



FOCUSED SITE INVESTIGATION



Former Industrial Property

2700 SE Tacoma Street
Portland, Oregon

Agency Information

ECSI Site ID: 3884/6561

Prepared for:

Clear Sky Capital

4300 E Camelback Road
Phoenix, Arizona 85018

In care of:

In Clover Consulting

Attn: Kim Freeman
PO Box 1631
Clackamas, Oregon 97015

Issued on:

January 2, 2024

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This

Focused Site Investigation

for the:

Industrial Property

2700 SE Tacoma Street
Portland, Oregon

Has been prepared for the sole benefit and use of our Client:

Clear Sky Capital

4300 E Camelback Road
Phoenix, Arizona 85018

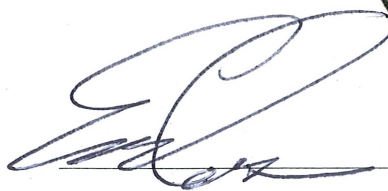
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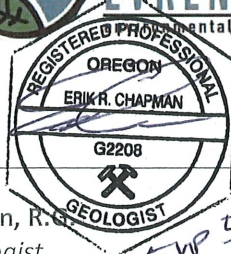
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List of Acronyms and Abbreviations

amsl	above mean sea level
bgs	below ground surface
CFSL	Clean Fill Screening Levels
Client	Clear Sky Capital
CMMP	Contaminated Media Management Plan
COI	Constituent of Interest
COPC	Constituent of Potential Concern
DRO	Diesel-Range Organics
DU	decision unit
ECSI	Environmental Cleanup Information
ENW	EVREN Northwest, Inc.
EPA	US Environmental Protection Agency
F&BI	Friedman & Bruya, Inc.
FSI	Focused Site Investigation
IDW	investigation derived waste
ISM	incremental sample methodology
ITRC	Interstate Technology Regulatory Council
mg/Kg	milligram per kilogram
MRL	method reporting limit
NFA	No Further Action
OAR	Oregon Administrative Rules
ODEQ	Oregon Department of Environmental Quality
ODOT	Oregon Department of Transportation
OWRD	Oregon Water Resources Department
PCBs	polychlorinated biphenyls
PID	photoionization detector
ppmv	parts per million by volume
RBCs	risk-based concentrations
RBDM	ODEQ's <i>Risk-Based Decision Making for the Remediation of Contaminated Sites</i> guidance document
SLRBCs	screening-level risk-based concentrations
RCRA	Resource Conservation and Recovery Act
RRO	Residual (oil)-range organics
SOW	scope of work
SWI	soil-water interface
TCLP	Toxicity Characteristic Leaching Procedure
USGS	US Geological Survey

1.0 Introduction

On behalf of Clear Sky Capital (Client), EVREN Northwest, Inc. (ENW) has prepared this report documenting a Focused Site Investigation (FSI) performed at the subject property, which is located at 2700 SE Tacoma Street in Portland, Oregon (see Figures 1 and 2). The work was completed in accordance with ENW's November 2023 Work Plan¹ which was approved by the Oregon Department of Environmental Quality (ODEQ) on November 11, 2023.

This report presents background information, purpose, scope of work, and findings of the FSI.

1.1 Background

The subject property was the site of Pacific Hoe Saw and Knife Company (Pacific Hoe) and later Simmonds International (Simmonds) from 1954 through 2020. These companies were involved in the manufacture of band saws, circular saws, and industrial knives for the wood products industry. Historical placement of industrial waste ("swarth") on the ground surface and general spills related to industrial activities resulted in the presence of total petroleum hydrocarbons, heavy metals, polychlorinated biphenyls (PCBs) and other contaminants in soil, ground water and storm water at the subject property.

Between 2004 and 2013, multiple phases of investigation were completed to address chemical impacts to soil, ground water and storm water under the direction of ODEQ, which lists the site on the Environmental Cleanup Information (ECSI) database as site number 6561.² One of the primary environmental concerns was a flood control berm constructed of manufacturing waste (or 'swarth') containing elevated concentrations of PCBs and metals. Under a work plan approved by ODEQ, the berm was removed in 2008 and replaced with clean soil materials. ODEQ issued a No Further Action (NFA) determination in May of 2014 following site cleanup actions and assessment of impacts in areas not covered by paving or warehouses.

Clear Sky Capital, Inc. is in the process of demolishing existing buildings in preparation for site re-development into a new public storage facility.³ In recent discussions between ENW, Clear Sky Capital, and ODEQ, the ODEQ has indicated the previous NFA determination may not be applicable to areas of the subject property previously covered with hardscape (building and asphalt) that will be disturbed and/or exposed during planned development activities. Areas of particular interest included the eastern portion of the site to remain open (uncovered) and landscaped, a former covered swarth bin in the western portion of the site where swarth was stored, a storm water planter planned as a treatment facility, and foundation drains requiring excavation up to seven feet below ground surface (bgs). These areas were formerly beneath original building structures, will be uncovered for the first time, and have not been

¹ ENW, November 3, 2023. *November 2023 Work Plan: Focused Site Investigation*, Industrial Property, 2700 SE Tacoma Street, Portland, Oregon.

² A former ECSI number for the site was 3884. ECSI No. 6561 was assigned to address issue with the northern portion of 3884 after Clear Sky entered into a Voluntary Cleanup Agreement with ODEQ.

³ Clear Sky Capital Tacoma Street Self Storage LP is an affiliate of Clear Sky Capital, Inc. and the work proposed under this workplan and under the Voluntary Cleanup Agreement with ODEQ is intended for the benefit of both parties.

assessed for contaminants. Hence, ODEQ seeks to ensure the site conditions remain protective of human health and the environment during and following the redevelopment of the site.

1.2 Purpose

As part of a negotiated Voluntary Cleanup Agreement between Clear Sky Capital and ODEQ, a work plan¹ was prepared to collect additional information to allow ODEQ to track progress and eventually re-issue a NFA for the site. The scope of the FSI Work Plan was developed to provide additional data and risk screening for:

- Areas of newly exposed soil that could pose a risk of direct exposure or contaminate surface runoff, and
- Areas where deeper soil will be disturbed during upcoming construction/redevelopment activities.

2.0 Scope of Work

ENW performed the following scope of work (SOW) for this project during two separate mobilizations:

- Collected surface soil samples using incremental sampling methodology (ISM) from four decision units (DU01 through DU04) to screen for contaminants in surface soils.
- Collected two replicate samples from one of the DUs for quality control purposes.
- Advanced 10 temporary soil borings (EB01 – EB10) to assess subsurface soils in areas planned for excavation and to potentially further define the vertical extent of impacts that may be identified in surface soils.
- Submitted samples to an independent laboratory under chain-of-custody protocols for appropriate analysis.
- Evaluated analytical results with respect to state regulatory standards and ODEQ guidance documents.
- Prepared this report documenting site conditions and findings.

3.0 Site Setting

Description and Location. The subject property consists of a 2.77-acre parcel of land located at the southeast corner of SE Tacoma Street and SE 26th Place in Portland, Multnomah County, Oregon. The subject property was historically developed with a two-story building, which was constructed in 1954 and later expanded in 1965 and 1990. The subject property building had undergone the complete demolition of all site buildings and decommissioning of all onsite industrial operations at the time of this FSI. In addition to the building structure, the subject property was improved with limited paved parking areas and associated landscaping.

The subject property is bounded by commercial property to the north and east, residential property to the southeast across SE Tacoma Street, commercial property to the south, and commercial properties to the west across SE 26th Place. Site features are presented on the Site Plan on Figure 2.

Topography. The subject site is located within the US Geological Survey (USGS) Lake Oswego, OR 7.5-minute quadrangle, at an approximate elevation of 64 feet above mean sea level (amsl) as shown in Figure 1. The site is situated on a terrace adjacent to Johnson Creek which defines its eastern property boundary. Storm water that is captured by storm drains discharges to Johnson Creek at an outfall along the eastern site boundary. Regional surface topography slopes gently to the west toward the Willamette River.

Geologic Setting. The site is located within the Portland Basin, a lowland area surrounding the confluence of the Columbia and Willamette Rivers and bounded by the Tualatin Mountains and Portland Hills to the west and the Cascade Range and Columbia Gorge to the east. The floor of the Portland Basin largely consists of Holocene sediments in the streambeds and flood plains of the active rivers and tributaries, and glacial outburst flood deposits of the late Pleistocene Missoula Floods which have been mapped at up to 400 feet elevation amsl.

Soils in the vicinity of the subject property have been mapped as Alluvium (Quaternary) and Channel facies (Pleistocene). Alluvium is present along the flood plain of Johnson Creek (i.e., within or immediately adjacent to the current Johnson Creek channel). Channel facies related to late Pleistocene catastrophic flood deposits are typically described as complexly interlayered and variable silts, sands, and gravels deposited in major floodways by flood events. The channel facies extend to at least 98 feet bgs in the site vicinity as documented in nearby Oregon Water Resources Department (OWRD) water well report MULT 63239, located at SE 23rd Avenue and Bybee Boulevard.⁴

According to previous investigations at the subject site, the subject site is underlain by complexly interlayered beds of silts, clayey silts, sandy silts, and silty gravels of fluvial origin. In general, the upper approximately 10 to 20 feet of soil beneath the subject site consists predominantly of silt, with a significant percentage of gravel and some sand. The fine-grained soils are generally underlain by gravels and sandy gravels with less silt.

Surface Water and Ground Water. Johnson Creek, the closest surface water body to the site, flows along the eastern subject property boundary. Johnson Creek flows 0.4 miles in a generally southwest direction to its confluence with Crystal Springs Creek. The combined stream flow then takes a southerly course to its confluence with the Willamette River near Milwaukie, Oregon. Crystal Springs is spring fed while Johnson Creek is recharged primarily by surface runoff. The surface water in Johnson Creek is supplemented by shallow ground water inflow during the rainy season.⁵

The shallow-most ground water beneath the subject site varies seasonally between 9 to 12 feet bgs. The direction of shallow ground water flow in the subject area has been documented to the west and southwest.

The Troutdale aquifer occurs at depths below 76 feet bgs according to a water well report provided by the OWRD (MULT 63239). The Troutdale aquifer provides ground water to water wells in the eastern

⁴ Madin, I.P., 1990. *Earthquake-Hazard Geology Maps of the Portland Metropolitan Area, Oregon*: Oregon Department of Geology and Mineral Industries Open-File Report O-90-2, scale 1:24,000.

⁵ USGS, 2009. *Hydrology of the Johnson Creek Basin, Oregon*, Scientific Investigations Report 2009-5123, US Geological Survey.

portion of the Johnson Creek watershed where it is primarily used for domestic and irrigation purposes. Water well MULT 63239 is owned by the City of Portland Bureau of Environmental Services and used for ground water monitoring purposes only. The well is screened from 79 feet to 98 feet bgs and static water levels in the well were recorded at 20 feet below land surface at the time of completion in 2000. The difference in screened interval and static water level suggests the Troutdale aquifer exists under semi-confined or confined aquifer conditions in the subject vicinity.

4.0 Methods and Procedures

Field activities were performed during November and December 2023. All methods and procedures were consistent with the ODEQ-approved Work Plan¹ except where noted below; please reference the Work Plan for a detailed understanding of the methods and procedures used.

A photographic log of select fieldwork is presented in Appendix A.

4.1 Field Work Objectives

Field work performed for this project was developed with the following specific objectives:

- To perform the work efficiently and cost-effectively, minimizing interference with any site operations.
- To perform the work in a safe manner for technical personnel and site employees / visitors.
- To document information and data generated in a professional manner that is valid for the intended use.

4.2 Preparation Activities

ENW performed or coordinated the following activities prior to conducting field activities:

Plan Preparation. In-house Sampling and Analysis Plan was prepared for the project, specific to this SOW.

One Call Notification. Prior to any subsurface site work, a call was placed with One Call Utility Notification Service to identify and locate all public utilities near each of the proposed sampling locations.

Planning. ENW scheduled and coordinated with the Client to begin site work.

4.3 ISM Surface Soil Sampling Locations and Depths

ISM samples were collected from four decision units (DU01 through DU04), collectively encompassing the eastern portion of the site. Decision units DU01 through DU04 were defined roughly as the northwest, northeast, southwest, and southeast quadrants of the planned landscaped area, respectively. Decision units DU01 through DU04 are illustrated on Figure 3.

Note: In a deviation from the Work Plan and as requested by ODEQ, for the purpose of gathering additional site data, a second ISM surface soil sample was collected from each of the DUs at a depth of approximately 2.5 feet bgs. All protocol for ISM sampling outlined in the Work Plan was followed.

ISM surface soil samples were collected from two depths (approximately 0.5 feet and 2.5 feet bgs) from each of the four DUs. For quality assurance/quality control purposes, two replicates that were

independent from the original incremental sampling location (center node of each grid) were collected from DU03 at the 0.5-foot sample depth. Replicate samples were labeled with “REP01” and REP02 appended to the sample ID.

All soil increments were combined into a dedicated one-gallon laboratory-prepared glass sample jar. Wood debris and large rocks were removed from each soil increment prior to combining in the laboratory-supplied glass sample container. All laboratory subsampling and sample preparations were conducted in accordance with ITRC protocols, as outlined in the Work Plan.

4.4 Soil Borings Locations and Depths

ENW supervised the advancement of 10 soil borings (EB01 through EB10) using direct-push technology on November 29-30, 2023.

Borings EB01 through EB04 were advanced in the eastern portion of the site where future plans call for landscaping. Boring EB05 was advanced below the planned storm water planter, and EB06 through EB10 were sited beneath or adjacent to the planned new building footprint and associated foundation drains. Additionally, boring EB10 was sited at the approximate location of the former Swarf bin. The locations of EB01 through EB10 are illustrated on Figure 3.

Soil Boring Logs. During advancement of the borings, soil cores were collected continuously from the surface to the total depth of each boring. Retrieved soil cores were field screened for evidence of chemical impact and described using the Unified Soil Classification System. Field screening results and soil descriptions were recorded onto soil boring logs included in Appendix B.

Soil Sampling. Grab samples were collected in accord with the Work Plan:

- A surface soil sample was collected from approximately 2 feet bgs in borings EB05 through EB10.
- Approximately 2 feet above the apparent soil-water interface (SWI) in all borings.

Note: field screening did not indicate any evidence of soil contamination which would have prompted the collection of additional grab samples.

Individual soil samples were designated with the sample’s depth appended to the boring number. For example, EB01-08 would indicate a sample collected from boring EB01 at a depth of 8 feet bgs.

Boring Abandonment. Following removal of all soil samples, borings were backfilled with hydrated bentonite chips to just below ground surface, and the surface was restored to match the surrounding.

4.5 Laboratory Analysis

Soil samples were transported via courier to F&BI of Seattle, Washington under chain-of-custody protocols. Samples were analyzed according to the analytical plan presented in the Work Plan. Copies of the laboratory analytical reports are included in Appendix C.

4.6 Cleanup Standards and Other Numeric Criteria

Oregon’s environmental cleanup rules (Oregon Administrative Rules [OAR] 340-122) establish the standards and procedures for the protection of current and future public health, safety and welfare, and the environment in the event of a release or threat of a release of a hazardous substance. In the event of a release of a hazardous substance, remedial actions shall be implemented to achieve:

- Acceptable risk levels defined in OAR 340-122-0115, as demonstrated by a residual risk assessment; or
- Numeric cleanup standards developed as part of an approved generic remedy identified or developed by the Department under OAR 340-122-0047, if applicable; or
- For areas where hazardous substances occur naturally (e.g., metals, etc.), the background level of the hazardous substances, if higher than those levels specified above.

Acceptable risk levels may be evaluated through conducting a site-specific risk assessment that calculates exposure point concentrations for specific exposure pathway receptor-scenarios or use generic for hazardous substances under ODEQ's Risk-Based Decision Making (RBDM) guideline to streamline the risk assessment process (see below).

The assessment and remediation of hazardous substances in Oregon are conducted according to OAR 340, Division 122, *Hazardous Substance Remedial Action Rules*. The following cleanup standards and numeric criteria may be applied in evaluating site assessment results.

Soil Matrix. Under the Soil Matrix Cleanup Option Rules (OARs 340-122-0320 through 0360) cleanup standards are determined by assigning site-specific values to environmental parameters (e.g., soil type, depth to ground water, etc.). For purposes of risk-based evaluations of soil, Soil Matrix Cleanup Levels are often used for screening purposes, where potentially significant levels of petroleum contamination may be present if concentrations of total petroleum hydrocarbons in soil exceed their respective soil matrix cleanup level or soil matrix level I for conservative screening purposes and may require remedial action. Concentrations of total petroleum hydrocarbons lower than their corresponding Soil Matrix Cleanup Level or Soil Matrix Level I if a cleanup level has not been determined, usually do not require any additional cleanup or risk management.

ODEQ Risk-Based Concentrations (RBCs). ODEQ has compiled default risk-based screening reference levels (RBDM guidance document) for common exposure-pathway receptor-scenarios that may be utilized in lieu of site-specific risk calculations (OAR 340-122-0115). In particular, the pre-calculated RBC represents the concentration of a constituent of interest (COI) in the impacted medium (e.g., soil, ground water, or air) that potentially represents an unacceptable risk level.

The published RBCs represent a conservative default concentration of a COI in an impacted medium (e.g., soil, ground water, soil gas, or air). When COI concentrations on a site exceed the RBC, unacceptable human health impacts are possible.

- For carcinogens, the regulatory standard is represented by an excess cancer risk of one in one million (1×10^{-6}), and
- For non-carcinogens, this is represented by a Hazard Index of 1.

RBC exceedances typically trigger further investigation and potentially a human health risk assessment. Therefore, RBCs can be applied at sites as generic, conservative cleanup standards and are routinely used by ODEQ to determine if a site requires additional action. Site-specific parameters used in the equations to develop the RBCs are often adjusted to match actual conditions in developing site-specific cleanup levels.

RBCs are generally used to evaluate sampling analytical results as follows:

- ODEQ's lowest RBC for all pathways for residential receptors is used as an initial 'conservative' screening of a constituent. If a constituent's concentration exceeds its screening level risk-based concentration (SLRBC), it requires further evaluation. Otherwise, the constituent is considered unlikely to pose unacceptable risk to any human receptor.
- Because ODEQ Generic RBCs are based on several conservative assumptions (e.g., duration and type of exposure), exceeding an SLRBC does not necessarily indicate that additional investigation or remediation is required. Rather, the exceedance of a SLRBC may indicate that additional investigation and evaluation, including consideration of site-specific information (e.g., current, and future land uses), may be necessary to determine if remediation or other actions are necessary. In many cases, it is not possible to determine whether unacceptable risks to human health and the environment are present, and require further action, until a risk assessment, including evaluation of current and reasonably likely land and water uses, is complete.
- In general, ODEQ considers chemical concentrations less than SLRBCs to be protective of human health.

Should constituents be identified that also exceed their generic, but exposure pathway- and receptor-specific RBCs, then the appropriateness of additional site-specific methods allowed under the RBDM guidance document will be evaluated (e.g., the development of site-specific RBCs, sampling of soil gas and/or vapor, etc.).

Other Numeric Criteria. In addition to the above risk-based cleanup standards, concentrations were also compared to the following numeric criteria to determine if possible enrichment was occurring, and/or determine if there may be offsite soil disposal restrictions.

- **Background Metals.** Analytical data were compared with background concentrations established by ODEQ.^{[1],[2]} ODEQ does not require cleanup for metals concentrations below default background concentrations. Background concentrations are used for screening data for metals in soil as part of the risk assessment.

4.7 Investigation Derived Waste Disposal

Investigation-derived waste generated during the sampling effort included disposable personal protective clothing and sampling equipment (i.e., dedicated Nitril gloves, towels), soil cuttings, and decontamination liquids. The solid IDW was bagged in opaque plastic garbage bags and disposed of as municipal waste. Soil cuttings and decontamination fluids were temporarily placed inside Oregon Department of Transportation-approved 55-gallon drums and stored on site pending receipt of analytical results.

The drums and their contents will be disposed of at an appropriate disposal facility after a disposal profile has been approved.

^[1] ODEQ, March 2013. Development of Oregon Background Metals Concentrations in Soil: Technical Report, Land Quality Division Cleanup Program.

^[2] ODEQ, October 28, 2002. Default Background Concentrations for metals, Memo from Toxicology Workgroup to DEQ Cleanup, Table 1 – Oregon DEQ Suggested Default Background Concentrations for Inorganic Contaminants in Various Environmental Media.

5.0 Findings

The findings of this FSI are presented in this section. The results of laboratory analysis of the soil samples from borings EB01 through EB10 and DU01 through DU04 are summarized in Table 1 (following the Tables Tab after text). Site photographs of field activities are included in Appendix A. Soil boring logs are presented in Appendix B. Copies of the laboratory analytical reports are included in Appendix C.

5.1 Sample Locations and General Site Observations

ENW collected surface soil and discrete soil samples in general accordance with the approved Work Plan. A summary of final ISM and soil boring locations and sample depths is described in Section 4 and presented on Table 5-1.

