FARALLON CONSULTING

T E C H N I C A L M E M O R A N D U M

TO: Sandy Smith – Washington State Department of Ecology
Andy Smith – Washington State Department of Ecology

cc: William Joyce – Hillis Clark Martin & Peterson P.S.
Jacob Blair – Hillis Clark Martin & Peterson P.S.
Nathan Blomgren – Chevron U.S.A. Inc
Cheryl Cameron – Chevron U.S.A. Inc
Dave Mariano – Shelton Yacht Club

FROM: Javan Ruark, Associate Geologist, L.G.
Jeffrey Kaspar, Principal Geologist, L.G., L.H.G.

DATE: September 15, 2023

RE: **PERFORMANCE SOIL SAMPLING – 2022**
FORMER EVERGREEN FUEL FACILITY
661 EAST PINE STREET
SHELTON, WASHINGTON
FARALLON PN: 863-001

Farallon Consulting, L.L.C. (Farallon) has prepared this Technical Memorandum to present the results for performance soil sampling that was conducted at the Former Evergreen Fuel Facility at 661 East Pine Street in Shelton, Washington (herein referred to as the Site) (Figure 1). The purpose of the performance soil sampling was to evaluate current soil conditions in areas where soil with concentrations of constituents of concern (COCs), which consist of total petroleum hydrocarbons as gasoline-range organics (GRO), as diesel-range organics (DRO), and as oil-range organics (ORO); benzene, toluene, ethylbenzene, and xylenes (BTEX); naphthalenes; and carcinogenic polycyclic aromatic hydrocarbons (cPAHs) previously exceeding the Washington State Model Toxics Control Act Cleanup Regulation (MTCA) cleanup levels, was left in-place following the cleanup action completed in January 2007. The main objectives of the performance soil sampling were to:

- Collect sufficient soil samples to assess concentrations of COCs remaining in soil at the Site since completion of the 2007 cleanup action;

- Delineate the lateral and vertical extent of COCs remaining in soil at the Site;
- Evaluate the current nature of DRO and ORO present in soil related to the status of biodegradation, using data regarding representative carbon fractions present, evidence of polar metabolites, and the potential for naturally occurring total organic carbon (TOC);
- Use the soil data collected to evaluate whether the MTCA Method A cleanup levels that were approved in the Cleanup Action Plan (CAP)[1] are exceeded, and if so, where;
- Use the soil data collected to define areas of the Site that could be targeted for future focused cleanup activities during the proposed Shelton Yacht Club (SYC) habitat improvements, and, if appropriate;
- Define a pathway to remove the Site from the Hazardous Sites List and obtain a No Further Action (NFA) or sufficiency determination.

The performance soil sampling was conducted in accordance with the Soil Sampling Work Plan Addendum (Work Plan)[2].

BACKGROUND

Cleanup action activities completed at the Site in January 2007 included excavation and disposal at a licensed disposal facility of 7,508 tons of soil containing COCs at concentrations exceeding regulatory cleanup levels. The excavation areas were backfilled with quarry spalls to above the water table at a depth of approximately 3 feet below ground surface (bgs). Prior to the backfilling, 4,000 pounds of Advanced Oxygen Release Compound manufactured by Regenesis, Inc. of San Clemente, California was mixed with the quarry spalls used for backfill to enhance aerobic biodegradation of residual COCs in saturated soil and groundwater. Confirmational groundwater monitoring and sampling was initiated in April 2007 to document the effects of the source removal action and ongoing biodegradation of residual COCs in groundwater. The Site is graded with gravel and used as a parking lot for SYC (Figure 2).

Confirmational groundwater monitoring and sampling conducted from 2007 to 2013 indicated that source removal and Oxygen Release Compound treatment had resulted in a

[1] Farallon Consulting, L.L.C. 2006. *Draft Cleanup Action Plan, Evergreen Fuel Facility, 661 East Pine Street, Shelton, Washington.* July 18.
[2] Farallon Consulting, L.L.C. 2022. *Soil Sampling Work Plan, Addendum to Cleanup Action Plan, Former Evergreen Fuel Facility, 661, East Pine Street, Shelton, Washington*; Agreed Order: DE 3937; Facility/Site No.: 6773108; Cleanup Site No.: 4306 (Work Plan). October 11.

significant reduction of COCs, with overall decreasing to stable conditions observed at monitoring wells MW-5, MW-6, MW-8, and MW-9. COCs were not detected at concentrations exceeding MTCA Method A cleanup levels between 2008 and 2013 throughout the Site. DRO was detected at concentrations exceeding the MTCA Method A cleanup level in six of eight groundwater samples collected from monitoring well MW-10 between 2007 and 2013.

Concentrations of DRO and ORO in groundwater samples collected from monitoring well MW-10 have exceeded MTCA Method A cleanup levels from 2013 to 2022 (Figure 3). However, DRO and ORO concentrations have indicated an overall stable trend since 2013. DRO was detected at a concentration exceeding the MTCA Method A cleanup level in a single groundwater sample collected from monitoring well MW-9 during the August 2016 confirmational groundwater monitoring and sampling event. Concentrations of DRO and ORO have not exceeded MTCA Method A cleanup levels in the remaining groundwater samples collected from monitoring well MW-9 from 2013 to 2022. Concentrations of DRO and ORO have not exceeded MTCA Method A cleanup levels in the groundwater samples collected from monitoring well MW-8 since confirmational groundwater monitoring and sampling was initiated in 2007. Analysis for GRO and BTEX has not been performed on the groundwater samples collected from monitoring wells MW-8 through MW-10, based on the following:

- Previous analytical data demonstrated that concentrations of GRO and BTEX detected in samples collected at the Site were less than MTCA Method A cleanup levels for four consecutive quarters; and
- As indicated in the March 2014 letter from the Washington State Department of Ecology (Ecology) Ecology Comments Letter[3], Ecology has not required further analysis for GRO or BTEX.

In the Ecology Comments Letter, Ecology stated that additional performance soil and confirmational groundwater monitoring and sampling were required to receive an NFA determination and closure of the Agreed Order requirements for the Site. Ecology indicated in its response that confirmational groundwater monitoring would be altered, consistent with MTCA, with the goal to achieve compliance for soil. The amended performance soil and

[3] Washington State Department of Ecology. 2014. Letter Regarding Transmittal of Ecology Comments on Request for No Further Action Determination and Revised Groundwater Monitoring Status Report – May 2013, Evergreen Fuel Facility, 661 East Pine Street, Shelton Washington, Agreed Order No. DE 3937 dated March 10, 2014, Facility/Site ID No. 6773108, Cleanup Site ID No. 4306, From Scott Rose of Ecology. To Peter Jewett of Farallon. August 25.

confirmational groundwater monitoring and sampling required by Ecology consisted of the following:

- Collecting additional soil samples at locations where residual COCs were left in-place to determine whether current concentrations were less than MTCA Method A cleanup levels for protection of groundwater. If concentrations of residual COCs still exceeded MTCA Method A cleanup levels, the locations with the highest concentrations of DRO were to be used to develop Site-specific Method B cleanup levels for direct contact and continued protection of groundwater; and
- Performing semiannual confirmational groundwater monitoring and sampling at existing Site monitoring wells until MTCA Method A cleanup levels had been achieved and maintained for 1 year at all monitoring wells required to be sampled, as detailed in the Agreed Order No. DE 3937 entered into by Ecology and Chevron U.S.A. Inc. (Chevron) and C.C. Cole and Sons, Inc (AO). Once groundwater analytical results indicated that COCs were less than MTCA Method A cleanup levels for 1 year, four consecutive quarters of confirmational groundwater monitoring and sampling are required to demonstrate that MTCA Method A cleanup levels for groundwater had been achieved for the Site. Neither of these requirements for groundwater has been attained for DRO in monitoring well MW-10 (Figure 3).

In an August 2015 email[4], Ecology provided additional details regarding confirmational groundwater monitoring and sampling to be conducted at the Site, which consisted of the following activities:

- Confirmational groundwater monitoring and sampling were to be conducted in accordance with the AO, and were to include monitoring wells MW-8 through MW-10; and
- Monitoring wells MW-5 and MW-6, which were covered during re-grading activities conducted in the Site parking lot, were to be located and decommissioned in accordance with Chapter 173-160 of the Washington Administrative Code.

Monitoring well decommissioning activities were conducted in December 2017. The results from the confirmational groundwater sampling conducted in 2019 indicated that further

[4] Washington State Department of Ecology (Ecology). 2015. Email regarding Evergreen Fuels Monitoring. From Jason Landskron of Ecology. To Javan Ruark of Farallon. August 6.

confirmational groundwater monitoring and sampling at the Site was warranted to comply with the AO.

On June 16, 2021, Ecology requested that groundwater samples collected from monitoring wells MW-9 and MW-10 be analyzed using the silica gel cleanup procedure. The purposes of the additional analysis were to gather supportive information for Ecology's update of the Northwest Total Petroleum Hydrocarbons-Dx Method analysis, and to evaluate whether DRO detected in groundwater was petroleum-related or due to naturally occurring organic materials. Details of the Ecology request were provided in a June 2021 email[5].

As detailed in a September 2021 email[6] Ecology provided notification that SYC is in the process of applying for a U.S. Army Corps of Engineers 404 permit, and certification under Section 401 of the Clean Water Act before initiating proposed shoreline restoration work. The shoreline work is part of a habitat improvement project being conducted in conjunction with the Squaxin Island Tribe that originally was scheduled to begin in July 2022. That work likely begin by the end of 2023, pending receipt of permits and coordination with all stakeholders.

PERFORMANCE SOIL SAMPLING – 2022

The performance soil sampling was conducted from October 26 through 28, 2022 in accordance with the Work Plan to evaluate current soil conditions in areas where soil with COC concentrations exceeding MTCA cleanup levels was left in-place following the cleanup action completed in January 2007. The following sections describe the elements of the performance soil sampling and results. The elements of the performance soil sampling included:

- Preparing a Health and Safety Plan in accordance with Chapter 296-62 of the Washington Administrative Code and Part 1910.120 of Title 29 of the Code of Federal Regulations prior to initiating field activities;
- Performing a utility locate at the boring locations using a private utility location service and contacting the One-Call Center for utility location;

[5] Washington State Department of Ecology. 2021. Email regarding Evergreen Fuels Shelton. From Charles San Juan of Ecology. To Javan Ruark of Farallon. June 16.
[6] Washington State Department of Ecology. 2021. Email regarding Former Evergreen Fuel Facility. From Joyce Mercuri of Ecology. To Javan Ruark of Farallon. September 29.

- Advancing borings B-11, B-12, B-16 through B-18, and B-21 through B-24 to evaluate COCs exceeding cleanup levels that were left in-place following the 2006 remedial excavation;
- Advancing boring B-13 to evaluate COCs exceeding cleanup levels upland of the bulkhead;
- Advancing borings B-14, B-15, and B-19 to evaluate COCs upland of the bulkhead;
- Advancing boring B-20 to evaluate COCs upland of the 2006 remedial excavation;
- Describing subsurface conditions encountered during advancement of each boring in accordance with ASTM International Standard D2488, *Standard Practice for Description and Identification of Soils*, and field-screening soil samples for physical evidence of contamination by a photoionization detector (PID) and screening for sheen in the soil samples;
- Monitoring soil generated during drilling activities for potential historical artifacts using a professional archaeologist from Drayton Archaeology of Blaine, Washington (Drayton) in accordance with the Inadvertent Discovery Plan (IDP);
- Submitting select soil samples collected from the borings for chemical analysis for one or more of the following:
    - GRO by Northwest Method NWTPH-Gx;
    - BTEX by U.S. Environmental Protection Agency (EPA) Method 8260D;
    - DRO and ORO by Northwest Method NWTPH-Dx with silica gel cleanup procedure;
    - cPAHs by EPA Method 8270 Select Ionization Method;
    - Extractable petroleum hydrocarbons (EPH) by NWEPH;
    - Total organic compounds (TOC) by EPA Method 9060; and
- Preparing this Technical Memorandum.

PERFORMANCE SOIL SAMPLING ACTIVITIES

Drilling services for the advancement of borings B-11 through B-24 were provided by HOLT Services, Inc. of Edgewood, Washington. Continuous soil cores were collected from borings B-11 through B-24 to depths ranging from 10 to 25 bgs to document soil conditions. Soil

was described in accordance with the Unified Soil Classification System and was screened in the field for evidence of contamination.

Visual observations, notations of odor and sheen, and headspace analysis using a PID were performed to screen for the presence of contamination, including volatile organic vapors, in soil. Sheen was observed at depth of 7 feet bgs at boring B-21. All remaining soil observed did not exhibit sheen during the soil sampling. Headspace analysis was conducted by placing soil from each sample interval into a resealable plastic bag and allowing the sample to warm for several minutes. The probe of the PID was inserted into the bag, and the highest reading obtained over an approximately 30-second interval was recorded. PID readings ranged from less than 0.0 parts per million by volume at borings B-11, B-13 through B-15, and B-17 through B-20 at depths ranging from 3.5 to 20 feet bgs to 255.5 parts per million by volume at boring B-24 at a depth of 5 feet bgs. The Unified Soil Classification System symbol, visual and olfactory notations for the samples, and PID readings were recorded on boring log forms, which are provided in Attachment A.

The soil samples were collected and handled in general accordance with the following procedures:

- Soil samples were collected directly from the sampling sleeve using either stainless steel or plastic sampling tools. Non-dedicated sampling equipment was decontaminated between uses, as appropriate. Soil cores were inspected by a professional archaeologist in accordance with the IDP prior to transfer to containers for laboratory analysis. Due to insufficient recovery during drilling, selected soil samples were not able to be collected as outlined in the Work Plan.
- Soil samples selected for laboratory analysis were transferred immediately into laboratory-supplied sample containers. Soil samples collected for analysis for GRO and BTEX were collected in accordance with EPA Method 5035A. This sampling method entails collecting approximately 5 grams of a representative soil sample using a dedicated sampling tool from target locations and placing the sample in a standard 40-milliliter, septum-sealed, threaded, screw-capped glass vial containing a laboratory-provided preservative.
- Soil samples to be analyzed for DRO, ORO, cPAHs, TOC, and EPH were transferred immediately into a laboratory-supplied 4-ounce glass container and sealed.

- Each sample container was labeled with the client name, project name and number, date and time of collection, sample identification, sampler's initials, and analysis. Sample identification included boring designation, sample depth, and date collected.
- Each sample was logged on a Chain of Custody form and placed into a cooler with ice to maintain a temperature of approximately 4 degrees Celsius. The samples were submitted to the laboratory for analysis within 24 to 48 hours of collection.

Soil samples were transported under standard chain-of-custody protocols to Libby Environmental, Inc. of Olympia, Washington for laboratory analysis. A minimum of two soil samples collected from each boring were submitted for laboratory analysis for one or more of the following:

- GRO by Northwest Method NWTPH-Gx;
- BTEX by EPA Method 8260D;
- DRO and ORO by Northwest Method NWTPH-Dx with silica gel cleanup procedure;
- Selected soil samples with the highest COC concentrations were analyzed for cPAHs by EPA Method 8270;
- Selected soil samples with the highest COC concentrations were analyzed for EPH by NWEPH;
- Soil samples collected from the borings outside the areas of historical COC impacts were analyzed for TOC by EPA Method 9060.
- Field duplicate soil samples were collected from borings B-14, B-15, B-19, and B-23 for quality assurance/quality control (QA/QC) purposes. As detailed in the Work Plan, trip blanks were not submitted for laboratory analysis based on the concentrations of COCs evaluated following receipt of the laboratory analytical results.

As required by the IDP, a professional archaeologist from Drayton observed the soil generated during the advancement of the borings.

Following the advancement of the borings, each location was backfilled with bentonite grout placed into the borehole from the base to within approximately 4 inches of the ground surface, followed by sand to the ground surface.

Boring locations were recorded by a licensed surveyor within 1 foot relative to the North American Datum of 1983, and elevation information to within 0.1 foot relative to the North American Vertical Datum of 1988 (Figure 2, Table 1).

PERFORMANCE SOIL SAMPLING RESULTS - 2022

A summary of the results of the soil sampling conducted is presented below and summarized on Figures 4 through 7 and in Tables 2 through 5. Farallon reviewed the analytical data package provided by Libby for sample delivery L22J130 v2, L22J143, L22K084 v2, and L22K085 v2. The soil samples from this group were analyzed for COCs by the methods cited in the section above, within the prescribed method holding times. The QA/QC testing performed by Libby included evaluation of surrogate recoveries and matrix spike/matrix spike duplicates. Results from the QA/QC testing were within established laboratory control limits. Based on Farallon's review of the QA/QC data generated during the October 2022 sampling event, the soil analytical results are acceptable for use in characterizing soil at the Site relative to the cleanup levels used for comparative purposes in this report. The laboratory analytical reports for the samples analyzed by Libby are provided in Appendix B.

GEOLOGY/HYDROGEOLOGY

The general stratigraphy encountered during the advancement of borings B-11 through B-24 was comprised of interbedded silty sands, silts, sands, and gravels from the ground surface to the total depth explored of 25 feet bgs. Fill material consisting of wood debris was observed to depths ranging from 5 to 6.5 feet bgs at the eastern and western areas upland of the bulkhead. A shallow groundwater-bearing zone was observed at depths ranging from 5 to 6.5 feet bgs, and extending to a depth of 15 feet bgs at the northeastern portion of the Site. Boring logs are provided in Attachment A. Photographs of the borings are included in Attachment C.

Based on the evaluation of the soil generated during the advancement of the borings, Drayton did not identify any historical materials of cultural significance at the Site. The complete letter report detailing Drayton's findings is included in Attachment D.

ANALYTICAL RESULTS

Soil analytical results for borings B-11 through B-20, which were advanced proximate to the bulkhead and former excavation areas (Figure 4), were as follows:

- GRO was detected at concentrations ranging from 66 to 320 milligrams per kilogram (mg/kg) in the soil samples collected from borings B-11, B-14, and B-15 at depths ranging from 6 to 15 feet bgs, which exceed the MTCA Method A cleanup level of 30 mg/kg (Figure 4; Table 2). GRO was not detected at concentrations exceeding the MTCA Method A cleanup level in the remaining samples collected from borings advanced upland of the bulkhead.
- Benzene was detected at concentrations ranging from 0.11 to 0.28 mg/kg in the soil samples collected from boring B-14 at depths ranging from 10 to 15 feet bgs, which exceed the MTCA Method A cleanup level of 0.03 mg/kg (Figure 4; Table 2). Benzene was not detected at concentrations exceeding the MTCA Method A cleanup level in the remaining samples collected from borings advanced upland of the bulkhead.
- DRO, ORO, toluene, ethylbenzene, xylenes, and cPAHs, including naphthalenes were not detected at concentrations exceeding MTCA Method A cleanup levels (Figures 4 and 5; Tables 2 and 3).

Soil analytical results for borings B-21 through B-24, which were advanced immediately south of State Route 3 (Figure 4) at areas where residual soil contamination was left in-place following the 2006 cleanup activities, were as follows:

- GRO was detected at concentrations of 50 and 340 mg/kg in the soil samples collected from borings B-23 and B-21 at depths of 10 and 11 feet bgs, respectively, which exceed the MTCA Method A cleanup level of 30 mg/kg (Figure 4; Table 2). GRO was not detected at concentrations exceeding the MTCA Method A cleanup level in the remaining samples collected from borings advanced upland of the 2006 remedial excavation.
- DRO, ORO, BTEX, and cPAHs, including naphthalenes were not detected at concentrations exceeding the MTCA Method A cleanup levels (Figures 4 and 5; Tables 2 and 3).

EPH analysis was performed on the soil samples with the highest concentrations of DRO. This included a soil sample collected from boring B-17 at a depth of 16 feet bgs that had a DRO concentration of 800 mg/kg and a soil sample collected from boring B-24 at a depth of

6 feet bgs that had a DRO concentration of 1,100 mg/kg (Figure 4; Table 2). ORO was not detected in either sample. *Ecology concurred that analyzing samples for EPH outside the holding time would not preclude consideration of the EPH analytical data in evaluating the composition of residual DRO. EPH analytical results analyzed outside of the holding time are considered estimated, with a potential low bias.*

The EPH results were variable between the sample locations. The results of the sampling at boring B-17 indicated that weathering and biodegradation processes along the northern portion of the Site bounded by State Route 3 are occurring. The lighter aliphatic and aromatic hydrocarbon fractions are no longer present. The sample was comprised of C12 to C34 aliphatic and C16 to C34 aromatic hydrocarbon fractions (Table 5).

The EPH result at boring B-24 indicates less prevalent weathering and biodegradation. C8 through C34 aliphatic and C10 through C34 aromatic hydrocarbon fractions were detected. The highest hydrocarbon fractions included the C12 to C16 aliphatics and aromatics (Table 5).

TOC was detected at 0.361 percent by weight of in the soil sample collected from boring B-13 at a depth of 6 feet bgs, which was in unsaturated soil (Figure 6; Table 4). TOC was detected at 0.400 and 0.615 percent by weight in the soil samples collected from borings B-13 and B-19 at depths of 10 and 20 feet bgs, respectively, which were in saturated soil (Figure 6; Table 4). TOC values are used to evaluate the capacity of the soil matrix to adsorb organic contaminants, and also the potential for interference with the DRO/ORO analysis that would provide rationale for application of silica gel to filter out biogenic bias to an analytical result. A typical subsurface soil value for groundwater fate and transport modeling is 0.2 percent. TOC values exceeding this value indicate the presence of a higher proportion of organic materials, such as decomposing plant matter. A typical topsoil ranges from approximately 0.5 to 3 percent TOC.

There are no current standards to evaluate the degree of TOC values that could necessitate application of a silica gel cleanup process to filter out bias to a standard NWTPH-DX analysis from biogenic materials (and polar metabolites). However, since Ecology allowed the use of the silica gel cleanup procedure for soil analysis, distinguishing the potential contributions of polar metabolites versus biogenic materials on the analytical data results at the Site is unnecessary. The TOC values and observations of organic materials in the soil matrix; however, are indicative of potential to bias groundwater sample analysis low. The biogenic

materials would be expected to adsorb COCs, allowing more resonance time for biodegradation and lower proportions of dissolved-phase COCs. The absence of GRO and BTEX compounds in groundwater is likely associated with the sorptive nature of the soil matrix.

CONCLUSIONS

Based on the results of the performance soil sampling, concentrations of selected COCs, specifically DRO, have decreased significantly since the 2006 remedial excavation (Figures 4 and 7; Table 2). DRO was not detected at concentrations exceeding the MTCA Method A cleanup level of 2,000 mg/kg in samples collected.

GRO and benzene concentrations continue to exceed MTCA Method A cleanup levels in shallow soil, less than 16 feet bgs at borings B-11, B-14, and B-15, located upland of the bulkhead near monitoring well MW-8 and east of monitoring well MW-9 (Figure 4; Table 2). GRO also exceeds the MTCA Method A cleanup level in shallow soil, less than 12 feet bgs at borings B-21 and B-23, located proximate to State Route 3 (Figure 4; Table 2). All remaining COCs were not detected at concentrations exceeding MTCA Method A cleanup levels at the Site during the 2022 performance soil sampling. The vertical extent of current COC concentrations in soil has adequately been defined sufficiently to support decisions regarding further actions, based on the results of the performance soil sampling.

The overall soil and historical groundwater analytical data, including the EPH petroleum fractions analysis, demonstrate that biodegradation of COCs is occurring at the Site. The naturally occurring TOC present in unsaturated and saturated soil outside the areas of historical COC impacts suggests that the higher TOC concentrations likely are contributing to sorbing of COCs and mitigating leaching to groundwater. The groundwater analytical results from the confirmational groundwater monitoring and sampling events conducted in December 2020 and December 2022 indicate that soil with residual concentrations of DRO and ORO and related polar metabolites resulting from ongoing biodegradation are present in a smear zone and leach from soil to groundwater when groundwater elevations are highest.

The recent evaluation of historical groundwater data indicates that polar metabolites being generated by ongoing biodegradation processes, rather than total petroleum hydrocarbon components, are affecting groundwater quality. According to the Draft Silica Gel Cleanup

Guidance[7], Ecology has recommended using the following screening levels for evaluation of toxicity of polar metabolites:

- Human health via drinking water pathway = 500 micrograms per liter (µg/l);
- Aquatic freshwater species = 3,040 µg/l; and
- Aquatic marine species = 2,120 µg/l.

There are currently no established polar metabolite values for evaluation of terrestrial ecologic receptor risk.

Based on the screening levels above and proximate to Oakland Bay, the aquatic marine species screening level would be appropriate to evaluate polar metabolite risk at the Site rather than human health risk. The concentrations of DRO and ORO have fluctuated over the past several years of monitoring, sometimes exceeding the applicable polar metabolite screening level and consistently exceeding the Site cleanup levels for DRO and ORO established in the Draft Cleanup Action Plan of 500 µg/l when the silica gel cleanup procedure is not applied.

The limited detections of GRO and BTEX at only five of the 14 borings completed, coupled with the relatively low concentrations of GRO and BTEX where detected in soil, also support the presence of a limited residual mass of GRO and BTEX that is present at the Site.

If Ecology determines that institutional controls with an environmental covenant is appropriate for the Site, residual soil with COCs exceeding applicable cleanup levels at the Site will be contained and subject to institutional controls and managed under a new environmental covenant consistent with MTCA.

[7] Washington State Department of Ecology. 2022. *Draft Guidance for Use of Silica Gel Cleanup in Washington State.* Washington State Department of Ecology, Toxics Cleanup Program, Publication No. 22-09-059. September.

Attachments: Figure 1, *Site Vicinity Map*
Figure 2, *Site Plan*
Figure 3, *Groundwater Analytical Data*
Figure 4, *2022 Soil Analytical Results for TPH and BTEX*
Figure 5, *2022 Soil Analytical Results for cPAHs*
Figure 6, *2022 Soil Analytical Results for TOC*
Figure 7, *Residual Soil Contamination*

Table 1, *Survey Data*
Table 2, *Soil Analytical Results for TPH and BTEX*
Table 3, *Soil Analytical Results for cPAHs*
Table 4, *Soil Analytical Results for Total Organic Carbon*
Table 5, *Soil Analytical Results for EPH*

Attachment A, Boring Logs
Attachment B, Laboratory Analytical Reports
Attachment C, Photograph Log
Attachment D, Cultural Resources Evaluation Letter Report

JR/JK:ca

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 reviewed 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. Should the information upon which Farallon relied prove to be inaccurate, Farallon may 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.

Farallon does not 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 are as of the date of the report.

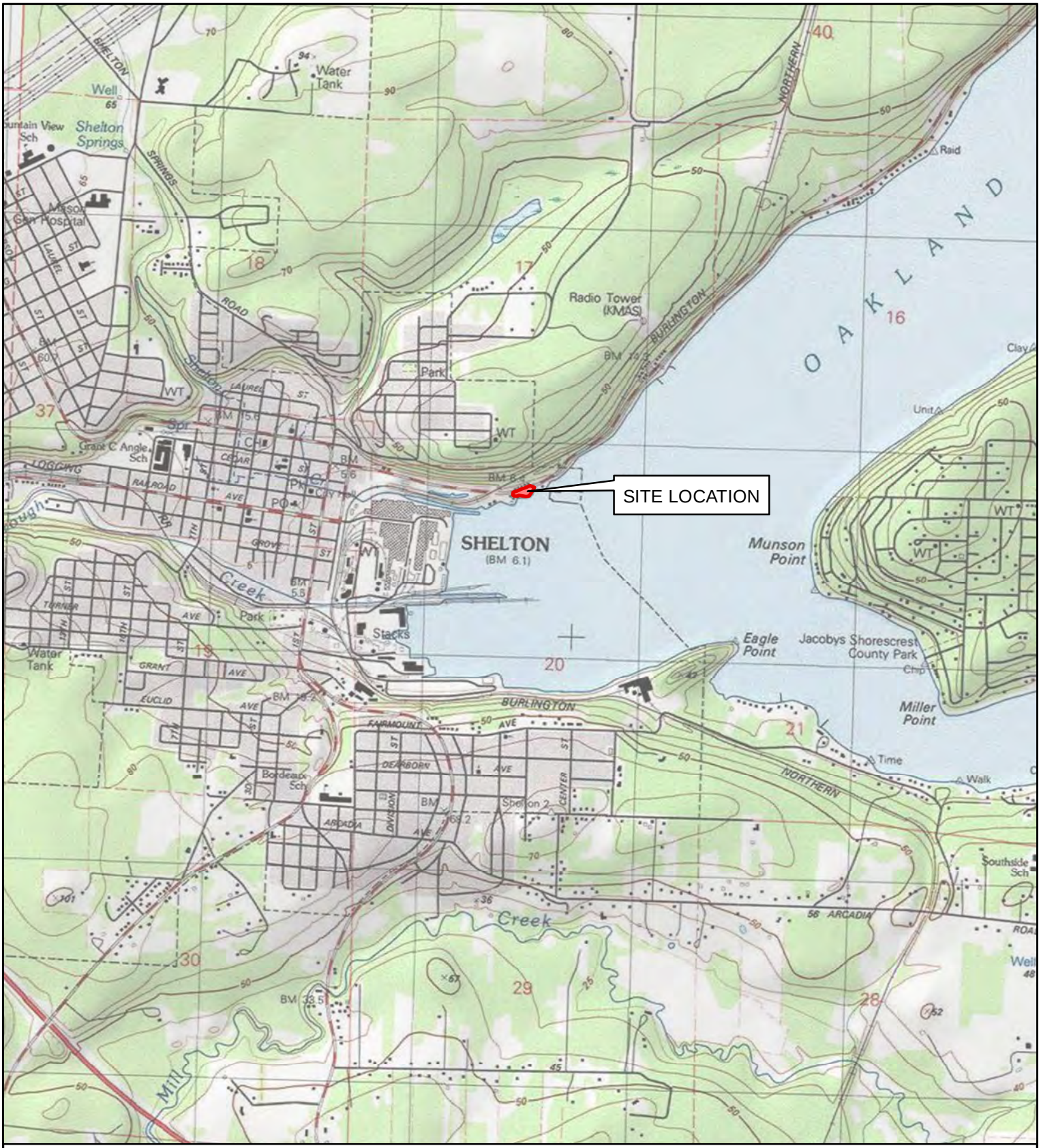
This report/assessment has been prepared in accordance with the contract for services between Farallon and CC Cole and Sons, Inc. and Chevron U.S.A. Inc. No other warranties, representations, or certifications are made.

FIGURES

PERFORMANCE SOIL SAMPLING – 2022

Former Evergreen Fuel Facility
661 East Pine Street
Shelton, Washington

Farallon PN: 863-001



REFERENCE: 7.5 MINUTE USGS QUADRANGLE SHELTON, WASHINGTON, DATED 2011

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Washington
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Oregon
Portland | Baker City

California
Oakland | Irvine

FIGURE 1

SITE VICINITY MAP
FORMER EVERGREEN FUEL FACILITY
661 EAST PINE STREET
SHELTON, WASHINGTON

FARALLON PN: 863-001

Drawn By: jjones Checked By: JR Date: 7/13/2023 Disc Reference:

Document Path: Q:\Projects\863 Former Evergreen Fuel\Mapfiles\GW_Monitoring_2022_Revised\Figure-01_SiteVicinity.mxd

LEGEND

- BORING (FARALLON, 2022)
- MONITORING WELL (FARALLON, 2007)
- DECOMMISSIONED MONITORING WELL (FARALLON, 2017)
- CATCH BASIN
- FIRE HYRDANT
- UTILITY POLE
- BULKHEAD RETAINING WALL
- ESTIMATED LIMITS OF FORMER EXCAVATION AREA
- UNDERGROUND POWER LINE
- UNDERGROUND STORM DRAIN LINE
- UNDERGROUND WATER LINE
- APPROXIMATE SITE BOUNDARY

NOTES:
ALL POWER AND WATER UTILITY LINES WERE REMOVED DURING EXCAVATION EXCEPT FOR POWER LINES ALONG STATE ROUTE 3.
ALL LOCATIONS ARE APPROXIMATE.
FIGURES WERE PRODUCED IN COLOR. GRAYSCALE COPIES MAY NOT REPRODUCE ALL ORIGINAL INFORMATION.

