (100% sand), fine sand, brown, moist, no odor, no staining.	SP-SM		100		0.0	FB-21-5.0		Bentonite
10							0.0	FB-21-10.0		

### Well Construction Information

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



# Log of Boring: FMW-137

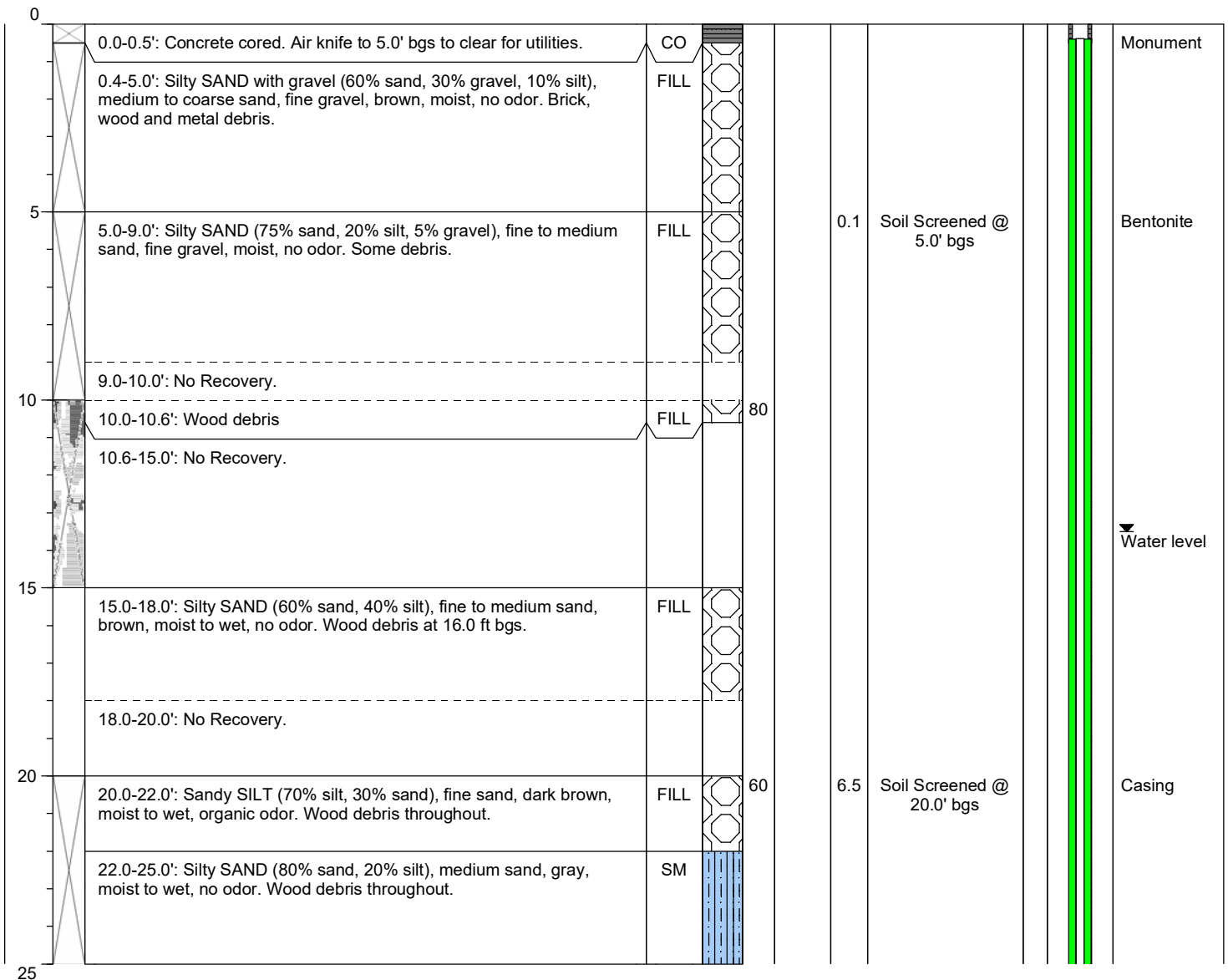
**Client:** City Investors IX LLC  
**Project:** Block 38 West Property  
**Location:** Seattle, WA

**Date/Time Started:** 11/3/2018 @ 1145 **Sampler Type:** 4 x 6 sample bag  
**Date/Time Completed:** 11/17/2018 @ 1400 **Drive Hammer (lbs.):** NA  
**Equipment:** Sonic Rig/Geoprobe **Depth of Water ATD (ft bgs):** NE  
**Drilling Company:** Holocene Drilling **Total Boring Depth (ft bgs):** 90.0  
**Drilling Foreman:** Zack Bailey **Total Well Depth (ft bgs):** 85.0  
**Drilling Method:** Sonic Drilling

**Farallon PN:** 397-061

**Logged By:** Greg Peters

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

<b>Monument Type:</b> Flush Mount	<b>Filter Pack:</b> 12/20 Sand	<b>Ground Surface Elevation (ft):</b> NA
<b>Casing Diameter (inches):</b> 2.0	<b>Surface Seal:</b> Concrete	<b>Top of Casing Elevation (ft):</b> NA
<b>Screen Slot Size (inches):</b> 0.010	<b>Annular Seal:</b> Bentonite	<b>Surveyed Location:</b> X: NA
<b>Screened Interval (ft bgs):</b> 72.0-85.0	<b>Boring Abandonment:</b> NA	Y: NA



# Log of Boring: FMW-137

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

**Date/Time Started:** 11/3/2018 @ 1145 **Sampler Type:** 4 x 6 sample bag  
**Date/Time Completed:** 11/17/2018 @ 1400 **Drive Hammer (lbs.):** NA  
**Equipment:** Sonic Rig/Geoprobe **Depth of Water ATD (ft bgs):** NE  
**Drilling Company:** Holocene Drilling **Total Boring Depth (ft bgs):** 90.0  
**Drilling Foreman:** Zack Bailey **Total Well Depth (ft bgs):** 85.0  
**Drilling Method:** Sonic Drilling

**Farallon PN:** 397-061

**Logged By:** Greg Peters

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	USCS Graphic	% Recovery	Blow Counts 8/8/8	PID (ppm)	Sample ID	Sample Analyzed	Boring/Well Construction Details
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25	25.0-27.0'	Silty SAND (60% sand, 40% silt), fine sand, gray, moist to wet, no odor.	SM		100					
	27.0-29.0'	Silty SAND (80% sand, 20% silt), fine to medium sand, gray, moist to wet, no odor.	SM							
	29.0-30.0'	No Recovery.								
30	30.0-35.0'	Silty SAND (70% sand, 30% silt), fine sand, gray, wet, no odor.	SM		100		0.3	Soil Screened @ 30.0' bgs		Bentonite
35	35.0-40.0'	Silty SAND (60% sand, 40% silt), fine sand, gray, moist, no odor.	SM		100					
40	40.0-42.0'	Poorly graded SAND with silt (90% sand, 10% silt), fine to medium sand, gray, moist, no odor.	SP-SM		100		0.3	Soil Screened @ 40.0' bgs		Casing
	42.0-45.0'	Silty SAND (70% sand, 30% silt), fine sand, gray, moist, no odor.	SM							
45	45.0-50.0'	Silty SAND (85% sand, 15% silt), fine sand, grayish brown, moist, no odor.	SM							
50										

### Well Construction Information

<b>Monument Type:</b> Flush Mount	<b>Filter Pack:</b> 12/20 Sand	<b>Ground Surface Elevation (ft):</b> NA
<b>Casing Diameter (inches):</b> 2.0	<b>Surface Seal:</b> Concrete	<b>Top of Casing Elevation (ft):</b> NA
<b>Screen Slot Size (inches):</b> 0.010	<b>Annular Seal:</b> Bentonite	<b>Surveyed Location:</b> X: NA
<b>Screened Interval (ft bgs):</b> 72.0-85.0	<b>Boring Abandonment:</b> NA	Y: NA



# Log of Boring: FMW-137

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

**Date/Time Started:** 11/3/2018 @ 1145 **Sampler Type:** 4 x 6 sample bag  
**Date/Time Completed:** 11/17/2018 @ 1400 **Drive Hammer (lbs.):** NA  
**Equipment:** Sonic Rig/Geoprobe **Depth of Water ATD (ft bgs):** NE  
**Drilling Company:** Holocene Drilling **Total Boring Depth (ft bgs):** 90.0  
**Drilling Foreman:** Zack Bailey **Total Well Depth (ft bgs):** 85.0  
**Drilling Method:** Sonic Drilling

**Farallon PN:** 397-061

**Logged By:** Greg Peters

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	USCS Graphic	% Recovery	Blow Counts 8/8/8	PID (ppm)	Sample ID	Sample Analyzed	Boring/Well Construction Details
50	50.0-55.0'	Silty SAND (80% sand, 20% silt), fine to medium sand, grayish brown, moist to wet, no odor.	SM		100		3.2	Soil Screened @ 50.0' bgs		Casing
55	55.0-60.0'	Silty SAND (80% sand, 20% silt), fine to medium sand, grayish brown, moist to wet, no odor.	SM							
60	60.0-70.0'	Poorly graded SAND with silt (90% sand, 10% silt), medium sand, grayish brown, moist, no odor.	SP-SM		100		1.3	Soil Screened @ 60.0' bgs		
65	70.0-72.0'	Poorly graded SAND with silt (90% sand, 10% silt), medium sand, grayish brown, moist.	SP-SM		100		0.3	Soil Screened @ 70.0' bgs		Bentonite
70	72.0-75.0'	Poorly graded SAND with silt (80% sand, 10% silt, 10% gravel), medium sand, fine gravel, grayish brown, moist no odor.	SP-SM							Screen (Pre-packed)
75										

### Well Construction Information

**Monument Type:** Flush Mount  
**Casing Diameter (inches):** 2.0  
**Screen Slot Size (inches):** 0.010  
**Screened Interval (ft bgs):** 72.0-85.0

**Filter Pack:** 12/20 Sand  
**Surface Seal:** Concrete  
**Annular Seal:** Bentonite  
**Boring Abandonment:** NA

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





# Log of Boring: FMW-137

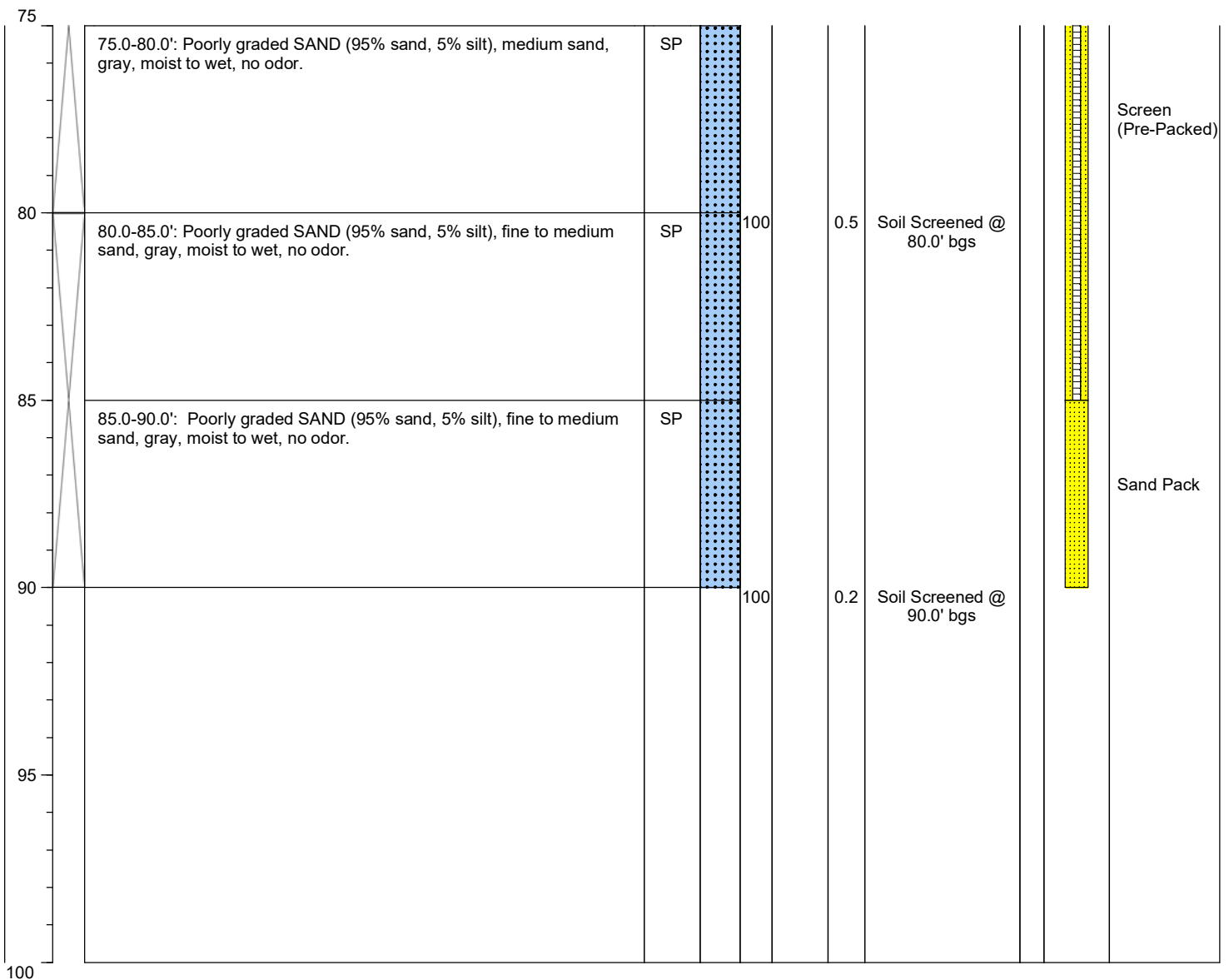
**Client:** City Investors IX LLC  
**Project:** Block 38 West Property  
**Location:** Seattle, WA

**Date/Time Started:** 11/3/2018 @ 1145 **Sampler Type:** 4 x 6 sample bag  
**Date/Time Completed:** 11/17/2018 @ 1400 **Drive Hammer (lbs.):** NA  
**Equipment:** Sonic Rig/Geoprobe **Depth of Water ATD (ft bgs):** NE  
**Drilling Company:** Holocene Drilling **Total Boring Depth (ft bgs):** 90.0  
**Drilling Foreman:** Zack Bailey **Total Well Depth (ft bgs):** 85.0  
**Drilling Method:** Sonic Drilling

**Farallon PN:** 397-061

**Logged By:** Greg Peters

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	USCS Graphic	% Recovery	Blow Counts 8/8/8	PID (ppm)	Sample ID	Sample Analyzed	Boring/Well Construction Details
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Well Construction Information			
<b>Monument Type:</b> Flush Mount	<b>Filter Pack:</b> 12/20 Sand	<b>Ground Surface Elevation (ft):</b> NA	
<b>Casing Diameter (inches):</b> 2.0	<b>Surface Seal:</b> Concrete	<b>Top of Casing Elevation (ft):</b> NA	
<b>Screen Slot Size (inches):</b> 0.010	<b>Annular Seal:</b> Bentonite	<b>Surveyed Location:</b> X: NA	
<b>Screened Interval (ft bgs):</b> 72.0-85.0	<b>Boring Abandonment:</b> NA	Y: NA	



# Log of Boring: FMW-138

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

**Date/Time Started:** 11/3/2018 @ 0900 **Sampler Type:** 4 x 6 sample bag  
**Date/Time Completed:** 11/4/2018 @ 0900 **Drive Hammer (lbs.):** NA  
**Equipment:** Sonic Rig/Geoprobe **Depth of Water ATD (ft bgs):** NE  
**Drilling Company:** Holocene Drilling **Total Boring Depth (ft bgs):** 100.0  
**Drilling Foreman:** Zack Bailey **Total Well Depth (ft bgs):** 100.0  
**Drilling Method:** Sonic Drilling

**Farallon PN:** 397-061

**Logged By:** Greg Peters

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	USCS Graphic	% Recovery	Blow Counts 8/8/8	PID (ppm)	Sample ID	Sample Analyzed	Boring/Well Construction Details
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0	0.0-0.4':	Concrete cored. Air knife to 5.0' bgs to clear for utilities.	CO							Monument
	0.4-5.0':	Silty SAND with gravel (60% sand, 30% gravel, 10% silt), fine to coarse sand, fine gravel, brown, moist, no odor. concrete sub layer at 2.5' bgs. Brick, wood and metal debris.	FILL							
5	5.0-8.0':	Silty SAND with gravel (60% sand, 20% gravel, 20% silt), fine to coarse sand, fine gravel, brown moist, no odor. Wood debris through core.	FILL				0.0	Soil Screened @ 5.0' bgs		Bentonite
	8.0-10.0':	No Recovery.								
10	10.0-12.0':	Silty SAND (60% sand, 30% silt, 10% gravel), fine sand, fine gravel, gray, moist, no odor. Wood debris at 12.0' bgs.	FILL		60		0.0	Soil Screened @ 10.0' bgs		
	12.0-15.0':	Silty SAND with gravel (70% sand, 15% silt, 15% gravel), fine sand, fine gravel, gray, moist, no odor. Wood debris.	FILL							
15	15.0-20.0':	Silty SAND (70% sand, 30% silt), fine sand, fine gravel, grayish brown, moist, organic like odor. Wood debris.	FILL				0.0	Soil Screened @ 15.0' bgs		Casing
20	20.0-25.0':	Sandy SILT (80% silt, 20% sand), fine sand, dark brown, moist to wet, organic like odor. organic matter and some wood debris present.	FILL		100		17.3	Soil Screened @ 20.0' bgs		

### Well Construction Information

<b>Monument Type:</b> Flush Mount	<b>Filter Pack:</b> 12/20 Sand	<b>Ground Surface Elevation (ft):</b> NA
<b>Casing Diameter (inches):</b> 2.0	<b>Surface Seal:</b> Concrete	<b>Top of Casing Elevation (ft):</b> NA
<b>Screen Slot Size (inches):</b> 0.010	<b>Annular Seal:</b> Bentonite	<b>Surveyed Location:</b> X: NA
<b>Screened Interval (ft bgs):</b> 90.0 - 100.0	<b>Boring Abandonment:</b> NA	Y: NA

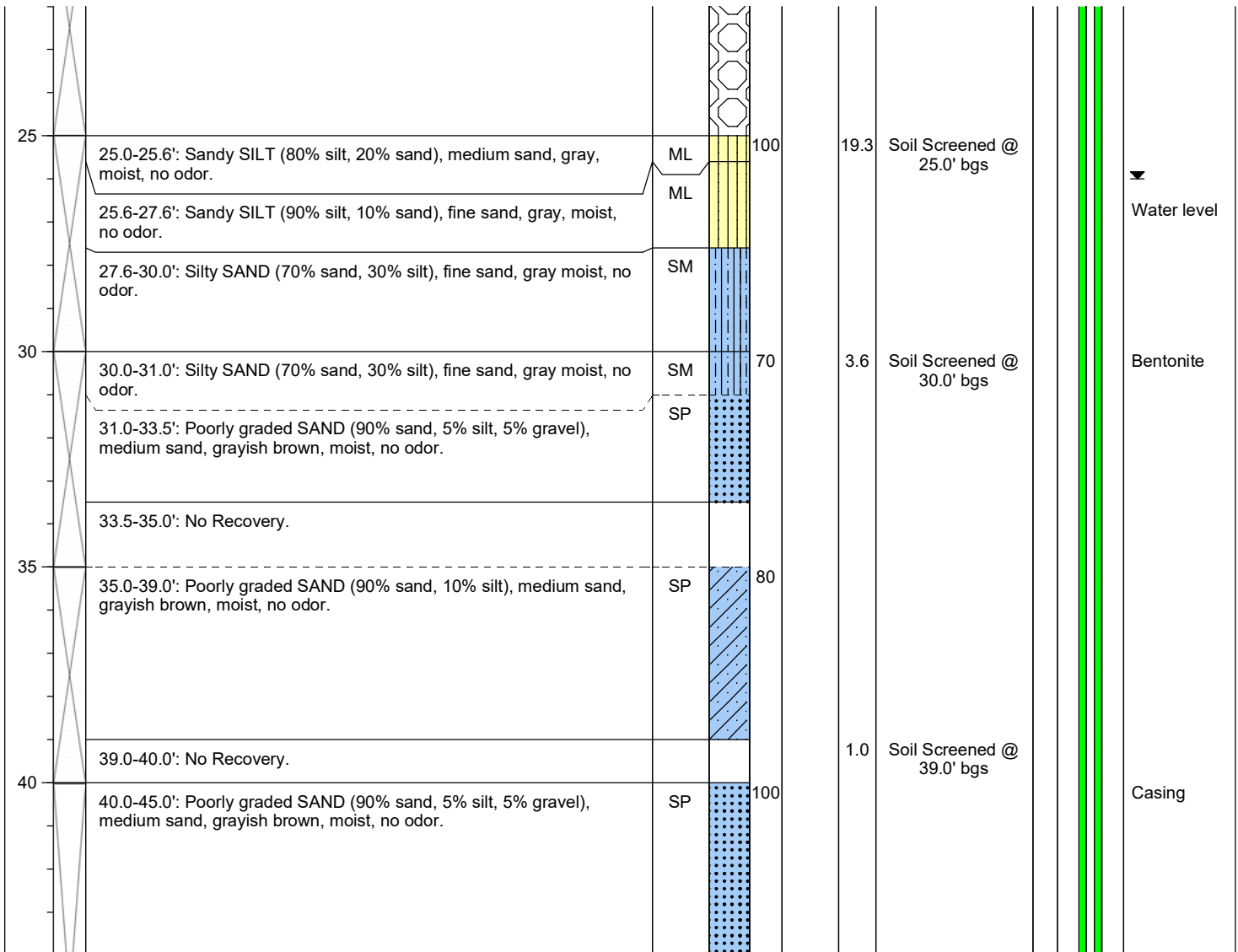
**Client:** City Investors IX LLC  
**Project:** Block 38 West Property  
**Location:** Seattle, WA

**Date/Time Started:** 11/3/2018 @ 0900 **Sampler Type:** 4 x 6 sample bag  
**Date/Time Completed:** 11/4/2018 @ 0900 **Drive Hammer (lbs.):** NA  
**Equipment:** Sonic Rig/Geoprobe **Depth of Water ATD (ft bgs):** NE  
**Drilling Company:** Holocene Drilling **Total Boring Depth (ft bgs):** 100.0  
**Drilling Foreman:** Zack Bailey **Total Well Depth (ft bgs):** 100.0  
**Drilling Method:** Sonic Drilling

**Farallon PN:** 397-061

**Logged By:** Greg Peters

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

**Monument Type:** Flush Mount  
**Casing Diameter (inches):** 2.0  
**Screen Slot Size (inches):** 0.010  
**Screened Interval (ft bgs):** 90.0 - 100.0

**Filter Pack:** 12/20 Sand  
**Surface Seal:** Concrete  
**Annular Seal:** Bentonite  
**Boring Abandonment:** NA

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



# Log of Boring: FMW-138

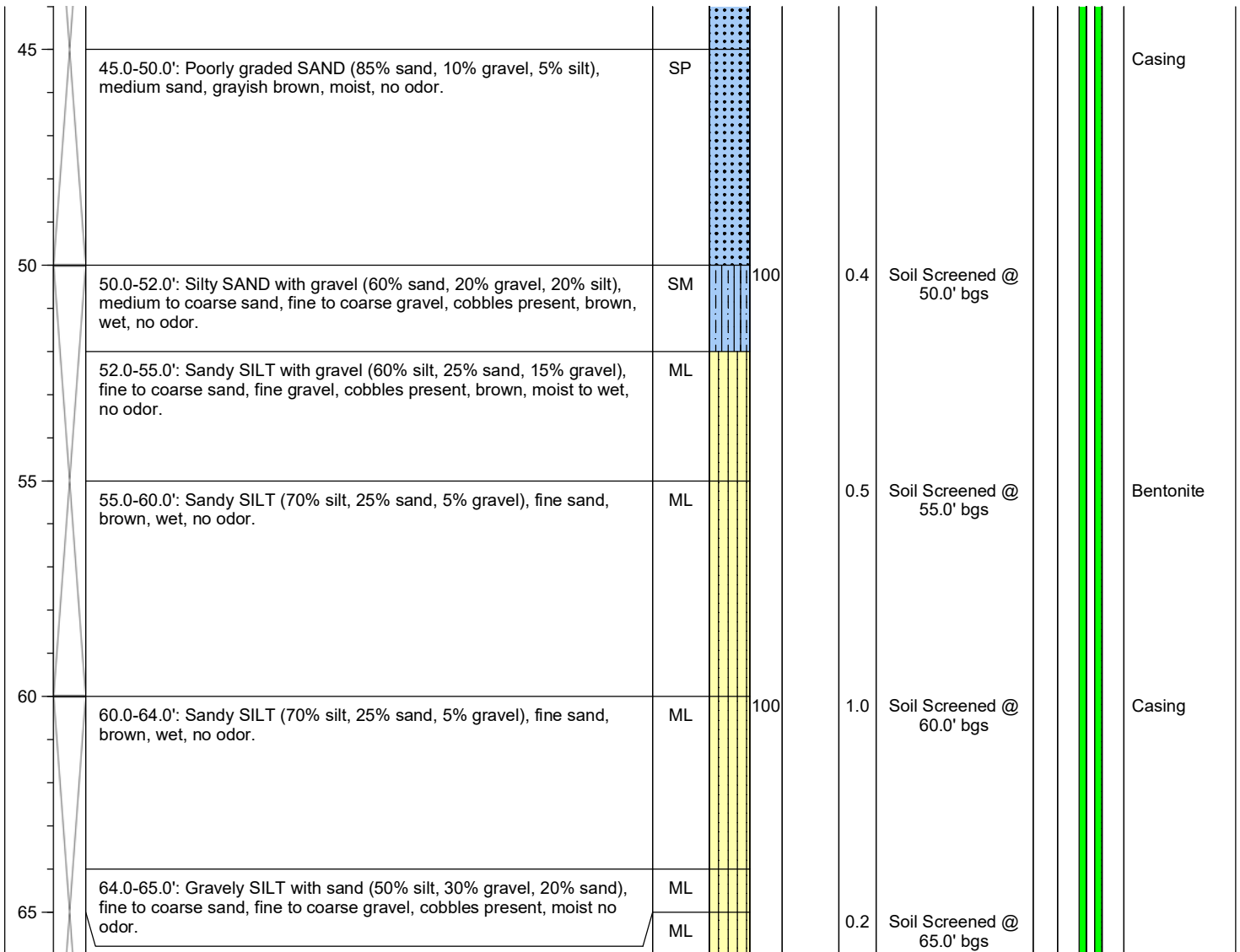
**Client:** City Investors IX LLC  
**Project:** Block 38 West Property  
**Location:** Seattle, WA

**Date/Time Started:** 11/3/2018 @ 0900 **Sampler Type:** 4 x 6 sample bag  
**Date/Time Completed:** 11/4/2018 @ 0900 **Drive Hammer (lbs.):** NA  
**Equipment:** Sonic Rig/Geoprobe **Depth of Water ATD (ft bgs):** NE  
**Drilling Company:** Holocene Drilling **Total Boring Depth (ft bgs):** 100.0  
**Drilling Foreman:** Zack Bailey **Total Well Depth (ft bgs):** 100.0  
**Drilling Method:** Sonic Drilling

**Farallon PN:** 397-061

**Logged By:** Greg Peters

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

**Monument Type:** Flush Mount  
**Casing Diameter (inches):** 2.0  
**Screen Slot Size (inches):** 0.010  
**Screened Interval (ft bgs):** 90.0 - 100.0

**Filter Pack:** 12/20 Sand  
**Surface Seal:** Concrete  
**Annular Seal:** Bentonite  
**Boring Abandonment:** NA

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



# Log of Boring: FMW-138

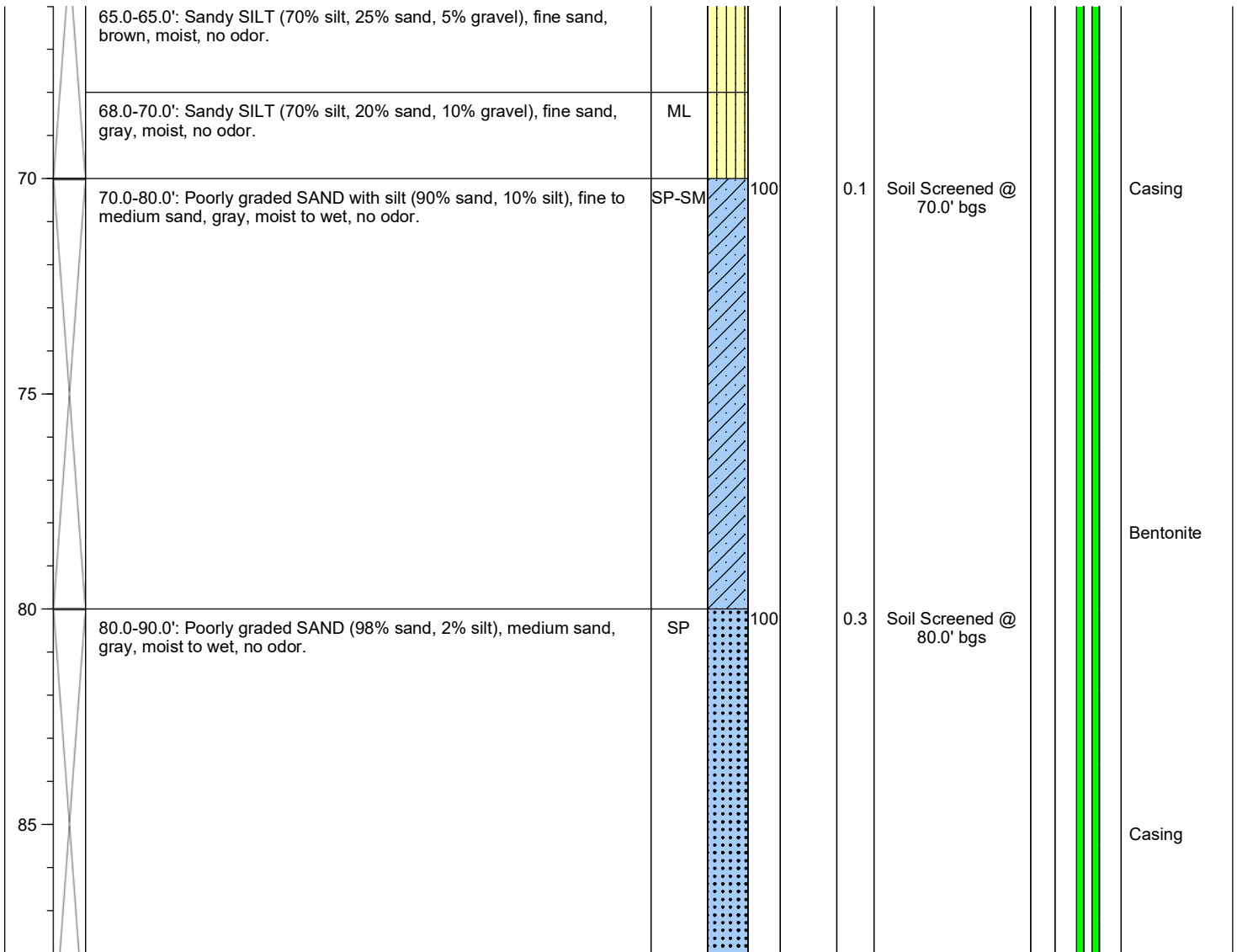
**Client:** City Investors IX LLC  
**Project:** Block 38 West Property  
**Location:** Seattle, WA

**Date/Time Started:** 11/3/2018 @ 0900 **Sampler Type:** 4 x 6 sample bag  
**Date/Time Completed:** 11/4/2018 @ 0900 **Drive Hammer (lbs.):** NA  
**Equipment:** Sonic Rig/Geoprobe **Depth of Water ATD (ft bgs):** NE  
**Drilling Company:** Holocene Drilling **Total Boring Depth (ft bgs):** 100.0  
**Drilling Foreman:** Zack Bailey **Total Well Depth (ft bgs):** 100.0  
**Drilling Method:** Sonic Drilling

**Farallon PN:** 397-061

**Logged By:** Greg Peters

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

**Monument Type:** Flush Mount  
**Casing Diameter (inches):** 2.0  
**Screen Slot Size (inches):** 0.010  
**Screened Interval (ft bgs):** 90.0 - 100.0

**Filter Pack:** 12/20 Sand  
**Surface Seal:** Concrete  
**Annular Seal:** Bentonite  
**Boring Abandonment:** NA

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



# Log of Boring: FMW-138

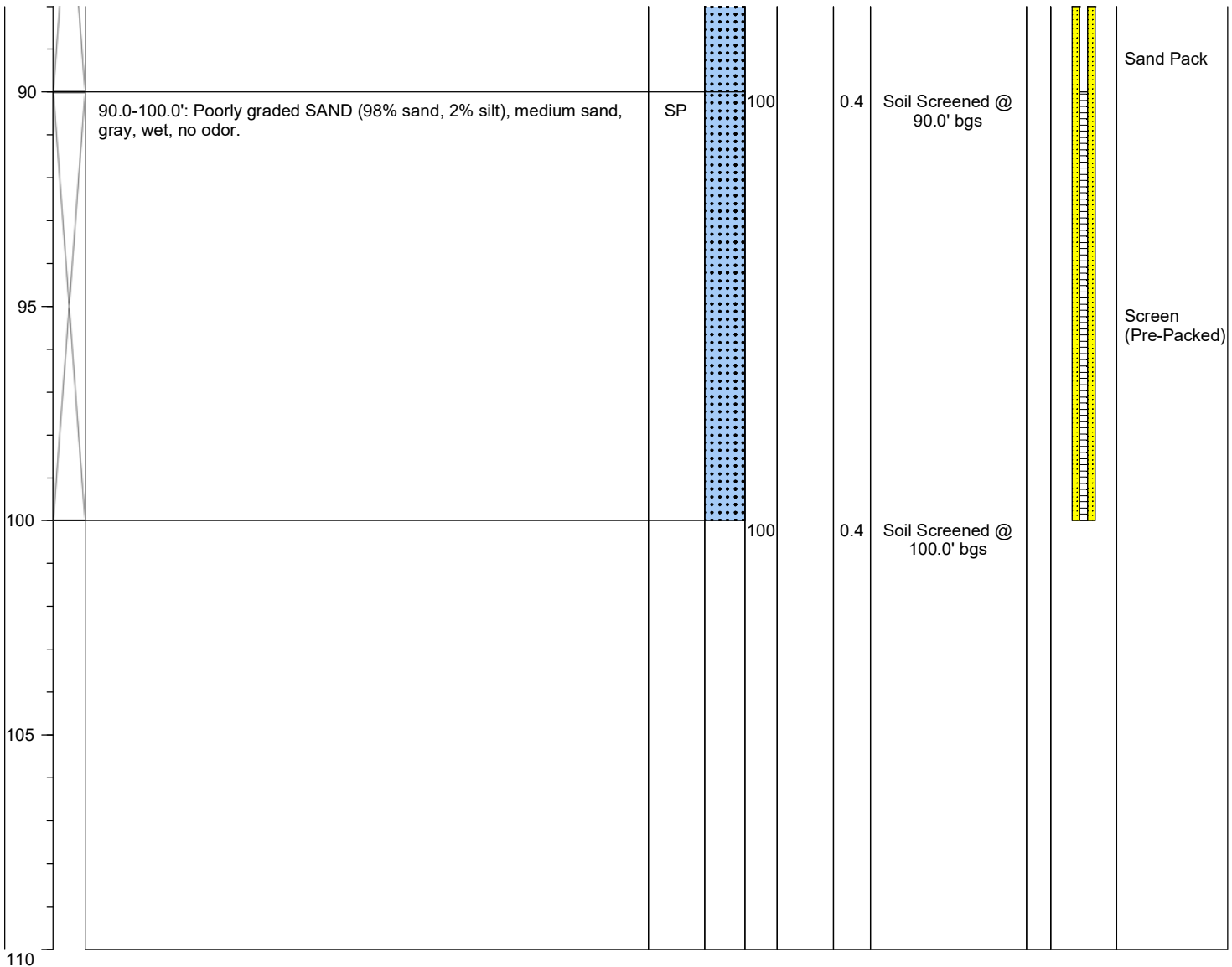
**Client:** City Investors IX LLC  
**Project:** Block 38 West Property  
**Location:** Seattle, WA

**Date/Time Started:** 11/3/2018 @ 0900 **Sampler Type:** 4 x 6 sample bag  
**Date/Time Completed:** 11/4/2018 @ 0900 **Drive Hammer (lbs.):** NA  
**Equipment:** Sonic Rig/Geoprobe **Depth of Water ATD (ft bgs):** NE  
**Drilling Company:** Holocene Drilling **Total Boring Depth (ft bgs):** 100.0  
**Drilling Foreman:** Zack Bailey **Total Well Depth (ft bgs):** 100.0  
**Drilling Method:** Sonic Drilling

**Farallon PN:** 397-061

**Logged By:** Greg Peters

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

<b>Monument Type:</b> Flush Mount	<b>Filter Pack:</b> 12/20 Sand	<b>Ground Surface Elevation (ft):</b> NA
<b>Casing Diameter (inches):</b> 2.0	<b>Surface Seal:</b> Concrete	<b>Top of Casing Elevation (ft):</b> NA
<b>Screen Slot Size (inches):</b> 0.010	<b>Annular Seal:</b> Bentonite	<b>Surveyed Location:</b> X: NA
<b>Screened Interval (ft bgs):</b> 90.0 - 100.0	<b>Boring Abandonment:</b> NA	Y: NA





# Log of Boring: FMW-154

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

**Date/Time Started:** 2/5/2022 @ 1130  
**Date/Time Completed:** 2/5/2022 @ 1245  
**Drilling Company:** Cascade Drilling  
**Drilling Method:** Sonic Drilling  
**Drilling Equipment:** Terrasonic  
**Drilling Operator:** Rico Rodriguez  
**Sampler Type:** 5' PE Bags  
**Drive Hammer (lbs):** NA

**Depth to Water ATD (ft bgs):** 10.0  
**Boring Diameter (in):** 8.0  
**Total Boring Depth (ft bgs):** 15.0  
**Constructed Well Depth (ft bgs):** 15.0

**Farallon PN:** 397-019

**Logged By:** G.Peters

**Reviewed By:** S. Stumpf

Depth (ft bgs)	Sample Interval	Lithologic Description	USCS	USCS Graphic	Blow Counts	% Recovery	PID (ppmv)	Sample ID	Sample Analyzed	Boring/Well Construction Details
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0	0.0-0.4': Asphalt. Airknife to 5.0' bgs for utility clearance.	AC								Concrete
	0.4-5.0': Poorly graded SAND (90% sand, 10% gravel), fine sand, dark brown, moist, no odor, no staining. Wood, brick, and plastic debris (Fill).	SP								
5	5.0-10.0': PEAT (90% peat, 10% sand), fine sand, brown, moist, organic odor, no staining. Wood debris.	PT			100	0.0		FMW-154-5.0		Bentonite
										Sand Pack
10	10.0-14.0': Well graded SAND with silt (60% sand, 20% peat, 10% silt, 10% gravel), fine to coarse sand, gray, wet, organic odor, no staining.	SW-SM			100	0.0		FMW-154-10.0		Water Level
15	14.0-15.0': Poorly graded SAND (100% sand), fine to medium sand, gray, wet, no odor, no staining.	SP								Well Screen
							0.0	FMW-154-15.0		

### Well Construction Information

<b>Monument Type:</b>	Flush Mount	<b>Filter Pack:</b>	Sand pack	<b>Ground Surface Elevation (ft):</b>	23.22
<b>Casing Diameter (in):</b>	2.0	<b>Surface Seal:</b>	Concrete	<b>Top of Casing Elevation (ft):</b>	22.80
<b>Screen Slot Size (in):</b>	0.010	<b>Annular Seal:</b>	Concrete	<b>Surveyed Location: X:</b>	1269430.17
<b>Screened Interval (ft bgs):</b>	10.0-15.0	<b>Boring Abandonment:</b>	NA	<b>Surveyed Location: Y:</b>	231126.54
				<b>Unique Well ID:</b>	BNW-075



# Log of Boring: FMW-155

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

**Date/Time Started:** 2/5/2022 @ 1255  
**Date/Time Completed:** 2/5/2022 @ 1320  
**Drilling Company:** Cascade Drilling  
**Drilling Method:** Sonic Drilling  
**Drilling Equipment:** Terrasonic  
**Drilling Operator:** Rico Rodriguez  
**Sampler Type:** 5' PE Bags  
**Drive Hammer (lbs):** NA

**Depth to Water ATD (ft bgs):** 8.5  
**Boring Diameter (in):** 8.0  
**Total Boring Depth (ft bgs):** 15.0  
**Constructed Well Depth (ft bgs):** 15.0

**Farallon PN:** 397-019

**Logged By:** G.Peters

**Reviewed By:** S. Stumpf

Depth (ft bgs)	Sample Interval	Lithologic Description	USCS	USCS Graphic	Blow Counts	% Recovery	PID (ppmv)	Sample ID	Sample Analyzed	Boring/Well Construction Details
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0	0.0-0.75'	Concrete. Airknife to 5.0' bgs for utility clearance.	CO							Concrete
	0.75-5.0'	Well graded SAND (90% sand, 10% gravel), fine to coarse sand, brown, moist, no odor, no staining (Fill).	SW							
5	5.0-10.0'	PEAT (100% peat), brown, wet, organic odor, no staining. Wood debris.	PT		100	0.0	FMW-155-5.0			Bentonite
10	10.0-12.0'	PEAT (80% peat, 10% sand, 10% silt), brown, wet, organic odor, no staining.	PT		100	0.0	FMW-155-10.0			Sand Pack
15	12.0-15.0'	Silty SAND (60% sand, 40% silt), fine sand, gray, wet, no odor, no staining.	SM							Well Screen
							0.0	FMW-155-15.0		

### Well Construction Information

<b>Monument Type:</b>	Flush Mount	<b>Filter Pack:</b>	Sand pack	<b>Ground Surface Elevation (ft):</b>	24.28
<b>Casing Diameter (in):</b>	2.0	<b>Surface Seal:</b>	Concrete	<b>Top of Casing Elevation (ft):</b>	23.90
<b>Screen Slot Size (in):</b>	0.010	<b>Annular Seal:</b>	Concrete	<b>Surveyed Location: X:</b>	1269433.30
<b>Screened Interval (ft bgs):</b>	10.0-15.0	<b>Boring Abandonment:</b>	NA	<b>Surveyed Location: Y:</b>	231262.97
				<b>Unique Well ID:</b>	BNW-074



# Log of Boring: FMW-156

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

**Date/Time Started:** 2/5/2022 @ 1340  
**Date/Time Completed:** 2/5/2022 @ 1415  
**Drilling Company:** Cascade Drilling  
**Drilling Method:** Sonic Drilling  
**Drilling Equipment:** Terrasonic  
**Drilling Operator:** Rico Rodriguez  
**Sampler Type:** 5' PE Bags  
**Drive Hammer (lbs):** NA

**Depth to Water ATD (ft bgs):** 10.0  
**Boring Diameter (in):** 8.0  
**Total Boring Depth (ft bgs):** 20.0  
**Constructed Well Depth (ft bgs):** 20.0

**Farallon PN:** 397-019

**Logged By:** G.Peters

**Reviewed By:** S. Stumpf

Depth (ft bgs)	Sample Interval	Lithologic Description	USCS	USCS Graphic	Blow Counts	% Recovery	PID (ppmv)	Sample ID	Sample Analyzed	Boring/Well Construction Details
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0	0.0-0.75'	Concrete. Airknife to 5.0' bgs for utility clearance.	CO							Concrete
	0.75-6.0'	Well graded SAND (90% sand, 10% gravel), fine to coarse sand, brown, moist, no odor, no staining (Fill).	SW							
5	6.0-10.0'	SILT with sand (60% silt, 20% sand, 20% wood), fine sand, gray, moist, organic odor, no staining. Wood debris.	ML			100	0.0			Bentonite
10	10.0-12.5'	Silty SAND (60% wood, 20% sand, 20% silt), fine sand, brown, moist to wet, no odor. Wood debris.	SM			100	0.0	FMW-156-10.0		Water Level
15	12.5-15.0'	PEAT (100% peat), brown, organic odor, wet, no staining.	PT							Sand Pack
	15.0-17.0'	Poorly graded SAND (80% wood, 20% sand), fine sand, grayish brown, wet, organic odor, no staining. Wood debris.	SP			100	0.0	FMW-156-15.0		
20	17.0-20.0'	Poorly graded SAND with silt (90% sand, 10% silt), fine sand, gray, wet, no odor, no staining.	SP-SM							Well Screen
								FMW-156-20.0		

### Well Construction Information

<b>Monument Type:</b>	Flush Mount	<b>Filter Pack:</b>	Sand pack	<b>Ground Surface Elevation (ft):</b>	26.01
<b>Casing Diameter (in):</b>	2.0	<b>Surface Seal:</b>	Concrete	<b>Top of Casing Elevation (ft):</b>	25.70
<b>Screen Slot Size (in):</b>	0.010	<b>Annular Seal:</b>	Concrete	<b>Surveyed Location: X:</b>	1269436.89
<b>Screened Interval (ft bgs):</b>	15.0-20.0	<b>Boring Abandonment:</b>	NA	<b>Surveyed Location: Y:</b>	231342.09
				<b>Unique Well ID:</b>	BNW-073



# Log of Boring: FMW-157

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

**Date/Time Started:** 2/5/2022 @ 1420  
**Date/Time Completed:** 2/5/2022 @ 1530  
**Drilling Company:** Cascade Drilling  
**Drilling Method:** Sonic Drilling  
**Drilling Equipment:** Terrasonic  
**Drilling Operator:** Rico Rodriguez  
**Sampler Type:** 5' PE Bags  
**Drive Hammer (lbs):** NA

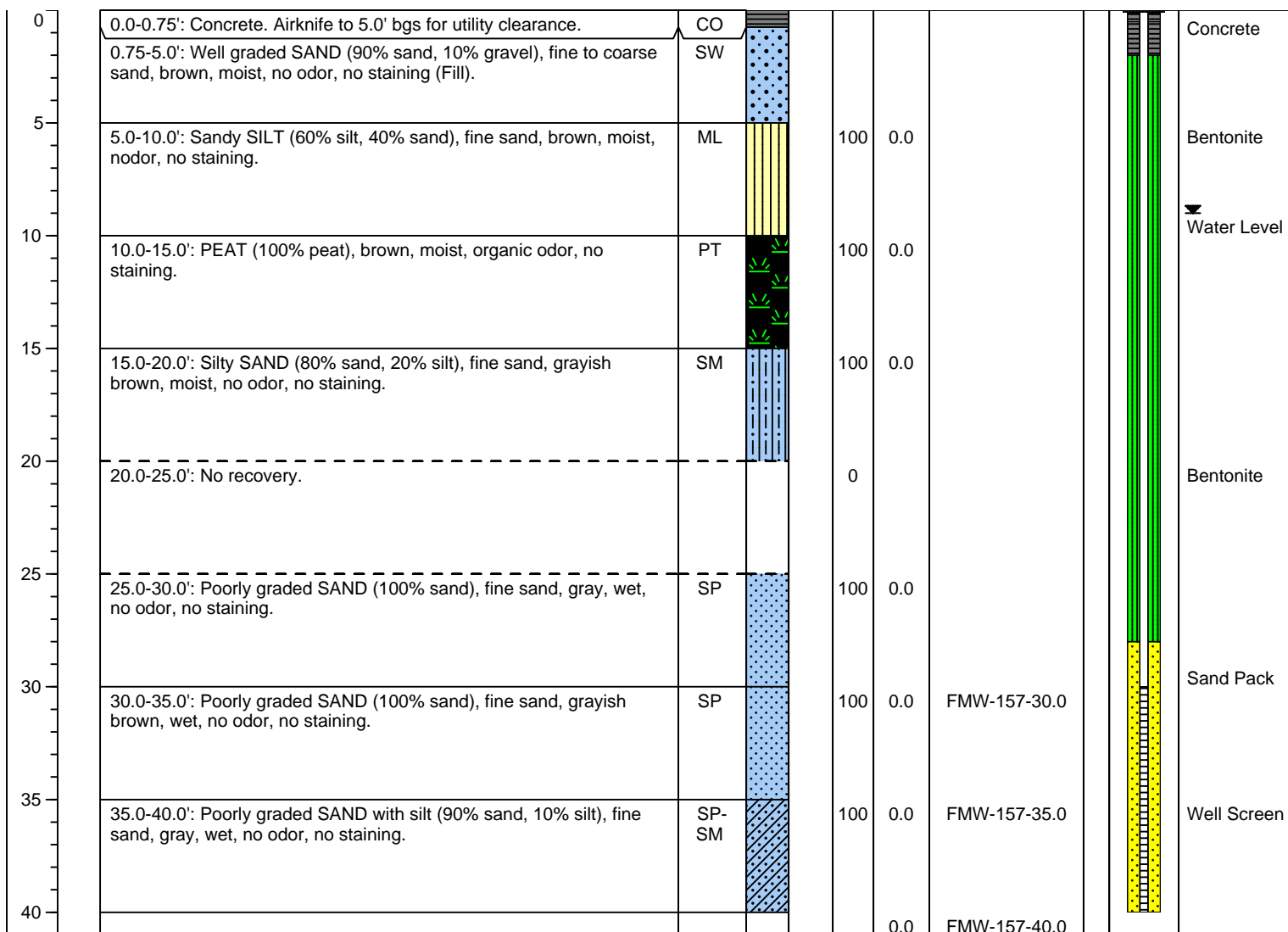
**Depth to Water ATD (ft bgs):** 9.0  
**Boring Diameter (in):** 8.0  
**Total Boring Depth (ft bgs):** 40.0  
**Constructed Well Depth (ft bgs):** 40.0

**Farallon PN:** 397-019

**Logged By:** G.Peters

**Reviewed By:** S. Stumpf

Depth (ft bgs)	Sample Interval	Lithologic Description	USCS	USCS Graphic	Blow Counts	% Recovery	PID (ppmv)	Sample ID	Sample Analyzed	Boring/Well Construction Details
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### Well Construction Information

<b>Monument Type:</b> Flush Mount	<b>Filter Pack:</b> Sand pack	<b>Ground Surface Elevation (ft):</b> 26.20
<b>Casing Diameter (in):</b> 2.0	<b>Surface Seal:</b> Concrete	<b>Top of Casing Elevation (ft):</b> 25.95
<b>Screen Slot Size (in):</b> 0.010	<b>Annular Seal:</b> Concrete	<b>Surveyed Location: X:</b> 1269437.13 <b>Y:</b> 231346.24
<b>Screened Interval (ft bgs):</b> 30.0-40.0	<b>Boring Abandonment:</b> NA	<b>Unique Well ID:</b> BNW-072



# Log of Test Pit: NGas-1

**Client:** Vulcan  
**Project:** Block 38W  
**Location:** Seattle, Washington

**Date/Time Started:** 1/26/19 @ 1100  
**Date/Time Completed:** 1/26/19 @ 1140  
**Equipment:** Airknife  
**Excavation Company:** APS  
**Excavation Foreman:** NA  
**Excavating Method:** Airknife

**Sampler Type:** Hand Auger  
**Depth of Water (ft bgs):** 3.0  
**Total Excavation Depth (ft bgs):** 3.0

**Farallon PN:** 397-019

**Logged By:** Yusuf Pehlivan

Depth (feet bgs)	Sample Interval	Lithologic Description	USCS	USGS Graphic	PID (ppm)	Sample ID	Sample Analyzed
------------------	-----------------	------------------------	------	--------------	-----------	-----------	-----------------

0	0.0-0.7': Concrete.	CO					
	0.7-1.8': Well-graded SAND with silt and gravel (60% sand, 30% gravel, 10% silt), fine to coarse sand, fine gravel, brown, moist, no odor. Geotextile fabric at 1.5' bgs.	SW-SM					
	1.8-3.0': Silty SAND with gravel (60% sand, 25% silt, 15% gravel), fine to coarse sand, fine gravel, dark brown, moist, wet at 3.0' bgs, no odor. Gas line encountered at 3.0' bgs. Water fills test pit.	SM					
5							



# Log of Test Pit: NGas-2

<b>Client:</b> Vulcan <b>Project:</b> Block 38W <b>Location:</b> Seattle, Washington	<b>Date/Time Started:</b> 1/26/19 @ 0900 <b>Date/Time Completed:</b> 1/26/19 @ 1100 <b>Equipment:</b> Airknife <b>Excavation Company:</b> APS <b>Excavation Foreman:</b> NA <b>Excavating Method:</b> Airknife	<b>Sampler Type:</b> Hand Auger <b>Depth of Water (ft bgs):</b> 4.5 <b>Total Excavation Depth (ft bgs):</b> 5.1
<b>Farallon PN:</b> 397-019		
<b>Logged By:</b> Yusuf Pehlivan		