Table 5-1. Summary of Discrete and ISM Soil Samples

Borehole / Location ID	Date Sampled	Depth Sampled (feet)	Sampled By	Location
EB01	11/29/2023	9	ENW	Proposed Parking/Landscaped Area (NW Corner)
EB02	11/29/2023	8	ENW	Proposed Parking/Landscaped Area (NE Corner)
EB03	11/29/2023	9	ENW	Proposed Parking/Landscaped Area (SW Corner)
EB04	11/29/2023	8	ENW	Proposed Parking/Landscaped Area (SE Corner)
EB05	11/29/2023	2	ENW	Proposed Stormwater Planter
	11/29/2023	9.5	ENW	
EB06	11/29/2023	2	ENW	Proposed Building Foundation Drain- SE Corner
	11/29/2023	8	ENW	
EB07	11/29/2023	2	ENW	Proposed Building Foundation Drain- NE Corner
	11/29/2023	6	ENW	
EB08	11/30/2023	2	ENW	Proposed Building Foundation Drain- Center of Building
	11/30/2023	10	ENW	
EB09	11/30/2023	2	ENW	Proposed Building Foundation Drain- NW Corner
	11/30/2023	8	ENW	
EB10	11/30/2023	2	ENW	Former Covered Swarth Bin
	11/30/2023	7	ENW	
DU01	12/4/2023	0.5	ENW	Proposed Landscaping (NW Corner)
	12/4/2023	2.5	ENW	
DU02	12/5/2023	0.5	ENW	Proposed Landscaping (NE Corner)
	12/5/2023	2.5	ENW	
DU03	12/4/2023	0.5	ENW	Proposed Landscaping (SW Corner)
	12/4/2023	2.5	ENW	
DU04	12/4/2023	0.5	ENW	Proposed Parking/Landscaped Area (SE Corner)
	12/4/2023	2.5	ENW	

General Observations. Saturated conditions in borings were encountered at approximately 10 to 11 feet bgs with the deepest occurring at EB07.

None of the grab soils samples collected for field screening purposes exhibited any odors or staining suggestive of contaminant impacts. Photoionization detector (PID) headspace readings (recorded on soil boring logs in Appendix B) were all 0.0 parts per million by volume (ppmv).

EB01 through EB04. These borings generally encountered fine sands and silts overlying medium to coarse gravels to the maximum depth explored of 14 feet bgs. The thickness of the upper fine-grained sand/silt unit ranged from about 1-foot bgs in EB04 to 10 feet at EB01. Boring EB04 encountered brick debris

suggestive fill materials. Based on absence of obvious contamination, soil samples were only collected from approximately two feet above the saturated zone in borings EB01 through EB04, in accord with the work plan.

EB05 through EB10. These borings in the western part of the site encountered between 5 and 10 feet of fine-grained sand/silt coarsening to coarse sand and some gravels. In borings EB05, EB08, EB09 and EB10, the fine-grained soils were underlain by gravel layers between 2 to 4 feet thick. Underlying soils in these locations was described as fine sand with silt to the maximum depth explored. Gravels were not encountered in EB06 and EB07.

5.2 Laboratory Results – Soil

Analytical results of the soil samples are presented in Table 1, behind the Tables tab following text. Results are screened in Table 1 against ODEQ's SLRBCs and background concentrations. The sample results and screening are summarized below. Boring and ISM sample locations are shown on the Sample Location Diagram on Figure 3.

Petroleum Hydrocarbons. Laboratory analysis by NWTPH-Dx detected the presence of diesel- and/or residual-range organics (DRO and/or RRO) in ISM samples from DU01 (0.5-foot sample), DU02 (0.5-foot and 2.5-foot samples), DU03 (0.5-foot sample and replicates), and DU04 (0.5-foot and 2.5-foot samples). DRO and/or RRO were not detected above laboratory method reporting limit (MRL) in any of the soil samples collected from temporary soil borings EB01 through EB10.

- **DRO** ranged from 5.9 milligrams per kilogram (mg/Kg) to 18 mg/Kg, which are below ODEQ's SLRBC of 1,100 mg/Kg. All DRO results were flagged by the laboratory due to chromatograms not resembling the standard used for quantitation, suggesting that DRO may be the result of overlap from the residual range (RRO).
- **RRO** ranged from 28 mg/Kg to 260 mg/Kg, which are below ODEQ SLRBC for mineral oil of 2,800 mg/Kg.
- The combined total concentration of DRO+RRO exceeded the Soil Matrix Screening Level (most conservative, Level 1) at only one location (DU04) at the 0.5-foot sampling depth.

Semi-Volatile Organic Constituents. All samples were analyzed for PCBs by EPA 8082-SIM and the results were as follows:

- PCBs were detected in the discrete soil samples from EB01, EB05, EB06, and ISM samples from DU03, and DU04. All PCB detections were below the ODEQ SLRBC of 0.23 mg/Kg. The remaining sample results were below the laboratory MRL.

RCRA 8 Metals.

- Arsenic was detected up to a maximum concentration of 5.37 mg/Kg, which is above the ODEQ SLRBC of 0.43 mg/Kg. However, the maximum arsenic concentration did not exceed ODEQ's published default background concentration of 8.8 mg/Kg, suggesting arsenic has not been enriched at the sampled locations.
- Barium and compounds were reported at between 58.7 mg/Kg and 252 mg/Kg, well below is SLRBC of 15,000 mg/Kg. Barium was not detected above its published default background

concentration of 790 mg/Kg at any of the sampled locations, suggesting barium has not been enriched at the sampled locations.

- Cadmium concentrations ranged from 0.24 to 0.636 mg/Kg, well below its SLRBC of 78 mg/Kg. Additionally, the detected concentrations of cadmium were at or below its default background concentration of 0.63 mg/Kg, suggesting cadmium is not likely enrichment at the sampled locations.
- Total chromium was detected in all samples; however, at concentrations below its SLRBC (120,000 mg/Kg). However, the chromium concentration in sample DU04-231204-0.5-IS exceeded its default background concentration of 76 mg/Kg, suggesting possible enrichment in surface soil at DU04. The sample from DU04-231204-0.5-IS was further analyzed for hexavalent chromium, which was not detected in the sample above the laboratory MRL.
- Lead was present in all samples ranging from 1.57 to 115 mg/Kg. The maximum lead detection exceeded its SLRBC (30 mg/Kg) and published background concentration (28 mg/Kg), suggesting possible enrichment in surface soil at DU04.
- Selenium and compounds, mercury and silver were not detected above laboratory MRLs.

Leachable Chromium and Lead. As a screen to determine the potential for shallow soil in decision unit DU04 to be characteristic of hazardous waste, sample DU04-231204-0.5-IS was further analyzed using the EPA Toxicity Characteristic Leaching Procedure (TCLP, see Table 2). As shown in Table 2, leachable chromium and lead were not detected above their respective laboratory MRLs.

5.3 Quality Assurance

The Quality Assurance Project Plan as detailed by the Work Plan¹ was followed. Data validation check sheets are included with the analytical reports in Appendix C and summarized in laboratory annotations and quality control notes. A review of the laboratory reports for soil samples indicates samples were generally analyzed within appropriate quality assurance/quality control procedures and specified holding times.

Laboratory data qualifiers. In all samples, F&BI reported the NWTPH-Dx results for DRO contained chromatographic patterns not resembling the fuel standard used for quantitation. Because none of the quantified results exceeded state risk-based screening level for DRO or RRO, the qualifier is not anticipated to affect the general conclusion of this report.

Quality Control Samples. The laboratory results of quality control samples are presented on Table 1 and summarized below.

Table 5-2. Statistical Evaluation of ISM Samples

Analyte	Arsenic	Barium	Cadmium	Chromium	Lead	Mercury	Selenium	Silver	PCB
Units	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
DU03-231204-0.5-IS	1.7	135	0.364	43	10.5	<0.2 (ND)	<1 (ND)	<1 (ND)	0.025
DU03-231204-0.5-IS-Rep01	2.02	163	0.5	28.3	19.4	<0.2 (ND)	<1 (ND)	<1 (ND)	0.029
DU03-231204-0.5-IS-Rep02	4.06	164	0.29	24.6	10.3	<0.2 (ND)	<1 (ND)	<1 (ND)	<0.02 (ND)
Mean	2.6	154.0	0.4	32.0	13	0.2	1.0	1.0	0.0
Standard Deviation	1.28	16.46	0.11	9.73	5.20	0.00	0.00	0.00	0.00
Coefficient of Variance	49.37%	10.69%	27.69%	30.45%	38.78%	0.00%	0.00%	0.00%	18.28%

Replicate samples “DU03-REP01” and DU03-REP02” indicated an acceptable variance for select metals and PCBs of 0% to 49.37% of the calculated mean, suggesting generally acceptable variance between sample and replicate data.

5.4 Risk Screening – Soil

In Table 3, constituents of potential concern (COPCs) in soil are compared to generic default RBCs developed for several receptor populations and exposure pathway scenarios given in *Appendix A - Table of Risk-Based Concentrations* in ODEQ’s RBDM guidance document. As indicated in Table 3, lead exceeded its generic default RBCs for the following exposure scenarios:

- *Soil Leaching to Ground Water:*
 - **Residential, urban residential, and occupational worker receptors.** Lead could pose an unacceptable human health risk to future residents, urban residents, and occupational workers who ingest ground water contaminated with lead leached from impacted surface soil in DU04.

ENW believes it’s unlikely for any leached lead to impact ground water aquifers beneath the site, particularly in the deeper Troutdale Formation aquifer based on the following:

- Leachable lead was not detected in the sample of soil collected from DU04 at the 0.5-foot depth, suggesting that lead is not likely to leach as concentrations of concern to a shallow ground water resource. Additionally, soil data from DU04 shows that total lead attenuates with depth; total lead did not exceed conservative risk-based concentrations in the ISM sample collected at the 2.5-foot depth bgs sample, or the discrete soil sample collected from EB04 at the 8-foot depth.
- The Troutdale aquifer occurs at a significant depth below surface soil in DU04.
- There are currently no water wells on the subject property. Because domestic water is provided by the City, the underlying ground water aquifer is unlikely to be used for domestic purposes in the future.

5.5 Soil Disposal Considerations

In addition to human health risk, Table 1 indicates chromium and lead in surface soil in DU04 exceeds its published default background concentration and may be enriched at this location. Soil containing chromium and lead in DU04 should not be treated as unrestricted clean fill. Rather, soils from DU04 should be managed appropriately, following the ODEQ-approved Contaminated Media Management Plan (CMMP).⁶

⁶ ENW. September 5, 2023. Contaminated Media Management Plan.

6.0 Conclusions and Recommendations

The findings of the FSI completed at the subject property support the following conclusions:

- Constituents of interest were not identified in surface or subsurface soil in borings placed at the following target areas:
 - The former Swarf waste decant area;
 - Planned lined concrete storm water feature; and,
 - Planned foundation drains.
- Soil in decision unit DU04 contains total lead at concentrations exceeding its generic RBCs for the *Leaching to Ground Water* exposure pathway. However, because the vertical extent of total lead has been delineated, leachable lead is not present at detectable concentrations, and the underlying ground water aquifer is both of significant depth and unlikely to be used for domestic purposes in the future, the leaching pathway is likely incomplete.
- Impacts identified in soil may limit certain off-site soil disposal options under state and federal Solid Waste rules. Soils in decision unit DU04 do not qualify as clean fill and will need to be managed.

Recommendations. Based on the findings and conclusions of this FSI, ENW recommends the following:

- Manage potentially enriched soil in DU04 according to the existing CMMP to ensure appropriate future management and handling of enriched surface soil.
 - *If the surface soil in DU04 is deemed suitable by the geotechnical consultant of record, consider using the metals-impacted soils in DU04 as engineered fill beneath the future storage building.*
- No further investigation is warranted at this time.

Following review of these findings, ODEQ should be requested to issue an opinion that No Further Action is required to further investigate this property.

We recommend this report is kept as part of the permanent property records.

7.0 Limitations

The scope of this report is limited to observations made during on-site work; interviews with knowledgeable sources; and review of readily available published and unpublished reports and literature. As a result, these conclusions are based on information supplied by others as well as interpretations by qualified parties.

The focus of the site closure does not extend to the presence of the following conditions unless they were the express concerns of contacted personnel, report and literature authors or the work scope.

1. Naturally occurring toxic or hazardous substances in the subsurface soils, geology, and water,

2. Toxicity of substances common in current habitable environments, such as stored chemicals, products, building materials and consumables,
3. Contaminants or contaminant concentrations that are not a concern now but may be under future regulatory standards,
4. Unpredictable events that may occur after ENW's site work, such as illegal dumping or accidental spillage.

There is no practice that is thorough enough to absolutely identify the presence of all hazardous substances that may be present at a given site. ENW's investigation has been focused only on the potential for contamination that was specifically identified in the SOW. Therefore, if contamination other than that specifically mentioned is present and not identified as part of a limited SOW, ENW's environmental investigation shall not be construed as a guaranteed absence of such materials. ENW has endeavored to collect representative analytical samples for the locations and depths indicated in this report. However, no sampling program can thoroughly identify all variations in contaminant distribution.

We have performed our services for this project in accordance with our agreement and understanding with the client. This document and the information contained herein have been prepared solely for the use of the client.

ENW performed this study under a limited scope of services per our agreement. It is possible, despite the use of reasonable care and interpretation, that ENW may have failed to identify regulation violations related to the presence of hazardous substances other than those specifically mentioned at the closure site. ENW assumes no responsibility for conditions that we did not specifically evaluate or conditions that were not generally recognized as environmentally unacceptable at the time this report was prepared.

Location ID		EB01	EB02	EB03	EB04	EB05		EB06		EB07		EB08		EB09		EB10	
Sample ID		EB01-9	EB02-8	EB03-9	EB04-8	EB05-2	EB05-9.5	EB06-2	EB06-8	EB07-2	EB07-6	EB08-2	EB08-10	EB09-2	EB09-8	EB10-2	EB10-7
Date Sampled		11/29/2023	11/29/2023	11/29/2023	11/29/2023	11/29/2023	11/29/2023	11/29/2023	11/29/2023	11/29/2023	11/29/2023	11/30/2023	11/30/2023	11/30/2023	11/30/2023	11/30/2023	11/30/2023
Depth Sampled (feet)		9	8	9	8	2	9.5	2	8	2	6	2	10	2	8	2	7
Sampled By		ENW	ENW	ENW	ENW	ENW	ENW	ENW	ENW	ENW	ENW	ENW	ENW	ENW	ENW	ENW	ENW
Location		Proposed Parking/Landscaped Area (NW Corner)	Proposed Parking/Landscaped Area (NE Corner)	Proposed Parking/Landscaped Area (SW Corner)	Proposed Parking/Landscaped Area (SE Corner)	Proposed Stormwater Planter		Proposed Building Foundation Drain- SE Corner		Proposed Building Foundation Drain- NE Corner		Proposed Building Foundation Drain- Center of Building		Proposed Building Foundation Drain- NW Corner		Foremer Covered Swarth Bin	
Constituent of Interest	Note	mg/Kg (ppm)	mg/Kg (ppm)	mg/Kg (ppm)	mg/Kg (ppm)	mg/Kg (ppm)	mg/Kg (ppm)	mg/Kg (ppm)	mg/Kg (ppm)	mg/Kg (ppm)	mg/Kg (ppm)	mg/Kg (ppm)	mg/Kg (ppm)	mg/Kg (ppm)	mg/Kg (ppm)	mg/Kg (ppm)	mg/Kg (ppm)
Metals																	
Arsenic	c, nv	1.72	2.25	2.37	1.74	2.5	2.74	2.08	2.72	4.19	2.69	2.84	3.28	5.73	2.39	3.07	2.33
Barium	nc, nv	133	94.3	87.8	58.7	252	85.2	192	161	227	175	168	122	186	150	149	148
Cadmium	nc, nv	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)
Chromium (III)	nc, nv	10.9	6	11.2	7.27	22.1	8.36	16.9	12.5	22.8	11.5	19.3	10.8	19.3	8.32	20.9	7.16
Chromium (VI)	c, nv	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Copper	nc, nv	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Lead	NA, nv	4.73	1.57	2.52	3.86	6.04	1.85	8.27	2.97	6.89	3.09	7.32	4.08	5.18	3.12	7.81	2.77
Mercury	nc, nv	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)
Silver	nc, nv	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)
Semivolatile Organic Constituents																	
Polychlorinated biphenyls (Total PCBs)	c, v	0.022	<0.02 (ND)	<0.02 (ND)	<0.02 (ND)	0.037	<0.02 (ND)	0.029	0.12	<0.02 (ND)	<0.02 (ND)	<0.02 (ND)	<0.02 (ND)	<0.02 (ND)	<0.02 (ND)	<0.02 (ND)	<0.02 (ND)
Total Petroleum Hydrocarbons																	
Generic Diesel / Heating Oil (DRO)	nc, v	<50 (ND)	<50 (ND)	<50 (ND)	<50 (ND)	<50 (ND)	<50 (ND)	<50 (ND)	<50 (ND)	<50 (ND)	<50 (ND)	<50 (ND)	<50 (ND)	<50 (ND)	<50 (ND)	<50 (ND)	<50 (ND)
Generic Mineral Insulating Oil (RRO)	nc, nv	<250 (ND)	<250 (ND)	<250 (ND)	<250 (ND)	<250 (ND)	<250 (ND)	<250 (ND)	<250 (ND)	<250 (ND)	<250 (ND)	<250 (ND)	<250 (ND)	<250 (ND)	<250 (ND)	<250 (ND)	<250 (ND)

Notes:
mg/Kg = milligram per kilogram or parts per million (ppm).
<# (ND) = not detected at or above the laboratory method reporting limit shown.
NE = not established.
--- = not analyzed or not applicable.
c = carcinogenic
nc = noncarcinogenic
v = volatile
nv = nonvolatile
DRO = diesel-range organics.
RRO = residual-range organics.

Shaded concentrations exceed screening level risk-based concentrations and background concentrations, as applicable.

¹ Lowest Risk-Based Concentration for soil (screening level assumes residential use, from ODEQ RBCs dated May 2018).

(Y) indicates analyte not detected, but detection limit is above screening concentration.
BKG = constituent exceeded its SLRBC; however, was not detected above default background concentrations in soil

Table 1 - Summary of Analytical Data, Soil

Location ID		DU01		DU02		DU03				DU04		Maximum Soil Concentration (remaining soil)	Soil Matrix Cleanup Level	ODEQs Screening-Level Risk-Based Concentrations SLRBCs ¹ (Soil)	Background Concentrations (Regional Default)	Exceeds ODEQs Screening-Level SLRBCs (Soil) and/or Soil Matrix Cleanup Level
Sample ID		DU01-231204-0.5-IS	DU01-231204-2.5-IS	DU02-231205-0.5-IS	DU02-231205-2.5-IS	DU03-231204-0.5-IS	DU03-231204-0.5-IS-Rep01	DU03-231204-0.5-IS-Rep02	DU03-231204-2.5-IS	DU04-231204-0.5-IS	DU04-231204-2.5-IS				Portland Basin	TRUE OR Y FALSE OR N
Date Sampled		12/4/2023	12/4/2023	12/5/2023	12/5/2023	12/4/2023	12/4/2023	12/4/2023	12/4/2023	12/4/2023	12/4/2023					
Depth Sampled (feet)		0.5	2.5	0.5	2.5	0.5	0.5	0.5	2.5	0.5	2.5					
Sampled By		ENW	ENW	ENW	ENW	ENW	ENW	ENW	ENW	ENW	ENW					
Location		Proposed Landscaping (NW Corner)		Proposed Landscaping (NE Corner)		Proposed Landscaping (SW Corner)				Proposed Parking/Landscaped Area (SE Corner)						
Constituent of Interest		Note	mg/Kg (ppm)	mg/Kg (ppm)	mg/Kg (ppm)	mg/Kg (ppm)	mg/Kg (ppm)	mg/Kg (ppm)	mg/Kg (ppm)	mg/Kg (ppm)	mg/Kg (ppm)	mg/Kg (ppm)				
Metals																
Arsenic	c, nv	2.03	5.71	1.66	1.96	1.7	2.02	2.69	4.06	2.59	3.16	5.73	NE	0.43	8.8	BKG
Barium	nc, nv	147	160	130	130	135	163	150	164	175	203	252	NE	15000	790	N
Cadmium	nc, nv	0.253	0.301	0.268	0.24	0.364	0.5	0.413	0.29	0.636	0.462	0.636	NE	78	0.63	N
Chromium (III)	nc, nv	35.8	15.6	12.8	14	43	28.3	18.5	24.6	197	22.7	197	NE	120000	76	N
Chromium (VI)	c, nv	---	---	---	---	---	---	---	---	<0.603 (ND)	---	73.7	NE	0.3	---	(Y)
Copper	nc, nv	---	---	---	---	---	---	---	---	---	---	30.6	NE	3100	34	N
Lead	NA, nv	11.2	10.4	19.7	20.1	10.5	19.4	12.7	10.3	115	29.6	115	NE	30	28	Y
Mercury	nc, nv	<0.2 (ND)	<0.2 (ND)	<0.2 (ND)	<0.2 (ND)	<0.2 (ND)	<0.2 (ND)	<0.2 (ND)	<0.2 (ND)	<0.2 (ND)	<0.2 (ND)	<1 (ND)	NE	23	0.23	N
Silver	nc, nv	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	NE	390	0.82	N
Semivolatile Organic Constituents																
Polychlorinated biphenyls (Total PCBs)	c, v	<0.02 (ND)	<0.02 (ND)	<0.02 (ND)	<0.02 (ND)	0.025	0.029	0.038	<0.02 (ND)	0.095	<0.02 (ND)	0.120	NE	0.23	---	N
Total Petroleum Hydrocarbons																
Generic Diesel / Heating Oil (DRO)	nc, v	7.9x	<5 (ND)	5.9x	7.1x	<5 (ND)	<5 (ND)	<5 (ND)	<5 (ND)	18x	<5 (ND)	50	200	1100	---	N
Generic Mineral Insulating Oil (RRO)	nc, nv	50	<25 (ND)	58	110	31	28	28	<25 (ND)	260	35	260		2800	---	N

Notes:

mg/Kg = milligram per kilogram or parts per million (ppm).

<# (ND) = not detected at or above the laboratory method reporting limit shown.

NE = not established.