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FIGURE 2

SITE PLAN
FORMER EVERGREEN FUEL FACILITY
661 EAST PINE STREET
SHELTON, WASHINGTON

FARALLON PN: 863-001

Drawn By: lmurock | Checked By: JR | Date: 8/9/2023 | Disc Reference:

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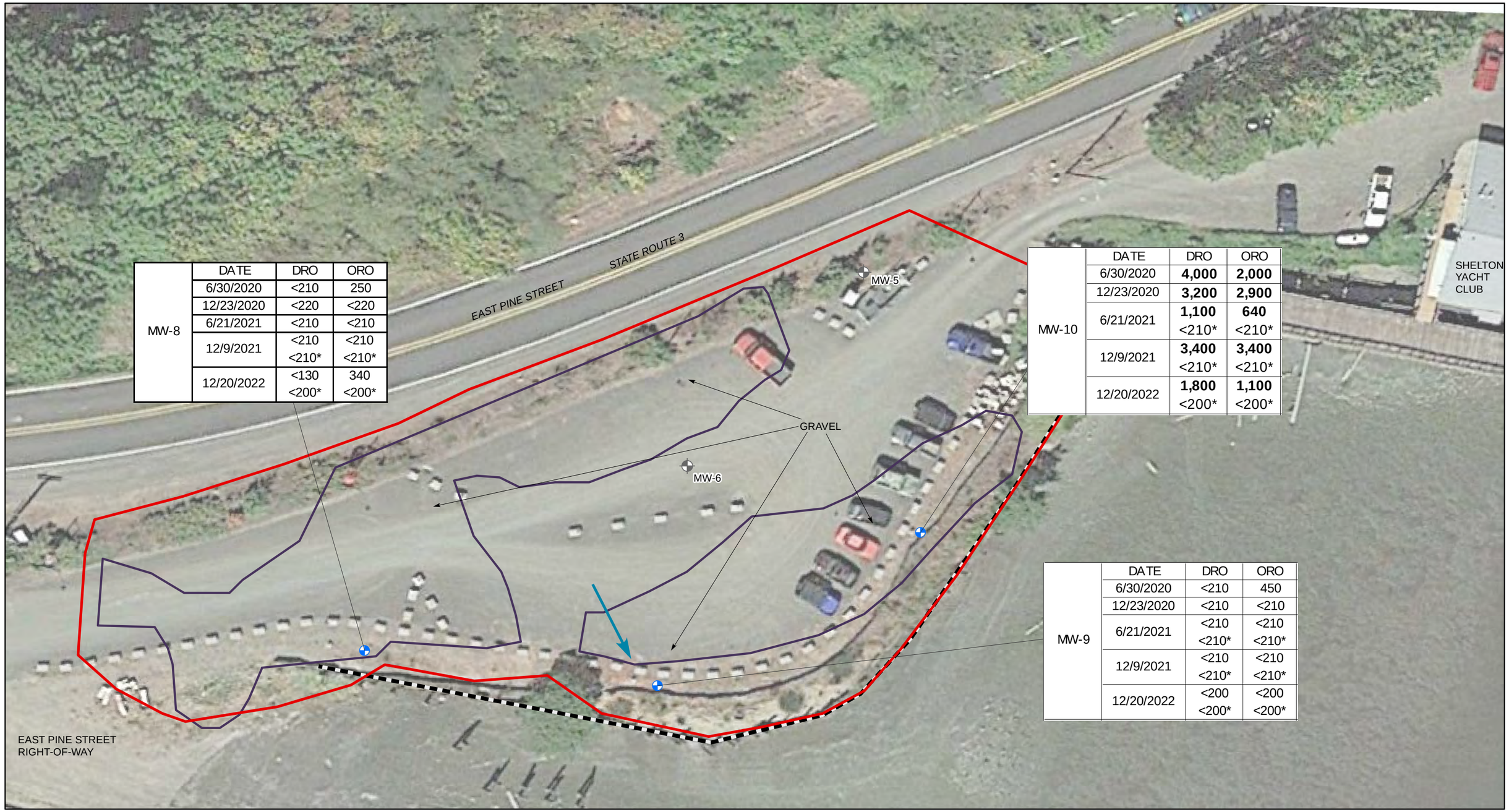

MW-8	DATE	DRO	ORO
	6/30/2020	<210	250
	12/23/2020	<220	<220
	6/21/2021	<210	<210
	12/9/2021	<210 <210*	<210 <210*
	12/20/2022	<130 <200*	340 <200*

MW-10	DATE	DRO	ORO
	6/30/2020	**4,000**	**2,000**
	12/23/2020	**3,200**	**2,900**
	6/21/2021	**1,100** <210*	**640** <210*
	12/9/2021	**3,400** <210*	**3,400** <210*
	12/20/2022	**1,800** <200*	**1,100** <200*

MW-9	DATE	DRO	ORO
	6/30/2020	<210	450
	12/23/2020	<210	<210
	6/21/2021	<210 <210*	<210 <210*
	12/9/2021	<210 <210*	<210 <210*
	12/20/2022	<200 <200*	<200 <200*

LEGEND

- MONITORING WELL (FARALLON, 2007)
- DECOMMISSIONED MONITORING WELL (FARALLON, 2017)
- ESTIMATED GROUNDWATER FLOW DIRECTION
- BULKHEAD RETAINING WALL
- ESTIMATED LIMITES OF FORMER EXCAVATION AREA
- APPROXIMATE SITE BOUNDARY

NOTES:
UNITS ARE IN MICROGRAMS PER LITER (µg/L).

BOLD = DENOTES CONCENTRATIONS IN GROUNDWATER THAT EXCEED THE WASHINGTON STATE MODEL TOXICS CONTROL ACT CLEANUP REGULATION (MTCA) CLEANUP LEVEL
< = DENOTES ANALYTE NOT DETECTED AT OR EXCEEDING THE REPORTING LIMIT LISTED.
* = SILICA GEL CLEANUP PROCESS APPLIED TO SAMPLE PRIOR TO ANALYSIS.
DRO = TOTAL PETROLEUM HYDROCARBONS (TPH) AS DIESEL-RANGE ORGANICS.
ORO = TPH AS OIL-RANGE ORGANICS

ALL LOCATIONS ARE APPROXIMATE. FIGURES WERE PRODUCED IN COLOR.
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FIGURE 3

GROUNDWATER ANALYTICAL DATA
FORMER EVERGREEN FUEL FACILITY
661 EAST PINE STREET
SHELTON, WASHINGTON

FARALLON PN: 863-001

Drawn By: lmurock Checked By: JR Date: 8/9/2023 Disc Reference:
Document Path: \\edgefs02\GIS\Projects\863 Former Evergreen Fuel\Mapfiles\001 Fmr Evergreen Fuel Facility\044\2023-03-10_Figs3_thru_7\Figure-03_2022_GW_TPH.mxd

B-24	DATE	DEPTH	GRO	DRO	B	T	E	X
	10/27/2022	6.0	---	1,100	<0.02	<0.10	<0.05	<0.15
	10/27/2022	7.0	---	880	<0.02	<0.10	<0.05	<0.15
	10/27/2022	10.0	---	62	<0.02	<0.10	<0.05	<0.15

B-23	DATE	DEPTH	GRO	DRO	B	T	E	X
	10/27/2022	10.0	**50**	56	<0.02	<0.10	<0.05	<0.15
	10/27/2022	11.5	<10	<50	<0.02	<0.10	<0.05	<0.15

B-22	DATE	DEPTH	GRO	DRO	B	T	E	X
	10/27/2022	7.0	---	<50	<0.02	<0.10	<0.05	<0.15
	10/27/2022	11.0	---	<50	<0.02	<0.10	<0.05	<0.15
	10/27/2022	15.0	---	<50	<0.02	<0.10	<0.05	<0.15

B-21	DATE	DEPTH	GRO	DRO	B	T	E	X
	10/27/2022	3.0	<10	---	---	---	---	---
	10/27/2022	11.0	**340**	---	---	---	---	---
	10/27/2022	12.0	---	---	---	---	---	---
	10/27/2022	13.0	11	---	---	---	---	---

B-20	DATE	DEPTH	GRO	DRO	B	T	E	X
	10/26/2022	5.0	<10	<50	<0.02	<0.10	<0.05	<0.15
	10/27/2022	10.0	28	<50	<0.02	<0.10	<0.05	<0.15
	10/27/2022	15.0	<10	<50	<0.02	<0.10	<0.05	<0.15

B-19	DATE	DEPTH	GRO	DRO	B	T	E	X
	10/27/2022	5.0	<10	<50	<0.02	<0.10	<0.05	<0.15
	10/27/2022	10.0	<10	<50	<0.02	<0.10	<0.05	<0.15
	10/27/2022	15.0	19	<50	<0.02	<0.10	<0.05	<0.15
	10/27/2022	20.0	<10	<50	<0.02	<0.10	<0.05	<0.15

B-18	DATE	DEPTH	GRO	DRO	B	T	E	X
	10/27/2022	16.0	---	<50	---	---	---	---
	10/27/2022	20.0	---	<50	---	---	---	---

B-17	DATE	DEPTH	GRO	DRO	B	T	E	X
	10/26/2022	16.0	---	800	---	---	---	---
	10/26/2022	19.0	---	<50	---	---	---	---

B-16	DATE	DEPTH	GRO	DRO	B	T	E	X
	10/26/2022	16.0	---	120	---	---	---	---
	10/26/2022	19.5	---	<50	---	---	---	---

B-15	DATE	DEPTH	GRO	DRO	B	T	E	X
	10/26/2022	5.0	<10	<50	<0.02	<0.10	<0.05	<0.15
	10/27/2022	10.0	**83**	<50	<0.02	<0.10	<0.05	<0.15
	10/27/2022	15.0	<10	<50	<0.02	<0.10	<0.05	<0.15

B-14	DATE	DEPTH	GRO	DRO	B	T	E	X
	10/26/2022	5.0	<10	<50	<0.02	<0.10	<0.05	<0.15
	10/27/2022	10.0	**320**	150	**0.11**	<0.10	0.18	0.24
	10/27/2022	15.0	**110**	420	**0.21**	<0.10	0.73	0.41
	10/27/2022	20.0	<10	<50	<0.02	<0.10	<0.05	<0.15

B-11	DATE	DEPTH	GRO	DRO	B	T	E	X
	10/26/2022	5.0	<10	<50	<0.02	<0.10	<0.05	<0.15
	10/26/2022	6.0	**160**	140	<0.02	<0.10	<0.05	<0.15
	10/26/2022	11.0	12	78	<0.02	<0.10	<0.05	<0.15
	10/26/2022	12.0	---	---	---	---	---	---
	10/26/2022	16.0	<10	<50	<0.02	<0.10	<0.05	<0.15

B-12	DATE	DEPTH	GRO	DRO	B	T	E	X
	10/26/2022	5.0	<10	<50	<0.02	<0.10	<0.05	<0.15
	10/26/2022	6.0	---	---	---	---	---	---
	10/26/2022	9.0	<10	<50	<0.02	<0.10	<0.05	<0.15

B-13	DATE	DEPTH	GRO	DRO	B	T	E	X
	10/26/2022	4.0	---	---	<0.02	<0.10	<0.05	<0.15
	10/26/2022	6.0	---	---	<0.02	<0.10	<0.05	<0.15
	10/26/2022	8.0	---	<50	<0.02	<0.10	<0.05	<0.15
	10/26/2022	10.0	---	---	<0.02	<0.10	<0.05	<0.15

MW-5
A9-BTM2-12
A7NW-SW-3
A7-BTM1-12
A6NW-SW-7
A4NW-SW-8
A6-BTM1-12
A4NW-SW2-7
MW-1
A5-BTM1-9.5
MW-6
D11-BTM2-16
MW-10
MW-4
MW-7
MW-2
C4-BTM1-12
C4SE-SW-6
C4SW-SW-5
MW-8
C4-BTM2-1.5
MW-3
MW-9
SHELTON YACHT CLUB

LEGEND

- RESIDUAL SOIL SAMPLE (FARALLON, 2006 AND 2007)
- BORING (FARALLON, 2022)
- MONITORING WELL (FARALLON, 2007)
- DECOMMISSIONED MONITORING WELL (FARALLON, 2017)
- BULKHEAD RETAINING WALL
- ESTIMATED LIMITES OF FORMER EXCAVATION AREA
- APPROXIMATE SITE BOUNDARY

NOTES:
DEPTH IN FEET BELOW GROUND SURFACE.
ANALYTICAL RESULTS IN MILLIGRAMS PER KILOGRAM.
BOLD = DENOTES CONCENTRATIONS THAT EXCEED THE WASHINGTON STATE MODEL TOXICS CONTROL ACT CLEANUP REGULATION CLEANUP LEVEL
< = DENOTES ANALYTE NOT DETECTED AT OR EXCEEDING THE LISTED REPORTING LIMIT
--- = DENOTES SAMPLE NOT ANALYZED
GRO = TPH AS GASOLINE-RANGE ORGANICS
DRO = TOTAL PETROLEUM HYDROCARBONS (TPH) AS DIESEL-RANGE ORGANICS
B = BENZENE
T = TOLUENE
E = ETHYLBENZENE
X = XYLENES

N

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SCALE IN FEET

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FIGURE 4

2022 SOIL ANALYTICAL RESULTS FOR TPH AND BTEX
FORMER EVERGREEN FUEL FACILITY
661 EAST PINE STREET
SHELTON, WASHINGTON

FARALLON PN: 863-001

Drawn By: lmurock | Checked By: JR | Date: 8/9/2023 | Disc Reference:
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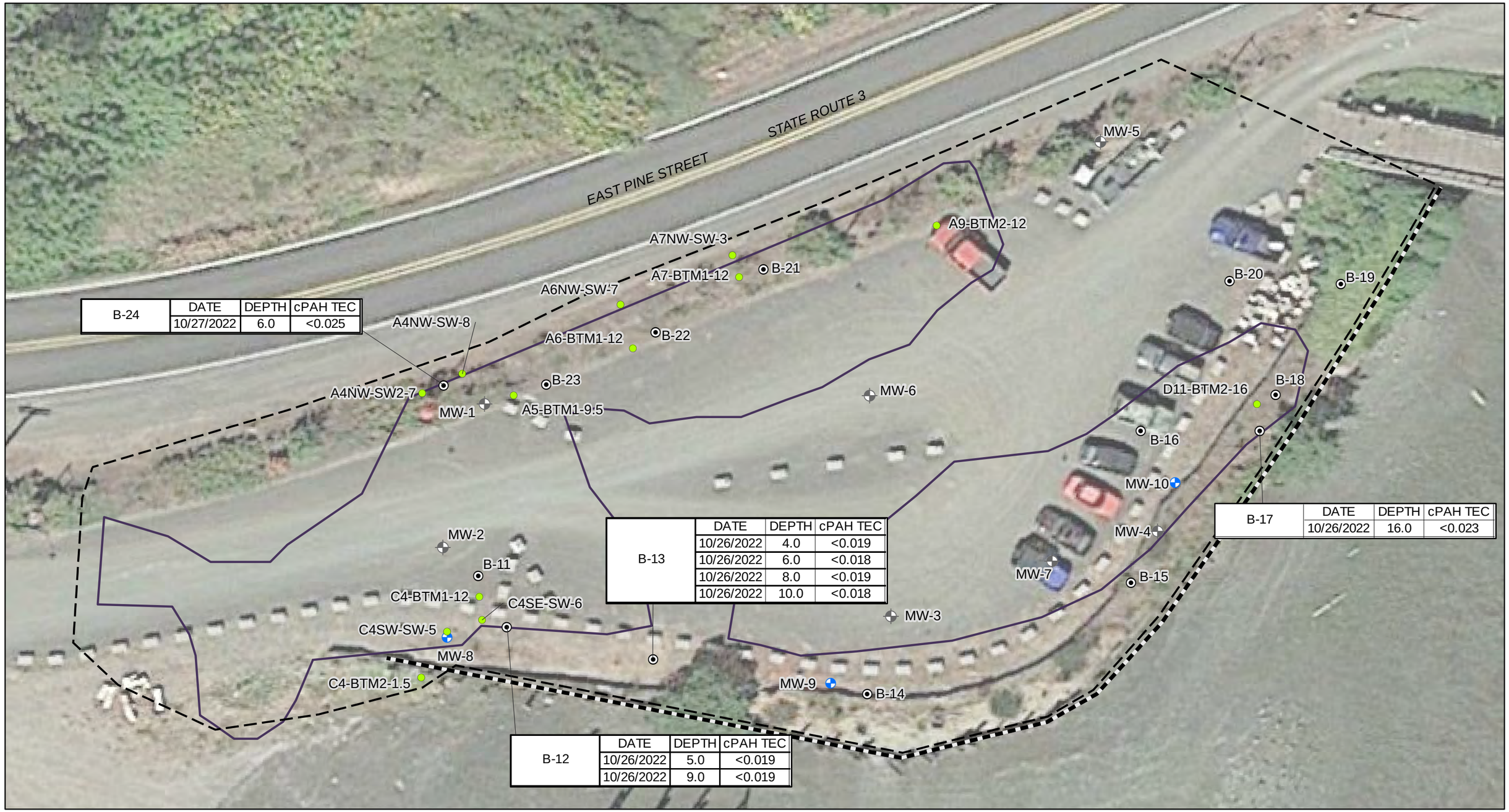

B-24	DATE	DEPTH	cPAH TEC
	10/27/2022	6.0	<0.025

B-13	DATE	DEPTH	cPAH TEC
	10/26/2022	4.0	<0.019
	10/26/2022	6.0	<0.018
	10/26/2022	8.0	<0.019
	10/26/2022	10.0	<0.018

B-17	DATE	DEPTH	cPAH TEC
	10/26/2022	16.0	<0.023

B-12	DATE	DEPTH	cPAH TEC
	10/26/2022	5.0	<0.019
	10/26/2022	9.0	<0.019

LEGEND

- RESIDUAL SOIL SAMPLE (FARALLON, 2006 AND 2007)
- BORING (FARALLON, 2022)
- MONITORING WELL (FARALLON, 2007)
- DECOMMISSIONED MONITORING WELL (FARALLON, 2017)
- BULKHEAD RETAINING WALL
- ESTIMATED LIMITES OF FORMER EXCAVATION AREA
- APPROXIMATE SITE BOUNDARY

NOTES:
DEPTH IN FEET BELOW GROUND SURFACE.
ANALYTICAL RESULTS IN MILLIGRAMS PER KILOGRAM.
< = DENOTES ANALYTE NOT DETECTED AT OR EXCEEDING THE LISTED REPORTING LIMIT
CPAH = CARCINOGENIC POLYCYCLIC AROMATIC HYDROCARBON
TEC = TOXIC EQUIVALENT CONCENTRATION

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FIGURE 5

2022 SOIL ANALYTICAL RESULTS cPAHs
661 EAST PINE STREET
SHELTON, WASHINGTON

FARALLON PN: 863-001

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EAST PINE STREET

STATE ROUTE 3

B-19	DATE	DEPTH	TOC
	10/27/2022	5.0	<0.150
	10/27/2022	20.0	0.400

B-13	DATE	DEPTH	TOC
	10/26/2022	6.0	0.361
	10/26/2022	10.0	0.615

MW-5
A9-BTM2-12
A7NW-SW-3
B-21
A7-BTM1-12
A6NW-SW-7
B-20
A4NW-SW-8
B-22
A6-BTM1-12
B-24
B-23
A4NW-SW2-7
MW-1
A5-BTM1-9.5
MW-6
D11-BTM2-16
B-18
B-16
B-17
MW-10
MW-4
MW-2
B-11
MW-7
B-15
C4-BTM1-12
C4SE-SW-6
MW-3
C4SW-SW-5
B-12
MW-8
C4-BTM2-1.5
MW-9
B-14

LEGEND

- RESIDUAL SOIL SAMPLE (FARALLON, 2006 AND 2007)
- BORING (FARALLON, 2022)
- MONITORING WELL (FARALLON, 2007)
- DECOMMISSIONED MONITORING WELL (FARALLON, 2017)
- BULKHEAD RETAINING WALL
- ESTIMATED LIMITES OF FORMER EXCAVATION AREA
- APPROXIMATE SITE BOUNDARY

NOTES:
DEPTH IN FEET BELOW GROUND SURFACE.
ANALYTICAL RESULTS IN PERCENT DRY WEIGHT.
< = DENOTES ANALYTE NOT DETECTED AT OR EXCEEDING THE LISTED REPORTING LIMIT
TOC = TOTAL ORGANIC CARBON

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FIGURE 6

2022 SOIL ANALYTICAL RESULTS FOR TOC
661 EAST PINE STREET
SHELTON, WASHINGTON

FARALLON PN: 863-001

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A7-BTM1-12	DATE	DEPTH	GRO	DRO	B	T	E	X
	12/8/2006	12	**50**	<25	<0.03	<0.10	0.24	0.62

A9-BTM2-12	DATE	DEPTH	GRO	DRO	B	T	E	X
	12/27/2006	12	19	<25	**0.07**	0.11	<0.05	0.3

A7NW-SW-3	DATE	DEPTH	GRO	DRO	B	T	E	X
	12/8/2006	3	**35**	30	<0.03	<0.10	<0.05	<0.15

A6NW-SW-7	DATE	DEPTH	GRO	DRO	B	T	E	X
	12/14/2006	7	<10	**3,300**	<0.03	<0.10	<0.05	<0.15

A6-BTM1-12	DATE	DEPTH	GRO	DRO	B	T	E	X
	12/14/2006	12	<10	**5,300**	<0.03	1.2	0.49	**27**

A4NW-SW-8	DATE	DEPTH	GRO	DRO	B	T	E	X
	12/14/2006	8	<10	**15,000**	**0.5**	3.7	5.3	**18**

A5-BTM1-9.5	DATE	DEPTH	GRO	DRO	B	T	E	X
	12/14/2006	9.5	**50**	75	<0.03	0.17	0.07	0.74

A4NW-SW2-7	DATE	DEPTH	GRO	DRO	B	T	E	X
	12/19/2006	7	<10	**7,200**	<0.03	2.7	1.5	8.6

C4-BTM1-12	DATE	DEPTH	GRO	DRO	B	T	E	X
	12/20/2006	12	<10	680	**0.6**	0.4	0.27	1.6

C4SE-SW-6	DATE	DEPTH	GRO	DRO	B	T	E	X
	12/20/2006	6	<10	**2,300**	<0.03	0.23	1.5	2.3

C4SW-SW-5	DATE	DEPTH	GRO	DRO	B	T	E	X
	12/29/2006	5	**59**	<25	**1.32**	0.14	0.85	1.96

C4-BTM2-1.5	DATE	DEPTH	GRO	DRO	B	T	E	X
	1/11/2007	1.5	<6.0	56	**0.06**	<0.06	<0.06	<0.06

D11-BTM2-16	DATE	DEPTH	GRO	DRO	B	T	E	X
	1/5/2007	16	<1,000	**23,000**	<1.5	<5	0.9	7

MW-1 MW-2 MW-3 MW-4 MW-5 MW-6 MW-7 MW-8 MW-9 MW-10

B-11 B-12 B-13 B-14 B-15 B-16 B-17 B-18 B-19 B-20 B-21 B-22 B-23 B-24

SHELTON YACHT CLUB

LEGEND

- RESIDUAL SOIL SAMPLE (FARALLON, 2006 AND 2007)
- BORING (FARALLON, 2022)
- MONITORING WELL (FARALLON, 2007)
- DECOMMISSIONED MONITORING WELL (FARALLON, 2017)
- BULKHEAD RETAINING WALL
- ESTIMATED LIMITS OF FORMER EXCAVATION AREA
- RESIDUAL SOIL CONTAMINATION AREA
- APPROXIMATE SITE BOUNDARY

NOTES:
DEPTH IN FEET BELOW GROUND SURFACE.
ANALYTICAL RESULTS IN MILLIGRAMS PER KILOGRAM.
ALL LOCATIONS ARE APPROXIMATE.
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BOLD = DENOTES CONCENTRATIONS THAT EXCEED THE WASHINGTON STATE MODEL TOXICS CONTROL ACT CLEANUP REGULATION CLEANUP LEVEL
< = DENOTES ANALYTE NOT DETECTED AT OR EXCEEDING THE LISTED REPORTING LIMIT
B = BENZENE
DRO = TOTAL PETROLEUM HYDROCARBONS (TPH) AS DIESEL-RANGE ORGANICS
E = ETHYLBENZENE
GRO = TPH AS GASOLINE-RANGE ORGANICS
NA = NOT ANALYZED
T = TOLUENE
X = XYLENES

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FIGURE 7

RESIDUAL SOIL CONTAMINATION
FORMER EVERGREEN FUEL FACILITY
661 EAST PINE STREET
SHELTON, WASHINGTON

FARALLON PN: 863-001

Drawn By: lmurock Checked By: JR Date: 8/9/2023 Disc Reference:

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TABLES

PERFORMANCE SOIL SAMPLING – 2022

Former Evergreen Fuel Facility
661 East Pine Street
Shelton, Washington

Farallon PN: 863-001

Table 1
Survey Data
Former Evergreen Fuel Facility
Shelton, Washington
Farallon PN: 863-001

Location	Date	Ground Surface Elevation[1]	Northing[2]	Easting[2]
B-11	10/28/2022	17.94	696394.02	997351.66
B-12		17.30	696381.48	997358.81
B-13		17.32	696373.74	997394.75
B-14		16.56	696364.86	997446.73
B-15		17.10	696392.22	997511.63
B-16		18.44	696428.97	997513.83
B-17		18.04	696429.39	997542.66
B-18		18.28	696438.19	997546.98
B-19		18.33	696465.63	997562.57
B-20		20.08	696466.14	997535.63
B-21		20.86	696469.12	997421.54
B-22		21.20	696453.61	997395.24
B-23		21.40	696440.91	997368.50
B-24		19.88	696440.79	997343.45

NOTES:

[1]Vertical Datum: NAVD 88 - Based on GPS measurments using the Washington State reference network.

[2]Horizontal Datum: NAD 83/2007 Washington South Zone - Based on GPS measurements using the Washington State reference network.

Table 2
Summary of Soil Analytical Results for TPH and BTEX
Former Evergreen Fuel Facility
Shelton, Washington
Farallon PN: 863-001

Sample Location	Sample Identification	Sample Depth (feet)[1]	Sample Date	Analytical Results (milligrams per kilogram)						
				DRO[2]	ORO[2]	GRO[3]	Benzene[4]	Toluene[4]	Ethylbenzene[4]	Xylenes[4]
B-11	B-11-5.0	5.0	10/26/2022	< 50	< 250	< 10	< 0.02	< 0.10	< 0.05	< 0.15
	B-11-6.0	6.0	10/26/2022	140	< 250	**160**	< 0.02	< 0.10	< 0.05	< 0.15
	B-11-11.0	11.0	10/26/2022	78	< 250	12	< 0.02	< 0.10	< 0.05	< 0.15
	B-11-16.0	16.0	10/26/2022	< 50	< 250	< 10	< 0.02	< 0.10	< 0.05	< 0.15
B-12	B-12-5.0	5.0	10/26/2022	< 50	< 250	< 10	< 0.02	< 0.10	< 0.05	< 0.15
	B-12-9.0	9.0	10/26/2022	< 50	< 250	< 10	< 0.02	< 0.10	< 0.05	< 0.15
B-13	B-13-4.0	4.0	10/26/2022	---	---	---	< 0.02	< 0.10	< 0.05	< 0.15
	B-13-6.0	6.0	10/26/2022	---	---	---	< 0.02	< 0.10	< 0.05	< 0.15
	B-13-8.0	8.0	10/26/2022	< 50	< 250	---	< 0.02	< 0.10	< 0.05	< 0.15
	B-13-10.0	10.0	10/26/2022	---	---	---	< 0.02	< 0.10	< 0.05	< 0.15
B-14	B-14-5.0	5.0	10/26/2022	< 50	< 250	< 10	< 0.02	< 0.10	< 0.05	< 0.15
	B-14-10.0	10.0	10/27/2022	150	< 250	**320**	**0.11**	< 0.10	0.18	0.24
	B-14-15.0	15.0	10/27/2022	420	< 250	**110**	**0.21**	< 0.10	0.73	0.41
	B-140-15.0	15.0	10/27/2022	< 50	< 250	**66**	**0.28**	< 0.10	0.47	0.47
	B-14-20.0	20.0	10/27/2022	< 50	< 250	< 10	< 0.02	< 0.10	< 0.05	< 0.15
	B-140-20.0	20.0	10/27/2022	< 50	< 250	17	< 0.02	< 0.10	< 0.05	< 0.15
B-15	B-15-5.0	5.0	10/26/2022	< 50	< 250	< 10	< 0.02	< 0.10	< 0.05	< 0.15
	B-15-10.0	10.0	10/27/2022	< 50	< 250	**83**	< 0.02	< 0.10	< 0.05	< 0.15
	B-150-10.0	10.0	10/27/2022	< 50	< 250	< 10	< 0.02	< 0.10	< 0.05	< 0.15
	B-15-15.0	15.0	10/27/2022	< 50	< 250	< 10	< 0.02	< 0.10	< 0.05	< 0.15
B-16	B-16-16.0	16.0	10/26/2022	120	< 250	---	---	---	---	---
	B-16-19.5	19.5	10/26/2022	< 50	< 250	---	---	---	---	---
B-17	B-17-16.0	16.0	10/26/2022	800	< 250	---	---	---	---	---
	B-17-19.0	19.0	10/26/2022	< 50	< 250	---	---	---	---	---
B-18	B-18-16.0	16.0	10/27/2022	< 50	< 250	---	---	---	---	---
	B-18-20.0	20.0	10/27/2022	< 50	< 250	---	---	---	---	---
B-19	B-19-5.0	5.0	10/27/2022	< 50	< 250	< 10	< 0.02	< 0.10	< 0.05	< 0.15
	B-19-10.0	10.0	10/27/2022	< 50	< 250	< 10	< 0.02	< 0.10	< 0.05	< 0.15
	B-19-15.0	15.0	10/27/2022	< 50	< 250	19	< 0.02	< 0.10	< 0.05	< 0.15
	B-19-20.0	20.0	10/27/2022	< 50	< 250	< 10	< 0.02	< 0.10	< 0.05	< 0.15
	B-190-20.0	20.0	10/27/2022	< 50	< 250	< 10	< 0.02	< 0.10	< 0.05	< 0.15
B-20	B-20-5.0	5.0	10/26/2022	< 50	< 250	< 10	< 0.02	< 0.10	< 0.05	< 0.15
	B-20-10.0	10.0	10/27/2022	< 50	< 250	28	< 0.02	< 0.10	< 0.05	< 0.15
	B-20-15.0	15.0	10/27/2022	< 50	< 250	< 10	< 0.02	< 0.10	< 0.05	< 0.15
B-21	B-21-3.0	3.0	10/27/2022	---	---	< 10	---	---	---	---
	B-21-11.0	11.0	10/27/2022	---	---	**340**	---	---	---	---
	B-21-13.0	13.0	10/27/2022	---	---	11	---	---	---	---
B-22	B-22-7.0	7.0	10/27/2022	< 50	< 250	---	< 0.02	< 0.10	< 0.05	< 0.15
	B-22-11.0	11.0	10/27/2022	< 50	< 250	---	< 0.02	< 0.10	< 0.05	< 0.15
	B-22-15.0	15.0	10/27/2022	< 50	< 250	---	< 0.02	< 0.10	< 0.05	< 0.15
MTCA Method A Cleanup Levels for Soil[5]				**2,000**	**2,000**	**30/100[6]**	**0.03**	**7**	**6**	**9**

Table 2
Summary of Soil Analytical Results for TPH and BTEX
Former Evergreen Fuel Facility
Shelton, Washington
Farallon PN: 863-001

Sample Location	Sample Identification	Sample Depth (feet)[1]	Sample Date	Analytical Results (milligrams per kilogram)						
				DRO[2]	ORO[2]	GRO[3]	Benzene[4]	Toluene[4]	Ethylbenzene[4]	Xylenes[4]
B-23	B-23-10.0	10.0	10/27/2022	56	< 250	**50**	< 0.02	< 0.10	< 0.05	< 0.15
	B-23-11.5	11.5	10/27/2022	< 50	< 250	< 10	< 0.02	< 0.10	< 0.05	< 0.15
	B-230-11.5	11.5	10/27/2022	< 50	< 250	< 10	< 0.02	< 0.10	< 0.05	< 0.15
B-24	B-24-6.0	6.0	10/27/2022	1,100	< 250	---	< 0.02	< 0.10	< 0.05	< 0.15
	B-24-7.0	7.0	10/27/2022	880	< 250	---	< 0.02	< 0.10	< 0.05	< 0.15
	B-24-10.0	10.0	10/27/2022	62	< 250	---	< 0.02	< 0.10	< 0.05	< 0.15
MTCA Method A Cleanup Levels for Soil[5]				**2,000**	**2,000**	**30[6]**	**0.03**	**7**	**6**	**9**

NOTES:

Results in **bold** and highlighted yellow denote concentrations exceeding applicable cleanup levels.

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

— denotes sample not analyzed.

[1]Depth in feet below ground surface.

[2]Analyzed by Northwest Method NWTPH-Dx with silica gel cleanup.

[3]Analyzed by Northwest Method NWTPH-Gx.

[4]Analyzed by U.S. Environmental Protection Agency Method 8260D.

[5]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.

[6]Cleanup level is 30 milligrams per kilogram as indicated in the *Draft Cleanup Action Plan, Evergreen Fuel Facility, 661 East Pine Street, Shelton, Washington dated July 18, 2006* prepared by Farallon.

BTEX = benzene, toluene, ethylbenzene and xylenes

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

GRO = TPH as gasoline-range organics

ORO = TPH as oil-range organics

Table 3
Summary of Soil Analytical Results for PAHs
Former Evergreen Fuel Facility
Shelton, Washington
Farallon PN: 863-001

Sample Location	Sample Identification	Sample Depth (feet)[1]	Sample Date	Analytical Results (milligrams per kilogram)[2]											
				Non-Carcinogenic PAHs				Carcinogenic PAHs							
				Naphthalene	1-Methylnaphthalene	2-Methylnaphthalene	Total Naphthalenes[3]	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[4,5]
B-12	B-12-5.0	5.0	10/26/2022	< 0.0226	< 0.0226	< 0.0226	< 0.0678	< 0.0226	< 0.0226	< 0.0226	< 0.0226	< 0.0453	< 0.0453	< 0.0453	< 0.019
	B-12-9.0	9.0	10/26/2022	0.0500	< 0.0219	< 0.0219	0.0500	< 0.0219	< 0.0219	< 0.0219	< 0.0219	< 0.0438	< 0.0438	< 0.0438	< 0.019
B-13	B-13-4.0	4.0	10/26/2022	< 0.0220	< 0.0220	< 0.0220	< 0.0660	< 0.0220	< 0.0220	< 0.0220	< 0.0220	< 0.0440	< 0.0440	< 0.0440	< 0.019
	B-13-6.0	6.0	10/26/2022	< 0.0206	< 0.0206	< 0.0206	< 0.0618	< 0.0206	< 0.0206	< 0.0206	< 0.0206	< 0.0412	< 0.0412	< 0.0412	< 0.018
	B-13-8.0	8.0	10/26/2022	< 0.0220	< 0.0220	< 0.0220	< 0.0660	< 0.0220	< 0.0220	< 0.0220	< 0.0220	< 0.0440	< 0.0440	< 0.0440	< 0.019
	B-13-10.0	10.0	10/26/2022	< 0.0209	< 0.0209	< 0.0209	< 0.0627	< 0.0209	< 0.0209	< 0.0209	< 0.0209	< 0.0418	< 0.0418	< 0.0418	< 0.018
B-17	B-17-16.0 H	16.0	10/26/2022	< 0.0196	0.0214	0.0242	0.0456	< 0.0293	< 0.0196	< 0.0245	< 0.0245	< 0.0196	< 0.0489	< 0.0391	< 0.023
B-24	B-24-6.0 H	6.0	10/27/2022	< 0.0219	< 0.0219	< 0.0219	< 0.0657	< 0.0328	< 0.0219	< 0.0274	< 0.0274	< 0.0219	< 0.0547	< 0.0438	< 0.025
MTCA Method A Cleanup Level for Soil [6]							**5**								**0.1**

NOTES:

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

[1]Depth in feet below ground surface.