Depth (feet bgs)	Sample Interval	Lithologic Description	USCS	USGS Graphic	PID (ppm)	Sample ID	Sample Analyzed
------------------	-----------------	------------------------	------	--------------	-----------	-----------	-----------------

0		0.0-4.5': Well-graded SAND with silt and gravel (50% sand, 40% gravel, 10% sand), fine to coarse sand, fine and coarse gravel, dark brown, moist, no odor, trace brick fragments.	SW-SM	[USGS Graphic]			
		4.5-5.0': Poorly graded gravel (100% gravel), fine gravel, gray, wet, utilities backfill.	GP	[USGS Graphic]			
5		5.0-5.1': Rotting wood. Water fills testpit.	WD	[USGS Graphic]			





# Log of Test Pit: PH-1

**Client:** Vulcan  
**Project:** Block 38W  
**Location:** Seattle, Washington

**Date/Time Started:** 1/26/19 @ 0925  
**Date/Time Completed:** 1/26/19 @ 1000  
**Equipment:** Airknife  
**Excavation Company:** APS  
**Excavation Foreman:** NA  
**Excavating Method:** Airknife

**Sampler Type:** Hand Auger  
**Depth of Water (ft bgs):** 3.5  
**Total Excavation Depth (ft bgs):** 4.0

**Farallon PN:** 397-019

**Logged By:** Yusuf Pehlivan

Depth (feet bgs)	Sample Interval	Lithologic Description	USCS	USGS Graphic	PID (ppm)	Sample ID	Sample Analyzed
------------------	-----------------	------------------------	------	--------------	-----------	-----------	-----------------

0	0.0-0.6': Concrete.	CO					
	0.6-4.0': Poorly graded SAND (95% sand, 5% gravel), fine and medium sand, fine gravel, grayish brown, moist, wet at 3.5' bgs, no odor. Water fills test pit, unable to log below water.	SP					
				0.0	PH-1-4.0-012619		
5							



# Log of Test Pit: PH-2

<b>Client:</b> Vulcan <b>Project:</b> Block 38W <b>Location:</b> Seattle, Washington	<b>Date/Time Started:</b> 1/26/19 @ 0900 <b>Date/Time Completed:</b> 1/26/19 @ 1100 <b>Equipment:</b> Airknife <b>Excavation Company:</b> APS <b>Excavation Foreman:</b> NA <b>Excavating Method:</b> Airknife	<b>Sampler Type:</b> Hand Auger <b>Depth of Water (ft bgs):</b> 4.5 <b>Total Excavation Depth (ft bgs):</b> 5.1
<b>Farallon PN:</b> 397-019		
<b>Logged By:</b> Yusuf Pehlivan		

Depth (feet bgs)	Sample Interval	Lithologic Description	USCS	USGS Graphic	PID (ppm)	Sample ID	Sample Analyzed
------------------	-----------------	------------------------	------	--------------	-----------	-----------	-----------------

0		0.0-4.5': Well-graded SAND with silt and gravel (50% sand, 40% gravel, 10% sand), fine to coarse sand, fine and coarse gravel, dark brown, moist, wet at 4.5' bgs, no odor, trace brick fragments. Gas line found at 4.5' bgs.	SW-SM				
		4.5-5.0': Poorly graded GRAVEL (100% gravel), fine gravel, gray, wet, utility backfill.	GP				
5		5.0-5.1': Rotting wood.	WD				



# Log of Test Pit: PH-4

<b>Client:</b> Vulcan <b>Project:</b> Block 38W <b>Location:</b> Seattle, Washington	<b>Date/Time Started:</b> 1/26/19 @ 1115 <b>Date/Time Completed:</b> 1/26/19 @ 1200 <b>Equipment:</b> Airknife <b>Excavation Company:</b> APS <b>Excavation Foreman:</b> NA <b>Excavating Method:</b> Airknife	<b>Sampler Type:</b> Hand Auger <b>Depth of Water (ft bgs):</b> NE <b>Total Excavation Depth (ft bgs):</b> 5.0
<b>Farallon PN:</b> 397-019		
<b>Logged By:</b> Yusuf Pehlivan		

Depth (feet bgs)	Sample Interval	Lithologic Description	USCS	USGS Graphic	PID (ppm)	Sample ID	Sample Analyzed
------------------	-----------------	------------------------	------	--------------	-----------	-----------	-----------------

0	0.0-3.0': Well-graded SAND with silt and gravel (50% sand, 40% gravel, 10% silt), fine to coarse sand, fine and coarse gravel, drk brown, moist, trace concrete blocks, brick, wood, plastic and metal debris.	SW-SM	[USGS Graphic]				
	3.0-4.0': Fill (100% gravel), fine gravel, gray, moist. Gas line at 3.5' bgs,	FILL	[USGS Graphic]				
	4.0-5.0': SILT with sand and gravel (70% silt, 15% sand, 15% gravel) fine and medium sand, fine gravel, dark brown, moist, no odor.	ML	[USGS Graphic]	12.3	PH-4-4.5-012619	X	
5							



# Log of Test Pit: PH-11

<b>Client:</b> Vulcan <b>Project:</b> Block 38W <b>Location:</b> Seattle, Washington	<b>Date/Time Started:</b> 1/26/19 @ 1230 <b>Date/Time Completed:</b> 1/26/19 @ 1320 <b>Equipment:</b> Airknife <b>Excavation Company:</b> APS <b>Excavation Foreman:</b> NA <b>Excavating Method:</b> Airknife	<b>Sampler Type:</b> Hand Auger <b>Depth of Water (ft bgs):</b> 4.2 <b>Total Excavation Depth (ft bgs):</b> 4.2
<b>Farallon PN:</b> 397-019		
<b>Logged By:</b> Yusuf Pehlivan		

Depth (feet bgs)	Sample Interval	Lithologic Description	USCS	USGS Graphic	PID (ppm)	Sample ID	Sample Analyzed
------------------	-----------------	------------------------	------	--------------	-----------	-----------	-----------------

0	0.0-0.9': Concrete.		CO				
	0.9-3.8': Well-graded SAND with silt and gravel (60% sand, 30% gravel, 10% silt), fine to coarse sand, fine and coarse gravel, dark brown, moist, trace rocks, brick, wood, and metal debris.		SW-SM				
	3.7-4.2': Utility Conduits.						
	4.2-4.4': Wood, wet. Unable to advance further.		WD				
5							



# Log of Test Pit: PH-11A

**Client:** Vulcan  
**Project:** Block 38W  
**Location:** Seattle, Washington

**Date/Time Started:** 1/19/19 @ 1240  
**Date/Time Completed:** 1/19/19 @ 1310  
**Equipment:** Airknife  
**Excavation Company:** APS  
**Excavation Foreman:** NA  
**Excavating Method:** Airknife

**Sampler Type:** Hand Auger  
**Depth of Water (ft bgs):** 4.5  
**Total Excavation Depth (ft bgs):** 4.5

**Farallon PN:** 397-019

**Logged By:** Yusuf Pehlivan

Depth (feet bgs)	Sample Interval	Lithologic Description	USCS	USGS Graphic	PID (ppm)	Sample ID	Sample Analyzed
------------------	-----------------	------------------------	------	--------------	-----------	-----------	-----------------

0	0.0-4.0': Silty SAND with gravel (50% sand, 35% silt, 15% gravel), fine and medium sand, fine gravel, dark brown, moist, no odor.	SM					
	4.0-4.5': Sandy SILT (60% silt, 40% sand), fill, wood fragments, dark brown, wet, no odor.	ML			4.1	PH-11A-4.0-091919	X
5							



# Log of Test Pit: PH-12

<b>Client:</b> Vulcan <b>Project:</b> Block 38W <b>Location:</b> Seattle, Washington	<b>Date/Time Started:</b> 1/19/19 @ 0930 <b>Date/Time Completed:</b> 1/19/19 @ 1015 <b>Equipment:</b> Airknife <b>Excavation Company:</b> APS <b>Excavation Foreman:</b> NA <b>Excavating Method:</b> Airknife	<b>Sampler Type:</b> Hand Auger <b>Depth of Water (ft bgs):</b> 4.0 <b>Total Excavation Depth (ft bgs):</b> 4.0
<b>Farallon PN:</b> 397-019		
<b>Logged By:</b> Yusuf Pehlivan		

Depth (feet bgs)	Sample Interval	Lithologic Description	USCS	USGS Graphic	PID (ppm)	Sample ID	Sample Analyzed
------------------	-----------------	------------------------	------	--------------	-----------	-----------	-----------------

0	0.0-0.9': Concrete.		CO				
	0.9-1.5': Well-graded GRAVEL with silt and sand (70% gravel, 20% sand, 10% silt), fine to coarse sand, fine and coarse gravel, brown, dry, no odor. Geotextile fabric at 1.5' bgs.		GW-GM				
	1.5-3.0': Concrete/rock blocks.		CO				
	3.0-4.0': Sandy SILT (60% silt, 40% sand), fine and medium sand, dark brown, moist, wet at 4.0 bgs, petroleum-like odor, trace organic plant matter. Water fills pothole at 4.0' bgs.		ML				
					127.5	PH-12-4.0-011919	X
5							





# Log of Test Pit: PH-13

**Client:** Vulcan  
**Project:** Block 38W  
**Location:** Seattle, Washington

**Date/Time Started:** 1/12/19 @ 0840  
**Date/Time Completed:** 1/12/19 @ 1015  
**Equipment:** Airknife  
**Excavation Company:** APS  
**Excavation Foreman:** NA  
**Excavating Method:** Airknife

**Sampler Type:** Pothole Digger  
**Depth of Water (ft bgs):** 3.0  
**Total Excavation Depth (ft bgs):** 5.0

**Farallon PN:** 397-019

**Logged By:** Yusuf Pehlivan

Depth (feet bgs)	Sample Interval	Lithologic Description	USCS	USGS Graphic	PID (ppm)	Sample ID	Sample Analyzed
------------------	-----------------	------------------------	------	--------------	-----------	-----------	-----------------

0	0.0-0.7': Concrete.		CO				
	0.7-1.5': Fill (70% sand, 30% gravel), fine and medium sand, fine and coarse gravel, grayish brown, dry to moist, no odor.		FILL				
	1.5-4.0': Poorly graded SAND (90% sand, 10% gravel), fine and medium sand, fine gravel, dry, wet at 3.0' bgs, no odor, well cemented. Well-graded gravel in hole to 3.0'bgs. 4.0-5.0' bgs not logged due to water.		SP		0.0	PH-13-3.0-011218	X
5							



# Log of Test Pit: PH-13A

**Client:** Vulcan  
**Project:** Block 38W  
**Location:** Seattle, Washington

**Date/Time Started:** 1/19/19 @ 0845  
**Date/Time Completed:** 1/19/19 @ 0910  
**Equipment:** Airknife  
**Excavation Company:** APS  
**Excavation Foreman:** NA  
**Excavating Method:** Airknife

**Sampler Type:** Hand Auger  
**Depth of Water (ft bgs):** 3.5  
**Total Excavation Depth (ft bgs):** 3.5

**Farallon PN:** 397-019

**Logged By:** Yusuf Pehlivan

Depth (feet bgs)	Sample Interval	Lithologic Description	USCS	USGS Graphic	PID (ppm)	Sample ID	Sample Analyzed
------------------	-----------------	------------------------	------	--------------	-----------	-----------	-----------------

0	0.0-0.9': Concrete.		CO				
	0.9-1.3': Well-graded GRAVEL with silt and sand (75% gravel, 15% sand, 10% silt), fine to coarse sand, fine and coarse gravel, brown, dry, no odor, road base. Geotextile fabric at 1.3' bgs.		GW-GM				
	1.3-3.5': Poorly graded SAND with gravel (85% sand, 15% gravel), medium and coarse sand, fine gravel. (Airknife operator says CDF). 3.0-5.0' bgs water fills test pit.		SP				
5							

**APPENDIX B**  
**LABORATORY ANALYTICAL RESULTS**

INTERIM ACTION REPORT  
Alley Area of Block 38 West Site  
Between Republican Street and Mercer Street  
Seattle, Washington

Farallon PN: 397-019



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

January 29, 2019

Javan Ruark  
Farallon Consulting, LLC  
975 5<sup>th</sup> Avenue NW  
Issaquah, WA 98027

Re: Analytical Data for Project 397-019  
Laboratory Reference No. 1901-097

Dear Javan:

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



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

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

Date of Report: January 29, 2019  
Samples Submitted: January 14, 2019  
Laboratory Reference: 1901-097  
Project: 397-019

### Case Narrative

Samples were collected on January 12, 2019 and received by the laboratory on January 14, 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.

#### NWTPH-Gx Analysis

Method 5035A VOA vials were not provided for sample PH-13-3.0-011219. The sample was therefore extracted from a 4-ounce jar for analysis. Some loss of volatiles may have occurred.

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: January 29, 2019  
 Samples Submitted: January 14, 2019  
 Laboratory Reference: 1901-097  
 Project: 397-019

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

Matrix: Soil  
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>PH-13-3.0-011219</b>					
Laboratory ID:	01-097-01					
Gasoline	<b>ND</b>	6.4	NWTPH-Gx	1-22-19	1-22-19	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	72	57-129				





Date of Report: January 29, 2019  
 Samples Submitted: January 14, 2019  
 Laboratory Reference: 1901-097  
 Project: 397-019

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

Matrix: Soil  
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB0122S1					
Gasoline	ND	5.0	NWTPH-Gx	1-22-19	1-22-19	
Surrogate:	<i>Percent Recovery</i>		<i>Control Limits</i>			
Fluorobenzene	68	57-129				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
<b>DUPLICATE</b>								
Laboratory ID:	01-102-01							
	ORIG	DUP						
Gasoline	51.5	51.4	NA	NA	NA	NA	0	30
Surrogate:								
Fluorobenzene				61	60	57-129		



Date of Report: January 29, 2019  
 Samples Submitted: January 14, 2019  
 Laboratory Reference: 1901-097  
 Project: 397-019

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

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>PH-13-3.0-011219</b>					
Laboratory ID:	01-097-01					
Diesel Range Organics	<b>ND</b>	29	NWTPH-Dx	1-23-19	1-23-19	
Lube Oil Range Organics	<b>ND</b>	59	NWTPH-Dx	1-23-19	1-23-19	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	<i>108</i>	<i>50-150</i>				



Date of Report: January 29, 2019  
 Samples Submitted: January 14, 2019  
 Laboratory Reference: 1901-097  
 Project: 397-019

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

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB0123S2					
Diesel Range Organics	<b>ND</b>	25	NWTPH-Dx	1-23-19	1-23-19	
Lube Oil Range Organics	<b>ND</b>	50	NWTPH-Dx	1-23-19	1-23-19	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	102	50-150				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
<b>DUPLICATE</b>								
Laboratory ID:	01-144-11							
	ORIG	DUP						
Diesel Range Organics	<b>130</b>	<b>38.3</b>	NA	NA	NA	NA	109	NA N
Lube Oil Range Organics	<b>792</b>	<b>280</b>	NA	NA	NA	NA	96	NA
<i>Surrogate:</i>								
<i>o-Terphenyl</i>				108	107	50-150		



Date of Report: January 29, 2019  
 Samples Submitted: January 14, 2019  
 Laboratory Reference: 1901-097  
 Project: 397-019

**PAHs EPA 8270D/SIM**

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>PH-13-3.0-011219</b>					
Laboratory ID:	01-097-01					
Benzo[a]anthracene	ND	0.0078	EPA 8270D/SIM	1-24-19	1-24-19	
Chrysene	ND	0.0078	EPA 8270D/SIM	1-24-19	1-24-19	
Benzo[b]fluoranthene	ND	0.0078	EPA 8270D/SIM	1-24-19	1-24-19	
Benzo(j,k)fluoranthene	ND	0.0078	EPA 8270D/SIM	1-24-19	1-24-19	
Benzo[a]pyrene	ND	0.0078	EPA 8270D/SIM	1-24-19	1-24-19	
Indeno(1,2,3-c,d)pyrene	ND	0.0078	EPA 8270D/SIM	1-24-19	1-24-19	
Dibenz[a,h]anthracene	ND	0.0078	EPA 8270D/SIM	1-24-19	1-24-19	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>55</i>	<i>40 - 117</i>				
<i>Pyrene-d10</i>	<i>70</i>	<i>38 - 119</i>				
<i>Terphenyl-d14</i>	<i>61</i>	<i>47 - 135</i>				



Date of Report: January 29, 2019  
 Samples Submitted: January 14, 2019  
 Laboratory Reference: 1901-097  
 Project: 397-019

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

Matrix: Soil  
 Units: mg/Kg

<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>Method</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Flags</b>
Laboratory ID:	MB0124S1					
Benzo[a]anthracene	<b>ND</b>	0.0067	EPA 8270D/SIM	1-24-19	1-24-19	
Chrysene	<b>ND</b>	0.0067	EPA 8270D/SIM	1-24-19	1-24-19	
Benzo[b]fluoranthene	<b>ND</b>	0.0067	EPA 8270D/SIM	1-24-19	1-24-19	
Benzo(j,k)fluoranthene	<b>ND</b>	0.0067	EPA 8270D/SIM	1-24-19	1-24-19	
Benzo[a]pyrene	<b>ND</b>	0.0067	EPA 8270D/SIM	1-24-19	1-24-19	
Indeno(1,2,3-c,d)pyrene	<b>ND</b>	0.0067	EPA 8270D/SIM	1-24-19	1-24-19	
Dibenz[a,h]anthracene	<b>ND</b>	0.0067	EPA 8270D/SIM	1-24-19	1-24-19	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>64</i>	<i>40 - 117</i>				
<i>Pyrene-d10</i>	<i>81</i>	<i>38 - 119</i>				
<i>Terphenyl-d14</i>	<i>73</i>	<i>47 - 135</i>				



Date of Report: January 29, 2019  
 Samples Submitted: January 14, 2019  
 Laboratory Reference: 1901-097  
 Project: 397-019

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

Matrix: Soil  
 Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery	RPD	RPD	Flags
					Recovery	Limits	Limit			
<b>SPIKE BLANKS</b>										
Laboratory ID:	SB0124S1									
	SB	SBD	SB	SBD	SB	SBD				
Benzo[a]anthracene	<b>0.0769</b>	<b>0.0752</b>	0.0833	0.0833	92	90	64 - 132	2	15	
Chrysene	<b>0.0629</b>	<b>0.0616</b>	0.0833	0.0833	76	74	64 - 127	2	15	
Benzo[b]fluoranthene	<b>0.0695</b>	<b>0.0720</b>	0.0833	0.0833	83	86	57 - 128	4	15	
Benzo(j,k)fluoranthene	<b>0.0669</b>	<b>0.0619</b>	0.0833	0.0833	80	74	62 - 130	8	15	
Benzo[a]pyrene	<b>0.0750</b>	<b>0.0746</b>	0.0833	0.0833	90	90	62 - 125	1	15	
Indeno(1,2,3-c,d)pyrene	<b>0.0734</b>	<b>0.0718</b>	0.0833	0.0833	88	86	55 - 130	2	15	
Dibenz[a,h]anthracene	<b>0.0684</b>	<b>0.0665</b>	0.0833	0.0833	82	80	58 - 129	3	15	
<i>Surrogate:</i>										
2-Fluorobiphenyl					57	67	40 - 117			
Pyrene-d10					76	74	38 - 119			
Terphenyl-d14					68	65	47 - 135			





Date of Report: January 29, 2019  
Samples Submitted: January 14, 2019  
Laboratory Reference: 1901-097  
Project: 397-019

### % MOISTURE

Date Analyzed: 1-23-19

Client ID	Lab ID	% Moisture
PH-13-3.0-011219	01-097-01	15





### Data Qualifiers and Abbreviations

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





# Onsite Environmental Inc.

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

## Chain of Custody

### Turnaround Request (in working days)

(Check One)

Same Day  1 Day

2 Days  3 Days

Standard (7 Days)  
(TPH analysis 5 Days)

(other) \_\_\_\_\_

### Laboratory Number: 01-097

Company: Farellon  
 Project Number: 397-019  
 Project Name: 397-019  
 Project Manager: Taven Kruke  
 Sampled by: Y. Pehlivan

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers
1	PH-13-3.0-01229	1/12/19	0935	S	1

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

Signature	Company	Date	Time	Comments/Special Instructions
	Farellon	1/14/19	0830	<u>HOLD all samples for will contact for analyses.</u>
	OSE	1/14/19	0830	<u>Added 1/22/19. DR. (SSO.GAT)</u>

Received \_\_\_\_\_  
 Relinquished \_\_\_\_\_  
 Received \_\_\_\_\_  
 Relinquished \_\_\_\_\_  
 Received \_\_\_\_\_  
 Relinquished \_\_\_\_\_  
 Reviewed/Date \_\_\_\_\_

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

Data Package: Standard  Level III  Level IV

Chromatograms with final report  Electronic Data Deliverables (EDDs)



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

January 30, 2019

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

Re: Analytical Data for Project 397-019  
Laboratory Reference No. 1901-158

Dear Javan:

Enclosed are the analytical results and associated quality control data for samples submitted on January 21, 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 stroke extending to the right.

David Baumeister  
Project Manager

Enclosures



---

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

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

Date of Report: January 30, 2019  
Samples Submitted: January 21, 2019  
Laboratory Reference: 1901-158  
Project: 397-019

### Case Narrative

Samples were collected on January 19, 2019 and received by the laboratory on January 21, 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.

#### NWTPH-Gx Analysis

Method 5035A VOA vials were not provided for sample PH-11A-4.0-011919. The sample was therefore extracted from a 4-ounce jar for analysis. Some loss of volatiles may have occurred.

#### PAHs EPA 8270D/SIM Analysis

Sample PH-11A-4.0-011919 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: January 30, 2019  
 Samples Submitted: January 21, 2019  
 Laboratory Reference: 1901-158  
 Project: 397-019

**GASOLINE RANGE ORGANICS  
 NWTPH-Gx**

Matrix: Soil  
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>PH-12-4.0-011919</b>					
Laboratory ID:	01-158-01					
Gasoline	<b>2100</b>	160	NWTPH-Gx	1-28-19	1-28-19	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	105	57-129				
<b>Client ID:</b>	<b>PH-11A-4.0-011919</b>					
Laboratory ID:	01-158-02					
Gasoline	<b>ND</b>	20	NWTPH-Gx	1-22-19	1-22-19	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	74	57-129				





Date of Report: January 30, 2019  
 Samples Submitted: January 21, 2019  
 Laboratory Reference: 1901-158  
 Project: 397-019

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

Matrix: Soil  
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB0122S1					
Gasoline	ND	5.0	NWTPH-Gx	1-22-19	1-22-19	
Surrogate:	Percent Recovery		Control Limits			
Fluorobenzene	68	57-129				
Laboratory ID:	MB0128S1					
Gasoline	ND	5.0	NWTPH-Gx	1-28-19	1-28-19	
Surrogate:	Percent Recovery		Control Limits			
Fluorobenzene	98	57-129				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags	
<b>DUPLICATE</b>									
Laboratory ID:	01-102-01								
	ORIG	DUP							
Gasoline	51.5	51.4	NA	NA	NA	NA	0	30	
Surrogate:									
Fluorobenzene					61	60	57-129		
Laboratory ID:	01-158-01								
	ORIG	DUP							
Gasoline	1500	1450	NA	NA	NA	NA	3	30	
Surrogate:									
Fluorobenzene					105	92	57-129		



Date of Report: January 30, 2019  
 Samples Submitted: January 21, 2019  
 Laboratory Reference: 1901-158  
 Project: 397-019

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

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>PH-12-4.0-011919</b>					
Laboratory ID:	01-158-01					
Diesel Range Organics	<b>9400</b>	1800	NWTPH-Dx	1-23-19	1-28-19	N,M
Lube Oil Range Organics	<b>21000</b>	3600	NWTPH-Dx	1-23-19	1-28-19	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	---	50-150				S

<b>Client ID:</b>	<b>PH-11A-4.0-011919</b>					
Laboratory ID:	01-158-02					
Diesel Range Organics	<b>520</b>	62	NWTPH-Dx	1-23-19	1-24-19	N
Lube Oil Range Organics	<b>1100</b>	120	NWTPH-Dx	1-23-19	1-24-19	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	50	50-150				



Date of Report: January 30, 2019  
 Samples Submitted: January 21, 2019  
 Laboratory Reference: 1901-158  
 Project: 397-019

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

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB0123S2					
Diesel Range Organics	<b>ND</b>	25	NWTPH-Dx	1-23-19	1-23-19	
Lube Oil Range Organics	<b>ND</b>	50	NWTPH-Dx	1-23-19	1-23-19	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	102	50-150				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
<b>DUPLICATE</b>								
Laboratory ID:	01-144-11							
	ORIG	DUP						
Diesel Range Organics	<b>130</b>	<b>38.3</b>	NA	NA	NA	NA	109	NA N
Lube Oil	<b>792</b>	<b>280</b>	NA	NA	NA	NA	96	NA
<i>Surrogate:</i>								
<i>o-Terphenyl</i>				108	107	50-150		



Date of Report: January 30, 2019  
 Samples Submitted: January 21, 2019  
 Laboratory Reference: 1901-158  
 Project: 397-019

**cPAHs EPA 8270D/SIM**

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>PH-12-4.0-011919</b>					
Laboratory ID:	01-158-01					
Benzo[a]anthracene	<b>110</b>	3.8	EPA 8270D/SIM	1-24-19	1-28-19	
Chrysene	<b>110</b>	3.8	EPA 8270D/SIM	1-24-19	1-28-19	
Benzo[b]fluoranthene	<b>100</b>	3.8	EPA 8270D/SIM	1-24-19	1-28-19	
Benzo(j,k)fluoranthene	<b>31</b>	3.8	EPA 8270D/SIM	1-24-19	1-28-19	
Benzo[a]pyrene	<b>120</b>	3.8	EPA 8270D/SIM	1-24-19	1-28-19	
Indeno(1,2,3-c,d)pyrene	<b>63</b>	3.8	EPA 8270D/SIM	1-24-19	1-28-19	
Dibenz[a,h]anthracene	<b>9.9</b>	3.8	EPA 8270D/SIM	1-24-19	1-28-19	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>63</i>	<i>40 - 117</i>				
<i>Pyrene-d10</i>	<i>91</i>	<i>38 - 119</i>				
<i>Terphenyl-d14</i>	<i>92</i>	<i>47 - 135</i>				



Date of Report: January 30, 2019  
 Samples Submitted: January 21, 2019  
 Laboratory Reference: 1901-158  
 Project: 397-019

**cPAHs EPA 8270D/SIM**

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>PH-11A-4.0-011919</b>					
Laboratory ID:	01-158-02					
Benzo[a]anthracene	<b>0.25</b>	0.016	EPA 8270D/SIM	1-24-19	1-24-19	
Chrysene	<b>0.26</b>	0.016	EPA 8270D/SIM	1-24-19	1-24-19	
Benzo[b]fluoranthene	<b>0.31</b>	0.016	EPA 8270D/SIM	1-24-19	1-24-19	
Benzo(j,k)fluoranthene	<b>0.081</b>	0.016	EPA 8270D/SIM	1-24-19	1-24-19	
Benzo[a]pyrene	<b>0.30</b>	0.016	EPA 8270D/SIM	1-24-19	1-24-19	
Indeno(1,2,3-c,d)pyrene	<b>0.20</b>	0.016	EPA 8270D/SIM	1-24-19	1-24-19	
Dibenz[a,h]anthracene	<b>0.031</b>	0.016	EPA 8270D/SIM	1-24-19	1-24-19	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>49</i>	<i>40 - 117</i>				
<i>Pyrene-d10</i>	<i>52</i>	<i>38 - 119</i>				
<i>Terphenyl-d14</i>	<i>45</i>	<i>47 - 135</i>				Q



Date of Report: January 30, 2019  
 Samples Submitted: January 21, 2019  
 Laboratory Reference: 1901-158  
 Project: 397-019

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

Matrix: Soil  
 Units: mg/Kg

<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>Method</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Flags</b>
Laboratory ID:	MB0124S1					
Benzo[a]anthracene	<b>ND</b>	0.0067	EPA 8270D/SIM	1-24-19	1-24-19	
Chrysene	<b>ND</b>	0.0067	EPA 8270D/SIM	1-24-19	1-24-19	
Benzo[b]fluoranthene	<b>ND</b>	0.0067	EPA 8270D/SIM	1-24-19	1-24-19	
Benzo(j,k)fluoranthene	<b>ND</b>	0.0067	EPA 8270D/SIM	1-24-19	1-24-19	
Benzo[a]pyrene	<b>ND</b>	0.0067	EPA 8270D/SIM	1-24-19	1-24-19	
Indeno(1,2,3-c,d)pyrene	<b>ND</b>	0.0067	EPA 8270D/SIM	1-24-19	1-24-19	
Dibenz[a,h]anthracene	<b>ND</b>	0.0067	EPA 8270D/SIM	1-24-19	1-24-19	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>64</i>	<i>40 - 117</i>				
<i>Pyrene-d10</i>	<i>81</i>	<i>38 - 119</i>				
<i>Terphenyl-d14</i>	<i>73</i>	<i>47 - 135</i>				





Date of Report: January 30, 2019  
 Samples Submitted: January 21, 2019  
 Laboratory Reference: 1901-158  
 Project: 397-019

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

Matrix: Soil  
 Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
<b>SPIKE BLANKS</b>										
Laboratory ID:	SB0124S1									
	SB	SBD	SB	SBD	SB	SBD				
Benzo[a]anthracene	<b>0.0769</b>	<b>0.0752</b>	0.0833	0.0833	92	90	64 - 132	2	15	
Chrysene	<b>0.0629</b>	<b>0.0616</b>	0.0833	0.0833	76	74	64 - 127	2	15	
Benzo[b]fluoranthene	<b>0.0695</b>	<b>0.0720</b>	0.0833	0.0833	83	86	57 - 128	4	15	
Benzo(j,k)fluoranthene	<b>0.0669</b>	<b>0.0619</b>	0.0833	0.0833	80	74	62 - 130	8	15	
Benzo[a]pyrene	<b>0.0750</b>	<b>0.0746</b>	0.0833	0.0833	90	90	62 - 125	1	15	
Indeno(1,2,3-c,d)pyrene	<b>0.0734</b>	<b>0.0718</b>	0.0833	0.0833	88	86	55 - 130	2	15	
Dibenz[a,h]anthracene	<b>0.0684</b>	<b>0.0665</b>	0.0833	0.0833	82	80	58 - 129	3	15	
<i>Surrogate:</i>										
2-Fluorobiphenyl					57	67	40 - 117			
Pyrene-d10					76	74	38 - 119			
Terphenyl-d14					68	65	47 - 135			



Date of Report: January 30, 2019  
Samples Submitted: January 21, 2019  
Laboratory Reference: 1901-158  
Project: 397-019

### % MOISTURE

Date Analyzed: 1-22-19

Client ID	Lab ID	% Moisture
PH-12-4.0-011919	01-158-01	30
PH-11A-4.0-011919	01-158-02	59





### Data Qualifiers and Abbreviations

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





# Onsite Environmental Inc.

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

## Chain of Custody

Turnaround Request  
(In working days)  
(Check One)

Same Day  1 Day

2 Days  3 Days

Standard (7 Days)  
(TPH analysis 5 Days)

(other) \_\_\_\_\_

Laboratory Number: **01-158**

Company: Fossilon  
Project Number: 397-019  
Project Name: 397-019  
Project Manager: Jaron Kuork  
Sampled by: V. Pehlman

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers
1	PH-12-4.0-01919	1/19/19	0940	S	2
2	PH-11A-4.0-01919	1/19/19	1304	S	1

Analysis	1	2
NWTPH-HCID		
NWTPH-Gx/BTEX		
NWTPH-Gx	(X)	(X)
NWTPH-Dx ( <input type="checkbox"/> Acid / SG Clean-up)	(X)	(X)
Volatiles 8260C		
Halogenated Volatiles 8260C		
EDB EPA 8011 (Waters Only)		
Semivolatiles 8270D/SIM (with low-level PAHs)	(X)	(X)
PAHs 8270D/SIM (low-level) <i>C PAHs only</i>	(X)	(X)
PCBs 8082A		
Organochlorine Pesticides 8081B		
Organophosphorus Pesticides 8270D/SIM		
Chlorinated Acid Herbicides 8151A		
Total RCRA Metals		
Total MTCA Metals		
TCLP Metals		
HEM (oil and grease) 1664A		
% Moisture	(X)	(X)

Signature	Company	Date	Time	Comments/Special Instructions
	Fossilon	1/19/19	0830	Hold samples for wet contact for analyses
	OSE	1/22/19	0830	Added 1/22/19. DR (STD. TAT)

Received \_\_\_\_\_

Relinquished \_\_\_\_\_

Received \_\_\_\_\_

Relinquished \_\_\_\_\_

Received \_\_\_\_\_

Relinquished \_\_\_\_\_

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

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

Data Package: Standard  Level III  Level IV

Chromatograms with final report  Electronic Data Deliverables (EDDs)



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

February 8, 2019

Javan Ruark  
Farallon Consulting, LLC  
975 5<sup>th</sup> Avenue NW  
Issaquah, WA 98027

Re: Analytical Data for Project 397-019  
Laboratory Reference No. 1901-216

Dear Javan:

Enclosed are the analytical results and associated quality control data for samples submitted on January 28, 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



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

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

Date of Report: February 8, 2019  
Samples Submitted: January 28, 2019  
Laboratory Reference: 1901-216  
Project: 397-019

### Case Narrative

Samples were collected on January 26, 2019 and received by the laboratory on January 28, 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.





Date of Report: February 8, 2019  
 Samples Submitted: January 28, 2019  
 Laboratory Reference: 1901-216  
 Project: 397-019

**cPAHs EPA 8270D/SIM**

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>PH-4-4.5-012619</b>					
Laboratory ID:	01-216-02					
Benzo[a]anthracene	<b>0.079</b>	0.011	EPA 8270D/SIM	2-7-19	2-7-19	
Chrysene	<b>0.086</b>	0.011	EPA 8270D/SIM	2-7-19	2-7-19	
Benzo[b]fluoranthene	<b>0.10</b>	0.011	EPA 8270D/SIM	2-7-19	2-7-19	
Benzo(j,k)fluoranthene	<b>0.035</b>	0.011	EPA 8270D/SIM	2-7-19	2-7-19	
Benzo[a]pyrene	<b>0.11</b>	0.011	EPA 8270D/SIM	2-7-19	2-7-19	
Indeno(1,2,3-c,d)pyrene	<b>0.078</b>	0.011	EPA 8270D/SIM	2-7-19	2-7-19	
Dibenz[a,h]anthracene	<b>0.013</b>	0.011	EPA 8270D/SIM	2-7-19	2-7-19	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>64</i>	<i>40 - 117</i>				
<i>Pyrene-d10</i>	<i>72</i>	<i>38 - 119</i>				
<i>Terphenyl-d14</i>	<i>67</i>	<i>47 - 135</i>				



Date of Report: February 8, 2019  
 Samples Submitted: January 28, 2019  
 Laboratory Reference: 1901-216  
 Project: 397-019

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

Matrix: Soil  
 Units: mg/Kg

<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>Method</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Flags</b>
Laboratory ID:	MB0207S1					
Benzo[a]anthracene	<b>ND</b>	0.0067	EPA 8270D/SIM	2-7-19	2-7-19	
Chrysene	<b>ND</b>	0.0067	EPA 8270D/SIM	2-7-19	2-7-19	
Benzo[b]fluoranthene	<b>ND</b>	0.0067	EPA 8270D/SIM	2-7-19	2-7-19	
Benzo(j,k)fluoranthene	<b>ND</b>	0.0067	EPA 8270D/SIM	2-7-19	2-7-19	
Benzo[a]pyrene	<b>ND</b>	0.0067	EPA 8270D/SIM	2-7-19	2-7-19	
Indeno(1,2,3-c,d)pyrene	<b>ND</b>	0.0067	EPA 8270D/SIM	2-7-19	2-7-19	
Dibenz[a,h]anthracene	<b>ND</b>	0.0067	EPA 8270D/SIM	2-7-19	2-7-19	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>87</i>	<i>40 - 117</i>				
<i>Pyrene-d10</i>	<i>98</i>	<i>38 - 119</i>				
<i>Terphenyl-d14</i>	<i>93</i>	<i>47 - 135</i>				



Date of Report: February 8, 2019  
 Samples Submitted: January 28, 2019  
 Laboratory Reference: 1901-216  
 Project: 397-019

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

Matrix: Soil  
 Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
					SB	SBD	SB	SBD	SB	
<b>SPIKE BLANKS</b>										
Laboratory ID:	SB0207S1									
	SB	SBD	SB	SBD	SB	SBD				
Benzo[a]anthracene	<b>0.0793</b>	<b>0.0790</b>	0.0833	0.0833	95	95	64 - 132	0	15	
Chrysene	<b>0.0721</b>	<b>0.0742</b>	0.0833	0.0833	87	89	64 - 127	3	15	
Benzo[b]fluoranthene	<b>0.0749</b>	<b>0.0768</b>	0.0833	0.0833	90	92	57 - 128	3	15	
Benzo(j,k)fluoranthene	<b>0.0722</b>	<b>0.0723</b>	0.0833	0.0833	87	87	62 - 130	0	15	
Benzo[a]pyrene	<b>0.0711</b>	<b>0.0734</b>	0.0833	0.0833	85	88	62 - 125	3	15	
Indeno(1,2,3-c,d)pyrene	<b>0.0733</b>	<b>0.0741</b>	0.0833	0.0833	88	89	55 - 130	1	15	
Dibenz[a,h]anthracene	<b>0.0759</b>	<b>0.0765</b>	0.0833	0.0833	91	92	58 - 129	1	15	
<i>Surrogate:</i>										
<i>2-Fluorobiphenyl</i>					89	79	40 - 117			
<i>Pyrene-d10</i>					83	85	38 - 119			
<i>Terphenyl-d14</i>					79	80	47 - 135			



Date of Report: February 8, 2019  
Samples Submitted: January 28, 2019  
Laboratory Reference: 1901-216  
Project: 397-019

### % MOISTURE

Date Analyzed: 2-7-19

Client ID	Lab ID	% Moisture
PH-4-4.5-012619	01-216-02	38





### Data Qualifiers and Abbreviations

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









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

September 16, 2020

Suzy Stumpf  
Farallon Consulting  
1809 7th Avenue, Suite 1111  
Seattle, WA 98101

Re: Analytical Data for Project 397-019  
Laboratory Reference No. 2009-116

Dear Suzy:

Enclosed are the analytical results and associated quality control data for samples submitted on September 14, 2020.

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

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

Sincerely,

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

David Baumeister  
Project Manager

Enclosures



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

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

Date of Report: September 16, 2020  
Samples Submitted: September 14, 2020  
Laboratory Reference: 2009-116  
Project: 397-019

### Case Narrative

Samples were collected on September 12 and 13, 2020 and received by the laboratory on September 14, 2020. They were maintained at the laboratory at a temperature of 2°C to 6°C.

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

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

#### NWTPH-Gx/BTEX Analysis

The MTCA Method A cleanup level of 0.030 ppm for Benzene and the MTCA Method A cleanup level of 30.0 ppm for fresh gasoline are not achievable for samples FB-13-20.0, FB-13-17.5, FB-12-20.0 and FB-12-17.5 due to the low dry weight of the samples in addition to the low sample weight in the provided VOA vials

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



Date of Report: September 16, 2020  
 Samples Submitted: September 14, 2020  
 Laboratory Reference: 2009-116  
 Project: 397-019

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

Matrix: Soil  
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FB-13-20.0</b>					
Laboratory ID:	09-116-07					
Benzene	ND	0.070	EPA 8021B	9-15-20	9-15-20	
Toluene	ND	0.35	EPA 8021B	9-15-20	9-15-20	
Ethyl Benzene	ND	0.35	EPA 8021B	9-15-20	9-15-20	
m,p-Xylene	ND	0.35	EPA 8021B	9-15-20	9-15-20	
o-Xylene	ND	0.35	EPA 8021B	9-15-20	9-15-20	
Gasoline	ND	35	NWTPH-Gx	9-15-20	9-15-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	97	58-129				
<b>Client ID:</b>	<b>FB-13-17.5</b>					
Laboratory ID:	09-116-08					
Benzene	ND	0.10	EPA 8021B	9-15-20	9-15-20	
Toluene	ND	0.51	EPA 8021B	9-15-20	9-15-20	
Ethyl Benzene	ND	0.51	EPA 8021B	9-15-20	9-15-20	
m,p-Xylene	ND	0.51	EPA 8021B	9-15-20	9-15-20	
o-Xylene	ND	0.51	EPA 8021B	9-15-20	9-15-20	
Gasoline	ND	51	NWTPH-Gx	9-15-20	9-15-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	97	58-129				
<b>Client ID:</b>	<b>FB-12-20.0</b>					
Laboratory ID:	09-116-19					
Benzene	ND	0.083	EPA 8021B	9-15-20	9-15-20	
Toluene	ND	0.41	EPA 8021B	9-15-20	9-15-20	
Ethyl Benzene	ND	0.41	EPA 8021B	9-15-20	9-15-20	
m,p-Xylene	ND	0.41	EPA 8021B	9-15-20	9-15-20	
o-Xylene	ND	0.41	EPA 8021B	9-15-20	9-15-20	
Gasoline	ND	41	NWTPH-Gx	9-15-20	9-15-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	99	58-129				



Date of Report: September 16, 2020  
 Samples Submitted: September 14, 2020  
 Laboratory Reference: 2009-116  
 Project: 397-019

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

Matrix: Soil  
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FB-12-17.5</b>					
Laboratory ID:	09-116-20					
Benzene	<b>ND</b>	0.075	EPA 8021B	9-15-20	9-15-20	
Toluene	<b>ND</b>	0.38	EPA 8021B	9-15-20	9-15-20	
Ethyl Benzene	<b>ND</b>	0.38	EPA 8021B	9-15-20	9-15-20	
m,p-Xylene	<b>ND</b>	0.38	EPA 8021B	9-15-20	9-15-20	
o-Xylene	<b>ND</b>	0.38	EPA 8021B	9-15-20	9-15-20	
Gasoline	<b>ND</b>	38	NWTPH-Gx	9-15-20	9-15-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	106	58-129				



Date of Report: September 16, 2020  
 Samples Submitted: September 14, 2020  
 Laboratory Reference: 2009-116  
 Project: 397-019

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

Matrix: Soil  
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB0915S1					
Benzene	ND	0.020	EPA 8021B	9-15-20	9-15-20	
Toluene	ND	0.050	EPA 8021B	9-15-20	9-15-20	
Ethyl Benzene	ND	0.050	EPA 8021B	9-15-20	9-15-20	
m,p-Xylene	ND	0.050	EPA 8021B	9-15-20	9-15-20	
o-Xylene	ND	0.050	EPA 8021B	9-15-20	9-15-20	
Gasoline	ND	5.0	NWTPH-Gx	9-15-20	9-15-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>		<i>Control Limits</i>			
<i>Fluorobenzene</i>	99	58-129				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
<b>DUPLICATE</b>								
Laboratory ID:	09-116-07							
	ORIG	DUP						
Benzene	ND	ND	NA	NA	NA	NA	30	
Toluene	ND	ND	NA	NA	NA	NA	30	
Ethyl Benzene	ND	ND	NA	NA	NA	NA	30	
m,p-Xylene	ND	ND	NA	NA	NA	NA	30	
o-Xylene	ND	ND	NA	NA	NA	NA	30	
Gasoline	ND	ND	NA	NA	NA	NA	30	
<i>Surrogate:</i>								
<i>Fluorobenzene</i>				97	95	58-129		

**SPIKE BLANKS**

Laboratory ID:	SB0915S1								
	SB	SBD	SB	SBD	SB	SBD			
Benzene	0.823	0.830	1.00	1.00	82	83	68-112	1	10
Toluene	0.863	0.873	1.00	1.00	86	87	70-114	1	10
Ethyl Benzene	0.866	0.881	1.00	1.00	87	88	70-115	2	10
m,p-Xylene	0.866	0.877	1.00	1.00	87	88	69-117	1	11
o-Xylene	0.884	0.893	1.00	1.00	88	89	71-115	1	11
<i>Surrogate:</i>									
<i>Fluorobenzene</i>					100	100	58-129		



Date of Report: September 16, 2020  
 Samples Submitted: September 14, 2020  
 Laboratory Reference: 2009-116  
 Project: 397-019

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

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FB-13-20.0</b>					
Laboratory ID:	09-116-07					
Diesel Range Organics	<b>86</b>	70	NWTPH-Dx	9-15-20	9-15-20	N
Lube Oil Range Organics	<b>1400</b>	140	NWTPH-Dx	9-15-20	9-15-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	55	50-150				
<b>Client ID:</b>	<b>FB-13-17.5</b>					
Laboratory ID:	09-116-08					
Diesel Range Organics	<b>160</b>	100	NWTPH-Dx	9-15-20	9-15-20	N
Lube Oil Range Organics	<b>2700</b>	200	NWTPH-Dx	9-15-20	9-15-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	52	50-150				
<b>Client ID:</b>	<b>FB-11-20.0</b>					
Laboratory ID:	09-116-10					
Diesel Range Organics	<b>72</b>	45	NWTPH-Dx	9-15-20	9-15-20	N
Lube Oil Range Organics	<b>470</b>	91	NWTPH-Dx	9-15-20	9-15-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	75	50-150				
<b>Client ID:</b>	<b>FB-11-17.5</b>					
Laboratory ID:	09-116-11					
Diesel Range Organics	<b>ND</b>	59	NWTPH-Dx	9-15-20	9-15-20	
Lube Oil Range Organics	<b>ND</b>	120	NWTPH-Dx	9-15-20	9-15-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	72	50-150				
<b>Client ID:</b>	<b>FB-14-20.0</b>					
Laboratory ID:	09-116-17					
Diesel Range Organics	<b>32</b>	29	NWTPH-Dx	9-15-20	9-15-20	N
Lube Oil Range Organics	<b>150</b>	58	NWTPH-Dx	9-15-20	9-15-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	75	50-150				
<b>Client ID:</b>	<b>FB-12-20.0</b>					
Laboratory ID:	09-116-19					
Diesel Range Organics	<b>170</b>	93	NWTPH-Dx	9-15-20	9-15-20	N
Lube Oil Range Organics	<b>1600</b>	190	NWTPH-Dx	9-15-20	9-15-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	60	50-150				





Date of Report: September 16, 2020  
 Samples Submitted: September 14, 2020  
 Laboratory Reference: 2009-116  
 Project: 397-019

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

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FB-12-17.5</b>					
Laboratory ID:	09-116-20					
Diesel Range Organics	<b>ND</b>	94	NWTPH-Dx	9-15-20	9-15-20	
Lube Oil Range Organics	<b>1300</b>	190	NWTPH-Dx	9-15-20	9-15-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	68	50-150				

<b>Client ID:</b>	<b>FB-14-17.5</b>					
Laboratory ID:	09-116-23					
Diesel Range Organics	<b>ND</b>	65	NWTPH-Dx	9-15-20	9-15-20	
Lube Oil Range Organics	<b>510</b>	130	NWTPH-Dx	9-15-20	9-15-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	70	50-150				

<b>Client ID:</b>	<b>FB-15-22.5</b>					
Laboratory ID:	09-116-25					
Diesel Range Organics	<b>ND</b>	140	NWTPH-Dx	9-15-20	9-15-20	
Lube Oil Range Organics	<b>1500</b>	270	NWTPH-Dx	9-15-20	9-15-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	78	50-150				

<b>Client ID:</b>	<b>FB-15-20.0</b>					
Laboratory ID:	09-116-26					
Diesel Range Organics	<b>ND</b>	30	NWTPH-Dx	9-15-20	9-15-20	
Lube Oil Range Organics	<b>160</b>	59	NWTPH-Dx	9-15-20	9-15-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	77	50-150				

<b>Client ID:</b>	<b>FB-15-17.5</b>					
Laboratory ID:	09-116-27					
Diesel Range Organics	<b>ND</b>	28	NWTPH-Dx	9-15-20	9-15-20	
Lube Oil Range Organics	<b>ND</b>	56	NWTPH-Dx	9-15-20	9-15-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	74	50-150				

<b>Client ID:</b>	<b>FB-16-22.5</b>					
Laboratory ID:	09-116-30					
Diesel Range Organics	<b>ND</b>	28	NWTPH-Dx	9-15-20	9-15-20	
Lube Oil Range Organics	<b>110</b>	57	NWTPH-Dx	9-15-20	9-15-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	74	50-150				



Date of Report: September 16, 2020  
 Samples Submitted: September 14, 2020  
 Laboratory Reference: 2009-116  
 Project: 397-019

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

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FB-16-20.0</b>					
Laboratory ID:	09-116-31					
Diesel Range Organics	<b>ND</b>	28	NWTPH-Dx	9-15-20	9-15-20	
Lube Oil Range Organics	<b>ND</b>	56	NWTPH-Dx	9-15-20	9-15-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	74	50-150				
<b>Client ID:</b>	<b>FB-16-17.5</b>					
Laboratory ID:	09-116-32					
Diesel Range Organics	<b>130</b>	110	NWTPH-Dx	9-15-20	9-15-20	N
Lube Oil Range Organics	<b>1000</b>	210	NWTPH-Dx	9-15-20	9-15-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	52	50-150				



Date of Report: September 16, 2020  
 Samples Submitted: September 14, 2020  
 Laboratory Reference: 2009-116  
 Project: 397-019

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

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB0915S1					
Diesel Range Organics	ND	25	NWTPH-Dx	9-15-20	9-15-20	
Lube Oil Range Organics	ND	50	NWTPH-Dx	9-15-20	9-15-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	90	50-150				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
<b>DUPLICATE</b>								
Laboratory ID:	09-116-31							
	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>				74	73	50-150		
Laboratory ID:	SB0915S1							
	ORIG	DUP						
Diesel Fuel #2	94.2	92.6	NA	NA	NA	NA	2	NA
Lube Oil Range	ND	ND	NA	NA	NA	NA	NA	NA
<i>Surrogate:</i>								
<i>o-Terphenyl</i>				88	87	50-150		



Date of Report: September 16, 2020  
 Samples Submitted: September 14, 2020  
 Laboratory Reference: 2009-116  
 Project: 397-019

**PAHs EPA 8270E/SIM**

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FB-10-22.5</b>					
Laboratory ID:	09-116-01					
Benzo[a]anthracene	<b>0.58</b>	0.045	EPA 8270E/SIM	9-15-20	9-16-20	
Chrysene	<b>0.68</b>	0.045	EPA 8270E/SIM	9-15-20	9-16-20	
Benzo[b]fluoranthene	<b>0.71</b>	0.045	EPA 8270E/SIM	9-15-20	9-16-20	
Benzo(j,k)fluoranthene	<b>0.17</b>	0.045	EPA 8270E/SIM	9-15-20	9-16-20	
Benzo[a]pyrene	<b>0.61</b>	0.045	EPA 8270E/SIM	9-15-20	9-16-20	
Indeno(1,2,3-c,d)pyrene	<b>0.37</b>	0.045	EPA 8270E/SIM	9-15-20	9-16-20	
Dibenz[a,h]anthracene	<b>0.065</b>	0.045	EPA 8270E/SIM	9-15-20	9-16-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>78</i>	<i>46 - 113</i>				
<i>Pyrene-d10</i>	<i>83</i>	<i>45 - 114</i>				
<i>Terphenyl-d14</i>	<i>86</i>	<i>49 - 121</i>				



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**PAHs EPA 8270E/SIM**

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FB-10-20.0</b>					
Laboratory ID:	09-116-02					
Benzo[a]anthracene	<b>ND</b>	0.0097	EPA 8270E/SIM	9-15-20	9-15-20	
Chrysene	<b>ND</b>	0.0097	EPA 8270E/SIM	9-15-20	9-15-20	
Benzo[b]fluoranthene	<b>ND</b>	0.0097	EPA 8270E/SIM	9-15-20	9-15-20	
Benzo(j,k)fluoranthene	<b>ND</b>	0.0097	EPA 8270E/SIM	9-15-20	9-15-20	
Benzo[a]pyrene	<b>ND</b>	0.0097	EPA 8270E/SIM	9-15-20	9-15-20	
Indeno(1,2,3-c,d)pyrene	<b>ND</b>	0.0097	EPA 8270E/SIM	9-15-20	9-15-20	
Dibenz[a,h]anthracene	<b>ND</b>	0.0097	EPA 8270E/SIM	9-15-20	9-15-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>71</i>	<i>46 - 113</i>				
<i>Pyrene-d10</i>	<i>67</i>	<i>45 - 114</i>				
<i>Terphenyl-d14</i>	<i>67</i>	<i>49 - 121</i>				