--- = not analyzed or not applicable.

c = carcinogenic

nc = noncarcinogenic

v = volatile

nv = nonvolatile

DRO = diesel-range organics.

RRO = residual-range organics.

Shaded concentrations exceed screening level risk-based concentrations and background concentrations, as applicable.

¹ Lowest Risk-Based Concentration for soil (screening level assumes residential use, from ODEQ RBCs dated May 2018).

(Y) indicates analyte not detected, but detection limit is above screening concentration.

BKG = constituent exceeded its SLRBC; however, was not detected above default background concentrations in soil

Summary of Analytical Data, Leachable Lead (TCLP)

Location ID		DU04	RCRA ¹ Toxicity Characteristic
Sample ID		DU04-231204-0.5-IS	
Date Sampled		12/4/23	
Depth Sampled (feet)		0.5	
Sampled By		ENW	
Location			
Constituent of Interest	Note	mg/L (ppm)	mg/L (ppm)
Metals			
Chromium (III)	nc, nv	<1 (ND)	5
Lead	NA, nv	<0.015 (ND)	5

Notes:

¹ Resource Conservation and Recovery Act, 1976

mg/L = milligram per Liter or parts per million (ppm).

<# (ND) = not detected at or above the laboratory method
reporting limit shown.

nc = noncarcinogenic

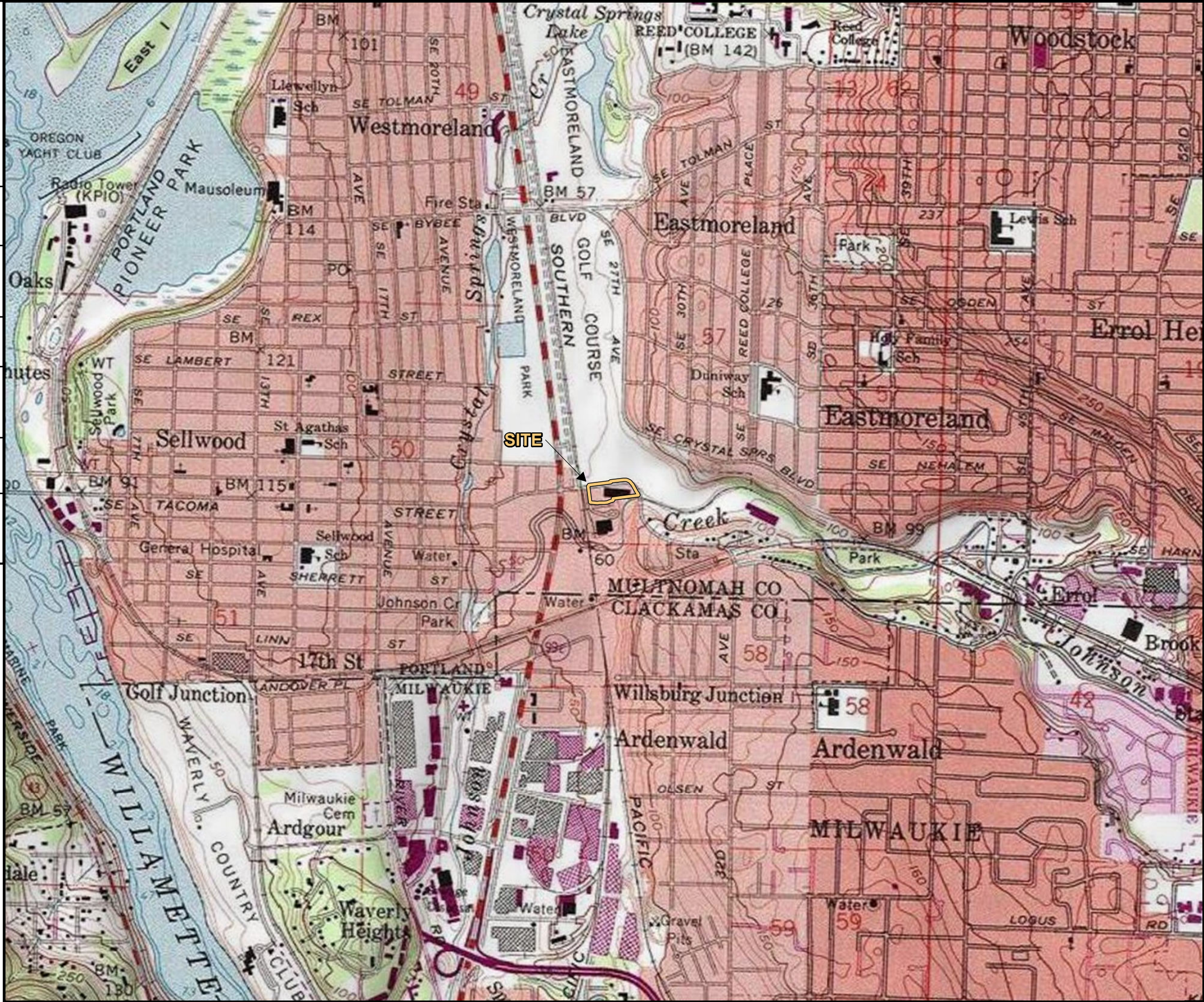
nv = nonvolatile

Table 3. Further Evaluation of COPCs, Soil (Risk Drivers)

Contaminated Medium		SOIL mg/Kg (ppm)																								Maximum Detected Concentration							
Exposure Pathway		Soil Ingestion, Dermal Contact, and Inhalation RBC _{so}										Volatilization to Outdoor Air RBC _{so}						Vapor Intrusion into Buildings RBC _{so}						Leaching to Groundwater RBC _{sw}									
Receptor Scenario		Residential		Urban Residential		Occupational		Construction Worker		Excavation Worker		Residential		Urban Residential		Occupational		Residential		Urban Residential		Occupational		Residential			Urban Residential		Occupational				
Direct or Indirect Pathway (see notes)		DC		DC		DC		DC		DC		IVS		IVS		IVS		IVS		IVS		IVS		IS			IS		IS				
Contaminant of Concern		Note		Note		Note		Note		Note		Note		Note		Note		Note		Note		Note		Note			Note		Note		mg/Kg (ppm)		
Metals																																	
Lead		NA, nv	400	L	400	L	800	L	800	L	800	L	-	NV	-	NV	-	NV	-	NV	-	NV	-	NV	-	NV	30	L	30	L	30	L	115

Notes:
— = not analyzed or not applicable.
< = not detected above method reporting limit shown.
mg/Kg = milligrams per Kilogram or parts per million (ppm).
nv = nonvolatile
Shaded cell = exceeds the RBC for this exposure pathway

DRAWN BY	CHECKED BY	APPROVED BY	DRAWING NUMBER
H. ROMER	T. BENNETT	L. GREEN	1816-23001(V01)
7/28/2023	7/28/2023	7/28/2023	



LEGEND:

SUBJET PROPERTY BOUNDARY

NOTES:

1. BASE MAP DEVELOPED BY THE USGS
(LAKE OSWEGO, 1:24000, 2013)



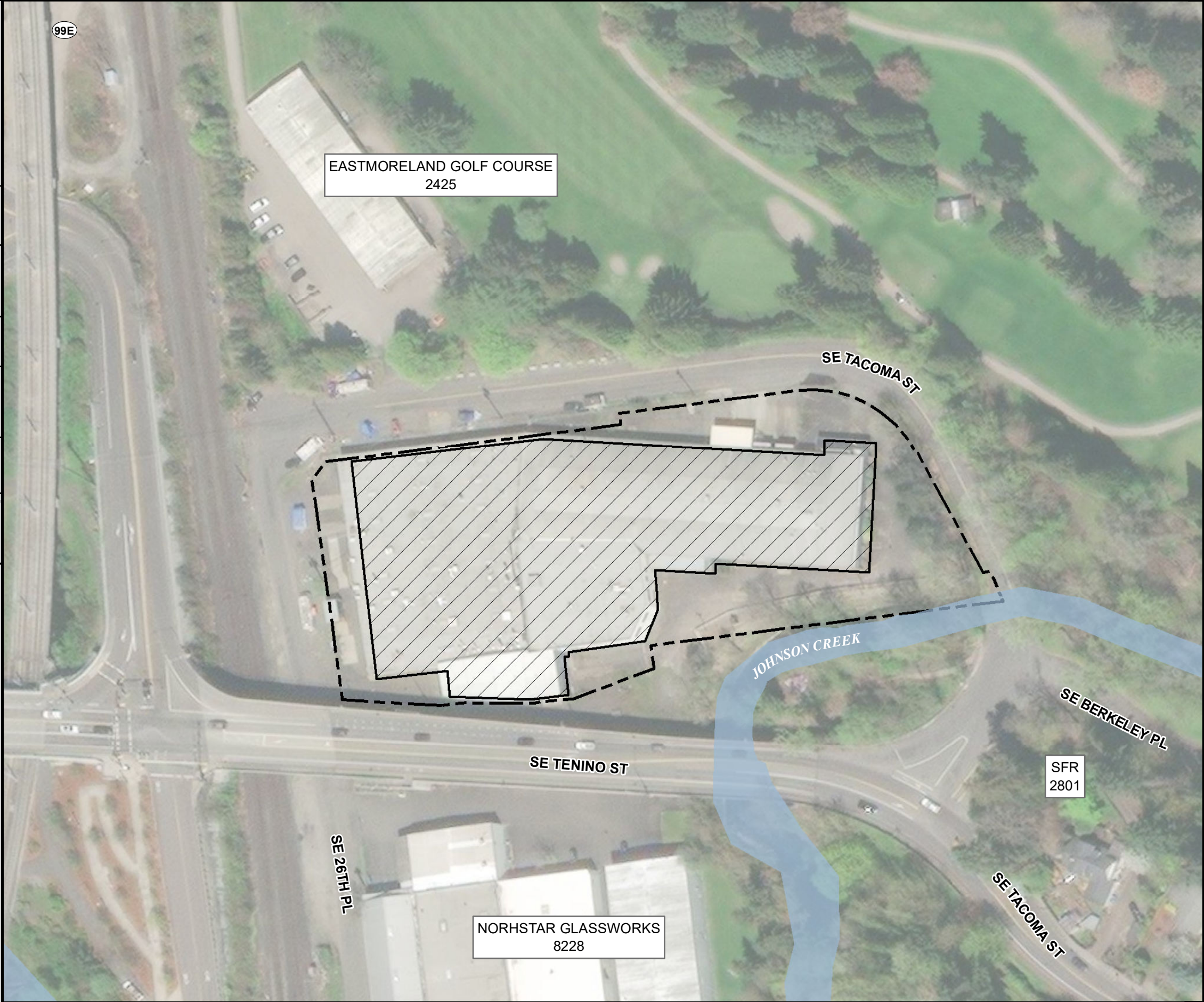
FIGURE 1

SITE VICINITY MAP

INDUSTRIAL PROPERTY
2700 SE TACOMA STREET
PORTLAND, OREGON

DRAWN BY		CHECKED BY		APPROVED BY		DRAWING NUMBER
H. ROMER	12/29/2023	T. BENNETT		L. GREEN		

1816-23001(V01)



LEGEND:

SUBJET PROPERTY BOUNDARY

FORMER SUBJECT BUILDING (DEMOLISHED)

WATERWAY

SFR = SINGLE FAMILY RESIDENCE

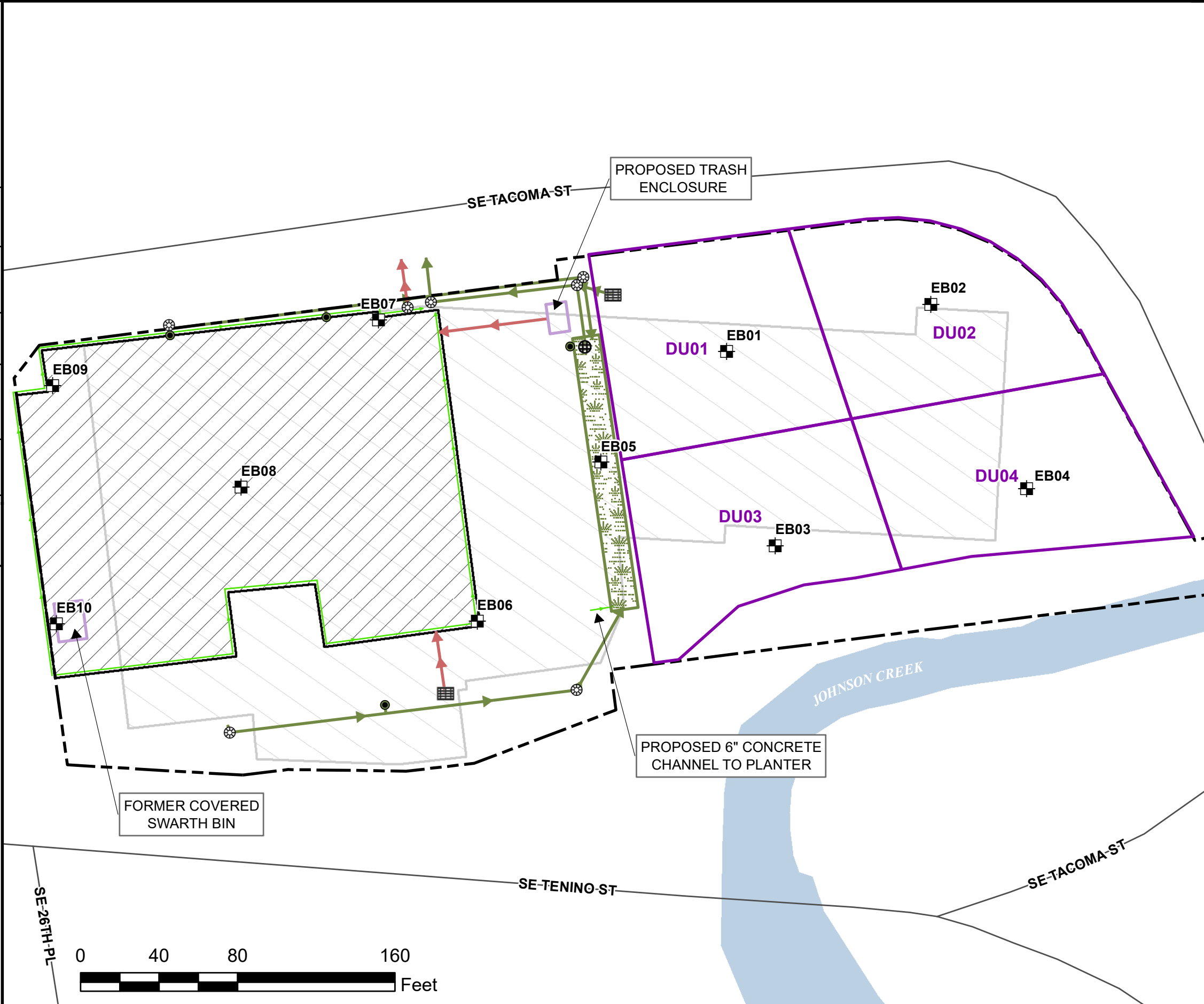
- NOTES:
1. BASE MAP DEVELOPED FROM AN AERIAL PHOTOGRAPH MAP DATED 2023 AND ENW FIELD NOTES.
 2. ALL BUILDING, STREET, AND FEATURE LOCATIONS ARE APPROXIMATE.
 3. SYMBOLS REPRESENT LOCATION AND DO NOT ALWAYS REPRESENT EXACT SHAPE, SIZE, OR ORIENTATION



FIGURE 2

SITE PLAN

INDUSTRIAL PROPERTY
2700 SE TACOMA STREET
PORTLAND, OREGON



LEGEND:

- SUBJET PROPERTY BOUNDARY
- FORMER BUILDING FOOTPRINT
- PROPOSED BUILDING FOOTPRINT
- DECISION UNIT
- WATERWAY
- PROPOSED STORM WATER PLANTER
- PROPOSED FOUNDATION DRAIN
- PROPOSED SANITARY SEWER LINE
- PROPOSED STORM WATER LINE
- PROPOSED STORM WATER BRACKET (BEEHIVE)
- PROPOSED CATCH BASIN
- PROPOSED CLEAN OUT
- PROPOSED ROOF DRAIN
- ENW TEMPORARY SOIL BORING

NOTES:

- BASE MAP DEVELOPED FROM AN AERIAL PHOTOGRAPH MAP DATED 2021 AND ENW FIELD NOTES.
- ALL BUILDING, STREET, AND FEATURE LOCATIONS ARE APPROXIMATE.
- SYMBOLS REPRESENT LOCATION AND DO NOT ALWAYS REPRESENT EXACT SHAPE, SIZE, OR ORIENTATION

FIGURE 3

SAMPLE LOCATION DIAGRAM

INDUSTRIAL PROPERTY
2700 SE TACOMA STREET
PORTLAND, OREGON

Appendix A

Photographic Log



On November 19 and 30, 2023, a direct-push drill rig was used to advance borings EB01 through EB10.



Soils were screened continuously for potential volatile using a PID.



View of soil materials retrieved from boring EB01.



Soils encountered in borings were generally described as silts and sands extending to around 10 to 20 feet bgs.



Industrial Property
2700 SE Tacoma Street
Portland, Oregon

**Site
Photographs**

Project No.
1816-23001-04

Appendix
A



View of gravels encountered beneath the shallow, relatively fine-grained sediments.



A small backhoe was used to facilitate the collection 50 increments of soil from DU01 through DU04.



View of brick material encountered in soils beneath DU04.



Industrial Property
2700 SE Tacoma Street
Portland, Oregon

**Site
Photographs**

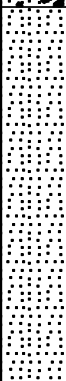
Project No.
1816-23001-04

Appendix
A

Appendix B

Boring Logs

DRILL LOG		PROJECT Sample Slab Penetration		PROJECT NO. 1816-23001-03		BORING NO. EB01	
SITE 2700 SE Tacoma St		BEGUN 11-29-23		COMPLETED 11-29-23		HOLE SIZE 2 1/4"	
COORDINATES		DEPTH GROUND WATER		DATE SL STATIC LEVEL		FIRST WATER	
DRILLER Cascade		CORE RECOVERY (%)		# SAMPLES 1		# CORE BOXES	
DRILL MAKE AND MODEL 7822 DT		LOGGED BY: J. Morris				DEPTH TOP OF ROCK	
						DEPTH BOTTOM OF HOLE 14	

DEPTH	STRATA ELEVATION/ DEPTH	GRAPHIC LOG	DESCRIPTION	SAMPLE DATA				PID/OVM	REMARKS: NOTES ON WATER LEVELS, LOSSES, CAVING, CASING, DEPTH & DRILLING CONDITIONS.
				SAMPLE NO.	SAMPLE TYPE	CORE RECOVERY	MW Const./ Completion		
0			Brown fine SAND with subrounded medium GRAVEL (GP-SP), moist, medium dense, trace mica, brick debris.						
1.5								0.0	
3						50		0.0	
4.5								0.0	
6			Brown coarse SAND (SP) with some subrounded medium GRAVEL, moist, rusty discoloration, quartz-rich, no visible mica.					0.0	
7.5						50		0.0	
9			Gray coarse to medium subrounded GRAVEL (GP) with SAND, wet, medium loose, no visible mica.	EB01-9				0.0	
10.5			Saturated at 11 feet; SWI at 11 feet.					0.0	

DRILL LOG			PROJECT	Sample Slab Penetration		PROJECT NO.		BORING NO.	
				1816-23001-03				EB01	
DEPTH	STRATA ELEVATION/ DEPTH	GRAPHIC LOG	DESCRIPTION	SAMPLE DATA				PID/OVM	REMARKS: NOTES ON WATER LEVELS, LOSSES, CAVING, CASING, DEPTH & DRILLING CONDITIONS.
				SAMPLE NO.	SAMPLE TYPE	CORE RECOVERY	MW Const./ Completion		
12			Lens of gray sand at 11.5 feet.			70		0.0	
13.5			Refusal at 14 feet; end of boring at 14 feet.						
15									
16.5									
18									
19.5									
21									
22.5									
24									

DRILL LOG		PROJECT Sample Slab Penetration		PROJECT NO. 1816-23001-03		BORING NO. EB02
SITE 2700 SE Tacoma St		BEGUN 11-29-23	COMPLETED 11-29-23		HOLE SIZE 2 1/4"	ANGLE FROM HORIZ.
COORDINATES		DEPTH GROUND WATER	DATE SL	STATIC LEVEL	FIRST WATER	GROUND ELEVATION
DRILLER Cascade		CORE RECOVERY (%)		# SAMPLES 1	# CORE BOXES	DEPTH TOP OF ROCK
DRILL MAKE AND MODEL 7822 DT		LOGGED BY: J. Morris				DEPTH BOTTOM OF HOLE 13

DEPTH	STRATA ELEVATION/ DEPTH	GRAPHIC LOG	DESCRIPTION	SAMPLE DATA				PID/OVM	REMARKS: NOTES ON WATER LEVELS, LOSSES, CAVING, CASING, DEPTH & DRILLING CONDITIONS.
				SAMPLE NO.	SAMPLE TYPE	CORE RECOVERY	MW Const./ Completion		
0			Coarse gray and brown GRAVEL (GP) with SAND, moist, dense, no visible mica.						
1.5			Brown medium SAND (SP) with fine SAND and SILT, moist, medium dense, brick debris, no visible mica.					0.0	
3			Lens of black SAND material at 2 feet. Below 2 feet strong orange and gray mottling, micaceous, brick debris absent.			70		0.0	
4.5								0.0	
6								0.0	
7.5			Multicolored coarse rounded GRAVEL (GP) (brown, orange, pink, gray) with SAND, moist, dense, micaceous.			40		0.0	
9				EB02-8				0.0	
10.5			Saturated at 10 feet; SWI at 10 feet.					0.0	
								0.0	