[2]Analyzed by U.S. Environmental Protection Agency Method 8270E/SIM.

[3]Sum of naphthalene, 1-methylnaphthalene and 2-methylnaphthalene.

[4]Total carcinogenic polycyclic aromatic hydrocarbons derived using the total toxicity equivalency method in Section 708(8) of Chapter 173-340 of the Washington Administrative Code.

[5]For concentrations reported at less than the laboratory reporting limit, half the reporting limit was used to calculate the TEC.

[6]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.

PAHs = polycyclic aromatic hydrocarbons

H = sample analyzed outside of holding time

TEC = toxic equivalent concentration

Table 4
Soil Analytical Results for Total Organic Carbon
Former Evergreen Fuel Facility
Shelton, Washington
Farallon PN: 863-001

Sample Location	Sample Identification	Sample Depth (feet)[1]	Sample Date	Analytical Results (percent dry weight)[2]
				Total Organic Carbon
B-13	B-13-6.0	6.0	10/26/2022	0.361
	B-13-10.0	10.0	10/26/2022	0.615
B-19	B-19-5.0	5.0	10/27/2022	< 0.150
	B-19-20.0	20.0	10/27/2022	0.400

NOTES:

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

[1]Depth in feet below ground surface.

[2]Analyzed by U.S. Environmental Protection Agency Method 9060.

Table 5
Soil Analytical Results for EPH
Former Evergreen Fuel Facility
Shelton, Washington
Farallon PN: 863-001

Sample Location	B-17	B-24
Sample Identification	B-17-16.0 [H]	B-24-6.0 [H]
Sample Depth (ft bgs)[1]	16.0	6.0
Sample Date	10/26/2022	10/27/2022
Parameter		
Total Petroleum Hydrocarbons[2] (mg/kg)		
DRO	800	1,100
ORO	< 250	< 250
Extractable Petroleum Hydrocarbons[3] (mg/kg)		
C8-C10 Aliphatics	< 20.3	131
C10-C12 Aliphatics	< 10.2	659
C12-C16 Aliphatics	24.0	1,550
C16-C21 Aliphatics	90.0	410
C21-C34 Aliphatics	43.0	40.4
C8-C10 Aromatics	< 20.3	< 23.2
C10-C12 Aromatics	< 10.2	14.5
C12-C16 Aromatics	< 10.2	229
C16-C21 Aromatics	33.7	136
C21-C34 Aromatics	52.9	73.0

NOTES:

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

[1]Depth in feet below ground surface.

[2]Analyzed by Northwest Method NWTPH-Dx with silica gel cleanup.

[3]Analyzed by Northwest Method NWEPH.

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

H = NWEPH analysis conducted outside of holding time

mg/kg = milligrams per kilogram

ORO = TPH as oil-range organics

ATTACHMENT A
BORING LOGS

PERFORMANCE SOIL SAMPLING – 2022

Former Evergreen Fuel Facility
661 East Pine Street
Shelton, Washington

Farallon PN: 863-001

FARALLON CONSULTING

Log of Boring: B-11

Client: CC Cole and Son's
Project: Fmr Evergreen Fuel Facility
Location: Shelton, Washington
Farallon PN: 863-001
Logged By: M. Ysaguirre
Reviewed By: J. Ruark

Date/Time Started: 10/26/22 0940
Date/Time Completed: 10/26/22 1205
Drilling Company: Holt
Drilling Method: Direct Push
Drilling Equipment: 7720DT
Drilling Operator: Louie Fehner
Sampler Type: 5' Macrocore

Depth to Water ATD (ft bgs): 5.0
Boring Diameter (in): N/A
Total Boring Depth (ft bgs): 19.0

Depth (ft bgs)	Lithologic Description	USCS	Water Level	% Recovery	PID (ppmv)	Sample ID
0	0.0 - 5.0': Cleared to 5.0' bgs for utilities. Fill material.	FILL		100		
5	5.0 - 6.5': Poorly graded GRAVEL with sand (90% gravel, 10% sand), fine and coarse gravel, fine sand, gray, wet, faint petroleum-like odor.	GP	▼	30	4.0	B-11-5.0
						B-11-6.0
	6.5 - 10.0': No Recovery.					
10	10.0 - 11.0': SILT (100% silt), gray, wet, no odor.	ML		90	17.2	
	11.0 - 12.0': Well graded SAND (80% sand, 15% gravel, 5% silt) fine to coarse sand, fine and coarse gravel, gray, moist, petroleum-like odor. Black interior inside core.	SW				B-11-11.0
	12.0 - 14.5': Silty SAND (60% sand, 35% silt, 5% gravel), fine sand and gravel, gray, moist, no odor. Orange/ reddish brown from 12.0 - 14.0'	SM			2.4	
15	14.5 - 15.0': No Recovery.					
	15.0 - 17.0': Well graded SAND with gravel (80% sand, 20% gravel), fine sand, fine gravel, gray, wet, no odor.	SW		80	0.0	B-11-16.0
	17.0 - 19.0': Poorly graded SAND (95% sand, 5% gravel), coarse sand, fine gravel, reddish brown, wet, no odor.	SP				
20	19.0 - 20.0': No Recovery.					

Completion Information

Temporary Well Casing Diameter (in): N/A
Temporary Well Screened Interval (ft bgs): N/A
Boring Abandonment: Bentonite
Surface Seal: N/A
Ground Surface Elevation (ft): N/A
Surveyed Location: **X:** N/A **Y:** N/A

FARALLON CONSULTING

Log of Boring: B-12

Client:	CC Cole and Son's
Project:	Fmr Evergreen Fuel Facility
Location:	Shelton, Washington
Farallon PN:	863-001
Logged By:	M. Ysaguirre
Reviewed By:	J. Ruark

Date/Time Started:	10/26/22 1010	**Depth to Water ATD (ft bgs):**	5.0
Date/Time Completed:	10/26/22 1230	**Boring Diameter (in):**	N/A
Drilling Company:	Holt	**Total Boring Depth (ft bgs):**	10.0
Drilling Method:	Direct Push		
Drilling Equipment:	7720DT		
Drilling Operator:	Louie Fehner		
Sampler Type:	5' Macrocore		

Depth (ft bgs)	Lithologic Description	USCS	% Recovery	PID (ppmv)	Sample ID
0	0.0 - 5.0': Cleared to 5.0' bgs for utilities. Poorly graded GRAVEL (100%) coarse gravel, black, wet, faint petroleum-like odor.	GP	100	0.1	
5	5.0 - 9.0': Poorly graded GRAVEL (100% gravel), fine and coarse gravel, gray, wet, no odor.	GP	100		B-12-5.0
	9.0 - 10.0': Poorly graded GRAVEL with sand (80% gravel, 20% sand), fine and coarse gravel and sand, gray, wet, no odor.	GP			B-12-9.0
10					
15					

Completion Information

Temporary Well Casing Diameter (in):	N/A	**Surface Seal:**	N/A
Temporary Well Screened Interval (ft bgs):	N/A	**Ground Surface Elevation (ft):**	N/A
Boring Abandonment:	Bentonite	**Surveyed Location:** **X:** N/A	**Y:** N/A

FARALLON CONSULTING

Log of Boring: B-13

Client: CC Cole and Son's
Project: Fmr Evergreen Fuel Facility
Location: Shelton, Washington
Farallon PN: 863-001
Logged By: M. Ysaguirre
Reviewed By: J. Ruark

Date/Time Started: 10/26/22 1056
Date/Time Completed: 10/26/22 1300
Drilling Company: Holt
Drilling Method: Direct Push
Drilling Equipment: 7720DT
Drilling Operator: Louie Fehner
Sampler Type: 5' Macrocore

Depth to Water ATD (ft bgs): 7.5
Boring Diameter (in): N/A
Total Boring Depth (ft bgs): 12.0

Depth (ft bgs)	Sample Interval	Lithologic Description	USCS	USCS Graphic	Water Level	% Recovery	PID (ppmv)	Sample ID	Sample Analyzed
0		0.0 - 5.0': Cleared to 5.0' bgs for utilities. Silty SAND (90% sand, 15% silt, 5% gravel), fine sand, coarse gravel, brown, moist, no odor.	SM			100	0.0	B-13-4.0	
5		5.0 - 8.5': Silty SAND (70% sand, 25% silt, 5% gravel), fine sand, gray, moist, no odor. Orange/ reddish brown from 5.0 to 6.0'. Coarse sand from 7.5 to 8.5'.	SM		▼	70	0.0	B-13-6.0	
								B-13-8.0	
		8.5 - 10.0': No Recovery.							
10		10.0 - 12.0': Silty SAND (60% sand, 35% silt, 5% gravel), fine sand and gravel, gray, moist, no odor.	SM			100	0.0	B-13-10.0	
15									

Completion Information

Temporary Well Casing Diameter (in): N/A
Temporary Well Screened Interval (ft bgs): N/A
Boring Abandonment: Bentonite
Surface Seal: N/A
Ground Surface Elevation (ft): N/A
Surveyed Location: **X:** N/A **Y:** N/A

FARALLON CONSULTING

Log of Boring: B-14

Client: CC Cole and Son's
Project: Fmr Evergreen Fuel Facility
Location: Shelton, Washington
Farallon PN: 863-001
Logged By: M. Ysaguirre
Reviewed By: J. Ruark

Date/Time Started: 10/26/22 1620
Date/Time Completed: 10/26/22 1700
Drilling Company: Holt
Drilling Method: Direct Push
Drilling Equipment: 7720DT
Drilling Operator: Louie Fehner
Sampler Type: 5' Macrocore

Depth to Water ATD (ft bgs): N/E
Boring Diameter (in): N/A
Total Boring Depth (ft bgs): 20.0

Depth (ft bgs)	Sample Interval	Lithologic Description	USCS	USCS Graphic	Water Level	% Recovery	PID (ppmv)	Sample ID	Sample Analyzed
0		0.0 - 5.0': No Recovery.				0			
5		5.0 - 5.5': Poorly graded SAND (90% sand, 10% gravel), coarse sand, fine and coarse gravel, brown, moist, no odor.	SP			10		B-14-5.0	
		5.5 - 10.0': No Recovery.							
10		10.0 - 10.4': Poorly graded SAND (90% sand, 10% gravel), coarse sand, fine and coarse gravel, brown, moist, no odor.	SP			10	42.5	B-14-10.0	
		10.4 - 15.0': No Recovery.							
15		15.0 - 20.0': Sandy SILT (85% silt, 15% sand), fine sand, moist, dark gray, no odor. Organic material and woody debris and shell fragments at 19.5 to 20.0'.	ML			100	6.0	B-14-15.0 B-140-15.0	
							0.0		
20							0.0	B-14-20.0 B-140-20.0	

Completion Information

Temporary Well Casing Diameter (in): N/A
Temporary Well Screened Interval (ft bgs): N/A
Boring Abandonment: Bentonite
Surface Seal: N/A
Ground Surface Elevation (ft): N/A
Surveyed Location: **X:** N/A **Y:** N/A

FARALLON CONSULTING

Log of Boring: B-15

Client: CC Cole and Son's
Project: Fmr Evergreen Fuel Facilities
Location: Shelton, Washington
Farallon PN: 863-001
Logged By: M. Ysaguirre
Reviewed By: J. Ruark

Date/Time Started: 10/27/22 1525
Date/Time Completed: 10/27/22 1600
Drilling Company: Holt
Drilling Method: Direct Push
Drilling Equipment: 7720DT
Drilling Operator: Louie Fehner
Sampler Type: 5' Macrocore

Depth to Water ATD (ft bgs): 5.5
Boring Diameter (in): N/A
Total Boring Depth (ft bgs): 20.0

Depth (ft bgs)	Sample Interval	Lithologic Description	USCS	USCS Graphic	Water Level	% Recovery	PID (ppmv)	Sample ID	Sample Analyzed
0		0.0 - 5.0': Cleared to 5.0' bgs for utilities.				100			
5		5.0 - 5.5': Poorly graded SAND (90% sand, 10% gravel), coarse sand, fine and coarse gravel, brown, moist, no odor.	SP		▼	30	42.0	B-15-5.0	
		5.5 - 6.5': Silty SAND (70% sand, 20% silt, 10% gravel), coarse sand, fine and coarse gravel, brown, wet, no odor. Gray at 6.3' to 6.5'.	SM						
		6.5 - 10.0': No Recovery.							
10		10.0 - 11.0': Silty SAND (70% sand, 20% silt, 10% gravel), coarse sand, fine and coarse gravel, brown, no odor. Wet at 10.5'.	SM			20	4.9	B-15-10.0 B-150-10.0	
		11.0 - 15.0': No Recovery.							
15		15.0 - 16.5': Silty SAND (70% sand, 20% silt, 10% gravel), coarse sand, fine and coarse gravel, wet, brown, no odor.	SM			30	0.0	B-15-15.0 B-150-15.0	
		16.5 - 20.0': No Recovery.							
20									

Completion Information

Temporary Well Casing Diameter (in): N/A
Temporary Well Screened Interval (ft bgs): N/A
Boring Abandonment: Bentonite
Surface Seal: N/A
Ground Surface Elevation (ft): N/A
Surveyed Location: **X:** N/A **Y:** N/A

Log of Boring: B-16

Client: CC Cole and Son's
Project: Fmr Evergreen Fuel Facility
Location: Shelton, Washington
Farallon PN: 863-001
Logged By: M. Ysaguirre
Reviewed By: J. Ruark

Date/Time Started: 10/26/22 1353
Date/Time Completed: 10/26/22 1422
Drilling Company: Holt
Drilling Method: Direct Push
Drilling Equipment: 7720DT
Drilling Operator: Louie Fehner
Sampler Type: 5' Macrocore

Depth to Water ATD (ft bgs): 6.5
Boring Diameter (in): N/A
Total Boring Depth (ft bgs): 20.0

Depth (ft bgs)	Sample Interval	Lithologic Description	USCS	USCS Graphic	Water Level	% Recovery	PID (ppmv)	Sample ID	Sample Analyzed
0		0.0 - 5.0': Cleared to 5.0' bgs for utilities.				100			
5		5.0 - 6.5': Poorly graded GRAVEL (100% gravel), coarse gravel, gray, dry, no odor.	GP			40			
		6.5 - 7.0': Poorly graded SAND (90% sand, 5% silt, 5% gravel), coarse sand, fine gravel, dark gray, wet, no odor.	SP				16.4	B-16-7.0	
		7.0 - 10.0': No Recovery.							
10		10.0 - 12.0': Poorly graded SAND with gravel (80% sand, 20% gravel), coarse sand, fine and coarse gravel, dark gray, moist, no odor. Wet from 11.0 -12.0'.	SP			40	3.2		
		12.0 - 15.0': No Recovery.							
15		15.0 - 16.0': Poorly graded SAND with gravel (80% sand, 20% gravel), coarse sand, fine and coarse gravel, dark gray, moist, no odor.	SP			90			
		16.0 - 19.5': Silty SAND (60% sand, 35% silt, 5% gravel) coarse sand, fine and coarse gravel, wet, dark gray. Slight petroleum-like odor at 16.0'.	SM					B-16-16.0	
20		19.5 - 20.0': No Recovery.						B-16-19.5	

Completion Information

Temporary Well Casing Diameter (in): N/A
Temporary Well Screened Interval (ft bgs): N/A
Boring Abandonment: Bentonite
Surface Seal: N/A
Ground Surface Elevation (ft): N/A
Surveyed Location: **X:** N/A **Y:** N/A

Log of Boring: B-17

Client: CC Cole and Son's
Project: Fmr Evergreen Fuel Facility
Location: Shelton, Washington
Farallon PN: 863-001
Logged By: M. Ysaguirre
Reviewed By: J. Ruark

Date/Time Started: 10/26/22 1450
Date/Time Completed: 10/26/22 1500
Drilling Company: Holt
Drilling Method: Direct Push
Drilling Equipment: 7720DT
Drilling Operator: Louie Fehner
Sampler Type: 5' Macrocore

Depth to Water ATD (ft bgs): N/E
Boring Diameter (in): N/A
Total Boring Depth (ft bgs): 20.0

Depth (ft bgs)	Sample Interval	Lithologic Description	USCS	USCS Graphic	Water Level	% Recovery	PID (ppmv)	Sample ID	Sample Analyzed
0		0.0 - 5.0': Clear to 5.0' bgs for utilities. No recovery from hand auger due to loose material.				0			
5		5.0 - 6.5': Poorly graded SAND (95% sand, 5% gravel), fine sand, fine gravel, brown, dry, no odor. Woody debris present at 6.1'. Cobbles and rock at 6.3'.	SP			30	18.1	B-17-5.0	
		6.5 - 10.0': No Recovery.							
10		10.0 - 10.6': Poorly graded SAND (95% sand, 5% gravel), fine sand, fine gravel, brown, dry, no odor.	SP			25	9.5		
		10.6 - 11.2': Silty SAND (60% sand, 35% silt, 5% gravel), coarse sand, fine gravel, moist, no odor.	SM						
		11.2 - 15.0': No Recovery.							
15		15.0 - 16.0': Poorly graded SAND (95% sand, 5% gravel), fine sand, fine gravel, brown, dry, no odor.	SP			80	2.3		
		16.0 - 19.0': Silty SAND (60% sand, 35% silt, 5% gravel), coarse sand, fine gravel, brown, moist, no odor.	SM					B-17-16.0	
		19.0 - 20.0': No Recovery.					0.0	B-17-19.0	
20									

Completion Information

Temporary Well Casing Diameter (in): N/A
Temporary Well Screened Interval (ft bgs): N/A
Boring Abandonment: Bentonite
Surface Seal: N/A
Ground Surface Elevation (ft): N/A
Surveyed Location: **X:** N/A **Y:** N/A

Log of Boring: B-18

Client:	CC Cole and Son's	**Date/Time Started:**	10/27/22 0945
Project:	Fmr Evergreen Fuel Facility	**Date/Time Completed:**	10/27/22 1005
Location:	Shelton, Washington	**Drilling Company:**	Holt
Farallon PN:	863-001	**Drilling Method:**	Direct Push
Logged By:	M. Ysaguirre	**Drilling Equipment:**	7720DT
Reviewed By:	J. Ruark	**Drilling Operator:**	Louie Fehner
		Sampler Type:	5' Macrocore
		Depth to Water ATD (ft bgs):	10.0
		Boring Diameter (in):	N/A
		Total Boring Depth (ft bgs):	20.0

Depth (ft bgs)	Lithologic Description	USCS	Water Level	% Recovery	PID (ppmv)	Sample ID
0	0.0 - 5.0': Cleared to 5.0' bgs for utilities.			100		
5	5.0 - 5.5': Poorly graded SAND (90% sand, 10% gravel), fine sand, fine and coarse gravel, reddish brown, dry, no odor.	SP		10	4.9	
	5.5 - 10.0': No Recovery.					
10	10.0 - 12.0': Poorly graded SAND (90% sand, 10% gravel), fine sand, fine and coarse gravel, reddish brown, dry, no odor. Wet from 11.0 to 12.0'.	SP	▼	100	0.3	
	12.0 - 15.0': Silty SAND with gravel (70% sand, 15% silt, 15% gravel), coarse sand, fine and coarse gravel, reddish brown, wet, no odor. Transition to gray at 13.5'. Organic material present at 14.7'.	SM				
15	15.0 - 15.5': Poorly graded SAND (90% sand, 10% gravel), fine sand, fine and coarse gravel, reddish brown, dry, no odor.	SP		100	0.0	
	15.5 - 20.0': Silty SAND with gravel (70% sand, 15% silt, 15% gravel), coarse sand, fine and coarse gravel, reddish brown, wet.	SM				B-18-16.0
20						B-18-20.0

Completion Information

Temporary Well Casing Diameter (in):	N/A	**Surface Seal:**	N/A
Temporary Well Screened Interval (ft bgs):	N/A	**Ground Surface Elevation (ft):**	N/A
Boring Abandonment:	Bentonite	**Surveyed Location:** **X:** N/A	**Y:** N/A

Log of Boring: B-19

Client: CC Cole and Son's
Project: Fmr Evergreen Fuel Facility
Location: Shelton, Washington
Farallon PN: 863-001
Logged By: M. Ysaguirre
Reviewed By: J. Ruark

Date/Time Started: 10/27/22 1100
Date/Time Completed: 10/27/22 1140
Drilling Company: Holt
Drilling Method: Direct Push
Drilling Equipment: 7720DT
Drilling Operator: Louie Fehner
Sampler Type: 5' Macrocore

Depth to Water ATD (ft bgs): 10.0
Boring Diameter (in): N/A
Total Boring Depth (ft bgs): 25.0

Depth (ft bgs)	Sample Interval	Lithologic Description	USCS	USCS Graphic	Water Level	% Recovery	PID (ppmv)	Sample ID	Sample Analyzed
0		0.0 -5.0': Cleared to 5.0' bgs for utilities.				100			
5		5.0 - 6.0': Well graded SAND (95% sand, 5% gravel), fine to coarse sand, fine and coarse gravel, brown, dry, no odor.	SW			20	0.0	B-19-5.0	
		6.0 - 10.0': No Recovery.							
10		10.0 - 13.5': Poorly graded SAND with silt (80% sand, 10% silt, 10% gravel), coarse sand, fine and coarse gravel, brown, wet, no odor. Transition to gray at 12.0'.	SP-SM		▼	70	0.0	B-19-10.0	
		13.5 - 15.0': No Recovery.							
15		15.0 - 15.5': Poorly graded SAND with silt (80% sand, 10% silt, 10% gravel), coarse sand, fine and coarse gravel, brown, wet, no odor.	SP-SM			10		B-19-15.0	
		15.5 - 20.0': No Recovery.							
20		20.0 - 25.0': Poorly graded SAND with silt (80% sand, 10% silt, 10% gravel), coarse sand, fine and coarse gravel, gray, moist, no odor. Peat from 23.0 to 23.5'.	SP-SM			100	0.0	B-19-20.0 B-190-20.0	
25									

Completion Information

Temporary Well Casing Diameter (in): N/A
Temporary Well Screened Interval (ft bgs): N/A
Boring Abandonment: Bentonite
Surface Seal: N/A
Ground Surface Elevation (ft): N/A
Surveyed Location: **X:** N/A **Y:** N/A

Log of Boring: B-20

Client: CC Cole and Son's
Project: Fmr Evergreen Fuel Facility
Location: Shelton, Washington
Farallon PN: 863-001
Logged By: M. Ysaguirre
Reviewed By: J. Ruark

Date/Time Started: 10/27/22 0905
Date/Time Completed: 10/27/22 0940
Drilling Company: Holt
Drilling Method: Direct Push
Drilling Equipment: 7720DT
Drilling Operator: Louie Fehner
Sampler Type: 5' Macrocore

Depth to Water ATD (ft bgs): 15.0
Boring Diameter (in): N/A
Total Boring Depth (ft bgs): 20.0

Depth (ft bgs)	Lithologic Description	USCS	Water Level	% Recovery	PID (ppmv)	Sample ID
0	0.0 - 5.0': Cleared to 5.0' bgs for utilities.			0		
5	5.0 - 7.0': Poorly graded SAND with silt (80% sand, 15% silt, 5% gravel), coarse sand, fine gravel, reddish brown, moist, no odor.	SP-SM		50	0.0	B-20-5.0
	7.0 - 7.5': Silty SAND (60% sand, 35% silt, 5% gravel), fine sand, fine gravel, reddish brown, moist, no odor.	SM				
	7.5 - 10.0': No Recovery.					
10	10.0 - 13.0': Silty SAND (70% sand, 25% silt, 5% gravel), coarse sand, fine and coarse gravel, gray, moist. Wet from 11.0 to 12.0'.	SM		80		B-20-10.0
	13.0 - 14.0': Silty SAND (70% sand, 25% silt, 5% gravel), coarse sand, fine and coarse gravel, gray, dry, no odor. Woody debris present at 13.5'.	SM			0.0	
	14.0 - 15.0': No Recovery.					
15	15.0 - 19.0': Sandy SILT (60% silt, 35% sand, 5% gravel), fine sand, fine gravel, gray, wet, no odor. Reddish brown tinge at 18.5'.	ML	▼	80	0.0	B-20-15.0
	19.0 - 20.0': No Recovery.					
20						

Completion Information

Temporary Well Casing Diameter (in): N/A
Temporary Well Screened Interval (ft bgs): N/A
Boring Abandonment: Bentonite
Surface Seal: N/A
Ground Surface Elevation (ft): N/A
Surveyed Location: **X:** N/A **Y:** N/A

Log of Boring: B-21

Client:	CC Cole and Son's	**Date/Time Started:**	10/27/22 1225	**Depth to Water ATD (ft bgs):**	5.0
Project:	Fmr Evergreen Fuel Facility	**Date/Time Completed:**	10/27/22 1310	**Boring Diameter (in):**	N/A
Location:	Shelton, Washington	**Drilling Company:**	Holt	**Total Boring Depth (ft bgs):**	20.0
Farallon PN:	863-001	**Drilling Method:**	Direct Push		
Logged By:	M. Ysaguirre	**Drilling Equipment:**	7720DT		
Reviewed By:	J. Ruark	**Drilling Operator:**	Louie Fehner		
		Sampler Type:	5' Macrocore		

Depth (ft bgs)	Lithologic Description	USCS	Water Level	% Recovery	PID (ppmv)	Sample ID	Sample Analyzed
0	0.0 - 5.0': Cleared to 5.0' bgs for utilities. Well graded SAND with gravel (80% sand, 20% gravel), fine and coarse sand and gravel, dark brown, moist, no odor.	SW		100		B-21-3.0	
5	5.0 - 7.0': Poorly graded GRAVEL with sand (80% gravel, 20% sand), coarse sand, fine and coarse gravel, brown, wet. Sheen present at 7.0'.	GP	▼	40			
	7.0 - 10.0': No Recovery.					B-21-7.0	
10	10.0 - 13.0': Silty SAND (70% sand, 20% silt, 10% gravel), coarse sand, fine and coarse gravel, gray, wet, petroleum-like odor. Peat present at 11.0 to 11.3'.	SM		60	102.5	B-21-11.0	
	13.0 - 15.0': No Recovery.				9.6	B-21-13.0	
15	15.0 - 20.0': No Recovery.						
20							

Completion Information

Temporary Well Casing Diameter (in):	N/A	**Surface Seal:**	N/A
Temporary Well Screened Interval (ft bgs):	N/A	**Ground Surface Elevation (ft):**	N/A
Boring Abandonment:	Bentonite	**Surveyed Location:** **X:** N/A	**Y:** N/A

FARALLON CONSULTING

Log of Boring: B-22

Client:	CC Cole and Son's	**Date/Time Started:**	10/27/22 1330	**Depth to Water ATD (ft bgs):**	6.5
Project:	Fmr Evergreen Fuel Facility	**Date/Time Completed:**	10/27/22 1345	**Boring Diameter (in):**	N/A
Location:	Shelton, Washington	**Drilling Company:**	Holt	**Total Boring Depth (ft bgs):**	20.0
Farallon PN:	863-001	**Drilling Method:**	Direct Push		
Logged By:	M. Ysaguirre	**Drilling Equipment:**	7720DT		
Reviewed By:	J. Ruark	**Drilling Operator:**	Louie Fehner		
		Sampler Type:	5' Macrocore		

Depth (ft bgs)	Lithologic Description	USCS	Water Level	% Recovery	PID (ppmv)	Sample ID
0	0.0 - 5.0': Cleared to 5.0' bgs for utilities.			100		
5	5.0 - 6.5': Poorly graded GRAVEL with sand (80% gravel, 20% sand), fine and coarse gravel, fine sand, brown, dry, no odor.	GP		40	1.3	
	6.5 - 7.0': Silty SAND with gravel (70% sand, 15% silt, 15% gravel), coarse sand, fine and coarse gravel, gray, wet, petroleum-like odor present at 7.0'.	SM				B-22-7.0
	7.0 - 10.0': No Recovery.					
10	10.0 - 11.0': Silty SAND with gravel (70% sand, 15% silt, 15% gravel), coarse sand, fine and coarse gravel, gray, wet, strong petroleum-like odor.	SM		20	22.9	
	11.0 - 15.0': No Recovery.					B-22-11.0
15	15.0 - 17.0': Silty SAND with gravel (70% sand, 15% silt, 15% gravel), coarse sand, fine and coarse gravel, gray, wet, faint petroleum-like odor.	SM		80	33.4	B-22-15.0
	17.0 - 19.0': Silty SAND (60% sand, 35% silt, 5% gravel), coarse sand, fine and coarse gravel, dark gray, wet, faint petroleum-like odor. Moist at 19.0'. No odor from 17.5 to 19.0'.	SM				
	19.0 - 20.0': No Recovery. Refusal at 20.0' bgs.				0.6	
20						

Completion Information

Temporary Well Casing Diameter (in):	N/A	**Surface Seal:**	N/A
Temporary Well Screened Interval (ft bgs):	N/A	**Ground Surface Elevation (ft):**	N/A
Boring Abandonment:	Bentonite	**Surveyed Location:** **X:** N/A	**Y:** N/A

FARALLON CONSULTING

Log of Boring: B-23

Client: CC Cole and Son's
Project: Fmr Evergreen Fuel Facility
Location: Shelton, Washington
Farallon PN: 863-001
Logged By: M. Ysaguirre
Reviewed By: J. Ruark

Date/Time Started: 10/27/22 1416
Date/Time Completed: 10/27/22 1445
Drilling Company: Holt
Drilling Method: Direct Push
Drilling Equipment: 7720DT
Drilling Operator: Louie Fehner
Sampler Type: 5' Macrocore

Depth to Water ATD (ft bgs): 5.5
Boring Diameter (in): N/A
Total Boring Depth (ft bgs): 15.0

Depth (ft bgs)	Sample Interval	Lithologic Description	USCS	USCS Graphic	Water Level	% Recovery	PID (ppmv)	Sample ID	Sample Analyzed
0		0.0 - 5.0': Cleared to 5.0' bgs for utilities.				100			
5		5.0 - 5.5': Poorly graded SAND (90% sand, 10% gravel), coarse sand, fine and coarse gravel, brown, dry, no odor.	SP			20	54.8		
		5.5 - 6.0': Poorly graded GRAVEL (100% gravel), fine and coarse gravel, gray, wet, no odor.	GP						
		6.0 - 10.0': No Recovery.							
10		10.0 - 12.0': Poorly graded SAND with gravel (80% sand, 20% gravel), coarse sand, fine and coarse gravel, dark gray, wet. Transition to light gray at 11.5'. Woody debris at 11.0'.	SP			40	170.4	B-23-10.0	
								B-23-11.5	
		12.0 - 15.0': No Recovery.					10.6	B-230-11.5	
15									

Completion Information

Temporary Well Casing Diameter (in): N/A
Temporary Well Screened Interval (ft bgs): N/A
Boring Abandonment: Bentonite
Surface Seal: N/A
Ground Surface Elevation (ft): N/A
Surveyed Location: **X:** N/A **Y:** N/A

FARALLON CONSULTING

Log of Boring: B-24

Client: CC Cole and Son's
Project: Fmr Evergreen Fuel Facility
Location: Shelton, Washington
Farallon PN: 863-001
Logged By: M. Ysaguirre
Reviewed By: J. Ruark

Date/Time Started: 10/27/22 1500
Date/Time Completed: 10/27/22 1520
Drilling Company: Holt
Drilling Method: Direct Push
Drilling Equipment: 7720DT
Drilling Operator: Louie Fehner
Sampler Type: 5' Macrocore

Depth to Water ATD (ft bgs): 5.0
Boring Diameter (in): N/A
Total Boring Depth (ft bgs): 15.0

Depth (ft bgs)	Sample Interval	Lithologic Description	USCS	USCS Graphic	Water Level	% Recovery	PID (ppmv)	Sample ID	Sample Analyzed
0		0.0 - 5.0': Cleared to 5.0' bgs for utilities.				100			
5		5.0 - 7.0': Silty SAND (80% sand, 15% silt, 5% gravel), coarse sand, fine and coarse gravel, dark gray, wet, no odor. Strong petroleum-like odor at 6.0'.	SM		▼	40	255.5	B-24-6.0	
							195.4		
		7.0 - 10.0': No Recovery.						B-24-7.0	
10		10.0 - 15.0': Poorly graded SAND (90% sand, 10% gravel), coarse sand, fine gravel, reddish brown, wet, no odor.	SP			100	3.5	B-24-10.0	
							0.9		
15									

Completion Information

Temporary Well Casing Diameter (in): N/A
Temporary Well Screened Interval (ft bgs): N/A
Boring Abandonment: Bentonite
Surface Seal: N/A
Ground Surface Elevation (ft): N/A
Surveyed Location: **X:** N/A **Y:** N/A

ATTACHMENT B
LABORATORY ANALYTICAL REPORTS

PERFORMANCE SOIL SAMPLING – 2022

Former Evergreen Fuel Facility
661 East Pine Street
Shelton, Washington

Farallon PN: 863-001

Libby Environmental, Inc.
3322 South Bay Road NE • Olympia, WA 98506-2957

July 26, 2023

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

Dear Mr. Ruark:

Please find enclosed the analytical data report for the 661 E Pine St. Project located in Shelton, Washington.