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**PAHs EPA 8270E/SIM**

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FB-10-17.5</b>					
Laboratory ID:	09-116-03					
Benzo[a]anthracene	<b>ND</b>	0.016	EPA 8270E/SIM	9-15-20	9-15-20	
Chrysene	<b>ND</b>	0.016	EPA 8270E/SIM	9-15-20	9-15-20	
Benzo[b]fluoranthene	<b>ND</b>	0.016	EPA 8270E/SIM	9-15-20	9-15-20	
Benzo(j,k)fluoranthene	<b>ND</b>	0.016	EPA 8270E/SIM	9-15-20	9-15-20	
Benzo[a]pyrene	<b>ND</b>	0.016	EPA 8270E/SIM	9-15-20	9-15-20	
Indeno(1,2,3-c,d)pyrene	<b>ND</b>	0.016	EPA 8270E/SIM	9-15-20	9-15-20	
Dibenz[a,h]anthracene	<b>ND</b>	0.016	EPA 8270E/SIM	9-15-20	9-15-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>47</i>	<i>46 - 113</i>				
<i>Pyrene-d10</i>	<i>46</i>	<i>45 - 114</i>				
<i>Terphenyl-d14</i>	<i>49</i>	<i>49 - 121</i>				





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### SEMIVOLATILE ORGANICS EPA 8270E/SIM

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FB-13-22.5</b>					
Laboratory ID:	09-116-06					
Naphthalene	<b>4.1</b>	0.077	EPA 8270E/SIM	9-15-20	9-16-20	
2-Methylnaphthalene	<b>4.1</b>	0.077	EPA 8270E/SIM	9-15-20	9-16-20	
1-Methylnaphthalene	<b>3.4</b>	0.077	EPA 8270E/SIM	9-15-20	9-16-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	63	46 - 113				
<i>Pyrene-d10</i>	72	45 - 114				
<i>Terphenyl-d14</i>	76	49 - 121				



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**PAHs EPA 8270E/SIM**

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FB-13-20.0</b>					
Laboratory ID:	09-116-07					
Naphthalene	<b>0.40</b>	0.019	EPA 8270E/SIM	9-15-20	9-15-20	
2-Methylnaphthalene	<b>0.11</b>	0.019	EPA 8270E/SIM	9-15-20	9-15-20	
1-Methylnaphthalene	<b>0.084</b>	0.019	EPA 8270E/SIM	9-15-20	9-15-20	
Benzo[a]anthracene	<b>0.55</b>	0.019	EPA 8270E/SIM	9-15-20	9-15-20	
Chrysene	<b>0.50</b>	0.019	EPA 8270E/SIM	9-15-20	9-15-20	
Benzo[b]fluoranthene	<b>0.53</b>	0.019	EPA 8270E/SIM	9-15-20	9-15-20	
Benzo(j,k)fluoranthene	<b>0.16</b>	0.019	EPA 8270E/SIM	9-15-20	9-15-20	
Benzo[a]pyrene	<b>0.55</b>	0.019	EPA 8270E/SIM	9-15-20	9-15-20	
Indeno(1,2,3-c,d)pyrene	<b>0.30</b>	0.019	EPA 8270E/SIM	9-15-20	9-15-20	
Dibenz[a,h]anthracene	<b>0.046</b>	0.019	EPA 8270E/SIM	9-15-20	9-15-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>64</i>	<i>46 - 113</i>				
<i>Pyrene-d10</i>	<i>59</i>	<i>45 - 114</i>				
<i>Terphenyl-d14</i>	<i>55</i>	<i>49 - 121</i>				



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**PAHs EPA 8270E/SIM**

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FB-13-17.5</b>					
Laboratory ID:	09-116-08					
Benzo[a]anthracene	<b>1.9</b>	0.027	EPA 8270E/SIM	9-15-20	9-16-20	
Chrysene	<b>1.6</b>	0.027	EPA 8270E/SIM	9-15-20	9-16-20	
Benzo[b]fluoranthene	<b>1.8</b>	0.027	EPA 8270E/SIM	9-15-20	9-16-20	
Benzo(j,k)fluoranthene	<b>0.46</b>	0.027	EPA 8270E/SIM	9-15-20	9-16-20	
Benzo[a]pyrene	<b>1.8</b>	0.027	EPA 8270E/SIM	9-15-20	9-16-20	
Indeno(1,2,3-c,d)pyrene	<b>1.0</b>	0.027	EPA 8270E/SIM	9-15-20	9-16-20	
Dibenz[a,h]anthracene	<b>0.15</b>	0.027	EPA 8270E/SIM	9-15-20	9-16-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>70</i>	<i>46 - 113</i>				
<i>Pyrene-d10</i>	<i>65</i>	<i>45 - 114</i>				
<i>Terphenyl-d14</i>	<i>62</i>	<i>49 - 121</i>				



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**PAHs EPA 8270E/SIM**

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FB-11-20.0</b>					
Laboratory ID:	09-116-10					
Benzo[a]anthracene	<b>0.50</b>	0.012	EPA 8270E/SIM	9-15-20	9-15-20	
Chrysene	<b>0.52</b>	0.012	EPA 8270E/SIM	9-15-20	9-15-20	
Benzo[b]fluoranthene	<b>0.62</b>	0.012	EPA 8270E/SIM	9-15-20	9-15-20	
Benzo(j,k)fluoranthene	<b>0.17</b>	0.012	EPA 8270E/SIM	9-15-20	9-15-20	
Benzo[a]pyrene	<b>0.54</b>	0.012	EPA 8270E/SIM	9-15-20	9-15-20	
Indeno(1,2,3-c,d)pyrene	<b>0.37</b>	0.012	EPA 8270E/SIM	9-15-20	9-15-20	
Dibenz[a,h]anthracene	<b>0.058</b>	0.012	EPA 8270E/SIM	9-15-20	9-15-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>57</i>	<i>46 - 113</i>				
<i>Pyrene-d10</i>	<i>58</i>	<i>45 - 114</i>				
<i>Terphenyl-d14</i>	<i>53</i>	<i>49 - 121</i>				



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**PAHs EPA 8270E/SIM**

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FB-11-17.5</b>					
Laboratory ID:	09-116-11					
Benzo[a]anthracene	<b>ND</b>	0.016	EPA 8270E/SIM	9-16-20	9-16-20	
Chrysene	<b>ND</b>	0.016	EPA 8270E/SIM	9-16-20	9-16-20	
Benzo[b]fluoranthene	<b>ND</b>	0.016	EPA 8270E/SIM	9-16-20	9-16-20	
Benzo(j,k)fluoranthene	<b>ND</b>	0.016	EPA 8270E/SIM	9-16-20	9-16-20	
Benzo[a]pyrene	<b>ND</b>	0.016	EPA 8270E/SIM	9-16-20	9-16-20	
Indeno(1,2,3-c,d)pyrene	<b>ND</b>	0.016	EPA 8270E/SIM	9-16-20	9-16-20	
Dibenz[a,h]anthracene	<b>ND</b>	0.016	EPA 8270E/SIM	9-16-20	9-16-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>69</i>	<i>46 - 113</i>				
<i>Pyrene-d10</i>	<i>67</i>	<i>45 - 114</i>				
<i>Terphenyl-d14</i>	<i>72</i>	<i>49 - 121</i>				



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**PAHs EPA 8270E/SIM**

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FB-14-22.5</b>					
Laboratory ID:	09-116-16					
Naphthalene	<b>0.18</b>	0.073	EPA 8270E/SIM	9-15-20	9-16-20	
2-Methylnaphthalene	<b>0.21</b>	0.073	EPA 8270E/SIM	9-15-20	9-16-20	
1-Methylnaphthalene	<b>0.15</b>	0.073	EPA 8270E/SIM	9-15-20	9-16-20	
Benzo[a]anthracene	<b>2.8</b>	0.073	EPA 8270E/SIM	9-15-20	9-16-20	
Chrysene	<b>2.6</b>	0.073	EPA 8270E/SIM	9-15-20	9-16-20	
Benzo[b]fluoranthene	<b>2.4</b>	0.073	EPA 8270E/SIM	9-15-20	9-16-20	
Benzo(j,k)fluoranthene	<b>0.78</b>	0.073	EPA 8270E/SIM	9-15-20	9-16-20	
Benzo[a]pyrene	<b>2.4</b>	0.073	EPA 8270E/SIM	9-15-20	9-16-20	
Indeno(1,2,3-c,d)pyrene	<b>1.4</b>	0.073	EPA 8270E/SIM	9-15-20	9-16-20	
Dibenz[a,h]anthracene	<b>0.24</b>	0.073	EPA 8270E/SIM	9-15-20	9-16-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>76</i>	<i>46 - 113</i>				
<i>Pyrene-d10</i>	<i>93</i>	<i>45 - 114</i>				
<i>Terphenyl-d14</i>	<i>100</i>	<i>49 - 121</i>				



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**PAHs EPA 8270E/SIM**

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FB-14-20.0</b>					
Laboratory ID:	09-116-17					
Naphthalene	<b>0.14</b>	0.039	EPA 8270E/SIM	9-15-20	9-16-20	
2-Methylnaphthalene	<b>0.14</b>	0.039	EPA 8270E/SIM	9-15-20	9-16-20	
1-Methylnaphthalene	<b>0.13</b>	0.039	EPA 8270E/SIM	9-15-20	9-16-20	
Benzo[a]anthracene	<b>1.7</b>	0.039	EPA 8270E/SIM	9-15-20	9-16-20	
Chrysene	<b>1.6</b>	0.039	EPA 8270E/SIM	9-15-20	9-16-20	
Benzo[b]fluoranthene	<b>1.6</b>	0.039	EPA 8270E/SIM	9-15-20	9-16-20	
Benzo(j,k)fluoranthene	<b>0.47</b>	0.039	EPA 8270E/SIM	9-15-20	9-16-20	
Benzo[a]pyrene	<b>1.8</b>	0.039	EPA 8270E/SIM	9-15-20	9-16-20	
Indeno(1,2,3-c,d)pyrene	<b>0.97</b>	0.039	EPA 8270E/SIM	9-15-20	9-16-20	
Dibenz[a,h]anthracene	<b>0.16</b>	0.039	EPA 8270E/SIM	9-15-20	9-16-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>66</i>	<i>46 - 113</i>				
<i>Pyrene-d10</i>	<i>72</i>	<i>45 - 114</i>				
<i>Terphenyl-d14</i>	<i>80</i>	<i>49 - 121</i>				





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Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FB-12-21.5</b>					
Laboratory ID:	09-116-18					
Naphthalene	<b>ND</b>	0.15	EPA 8270E/SIM	9-15-20	9-16-20	
2-Methylnaphthalene	<b>ND</b>	0.15	EPA 8270E/SIM	9-15-20	9-16-20	
1-Methylnaphthalene	<b>ND</b>	0.15	EPA 8270E/SIM	9-15-20	9-16-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	62	46 - 113				
<i>Pyrene-d10</i>	80	45 - 114				
<i>Terphenyl-d14</i>	76	49 - 121				



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**PAHs EPA 8270E/SIM**

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FB-12-20.0</b>					
Laboratory ID:	09-116-19					
Benzo[a]anthracene	<b>0.084</b>	0.025	EPA 8270E/SIM	9-15-20	9-15-20	
Chrysene	<b>0.085</b>	0.025	EPA 8270E/SIM	9-15-20	9-15-20	
Benzo[b]fluoranthene	<b>0.089</b>	0.025	EPA 8270E/SIM	9-15-20	9-15-20	
Benzo(j,k)fluoranthene	<b>ND</b>	0.025	EPA 8270E/SIM	9-15-20	9-15-20	
Benzo[a]pyrene	<b>0.081</b>	0.025	EPA 8270E/SIM	9-15-20	9-15-20	
Indeno(1,2,3-c,d)pyrene	<b>0.058</b>	0.025	EPA 8270E/SIM	9-15-20	9-15-20	
Dibenz[a,h]anthracene	<b>ND</b>	0.025	EPA 8270E/SIM	9-15-20	9-15-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>71</i>	<i>46 - 113</i>				
<i>Pyrene-d10</i>	<i>70</i>	<i>45 - 114</i>				
<i>Terphenyl-d14</i>	<i>60</i>	<i>49 - 121</i>				



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**PAHs EPA 8270E/SIM**

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FB-12-17.5</b>					
Laboratory ID:	09-116-20					
Benzo[a]anthracene	<b>0.21</b>	0.025	EPA 8270E/SIM	9-15-20	9-15-20	
Chrysene	<b>0.19</b>	0.025	EPA 8270E/SIM	9-15-20	9-15-20	
Benzo[b]fluoranthene	<b>0.22</b>	0.025	EPA 8270E/SIM	9-15-20	9-15-20	
Benzo(j,k)fluoranthene	<b>0.083</b>	0.025	EPA 8270E/SIM	9-15-20	9-15-20	
Benzo[a]pyrene	<b>0.25</b>	0.025	EPA 8270E/SIM	9-15-20	9-15-20	
Indeno(1,2,3-c,d)pyrene	<b>0.16</b>	0.025	EPA 8270E/SIM	9-15-20	9-15-20	
Dibenz[a,h]anthracene	<b>ND</b>	0.025	EPA 8270E/SIM	9-15-20	9-15-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>76</i>	<i>46 - 113</i>				
<i>Pyrene-d10</i>	<i>80</i>	<i>45 - 114</i>				
<i>Terphenyl-d14</i>	<i>75</i>	<i>49 - 121</i>				



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**PAHs EPA 8270E/SIM**

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FB-14-17.5</b>					
Laboratory ID:	09-116-23					
Benzo[a]anthracene	<b>ND</b>	0.017	EPA 8270E/SIM	9-15-20	9-15-20	
Chrysene	<b>ND</b>	0.017	EPA 8270E/SIM	9-15-20	9-15-20	
Benzo[b]fluoranthene	<b>ND</b>	0.017	EPA 8270E/SIM	9-15-20	9-15-20	
Benzo(j,k)fluoranthene	<b>ND</b>	0.017	EPA 8270E/SIM	9-15-20	9-15-20	
Benzo[a]pyrene	<b>ND</b>	0.017	EPA 8270E/SIM	9-15-20	9-15-20	
Indeno(1,2,3-c,d)pyrene	<b>ND</b>	0.017	EPA 8270E/SIM	9-15-20	9-15-20	
Dibenz[a,h]anthracene	<b>ND</b>	0.017	EPA 8270E/SIM	9-15-20	9-15-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>54</i>	<i>46 - 113</i>				
<i>Pyrene-d10</i>	<i>56</i>	<i>45 - 114</i>				
<i>Terphenyl-d14</i>	<i>50</i>	<i>49 - 121</i>				



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**PAHs EPA 8270E/SIM**

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FB-15-22.5</b>					
Laboratory ID:	09-116-25					
Naphthalene	<b>0.40</b>	0.15	EPA 8270E/SIM	9-15-20	9-16-20	
2-Methylnaphthalene	<b>0.32</b>	0.15	EPA 8270E/SIM	9-15-20	9-16-20	
1-Methylnaphthalene	<b>0.26</b>	0.15	EPA 8270E/SIM	9-15-20	9-16-20	
Benzo[a]anthracene	<b>2.4</b>	0.15	EPA 8270E/SIM	9-15-20	9-16-20	
Chrysene	<b>2.0</b>	0.15	EPA 8270E/SIM	9-15-20	9-16-20	
Benzo[b]fluoranthene	<b>2.2</b>	0.15	EPA 8270E/SIM	9-15-20	9-16-20	
Benzo(j,k)fluoranthene	<b>0.78</b>	0.15	EPA 8270E/SIM	9-15-20	9-16-20	
Benzo[a]pyrene	<b>2.3</b>	0.15	EPA 8270E/SIM	9-15-20	9-16-20	
Indeno(1,2,3-c,d)pyrene	<b>1.3</b>	0.15	EPA 8270E/SIM	9-15-20	9-16-20	
Dibenz[a,h]anthracene	<b>0.24</b>	0.15	EPA 8270E/SIM	9-15-20	9-16-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>60</i>	<i>46 - 113</i>				
<i>Pyrene-d10</i>	<i>73</i>	<i>45 - 114</i>				
<i>Terphenyl-d14</i>	<i>72</i>	<i>49 - 121</i>				



Date of Report: September 16, 2020  
 Samples Submitted: September 14, 2020  
 Laboratory Reference: 2009-116  
 Project: 397-019

**PAHs EPA 8270E/SIM**

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FB-15-20.0</b>					
Laboratory ID:	09-116-26					
Naphthalene	<b>0.25</b>	0.0079	EPA 8270E/SIM	9-15-20	9-15-20	
2-Methylnaphthalene	<b>0.34</b>	0.0079	EPA 8270E/SIM	9-15-20	9-15-20	
1-Methylnaphthalene	<b>0.29</b>	0.0079	EPA 8270E/SIM	9-15-20	9-15-20	
Benzo[a]anthracene	<b>0.21</b>	0.0079	EPA 8270E/SIM	9-15-20	9-15-20	
Chrysene	<b>0.20</b>	0.0079	EPA 8270E/SIM	9-15-20	9-15-20	
Benzo[b]fluoranthene	<b>0.20</b>	0.0079	EPA 8270E/SIM	9-15-20	9-15-20	
Benzo(j,k)fluoranthene	<b>0.064</b>	0.0079	EPA 8270E/SIM	9-15-20	9-15-20	
Benzo[a]pyrene	<b>0.20</b>	0.0079	EPA 8270E/SIM	9-15-20	9-15-20	
Indeno(1,2,3-c,d)pyrene	<b>0.11</b>	0.0079	EPA 8270E/SIM	9-15-20	9-15-20	
Dibenz[a,h]anthracene	<b>0.020</b>	0.0079	EPA 8270E/SIM	9-15-20	9-15-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>67</i>	<i>46 - 113</i>				
<i>Pyrene-d10</i>	<i>64</i>	<i>45 - 114</i>				
<i>Terphenyl-d14</i>	<i>65</i>	<i>49 - 121</i>				



Date of Report: September 16, 2020  
 Samples Submitted: September 14, 2020  
 Laboratory Reference: 2009-116  
 Project: 397-019

**PAHs EPA 8270E/SIM**

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FB-15-17.5</b>					
Laboratory ID:	09-116-27					
Naphthalene	<b>0.10</b>	0.0074	EPA 8270E/SIM	9-15-20	9-15-20	
2-Methylnaphthalene	<b>0.040</b>	0.0074	EPA 8270E/SIM	9-15-20	9-15-20	
1-Methylnaphthalene	<b>0.033</b>	0.0074	EPA 8270E/SIM	9-15-20	9-15-20	
Benzo[a]anthracene	<b>0.26</b>	0.0074	EPA 8270E/SIM	9-15-20	9-15-20	
Chrysene	<b>0.25</b>	0.0074	EPA 8270E/SIM	9-15-20	9-15-20	
Benzo[b]fluoranthene	<b>0.27</b>	0.0074	EPA 8270E/SIM	9-15-20	9-15-20	
Benzo(j,k)fluoranthene	<b>0.098</b>	0.0074	EPA 8270E/SIM	9-15-20	9-15-20	
Benzo[a]pyrene	<b>0.31</b>	0.0074	EPA 8270E/SIM	9-15-20	9-15-20	
Indeno(1,2,3-c,d)pyrene	<b>0.18</b>	0.0074	EPA 8270E/SIM	9-15-20	9-15-20	
Dibenz[a,h]anthracene	<b>0.025</b>	0.0074	EPA 8270E/SIM	9-15-20	9-15-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>79</i>	<i>46 - 113</i>				
<i>Pyrene-d10</i>	<i>86</i>	<i>45 - 114</i>				
<i>Terphenyl-d14</i>	<i>83</i>	<i>49 - 121</i>				





Date of Report: September 16, 2020  
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 Project: 397-019

**PAHs EPA 8270E/SIM**

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FB-16-22.5</b>					
Laboratory ID:	09-116-30					
Benzo[a]anthracene	<b>0.45</b>	0.0075	EPA 8270E/SIM	9-15-20	9-16-20	
Chrysene	<b>0.45</b>	0.0075	EPA 8270E/SIM	9-15-20	9-16-20	
Benzo[b]fluoranthene	<b>0.47</b>	0.0075	EPA 8270E/SIM	9-15-20	9-16-20	
Benzo(j,k)fluoranthene	<b>0.13</b>	0.0075	EPA 8270E/SIM	9-15-20	9-16-20	
Benzo[a]pyrene	<b>0.49</b>	0.0075	EPA 8270E/SIM	9-15-20	9-16-20	
Indeno(1,2,3-c,d)pyrene	<b>0.29</b>	0.0075	EPA 8270E/SIM	9-15-20	9-16-20	
Dibenz[a,h]anthracene	<b>0.051</b>	0.0075	EPA 8270E/SIM	9-15-20	9-16-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>72</i>	<i>46 - 113</i>				
<i>Pyrene-d10</i>	<i>84</i>	<i>45 - 114</i>				
<i>Terphenyl-d14</i>	<i>81</i>	<i>49 - 121</i>				



Date of Report: September 16, 2020  
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 Laboratory Reference: 2009-116  
 Project: 397-019

**PAHs EPA 8270E/SIM**

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FB-16-20.0</b>					
Laboratory ID:	09-116-31					
Benzo[a]anthracene	<b>ND</b>	0.0074	EPA 8270E/SIM	9-15-20	9-15-20	
Chrysene	<b>ND</b>	0.0074	EPA 8270E/SIM	9-15-20	9-15-20	
Benzo[b]fluoranthene	<b>ND</b>	0.0074	EPA 8270E/SIM	9-15-20	9-15-20	
Benzo(j,k)fluoranthene	<b>ND</b>	0.0074	EPA 8270E/SIM	9-15-20	9-15-20	
Benzo[a]pyrene	<b>ND</b>	0.0074	EPA 8270E/SIM	9-15-20	9-15-20	
Indeno(1,2,3-c,d)pyrene	<b>ND</b>	0.0074	EPA 8270E/SIM	9-15-20	9-15-20	
Dibenz[a,h]anthracene	<b>ND</b>	0.0074	EPA 8270E/SIM	9-15-20	9-15-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>74</i>	<i>46 - 113</i>				
<i>Pyrene-d10</i>	<i>78</i>	<i>45 - 114</i>				
<i>Terphenyl-d14</i>	<i>80</i>	<i>49 - 121</i>				



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 Project: 397-019

**PAHs EPA 8270E/SIM**

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FB-16-17.5</b>					
Laboratory ID:	09-116-32					
Benzo[a]anthracene	<b>0.032</b>	0.029	EPA 8270E/SIM	9-16-20	9-16-20	
Chrysene	<b>0.055</b>	0.029	EPA 8270E/SIM	9-16-20	9-16-20	
Benzo[b]fluoranthene	<b>0.029</b>	0.029	EPA 8270E/SIM	9-16-20	9-16-20	
Benzo(j,k)fluoranthene	<b>ND</b>	0.029	EPA 8270E/SIM	9-16-20	9-16-20	
Benzo[a]pyrene	<b>ND</b>	0.029	EPA 8270E/SIM	9-16-20	9-16-20	
Indeno(1,2,3-c,d)pyrene	<b>ND</b>	0.029	EPA 8270E/SIM	9-16-20	9-16-20	
Dibenz[a,h]anthracene	<b>ND</b>	0.029	EPA 8270E/SIM	9-16-20	9-16-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>77</i>	<i>46 - 113</i>				
<i>Pyrene-d10</i>	<i>81</i>	<i>45 - 114</i>				
<i>Terphenyl-d14</i>	<i>75</i>	<i>49 - 121</i>				



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 Project: 397-019

**SEMIVOLATILE ORGANICS EPA 8270E/SIM  
 QUALITY CONTROL**

Matrix: Soil  
 Units: mg/Kg

<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>Method</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Flags</b>
<b>METHOD BLANK</b>						
Laboratory ID:	MB0915S1					
Naphthalene	ND	0.0067	EPA 8270E/SIM	9-15-20	9-15-20	
2-Methylnaphthalene	ND	0.0067	EPA 8270E/SIM	9-15-20	9-15-20	
1-Methylnaphthalene	ND	0.0067	EPA 8270E/SIM	9-15-20	9-15-20	
Benzo[a]anthracene	ND	0.0067	EPA 8270E/SIM	9-15-20	9-15-20	
Chrysene	ND	0.0067	EPA 8270E/SIM	9-15-20	9-15-20	
Benzo[b]fluoranthene	ND	0.0067	EPA 8270E/SIM	9-15-20	9-15-20	
Benzo(j,k)fluoranthene	ND	0.0067	EPA 8270E/SIM	9-15-20	9-15-20	
Benzo[a]pyrene	ND	0.0067	EPA 8270E/SIM	9-15-20	9-15-20	
Indeno(1,2,3-c,d)pyrene	ND	0.0067	EPA 8270E/SIM	9-15-20	9-15-20	
Dibenz[a,h]anthracene	ND	0.0067	EPA 8270E/SIM	9-15-20	9-15-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>78</i>	<i>46 - 113</i>				
<i>Pyrene-d10</i>	<i>88</i>	<i>45 - 114</i>				
<i>Terphenyl-d14</i>	<i>92</i>	<i>49 - 121</i>				



Date of Report: September 16, 2020  
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**SEMIVOLATILE ORGANICS EPA 8270E/SIM  
 QUALITY CONTROL**

Matrix: Soil  
 Units: mg/Kg

<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>Method</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Flags</b>
<b>METHOD BLANK</b>						
Laboratory ID:	MB0916S1					
Naphthalene	ND	0.0067	EPA 8270E/SIM	9-16-20	9-16-20	
2-Methylnaphthalene	ND	0.0067	EPA 8270E/SIM	9-16-20	9-16-20	
1-Methylnaphthalene	ND	0.0067	EPA 8270E/SIM	9-16-20	9-16-20	
Benzo[a]anthracene	ND	0.0067	EPA 8270E/SIM	9-16-20	9-16-20	
Chrysene	ND	0.0067	EPA 8270E/SIM	9-16-20	9-16-20	
Benzo[b]fluoranthene	ND	0.0067	EPA 8270E/SIM	9-16-20	9-16-20	
Benzo(j,k)fluoranthene	ND	0.0067	EPA 8270E/SIM	9-16-20	9-16-20	
Benzo[a]pyrene	ND	0.0067	EPA 8270E/SIM	9-16-20	9-16-20	
Indeno(1,2,3-c,d)pyrene	ND	0.0067	EPA 8270E/SIM	9-16-20	9-16-20	
Dibenz[a,h]anthracene	ND	0.0067	EPA 8270E/SIM	9-16-20	9-16-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>86</i>	<i>46 - 113</i>				
<i>Pyrene-d10</i>	<i>87</i>	<i>45 - 114</i>				
<i>Terphenyl-d14</i>	<i>91</i>	<i>49 - 121</i>				



Date of Report: September 16, 2020  
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**SEMIVOLATILE ORGANICS EPA 8270E/SIM  
 QUALITY CONTROL**

Matrix: Soil  
 Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
	SB	SBD	SB	SBD	SB	SBD				
<b>SPIKE BLANKS</b>										
Laboratory ID:	SB0915S1									
Naphthalene	<b>0.0675</b>	<b>0.0646</b>	0.0833	0.0833	81	78	60 - 116	4	16	
Acenaphthylene	<b>0.0674</b>	<b>0.0694</b>	0.0833	0.0833	81	83	60 - 125	3	15	
Acenaphthene	<b>0.0703</b>	<b>0.0724</b>	0.0833	0.0833	84	87	60 - 121	3	15	
Fluorene	<b>0.0684</b>	<b>0.0724</b>	0.0833	0.0833	82	87	65 - 126	6	15	
Phenanthrene	<b>0.0700</b>	<b>0.0736</b>	0.0833	0.0833	84	88	65 - 120	5	15	
Anthracene	<b>0.0711</b>	<b>0.0748</b>	0.0833	0.0833	85	90	67 - 125	5	15	
Fluoranthene	<b>0.0714</b>	<b>0.0784</b>	0.0833	0.0833	86	94	66 - 125	9	15	
Pyrene	<b>0.0755</b>	<b>0.0799</b>	0.0833	0.0833	91	96	62 - 125	6	15	
Benzo[a]anthracene	<b>0.0790</b>	<b>0.0847</b>	0.0833	0.0833	95	102	72 - 129	7	15	
Chrysene	<b>0.0764</b>	<b>0.0786</b>	0.0833	0.0833	92	94	66 - 123	3	15	
Benzo[b]fluoranthene	<b>0.0744</b>	<b>0.0816</b>	0.0833	0.0833	89	98	68 - 128	9	15	
Benzo(j,k)fluoranthene	<b>0.0718</b>	<b>0.0763</b>	0.0833	0.0833	86	92	63 - 128	6	16	
Benzo[a]pyrene	<b>0.0772</b>	<b>0.0809</b>	0.0833	0.0833	93	97	66 - 130	5	15	
Indeno(1,2,3-c,d)pyrene	<b>0.0685</b>	<b>0.0751</b>	0.0833	0.0833	82	90	63 - 135	9	15	
Dibenz[a,h]anthracene	<b>0.0710</b>	<b>0.0803</b>	0.0833	0.0833	85	96	65 - 130	12	15	
Benzo[g,h,i]perylene	<b>0.0708</b>	<b>0.0798</b>	0.0833	0.0833	85	96	66 - 127	12	15	
<i>Surrogate:</i>										
2-Fluorobiphenyl					78	82	46 - 113			
Pyrene-d10					85	89	45 - 114			
Terphenyl-d14					86	90	49 - 121			



Date of Report: September 16, 2020  
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 Laboratory Reference: 2009-116  
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**SEMIVOLATILE ORGANICS EPA 8270E/SIM  
 QUALITY CONTROL**

Matrix: Soil  
 Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
	SB	SBD	SB	SBD	SB	SBD				
<b>SPIKE BLANKS</b>										
Laboratory ID:	SB0916S1									
Naphthalene	<b>0.0720</b>	<b>0.0689</b>	0.0833	0.0833	86	83	60 - 116	4	16	
Acenaphthylene	<b>0.0751</b>	<b>0.0731</b>	0.0833	0.0833	90	88	60 - 125	3	15	
Acenaphthene	<b>0.0771</b>	<b>0.0752</b>	0.0833	0.0833	93	90	60 - 121	2	15	
Fluorene	<b>0.0725</b>	<b>0.0706</b>	0.0833	0.0833	87	85	65 - 126	3	15	
Phenanthrene	<b>0.0735</b>	<b>0.0691</b>	0.0833	0.0833	88	83	65 - 120	6	15	
Anthracene	<b>0.0741</b>	<b>0.0718</b>	0.0833	0.0833	89	86	67 - 125	3	15	
Fluoranthene	<b>0.0704</b>	<b>0.0767</b>	0.0833	0.0833	85	92	66 - 125	9	15	
Pyrene	<b>0.0751</b>	<b>0.0781</b>	0.0833	0.0833	90	94	62 - 125	4	15	
Benzo[a]anthracene	<b>0.0789</b>	<b>0.0738</b>	0.0833	0.0833	95	89	72 - 129	7	15	
Chrysene	<b>0.0740</b>	<b>0.0717</b>	0.0833	0.0833	89	86	66 - 123	3	15	
Benzo[b]fluoranthene	<b>0.0767</b>	<b>0.0690</b>	0.0833	0.0833	92	83	68 - 128	11	15	
Benzo(j,k)fluoranthene	<b>0.0722</b>	<b>0.0702</b>	0.0833	0.0833	87	84	63 - 128	3	16	
Benzo[a]pyrene	<b>0.0768</b>	<b>0.0731</b>	0.0833	0.0833	92	88	66 - 130	5	15	
Indeno(1,2,3-c,d)pyrene	<b>0.0749</b>	<b>0.0716</b>	0.0833	0.0833	90	86	63 - 135	5	15	
Dibenz[a,h]anthracene	<b>0.0765</b>	<b>0.0726</b>	0.0833	0.0833	92	87	65 - 130	5	15	
Benzo[g,h,i]perylene	<b>0.0759</b>	<b>0.0723</b>	0.0833	0.0833	91	87	66 - 127	5	15	
<i>Surrogate:</i>										
2-Fluorobiphenyl					85	84	46 - 113			
Pyrene-d10					85	84	45 - 114			
Terphenyl-d14					88	83	49 - 121			





Date of Report: September 16, 2020  
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**TOTAL METALS  
 EPA 6010D/7471B**

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FB-13-22.5</b>					
Laboratory ID:	09-116-06					
Arsenic	ND	11	EPA 6010D	9-16-20	9-16-20	
Barium	490	2.9	EPA 6010D	9-16-20	9-16-20	
Cadmium	0.73	0.57	EPA 6010D	9-16-20	9-16-20	
Chromium	23	0.57	EPA 6010D	9-16-20	9-16-20	
Lead	130	5.7	EPA 6010D	9-16-20	9-16-20	
Mercury	ND	0.29	EPA 7471B	9-16-20	9-16-20	
Selenium	ND	11	EPA 6010D	9-16-20	9-16-20	
Silver	ND	1.1	EPA 6010D	9-16-20	9-16-20	

<b>Client ID:</b>	<b>FB-13-20.0</b>					
Laboratory ID:	09-116-07					
Cadmium	ND	1.4	EPA 6010D	9-16-20	9-16-20	
Lead	96	14	EPA 6010D	9-16-20	9-16-20	

<b>Client ID:</b>	<b>FB-14-22.5</b>					
Laboratory ID:	09-116-16					
Arsenic	13	11	EPA 6010D	9-16-20	9-16-20	
Barium	68	2.7	EPA 6010D	9-16-20	9-16-20	
Cadmium	ND	0.55	EPA 6010D	9-16-20	9-16-20	
Chromium	17	0.55	EPA 6010D	9-16-20	9-16-20	
Lead	31	5.5	EPA 6010D	9-16-20	9-16-20	
Mercury	ND	0.27	EPA 7471B	9-16-20	9-16-20	
Selenium	ND	11	EPA 6010D	9-16-20	9-16-20	
Silver	ND	1.1	EPA 6010D	9-16-20	9-16-20	

<b>Client ID:</b>	<b>FB-14-20.0</b>					
Laboratory ID:	09-116-17					
Cadmium	ND	0.58	EPA 6010D	9-16-20	9-16-20	
Lead	50	5.8	EPA 6010D	9-16-20	9-16-20	

<b>Client ID:</b>	<b>FB-12-21.5</b>					
Laboratory ID:	09-116-18					
Lead	25	5.6	EPA 6010D	9-16-20	9-16-20	



Date of Report: September 16, 2020  
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 Project: 397-019

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

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FB-15-22.5</b>					
Laboratory ID:	09-116-25					
Arsenic	<b>ND</b>	11	EPA 6010D	9-16-20	9-16-20	
Barium	<b>81</b>	2.7	EPA 6010D	9-16-20	9-16-20	
Cadmium	<b>ND</b>	0.54	EPA 6010D	9-16-20	9-16-20	
Chromium	<b>15</b>	0.54	EPA 6010D	9-16-20	9-16-20	
Lead	<b>120</b>	5.4	EPA 6010D	9-16-20	9-16-20	
Mercury	<b>ND</b>	0.27	EPA 7471B	9-16-20	9-16-20	
Selenium	<b>ND</b>	11	EPA 6010D	9-16-20	9-16-20	
Silver	<b>ND</b>	1.1	EPA 6010D	9-16-20	9-16-20	

<b>Client ID:</b>	<b>FB-15-20.0</b>					
Laboratory ID:	09-116-26					
Cadmium	<b>ND</b>	0.59	EPA 6010D	9-16-20	9-16-20	
Lead	<b>56</b>	5.9	EPA 6010D	9-16-20	9-16-20	

<b>Client ID:</b>	<b>FB-15-17.5</b>					
Laboratory ID:	09-116-27					
Cadmium	<b>ND</b>	0.56	EPA 6010D	9-16-20	9-16-20	
Lead	<b>ND</b>	5.6	EPA 6010D	9-16-20	9-16-20	



Date of Report: September 16, 2020  
 Samples Submitted: September 14, 2020  
 Laboratory Reference: 2009-116  
 Project: 397-019

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

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB0916SM1					
Arsenic	<b>ND</b>	10	EPA 6010D	9-16-20	9-16-20	
Cadmium	<b>ND</b>	0.50	EPA 6010D	9-16-20	9-16-20	
Lead	<b>ND</b>	5.0	EPA 6010D	9-16-20	9-16-20	
Selenium	<b>ND</b>	10	EPA 6010D	9-16-20	9-16-20	
Silver	<b>ND</b>	1.0	EPA 6010D	9-16-20	9-16-20	
Laboratory ID:	MB0916S1					
Mercury	<b>ND</b>	0.25	EPA 7471B	9-16-20	9-16-20	
Laboratory ID:	MB0916SM2					
Barium	<b>ND</b>	2.5	EPA 6010D	9-16-20	9-16-20	
Chromium	<b>ND</b>	0.50	EPA 6010D	9-16-20	9-16-20	



Date of Report: September 16, 2020  
 Samples Submitted: September 14, 2020  
 Laboratory Reference: 2009-116  
 Project: 397-019

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

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
<b>DUPLICATE</b>										
Laboratory ID:	09-116-18									
	ORIG	DUP								
Arsenic	ND	ND	NA	NA		NA	NA	NA	20	
Cadmium	ND	ND	NA	NA		NA	NA	NA	20	
Lead	21.9	22.5	NA	NA		NA	NA	3	20	
Selenium	ND	ND	NA	NA		NA	NA	NA	20	
Silver	ND	ND	NA	NA		NA	NA	NA	20	
Laboratory ID:	09-116-16									
Mercury	ND	ND	NA	NA		NA	NA	NA	20	
Laboratory ID:	09-116-18									
	ORIG	DUP								
Barium	69.2	62.4	NA	NA		NA	NA	10	20	
Chromium	20.5	24.2	NA	NA		NA	NA	17	20	
<b>MATRIX SPIKES</b>										
Laboratory ID:	09-116-18									
	MS	MSD	MS	MSD		MS	MSD			
Arsenic	94.7	94.6	100	100	ND	95	95	75-125	0	20
Cadmium	40.0	40.7	50.0	50.0	ND	80	81	75-125	2	20
Lead	234	233	250	250	21.9	85	84	75-125	1	20
Selenium	85.9	85.7	100	100	ND	86	86	75-125	0	20
Silver	20.0	20.2	25.0	25.0	ND	80	81	75-125	1	20
Laboratory ID:	09-116-16									
Mercury	0.596	0.612	0.500	0.500	0.0673	106	109	80-120	3	20
Laboratory ID:	09-116-18									
	MS	MSD	MS	MSD		MS	MSD			
Barium	146	144	100	100	69.2	77	75	75-125	1	20
Chromium	104	103	100	100	20.5	84	83	75-125	1	20



Date of Report: September 16, 2020  
 Samples Submitted: September 14, 2020  
 Laboratory Reference: 2009-116  
 Project: 397-019

**% MOISTURE**

<b>Client ID</b>	<b>Lab ID</b>	<b>% Moisture</b>	<b>Date Analyzed</b>
FB-10-22.5	09-116-01	25	9-15-20
FB-10-20.0	09-116-02	31	9-15-20
FB-10-17.5	09-116-03	58	9-15-20
FB-13-22.5	09-116-06	13	9-15-20
FB-13-20.0	09-116-07	64	9-15-20
FB-13-17.5	09-116-08	75	9-15-20
FB-11-20.0	09-116-10	45	9-15-20
FB-11-17.5	09-116-11	58	9-15-20
FB-14-22.5	09-116-16	9	9-15-20
FB-14-20.0	09-116-17	14	9-15-20
FB-12-21.5	09-116-18	11	9-15-20
FB-12-20.0	09-116-19	73	9-15-20
FB-12-17.5	09-116-20	73	9-15-20
FB-14-17.5	09-116-23	61	9-15-20
FB-15-22.5	09-116-25	8	9-15-20
FB-15-20.0	09-116-26	16	9-15-20
FB-15-17.5	09-116-27	10	9-15-20
FB-16-22.5	09-116-30	12	9-15-20
FB-16-20.0	09-116-31	10	9-15-20
FB-16-17.5	09-116-32	77	9-15-20





### 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







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

# Chain of Custody

Turnaround Request  
(in working days)

(Check One)

- Same Day
- 1 Day
- 2 Days
- 3 Days
- Standard (7 Days)

\_\_\_\_\_ (other)

Laboratory Number: **09-1116**

Company: Favallu  
 Project Number: 397-019  
 Project Name: Block 38 West  
 Project Manager: Bruce Stumpf  
 Sampled by: Geoff Peters

Lab ID	Sample Identification	Date		Matrix	Number of Containers
		Sampled	Time Sampled		
1	FB-10-22.5	9/12/20	1020	Soil	5
2	FB-10-20.0		1127		
3	FB-10-17.5		1154		
4	FB-10-15.0		1210		
5	FB-10-10.0		1215		
6	FB-13-22.5		1230		
7	FB-13-20.0		1240		
8	FB-13-17.5		1250		
9	FB-11-22.5		1350		
10	FB-11-20.0		1405		

Date	Time	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 <del>MTCA</del> Metals	TCLP Metals	HEM (oil and grease) 1664A	% Moisture	
9/13/20	1430																			
9-14-20	1030																			
9-14-20	1108																			
9/14/20	1108																			

Comments/Special Instructions

*Project Manager will confirm sample analyses and turnaround time.  
 X-added 9-15-20 VL (1 day TAT)*

Received	Signature	Company	Reviewed/Date
Relinquished	<i>[Signature]</i>	Favallu	
Received	<i>[Signature]</i>	Speedy	
Relinquished	<i>[Signature]</i>	Speedy	
Received	<i>[Signature]</i>	<i>[Signature]</i>	
Relinquished			
Received			
Reviewed/Date			

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





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# Chain of Custody

Turnaround Request  
 (in working days)

(Check One)

Same Day  1 Day

2 Days  3 Days

Standard (7 Days)

\_\_\_\_\_ (other)

Laboratory Number: **09-116**

Company: Fowelson  
 Project Number: 397-019  
 Project Name: Block 38 cbst  
 Project Manager: Suzzy Stumpf  
 Sampled by: Gary Peters

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers
11	FB-11-17.5	9/12/20	1415	Soil	5
12	FB-11-15.0		1420		
13	FB-11-10.0		1430		
14	FB-13-15.0		1555		
15	FB-13-10.0		1600		
16	FB-14-22.5		1555		
17	FB-14-20.0		1600		
18	FB-12-21.5	9/13/20	0930		
19	FB-12-20.0		0937		
20	FB-12-17.5		1011		

Analysis	11	12	13	14	15	16	17	18	19	20
NWTPH-HCID										
NWTPH-Gx/BTEX										
NWTPH-Gx										
NWTPH-Dx (Acid / SG Clean-up)	X									
Volatiles 8260C										
Halogenated Volatiles 8260C										
EDB EPA 8011 (Waters Only)										
Semivolatiles 8270D/SIM (with low-level PAHs)										
PAHs 8270D/SIM (low-level)	X									
PCBs 8082A										
Organochlorine Pesticides 8081B										
Organophosphorus Pesticides 8270D/SIM										
Chlorinated Acid Herbicides 8151A										
Total <del>ROA</del> Metals <u>lead + cadmium</u>										
Total <del>WTEA</del> Metals <u>lead + cadmium</u>										
TCLP Metals										
HEM (oil and grease) 1664A										
% Moisture	X									

Signature	Company	Date	Time	Comments/Special Instructions
	Fowelson	9/13/20	1430	
	Speedy	9-14-20	1030	
	Speedy	9/14/20	1108	
	Speedy	9/19/20	1108	

Relinquished

Received

Relinquished

Received

Relinquished

Received

Reviewed/Date

Reviewed/Date

Data Package: Standard  Level III  Level IV

Chromatograms with final report  Electronic Data Deliverables (EDDs)

*See p. 1*





# MVA Onsite Environmental Inc.

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## Chain of Custody

Company: Fenvelum  
 Project Number: 397-019  
 Project Name: Block 38 west  
 Project Manager: Suzey Stumpf  
 Sampled by: Gary Peters

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

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx ( <input type="checkbox"/> Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total <del>MPCA</del> Metals	TCLP Metals	HEM (oil and grease) 1664A	% Moisture		
21	FB-12-15.0	9/13/20	10:20	S	5																				
22	FB-12-10.0		10:30																						
23	FB-14-17.5		10:38																						
24	FB-14-10.0		10:45					X																X	
25	FB-13-22.5		10:50					X																X	
26	FB-15-20.0		11:00					X																X	
27	FB-15-17.5		11:03					X																X	
28	FB-13-15.0		11:05																					X	
29	FB-15-10.0		11:06																					X	
30	FB-16-22.5		11:25					X																X	
	Signature	Company																							
	Relinquished					9/13/20	14:30																		
	Received					9-14-20	10:30																		
	Relinquished					9-14-20	11:08																		
	Received					9/14/20	11:08																		
	Relinquished																								
	Received																								
	Relinquished																								
	Reviewed/Date																								

Comments/Special Instructions: See p. 9.1

Data Package: Standard  Level III  Level IV

Chromatograms with final report  Electronic Data Deliverables (EDDs)

Laboratory Number: **09-116**

Naphthalene  
C PAHs

lead + cadmium





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# Chain of Custody

**Turnaround Request**  
 (in working days)  
 (Check One)

Same Day

2 Days

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

\_\_\_\_\_ (other)

**Laboratory Number:**

**09-116**

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx ( <input type="checkbox"/> Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total <del>MTEA</del> Metals	TCLP Metals	HEM (oil and grease) 1664A	% Moisture
31	FB-16-20.0	9/13/20	1130	Soil	5				X				X	X									X
32	FB-16-17.5		1135						X														
33	FB-16-15.0		1140																				
34	FB-16-10.0		1150																				

8260

Naphthalenes  
CPAHs

Company: *Fanuelan*  
 Project Number: *397-019*  
 Project Name: *Block 38 West*  
 Project Manager: *Stry Stumpf*  
 Sampled by: *Greg Peters*

	Signature	Company	Date	Time	Comments/Special Instructions
Relinquished	<i>[Signature]</i>	<i>Fanuelan</i>	<i>9/13/20</i>	<i>1430</i>	
Received	<i>[Signature]</i>	<i>Stry</i>	<i>9-14-20</i>	<i>1030</i>	
Relinquished	<i>[Signature]</i>	<i>Stry</i>	<i>9-14-20</i>	<i>1110</i>	
Received	<i>[Signature]</i>	<i>[Signature]</i>	<i>9/14/20</i>	<i>1100</i>	<i>See pg. 1</i>
Relinquished					
Received					
Reviewed/Date					

Data Package: Standard  Level III  Level IV

Chromatograms with final report  Electronic Data Deliverables (EDDs)



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September 22, 2020

Suzy Stumpf  
Farallon Consulting  
1809 7th Avenue, Suite 1111  
Seattle, WA 98101

Re: Analytical Data for Project 397-019  
Laboratory Reference No. 2009-116B

Dear Suzy:

Enclosed are the analytical results and associated quality control data for samples submitted on September 14, 2020.

**Please note that the data for the standard turn around analyses will follow in the final report.**

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

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

Sincerely,

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

David Baumeister  
Project Manager

Enclosures



Date of Report: September 22, 2020  
Samples Submitted: September 14, 2020  
Laboratory Reference: 2009-116B  
Project: 397-019

### Case Narrative

Samples were collected on September 12 and 13, 2020 and received by the laboratory on September 14, 2020. They were maintained at the laboratory at a temperature of 2°C to 6°C.