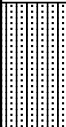
DRILL LOG			PROJECT	Sample Slab Penetration			PROJECT NO.	BORING NO.	
				1816-23001-03				EB02	
DEPTH	STRATA ELEVATION/ DEPTH	GRAPHIC LOG	DESCRIPTION	SAMPLE DATA				PID/OVM	REMARKS: NOTES ON WATER LEVELS, LOSSES, CAVING, CASING, DEPTH & DRILLING CONDITIONS.
				SAMPLE NO.	SAMPLE TYPE	CORE RECOVERY	MW Const./ Completion		
12						30		0.0	
13.5			Refusal at 13 feet; end of boring at 13 feet.					0.0	
15									
16.5									
18									
19.5									
21									
22.5									
24									

DRILL LOG		PROJECT		PROJECT NO.		BORING NO.
		Sample Slab Penetration		1816-23001-03		EB03
SITE		BEGUN	COMPLETED		HOLE SIZE	
2700 SE Tacoma St		11-29-23	11-29-23		2 1/4"	
COORDINATES		DEPTH GROUND WATER	DATE SL	STATIC LEVEL	FIRST WATER	GROUND ELEVATION
DRILLER		CORE RECOVERY (%)		# SAMPLES	# CORE BOXES	DEPTH TOP OF ROCK
Cascade				1		
DRILL MAKE AND MODEL		LOGGED BY:				DEPTH BOTTOM OF HOLE
7822 DT		J. Morris				11

DEPTH	STRATA ELEVATION/ DEPTH	GRAPHIC LOG	DESCRIPTION	SAMPLE DATA				PID/OVM	REMARKS: NOTES ON WATER LEVELS, LOSSES, CAVING, CASING, DEPTH & DRILLING CONDITIONS.
				SAMPLE NO.	SAMPLE TYPE	CORE RECOVERY	MW Const./ Completion		
0			Rounded gray fine GRAVEL (GP), moist, medium dense, no observable mica.						
1.5			Gray SILT with fine SAND (SM), moist, stiff, no visible mica, root traces, occasional trace brick debris.					0.0	
3			At 3 feet, color changes to brown with orange mottling, root traces gone, mica present.			90		0.0	
4.5			Gray and brown GRAVEL (GW), coarse to fine, with SAND, moist, medium loose, orange and yellow discoloration in sand (interpret as mineral leaching), no visible mica.					0.0	
6									
7.5						70		0.0	
9				EB03-9				0.0	
10.5								0.0	
			Refusal at 11 feet; end of boring at 11 feet.					0.0	

DRILL LOG			PROJECT	Sample Slab Penetration			PROJECT NO.	BORING NO.	
				1816-23001-03				EB03	
DEPTH	STRATA ELEVATION/ DEPTH	GRAPHIC LOG	DESCRIPTION	SAMPLE DATA				PID/OVM	REMARKS: NOTES ON WATER LEVELS, LOSSES, CAVING, CASING, DEPTH & DRILLING CONDITIONS.
				SAMPLE NO.	SAMPLE TYPE	CORE RECOVERY	MW Const./ Completion		
12						20			
13.5									
15									
16.5									
18									
19.5									
21									
22.5									
24									

DRILL LOG		PROJECT		PROJECT NO.		BORING NO.
		Sample Slab Penetration		1816-23001-03		EB04
SITE		BEGUN	COMPLETED		HOLE SIZE	
2700 SE Tacoma St		11-29-23	11-29-23		2 1/4"	
COORDINATES		DEPTH GROUND WATER	DATE SL	STATIC LEVEL	FIRST WATER	GROUND ELEVATION
DRILLER		CORE RECOVERY (%)		# SAMPLES	# CORE BOXES	DEPTH TOP OF ROCK
Cascade				1		
DRILL MAKE AND MODEL		LOGGED BY:				DEPTH BOTTOM OF HOLE
7822 DT		J. Morris				10

DEPTH	STRATA ELEVATION/ DEPTH	GRAPHIC LOG	DESCRIPTION	SAMPLE DATA				PID/OVM	REMARKS: NOTES ON WATER LEVELS, LOSSES, CAVING, CASING, DEPTH & DRILLING CONDITIONS.
				SAMPLE NO.	SAMPLE TYPE	CORE RECOVERY	MW Const./ Completion		
0			Brown fine SAND with SILT (SM), moist, dense, gray mottling, no visible mica.						
1.5			Coarse gray rounded GRAVEL (GP), barely moist, dense, copious fine brick debris, no visible mica.			15		0.0	
3								0.0	
4.5								0.0	
6								0.0	
7.5						20		0.0	
9				EB04-8				0.0	
10.5			Saturated at 10 feet; SWI at 10 feet. Refusal at 10 feet; end of boring at 10 feet.					0.0	

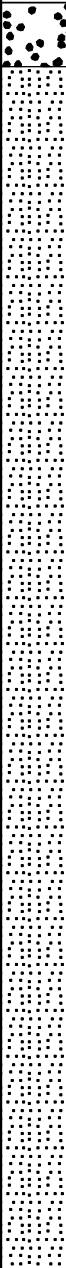
DRILL LOG		PROJECT		PROJECT NO.		BORING NO.
		Sample Slab Penetration		1816-23001-03		EB05
SITE		BEGUN	COMPLETED		HOLE SIZE	
2700 SE Tacoma St		11-29-23	11-29-23		2 1/4"	
COORDINATES		DEPTH GROUND WATER	DATE SL	STATIC LEVEL	FIRST WATER	GROUND ELEVATION
DRILLER		CORE RECOVERY (%)		# SAMPLES	# CORE BOXES	DEPTH TOP OF ROCK
Cascade				2		
DRILL MAKE AND MODEL		LOGGED BY:				DEPTH BOTTOM OF HOLE
7822 DT		J. Morris				15

DEPTH	STRATA ELEVATION/ DEPTH	GRAPHIC LOG	DESCRIPTION	SAMPLE DATA				PID/OVM	REMARKS: NOTES ON WATER LEVELS, LOSSES, CAVING, CASING, DEPTH & DRILLING CONDITIONS.
				SAMPLE NO.	SAMPLE TYPE	CORE RECOVERY	MW Const./ Completion		
0			Brown coarse SAND (SP) with rounded GRAVEL, moist, loose, quartz-rich, trace mica.						
1.5								0.0	
			Brown fine SAND (SP) with 10% medium subrounded GRAVEL, moist, mottled orange, yellow mineral leaching, trace mica.	EB05-2		50		0.0	
3								0.0	
								0.0	
4.5								0.0	
			Brown GRAVEL (GW), coarse to fine, with SAND, coarse to medium, moist to wet, gray orange and red discoloration, medium loose, no visible mica.					0.0	
6								0.0	
								0.0	
7.5						70		0.0	
								0.0	
9				EB05-9.5				0.0	
								0.0	
10.5								0.0	
			Lens of brown silty SAND at 11 feet.					0.0	

EVREN Northwest

DRILL LOG			PROJECT	Sample Slab Penetration				PROJECT NO.	BORING NO.	
							1816-23001-03	EB05		
DEPTH	STRATA ELEVATION/ DEPTH	GRAPHIC LOG	DESCRIPTION	SAMPLE DATA				PID/OVM	REMARKS: NOTES ON WATER LEVELS, LOSSES, CAVING, CASING, DEPTH & DRILLING CONDITIONS.	
				SAMPLE NO.	SAMPLE TYPE	CORE RECOVERY	MW Const./ Completion			
12			Color changes to gray at 11.5 (no observable sheen or odor). Saturated at 11.5 feet; SWI at 11.5 feet.			95		0.0		
			Lens of coarse sand at 12.5 feet.					0.0		
13.5										
15			Refusal at 15 feet; SWI at 15 feet.					0.0		
16.5										
18										
19.5										
21										
22.5										
24										

DRILL LOG		PROJECT		PROJECT NO.		BORING NO.
		Sample Slab Penetration		1816-23001-03		EB06
SITE		BEGUN	COMPLETED		HOLE SIZE	
2700 SE Tacoma St		11-29-23	11-29-23		2 1/4"	
COORDINATES		DEPTH GROUND WATER	DATE SL	STATIC LEVEL	FIRST WATER	GROUND ELEVATION
DRILLER		CORE RECOVERY (%)		# SAMPLES	# CORE BOXES	DEPTH TOP OF ROCK
Cascade				2		
DRILL MAKE AND MODEL		LOGGED BY:				DEPTH BOTTOM OF HOLE
7822 DT		J. Morris				10

DEPTH	STRATA ELEVATION/ DEPTH	GRAPHIC LOG	DESCRIPTION	SAMPLE DATA				PID/OVM	REMARKS: NOTES ON WATER LEVELS, LOSSES, CAVING, CASING, DEPTH & DRILLING CONDITIONS.
				SAMPLE NO.	SAMPLE TYPE	CORE RECOVERY	MW Const./ Completion		
0			Gray coarse GRAVEL (GP) with SAND, moist, dense, no observable mica.						
			Brown fine SAND (SP), moist, medium dense, brick debris, no visible mica.					0.0	
1.5				EB06-2		80		0.0	
3								0.0	
4.5			Gray-brown coarse SAND (SP) with fine GRAVEL, moist, medium loose, orange and gray mottling, micaceous.					0.0	
6								0.0	
7.5				EB06-8		60		0.0	
9								0.0	
10.5			Saturated at 10 feet; SWI at 10 feet. Refusal at 10 feet; end of boring at 10 feet.					0.0	

DRILL LOG		PROJECT		PROJECT NO.		BORING NO.	
		Sample Slab Penetration		1816-23001-03		EB07	
SITE		BEGUN		COMPLETED		HOLE SIZE	
2700 SE Tacoma St		11-29-23		11-29-23		2 1/4"	
COORDINATES		DEPTH GROUND WATER	DATE SL	STATIC LEVEL		FIRST WATER	
DRILLER		CORE RECOVERY (%)		# SAMPLES		# CORE BOXES	
Cascade				2			
DRILL MAKE AND MODEL		LOGGED BY:				DEPTH BOTTOM OF HOLE	
7822 DT		J. Morris				10	

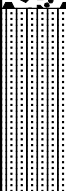
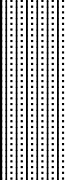
DEPTH	STRATA ELEVATION/ DEPTH	GRAPHIC LOG	DESCRIPTION	SAMPLE DATA				PID/OVM	REMARKS: NOTES ON WATER LEVELS, LOSSES, CAVING, CASING, DEPTH & DRILLING CONDITIONS.
				SAMPLE NO.	SAMPLE TYPE	CORE RECOVERY	MW Const./ Completion		
0			Brown fine SAND with SILT (SM), some fine to medium GRAVEL, moist, orange mottling, micaceous, occasional brick debris.						
1.5				EB07-2		90		0.0	
3								0.0	
4.5								0.0	
6				EB07-6				0.0	
7.5			Brown coarse SAND (SP) with GRAVEL, wet, loose, orange mottling, micaceous.			70		0.0	
9								0.0	
10.5			End of boring at 10 feet.					0.0	

DRILL LOG		PROJECT		PROJECT NO.		BORING NO.
		Sample Slab Penetration		1816-23001-03		EB08
SITE		BEGUN	COMPLETED		HOLE SIZE	
2700 SE Tacoma St		11-30-23	11-30-23		2 1/4"	
COORDINATES		DEPTH GROUND WATER	DATE SL	STATIC LEVEL	FIRST WATER	
DRILLER		CORE RECOVERY (%)		# SAMPLES	# CORE BOXES	DEPTH TOP OF ROCK
Cascade				2		
DRILL MAKE AND MODEL		LOGGED BY:				DEPTH BOTTOM OF HOLE
7822 DT		J. Morrisw				15

DEPTH	STRATA ELEVATION/ DEPTH	GRAPHIC LOG	DESCRIPTION	SAMPLE DATA				PID/OVM	REMARKS: NOTES ON WATER LEVELS, LOSSES, CAVING, CASING, DEPTH & DRILLING CONDITIONS.
				SAMPLE NO.	SAMPLE TYPE	CORE RECOVERY	MW Const./ Completion		
0			Gray angular GRAVEL (GP) with medium SAND, moist, loose, no mica.					0.0	
1.5			Brown well-graded SAND (SW)- coarse to fine--moist, medium dense, micaceous, rust-colored mineral leaching in horizontal beds.	EB08-2		80		0.0	
3								0.0	
4.5								0.0	
6								0.0	
7.5			Coarse GRAVEL appears at 7 feet.			60		0.0	
9			Gray coarse GRAVEL (GP), dry, dense, no visible mica.					0.0	
10.5			Brown and gray fine SAND with SILT (SM), wet, gray and orange mottling, micaceous.	EB08-10				0.0	

DRILL LOG			PROJECT		PROJECT NO.		BORING NO.		
			Sample Slab Penetration		1816-23001-03		EB08		
DEPTH	STRATA ELEVATION/ DEPTH	GRAPHIC LOG	DESCRIPTION	SAMPLE DATA				PID/OVM	REMARKS: NOTES ON WATER LEVELS, LOSSES, CAVING, CASING, DEPTH & DRILLING CONDITIONS.
				SAMPLE NO.	SAMPLE TYPE	CORE RECOVERY	MW Const./ Completion		
12			Saturated at 12 feet; SWI at 12 feet.					0.0	
13.5							0.0		
15			End of boring at 15 feet.					0.0	
16.5									
18									
19.5									
21									
22.5									
24									

DRILL LOG		PROJECT		PROJECT NO.		BORING NO.	
		Sample Slab Penetration		1816-23001-03		EB09	
SITE		BEGUN		COMPLETED		HOLE SIZE	
2700 SE Tacoma St		11-30-23		11-30-23		2 1/4"	
COORDINATES		DEPTH GROUND WATER	DATE SL	STATIC LEVEL		FIRST WATER	
DRILLER		CORE RECOVERY (%)		# SAMPLES		# CORE BOXES	
Cascade				2			
DRILL MAKE AND MODEL		LOGGED BY:				DEPTH BOTTOM OF HOLE	
7822 DT		J. Morris				15	

DEPTH	STRATA ELEVATION/ DEPTH	GRAPHIC LOG	DESCRIPTION	SAMPLE DATA				PID/OVM	REMARKS: NOTES ON WATER LEVELS, LOSSES, CAVING, CASING, DEPTH & DRILLING CONDITIONS.
				SAMPLE NO.	SAMPLE TYPE	CORE RECOVERY	MW Const./ Completion		
0			Gray angular GRAVEL, moist, medium loose, no visible mica.	EB09-2		30			
1.5			Brown SAND (SW)--coarse to fine--moist, medium dense, orange leaching in horizontal beds, micaceous.					0.0	
3								0.0	
4.5				EB09-8		50		0.0	
6			Brown and gray GRAVEL (GW) with coarse to fine sand, moist to wet, medium loose, rusty mineral leaching, no visible mica.					0.0	
7.5								0.0	
9			Brown fine SAND with SILT (SM) , wet, medium soft, strong gray mottling, micaceous.						
10.5			Saturated at 10 feet; SWI at 10 feet.					0.0	

DRILL LOG			PROJECT	PROJECT NO.		BORING NO.			
			Sample Slab Penetration		1816-23001-03		EB09		
DEPTH	STRATA ELEVATION/ DEPTH	GRAPHIC LOG	DESCRIPTION	SAMPLE DATA				PID/OVM	REMARKS: NOTES ON WATER LEVELS, LOSSES, CAVING, CASING, DEPTH & DRILLING CONDITIONS.
				SAMPLE NO.	SAMPLE TYPE	CORE RECOVERY	MW Const./ Completion		
12						100		0.0	
13.5								0.0	
15			End of boring at 15 feet.					0.0	
16.5									
18									
19.5									
21									
22.5									
24									

DRILL LOG		PROJECT		PROJECT NO.		BORING NO.	
		Sample Slab Penetration		1816-23001-03		EB10	
SITE		BEGUN		COMPLETED		HOLE SIZE	
2700 SE Tacoma St		11-30-23		11-30-23		2 1/4"	
COORDINATES		DEPTH GROUND WATER	DATE SL	STATIC LEVEL		FIRST WATER	
DRILLER		CORE RECOVERY (%)		# SAMPLES		# CORE BOXES	
Cascade				2			
DRILL MAKE AND MODEL		LOGGED BY:				DEPTH BOTTOM OF HOLE	
7822 DT		J. Morris				10	

DEPTH	STRATA ELEVATION/ DEPTH	GRAPHIC LOG	DESCRIPTION	SAMPLE DATA				PID/OVM	REMARKS: NOTES ON WATER LEVELS, LOSSES, CAVING, CASING, DEPTH & DRILLING CONDITIONS.
				SAMPLE NO.	SAMPLE TYPE	CORE RECOVERY	MW Const./ Completion		
0			Gray coarse SAND (SP) with GRAVEL, moist, medium dense, brick debris, no mica.						
1.5			Brown medium to fine SAND (SP) , moist, medium dense, micaceous.						
3				EB10-2		100		0.0	
4.5			Coarse GRAVEL appears at 4 feet.					0.0	
6								0.0	
7.5			Gray coarse GRAVEL (GW) with brown coarse to fine SAND, moist, medium loose, micaceous.					0.0	
9				EB10-7				0.0	
			Brown medium SAND (SP) with fine GRAVEL, saturated, medium loose, orange mottling, micaceous. SWI at 9 feet.					0.0	
10.5			End of boring at 10 feet.					0.0	

Appendix C

Laboratory Analytical Reports

Analytical Laboratory Data Validation Check Sheet

Project Name: 2700 SE Tacoma Street, Portland

Project Number: 1816-23001-04

Date of Review: 12/14/23

Lab. Name: F&BI

Lab Batch ID #: 312081

Chain of Custody

- 1.) Are all requested analyses reported? ☒yes ☐no
- 2.) Were the requested methods used? ☒yes ☐no
- 3.) Trip blank submitted? ☐yes ☒no
- 4.) Field blank submitted? ☐yes ☒no

Timing

- 5.) Samples extracted within holding times? ☒yes ☐no
If not, are all discrepancies footnoted? ☐yes ☐no ☒NA
- 6.) Analysis performed within holding times? ☒yes ☐no
If not, are all discrepancies footnoted? ☐yes ☐no ☒NA

Quality Assurance/Quality Control

- 7.) Are the required reporting limits reported? (MRLs vs MDLs/PQLs) ☒yes ☐no
- 8.) Are all reported values above either MRL or MDL? ☒yes ☐no
- 9.) Are all values between the MDL & PQL tagged as trace? ☐yes ☐no ☒NA
- 10a.) Are reporting limits raised for other reason besides high analyte conc.? ☐yes ☒no
- 10b.) If so, are they footnoted? ☐yes ☐no ☒NA
- 11.) Lab method blank completed? ☒yes ☐no
- 12.) Lab, Field, or Trip Blank(s) report detections? ☐yes ☒no
If yes, indicate blank type, chemical(s) and concentration(s):
- 13.) For inorganics and metals, is there one method blank for each analyte? ☒yes ☐no ☐NA
If not, are all discrepancies footnoted? ☐yes ☐no
- 14.) For VOCs, is there one method blank for each day of analysis? ☒yes ☐no ☐NA
If not, are all discrepancies footnoted? ☐yes ☐no
- 15.) For SVOC's, is there one method blank for each extraction batch? ☒yes ☐no ☐NA
If not, are all discrepancies footnoted? ☐yes ☐no

Accuracy

- 16.) Is there a surrogate spike recovery for all VOC & SVOC samples? ☒yes ☐no ☐NA
Do all surrogate spike recoveries meet accepted criteria? ☒yes ☐no
If not, are all discrepancies footnoted? ☐yes ☐no ☒NA
- 17.) Is there a spike recovery for all Laboratory Control Samples? ☒yes ☐no ☐NA
Do all LCS/LCSD spike recoveries meet accepted criteria? ☒yes ☐no
If not, are all discrepancies footnoted? ☐yes ☐no ☒NA
- 18.) Are all LCS/LCSD RPDs within acceptable limits? ☐yes ☐no ☒NA
If not, are all discrepancies footnoted? ☐yes ☐no ☒NA

Precision

- 19.) Are all matrix spike/matrix spike duplicate recoveries within acceptable limits? ☐yes ☒no ☐NA
If not, are all discrepancies footnoted? ☐yes ☐no ☐NA

Lead was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful. (b)

- 20.) Are all matrix spike/matrix spike duplicate RPDs within acceptable limits? ☒yes ☐no ☐NA

If not, are all discrepancies footnoted?

☐yes ☐no ☒NA

21.) Do all RPD calculations for Field Duplicates meet accepted criteria?

☐yes ☐no ☒NA

Comments:

Lead was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable. (nm)

Arsenic, Barium and Chromium were spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful. (b)

For samples DU03-231205-0.5-IS & DU03-231205-2.5-IS, the sample chromatographic pattern does not resemble the fuel standard used for quantitation. (x)

Initial Review By: AR

Final Review By: _____

Analytical Laboratory Data Validation Check Sheet

Project Name: 2700 SE Tacoma Street, Portland

Project Number: 1816-23001-04

Date of Review: 12/21/23

Lab. Name: F&BI

Lab Batch ID #: 312054

Chain of Custody

1.) Are all requested analyses reported?

☒yes ☐no**Sample DU04-231204-0.5-IS was sent to Fremont Analytical for hexavalent chromium analysis. The report is enclosed.**

2.) Were the requested methods used?

☒yes ☐no

3.) Trip blank submitted?

☐yes ☒no

4.) Field blank submitted?

☐yes ☒noTiming

5.) Samples extracted within holding times?

☒yes ☐no

If not, are all discrepancies footnoted?

☐yes ☐no ☒NA

6.) Analysis performed within holding times?

☒yes ☐no

If not, are all discrepancies footnoted?