The results of the analyses are summarized in the attached tables. Applicable detection limits and QA/QC data are included. The sample(s) will be disposed of within 30 days unless we are contacted to arrange long term storage.

Libby Environmental, Inc. appreciates the opportunity to have provided analytical services for this project. If you have any further questions about the data report, please give me a call. It was a pleasure working with you on this project, and we are looking forward to the next opportunity to work together.

Sincerely,

Sherry L. Chilcutt
Senior Chemist
Libby Environmental, Inc.

Phone (360) 352-2110 • Fax (360) 352-4154 • libbyenv@gmail.com

Libby Environmental, Inc.

Chain of Custody Record

www.LibbyEnvironmental.com

3322 South Bay Road NE
Olympia, WA 98506
Ph: 360-352-2110
Fax: 360-352-4154

Date: 10/26/22 Page: 1 of 2

Client: Farallon Consulting
Project Manager: Javan Ruark
Address: 975 5th Ave NW
Project Name: 661 E Pine St
City: Issaquah State: WA Zip: 98027
Location: ~~Shelton~~, 661 E Pine St City, State: Shelton, WA
Phone: Fax:
Collector: Michael Ysaguirre Date of Collection: 10/26/22
Client Project # 863-001
Email: Jruark@farallonconsulting.com

	Sample Number	Depth	Time	Sample Type	Container Type	VOC 8260	PCE & Daughter Prod.	NWTPH-Gx	BTEX (8260) / (8021)	NWTPH-HCID	NWTPH-Dx / Dx w/ Si. Gel	PCB 8082	MTCA 5 Metals	RCRA 8 Metals	cPAH 8270	PAH 8270	Semi Vol 8270	TOC		Field Notes
1	B-~~Ø~~20-5.0	5.0	1332	SOIL	Jar, VOA			X	X		X						X	JR		
2	B-~~Ø~~16-7.0	7.0	1412								X									HOLD
3	B-~~Ø~~16-16.0	16.0	1418								X									
4	B-~~Ø~~16-19.5	19.5	1422								X									
5	B-~~Ø~~15-5.0	5.0	1501					X	X		X									
6	B-~~Ø~~14-5.0	5.0	1459					X	X		X						X	JR		
7	B-~~Ø~~17-5.0	5.0	1457								X									HOLD
8	B-~~Ø~~17-16.0	16.0	1440								X									
9	B-~~Ø~~17-19.0	19.0	1451								X									
10	B-~~Ø~~11-5.0	5.0	1122					X	X		X									
11	B-~~Ø~~11-6.0	6.0	1150					X	X		X									
12	B-~~Ø~~11-11.0	11.0	1157					X	X		X									
13	B-~~Ø~~11-16.0	16.0	1205					X	X		X									
14	B-~~Ø~~12-5.0	5.0	1234					X	X		X			X						
15	B-~~Ø~~12-9.0	9.0	1236					X	X		X			X						
16	B-~~Ø~~13-4.0	4.0	1249						X					X						
17	B-~~Ø~~13-6.0	6.0	1256						X					X						48hr TAT Added 11-2-22

10-31-22 Made changes Per Javan via email.

Relinquished by:	Date / Time	Received by:	Date / Time
	10/26/22 1625		10-26-22 1624
Relinquished by:	Date / Time	Received by:	Date / Time
Relinquished by:	Date / Time	Received by:	Date / Time

Sample Receipt

Good Condition?	Y	N
Cooler Temp.		°C
Sample Temp.		°C
Total Number of Containers		

Remarks: Per Javan via email

TAT: 24HR 48HR 5-DAY

Distribution: White - Lab, Yellow - Originator

Libby Environmental, Inc.

3322 South Bay Road NE
Olympia, WA 98506
Ph: 360-352-2110
Fax: 360-352-4154

Chain of Custody Record

www.LibbyEnvironmental.com

Date: 10/26/22 Page: 2 of 2

Client: Farallon Consulting
Project Manager: Javan Ruark
Address: 975 5th Ave NW
Project Name: 661 E Pine St
City: Issaquah State: WA Zip: 98027
Location: 661 E Pine St City, State: Shelton, WA
Phone: Fax:
Collector: Michael Ysaguirre Date of Collection: 10/26/22
Client Project # 863-001
Email: JRuark@farallonconsulting.com

	Sample Number	Depth	Time	Sample Type	Container Type	VOC 8260	PCE & Daughter Prod.	NWTPH-Gx	BTEX (8260) / (8021)	NWTPH-HCID	NWTPH-Dx / Dx w/ Si. Gel	PCB 8082	MTCA 5 Metals	RCRA 8 Metals	c PAH 8270	PAH 8270	Semi Vol 8270			Field Notes
1	B-013-8.0	8.0	1300	SOIL	Jar, VOA				X		X			X						
2	B-013-10.0	10.0	1305	1	1				X					X						48hr TAT Added 11-2-22 Per Javan via email
3																				
4																				
5																				
6																				
7																				
8																				
9																				
10																				
11																				
12																				
13																				
14																				
15																				
16																				
17																				

10-31-22 Made changes Per Javan via email.

Relinquished by:	Date / Time	Received by:	Date / Time
	10/26/22 1625		10-26-22 1625
Relinquished by:	Date / Time	Received by:	Date / Time
Relinquished by:	Date / Time	Received by:	Date / Time

Sample Receipt

Good Condition?	Y	N
Cooler Temp.		°C
Sample Temp.		°C
Total Number of Containers		

Remarks:

TAT: 24HR 48HR 5-DAY

LEGAL ACTION CLAUSE: *In the event of default of payment and/or failure to pay, Client agrees to pay the costs of collection including court costs and reasonable attorney fees to be determined by a court of law.*

Distribution: White - Lab, Yellow - Originator

Libby Environmental, Inc.

3322 South Bay Road NE
Olympia, WA 98506
Phone: (360) 352-2110
FAX: (360) 352-4154
Email: libbyenv@gmail.com

661 E PINE ST PROJECT
Farallon Consulting
Shelton, Washington
Libby Project # L22J130
Client Project # 863-001

Analyses of BTEX (EPA Method 8260D) in Soil

Sample Description		Method Blank	B-13-4.0	B-13-8.0
Date Sampled		N/A	10/26/2022	10/26/2022
Date Analyzed	PQL (mg/kg)	11/3/2022 (mg/kg)	11/3/2022 (mg/kg)	11/3/2022 (mg/kg)
Benzene	0.02	nd	nd	nd
Toluene	0.10	nd	nd	nd
Ethylbenzene	0.05	nd	nd	nd
Total Xylenes	0.15	nd	nd	nd
Surrogate Recovery	Acceptable Limits (%)			
Dibromofluoromethane	27-188	101	95	101
1,2-Dichloroethane-d4	17-212	99	98	106
Toluene-d8	41-142	104	98	99
4-Bromofluorobenzene	47-167	88	86	97

"nd" Indicates not detected at listed detection limit.
"int" Indicates that interference prevents determination.

ANALYSES PERFORMED BY: Alex Randolph

Libby Environmental, Inc.

3322 South Bay Road NE
Olympia, WA 98506
Phone: (360) 352-2110
FAX: (360) 352-4154
Email: libbyenv@gmail.com

661 E PINE ST PROJECT
Farallon Consulting
Shelton, Washington
Libby Project # L22J130
Client Project # 863-001

QA/QC for Volatile Organic Compounds by EPA Method 8260D in Soil

Matrix Spike Sample Identification: L22J130-19

Date Analyzed: 11/3/2022

	Spiked Conc. (mg/kg)	MS Response (mg/kg)	MSD Response (mg/kg)	MS Recovery (%)	MSD Recovery (%)	RPD (%)	Recovery Limits (%)	Data Flag
Benzene	0.25	0.28	0.28	113	112	1.4	65-126	
Toluene	0.25	0.29	0.27	116	110	6.0	67-136	
Ethylbenzene	0.25	0.27	0.26	109	105	4.0	55-140	
Total Xylenes	0.75	0.90	0.84	120	112	6.4	43-149	

Surrogate Recovery (%)	MS	MSD	
Dibromofluoromethane	103	103	27-188
1,2-Dichloroethane-d4	105	108	17-212
Toluene-d8	98	97	41-142
4-Bromofluorobenzene	93	92	47-167

ACCEPTABLE RPD IS 35%

ANALYSES PERFORMED BY: Alex Randolph

Laboratory Control Sample

Date Analyzed: 11/3/2022

	Spiked Conc. (mg/kg)	LCS Response (mg/kg)	LCS Recovery (%)	Recovery Limits (%)	Data Flag
Benzene	0.25	0.27	109	65-118	
Toluene	0.25	0.26	106	68-125	
Ethylbenzene	0.25	0.27	108	49-144	
Total Xylenes	0.75	0.85	113	38-140	

Surrogate Recovery		
Dibromofluoromethane	98	27-188
1,2-Dichloroethane-d4	98	17-212
Toluene-d8	97	41-142
4-Bromofluorobenzene	92	47-167

ANALYSES PERFORMED BY: Alex Randolph

Libby Environmental, Inc.

3322 South Bay Road NE
Olympia, WA 98506
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Email: libbyenv@gmail.com

661 E PINE ST PROJECT
Farallon Consulting
Shelton, Washington
Libby Project # L22J130
Client Project # 863-001

Analyses of Gasoline (NWTPH-Gx) & BTEX (EPA Method 8260D) in Soil

Sample Description		Method Blank	B-20-5.0	B-15-5.0	B-14-5.0	B-11-5.0	B-11-5.0 Dup
Date Sampled		N/A	10/26/2022	10/26/2022	10/26/2022	10/26/2022	10/26/2022
Date Analyzed	PQL (mg/kg)	11/1/2022 (mg/kg)	11/1/2022 (mg/kg)	11/1/2022 (mg/kg)	11/1/2022 (mg/kg)	11/1/2022 (mg/kg)	11/1/2022 (mg/kg)
Benzene	0.02	nd	nd	nd	nd	nd	nd
Toluene	0.10	nd	nd	nd	nd	nd	nd
Ethylbenzene	0.05	nd	nd	nd	nd	nd	nd
Total Xylenes	0.15	nd	nd	nd	nd	nd	nd
Gasoline	10	nd	nd	nd	nd	nd	nd
Surrogate Recovery	Acceptable Limits (%)						
Dibromofluoromethane	27-188	72	73	73	73	72	71
1,2-Dichloroethane-d4	17-212	54	53	53	56	52	51
Toluene-d8	41-142	89	87	90	89	89	88
4-Bromofluorobenzene	47-167	151	146	148	149	154	152

"nd" Indicates not detected at listed detection limit.
"int" Indicates that interference prevents determination.

ANALYSES PERFORMED BY: Alex Randolph

Libby Environmental, Inc.

3322 South Bay Road NE
Olympia, WA 98506
Phone: (360) 352-2110
FAX: (360) 352-4154
Email: libbyenv@gmail.com

661 E PINE ST PROJECT
Farallon Consulting
Shelton, Washington
Libby Project # L22J130
Client Project # 863-001

Analyses of Gasoline (NWTPH-Gx) & BTEX (EPA Method 8260D) in Soil

Sample Description		B-11-6.0	B-11-11.0	B-11-16.0	B-12-5.0	B-12-9.0
Date Sampled		10/26/2022	10/26/2022	10/26/2022	10/26/2022	10/26/2022
Date Analyzed	PQL (mg/kg)	11/1/2022 (mg/kg)	11/1/2022 (mg/kg)	11/1/2022 (mg/kg)	11/1/2022 (mg/kg)	11/1/2022 (mg/kg)
Benzene	0.02	nd	nd	nd	nd	nd
Toluene	0.10	nd	nd	nd	nd	nd
Ethylbenzene	0.05	nd	nd	nd	nd	nd
Total Xylenes	0.15	nd	nd	nd	nd	nd
Gasoline	10	160	12	nd	nd	nd
Surrogate Recovery	Acceptable Limits (%)					
Dibromofluoromethane	27-188	70	68	69	68	70
1,2-Dichloroethane-d4	17-212	49	48	51	49	48
Toluene-d8	41-142	93	90	87	88	89
4-Bromofluorobenzene	47-167	196 S	156	149	147	147

"nd" Indicates not detected at listed detection limit.
"S" Spike recovery outside accepted recovery limits.
"int" Indicates that interference prevents determination.

ANALYSES PERFORMED BY: Alex Randolph

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661 E PINE ST PROJECT
Farallon Consulting
Shelton, Washington
Libby Project # L22J130
Client Project # 863-001

QA/QC for Volatile Organic Compounds by EPA Method 8260D in Soil

Matrix Spike Sample Identification: B-11-5.0
Date Analyzed: 11/1/2022

	Spiked Conc. (mg/kg)	MS Response (mg/kg)	MSD Response (mg/kg)	MS Recovery (%)	MSD Recovery (%)	RPD (%)	Recovery Limits (%)	Data Flag
Benzene	0.25	0.19	0.19	78	76	2.9	65-126	
Toluene	0.25	0.20	0.19	79	77	2.0	67-136	
Ethylbenzene	0.25	0.28	0.28	111	112	0.7	55-140	
Total Xylenes	0.75	0.88	0.89	117	119	1.2	43-149	

Surrogate Recovery (%)	MS	MSD	
Dibromofluoromethane	72	71	27-188
1,2-Dichloroethane-d4	49	49	17-212
Toluene-d8	90	89	41-142
4-Bromofluorobenzene	155	159	47-167

ACCEPTABLE RPD IS 35%

ANALYSES PERFORMED BY: Alex Randolph

Laboratory Control Sample

Date Analyzed: 11/1/2022

	Spiked Conc. (mg/kg)	LCS Response (mg/kg)	LCS Recovery (%)	Recovery Limits (%)	Data Flag
Benzene	0.25	0.18	71	65-118	
Toluene	0.25	0.17	68	68-125	
Ethylbenzene	0.25	0.24	95	49-144	
Total Xylenes	0.75	0.75	100	38-140	

Surrogate Recovery		
Dibromofluoromethane	73	27-188
1,2-Dichloroethane-d4	54	17-212
Toluene-d8	91	41-142
4-Bromofluorobenzene	158	47-167

ANALYSES PERFORMED BY: Alex Randolph

Libby Environmental, Inc.

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661 E PINE ST PROJECT
Farallon Consulting
Shelton, Washington
Libby Project # L22J130
Client Project # 863-001

Analyses of Diesel & Oil w/Silica Gel Clean-Up (NWTPH-Dx/Dx Extended) in Soil

Sample Number	Date Analyzed	Surrogate Recovery (%)	Diesel (mg/kg)	Oil (mg/kg)
Method Blank	11/2/2022	96	nd	nd
B-20-5.0	11/2/2022	115	nd	nd
B-20-5.0 Dup	11/2/2022	112	nd	nd
B-16-16.0	11/2/2022	126	120	nd
B-16-19.5	11/2/2022	103	nd	nd
B-15-5.0	11/2/2022	107	nd	nd
B-14-5.0	11/2/2022	99	nd	nd
B-17-16.0	11/2/2022	int	800	nd
B-17-19.0	11/2/2022	106	nd	nd
B-11-5.0	11/2/2022	103	nd	nd
B-11-5.0 Dup	11/2/2022	103	nd	nd
B-11-6.0	11/2/2022	int	140	nd
B-11-11.0	11/2/2022	133	78	nd
B-11-16.0	11/2/2022	108	nd	nd
B-12-5.0	11/2/2022	107	nd	nd
B-12-9.0	11/2/2022	94	nd	nd
B-13-8.0	11/2/2022	108	nd	nd
Practical Quantitation Limit			50	250

"nd" Indicates not detected at the listed detection limits.
"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (2-F Biphenyl): 65% TO 135%

ANALYSES PERFORMED BY: Lucy Owens

Libby Environmental, Inc.

3322 South Bay Road NE
Olympia, WA 98506
Phone: (360) 352-2110
FAX: (360) 352-4154
Email: libbyenv@gmail.com

661 E PINE ST PROJECT
Farallon Consulting
Libby Project # L22J130
Date Received 10/26/22 16:29

Received By JA

Sample Receipt Checklist

Chain of Custody

1. Is the Chain of Custody complete?	☑ Yes	☐ No	
2. How was the sample delivered?	☑ Hand Delivered	☐ Picked Up	☐ Shipped

Log In

3. Cooler or Shipping Container is present.	☑ Yes	☐ No	☐ N/A
4. Cooler or Shipping Container is in good condition.	☑ Yes	☐ No	☐ N/A
5. Cooler or Shipping Container has Custody Seals present.	☐ Yes	☑ No	☐ N/A
6. Was an attempt made to cool the samples?	☑ Yes	☐ No	☐ N/A
7. Temperature of cooler (0°C to 8°C recommended)	3.3 °C		
8. Temperature of sample(s) (0°C to 8°C recommended)	14.4 °C		
9. Did all containers arrive in good condition (unbroken)?	☑ Yes	☐ No	
10. Is it clear what analyses were requested?	☑ Yes	☐ No	
11. Did container labels match Chain of Custody?	☑ Yes	☐ No	
12. Are matrices correctly identified on Chain of Custody?	☑ Yes	☐ No	
13. Are correct containers used for the analysis indicated?	☑ Yes	☐ No	
14. Is there sufficient sample volume for indicated analysis?	☑ Yes	☐ No	
15. Were all containers properly preserved per each analysis?	☑ Yes	☐ No	
16. Were VOA vials collected correctly (no headspace)?	☐ Yes	☐ No	☑ N/A
17. Were all holding times able to be met?	☑ Yes	☐ No	

Discrepancies/ Notes

18. Was client notified of all discrepancies?	☐ Yes	☐ No	☑ N/A

Person Notified: _____ Date: _____

By Whom: _____ Via: _____

Regarding: _____

19. Comments. B-17-5.0 only 4 oz jar, split into 20 mL VOAs upon receipt.

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

Libby Environmental
Sherry Chilcutt
3322 South Bay Road NE
Olympia, WA 98506

RE: 661 E Pine St
Work Order Number: 2211046

July 25, 2023

Attention Sherry Chilcutt:

Fremont Analytical, Inc. received 6 sample(s) on 11/2/2022 for the analyses presented in the following report.

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)
Sample Moisture (Percent Moisture)

This report consists of the following:

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

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

Thank you for using Fremont Analytical.

Sincerely,

Brianna Barnes
Project Manager

Date: *07/25/2023*

CLIENT: Libby Environmental
Project: 661 E Pine St
Work Order: 2211046

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
2211046-001	B-12-5.0	10/26/2022 12:34 PM	11/02/2022 9:35 AM
2211046-002	B-12-9.0	10/26/2022 12:36 PM	11/02/2022 9:35 AM
2211046-003	B-13-4.0	10/26/2022 12:49 PM	11/02/2022 9:35 AM
2211046-004	B-13-6.0	10/26/2022 12:56 PM	11/02/2022 9:35 AM
2211046-005	B-13-8.0	10/26/2022 1:00 PM	11/02/2022 9:35 AM
2211046-006	B-13-10.0	10/26/2022 1:05 PM	11/02/2022 9:35 AM

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

Case Narrative

WO#: **2211046**
Date: **7/25/2023**

CLIENT: Libby Environmental
Project: 661 E Pine St

I. SAMPLE RECEIPT:
Samples receipt information is recorded on the attached Sample Receipt Checklist.

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

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

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

7/25/2023: Revision 1 includes additional PAH analytes per client request.

Qualifiers:

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

Acronyms:

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

Analytical Report

Work Order: **2211046**
Date Reported: **7/25/2023**

Client: Libby Environmental
Collection Date: 10/26/2022 12:34:00 PM
Project: 661 E Pine St
Lab ID: 2211046-001
Matrix: Soil
Client Sample ID: **B-12-5.0**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)				Batch ID: 38380		Analyst: SK
Naphthalene	ND	22.6		µg/Kg-dry	1	11/4/2022 10:30:39 AM
2-Methylnaphthalene	ND	22.6		µg/Kg-dry	1	11/4/2022 10:30:39 AM
1-Methylnaphthalene	ND	22.6		µg/Kg-dry	1	11/4/2022 10:30:39 AM
Benz(a)anthracene	ND	22.6		µg/Kg-dry	1	11/4/2022 10:30:39 AM
Chrysene	ND	45.3		µg/Kg-dry	1	11/4/2022 10:30:39 AM
Benzo(b)fluoranthene	ND	22.6		µg/Kg-dry	1	11/4/2022 10:30:39 AM
Benzo(k)fluoranthene	ND	22.6		µg/Kg-dry	1	11/4/2022 10:30:39 AM
Benzo(a)pyrene	ND	22.6		µg/Kg-dry	1	11/4/2022 10:30:39 AM
Indeno(1,2,3-cd)pyrene	ND	45.3		µg/Kg-dry	1	11/4/2022 10:30:39 AM
Dibenz(a,h)anthracene	ND	45.3		µg/Kg-dry	1	11/4/2022 10:30:39 AM
Surr: 2-Fluorobiphenyl	94.0	22.2 - 146		%Rec	1	11/4/2022 10:30:39 AM
Surr: Terphenyl-d14 (surr)	101	20.2 - 159		%Rec	1	11/4/2022 10:30:39 AM
Sample Moisture (Percent Moisture)				Batch ID: R79538		Analyst: CO
Percent Moisture	2.94	0.500		wt%	1	11/3/2022 1:30:33 PM

Analytical Report

Work Order: **2211046**
Date Reported: **7/25/2023**

Client: Libby Environmental
Collection Date: 10/26/2022 12:36:00 PM
Project: 661 E Pine St
Lab ID: 2211046-002
Matrix: Soil
Client Sample ID: **B-12-9.0**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)				Batch ID: 38380		Analyst: SK
Naphthalene	50.0	21.9		µg/Kg-dry	1	11/4/2022 10:58:58 AM
2-Methylnaphthalene	ND	21.9		µg/Kg-dry	1	11/4/2022 10:58:58 AM
1-Methylnaphthalene	ND	21.9		µg/Kg-dry	1	11/4/2022 10:58:58 AM
Benz(a)anthracene	ND	21.9		µg/Kg-dry	1	11/4/2022 10:58:58 AM
Chrysene	ND	43.8		µg/Kg-dry	1	11/4/2022 10:58:58 AM
Benzo(b)fluoranthene	ND	21.9		µg/Kg-dry	1	11/4/2022 10:58:58 AM
Benzo(k)fluoranthene	ND	21.9		µg/Kg-dry	1	11/4/2022 10:58:58 AM
Benzo(a)pyrene	ND	21.9		µg/Kg-dry	1	11/4/2022 10:58:58 AM
Indeno(1,2,3-cd)pyrene	ND	43.8		µg/Kg-dry	1	11/4/2022 10:58:58 AM
Dibenz(a,h)anthracene	ND	43.8		µg/Kg-dry	1	11/4/2022 10:58:58 AM
Surr: 2-Fluorobiphenyl	90.4	22.2 - 146		%Rec	1	11/4/2022 10:58:58 AM
Surr: Terphenyl-d14 (surr)	99.0	20.2 - 159		%Rec	1	11/4/2022 10:58:58 AM
Sample Moisture (Percent Moisture)				Batch ID: R79538		Analyst: CO
Percent Moisture	12.9	0.500		wt%	1	11/3/2022 1:30:33 PM

Analytical Report

Work Order: **2211046**
Date Reported: **7/25/2023**

Client: Libby Environmental
Collection Date: 10/26/2022 12:49:00 PM
Project: 661 E Pine St
Lab ID: 2211046-003
Matrix: Soil
Client Sample ID: **B-13-4.0**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)				Batch ID: 38380		Analyst: SK
Naphthalene	ND	22.0		µg/Kg-dry	1	11/4/2022 11:27:26 AM
2-Methylnaphthalene	ND	22.0		µg/Kg-dry	1	11/4/2022 11:27:26 AM
1-Methylnaphthalene	ND	22.0		µg/Kg-dry	1	11/4/2022 11:27:26 AM
Benz(a)anthracene	ND	22.0		µg/Kg-dry	1	11/4/2022 11:27:26 AM
Chrysene	ND	44.0		µg/Kg-dry	1	11/4/2022 11:27:26 AM
Benzo(b)fluoranthene	ND	22.0		µg/Kg-dry	1	11/4/2022 11:27:26 AM
Benzo(k)fluoranthene	ND	22.0		µg/Kg-dry	1	11/4/2022 11:27:26 AM
Benzo(a)pyrene	ND	22.0		µg/Kg-dry	1	11/4/2022 11:27:26 AM
Indeno(1,2,3-cd)pyrene	ND	44.0		µg/Kg-dry	1	11/4/2022 11:27:26 AM
Dibenz(a,h)anthracene	ND	44.0		µg/Kg-dry	1	11/4/2022 11:27:26 AM
Surr: 2-Fluorobiphenyl	72.3	22.2 - 146		%Rec	1	11/4/2022 11:27:26 AM
Surr: Terphenyl-d14 (surr)	84.2	20.2 - 159		%Rec	1	11/4/2022 11:27:26 AM
Sample Moisture (Percent Moisture)				Batch ID: R79538		Analyst: CO
Percent Moisture	12.7	0.500		wt%	1	11/3/2022 1:30:33 PM

Analytical Report

Work Order: **2211046**
Date Reported: **7/25/2023**

Client: Libby Environmental
Collection Date: 10/26/2022 12:56:00 PM
Project: 661 E Pine St
Lab ID: 2211046-004
Matrix: Soil
Client Sample ID: **B-13-6.0**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)				Batch ID: 38380		Analyst: SK
Naphthalene	ND	20.6		µg/Kg-dry	1	11/4/2022 11:55:46 AM
2-Methylnaphthalene	ND	20.6		µg/Kg-dry	1	11/4/2022 11:55:46 AM
1-Methylnaphthalene	ND	20.6		µg/Kg-dry	1	11/4/2022 11:55:46 AM
Benz(a)anthracene	ND	20.6		µg/Kg-dry	1	11/4/2022 11:55:46 AM
Chrysene	ND	41.2		µg/Kg-dry	1	11/4/2022 11:55:46 AM
Benzo(b)fluoranthene	ND	20.6		µg/Kg-dry	1	11/4/2022 11:55:46 AM
Benzo(k)fluoranthene	ND	20.6		µg/Kg-dry	1	11/4/2022 11:55:46 AM
Benzo(a)pyrene	ND	20.6		µg/Kg-dry	1	11/4/2022 11:55:46 AM
Indeno(1,2,3-cd)pyrene	ND	41.2		µg/Kg-dry	1	11/4/2022 11:55:46 AM
Dibenz(a,h)anthracene	ND	41.2		µg/Kg-dry	1	11/4/2022 11:55:46 AM
Surr: 2-Fluorobiphenyl	75.2	22.2 - 146		%Rec	1	11/4/2022 11:55:46 AM
Surr: Terphenyl-d14 (surr)	82.7	20.2 - 159		%Rec	1	11/4/2022 11:55:46 AM
Sample Moisture (Percent Moisture)				Batch ID: R79538		Analyst: CO
Percent Moisture	17.4	0.500		wt%	1	11/3/2022 1:30:33 PM

Analytical Report

Work Order: **2211046**
Date Reported: **7/25/2023**

Client: Libby Environmental
Collection Date: 10/26/2022 1:00:00 PM
Project: 661 E Pine St
Lab ID: 2211046-005
Matrix: Soil
Client Sample ID: **B-13-8.0**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)				Batch ID: 38380		Analyst: SK
Naphthalene	ND	22.0		µg/Kg-dry	1	11/4/2022 12:24:10 PM
2-Methylnaphthalene	ND	22.0		µg/Kg-dry	1	11/4/2022 12:24:10 PM
1-Methylnaphthalene	ND	22.0		µg/Kg-dry	1	11/4/2022 12:24:10 PM
Benz(a)anthracene	ND	22.0		µg/Kg-dry	1	11/4/2022 12:24:10 PM
Chrysene	ND	44.0		µg/Kg-dry	1	11/4/2022 12:24:10 PM
Benzo(b)fluoranthene	ND	22.0		µg/Kg-dry	1	11/4/2022 12:24:10 PM
Benzo(k)fluoranthene	ND	22.0		µg/Kg-dry	1	11/4/2022 12:24:10 PM
Benzo(a)pyrene	ND	22.0		µg/Kg-dry	1	11/4/2022 12:24:10 PM
Indeno(1,2,3-cd)pyrene	ND	44.0		µg/Kg-dry	1	11/4/2022 12:24:10 PM
Dibenz(a,h)anthracene	ND	44.0		µg/Kg-dry	1	11/4/2022 12:24:10 PM
Surr: 2-Fluorobiphenyl	80.5	22.2 - 146		%Rec	1	11/4/2022 12:24:10 PM
Surr: Terphenyl-d14 (surr)	89.0	20.2 - 159		%Rec	1	11/4/2022 12:24:10 PM
Sample Moisture (Percent Moisture)				Batch ID: R79538		Analyst: CO
Percent Moisture	16.6	0.500		wt%	1	11/3/2022 1:30:33 PM

Analytical Report

Work Order: **2211046**
Date Reported: **7/25/2023**

Client: Libby Environmental
Collection Date: 10/26/2022 1:05:00 PM
Project: 661 E Pine St
Lab ID: 2211046-006
Matrix: Soil
Client Sample ID: **B-13-10.0**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)				Batch ID: 38380		Analyst: SK
Naphthalene	ND	20.9		µg/Kg-dry	1	11/4/2022 12:52:39 PM
2-Methylnaphthalene	ND	20.9		µg/Kg-dry	1	11/4/2022 12:52:39 PM
1-Methylnaphthalene	ND	20.9		µg/Kg-dry	1	11/4/2022 12:52:39 PM
Benz(a)anthracene	ND	20.9		µg/Kg-dry	1	11/4/2022 12:52:39 PM
Chrysene	ND	41.8		µg/Kg-dry	1	11/4/2022 12:52:39 PM
Benzo(b)fluoranthene	ND	20.9		µg/Kg-dry	1	11/4/2022 12:52:39 PM
Benzo(k)fluoranthene	ND	20.9		µg/Kg-dry	1	11/4/2022 12:52:39 PM
Benzo(a)pyrene	ND	20.9		µg/Kg-dry	1	11/4/2022 12:52:39 PM
Indeno(1,2,3-cd)pyrene	ND	41.8		µg/Kg-dry	1	11/4/2022 12:52:39 PM
Dibenz(a,h)anthracene	ND	41.8		µg/Kg-dry	1	11/4/2022 12:52:39 PM
Surr: 2-Fluorobiphenyl	81.5	22.2 - 146		%Rec	1	11/4/2022 12:52:39 PM
Surr: Terphenyl-d14 (surr)	90.1	20.2 - 159		%Rec	1	11/4/2022 12:52:39 PM
Sample Moisture (Percent Moisture)				Batch ID: R79538		Analyst: CO
Percent Moisture	19.9	0.500		wt%	1	11/3/2022 1:30:33 PM

Work Order: 2211046
CLIENT: Libby Environmental
Project: 661 E Pine St

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: **MB-38380** SampType: **MBLK** Units: **µg/Kg** Prep Date: **11/3/2022** RunNo: **79585**
Client ID: **MBLKS** Batch ID: **38380** Analysis Date: **11/4/2022** SeqNo: **1640699**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	ND	20.0									
2-Methylnaphthalene	ND	20.0									
1-Methylnaphthalene	ND	20.0									
Benz(a)anthracene	ND	20.0									
Chrysene	ND	40.0									
Benzo(b)fluoranthene	ND	20.0									
Benzo(k)fluoranthene	ND	20.0									
Benzo(a)pyrene	ND	20.0									
Indeno(1,2,3-cd)pyrene	ND	40.0									
Dibenz(a,h)anthracene	ND	40.0									
Surr: 2-Fluorobiphenyl	953		1,000		95.3	34.4	132				
Surr: Terphenyl-d14 (surr)	1,030		1,000		103	32.8	147				

Sample ID: **LCS-38380** SampType: **LCS** Units: **µg/Kg** Prep Date: **11/3/2022** RunNo: **79585**
Client ID: **LCSS** Batch ID: **38380** Analysis Date: **11/4/2022** SeqNo: **1640700**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	1,980	20.0	2,000	0	98.8	64.3	115				
2-Methylnaphthalene	2,000	20.0	2,000	0	100	58.9	122				
1-Methylnaphthalene	2,000	20.0	2,000	0	100	57.4	122				
Benz(a)anthracene	2,260	20.0	2,000	0	113	61.5	123				
Chrysene	1,920	40.0	2,000	0	96.1	58.6	120				
Benzo(b)fluoranthene	2,060	20.0	2,000	0	103	62.1	124				
Benzo(k)fluoranthene	1,990	20.0	2,000	0	99.3	60.3	116				
Benzo(a)pyrene	2,110	20.0	2,000	0	105	51.6	115				
Indeno(1,2,3-cd)pyrene	2,000	40.0	2,000	0	99.9	53.8	127				
Dibenz(a,h)anthracene	1,990	40.0	2,000	0	99.7	53.3	127				
Surr: 2-Fluorobiphenyl	1,010		1,000		101	34.4	132				
Surr: Terphenyl-d14 (surr)	1,070		1,000		107	32.8	147				

Work Order: 2211046
CLIENT: Libby Environmental
Project: 661 E Pine St

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: **2211046-003AMS** SampType: **MS** Units: **µg/Kg-dry** Prep Date: **11/3/2022** RunNo: **79585**
Client ID: **B-13-4.0** Batch ID: **38380** Analysis Date: **11/4/2022** SeqNo: **1640707**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	1,960	22.1	2,210	9.813	88.3	55.7	105				
2-Methylnaphthalene	1,970	22.1	2,210	14.27	88.7	56.6	103				
1-Methylnaphthalene	1,960	22.1	2,210	7.379	88.4	56.1	101				
Benz(a)anthracene	2,250	22.1	2,210	0	102	53.4	112				
Chrysene	1,750	44.2	2,210	12.42	78.8	52	105				
Benzo(b)fluoranthene	1,930	22.1	2,210	6.100	87.0	51.3	119				
Benzo(k)fluoranthene	1,730	22.1	2,210	0	78.5	50.3	108				
Benzo(a)pyrene	1,870	22.1	2,210	0	84.5	48.5	106				
Indeno(1,2,3-cd)pyrene	1,540	44.2	2,210	0	69.7	42.1	113				
Dibenz(a,h)anthracene	1,580	44.2	2,210	0	71.5	40.4	114				
Surr: 2-Fluorobiphenyl	978		1,105		88.6	34.4	132				
Surr: Terphenyl-d14 (surr)	1,110		1,105		101	32.8	147				

Sample ID: **2211046-003AMSD** SampType: **MSD** Units: **µg/Kg-dry** Prep Date: **11/3/2022** RunNo: **79585**
Client ID: **B-13-4.0** Batch ID: **38380** Analysis Date: **11/4/2022** SeqNo: **1640708**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	1,810	22.2	2,216	9.813	81.4	55.7	105	1,962	7.86	30	
2-Methylnaphthalene	1,830	22.2	2,216	14.27	81.9	56.6	103	1,975	7.63	30	
1-Methylnaphthalene	1,820	22.2	2,216	7.379	81.6	56.1	101	1,961	7.65	30	
Benz(a)anthracene	2,110	22.2	2,216	0	95.3	53.4	112	2,254	6.51	30	
Chrysene	1,660	44.3	2,216	12.42	74.5	52	105	1,754	5.32	30	
Benzo(b)fluoranthene	1,850	22.2	2,216	6.100	83.4	51.3	119	1,927	3.89	30	
Benzo(k)fluoranthene	1,650	22.2	2,216	0	74.3	50.3	108	1,735	5.19	30	
Benzo(a)pyrene	1,820	22.2	2,216	0	82.2	48.5	106	1,866	2.46	30	
Indeno(1,2,3-cd)pyrene	1,530	44.3	2,216	0	68.9	42.1	113	1,541	0.957	30	
Dibenz(a,h)anthracene	1,550	44.3	2,216	0	70.1	40.4	114	1,581	1.77	30	
Surr: 2-Fluorobiphenyl	894		1,108		80.6	34.4	132		0		
Surr: Terphenyl-d14 (surr)	1,010		1,108		91.5	32.8	147		0		

Fremont Analytical
An Alliance Technical Group Company

Sample Log-In Check List

Client Name:	LIBBY	Work Order Number:	2211046
Logged by:	Elisabeth Samoray	Date Received:	11/2/2022 9:35:00 AM

Chain of Custody

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

Log In

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

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified:		Date:	
By Whom:		Via:	☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:			
Client Instructions:			

17. Additional remarks:

Item Information

Item #	Temp °C
Sample 1	3.6

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

Libby Environmental, Inc.