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

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



Date of Report: September 22, 2020  
 Samples Submitted: September 14, 2020  
 Laboratory Reference: 2009-116B  
 Project: 397-019

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

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FB-13-15.0</b>					
Laboratory ID:	09-116-14					
Diesel Range Organics	<b>ND</b>	130	NWTPH-Dx	9-21-20	9-21-20	
Lube Oil Range Organics	<b>1200</b>	260	NWTPH-Dx	9-21-20	9-21-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	<i>82</i>	<i>50-150</i>				



Date of Report: September 22, 2020  
 Samples Submitted: September 14, 2020  
 Laboratory Reference: 2009-116B  
 Project: 397-019

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

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB0921S1					
Diesel Range Organics	<b>ND</b>	25	NWTPH-Dx	9-21-20	9-21-20	
Lube Oil Range Organics	<b>ND</b>	50	NWTPH-Dx	9-21-20	9-21-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	<i>101</i>	<i>50-150</i>				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
<b>DUPLICATE</b>								
Laboratory ID:	SB0921S1							
	ORIG	DUP						
Diesel Fuel #2	<b>90.3</b>	<b>88.6</b>	NA	NA	NA	NA	2	NA
<i>Surrogate:</i>								
<i>o-Terphenyl</i>				86	85	50-150		





Date of Report: September 22, 2020  
 Samples Submitted: September 14, 2020  
 Laboratory Reference: 2009-116B  
 Project: 397-019

**PAHs EPA 8270E/SIM**

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FB-13-15.0</b>					
Laboratory ID:	09-116-14					
Benzo[a]anthracene	<b>ND</b>	0.035	EPA 8270E/SIM	9-21-20	9-21-20	
Chrysene	<b>ND</b>	0.035	EPA 8270E/SIM	9-21-20	9-21-20	
Benzo[b]fluoranthene	<b>ND</b>	0.035	EPA 8270E/SIM	9-21-20	9-21-20	
Benzo(j,k)fluoranthene	<b>ND</b>	0.035	EPA 8270E/SIM	9-21-20	9-21-20	
Benzo[a]pyrene	<b>ND</b>	0.035	EPA 8270E/SIM	9-21-20	9-21-20	
Indeno(1,2,3-c,d)pyrene	<b>ND</b>	0.035	EPA 8270E/SIM	9-21-20	9-21-20	
Dibenz[a,h]anthracene	<b>ND</b>	0.035	EPA 8270E/SIM	9-21-20	9-21-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>59</i>	<i>46 - 113</i>				
<i>Pyrene-d10</i>	<i>63</i>	<i>45 - 114</i>				
<i>Terphenyl-d14</i>	<i>71</i>	<i>49 - 121</i>				



Date of Report: September 22, 2020  
 Samples Submitted: September 14, 2020  
 Laboratory Reference: 2009-116B  
 Project: 397-019

**PAHs EPA 8270E/SIM**

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FB-12-15.0</b>					
Laboratory ID:	09-116-21					
Benzo[a]anthracene	<b>ND</b>	0.022	EPA 8270E/SIM	9-21-20	9-21-20	
Chrysene	<b>ND</b>	0.022	EPA 8270E/SIM	9-21-20	9-21-20	
Benzo[b]fluoranthene	<b>ND</b>	0.022	EPA 8270E/SIM	9-21-20	9-21-20	
Benzo(j,k)fluoranthene	<b>ND</b>	0.022	EPA 8270E/SIM	9-21-20	9-21-20	
Benzo[a]pyrene	<b>ND</b>	0.022	EPA 8270E/SIM	9-21-20	9-21-20	
Indeno(1,2,3-c,d)pyrene	<b>ND</b>	0.022	EPA 8270E/SIM	9-21-20	9-21-20	
Dibenz[a,h]anthracene	<b>ND</b>	0.022	EPA 8270E/SIM	9-21-20	9-21-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>62</i>	<i>46 - 113</i>				
<i>Pyrene-d10</i>	<i>67</i>	<i>45 - 114</i>				
<i>Terphenyl-d14</i>	<i>65</i>	<i>49 - 121</i>				



Date of Report: September 22, 2020  
 Samples Submitted: September 14, 2020  
 Laboratory Reference: 2009-116B  
 Project: 397-019

**PAHs EPA 8270E/SIM**

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FB-15-15.0</b>					
Laboratory ID:	09-116-28					
Benzo[a]anthracene	<b>ND</b>	0.022	EPA 8270E/SIM	9-21-20	9-21-20	
Chrysene	<b>ND</b>	0.022	EPA 8270E/SIM	9-21-20	9-21-20	
Benzo[b]fluoranthene	<b>ND</b>	0.022	EPA 8270E/SIM	9-21-20	9-21-20	
Benzo(j,k)fluoranthene	<b>ND</b>	0.022	EPA 8270E/SIM	9-21-20	9-21-20	
Benzo[a]pyrene	<b>ND</b>	0.022	EPA 8270E/SIM	9-21-20	9-21-20	
Indeno(1,2,3-c,d)pyrene	<b>ND</b>	0.022	EPA 8270E/SIM	9-21-20	9-21-20	
Dibenz[a,h]anthracene	<b>ND</b>	0.022	EPA 8270E/SIM	9-21-20	9-21-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>70</i>	<i>46 - 113</i>				
<i>Pyrene-d10</i>	<i>69</i>	<i>45 - 114</i>				
<i>Terphenyl-d14</i>	<i>65</i>	<i>49 - 121</i>				



Date of Report: September 22, 2020  
 Samples Submitted: September 14, 2020  
 Laboratory Reference: 2009-116B  
 Project: 397-019

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

Matrix: Soil  
 Units: mg/Kg

<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>Method</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Flags</b>
<b>METHOD BLANK</b>						
Laboratory ID:	MB0921S1					
Benzo[a]anthracene	<b>ND</b>	0.0067	EPA 8270E/SIM	9-21-20	9-21-20	
Chrysene	<b>ND</b>	0.0067	EPA 8270E/SIM	9-21-20	9-21-20	
Benzo[b]fluoranthene	<b>ND</b>	0.0067	EPA 8270E/SIM	9-21-20	9-21-20	
Benzo[j,k]fluoranthene	<b>ND</b>	0.0067	EPA 8270E/SIM	9-21-20	9-21-20	
Benzo[a]pyrene	<b>ND</b>	0.0067	EPA 8270E/SIM	9-21-20	9-21-20	
Indeno(1,2,3-c,d)pyrene	<b>ND</b>	0.0067	EPA 8270E/SIM	9-21-20	9-21-20	
Dibenz[a,h]anthracene	<b>ND</b>	0.0067	EPA 8270E/SIM	9-21-20	9-21-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>77</i>	<i>46 - 113</i>				
<i>Pyrene-d10</i>	<i>83</i>	<i>45 - 114</i>				
<i>Terphenyl-d14</i>	<i>91</i>	<i>49 - 121</i>				



Date of Report: September 22, 2020  
 Samples Submitted: September 14, 2020  
 Laboratory Reference: 2009-116B  
 Project: 397-019

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

Matrix: Soil  
 Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery	RPD	RPD	Flags
					Recovery	Limits	Limit			
<b>SPIKE BLANKS</b>										
Laboratory ID:	SB0921S1									
	SB	SBD	SB	SBD	SB	SBD				
Benzo[a]anthracene	<b>0.0670</b>	<b>0.0707</b>	0.0833	0.0833	80	85	72 - 129	5	15	
Chrysene	<b>0.0663</b>	<b>0.0714</b>	0.0833	0.0833	80	86	66 - 123	7	15	
Benzo[b]fluoranthene	<b>0.0674</b>	<b>0.0692</b>	0.0833	0.0833	81	83	68 - 128	3	15	
Benzo(j,k)fluoranthene	<b>0.0662</b>	<b>0.0701</b>	0.0833	0.0833	79	84	63 - 128	6	16	
Benzo[a]pyrene	<b>0.0644</b>	<b>0.0691</b>	0.0833	0.0833	77	83	66 - 130	7	15	
Indeno(1,2,3-c,d)pyrene	<b>0.0620</b>	<b>0.0661</b>	0.0833	0.0833	74	79	63 - 135	6	15	
Dibenz[a,h]anthracene	<b>0.0589</b>	<b>0.0622</b>	0.0833	0.0833	71	75	65 - 130	5	15	
<i>Surrogate:</i>										
2-Fluorobiphenyl					73	71	46 - 113			
Pyrene-d10					82	85	45 - 114			
Terphenyl-d14					81	85	49 - 121			



Date of Report: September 22, 2020  
 Samples Submitted: September 14, 2020  
 Laboratory Reference: 2009-116B  
 Project: 397-019

**PAHs EPA 8270E/SIM**

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FB-13-22.5</b>					
Laboratory ID:	09-116-06					
Benzo[a]anthracene	<b>24</b>	0.77	EPA 8270E/SIM	9-15-20	9-21-20	
Chrysene	<b>24</b>	0.77	EPA 8270E/SIM	9-15-20	9-21-20	
Benzo[b]fluoranthene	<b>24</b>	0.77	EPA 8270E/SIM	9-15-20	9-21-20	
Benzo(j,k)fluoranthene	<b>7.7</b>	0.77	EPA 8270E/SIM	9-15-20	9-21-20	
Benzo[a]pyrene	<b>25</b>	0.77	EPA 8270E/SIM	9-15-20	9-21-20	
Indeno(1,2,3-c,d)pyrene	<b>12</b>	0.77	EPA 8270E/SIM	9-15-20	9-21-20	
Dibenz[a,h]anthracene	<b>2.1</b>	0.77	EPA 8270E/SIM	9-15-20	9-21-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>63</i>	<i>46 - 113</i>				
<i>Pyrene-d10</i>	<i>72</i>	<i>45 - 114</i>				
<i>Terphenyl-d14</i>	<i>76</i>	<i>49 - 121</i>				



Date of Report: September 22, 2020  
 Samples Submitted: September 14, 2020  
 Laboratory Reference: 2009-116B  
 Project: 397-019

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

Matrix: Soil  
 Units: mg/Kg

<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>Method</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Flags</b>
<b>METHOD BLANK</b>						
Laboratory ID:	MB0915S1					
Benzo[a]anthracene	ND	0.0067	EPA 8270E/SIM	9-15-20	9-15-20	
Chrysene	ND	0.0067	EPA 8270E/SIM	9-15-20	9-15-20	
Benzo[b]fluoranthene	ND	0.0067	EPA 8270E/SIM	9-15-20	9-15-20	
Benzo[j,k]fluoranthene	ND	0.0067	EPA 8270E/SIM	9-15-20	9-15-20	
Benzo[a]pyrene	ND	0.0067	EPA 8270E/SIM	9-15-20	9-15-20	
Indeno(1,2,3-c,d)pyrene	ND	0.0067	EPA 8270E/SIM	9-15-20	9-15-20	
Dibenz[a,h]anthracene	ND	0.0067	EPA 8270E/SIM	9-15-20	9-15-20	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>78</i>	<i>46 - 113</i>				
<i>Pyrene-d10</i>	<i>88</i>	<i>45 - 114</i>				
<i>Terphenyl-d14</i>	<i>92</i>	<i>49 - 121</i>				





Date of Report: September 22, 2020  
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 Laboratory Reference: 2009-116B  
 Project: 397-019

**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	SB	SBD	SB	SBD				
<b>SPIKE BLANKS</b>										
Laboratory ID:	SB0915S1									
Naphthalene	<b>0.0675</b>	<b>0.0646</b>	0.0833	0.0833	81	78	60 - 116	4	16	
Acenaphthylene	<b>0.0674</b>	<b>0.0694</b>	0.0833	0.0833	81	83	60 - 125	3	15	
Acenaphthene	<b>0.0703</b>	<b>0.0724</b>	0.0833	0.0833	84	87	60 - 121	3	15	
Fluorene	<b>0.0684</b>	<b>0.0724</b>	0.0833	0.0833	82	87	65 - 126	6	15	
Phenanthrene	<b>0.0700</b>	<b>0.0736</b>	0.0833	0.0833	84	88	65 - 120	5	15	
Anthracene	<b>0.0711</b>	<b>0.0748</b>	0.0833	0.0833	85	90	67 - 125	5	15	
Fluoranthene	<b>0.0714</b>	<b>0.0784</b>	0.0833	0.0833	86	94	66 - 125	9	15	
Pyrene	<b>0.0755</b>	<b>0.0799</b>	0.0833	0.0833	91	96	62 - 125	6	15	
Benzo[a]anthracene	<b>0.0790</b>	<b>0.0847</b>	0.0833	0.0833	95	102	72 - 129	7	15	
Chrysene	<b>0.0764</b>	<b>0.0786</b>	0.0833	0.0833	92	94	66 - 123	3	15	
Benzo[b]fluoranthene	<b>0.0744</b>	<b>0.0816</b>	0.0833	0.0833	89	98	68 - 128	9	15	
Benzo(j,k)fluoranthene	<b>0.0718</b>	<b>0.0763</b>	0.0833	0.0833	86	92	63 - 128	6	16	
Benzo[a]pyrene	<b>0.0772</b>	<b>0.0809</b>	0.0833	0.0833	93	97	66 - 130	5	15	
Indeno(1,2,3-c,d)pyrene	<b>0.0685</b>	<b>0.0751</b>	0.0833	0.0833	82	90	63 - 135	9	15	
Dibenz[a,h]anthracene	<b>0.0710</b>	<b>0.0803</b>	0.0833	0.0833	85	96	65 - 130	12	15	
Benzo[g,h,i]perylene	<b>0.0708</b>	<b>0.0798</b>	0.0833	0.0833	85	96	66 - 127	12	15	
<i>Surrogate:</i>										
2-Fluorobiphenyl					78	82	46 - 113			
Pyrene-d10					85	89	45 - 114			
Terphenyl-d14					86	90	49 - 121			



Date of Report: September 22, 2020  
Samples Submitted: September 14, 2020  
Laboratory Reference: 2009-116B  
Project: 397-019

**TCLP LEAD**  
**EPA 1311/6010D**



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

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

Date of Report: September 22, 2020  
Samples Submitted: September 14, 2020  
Laboratory Reference: 2009-116B  
Project: 397-019

**TCLP LEAD  
EPA 1311/6010D  
QUALITY CONTROL**



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

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

Date of Report: September 22, 2020  
Samples Submitted: September 14, 2020  
Laboratory Reference: 2009-116B  
Project: 397-019

**% MOISTURE**

<b>Client ID</b>	<b>Lab ID</b>	<b>% Moisture</b>	<b>Date Analyzed</b>
<b>FB-13-15.0</b>	09-116-14	<b>81</b>	9-18-20
<b>FB-12-15.0</b>	09-116-21	<b>70</b>	9-18-20
<b>FB-15-15.0</b>	09-116-28	<b>70</b>	9-18-20





### Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
  - B - The analyte indicated was also found in the blank sample.
  - C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
  - E - The value reported exceeds the quantitation range and is an estimate.
  - F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
  - H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
  - I - Compound recovery is outside of the control limits.
  - J - The value reported was below the practical quantitation limit. The value is an estimate.
  - K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
  - L - The RPD is outside of the control limits.
  - M - Hydrocarbons in the gasoline range are impacting the diesel range result.
  - M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
  - N - Hydrocarbons in the lube oil range are impacting the diesel range result.
  - N1 - Hydrocarbons in diesel range are impacting lube oil range results.
  - O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
  - P - The RPD of the detected concentrations between the two columns is greater than 40.
  - Q - Surrogate recovery is outside of the control limits.
  - S - Surrogate recovery data is not available due to the necessary dilution of the sample.
  - T - The sample chromatogram is not similar to a typical \_\_\_\_\_.
  - U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
  - U1 - The practical quantitation limit is elevated due to interferences present in the sample.
  - V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
  - W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
  - X - Sample extract treated with a mercury cleanup procedure.
  - X1 - Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
  - Y - The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
  - Z -
- ND - Not Detected at PQL  
 PQL - Practical Quantitation Limit  
 RPD - Relative Percent Difference





# OnSite Environmental Inc.

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

# Chain of Custody

Company: Favallu  
 Project Number: 397-019  
 Project Name: Block 38 West  
 Project Manager: Sury Stumpf  
 Sampled by: Greg Peters

**Turnaround Request (in working days)**

(Check One)

Same Day     1 Day

2 Days         3 Days

Standard (7 Days)

\_\_\_\_\_ (other)

Laboratory Number: **09-116**

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers
1	FB-10-22.5	9/12/20	1020	Soil	5
2	FB-10-20.0		1127		
3	FB-10-17.5		1154		
4	FB-10-15.0		1210		
5	FB-10-10.0		1215		
6	FB-13-22.5		1230		
7	FB-13-20.0		1240		
8	FB-13-17.5		1250		
9	FB-11-22.5		1350		
10	FB-11-20.0		1405		

NWTPH-HCID	NWTPH-GW/DFEX <u>BTX by 6860</u>	NWTPH-Gx	NWTPH-Dx <input type="checkbox"/> Acid / SG Clean-up	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MICA Metals <u>Lead + cadmium</u>	TCLP Metals <u>Lead</u>	HEM (oil and grease) 1664A	% Moisture
								<u>Naphthalenes</u>									
								<u>CPAHs</u>									

Signature	Company	Date	Time	Comments/Special Instructions
<u>[Signature]</u>	Favallu	9/13/20	1430	Project Manager will confirm sample analyses and turnaround time. X-added 9-15-20 KL (1 day TAT) ⊗ Added 9/15/20 for 1 day TAT
<u>[Signature]</u>	Speedy	9-14-20	1030	
<u>[Signature]</u>	Speedy	9-14-20	1108	
<u>[Signature]</u>	<u>[Signature]</u>	9/14/20	1108	
Reviewed/Date	Reviewed/Date	Chromatograms with final report <input type="checkbox"/> Electronic Data Deliverables (EDDs) <input type="checkbox"/>		



# Chain of Custody

Company: Fanallon  
Project Number: 397-019  
Project Name: Block 38 West  
Project Manager: Suzy Stumpf  
Sampled by: Greg Peters

**Turnaround Request (in working days)**

(Check One)

Same Day     1 Day

2 Days     3 Days

Standard (7 Days)

\_\_\_\_\_ (other)

Laboratory Number: **09-116**

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers
11	FB-11-17.5	9/12/20	1415	Soil	5
12	FB-11-15.0		1420		
13	FB-11-10.0		1430		
14	FB-13-15.0		1555		
15	FB-13-10.0		1600		
16	FB-14-22.5		1555		
17	FB-14-20.0	↓	1600		
18	FB-12-21.5	9/13/20	0930		
19	FB-12-20.0	↓	0937		
20	FB-12-17.5	↓	1011		

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 Metals	Total Metals	TCLP Metals	HEM (oil and grease) 1664A	% Moisture
	<u>6660</u>						<u>PAHs</u>						<u>PCDA</u>	<u>PCDA</u>	<u>lead + cadmium</u>		
			<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>									
			<input checked="" type="checkbox"/>														<input checked="" type="checkbox"/>
							<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>
			<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						<input checked="" type="checkbox"/>									<input checked="" type="checkbox"/>
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						<input checked="" type="checkbox"/>									<input checked="" type="checkbox"/>

Signature	Company	Date	Time	Comments/Special Instructions
	<u>Fanallon</u>	9/13/20	1430	<u>See pg 1</u>
<u>Bob Borch</u>	<u>Speedy</u>	9-14-20	1030	
<u>Bob Borch</u>	<u>Speedy</u>	9-14-20	1108	
		9/14/20	1108	
				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"/>





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# Chain of Custody

Company: Fornallen  
 Project Number: 397-019  
 Project Name: Block 3B West  
 Project Manager: Suzy Stumpf  
 Sampled by: Greg Peters

**Turnaround Request (in working days)**

(Check One)

Same Day     1 Day  
 2 Days         3 Days  
 Standard (7 Days)  
 \_\_\_\_\_ (other)

Laboratory Number: **09-116**

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers
21	FB-12-15.0	9/13/20	1020	S	5
22	FB-12-10.0		1030		
23	FB-14-17.5		1038		
24	FB-14-10.0		1045		
25	FB-15-22.5		1050		
26	FB-15-20.0		1100		
27	FB-15-17.5		1103		
28	FB-15-15.0		1105		
29	FB-15-10.0		1106		
30	FB-16-22.5		1125		

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) C PAHs	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total <del>RCRA</del> Metals	TCLP Metals	HEM (oil and grease) 1664A	% Moisture
	<u>pet</u>							<input checked="" type="checkbox"/>						<u>lead + cadmium</u>	<u>Lead</u>		<input checked="" type="checkbox"/>
			X					X									X
			X				X	X				X			0		X
			X				X	X						X			X
			X				X	X						X			X
								<input checked="" type="checkbox"/>									<input checked="" type="checkbox"/>
			X					X									X

	Signature	Company	Date	Time	Comments/Special Instructions
Relinquished		Fornallen	9/13/20	1430	<u>See p. 9.1</u>
Received		Speedy	9-14-20	1030	
Relinquished		Speedy	9-14-20	1108	
Received			9/14/20	1108	
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: Farrallon  
 Project Number: 397-019  
 Project Name: Block 38 West  
 Project Manager: Stacy Stumpf  
 Sampled by: Greg Peters

**Turnaround Request (in working days)**  
 (Check One)  
 Same Day     1 Day  
 2 Days        3 Days  
 Standard (7 Days) (TPH analysis 5 Days)  
 \_\_\_\_\_ (other)

Laboratory Number: **09-116**

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	Analytes																					
						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)	Naphthalenes	PAHs 8270D/SIM (low-level) CPAHs	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total <del>MTEA</del> Metals Lead + Cadmium	TCLP Metals	HEM (oil and grease) 1664A	% Moisture			
31	FB-16-20.0	9/13/20	1130	Soil	5				X						X												X
32	FB-16-17.5		1135						X						X												X
33	FB-16-15.0		1140																								
34	FB-16-10.0		1150																								

	Signature	Company	Date	Time	Comments/Special Instructions
Relinquished		Farrallon	9/13/20	1430	See pg. 1
Received		Speedy	9-14-20	1030	
Relinquished		Speedy	9-14-20	1110	
Received			9/14/20	1110	
Relinquished					
Received					Data Package: Standard <input type="checkbox"/> Level III <input type="checkbox"/> Level IV <input type="checkbox"/>
Reviewed/Date					Chromatograms with final report <input type="checkbox"/> Electronic Data Deliverables (EDDs) <input type="checkbox"/>



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

March 16, 2021

Suzy Stumpf  
Farallon Consulting  
1809 7th Avenue, Suite 1111  
Seattle, WA 98101

Re: Analytical Data for Project 397-019  
Laboratory Reference No. 2103-120

Dear Suzy:

Enclosed are the analytical results and associated quality control data for samples submitted on March 10, 2021.

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



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

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

Date of Report: March 16, 2021  
Samples Submitted: March 10, 2021  
Laboratory Reference: 2103-120  
Project: 397-019

### Case Narrative

Samples were collected on March 10, 2021 and received by the laboratory on March 10, 2021. They were maintained at the laboratory at a temperature of 2°C to 6°C.

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

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



Date of Report: March 16, 2021  
 Samples Submitted: March 10, 2021  
 Laboratory Reference: 2103-120  
 Project: 397-019

**PAHs EPA 8270E/SIM**

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>A/A5-SSW-22.5-031021</b>					
Laboratory ID:	03-120-01					
Benzo[a]anthracene	<b>0.068</b>	0.018	EPA 8270E/SIM	3-15-21	3-15-21	
Chrysene	<b>0.078</b>	0.018	EPA 8270E/SIM	3-15-21	3-15-21	
Benzo[b]fluoranthene	<b>0.081</b>	0.018	EPA 8270E/SIM	3-15-21	3-15-21	
Benzo(j,k)fluoranthene	<b>0.023</b>	0.018	EPA 8270E/SIM	3-15-21	3-15-21	
Benzo[a]pyrene	<b>0.066</b>	0.018	EPA 8270E/SIM	3-15-21	3-15-21	
Indeno(1,2,3-c,d)pyrene	<b>0.048</b>	0.018	EPA 8270E/SIM	3-15-21	3-15-21	
Dibenz[a,h]anthracene	<b>ND</b>	0.018	EPA 8270E/SIM	3-15-21	3-15-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>88</i>	<i>46 - 113</i>				
<i>Pyrene-d10</i>	<i>91</i>	<i>45 - 114</i>				
<i>Terphenyl-d14</i>	<i>100</i>	<i>49 - 121</i>				



Date of Report: March 16, 2021  
 Samples Submitted: March 10, 2021  
 Laboratory Reference: 2103-120  
 Project: 397-019

**PAHs EPA 8270E/SIM**

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>A/A5-B2-22.5-031021</b>					
Laboratory ID:	03-120-02					
Benzo[a]anthracene	<b>0.13</b>	0.017	EPA 8270E/SIM	3-15-21	3-15-21	
Chrysene	<b>0.17</b>	0.017	EPA 8270E/SIM	3-15-21	3-15-21	
Benzo[b]fluoranthene	<b>0.20</b>	0.017	EPA 8270E/SIM	3-15-21	3-15-21	
Benzo(j,k)fluoranthene	<b>0.049</b>	0.017	EPA 8270E/SIM	3-15-21	3-15-21	
Benzo[a]pyrene	<b>0.16</b>	0.017	EPA 8270E/SIM	3-15-21	3-15-21	
Indeno(1,2,3-c,d)pyrene	<b>0.10</b>	0.017	EPA 8270E/SIM	3-15-21	3-15-21	
Dibenz[a,h]anthracene	<b>0.018</b>	0.017	EPA 8270E/SIM	3-15-21	3-15-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>89</i>	<i>46 - 113</i>				
<i>Pyrene-d10</i>	<i>90</i>	<i>45 - 114</i>				
<i>Terphenyl-d14</i>	<i>102</i>	<i>49 - 121</i>				



Date of Report: March 16, 2021  
 Samples Submitted: March 10, 2021  
 Laboratory Reference: 2103-120  
 Project: 397-019

**PAHs EPA 8270E/SIM**

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>A/A5-B2-20.0-031021</b>					
Laboratory ID:	03-120-03					
Benzo[a]anthracene	<b>0.097</b>	0.028	EPA 8270E/SIM	3-15-21	3-15-21	
Chrysene	<b>0.11</b>	0.028	EPA 8270E/SIM	3-15-21	3-15-21	
Benzo[b]fluoranthene	<b>0.10</b>	0.028	EPA 8270E/SIM	3-15-21	3-15-21	
Benzo(j,k)fluoranthene	<b>0.043</b>	0.028	EPA 8270E/SIM	3-15-21	3-15-21	
Benzo[a]pyrene	<b>0.096</b>	0.028	EPA 8270E/SIM	3-15-21	3-15-21	
Indeno(1,2,3-c,d)pyrene	<b>0.056</b>	0.028	EPA 8270E/SIM	3-15-21	3-15-21	
Dibenz[a,h]anthracene	<b>ND</b>	0.028	EPA 8270E/SIM	3-15-21	3-15-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>82</i>	<i>46 - 113</i>				
<i>Pyrene-d10</i>	<i>87</i>	<i>45 - 114</i>				
<i>Terphenyl-d14</i>	<i>97</i>	<i>49 - 121</i>				





Date of Report: March 16, 2021  
 Samples Submitted: March 10, 2021  
 Laboratory Reference: 2103-120  
 Project: 397-019

**PAHs EPA 8270E/SIM**

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>A/A5-B2-17.5-031021</b>					
Laboratory ID:	03-120-04					
Benzo[a]anthracene	ND	0.0087	EPA 8270E/SIM	3-15-21	3-15-21	
Chrysene	ND	0.0087	EPA 8270E/SIM	3-15-21	3-15-21	
Benzo[b]fluoranthene	ND	0.0087	EPA 8270E/SIM	3-15-21	3-15-21	
Benzo(j,k)fluoranthene	ND	0.0087	EPA 8270E/SIM	3-15-21	3-15-21	
Benzo[a]pyrene	ND	0.0087	EPA 8270E/SIM	3-15-21	3-15-21	
Indeno(1,2,3-c,d)pyrene	ND	0.0087	EPA 8270E/SIM	3-15-21	3-15-21	
Dibenz[a,h]anthracene	ND	0.0087	EPA 8270E/SIM	3-15-21	3-15-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>98</i>	<i>46 - 113</i>				
<i>Pyrene-d10</i>	<i>101</i>	<i>45 - 114</i>				
<i>Terphenyl-d14</i>	<i>107</i>	<i>49 - 121</i>				



Date of Report: March 16, 2021  
 Samples Submitted: March 10, 2021  
 Laboratory Reference: 2103-120  
 Project: 397-019

**PAHs EPA 8270E/SIM**

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>A/A5-B-17.5-031021</b>					
Laboratory ID:	03-120-05					
Benzo[a]anthracene	<b>0.11</b>	0.0093	EPA 8270E/SIM	3-15-21	3-15-21	
Chrysene	<b>0.11</b>	0.0093	EPA 8270E/SIM	3-15-21	3-15-21	
Benzo[b]fluoranthene	<b>0.26</b>	0.0093	EPA 8270E/SIM	3-15-21	3-15-21	
Benzo(j,k)fluoranthene	<b>0.050</b>	0.0093	EPA 8270E/SIM	3-15-21	3-15-21	
Benzo[a]pyrene	<b>0.14</b>	0.0093	EPA 8270E/SIM	3-15-21	3-15-21	
Indeno(1,2,3-c,d)pyrene	<b>0.059</b>	0.0093	EPA 8270E/SIM	3-15-21	3-15-21	
Dibenz[a,h]anthracene	<b>0.010</b>	0.0093	EPA 8270E/SIM	3-15-21	3-15-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>81</i>	<i>46 - 113</i>				
<i>Pyrene-d10</i>	<i>89</i>	<i>45 - 114</i>				
<i>Terphenyl-d14</i>	<i>92</i>	<i>49 - 121</i>				



Date of Report: March 16, 2021  
 Samples Submitted: March 10, 2021  
 Laboratory Reference: 2103-120  
 Project: 397-019

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

Matrix: Soil  
 Units: mg/Kg

<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>Method</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Flags</b>
<b>METHOD BLANK</b>						
Laboratory ID:	MB0315S1					
Benzo[a]anthracene	ND	0.0067	EPA 8270E/SIM	3-15-21	3-15-21	
Chrysene	ND	0.0067	EPA 8270E/SIM	3-15-21	3-15-21	
Benzo[b]fluoranthene	ND	0.0067	EPA 8270E/SIM	3-15-21	3-15-21	
Benzo[j,k]fluoranthene	ND	0.0067	EPA 8270E/SIM	3-15-21	3-15-21	
Benzo[a]pyrene	ND	0.0067	EPA 8270E/SIM	3-15-21	3-15-21	
Indeno(1,2,3-c,d)pyrene	ND	0.0067	EPA 8270E/SIM	3-15-21	3-15-21	
Dibenz[a,h]anthracene	ND	0.0067	EPA 8270E/SIM	3-15-21	3-15-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	92	46 - 113				
Pyrene-d10	99	45 - 114				
Terphenyl-d14	104	49 - 121				



Date of Report: March 16, 2021  
 Samples Submitted: March 10, 2021  
 Laboratory Reference: 2103-120  
 Project: 397-019

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

Matrix: Soil  
 Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery	RPD	RPD	Flags
							Limits		Limit	
<b>SPIKE BLANKS</b>										
Laboratory ID:	SB0315S1									
	SB	SBD	SB	SBD	SB	SBD				
Benzo[a]anthracene	<b>0.0816</b>	<b>0.0791</b>	0.0833	0.0833	98	95	72 - 129	3	15	
Chrysene	<b>0.0832</b>	<b>0.0829</b>	0.0833	0.0833	100	100	66 - 123	0	15	
Benzo[b]fluoranthene	<b>0.0857</b>	<b>0.0881</b>	0.0833	0.0833	103	106	68 - 128	3	15	
Benzo(j,k)fluoranthene	<b>0.0764</b>	<b>0.0727</b>	0.0833	0.0833	92	87	63 - 128	5	16	
Benzo[a]pyrene	<b>0.0795</b>	<b>0.0784</b>	0.0833	0.0833	95	94	66 - 130	1	15	
Indeno(1,2,3-c,d)pyrene	<b>0.0749</b>	<b>0.0734</b>	0.0833	0.0833	90	88	63 - 135	2	15	
Dibenz[a,h]anthracene	<b>0.0796</b>	<b>0.0787</b>	0.0833	0.0833	96	94	65 - 130	1	15	
<i>Surrogate:</i>										
2-Fluorobiphenyl					90	95	46 - 113			
Pyrene-d10					100	97	45 - 114			
Terphenyl-d14					104	103	49 - 121			



Date of Report: March 16, 2021  
Samples Submitted: March 10, 2021  
Laboratory Reference: 2103-120  
Project: 397-019

**% MOISTURE**

<b>Client ID</b>	<b>Lab ID</b>	<b>% Moisture</b>	<b>Date Analyzed</b>
<b>A/A5-SSW-22.5-031021</b>	03-120-01	<b>63</b>	3-15-21
<b>A/A5-B2-22.5-031021</b>	03-120-02	<b>60</b>	3-15-21
<b>A/A5-B2-20.0-031021</b>	03-120-03	<b>76</b>	3-15-21
<b>A/A5-B2-17.5-031021</b>	03-120-04	<b>23</b>	3-15-21
<b>A/A5-B-17.5-031021</b>	03-120-05	<b>28</b>	3-15-21





### 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





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

# Chain of Custody

Turnaround Request  
 (in working days)  
 (Check One)

Same Day  1 Day

2 Days  3 Days

Standard (7 Days)

\_\_\_\_\_ (other)

Laboratory Number: **03-120**

Company: *Farellon Consulting*  
 Project Number: *397-019*  
 Project Name: *Block 38 Regulatory Closure*  
 Project Manager: *Suzzy Stumpf*  
 Sampled by: *Greg Peters*

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers
1	<i>A1A5-SM-2205-031021</i>	<i>3/10/21</i>	<i>1130</i>	<i>Soil</i>	<i>1</i>
2	<i>A1A5-SM-2205-031021</i>	<i>3/10/21</i>	<i>1249</i>	<i>Soil</i>	<i>1</i>
3	<i>A1A5-SM-2205-031021</i>	<i>3/10/21</i>	<i>1255</i>	<i>Soil</i>	<i>1</i>
4	<i>A1A5-SM-2205-031021</i>	<i>3/10/21</i>	<i>1300</i>	<i>Soil</i>	<i>1</i>
5	<i>A1A5-B-17.5-031021</i>	<i>3/10/21</i>	<i>1305</i>	<i>Soil</i>	<i>1</i>

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

Signature	Company	Date	Time	Comments/Special Instructions
	<i>Farellon</i>	<i>3/10/21</i>	<i>1454</i>	
	<i>OSE</i>	<i>3/10/21</i>	<i>1454</i>	

Relinquished  
 Received  
 Relinquished  
 Received  
 Relinquished  
 Received  
 Relinquished  
 Received  
 Relinquished  
 Received  
 Relinquished

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





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

March 24, 2021

Suzy Stumpf  
Farallon Consulting  
1809 7th Avenue, Suite 1111  
Seattle, WA 98101

Re: Analytical Data for Project 397-019  
Laboratory Reference No. 2103-234

Dear Suzy:

Enclosed are the analytical results and associated quality control data for samples submitted on March 19, 2021.

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



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

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

Date of Report: March 24, 2021  
Samples Submitted: March 19, 2021  
Laboratory Reference: 2103-234  
Project: 397-019

### Case Narrative

Samples were collected on March 18, 2021 and received by the laboratory on March 19, 2021. They were maintained at the laboratory at a temperature of 2°C to 6°C.

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

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



Date of Report: March 24, 2021  
 Samples Submitted: March 19, 2021  
 Laboratory Reference: 2103-234  
 Project: 397-019

**PAHs EPA 8270E/SIM**

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>A/A5-ESW-22.5-031821</b>					
Laboratory ID:	03-234-01					
Benzo[a]anthracene	<b>1.0</b>	0.0092	EPA 8270E/SIM	3-23-21	3-23-21	
Chrysene	<b>0.92</b>	0.0092	EPA 8270E/SIM	3-23-21	3-23-21	
Benzo[b]fluoranthene	<b>1.0</b>	0.0092	EPA 8270E/SIM	3-23-21	3-23-21	
Benzo(j,k)fluoranthene	<b>0.30</b>	0.0092	EPA 8270E/SIM	3-23-21	3-23-21	
Benzo[a]pyrene	<b>1.1</b>	0.0092	EPA 8270E/SIM	3-23-21	3-23-21	
Indeno(1,2,3-c,d)pyrene	<b>0.60</b>	0.0092	EPA 8270E/SIM	3-23-21	3-23-21	
Dibenz[a,h]anthracene	<b>0.11</b>	0.0092	EPA 8270E/SIM	3-23-21	3-23-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>71</i>	<i>46 - 113</i>				
<i>Pyrene-d10</i>	<i>75</i>	<i>45 - 114</i>				
<i>Terphenyl-d14</i>	<i>77</i>	<i>49 - 121</i>				



Date of Report: March 24, 2021  
 Samples Submitted: March 19, 2021  
 Laboratory Reference: 2103-234  
 Project: 397-019

**PAHs EPA 8270E/SIM**

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>A/A5-ESW-20.0-031821</b>					
Laboratory ID:	03-234-02					
Benzo[a]anthracene	<b>0.12</b>	0.0089	EPA 8270E/SIM	3-23-21	3-23-21	
Chrysene	<b>0.13</b>	0.0089	EPA 8270E/SIM	3-23-21	3-23-21	
Benzo[b]fluoranthene	<b>0.14</b>	0.0089	EPA 8270E/SIM	3-23-21	3-23-21	
Benzo(j,k)fluoranthene	<b>0.041</b>	0.0089	EPA 8270E/SIM	3-23-21	3-23-21	
Benzo[a]pyrene	<b>0.14</b>	0.0089	EPA 8270E/SIM	3-23-21	3-23-21	
Indeno(1,2,3-c,d)pyrene	<b>0.082</b>	0.0089	EPA 8270E/SIM	3-23-21	3-23-21	
Dibenz[a,h]anthracene	<b>0.012</b>	0.0089	EPA 8270E/SIM	3-23-21	3-23-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>67</i>	<i>46 - 113</i>				
<i>Pyrene-d10</i>	<i>71</i>	<i>45 - 114</i>				
<i>Terphenyl-d14</i>	<i>74</i>	<i>49 - 121</i>				



Date of Report: March 24, 2021  
 Samples Submitted: March 19, 2021  
 Laboratory Reference: 2103-234  
 Project: 397-019

**PAHs EPA 8270E/SIM**

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>A/A5-ESW-17.5-031821</b>					
Laboratory ID:	03-234-03					
Benzo[a]anthracene	ND	0.0089	EPA 8270E/SIM	3-23-21	3-23-21	
Chrysene	ND	0.0089	EPA 8270E/SIM	3-23-21	3-23-21	
Benzo[b]fluoranthene	ND	0.0089	EPA 8270E/SIM	3-23-21	3-23-21	
Benzo(j,k)fluoranthene	ND	0.0089	EPA 8270E/SIM	3-23-21	3-23-21	
Benzo[a]pyrene	ND	0.0089	EPA 8270E/SIM	3-23-21	3-23-21	
Indeno(1,2,3-c,d)pyrene	ND	0.0089	EPA 8270E/SIM	3-23-21	3-23-21	
Dibenz[a,h]anthracene	ND	0.0089	EPA 8270E/SIM	3-23-21	3-23-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>83</i>	<i>46 - 113</i>				
<i>Pyrene-d10</i>	<i>80</i>	<i>45 - 114</i>				
<i>Terphenyl-d14</i>	<i>84</i>	<i>49 - 121</i>				



Date of Report: March 24, 2021  
 Samples Submitted: March 19, 2021  
 Laboratory Reference: 2103-234  
 Project: 397-019

**PAHs EPA 8270E/SIM**

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>A/A5-SSW-20.0-031821</b>					
Laboratory ID:	03-234-04					
Benzo[a]anthracene	ND	0.0089	EPA 8270E/SIM	3-23-21	3-23-21	
Chrysene	ND	0.0089	EPA 8270E/SIM	3-23-21	3-23-21	
Benzo[b]fluoranthene	ND	0.0089	EPA 8270E/SIM	3-23-21	3-23-21	
Benzo(j,k)fluoranthene	ND	0.0089	EPA 8270E/SIM	3-23-21	3-23-21	
Benzo[a]pyrene	ND	0.0089	EPA 8270E/SIM	3-23-21	3-23-21	
Indeno(1,2,3-c,d)pyrene	ND	0.0089	EPA 8270E/SIM	3-23-21	3-23-21	
Dibenz[a,h]anthracene	ND	0.0089	EPA 8270E/SIM	3-23-21	3-23-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>60</i>	<i>46 - 113</i>				
<i>Pyrene-d10</i>	<i>55</i>	<i>45 - 114</i>				
<i>Terphenyl-d14</i>	<i>59</i>	<i>49 - 121</i>				



Date of Report: March 24, 2021  
 Samples Submitted: March 19, 2021  
 Laboratory Reference: 2103-234  
 Project: 397-019

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

Matrix: Soil  
 Units: mg/Kg

<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>Method</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Flags</b>
<b>METHOD BLANK</b>						
Laboratory ID:	MB0323S1					
Benzo[a]anthracene	ND	0.0067	EPA 8270E/SIM	3-23-21	3-23-21	
Chrysene	ND	0.0067	EPA 8270E/SIM	3-23-21	3-23-21	
Benzo[b]fluoranthene	ND	0.0067	EPA 8270E/SIM	3-23-21	3-23-21	
Benzo[j,k]fluoranthene	ND	0.0067	EPA 8270E/SIM	3-23-21	3-23-21	
Benzo[a]pyrene	ND	0.0067	EPA 8270E/SIM	3-23-21	3-23-21	
Indeno(1,2,3-c,d)pyrene	ND	0.0067	EPA 8270E/SIM	3-23-21	3-23-21	
Dibenz[a,h]anthracene	ND	0.0067	EPA 8270E/SIM	3-23-21	3-23-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>90</i>	<i>46 - 113</i>				
<i>Pyrene-d10</i>	<i>86</i>	<i>45 - 114</i>				
<i>Terphenyl-d14</i>	<i>100</i>	<i>49 - 121</i>				





Date of Report: March 24, 2021  
 Samples Submitted: March 19, 2021  
 Laboratory Reference: 2103-234  
 Project: 397-019

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

Matrix: Soil  
 Units: mg/Kg

<b>Analyte</b>	<b>Result</b>		<b>Spike Level</b>		<b>Source</b>	<b>Percent</b>		<b>Recovery</b>	<b>RPD</b>	<b>RPD</b>	<b>Flags</b>
					<b>Result</b>	<b>Recovery</b>	<b>Limits</b>			<b>Limit</b>	
<b>MATRIX SPIKES</b>											
Laboratory ID:	03-193-01										
	MS	MSD	MS	MSD		MS	MSD				
Benzo[a]anthracene	<b>0.0703</b>	<b>0.0684</b>	0.0833	0.0833	ND	84	82	56 - 136	3	25	
Chrysene	<b>0.0699</b>	<b>0.0686</b>	0.0833	0.0833	ND	84	82	49 - 130	2	22	
Benzo[b]fluoranthene	<b>0.0731</b>	<b>0.0694</b>	0.0833	0.0833	ND	88	83	51 - 135	5	26	
Benzo(j,k)fluoranthene	<b>0.0683</b>	<b>0.0696</b>	0.0833	0.0833	ND	82	84	56 - 124	2	23	
Benzo[a]pyrene	<b>0.0733</b>	<b>0.0726</b>	0.0833	0.0833	ND	88	87	54 - 133	1	26	
Indeno(1,2,3-c,d)pyrene	<b>0.0701</b>	<b>0.0677</b>	0.0833	0.0833	ND	84	81	52 - 134	3	20	
Dibenz[a,h]anthracene	<b>0.0711</b>	<b>0.0696</b>	0.0833	0.0833	ND	85	84	58 - 127	2	17	
<i>Surrogate:</i>											
2-Fluorobiphenyl						82	82	46 - 113			
Pyrene-d10						83	81	45 - 114			
Terphenyl-d14						85	86	49 - 121			



Date of Report: March 24, 2021  
Samples Submitted: March 19, 2021  
Laboratory Reference: 2103-234  
Project: 397-019

**% MOISTURE**

<b>Client ID</b>	<b>Lab ID</b>	<b>% Moisture</b>	<b>Date Analyzed</b>
<b>A/A5-ESW-22.5-031821</b>	03-234-01	<b>28</b>	3-23-21
<b>A/A5-ESW-20.0-031821</b>	03-234-02	<b>25</b>	3-23-21
<b>A/A5-ESW-17.5-031821</b>	03-234-03	<b>26</b>	3-23-21
<b>A/A5-SSW-20.0-031821</b>	03-234-04	<b>25</b>	3-23-21





### Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
  - B - The analyte indicated was also found in the blank sample.
  - C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
  - E - The value reported exceeds the quantitation range and is an estimate.
  - F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
  - H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
  - I - Compound recovery is outside of the control limits.
  - J - The value reported was below the practical quantitation limit. The value is an estimate.
  - K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
  - L - The RPD is outside of the control limits.
  - M - Hydrocarbons in the gasoline range are impacting the diesel range result.
  - M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
  - N - Hydrocarbons in the lube oil range are impacting the diesel range result.
  - N1 - Hydrocarbons in diesel range are impacting lube oil range results.
  - O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
  - P - The RPD of the detected concentrations between the two columns is greater than 40.
  - Q - Surrogate recovery is outside of the control limits.
  - S - Surrogate recovery data is not available due to the necessary dilution of the sample.
  - T - The sample chromatogram is not similar to a typical \_\_\_\_\_.
  - U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
  - U1 - The practical quantitation limit is elevated due to interferences present in the sample.
  - V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
  - W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
  - X - Sample extract treated with a mercury cleanup procedure.
  - X1 - Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
  - Y - The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
  - Z -
- ND - Not Detected at PQL  
 PQL - Practical Quantitation Limit  
 RPD - Relative Percent Difference





# OnSite Environmental Inc.

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

## Chain of Custody

Turnaround Request  
(in working days)

(Check One)

Same Day  1 Day

2 Days  3 Days

Standard (7 Days)

\_\_\_\_\_ (other)

Laboratory Number: **03-234**

Company: Fowellon Consulting  
 Project Number: 397-019  
 Project Name: Block 38 West Regulatory Review  
 Project Manager: Suzzy Stumpf  
 Sampled by: Greg Fokas

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers
1	A/A5-ESW-22.5-031821	3/18/21	22.5	Soil	4
2	A/A5-ESW-20.0-031821		20.0		
3	A/A5-ESW-17.5-031821		17.5		
4	A/A5-ESW-20.0-031821		20.0		

Parameter	1	2	3	4
NWTPH-HCID				
NWTPH-Gx/BTEX				
NWTPH-Gx				
NWTPH-Dx ( <input type="checkbox"/> Acid / SG Clean-up)				
Volatiles 8260C				
Halogenated Volatiles 8260C				
EDB EPA 8011 (Waters Only)				
Semivolatiles 8270D/SIM (with low-level PAHs)				
PAHs 8270D/SIM (low-level)				
PCBs 8082A				
Organochlorine Pesticides 8081B				
Organophosphorus Pesticides 8270D/SIM				
Chlorinated Acid Herbicides 8151A				
Total RCRA Metals				
Total MTCA Metals				
TCLP Metals				
HEM (oil and grease) 1664A				
<u>CPAHs</u>	X	X	X	X
% Moisture	X	X	X	X

Signature	Company	Date	Time	Comments/Special Instructions
<u>[Signature]</u>	<u>Fowellon</u>	<u>3/18/21</u>	<u>1430</u>	
<u>[Signature]</u>	<u>Siber</u>	<u>3/19/21</u>	<u>1210</u>	
<u>[Signature]</u>	<u>Siber</u>	<u>3/19/21</u>	<u>1245</u>	
<u>[Signature]</u>	<u>OSI</u>	<u>3/19/21</u>	<u>1245</u>	

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



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

March 26, 2021

Suzy Stumpf  
Farallon Consulting  
1809 7th Avenue, Suite 1111  
Seattle, WA 98101

Re: Analytical Data for Project 397-019  
Laboratory Reference No. 2103-267

Dear Suzy:

Enclosed are the analytical results and associated quality control data for samples submitted on March 23, 2021.

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

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

Sincerely,

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

David Baumeister  
Project Manager

Enclosures



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

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

Date of Report: March 26, 2021  
Samples Submitted: March 23, 2021  
Laboratory Reference: 2103-267  
Project: 397-019

### Case Narrative

Samples were collected on March 22, 2021 and received by the laboratory on March 23, 2021. They were maintained at the laboratory at a temperature of 2°C to 6°C.

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

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



Date of Report: March 26, 2021  
 Samples Submitted: March 23, 2021  
 Laboratory Reference: 2103-267  
 Project: 397-019

**PAHs EPA 8270E/SIM**

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>C/A5-ESW-22-5-032221</b>					
Laboratory ID:	03-267-01					
Benzo[a]anthracene	<b>1.0</b>	0.042	EPA 8270E/SIM	3-24-21	3-25-21	
Chrysene	<b>1.1</b>	0.042	EPA 8270E/SIM	3-24-21	3-25-21	
Benzo[b]fluoranthene	<b>1.3</b>	0.042	EPA 8270E/SIM	3-24-21	3-25-21	
Benzo(j,k)fluoranthene	<b>0.37</b>	0.042	EPA 8270E/SIM	3-24-21	3-25-21	
Benzo[a]pyrene	<b>1.2</b>	0.042	EPA 8270E/SIM	3-24-21	3-25-21	
Indeno(1,2,3-c,d)pyrene	<b>0.77</b>	0.042	EPA 8270E/SIM	3-24-21	3-25-21	
Dibenz[a,h]anthracene	<b>0.15</b>	0.042	EPA 8270E/SIM	3-24-21	3-25-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	78	46 - 113				
<i>Pyrene-d10</i>	93	45 - 114				
<i>Terphenyl-d14</i>	89	49 - 121				





Date of Report: March 26, 2021  
 Samples Submitted: March 23, 2021  
 Laboratory Reference: 2103-267  
 Project: 397-019

**PAHs EPA 8270E/SIM**

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>C/A5-ESW-20.0-032221</b>					
Laboratory ID:	03-267-02					
Benzo[a]anthracene	<b>0.41</b>	0.016	EPA 8270E/SIM	3-24-21	3-25-21	
Chrysene	<b>0.44</b>	0.016	EPA 8270E/SIM	3-24-21	3-25-21	
Benzo[b]fluoranthene	<b>0.51</b>	0.016	EPA 8270E/SIM	3-24-21	3-25-21	
Benzo(j,k)fluoranthene	<b>0.13</b>	0.016	EPA 8270E/SIM	3-24-21	3-25-21	
Benzo[a]pyrene	<b>0.43</b>	0.016	EPA 8270E/SIM	3-24-21	3-25-21	
Indeno(1,2,3-c,d)pyrene	<b>0.28</b>	0.016	EPA 8270E/SIM	3-24-21	3-25-21	
Dibenz[a,h]anthracene	<b>0.055</b>	0.016	EPA 8270E/SIM	3-24-21	3-25-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>65</i>	<i>46 - 113</i>				
<i>Pyrene-d10</i>	<i>75</i>	<i>45 - 114</i>				
<i>Terphenyl-d14</i>	<i>74</i>	<i>49 - 121</i>				



Date of Report: March 26, 2021  
 Samples Submitted: March 23, 2021  
 Laboratory Reference: 2103-267  
 Project: 397-019

**PAHs EPA 8270E/SIM**

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>C/A5-ESW-17.5-032221</b>					
Laboratory ID:	03-267-03					
Benzo[a]anthracene	ND	0.012	EPA 8270E/SIM	3-24-21	3-25-21	
Chrysene	ND	0.012	EPA 8270E/SIM	3-24-21	3-25-21	
Benzo[b]fluoranthene	ND	0.012	EPA 8270E/SIM	3-24-21	3-25-21	
Benzo(j,k)fluoranthene	ND	0.012	EPA 8270E/SIM	3-24-21	3-25-21	
Benzo[a]pyrene	ND	0.012	EPA 8270E/SIM	3-24-21	3-25-21	
Indeno(1,2,3-c,d)pyrene	ND	0.012	EPA 8270E/SIM	3-24-21	3-25-21	
Dibenz[a,h]anthracene	ND	0.012	EPA 8270E/SIM	3-24-21	3-25-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	77	46 - 113				
<i>Pyrene-d10</i>	87	45 - 114				
<i>Terphenyl-d14</i>	91	49 - 121				



Date of Report: March 26, 2021  
 Samples Submitted: March 23, 2021  
 Laboratory Reference: 2103-267  
 Project: 397-019

**PAHs EPA 8270E/SIM**

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>D/A5-B-17.5-032221</b>					
Laboratory ID:	03-267-04					
Benzo[a]anthracene	ND	0.023	EPA 8270E/SIM	3-24-21	3-25-21	
Chrysene	ND	0.023	EPA 8270E/SIM	3-24-21	3-25-21	
Benzo[b]fluoranthene	ND	0.023	EPA 8270E/SIM	3-24-21	3-25-21	
Benzo(j,k)fluoranthene	ND	0.023	EPA 8270E/SIM	3-24-21	3-25-21	
Benzo[a]pyrene	ND	0.023	EPA 8270E/SIM	3-24-21	3-25-21	
Indeno(1,2,3-c,d)pyrene	ND	0.023	EPA 8270E/SIM	3-24-21	3-25-21	
Dibenz[a,h]anthracene	ND	0.023	EPA 8270E/SIM	3-24-21	3-25-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>82</i>	<i>46 - 113</i>				
<i>Pyrene-d10</i>	<i>96</i>	<i>45 - 114</i>				
<i>Terphenyl-d14</i>	<i>94</i>	<i>49 - 121</i>				



Date of Report: March 26, 2021  
 Samples Submitted: March 23, 2021  
 Laboratory Reference: 2103-267  
 Project: 397-019

**PAHs EPA 8270E/SIM**

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>A/A5-SSW-17.5-032221</b>					
Laboratory ID:	03-267-05					
Benzo[a]anthracene	ND	0.0087	EPA 8270E/SIM	3-24-21	3-25-21	
Chrysene	ND	0.0087	EPA 8270E/SIM	3-24-21	3-25-21	
Benzo[b]fluoranthene	ND	0.0087	EPA 8270E/SIM	3-24-21	3-25-21	
Benzo(j,k)fluoranthene	ND	0.0087	EPA 8270E/SIM	3-24-21	3-25-21	
Benzo[a]pyrene	ND	0.0087	EPA 8270E/SIM	3-24-21	3-25-21	
Indeno(1,2,3-c,d)pyrene	ND	0.0087	EPA 8270E/SIM	3-24-21	3-25-21	
Dibenz[a,h]anthracene	ND	0.0087	EPA 8270E/SIM	3-24-21	3-25-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	79	46 - 113				
<i>Pyrene-d10</i>	87	45 - 114				
<i>Terphenyl-d14</i>	95	49 - 121				



Date of Report: March 26, 2021  
 Samples Submitted: March 23, 2021  
 Laboratory Reference: 2103-267  
 Project: 397-019

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

Matrix: Soil  
 Units: mg/Kg

<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>Method</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Flags</b>
<b>METHOD BLANK</b>						
Laboratory ID:	MB0324S1					
Benzo[a]anthracene	ND	0.0067	EPA 8270E/SIM	3-24-21	3-25-21	
Chrysene	ND	0.0067	EPA 8270E/SIM	3-24-21	3-25-21	
Benzo[b]fluoranthene	ND	0.0067	EPA 8270E/SIM	3-24-21	3-25-21	
Benzo(j,k)fluoranthene	ND	0.0067	EPA 8270E/SIM	3-24-21	3-25-21	
Benzo[a]pyrene	ND	0.0067	EPA 8270E/SIM	3-24-21	3-25-21	
Indeno(1,2,3-c,d)pyrene	ND	0.0067	EPA 8270E/SIM	3-24-21	3-25-21	
Dibenz[a,h]anthracene	ND	0.0067	EPA 8270E/SIM	3-24-21	3-25-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	98	46 - 113				
Pyrene-d10	106	45 - 114				
Terphenyl-d14	111	49 - 121				



Date of Report: March 26, 2021  
 Samples Submitted: March 23, 2021  
 Laboratory Reference: 2103-267  
 Project: 397-019

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

Matrix: Soil  
 Units: mg/Kg

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
<b>MATRIX SPIKES</b>											
Laboratory ID:	03-202-02										
	MS	MSD	MS	MSD		MS	MSD				
Benzo[a]anthracene	<b>0.0786</b>	<b>0.0843</b>	0.0833	0.0833	ND	94	101	56 - 136	7	25	
Chrysene	<b>0.0736</b>	<b>0.0815</b>	0.0833	0.0833	ND	88	98	49 - 130	10	22	
Benzo[b]fluoranthene	<b>0.0772</b>	<b>0.0861</b>	0.0833	0.0833	ND	93	103	51 - 135	11	26	
Benzo(j,k)fluoranthene	<b>0.0767</b>	<b>0.0840</b>	0.0833	0.0833	ND	92	101	56 - 124	9	23	
Benzo[a]pyrene	<b>0.0793</b>	<b>0.0872</b>	0.0833	0.0833	ND	95	105	54 - 133	9	26	
Indeno(1,2,3-c,d)pyrene	<b>0.0810</b>	<b>0.0839</b>	0.0833	0.0833	ND	97	101	52 - 134	4	20	
Dibenz[a,h]anthracene	<b>0.0766</b>	<b>0.0843</b>	0.0833	0.0833	ND	92	101	58 - 127	10	17	
<i>Surrogate:</i>											
2-Fluorobiphenyl						82	92	46 - 113			
Pyrene-d10						92	95	45 - 114			
Terphenyl-d14						98	105	49 - 121			



Date of Report: March 26, 2021  
Samples Submitted: March 23, 2021  
Laboratory Reference: 2103-267  
Project: 397-019

**% MOISTURE**

<b>Client ID</b>	<b>Lab ID</b>	<b>% Moisture</b>	<b>Date Analyzed</b>
<b>C/A5-ESW-22-5-032221</b>	03-267-01	<b>20</b>	3-24-21
<b>C/A5-ESW-20.0-032221</b>	03-267-02	<b>19</b>	3-24-21
<b>C/A5-ESW-17.5-032221</b>	03-267-03	<b>43</b>	3-24-21
<b>D/A5-B-17.5-032221</b>	03-267-04	<b>71</b>	3-24-21
<b>A/A5-SSW-17.5-032221</b>	03-267-05	<b>23</b>	3-24-21







### 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





# MVA Onsite Environmental Inc.

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

## Chain of Custody

Turnaround Request  
(in working days)

(Check One)

Same Day  1 Day

2 Days  3 Days

Standard (7 Days)

\_\_\_\_\_ (other)

Laboratory Number: **03-267**

Company: *Fennell Consulting*

Project Number: *397-019*

Project Name: *Block 38 West*

Project Manager: *Suzey Stamm*

Sampled by: *Greg Peters*

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers
1	<i>CPAS-ESW-22-5-032221</i>	<i>3/22/21</i>	<i>922</i>	<i>Soil</i>	<i>1</i>
2	<i>CPAS-ESW-20-0-032221</i>	<i>3/22/21</i>	<i>930</i>	<i>Soil</i>	<i>1</i>
3	<i>CPAS-ESW-17.5-032221</i>	<i>3/22/21</i>	<i>940</i>	<i>Soil</i>	<i>1</i>
4	<i>DPAS-B-17.5-032221</i>	<i>3/22/21</i>	<i>1330</i>	<i>Soil</i>	<i>1</i>
5	<i>APAS-SSW-17.5-032221</i>	<i>3/22/21</i>	<i>1415</i>	<i>Soil</i>	<i>1</i>

Parameter	1	2	3	4	5
NWTPH-HCID					
NWTPH-Gx/BTEX					
NWTPH-Gx					
NWTPH-Dx ( <input type="checkbox"/> Acid / SG Clean-up)					
Volatiles 8260C					
Halogenated Volatiles 8260C					
EDB EPA 8011 (Waters Only)					
Semivolatiles 8270D/SIM (with low-level PAHs)					
PAHs 8270D/SIM (low-level)					
PCBs 8082A					
Organochlorine Pesticides 8081B					
Organophosphorus Pesticides 8270D/SIM					
Chlorinated Acid Herbicides 8151A					
Total RCRA Metals					
Total MTCA Metals					
TCLP Metals					
HEM (oil and grease) 1664A					
<i>CPAS</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>
% Moisture	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>

Signature	Company	Date	Time	Comments/Special Instructions
<i>[Signature]</i>	<i>Fennell</i>	<i>3/22/21</i>	<i>1700</i>	
<i>[Signature]</i>	<i>ORF</i>	<i>3/23/21</i>	<i>8:00</i>	
Relinquished				
Received				
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date	Reviewed/Date			

Data Package: Standard  Level III  Level IV

Chromatograms with final report  Electronic Data Deliverables (EDDs)



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

March 30, 2021

Suzy Stumpf  
Farallon Consulting  
1809 7th Avenue, Suite 1111  
Seattle, WA 98101

Re: Analytical Data for Project 397-019  
Laboratory Reference No. 2103-287

Dear Suzy:

Enclosed are the analytical results and associated quality control data for samples submitted on March 24, 2021.