☐yes ☐no ☒NAQuality Assurance/Quality Control

7.) Are the required reporting limits reported? (MRLs vs MDLs/PQLs)

☒yes ☐no

8.) Are all reported values above either MRL or MDL?

☒yes ☐no

9.) Are all values between the MDL & PQL tagged as trace?

☐yes ☐no ☒NA

10a.) Are reporting limits raised for other reason besides high analyte conc.?

☐yes ☒no

10b.) If so, are they footnoted?

☐yes ☐no ☒NA

11.) Lab method blank completed?

☒yes ☐no

12.) Lab, Field, or Trip Blank(s) report detections?

☐yes ☒no

If yes, indicate blank type, chemical(s) and concentration(s):

13.) For inorganics and metals, is there one method blank for each analyte?

☒yes ☐no ☐NA

If not, are all discrepancies footnoted?

☐yes ☐no

14.) For VOCs, is there one method blank for each day of analysis?

☒yes ☐no ☐NA

If not, are all discrepancies footnoted?

☐yes ☐no

15.) For SVOC's, is there one method blank for each extraction batch?

☒yes ☐no ☐NA

If not, are all discrepancies footnoted?

☐yes ☐noAccuracy

16.) Is there a surrogate spike recovery for all VOC & SVOC samples?

☒yes ☐no ☐NA

Do all surrogate spike recoveries meet accepted criteria?

☒yes ☐no

If not, are all discrepancies footnoted?

☐yes ☐no ☒NA

17.) Is there a spike recovery for all Laboratory Control Samples?

☒yes ☐no ☐NA

Do all LCS/LCSD spike recoveries meet accepted criteria?

☒yes ☐no

If not, are all discrepancies footnoted?

☐yes ☐no ☒NA

18.) Are all LCS/LCSD RPDs within acceptable limits?

☐yes ☐no ☒NA

If not, are all discrepancies footnoted?

☐yes ☐no ☒NAPrecision

19.) Are all matrix spike/matrix spike duplicate recoveries within acceptable limits?

☒yes ☐no ☐NA

If not, are all discrepancies footnoted?

☐yes ☐no ☒NA

20.) Are all matrix spike/matrix spike duplicate RPDs within acceptable limits?

☒yes ☐no ☐NA

If not, are all discrepancies footnoted?

☐yes ☐no ☒NA

21.) Do all RPD calculations for Field Duplicates meet accepted criteria?

☐yes ☐no ☒NA

Comments:

Barium, Chromium (III) were spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful. (b)

For samples DU04-231204-0.5-IS and DU01-231204-0.5-IS, the chromatographic pattern does not resemble the fuel standard used for quantitation. (x)

Initial Review By: AR

Final Review By: _____

Analytical Laboratory Data Validation Check Sheet

Project Name: 2700 SE Tacoma Street, Portland

Project Number: 1816-23001-04

Date of Review: 12/8/23

Lab. Name: F&BI

Lab Batch ID #: 312015

Chain of Custody

- 1.) Are all requested analyses reported? ☒yes ☐no
- 2.) Were the requested methods used? ☒yes ☐no
- 3.) Trip blank submitted? ☐yes ☒no
- 4.) Field blank submitted? ☐yes ☒no

Timing

- 5.) Samples extracted within holding times? ☒yes ☐no
If not, are all discrepancies footnoted? ☐yes ☐no ☒NA
- 6.) Analysis performed within holding times? ☒yes ☐no
If not, are all discrepancies footnoted? ☐yes ☐no ☒NA

Quality Assurance/Quality Control

- 7.) Are the required reporting limits reported? (MRLs vs MDLs/PQLs) ☒yes ☐no
- 8.) Are all reported values above either MRL or MDL? ☒yes ☐no
- 9.) Are all values between the MDL & PQL tagged as trace? ☐yes ☐no ☒NA
- 10a.) Are reporting limits raised for other reason besides high analyte conc.? ☐yes ☒no
- 10b.) If so, are they footnoted? ☐yes ☐no ☒NA
- 11.) Lab method blank completed? ☒yes ☐no
- 12.) Lab, Field, or Trip Blank(s) report detections? ☐yes ☒no
If yes, indicate blank type, chemical(s) and concentration(s):
- 13.) For inorganics and metals, is there one method blank for each analyte? ☒yes ☐no ☐NA
If not, are all discrepancies footnoted? ☐yes ☐no
- 14.) For VOCs, is there one method blank for each day of analysis? ☒yes ☐no ☐NA
If not, are all discrepancies footnoted? ☐yes ☐no
- 15.) For SVOC's, is there one method blank for each extraction batch? ☒yes ☐no ☐NA
If not, are all discrepancies footnoted? ☐yes ☐no

Accuracy

- 16.) Is there a surrogate spike recovery for all VOC & SVOC samples? ☒yes ☐no ☐NA
Do all surrogate spike recoveries meet accepted criteria? ☒yes ☐no
If not, are all discrepancies footnoted? ☐yes ☐no ☒NA
- 17.) Is there a spike recovery for all Laboratory Control Samples? ☒yes ☐no ☐NA
Do all LCS/LCSD spike recoveries meet accepted criteria? ☒yes ☐no
If not, are all discrepancies footnoted? ☐yes ☐no ☒NA
- 18.) Are all LCS/LCSD RPDs within acceptable limits? ☐yes ☐no ☒NA
If not, are all discrepancies footnoted? ☐yes ☐no ☒NA

Precision

- 19.) Are all matrix spike/matrix spike duplicate recoveries within acceptable limits? ☐yes ☒no ☐NA
If not, are all discrepancies footnoted? ☒yes ☐no ☐NA

Aroclor 1260 was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful. (b)

- 20.) Are all matrix spike/matrix spike duplicate RPDs within acceptable limits? ☒yes ☐no ☐NA

If not, are all discrepancies footnoted?
21.) Do all RPD calculations for Field Duplicates meet accepted criteria?

☐yes ☐no ☒NA
☐yes ☐no ☒NA

Comments:

Barium and Chromium were spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful. (b)

Initial Review By: AR

Final Review By: _____

Analytical Laboratory Data Validation Check Sheet

Project Name: 2700 SE Tacoma Street, Portland

Project Number: 1816-23001-04

Date of Review: 12/13/23

Lab. Name: F&BI

Lab Batch ID #: 311404

Chain of Custody

- 1.) Are all requested analyses reported? ☒yes ☐no
- 2.) Were the requested methods used? ☒yes ☐no
- 3.) Trip blank submitted? ☐yes ☒no
- 4.) Field blank submitted? ☐yes ☒no

Timing

- 5.) Samples extracted within holding times? ☒yes ☐no
If not, are all discrepancies footnoted? ☐yes ☐no ☒NA
- 6.) Analysis performed within holding times? ☒yes ☐no
If not, are all discrepancies footnoted? ☐yes ☐no ☒NA

Quality Assurance/Quality Control

- 7.) Are the required reporting limits reported? (MRLs vs MDLs/PQLs) ☒yes ☐no
- 8.) Are all reported values above either MRL or MDL? ☒yes ☐no
- 9.) Are all values between the MDL & PQL tagged as trace? ☐yes ☐no ☒NA
- 10a.) Are reporting limits raised for other reason besides high analyte conc.? ☐yes ☒no
- 10b.) If so, are they footnoted? ☐yes ☐no ☒NA
- 11.) Lab method blank completed? ☒yes ☐no
- 12.) Lab, Field, or Trip Blank(s) report detections? ☐yes ☒no
If yes, indicate blank type, chemical(s) and concentration(s):
- 13.) For inorganics and metals, is there one method blank for each analyte? ☒yes ☐no ☐NA
If not, are all discrepancies footnoted? ☐yes ☐no
- 14.) For VOCs, is there one method blank for each day of analysis? ☒yes ☐no ☐NA
If not, are all discrepancies footnoted? ☐yes ☐no
- 15.) For SVOC's, is there one method blank for each extraction batch? ☒yes ☐no ☐NA
If not, are all discrepancies footnoted? ☐yes ☐no

Accuracy

- 16.) Is there a surrogate spike recovery for all VOC & SVOC samples? ☒yes ☐no ☐NA
Do all surrogate spike recoveries meet accepted criteria? ☒yes ☐no
If not, are all discrepancies footnoted? ☐yes ☐no ☒NA
- 17.) Is there a spike recovery for all Laboratory Control Samples? ☒yes ☐no ☐NA
Do all LCS/LCSD spike recoveries meet accepted criteria? ☒yes ☐no
If not, are all discrepancies footnoted? ☐yes ☐no ☒NA
- 18.) Are all LCS/LCSD RPDs within acceptable limits? ☒yes ☐no ☐NA
If not, are all discrepancies footnoted? ☐yes ☐no ☒NA

Precision

- 19.) Are all matrix spike/matrix spike duplicate recoveries within acceptable limits? ☐yes ☒no ☐NA
If not, are all discrepancies footnoted? ☒yes ☐no ☐NA

Diesel Extended was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful. (b)

Aroclor 1260 was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful. (b)

20.) Are all matrix spike/matrix spike duplicate RPDs within acceptable limits?

☐yes ☒no ☐NA

If not, are all discrepancies footnoted?

☒yes ☐no ☐NA

Diesel Extended was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful. (b)

21.) Do all RPD calculations for Field Duplicates meet accepted criteria?

☐yes ☐no ☒NA

Comments:

Initial Review By: AR

Final Review By: _____

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Vineta Mills, M.S.
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December 20, 2023

Lynn Green, Project Manager
Evren Northwest, Inc.
PO Box 14488
Portland, OR 97293

Dear Mr Green:

Included are the results from the testing of material submitted on December 5, 2023 from the 1816-23001-04, F&BI 312054 project. There are 35 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days, or as directed by the Chain of Custody document. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures

c: Neil Woller, Paul Trone, Evan Bruggeman
ENW1220R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on December 5, 2023 by Friedman & Bruya, Inc. from the Evren Northwest 1816-23001-04, F&BI 312054 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>Evren Northwest</u>
312054 -01	DU04-231204-0.5-IS
312054 -02	DU04-231204-2.5-IS
312054 -03	DU03-231204-0.5-IS
312054 -04	DU03-231204-0.5-IS-Rep01
312054 -05	DU03-231204-0.5-IS-Rep02
312054 -06	DU03-231204-2.5-IS
312054 -07	DU01-231204-0.5-IS
312054 -08	DU01-231204-2.5-IS

Sample DU04-231204-0.5-IS was sent to Fremont Analytical for hexavalent chromium analysis. The report is enclosed.

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/20/23

Date Received: 12/05/23

Project: 1816-23001-04, F&BI 312054

Date Extracted: 12/06/23

Date Analyzed: 12/06/23

**RESULTS FROM THE ANALYSIS OF SOIL SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL AND MOTOR OIL
USING METHOD NWTPH-Dx**

Results Reported on a Dry Weight Basis

Results Reported as mg/kg (ppm)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>Motor Oil Range</u> (C ₂₅ -C ₃₆)	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 50-150)
DU04-231204-0.5-IS 312054-01	18 x	260	81
DU04-231204-2.5-IS 312054-02	<5	35	78
DU03-231204-0.5-IS 312054-03	<5	31	91
DU03-231204-0.5-IS-Rep01 312054-04	<5	28	72
DU03-231204-0.5-IS-Rep02 312054-05	<5	28	75
DU03-231204-2.5-IS 312054-06	<5	<25	76
DU01-231204-0.5-IS 312054-07	7.9 x	50	83
DU01-231204-2.5-IS 312054-08	<5	<25	70
Method Blank 03-2816 MB	<5	<25	86

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	DU04-231204-0.5-IS	Client:	Evren Northwest
Date Received:	12/05/23	Project:	1816-23001-04, F&BI 312054
Date Extracted:	12/06/23	Lab ID:	312054-01
Date Analyzed:	12/06/23	Data File:	312054-01.093
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
----------	------------------------------

Arsenic	2.59
Barium	175
Cadmium	0.636
Lead	115
Mercury	<0.2
Selenium	<1
Silver	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	DU04-231204-0.5-IS	Client:	Evren Northwest
Date Received:	12/05/23	Project:	1816-23001-04, F&BI 312054
Date Extracted:	12/06/23	Lab ID:	312054-01 x5
Date Analyzed:	12/06/23	Data File:	312054-01 x5.109
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
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Chromium	197
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	DU04-231204-2.5-IS	Client:	Evren Northwest
Date Received:	12/05/23	Project:	1816-23001-04, F&BI 312054
Date Extracted:	12/06/23	Lab ID:	312054-02
Date Analyzed:	12/06/23	Data File:	312054-02.094
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
----------	------------------------------

Arsenic	3.16
Barium	203
Cadmium	0.462
Lead	29.6
Mercury	<0.2
Selenium	<1
Silver	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	DU04-231204-2.5-IS	Client:	Evren Northwest
Date Received:	12/05/23	Project:	1816-23001-04, F&BI 312054
Date Extracted:	12/06/23	Lab ID:	312054-02 x5
Date Analyzed:	12/06/23	Data File:	312054-02 x5.117
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
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Chromium	22.7
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	DU03-231204-0.5-IS	Client:	Evren Northwest
Date Received:	12/05/23	Project:	1816-23001-04, F&BI 312054
Date Extracted:	12/06/23	Lab ID:	312054-03
Date Analyzed:	12/06/23	Data File:	312054-03.095
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
----------	------------------------------

Arsenic	1.70
Barium	135
Cadmium	0.364
Lead	10.5
Mercury	<0.2
Selenium	<1
Silver	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	DU03-231204-0.5-IS	Client:	Evren Northwest
Date Received:	12/05/23	Project:	1816-23001-04, F&BI 312054
Date Extracted:	12/06/23	Lab ID:	312054-03 x5
Date Analyzed:	12/06/23	Data File:	312054-03 x5.118
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
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Chromium	43.0
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	DU03-231204-0.5-IS-Rep01	Client:	Evren Northwest
Date Received:	12/05/23	Project:	1816-23001-04, F&BI 312054
Date Extracted:	12/06/23	Lab ID:	312054-04
Date Analyzed:	12/06/23	Data File:	312054-04.096
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
----------	------------------------------

Arsenic	2.02
Barium	163
Cadmium	0.50
Lead	19.4
Mercury	<0.2
Selenium	<1
Silver	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	DU03-231204-0.5-IS-Rep01	Client:	Evren Northwest
Date Received:	12/05/23	Project:	1816-23001-04, F&BI 312054
Date Extracted:	12/06/23	Lab ID:	312054-04 x5
Date Analyzed:	12/06/23	Data File:	312054-04 x5.119
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
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Chromium	28.3
----------	------

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	DU03-231204-0.5-IS-Rep02	Client:	Evren Northwest
Date Received:	12/05/23	Project:	1816-23001-04, F&BI 312054
Date Extracted:	12/06/23	Lab ID:	312054-05
Date Analyzed:	12/06/23	Data File:	312054-05.097
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
----------	------------------------------

Arsenic	2.69
Barium	150
Cadmium	0.413
Lead	12.7
Mercury	<0.2
Selenium	<1
Silver	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	DU03-231204-0.5-IS-Rep02	Client:	Evren Northwest
Date Received:	12/05/23	Project:	1816-23001-04, F&BI 312054
Date Extracted:	12/06/23	Lab ID:	312054-05 x5
Date Analyzed:	12/06/23	Data File:	312054-05 x5.120
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
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Chromium	18.5
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	DU03-231204-2.5-IS	Client:	Evren Northwest
Date Received:	12/05/23	Project:	1816-23001-04, F&BI 312054
Date Extracted:	12/06/23	Lab ID:	312054-06
Date Analyzed:	12/06/23	Data File:	312054-06.106
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
----------	------------------------------

Arsenic	4.06
Barium	164
Cadmium	0.290
Lead	10.3
Mercury	<0.2
Selenium	<1
Silver	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	DU03-231204-2.5-IS	Client:	Evren Northwest
Date Received:	12/05/23	Project:	1816-23001-04, F&BI 312054
Date Extracted:	12/06/23	Lab ID:	312054-06 x5
Date Analyzed:	12/06/23	Data File:	312054-06 x5.121
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
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Chromium	24.6
----------	------

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	DU01-231204-0.5-IS	Client:	Evren Northwest
Date Received:	12/05/23	Project:	1816-23001-04, F&BI 312054
Date Extracted:	12/06/23	Lab ID:	312054-07
Date Analyzed:	12/06/23	Data File:	312054-07.107
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
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Arsenic	2.03
Barium	147
Cadmium	0.253
Lead	11.2
Mercury	<0.2
Selenium	<1
Silver	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	DU01-231204-0.5-IS	Client:	Evren Northwest
Date Received:	12/05/23	Project:	1816-23001-04, F&BI 312054
Date Extracted:	12/06/23	Lab ID:	312054-07 x5
Date Analyzed:	12/06/23	Data File:	312054-07 x5.133
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
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Chromium	35.8
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	DU01-231204-2.5-IS	Client:	Evren Northwest
Date Received:	12/05/23	Project:	1816-23001-04, F&BI 312054
Date Extracted:	12/06/23	Lab ID:	312054-08
Date Analyzed:	12/06/23	Data File:	312054-08.108
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
----------	------------------------------

Arsenic	5.71
Barium	160
Cadmium	0.301
Lead	10.4
Mercury	<0.2
Selenium	<1
Silver	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	DU01-231204-2.5-IS	Client:	Evren Northwest
Date Received:	12/05/23	Project:	1816-23001-04, F&BI 312054
Date Extracted:	12/06/23	Lab ID:	312054-08 x5
Date Analyzed:	12/06/23	Data File:	312054-08 x5.134
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
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Chromium	15.6
----------	------

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	Method Blank	Client:	Evren Northwest
Date Received:	NA	Project:	1816-23001-04, F&BI 312054
Date Extracted:	12/06/23	Lab ID:	I3-959 mb
Date Analyzed:	12/06/23	Data File:	I3-959 mb.044
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Barium	<1
Cadmium	<0.2
Chromium	<1
Lead	<1
Mercury	<0.2
Selenium	<1
Silver	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis for TCLP Metals By EPA Method 6020B and 1311

Client ID:	DU04-231204-0.5-IS	Client:	Evren Northwest
Date Received:	12/05/23	Project:	1816-23001-04, F&BI 312054
Date Extracted:	12/14/23	Lab ID:	312054-01 x0.1
Date Analyzed:	12/18/23	Data File:	312054-01 x0.1.082
Matrix:	Soil/Solid	Instrument:	ICPMS2
Units:	mg/L (ppm)	Operator:	SP

Analyte:	Concentration mg/L (ppm)	TCLP Limit
Chromium	<1	5.0
Lead	<0.015	5.0

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis for TCLP Metals By EPA Method 6020B and 1311

Client ID:	Method Blank	Client:	Evren Northwest
Date Received:	NA	Project:	1816-23001-04, F&BI 312054
Date Extracted:	12/14/23	Lab ID:	I3-991 mb x0.1
Date Analyzed:	12/18/23	Data File:	I3-991 mb x0.1.081
Matrix:	Soil/Solid	Instrument:	ICPMS2
Units:	mg/L (ppm)	Operator:	SP

Analyte:	Concentration mg/L (ppm)	TCLP Limit
Chromium	<1	5.0
Lead	<0.015	5.0

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	DU04-231204-0.5-IS	Client:	Evren Northwest
Date Received:	12/05/23	Project:	1816-23001-04, F&BI 312054
Date Extracted:	12/07/23	Lab ID:	312054-01 1/30
Date Analyzed:	12/07/23	Data File:	120713.D
Matrix:	Soil	Instrument:	GC9
Units:	mg/kg (ppm) Dry Weight	Operator:	AL

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Tetrachlorometaxylene	93	11	184
Decachlorobiphenyl	80	25	127

Compounds:	Concentration mg/kg (ppm)
Aroclor 1221	<0.02
Aroclor 1232	<0.02
Aroclor 1016	<0.02
Aroclor 1242	<0.02
Aroclor 1248	<0.02
Aroclor 1254	0.036
Aroclor 1260	0.059
Aroclor 1262	<0.02
Aroclor 1268	<0.02

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	DU04-231204-2.5-IS	Client:	Evren Northwest
Date Received:	12/05/23	Project:	1816-23001-04, F&BI 312054
Date Extracted:	12/07/23	Lab ID:	312054-02 1/30
Date Analyzed:	12/07/23	Data File:	120714.D
Matrix:	Soil	Instrument:	GC9
Units:	mg/kg (ppm) Dry Weight	Operator:	AL

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Tetrachlorometaxylene	92	11	184
Decachlorobiphenyl	82	25	127

Compounds:	Concentration mg/kg (ppm)
Aroclor 1221	<0.02
Aroclor 1232	<0.02
Aroclor 1016	<0.02
Aroclor 1242	<0.02
Aroclor 1248	<0.02
Aroclor 1254	<0.02
Aroclor 1260	<0.02
Aroclor 1262	<0.02
Aroclor 1268	<0.02

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	DU03-231204-0.5-IS	Client:	Evren Northwest
Date Received:	12/05/23	Project:	1816-23001-04, F&BI 312054
Date Extracted:	12/07/23	Lab ID:	312054-03 1/30
Date Analyzed:	12/07/23	Data File:	120715.D
Matrix:	Soil	Instrument:	GC9
Units:	mg/kg (ppm) Dry Weight	Operator:	AL

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Tetrachlorometaxylene	90	11	184
Decachlorobiphenyl	87	25	127

Compounds:	Concentration mg/kg (ppm)
Aroclor 1221	<0.02
Aroclor 1232	<0.02
Aroclor 1016	<0.02
Aroclor 1242	<0.02
Aroclor 1248	<0.02
Aroclor 1254	0.025
Aroclor 1260	<0.02
Aroclor 1262	<0.02
Aroclor 1268	<0.02