3322 South Bay Road NE • Olympia, WA 98506-2957

SUBCONTRACT ORDER L22J130

2211046

Sending Laboratory:

Libby Environmental, Inc.
3322 South Bay Road NE
Olympia, WA 98506
Phone: 360-352-2110
Fax: 360-352-4154

Project Manager: Sherry Chilcutt
LibbyEnv@gmail.com

Subcontracted Laboratory:

Fremont Analytical, Inc.
3600 Fremont Ave N
Seattle, WA 98103
Phone: (206) 352-3790
Fax:

Requested Turnaround (TAT) Std

Project: 661 E Pine St

Analysis	Comments
Client Sample ID: B-012-5.0 ***Soil Sampled: 10/26/2022 12:34***	Lab ID: L22J130-14
cPAH by 8270	
Containers Supplied:	
Client Sample ID: B-012-9.0 ***Soil Sampled: 10/26/2022 12:36***	Lab ID: L22J130-15
cPAH by 8270	
Containers Supplied:	
Client Sample ID: B-013-4.0 ***Soil Sampled: 10/26/2022 12:49***	Lab ID: L22J130-16
cPAH by 8270	
Containers Supplied:	
Client Sample ID: B-013-6.0 ***Soil Sampled: 10/26/2022 12:56***	Lab ID: L22J130-17
cPAH by 8270	
Containers Supplied:	
Client Sample ID: B-013-8.0 ***Soil Sampled: 10/26/2022 13:00***	Lab ID: L22J130-18
cPAH by 8270	
Containers Supplied:	
Client Sample ID: B-013-10.0 ***Soil Sampled: 10/26/2022 13:05***	Lab ID: L22J130-19
cPAH by 8270	
Containers Supplied:	

Released By	Date	Received By	Date
	11-1-22	Alice O'Connor	11/2/22 9:35

Libby Environmental, Inc.

3322 South Bay Road NE • Olympia, WA 98506-2957

SUBCONTRACT ORDER L22J130

2211046

Sending Laboratory:

Libby Environmental, Inc.
3322 South Bay Road NE
Olympia, WA 98506
Phone: 360-352-2110
Fax: 360-352-4154

Project Manager: Sherry Chilcutt
LibbyEnv@gmail.com

Subcontracted Laboratory:

Fremont Analytical, Inc.
3600 Fremont Ave N
Seattle, WA 98103
Phone: (206) 352-3790
Fax:

Edits per S.C. 11/3/22 -BB

Requested Turnaround (TAT) Std

Project: 661 E Pine St

Analysis	Comments
B-12-5.0	
Client Sample ID: B-012-5.0 ***Soil Sampled: 10/26/2022 12:34***	Lab ID: L22J130-14
cPAH by 8270	
Containers Supplied:	
B-12-9.0	
Client Sample ID: B-012-9.0 ***Soil Sampled: 10/26/2022 12:36***	Lab ID: L22J130-15
cPAH by 8270	
Containers Supplied:	
B-13-4.0	
Client Sample ID: B-013-4.0 ***Soil Sampled: 10/26/2022 12:49***	Lab ID: L22J130-16
cPAH by 8270	
Containers Supplied:	
B-13-6.0	
Client Sample ID: B-013-6.0 ***Soil Sampled: 10/26/2022 12:56*** 2 Day TAT	Lab ID: L22J130-17
cPAH by 8270	
Containers Supplied:	
B-13-8.0	
Client Sample ID: B-013-8.0 ***Soil Sampled: 10/26/2022 13:00***	Lab ID: L22J130-18
cPAH by 8270	
Containers Supplied:	
B-13-10.0	
Client Sample ID: B-013-10.0 ***Soil Sampled: 10/26/2022 13:05*** 2 Day TAT	Lab ID: L22J130-19
cPAH by 8270	
Containers Supplied:	

Released By	Date	Received By	Date
	11-1-22	Alice O'Connor	11/2/22 9:35

Libby Environmental, Inc.

3322 South Bay Road NE • Olympia, WA 98506-2957

SUBCONTRACT ORDER L22J130

Sending Laboratory:

Libby Environmental, Inc.
3322 South Bay Road NE
Olympia, WA 98506
Phone: 360-352-2110
Fax: 360-352-4154

Project Manager: Sherry Chilcutt
LibbyEnv@gmail.com

Subcontracted Laboratory: 2211046

Fremont Analytical, Inc.
3600 Fremont Ave N
Seattle, WA 98103
Phone: (206) 352-3790
Fax:

Edits per S.C. 11/3/22 -BB
Edits per E.B. 7/25/2023-BB

Requested Turnaround (TAT) Std

Project: 661 E Pine St

Analysis	Comments
B-12-5.0	
Client Sample ID: B-012-5.0 ***Soil Sampled: 10/26/2022 12:34***	Lab ID: L22J130-14
cPAH by 8270 +Naphthalenes	
Containers Supplied:	
B-12-9.0	
Client Sample ID: B-012-9.0 ***Soil Sampled: 10/26/2022 12:36***	Lab ID: L22J130-15
cPAH by 8270 +Naphthalenes	
Containers Supplied:	
B-13-4.0	
Client Sample ID: B-013-4.0 ***Soil Sampled: 10/26/2022 12:49***	Lab ID: L22J130-16
cPAH by 8270 +Naphthalenes	
Containers Supplied:	
B-13-6.0	
Client Sample ID: B-013-6.0 ***Soil Sampled: 10/26/2022 12:56*** 2 Day TAT	Lab ID: L22J130-17
cPAH by 8270 +Naphthalenes	
Containers Supplied:	
B-13-8.0	
Client Sample ID: B-013-8.0 ***Soil Sampled: 10/26/2022 13:00***	Lab ID: L22J130-18
cPAH by 8270 +Naphthalenes	
Containers Supplied:	
B-13-10.0	
Client Sample ID: B-013-10.0 ***Soil Sampled: 10/26/2022 13:05*** 2 Day TAT	Lab ID: L22J130-19
cPAH by 8270 +Naphthalenes	
Containers Supplied:	

Released By	Date	Received By	Date
	11-1-22	Alice O'Connor	11/2/22 9:35

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

Libby Environmental
Sherry Chilcutt
3322 South Bay Road NE
Olympia, WA 98506

RE: 661 E Pine St
Work Order Number: 2211203

November 15, 2022

Attention Sherry Chilcutt:

Fremont Analytical, Inc. received 2 sample(s) on 11/8/2022 for the analyses presented in the following report.

Total Organic Carbon by EPA 9060

This report consists of the following:

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

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

Thank you for using Fremont Analytical.

Sincerely,

Brianna Barnes
Project Manager

Date: *11/15/2022*

CLIENT: Libby Environmental
Project: 661 E Pine St
Work Order: 2211203

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
2211203-001	B-13-6.0	10/26/2022 12:56 PM	11/08/2022 3:27 PM
2211203-002	B-13-10.0	10/26/2022 1:05 PM	11/08/2022 3:27 PM

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

Case Narrative

WO#: **2211203**
Date: **11/15/2022**

CLIENT: Libby Environmental
Project: 661 E Pine St

I. SAMPLE RECEIPT:
Samples receipt information is recorded on the attached Sample Receipt Checklist.

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

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

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

Qualifiers:

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

Acronyms:

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

Analytical Report

Work Order: **2211203**
Date Reported: **11/15/2022**

Client: Libby Environmental
Project: 661 E Pine St
Lab ID: 2211203-001
Client Sample ID: **B-13-6.0**

Collection Date: 10/26/2022 12:56:00 PM
Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Total Organic Carbon by EPA 9060				Batch ID: 38505		Analyst: ALT
Total Organic Carbon	0.361	0.150		%-dry	1	11/15/2022 1:33:00 PM

Analytical Report

Work Order: **2211203**
Date Reported: **11/15/2022**

Client: Libby Environmental
Project: 661 E Pine St
Lab ID: 2211203-002
Client Sample ID: **B-13-10.0**

Collection Date: 10/26/2022 1:05:00 PM
Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Total Organic Carbon by EPA 9060				Batch ID: 38505		Analyst: ALT
Total Organic Carbon	0.615	0.150		%-dry	1	11/15/2022 1:45:00 PM

Work Order: 2211203
CLIENT: Libby Environmental
Project: 661 E Pine St

QC SUMMARY REPORT

Total Organic Carbon by EPA 9060

Sample ID: **MB-38505**	SampType: **MBLK**			Units: **%-dry**		Prep Date: **11/15/2022**		RunNo: **79865**		
Client ID: **MBLKS**	Batch ID: **38505**					Analysis Date: **11/15/2022**		SeqNo: **1647774**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	ND	0.150									

Sample ID: **LCS-38505**	SampType: **LCS**			Units: **%-dry**		Prep Date: **11/15/2022**		RunNo: **79865**		
Client ID: **LCSS**	Batch ID: **38505**					Analysis Date: **11/15/2022**		SeqNo: **1647775**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	1.04	0.150	1.000	0	104	80	120				

Sample ID: **2211203-002ADUP**	SampType: **DUP**			Units: **%-dry**		Prep Date: **11/15/2022**		RunNo: **79865**		
Client ID: **B-13-10.0**	Batch ID: **38505**					Analysis Date: **11/15/2022**		SeqNo: **1647782**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	0.472	0.150						0.6150	26.3	20	

Sample ID: **2211203-002AMS**	SampType: **MS**			Units: **%-dry**		Prep Date: **11/15/2022**		RunNo: **79865**		
Client ID: **B-13-10.0**	Batch ID: **38505**					Analysis Date: **11/15/2022**		SeqNo: **1647783**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	1.58	0.150	1.000	0.6150	96.3	75	125				

Sample ID: **2211203-002AMSD**	SampType: **MSD**			Units: **%-dry**		Prep Date: **11/15/2022**		RunNo: **79865**		
Client ID: **B-13-10.0**	Batch ID: **38505**					Analysis Date: **11/15/2022**		SeqNo: **1647784**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	1.64	0.150	1.000	0.6150	102	75	125	1.578	3.67	20	

Sample Log-In Check List

Client Name:	LIBBY	Work Order Number:	2211203
Logged by:	Clare Griggs	Date Received:	11/8/2022 3:27:00 PM

Chain of Custody

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

Log In

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

Special Handling (if applicable)

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

Person Notified: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

19. Additional remarks:

Item Information

Item #	Temp ºC
Sample	3.0

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

Libby Environmental, Inc.

3322 South Bay Road NE • Olympia, WA 98506-2957

SUBCONTRACT ORDER L22J130

2211203

Sending Laboratory:

Libby Environmental, Inc.
3322 South Bay Road NE
Olympia, WA 98506
Phone: 360-352-2110
Fax: 360-352-4154

Project Manager: Sherry Chilcutt
LibbyEnv@gmail.com

Subcontracted Laboratory:

Fremont Analytical, Inc.
3600 Fremont Ave N
Seattle, WA 98103
Phone: (206) 352-3790
Fax:

Requested Turnaround (TAT) Standard

Project: 661 E Pine St

Analysis	Comments
Client Sample ID: B-13-6.0 ***Soil*** ***Sampled: 10/26/2022 12:56***	Lab ID: L22J130-17
TOC	
Containers Supplied:	
Client Sample ID: B-13-10.0 ***Soil*** ***Sampled: 10/26/2022 13:05***	Lab ID: L22J130-19
TOC	
Containers Supplied:	

Released By — Date: 11/7/22

Received By — Date: 11/8/22 1527

Libby Environmental, Inc.

3322 South Bay Road NE • Olympia, WA 98506-2957

SUBCONTRACT ORDER L22J130

2211203

Sending Laboratory:

Libby Environmental, Inc.
3322 South Bay Road NE
Olympia, WA 98506
Phone: 360-352-2110
Fax: 360-352-4154

Project Manager: Sherry Chilcutt
LibbyEnv@gmail.com

Subcontracted Laboratory:

Fremont Analytical, Inc.
3600 Fremont Ave N
Seattle, WA 98103
Phone: (206) 352-3790
Fax:

Requested Turnaround (TAT) Standard

Project: 661 E Pine St

Analysis	Comments
Client Sample ID: B-13-6.0 ***Soil Sampled: 10/26/2022 12:56***	Lab ID: L22J130-17
TOC	
Containers Supplied:	
Client Sample ID: B-13-10.0 ***Soil Sampled: 10/26/2022 13:05***	Lab ID: L22J130-19
TOC	
Containers Supplied:	

Released By	Date	Received By	Date
	11/7/22		11/8/22 1527

Libby Environmental, Inc.
3322 South Bay Road NE • Olympia, WA 98506-2957

November 15, 2022

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

Dear Mr. Ruark:

Please find enclosed the analytical data report for the 661 E Pine St. Project located in Shelton, Washington.

The results of the analyses are summarized in the attached tables. Applicable detection limits and QA/QC data are included. The sample(s) will be disposed of within 30 days unless we are contacted to arrange long term storage.

Libby Environmental, Inc. appreciates the opportunity to have provided analytical services for this project. If you have any further questions about the data report, please give me a call. It was a pleasure working with you on this project, and we are looking forward to the next opportunity to work together.

Sincerely,

Sherry L. Chilcutt
Senior Chemist
Libby Environmental, Inc.

Phone (360) 352-2110 • Fax (360) 352-4154 • libbyenv@gmail.com

Libby Environmental, Inc.

3322 South Bay Road NE
Olympia, WA 98506
Ph: 360-352-2110
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Chain of Custody Record

www.LibbyEnvironmental.com

Client: Farallon Consulting
Address: 975 5th Ave NW
City: Issaquah State: WA Zip: 98027
Phone: Fax:
Client Project # 863-001

Date: 10/27/22 Page: 1 of 2
Project Manager: Javan Ruark
Project Name: 661 E Pine St.
Location: 661 E Pine St City, State: Shelton, WA
Collector: Michael Ysaguirre Date of Collection: 10/27/22
Email: JRuark@farallonconsulting.com

10-31-22 Selected Analysis per Javan via email.

	Sample Number	Depth	Time	Sample Type	Container Type	VOC 8260	PCE & Daughter Prod.	NWTPH-Gx	BTEX (8260) / (8021)	NWTPH-HCID	NWTPH-Dx / Dx w/ SG Gel	PCB 8082	MTCA 5 Metals	RCRA 8 Metals	c PAH 8270	PAH 8270	Semi Vol 8270			Field Notes
1	B-14-10.0	10.0	1625	SOIL				X	X		X									48 hr TAT
2	B-14-15.0	15.0	1630					X	X		X									
3	B-140-15.0	15.0	1635					X	X		X									
4	B-14-20.0	20.0	1640					X	X		X									48 hr TAT
5	B-140-20.0	20.0	1645					X	X		X									
6	B-15-10.0	10.0	1536					X	X		X									
7	B-150-10.0	10.0	1540					X	X		X									
8	B-15-15.0	15.0	1545					X	X		X									
9	B-15-16.0	16.0	1605																	HOLD
10	B-23-10.0	10.0	1437					X	X		X									
11	B-23-11.5	11.5	1442					X	X		X									
12	B-230-11.5	11.5	1450					X	X		X									
13	B-24-6.0	6.0	1506						X		X									
14	B-24-7.0	7.0	1520						X		X									
15	B-24-10.0	10.0	1524						X		X									
16	B-22-7.0	7.0	1332						X		X									
17	B-22-11.0	11.0	1341						X		X									

Relinquished by:	Date / Time 10/27/22 1823	Received by:	Date / Time 10/28/22 0910
Relinquished by:	Date / Time	Received by:	Date / Time
Relinquished by:	Date / Time	Received by:	Date / Time

Sample Receipt

Good Condition?	Y	N
Cooler Temp.		°C
Sample Temp.		°C
Total Number of Containers		

Remarks: Hold for PM analysis

TAT: 24HR 48HR 5-DAY

LEGAL ACTION CLAUSE: *In the event of default of payment and/or failure to pay, Client agrees to pay the costs of collection including court costs and reasonable attorney fees to be determined by a court of law.*

Distribution: White - Lab, Yellow - Originator

Libby Environmental, Inc.

Chain of Custody Record

www.LibbyEnvironmental.com

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Fax: 360-352-4154

Date: 10/27/22 Page: 2 of 2

Client: Farallon Consulting
Project Manager: Javan Ruark
Address: 975 5th Ave NW
Project Name: 661 E Pine St
City: Issaquah State: WA Zip: 98027
Location: 661 E Pine St City, State: Shelton, WA
Phone: Fax:
Collector: Michael Ysaguirre Date of Collection: 10/27/22
Client Project # 863-001
Email: JRuark@farallonconsulting.com

	Sample Number	Depth	Time	Sample Type	Container Type	VOC 8260	PCE & Daughter Prod.	NWTPH-Gx	BTEX (8260) / (8021)	NWTPH-HCID	NWTPH-Dx / Dx Jul Si Gel	PCB 8082	MTCA 5 Metals	RCRA 8 Metals	cPAH 8270	PAH 8270	Semi Vol 8270	TOC		Field Notes
																			10-31-22 Selected Analysis per Javan via email	
1	B-22-15.0	15.0	1348	SOIL					X		X									
2	B-21-3.0	3.0	1232					X												
3	B-21-7.0	7.0	1245																	HOLD
4	B-21-11.0	11.0	1309					X												
5	B-21-13.0	13.0	1312					X												
6	B-19-5.0	5.0	1105					X	X		X							X		48hr TAT
7	B-19-10.0	10.0	1115					X	X		X									Added 11-2-22 JR STD
8	B-19-15.0	15.0	1130					X	X		X									
9	B-19-20.0	20.0	1140					X	X		X							X		48hr TAT
10	B-190-20.0	20.0	1142					X	X		X									Added 11-2-22 JR STD
11	B-18-16.0	16.0	1005								X									
12	B-18-20.0	20.0	1007								X									
13	B-20-10.0	10.0	0925					X	X		X									
14	B-20-15.0	15.0	0930					X	X		X									
15																				
16																				
17																				

Relinquished by:	Date / Time	Received by:	Date / Time
[signature]	10/27/22 1823	[signature]	10/28/22 0910
Relinquished by:	Date / Time	Received by:	Date / Time
Relinquished by:	Date / Time	Received by:	Date / Time

Sample Receipt

Good Condition?	Y	N
Cooler Temp.		°C
Sample Temp.		°C
Total Number of Containers		

Remarks: See page 1

TAT: 24HR 48HR 5-DAY

Distribution: White - Lab, Yellow - Originator

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661 E PINE ST PROJECT
Farallon Consulting
Shelton, Washington
Libby Project # L22J143
Client Project # 863-001

Analyses of Gasoline (NWTPH-Gx) & BTEX (EPA Method 8260D) in Soil

Sample Description		Method Blank	B-14-10.0	B-14-20.0	B-19-5.0	B-19-20.0
Date Sampled		N/A	10/27/2022	10/27/2022	10/27/2022	10/27/2022
Date Analyzed	PQL	11/2/2022	11/2/2022	11/2/2022	11/2/2022	11/2/2022
	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Benzene	0.02	nd	0.11	nd	nd	nd
Toluene	0.10	nd	nd	nd	nd	nd
Ethylbenzene	0.05	nd	0.18	nd	nd	nd
Total Xylenes	0.15	nd	0.24	nd	nd	nd
Gasoline	10	nd	320	nd	nd	nd
Surrogate Recovery						
Dibromofluoromethane	27-188	169	116	110	120	121
1,2-Dichloroethane-d4	17-212	148	132	107	129	135
Toluene-d8	41-142	91	118	89	86	91
4-Bromofluorobenzene	47-167	81	118	82	81	85

"nd" Indicates not detected at listed detection limit.
"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE : 65% TO 135%

ANALYSES PERFORMED BY: Matthew Hansen

Libby Environmental, Inc.

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661 E PINE ST PROJECT
Farallon Consulting
Shelton, Washington
Libby Project # L22J143
Client Project # 863-001

QA/QC for Gasoline (NWTPH-Gx) & BTEX (EPA Method 8260D) in Soil

Matrix Spike Sample Identification: L22K003-01

Date Analyzed: 11/2/2022

	Spiked Conc. (mg/kg)	MS Response (mg/kg)	MSD Response (mg/kg)	MS Recovery (%)	MSD Recovery (%)	RPD (%)	Recovery Limits (%)	Data Flag
Benzene	0.25	0.29	0.23	117	92	24.2	65-126	
Toluene	0.25	0.26	0.12	104	49	72.0	67-136	R, S
Ethylbenzene	0.25	0.25	0.23	99	90	9.4	55-140	
Total Xylenes	0.75	0.76	0.70	102	93	9.2	43-149	

Surrogate Recovery (%)	MS	MSD	
Dibromofluoromethane	129	122	27-188
1,2-Dichloroethane-d4	134	112	17-212
Toluene-d8	93	47	41-142
4-Bromofluorobenzene	110	109	47-167

ACCEPTABLE RPD IS 35%
"R" High relative percent difference observed.
"S" Spike compound recovery is outside acceptance limits.

ANALYSES PERFORMED BY: Matthew Hansen

Laboratory Control Sample

Date Analyzed: 11/2/2022

	Spiked Conc. (mg/kg)	LCS Response (mg/kg)	LCS Recovery (%)	LCS Recovery Limits (%)	Data Flag
Benzene	0.25	0.27	109	65-118	
Toluene	0.25	0.25	98	68-125	
Ethylbenzene	0.25	0.25	100	49-144	
Total Xylenes	0.75	0.70	93	38-140	

Surrogate Recovery		
Dibromofluoromethane	252 S	27-188
1,2-Dichloroethane-d4	149	17-212
Toluene-d8	92	41-142
4-Bromofluorobenzene	109	47-167

"S" Spike compound recovery is outside acceptance limits.

ANALYSES PERFORMED BY: Matthew Hansen

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661 E PINE ST PROJECT
Farallon Consulting
Shelton, Washington
Libby Project # L22J143
Client Project # 863-001

Analyses of Diesel & Oil w/ Silica Gel Clean up (NWTPH-Dx/Dx Extended) in Soil

Sample Number	Date Analyzed	Surrogate Recovery (%)	Diesel (mg/kg)	Oil (mg/kg)
Method Blank	11/1/2022	98	nd	nd
B-14-10.0	11/1/2022	int	150	nd
B-14-10.0 Dup	11/1/2022	int	170	nd
B-14-20.0	11/1/2022	92	nd	nd
B-19-5.0	11/1/2022	95	nd	nd
B-19-20.0	11/1/2022	102	nd	nd
Practical Quantitation Limit			50	250

"nd" Indicates not detected at the listed detection limits.
"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (2-F Biphenyl): 65% TO 135%

ANALYSES PERFORMED BY: Lucy Owens

Libby Environmental, Inc.

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661 E PINE ST PROJECT
Farallon Consulting
Shelton, Washington
Libby Project # L22J143
Client Project # 863-001

Analyses of Gasoline (NWTPH-Gx) & BTEX (EPA Method 8260D) in Soil

Sample Description		Method Blank	B-14-15.0	B-140-15.0	B-140-20.0	B-15-10.0	B-150-10.0
Date Sampled		N/A	10/27/2022	10/27/2022	10/27/2022	10/27/2022	10/27/2022
Date Analyzed	PQL (mg/kg)	11/2/2022 (mg/kg)	11/2/2022 (mg/kg)	11/2/2022 (mg/kg)	11/2/2022 (mg/kg)	11/2/2022 (mg/kg)	11/2/2022 (mg/kg)
Benzene	0.02	nd	0.21	0.28	nd	nd	nd
Toluene	0.10	nd	nd	nd	nd	nd	nd
Ethylbenzene	0.05	nd	0.73	0.47	nd	nd	nd
Total Xylenes	0.15	nd	0.41	0.47	nd	nd	nd
Gasoline	10	nd	110	66	17	83	nd
Surrogate Recovery							
Dibromofluoromethane	27-188	103	88	90	97	95	94
1,2-Dichloroethane-d4	17-212	112	100	101	99	98	90
Toluene-d8	41-142	98	98	93	95	99	96
4-Bromofluorobenzene	47-167	91	132	116	101	147	94

"nd" Indicates not detected at listed detection limit.
"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE : 65% TO 135%

ANALYSES PERFORMED BY: Alex Randolph

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661 E PINE ST PROJECT
Farallon Consulting
Shelton, Washington
Libby Project # L22J143
Client Project # 863-001

Analyses of Gasoline (NWTPH-Gx) & BTEX (EPA Method 8260D) in Soil

Sample Description		B-15-15.0	B-23-10.0	B-23-10.0 Dup	B-23-11.5	B-230-11.5	B-19-10.0
Date Sampled		10/27/2022	10/27/2022	10/27/2022	10/27/2022	10/27/2022	10/27/2022
Date Analyzed	PQL	11/2/2022	11/2/2022	11/2/2022	11/2/2022	11/2/2022	11/3/2022
	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Benzene	0.02	nd	nd	nd	nd	nd	nd
Toluene	0.10	nd	nd	nd	nd	nd	nd
Ethylbenzene	0.05	nd	nd	0.074	nd	nd	nd
Total Xylenes	0.15	nd	nd	0.36	nd	nd	nd
Gasoline	10	nd	50	49	nd	nd	nd
Surrogate Recovery							
Dibromofluoromethane	27-188	97	99	95	99	102	96
1,2-Dichloroethane-d4	17-212	101	105	102	105	108	87
Toluene-d8	41-142	96	96	97	101	98	96
4-Bromofluorobenzene	47-167	96	101	113	90	91	88

"nd" Indicates not detected at listed detection limit.
"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE : 65% TO 135%

ANALYSES PERFORMED BY: Alex Randolph

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Shelton, Washington
Libby Project # L22J143
Client Project # 863-001

Analyses of Gasoline (NWTPH-Gx) & BTEX (EPA Method 8260D) in Soil

Sample Description		B-19-15.0	B-190-20.0	B-20-10.0	B-20-15.0	Method Blank
Date Sampled		10/27/2022	10/27/2022	10/27/2022	10/27/2022	N/A
Date Analyzed	PQL	11/3/2022	11/3/2022	11/3/2022	11/3/2022	11/2/2022
	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Benzene	0.02	nd	nd	nd	nd	nd
Toluene	0.10	nd	nd	nd	nd	nd
Ethylbenzene	0.05	nd	nd	nd	nd	nd
Total Xylenes	0.15	nd	nd	nd	nd	nd
Gasoline	10	19	nd	28	nd	nd
Surrogate Recovery						
Dibromofluoromethane	27-188	102	100	104	99	101
1,2-Dichloroethane-d4	17-212	104	107	106	109	99
Toluene-d8	41-142	98	97	97	97	104
4-Bromofluorobenzene	47-167	90	93	95	93	88

"nd" Indicates not detected at listed detection limit.
"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE : 65% TO 135%

ANALYSES PERFORMED BY: Alex Randolph

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661 E PINE ST PROJECT
Farallon Consulting
Shelton, Washington
Libby Project # L22J143
Client Project # 863-001

QA/QC for Gasoline (NWTPH-Gx) & BTEX (EPA Method 8260D) in Soil

Matrix Spike Sample Identification: B-23-11.5
Date Analyzed: 11/2/2022

	Spiked Conc. (mg/kg)	MS Response (mg/kg)	MSD Response (mg/kg)	MS Recovery (%)	MSD Recovery (%)	RPD (%)	Recovery Limits (%)	Data Flag
Benzene	0.25	0.30	0.30	119	120	1.4	65-126	
Toluene	0.25	0.32	0.31	129	123	4.8	67-136	
Ethylbenzene	0.25	0.29	0.30	115	122	5.3	55-140	
Total Xylenes	0.75	0.94	0.94	126	125	0.4	43-149	

Surrogate Recovery (%)	MS	MSD	
Dibromofluoromethane	100	101	27-188
1,2-Dichloroethane-d4	101	102	17-212
Toluene-d8	102	99	41-142
4-Bromofluorobenzene	90	90	47-167

ACCEPTABLE RPD IS 35%

ANALYSES PERFORMED BY: Alex Randolph

Laboratory Control Sample

Date Analyzed: 11/2/2022

	Spiked Conc. (mg/kg)	LCS Response (mg/kg)	LCS Recovery (%)	LCS Recovery Limits (%)	Data Flag
Benzene	0.25	0.28	113	65-118	
Toluene	0.25	0.26	105	68-125	
Ethylbenzene	0.25	0.28	111	49-144	
Total Xylenes	0.75	0.84	112	38-140	

Surrogate Recovery		
Dibromofluoromethane	98	27-188
1,2-Dichloroethane-d4	94	17-212
Toluene-d8	95	41-142
4-Bromofluorobenzene	88	47-167

ANALYSES PERFORMED BY: Alex Randolph

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661 E PINE ST PROJECT
Farallon Consulting
Shelton, Washington
Libby Project # L22J143
Client Project # 863-001

QA/QC for Gasoline (NWTPH-Gx) & BTEX (EPA Method 8260D) in Soil

Matrix Spike Sample Identification: L22J130

Date Analyzed: 11/3/2022

	Spiked Conc. (mg/kg)	MS Response (mg/kg)	MSD Response (mg/kg)	MS Recovery (%)	MSD Recovery (%)	RPD (%)	Recovery Limits (%)	Data Flag
Benzene	0.25	0.29	0.28	116	112	3.9	65-126	
Toluene	0.25	0.33	0.31	132	124	6.3	67-136	
Ethylbenzene	0.25	0.28	0.27	112	108	3.6	55-140	
Total Xylenes	0.75	0.95	0.90	127	120	5.4	43-149	

Surrogate Recovery (%)	MS	MSD	
Dibromofluoromethane	103	103	27-188
1,2-Dichloroethane-d4	105	108	17-212
Toluene-d8	98	97	41-142
4-Bromofluorobenzene	93	92	47-167

ACCEPTABLE RPD IS 35%

ANALYSES PERFORMED BY: Alex Randolph

Laboratory Control Sample

Date Analyzed: 11/3/2022

	Spiked Conc. (mg/kg)	LCS Response (mg/kg)	LCS Recovery (%)	LCS Recovery Limits (%)	Data Flag
Benzene	0.25	0.27	109	65-118	
Toluene	0.25	0.26	106	68-125	
Ethylbenzene	0.25	0.27	108	49-144	
Total Xylenes	0.75	0.85	113	38-140	

Surrogate Recovery		
Dibromofluoromethane	98	27-188
1,2-Dichloroethane-d4	98	17-212
Toluene-d8	97	41-142
4-Bromofluorobenzene	92	47-167

ANALYSES PERFORMED BY: Alex Randolph

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661 E PINE ST PROJECT
Farallon Consulting
Shelton, Washington
Libby Project # L22J143
Client Project # 863-001

Analyses of Gasoline (NWTPH-Gx) in Soil

Sample Number	Date Analyzed	Surrogate Recovery (%)	Gasoline (mg/kg)
Method Blank	11/2/2022	98	nd
B-21-3.0	11/2/2022	95	nd
B-21-11.0	11/2/2022	91	340
B-21-13.0	11/2/2022	95	11
Practical Quantitation Limit			10

"nd" Indicates not detected at the listed detection limits.
"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (Toluene-d8): 58% TO 125%

ANALYSES PERFORMED BY: Alex Randolph

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661 E PINE ST PROJECT
Farallon Consulting
Shelton, Washington
Libby Project # L22J143
Client Project # 863-001

BTEX by EPA Method 8260D in Soil

Sample Description		Method Blank	B-24-6.0	B-24-7.0	B-24-10.0	B-22-7.0	B-22-11.0
Date Sampled		N/A	10/27/2022	10/27/2022	10/27/2022	10/27/2022	10/27/2022
Date Analyzed	PQL	11/2/2022	11/2/2022	11/2/2022	11/2/2022	11/2/2022	11/2/2022
	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Benzene	0.02	nd	nd	nd	nd	nd	nd
Toluene	0.10	nd	nd	nd	nd	nd	nd
Ethylbenzene	0.05	nd	nd	nd	nd	nd	nd
Total Xylenes	0.15	nd	nd	nd	nd	nd	nd
Surrogate Recovery							
Dibromofluoromethane	27-188	103	99	95	93	96	95
1,2-Dichloroethane-d4	17-212	112	108	107	105	103	98
Toluene-d8	41-142	98	105	96	96	98	96
4-Bromofluorobenzene	47-167	91	216 S	241 S	95	96	97

"nd" Indicates not detected at listed detection limit.
"S" Spike recovery outside accepted recovery limits.
"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE : 65% TO 135%

ANALYSES PERFORMED BY: Alex Randolph

Libby Environmental, Inc.