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



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

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

Date of Report: March 30, 2021  
Samples Submitted: March 24, 2021  
Laboratory Reference: 2103-287  
Project: 397-019

### Case Narrative

Samples were collected on March 24, 2021 and received by the laboratory on March 24, 2021. They were maintained at the laboratory at a temperature of 2°C to 6°C.

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

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



Date of Report: March 30, 2021  
 Samples Submitted: March 24, 2021  
 Laboratory Reference: 2103-287  
 Project: 397-019

**PAHs EPA 8270E/SIM**

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>A/A5-B-16.0-032421</b>					
Laboratory ID:	03-287-01					
Benzo[a]anthracene	ND	0.0092	EPA 8270E/SIM	3-25-21	3-29-21	
Chrysene	ND	0.0092	EPA 8270E/SIM	3-25-21	3-29-21	
Benzo[b]fluoranthene	ND	0.0092	EPA 8270E/SIM	3-25-21	3-29-21	
Benzo(j,k)fluoranthene	ND	0.0092	EPA 8270E/SIM	3-25-21	3-29-21	
Benzo[a]pyrene	ND	0.0092	EPA 8270E/SIM	3-25-21	3-29-21	
Indeno(1,2,3-c,d)pyrene	ND	0.0092	EPA 8270E/SIM	3-25-21	3-29-21	
Dibenz[a,h]anthracene	ND	0.0092	EPA 8270E/SIM	3-25-21	3-29-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	91	46 - 113				
<i>Pyrene-d10</i>	104	45 - 114				
<i>Terphenyl-d14</i>	100	49 - 121				



Date of Report: March 30, 2021  
 Samples Submitted: March 24, 2021  
 Laboratory Reference: 2103-287  
 Project: 397-019

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

Matrix: Soil  
 Units: mg/Kg

<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>Method</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Flags</b>
<b>METHOD BLANK</b>						
Laboratory ID:	MB0325S1					
Benzo[a]anthracene	ND	0.0067	EPA 8270E/SIM	3-25-21	3-26-21	
Chrysene	ND	0.0067	EPA 8270E/SIM	3-25-21	3-26-21	
Benzo[b]fluoranthene	ND	0.0067	EPA 8270E/SIM	3-25-21	3-26-21	
Benzo[j,k]fluoranthene	ND	0.0067	EPA 8270E/SIM	3-25-21	3-26-21	
Benzo[a]pyrene	ND	0.0067	EPA 8270E/SIM	3-25-21	3-26-21	
Indeno(1,2,3-c,d)pyrene	ND	0.0067	EPA 8270E/SIM	3-25-21	3-26-21	
Dibenz[a,h]anthracene	ND	0.0067	EPA 8270E/SIM	3-25-21	3-26-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>89</i>	<i>46 - 113</i>				
<i>Pyrene-d10</i>	<i>102</i>	<i>45 - 114</i>				
<i>Terphenyl-d14</i>	<i>107</i>	<i>49 - 121</i>				



Date of Report: March 30, 2021  
 Samples Submitted: March 24, 2021  
 Laboratory Reference: 2103-287  
 Project: 397-019

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

Matrix: Soil  
 Units: mg/Kg

<b>Analyte</b>	<b>Result</b>		<b>Spike Level</b>		<b>Source Result</b>	<b>Percent Recovery</b>		<b>Recovery Limits</b>	<b>RPD</b>	<b>RPD Limit</b>	<b>Flags</b>
<b>MATRIX SPIKES</b>											
Laboratory ID:	03-296-01										
	MS	MSD	MS	MSD		MS	MSD				
Benzo[a]anthracene	<b>0.0951</b>	<b>0.0836</b>	0.0833	0.0833	ND	114	100	56 - 136	13	25	
Chrysene	<b>0.0869</b>	<b>0.0795</b>	0.0833	0.0833	ND	104	95	49 - 130	9	22	
Benzo[b]fluoranthene	<b>0.0993</b>	<b>0.0897</b>	0.0833	0.0833	ND	119	108	51 - 135	10	26	
Benzo(j,k)fluoranthene	<b>0.0824</b>	<b>0.0758</b>	0.0833	0.0833	ND	99	91	56 - 124	8	23	
Benzo[a]pyrene	<b>0.0965</b>	<b>0.0858</b>	0.0833	0.0833	ND	116	103	54 - 133	12	26	
Indeno(1,2,3-c,d)pyrene	<b>0.0978</b>	<b>0.0898</b>	0.0833	0.0833	ND	117	108	52 - 134	9	20	
Dibenz[a,h]anthracene	<b>0.0894</b>	<b>0.0830</b>	0.0833	0.0833	ND	107	100	58 - 127	7	17	
<i>Surrogate:</i>											
2-Fluorobiphenyl						92	89	46 - 113			
Pyrene-d10						101	100	45 - 114			
Terphenyl-d14						102	101	49 - 121			





Date of Report: March 30, 2021  
Samples Submitted: March 24, 2021  
Laboratory Reference: 2103-287  
Project: 397-019

**% MOISTURE**

<b>Client ID</b>	<b>Lab ID</b>	<b>% Moisture</b>	<b>Date Analyzed</b>
A/A5-B-16.0-032421	03-287-01	27	3-25-21





### 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







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

May 13, 2021

Suzy Stumpf  
Farallon Consulting  
1809 7th Avenue, Suite 1111  
Seattle, WA 98101

Re: Analytical Data for Project 397-019  
Laboratory Reference No. 2105-037

Dear Suzy:

Enclosed are the analytical results and associated quality control data for samples submitted on May 5, 2021.

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



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

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

Date of Report: May 13, 2021  
Samples Submitted: May 5, 2021  
Laboratory Reference: 2105-037  
Project: 397-019

### Case Narrative

Samples were collected on May 4, 2021 and received by the laboratory on May 5, 2021. They were maintained at the laboratory at a temperature of 2°C to 6°C.

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

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



Date of Report: May 13, 2021  
 Samples Submitted: May 5, 2021  
 Laboratory Reference: 2105-037  
 Project: 397-019

### VOLATILE ORGANICS EPA 8260D

Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>E/A5-ESW-22.5-050421</b>					
Laboratory ID:	05-037-01					
Benzene	ND	0.0020	EPA 8260D	5-6-21	5-6-21	
Toluene	ND	0.010	EPA 8260D	5-6-21	5-6-21	
Ethylbenzene	ND	0.0020	EPA 8260D	5-6-21	5-6-21	
m,p-Xylene	ND	0.0041	EPA 8260D	5-6-21	5-6-21	
o-Xylene	ND	0.0020	EPA 8260D	5-6-21	5-6-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>114</i>	<i>74-131</i>				
<i>Toluene-d8</i>	<i>93</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>79</i>	<i>71-130</i>				



Date of Report: May 13, 2021  
 Samples Submitted: May 5, 2021  
 Laboratory Reference: 2105-037  
 Project: 397-019

### VOLATILE ORGANICS EPA 8260D

Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>E/A5-ESW-20.0-050421</b>					
Laboratory ID:	05-037-02					
Benzene	ND	0.0039	EPA 8260D	5-6-21	5-6-21	
Toluene	ND	0.019	EPA 8260D	5-6-21	5-6-21	
Ethylbenzene	ND	0.0039	EPA 8260D	5-6-21	5-6-21	
m,p-Xylene	ND	0.0078	EPA 8260D	5-6-21	5-6-21	
o-Xylene	ND	0.0039	EPA 8260D	5-6-21	5-6-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>113</i>	<i>74-131</i>				
<i>Toluene-d8</i>	<i>91</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>78</i>	<i>71-130</i>				





Date of Report: May 13, 2021  
 Samples Submitted: May 5, 2021  
 Laboratory Reference: 2105-037  
 Project: 397-019

### VOLATILE ORGANICS EPA 8260D

Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>E/A5-ESW-17.5-050421</b>					
Laboratory ID:	05-037-03					
Benzene	ND	0.0050	EPA 8260D	5-6-21	5-6-21	
Toluene	ND	0.025	EPA 8260D	5-6-21	5-6-21	
Ethylbenzene	ND	0.0050	EPA 8260D	5-6-21	5-6-21	
m,p-Xylene	ND	0.010	EPA 8260D	5-6-21	5-6-21	
o-Xylene	ND	0.0050	EPA 8260D	5-6-21	5-6-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>117</i>	<i>74-131</i>				
<i>Toluene-d8</i>	<i>90</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>75</i>	<i>71-130</i>				



Date of Report: May 13, 2021  
 Samples Submitted: May 5, 2021  
 Laboratory Reference: 2105-037  
 Project: 397-019

**VOLATILE ORGANICS EPA 8260D  
 QUALITY CONTROL**

Matrix: Soil  
 Units: mg/kg

<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>Method</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Flags</b>
<b>METHOD BLANK</b>						
Laboratory ID:	MB0506S1					
Benzene	ND	0.0010	EPA 8260D	5-6-21	5-6-21	
Toluene	ND	0.0050	EPA 8260D	5-6-21	5-6-21	
Ethylbenzene	ND	0.0010	EPA 8260D	5-6-21	5-6-21	
m,p-Xylene	ND	0.0020	EPA 8260D	5-6-21	5-6-21	
o-Xylene	ND	0.0010	EPA 8260D	5-6-21	5-6-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>116</i>	<i>74-131</i>				
<i>Toluene-d8</i>	<i>95</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>101</i>	<i>71-130</i>				



Date of Report: May 13, 2021  
 Samples Submitted: May 5, 2021  
 Laboratory Reference: 2105-037  
 Project: 397-019

**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		
<b>SPIKE BLANKS</b>										
Laboratory ID:	SB0506S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	<b>0.0495</b>	<b>0.0484</b>	0.0500	0.0500	99	97	71-131	2	19	
Benzene	<b>0.0582</b>	<b>0.0565</b>	0.0500	0.0500	116	113	73-124	3	18	
Trichloroethene	<b>0.0595</b>	<b>0.0601</b>	0.0500	0.0500	119	120	79-130	1	18	
Toluene	<b>0.0519</b>	<b>0.0516</b>	0.0500	0.0500	104	103	76-123	1	18	
Chlorobenzene	<b>0.0518</b>	<b>0.0510</b>	0.0500	0.0500	104	102	78-122	2	18	
<i>Surrogate:</i>										
<i>Dibromofluoromethane</i>					103	105	74-131			
<i>Toluene-d8</i>					95	94	78-128			
<i>4-Bromofluorobenzene</i>					105	105	71-130			



Date of Report: May 13, 2021  
 Samples Submitted: May 5, 2021  
 Laboratory Reference: 2105-037  
 Project: 397-019

**GASOLINE RANGE ORGANICS  
 NWTPH-Gx**

Matrix: Soil  
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>E/A5-ESW-22.5-050421</b>					
Laboratory ID:	05-037-01					
Gasoline	<b>ND</b>	14	NWTPH-Gx	5-7-21	5-7-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	100	66-129				
<b>Client ID:</b>	<b>E/A5-ESW-20.0-050421</b>					
Laboratory ID:	05-037-02					
Gasoline	<b>ND</b>	27	NWTPH-Gx	5-7-21	5-7-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	101	66-129				
<b>Client ID:</b>	<b>E/A5-ESW-17.5-050421</b>					
Laboratory ID:	05-037-03					
Gasoline	<b>ND</b>	34	NWTPH-Gx	5-7-21	5-7-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	95	66-129				



Date of Report: May 13, 2021  
 Samples Submitted: May 5, 2021  
 Laboratory Reference: 2105-037  
 Project: 397-019

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

Matrix: Soil  
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB0507S1					
Gasoline	<b>ND</b>	5.0	NWTPH-Gx	5-7-21	5-7-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	99	66-129				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
<b>DUPLICATE</b>								
Laboratory ID:	05-063-01							
	ORIG	DUP						
Gasoline	<b>ND</b>	<b>ND</b>	NA	NA	NA	NA	30	
<i>Surrogate:</i>								
<i>Fluorobenzene</i>				99	104	66-129		



Date of Report: May 13, 2021  
 Samples Submitted: May 5, 2021  
 Laboratory Reference: 2105-037  
 Project: 397-019

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

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>E/A5-ESW-22.5-050421</b>					
Laboratory ID:	05-037-01					
Diesel Range Organics	<b>350</b>	90	NWTPH-Dx	5-6-21	5-13-21	N
Lube Oil Range Organics	<b>1600</b>	180	NWTPH-Dx	5-6-21	5-13-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	92	50-150				

<b>Client ID:</b>	<b>E/A5-ESW-20.0-050421</b>					
Laboratory ID:	05-037-02					
Diesel Range Organics	<b>220</b>	79	NWTPH-Dx	5-6-21	5-13-21	N
Lube Oil Range Organics	<b>1500</b>	160	NWTPH-Dx	5-6-21	5-13-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	78	50-150				

<b>Client ID:</b>	<b>E/A5-ESW-17.5-050421</b>					
Laboratory ID:	05-037-03					
Diesel Range Organics	<b>130</b>	94	NWTPH-Dx	5-6-21	5-13-21	N
Lube Oil Range Organics	<b>1000</b>	190	NWTPH-Dx	5-6-21	5-13-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	95	50-150				



Date of Report: May 13, 2021  
 Samples Submitted: May 5, 2021  
 Laboratory Reference: 2105-037  
 Project: 397-019

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

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB0506S3					
Diesel Range Organics	<b>ND</b>	25	NWTPH-Dx	5-6-21	5-7-21	
Lube Oil Range Organics	<b>ND</b>	50	NWTPH-Dx	5-6-21	5-7-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	<i>101</i>	<i>50-150</i>				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
<b>DUPLICATE</b>								
Laboratory ID:	SB0506S3							
	ORIG	DUP						
Diesel Fuel #2	<b>112</b>	<b>108</b>	NA	NA	NA	NA	4	NA
<i>Surrogate:</i>								
<i>o-Terphenyl</i>				101	98	50-150		





Date of Report: May 13, 2021  
 Samples Submitted: May 5, 2021  
 Laboratory Reference: 2105-037  
 Project: 397-019

**PAHs EPA 8270E/SIM**

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>E/A5-ESW-22.5-050421</b>					
Laboratory ID:	05-037-01					
Naphthalene	<b>1.4</b>	0.60	EPA 8270E/SIM	5-6-21	5-11-21	
2-Methylnaphthalene	<b>1.2</b>	0.60	EPA 8270E/SIM	5-6-21	5-11-21	
1-Methylnaphthalene	<b>1.4</b>	0.60	EPA 8270E/SIM	5-6-21	5-11-21	
Benzo[a]anthracene	<b>13</b>	0.60	EPA 8270E/SIM	5-6-21	5-11-21	
Chrysene	<b>13</b>	0.60	EPA 8270E/SIM	5-6-21	5-11-21	
Benzo[b]fluoranthene	<b>14</b>	0.60	EPA 8270E/SIM	5-6-21	5-11-21	
Benzo(j,k)fluoranthene	<b>4.6</b>	0.60	EPA 8270E/SIM	5-6-21	5-11-21	
Benzo[a]pyrene	<b>16</b>	0.60	EPA 8270E/SIM	5-6-21	5-11-21	
Indeno(1,2,3-c,d)pyrene	<b>8.8</b>	0.60	EPA 8270E/SIM	5-6-21	5-11-21	
Dibenz[a,h]anthracene	<b>1.4</b>	0.60	EPA 8270E/SIM	5-6-21	5-11-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>71</i>	<i>41 - 114</i>				
<i>Pyrene-d10</i>	<i>76</i>	<i>39 - 115</i>				
<i>Terphenyl-d14</i>	<i>83</i>	<i>44 - 125</i>				



Date of Report: May 13, 2021  
 Samples Submitted: May 5, 2021  
 Laboratory Reference: 2105-037  
 Project: 397-019

**PAHs EPA 8270E/SIM**

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>E/A5-ESW-20.0-050421</b>					
Laboratory ID:	05-037-02					
Naphthalene	<b>1.3</b>	0.021	EPA 8270E/SIM	5-6-21	5-7-21	
2-Methylnaphthalene	<b>0.24</b>	0.021	EPA 8270E/SIM	5-6-21	5-7-21	
1-Methylnaphthalene	<b>0.16</b>	0.021	EPA 8270E/SIM	5-6-21	5-7-21	
Benzo[a]anthracene	<b>0.049</b>	0.021	EPA 8270E/SIM	5-6-21	5-7-21	
Chrysene	<b>0.069</b>	0.021	EPA 8270E/SIM	5-6-21	5-7-21	
Benzo[b]fluoranthene	<b>0.080</b>	0.021	EPA 8270E/SIM	5-6-21	5-7-21	
Benzo(j,k)fluoranthene	<b>ND</b>	0.021	EPA 8270E/SIM	5-6-21	5-7-21	
Benzo[a]pyrene	<b>0.038</b>	0.021	EPA 8270E/SIM	5-6-21	5-7-21	
Indeno(1,2,3-c,d)pyrene	<b>0.047</b>	0.021	EPA 8270E/SIM	5-6-21	5-7-21	
Dibenz[a,h]anthracene	<b>ND</b>	0.021	EPA 8270E/SIM	5-6-21	5-7-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>71</i>	<i>41 - 114</i>				
<i>Pyrene-d10</i>	<i>68</i>	<i>39 - 115</i>				
<i>Terphenyl-d14</i>	<i>86</i>	<i>44 - 125</i>				



Date of Report: May 13, 2021  
 Samples Submitted: May 5, 2021  
 Laboratory Reference: 2105-037  
 Project: 397-019

**PAHs EPA 8270E/SIM**

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>E/A5-ESW-17.5-050421</b>					
Laboratory ID:	05-037-03					
Naphthalene	<b>0.073</b>	0.025	EPA 8270E/SIM	5-6-21	5-10-21	
2-Methylnaphthalene	<b>ND</b>	0.025	EPA 8270E/SIM	5-6-21	5-10-21	
1-Methylnaphthalene	<b>ND</b>	0.025	EPA 8270E/SIM	5-6-21	5-10-21	
Benzo[a]anthracene	<b>ND</b>	0.025	EPA 8270E/SIM	5-6-21	5-10-21	
Chrysene	<b>ND</b>	0.025	EPA 8270E/SIM	5-6-21	5-10-21	
Benzo[b]fluoranthene	<b>ND</b>	0.025	EPA 8270E/SIM	5-6-21	5-10-21	
Benzo(j,k)fluoranthene	<b>ND</b>	0.025	EPA 8270E/SIM	5-6-21	5-10-21	
Benzo[a]pyrene	<b>0.036</b>	0.025	EPA 8270E/SIM	5-6-21	5-10-21	
Indeno(1,2,3-c,d)pyrene	<b>ND</b>	0.025	EPA 8270E/SIM	5-6-21	5-10-21	
Dibenz[a,h]anthracene	<b>ND</b>	0.025	EPA 8270E/SIM	5-6-21	5-10-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	72	41 - 114				
Pyrene-d10	75	39 - 115				
Terphenyl-d14	75	44 - 125				



Date of Report: May 13, 2021  
 Samples Submitted: May 5, 2021  
 Laboratory Reference: 2105-037  
 Project: 397-019

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

Matrix: Soil  
 Units: mg/Kg

<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>Method</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Flags</b>
<b>METHOD BLANK</b>						
Laboratory ID:	MB0506S2					
Naphthalene	ND	0.0067	EPA 8270E/SIM	5-6-21	5-6-21	
2-Methylnaphthalene	ND	0.0067	EPA 8270E/SIM	5-6-21	5-6-21	
1-Methylnaphthalene	ND	0.0067	EPA 8270E/SIM	5-6-21	5-6-21	
Benzo[a]anthracene	ND	0.0067	EPA 8270E/SIM	5-6-21	5-6-21	
Chrysene	ND	0.0067	EPA 8270E/SIM	5-6-21	5-6-21	
Benzo[b]fluoranthene	ND	0.0067	EPA 8270E/SIM	5-6-21	5-6-21	
Benzo(j,k)fluoranthene	ND	0.0067	EPA 8270E/SIM	5-6-21	5-6-21	
Benzo[a]pyrene	ND	0.0067	EPA 8270E/SIM	5-6-21	5-6-21	
Indeno(1,2,3-c,d)pyrene	ND	0.0067	EPA 8270E/SIM	5-6-21	5-6-21	
Dibenz[a,h]anthracene	ND	0.0067	EPA 8270E/SIM	5-6-21	5-6-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>110</i>	<i>41 - 114</i>				
<i>Pyrene-d10</i>	<i>98</i>	<i>39 - 115</i>				
<i>Terphenyl-d14</i>	<i>118</i>	<i>44 - 125</i>				



Date of Report: May 13, 2021  
 Samples Submitted: May 5, 2021  
 Laboratory Reference: 2105-037  
 Project: 397-019

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

Matrix: Soil  
 Units: mg/Kg

<b>Analyte</b>	<b>Result</b>		<b>Spike Level</b>		<b>Source</b>	<b>Percent</b>		<b>Recovery</b>	<b>RPD</b>	<b>RPD</b>	<b>Flags</b>
					<b>Result</b>	<b>Recovery</b>	<b>Limits</b>			<b>Limit</b>	
<b>MATRIX SPIKES</b>											
Laboratory ID:	05-042-05										
	MS	MSD	MS	MSD		MS	MSD				
Naphthalene	0.155	0.137	0.167	0.167	ND	93	82	41 - 123	12	23	
Acenaphthylene	0.158	0.153	0.167	0.167	ND	95	92	45 - 124	3	20	
Acenaphthene	0.155	0.147	0.167	0.167	ND	93	88	46 - 122	5	23	
Fluorene	0.164	0.162	0.167	0.167	ND	98	97	45 - 128	1	27	
Phenanthrene	0.164	0.158	0.167	0.167	ND	98	95	38 - 133	4	33	
Anthracene	0.158	0.153	0.167	0.167	ND	95	92	49 - 127	3	21	
Fluoranthene	0.176	0.160	0.167	0.167	ND	105	96	45 - 130	10	29	
Pyrene	0.181	0.170	0.167	0.167	ND	108	102	43 - 132	6	32	
Benzo[a]anthracene	0.166	0.160	0.167	0.167	ND	99	96	49 - 139	4	27	
Chrysene	0.164	0.166	0.167	0.167	ND	98	99	47 - 127	1	28	
Benzo[b]fluoranthene	0.182	0.169	0.167	0.167	ND	109	101	46 - 129	7	31	
Benzo(j,k)fluoranthene	0.159	0.167	0.167	0.167	ND	95	100	46 - 128	5	25	
Benzo[a]pyrene	0.175	0.172	0.167	0.167	ND	105	103	47 - 134	2	27	
Indeno(1,2,3-c,d)pyrene	0.178	0.172	0.167	0.167	ND	107	103	42 - 133	3	25	
Dibenz[a,h]anthracene	0.171	0.169	0.167	0.167	ND	102	101	46 - 129	1	24	
Benzo[g,h,i]perylene	0.166	0.166	0.167	0.167	ND	99	99	44 - 129	0	27	
<i>Surrogate:</i>											
2-Fluorobiphenyl						88	84	41 - 114			
Pyrene-d10						93	90	39 - 115			
Terphenyl-d14						105	97	44 - 125			



Date of Report: May 13, 2021  
Samples Submitted: May 5, 2021  
Laboratory Reference: 2105-037  
Project: 397-019

**% MOISTURE**

<b>Client ID</b>	<b>Lab ID</b>	<b>% Moisture</b>	<b>Date Analyzed</b>
E/A5-ESW-22.5-050421	05-037-01	44	5-6-21
E/A5-ESW-20.0-050421	05-037-02	68	5-6-21
E/A5-ESW-17.5-050421	05-037-03	73	5-6-21





### Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
  - B - The analyte indicated was also found in the blank sample.
  - C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
  - E - The value reported exceeds the quantitation range and is an estimate.
  - F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
  - H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
  - I - Compound recovery is outside of the control limits.
  - J - The value reported was below the practical quantitation limit. The value is an estimate.
  - K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
  - L - The RPD is outside of the control limits.
  - M - Hydrocarbons in the gasoline range are impacting the diesel range result.
  - M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
  - N - Hydrocarbons in the lube oil range are impacting the diesel range result.
  - N1 - Hydrocarbons in diesel range are impacting lube oil range results.
  - O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
  - P - The RPD of the detected concentrations between the two columns is greater than 40.
  - Q - Surrogate recovery is outside of the control limits.
  - S - Surrogate recovery data is not available due to the necessary dilution of the sample.
  - T - The sample chromatogram is not similar to a typical \_\_\_\_\_.
  - U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
  - U1 - The practical quantitation limit is elevated due to interferences present in the sample.
  - V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
  - W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
  - X - Sample extract treated with a mercury cleanup procedure.
  - X1 - Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
  - Y - The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
  - Z -
- ND - Not Detected at PQL  
 PQL - Practical Quantitation Limit  
 RPD - Relative Percent Difference







**Onsite Environmental Inc.**  
 Analytical Laboratory Testing Services  
 14648 NE 95th Street • Redmond, WA 98052  
 Phone: (425) 883-3981 • www.onsite-env.com

# Chain of Custody

**Turnaround Request**  
(in working days)

(Check One)

Same Day  1 Day

2 Days  3 Days

Standard (7 Days)

\_\_\_\_\_ (other)

**Laboratory Number:**

**05-037**

Company: Favallan  
 Project Number: 397-019  
 Project Name: Block 38 wet  
 Project Manager: Suzy Stumpf  
 Sampled by: Greg Peters

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers
1	E/AS-ESW-22.5-050421	5/4/21	1115	Soil	6
2	E/AS-ESW-20.0-050421	5/4/21	1120	Soil	6
3	E/AS-ESW-17.5-050421	5/4/21	1130	Soil	6

Number of Containers	NWTPH-HCID	NWTPH-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	OPAHs	Naphthalenes	% Moisture
6		<del>NWTPH-BTEX</del> 8260	X	X	X															
6			X	X	X															
6			X	X	X															

Signature	Company	Date	Time	Comments/Special Instructions
<u>[Signature]</u>	<u>Favallan</u>	<u>5/4/21</u>	<u>1600</u>	
<u>[Signature]</u>	<u>Sply Sply</u>	<u>5/5/21</u>	<u>0945</u>	
<u>[Signature]</u>	<u>Van</u>	<u>5/5/21</u>	<u>1145</u>	
<u>[Signature]</u>	<u>ORTE</u>	<u>5/5/21</u>	<u>1445</u>	

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



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

July 7, 2021

Suzy Stumpf  
Farallon Consulting  
1809 7th Avenue, Suite 1111  
Seattle, WA 98101

Re: Analytical Data for Project 397-019  
Laboratory Reference No. 2106-270

Dear Suzy:

Enclosed are the analytical results and associated quality control data for samples submitted on June 28, 2021.

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

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

Sincerely,

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

David Baumeister  
Project Manager

Enclosures



Date of Report: July 7, 2021  
Samples Submitted: June 28, 2021  
Laboratory Reference: 2106-270  
Project: 397-019

### Case Narrative

Samples were collected on June 28, 2021 and received by the laboratory on June 28, 2021. 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.

#### Gasoline Range Organics by NWTPH-Gx Analysis

The MTCA Method A cleanup level of 30.0 ppm for fresh gasoline is not achievable for samples E/A5-B-17.5 and F/A5-B-17.5 due to the low dry weight of the samples.

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



Date of Report: July 7, 2021  
 Samples Submitted: June 28, 2021  
 Laboratory Reference: 2106-270  
 Project: 397-019

**GASOLINE RANGE ORGANICS  
 NWTPH-Gx**

Matrix: Soil  
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>E/A5-B-17.5</b>					
Laboratory ID:	06-270-01					
Gasoline	<b>ND</b>	45	NWTPH-Gx	6-30-21	6-30-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	88	66-129				
<b>Client ID:</b>	<b>F/A5-B-17.5</b>					
Laboratory ID:	06-270-02					
Gasoline	<b>ND</b>	43	NWTPH-Gx	6-30-21	6-30-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	96	66-129				



Date of Report: July 7, 2021  
 Samples Submitted: June 28, 2021  
 Laboratory Reference: 2106-270  
 Project: 397-019

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

Matrix: Soil  
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB0630S1					
Gasoline	<b>ND</b>	5.0	NWTPH-Gx	6-30-21	6-30-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	93	66-129				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
<b>DUPLICATE</b>								
Laboratory ID:	06-252-02							
	ORIG	DUP						
Gasoline	<b>ND</b>	<b>ND</b>	NA	NA	NA	NA	30	
<i>Surrogate:</i>								
<i>Fluorobenzene</i>				93	95	66-129		



Date of Report: July 7, 2021  
 Samples Submitted: June 28, 2021  
 Laboratory Reference: 2106-270  
 Project: 397-019

### VOLATILE ORGANICS EPA 8260D

Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>E/A5-B-17.5</b>					
Laboratory ID:	06-270-01					
Benzene	ND	0.0070	EPA 8260D	6-29-21	6-29-21	
Toluene	ND	0.035	EPA 8260D	6-29-21	6-29-21	
Ethylbenzene	ND	0.0070	EPA 8260D	6-29-21	6-29-21	
m,p-Xylene	ND	0.014	EPA 8260D	6-29-21	6-29-21	
o-Xylene	ND	0.0070	EPA 8260D	6-29-21	6-29-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>114</i>	<i>74-131</i>				
<i>Toluene-d8</i>	<i>110</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>76</i>	<i>71-130</i>				



Date of Report: July 7, 2021  
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### VOLATILE ORGANICS EPA 8260D

Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>F/A5-B-17.5</b>					
Laboratory ID:	06-270-02					
Benzene	ND	0.0062	EPA 8260D	6-29-21	6-29-21	
Toluene	ND	0.031	EPA 8260D	6-29-21	6-29-21	
Ethylbenzene	ND	0.0062	EPA 8260D	6-29-21	6-29-21	
m,p-Xylene	ND	0.012	EPA 8260D	6-29-21	6-29-21	
o-Xylene	ND	0.0062	EPA 8260D	6-29-21	6-29-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>115</i>	<i>74-131</i>				
<i>Toluene-d8</i>	<i>109</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>75</i>	<i>71-130</i>				





Date of Report: July 7, 2021  
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 Project: 397-019

**VOLATILE ORGANICS EPA 8260D  
 QUALITY CONTROL**

Matrix: Soil  
 Units: mg/kg

<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>Method</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Flags</b>
<b>METHOD BLANK</b>						
Laboratory ID:	MB0629S1					
Benzene	ND	0.0010	EPA 8260D	6-29-21	6-29-21	
Toluene	ND	0.0050	EPA 8260D	6-29-21	6-29-21	
Ethylbenzene	ND	0.0010	EPA 8260D	6-29-21	6-29-21	
m,p-Xylene	ND	0.0020	EPA 8260D	6-29-21	6-29-21	
o-Xylene	ND	0.0010	EPA 8260D	6-29-21	6-29-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>115</i>	<i>74-131</i>				
<i>Toluene-d8</i>	<i>115</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>98</i>	<i>71-130</i>				



Date of Report: July 7, 2021  
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 Project: 397-019

**VOLATILE ORGANICS EPA 8260D  
 QUALITY CONTROL**

Matrix: Soil  
 Units: mg/kg

Analyte	Result		Spike Level		Percent Recovery		Recovery	RPD		Flags
					Recovery	Limits	RPD	Limit		
<b>SPIKE BLANKS</b>										
Laboratory ID:	SB0629S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	<b>0.0575</b>	<b>0.0632</b>	0.0500	0.0500	115	126	71-131	9	19	
Benzene	<b>0.0456</b>	<b>0.0490</b>	0.0500	0.0500	91	98	73-124	7	18	
Trichloroethene	<b>0.0473</b>	<b>0.0508</b>	0.0500	0.0500	95	102	79-130	7	18	
Toluene	<b>0.0452</b>	<b>0.0484</b>	0.0500	0.0500	90	97	76-123	7	18	
Chlorobenzene	<b>0.0444</b>	<b>0.0468</b>	0.0500	0.0500	89	94	78-122	5	18	
<i>Surrogate:</i>										
<i>Dibromofluoromethane</i>					120	116	74-131			
<i>Toluene-d8</i>					112	113	78-128			
<i>4-Bromofluorobenzene</i>					106	104	71-130			



Date of Report: July 7, 2021  
 Samples Submitted: June 28, 2021  
 Laboratory Reference: 2106-270  
 Project: 397-019

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

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>E/A5-B-17.5</b>					
Laboratory ID:	06-270-01					
Diesel Range Organics	<b>130</b>	120	NWTPH-Dx	6-29-21	6-29-21	N
Lube Oil Range Organics	<b>2100</b>	230	NWTPH-Dx	6-29-21	6-29-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	98	50-150				

<b>Client ID:</b>	<b>F/A5-B-17.5</b>					
Laboratory ID:	06-270-02					
Diesel Range Organics	<b>160</b>	110	NWTPH-Dx	6-29-21	6-29-21	N
Lube Oil Range Organics	<b>710</b>	220	NWTPH-Dx	6-29-21	6-29-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	87	50-150				



Date of Report: July 7, 2021  
 Samples Submitted: June 28, 2021  
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 Project: 397-019

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

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB0629S1					
Diesel Range Organics	<b>ND</b>	25	NWTPH-Dx	6-29-21	6-29-21	
Lube Oil Range Organics	<b>ND</b>	50	NWTPH-Dx	6-29-21	6-29-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	90	50-150				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
<b>DUPLICATE</b>								
Laboratory ID:	06-270-02							
	ORIG	DUP						
Diesel Range Organics	<b>36.9</b>	<b>ND</b>	NA	NA	NA	NA	NA	N
Lube Oil Range Organics	<b>164</b>	<b>139</b>	NA	NA	NA	NA	17	NA
<i>Surrogate:</i>								
<i>o-Terphenyl</i>				87	77	50-150		



Date of Report: July 7, 2021  
 Samples Submitted: June 28, 2021  
 Laboratory Reference: 2106-270  
 Project: 397-019

**PAHs EPA 8270E/SIM**

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>E/A5-B-17.5</b>					
Laboratory ID:	06-270-01					
Naphthalene	<b>1.2</b>	0.031	EPA 8270E/SIM	6-29-21	6-29-21	
2-Methylnaphthalene	<b>0.38</b>	0.031	EPA 8270E/SIM	6-29-21	6-29-21	
1-Methylnaphthalene	<b>0.19</b>	0.031	EPA 8270E/SIM	6-29-21	6-29-21	
Benzo[a]anthracene	<b>0.82</b>	0.031	EPA 8270E/SIM	6-29-21	6-29-21	
Chrysene	<b>0.71</b>	0.031	EPA 8270E/SIM	6-29-21	6-29-21	
Benzo[b]fluoranthene	<b>0.78</b>	0.031	EPA 8270E/SIM	6-29-21	6-29-21	
Benzo(j,k)fluoranthene	<b>0.30</b>	0.031	EPA 8270E/SIM	6-29-21	6-29-21	
Benzo[a]pyrene	<b>0.87</b>	0.031	EPA 8270E/SIM	6-29-21	6-29-21	
Indeno(1,2,3-c,d)pyrene	<b>0.52</b>	0.031	EPA 8270E/SIM	6-29-21	6-29-21	
Dibenz[a,h]anthracene	<b>0.095</b>	0.031	EPA 8270E/SIM	6-29-21	6-29-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>77</i>	<i>41 - 114</i>				
<i>Pyrene-d10</i>	<i>96</i>	<i>39 - 115</i>				
<i>Terphenyl-d14</i>	<i>90</i>	<i>44 - 125</i>				



Date of Report: July 7, 2021  
 Samples Submitted: June 28, 2021  
 Laboratory Reference: 2106-270  
 Project: 397-019

**PAHs EPA 8270E/SIM**

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>F/A5-B-17.5</b>					
Laboratory ID:	06-270-02					
Naphthalene	<b>ND</b>	0.029	EPA 8270E/SIM	6-29-21	6-29-21	
2-Methylnaphthalene	<b>ND</b>	0.029	EPA 8270E/SIM	6-29-21	6-29-21	
1-Methylnaphthalene	<b>ND</b>	0.029	EPA 8270E/SIM	6-29-21	6-29-21	
Benzo[a]anthracene	<b>ND</b>	0.029	EPA 8270E/SIM	6-29-21	6-29-21	
Chrysene	<b>ND</b>	0.029	EPA 8270E/SIM	6-29-21	6-29-21	
Benzo[b]fluoranthene	<b>0.032</b>	0.029	EPA 8270E/SIM	6-29-21	6-29-21	
Benzo(j,k)fluoranthene	<b>ND</b>	0.029	EPA 8270E/SIM	6-29-21	6-29-21	
Benzo[a]pyrene	<b>0.034</b>	0.029	EPA 8270E/SIM	6-29-21	6-29-21	
Indeno(1,2,3-c,d)pyrene	<b>ND</b>	0.029	EPA 8270E/SIM	6-29-21	6-29-21	
Dibenz[a,h]anthracene	<b>ND</b>	0.029	EPA 8270E/SIM	6-29-21	6-29-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>82</i>	<i>41 - 114</i>				
<i>Pyrene-d10</i>	<i>96</i>	<i>39 - 115</i>				
<i>Terphenyl-d14</i>	<i>93</i>	<i>44 - 125</i>				



Date of Report: July 7, 2021  
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**PAHs EPA 8270E/SIM  
 QUALITY CONTROL**

Matrix: Soil  
 Units: mg/Kg

<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>Method</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Flags</b>
<b>METHOD BLANK</b>						
Laboratory ID:	MB0629S1					
Naphthalene	ND	0.0067	EPA 8270E/SIM	6-29-21	6-29-21	
2-Methylnaphthalene	ND	0.0067	EPA 8270E/SIM	6-29-21	6-29-21	
1-Methylnaphthalene	ND	0.0067	EPA 8270E/SIM	6-29-21	6-29-21	
Benzo[a]anthracene	ND	0.0067	EPA 8270E/SIM	6-29-21	6-29-21	
Chrysene	ND	0.0067	EPA 8270E/SIM	6-29-21	6-29-21	
Benzo[b]fluoranthene	ND	0.0067	EPA 8270E/SIM	6-29-21	6-29-21	
Benzo(j,k)fluoranthene	ND	0.0067	EPA 8270E/SIM	6-29-21	6-29-21	
Benzo[a]pyrene	ND	0.0067	EPA 8270E/SIM	6-29-21	6-29-21	
Indeno(1,2,3-c,d)pyrene	ND	0.0067	EPA 8270E/SIM	6-29-21	6-29-21	
Dibenz[a,h]anthracene	ND	0.0067	EPA 8270E/SIM	6-29-21	6-29-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>84</i>	<i>41 - 114</i>				
<i>Pyrene-d10</i>	<i>95</i>	<i>39 - 115</i>				
<i>Terphenyl-d14</i>	<i>99</i>	<i>44 - 125</i>				





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 Project: 397-019

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

Matrix: Soil  
 Units: mg/Kg

<b>Analyte</b>	<b>Result</b>		<b>Spike Level</b>		<b>Source</b>	<b>Percent</b>		<b>Recovery</b>	<b>RPD</b>	<b>RPD</b>	<b>Flags</b>
					<b>Result</b>	<b>Recovery</b>	<b>Limits</b>		<b>RPD</b>	<b>Limit</b>	
<b>MATRIX SPIKES</b>											
Laboratory ID:	06-267-02										
	MS	MSD	MS	MSD		MS	MSD				
Naphthalene	<b>0.0791</b>	<b>0.0802</b>	0.0833	0.0833	ND	95	96	41 - 123	1	23	
Acenaphthylene	<b>0.0784</b>	<b>0.0807</b>	0.0833	0.0833	ND	94	97	45 - 124	3	20	
Acenaphthene	<b>0.0761</b>	<b>0.0783</b>	0.0833	0.0833	ND	91	94	46 - 122	3	23	
Fluorene	<b>0.0789</b>	<b>0.0815</b>	0.0833	0.0833	ND	95	98	45 - 128	3	27	
Phenanthrene	<b>0.0749</b>	<b>0.0786</b>	0.0833	0.0833	ND	90	94	38 - 133	5	33	
Anthracene	<b>0.0797</b>	<b>0.0807</b>	0.0833	0.0833	ND	96	97	49 - 127	1	21	
Fluoranthene	<b>0.0852</b>	<b>0.0843</b>	0.0833	0.0833	ND	102	101	45 - 130	1	29	
Pyrene	<b>0.0841</b>	<b>0.0872</b>	0.0833	0.0833	ND	101	105	43 - 132	4	32	
Benzo[a]anthracene	<b>0.0768</b>	<b>0.0760</b>	0.0833	0.0833	ND	92	91	49 - 139	1	27	
Chrysene	<b>0.0797</b>	<b>0.0876</b>	0.0833	0.0833	ND	96	105	47 - 127	9	28	
Benzo[b]fluoranthene	<b>0.0741</b>	<b>0.0774</b>	0.0833	0.0833	ND	89	93	46 - 129	4	31	
Benzo(j,k)fluoranthene	<b>0.0905</b>	<b>0.0925</b>	0.0833	0.0833	ND	109	111	46 - 128	2	25	
Benzo[a]pyrene	<b>0.0814</b>	<b>0.0833</b>	0.0833	0.0833	ND	98	100	47 - 134	2	27	
Indeno(1,2,3-c,d)pyrene	<b>0.0723</b>	<b>0.0760</b>	0.0833	0.0833	ND	87	91	42 - 133	5	25	
Dibenz[a,h]anthracene	<b>0.0765</b>	<b>0.0801</b>	0.0833	0.0833	ND	92	96	46 - 129	5	24	
Benzo[g,h,i]perylene	<b>0.0787</b>	<b>0.0825</b>	0.0833	0.0833	ND	94	99	44 - 129	5	27	
<i>Surrogate:</i>											
2-Fluorobiphenyl						81	88	41 - 114			
Pyrene-d10						86	89	39 - 115			
Terphenyl-d14						85	87	44 - 125			



Date of Report: July 7, 2021  
Samples Submitted: June 28, 2021  
Laboratory Reference: 2106-270  
Project: 397-019

**% MOISTURE**

<b>Client ID</b>	<b>Lab ID</b>	<b>% Moisture</b>	<b>Date Analyzed</b>
E/A5-B-17.5	06-270-01	78	6-29-21
F/A5-B-17.5	06-270-02	77	6-29-21





### 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.
  - Y1 - Negative effects of the matrix from this sample on the instrument caused values for this analyte in the bracketing continuing calibration verification standard (CCVs) to be outside of 20% acceptance criteria. Because of this, quantitation limits and sample concentrations should be considered estimates.
  - Z -
- ND - Not Detected at PQL  
 PQL - Practical Quantitation Limit  
 RPD - Relative Percent Difference





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

# Chain of Custody

Turnaround Request  
(in working days)

(Check One)

- Same Day  1 Day
- 2 Days  3 Days
- Standard (7 Days)
- \_\_\_\_\_ (other)

Company: Favallon  
 Project Number: 397-019  
 Project Name: Block 38 West  
 Project Manager: Suzy Stumpf  
 Sampled by: Lisa Thompson

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers
1	E/A5-B-17.5	6/28/21	0830	S	5
2	F/A5-B-17.5	6/28/21	0930	S	5

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	cPAHs	Naphthalenes 8270	% Moisture
1	E/A5-B-17.5	6/28/21	0830	S	5		X	X	X														X	X	
2	F/A5-B-17.5	6/28/21	0930	S	5		X	X	X														X	X	

Signature	Company	Date	Time	Comments/Special Instructions
	Favallon	6/28/21	1215	
	Speedy	6-28-21	1215	
	Speedy	6-28-21	1400	
	ORE	6/28/21	1400	

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



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

July 15, 2021

Suzy Stumpf  
Farallon Consulting  
1809 7th Avenue, Suite 1111  
Seattle, WA 98101

Re: Analytical Data for Project 397-019  
Laboratory Reference No. 2107-039

Dear Suzy:

Enclosed are the analytical results and associated quality control data for samples submitted on July 6, 2021.

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



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

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

Date of Report: July 15, 2021  
Samples Submitted: July 6, 2021  
Laboratory Reference: 2107-039  
Project: 397-019

### Case Narrative

Samples were collected on July 6, 2021 and received by the laboratory on July 6, 2021. They were maintained at the laboratory at a temperature of 2°C to 6°C.