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	DU03-231204-0.5-IS-Rep01	Client:	Evren Northwest
Date Received:	12/05/23	Project:	1816-23001-04, F&BI 312054
Date Extracted:	12/07/23	Lab ID:	312054-04 1/30
Date Analyzed:	12/07/23	Data File:	120716.D
Matrix:	Soil	Instrument:	GC9
Units:	mg/kg (ppm) Dry Weight	Operator:	AL

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Tetrachlorometaxylene	95	11	184
Decachlorobiphenyl	90	25	127

Compounds:	Concentration mg/kg (ppm)
Aroclor 1221	<0.02
Aroclor 1232	<0.02
Aroclor 1016	<0.02
Aroclor 1242	<0.02
Aroclor 1248	<0.02
Aroclor 1254	0.029
Aroclor 1260	<0.02
Aroclor 1262	<0.02
Aroclor 1268	<0.02

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	DU03-231204-0.5-IS-Rep02	Client:	Evren Northwest
Date Received:	12/05/23	Project:	1816-23001-04, F&BI 312054
Date Extracted:	12/07/23	Lab ID:	312054-05 1/30
Date Analyzed:	12/07/23	Data File:	120717.D
Matrix:	Soil	Instrument:	GC9
Units:	mg/kg (ppm) Dry Weight	Operator:	AL

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Tetrachlorometaxylene	85	11	184
Decachlorobiphenyl	81	25	127

Compounds:	Concentration mg/kg (ppm)
Aroclor 1221	<0.02
Aroclor 1232	<0.02
Aroclor 1016	<0.02
Aroclor 1242	<0.02
Aroclor 1248	<0.02
Aroclor 1254	0.038
Aroclor 1260	<0.02
Aroclor 1262	<0.02
Aroclor 1268	<0.02

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	DU03-231204-2.5-IS	Client:	Evren Northwest
Date Received:	12/05/23	Project:	1816-23001-04, F&BI 312054
Date Extracted:	12/07/23	Lab ID:	312054-06 1/30
Date Analyzed:	12/07/23	Data File:	120718.D
Matrix:	Soil	Instrument:	GC9
Units:	mg/kg (ppm) Dry Weight	Operator:	AL

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Tetrachlorometaxylene	86	11	184
Decachlorobiphenyl	83	25	127

Compounds:	Concentration mg/kg (ppm)
Aroclor 1221	<0.02
Aroclor 1232	<0.02
Aroclor 1016	<0.02
Aroclor 1242	<0.02
Aroclor 1248	<0.02
Aroclor 1254	<0.02
Aroclor 1260	<0.02
Aroclor 1262	<0.02
Aroclor 1268	<0.02

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	DU01-231204-0.5-IS	Client:	Evren Northwest
Date Received:	12/05/23	Project:	1816-23001-04, F&BI 312054
Date Extracted:	12/07/23	Lab ID:	312054-07 1/30
Date Analyzed:	12/07/23	Data File:	120719.D
Matrix:	Soil	Instrument:	GC9
Units:	mg/kg (ppm) Dry Weight	Operator:	AL

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Tetrachlorometaxylene	92	11	184
Decachlorobiphenyl	85	25	127

Compounds:	Concentration mg/kg (ppm)
Aroclor 1221	<0.02
Aroclor 1232	<0.02
Aroclor 1016	<0.02
Aroclor 1242	<0.02
Aroclor 1248	<0.02
Aroclor 1254	<0.02
Aroclor 1260	<0.02
Aroclor 1262	<0.02
Aroclor 1268	<0.02

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	DU01-231204-2.5-IS	Client:	Evren Northwest
Date Received:	12/05/23	Project:	1816-23001-04, F&BI 312054
Date Extracted:	12/07/23	Lab ID:	312054-08 1/30
Date Analyzed:	12/08/23	Data File:	120720.D
Matrix:	Soil	Instrument:	GC9
Units:	mg/kg (ppm) Dry Weight	Operator:	AL

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Tetrachlorometaxylene	89	11	184
Decachlorobiphenyl	81	25	127

Compounds:	Concentration mg/kg (ppm)
Aroclor 1221	<0.02
Aroclor 1232	<0.02
Aroclor 1016	<0.02
Aroclor 1242	<0.02
Aroclor 1248	<0.02
Aroclor 1254	<0.02
Aroclor 1260	<0.02
Aroclor 1262	<0.02
Aroclor 1268	<0.02

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	Method Blank	Client:	Evren Northwest
Date Received:	Not Applicable	Project:	1816-23001-04, F&BI 312054
Date Extracted:	12/07/23	Lab ID:	03-2820 mb 1/30
Date Analyzed:	12/07/23	Data File:	120705.D
Matrix:	Soil	Instrument:	GC9
Units:	mg/kg (ppm) Dry Weight	Operator:	AL

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Tetrachlorometaxylene	107	11	184
Decachlorobiphenyl	103	25	127

Compounds:	Concentration mg/kg (ppm)
Aroclor 1221	<0.02
Aroclor 1232	<0.02
Aroclor 1016	<0.02
Aroclor 1242	<0.02
Aroclor 1248	<0.02
Aroclor 1254	<0.02
Aroclor 1260	<0.02
Aroclor 1262	<0.02
Aroclor 1268	<0.02

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/20/23

Date Received: 12/05/23

Project: 1816-23001-04, F&BI 312054

**QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL EXTENDED USING METHOD NWTPH-D_x**

Laboratory Code: 312054-08 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet Wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	500	<5	90	83	63-146	8

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	500	91	77-123

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/20/23

Date Received: 12/05/23

Project: 1816-23001-04, F&BI 312054

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 6020B

Laboratory Code: 311416-01 x5 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	mg/kg (ppm)	10	<5	83	83	70-130	0
Barium	mg/kg (ppm)	50	21.3	90 b	97 b	70-130	7 b
Cadmium	mg/kg (ppm)	10	<5	97	93	70-130	4
Chromium	mg/kg (ppm)	50	12.6	83 b	89 b	70-130	7 b
Lead	mg/kg (ppm)	50	<5	94	95	70-130	1
Mercury	mg/kg (ppm)	5	<5	93	93	70-130	0
Selenium	mg/kg (ppm)	5	<5	91	92	70-130	1
Silver	mg/kg (ppm)	10	<5	88	85	70-130	3

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	mg/kg (ppm)	10	89	85-115
Barium	mg/kg (ppm)	50	93	85-115
Cadmium	mg/kg (ppm)	10	97	85-115
Chromium	mg/kg (ppm)	50	102	85-115
Lead	mg/kg (ppm)	50	91	85-115
Mercury	mg/kg (ppm)	5	91	85-115
Selenium	mg/kg (ppm)	5	93	85-115
Silver	mg/kg (ppm)	10	94	85-115

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/20/23

Date Received: 12/05/23

Project: 1816-23001-04, F&BI 312054

**QUALITY ASSURANCE RESULTS
FOR THE ANALYSIS OF SOIL/SOLID SAMPLES
FOR TCLP METALS USING
EPA METHODS 6020B AND 1311**

Laboratory Code: 312223-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Chromium	mg/L (ppm)	2.0	<1	98	99	75-125	1
Lead	mg/L (ppm)	1.0	<1	92	93	75-125	1

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Chromium	mg/L (ppm)	2.0	95	80-120
Lead	mg/L (ppm)	1.0	91	80-120

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/20/23

Date Received: 12/05/23

Project: 1816-23001-04, F&BI 312054

**QUALITY ASSURANCE RESULTS
FOR THE ANALYSIS OF SOIL SAMPLES FOR
POLYCHLORINATED BIPHENYLS AS
AROCOR 1016/1260 BY EPA METHOD 8082A**

Laboratory Code: 312038-02 1/30 (Matrix Spike) 1/30

Analyte	Reporting Units	Spike Level	Sample Result (Wet Wt)	Percent Recovery MS	Percent Recovery MSD	Control Limits	RPD (Limit 20)
Aroclor 1016	mg/kg (ppm)	0.25	<0.02	87	92	24-163	6
Aroclor 1260	mg/kg (ppm)	0.25	<0.02	78	83	10-194	6

Laboratory Code: Laboratory Control Sample 1/30

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Aroclor 1016	mg/kg (ppm)	0.25	94	47-158
Aroclor 1260	mg/kg (ppm)	0.25	84	69-141

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

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

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for the analyte were outside of acceptance criteria, biased low; or, the calibration results for the analyte were outside of acceptance criteria, biased high, with a detection for the analyte in the sample. The value reported is an estimate.

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

cf - The sample was centrifuged prior to analysis.

d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.

dv - Insufficient sample volume was available to achieve normal reporting limits.

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

fc - The analyte is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.

hs - Headspace was present in the container used for analysis.

ht - The analysis was performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of control limits due to sample matrix effects.

j - The analyte concentration is reported below the standard reporting limit. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

k - The calibration results for the analyte were outside of acceptance criteria, biased high, and the analyte was not detected in the sample.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

312054

SAMPLE CHAIN OF CUSTODY

12/05/23 ISM/F11

Page # of 1

Report To Lynn Green

Company EVREN-NW

Address 40 SE 24th Ave

City, State, ZIP Portland, Oregon 97214

Phone 503-452-5561 Email lynn@green-nw.com

SAMPLELERS (signature)

PROJECT NAME

1816-23001-04

PO #

REMARKS

INVOICE TO

Project Specific RIs Yes / No

TURNAROUND TIME

Standard Turnaround

RUSH

Rush charges authorized by:

SAMPLE DISPOSAL

Dispose after 30 days

Archive Samples

Other

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	ANALYSES REQUESTED										Notes
						NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	PCBs EPA 8082	PCBs EPA 8082	PCBs EPA 8082	PCBs EPA 8082	
D004-231204-0.5-LS	01	12-04-23	11:40	Soil	1	X					X	X	X	X	X	
D004-231204-2.5-LS	02	12-04-23	11:40	Soil	1	X					X	X	X	X	X	
D003-231204-0.5-LS	03	12-04-23	12:17	Soil	1	X					X	X	X	X	X	
D003-231204-0.5-LS-Rep1	04	12-04-23	12:17	Soil	1	X					X	X	X	X	X	
D003-231204-0.5-LS-Rep2	05	12-04-23	12:17	Soil	1	X					X	X	X	X	X	
D003-231204-2.5-LS	06	12-04-23	13:04	Soil	1	X					X	X	X	X	X	
D001-231204-0.5-LS	07	12-04-23	14:01	Soil	1	X					X	X	X	X	X	
D001-231204-2.5-LS	08	12-04-23	14:01	Soil	1	X					X	X	X	X	X	
Samples received at 3:00																

SIGNATURE

PRINT NAME

COMPANY

DATE

TIME

Friedman & Bruya, Inc.

3012 16th Avenue West

Seattle, WA 98119-2029

Ph. (206) 285-8282

Relinquished by:

Jordan Morris

Evan Morris

12-04-23

18:00

Received by:

ANH PHAN

F86

12/05/23

10:00

Relinquished by:

Received by:



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

Friedman & Bruya
Michael Erdahl
5500 4th Ave S
Seattle, WA 98108

RE: 312054
Work Order Number: 2312297

December 18, 2023

Attention Michael Erdahl:

Fremont Analytical, Inc. received 1 sample(s) on 12/12/2023 for the analyses presented in the following report.

Hexavalent Chromium by EPA Method 7196
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

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

Original

www.fremontanalytical.com



CLIENT: Friedman & Bruya
Project: 312054
Work Order: 2312297

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
2312297-001	DU04-231204-0.5-IS	12/04/2023 11:40 AM	12/12/2023 3:07 PM

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

CLIENT: Friedman & Bruya

Project: 312054

I. SAMPLE RECEIPT:

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

II. GENERAL REPORTING COMMENTS:

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

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

III. ANALYSES AND EXCEPTIONS:

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

Qualifiers:

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

Acronyms:

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

CLIENT: Friedman & Bruya
Project: 312054

Lab ID: 2312297-001

Collection Date: 12/4/2023 11:40:00 AM

Client Sample ID: DU04-231204-0.5-IS

Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<u>Sample Moisture (Percent Moisture)</u>				Batch ID: R88311		Analyst: MP
Percent Moisture	17.0	0.500		wt%	1	12/13/2023 8:29:41 AM
<u>Hexavalent Chromium by EPA Method 7196</u>				Batch ID: 42340		Analyst: ME
Chromium, Hexavalent	ND	0.603		mg/Kg-dry	1	12/15/2023 4:37:00 PM

Work Order: 2312297
CLIENT: Friedman & Bruya
Project: 312054

QC SUMMARY REPORT

Hexavalent Chromium by EPA Method 7196

Sample ID: MB-42340	SampType: MBLK	Units: mg/Kg			Prep Date: 12/14/2023			RunNo: 88391			
Client ID: MBLKS	Batch ID: 42340				Analysis Date: 12/15/2023			SeqNo: 1845781			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium, Hexavalent	ND	0.500									
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Sample ID: LCS-42340	SampType: LCS	Units: mg/Kg			Prep Date: 12/14/2023			RunNo: 88391			
Client ID: LCSS	Batch ID: 42340	Analysis Date: 12/15/2023						SeqNo: 1845782			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium, Hexavalent	10.3	0.500	12.87	0	80.2	66.6	106.6				
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Sample ID: 2312230-001ADUP	SampType: DUP	Units: mg/Kg			Prep Date: 12/14/2023			RunNo: 88391			
Client ID: BATCH	Batch ID: 42340				Analysis Date: 12/15/2023			SeqNo: 1845787			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium, Hexavalent	2.86	0.500						1.947	38.0	30	
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Sample ID: 2312230-001AMS1		SampType: MS		Units: mg/Kg		Prep Date: 12/14/2023			RunNo: 88391		
Client ID: BATCH		Batch ID: 42340		Analysis Date: 12/15/2023					SeqNo: 1845788		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium, Hexavalent	11.3	0.481	12.38	1.947	75.6	5	143				
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Sample ID: 2312230-001AMS2		SampType: MS		Units: mg/Kg		Prep Date: 12/14/2023			RunNo: 88391		
Client ID: BATCH		Batch ID: 42340					Analysis Date: 12/15/2023			SeqNo: 1845789	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium, Hexavalent	11.2	0.481	9.615	1.947	95.9	5	143				
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Sample Log-In Check List

Client Name: FB

Work Order Number: 2312297

Logged by: Morgan Wilson

Date Received: 12/12/2023 3:07:00 PM

Chain of Custody

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

Log In

3. 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 hold times (except field parameters, pH e.g.) 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	1.0

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Vineta Mills, M.S.
Eric Young, B.S.

5500 4th Avenue South
Seattle, WA 98108
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

December 27, 2023

Lynn Green, Project Manager
Evren Northwest, Inc.
PO Box 14488
Portland, OR 97293

Dear Mr Green:

Included is the amended report from the testing of material submitted on December 6, 2023 from the 1816-23001-04, F&BI 312081 project. Per your request, the sample IDs have been updated to DU02 from DU03.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures

c: Neil Woller, Paul Trone, Evan Bruggeman
ENW1214R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
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Eric Young, B.S.

5500 4th Avenue South
Seattle, WA 98108
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

December 14, 2023

Lynn Green, Project Manager
Evren Northwest, Inc.
PO Box 14488
Portland, OR 97293

Dear Mr Green:

Included are the results from the testing of material submitted on December 6, 2023 from the 1816-23001-04, F&BI 312081 project. There are 14 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days, or as directed by the Chain of Custody document. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures

c: Neil Woller, Paul Trone, Evan Bruggeman
ENW1214R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on December 6, 2023 by Friedman & Bruya, Inc. from the Evren Northwest 1816-23001-04, F&BI 312081 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>Evren Northwest</u>
312081 -01	DU02-231205-0.5-IS
312081 -02	DU02-231205-2.5-IS

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/14/23
Date Received: 12/06/23
Project: 1816-23001-04, F&BI 312081
Date Extracted: 12/07/23
Date Analyzed: 12/07/23

**RESULTS FROM THE ANALYSIS OF SOIL SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL AND RESIDUAL RANGE
USING METHOD NWTPH-D_x**

Results Reported on a Dry Weight Basis

Results Reported as mg/kg (ppm)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>Residual Range</u> (C ₂₅ -C ₃₆)	Surrogate <u>(% Recovery)</u> (Limit 50-150)
DU02-231205-0.5-IS 312081-01	5.9 x	58	90
DU02-231205-2.5-IS 312081-02	7.1 x	110	91
Method Blank 03-2816 MB2	<5	<25	106

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	DU02-231205-0.5-IS	Client:	Evren Northwest
Date Received:	12/06/23	Project:	1816-23001-04, F&BI 312081
Date Extracted:	12/07/23	Lab ID:	312081-01
Date Analyzed:	12/07/23	Data File:	312081-01.055
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
----------	------------------------------

Arsenic	1.66
Barium	130
Cadmium	0.268
Lead	19.7
Mercury	<0.2
Selenium	<1
Silver	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	DU02-231205-0.5-IS	Client:	Evren Northwest
Date Received:	12/06/23	Project:	1816-23001-04, F&BI 312081
Date Extracted:	12/07/23	Lab ID:	312081-01 x5
Date Analyzed:	12/08/23	Data File:	312081-01 x5.040
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
----------	------------------------------

Chromium	12.8
----------	------

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	DU02-231205-2.5-IS	Client:	Evren Northwest
Date Received:	12/06/23	Project:	1816-23001-04, F&BI 312081
Date Extracted:	12/07/23	Lab ID:	312081-02
Date Analyzed:	12/07/23	Data File:	312081-02.056
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
----------	------------------------------

Arsenic	1.96
Barium	130
Cadmium	0.240
Lead	20.1
Mercury	<0.2
Selenium	<1
Silver	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	DU02-231205-2.5-IS	Client:	Evren Northwest
Date Received:	12/06/23	Project:	1816-23001-04, F&BI 312081
Date Extracted:	12/07/23	Lab ID:	312081-02 x5
Date Analyzed:	12/08/23	Data File:	312081-02 x5.041
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
----------	------------------------------

Chromium	14.0
----------	------

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	Method Blank	Client:	Evren Northwest
Date Received:	NA	Project:	1816-23001-04, F&BI 312081
Date Extracted:	12/07/23	Lab ID:	I3-959 mb2
Date Analyzed:	12/07/23	Data File:	I3-959 mb2.047
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
----------	------------------------------

Arsenic	<1
Barium	<1
Cadmium	<0.2
Chromium	<1
Lead	<1
Mercury	<0.2
Selenium	<1
Silver	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	DU02-231205-0.5-IS	Client:	Evren Northwest
Date Received:	12/06/23	Project:	1816-23001-04, F&BI 312081
Date Extracted:	12/07/23	Lab ID:	312081-01 1/30
Date Analyzed:	12/08/23	Data File:	120721.D
Matrix:	Soil	Instrument:	GC9
Units:	mg/kg (ppm) Dry Weight	Operator:	AL

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Tetrachlorometaxylene	94	11	184
Decachlorobiphenyl	86	25	127

Compounds:	Concentration mg/kg (ppm)
Aroclor 1221	<0.02
Aroclor 1232	<0.02
Aroclor 1016	<0.02
Aroclor 1242	<0.02
Aroclor 1248	<0.02
Aroclor 1254	<0.02
Aroclor 1260	<0.02
Aroclor 1262	<0.02
Aroclor 1268	<0.02

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	DU02-231205-2.5-IS	Client:	Evren Northwest
Date Received:	12/06/23	Project:	1816-23001-04, F&BI 312081
Date Extracted:	12/07/23	Lab ID:	312081-02 1/30
Date Analyzed:	12/08/23	Data File:	120722.D
Matrix:	Soil	Instrument:	GC9
Units:	mg/kg (ppm) Dry Weight	Operator:	AL

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Tetrachlorometaxylene	94	11	184
Decachlorobiphenyl	83	25	127

Compounds:	Concentration mg/kg (ppm)
Aroclor 1221	<0.02
Aroclor 1232	<0.02
Aroclor 1016	<0.02
Aroclor 1242	<0.02
Aroclor 1248	<0.02
Aroclor 1254	<0.02
Aroclor 1260	<0.02
Aroclor 1262	<0.02
Aroclor 1268	<0.02

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	Method Blank	Client:	Evren Northwest
Date Received:	Not Applicable	Project:	1816-23001-04, F&BI 312081
Date Extracted:	12/07/23	Lab ID:	03-2820 mb 1/30
Date Analyzed:	12/07/23	Data File:	120705.D
Matrix:	Soil	Instrument:	GC9
Units:	mg/kg (ppm) Dry Weight	Operator:	AL

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Tetrachlorometaxylene	107	11	184
Decachlorobiphenyl	103	25	127

Compounds:	Concentration mg/kg (ppm)
Aroclor 1221	<0.02
Aroclor 1232	<0.02
Aroclor 1016	<0.02
Aroclor 1242	<0.02
Aroclor 1248	<0.02
Aroclor 1254	<0.02
Aroclor 1260	<0.02
Aroclor 1262	<0.02
Aroclor 1268	<0.02

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/14/23

Date Received: 12/06/23

Project: 1816-23001-04, F&BI 312081

**QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL EXTENDED USING METHOD NWTPH-D_x**

Laboratory Code: 312054-08 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet Wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	1,000	<5	90	83	63-146	8

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	1,000	91	77-123

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/14/23

Date Received: 12/06/23

Project: 1816-23001-04, F&BI 312081

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 6020B

Laboratory Code: 312071-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	mg/kg (ppm)	10	3.56	101 b	88 b	75-125	14 b
Barium	mg/kg (ppm)	50	55.9	92 b	104 b	75-125	12 b
Cadmium	mg/kg (ppm)	10	<1	93	94	75-125	1
Chromium	mg/kg (ppm)	50	12.6	91 b	92 b	75-125	1 b
Lead	mg/kg (ppm)	50	141	0 b	0 b	75-125	nm
Mercury	mg/kg (ppm)	5	<1	78	79	75-125	1
Selenium	mg/kg (ppm)	5	<1	87	87	75-125	0
Silver	mg/kg (ppm)	10	<1	88	89	75-125	1

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	mg/kg (ppm)	10	89	80-120
Barium	mg/kg (ppm)	50	95	80-120
Cadmium	mg/kg (ppm)	10	99	80-120
Chromium	mg/kg (ppm)	50	104	80-120
Lead	mg/kg (ppm)	50	96	80-120
Mercury	mg/kg (ppm)	5	95	80-120
Selenium	mg/kg (ppm)	5	96	80-120
Silver	mg/kg (ppm)	10	98	80-120

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/14/23

Date Received: 12/06/23

Project: 1816-23001-04, F&BI 312081

**QUALITY ASSURANCE RESULTS
FOR THE ANALYSIS OF SOIL SAMPLES FOR
POLYCHLORINATED BIPHENYLS AS
AROCOR 1016/1260 BY EPA METHOD 8082A**

Laboratory Code: 312038-02 1/30 (Matrix Spike) 1/30

Analyte	Reporting Units	Spike Level	Sample Result (Wet Wt)	Percent Recovery MS	Percent Recovery MSD	Control Limits	RPD (Limit 20)
Aroclor 1016	mg/kg (ppm)	0.25	<0.02	87	92	24-163	6
Aroclor 1260	mg/kg (ppm)	0.25	<0.02	78	83	10-194	6

Laboratory Code: Laboratory Control Sample 1/30

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Aroclor 1016	mg/kg (ppm)	0.25	94	47-158
Aroclor 1260	mg/kg (ppm)	0.25	84	69-141

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

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

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for the analyte were outside of acceptance criteria, biased low; or, the calibration results for the analyte were outside of acceptance criteria, biased high, with a detection for the analyte in the sample. The value reported is an estimate.