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661 E PINE ST PROJECT
Farallon Consulting
Shelton, Washington
Libby Project # L22J143
Client Project # 863-001

BTEX by EPA Method 8260D in Soil

Sample Description		B-22-15.0
Date Sampled		10/27/2022
Date Analyzed	PQL	11/2/2022
	(mg/kg)	(mg/kg)
Benzene	0.02	nd
Toluene	0.10	nd
Ethylbenzene	0.05	nd
Total Xylenes	0.15	nd
Surrogate Recovery		
Dibromofluoromethane	27-188	89
1,2-Dichloroethane-d4	17-212	97
Toluene-d8	41-142	94
4-Bromofluorobenzene	47-167	100

"nd" Indicates not detected at listed detection limit.
"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE : 65% TO 135%

ANALYSES PERFORMED BY: Alex Randolph

Libby Environmental, Inc.

3322 South Bay Road NE
Olympia, WA 98506
Phone: (360) 352-2110
FAX: (360) 352-4154
Email: libbyenv@gmail.com

661 E PINE ST PROJECT
Farallon Consulting
Shelton, Washington
Libby Project # L22J143
Client Project # 863-001

QA/QC for Gasoline (NWTPH-Gx) & BTEX (EPA Method 8260D) in Soil

Matrix Spike Sample Identification: B-23-11.5
Date Analyzed: 11/2/2022

	Spiked Conc. (mg/kg)	MS Response (mg/kg)	MSD Response (mg/kg)	MS Recovery (%)	MSD Recovery (%)	RPD (%)	Limits Recovery (%)	Data Flag
Benzene	0.25	0.30	0.30	119	120	1.4	65-126	
Toluene	0.25	0.32	0.31	129	123	4.8	67-136	
Ethylbenzene	0.25	0.29	0.30	115	122	5.3	55-140	
Total Xylenes	0.75	0.94	0.94	126	125	0.4	43-149	

Surrogate Recovery (%)	MS	MSD	
Dibromofluoromethane	100	101	27-188
1,2-Dichloroethane-d4	101	102	17-212
Toluene-d8	102	99	41-142
4-Bromofluorobenzene	90	90	47-167

ACCEPTABLE RPD IS 35%

ANALYSES PERFORMED BY: Alex Randolph

Laboratory Control Sample

Date Analyzed: 11/2/2022

	Spiked Conc. (mg/kg)	LCS Response (mg/kg)	LCS Recovery (%)	LCS Recovery Limits (%)	Data Flag
Benzene	0.25	0.28	113	65-118	
Toluene	0.25	0.26	105	68-125	
Ethylbenzene	0.25	0.28	111	49-144	
Total Xylenes	0.75	0.84	112	38-140	

Surrogate Recovery		
Dibromofluoromethane	98	27-188
1,2-Dichloroethane-d4	94	17-212
Toluene-d8	95	41-142
4-Bromofluorobenzene	88	47-167

ANALYSES PERFORMED BY: Alex Randolph

Libby Environmental, Inc.

3322 South Bay Road NE
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Email: libbyenv@gmail.com

661 E PINE ST PROJECT
Farallon Consulting
Shelton, Washington
Libby Project # L22J143
Client Project # 863-001

Analyses of Diesel & Oil w/ Silica Gel Clean up (NWTPH-Dx/Dx Extended) in Soil

Sample Number	Date Analyzed	Surrogate Recovery (%)	Diesel (mg/kg)	Oil (mg/kg)
Method Blank	11/1/2022	98	nd	nd
Method Blank	11/2/2022	92	nd	nd
Method Blank	11/3/2022	95	nd	nd
B-14-15.0	11/1/2022	int	420	nd
B-140-15.0	11/2/2022	88	nd	nd
B-140-20.0	11/2/2022	106	nd	nd
B-15-10.0	11/2/2022	85	nd	nd
B-150-10.0	11/2/2022	91	nd	nd
B-15-15.0	11/2/2022	96	nd	nd
B-23-10.0	11/2/2022	96	56	nd
B-23-10.0 Dup	11/2/2022	96	43 J	nd
B-23-11.5	11/2/2022	102	nd	nd
B-230-11.5	11/2/2022	109	nd	nd
B-24-6.0	11/2/2022	int	1100	nd
B-24-7.0	11/2/2022	int	880	nd
B-24-10.0	11/2/2022	116	62	nd
B-22-7.0	11/2/2022	88	nd	nd
B-22-11.0	11/3/2022	99	nd	nd
Practical Quantitation Limit			50	250

"J" Result is less than the PQL but greater than the MDL. Reported value is approximate.
"nd" Indicates not detected at the listed detection limits.
"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (2-F Biphenyl): 65% TO 135%

ANALYSES PERFORMED BY: Lucy Owens

Libby Environmental, Inc.

3322 South Bay Road NE
Olympia, WA 98506
Phone: (360) 352-2110
FAX: (360) 352-4154
Email: libbyenv@gmail.com

661 E PINE ST PROJECT
Farallon Consulting
Shelton, Washington
Libby Project # L22J143
Client Project # 863-001

Analyses of Diesel & Oil w/ Silica Gel Clean up (NWTPH-Dx/Dx Extended) in Soil

Sample Number	Date Analyzed	Surrogate Recovery (%)	Diesel (mg/kg)	Oil (mg/kg)
Method Blank	11/2/2022	93	nd	nd
B-22-15.0	11/2/2022	91	nd	nd
B-19-10.0	11/2/2022	95	nd	nd
B-19-15.0	11/2/2022	106	nd	nd
B-190-20.0	11/2/2022	94	nd	nd
B-18-16.0	11/2/2022	114	nd	nd
B-18-20.0	11/2/2022	89	nd	nd
B-20-10.0	11/2/2022	90	nd	nd
B-20-15.0	11/2/2022	93	nd	nd
Practical Quantitation Limit			50	250

"nd" Indicates not detected at the listed detection limits.
"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (2-F Biphenyl): 65% TO 135%

ANALYSES PERFORMED BY: Lucy Owens

Libby Environmental, Inc.

3322 South Bay Road NE
Olympia, WA 98506
Phone: (360) 352-2110
FAX: (360) 352-4154
Email: libbyenv@gmail.com

661 E PINE ST PROJECT
Farallon Consulting
Libby Project # L22J143
Date Received 10/28/22 9:10

Received By KD

Sample Receipt Checklist

Chain of Custody

1. Is the Chain of Custody complete?	☐ Yes	☑ No	
2. How was the sample delivered?	☑ Hand Delivered	☐ Picked Up	☐ Shipped

Log In

3. Cooler or Shipping Container is present.	☑ Yes	☐ No	☐ N/A
4. Cooler or Shipping Container is in good condition.	☑ Yes	☐ No	☐ N/A
5. Cooler or Shipping Container has Custody Seals present.	☐ Yes	☑ No	☐ N/A
6. Was an attempt made to cool the samples?	☑ Yes	☐ No	☐ N/A
7. Temperature of cooler (0°C to 8°C recommended)	4.9 °C		
8. Temperature of sample(s) (0°C to 8°C recommended)	5.2 °C		
9. Did all containers arrive in good condition (unbroken)?	☑ Yes	☐ No	
10. Is it clear what analyses were requested?	☑ Yes	☐ No	
11. Did container labels match Chain of Custody?	☑ Yes	☐ No	
12. Are matrices correctly identified on Chain of Custody?	☑ Yes	☐ No	
13. Are correct containers used for the analysis indicated?	☑ Yes	☐ No	
14. Is there sufficient sample volume for indicated analysis?	☑ Yes	☐ No	
15. Were all containers properly preserved per each analysis?	☑ Yes	☐ No	
16. Were VOA vials collected correctly (no headspace)?	☑ Yes	☐ No	☐ N/A
17. Were all holding times able to be met?	☑ Yes	☐ No	

Discrepancies/ Notes

18. Was client notified of all discrepancies? ☑ Yes ☐ No ☐ N/A

Person Notified: Javan Date: 10/28/2022

By Whom: KD Via: Email

Regarding: Analyses

19. Comments. COC had no analyses marked, but had a note to hold for PM on analyses

10-31-2022, Client selected analyses.

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

Libby Environmental
Sherry Chilcutt
3322 South Bay Road NE
Olympia, WA 98506

RE: 661 E Pine St
Work Order Number: 2211116

November 15, 2022

Attention Sherry Chilcutt:

Fremont Analytical, Inc. received 2 sample(s) on 11/4/2022 for the analyses presented in the following report.

Sample Moisture (Percent Moisture)
Total Organic Carbon by EPA 9060

This report consists of the following:

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

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

Thank you for using Fremont Analytical.

Sincerely,

Brianna Barnes
Project Manager

Date: *11/15/2022*

CLIENT: Libby Environmental
Project: 661 E Pine St
Work Order: 2211116

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
2211116-001	B-19-5.0	10/27/2022 11:05 AM	11/04/2022 9:21 AM
2211116-002	B-19-20.0	10/27/2022 11:40 AM	11/04/2022 9:21 AM

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

Case Narrative

WO#: **2211116**
Date: **11/15/2022**

CLIENT: Libby Environmental
Project: 661 E Pine St

I. SAMPLE RECEIPT:
Samples receipt information is recorded on the attached Sample Receipt Checklist.

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

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

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

Qualifiers:

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

Acronyms:

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

Analytical Report

Work Order: **2211116**
Date Reported: **11/15/2022**

CLIENT: Libby Environmental
Project: 661 E Pine St

Lab ID: 2211116-001 **Collection Date:** 10/27/2022 11:05:00 AM
Client Sample ID: **B-19-5.0** **Matrix:** Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Sample Moisture (Percent Moisture)				Batch ID: R79681		Analyst: AP
Percent Moisture	2.64	0.500		wt%	1	11/9/2022 9:19:38 AM
Total Organic Carbon by EPA 9060				Batch ID: 38436		Analyst: ALT
Total Organic Carbon	ND	0.150		%-dry	1	11/10/2022 10:22:00 AM

Lab ID: 2211116-002 **Collection Date:** 10/27/2022 11:40:00 AM
Client Sample ID: **B-19-20.0** **Matrix:** Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Sample Moisture (Percent Moisture)				Batch ID: R79681		Analyst: AP
Percent Moisture	13.8	0.500		wt%	1	11/9/2022 9:19:38 AM
Total Organic Carbon by EPA 9060				Batch ID: 38436		Analyst: ALT
Total Organic Carbon	0.400	0.150		%-dry	1	11/10/2022 11:20:00 AM

Work Order: 2211116
CLIENT: Libby Environmental
Project: 661 E Pine St

QC SUMMARY REPORT

Total Organic Carbon by EPA 9060

Sample ID: **MB-38436**	SampType: **MBLK**			Units: **%-dry**		Prep Date: **11/9/2022**		RunNo: **79826**		
Client ID: **MBLKS**	Batch ID: **38436**					Analysis Date: **11/10/2022**		SeqNo: **1646750**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	ND	0.150									

Sample ID: **LCS-38436**	SampType: **LCS**			Units: **%-dry**		Prep Date: **11/9/2022**		RunNo: **79826**		
Client ID: **LCSS**	Batch ID: **38436**					Analysis Date: **11/10/2022**		SeqNo: **1646751**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	0.963	0.150	1.000	0	96.3	80	120				

Sample ID: **2211116-001ADUP**	SampType: **DUP**			Units: **%-dry**		Prep Date: **11/9/2022**		RunNo: **79826**		
Client ID: **B-19-5.0**	Batch ID: **38436**					Analysis Date: **11/10/2022**		SeqNo: **1646743**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	ND	0.150						0		20	

Sample ID: **2211116-001AMS**	SampType: **MS**			Units: **%-dry**		Prep Date: **11/9/2022**		RunNo: **79826**		
Client ID: **B-19-5.0**	Batch ID: **38436**					Analysis Date: **11/10/2022**		SeqNo: **1646744**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	1.17	0.150	1.000	0.09800	107	75	125				

Sample ID: **2211116-001AMSD**	SampType: **MSD**			Units: **%-dry**		Prep Date: **11/9/2022**		RunNo: **79826**		
Client ID: **B-19-5.0**	Batch ID: **38436**					Analysis Date: **11/10/2022**		SeqNo: **1646745**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	1.15	0.150	1.000	0.09800	106	75	125	1.167	1.21	20	

Sample Log-In Check List

Client Name:	LIBBY	Work Order Number:	2211116
Logged by:	Elisabeth Samoray	Date Received:	11/4/2022 9:21:00 AM

Chain of Custody

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

Log In

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

Special Handling (if applicable)

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

Person Notified: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

19. Additional remarks:

Item Information

Item #	Temp ºC
Sample 1	2.4

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

Libby Environmental, Inc.

3322 South Bay Road NE • Olympia, WA 98506-2957

SUBCONTRACT ORDER L22J143

Sending Laboratory:

Libby Environmental, Inc.
3322 South Bay Road NE
Olympia, WA 98506
Phone: 360-352-2110
Fax: 360-352-4154

Project Manager: Sherry Chilcutt
LibbyEnv@gmail.com

Subcontracted Laboratory: 2211116

Fremont Analytical, Inc.
3600 Fremont Ave N
Seattle, WA 98103
Phone: (206) 352-3790
Fax:

Requested Turnaround (TAT) Std

Project: 661 E Pine St

Analysis	Comments
Client Sample ID: B-19-5.0 ***Soil Sampled: 10/27/2022 11:05***	Lab ID: L22J143-23
TOC	
Containers Supplied:	
Client Sample ID: B-19-20.0 ***Soil Sampled: 10/27/2022 11:40***	Lab ID: L22J143-26
TOC	
Containers Supplied:	

Released By — Date: 11-3-22

Received By — Date: 11/04 9:21

Libby Environmental, Inc.
3322 South Bay Road NE • Olympia, WA 98506-2957

July 26, 2023

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

Dear Javan Ruark:

Please find enclosed the analytical data report for the 661 E Pine St project located in Shelton, Washington.

The results of the analyses are summarized in the attached tables. Applicable detection limits and QA/QC data are included. The sample(s) will be disposed of within 30 days unless we are contacted to arrange long term storage.

Libby Environmental, Inc. appreciates the opportunity to have provided analytical services for this project. If you have any further questions about the data report, please give me a call. It was a pleasure working with you on this project, and we are looking forward to the next opportunity to work together.

Sincerely,

Sherry L. Chilcutt
Senior Chemist
Libby Environmental, Inc.

Phone (360) 352-2110 • Fax (360) 352-4154 • libbyenv@gmail.com

Libby Environmental, Inc.

3322 South Bay Road NE
Olympia, WA 98506
Ph: 360-352-2110
Fax: 360-352-4154

Chain of Custody Record

www.LibbyEnvironmental.com

Date: 10/26/22 Page: 1 of 2

Client: Farallon Consulting
Project Manager: Javan Ruark
Address: 975 5th Ave NW
Project Name: 661 E Pine St
City: Issaquah State: WA Zip: 98027
Location: [redacted], 661 E Pine St City, State: Shelton, WA
Phone: Fax:
Collector: Michael Ysaguirre Date of Collection: 10/26/22
Client Project # 863-001
Email: Jruark@farallonconsulting.com

	Sample Number	Depth	Time	Sample Type	Container Type	VOC 8260	PCE & Daughter Prod.	NWTPH-Gx	BTEX (8260) / (8021)	NWTPH-HCID	NWTPH-Dx / Dx w/ Si. Gel	PCB 8082	MTCA 5 Metals	RCRA 8 Metals	c PAH 8270	PAH 8270	Semi Vol 8270	TOC	EPH	Field Notes
																				10-31-22 Make changes Per Javan via email.
1	B-Ø20-5.0	5.0	1332	SOIL	Jar, VOA			X	X		X							X	JR	
2	B-Ø16-7.0	7.0	1412								X									HOLD
3	B-Ø16-16.0	16.0	1418								X									
4	B-Ø16-19.5	19.5	1422								X									
5	B-Ø15-5.0	5.0	1501				X	X			X									
6	B-Ø14-5.0	5.0	1459				X	X			X							X	JR	
7	B-Ø17-5.0	5.0	1457								X									HOLD
8	B-Ø17-16.0	16.0	1440								X			⊗					⊗	11-17-22 Analyses added per Javan via email. STD TAT
9	B-Ø17-19.0	19.0	1451								X									
10	B-Ø11-5.0	5.0	1122				X	X			X									
11	B-Ø11-6.0	6.0	1150				X	X			X									
12	B-Ø11-11.0	11.0	1157				X	X			X									
13	B-Ø11-16.0	16.0	1205				X	X			X									
14	B-Ø12-5.0	5.0	1234				X	X			X			X						
15	B-Ø12-9.0	9.0	1236				X	X			X			X						
16	B-Ø13-4.0	4.0	1249					X						X				X		Added 11-7-22
17	B-Ø13-6.0	6.0	1256					(X)						(X)				(X)		48hr ⊗ TAT Added 11-2-22

Relinquished by:	Date / Time	Received by:	Date / Time
[signature]	10/26/22 1625	[signature]	10-26-22 1629
Relinquished by:	Date / Time	Received by:	Date / Time
Relinquished by:	Date / Time	Received by:	Date / Time

Sample Receipt

Good Condition?	Y	N
Cooler Temp.		°C
Sample Temp.		°C
Total Number of Containers		

Remarks: Per Javan via email

TAT: 24HR 48HR (5-DAY)

LEGAL ACTION CLAUSE: *In the event of default of payment and/or failure to pay, Client agrees to pay the costs of collection including court costs and reasonable attorney fees to be determined by a court of law.*

Distribution: White - Lab, Yellow - Originator

Libby Environmental, Inc.

Chain of Custody Record

www.LibbyEnvironmental.com

3322 South Bay Road NE
Olympia, WA 98506
Ph: 360-352-2110
Fax: 360-352-4154

Date: 10/26/22 Page: 2 of 2

Client: Farallon Consulting
Project Manager: Javan Ruark
Address: 975 5th Ave NW
Project Name: 661 E Pine St
City: Issaquah State: WA Zip: 98027
Location: 661 E Pine St City, State: Shelton, WA
Phone: Fax:
Collector: Michael Ysaguirre Date of Collection: 10/26/22
Client Project # 863-001
Email: JRuark@farallonconsulting.com

Sample Number	Depth	Time	Sample Type	Container Type	VOC 8260	PCE & Daughter Prod.	NWTPH-Gx	BTEX (8260) / (8021)	NWTPH-HCID	NWTPH-Dx / Dx w/ SG Cl	PCB 8082	MTCA 5 Metals	RCRA 8 Metals	c PAH 8270	PAH 8270	Semi Vol 8270	TOC	Field Notes
1 B-B13-8.0	8.0	1300	SOIL	Jar, VOA				X		X			X					10-31-22 Made changes Per Javan via email.
2 B-B13-10.0	10.0	1305	⊥	⊥				(X)					(X)			⊗		48hr TAT Added 11-2-22 Per Javan via email
3																		
4																		Added 11-7-22
5																		
6																		
7																		
8																		
9																		
10																		
11																		
12																		
13																		
14																		
15																		
16																		
17																		

Relinquished by:	Date / Time	Received by:	Date / Time
	10/26/22 1625		10-26-22 1626
Relinquished by:	Date / Time	Received by:	Date / Time
Relinquished by:	Date / Time	Received by:	Date / Time

Sample Receipt

Good Condition?	Y	N
Cooler Temp.		°C
Sample Temp.		°C
Total Number of Containers		

Remarks:

TAT: 24HR 48HR 5-DAY

LEGAL ACTION CLAUSE: *In the event of default of payment and/or failure to pay. Client agrees to pay the costs of collection including court costs and reasonable attorney fees to be determined by a court of law.*

Distribution: White - Lab, Yellow - Originator

Libby Environmental, Inc.

3322 South Bay Road NE
Olympia, WA 98506
Phone: (360) 352-2110
FAX: (360) 352-4154
Email: libbyenv@gmail.com

661 E PINE ST PROJECT
Farallon Consulting
Libby Project # L22K084
Date Received 10/26/22 16:29

Received By JA

Sample Receipt Checklist

Chain of Custody

1. Is the Chain of Custody complete?	☑ Yes	☐ No	
2. How was the sample delivered?	☑ Hand Delivered	☐ Picked Up	☐ Shipped

Log In

3. Cooler or Shipping Container is present.	☑ Yes	☐ No	☐ N/A
4. Cooler or Shipping Container is in good condition.	☑ Yes	☐ No	☐ N/A
5. Cooler or Shipping Container has Custody Seals present.	☐ Yes	☑ No	☐ N/A
6. Was an attempt made to cool the samples?	☑ Yes	☐ No	☐ N/A
7. Temperature of cooler (0°C to 8°C recommended)	3.3 °C		
8. Temperature of sample(s) (0°C to 8°C recommended)	14.4 °C		
9. Did all containers arrive in good condition (unbroken)?	☑ Yes	☐ No	
10. Is it clear what analyses were requested?	☑ Yes	☐ No	
11. Did container labels match Chain of Custody?	☑ Yes	☐ No	
12. Are matrices correctly identified on Chain of Custody?	☑ Yes	☐ No	
13. Are correct containers used for the analysis indicated?	☑ Yes	☐ No	
14. Is there sufficient sample volume for indicated analysis?	☑ Yes	☐ No	
15. Were all containers properly preserved per each analysis?	☑ Yes	☐ No	
16. Were VOA vials collected correctly (no headspace)?	☐ Yes	☐ No	☑ N/A
17. Were all holding times able to be met?	☑ Yes	☐ No	

Discrepancies/ Notes

18. Was client notified of all discrepancies?	☐ Yes	☐ No	☑ N/A

Person Notified: _____ Date: _____

By Whom: _____ Via: _____

Regarding: _____

19. Comments. B-17-5.0 only 4 oz jar, split into 20 mL VOAs upon receipt.

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

Libby Environmental
Sherry Chilcutt
3322 South Bay Road NE
Olympia, WA 98506

RE: 661 E Pine St
Work Order Number: 2211393

July 25, 2023

Attention Sherry Chilcutt:

Fremont Analytical, Inc. received 1 sample(s) on 11/18/2022 for the analyses presented in the following report.

Extractable Petroleum Hydrocarbons by NWEPH
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)
Sample Moisture (Percent Moisture)

This report consists of the following:

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

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

Thank you for using Fremont Analytical.

Sincerely,

Brianna Barnes
Project Manager

Date: *07/25/2023*

CLIENT: Libby Environmental
Project: 661 E Pine St
Work Order: 2211393

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
2211393-001	B-17-16.0	10/26/2022 2:40 PM	11/18/2022 9:55 AM

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

Case Narrative

WO#: **2211393**
Date: **7/25/2023**

CLIENT: Libby Environmental
Project: 661 E Pine St

I. SAMPLE RECEIPT:
Samples receipt information is recorded on the attached Sample Receipt Checklist.

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

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

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

7/25/2023: Revision 1 includes additional PAH analytes per client request.

Qualifiers:

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

Acronyms:

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

Analytical Report

Work Order: **2211393**
Date Reported: **7/25/2023**

Client: Libby Environmental
Collection Date: 10/26/2022 2:40:00 PM
Project: 661 E Pine St
Lab ID: 2211393-001
Matrix: Soil
Client Sample ID: **B-17-16.0**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Extractable Petroleum Hydrocarbons by NWEPH				Batch ID: 38881		Analyst: KJ
Aliphatic Hydrocarbon (C8-C10)	ND	20.3	H	mg/Kg-dry	1	12/28/2022 4:11:38 PM
Aliphatic Hydrocarbon (C10-C12)	ND	10.2	H	mg/Kg-dry	1	12/28/2022 4:11:38 PM
Aliphatic Hydrocarbon (C12-C16)	24.0	10.2	H	mg/Kg-dry	1	12/28/2022 4:11:38 PM
Aliphatic Hydrocarbon (C16-C21)	90.0	10.2	H	mg/Kg-dry	1	12/28/2022 4:11:38 PM
Aliphatic Hydrocarbon (C21-C34)	43.0	10.2	H	mg/Kg-dry	1	12/28/2022 4:11:38 PM
Aromatic Hydrocarbon (C8-C10)	ND	20.3	H	mg/Kg-dry	1	12/28/2022 11:23:05 AM
Aromatic Hydrocarbon (C10-C12)	ND	10.2	H	mg/Kg-dry	1	12/28/2022 11:23:05 AM
Aromatic Hydrocarbon (C12-C16)	ND	10.2	H	mg/Kg-dry	1	12/28/2022 11:23:05 AM
Aromatic Hydrocarbon (C16-C21)	33.7	9.83	H	mg/Kg-dry	1	12/15/2022 10:09:32 AM
Aromatic Hydrocarbon (C21-C34)	52.9	10.2	H	mg/Kg-dry	1	12/28/2022 11:23:05 AM
Surr: 1-Chlorooctadecane	64.4	50 - 150	H	%Rec	1	12/28/2022 4:11:38 PM
Surr: o-Terphenyl	82.3	50 - 150	H	%Rec	1	12/28/2022 11:23:05 AM
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)				Batch ID: 38582		Analyst: SK
Naphthalene	ND	19.6	H	µg/Kg-dry	1	11/23/2022 2:52:05 AM
2-Methylnaphthalene	24.2	19.6	H	µg/Kg-dry	1	11/23/2022 2:52:05 AM
1-Methylnaphthalene	21.4	19.6	H	µg/Kg-dry	1	11/23/2022 2:52:05 AM
Benz(a)anthracene	ND	19.6	H	µg/Kg-dry	1	11/23/2022 2:52:05 AM
Chrysene	ND	19.6	H	µg/Kg-dry	1	11/23/2022 2:52:05 AM
Benzo(b)fluoranthene	ND	24.5	H	µg/Kg-dry	1	11/23/2022 2:52:05 AM
Benzo(k)fluoranthene	ND	24.5	H	µg/Kg-dry	1	11/23/2022 2:52:05 AM
Benzo(a)pyrene	ND	29.3	H	µg/Kg-dry	1	11/23/2022 2:52:05 AM
Indeno(1,2,3-cd)pyrene	ND	39.1	H	µg/Kg-dry	1	11/23/2022 2:52:05 AM
Dibenz(a,h)anthracene	ND	48.9	H	µg/Kg-dry	1	11/23/2022 2:52:05 AM
Surr: 2-Fluorobiphenyl	68.9	22.2 - 146	H	%Rec	1	11/23/2022 2:52:05 AM
Surr: Terphenyl-d14 (surr)	76.7	20.2 - 159	H	%Rec	1	11/23/2022 2:52:05 AM
Sample Moisture (Percent Moisture)				Batch ID: R80033		Analyst: AP
Percent Moisture	5.69	0.500		wt%	1	11/23/2022 8:37:22 AM

Work Order: 2211393
CLIENT: Libby Environmental
Project: 661 E Pine St

QC SUMMARY REPORT

Extractable Petroleum Hydrocarbons by NWEPH

Sample ID: **MB-38628**	SampType: **MBLK**	Units: **mg/Kg**	Prep Date: **11/28/2022**	RunNo: **80515**
Client ID: **MBLKS**	Batch ID: **38628**		Analysis Date: **12/15/2022**	SeqNo: **1664704**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aromatic Hydrocarbon (C16-C21)	ND	10.0									
Surr: o-Terphenyl	60.5		100.0		60.5	50	150				

Sample ID: **LCS-38628**	SampType: **LCS**	Units: **mg/Kg**	Prep Date: **11/28/2022**	RunNo: **80515**
Client ID: **LCSS**	Batch ID: **38628**		Analysis Date: **12/15/2022**	SeqNo: **1664705**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aromatic Hydrocarbon (C16-C21)	110	10.0	125.0	0	88.3	55.4	124				
Surr: o-Terphenyl	98.5		100.0		98.5	50	150				

Sample ID: **2211393-001AMS**	SampType: **MS**	Units: **mg/Kg-dry**	Prep Date: **11/28/2022**	RunNo: **80515**
Client ID: **B-17-16.0**	Batch ID: **38628**		Analysis Date: **12/15/2022**	SeqNo: **1664707**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aromatic Hydrocarbon (C16-C21)	84.5	9.89	123.6	33.73	41.1	23.7	139				H
Surr: o-Terphenyl	59.8		98.91		60.4	50	150				H

Sample ID: **2211393-001AMSD**	SampType: **MSD**	Units: **mg/Kg-dry**	Prep Date: **11/28/2022**	RunNo: **80515**
Client ID: **B-17-16.0**	Batch ID: **38628**		Analysis Date: **12/15/2022**	SeqNo: **1664708**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aromatic Hydrocarbon (C16-C21)	116	9.90	123.8	33.73	66.7	23.7	139	84.48	31.7	30	RH
Surr: o-Terphenyl	88.0		99.01		88.9	50	150		0		H

NOTES:
R - High RPD observed, spike recovery is within range.