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

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



Date of Report: July 15, 2021  
 Samples Submitted: July 6, 2021  
 Laboratory Reference: 2107-039  
 Project: 397-019

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

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>G/A5-ESW-22.5-070621</b>					
Laboratory ID:	07-039-01					
Diesel Range Organics	<b>150</b>	140	NWTPH-Dx	7-12-21	7-12-21	N
Lube Oil	<b>1700</b>	280	NWTPH-Dx	7-12-21	7-12-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	79	50-150				

<b>Client ID:</b>	<b>G/A5-ESW-20.0-070621</b>					
Laboratory ID:	07-039-02					
Diesel Range Organics	<b>890</b>	180	NWTPH-Dx	7-12-21	7-12-21	N
Lube Oil Range Organics	<b>3300</b>	370	NWTPH-Dx	7-12-21	7-12-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	76	50-150				

<b>Client ID:</b>	<b>G/A5-ESW-17.5-070621</b>					
Laboratory ID:	07-039-03					
Diesel Range Organics	<b>940</b>	400	NWTPH-Dx	7-12-21	7-12-21	N
Lube Oil	<b>6100</b>	800	NWTPH-Dx	7-12-21	7-12-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	89	50-150				

<b>Client ID:</b>	<b>H/A5-ESW-22.5-070621</b>					
Laboratory ID:	07-039-04					
Diesel Range Organics	<b>200</b>	140	NWTPH-Dx	7-12-21	7-12-21	N
Lube Oil	<b>2400</b>	280	NWTPH-Dx	7-12-21	7-12-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	83	50-150				

<b>Client ID:</b>	<b>H/A5-ESW-20.0-070621</b>					
Laboratory ID:	07-039-05					
Diesel Range Organics	<b>360</b>	190	NWTPH-Dx	7-12-21	7-12-21	N
Lube Oil	<b>2800</b>	380	NWTPH-Dx	7-12-21	7-12-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	78	50-150				

<b>Client ID:</b>	<b>H/A5-ESW-17.5-070621</b>					
Laboratory ID:	07-039-06					
Diesel Range Organics	<b>ND</b>	86	NWTPH-Dx	7-12-21	7-12-21	
Lube Oil	<b>250</b>	170	NWTPH-Dx	7-12-21	7-12-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	66	50-150				





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

Matrix: Soil  
 Units: mg/Kg (ppm)

<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>Method</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Flags</b>
<b>Client ID:</b>	<b>H/A5-B-17.5-070621</b>					
Laboratory ID:	07-039-07					
Diesel Range Organics	<b>98</b>	81	NWTPH-Dx	7-12-21	7-12-21	N
Lube Oil	<b>780</b>	160	NWTPH-Dx	7-12-21	7-12-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	69	50-150				



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

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB0712S2					
Diesel Range Organics	<b>ND</b>	25	NWTPH-Dx	7-12-21	7-12-21	
Lube Oil Range Organics	<b>ND</b>	50	NWTPH-Dx	7-12-21	7-12-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	88	50-150				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
<b>DUPLICATE</b>								
Laboratory ID:	SB0712S2							
	ORIG	DUP						
Diesel Fuel #2	<b>83.2</b>	<b>77.8</b>	NA	NA	NA	NA	7	NA
<i>Surrogate:</i>								
<i>o-Terphenyl</i>				85	82	50-150		



Date of Report: July 15, 2021  
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 Laboratory Reference: 2107-039  
 Project: 397-019

**cPAHs EPA 8270D/SIM**

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>G/A5-ESW-22.5-070621</b>					
Laboratory ID:	07-039-01					
Naphthalene	<b>0.21</b>	0.037	EPA 8270E/SIM	7-7-21	7-8-21	
2-Methylnaphthalene	<b>0.18</b>	0.037	EPA 8270E/SIM	7-7-21	7-8-21	
1-Methylnaphthalene	<b>0.18</b>	0.037	EPA 8270E/SIM	7-7-21	7-8-21	
Benzo[a]anthracene	<b>1.4</b>	0.037	EPA 8270E/SIM	7-7-21	7-8-21	
Chrysene	<b>1.4</b>	0.037	EPA 8270E/SIM	7-7-21	7-8-21	
Benzo[b]fluoranthene	<b>1.4</b>	0.037	EPA 8270E/SIM	7-7-21	7-8-21	
Benzo(j,k)fluoranthene	<b>0.53</b>	0.037	EPA 8270E/SIM	7-7-21	7-8-21	
Benzo[a]pyrene	<b>1.5</b>	0.037	EPA 8270E/SIM	7-7-21	7-8-21	
Indeno(1,2,3-c,d)pyrene	<b>0.90</b>	0.037	EPA 8270E/SIM	7-7-21	7-8-21	
Dibenz[a,h]anthracene	<b>0.22</b>	0.037	EPA 8270E/SIM	7-7-21	7-8-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>93</i>	<i>41 - 114</i>				
<i>Pyrene-d10</i>	<i>92</i>	<i>39 - 115</i>				
<i>Terphenyl-d14</i>	<i>88</i>	<i>44 - 125</i>				

<b>Client ID:</b>	<b>G/A5-ESW-20.0-070621</b>					
Laboratory ID:	07-039-02					
Naphthalene	<b>2.8</b>	0.49	EPA 8270E/SIM	7-7-21	7-9-21	
2-Methylnaphthalene	<b>3.2</b>	0.49	EPA 8270E/SIM	7-7-21	7-9-21	
1-Methylnaphthalene	<b>2.6</b>	0.49	EPA 8270E/SIM	7-7-21	7-9-21	
Benzo[a]anthracene	<b>8.3</b>	0.49	EPA 8270E/SIM	7-7-21	7-9-21	
Chrysene	<b>9.0</b>	0.49	EPA 8270E/SIM	7-7-21	7-9-21	
Benzo[b]fluoranthene	<b>10</b>	0.49	EPA 8270E/SIM	7-7-21	7-9-21	
Benzo(j,k)fluoranthene	<b>2.5</b>	0.49	EPA 8270E/SIM	7-7-21	7-9-21	
Benzo[a]pyrene	<b>9.4</b>	0.49	EPA 8270E/SIM	7-7-21	7-9-21	
Indeno(1,2,3-c,d)pyrene	<b>5.7</b>	0.49	EPA 8270E/SIM	7-7-21	7-9-21	
Dibenz[a,h]anthracene	<b>0.85</b>	0.49	EPA 8270E/SIM	7-7-21	7-9-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>68</i>	<i>41 - 114</i>				
<i>Pyrene-d10</i>	<i>72</i>	<i>39 - 115</i>				
<i>Terphenyl-d14</i>	<i>78</i>	<i>44 - 125</i>				



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**cPAHs EPA 8270D/SIM**

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>G/A5-ESW-17.5-070621</b>					
Laboratory ID:	07-039-03					
Benzo[a]anthracene	<b>0.42</b>	0.021	EPA 8270E/SIM	7-7-21	7-8-21	
Chrysene	<b>0.48</b>	0.021	EPA 8270E/SIM	7-7-21	7-8-21	
Benzo[b]fluoranthene	<b>0.58</b>	0.021	EPA 8270E/SIM	7-7-21	7-8-21	
Benzo(j,k)fluoranthene	<b>0.15</b>	0.021	EPA 8270E/SIM	7-7-21	7-8-21	
Benzo[a]pyrene	<b>0.51</b>	0.021	EPA 8270E/SIM	7-7-21	7-8-21	
Indeno(1,2,3-c,d)pyrene	<b>0.33</b>	0.021	EPA 8270E/SIM	7-7-21	7-8-21	
Dibenz[a,h]anthracene	<b>0.059</b>	0.021	EPA 8270E/SIM	7-7-21	7-8-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>92</i>	<i>41 - 114</i>				
<i>Pyrene-d10</i>	<i>102</i>	<i>39 - 115</i>				
<i>Terphenyl-d14</i>	<i>94</i>	<i>44 - 125</i>				

<b>Client ID:</b>	<b>H/A5-ESW-22.5-070621</b>					
Laboratory ID:	07-039-04					
Naphthalene	<b>0.011</b>	0.0076	EPA 8270E/SIM	7-7-21	7-9-21	
2-Methylnaphthalene	<b>0.020</b>	0.0076	EPA 8270E/SIM	7-7-21	7-9-21	
1-Methylnaphthalene	<b>0.018</b>	0.0076	EPA 8270E/SIM	7-7-21	7-9-21	
Benzo[a]anthracene	<b>0.070</b>	0.0076	EPA 8270E/SIM	7-7-21	7-9-21	
Chrysene	<b>0.15</b>	0.0076	EPA 8270E/SIM	7-7-21	7-9-21	
Benzo[b]fluoranthene	<b>0.081</b>	0.0076	EPA 8270E/SIM	7-7-21	7-9-21	
Benzo(j,k)fluoranthene	<b>0.024</b>	0.0076	EPA 8270E/SIM	7-7-21	7-9-21	
Benzo[a]pyrene	<b>0.062</b>	0.0076	EPA 8270E/SIM	7-7-21	7-9-21	
Indeno(1,2,3-c,d)pyrene	<b>0.040</b>	0.0076	EPA 8270E/SIM	7-7-21	7-9-21	
Dibenz[a,h]anthracene	<b>0.023</b>	0.0076	EPA 8270E/SIM	7-7-21	7-9-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>77</i>	<i>41 - 114</i>				
<i>Pyrene-d10</i>	<i>89</i>	<i>39 - 115</i>				
<i>Terphenyl-d14</i>	<i>80</i>	<i>44 - 125</i>				



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**cPAHs EPA 8270D/SIM**

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>H/A5-ESW-20.0-070621</b>					
Laboratory ID:	07-039-05					
Naphthalene	<b>2.9</b>	0.20	EPA 8270E/SIM	7-7-21	7-9-21	
2-Methylnaphthalene	<b>1.7</b>	0.20	EPA 8270E/SIM	7-7-21	7-9-21	
1-Methylnaphthalene	<b>0.98</b>	0.20	EPA 8270E/SIM	7-7-21	7-9-21	
Benzo[a]anthracene	<b>3.5</b>	0.20	EPA 8270E/SIM	7-7-21	7-9-21	
Chrysene	<b>3.6</b>	0.20	EPA 8270E/SIM	7-7-21	7-9-21	
Benzo[b]fluoranthene	<b>4.7</b>	0.20	EPA 8270E/SIM	7-7-21	7-9-21	
Benzo(j,k)fluoranthene	<b>1.0</b>	0.20	EPA 8270E/SIM	7-7-21	7-9-21	
Benzo[a]pyrene	<b>4.0</b>	0.20	EPA 8270E/SIM	7-7-21	7-9-21	
Indeno(1,2,3-c,d)pyrene	<b>2.5</b>	0.20	EPA 8270E/SIM	7-7-21	7-9-21	
Dibenz[a,h]anthracene	<b>0.41</b>	0.20	EPA 8270E/SIM	7-7-21	7-9-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>64</i>	<i>41 - 114</i>				
<i>Pyrene-d10</i>	<i>73</i>	<i>39 - 115</i>				
<i>Terphenyl-d14</i>	<i>76</i>	<i>44 - 125</i>				

<b>Client ID:</b>	<b>H/A5-ESW-17.5-070621</b>					
Laboratory ID:	07-039-06					
Benzo[a]anthracene	<b>ND</b>	0.023	EPA 8270E/SIM	7-7-21	7-8-21	
Chrysene	<b>ND</b>	0.023	EPA 8270E/SIM	7-7-21	7-8-21	
Benzo[b]fluoranthene	<b>ND</b>	0.023	EPA 8270E/SIM	7-7-21	7-8-21	
Benzo(j,k)fluoranthene	<b>ND</b>	0.023	EPA 8270E/SIM	7-7-21	7-8-21	
Benzo[a]pyrene	<b>ND</b>	0.023	EPA 8270E/SIM	7-7-21	7-8-21	
Indeno(1,2,3-c,d)pyrene	<b>ND</b>	0.023	EPA 8270E/SIM	7-7-21	7-8-21	
Dibenz[a,h]anthracene	<b>ND</b>	0.023	EPA 8270E/SIM	7-7-21	7-8-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>76</i>	<i>41 - 114</i>				
<i>Pyrene-d10</i>	<i>83</i>	<i>39 - 115</i>				
<i>Terphenyl-d14</i>	<i>83</i>	<i>44 - 125</i>				



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**cPAHs EPA 8270D/SIM**

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>H/A5-B-17.5-070621</b>					
Laboratory ID:	07-039-07					
Naphthalene	<b>0.034</b>	0.022	EPA 8270E/SIM	7-7-21	7-8-21	
2-Methylnaphthalene	<b>ND</b>	0.022	EPA 8270E/SIM	7-7-21	7-8-21	
1-Methylnaphthalene	<b>ND</b>	0.022	EPA 8270E/SIM	7-7-21	7-8-21	
Benzo[a]anthracene	<b>ND</b>	0.022	EPA 8270E/SIM	7-7-21	7-8-21	
Chrysene	<b>0.058</b>	0.022	EPA 8270E/SIM	7-7-21	7-8-21	
Benzo[b]fluoranthene	<b>0.024</b>	0.022	EPA 8270E/SIM	7-7-21	7-8-21	
Benzo(j,k)fluoranthene	<b>ND</b>	0.022	EPA 8270E/SIM	7-7-21	7-8-21	
Benzo[a]pyrene	<b>ND</b>	0.022	EPA 8270E/SIM	7-7-21	7-8-21	
Indeno(1,2,3-c,d)pyrene	<b>ND</b>	0.022	EPA 8270E/SIM	7-7-21	7-8-21	
Dibenz[a,h]anthracene	<b>ND</b>	0.022	EPA 8270E/SIM	7-7-21	7-8-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>81</i>	<i>41 - 114</i>				
<i>Pyrene-d10</i>	<i>82</i>	<i>39 - 115</i>				
<i>Terphenyl-d14</i>	<i>83</i>	<i>44 - 125</i>				



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 Project: 397-019

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

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB0707S2					
Naphthalene	ND	0.0067	EPA 8270E/SIM	7-7-21	7-7-21	
2-Methylnaphthalene	ND	0.0067	EPA 8270E/SIM	7-7-21	7-7-21	
1-Methylnaphthalene	ND	0.0067	EPA 8270E/SIM	7-7-21	7-7-21	
Benzo[a]anthracene	ND	0.0067	EPA 8270E/SIM	7-7-21	7-7-21	
Chrysene	ND	0.0067	EPA 8270E/SIM	7-7-21	7-7-21	
Benzo[b]fluoranthene	ND	0.0067	EPA 8270E/SIM	7-7-21	7-7-21	
Benzo(j,k)fluoranthene	ND	0.0067	EPA 8270E/SIM	7-7-21	7-7-21	
Benzo[a]pyrene	ND	0.0067	EPA 8270E/SIM	7-7-21	7-7-21	
Indeno(1,2,3-c,d)pyrene	ND	0.0067	EPA 8270E/SIM	7-7-21	7-7-21	
Dibenz[a,h]anthracene	ND	0.0067	EPA 8270E/SIM	7-7-21	7-7-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>104</i>	<i>41 - 114</i>				
<i>Pyrene-d10</i>	<i>101</i>	<i>39 - 115</i>				
<i>Terphenyl-d14</i>	<i>96</i>	<i>44 - 125</i>				

Analyte	Result	Spike Level	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
<b>SPIKE BLANKS</b>							
Laboratory ID:	SB0707S2						
	SB	SBD	SB	SBD	SB	SBD	
Naphthalene	0.0768	0.0821	0.0833	0.0833	92	99	57 - 117 7 16
Acenaphthylene	0.0815	0.0854	0.0833	0.0833	98	103	58 - 126 5 15
Acenaphthene	0.0821	0.0862	0.0833	0.0833	99	103	61 - 122 5 15
Fluorene	0.0883	0.0909	0.0833	0.0833	106	109	59 - 127 3 15
Phenanthrene	0.0877	0.0892	0.0833	0.0833	105	107	58 - 124 2 15
Anthracene	0.0909	0.0920	0.0833	0.0833	109	110	64 - 128 1 15
Fluoranthene	0.0922	0.0959	0.0833	0.0833	111	115	63 - 128 4 15
Pyrene	0.0919	0.0910	0.0833	0.0833	110	109	62 - 129 1 15
Benzo[a]anthracene	0.0890	0.0919	0.0833	0.0833	107	110	64 - 138 3 15
Chrysene	0.0929	0.0946	0.0833	0.0833	112	114	63 - 128 2 15
Benzo[b]fluoranthene	0.0850	0.0906	0.0833	0.0833	102	109	62 - 129 6 15
Benzo(j,k)fluoranthene	0.103	0.104	0.0833	0.0833	124	125	59 - 134 1 16
Benzo[a]pyrene	0.101	0.103	0.0833	0.0833	121	124	63 - 132 2 15
Indeno(1,2,3-c,d)pyrene	0.0869	0.0872	0.0833	0.0833	104	105	58 - 132 0 15
Dibenz[a,h]anthracene	0.0940	0.0964	0.0833	0.0833	113	116	60 - 130 3 15
Benzo[g,h,i]perylene	0.0957	0.0974	0.0833	0.0833	115	117	61 - 129 2 15
<i>Surrogate:</i>							
<i>2-Fluorobiphenyl</i>					89	92	41 - 114
<i>Pyrene-d10</i>					97	100	39 - 115
<i>Terphenyl-d14</i>					99	103	44 - 125





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**TOTAL LEAD  
 EPA 6010D**

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>G/A5-ESW-22.5-070621</b>					
Laboratory ID:	07-039-01					
Lead	<b>47</b>	5.5	EPA 6010D	7-14-21	7-14-21	

<b>Client ID:</b>	<b>G/A5-ESW-20.0-070621</b>					
Laboratory ID:	07-039-02					
Lead	<b>21000</b>	7.3	EPA 6010D	7-14-21	7-14-21	

<b>Client ID:</b>	<b>H/A5-ESW-22.5-070621</b>					
Laboratory ID:	07-039-04					
Lead	<b>22</b>	5.7	EPA 6010D	7-14-21	7-14-21	

<b>Client ID:</b>	<b>H/A5-ESW-20.0-070621</b>					
Laboratory ID:	07-039-05					
Lead	<b>1300</b>	7.6	EPA 6010D	7-14-21	7-14-21	

<b>Client ID:</b>	<b>H/A5-B-17.5-070621</b>					
Laboratory ID:	07-039-07					
Lead	<b>210</b>	16	EPA 6010D	7-14-21	7-14-21	



Date of Report: July 15, 2021  
 Samples Submitted: July 6, 2021  
 Laboratory Reference: 2107-039  
 Project: 397-019

**TOTAL LEAD  
 EPA 6010D  
 QUALITY CONTROL**

Matrix: Soil  
 Units: mg/Kg (ppm)

<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>Method</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Flags</b>
<b>METHOD BLANK</b>						
Laboratory ID:	MB0714SM3					
Lead	<b>ND</b>	5.0	EPA 6010D	7-14-21	7-14-21	

<b>Analyte</b>	<b>Result</b>	<b>Spike Level</b>	<b>Source Result</b>	<b>Percent Recovery</b>	<b>Recovery Limits</b>	<b>RPD</b>	<b>RPD Limit</b>	<b>Flags</b>
<b>DUPLICATE</b>								
Laboratory ID:	07-099-01							
	ORIG	DUP						
Lead	<b>ND</b>	<b>ND</b>	NA	NA	NA	NA	NA	20

**MATRIX SPIKES**

Laboratory ID:	07-099-01									
	MS	MSD	MS	MSD		MS	MSD			
Lead	<b>284</b>	<b>262</b>	250	250	ND	<b>113</b>	<b>105</b>	75-125	8	20



Date of Report: July 15, 2021  
Samples Submitted: July 6, 2021  
Laboratory Reference: 2107-039  
Project: 397-019

**% MOISTURE**

<b>Client ID</b>	<b>Lab ID</b>	<b>% Moisture</b>	<b>Date Analyzed</b>
G/A5-ESW-22.5-070621	07-039-01	9	7-9-21
G/A5-ESW-20.0-070621	07-039-02	32	7-9-21
G/A5-ESW-17.5-070621	07-039-03	69	7-9-21
H/A5-ESW-22.5-070621	07-039-04	12	7-9-21
H/A5-ESW-20.0-070621	07-039-05	34	7-9-21
H/A5-ESW-17.5-070621	07-039-06	71	7-9-21
H/A5-B-17.5-070621	07-039-07	69	7-9-21





### 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.
  - Y1 - Negative effects of the matrix from this sample on the instrument caused values for this analyte in the bracketing continuing calibration verification standard (CCVs) to be outside of 20% acceptance criteria. Because of this, quantitation limits and sample concentrations should be considered estimates.
  - Z -
- ND - Not Detected at PQL  
 PQL - Practical Quantitation Limit  
 RPD - Relative Percent Difference





**OnSite Environmental Inc.**

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 Phone: (425) 883-3881 • www.onsite-env.com

# Chain of Custody

**Turnaround Request (in working days)**

(Check One)

- Same Day  1 Day  
 2 Days  3 Days  
 Standard (7 Days)

(other)

**Laboratory Number: 07-039**

Company: *Fawcett Consulting*  
 Project Number: *397-019*  
 Project Name: *Block 38 West*  
 Project Manager: *Suzzy Shumpf*  
 Sampled by: *Greg Peters*

Lab ID	Sample Identification	Date		Soil Matrix	Number of Containers	Laboratory Number: 07-039																						
		Sampled	Time Sampled			NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx ( <input type="checkbox"/> Acid / SG Clean-up)	Volatiles 8260D	Halogenated Volatiles 8260D	EDB EPA 8011 (Waters Only)	Semivolatiles 8270E/SIM (with low-level PAHs)	PAHs 8270E/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270E/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	C <sub>1</sub> PAHs	Naphthalenes	Total lead	% Moisture		
1	G/A5-ESW-22.5-070621	7/6/21	930	Soil	5				X															X	X	X		
2	G/A5-ESW-20.0-070621		1047		1				X															X	X	X		
3	G/A5-ESW-17.5-070621		1050		1				X															X	X	X		
4	H/A5-ESW-22.5-070621		1350		1				X															X	X	X		
5	H/A5-ESW-20.0-070621		1400		1				X															X	X	X		
6	H/A5-ESW-17.5-070621		1410		1				X															X	X	X		
7	H/A5-B-070621 H/A5-17.5-070621 070621		1415		1				X															X	X	X		

Signature: *[Signature]*  
 Company: *Fawcett*  
 Date: *7/6/21*  
 Time: *1617*

Signature: *[Signature]*  
 Company: *OSE*  
 Date: *7/6/21*  
 Time: *1617*

Comments/Special Instructions

Data Package:  Standard  Level III  Level IV

Chromatograms with final report  Electronic Data Deliverables (EDDs)



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

July 30, 2021

Suzy Stumpf  
Farallon Consulting  
1809 7th Avenue, Suite 1111  
Seattle, WA 98101

Re: Analytical Data for Project 397-019  
Laboratory Reference No. 2107-039B

Dear Suzy:

Enclosed are the analytical results and associated quality control data for samples submitted on July 6, 2021.

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

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

Sincerely,

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

David Baumeister  
Project Manager

Enclosures



Date of Report: July 30, 2021  
Samples Submitted: July 6, 2021  
Laboratory Reference: 2107-039B  
Project: 397-019

### Case Narrative

Samples were collected on July 6, 2021 and received by the laboratory on July 6, 2021. They were maintained at the laboratory at a temperature of 2°C to 6°C.

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

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





Date of Report: July 30, 2021  
 Samples Submitted: July 6, 2021  
 Laboratory Reference: 2107-039B  
 Project: 397-019

**TOTAL LEAD  
 EPA 6010D**

Matrix: Soil  
 Units: mg/Kg (ppm)

<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>Method</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Flags</b>
<b>Client ID:</b>	<b>G/A5-ESW-17.5-070621</b>					
Laboratory ID:	07-039-03					
Lead	<b>240</b>	16	EPA 6010D	7-27-21	7-27-21	

<b>Client ID:</b>	<b>H/A5-ESW-17.5-070621</b>					
Laboratory ID:	07-039-06					
Lead	<b>96</b>	17	EPA 6010D	7-27-21	7-27-21	



Date of Report: July 30, 2021  
 Samples Submitted: July 6, 2021  
 Laboratory Reference: 2107-039B  
 Project: 397-019

**TOTAL LEAD  
 EPA 6010D  
 QUALITY CONTROL**

Matrix: Soil  
 Units: mg/Kg (ppm)

<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>Method</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Flags</b>
<b>METHOD BLANK</b>						
Laboratory ID:	MB0727SM1					
Lead	<b>ND</b>	5.0	EPA 6010D	7-27-21	7-27-21	

<b>Analyte</b>	<b>Result</b>	<b>Spike Level</b>	<b>Source Result</b>	<b>Percent Recovery</b>	<b>Recovery Limits</b>	<b>RPD</b>	<b>RPD Limit</b>	<b>Flags</b>	
<b>DUPLICATE</b>									
Laboratory ID:	07-253-01								
	ORIG	DUP							
Lead	<b>16.2</b>	<b>12.9</b>	NA	NA	NA	NA	23	20	C

**MATRIX SPIKES**

Laboratory ID:	07-253-01									
	MS	MSD	MS	MSD		MS	MSD			
Lead	<b>253</b>	<b>254</b>	250	250	16.2	<b>95</b>	<b>95</b>	75-125	0	20



Date of Report: July 30, 2021  
 Samples Submitted: July 6, 2021  
 Laboratory Reference: 2107-039B  
 Project: 397-019

**PAHs EPA 8270E/SIM**

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>G/A5-ESW-17.5-070621</b>					
Laboratory ID:	07-039-03					
Naphthalene	<b>0.30</b>	0.021	EPA 8270E/SIM	7-7-21	7-8-21	
2-Methylnaphthalene	<b>0.092</b>	0.021	EPA 8270E/SIM	7-7-21	7-8-21	
1-Methylnaphthalene	<b>0.053</b>	0.021	EPA 8270E/SIM	7-7-21	7-8-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>92</i>	<i>41 - 114</i>				
<i>Pyrene-d10</i>	<i>102</i>	<i>39 - 115</i>				
<i>Terphenyl-d14</i>	<i>94</i>	<i>44 - 125</i>				



Date of Report: July 30, 2021  
 Samples Submitted: July 6, 2021  
 Laboratory Reference: 2107-039B  
 Project: 397-019

**PAHs EPA 8270E/SIM**

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>H/A5-ESW-17.5-070621</b>					
Laboratory ID:	07-039-06					
Naphthalene	<b>0.19</b>	0.023	EPA 8270E/SIM	7-7-21	7-8-21	
2-Methylnaphthalene	<b>0.13</b>	0.023	EPA 8270E/SIM	7-7-21	7-8-21	
1-Methylnaphthalene	<b>0.060</b>	0.023	EPA 8270E/SIM	7-7-21	7-8-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	76	41 - 114				
<i>Pyrene-d10</i>	83	39 - 115				
<i>Terphenyl-d14</i>	83	44 - 125				



Date of Report: July 30, 2021  
 Samples Submitted: July 6, 2021  
 Laboratory Reference: 2107-039B  
 Project: 397-019

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

Matrix: Soil  
 Units: mg/Kg

<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>Method</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Flags</b>
<b>METHOD BLANK</b>						
Laboratory ID:	MB0707S2					
Naphthalene	ND	0.0067	EPA 8270E/SIM	7-7-21	7-7-21	
2-Methylnaphthalene	ND	0.0067	EPA 8270E/SIM	7-7-21	7-7-21	
1-Methylnaphthalene	ND	0.0067	EPA 8270E/SIM	7-7-21	7-7-21	
Benzo[a]anthracene	ND	0.0067	EPA 8270E/SIM	7-7-21	7-7-21	
Chrysene	ND	0.0067	EPA 8270E/SIM	7-7-21	7-7-21	
Benzo[b]fluoranthene	ND	0.0067	EPA 8270E/SIM	7-7-21	7-7-21	
Benzo(j,k)fluoranthene	ND	0.0067	EPA 8270E/SIM	7-7-21	7-7-21	
Benzo[a]pyrene	ND	0.0067	EPA 8270E/SIM	7-7-21	7-7-21	
Indeno(1,2,3-c,d)pyrene	ND	0.0067	EPA 8270E/SIM	7-7-21	7-7-21	
Dibenz[a,h]anthracene	ND	0.0067	EPA 8270E/SIM	7-7-21	7-7-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>104</i>	<i>41 - 114</i>				
<i>Pyrene-d10</i>	<i>101</i>	<i>39 - 115</i>				
<i>Terphenyl-d14</i>	<i>96</i>	<i>44 - 125</i>				



Date of Report: July 30, 2021  
 Samples Submitted: July 6, 2021  
 Laboratory Reference: 2107-039B  
 Project: 397-019

**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	SB	SBD	SB	SBD				
<b>SPIKE BLANKS</b>										
Laboratory ID:	SB0707S2									
Naphthalene	<b>0.0768</b>	<b>0.0821</b>	0.0833	0.0833	92	99	57 - 117	7	16	
Acenaphthylene	<b>0.0815</b>	<b>0.0854</b>	0.0833	0.0833	98	103	58 - 126	5	15	
Acenaphthene	<b>0.0821</b>	<b>0.0862</b>	0.0833	0.0833	99	103	61 - 122	5	15	
Fluorene	<b>0.0883</b>	<b>0.0909</b>	0.0833	0.0833	106	109	59 - 127	3	15	
Phenanthrene	<b>0.0877</b>	<b>0.0892</b>	0.0833	0.0833	105	107	58 - 124	2	15	
Anthracene	<b>0.0909</b>	<b>0.0920</b>	0.0833	0.0833	109	110	64 - 128	1	15	
Fluoranthene	<b>0.0922</b>	<b>0.0959</b>	0.0833	0.0833	111	115	63 - 128	4	15	
Pyrene	<b>0.0919</b>	<b>0.0910</b>	0.0833	0.0833	110	109	62 - 129	1	15	
Benzo[a]anthracene	<b>0.0890</b>	<b>0.0919</b>	0.0833	0.0833	107	110	64 - 138	3	15	
Chrysene	<b>0.0929</b>	<b>0.0946</b>	0.0833	0.0833	112	114	63 - 128	2	15	
Benzo[b]fluoranthene	<b>0.0850</b>	<b>0.0906</b>	0.0833	0.0833	102	109	62 - 129	6	15	
Benzo(j,k)fluoranthene	<b>0.103</b>	<b>0.104</b>	0.0833	0.0833	124	125	59 - 134	1	16	
Benzo[a]pyrene	<b>0.101</b>	<b>0.103</b>	0.0833	0.0833	121	124	63 - 132	2	15	
Indeno(1,2,3-c,d)pyrene	<b>0.0869</b>	<b>0.0872</b>	0.0833	0.0833	104	105	58 - 132	0	15	
Dibenz[a,h]anthracene	<b>0.0940</b>	<b>0.0964</b>	0.0833	0.0833	113	116	60 - 130	3	15	
Benzo[g,h,i]perylene	<b>0.0957</b>	<b>0.0974</b>	0.0833	0.0833	115	117	61 - 129	2	15	
<i>Surrogate:</i>										
2-Fluorobiphenyl					89	92	41 - 114			
Pyrene-d10					97	100	39 - 115			
Terphenyl-d14					99	103	44 - 125			



Date of Report: July 30, 2021  
Samples Submitted: July 6, 2021  
Laboratory Reference: 2107-039B  
Project: 397-019

**% MOISTURE**

<b>Client ID</b>	<b>Lab ID</b>	<b>% Moisture</b>	<b>Date Analyzed</b>
G/A5-ESW-17.5-070621	07-039-03	69	7-9-21
H/A5-ESW-17.5-070621	07-039-06	71	7-9-21







### 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.
  - Y1 - Negative effects of the matrix from this sample on the instrument caused values for this analyte in the bracketing continuing calibration verification standard (CCVs) to be outside of 20% acceptance criteria. Because of this, quantitation limits and sample concentrations should be considered estimates.
  - Z -
- ND - Not Detected at PQL  
 PQL - Practical Quantitation Limit  
 RPD - Relative Percent Difference





# M OnSite Environmental Inc.

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Phone: (425) 883-3881 • www.on-site-env.com

## Chain of Custody

### Turnaround Request (in working days)

(Check One)

Same Day  1 Day

2 Days  3 Days

Standard (7 Days)

\_\_\_\_\_ (other)

### Laboratory Number: 07-039

Company: Fawcett Environmental

Project Number: 397-019

Project Name: Block 38 West

Project Manager: Suzy Stumpf

Sampled by: Greg Peters

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix
1	G/A5-ESW-22-5-070621	7/6/21	930	Soil
2	G/A5-ESW-20-0-070621		1047	
3	G/A5-ESW-17.5-070621		1050	
4	H/A5-ESW-22-5-070621		1350	
5	H/A5-ESW-20-0-070621		1400	
6	H/A5-ESW-17.5-070621		1410	
7	<del>H/A5-B-070621</del> DB H/A5-B-17.5-070621 DB		1415	

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

Signature	Company	Date	Time	Comments/Special Instructions
	Fawcett Environmental	7/6/21	1617	
	OSE	7/6/21	1417	

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

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

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

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

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

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

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

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

Chromatograms with final report  Electronic Data Deliverables (EDDs)

X Added 7/20/21. DB (STA)

O Added 7/23/21. DB (STA)

● - Added 7/28/21. DB (STA)

Data Package: Standard  Level III  Level IV



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

July 20, 2021

Suzy Stumpf  
Farallon Consulting  
1809 7th Avenue, Suite 1111  
Seattle, WA 98101

Re: Analytical Data for Project 397-019  
Laboratory Reference No. 2107-084

Dear Suzy:

Enclosed are the analytical results and associated quality control data for samples submitted on July 9, 2021.

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

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

Sincerely,

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

David Baumeister  
Project Manager

Enclosures



Date of Report: July 20, 2021  
Samples Submitted: July 9, 2021  
Laboratory Reference: 2107-084  
Project: 397-019

### Case Narrative

Samples were collected on July 9, 2021 and received by the laboratory on July 9, 2021. They were maintained at the laboratory at a temperature of 2°C to 6°C.

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

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

#### PAHs EPA 8270E/SIM Analysis

Sample I/A5-ESW-17.5-070921 had one surrogate recovery outside of control limits. This is within allowance of our standard operating procedure as long as the recovery is above 10%.

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



Date of Report: July 20, 2021  
 Samples Submitted: July 9, 2021  
 Laboratory Reference: 2107-084  
 Project: 397-019

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

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>I/A5-ESW-22.5-070921</b>					
Laboratory ID:	07-084-01					
Diesel Range Organics	<b>82</b>	30	NWTPH-Dx	7-12-21	7-12-21	N
Lube Oil	<b>550</b>	60	NWTPH-Dx	7-12-21	7-12-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	96	50-150				

<b>Client ID:</b>	<b>I/A5-ESW-20.0-070921</b>					
Laboratory ID:	07-084-02					
Diesel Range Organics	<b>520</b>	450	NWTPH-Dx	7-12-21	7-16-21	N
Lube Oil	<b>4100</b>	900	NWTPH-Dx	7-12-21	7-16-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	---	50-150				

<b>Client ID:</b>	<b>I/A5-ESW-17.5-070921</b>					
Laboratory ID:	07-084-03					
Diesel Range Organics	<b>1400</b>	50	NWTPH-Dx	7-12-21	7-12-21	N
Lube Oil Range Organics	<b>3000</b>	100	NWTPH-Dx	7-12-21	7-12-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	75	50-150				

<b>Client ID:</b>	<b>I/A5-B-17.5-070921</b>					
Laboratory ID:	07-084-04					
Diesel Range Organics	<b>87</b>	59	NWTPH-Dx	7-12-21	7-12-21	N
Lube Oil Range Organics	<b>230</b>	120	NWTPH-Dx	7-12-21	7-12-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	86	50-150				

<b>Client ID:</b>	<b>J/A5-ESW-22.5-070921</b>					
Laboratory ID:	07-084-05					
Diesel Range Organics	<b>230</b>	30	NWTPH-Dx	7-12-21	7-12-21	N
Lube Oil	<b>1700</b>	60	NWTPH-Dx	7-12-21	7-12-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	114	50-150				

<b>Client ID:</b>	<b>J/A5-ESW-20.0-070921</b>					
Laboratory ID:	07-084-06					
Diesel Range Organics	<b>110</b>	46	NWTPH-Dx	7-12-21	7-12-21	N
Lube Oil Range Organics	<b>310</b>	91	NWTPH-Dx	7-12-21	7-12-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	70	50-150				



Date of Report: July 20, 2021  
 Samples Submitted: July 9, 2021  
 Laboratory Reference: 2107-084  
 Project: 397-019

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

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>J/A5-ESW-17.5-070921</b>					
Laboratory ID:	07-084-07					
Diesel Range Organics	<b>ND</b>	32	NWTPH-Dx	7-12-21	7-16-21	
Lube Oil Range Organics	<b>110</b>	63	NWTPH-Dx	7-12-21	7-16-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	89	50-150				



Date of Report: July 20, 2021  
 Samples Submitted: July 9, 2021  
 Laboratory Reference: 2107-084  
 Project: 397-019

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

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB0712S3					
Diesel Range Organics	<b>ND</b>	25	NWTPH-Dx	7-12-21	7-12-21	
Lube Oil Range Organics	<b>ND</b>	50	NWTPH-Dx	7-12-21	7-12-21	
<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
<b>DUPLICATE</b>								
Laboratory ID:	07-083-01							
	ORIG	DUP						
Diesel Range	<b>ND</b>	<b>ND</b>	NA	NA	NA	NA	NA	
Lube Oil	<b>3450</b>	<b>1450</b>	NA	NA	NA	NA	82	
<i>Surrogate:</i>								
<i>o-Terphenyl</i>				---	104	50-150		S





Date of Report: July 20, 2021  
 Samples Submitted: July 9, 2021  
 Laboratory Reference: 2107-084  
 Project: 397-019

PAHs EPA 8270E/SIM

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>I/A5-ESW-22.5-070921</b>					
Laboratory ID:	07-084-01					
Naphthalene	0.11	0.079	EPA 8270E/SIM	7-12-21	7-12-21	
2-Methylnaphthalene	0.097	0.079	EPA 8270E/SIM	7-12-21	7-12-21	
1-Methylnaphthalene	0.084	0.079	EPA 8270E/SIM	7-12-21	7-12-21	
Benzo[a]anthracene	1.6	0.079	EPA 8270E/SIM	7-12-21	7-12-21	
Chrysene	1.6	0.079	EPA 8270E/SIM	7-12-21	7-12-21	
Benzo[b]fluoranthene	2.0	0.079	EPA 8270E/SIM	7-12-21	7-12-21	
Benzo(j,k)fluoranthene	0.51	0.079	EPA 8270E/SIM	7-12-21	7-12-21	
Benzo[a]pyrene	2.0	0.079	EPA 8270E/SIM	7-12-21	7-12-21	
Indeno(1,2,3-c,d)pyrene	1.2	0.079	EPA 8270E/SIM	7-12-21	7-12-21	
Dibenz[a,h]anthracene	0.19	0.079	EPA 8270E/SIM	7-12-21	7-12-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	61	41 - 114				
<i>Pyrene-d10</i>	64	39 - 115				
<i>Terphenyl-d14</i>	60	44 - 125				

<b>Client ID:</b>	<b>I/A5-ESW-20.0-070921</b>					
Laboratory ID:	07-084-02					
Naphthalene	0.67	0.060	EPA 8270E/SIM	7-12-21	7-12-21	
2-Methylnaphthalene	0.50	0.060	EPA 8270E/SIM	7-12-21	7-12-21	
1-Methylnaphthalene	0.37	0.060	EPA 8270E/SIM	7-12-21	7-12-21	
Benzo[a]anthracene	2.5	0.060	EPA 8270E/SIM	7-12-21	7-12-21	
Chrysene	3.0	0.060	EPA 8270E/SIM	7-12-21	7-12-21	
Benzo[b]fluoranthene	3.2	0.060	EPA 8270E/SIM	7-12-21	7-12-21	
Benzo(j,k)fluoranthene	1.1	0.060	EPA 8270E/SIM	7-12-21	7-12-21	
Benzo[a]pyrene	3.2	0.060	EPA 8270E/SIM	7-12-21	7-12-21	
Indeno(1,2,3-c,d)pyrene	1.9	0.060	EPA 8270E/SIM	7-12-21	7-12-21	
Dibenz[a,h]anthracene	0.32	0.060	EPA 8270E/SIM	7-12-21	7-12-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	62	41 - 114				
<i>Pyrene-d10</i>	73	39 - 115				
<i>Terphenyl-d14</i>	71	44 - 125				



Date of Report: July 20, 2021  
 Samples Submitted: July 9, 2021  
 Laboratory Reference: 2107-084  
 Project: 397-019

PAHs EPA 8270E/SIM

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>I/A5-ESW-17.5-070921</b>					
Laboratory ID:	07-084-03					
Benzo[a]anthracene	91	2.7	EPA 8270E/SIM	7-12-21	7-13-21	
Chrysene	110	2.7	EPA 8270E/SIM	7-12-21	7-13-21	
Benzo[b]fluoranthene	120	2.7	EPA 8270E/SIM	7-12-21	7-13-21	
Benzo(j,k)fluoranthene	24	2.7	EPA 8270E/SIM	7-12-21	7-13-21	
Benzo[a]pyrene	120	2.7	EPA 8270E/SIM	7-12-21	7-13-21	
Indeno(1,2,3-c,d)pyrene	69	2.7	EPA 8270E/SIM	7-12-21	7-13-21	
Dibenz[a,h]anthracene	9.1	2.7	EPA 8270E/SIM	7-12-21	7-13-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	105	41 - 114				
<i>Pyrene-d10</i>	101	39 - 115				
<i>Terphenyl-d14</i>	130	44 - 125				Q

<b>Client ID:</b>	<b>I/A5-B-17.5-070921</b>					
Laboratory ID:	07-084-04					
Naphthalene	9.8	0.79	EPA 8270E/SIM	7-12-21	7-13-21	
2-Methylnaphthalene	8.8	0.79	EPA 8270E/SIM	7-12-21	7-13-21	
1-Methylnaphthalene	7.5	0.79	EPA 8270E/SIM	7-12-21	7-13-21	
Benzo[a]anthracene	62	0.79	EPA 8270E/SIM	7-12-21	7-13-21	
Chrysene	56	0.79	EPA 8270E/SIM	7-12-21	7-13-21	
Benzo[b]fluoranthene	58	0.79	EPA 8270E/SIM	7-12-21	7-13-21	
Benzo(j,k)fluoranthene	19	0.79	EPA 8270E/SIM	7-12-21	7-13-21	
Benzo[a]pyrene	70	0.79	EPA 8270E/SIM	7-12-21	7-13-21	
Indeno(1,2,3-c,d)pyrene	37	0.79	EPA 8270E/SIM	7-12-21	7-13-21	
Dibenz[a,h]anthracene	4.8	0.79	EPA 8270E/SIM	7-12-21	7-13-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	87	41 - 114				
<i>Pyrene-d10</i>	106	39 - 115				
<i>Terphenyl-d14</i>	104	44 - 125				



Date of Report: July 20, 2021  
 Samples Submitted: July 9, 2021  
 Laboratory Reference: 2107-084  
 Project: 397-019

**PAHs EPA 8270E/SIM**

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>J/A5-ESW-22.5-070921</b>					
Laboratory ID:	07-084-05					
Benzo[a]anthracene	<b>1.2</b>	0.16	EPA 8270E/SIM	7-12-21	7-12-21	
Chrysene	<b>1.3</b>	0.16	EPA 8270E/SIM	7-12-21	7-12-21	
Benzo[b]fluoranthene	<b>1.5</b>	0.16	EPA 8270E/SIM	7-12-21	7-12-21	
Benzo(j,k)fluoranthene	<b>0.47</b>	0.16	EPA 8270E/SIM	7-12-21	7-12-21	
Benzo[a]pyrene	<b>1.5</b>	0.16	EPA 8270E/SIM	7-12-21	7-12-21	
Indeno(1,2,3-c,d)pyrene	<b>0.93</b>	0.16	EPA 8270E/SIM	7-12-21	7-12-21	
Dibenz[a,h]anthracene	<b>0.18</b>	0.0080	EPA 8270E/SIM	7-12-21	7-12-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>60</i>	<i>41 - 114</i>				
<i>Pyrene-d10</i>	<i>76</i>	<i>39 - 115</i>				
<i>Terphenyl-d14</i>	<i>74</i>	<i>44 - 125</i>				

<b>Client ID:</b>	<b>J/A5-ESW-20.0-070921</b>					
Laboratory ID:	07-084-06					
Benzo[a]anthracene	<b>6.0</b>	0.24	EPA 8270E/SIM	7-12-21	7-12-21	
Chrysene	<b>5.6</b>	0.24	EPA 8270E/SIM	7-12-21	7-12-21	
Benzo[b]fluoranthene	<b>5.8</b>	0.24	EPA 8270E/SIM	7-12-21	7-12-21	
Benzo(j,k)fluoranthene	<b>2.1</b>	0.24	EPA 8270E/SIM	7-12-21	7-12-21	
Benzo[a]pyrene	<b>6.5</b>	0.24	EPA 8270E/SIM	7-12-21	7-12-21	
Indeno(1,2,3-c,d)pyrene	<b>3.5</b>	0.24	EPA 8270E/SIM	7-12-21	7-12-21	
Dibenz[a,h]anthracene	<b>0.57</b>	0.24	EPA 8270E/SIM	7-12-21	7-12-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>53</i>	<i>41 - 114</i>				
<i>Pyrene-d10</i>	<i>65</i>	<i>39 - 115</i>				
<i>Terphenyl-d14</i>	<i>70</i>	<i>44 - 125</i>				



Date of Report: July 20, 2021  
 Samples Submitted: July 9, 2021  
 Laboratory Reference: 2107-084  
 Project: 397-019

**PAHs EPA 8270E/SIM**

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>J/A5-ESW-17.5-070921</b>					
Laboratory ID:	07-084-07					
Benzo[a]anthracene	<b>0.66</b>	0.0084	EPA 8270E/SIM	7-12-21	7-12-21	
Chrysene	<b>0.68</b>	0.0084	EPA 8270E/SIM	7-12-21	7-12-21	
Benzo[b]fluoranthene	<b>0.74</b>	0.0084	EPA 8270E/SIM	7-12-21	7-12-21	
Benzo(j,k)fluoranthene	<b>0.24</b>	0.0084	EPA 8270E/SIM	7-12-21	7-12-21	
Benzo[a]pyrene	<b>0.87</b>	0.0084	EPA 8270E/SIM	7-12-21	7-12-21	
Indeno(1,2,3-c,d)pyrene	<b>0.47</b>	0.0084	EPA 8270E/SIM	7-12-21	7-12-21	
Dibenz[a,h]anthracene	<b>0.067</b>	0.0084	EPA 8270E/SIM	7-12-21	7-12-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>77</i>	<i>41 - 114</i>				
<i>Pyrene-d10</i>	<i>90</i>	<i>39 - 115</i>				
<i>Terphenyl-d14</i>	<i>84</i>	<i>44 - 125</i>				



Date of Report: July 20, 2021  
 Samples Submitted: July 9, 2021  
 Laboratory Reference: 2107-084  
 Project: 397-019

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

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB0712S1					
Naphthalene	ND	0.0067	EPA 8270E/SIM	7-12-21	7-12-21	
2-Methylnaphthalene	ND	0.0067	EPA 8270E/SIM	7-12-21	7-12-21	
1-Methylnaphthalene	ND	0.0067	EPA 8270E/SIM	7-12-21	7-12-21	
Benzo[a]anthracene	ND	0.0067	EPA 8270E/SIM	7-12-21	7-12-21	
Chrysene	ND	0.0067	EPA 8270E/SIM	7-12-21	7-12-21	
Benzo[b]fluoranthene	ND	0.0067	EPA 8270E/SIM	7-12-21	7-12-21	
Benzo(j,k)fluoranthene	ND	0.0067	EPA 8270E/SIM	7-12-21	7-12-21	
Benzo[a]pyrene	ND	0.0067	EPA 8270E/SIM	7-12-21	7-12-21	
Indeno(1,2,3-c,d)pyrene	ND	0.0067	EPA 8270E/SIM	7-12-21	7-12-21	
Dibenz[a,h]anthracene	ND	0.0067	EPA 8270E/SIM	7-12-21	7-12-21	

Surrogate:	Percent Recovery	Control Limits
2-Fluorobiphenyl	83	41 - 114
Pyrene-d10	89	39 - 115
Terphenyl-d14	88	44 - 125

Analyte	Result	Spike Level	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
<b>SPIKE BLANKS</b>							
Laboratory ID:	SB0712S1						
	SB	SBD	SB	SBD	SB	SBD	
Naphthalene	0.0765	0.0736	0.0833	0.0833	92	88	57 - 117 4 16
Acenaphthylene	0.0823	0.0785	0.0833	0.0833	99	94	58 - 126 5 15
Acenaphthene	0.0804	0.0757	0.0833	0.0833	97	91	61 - 122 6 15
Fluorene	0.0805	0.0752	0.0833	0.0833	97	90	59 - 127 7 15
Phenanthrene	0.0779	0.0727	0.0833	0.0833	94	87	58 - 124 7 15
Anthracene	0.0804	0.0762	0.0833	0.0833	97	91	64 - 128 5 15
Fluoranthene	0.0777	0.0719	0.0833	0.0833	93	86	63 - 128 8 15
Pyrene	0.0753	0.0695	0.0833	0.0833	90	83	62 - 129 8 15
Benzo[a]anthracene	0.0788	0.0711	0.0833	0.0833	95	85	64 - 138 10 15
Chrysene	0.0785	0.0749	0.0833	0.0833	94	90	63 - 128 5 15
Benzo[b]fluoranthene	0.0800	0.0817	0.0833	0.0833	96	98	62 - 129 2 15
Benzo(j,k)fluoranthene	0.0799	0.0685	0.0833	0.0833	96	82	59 - 134 15 16
Benzo[a]pyrene	0.0784	0.0740	0.0833	0.0833	94	89	63 - 132 6 15
Indeno(1,2,3-c,d)pyrene	0.0812	0.0733	0.0833	0.0833	97	88	58 - 132 10 15
Dibenz[a,h]anthracene	0.0756	0.0708	0.0833	0.0833	91	85	60 - 130 7 15
Benzo[g,h,i]perylene	0.0796	0.0747	0.0833	0.0833	96	90	61 - 129 6 15

Surrogate:	Percent Recovery	Recovery Limits
2-Fluorobiphenyl	89	41 - 114
Pyrene-d10	84	39 - 115
Terphenyl-d14	82	44 - 125



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

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

Date of Report: July 20, 2021  
 Samples Submitted: July 9, 2021  
 Laboratory Reference: 2107-084  
 Project: 397-019

**TOTAL METALS  
 EPA 6010D**

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>I/A5-ESW-22.5-070921</b>					
Laboratory ID:	07-084-01					
Lead	<b>260</b>	6.0	EPA 6010D	7-16-21	7-16-21	

<b>Client ID:</b>	<b>I/A5-ESW-20.0-070921</b>					
Laboratory ID:	07-084-02					
Lead	<b>2600</b>	9.0	EPA 6010D	7-16-21	7-16-21	

<b>Client ID:</b>	<b>I/A5-B-17.5-070921</b>					
Laboratory ID:	07-084-04					
Lead	<b>130</b>	12	EPA 6010D	7-16-21	7-16-21	

<b>Client ID:</b>	<b>J/A5-ESW-22.5-070921</b>					
Laboratory ID:	07-084-05					
Cadmium	<b>0.64</b>	0.60	EPA 6010D	7-16-21	7-16-21	
Lead	<b>260</b>	6.0	EPA 6010D	7-16-21	7-16-21	

<b>Client ID:</b>	<b>J/A5-ESW-20.0-070921</b>					
Laboratory ID:	07-084-06					
Cadmium	<b>ND</b>	0.91	EPA 6010D	7-16-21	7-16-21	
Lead	<b>420</b>	9.1	EPA 6010D	7-16-21	7-16-21	



Date of Report: July 20, 2021  
 Samples Submitted: July 9, 2021  
 Laboratory Reference: 2107-084  
 Project: 397-019

**TOTAL METALS  
 EPA 6010D  
 QUALITY CONTROL**

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB0716SM2					
Cadmium	ND	0.50	EPA 6010D	7-16-21	7-16-21	
Lead	ND	5.0	EPA 6010D	7-16-21	7-16-21	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
<b>DUPLICATE</b>								
Laboratory ID:	07-092-02							
	ORIG	DUP						
Cadmium	ND	ND	NA	NA	NA	NA	20	
Lead	25.1	25.0	NA	NA	NA	0	20	

**MATRIX SPIKES**

Laboratory ID:	MS	MSD	MS	MSD	MS	MSD	MSD	RPD	RPD Limit	Flags
Laboratory ID:	07-092-02									
Cadmium	48.0	47.4	50.0	50.0	ND	96	95	75-125	1	20
Lead	263	256	250	250	25.1	95	92	75-125	3	20





Date of Report: July 20, 2021  
Samples Submitted: July 9, 2021  
Laboratory Reference: 2107-084  
Project: 397-019

**% MOISTURE**

<b>Client ID</b>	<b>Lab ID</b>	<b>% Moisture</b>	<b>Date Analyzed</b>
I/A5-ESW-22.5-070921	07-084-01	16	7-13-21
I/A5-ESW-20.0-070921	07-084-02	44	7-13-21
I/A5-ESW-17.5-070921	07-084-03	50	7-13-21
I/A5-B-17.5-070921	07-084-04	58	7-13-21
J/A5-ESW-22.5-070921	07-084-05	16	7-13-21
J/A5-ESW-20.0-070921	07-084-06	45	7-13-21
J/A5-ESW-17.5-070921	07-084-07	21	7-13-21





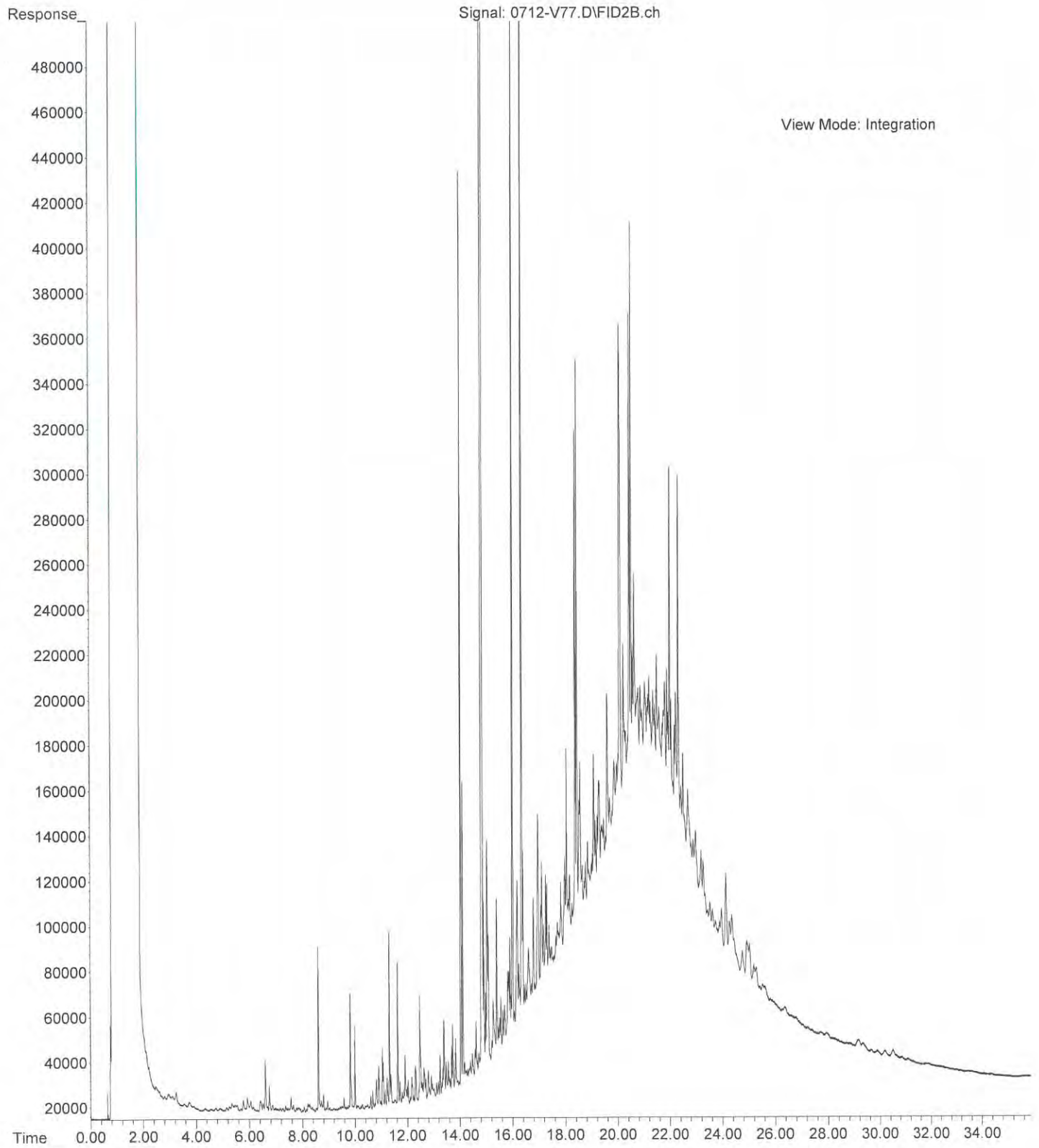
### Data Qualifiers and Abbreviations

- 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.
  - Y1 - Negative effects of the matrix from this sample on the instrument caused values for this analyte in the bracketing continuing calibration verification standard (CCVs) to be outside of 20% acceptance criteria. Because of this, quantitation limits and sample concentrations should be considered estimates.
  - Z -
- ND - Not Detected at PQL  
 PQL - Practical Quantitation Limit  
 RPD - Relative Percent Difference