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

cf - The sample was centrifuged prior to analysis.

d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.

dv - Insufficient sample volume was available to achieve normal reporting limits.

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

fc - The analyte is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.

hs - Headspace was present in the container used for analysis.

ht - The analysis was performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of control limits due to sample matrix effects.

j - The analyte concentration is reported below the standard reporting limit. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

k - The calibration results for the analyte were outside of acceptance criteria, biased high, and the analyte was not detected in the sample.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

12/06/23 ISM/Fg

Page # 1 of 1

Company EVREN-NW

Address 40 SE 24th Ave

City, State, ZIP Portland, Oregon 97214

Phone 503-452-5561 Email lynng@evren-nw.com

SAMPLERS (signature)	
PROJECT NAME	PO #
1816-23001-09	
REMARKS	INVOICE TO
Project Specific RLS - Yes / No	

TURNAROUND TIME
Standard Turnaround
RUSH _____
Rush charges authorized by: _____
SAMPLE DISPOSAL
Dispose after 30 days
Archive Samples
Other _____

[illegible]

Friedman & Bruya, Inc.

3012 16th Avenue West

Seattle, WA 98119-2029

Ph. (206) 285-8282

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
	Jorden Adams	Evern Northwest	12-05-23	18:00
	JADEN	FSB	12/06/23	10:50
Relinquished by:				
Received by:				
Relinquished by:				
Received by:				

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Vineta Mills, M.S.
Eric Young, B.S.

5500 4th Avenue South
Seattle, WA 98108
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

December 8, 2023

Lynn Green, Project Manager
Evren Northwest, Inc.
PO Box 14488
Portland, OR 97293

Dear Mr Green:

Included are the results from the testing of material submitted on December 1, 2023 from the 1816-23001-04, F&BI 312015 project. There are 25 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days, or as directed by the Chain of Custody document. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures

c: Neil Woller, Paul Trone, Evan Bruggeman
ENW1208R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on December 1, 2023 by Friedman & Bruya, Inc. from the Evren Northwest 1816-23001-04, F&BI 312015 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>Evren Northwest</u>
312015 -01	EB08-2
312015 -02	EB08-10
312015 -03	EB09-2
312015 -04	EB09-8
312015 -05	EB10-2
312015 -06	EB10-7

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/08/23

Date Received: 12/01/23

Project: 1816-23001-04, F&BI 312015

Date Extracted: 12/01/23

Date Analyzed: 12/01/23

**RESULTS FROM THE ANALYSIS OF SOIL SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL AND RESIDUAL RANGE
USING METHOD NWTPH-D_x**

Results Reported on a Dry Weight Basis

Results Reported as mg/kg (ppm)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>Residual Range</u> (C ₂₅ -C ₃₆)	Surrogate (% Recovery) (Limit 50-150)
EB08-2 312015-01	<50	<250	84
EB08-10 310215-02	<50	<250	83
EB09-2 310215-03	<50	<250	87
EB09-8 310215-04	<50	<250	83
EB10-2 310215-05	<50	<250	85
EB10-7 310215-06	<50	<250	86
Method Blank 03-2778 MB	<50	<250	83

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	EB08-2	Client:	Evren Northwest
Date Received:	12/01/23	Project:	1816-23001-04, F&BI 312015
Date Extracted:	12/01/23	Lab ID:	312015-01
Date Analyzed:	12/01/23	Data File:	312015-01.124
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
----------	------------------------------

Arsenic	2.84
Barium	168
Cadmium	<1
Lead	7.32
Mercury	<1
Selenium	<1
Silver	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	EB08-2	Client:	Evren Northwest
Date Received:	12/01/23	Project:	1816-23001-04, F&BI 312015
Date Extracted:	12/01/23	Lab ID:	312015-01 x5
Date Analyzed:	12/04/23	Data File:	312015-01 x5.113
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
----------	------------------------------

Chromium	19.3
----------	------

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	EB08-10	Client:	Evren Northwest
Date Received:	12/01/23	Project:	1816-23001-04, F&BI 312015
Date Extracted:	12/01/23	Lab ID:	312015-02
Date Analyzed:	12/01/23	Data File:	312015-02.125
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
----------	------------------------------

Arsenic	3.28
Barium	122
Cadmium	<1
Lead	4.08
Mercury	<1
Selenium	<1
Silver	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	EB08-10	Client:	Evren Northwest
Date Received:	12/01/23	Project:	1816-23001-04, F&BI 312015
Date Extracted:	12/01/23	Lab ID:	312015-02 x5
Date Analyzed:	12/04/23	Data File:	312015-02 x5.114
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
----------	------------------------------

Chromium	10.8
----------	------

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	EB09-2	Client:	Evren Northwest
Date Received:	12/01/23	Project:	1816-23001-04, F&BI 312015
Date Extracted:	12/01/23	Lab ID:	312015-03
Date Analyzed:	12/01/23	Data File:	312015-03.126
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
----------	------------------------------

Arsenic	5.73
Barium	186
Cadmium	<1
Lead	5.18
Mercury	<1
Selenium	<1
Silver	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	EB09-2	Client:	Evren Northwest
Date Received:	12/01/23	Project:	1816-23001-04, F&BI 312015
Date Extracted:	12/01/23	Lab ID:	312015-03 x5
Date Analyzed:	12/04/23	Data File:	312015-03 x5.115
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
----------	------------------------------

Chromium	19.3
----------	------

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	EB09-8	Client:	Evren Northwest
Date Received:	12/01/23	Project:	1816-23001-04, F&BI 312015
Date Extracted:	12/01/23	Lab ID:	312015-04
Date Analyzed:	12/01/23	Data File:	312015-04.127
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
----------	------------------------------

Arsenic	2.39
Barium	150
Cadmium	<1
Lead	3.12
Mercury	<1
Selenium	<1
Silver	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	EB09-8	Client:	Evren Northwest
Date Received:	12/01/23	Project:	1816-23001-04, F&BI 312015
Date Extracted:	12/01/23	Lab ID:	312015-04 x5
Date Analyzed:	12/04/23	Data File:	312015-04 x5.116
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
----------	------------------------------

Chromium	8.32
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	EB10-2	Client:	Evren Northwest
Date Received:	12/01/23	Project:	1816-23001-04, F&BI 312015
Date Extracted:	12/01/23	Lab ID:	312015-05
Date Analyzed:	12/01/23	Data File:	312015-05.128
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
----------	------------------------------

Arsenic	3.07
Barium	149
Cadmium	<1
Lead	7.81
Mercury	<1
Selenium	<1
Silver	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	EB10-2	Client:	Evren Northwest
Date Received:	12/01/23	Project:	1816-23001-04, F&BI 312015
Date Extracted:	12/01/23	Lab ID:	312015-05 x5
Date Analyzed:	12/04/23	Data File:	312015-05 x5.119
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
----------	------------------------------

Chromium	20.9
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	EB10-7	Client:	Evren Northwest
Date Received:	12/01/23	Project:	1816-23001-04, F&BI 312015
Date Extracted:	12/01/23	Lab ID:	312015-06
Date Analyzed:	12/01/23	Data File:	312015-06.129
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
----------	------------------------------

Arsenic	2.33
Barium	148
Cadmium	<1
Lead	2.77
Mercury	<1
Selenium	<1
Silver	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	EB10-7	Client:	Evren Northwest
Date Received:	12/01/23	Project:	1816-23001-04, F&BI 312015
Date Extracted:	12/01/23	Lab ID:	312015-06 x5
Date Analyzed:	12/04/23	Data File:	312015-06 x5.120
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
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Chromium	7.16
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	Method Blank	Client:	Evren Northwest
Date Received:	NA	Project:	1816-23001-04, F&BI 312015
Date Extracted:	12/01/23	Lab ID:	I3-945 mb2
Date Analyzed:	12/01/23	Data File:	I3-945 mb2.087
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
----------	------------------------------

Arsenic	<1
Barium	<1
Cadmium	<1
Chromium	<1
Lead	<1
Mercury	<1
Selenium	<1
Silver	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	EB08-2	Client:	Evren Northwest
Date Received:	12/01/23	Project:	1816-23001-04, F&BI 312015
Date Extracted:	12/01/23	Lab ID:	312015-01 1/30
Date Analyzed:	12/01/23	Data File:	120132.D
Matrix:	Soil	Instrument:	GC9
Units:	mg/kg (ppm) Dry Weight	Operator:	AL

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Tetrachlorometaxylene	80	11	184
Decachlorobiphenyl	81	25	127

Compounds:	Concentration mg/kg (ppm)
Aroclor 1221	<0.02
Aroclor 1232	<0.02
Aroclor 1016	<0.02
Aroclor 1242	<0.02
Aroclor 1248	<0.02
Aroclor 1254	<0.02
Aroclor 1260	<0.02
Aroclor 1262	<0.02
Aroclor 1268	<0.02

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	EB08-10	Client:	Evren Northwest
Date Received:	12/01/23	Project:	1816-23001-04, F&BI 312015
Date Extracted:	12/01/23	Lab ID:	312015-02 1/30
Date Analyzed:	12/01/23	Data File:	120133.D
Matrix:	Soil	Instrument:	GC9
Units:	mg/kg (ppm) Dry Weight	Operator:	AL

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Tetrachlorometaxylene	77	11	184
Decachlorobiphenyl	74	25	127

Compounds:	Concentration mg/kg (ppm)
Aroclor 1221	<0.02
Aroclor 1232	<0.02
Aroclor 1016	<0.02
Aroclor 1242	<0.02
Aroclor 1248	<0.02
Aroclor 1254	<0.02
Aroclor 1260	<0.02
Aroclor 1262	<0.02
Aroclor 1268	<0.02

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	EB09-2	Client:	Evren Northwest
Date Received:	12/01/23	Project:	1816-23001-04, F&BI 312015
Date Extracted:	12/01/23	Lab ID:	312015-03 1/30
Date Analyzed:	12/01/23	Data File:	120134.D
Matrix:	Soil	Instrument:	GC9
Units:	mg/kg (ppm) Dry Weight	Operator:	AL

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Tetrachlorometaxylene	67	11	184
Decachlorobiphenyl	71	25	127

Compounds:	Concentration mg/kg (ppm)
Aroclor 1221	<0.02
Aroclor 1232	<0.02
Aroclor 1016	<0.02
Aroclor 1242	<0.02
Aroclor 1248	<0.02
Aroclor 1254	<0.02
Aroclor 1260	<0.02
Aroclor 1262	<0.02
Aroclor 1268	<0.02

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	EB09-8	Client:	Evren Northwest
Date Received:	12/01/23	Project:	1816-23001-04, F&BI 312015
Date Extracted:	12/01/23	Lab ID:	312015-04 1/30
Date Analyzed:	12/02/23	Data File:	120135.D
Matrix:	Soil	Instrument:	GC9
Units:	mg/kg (ppm) Dry Weight	Operator:	AL

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Tetrachlorometaxylene	100	11	184
Decachlorobiphenyl	90	25	127

Compounds:	Concentration mg/kg (ppm)
Aroclor 1221	<0.02
Aroclor 1232	<0.02
Aroclor 1016	<0.02
Aroclor 1242	<0.02
Aroclor 1248	<0.02
Aroclor 1254	<0.02
Aroclor 1260	<0.02
Aroclor 1262	<0.02
Aroclor 1268	<0.02

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	EB10-2	Client:	Evren Northwest
Date Received:	12/01/23	Project:	1816-23001-04, F&BI 312015
Date Extracted:	12/01/23	Lab ID:	312015-05 1/30
Date Analyzed:	12/02/23	Data File:	120136.D
Matrix:	Soil	Instrument:	GC9
Units:	mg/kg (ppm) Dry Weight	Operator:	AL

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Tetrachlorometaxylene	106	11	184
Decachlorobiphenyl	101	25	127

Compounds:	Concentration mg/kg (ppm)
Aroclor 1221	<0.02
Aroclor 1232	<0.02
Aroclor 1016	<0.02
Aroclor 1242	<0.02
Aroclor 1248	<0.02
Aroclor 1254	<0.02
Aroclor 1260	<0.02
Aroclor 1262	<0.02
Aroclor 1268	<0.02

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	EB10-7	Client:	Evren Northwest
Date Received:	12/01/23	Project:	1816-23001-04, F&BI 312015
Date Extracted:	12/01/23	Lab ID:	312015-06 1/30
Date Analyzed:	12/02/23	Data File:	120137.D
Matrix:	Soil	Instrument:	GC9
Units:	mg/kg (ppm) Dry Weight	Operator:	AL

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Tetrachlorometaxylene	88	11	184
Decachlorobiphenyl	88	25	127

Compounds:	Concentration mg/kg (ppm)
Aroclor 1221	<0.02
Aroclor 1232	<0.02
Aroclor 1016	<0.02
Aroclor 1242	<0.02
Aroclor 1248	<0.02
Aroclor 1254	<0.02
Aroclor 1260	<0.02
Aroclor 1262	<0.02
Aroclor 1268	<0.02

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	Method Blank	Client:	Evren Northwest
Date Received:	Not Applicable	Project:	1816-23001-04, F&BI 312015
Date Extracted:	12/01/23	Lab ID:	03-2773 mb 1/30
Date Analyzed:	12/01/23	Data File:	120106.D
Matrix:	Soil	Instrument:	GC9
Units:	mg/kg (ppm) Dry Weight	Operator:	AL

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Tetrachlorometaxylene	100	11	184
Decachlorobiphenyl	95	25	127

Compounds:	Concentration mg/kg (ppm)
Aroclor 1221	<0.02
Aroclor 1232	<0.02
Aroclor 1016	<0.02
Aroclor 1242	<0.02
Aroclor 1248	<0.02
Aroclor 1254	<0.02
Aroclor 1260	<0.02
Aroclor 1262	<0.02
Aroclor 1268	<0.02

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/08/23

Date Received: 12/01/23

Project: 1816-23001-04, F&BI 312015

**QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL EXTENDED USING METHOD NWTPH-D_x**

Laboratory Code: 312015-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet Wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	104	104	63-146	0

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	100	77-123

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/08/23

Date Received: 12/01/23

Project: 1816-23001-04, F&BI 312015

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 6020B

Laboratory Code: 311411-02 x5 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	mg/kg (ppm)	10	<5	83	84	75-125	1
Barium	mg/kg (ppm)	50	62.1	90 b	92 b	75-125	2 b
Cadmium	mg/kg (ppm)	10	<5	101	96	75-125	5
Chromium	mg/kg (ppm)	50	13.8	99 b	92 b	75-125	7 b
Lead	mg/kg (ppm)	50	<5	99	93	75-125	6
Mercury	mg/kg (ppm)	5	<5	96	91	75-125	5
Selenium	mg/kg (ppm)	5	<5	88	80	75-125	10
Silver	mg/kg (ppm)	10	<5	93	90	75-125	3

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	mg/kg (ppm)	10	87	80-120
Barium	mg/kg (ppm)	50	99	80-120
Cadmium	mg/kg (ppm)	10	94	80-120
Chromium	mg/kg (ppm)	50	102	80-120
Lead	mg/kg (ppm)	50	91	80-120
Mercury	mg/kg (ppm)	5	89	80-120
Selenium	mg/kg (ppm)	5	94	80-120
Silver	mg/kg (ppm)	10	90	80-120

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/08/23

Date Received: 12/01/23

Project: 1816-23001-04, F&BI 312015

**QUALITY ASSURANCE RESULTS
FOR THE ANALYSIS OF SOIL SAMPLES FOR
POLYCHLORINATED BIPHENYLS AS
AROCOR 1016/1260 BY EPA METHOD 8082A**

Laboratory Code: 311366-02 1/30 (Matrix Spike) 1/30

Analyte	Reporting Units	Spike Level	Sample Result (Wet Wt)	Percent Recovery MS	Percent Recovery MSD	Control Limits	RPD (Limit 20)
Aroclor 1016	mg/kg (ppm)	0.25	<0.02	121	120	24-163	1
Aroclor 1260	mg/kg (ppm)	0.25	30	185 b	200 b	10-194	8 b

Laboratory Code: Laboratory Control Sample 1/30

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Aroclor 1016	mg/kg (ppm)	0.25	116	47-158
Aroclor 1260	mg/kg (ppm)	0.25	109	69-141

21

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Page # of

~~TURNAROUND TIME~~

Rush charges authorized by: RUSH

SAMPLE DISPOSAL

Dispose after 30 days

Other

her

INVOICE TO

- *As Anchors

Project	Specific RIs	Yes / No
1	1	Yes
2	1	Yes
3	1	Yes
4	1	Yes
5	1	Yes
6	1	Yes
7	1	Yes
8	1	Yes
9	1	Yes
10	1	Yes
11	1	Yes
12	1	Yes
13	1	Yes
14	1	Yes
15	1	Yes
16	1	Yes
17	1	Yes
18	1	Yes
19	1	Yes
20	1	Yes
21	1	Yes
22	1	Yes
23	1	Yes
24	1	Yes
25	1	Yes
26	1	Yes
27	1	Yes
28	1	Yes
29	1	Yes
30	1	Yes
31	1	Yes
32	1	Yes
33	1	Yes
34	1	Yes
35	1	Yes
36	1	Yes
37	1	Yes
38	1	Yes
39	1	Yes
40	1	Yes
41	1	Yes
42	1	Yes
43	1	Yes
44	1	Yes
45	1	Yes
46	1	Yes
47	1	Yes
48	1	Yes
49	1	Yes
50	1	Yes
51	1	Yes
52	1	Yes
53	1	Yes
54	1	Yes
55	1	Yes
56	1	Yes
57	1	Yes
58	1	Yes
59	1	Yes
60	1	Yes
61	1	Yes
62	1	Yes
63	1	Yes
64	1	Yes
65	1	Yes
66	1	Yes
67	1	Yes
68	1	Yes
69	1	Yes
70	1	Yes
71	1	Yes
72	1	Yes
73	1	Yes
74	1	Yes
75	1	Yes
76	1	Yes
77	1	Yes
78	1	Yes
79	1	Yes
80	1	Yes
81	1	Yes
82	1	Yes
83	1	Yes
84	1	Yes
85	1	Yes
86	1	Yes
87	1	Yes
88	1	Yes
89	1	Yes
90	1	Yes
91	1	Yes
92	1	Yes
93	1	Yes
94	1	Yes
95	1	Yes
96	1	Yes
97	1	Yes
98	1	Yes
99	1	Yes
100	1	Yes

ANALYSES REQUESTED

						ANALYSES REQUESTED							Notes
Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	PCRB Metals As, Ba, Cd, Cr, Pb, Hg, Ni, Mn	
CB08-2	(NP) 02A-01	11-30-23	8:18	Soil	1	X					X	X	
CB08-10	03 A-E	11-30-23	8:32	Soil	5	X					X	X	
CB09-2	03	11-30-23	8:40	Soil	1	X					X	X	
CB09-8	04 A-E	11-30-23	8:55	Soil	5	X					X	X	
CB10-2	05	11-30-23	9:10	Soil	1	X					X	X	
CB10-7	06 A-E	11-30-23	9:14	Soil	5	X					X	X	
Samples received at						2 °C							

TIME

Ph (906) 985 8989

Received by:

circumference

COPIES

12/01/23

0953

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Vineta Mills, M.S.
Eric Young, B.S.