Sample ID: **LCS-38628**	SampType: **LCS**	Units: **mg/Kg**	Prep Date: **11/28/2022**	RunNo: **80515**
Client ID: **LCSS**	Batch ID: **38628**		Analysis Date: **12/15/2022**	SeqNo: **1664710**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aromatic Hydrocarbon (C16-C21)	119	10.0	125.0	0	95.3	55.4	124				

Work Order: 2211393
CLIENT: Libby Environmental
Project: 661 E Pine St

QC SUMMARY REPORT

Extractable Petroleum Hydrocarbons by NWEPH

Sample ID: **LCS-38628**	SampType: **LCS**			Units: **mg/Kg**		Prep Date: **11/28/2022**		RunNo: **80515**		
Client ID: **LCSS**	Batch ID: **38628**					Analysis Date: **12/15/2022**		SeqNo: **1664710**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: o-Terphenyl	120		100.0		120	50	150				

Sample ID: **MB-38881**	SampType: **MBLK**			Units: **mg/Kg**		Prep Date: **12/19/2022**		RunNo: **80790**		
Client ID: **MBLKS**	Batch ID: **38881**					Analysis Date: **12/28/2022**		SeqNo: **1671179**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aromatic Hydrocarbon (C8-C10)	ND	20.0									
Aromatic Hydrocarbon (C10-C12)	ND	10.0									
Aromatic Hydrocarbon (C12-C16)	ND	10.0									
Aromatic Hydrocarbon (C21-C34)	ND	10.0									
Surr: o-Terphenyl	66.9		100.0		66.9	50	150				

Sample ID: **LCS-38881**	SampType: **LCS**			Units: **mg/Kg**		Prep Date: **12/19/2022**		RunNo: **80790**		
Client ID: **LCSS**	Batch ID: **38881**					Analysis Date: **12/28/2022**		SeqNo: **1671180**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aromatic Hydrocarbon (C8-C10)	108	20.0	250.0	0	43.3	23.1	130				
Aromatic Hydrocarbon (C10-C12)	63.7	10.0	125.0	0	50.9	46.8	104				
Aromatic Hydrocarbon (C12-C16)	77.0	10.0	125.0	0	61.6	54.1	111				
Aromatic Hydrocarbon (C21-C34)	90.0	10.0	125.0	0	72.0	48.5	134				
Surr: o-Terphenyl	63.4		100.0		63.4	50	150				

Sample ID: **2211394-001AMS**	SampType: **MS**			Units: **mg/Kg-dry**		Prep Date: **12/19/2022**		RunNo: **80790**		
Client ID: **BATCH**	Batch ID: **38881**					Analysis Date: **12/28/2022**		SeqNo: **1671183**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aromatic Hydrocarbon (C8-C10)	140	23.7	296.2	0	47.1	11.3	130				H
Aromatic Hydrocarbon (C10-C12)	93.9	11.8	148.1	14.53	53.6	19.3	130				H
Aromatic Hydrocarbon (C12-C16)	338	11.8	148.1	229.4	73.0	30.3	131				H
Aromatic Hydrocarbon (C21-C34)	178	11.8	148.1	73.05	70.6	38.8	143				H

Work Order: 2211393
CLIENT: Libby Environmental
Project: 661 E Pine St

QC SUMMARY REPORT

Extractable Petroleum Hydrocarbons by NWEPH

Sample ID: **2211394-001AMS**	SampType: **MS**			Units: **mg/Kg-dry**		Prep Date: **12/19/2022**		RunNo: **80790**		
Client ID: **BATCH**	Batch ID: **38881**					Analysis Date: **12/28/2022**		SeqNo: **1671183**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: o-Terphenyl	87.3		118.5		73.7	50	150				H

Sample ID: **2211394-001AMSD**	SampType: **MSD**			Units: **mg/Kg-dry**		Prep Date: **12/19/2022**		RunNo: **80790**		
Client ID: **BATCH**	Batch ID: **38881**					Analysis Date: **12/28/2022**		SeqNo: **1671184**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aromatic Hydrocarbon (C8-C10)	150	22.4	280.4	0	53.6	11.3	130	139.6	7.48	30	H
Aromatic Hydrocarbon (C10-C12)	92.3	11.2	140.2	14.53	55.4	19.3	130	93.92	1.78	30	H
Aromatic Hydrocarbon (C12-C16)	297	11.2	140.2	229.4	47.9	30.3	131	337.5	12.9	30	H
Aromatic Hydrocarbon (C21-C34)	189	11.2	140.2	73.05	82.4	38.8	143	177.5	6.00	30	H
Surr: o-Terphenyl	76.8		112.2		68.5	50	150		0		H

Sample ID: **MB-38881**	SampType: **MBLK**			Units: **mg/Kg**		Prep Date: **12/19/2022**		RunNo: **80790**		
Client ID: **MBLKS**	Batch ID: **38881**					Analysis Date: **12/28/2022**		SeqNo: **1671188**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C8-C10)	ND	20.0									
Aliphatic Hydrocarbon (C10-C12)	ND	10.0									
Aliphatic Hydrocarbon (C12-C16)	ND	10.0									
Aliphatic Hydrocarbon (C16-C21)	ND	10.0									
Aliphatic Hydrocarbon (C21-C34)	ND	10.0									
Surr: 1-Chlorooctadecane	75.9		100.0		75.9	50	150				

Sample ID: **LCS-38881**	SampType: **LCS**			Units: **mg/Kg**		Prep Date: **12/19/2022**		RunNo: **80790**		
Client ID: **LCSS**	Batch ID: **38881**					Analysis Date: **12/28/2022**		SeqNo: **1671189**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C8-C10)	93.4	20.0	250.0	0	37.3	16.3	130				
Aliphatic Hydrocarbon (C10-C12)	70.1	10.0	125.0	0	56.1	36.7	107				
Aliphatic Hydrocarbon (C12-C16)	78.3	10.0	125.0	0	62.7	45.3	127				

Work Order: 2211393
CLIENT: Libby Environmental
Project: 661 E Pine St

QC SUMMARY REPORT

Extractable Petroleum Hydrocarbons by NWEPH

Sample ID: **LCS-38881** SampType: **LCS** Units: **mg/Kg** Prep Date: **12/19/2022** RunNo: **80790**
Client ID: **LCSS** Batch ID: **38881** Analysis Date: **12/28/2022** SeqNo: **1671189**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C16-C21)	70.4	10.0	125.0	0	56.3	47.3	129				
Aliphatic Hydrocarbon (C21-C34)	67.2	10.0	125.0	0	53.7	35.2	139				
Surr: 1-Chlorooctadecane	93.1		100.0		93.1	50	150				

Sample ID: **2211394-001AMS** SampType: **MS** Units: **mg/Kg-dry** Prep Date: **12/19/2022** RunNo: **80790**
Client ID: **BATCH** Batch ID: **38881** Analysis Date: **12/28/2022** SeqNo: **1671192**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C8-C10)	260	23.7	296.2	131.1	43.5	5.66	130				H
Aliphatic Hydrocarbon (C10-C12)	764	11.8	148.1	659.3	70.6	9.14	134				H
Aliphatic Hydrocarbon (C12-C16)	1,710	11.8	148.1	1,546	113	23.1	139				H
Aliphatic Hydrocarbon (C16-C21)	582	11.8	148.1	409.9	116	24.4	134				H
Aliphatic Hydrocarbon (C21-C34)	119	11.8	148.1	40.44	52.9	21.4	152				H
Surr: 1-Chlorooctadecane	95.1		118.5		80.2	50	150				H

Sample ID: **2211394-001AMSD** SampType: **MSD** Units: **mg/Kg-dry** Prep Date: **12/19/2022** RunNo: **80790**
Client ID: **BATCH** Batch ID: **38881** Analysis Date: **12/28/2022** SeqNo: **1671193**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C8-C10)	294	22.4	280.4	131.1	58.0	5.66	130	259.8	12.3	30	H
Aliphatic Hydrocarbon (C10-C12)	699	11.2	140.2	659.3	28.0	9.14	134	763.8	8.92	30	H
Aliphatic Hydrocarbon (C12-C16)	1,440	11.2	140.2	1,546	-78.1	23.1	139	1,714	17.6	30	SH
Aliphatic Hydrocarbon (C16-C21)	467	11.2	140.2	409.9	40.8	24.4	134	581.9	21.9	30	H
Aliphatic Hydrocarbon (C21-C34)	99.1	11.2	140.2	40.44	41.8	21.4	152	118.8	18.1	30	H
Surr: 1-Chlorooctadecane	85.7		112.2		76.4	50	150		0		H

NOTES:
S - Outlying spike recovery(ies) observed. A duplicate analysis was performed and recovered within range.

Work Order: 2211393
CLIENT: Libby Environmental
Project: 661 E Pine St

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: **MB-38582** SampType: **MBLK** Units: **µg/Kg** Prep Date: **11/21/2022** RunNo: **80061**
Client ID: **MBLKS** Batch ID: **38582** Analysis Date: **11/22/2022** SeqNo: **1652940**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	ND	20.0									
2-Methylnaphthalene	ND	20.0									
1-Methylnaphthalene	ND	20.0									
Benz(a)anthracene	ND	20.0									
Chrysene	ND	20.0									
Benzo(b)fluoranthene	ND	25.0									
Benzo(k)fluoranthene	ND	25.0									
Benzo(a)pyrene	ND	30.0									
Indeno(1,2,3-cd)pyrene	ND	40.0									
Dibenz(a,h)anthracene	ND	50.0									
Surr: 2-Fluorobiphenyl	822		1,000		82.2	34.4	132				
Surr: Terphenyl-d14 (surr)	782		1,000		78.2	32.8	147				

Sample ID: **LCS-38582** SampType: **LCS** Units: **µg/Kg** Prep Date: **11/21/2022** RunNo: **80061**
Client ID: **LCSS** Batch ID: **38582** Analysis Date: **11/22/2022** SeqNo: **1652941**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	1,610	20.0	2,000	0	80.4	64.3	115				
2-Methylnaphthalene	1,500	20.0	2,000	0	75.1	58.9	122				
1-Methylnaphthalene	1,500	20.0	2,000	0	75.2	57.4	122				
Benz(a)anthracene	1,660	20.0	2,000	0	83.1	61.5	123				
Chrysene	1,540	20.0	2,000	0	76.9	58.6	120				
Benzo(b)fluoranthene	1,630	25.0	2,000	0	81.6	62.1	124				
Benzo(k)fluoranthene	1,530	25.0	2,000	0	76.3	60.3	116				
Benzo(a)pyrene	1,650	30.0	2,000	0	82.5	51.6	115				
Indeno(1,2,3-cd)pyrene	1,580	40.0	2,000	0	79.1	53.8	127				
Dibenz(a,h)anthracene	1,550	50.0	2,000	0	77.4	53.3	127				
Surr: 2-Fluorobiphenyl	827		1,000		82.7	34.4	132				
Surr: Terphenyl-d14 (surr)	794		1,000		79.4	32.8	147				

Work Order: 2211393
CLIENT: Libby Environmental
Project: 661 E Pine St

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: **2211329-019AMS** SampType: **MS** Units: **µg/Kg-dry** Prep Date: **11/21/2022** RunNo: **80061**
Client ID: **BATCH** Batch ID: **38582** Analysis Date: **11/22/2022** SeqNo: **1652943**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	1,390	208	2,076	0	66.9	55.7	105				D
2-Methylnaphthalene	1,290	208	2,076	0	62.0	56.6	103				D
1-Methylnaphthalene	1,330	208	2,076	0	64.0	56.1	101				D
Benz(a)anthracene	1,460	208	2,076	0	70.4	53.4	112				D
Chrysene	1,300	208	2,076	0	62.7	52	105				D
Benzo(b)fluoranthene	1,450	260	2,076	0	69.6	51.3	119				D
Benzo(k)fluoranthene	1,410	260	2,076	0	67.7	50.3	108				D
Benzo(a)pyrene	1,570	311	2,076	0	75.5	48.5	106				D
Indeno(1,2,3-cd)pyrene	1,280	415	2,076	0	61.7	42.1	113				D
Dibenz(a,h)anthracene	1,240	519	2,076	0	59.8	40.4	114				D
Surr: 2-Fluorobiphenyl	694		1,038		66.9	34.4	132				D
Surr: Terphenyl-d14 (surr)	635		1,038		61.2	32.8	147				D

Sample ID: **2211329-019AMSD** SampType: **MSD** Units: **µg/Kg-dry** Prep Date: **11/21/2022** RunNo: **80061**
Client ID: **BATCH** Batch ID: **38582** Analysis Date: **11/22/2022** SeqNo: **1652944**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	1,350	208	2,080	0	64.8	55.7	105	1,388	2.95	30	D
2-Methylnaphthalene	1,260	208	2,080	0	60.4	56.6	103	1,288	2.56	30	D
1-Methylnaphthalene	1,290	208	2,080	0	61.9	56.1	101	1,330	3.20	30	D
Benz(a)anthracene	1,540	208	2,080	0	74.1	53.4	112	1,462	5.32	30	D
Chrysene	1,350	208	2,080	0	64.7	52	105	1,302	3.31	30	D
Benzo(b)fluoranthene	1,510	260	2,080	0	72.5	51.3	119	1,445	4.31	30	D
Benzo(k)fluoranthene	1,320	260	2,080	0	63.2	50.3	108	1,405	6.59	30	D
Benzo(a)pyrene	1,560	312	2,080	0	75.1	48.5	106	1,567	0.360	30	D
Indeno(1,2,3-cd)pyrene	1,220	416	2,080	0	58.7	42.1	113	1,282	4.85	30	D
Dibenz(a,h)anthracene	1,190	520	2,080	0	57.4	40.4	114	1,241	3.86	30	D
Surr: 2-Fluorobiphenyl	674		1,040		64.8	34.4	132		0		D
Surr: Terphenyl-d14 (surr)	646		1,040		62.1	32.8	147		0		D

Fremont Analytical
An Alliance Technical Group Company

Sample Log-In Check List

Client Name:	LIBBY	Work Order Number:	2211393
Logged by:	Elisabeth Samoray	Date Received:	11/18/2022 9:55:00 AM

Chain of Custody

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

Log In

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

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified:		Date:	
By Whom:		Via:	☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:			
Client Instructions:			

17. Additional remarks:

Item Information

Item #	Temp °C
Sample 1	5.6

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

Libby Environmental, Inc.

3322 South Bay Road NE • Olympia, WA 98506-2957

SUBCONTRACT ORDER L22K084

Sending Laboratory:

Libby Environmental, Inc.
3322 South Bay Road NE
Olympia, WA 98506
Phone: 360-352-2110
Fax: 360-352-4154

Project Manager: Sherry Chilcutt
LibbyEnv@gmail.com

Subcontracted Laboratory: 2211393

Fremont Analytical, Inc.
3600 Fremont Ave N
Seattle, WA 98103
Phone: (206) 352-3790
Fax:

Requested Turnaround (TAT) STANDARD

Project: 661 E Pine St

Analysis	Comments
Client Sample ID: B-17-16.0 ***Soil*** ***Sampled: 10/26/2022 14:40***	Lab ID: L22K084-01
EPH	Please analyze out of hold
cPAH by 8270	Please analyze out of hold
Containers Supplied: Jar 4 oz (A)	

Released By — Date 11/17/22 — Received By Katherine Porter — Date 11/18

10.17.22 — 9:55

Libby Environmental, Inc.

3322 South Bay Road NE • Olympia, WA 98506-2957

SUBCONTRACT ORDER L22K084

Sending Laboratory:

Libby Environmental, Inc.
3322 South Bay Road NE
Olympia, WA 98506
Phone: 360-352-2110
Fax: 360-352-4154

Project Manager: Sherry Chilcutt
LibbyEnv@gmail.com

Subcontracted Laboratory: 2211393

Fremont Analytical, Inc.
3600 Fremont Ave N
Seattle, WA 98103
Phone: (206) 352-3790
Fax:

Requested Turnaround (TAT) STANDARD

Project: 661 E Pine St

Analysis	Comments
Client Sample ID: B-17-16.0 ***Soil Sampled: 10/26/2022 14:40***	Lab ID: L22K084-01
EPH	Please analyze out of hold
cPAH by 8270 +Naphthalenes per EB 7/25/2023 -BB	Please analyze out of hold
Containers Supplied: Jar 4 oz (A)	

Released By — Date 11/17/22 — Received By Katherine Porter — Date 11/18

10.17.22 — 9:55

Libby Environmental, Inc.
3322 South Bay Road NE • Olympia, WA 98506-2957

July 19, 2023

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

Dear Javan Ruark:

Please find enclosed the analytical data report for the 661 E Pine St. project located in Shelton, Washington.

The results of the analyses are summarized in the attached tables. Applicable detection limits and QA/QC data are included. The sample(s) will be disposed of within 30 days unless we are contacted to arrange long term storage.

Libby Environmental, Inc. appreciates the opportunity to have provided analytical services for this project. If you have any further questions about the data report, please give me a call. It was a pleasure working with you on this project, and we are looking forward to the next opportunity to work together.

Sincerely,

Sherry L. Chilcutt
Senior Chemist
Libby Environmental, Inc.

Phone (360) 352-2110 • Fax (360) 352-4154 • libbyenv@gmail.com

Libby Environmental, Inc.

Chain of Custody Record

www.LibbyEnvironmental.com

3322 South Bay Road NE
Olympia, WA 98506
Ph: 360-352-2110
Fax: 360-352-4154

Date: 10/27/22 Page: 1 of 2

Client: Farallon Consulting
Project Manager: Javan Ruark
Address: 975 5th Ave NW
Project Name: 661 E Pine St.
City: Issaquah State: WA Zip: 98027
Location: 661 E Pine St City, State: Shelton, WA
Phone: Fax:
Collector: Michael Ysaguirre Date of Collection: 10/27/22
Client Project # 863-001
Email: Jruark@farallonconsulting.com

	Sample Number	Depth	Time	Sample Type	Container Type	VOC 8260	PCE & Daughter Prod.	NWTPH-Gx	BTEX (8260) / (8021)	NWTPH-HCID	NWTPH-Dx / Dx w/ SG	PCB 8082	MTCA 5 Metals	RCRA 8 Metals	cPAH 8270	PAH 8270	Semivol 8270	EPH		Field Notes
																				10-31-22 Selected Analysis per Javan via email.
1	B-14-10.0	10.0	1625	SOIL				X	X		X									48 hr TAT
2	B-14-15.0	15.0	1630					X	X		X									
3	B-140-15.0	15.0	1635					X	X		X									
4	B-14-20.0	20.0	1640					X	X		X									48 hr TAT
5	B-140-20.0	20.0	1645					X	X		X									
6	B-15-10.0	10.0	1536					X	X		X									
7	B-150-10.0	10.0	1540					X	X		X									
8	B-15-15.0	15.0	1545					X	X		X									
9	B-15-16.0	16.0	1605																	HOLD
10	B-23-10.0	10.0	1437					X	X		X									
11	B-23-11.5	11.5	1442					X	X		X									
12	B-230-11.5	11.5	1450					X	X		X									
13	B-24-6.0	6.0	1506						X		X			⊗				⊗		11-17-22 Analyses added per Javan via email. STD TAT
14	B-24-7.0	7.0	1520						X		X									
15	B-24-10.0	10.0	1524						X		X									
16	B-22-7.0	7.0	1332						X		X									
17	B-22-11.0	11.0	1341						X		X									

Relinquished by:	Date / Time	Received by:	Date / Time
[signature]	10/27/22 1823	[signature]	10/28/22 0910
Relinquished by:	Date / Time	Received by:	Date / Time
Relinquished by:	Date / Time	Received by:	Date / Time

Sample Receipt

	Y	N	
Good Condition?			
Cooler Temp.			°C
Sample Temp.			°C
Total Number of Containers			

Remarks: Hold for PM analysis

TAT: 24HR 48HR 5-DAY

Distribution: White - Lab, Yellow - Originator

Libby Environmental, Inc.

Chain of Custody Record

www.LibbyEnvironmental.com

3322 South Bay Road NE
Olympia, WA 98506
Ph: 360-352-2110
Fax: 360-352-4154

Date: 10/27/22 Page: 2 of 2

Client: Farallon Consulting
Project Manager: Javan Ruark
Address: 975 5th Ave NW
Project Name: 661 E Pine St
City: Issaquah State: WA Zip: 98027
Location: 661 E Pine St City, State: Shelton, WA
Phone: Fax:
Collector: Michael Ysaguirre Date of Collection: 10/27/22
Client Project # 863-001
Email: Jruark@farallonconsulting.com

	Sample Number	Depth	Time	Sample Type	Container Type	VOC 8260	PCE & Daughter Prod.	NWTPH-Gx	BTEX (8260) / (8021)	NWTPH-HCID	NWTPH-Dx / Dx w/ Si Gel	PCB 8082	MTCA 5 Metals	RCRA 8 Metals	cPAH 8270	PAH 8270	Semi Vol 8270	TOC		Field Notes
																				10-31-22 Selected Analysis per Jwan via email
1	B-22-15.0	15.0	1348	SOIL					X		X									
2	B-21-3.0	3.0	1232					X												
3	B-21-7.0	7.0	1245																	HOLD
4	B-21-11.0	11.0	1309					X												
5	B-21-13.0	13.0	1312					X												
6	B-19-5.0	5.0	1105					X	X		X						(X)			48hr TAT
7	B-19-10.0	10.0	1115					X	X		X									Added 11-2-22 JR STD
8	B-19-15.0	15.0	1130					X	X		X									
9	B-19-20.0	20.0	1140					X	X		X						(X)			48hr TAT
10	B-190-20.0	20.0	1142					X	X		X									Added 11-2-22 JR STD
11	B-18-16.0	16.0	1005								X									
12	B-18-20.0	20.0	1007								X									
13	B-20-10.0	10.0	0925					X	X		X									
14	B-20-15.0	15.0	0930					X	X		X									
15																				
16																				
17																				

Relinquished by:	Date / Time	Received by:	Date / Time
	10/27/22 1823		10/28/22 0910
Relinquished by:	Date / Time	Received by:	Date / Time
Relinquished by:	Date / Time	Received by:	Date / Time

Sample Receipt

Good Condition?	Y	N
Cooler Temp.		°C
Sample Temp.		°C
Total Number of Containers		

Remarks: See page 1

TAT: 24HR 48HR 5-DAY

Distribution: White - Lab, Yellow - Originator

Libby Environmental, Inc.

3322 South Bay Road NE
Olympia, WA 98506
Phone: (360) 352-2110
FAX: (360) 352-4154
Email: libbyenv@gmail.com

661 E PINE ST PROJECT
Farallon Consulting
Libby Project # L22K085
Date Received 10/28/22 9:10

Received By KD

Sample Receipt Checklist

Chain of Custody

1. Is the Chain of Custody complete?	☐ Yes	☑ No	
2. How was the sample delivered?	☑ Hand Delivered	☐ Picked Up	☐ Shipped

Log In

3. Cooler or Shipping Container is present.	☑ Yes	☐ No	☐ N/A
4. Cooler or Shipping Container is in good condition.	☑ Yes	☐ No	☐ N/A
5. Cooler or Shipping Container has Custody Seals present.	☐ Yes	☑ No	☐ N/A
6. Was an attempt made to cool the samples?	☑ Yes	☐ No	☐ N/A
7. Temperature of cooler (0°C to 8°C recommended)	4.9 °C		
8. Temperature of sample(s) (0°C to 8°C recommended)	5.2 °C		
9. Did all containers arrive in good condition (unbroken)?	☑ Yes	☐ No	
10. Is it clear what analyses were requested?	☑ Yes	☐ No	
11. Did container labels match Chain of Custody?	☑ Yes	☐ No	
12. Are matrices correctly identified on Chain of Custody?	☑ Yes	☐ No	
13. Are correct containers used for the analysis indicated?	☑ Yes	☐ No	
14. Is there sufficient sample volume for indicated analysis?	☑ Yes	☐ No	
15. Were all containers properly preserved per each analysis?	☑ Yes	☐ No	
16. Were VOA vials collected correctly (no headspace)?	☑ Yes	☐ No	☐ N/A
17. Were all holding times able to be met?	☑ Yes	☐ No	

Discrepancies/ Notes

18. Was client notified of all discrepancies? ☑ Yes ☐ No ☐ N/A

Person Notified: Javan Date: 10/28/2022

By Whom: KD Via: Email

Regarding: Analyses

19. Comments. COC had no analyses marked, but had a note to hold for PM on analyses

10-31-2022, Client selected analyses.

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

Libby Environmental
Sherry Chilcutt
3322 South Bay Road NE
Olympia, WA 98506

RE: 661 E Pine St
Work Order Number: 2211394

July 19, 2023

Attention Sherry Chilcutt:

Fremont Analytical, Inc. received 1 sample(s) on 11/18/2022 for the analyses presented in the following report.

Extractable Petroleum Hydrocarbons by NWEPH
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)
Sample Moisture (Percent Moisture)

This report consists of the following:

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

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

Thank you for using Fremont Analytical.

Sincerely,

Brianna Barnes
Project Manager

Date: *07/19/2023*

CLIENT: Libby Environmental
Project: 661 E Pine St
Work Order: 2211394

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
2211394-001	B-24-6.0	10/27/2022 3:06 PM	11/18/2022 9:55 AM

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

Case Narrative

WO#: **2211394**
Date: **7/19/2023**

CLIENT: Libby Environmental
Project: 661 E Pine St

I. SAMPLE RECEIPT:
Samples receipt information is recorded on the attached Sample Receipt Checklist.

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

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

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

7/19/2023: Revision 1 includes addiitonal analaysis per client request.

Qualifiers:

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

Acronyms:

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

Analytical Report

Work Order: **2211394**
Date Reported: **7/19/2023**

Client: Libby Environmental
Collection Date: 10/27/2022 3:06:00 PM
Project: 661 E Pine St
Lab ID: 2211394-001
Matrix: Soil
Client Sample ID: **B-24-6.0**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Extractable Petroleum Hydrocarbons by NWEPH				Batch ID: 38881		Analyst: KJ
Aliphatic Hydrocarbon (C8-C10)	131	23.2	H	mg/Kg-dry	1	12/28/2022 4:34:46 PM
Aliphatic Hydrocarbon (C10-C12)	659	11.6	H	mg/Kg-dry	1	12/28/2022 4:34:46 PM
Aliphatic Hydrocarbon (C12-C16)	1,550	11.6	H	mg/Kg-dry	1	12/28/2022 4:34:46 PM
Aliphatic Hydrocarbon (C16-C21)	410	11.6	H	mg/Kg-dry	1	12/28/2022 4:34:46 PM
Aliphatic Hydrocarbon (C21-C34)	40.4	11.6	H	mg/Kg-dry	1	12/28/2022 4:34:46 PM
Aromatic Hydrocarbon (C8-C10)	ND	23.2	H	mg/Kg-dry	1	12/28/2022 11:46:00 AM
Aromatic Hydrocarbon (C10-C12)	14.5	11.6	H	mg/Kg-dry	1	12/28/2022 11:46:00 AM
Aromatic Hydrocarbon (C12-C16)	229	11.6	H	mg/Kg-dry	1	12/28/2022 11:46:00 AM
Aromatic Hydrocarbon (C16-C21)	136	10.2	H	mg/Kg-dry	1	12/15/2022 11:18:10 AM
Aromatic Hydrocarbon (C21-C34)	73.0	11.6	H	mg/Kg-dry	1	12/28/2022 11:46:00 AM
Surr: 1-Chlorooctadecane	83.3	50 - 150	H	%Rec	1	12/28/2022 4:34:46 PM
Surr: o-Terphenyl	66.8	50 - 150	H	%Rec	1	12/28/2022 11:46:00 AM
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)				Batch ID: 38582		Analyst: SK
Naphthalene	ND	21.9	H	µg/Kg-dry	1	11/23/2022 3:19:48 AM
2-Methylnaphthalene	ND	21.9	H	µg/Kg-dry	1	11/23/2022 3:19:48 AM
1-Methylnaphthalene	ND	21.9	H	µg/Kg-dry	1	11/23/2022 3:19:48 AM
Benz(a)anthracene	ND	21.9	H	µg/Kg-dry	1	11/23/2022 3:19:48 AM
Chrysene	ND	21.9	H	µg/Kg-dry	1	11/23/2022 3:19:48 AM
Benzo(b)fluoranthene	ND	27.4	H	µg/Kg-dry	1	11/23/2022 3:19:48 AM
Benzo(k)fluoranthene	ND	27.4	H	µg/Kg-dry	1	11/23/2022 3:19:48 AM
Benzo(a)pyrene	ND	32.8	H	µg/Kg-dry	1	11/23/2022 3:19:48 AM
Indeno(1,2,3-cd)pyrene	ND	43.8	H	µg/Kg-dry	1	11/23/2022 3:19:48 AM
Dibenz(a,h)anthracene	ND	54.7	H	µg/Kg-dry	1	11/23/2022 3:19:48 AM
Surr: 2-Fluorobiphenyl	56.7	22.2 - 146	H	%Rec	1	11/23/2022 3:19:48 AM
Surr: Terphenyl-d14 (surr)	70.9	20.2 - 159	H	%Rec	1	11/23/2022 3:19:48 AM
Sample Moisture (Percent Moisture)				Batch ID: R80033		Analyst: AP
Percent Moisture	18.4	0.500		wt%	1	11/23/2022 8:37:22 AM

Work Order: 2211394
CLIENT: Libby Environmental
Project: 661 E Pine St

QC SUMMARY REPORT

Extractable Petroleum Hydrocarbons by NWEPH

Sample ID: **MB-38628**	SampType: **MBLK**			Units: **mg/Kg**		Prep Date: **11/28/2022**		RunNo: **80515**		
Client ID: **MBLKS**	Batch ID: **38628**					Analysis Date: **12/15/2022**		SeqNo: **1664704**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aromatic Hydrocarbon (C16-C21)	ND	10.0									
Surr: o-Terphenyl	60.5		100.0		60.5	50	150				

Sample ID: **LCS-38628**	SampType: **LCS**			Units: **mg/Kg**		Prep Date: **11/28/2022**		RunNo: **80515**		
Client ID: **LCSS**	Batch ID: **38628**					Analysis Date: **12/15/2022**		SeqNo: **1664705**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aromatic Hydrocarbon (C16-C21)	110	10.0	125.0	0	88.3	55.4	124				
Surr: o-Terphenyl	98.5		100.0		98.5	50	150				

Sample ID: **2211393-001AMS**	SampType: **MS**			Units: **mg/Kg-dry**		Prep Date: **11/28/2022**		RunNo: **80515**		
Client ID: **BATCH**	Batch ID: **38628**					Analysis Date: **12/15/2022**		SeqNo: **1664707**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aromatic Hydrocarbon (C16-C21)	84.5	9.89	123.6	33.73	41.1	23.7	139				H
Surr: o-Terphenyl	59.8		98.91		60.4	50	150				H

Sample ID: **2211393-001AMSD**	SampType: **MSD**			Units: **mg/Kg-dry**		Prep Date: **11/28/2022**		RunNo: **80515**		
Client ID: **BATCH**	Batch ID: **38628**					Analysis Date: **12/15/2022**		SeqNo: **1664708**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aromatic Hydrocarbon (C16-C21)	116	9.90	123.8	33.73	66.7	23.7	139	84.48	31.7	30	RH
Surr: o-Terphenyl	88.0		99.01		88.9	50	150		0		H

NOTES:
R - High RPD observed, spike recovery is within range.

Sample ID: **LCS-38628**	SampType: **LCS**			Units: **mg/Kg**		Prep Date: **11/28/2022**		RunNo: **80515**		
Client ID: **LCSS**	Batch ID: **38628**					Analysis Date: **12/15/2022**		SeqNo: **1664710**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aromatic Hydrocarbon (C16-C21)	119	10.0	125.0	0	95.3	55.4	124				

Work Order: 2211394
CLIENT: Libby Environmental
Project: 661 E Pine St

QC SUMMARY REPORT

Extractable Petroleum Hydrocarbons by NWEPH

Sample ID: **LCS-38628**	SampType: **LCS**			Units: **mg/Kg**		Prep Date: **11/28/2022**		RunNo: **80515**		
Client ID: **LCSS**	Batch ID: **38628**					Analysis Date: **12/15/2022**		SeqNo: **1664710**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: o-Terphenyl	120		100.0		120	50	150				

Sample ID: **MB-38881**	SampType: **MBLK**			Units: **mg/Kg**		Prep Date: **12/19/2022**		RunNo: **80790**		
Client ID: **MBLKS**	Batch ID: **38881**					Analysis Date: **12/28/2022**		SeqNo: **1671179**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aromatic Hydrocarbon (C8-C10)	ND	20.0									
Aromatic Hydrocarbon (C10-C12)	ND	10.0									
Aromatic Hydrocarbon (C12-C16)	ND	10.0									
Aromatic Hydrocarbon (C21-C34)	ND	10.0									
Surr: o-Terphenyl	66.9		100.0		66.9	50	150				

Sample ID: **LCS-38881**	SampType: **LCS**			Units: **mg/Kg**		Prep Date: **12/19/2022**		RunNo: **80790**		
Client ID: **LCSS**	Batch ID: **38881**					Analysis Date: **12/28/2022**		SeqNo: **1671180**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aromatic Hydrocarbon (C8-C10)	108	20.0	250.0	0	43.3	23.1	130				
Aromatic Hydrocarbon (C10-C12)	63.7	10.0	125.0	0	50.9	46.8	104				
Aromatic Hydrocarbon (C12-C16)	77.0	10.0	125.0	0	61.6	54.1	111				
Aromatic Hydrocarbon (C21-C34)	90.0	10.0	125.0	0	72.0	48.5	134				
Surr: o-Terphenyl	63.4		100.0		63.4	50	150				

Sample ID: **2211394-001AMS**	SampType: **MS**			Units: **mg/Kg-dry**		Prep Date: **12/19/2022**		RunNo: **80790**		
Client ID: **B-24-6.0**	Batch ID: **38881**					Analysis Date: **12/28/2022**		SeqNo: **1671183**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aromatic Hydrocarbon (C8-C10)	140	23.7	296.2	0	47.1	11.3	130				H
Aromatic Hydrocarbon (C10-C12)	93.9	11.8	148.1	14.53	53.6	19.3	130				H
Aromatic Hydrocarbon (C12-C16)	338	11.8	148.1	229.4	73.0	30.3	131				H
Aromatic Hydrocarbon (C21-C34)	178	11.8	148.1	73.05	70.6	38.8	143				H

Work Order: 2211394
CLIENT: Libby Environmental
Project: 661 E Pine St

QC SUMMARY REPORT

Extractable Petroleum Hydrocarbons by NWEPH

Sample ID: 2211394-001AMS	SampType: MS			Units: mg/Kg-dry		Prep Date: 12/19/2022		RunNo: 80790		
Client ID: B-24-6.0	Batch ID: 38881					Analysis Date: 12/28/2022		SeqNo: 1671183		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: o-Terphenyl	87.3		118.5		73.7	50	150				H

Sample ID: 2211394-001AMSD	SampType: MSD			Units: mg/Kg-dry		Prep Date: 12/19/2022		RunNo: 80790		
Client ID: B-24-6.0	Batch ID: 38881					Analysis Date: 12/28/2022		SeqNo: 1671184		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aromatic Hydrocarbon (C8-C10)	150	22.4	280.4	0	53.6	11.3	130	139.6	7.48	30	H
Aromatic Hydrocarbon (C10-C12)	92.3	11.2	140.2	14.53	55.4	19.3	130	93.92	1.78	30	H
Aromatic Hydrocarbon (C12-C16)	297	11.2	140.2	229.4	47.9	30.3	131	337.5	12.9	30	H
Aromatic Hydrocarbon (C21-C34)	189	11.2	140.2	73.05	82.4	38.8	143	177.5	6.00	30	H
Surr: o-Terphenyl	76.8		112.2		68.5	50	150		0		H

Sample ID: MB-38881	SampType: MBLK			Units: mg/Kg		Prep Date: 12/19/2022		RunNo: 80790		
Client ID: MBLKS	Batch ID: 38881					Analysis Date: 12/28/2022		SeqNo: 1671188		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C8-C10)	ND	20.0									
Aliphatic Hydrocarbon (C10-C12)	ND	10.0									
Aliphatic Hydrocarbon (C12-C16)	ND	10.0									
Aliphatic Hydrocarbon (C16-C21)	ND	10.0									
Aliphatic Hydrocarbon (C21-C34)	ND	10.0									
Surr: 1-Chlorooctadecane	75.9		100.0		75.9	50	150				

Sample ID: LCS-38881	SampType: LCS			Units: mg/Kg		Prep Date: 12/19/2022		RunNo: 80790		
Client ID: LCSS	Batch ID: 38881					Analysis Date: 12/28/2022		SeqNo: 1671189		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C8-C10)	93.4	20.0	250.0	0	37.3	16.3	130				
Aliphatic Hydrocarbon (C10-C12)	70.1	10.0	125.0	0	56.1	36.7	107				
Aliphatic Hydrocarbon (C12-C16)	78.3	10.0	125.0	0	62.7	45.3	127				

Work Order: 2211394
CLIENT: Libby Environmental
Project: 661 E Pine St

QC SUMMARY REPORT

Extractable Petroleum Hydrocarbons by NWEPH

Sample ID: **LCS-38881** SampType: **LCS** Units: **mg/Kg** Prep Date: **12/19/2022** RunNo: **80790**
Client ID: **LCSS** Batch ID: **38881** Analysis Date: **12/28/2022** SeqNo: **1671189**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C16-C21)	70.4	10.0	125.0	0	56.3	47.3	129				
Aliphatic Hydrocarbon (C21-C34)	67.2	10.0	125.0	0	53.7	35.2	139				
Surr: 1-Chlorooctadecane	93.1		100.0		93.1	50	150				

Sample ID: **2211394-001AMS** SampType: **MS** Units: **mg/Kg-dry** Prep Date: **12/19/2022** RunNo: **80790**
Client ID: **B-24-6.0** Batch ID: **38881** Analysis Date: **12/28/2022** SeqNo: **1671192**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C8-C10)	260	23.7	296.2	131.1	43.5	5.66	130				H
Aliphatic Hydrocarbon (C10-C12)	764	11.8	148.1	659.3	70.6	9.14	134				H
Aliphatic Hydrocarbon (C12-C16)	1,710	11.8	148.1	1,546	113	23.1	139				H
Aliphatic Hydrocarbon (C16-C21)	582	11.8	148.1	409.9	116	24.4	134				H
Aliphatic Hydrocarbon (C21-C34)	119	11.8	148.1	40.44	52.9	21.4	152				H
Surr: 1-Chlorooctadecane	95.1		118.5		80.2	50	150				H

Sample ID: **2211394-001AMSD** SampType: **MSD** Units: **mg/Kg-dry** Prep Date: **12/19/2022** RunNo: **80790**
Client ID: **B-24-6.0** Batch ID: **38881** Analysis Date: **12/28/2022** SeqNo: **1671193**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C8-C10)	294	22.4	280.4	131.1	58.0	5.66	130	259.8	12.3	30	H
Aliphatic Hydrocarbon (C10-C12)	699	11.2	140.2	659.3	28.0	9.14	134	763.8	8.92	30	H
Aliphatic Hydrocarbon (C12-C16)	1,440	11.2	140.2	1,546	-78.1	23.1	139	1,714	17.6	30	SH
Aliphatic Hydrocarbon (C16-C21)	467	11.2	140.2	409.9	40.8	24.4	134	581.9	21.9	30	H
Aliphatic Hydrocarbon (C21-C34)	99.1	11.2	140.2	40.44	41.8	21.4	152	118.8	18.1	30	H
Surr: 1-Chlorooctadecane	85.7		112.2		76.4	50	150		0		H

NOTES:
S - Spiked amount was low relative to sample concentration. Outlying spike recoveries may be expected.

Work Order: 2211394
CLIENT: Libby Environmental
Project: 661 E Pine St

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: **MB-38582** SampType: **MBLK** Units: **µg/Kg** Prep Date: **11/21/2022** RunNo: **80061**
Client ID: **MBLKS** Batch ID: **38582** Analysis Date: **11/22/2022** SeqNo: **1652940**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	ND	20.0									
2-Methylnaphthalene	ND	20.0									
1-Methylnaphthalene	ND	20.0									
Benz(a)anthracene	ND	20.0									
Chrysene	ND	20.0									
Benzo(b)fluoranthene	ND	25.0									
Benzo(k)fluoranthene	ND	25.0									
Benzo(a)pyrene	ND	30.0									
Indeno(1,2,3-cd)pyrene	ND	40.0									
Dibenz(a,h)anthracene	ND	50.0									
Surr: 2-Fluorobiphenyl	822		1,000		82.2	34.4	132				
Surr: Terphenyl-d14 (surr)	782		1,000		78.2	32.8	147				

Sample ID: **LCS-38582** SampType: **LCS** Units: **µg/Kg** Prep Date: **11/21/2022** RunNo: **80061**
Client ID: **LCSS** Batch ID: **38582** Analysis Date: **11/22/2022** SeqNo: **1652941**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	1,610	20.0	2,000	0	80.4	64.3	115				
2-Methylnaphthalene	1,500	20.0	2,000	0	75.1	58.9	122				
1-Methylnaphthalene	1,500	20.0	2,000	0	75.2	57.4	122				
Benz(a)anthracene	1,660	20.0	2,000	0	83.1	61.5	123				
Chrysene	1,540	20.0	2,000	0	76.9	58.6	120				
Benzo(b)fluoranthene	1,630	25.0	2,000	0	81.6	62.1	124				
Benzo(k)fluoranthene	1,530	25.0	2,000	0	76.3	60.3	116				
Benzo(a)pyrene	1,650	30.0	2,000	0	82.5	51.6	115				
Indeno(1,2,3-cd)pyrene	1,580	40.0	2,000	0	79.1	53.8	127				
Dibenz(a,h)anthracene	1,550	50.0	2,000	0	77.4	53.3	127				
Surr: 2-Fluorobiphenyl	827		1,000		82.7	34.4	132				
Surr: Terphenyl-d14 (surr)	794		1,000		79.4	32.8	147				

Work Order: 2211394
CLIENT: Libby Environmental
Project: 661 E Pine St

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: **2211329-019AMS** SampType: **MS** Units: **µg/Kg-dry** Prep Date: **11/21/2022** RunNo: **80061**
Client ID: **BATCH** Batch ID: **38582** Analysis Date: **11/22/2022** SeqNo: **1652943**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	1,390	208	2,076	0	66.9	55.7	105				D
2-Methylnaphthalene	1,290	208	2,076	0	62.0	56.6	103				D
1-Methylnaphthalene	1,330	208	2,076	0	64.0	56.1	101				D
Benz(a)anthracene	1,460	208	2,076	0	70.4	53.4	112				D
Chrysene	1,300	208	2,076	0	62.7	52	105				D
Benzo(b)fluoranthene	1,450	260	2,076	0	69.6	51.3	119				D
Benzo(k)fluoranthene	1,410	260	2,076	0	67.7	50.3	108				D
Benzo(a)pyrene	1,570	311	2,076	0	75.5	48.5	106				D
Indeno(1,2,3-cd)pyrene	1,280	415	2,076	0	61.7	42.1	113				D
Dibenz(a,h)anthracene	1,240	519	2,076	0	59.8	40.4	114				D
Surr: 2-Fluorobiphenyl	694		1,038		66.9	34.4	132				D
Surr: Terphenyl-d14 (surr)	635		1,038		61.2	32.8	147				D

NOTES:
Diluted due to matrix.

Sample ID: **2211329-019AMSD** SampType: **MSD** Units: **µg/Kg-dry** Prep Date: **11/21/2022** RunNo: **80061**
Client ID: **BATCH** Batch ID: **38582** Analysis Date: **11/22/2022** SeqNo: **1652944**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	1,350	208	2,080	0	64.8	55.7	105	1,388	2.95	30	D
2-Methylnaphthalene	1,260	208	2,080	0	60.4	56.6	103	1,288	2.56	30	D
1-Methylnaphthalene	1,290	208	2,080	0	61.9	56.1	101	1,330	3.20	30	D
Benz(a)anthracene	1,540	208	2,080	0	74.1	53.4	112	1,462	5.32	30	D
Chrysene	1,350	208	2,080	0	64.7	52	105	1,302	3.31	30	D
Benzo(b)fluoranthene	1,510	260	2,080	0	72.5	51.3	119	1,445	4.31	30	D
Benzo(k)fluoranthene	1,320	260	2,080	0	63.2	50.3	108	1,405	6.59	30	D
Benzo(a)pyrene	1,560	312	2,080	0	75.1	48.5	106	1,567	0.360	30	D
Indeno(1,2,3-cd)pyrene	1,220	416	2,080	0	58.7	42.1	113	1,282	4.85	30	D
Dibenz(a,h)anthracene	1,190	520	2,080	0	57.4	40.4	114	1,241	3.86	30	D
Surr: 2-Fluorobiphenyl	674		1,040		64.8	34.4	132		0		D
Surr: Terphenyl-d14 (surr)	646		1,040		62.1	32.8	147		0		D

Work Order: 2211394
CLIENT: Libby Environmental
Project: 661 E Pine St

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: **2211329-019AMSD**	SampType: **MSD**			Units: **µg/Kg-dry**		Prep Date: **11/21/2022**			RunNo: **80061**		
Client ID: **BATCH**	Batch ID: **38582**					Analysis Date: **11/22/2022**			SeqNo: **1652944**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

NOTES:
Diluted due to matrix.

Fremont Analytical
An Alliance Technical Group Company

Sample Log-In Check List

Client Name:	LIBBY	Work Order Number:	2211394
Logged by:	Elisabeth Samoray	Date Received:	11/18/2022 9:55:00 AM

Chain of Custody

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

Log In

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

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified:		Date:	
By Whom:		Via:	☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:			
Client Instructions:			

17. Additional remarks:

Item Information

Item #	Temp °C
Sample 1	5.6

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

Libby Environmental, Inc.

3322 South Bay Road NE • Olympia, WA 98506-2957

SUBCONTRACT ORDER L22K085

2211394

Sending Laboratory:

Libby Environmental, Inc.
3322 South Bay Road NE
Olympia, WA 98506
Phone: 360-352-2110
Fax: 360-352-4154

Project Manager: Sherry Chilcutt
LibbyEnv@gmail.com

Subcontracted Laboratory:

Fremont Analytical, Inc.
3600 Fremont Ave N
Seattle, WA 98103
Phone: (206) 352-3790
Fax:

Requested Turnaround (TAT) STANDARD

Project: 661 E Pine St

Analysis	Comments
Client Sample ID: B-24-6.0 ***Soil Sampled: 10/27/2022 15:06***	Lab ID: L22K085-01
EPH	Please analyze out of hold
cPAH by 8270	Please analyze out of hold
Containers Supplied: Jar 4 oz (A)	

Released By — Date 11/17/22

Jeanette Andler 11.17.22

Received By Katherine Porter — Date 11/18 9:55

Libby Environmental, Inc.

3322 South Bay Road NE • Olympia, WA 98506-2957

SUBCONTRACT ORDER L22K085

2211394

Sending Laboratory:

Libby Environmental, Inc.
3322 South Bay Road NE
Olympia, WA 98506
Phone: 360-352-2110
Fax: 360-352-4154

Project Manager: Sherry Chilcutt
LibbyEnv@gmail.com

Subcontracted Laboratory:

Fremont Analytical, Inc.
3600 Fremont Ave N
Seattle, WA 98103
Phone: (206) 352-3790
Fax:

Requested Turnaround (TAT) STANDARD

Project: 661 E Pine St

Analysis	Comments
Client Sample ID: B-24-6.0 ***Soil Sampled: 10/27/2022 15:06***	Lab ID: L22K085-01
EPH	Please analyze out of hold
cPAH by 8270	Please analyze out of hold
Containers Supplied: Jar 4 oz (A)	Add naphthalenes per EB 7/19/23 -BB

Released By — Date 11/17/22

Received By Katherine Porter — Date 11/18 9:55

11.17.22

Page 1 of 1

ATTACHMENT C
PHOTOGRAPH LOG

PERFORMANCE SOIL SAMPLING – 2022

FORMER EVERGREEN FUEL FACILITY
661 EAST PINE STREET
SHELTON, WASHINGTON

FARALLON PN: 863-001

SITE PHOTOGRAPHS
Performance Soil Sampling – 2022
Former Evergreen Fuel Facility
Shelton, Washington
Farallon PN: 863-001

Photograph 1. B-13 soil cores.
Photograph 2. B-14 soil cores.
Photograph 3. B-16 soil cores.
Photograph 4. B-17 soil cores.
Photograph 5. B-18 soil cores.
Photograph 6. B-19 soil cores.
Photograph 7. B-20 soil cores.
Photograph 8. B-22 soil cores.
Photograph 9. Concrete present during use of airknife (B-12).
Photograph 10. Side-stepped past concrete (B-12).

Photograph 1. B-13 soil cores.

Photograph 2. B-14 soil cores.

Photograph 3. B-16 soil cores.

Photograph 4. B-17 soil cores.

Photograph 5. B-18 soil cores.

Photograph 6. B-19 soil cores.

Photograph 7. B-20 soil cores.

Photograph 8. B-22 soil cores.

Photograph 9. Concrete present during use of airknife (B-12).

Photograph 10. Side-stepped past concrete (B-12).

ATTACHMENT D
CULTURAL RESOURCE EVALUATION LETTER REPORT

PERFORMANCE SOIL SAMPLING – 2022

FORMER EVERGREEN FUEL FACILITY
661 EAST PINE STREET
SHELTON, WASHINGTON

FARALLON PN: 863-001

CULTURAL RESOURCES REPORT COVER SHEET

Project Number: 2022-11-07709

Author: Garth L. Baldwin and Adam M. Hefling

Title of Report: Archaeological Monitoring of Geotechnical Testing at the Former Evergreen Fuel Facility at 661 East Pine Street (TPN: 320175102006), City of Shelton, Mason County, Washington

Date of Report: November 25, 2022

County: Mason Section: 20 Township: 20 N Range: 3W

Quad: Shelton (2020) Acres: <1

PDF of report submitted (REQUIRED) ☒ Yes

Historic Property Inventory Forms to be Approved Online? ☐ Yes ☒ No

Archaeological Site(s)/Isolate(s) Found or Amended? ☐ Yes ☒ No

TCP(s) found? ☐ Yes ☒ No

Replace a draft? ☐ Yes ☒ No

Satisfy a DAHP Archaeological Excavation Permit requirement? ☐ Yes # ☒ No

Were Human Remains Found? ☐ Yes DAHP Case # ☒ No

DAHP Archaeological Site #:

_____
_____
_____
_____
_____

- Submission of PDFs is required.
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November 25, 2022
Drayton Letter 0922N

Javan Ruark
FARALLON CONSULTING, L.L.C.
975 5th Avenue Northwest
Issaquah, Washington 98027

Re: Archaeological Monitoring of Geotechnical Testing at the Former Evergreen Fuel Facility at 661 East Pine Street (TPN: 320175102006), City of Shelton, Mason County, Washington

Mr. Ruark,

Drayton Archaeology (Drayton) recently completed monitoring at 661 East Pine Street (TPN: 320175102006), Shelton, Washington, the former Evergreen Fuel Facility. The project lies in Mason County within the NE ¼, NE ¼, NW ¼ of Section 20, Township 20 North, Range 3 West. Currently, the project area serves as a parking lot to the Shelton Yacht Club (Figures 1 and 2). Site plans have been provided by Farallon Consulting. LLC. (Figure 3).

In 2007, this location was subject of a contaminant cleanup effort under an agreement with the Washington State Department of Ecology by C.C. Cole and Sons, Inc. and Chevron U.S.A. As a follow up to the 2007 efforts, Farallon Consulting. LLC. (Farallon) undertook additional soil sampling, which is the subject of the present monitoring review. Holt Services was contracted by Farallon to bore soil cores to collect soil samples for testing. Drayton was retained by Farallon to monitor for cultural resources that may have been encountered during this work. Monitoring for this project occurred between October 26 and 27, 2022. No cultural materials were observed during monitoring of this project. This review was undertaken as an internal measure of due diligence and for use in the event a permit is needed. This review meets all standards and requirements of the Washington Department of Archaeology and Historic Preservation (DAHP).

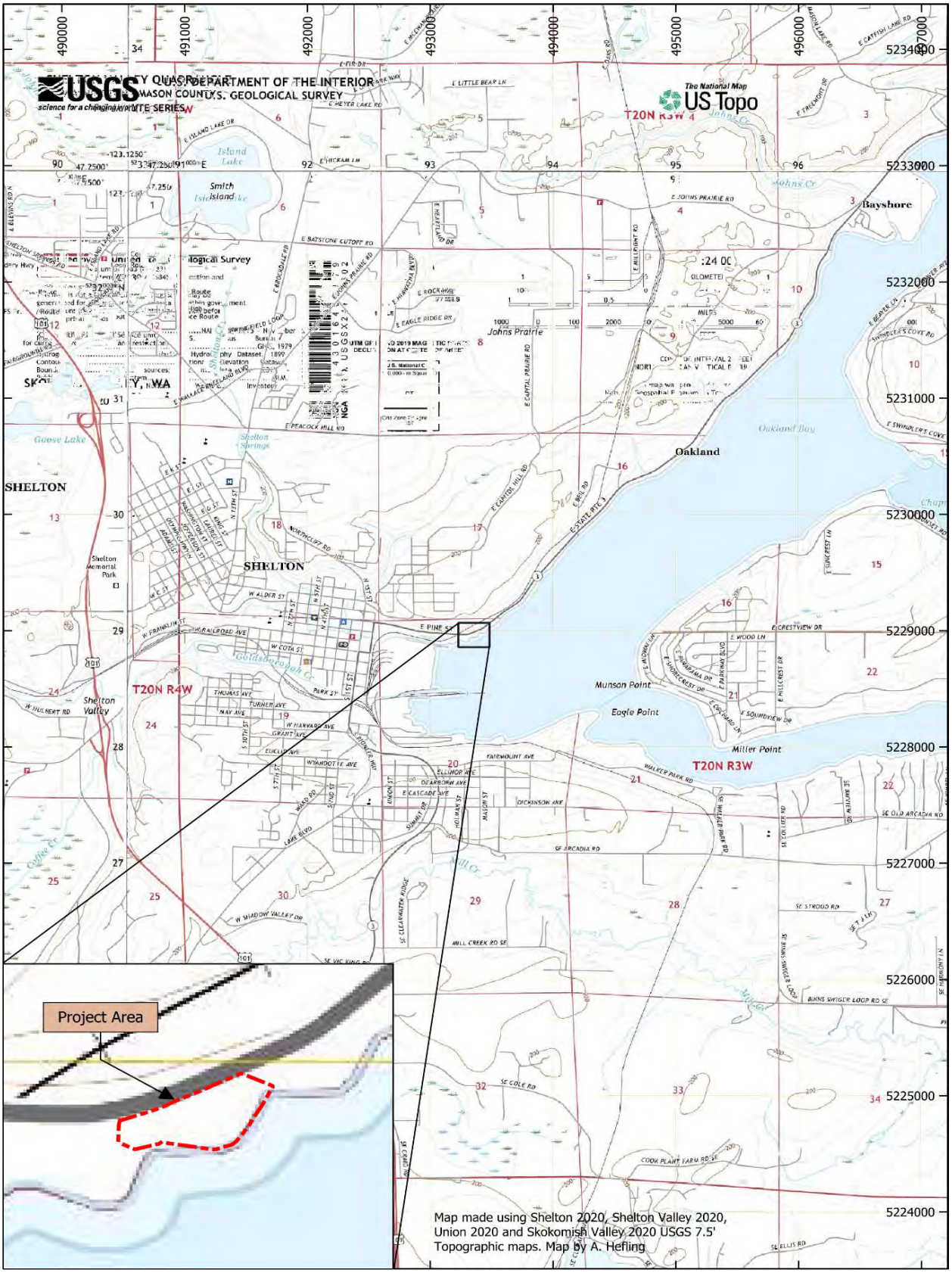

Figure 1. A portion of the Shelton (2020) 7.5' minute USGS topo map.

Figure 2. An aerial view illustrating the project area.

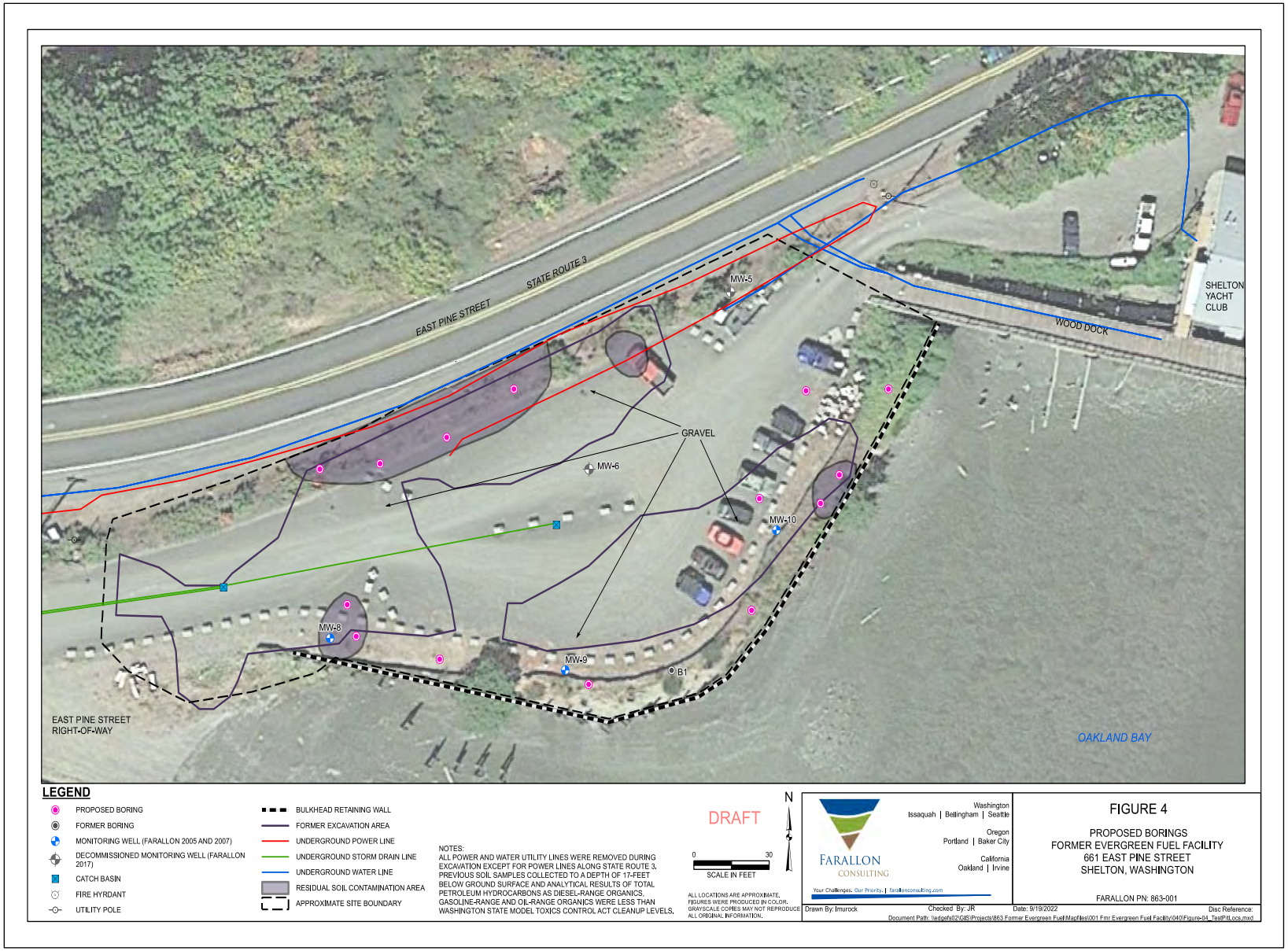

Figure 3. Site plan provided by Farallon Consulting.

MONITORING

Monitoring activity was conducted by Drayton staff archaeologist Adam Hefling on October 26 and 27, 2022. The project area is located on a constructed earthen platform with a wooden retaining wall along its southern and eastern edge (Photos 1 – 3). It is bounded on the north and west side by Washington State Highway 3 (WA-3), and on the south and east by Oakland Bay on the outskirts of Shelton, Washington. The project area is located on an artificial, man-made platform. A wooden retaining wall forms the southern and eastern boundary of the project area. This space was filled in and leveled to form a large flat platform. Fill observed was mostly glacial in origin, with some buried concrete. A layer of gravel lies over most of the project area. Along the northern boundary of the project, between Highway 3, is a landscaped strip, about 4.5-meters (m) (15 ft) wide, with a sidewalk.

Photo 1. View northeast of the retaining wall along the southern boundary of the project area.

Photo 2. Northeastern overview of the project area.

Photo 3. Project area overview looking west from near BH13.

Holt Services was employed by Farallon to conduct the excavation and boring for soil sample recovery (Figure 4). The top 1.5 m (5 ft) of each core was excavated by vacuum-truck. No monitoring was necessary during this part of the work, as vacuuming did not go below the fill sediments. Once the top 1.5 m (5 ft) were removed, a boring machine was used to take core samples in 1.5 m (5 ft) increments (Photo 4). Most cores were entirely glacial sediment. Soil descriptions were done through visual inspection only, due to known residual soil contamination at the site (Appendix A).

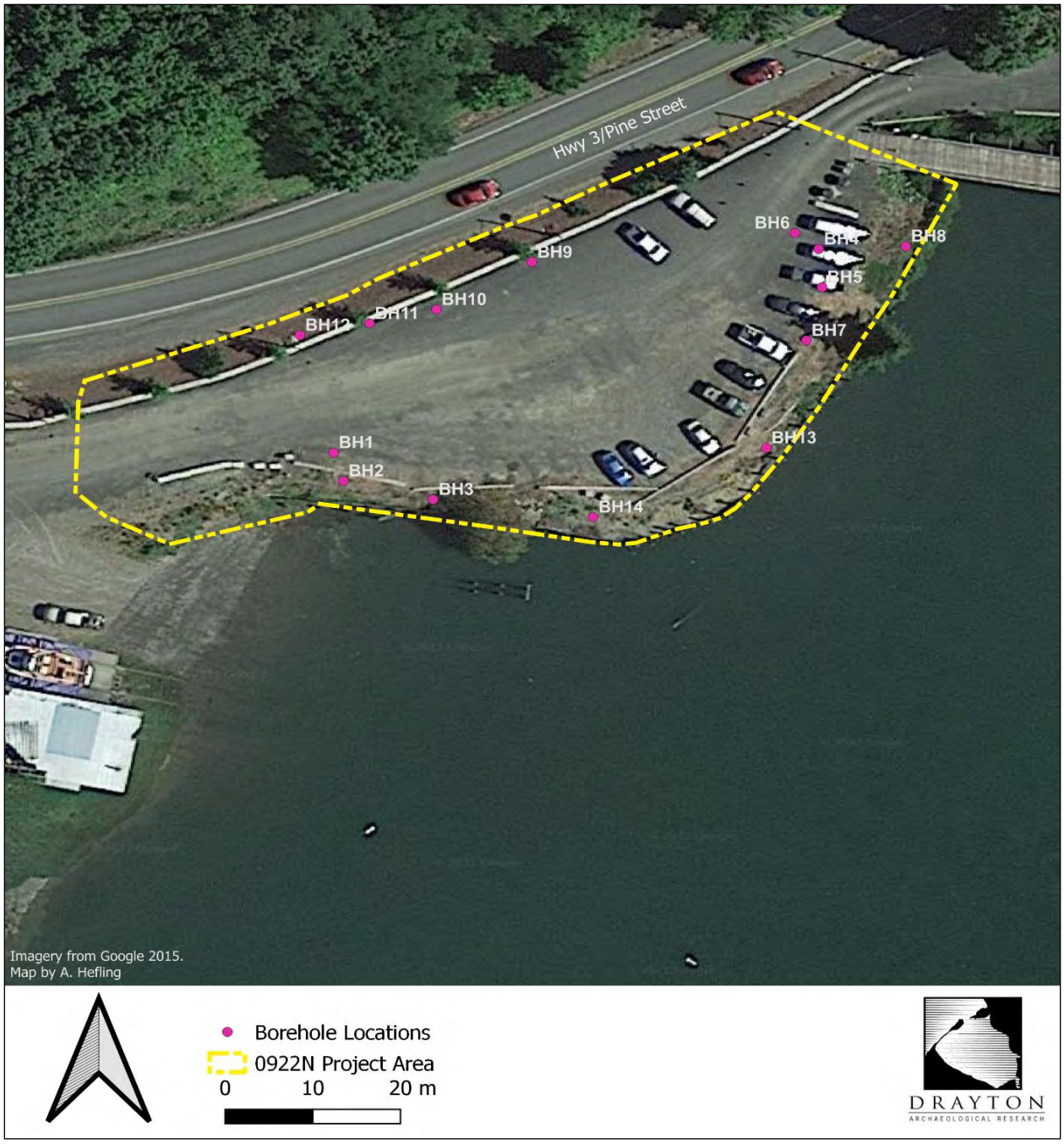

Figure 4. An aerial image illustrating the location of the bore holes.

Photo 4. Geoprobe boring machine operated by a Holt Services technician.

Some samples, notably BH2 and BH14, were incomplete due to poor recovery, which occurred due to the loose and wet nature of some of the soil samples. Cores were drilled to 6 m (20 ft) total depth. Soil profile depths were recorded in metric centimeters, and are only approximate, as the core samples are not always complete and sometimes have residual core material from previous samples.

Borehole 1 (BH1) is representative of the boreholes observed during the duration of the project (Photo 5). Photo 5 shows, from top to bottom, (5-10-ft), 3 – 4.5 m (10-15 ft) and 4.5 – 6 m (15-20 ft) respectively. The 1.5 – 3 m (5-10-ft) sample had poor recovery, with less than half of the sample retrieved from the borehole. The sample that is visible is primarily brown and gray gravelly sediment that is glacial in origin.

Photo 5. Borehole 1 soil samples, top to bottom respectively.

A small amount of broken shell was observed in Borehole 14 (Photo 6). Mussel (*Mytilus* spp.) shell was the only identifiable species. This species is abundant and the material was not associated with any other constituents (e.g., FMR, humic soil, or other shell). In total, 14 boreholes were monitored during this project. No cultural materials were observed during monitoring.

Photo 6. Borehole 14 samples arranged top to bottom, respectively.

CONCLUSIONS

This letter report summarizes Drayton Archaeology's Archaeological Monitoring for the Cole-Chevron Project, City of Shelton, Mason County, Washington. No cultural materials were encountered during soil coring activity for this project.

Please contact me with question or comments regarding this letter report or any of the information provided at 360.739.3921 or at garth@draytonarchaeology.com

My Regards,

Garth L. Baldwin, M.A., RPA 16248
Principal Drayton Archaeology

Cc: LEAD AGENCY?? ECOLOGY OR CORPS?
ANY OTHER?
Rhonda Foster, THPO, Squaxin Island Tribe
Stephanie Jolivette, State Archaeologist, DAHP

APPENDIX A: BOREHOLE PROFILE DESCRIPTIONS.

DEPTH BELOW SURFACE (CM)	SOIL DESCRIPTIONS	RESULTS
BH01		
0-45	Gray gravelly silty clay	Negative
45-55	Dark gray gravelly silty clay	Negative
55-85	Dark gray brown gravelly silty clay	Negative
85-100	Gray mottled with yellowish brown gravelly sandy clay	Negative
100-125	Brown sandy clay	Negative
125-215	Gray gravelly silty clay	Negative
215-260	Brown gravelly sand	Negative
260-330	Gray gravelly sand	Negative
	BH02	
0-62	Gray brown gravelly sand	Negative
Comments: Only went to 8 feet, recovery was poor for both samples (two attempts to collect the 5-10 ft sample).		
	BH03	
0-35	Gray sandy clay	Negative
35-100	Brown sandy clay	Negative
100-150	Gray clay silt	Negative
150-170	Brown sandy clay	Negative
BH04		
0-125	Gray gravelly, sandy silt	Negative
125-150	Gray sand	Negative
150-205	Olive brown sand	Negative
205-230	Gray gravelly sand	Negative
BH05		
0-10	Gravel	Negative
10-45	Brown sand	Negative
45-60	Gray and brown mottled sandy clay	Negative
60-95	Brown sand	Negative
95-165	Gray silty clay	Negative
165-200	Brown gravelly sand	Negative
BH06		
0-40	Brown gravelly sand	Negative
40-70	Mixed gray brown and reddish brown sandy clay	Negative
70-80	Dark gray gravelly sandy clay	Negative
80-90	Reddish brown gravelly sandy clay	Negative
90-160	Gray gravelly sandy clay	Negative
160-180	Gray gravelly sand	Negative
180-290	Gray gravelly clay sand	Negative

DEPTH BELOW SURFACE (CM)	SOIL DESCRIPTIONS	RESULTS
	BH07	
0-60	Reddish brown gravelly sand mixed with brown sand	Negative
60-120	Brown mixed with gray gravelly sand	Negative
120-140	Gray silty sand	Negative
140-275	Dark gray sand, 1 chunk of charcoal observed	Negative
275-340	Brown gravelly sand	Negative
	BH08	
0-50	Brown gravelly sand	Negative
50-85	Brown silty clay	Negative
85-225	Gray gravelly sandy clay	Negative
225-250	Dark brown peat	Negative
250-280	Dark gray clay	Negative
280-290	Green gleied clay sand	Negative
Comments: Organic peat encountered in Strat IV.		
BH09		
0-65	Alluvial beach gravel	Negative
65-125	Gray gravelly clay sand	Negative
BH10		
0-30	Gravel	Negative
30-220	Gray gravelly sandy clay	Negative
BH11		
0-30	Brown gravelly sand	Negative
30-50	Gray gravelly sand	Negative
50-60	Olive brown gravelly sand	Negative
	BH12	
0-70	Brown sand	Negative
Comments: Smells of petroleum.		
	BH13	
0-35	Dark brown gravelly sand loam	Negative
35-50	Gray gley colored gravelly sand	Negative
Comments: Poor sample recovery		
BH14		
0-80	Gray silty sand	Negative
80-110	Dark gray silt, with some shell (<2%), including mussel and some organic peat material	Negative
Comments: Poor sample recovery. Shell observed is not cultural.		