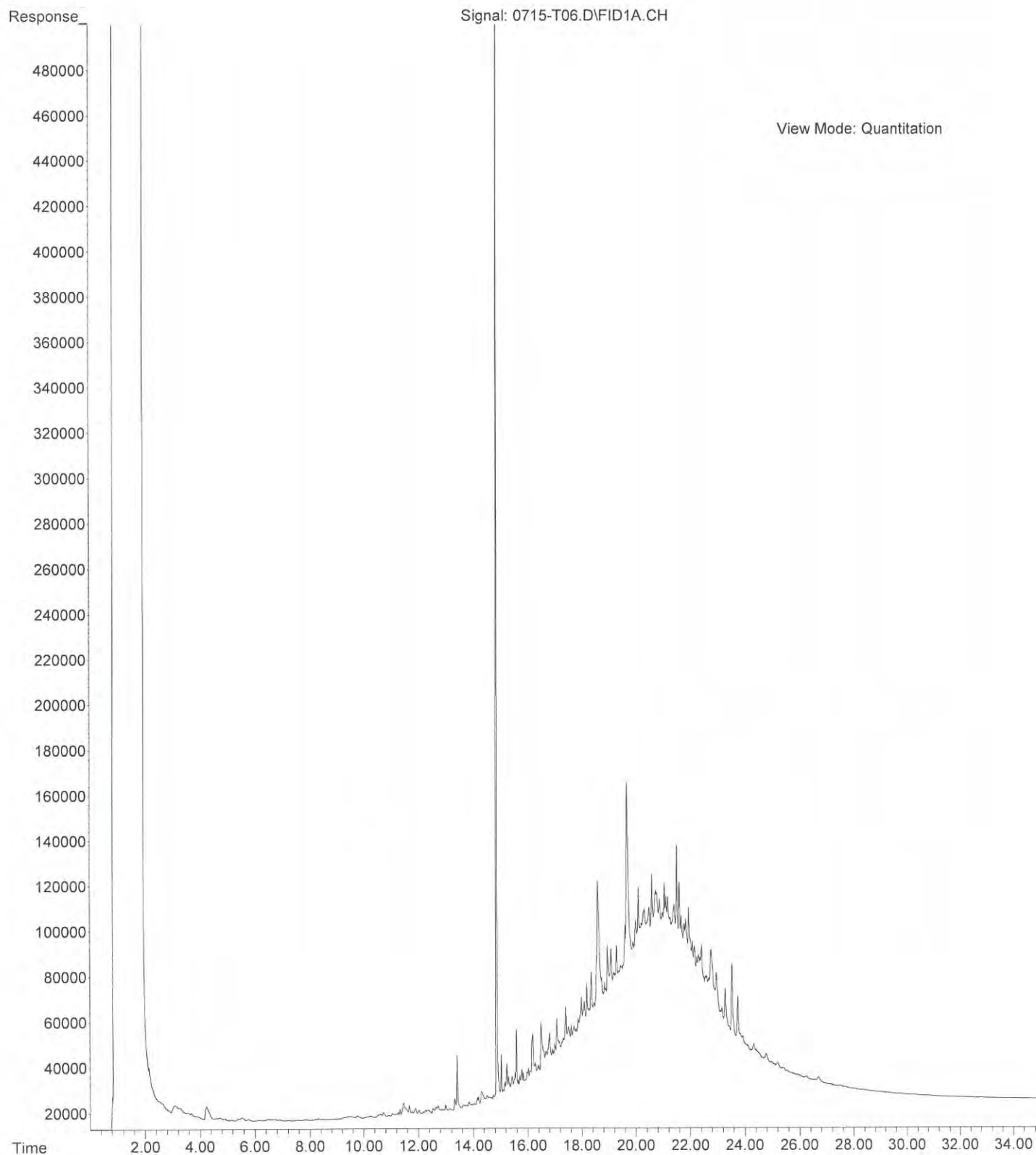




File :X:\DIESELS\Vigo\Data\V210712.SEC\0712-V77.D  
Operator : JT  
Acquired : 13 Jul 2021 00:56 using AcqMethod V210519F.M  
Instrument : Vigo  
Sample Name: 07-084-01  
Misc Info :  
Vial Number: 77

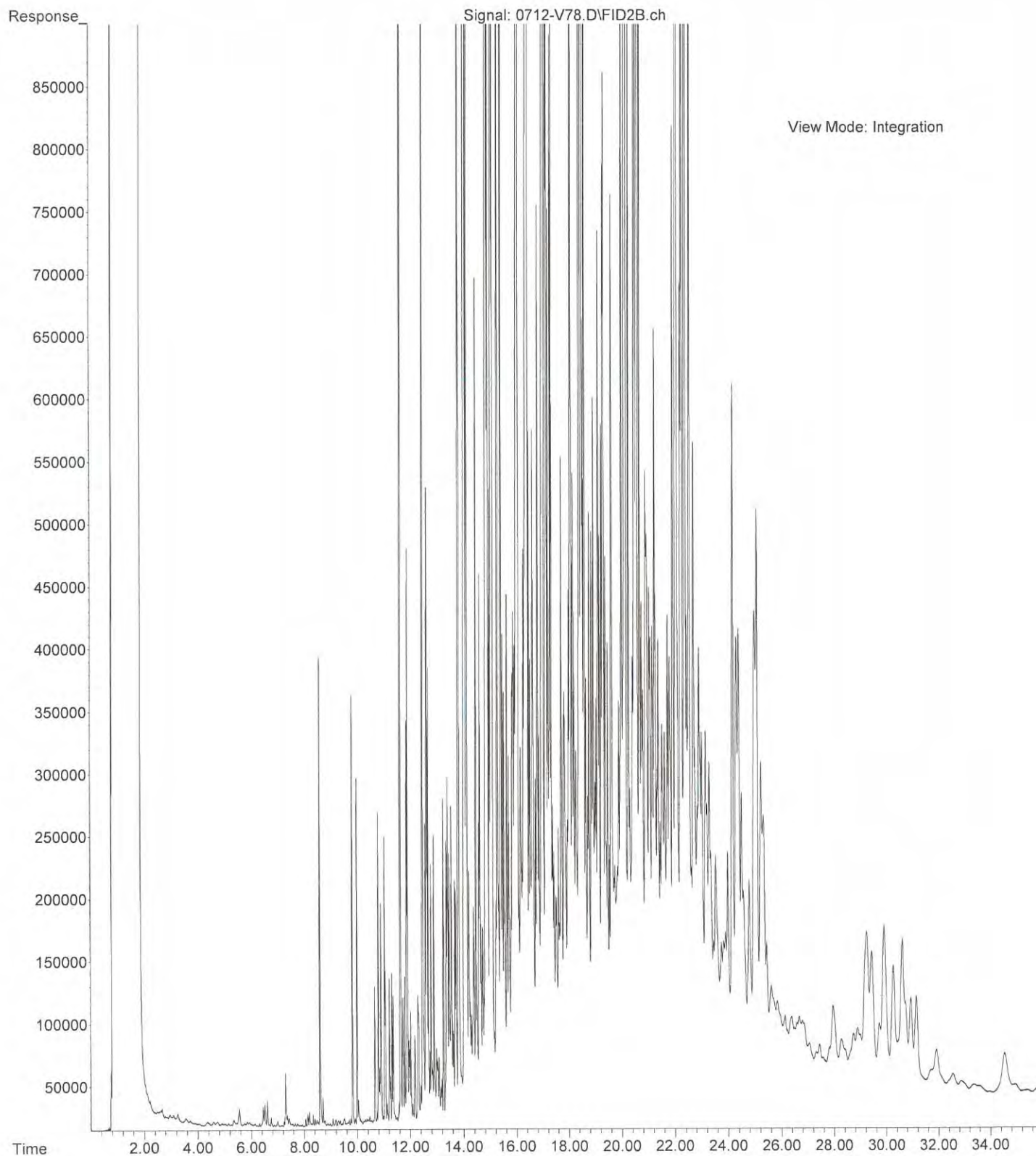


File :X:\DIESELS\Teri\Data\T210716\0715-T06.D  
Operator : JT  
Acquired : 16 Jul 2021 17:00 using AcqMethod T210205F.M  
Instrument : Teri  
Sample Name: 07-084-02 10X  
Misc Info :  
Vial Number: 6

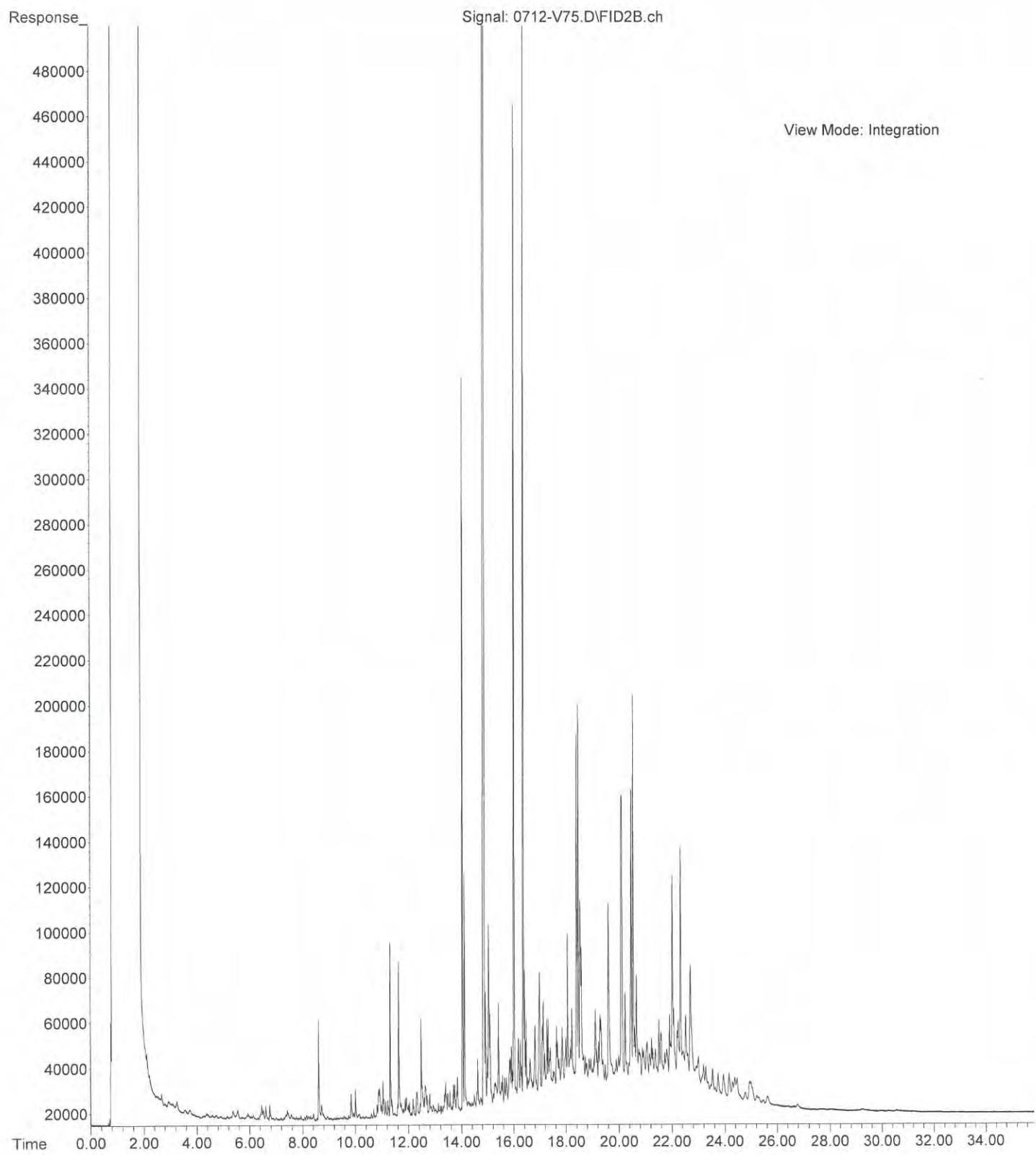




File :X:\DIESELS\Vigo\Data\V210712.SEC\0712-V78.D  
Operator : JT  
Acquired : 13 Jul 2021 1:36 using AcqMethod V210519F.M  
Instrument : Vigo  
Sample Name: 07-084-03  
Misc Info :  
Vial Number: 78

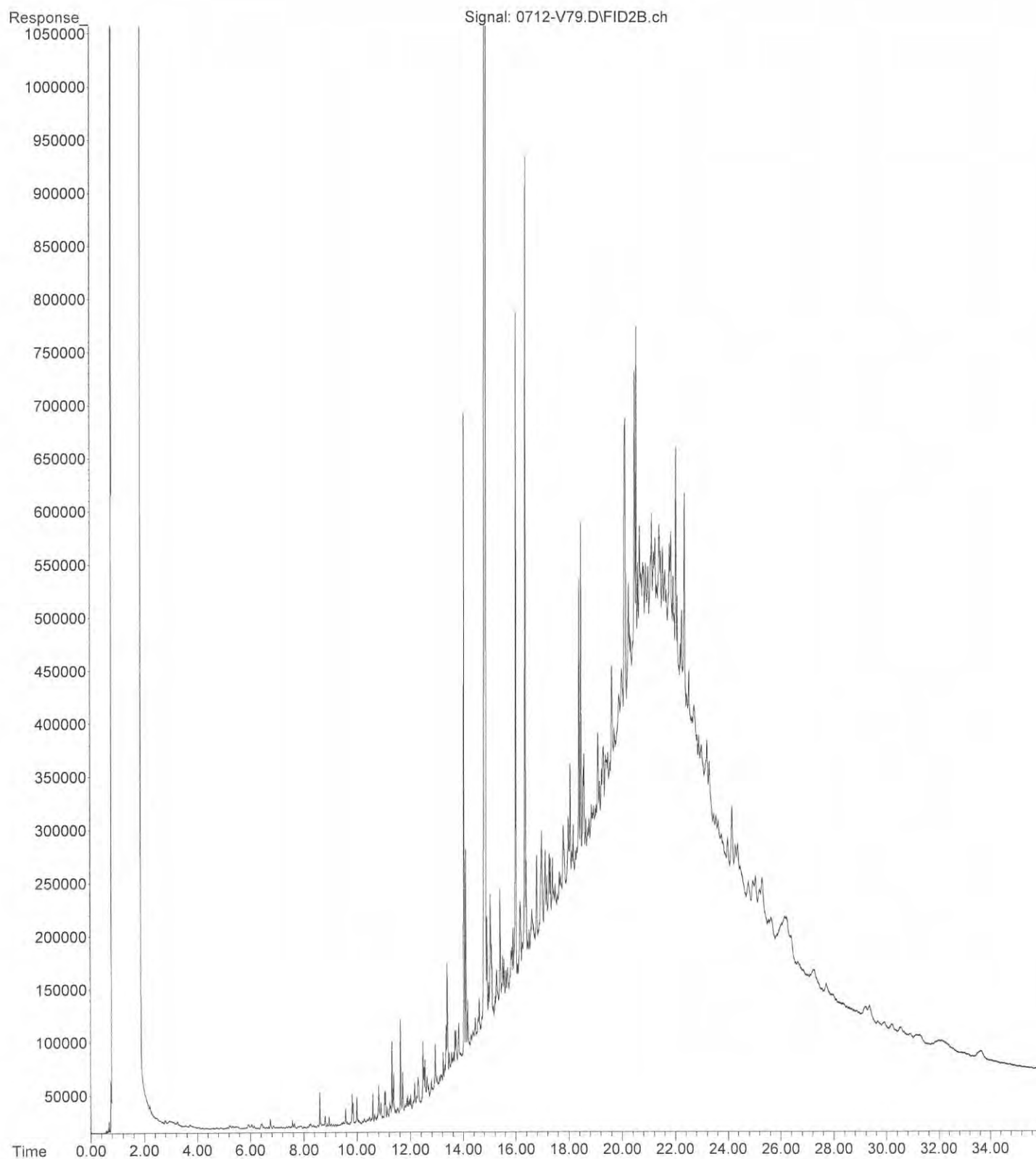


File :X:\DIESELS\Vigo\Data\V210712.SEC\0712-V75.D  
Operator : JT  
Acquired : 12 Jul 2021 23:35 using AcqMethod V210519F.M  
Instrument : Vigo  
Sample Name: 07-084-04  
Misc Info :  
Vial Number: 75

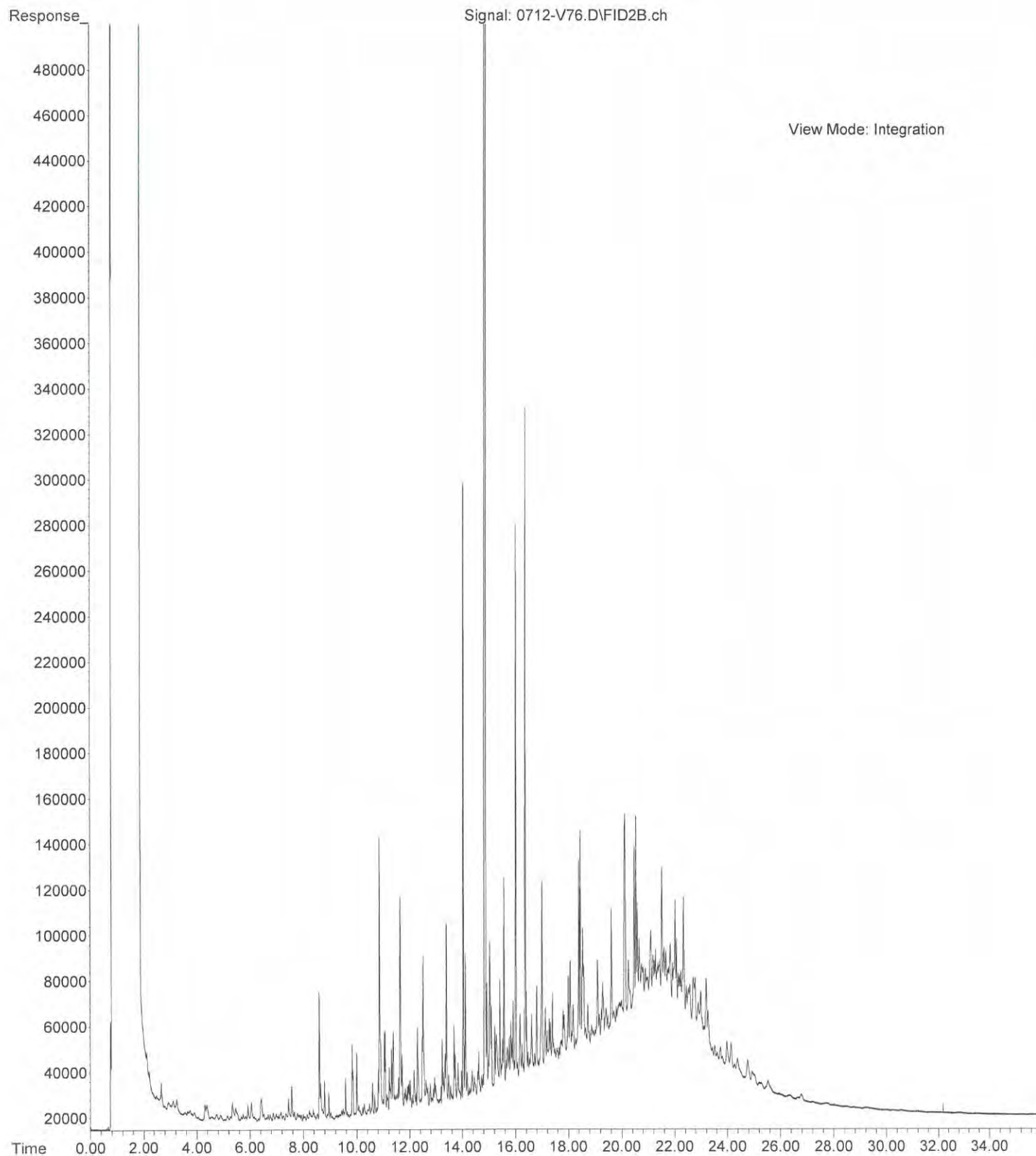




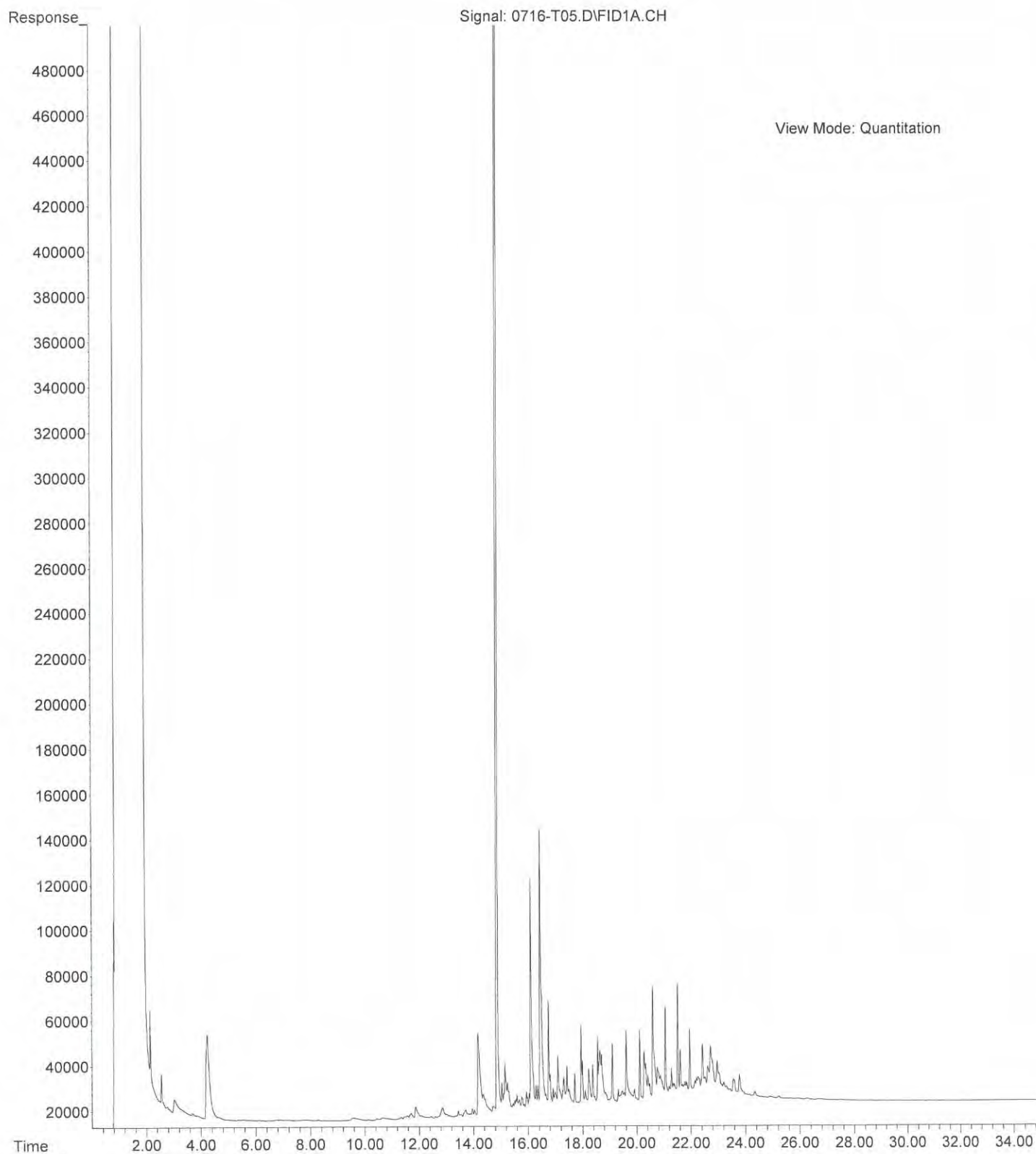
File :X:\DIESELS\Vigo\Data\V210712.SEC\0712-V79.D  
Operator : JT  
Acquired : 13 Jul 2021 2:16 using AcqMethod V210519F.M  
Instrument : Vigo  
Sample Name: 07-084-05  
Misc Info :  
Vial Number: 79



File :X:\DIESELS\Vigo\Data\V210712.SEC\0712-V76.D  
Operator : JT  
Acquired : 13 Jul 2021 00:15 using AcqMethod V210519F.M  
Instrument : Vigo  
Sample Name: 07-084-06  
Misc Info :  
Vial Number: 76



File :X:\DIESELS\Teri\Data\T210716\0716-T05.D  
Operator : JT  
Acquired : 16 Jul 2021 16:17 using AcqMethod T210205F.M  
Instrument : Teri  
Sample Name: 07-084-07  
Misc Info :  
Vial Number: 5





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

July 19, 2021

Suzy Stumpf  
Farallon Consulting  
1809 7th Avenue, Suite 1111  
Seattle, WA 98101

Re: Analytical Data for Project 397-019  
Laboratory Reference No. 2107-095

Dear Suzy:

Enclosed are the analytical results and associated quality control data for samples submitted on July 12, 2021.

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



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

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

Date of Report: July 19, 2021  
Samples Submitted: July 12, 2021  
Laboratory Reference: 2107-095  
Project: 397-019

### Case Narrative

Samples were collected on July 12, 2021 and received by the laboratory on July 12, 2021. They were maintained at the laboratory at a temperature of 2°C to 6°C.

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

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



Date of Report: July 19, 2021  
 Samples Submitted: July 12, 2021  
 Laboratory Reference: 2107-095  
 Project: 397-019

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

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>L/A5-ESW-25.0-071221</b>					
Laboratory ID:	07-095-01					
Diesel Range Organics	<b>80</b>	28	NWTPH-Dx	7-13-21	7-16-21	N
Lube Oil Range Organics	<b>500</b>	56	NWTPH-Dx	7-13-21	7-16-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	91	50-150				

<b>Client ID:</b>	<b>L/A5-ESW-22.5-071221</b>					
Laboratory ID:	07-095-02					
Diesel Range Organics	<b>31</b>	29	NWTPH-Dx	7-13-21	7-16-21	N
Lube Oil Range Organics	<b>200</b>	57	NWTPH-Dx	7-13-21	7-16-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	82	50-150				

<b>Client ID:</b>	<b>L/A5-B-22.0-071221</b>					
Laboratory ID:	07-095-03					
Diesel Range Organics	<b>ND</b>	29	NWTPH-Dx	7-13-21	7-16-21	
Lube Oil Range Organics	<b>ND</b>	57	NWTPH-Dx	7-13-21	7-16-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	93	50-150				



Date of Report: July 19, 2021  
 Samples Submitted: July 12, 2021  
 Laboratory Reference: 2107-095  
 Project: 397-019

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

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB0713S2					
Diesel Range Organics	<b>ND</b>	25	NWTPH-Dx	7-13-21	7-13-21	
Lube Oil Range Organics	<b>ND</b>	50	NWTPH-Dx	7-13-21	7-13-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	87	50-150				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
<b>DUPLICATE</b>								
Laboratory ID:	SB0713S2							
	ORIG	DUP						
Diesel Fuel #2	<b>84.0</b>	<b>82.7</b>	NA	NA	NA	NA	2	NA
<i>Surrogate:</i>								
<i>o-Terphenyl</i>				87	87	50-150		





Date of Report: July 19, 2021  
 Samples Submitted: July 12, 2021  
 Laboratory Reference: 2107-095  
 Project: 397-019

**cPAHs EPA 8270E/SIM**

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>L/A5-ESW-25.0-071221</b>					
Laboratory ID:	07-095-01					
Benzo[a]anthracene	1.9	0.075	EPA 8270E/SIM	7-13-21	7-13-21	
Chrysene	1.9	0.075	EPA 8270E/SIM	7-13-21	7-13-21	
Benzo[b]fluoranthene	2.1	0.075	EPA 8270E/SIM	7-13-21	7-13-21	
Benzo(j,k)fluoranthene	0.68	0.075	EPA 8270E/SIM	7-13-21	7-13-21	
Benzo[a]pyrene	2.2	0.075	EPA 8270E/SIM	7-13-21	7-13-21	
Indeno(1,2,3-c,d)pyrene	1.3	0.075	EPA 8270E/SIM	7-13-21	7-13-21	
Dibenz[a,h]anthracene	0.18	0.075	EPA 8270E/SIM	7-13-21	7-13-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	72	41 - 114				
Pyrene-d10	76	39 - 115				
Terphenyl-d14	78	44 - 125				
<b>Client ID:</b>	<b>L/A5-ESW-22.5-071221</b>					
Laboratory ID:	07-095-02					
Benzo[a]anthracene	0.37	0.038	EPA 8270E/SIM	7-13-21	7-13-21	
Chrysene	0.41	0.038	EPA 8270E/SIM	7-13-21	7-13-21	
Benzo[b]fluoranthene	0.41	0.038	EPA 8270E/SIM	7-13-21	7-13-21	
Benzo(j,k)fluoranthene	0.14	0.038	EPA 8270E/SIM	7-13-21	7-13-21	
Benzo[a]pyrene	0.41	0.038	EPA 8270E/SIM	7-13-21	7-13-21	
Indeno(1,2,3-c,d)pyrene	0.22	0.038	EPA 8270E/SIM	7-13-21	7-13-21	
Dibenz[a,h]anthracene	ND	0.038	EPA 8270E/SIM	7-13-21	7-13-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	69	41 - 114				
Pyrene-d10	73	39 - 115				
Terphenyl-d14	74	44 - 125				
<b>Client ID:</b>	<b>L/A5-B-22.0-071221</b>					
Laboratory ID:	07-095-03					
Benzo[a]anthracene	0.13	0.0076	EPA 8270E/SIM	7-13-21	7-13-21	
Chrysene	0.13	0.0076	EPA 8270E/SIM	7-13-21	7-13-21	
Benzo[b]fluoranthene	0.14	0.0076	EPA 8270E/SIM	7-13-21	7-13-21	
Benzo(j,k)fluoranthene	0.048	0.0076	EPA 8270E/SIM	7-13-21	7-13-21	
Benzo[a]pyrene	0.15	0.0076	EPA 8270E/SIM	7-13-21	7-13-21	
Indeno(1,2,3-c,d)pyrene	0.090	0.0076	EPA 8270E/SIM	7-13-21	7-13-21	
Dibenz[a,h]anthracene	0.012	0.0076	EPA 8270E/SIM	7-13-21	7-13-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	85	41 - 114				
Pyrene-d10	89	39 - 115				
Terphenyl-d14	86	44 - 125				



Date of Report: July 19, 2021  
 Samples Submitted: July 12, 2021  
 Laboratory Reference: 2107-095  
 Project: 397-019

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

Matrix: Soil  
 Units: mg/Kg

<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>Method</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Flags</b>
<b>METHOD BLANK</b>						
Laboratory ID:	MB0713S1					
Benzo[a]anthracene	ND	0.0067	EPA 8270E/SIM	7-13-21	7-13-21	
Chrysene	ND	0.0067	EPA 8270E/SIM	7-13-21	7-13-21	
Benzo[b]fluoranthene	ND	0.0067	EPA 8270E/SIM	7-13-21	7-13-21	
Benzo(j,k)fluoranthene	ND	0.0067	EPA 8270E/SIM	7-13-21	7-13-21	
Benzo[a]pyrene	ND	0.0067	EPA 8270E/SIM	7-13-21	7-13-21	
Indeno(1,2,3-c,d)pyrene	ND	0.0067	EPA 8270E/SIM	7-13-21	7-13-21	
Dibenz[a,h]anthracene	ND	0.0067	EPA 8270E/SIM	7-13-21	7-13-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>105</i>	<i>41 - 114</i>				
<i>Pyrene-d10</i>	<i>100</i>	<i>39 - 115</i>				
<i>Terphenyl-d14</i>	<i>110</i>	<i>44 - 125</i>				

<b>Analyte</b>	<b>Result</b>		<b>Spike Level</b>		<b>Percent Recovery</b>		<b>Recovery Limits</b>	<b>RPD</b>	<b>RPD Limit</b>	<b>Flags</b>
<b>SPIKE BLANKS</b>										
Laboratory ID:	SB0713S1									
	SB	SBD	SB	SBD	SB	SBD				
Benzo[a]anthracene	<b>0.0892</b>	<b>0.0916</b>	0.0833	0.0833	107	110	64 - 138	3	15	
Chrysene	<b>0.0956</b>	<b>0.0890</b>	0.0833	0.0833	115	107	63 - 128	7	15	
Benzo[b]fluoranthene	<b>0.0998</b>	<b>0.0977</b>	0.0833	0.0833	120	117	62 - 129	2	15	
Benzo(j,k)fluoranthene	<b>0.0921</b>	<b>0.0896</b>	0.0833	0.0833	111	108	59 - 134	3	16	
Benzo[a]pyrene	<b>0.0958</b>	<b>0.0984</b>	0.0833	0.0833	115	118	63 - 132	3	15	
Indeno(1,2,3-c,d)pyrene	<b>0.0942</b>	<b>0.0967</b>	0.0833	0.0833	113	116	58 - 132	3	15	
Dibenz[a,h]anthracene	<b>0.0962</b>	<b>0.0935</b>	0.0833	0.0833	115	112	60 - 130	3	15	
<i>Surrogate:</i>										
<i>2-Fluorobiphenyl</i>					<i>105</i>	<i>104</i>	<i>41 - 114</i>			
<i>Pyrene-d10</i>					<i>102</i>	<i>98</i>	<i>39 - 115</i>			
<i>Terphenyl-d14</i>					<i>101</i>	<i>96</i>	<i>44 - 125</i>			



Date of Report: July 19, 2021  
Samples Submitted: July 12, 2021  
Laboratory Reference: 2107-095  
Project: 397-019

**% MOISTURE**

<b>Client ID</b>	<b>Lab ID</b>	<b>% Moisture</b>	<b>Date Analyzed</b>
L/A5-ESW-25.0-071221	07-095-01	11	7-13-21
L/A5-ESW-22.5-071221	07-095-02	13	7-13-21
L/A5-B-22.0-071221	07-095-03	13	7-13-21





### 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.
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  - 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.
  - Y1 - Negative effects of the matrix from this sample on the instrument caused values for this analyte in the bracketing continuing calibration verification standard (CCVs) to be outside of 20% acceptance criteria. Because of this, quantitation limits and sample concentrations should be considered estimates.
  - Z -
- ND - Not Detected at PQL  
 PQL - Practical Quantitation Limit  
 RPD - Relative Percent Difference





# Onsite Environmental Inc.

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

## Chain of Custody

Company: Fawcett Consulting

Project Number: 397-019

Project Name: Block 38 West

Project Manager: Suey Strumpf

Sampled by: Greg Fekus

### Turnaround Request (in working days)

(Check One)

Same Day  1 Day

2 Days  3 Days

Standard (7 Days)

\_\_\_\_\_ (other)

Lab ID

Date Sampled

Time Sampled

Matrix

Number of Containers

NWTPH-HCID

NWTPH-Gx/BTEX

NWTPH-Gx

NWTPH-Dx ( Acid / SG Clean-up)

Volatiles 8260D

Halogenated Volatiles 8260D

EDB EPA 8011 (Waters Only)

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

PAHs 8270E/SIM (low-level)

PCBs 8082A

Organochlorine Pesticides 8081B

Organophosphorus Pesticides 8270E/SIM

Chlorinated Acid Herbicides 8151A

Total RCRA Metals

Total MTCA Metals

TCLP Metals

HEM (oil and grease) 1664A

CPAHs

% Moisture

1 41A5-ESW-250-071221

7/12/21

1237

Soil

2

X

X

X

X

X

X

X

X

X

X

2 41A5-ESW-22.5-071221

7/12/21

1242

Soil

2

X

X

X

X

X

X

X

X

X

X

3 41A5-B-22.0-071221

7/12/21

1247

Soil

2

X

X

X

X

X

X

X

X

X

X

Relinquished  
Received  
Relinquished  
Received  
Relinquished  
Received  
Reviewed/Date

Signature

Company

Date

Time

Comments/Special Instructions

Data Package: Standard  Level III  Level IV

Chromatograms with final report  Electronic Data Deliverables (EDDs)

Fawcett

7/12/21 1501

7/12/21 1501

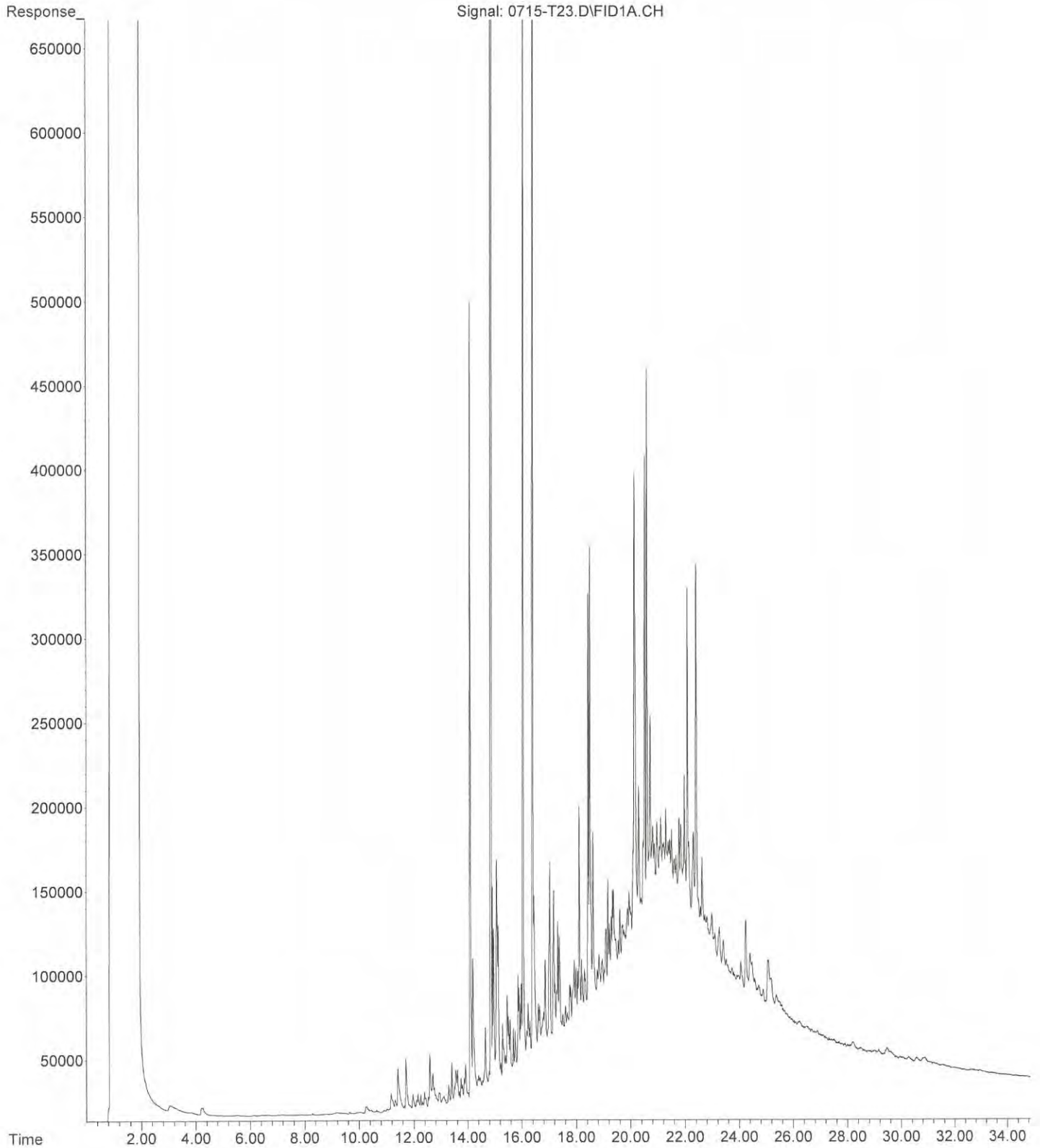
CPAHs

CPAHs

CPAHs

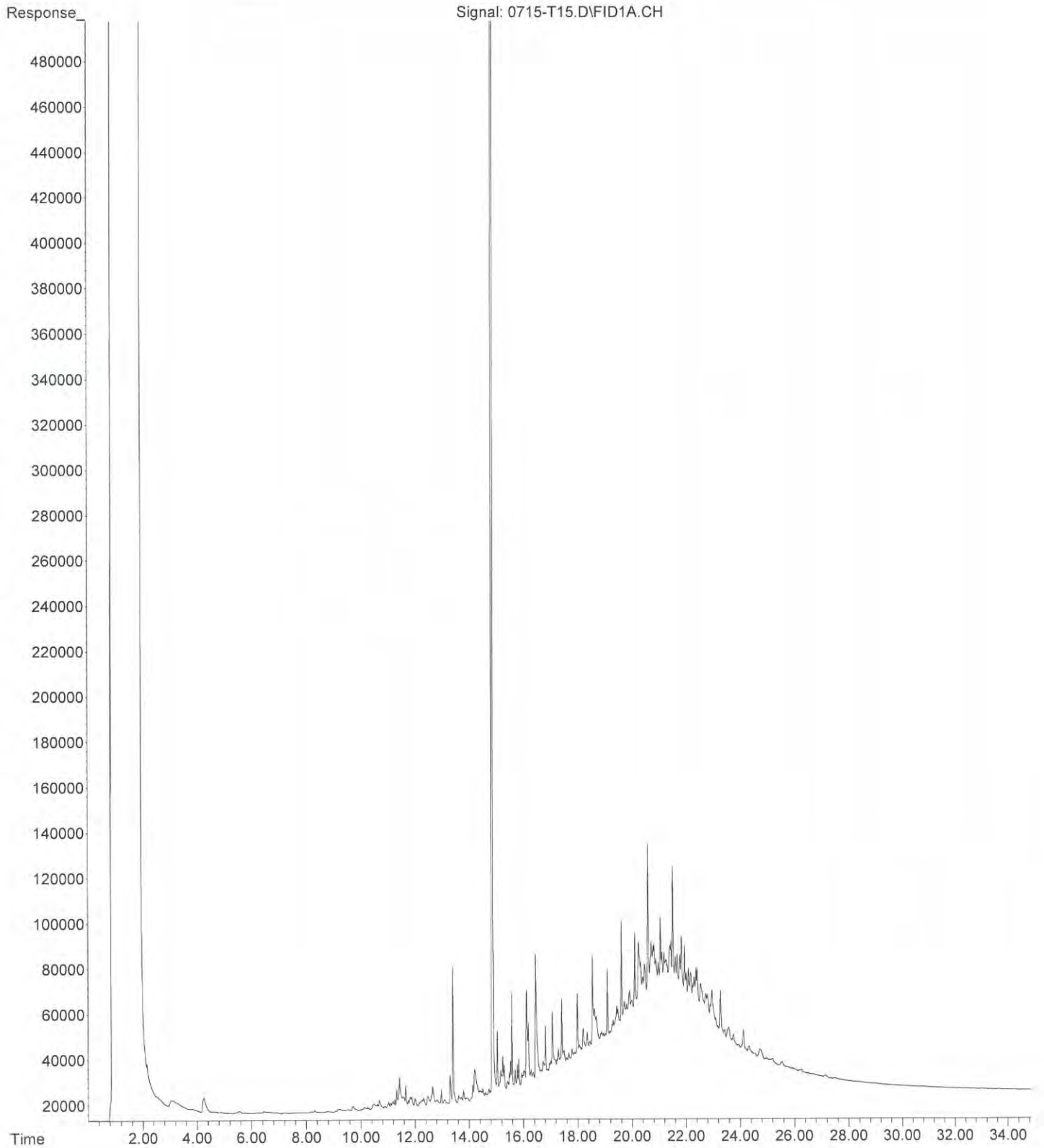
CPAHs

File :X:\DIESELS\Teri\Data\T210716\0715-T23.D  
Operator : JT  
Acquired : 17 Jul 2021 5:06 using AcqMethod T210205F.M  
Instrument : Teri  
Sample Name: 07-095-01  
Misc Info :  
Vial Number: 23





File :X:\DIESELS\Teri\Data\T210716\0715-T15.D  
Operator : JT  
Acquired : 16 Jul 2021 23:26 using AcqMethod T210205F.M  
Instrument : Teri  
Sample Name: 07-095-02  
Misc Info :  
Vial Number: 15







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

July 23, 2021

Suzy Stumpf  
Farallon Consulting  
1809 7th Avenue, Suite 1111  
Seattle, WA 98101

Re: Analytical Data for Project 397-019  
Laboratory Reference No. 2107-157

Dear Suzy:

Enclosed are the analytical results and associated quality control data for samples submitted on July 15, 2021.

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

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

Sincerely,

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

David Baumeister  
Project Manager

Enclosures



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

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

Date of Report: July 23, 2021  
Samples Submitted: July 15, 2021  
Laboratory Reference: 2107-157  
Project: 397-019

### Case Narrative

Samples were collected on July 15, 2021 and received by the laboratory on July 15, 2021. They were maintained at the laboratory at a temperature of 2°C to 6°C.

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

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



Date of Report: July 23, 2021  
 Samples Submitted: July 15, 2021  
 Laboratory Reference: 2107-157  
 Project: 397-019

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

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>M/A5-ESW-25.0-071521</b>					
Laboratory ID:	07-157-01					
Diesel Range Organics	<b>87</b>	33	NWTPH-Dx	7-19-21	7-20-21	N
Lube Oil	<b>340</b>	65	NWTPH-Dx	7-19-21	7-20-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	86	50-150				
<b>Client ID:</b>	<b>M/A5-ESW-22.5-071521</b>					
Laboratory ID:	07-157-02					
Diesel Range Organics	<b>ND</b>	28	NWTPH-Dx	7-19-21	7-20-21	
Lube Oil Range Organics	<b>ND</b>	55	NWTPH-Dx	7-19-21	7-20-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	76	50-150				



Date of Report: July 23, 2021  
 Samples Submitted: July 15, 2021  
 Laboratory Reference: 2107-157  
 Project: 397-019

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

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB0719S4					
Diesel Range Organics	<b>ND</b>	25	NWTPH-Dx	7-19-21	7-20-21	
Lube Oil Range Organics	<b>ND</b>	50	NWTPH-Dx	7-19-21	7-20-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	97	50-150				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
<b>DUPLICATE</b>								
Laboratory ID:	07-157-01							
	ORIG	DUP						
Diesel Range Organics	<b>66.7</b>	<b>59.7</b>	NA	NA	NA	NA	11	NA N
Lube Oil	<b>257</b>	<b>246</b>	NA	NA	NA	NA	4	NA
<i>Surrogate:</i>								
<i>o-Terphenyl</i>				86	84	50-150		



Date of Report: July 23, 2021  
 Samples Submitted: July 15, 2021  
 Laboratory Reference: 2107-157  
 Project: 397-019

**cPAHs EPA 8270E/SIM**

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>M/A5-ESW-25.0-071521</b>					
Laboratory ID:	07-157-01					
Benzo[a]anthracene	<b>0.19</b>	0.0087	EPA 8270E/SIM	7-16-21	7-16-21	
Chrysene	<b>0.20</b>	0.0087	EPA 8270E/SIM	7-16-21	7-16-21	
Benzo[b]fluoranthene	<b>0.22</b>	0.0087	EPA 8270E/SIM	7-16-21	7-16-21	
Benzo(j,k)fluoranthene	<b>0.063</b>	0.0087	EPA 8270E/SIM	7-16-21	7-16-21	
Benzo[a]pyrene	<b>0.23</b>	0.0087	EPA 8270E/SIM	7-16-21	7-16-21	
Indeno(1,2,3-c,d)pyrene	<b>0.13</b>	0.0087	EPA 8270E/SIM	7-16-21	7-16-21	
Dibenz[a,h]anthracene	<b>0.015</b>	0.0087	EPA 8270E/SIM	7-16-21	7-16-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>86</i>	<i>41 - 114</i>				
<i>Pyrene-d10</i>	<i>82</i>	<i>39 - 115</i>				
<i>Terphenyl-d14</i>	<i>80</i>	<i>44 - 125</i>				

<b>Client ID:</b>	<b>M/A5-ESW-22.5-071521</b>					
Laboratory ID:	07-157-02					
Benzo[a]anthracene	<b>ND</b>	0.0073	EPA 8270E/SIM	7-16-21	7-16-21	
Chrysene	<b>ND</b>	0.0073	EPA 8270E/SIM	7-16-21	7-16-21	
Benzo[b]fluoranthene	<b>ND</b>	0.0073	EPA 8270E/SIM	7-16-21	7-16-21	
Benzo(j,k)fluoranthene	<b>ND</b>	0.0073	EPA 8270E/SIM	7-16-21	7-16-21	
Benzo[a]pyrene	<b>ND</b>	0.0073	EPA 8270E/SIM	7-16-21	7-16-21	
Indeno(1,2,3-c,d)pyrene	<b>ND</b>	0.0073	EPA 8270E/SIM	7-16-21	7-16-21	
Dibenz[a,h]anthracene	<b>ND</b>	0.0073	EPA 8270E/SIM	7-16-21	7-16-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>86</i>	<i>41 - 114</i>				
<i>Pyrene-d10</i>	<i>85</i>	<i>39 - 115</i>				
<i>Terphenyl-d14</i>	<i>82</i>	<i>44 - 125</i>				



Date of Report: July 23, 2021  
 Samples Submitted: July 15, 2021  
 Laboratory Reference: 2107-157  
 Project: 397-019

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

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB0716S1					
Benzo[a]anthracene	ND	0.0067	EPA 8270E/SIM	7-16-21	7-16-21	
Chrysene	ND	0.0067	EPA 8270E/SIM	7-16-21	7-16-21	
Benzo[b]fluoranthene	ND	0.0067	EPA 8270E/SIM	7-16-21	7-16-21	
Benzo(j,k)fluoranthene	ND	0.0067	EPA 8270E/SIM	7-16-21	7-16-21	
Benzo[a]pyrene	ND	0.0067	EPA 8270E/SIM	7-16-21	7-16-21	
Indeno(1,2,3-c,d)pyrene	ND	0.0067	EPA 8270E/SIM	7-16-21	7-16-21	
Dibenz[a,h]anthracene	ND	0.0067	EPA 8270E/SIM	7-16-21	7-16-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	93	41 - 114				
<i>Pyrene-d10</i>	89	39 - 115				
<i>Terphenyl-d14</i>	90	44 - 125				

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
<b>SPIKE BLANKS</b>										
Laboratory ID:	SB0716S1									
	SB	SBD	SB	SBD	SB	SBD				
Benzo[a]anthracene	<b>0.0787</b>	<b>0.0756</b>	0.0833	0.0833	94	91	64 - 138	4	15	
Chrysene	<b>0.0903</b>	<b>0.0848</b>	0.0833	0.0833	108	102	63 - 128	6	15	
Benzo[b]fluoranthene	<b>0.0910</b>	<b>0.0880</b>	0.0833	0.0833	109	106	62 - 129	3	15	
Benzo(j,k)fluoranthene	<b>0.0811</b>	<b>0.0752</b>	0.0833	0.0833	97	90	59 - 134	8	16	
Benzo[a]pyrene	<b>0.0896</b>	<b>0.0865</b>	0.0833	0.0833	108	104	63 - 132	4	15	
Indeno(1,2,3-c,d)pyrene	<b>0.0808</b>	<b>0.0818</b>	0.0833	0.0833	97	98	58 - 132	1	15	
Dibenz[a,h]anthracene	<b>0.0809</b>	<b>0.0806</b>	0.0833	0.0833	97	97	60 - 130	0	15	
<i>Surrogate:</i>										
<i>2-Fluorobiphenyl</i>					97	92	41 - 114			
<i>Pyrene-d10</i>					94	86	39 - 115			
<i>Terphenyl-d14</i>					92	91	44 - 125			



Date of Report: July 23, 2021  
Samples Submitted: July 15, 2021  
Laboratory Reference: 2107-157  
Project: 397-019

**% MOISTURE**

<b>Client ID</b>	<b>Lab ID</b>	<b>% Moisture</b>	<b>Date Analyzed</b>
M/A5-ESW-25.0-071521	07-157-01	24	7-16-21
M/A5-ESW-22.5-071521	07-157-02	9	7-16-21







### 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.
  - Y1 - Negative effects of the matrix from this sample on the instrument caused values for this analyte in the bracketing continuing calibration verification standard (CCVs) to be outside of 20% acceptance criteria. Because of this, quantitation limits and sample concentrations should be considered estimates.
  - Z -
- ND - Not Detected at PQL  
 PQL - Practical Quantitation Limit  
 RPD - Relative Percent Difference





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

# Chain of Custody

Turnaround Request  
(in working days)

(Check One)

- Same Day     1 Day  
 2 Days     3 Days  
 Standard (7 Days)

\_\_\_\_\_ (other)

Laboratory Number: **07-157**

Company: Fenallen  
 Project Number: 397-G19  
 Project Name: Block 38 West  
 Project Manager: Suzzy Stumpf  
 Sampled by: Greg Peters

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix
1	M/A5-ESW-250-071521	7/15/21	1206	Soil
2	M/A5-ESW-22.5-071521	7/15/21	1205	Soil

Number of Containers

Method	1	2
NWTPH-HCID		
NWTPH-Gx/BTEX		
NWTPH-Gx		
NWTPH-Dx ( <input type="checkbox"/> Acid / SG Clean-up)	X	X
Volatiles 8260D		
Halogenated Volatiles 8260D		
EDB EPA 8011 (Waters Only)		
Semivolatiles 8270E/SIM (with low-level PAHs)		
PAHs 8270E/SIM (low-level)		
PCBs 8082A		
Organochlorine Pesticides 8081B		
Organophosphorus Pesticides 8270E/SIM		
Chlorinated Acid Herbicides 8151A		
Total RCRA Metals		
Total MTCA Metals		
TCLP Metals		
HEM (oil and grease) 1664A		
CPAHs	X	X
% Moisture	X	X

Signature	Company	Date	Time	Comments/Special Instructions
	Fenallen	7/15/21	1424	
	OST	7/15/21	1424	

Relinquished  
 Received  
 Relinquished  
 Received  
 Relinquished  
 Received  
 Relinquished  
 Received  
 Reviewed/Date

Reviewed/Date

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



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

July 26, 2021

Suzy Stumpf  
Farallon Consulting  
1809 7th Avenue, Suite 1111  
Seattle, WA 98101

Re: Analytical Data for Project 397-019  
Laboratory Reference No. 2107-191

Dear Suzy:

Enclosed are the analytical results and associated quality control data for samples submitted on July 20, 2021.

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



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

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

Date of Report: July 26, 2021  
Samples Submitted: July 20, 2021  
Laboratory Reference: 2107-191  
Project: 397-019

### Case Narrative

Samples were collected on July 20, 2021 and received by the laboratory on July 20, 2021. They were maintained at the laboratory at a temperature of 2°C to 6°C.

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

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



Date of Report: July 26, 2021  
 Samples Submitted: July 20, 2021  
 Laboratory Reference: 2107-191  
 Project: 397-019

**PAHs EPA 8270E/SIM**

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>N/A5-ESW-28.0-072021</b>					
Laboratory ID:	07-191-01					
Benzo[a]anthracene	<b>1.2</b>	0.016	EPA 8270E/SIM	7-21-21	7-24-21	
Chrysene	<b>1.4</b>	0.016	EPA 8270E/SIM	7-21-21	7-24-21	
Benzo[b]fluoranthene	<b>1.5</b>	0.016	EPA 8270E/SIM	7-21-21	7-24-21	
Benzo(j,k)fluoranthene	<b>0.36</b>	0.016	EPA 8270E/SIM	7-21-21	7-24-21	
Benzo[a]pyrene	<b>1.2</b>	0.016	EPA 8270E/SIM	7-21-21	7-24-21	
Indeno(1,2,3-c,d)pyrene	<b>0.88</b>	0.016	EPA 8270E/SIM	7-21-21	7-24-21	
Dibenz[a,h]anthracene	<b>0.15</b>	0.016	EPA 8270E/SIM	7-21-21	7-24-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>77</i>	<i>41 - 114</i>				
<i>Pyrene-d10</i>	<i>75</i>	<i>39 - 115</i>				
<i>Terphenyl-d14</i>	<i>82</i>	<i>44 - 125</i>				



Date of Report: July 26, 2021  
 Samples Submitted: July 20, 2021  
 Laboratory Reference: 2107-191  
 Project: 397-019

**PAHs EPA 8270E/SIM**

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>N/A5-ESW-26.0-072021</b>					
Laboratory ID:	07-191-02					
Benzo[a]anthracene	<b>0.068</b>	0.0083	EPA 8270E/SIM	7-21-21	7-24-21	
Chrysene	<b>0.087</b>	0.0083	EPA 8270E/SIM	7-21-21	7-24-21	
Benzo[b]fluoranthene	<b>0.098</b>	0.0083	EPA 8270E/SIM	7-21-21	7-24-21	
Benzo(j,k)fluoranthene	<b>0.034</b>	0.0083	EPA 8270E/SIM	7-21-21	7-24-21	
Benzo[a]pyrene	<b>0.087</b>	0.0083	EPA 8270E/SIM	7-21-21	7-24-21	
Indeno(1,2,3-c,d)pyrene	<b>0.065</b>	0.0083	EPA 8270E/SIM	7-21-21	7-24-21	
Dibenz[a,h]anthracene	<b>0.016</b>	0.0083	EPA 8270E/SIM	7-21-21	7-24-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>81</i>	<i>41 - 114</i>				
<i>Pyrene-d10</i>	<i>91</i>	<i>39 - 115</i>				
<i>Terphenyl-d14</i>	<i>96</i>	<i>44 - 125</i>				



Date of Report: July 26, 2021  
 Samples Submitted: July 20, 2021  
 Laboratory Reference: 2107-191  
 Project: 397-019

**PAHs EPA 8270E/SIM**

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>N/A5-NSW-28.0-072021</b>					
Laboratory ID:	07-191-03					
Benzo[a]anthracene	<b>0.33</b>	0.0085	EPA 8270E/SIM	7-21-21	7-24-21	
Chrysene	<b>0.36</b>	0.0085	EPA 8270E/SIM	7-21-21	7-24-21	
Benzo[b]fluoranthene	<b>0.38</b>	0.0085	EPA 8270E/SIM	7-21-21	7-24-21	
Benzo(j,k)fluoranthene	<b>0.15</b>	0.0085	EPA 8270E/SIM	7-21-21	7-24-21	
Benzo[a]pyrene	<b>0.41</b>	0.0085	EPA 8270E/SIM	7-21-21	7-24-21	
Indeno(1,2,3-c,d)pyrene	<b>0.25</b>	0.0085	EPA 8270E/SIM	7-21-21	7-24-21	
Dibenz[a,h]anthracene	<b>0.048</b>	0.0085	EPA 8270E/SIM	7-21-21	7-24-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>87</i>	<i>41 - 114</i>				
<i>Pyrene-d10</i>	<i>93</i>	<i>39 - 115</i>				
<i>Terphenyl-d14</i>	<i>103</i>	<i>44 - 125</i>				





Date of Report: July 26, 2021  
 Samples Submitted: July 20, 2021  
 Laboratory Reference: 2107-191  
 Project: 397-019

**PAHs EPA 8270E/SIM**

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>N/A5-NSW-26.0-072021</b>					
Laboratory ID:	07-191-04					
Benzo[a]anthracene	<b>0.010</b>	0.0074	EPA 8270E/SIM	7-21-21	7-22-21	
Chrysene	<b>0.013</b>	0.0074	EPA 8270E/SIM	7-21-21	7-22-21	
Benzo[b]fluoranthene	<b>0.014</b>	0.0074	EPA 8270E/SIM	7-21-21	7-22-21	
Benzo(j,k)fluoranthene	<b>ND</b>	0.0074	EPA 8270E/SIM	7-21-21	7-22-21	
Benzo[a]pyrene	<b>0.011</b>	0.0074	EPA 8270E/SIM	7-21-21	7-22-21	
Indeno(1,2,3-c,d)pyrene	<b>0.0075</b>	0.0074	EPA 8270E/SIM	7-21-21	7-22-21	
Dibenz[a,h]anthracene	<b>ND</b>	0.0074	EPA 8270E/SIM	7-21-21	7-22-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>85</i>	<i>41 - 114</i>				
<i>Pyrene-d10</i>	<i>110</i>	<i>39 - 115</i>				
<i>Terphenyl-d14</i>	<i>117</i>	<i>44 - 125</i>				



Date of Report: July 26, 2021  
 Samples Submitted: July 20, 2021  
 Laboratory Reference: 2107-191  
 Project: 397-019

**PAHs EPA 8270E/SIM**

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>N/A5-B-25.0-072021</b>					
Laboratory ID:	07-191-05					
Benzo[a]anthracene	ND	0.0073	EPA 8270E/SIM	7-21-21	7-22-21	
Chrysene	ND	0.0073	EPA 8270E/SIM	7-21-21	7-22-21	
Benzo[b]fluoranthene	ND	0.0073	EPA 8270E/SIM	7-21-21	7-22-21	
Benzo(j,k)fluoranthene	ND	0.0073	EPA 8270E/SIM	7-21-21	7-22-21	
Benzo[a]pyrene	ND	0.0073	EPA 8270E/SIM	7-21-21	7-22-21	
Indeno(1,2,3-c,d)pyrene	ND	0.0073	EPA 8270E/SIM	7-21-21	7-22-21	
Dibenz[a,h]anthracene	ND	0.0073	EPA 8270E/SIM	7-21-21	7-22-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	95	41 - 114				
<i>Pyrene-d10</i>	112	39 - 115				
<i>Terphenyl-d14</i>	115	44 - 125				



Date of Report: July 26, 2021  
 Samples Submitted: July 20, 2021  
 Laboratory Reference: 2107-191  
 Project: 397-019

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

Matrix: Soil  
 Units: mg/Kg

<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>Method</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Flags</b>
<b>METHOD BLANK</b>						
Laboratory ID:	MB0721S1					
Benzo[a]anthracene	ND	0.0067	EPA 8270E/SIM	7-21-21	7-23-21	
Chrysene	ND	0.0067	EPA 8270E/SIM	7-21-21	7-23-21	
Benzo[b]fluoranthene	ND	0.0067	EPA 8270E/SIM	7-21-21	7-23-21	
Benzo(j,k)fluoranthene	ND	0.0067	EPA 8270E/SIM	7-21-21	7-23-21	
Benzo[a]pyrene	ND	0.0067	EPA 8270E/SIM	7-21-21	7-23-21	
Indeno(1,2,3-c,d)pyrene	ND	0.0067	EPA 8270E/SIM	7-21-21	7-23-21	
Dibenz[a,h]anthracene	ND	0.0067	EPA 8270E/SIM	7-21-21	7-23-21	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>100</i>	<i>41 - 114</i>				
<i>Pyrene-d10</i>	<i>104</i>	<i>39 - 115</i>				
<i>Terphenyl-d14</i>	<i>106</i>	<i>44 - 125</i>				



Date of Report: July 26, 2021  
 Samples Submitted: July 20, 2021  
 Laboratory Reference: 2107-191  
 Project: 397-019

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

Matrix: Soil  
 Units: mg/Kg

<b>Analyte</b>	<b>Result</b>		<b>Spike Level</b>		<b>Source Result</b>	<b>Percent Recovery</b>		<b>Recovery Limits</b>	<b>RPD</b>	<b>RPD Limit</b>	<b>Flags</b>
<b>MATRIX SPIKES</b>											
Laboratory ID:	07-179-01										
	MS	MSD	MS	MSD		MS	MSD				
Benzo[a]anthracene	<b>0.191</b>	<b>0.179</b>	0.167	0.167	ND	114	107	49 - 139	6	27	
Chrysene	<b>0.195</b>	<b>0.184</b>	0.167	0.167	ND	117	110	47 - 127	6	28	
Benzo[b]fluoranthene	<b>0.196</b>	<b>0.186</b>	0.167	0.167	ND	117	111	46 - 129	5	31	
Benzo(j,k)fluoranthene	<b>0.209</b>	<b>0.201</b>	0.167	0.167	ND	125	120	46 - 128	4	25	
Benzo[a]pyrene	<b>0.202</b>	<b>0.193</b>	0.167	0.167	ND	121	116	47 - 134	5	27	
Indeno(1,2,3-c,d)pyrene	<b>0.205</b>	<b>0.195</b>	0.167	0.167	ND	123	117	42 - 133	5	25	
Dibenz[a,h]anthracene	<b>0.207</b>	<b>0.199</b>	0.167	0.167	ND	124	119	46 - 129	4	24	
<i>Surrogate:</i>											
2-Fluorobiphenyl						77	80	41 - 114			
Pyrene-d10						100	94	39 - 115			
Terphenyl-d14						112	106	44 - 125			



Date of Report: July 26, 2021  
Samples Submitted: July 20, 2021  
Laboratory Reference: 2107-191  
Project: 397-019

**% MOISTURE**

<b>Client ID</b>	<b>Lab ID</b>	<b>% Moisture</b>	<b>Date Analyzed</b>
N/A5-ESW-28.0-072021	07-191-01	19	7-21-21
N/A5-ESW-26.0-072021	07-191-02	19	7-21-21
N/A5-NSW-28.0-072021	07-191-03	21	7-21-21
N/A5-NSW-26.0-072021	07-191-04	10	7-21-21
N/A5-B-25.0-072021	07-191-05	9	7-21-21





### 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.
  - Y1 - Negative effects of the matrix from this sample on the instrument caused values for this analyte in the bracketing continuing calibration verification standard (CCVs) to be outside of 20% acceptance criteria. Because of this, quantitation limits and sample concentrations should be considered estimates.
  - Z -
- ND - Not Detected at PQL  
 PQL - Practical Quantitation Limit  
 RPD - Relative Percent Difference





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# Chain of Custody

Turnaround Request  
 (in working days)  
 (Check One)

- Same Day  1 Day
- 2 Days  3 Days
- Standard (7 Days)
- \_\_\_\_\_ (other)

Laboratory Number: **07-191**

Company: *Fossilton*  
 Project Number: *377-019*  
 Project Name: *Block 38 West*  
 Project Manager: *Suzy Stumpf*  
 Sampled by: *Greg Peters*

Lab ID Sample Identification

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers
1	N/A5-ESW-28.0-072021	7/20/21	851	Soil	2
2	N/A5-ESW-26.0-072021	7/20/21	900	Soil	2
3	N/A5-NSW-28.0-072021	7/20/21	910	Soil	2
4	N/A5-NSW-26.0-072021	7/20/21	920	Soil	2
5	N/A5-B-25.0-072021	7/20/21	935	Soil	2

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

Signature	Company	Date	Time	Comments/Special Instructions
<i>[Signature]</i>	<i>Fossilton</i>	<i>7/20/21</i>	<i>1416</i>	
<i>[Signature]</i>	<i>OSE</i>	<i>7/20/21</i>	<i>1416</i>	

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





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February 18, 2022

Suzy Stumpf  
Farallon Consulting  
1809 7th Avenue, Suite 1111  
Seattle, WA 98101

Re: Analytical Data for Project 397-019  
Laboratory Reference No. 2202-076B

Dear Suzy:

Enclosed are the analytical results and associated quality control data for samples submitted on February 7, 2022.

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

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

Sincerely,

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

David Baumeister  
Project Manager

Enclosures



Date of Report: February 18, 2022  
Samples Submitted: February 7, 2022  
Laboratory Reference: 2202-076B  
Project: 397-019

### Case Narrative

Samples were collected on February 5, 2022 and received by the laboratory on February 7, 2022. They were maintained at the laboratory at a temperature of 2°C to 6°C.

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

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



Date of Report: February 18, 2022  
 Samples Submitted: February 7, 2022  
 Laboratory Reference: 2202-076B  
 Project: 397-019

### SEMIVOLATILE ORGANICS EPA 8270E/SIM

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FB-21-5.0</b>					
Laboratory ID:	02-076-07					
Benzo[a]anthracene	ND	0.0077	EPA 8270E/SIM	2-17-22	2-18-22	
Chrysene	ND	0.0077	EPA 8270E/SIM	2-17-22	2-18-22	
Benzo[b]fluoranthene	ND	0.0077	EPA 8270E/SIM	2-17-22	2-18-22	
Benzo(j,k)fluoranthene	ND	0.0077	EPA 8270E/SIM	2-17-22	2-18-22	
Benzo[a]pyrene	ND	0.0077	EPA 8270E/SIM	2-17-22	2-18-22	
Indeno(1,2,3-c,d)pyrene	ND	0.0077	EPA 8270E/SIM	2-17-22	2-18-22	
Dibenz[a,h]anthracene	ND	0.0077	EPA 8270E/SIM	2-17-22	2-18-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>79</i>	<i>41 - 114</i>				
<i>Pyrene-d10</i>	<i>94</i>	<i>39 - 115</i>				
<i>Terphenyl-d14</i>	<i>94</i>	<i>44 - 125</i>				



Date of Report: February 18, 2022  
 Samples Submitted: February 7, 2022  
 Laboratory Reference: 2202-076B  
 Project: 397-019

**SEMIVOLATILE ORGANICS EPA 8270E/SIM  
 QUALITY CONTROL**

Matrix: Soil  
 Units: mg/Kg

<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>Method</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Flags</b>
<b>METHOD BLANK</b>						
Laboratory ID:	MB0217S1					
Benzo[a]anthracene	ND	0.0067	EPA 8270E/SIM	2-17-22	2-17-22	
Chrysene	ND	0.0067	EPA 8270E/SIM	2-17-22	2-17-22	
Benzo[b]fluoranthene	ND	0.0067	EPA 8270E/SIM	2-17-22	2-17-22	
Benzo(j,k)fluoranthene	ND	0.0067	EPA 8270E/SIM	2-17-22	2-17-22	
Benzo[a]pyrene	ND	0.0067	EPA 8270E/SIM	2-17-22	2-17-22	
Indeno(1,2,3-c,d)pyrene	ND	0.0067	EPA 8270E/SIM	2-17-22	2-17-22	
Dibenz[a,h]anthracene	ND	0.0067	EPA 8270E/SIM	2-17-22	2-17-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	84	41 - 114				
<i>Pyrene-d10</i>	97	39 - 115				
<i>Terphenyl-d14</i>	95	44 - 125				

<b>Analyte</b>	<b>Result</b>		<b>Spike Level</b>		<b>Percent Recovery</b>		<b>Recovery Limits</b>	<b>RPD</b>	<b>RPD Limit</b>	<b>Flags</b>
<b>SPIKE BLANKS</b>										
Laboratory ID:	SB0217S1									
	SB	SBD	SB	SBD	SB	SBD				
Benzo[a]anthracene	0.0986	0.0954	0.0833	0.0833	118	115	64 - 138	3	15	
Chrysene	0.0962	0.0962	0.0833	0.0833	115	115	63 - 128	0	15	
Benzo[b]fluoranthene	0.0918	0.0881	0.0833	0.0833	110	106	62 - 129	4	15	
Benzo(j,k)fluoranthene	0.0882	0.0882	0.0833	0.0833	106	106	59 - 134	0	16	
Benzo[a]pyrene	0.0918	0.0890	0.0833	0.0833	110	107	63 - 132	3	15	
Indeno(1,2,3-c,d)pyrene	0.0832	0.0802	0.0833	0.0833	100	96	58 - 132	4	15	
Dibenz[a,h]anthracene	0.0888	0.0864	0.0833	0.0833	107	104	60 - 130	3	15	
<i>Surrogate:</i>										
<i>2-Fluorobiphenyl</i>					83	80	41 - 114			
<i>Pyrene-d10</i>					99	96	39 - 115			
<i>Terphenyl-d14</i>					100	98	44 - 125			



Date of Report: February 18, 2022  
Samples Submitted: February 7, 2022  
Laboratory Reference: 2202-076B  
Project: 397-019

**% MOISTURE**

<b>Client ID</b>	<b>Lab ID</b>	<b>% Moisture</b>	<b>Date Analyzed</b>
FB-21-5.0	02-076-07	13	2-17-22





### 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.
  - Y1 - Negative effects of the matrix from this sample on the instrument caused values for this analyte in the bracketing continuing calibration verification standard (CCVs) to be outside of 20% acceptance criteria. Because of this, quantitation limits and sample concentrations should be considered estimates.
  - Z -
- ND - Not Detected at PQL  
 PQL - Practical Quantitation Limit  
 RPD - Relative Percent Difference





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# Chain of Custody

**Turnaround Request**  
(in working days)

(Check One)

Same Day  1 Day

2 Days  3 Days

Standard (7 Days)

\_\_\_\_\_ (other)

**Laboratory Number: 02-076**

Company: Favalden  
 Project Number: 397-019  
 Project Name: Block 38 West  
 Project Manager: Sally Stumpf  
 Sampled by: B. Reiss

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers
1	FB-20-12.0	2/4/22	9:00	Soil	5
2	FB-20-15.0		9:10		5
3	FB-20-17.0		9:25		5
4	FB-20-22.0		9:30		5
5	FB-20-25.0		9:40		5
6	FB-21-3.0		10:45		1
7	FB-21-5.0		1:00		1
8	FB-21-10.0		1:05		1
9	FMW-154-5.0		12:20		5
10	FMW-154-10.0		12:30		5

Method	2/4/22	9:00	Soil	5
NWTPH-HCID				
NWTPH-Gx/BTEX (8021 <input type="checkbox"/> 8260 <input type="checkbox"/> )				
NWTPH-Gx				
NWTPH-Dx (Acid / SG Clean-up <input type="checkbox"/> )		X		
Volatiles 8260		X		
Halogenated Volatiles 8260				
EDB EPA 8011 (Waters Only)				
Semivolatiles 8270/SIM (with low-level PAHs)				
PAHs 8270/SIM (low-level)				
PCBs 8082				
Organochlorine Pesticides 8081				
Organophosphorus Pesticides 8270/SIM				
Chlorinated Acid Herbicides 8151				
Total RCRA Metals				
Total MTCA Metals				
TCLP Metals				
HEM (oil and grease) 1664				
Hold				
CPAHs				
Naphthalenes				
% Moisture				

Relinquished	Signature	Company	Date	Time	Comments/Special Instructions
Relinquished		Favalden	2/6/22	13:30	<input checked="" type="checkbox"/> Added 2/17/22 DB (STA)
Received	<u>Yes</u>	<u>Sally Stumpf</u>	2/7/22	08:37	
Relinquished			2/7/22	10:15	
Received	<u>Nick Weber</u>	<u>OSF</u>	2/17/22	10:15	
Relinquished					
Received					
Reviewed/Date					

Data Package: Standard  Level III  Level IV

Chromatograms with final report  Electronic Data Deliverables (EDDs)





# MVA Onsite Environmental Inc.

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## Chain of Custody

### Turnaround Request (in working days)

(Check One)

- Same Day
- 1 Day
- 2 Days
- 3 Days
- Standard (7 Days)
- \_\_\_\_\_ (other)

### Laboratory Number: 02-076

Company: Forevald

Project Number: 307019

Project Name: Box 38 West

Project Manager: Suzzy Stumpf

Sampled by: G. Peters

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers
11	FMW-154-15.0	2/5/22	1240	Soil	5
12	FMW-155-5.0		1300		
13	FMW-155-10.0		1310		
14	FMW-155-15.0		1315		
15	FMW-156-10.0		1400		
16	FMW-156-15.0		1405		
17	FMW-156-20.0		1410		
18	FMW-157-30.0		1440		
19	FMW-157-35.0		1450		
20	FMW-157-40.0		1500		

Analysis	Result
NWTPH-HCID	
NWTPH-Gx/BTEX (8021 <input type="checkbox"/> 8260 <input type="checkbox"/> )	
NWTPH-Gx	
NWTPH-Dx (Acid / SG Clean-up <input type="checkbox"/> )	
Volatiles 8260	
Halogenated Volatiles 8260	
EDB EPA 8011 (Waters Only)	
Semivolatiles 8270/SIM (with low-level PAHs)	
PAHs 8270/SIM (low-level)	
PCBs 8082	
Organochlorine Pesticides 8081	
Organophosphorus Pesticides 8270/SIM	
Chlorinated Acid Herbicides 8151	
Total RCRA Metals	
Total MTCA Metals	
TCLP Metals	
HEM (oil and grease) 1664	
	X Hold
% Moisture	

Signature	Company	Date	Time	Comments/Special Instructions
<u>[Signature]</u>	<u>Forevald</u>	<u>2/6/22</u>	<u>1330</u>	
<u>[Signature]</u>	<u>Suzzy Stumpf</u>	<u>2/7/22</u>	<u>1015</u>	
<u>[Signature]</u>	<u>OSB</u>	<u>2/7/22</u>	<u>1015</u>	

Relinquished

Received

Relinquished

Received

Relinquished

Received

Relinquished

Reviewed/Date

Reviewed/Date

Data Package: Standard  Level III  Level IV

Chromatograms with final report  Electronic Data Deliverables (EDDs)

**APPENDIX C**  
**TERRESTRIAL ECOLOGICAL EVALUATION**

INTERIM ACTION REPORT  
Alley Area of Block 38 West Site  
Between Republican Street and Mercer Street  
Seattle, Washington

Farallon PN: 397-019



# Voluntary Cleanup Program

## Washington State Department of Ecology Toxics Cleanup Program

### TERRESTRIAL ECOLOGICAL EVALUATION FORM

Under the Model Toxics Control Act (MTCA), a terrestrial ecological evaluation is necessary if hazardous substances are released into the soils at a Site. In the event of such a release, you must take one of the following three actions as part of your investigation and cleanup of the Site:

1. Document an exclusion from further evaluation using the criteria in WAC 173-340-7491.
2. Conduct a simplified evaluation as set forth in WAC 173-340-7492.
3. Conduct a site-specific evaluation as set forth in WAC 173-340-7493.

When requesting a written opinion under the Voluntary Cleanup Program (VCP), you must complete this form and submit it to the Department of Ecology (Ecology). The form documents the type and results of your evaluation.

**Completion of this form is not sufficient to document your evaluation. You still need to document your analysis and the basis for your conclusion in your cleanup plan or report.**

If you have questions about how to conduct a terrestrial ecological evaluation, please contact the Ecology site manager assigned to your Site. For additional guidance, please refer to <https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Terrestrial-ecological-evaluation>.

#### Step 1: IDENTIFY HAZARDOUS WASTE SITE

Please identify below the hazardous waste site for which you are documenting an evaluation.

Facility/Site Name: Block 38 West

Facility/Site Address: 520 Westlake Ave N, Seattle, WA 98109

Facility/Site No: 62773

VCP Project No.: N/A

#### Step 2: IDENTIFY EVALUATOR

Please identify below the person who conducted the evaluation and their contact information.

Name: Suzy Stumpf

Title: Principal Engineer

Organization: Farallon Consulting

Mailing address: 1809 7<sup>th</sup> Ave Ste 1111

City: Seattle

State: WA

Zip code: 98101

Phone: (425) 295-0800

Fax: (425) 295-0850

E-mail: sstumpf@farallonconsulting.com

### Step 3: DOCUMENT EVALUATION TYPE AND RESULTS

#### A. Exclusion from further evaluation.

##### 1. Does the Site qualify for an exclusion from further evaluation?

- Yes    *If you answered "YES," then answer **Question 2**.*
- No or Unknown    *If you answered "NO" or "UNKNOWN," then skip to **Step 3B** of this form.*

##### 2. What is the basis for the exclusion? Check all that apply. Then skip to **Step 4** of this form.

Point of Compliance: WAC 173-340-7491(1)(a)

- All soil contamination is, or will be,\* at least 15 feet below the surface.
- All soil contamination is, or will be,\* at least 6 feet below the surface (or alternative depth if approved by Ecology), and institutional controls are used to manage remaining contamination.

Barriers to Exposure: WAC 173-340-7491(1)(b)

- All contaminated soil, is or will be,\* covered by physical barriers (such as buildings or paved roads) that prevent exposure to plants and wildlife, and institutional controls are used to manage remaining contamination.

Undeveloped Land: WAC 173-340-7491(1)(c)

- There is less than 0.25 acres of contiguous# undeveloped± land on or within 500 feet of any area of the Site and any of the following chemicals is present: chlorinated dioxins or furans, PCB mixtures, DDT, DDE, DDD, aldrin, chlordane, dieldrin, endosulfan, endrin, heptachlor, heptachlor epoxide, benzene hexachloride, toxaphene, hexachlorobenzene, pentachlorophenol, or pentachlorobenzene.
- For sites not containing any of the chemicals mentioned above, there is less than 1.5 acres of contiguous# undeveloped± land on or within 500 feet of any area of the Site.

Background Concentrations: WAC 173-340-7491(1)(d)

- Concentrations of hazardous substances in soil do not exceed natural background levels as described in WAC 173-340-200 and 173-340-709.

\* An exclusion based on future land use must have a completion date for future development that is acceptable to Ecology.

± "Undeveloped land" is land that is not covered by building, roads, paved areas, or other barriers that would prevent wildlife from feeding on plants, earthworms, insects, or other food in or on the soil.

# "Contiguous" undeveloped land is an area of undeveloped land that is not divided into smaller areas of highways, extensive paving, or similar structures that are likely to reduce the potential use of the overall area by wildlife.

## B. Simplified evaluation.

### 1. Does the Site qualify for a simplified evaluation?

- Yes *If you answered "YES," then answer **Question 2** below.*
- No or Unknown *If you answered "NO" or "UNKNOWN," then skip to **Step 3C** of this form.*

### 2. Did you conduct a simplified evaluation?

- Yes *If you answered "YES," then answer **Question 3** below.*
- No *If you answered "NO," then skip to **Step 3C** of this form.*

### 3. Was further evaluation necessary?

- Yes *If you answered "YES," then answer **Question 4** below.*
- No *If you answered "NO," then answer **Question 5** below.*

### 4. If further evaluation was necessary, what did you do?

- Used the concentrations listed in Table 749-2 as cleanup levels. *If so, then skip to **Step 4** of this form.*
- Conducted a site-specific evaluation. *If so, then skip to **Step 3C** of this form.*

### 5. If no further evaluation was necessary, what was the reason? Check all that apply. Then skip to **Step 4** of this form.

#### Exposure Analysis: WAC 173-340-7492(2)(a)

- Area of soil contamination at the Site is not more than 350 square feet.
- Current or planned land use makes wildlife exposure unlikely. Used Table 749-1.

#### Pathway Analysis: WAC 173-340-7492(2)(b)

- No potential exposure pathways from soil contamination to ecological receptors.

#### Contaminant Analysis: WAC 173-340-7492(2)(c)

- No contaminant listed in Table 749-2 is, or will be, present in the upper 15 feet at concentrations that exceed the values listed in Table 749-2.
- No contaminant listed in Table 749-2 is, or will be, present in the upper 6 feet (or alternative depth if approved by Ecology) at concentrations that exceed the values listed in Table 749-2, and institutional controls are used to manage remaining contamination.
- No contaminant listed in Table 749-2 is, or will be, present in the upper 15 feet at concentrations likely to be toxic or have the potential to bioaccumulate as determined using Ecology-approved bioassays.
- No contaminant listed in Table 749-2 is, or will be, present in the upper 6 feet (or alternative depth if approved by Ecology) at concentrations likely to be toxic or have the potential to bioaccumulate as determined using Ecology-approved bioassays, and institutional controls are used to manage remaining contamination.



**C. Site-specific evaluation.** A site-specific evaluation process consists of two parts: (1) formulating the problem, and (2) selecting the methods for addressing the identified problem. Both steps require consultation with and approval by Ecology. See WAC 173-340-7493(1)(c).

**1. Was there a problem?** See WAC 173-340-7493(2).

- Yes    *If you answered “YES,” then answer **Question 2** below.*
- No    *If you answered “NO,” then identify the reason here and then skip to **Question 5** below:*
- No issues were identified during the problem formulation step.
  - While issues were identified, those issues were addressed by the cleanup actions for protecting human health.

**2. What did you do to resolve the problem?** See WAC 173-340-7493(3).

- Used the concentrations listed in Table 749-3 as cleanup levels. *If so, then skip to **Question 5** below.*
- Used one or more of the methods listed in WAC 173-340-7493(3) to evaluate and address the identified problem. *If so, then answer **Questions 3 and 4** below.*

**3. If you conducted further site-specific evaluations, what methods did you use?**

*Check all that apply. See WAC 173-340-7493(3).*

- Literature surveys.
- Soil bioassays.
- Wildlife exposure model.
- Biomarkers.
- Site-specific field studies.
- Weight of evidence.
- Other methods approved by Ecology. If so, please specify:

**4. What was the result of those evaluations?**

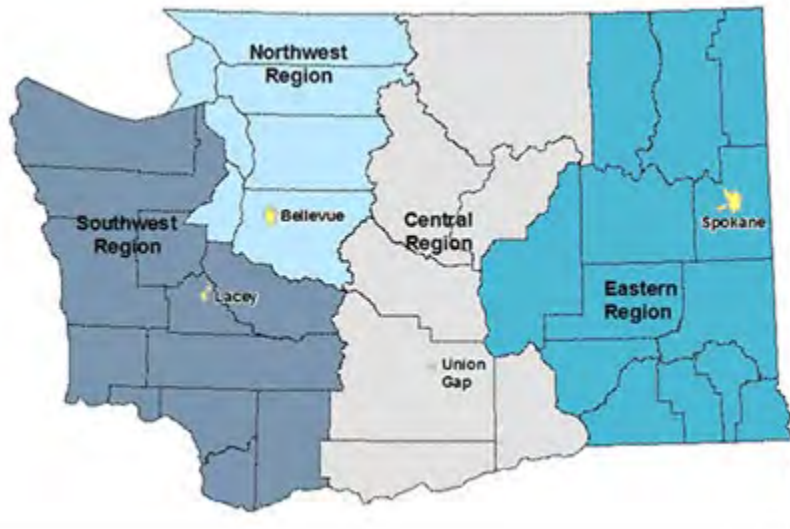
- Confirmed there was no problem.
- Confirmed there was a problem and established site-specific cleanup levels.

**5. Have you already obtained Ecology’s approval of both your problem formulation and problem resolution steps?**

- Yes    If so, please identify the Ecology staff who approved those steps:
- No

## Step 4: SUBMITTAL

Please mail your completed form to the Ecology site manager assigned to your Site. If a site manager has not yet been assigned, please mail your completed form to the Ecology regional office for the County in which your Site is located.



<b>Northwest Region:</b> Attn: VCP Coordinator 3190 160 <sup>th</sup> Ave. SE Bellevue, WA 98008-5452	<b>Central Region:</b> Attn: VCP Coordinator 1250 West Alder St. Union Gap, WA 98903-0009
<b>Southwest Region:</b> Attn: VCP Coordinator P.O. Box 47775 Olympia, WA 98504-7775	<b>Eastern Region:</b> Attn: VCP Coordinator N. 4601 Monroe Spokane WA 99205-1295

If you need this publication in an alternate format, please call the Toxics Cleanup Program at 360-407-7170. People with hearing loss can call 711 for Washington Relay Service. People with a speech disability can call 877-833-6341.





**APPENDIX D**  
**DATA VALIDATION REPORT**

INTERIM ACTION REPORT  
Alley Area of Block 38 West Site  
Between Republican Street and Mercer Street  
Seattle, Washington

Farallon PN: 397-019



**DATA VALIDATION REPORT**

**ALLEY AREA OF BLOCK 38 WEST SITE  
BETWEEN REPUBLICAN STREET AND MERCER STREET  
SEATTLE, WASHINGTON**

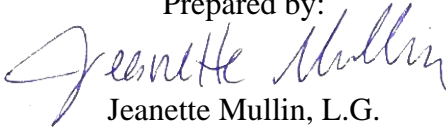
**Agreed Order No. DE 17963  
Facility Site Identification No. 62773  
Cleanup Site Identification No. 15008**

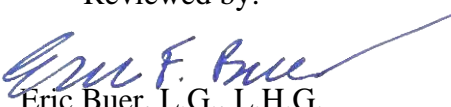
**Submitted by:  
Farallon Consulting, L.L.C.  
975 5<sup>th</sup> Avenue Northwest  
Issaquah, Washington 98027**

**Farallon PN: 397-019**

**For:  
City Investors IX LLC  
505 5<sup>th</sup> Avenue South  
Seattle, Washington 98104**

August 23, 2022

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Table 1 *Overview of Soil Sample Analyses*

Table 2 *Summary of Qualified Data*



## 1.0 INTRODUCTION

This report provides a summary of quality assurance (QA) data validation findings. Data validation was previously performed for most of the data shown in the Block 38 analytical results tables and is reported in two other reports:

- Appendix B of the *Alley Area of Block 38 West Site Interim Action Workplan* (Farallon 2021a); and
- Appendix D of the Agency Review Draft Interim Action Report, Block 38 West Site, 500 through 536 Westlake Avenue North, Seattle, Washington (Farallon 2021).

This report documents the data validation performed for additional soil samples collected in 2021 from the Block 38 alley during the interim action cleanup. Data validation was conducted for the following environmental samples:

Project Name: Alley Area of the Block 38 West Site  
Project No.: 397-019  
Lab Name: OnSite Environmental Inc. (OnSite), Redmond, Washington  
Lab Reference No.: 11 Sample Delivery Groups identified in Table 1  
Matrices: Soil

Table 1 identifies the 11 Sample Delivery Groups (SDGs) analyzed by OnSite, the samples analyzed within each delivery group, the sample matrix, and the analytical methods used to analyze each sample.

This review of project data was performed using the U.S. Environmental Protection Agency's (EPA) National Functional Guidelines for Organic Superfund Methods Data Review (USEPA-540-R-2017-002) dated January 2017, and National Functional Guidelines for Inorganic Superfund Methods Data Review (USEPA-540-R-2017-001) dated January 2017.

This report includes a review of holding times, method blanks, matrix spike and spike blank recoveries, matrix spike duplicate and spike blank duplicate data, duplicates, surrogates, and chain-of-custody records. As shown in Table 1, select samples were analyzed for total petroleum hydrocarbons (TPH) as diesel- and oil-range organics by Northwest Method NWTPH-Dx; TPH as gasoline-range organics by Northwest Method NWTPH-Gx; volatile organic compounds (VOCs)



by EPA Method 8260D; semivolatile organic compounds (SVOCs) by EPA Method 8270E/Selective Ion Monitoring (SIM); and metals by EPA Method 6010D.

## **1.1 OVERALL DATA ASSESSMENT**

All data are of known quality and are acceptable for use. No results were rejected as a result of this data assessment. Data qualified during this validation effort is summarized in Table 2 and discussed in the sections below.

## **1.2 DATA QUALIFIER DEFINITIONS**

Following are definitions of data qualifiers used during data validation:

- J+ (Estimated High Bias): The result is an estimated quantity, and the result may be biased high based on non-conformances identified during data validation.

## **1.3 CHAIN-OF-CUSTODY**

Field chain-of-custody forms were complete. All chain-of-custody forms were signed and dated. No issues with sample receipt conditions were indicated in the Case Narrative section of the laboratory reports.

## **1.4 COMPLETENESS**

Completeness is expressed as the ratio of valid results to the amount of data expected to be obtained under normal conditions. Completeness is determined by assessing the number of samples for which valid results were obtained versus the number of samples that were submitted to the laboratory for analysis. Valid results are results that are determined to be usable during the data validation review process.

The completeness of this data set is 100 percent.





## **2.0 PETROLEUM HYDROCARBON NWTPH-DX QA REVIEW**

### **2.1 TIMELINESS AND PRESERVATION**

The recommended holding time for Northwest Method NWTPH-Dx soil is 14 days to extract and 40 days to analyze after extraction. All samples were extracted and analyzed within holding times.

### **2.2 LABORATORY QUALITY CONTROL SAMPLES**

#### **2.2.1 Quality Control Analysis Frequency**

Method blanks were analyzed at a minimum frequency of 5 percent (or one per batch). Duplicates were analyzed at a rate of 1 duplicate per 10 samples with a minimum of 1 duplicate per SDG. These criteria were met for all delivery groups.

#### **2.2.2 Method Blanks**

No target analytes were detected in the soil method blanks at or exceeding the reporting limits for all delivery groups.

#### **2.2.3 Laboratory Duplicates**

Relative Percent Differences (RPDs) of all analytes were within the laboratory's quality control (QC) limits for all delivery groups. In cases where the RPD was elevated, such as for SDG 2107-084, the duplicate was performed on a non-project sample where heterogeneity and matrix impacts may have been present. No qualification of project samples is needed.

#### **2.2.4 Surrogate Recoveries**

The laboratory used one surrogate spike compound for Method NWTPH-Dx. All surrogate recoveries were within the laboratory's QC limits for all delivery groups except as noted below. The o-terphenyl surrogate spike was not recovered in the following sample due to sample dilution to address high concentrations of target analytes:

- **SDG 2107-084:** Sample I/A5-ESW-20.0-070921

No qualifications of sample results are needed based on the lack of surrogate recovery in this sample.



## **3.0 PETROLEUM HYDROCARBON NWTPH-GX QA REVIEW**

### **3.1 TIMELINESS AND PRESERVATION**

The recommended holding time for Northwest Method NWTPH-Gx soil samples is 14 days. All samples were extracted and analyzed within this period.

### **3.2 LABORATORY QUALITY CONTROL SAMPLES**

#### **3.2.1 Quality Control Analysis Frequency**

Method blanks were analyzed at a frequency of 1 method blank per 10 samples. Duplicates were analyzed at a frequency of 1 per 10 samples. These criteria were met for all delivery groups.

#### **3.2.2 Method Blanks**

No target analytes were detected at or exceeding the reporting limits in the method blanks for all delivery groups.

#### **3.2.3 Laboratory Duplicates, Spike Blanks/Spike Blank Duplicates, and/or Matrix Spikes/Matrix Spike Duplicates**

RPDs of all analytes were within the laboratory's QC limits for all delivery groups.

#### **3.2.4 Surrogate Recoveries**

The laboratory used one surrogate spike compound for Method NWTPH-Gx. All surrogate recoveries were within the laboratory's QC limits for all delivery groups.



## **4.0 VOLATILE ORGANIC COMPOUND 8260D QA REVIEW**

### **4.1 TIMELINESS**

The recommended holding time for EPA Method 8260D is 14 days for preserved soil samples. All samples were extracted and analyzed within this period.

### **4.2 LABORATORY QUALITY CONTROL SAMPLES**

#### **4.2.1 Quality Control Analysis Frequency**

Method blanks were analyzed at a frequency of 1 method blank per 10 samples. Spike blanks/spike blank duplicates were analyzed at a frequency of 1 per 10 samples. These criteria were met for all delivery groups.

#### **4.2.2 Method Blanks**

No target analytes were detected at or exceeding the reporting limits in the method blanks for all delivery groups.

#### **4.2.3 Spike Blanks/Spike Blank Duplicates**

Recoveries and RPDs of all analytes were within the laboratory's QC limits for all delivery groups.

#### **4.2.4 Surrogate Recoveries**

The laboratory used three surrogate spike compounds for EPA Method 8260D. All surrogate recoveries were within the laboratory's QC limits for all delivery groups.



## 5.0 SEMIVOLATILE ORGANIC COMPOUND QA REVIEW

### 5.1 TIMELINESS

The recommended holding time for EPA Method 8270E/SIM soil samples is 14 days to extract and 40 days to analyze after extraction. All samples were extracted and analyzed within this period.

### 5.2 LABORATORY QUALITY CONTROL SAMPLES

#### 5.2.1 Quality Control Analysis Frequency

Method blanks and spike blanks/spike blank duplicates (or matrix spikes/matrix spike duplicates) were analyzed at a minimum frequency of 5 percent (or one per batch). These criteria were met for all delivery groups.

#### 5.2.2 Method Blanks

No target analytes were detected at or exceeding the reporting limits in the method blanks for all delivery groups.

#### 5.2.3 Spike Blanks/Spike Blank Duplicates and/or Matrix Spikes/Matrix Spike Duplicates

Recoveries and RPDs of all analytes were within the laboratory's QC limits for all delivery groups.

#### 5.2.4 Surrogate Recoveries

The laboratory used three surrogate spike compounds for EPA Method 8270E/SIM for soil samples. Surrogate recoveries were within the laboratory's QC limits for all delivery groups except as noted below:

- **SDG 2107-084:** The percent recovery of the surrogate terphenyl-d14 exceeded the upper control limit in soil sample I/A5-ESW-17.5-070921. The analytes associated with this surrogate compound (benzo[a]anthracene, chrysene, benzo[b]fluoranthene, benzo(j,k)fluoranthene, benzo[a]pyrene, indeno[1,2,3-cd]pyrene, and dibenz[a,h]anthracene) were detected in the sample and the results are qualified as estimates with a high bias (J+) as shown in Table 2.



## 6.0 METALS QA REVIEW

### 6.1 TIMELINESS

The recommended holding time for EPA Method 6010D is 6 months for soil samples. All samples were extracted and analyzed within holding times.

### 6.2 LABORATORY QUALITY CONTROL SAMPLES

#### 6.2.1 Quality Control Analysis Frequency

Method blanks, matrix spikes/matrix spike duplicates, and laboratory duplicates were analyzed at a frequency of 5 percent (or one per batch). These criteria were met for all delivery groups.

#### 6.2.2 Method Blanks

No target analytes were detected at or exceeding the reporting limits in the method blanks for all delivery groups.

#### 6.2.3 Matrix Spikes/Matrix Spike Duplicates and Laboratory Duplicates

Recoveries and RPDs of all analytes were within the laboratory's QC limits for all delivery groups except as noted below:

- **SDG 2107-039B:** The laboratory duplicate RPD for lead exceeded the RPD control limit. The laboratory duplicate analysis was conducted on a non-project sample within the batch; the laboratory noted that the original and duplicate results were within five times the quantitation limit. EPA guidance indicates that when the original sample and duplicate sample results are less than five times the quantitation limit, the absolute difference between the original sample result and duplicate sample result should be calculated and compared to the quantitation limit. If the difference is less than the quantitation limit, no qualification is needed. No qualifications of project sample results are needed for two reasons: 1) the duplicate analysis was performed on a non-project sample and results are not applicable to project samples, and 2) the absolute difference between the original and duplicate sample results was less than the practical quantitation limit.



## 7.0 REFERENCES

Farallon Consulting, L.L.C. (Farallon). 2021. *Interim Action Work Plan, Alley Area of Block 38 West Site Between Republican Street and Mercer Street, Seattle, Washington*. Prepared for City Investors IX LLC. February 3.

———. 2022. *Remedial Investigation Work Plan, Block 38 West Site, 500 through 536 Westlake Avenue North, Seattle, Washington*. Prepared for City Investors IX LLC. August 5.

U.S. Environmental Protection Agency (EPA). 2017a. *National Functional Guidelines for Inorganic Superfund Methods Data Review*. OLEM 9355.0-135, EPA-540-R-2017-001. January.

———. 2017b. *National Functional Guidelines for Organic Superfund Methods Data Review*. OLEM 9355.0-136, EPA-540-R-2017-002. January.

## **TABLES**

**DATA VALIDATION REPORT  
Alley Area of Block 38 West Site  
Between Republican Street and Mercer Street  
Seattle, Washington**

Farallon PN: 397-019



**Table 1**  
**Overview of Soil Sample Analyses**  
**Block 38 Alley**  
**Seattle, Washington**  
**Farallon PN: 397-019**

Lab Sample Delivery Group	Sample Identification	Matrix	Sample Date	Analytical Method				
				NWTPH-Dx	NWTPH-Gx	EPA 8260D	EPA 8270E/SIM	EPA 6010D
2103-120	A/A5-SSW-22.5-031021	Soil	3/10/2021				X	
2103-120	A/A5-B2-22.5-031021	Soil	3/10/2021				X	
2103-120	A/A5-B2-20.0-031021	Soil	3/10/2021				X	
2103-120	A/A5-B2-17.5-031021	Soil	3/10/2021				X	
2103-120	A/A5-B-17.5-031021	Soil	3/10/2021				X	
2103-234	A/A5-ESW-22.5-031821	Soil	3/18/2021				X	
2103-234	A/A5-ESW-20.0-031821	Soil	3/18/2021				X	
2103-234	A/A5-ESW-17.5-031821	Soil	3/18/2021				X	
2103-234	A/A5-SSW-20.0-031821	Soil	3/18/2021				X	
2103-267	C/A5-ESW-22.5-032221	Soil	3/22/2021				X	
2103-267	C/A5-ESW-20.0-032221	Soil	3/22/2021				X	
2103-267	C/A5-ESW-17.5-032221	Soil	3/22/2021				X	
2103-267	D/A5-B-17.5-032221	Soil	3/22/2021				X	
2103-267	A/A5-SSW-17.5-032221	Soil	3/22/2021				X	
2103-287	A/A5-B-16.0-032421	Soil	3/24/2021				X	
2105-037	E/A5-ESW-22.5-050421	Soil	5/4/2021	X	X	X	X	
2105-037	E/A5-ESW-20.0-050421	Soil	5/4/2021	X	X	X	X	
2105-037	E/A5-ESW-17.5-050421	Soil	5/4/2021	X	X	X	X	
2106-270	E/A5-B-17.5	Soil	6/28/2021	X	X	X	X	
2106-270	F/A5-B-17.5	Soil	6/28/2021	X	X	X	X	
2107-039	G/A5-ESW-22.5-070621	Soil	7/6/2021	X			X	X
2107-039	G/A5-ESW-20.0-070621	Soil	7/6/2021	X			X	X
2107-039	G/A5-ESW-17.5-070621	Soil	7/6/2021	X			X	X
2107-039	H/A5-ESW-22.5-070621	Soil	7/6/2021	X			X	X
2107-039	H/A5-ESW-20.0-070621	Soil	7/6/2021	X			X	X
2107-039	H/A5-ESW-17.5-070621	Soil	7/6/2021	X			X	X
2107-039	H/A5-B-17.5-070621	Soil	7/6/2021	X			X	X
2107-084	I/A5-ESW-22.5-070921	Soil	7/9/2021	X			X	X
2107-084	I/A5-ESW-20.0-070921	Soil	7/9/2021	X			X	X
2107-084	I/A5-ESW-17.5-070921	Soil	7/9/2021	X			X	
2107-084	I/A5-B-17.5-070921	Soil	7/9/2021	X			X	X
2107-084	J/A5-ESW-22.5-070921	Soil	7/9/2021	X			X	X

**Table 1**  
**Overview of Soil Sample Analyses**  
**Block 38 Alley**  
**Seattle, Washington**  
**Farallon PN: 397-019**

Lab Sample Delivery Group	Sample Identification	Matrix	Sample Date	Analytical Method				
				NWTPH-Dx	NWTPH-Gx	EPA 8260D	EPA 8270E/SIM	EPA 6010D
2107-084	J/A5-ESW-20.0-070921	Soil	7/9/2021	X			X	X
2107-084	J/A5-ESW-17.5-070921	Soil	7/9/2021	X			X	
2107-095	L/A5-ESW-25.0-071221	Soil	7/12/2021	X			X	
2107-095	L/A5-ESW-22.5-071221	Soil	7/12/2021	X			X	
2107-095	L/A5-B-22.0-071221	Soil	7/12/2021	X			X	
2107-157	M/A5-ESW-25.0-071521	Soil	7/15/2021	X			X	
2107-157	M/A5-ESW-22.5-071521	Soil	7/15/2021	X			X	
2107-191	N/A5-ESW-28.0-072021	Soil	7/20/2021				X	
2107-191	N/A5-ESW-26.0-072021	Soil	7/20/2021				X	
2107-191	N/A5-NSW-28.0-072021	Soil	7/20/2021				X	
2107-191	N/A5-NSW-26.0-072021	Soil	7/20/2021				X	
2107-191	N/A5-B-25.0-072021	Soil	7/20/2021				X	

NOTES:

An "X" indicates the sample was analyzed by the method specified in that column.

**Table 2**  
**Summary of Qualified Data**  
**Block 38 Alley**  
**Seattle, Washington**  
**Farallon PN: 397-019**

<b>Sample Identification</b>	<b>SDG</b>	<b>Matrix</b>	<b>Method</b>	<b>Analyte</b>	<b>Qualifier</b>	<b>Reason</b>
I/A5-ESW-17.5-070921	2107-084	Soil	EPA 8270E/SIM	Benzo[a]anthracene	J+	Percent recovery of surrogate terphenyl-d14 exceeded the upper control limit
I/A5-ESW-17.5-070921	2107-084	Soil	EPA 8270E/SIM	Chrysene	J+	Percent recovery of surrogate terphenyl-d14 exceeded the upper control limit
I/A5-ESW-17.5-070921	2107-084	Soil	EPA 8270E/SIM	Benzo[b]fluoranthene	J+	Percent recovery of surrogate terphenyl-d14 exceeded the upper control limit
I/A5-ESW-17.5-070921	2107-084	Soil	EPA 8270E/SIM	Benzo(j,k)fluoranthene	J+	Percent recovery of surrogate terphenyl-d14 exceeded the upper control limit
I/A5-ESW-17.5-070921	2107-084	Soil	EPA 8270E/SIM	Benzo[a]pyrene	J+	Percent recovery of surrogate terphenyl-d14 exceeded the upper control limit
I/A5-ESW-17.5-070921	2107-084	Soil	EPA 8270E/SIM	Indeno[1,2,3-cd]pyrene	J+	Percent recovery of surrogate terphenyl-d14 exceeded the upper control limit
I/A5-ESW-17.5-070921	2107-084	Soil	EPA 8270E/SIM	Dibenz[a,h]anthracene	J+	Percent recovery of surrogate terphenyl-d14 exceeded the upper control limit

**NOTES:**

EPA = U.S. Environmental Protection Agency

J+ = result is an estimate with a high bias

SDG = sample delivery group

**APPENDIX E**  
**SOIL DISPOSAL TONNAGE SUMMARY**

INTERIM ACTION REPORT  
Alley Area of Block 38 West Site  
Between Republican Street and Mercer Street  
Seattle, Washington

Farallon PN: 397-019

**Table 1**  
**Soil Disposal Summary**  
**Block 38 Alley**  
**Seattle, Washington**  
**Farallon PN: 397-019**

<b>Date Range:</b>	<b>Disposal Facility</b>	
	<b>Waste Management</b>	<b>Republic Services</b>
	<b>Class 3 (tons)</b>	<b>Class 3+ (tons)</b>
<b>March</b>		
3/1/2021 - 3/2/2021	14.13	0
3/8/2021 - 3/10/2021	0	157.84
3/18/2021 - 3/19/2021	0	190.86
3/22/2021 - 3/25/2021	0	456.63
3/31/2021 - 4/1/2021	0	39.90
<b>April</b>		
4/6/2021 - 4/8/2021	0	370.21
<b>May</b>		
5/4/2021	0	34.87
5/13/2021	0	26.19
<b>June</b>		
6/28/2021 - 6/30/2021	0	68.47
<b>July</b>		
7/6/2021 - 7/9/2021	0	385.87
7/12/2021 - 7/16/2021	0	439.18
7/19/2021 - 7/23/2021	0	197.64
<b>Totals Through:</b>		
	3/2/2021	7/23/2021
Truck Count	2	194
<b>Total (tons)</b>	<b>14.13</b>	<b>2,367.66</b>