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www.friedmanandbruya.com

December 13, 2023

Lynn Green, Project Manager
Evren Northwest, Inc.
PO Box 14488
Portland, OR 97293

Dear Mr Green:

Included are the results from the testing of material submitted on November 30, 2023 from the 1816-23001-04, F&BI 311404 project. There are 35 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days, or as directed by the Chain of Custody document. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures

c: Neil Woller, Paul Trone, Evan Bruggeman
ENW1213R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on November 30, 2023 by Friedman & Bruya, Inc. from the Evren Northwest 1816-23001-04, F&BI 311404 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>Evren Northwest</u>
311404 -01	EB01-9
311404 -02	EB02-8
311404 -03	EB03-9
311404 -04	EB04-8
311404 -05	EB05-2
311404 -06	EB05-9.5
311404 -07	EB06-2
311404 -08	EB06-8
311404 -09	EB07-2
311404 -10	EB07-6

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/13/23

Date Received: 11/30/23

Project: 1816-23001-04, F&BI 311404

Date Extracted: 11/30/23

Date Analyzed: 11/30/23 and 12/01/23

**RESULTS FROM THE ANALYSIS OF SOIL SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL AND RESIDUAL RANGE
USING METHOD NWTPH-D_x**

Results Reported on a Dry Weight Basis

Results Reported as mg/kg (ppm)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>Residual Range</u> (C ₂₅ -C ₃₆)	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 50-150)
EB01-9 311404-01	<50	<250	92
EB02-8 311404-02	<50	<250	94
EB03-9 311404-03	<50	<250	96
EB04-8 311404-04	<50	<250	98
EB05-2 311404-05	<50	<250	97
EB05-9.5 311404-06	<50	<250	95
EB06-2 311404-07	<50	<250	95
EB06-8 311404-08	<50	<250	96
EB07-2 311404-09	<50	<250	96
EB07-6 311404-10	<50	<250	95
Method Blank 03-2771 MB	<50	<250	93

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	EB01-9	Client:	Evren Northwest
Date Received:	11/30/23	Project:	1816-23001-04, F&BI 311404
Date Extracted:	12/01/23	Lab ID:	311404-01
Date Analyzed:	12/01/23	Data File:	311404-01.111
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
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Arsenic	1.72
Barium	133
Cadmium	<1
Lead	4.73
Mercury	<1
Selenium	<1
Silver	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	EB01-9	Client:	Evren Northwest
Date Received:	11/30/23	Project:	1816-23001-04, F&BI 311404
Date Extracted:	11/30/23	Lab ID:	311404-01 x5
Date Analyzed:	12/05/23	Data File:	311404-01 x5.107
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
----------	------------------------------

Chromium	10.9
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	EB02-8	Client:	Evren Northwest
Date Received:	11/30/23	Project:	1816-23001-04, F&BI 311404
Date Extracted:	11/30/23	Lab ID:	311404-02
Date Analyzed:	12/01/23	Data File:	311404-02.112
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
----------	------------------------------

Arsenic	2.25
Barium	94.3
Cadmium	<1
Chromium	6.00
Lead	1.57
Mercury	<1
Selenium	<1
Silver	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	EB03-9	Client:	Evren Northwest
Date Received:	11/30/23	Project:	1816-23001-04, F&BI 311404
Date Extracted:	11/30/23	Lab ID:	311404-03
Date Analyzed:	12/01/23	Data File:	311404-03.113
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
----------	------------------------------

Arsenic	2.37
Barium	87.8
Cadmium	<1
Chromium	11.2
Lead	2.52
Mercury	<1
Selenium	<1
Silver	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	EB04-8	Client:	Evren Northwest
Date Received:	11/30/23	Project:	1816-23001-04, F&BI 311404
Date Extracted:	11/30/23	Lab ID:	311404-04
Date Analyzed:	12/01/23	Data File:	311404-04.114
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
----------	------------------------------

Arsenic	1.74
Barium	58.7
Cadmium	<1
Chromium	7.27
Lead	3.86
Mercury	<1
Selenium	<1
Silver	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	EB05-2	Client:	Evren Northwest
Date Received:	11/30/23	Project:	1816-23001-04, F&BI 311404
Date Extracted:	11/30/23	Lab ID:	311404-05
Date Analyzed:	12/01/23	Data File:	311404-05.115
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
----------	------------------------------

Arsenic	2.50
Barium	252
Cadmium	<1
Lead	6.04
Mercury	<1
Selenium	<1
Silver	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	EB05-2	Client:	Evren Northwest
Date Received:	11/30/23	Project:	1816-23001-04, F&BI 311404
Date Extracted:	11/30/23	Lab ID:	311404-05 x5
Date Analyzed:	12/04/23	Data File:	311404-05 x5.107
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
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Chromium	22.1
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	EB05-9.5	Client:	Evren Northwest
Date Received:	11/30/23	Project:	1816-23001-04, F&BI 311404
Date Extracted:	11/30/23	Lab ID:	311404-06
Date Analyzed:	12/01/23	Data File:	311404-06.116
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
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Arsenic	2.74
Barium	85.2
Cadmium	<1
Lead	1.85
Mercury	<1
Selenium	<1
Silver	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	EB05-9.5	Client:	Evren Northwest
Date Received:	11/30/23	Project:	1816-23001-04, F&BI 311404
Date Extracted:	11/30/23	Lab ID:	311404-06 x5
Date Analyzed:	12/04/23	Data File:	311404-06 x5.108
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
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Chromium	8.36
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	EB06-2	Client:	Evren Northwest
Date Received:	11/30/23	Project:	1816-23001-04, F&BI 311404
Date Extracted:	11/30/23	Lab ID:	311404-07
Date Analyzed:	12/01/23	Data File:	311404-07.117
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
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Arsenic	2.08
Barium	192
Cadmium	<1
Lead	8.27
Mercury	<1
Selenium	<1
Silver	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	EB06-2	Client:	Evren Northwest
Date Received:	11/30/23	Project:	1816-23001-04, F&BI 311404
Date Extracted:	11/30/23	Lab ID:	311404-07 x5
Date Analyzed:	12/04/23	Data File:	311404-07 x5.109
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
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Chromium	16.9
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	EB06-8	Client:	Evren Northwest
Date Received:	11/30/23	Project:	1816-23001-04, F&BI 311404
Date Extracted:	11/30/23	Lab ID:	311404-08
Date Analyzed:	12/01/23	Data File:	311404-08.118
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
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Arsenic	2.72
Barium	161
Cadmium	<1
Lead	2.97
Mercury	<1
Selenium	<1
Silver	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	EB06-8	Client:	Evren Northwest
Date Received:	11/30/23	Project:	1816-23001-04, F&BI 311404
Date Extracted:	11/30/23	Lab ID:	311404-08 x5
Date Analyzed:	12/04/23	Data File:	311404-08 x5.110
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
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Chromium	12.5
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	EB07-2	Client:	Evren Northwest
Date Received:	11/30/23	Project:	1816-23001-04, F&BI 311404
Date Extracted:	11/30/23	Lab ID:	311404-09
Date Analyzed:	12/01/23	Data File:	311404-09.119
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
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Arsenic	4.19
Cadmium	<1
Lead	6.89
Mercury	<1
Selenium	<1
Silver	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	EB07-2	Client:	Evren Northwest
Date Received:	11/30/23	Project:	1816-23001-04, F&BI 311404
Date Extracted:	11/30/23	Lab ID:	311404-09 x5
Date Analyzed:	12/04/23	Data File:	311404-09 x5.111
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
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Barium	227
Chromium	22.8

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	EB07-6	Client:	Evren Northwest
Date Received:	11/30/23	Project:	1816-23001-04, F&BI 311404
Date Extracted:	11/30/23	Lab ID:	311404-10
Date Analyzed:	12/01/23	Data File:	311404-10.123
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
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Arsenic	2.69
Barium	175
Cadmium	<1
Lead	3.09
Mercury	<1
Selenium	<1
Silver	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	EB07-6	Client:	Evren Northwest
Date Received:	11/30/23	Project:	1816-23001-04, F&BI 311404
Date Extracted:	11/30/23	Lab ID:	311404-10 x5
Date Analyzed:	12/04/23	Data File:	311404-10 x5.112
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
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Chromium	11.5
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	Method Blank	Client:	Evren Northwest
Date Received:	NA	Project:	1816-23001-04, F&BI 311404
Date Extracted:	11/30/23	Lab ID:	I3-940 mb
Date Analyzed:	12/01/23	Data File:	I3-940 mb.083
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Barium	<1
Cadmium	<1
Chromium	<1
Lead	<1
Mercury	<1
Selenium	<1
Silver	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	EB01-9	Client:	Evren Northwest
Date Received:	11/30/23	Project:	1816-23001-04, F&BI 311404
Date Extracted:	12/01/23	Lab ID:	311404-01 1/30
Date Analyzed:	12/01/23	Data File:	120119.D
Matrix:	Soil	Instrument:	GC9
Units:	mg/kg (ppm) Dry Weight	Operator:	AL

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Tetrachlorometaxylene	78	11	184
Decachlorobiphenyl	77	25	127

Compounds:	Concentration mg/kg (ppm)
Aroclor 1221	<0.02
Aroclor 1232	<0.02
Aroclor 1016	<0.02
Aroclor 1242	<0.02
Aroclor 1248	<0.02
Aroclor 1254	<0.02
Aroclor 1260	0.022
Aroclor 1262	<0.02
Aroclor 1268	<0.02

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	EB02-8	Client:	Evren Northwest
Date Received:	11/30/23	Project:	1816-23001-04, F&BI 311404
Date Extracted:	12/01/23	Lab ID:	311404-02 1/30
Date Analyzed:	12/01/23	Data File:	120120.D
Matrix:	Soil	Instrument:	GC9
Units:	mg/kg (ppm) Dry Weight	Operator:	AL

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Tetrachlorometaxylene	72	11	184
Decachlorobiphenyl	78	25	127

Compounds:	Concentration mg/kg (ppm)
Aroclor 1221	<0.02
Aroclor 1232	<0.02
Aroclor 1016	<0.02
Aroclor 1242	<0.02
Aroclor 1248	<0.02
Aroclor 1254	<0.02
Aroclor 1260	<0.02
Aroclor 1262	<0.02
Aroclor 1268	<0.02

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	EB03-9	Client:	Evren Northwest
Date Received:	11/30/23	Project:	1816-23001-04, F&BI 311404
Date Extracted:	12/01/23	Lab ID:	311404-03 1/30
Date Analyzed:	12/01/23	Data File:	120121.D
Matrix:	Soil	Instrument:	GC9
Units:	mg/kg (ppm) Dry Weight	Operator:	AL

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Tetrachlorometaxylene	59	11	184
Decachlorobiphenyl	89	25	127

Compounds:	Concentration mg/kg (ppm)
Aroclor 1221	<0.02
Aroclor 1232	<0.02
Aroclor 1016	<0.02
Aroclor 1242	<0.02
Aroclor 1248	<0.02
Aroclor 1254	<0.02
Aroclor 1260	<0.02
Aroclor 1262	<0.02
Aroclor 1268	<0.02

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	EB04-8	Client:	Evren Northwest
Date Received:	11/30/23	Project:	1816-23001-04, F&BI 311404
Date Extracted:	12/01/23	Lab ID:	311404-04 1/30
Date Analyzed:	12/01/23	Data File:	120122.D
Matrix:	Soil	Instrument:	GC9
Units:	mg/kg (ppm) Dry Weight	Operator:	AL

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Tetrachlorometaxylene	58	11	184
Decachlorobiphenyl	79	25	127

Compounds:	Concentration mg/kg (ppm)
Aroclor 1221	<0.02
Aroclor 1232	<0.02
Aroclor 1016	<0.02
Aroclor 1242	<0.02
Aroclor 1248	<0.02
Aroclor 1254	<0.02
Aroclor 1260	<0.02
Aroclor 1262	<0.02
Aroclor 1268	<0.02

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	EB05-2	Client:	Evren Northwest
Date Received:	11/30/23	Project:	1816-23001-04, F&BI 311404
Date Extracted:	12/01/23	Lab ID:	311404-05 1/30
Date Analyzed:	12/01/23	Data File:	120123.D
Matrix:	Soil	Instrument:	GC9
Units:	mg/kg (ppm) Dry Weight	Operator:	AL

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Tetrachlorometaxylene	40	11	184
Decachlorobiphenyl	79	25	127

Compounds:	Concentration mg/kg (ppm)
Aroclor 1221	<0.02
Aroclor 1232	<0.02
Aroclor 1016	<0.02
Aroclor 1242	<0.02
Aroclor 1248	<0.02
Aroclor 1254	<0.02
Aroclor 1260	0.037
Aroclor 1262	<0.02
Aroclor 1268	<0.02

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	EB05-9.5	Client:	Evren Northwest
Date Received:	11/30/23	Project:	1816-23001-04, F&BI 311404
Date Extracted:	12/01/23	Lab ID:	311404-06 1/30
Date Analyzed:	12/01/23	Data File:	120124.D
Matrix:	Soil	Instrument:	GC9
Units:	mg/kg (ppm) Dry Weight	Operator:	AL

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Tetrachlorometaxylene	78	11	184
Decachlorobiphenyl	79	25	127

Compounds:	Concentration mg/kg (ppm)
Aroclor 1221	<0.02
Aroclor 1232	<0.02
Aroclor 1016	<0.02
Aroclor 1242	<0.02
Aroclor 1248	<0.02
Aroclor 1254	<0.02
Aroclor 1260	<0.02
Aroclor 1262	<0.02
Aroclor 1268	<0.02

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	EB06-2	Client:	Evren Northwest
Date Received:	11/30/23	Project:	1816-23001-04, F&BI 311404
Date Extracted:	12/01/23	Lab ID:	311404-07 1/30
Date Analyzed:	12/01/23	Data File:	120125.D
Matrix:	Soil	Instrument:	GC9
Units:	mg/kg (ppm) Dry Weight	Operator:	AL

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Tetrachlorometaxylene	52	11	184
Decachlorobiphenyl	87	25	127

Compounds:	Concentration mg/kg (ppm)
Aroclor 1221	<0.02
Aroclor 1232	<0.02
Aroclor 1016	<0.02
Aroclor 1242	<0.02
Aroclor 1248	<0.02
Aroclor 1254	<0.02
Aroclor 1260	0.029
Aroclor 1262	<0.02
Aroclor 1268	<0.02

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	EB06-8	Client:	Evren Northwest
Date Received:	11/30/23	Project:	1816-23001-04, F&BI 311404
Date Extracted:	12/01/23	Lab ID:	311404-08 1/30
Date Analyzed:	12/01/23	Data File:	120126.D
Matrix:	Soil	Instrument:	GC9
Units:	mg/kg (ppm) Dry Weight	Operator:	AL

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Tetrachlorometaxylene	48	11	184
Decachlorobiphenyl	85	25	127

Compounds:	Concentration mg/kg (ppm)
Aroclor 1221	<0.02
Aroclor 1232	<0.02
Aroclor 1016	<0.02
Aroclor 1242	<0.02
Aroclor 1248	<0.02
Aroclor 1254	<0.02
Aroclor 1260	0.12
Aroclor 1262	<0.02
Aroclor 1268	<0.02

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	EB07-2	Client:	Evren Northwest
Date Received:	11/30/23	Project:	1816-23001-04, F&BI 311404
Date Extracted:	12/01/23	Lab ID:	311404-09 1/30
Date Analyzed:	12/01/23	Data File:	120127.D
Matrix:	Soil	Instrument:	GC9
Units:	mg/kg (ppm) Dry Weight	Operator:	AL

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Tetrachlorometaxylene	45	11	184
Decachlorobiphenyl	76	25	127

Compounds:	Concentration mg/kg (ppm)
Aroclor 1221	<0.02
Aroclor 1232	<0.02
Aroclor 1016	<0.02
Aroclor 1242	<0.02
Aroclor 1248	<0.02
Aroclor 1254	<0.02
Aroclor 1260	<0.02
Aroclor 1262	<0.02
Aroclor 1268	<0.02

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	EB07-6	Client:	Evren Northwest
Date Received:	11/30/23	Project:	1816-23001-04, F&BI 311404
Date Extracted:	12/01/23	Lab ID:	311404-10 1/30
Date Analyzed:	12/01/23	Data File:	120128.D
Matrix:	Soil	Instrument:	GC9
Units:	mg/kg (ppm) Dry Weight	Operator:	AL

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Tetrachlorometaxylene	43	11	184
Decachlorobiphenyl	83	25	127

Compounds:	Concentration mg/kg (ppm)
Aroclor 1221	<0.02
Aroclor 1232	<0.02
Aroclor 1016	<0.02
Aroclor 1242	<0.02
Aroclor 1248	<0.02
Aroclor 1254	<0.02
Aroclor 1260	<0.02
Aroclor 1262	<0.02
Aroclor 1268	<0.02

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	Method Blank	Client:	Evren Northwest
Date Received:	Not Applicable	Project:	1816-23001-04, F&BI 311404
Date Extracted:	12/01/23	Lab ID:	03-2773 mb 1/30
Date Analyzed:	12/01/23	Data File:	120106.D
Matrix:	Soil	Instrument:	GC9
Units:	mg/kg (ppm) Dry Weight	Operator:	AL

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Tetrachlorometaxylene	100	11	184
Decachlorobiphenyl	95	25	127

Compounds:	Concentration mg/kg (ppm)
Aroclor 1221	<0.02
Aroclor 1232	<0.02
Aroclor 1016	<0.02
Aroclor 1242	<0.02
Aroclor 1248	<0.02
Aroclor 1254	<0.02
Aroclor 1260	<0.02
Aroclor 1262	<0.02
Aroclor 1268	<0.02

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/13/23

Date Received: 11/30/23

Project: 1816-23001-04, F&BI 311404

**QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL EXTENDED USING METHOD NWTPH-D_x**

Laboratory Code: 311398-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	(Wet wt) Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	12,000	80 b	140 b	64-136	55 b

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	104	78-121

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/13/23

Date Received: 11/30/23

Project: 1816-23001-04, F&BI 311404

**QUALITY ASSURANCE RESULTS
FOR THE ANALYSIS OF SOIL SAMPLES
FOR TOTAL METALS USING EPA METHOD 6020B**

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	mg/kg (ppm)	10	90	87	80-120	3
Barium	mg/kg (ppm)	50	100	95	80-120	5
Cadmium	mg/kg (ppm)	10	100	94	80-120	6
Chromium	mg/kg (ppm)	50	113	103	80-120	9
Lead	mg/kg (ppm)	50	104	94	80-120	10
Mercury	mg/kg (ppm)	5	95	86	80-120	10
Selenium	mg/kg (ppm)	5	99	97	80-120	2
Silver	mg/kg (ppm)	10	98	92	80-120	6

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/13/23

Date Received: 11/30/23

Project: 1816-23001-04, F&BI 311404

**QUALITY ASSURANCE RESULTS
FOR THE ANALYSIS OF SOIL SAMPLES FOR
POLYCHLORINATED BIPHENYLS AS
AROCOR 1016/1260 BY EPA METHOD 8082A**

Laboratory Code: 311366-02 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet Wt)	Percent Recovery MS	Percent Recovery MSD	Control Limits	RPD (Limit 20)
Aroclor 1016	mg/kg (ppm)	0.25	<0.02	121	120	24-163	1
Aroclor 1260	mg/kg (ppm)	0.25	30	185 b	200 b	10-194	8 b

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Aroclor 1016	mg/kg (ppm)	0.25	116	47-158
Aroclor 1260	mg/kg (ppm)	0.25	109	69-141

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

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

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for the analyte were outside of acceptance criteria, biased low; or, the calibration results for the analyte were outside of acceptance criteria, biased high, with a detection for the analyte in the sample. The value reported is an estimate.

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

cf - The sample was centrifuged prior to analysis.

d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.

dv - Insufficient sample volume was available to achieve normal reporting limits.

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

fc - The analyte is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.

hs - Headspace was present in the container used for analysis.

ht - The analysis was performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of control limits due to sample matrix effects.

j - The analyte concentration is reported below the standard reporting limit. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

k - The calibration results for the analyte were outside of acceptance criteria, biased high, and the analyte was not detected in the sample.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

311464

SAMPLE CHAIN OF CUSTODY

11/30/23 N3/03

Page # 1 of 1

Report To Lynn Green

Company EVREN-NW

Address 40 SE 24th Ave

City, State, ZIP Portland, Oregon 97214

Phone 503-452-5561 Email lynn@evren-nw.com

SAMPLERS (signature)

PROJECT NAME

PO #

1816-23001 & 24

REMARKS

INVOICE TO

Project Specific RIs - Yes / No

TURNAROUND TIME
 Standard Turnaround
 RUSH
 Rush charges authorized by:
 SAMPLE DISPOSAL
 Dispose after 30 days
 Archive Samples
 Other

ANALYSES REQUESTED

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	PCBs & metals As, Br, Cl, Cr, Pb, Hg	Notes
EB01-9	01 A-E	11-29-23	10:00	Soil	5	X					X	X	
EB02-8	02	11-29-23	11:03	Soil	5	X					X	X	
EB03-9	03	11-29-23	12:03	Soil	5	X					X	X	
EB04-8	04 ✓	11-29-23	12:40	Soil	5	X					X	X	
EB05-2	05	11-29-23	13:25	Soil	1	X					X	X	
EB05-9.5	06 A-E	11-29-23	13:30	Soil	5	X					X	X	
EB06-2	07	11-29-23	13:39	Soil	1	X					X	X	
EB06-8	08 A-E	11-29-23	13:46	Soil	5	X					X	X	
EB07-2	09	11-29-23	13:59	Soil	1	X					X	X	Samples received at 1:00
EB07-6	10 A-E	11-29-23	14:04	Soil	5	X					X	X	

SIGNATURE

PRINT NAME

COMPANY

DATE

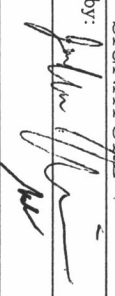
TIME

Friedman & Bruya, Inc.

3012 16th Avenue West

Seattle, WA 98119-2029

Ph. (206) 285-8282

Relinquished by: 

Jordan Morris

Eureka Northwest

11-29-23

1:51

Received by: 

Anna Phan

F8B

11/30/23

Relinquished by:

Received by: