FOCUSED PHASE II ENVIRONMENTAL SITE ASSESSMENT

INDUSTRIAL PROPERTY

10103 NE Marx Street
Portland, Oregon

Prepared for:

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This

Focused Phase II Environmental Site Assessment

Report for:

Industrial Property

10103 NE Marx Street
Portland, Oregon

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

Blackstone Consulting
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and its assignees

Issued March 22, 2023 *by:*

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List of Acronyms and Abbreviations

AST	above-ground storage tank
bgs	below ground surface
CFSLs	clean fill screening levels
Client	Blackstone Consulting
CMMP	Contaminated Media Management Plan
COCs	constituents of concern
COIs	constituents of interest
DPT	direct-push technology
DRO	diesel-range organics
ENW	EVREN Northwest, Inc.
EPA	US Environmental Protection Agency
ESA	Environmental Site Assessment
F&BI	Friedman and Bruya, Inc.
FSDS	Field Sampling Data Sheet
GPR	ground penetrating radar
GRO	gasoline-range organics
HCID	hydrocarbon identification
LUST	Leaking Underground Storage Tank
µg/L	micrograms per Liter
mg/Kg	milligrams per Kilogram
mg/L	milligrams per liter
MRL	method reporting limit
NFA	No Further Action
OAR	Oregon Administrative Rules
ODEQ	Oregon Department of Environmental Quality
OWRD	Oregon Water Resources Department
PAHs	polynuclear aromatic hydrocarbons
PCBs	polychlorinated biphenyls
PID	photoionization detector
Qalc	Quaternary flood plain deposits of the Willamette River and major tributaries
RBCs	risk-based concentrations
RBDM	ODEQ's *Risk-Based Decision Making for the Remediation of Contaminated Sites* guidance document
RCRA	Resource Conservation and Recovery Act
REC	recognized environmental condition
ROW	right-of-way
RRO	residual (oil)-range organics
SLRBCs	screening-level risk-based concentrations
SOW	scope of work
SVOC	semi-volatile organic constituent
SWI	soil/water interface
TPH	Total Petroleum Hydrocarbons
USCS	Unified Soil Classification System
USGS	U.S. Geological Survey
UST	underground storage tank
VOCs	volatile organic constituents

1.0 Introduction

At the request of Blackstone Consulting, LLC (Blackstone - Client), EVREN Northwest, Inc. (ENW) prepared this report documenting a Focused Phase II Environmental Site Assessment (ESA) at the subject site (10103 NE Marx Street, Portland, Oregon; see Figures 1 and 2). This focused Phase II ESA was conducted to further evaluate environmental concerns identified in a Phase I ESA prepared for the subject property by Blackstone.

Site work was conducted in February 2023 and was photographically documented (Appendix A). This report summarizes the background and purpose of the investigation, field methods and observations, and the findings of laboratory analyses.

2.0 Salient Background

2.1 Historical Land Use

According to historical information provided by Blackstone,[1] various business entities have occupied the subject property since the 1970s. Industrial activities on the subject property have included a drum reconditioning and intermediate bulk container (IBC) processing operation from approximately the 1970s until the site was reportedly vacated in 2022. Site operations included restoration of empty containers previously used for chemical and liquid storage by various industrial and agricultural operations whereby the containers were cleaned inside the warehouse building using a phosphate detergent and hot water and other cleaning solutions. The refurbished containers were sold to customers for re-use.

Surrounding properties began transitioning to industrial use in the 1950s. Several commercial/warehouse buildings and a lumber storage yard were initially present on the south and southwest adjoining properties beginning in the 1970s, with the lumber operation later becoming the current Oregon Department of Transportation (ODOT) East Portland Maintenance Yard. The east-adjoining property was operated as a salvage yard in the 1960s, and a commercial waste handling/recycling company occupied the southeast-adjacent property by the 1970s. The present-day multi-use public pathway and Interstate 205 (I-205) Sandy Boulevard onramp have bordered the site to the northwest since the 1980s. Current nearby businesses include an auto body shop, waste handling facility and storage yard to the east, and a paving contractor to the south.

2.2 Previous Environmental Investigations

According to information in Blackstone's Phase I ESA, the following previous environmental investigations were conducted at the subject property. The documented history provided by Blackstone was partly gathered from a review of available files from the Oregon Department of Environmental Quality (ODEQ) online databases and may not comprehensively describe all previous environmental activities conducted.

[1] Blackstone Consulting, LLC 2022. *Phase I Environmental Site Assessment Report, 5.3-Acre Industrial Property, 10103 Northeast Marx Street, Portland, Oregon*: Prepared for Crest Partners, dated January 15, 2023.

2.2.1 Subject Property Storm Water Investigations

According to Blackstone's research, the subject property was identified on ODEQ 's Environmental Cleanup Site Information (ECSI) database for storm water related issued in the past. In the late 1990s/early-2000s, the subject site was evaluated as a potential contributor of PCBs in nearby Johnson Lake, which was part of a broader source control evaluation for the Columbia Slough Watershed. According to ODEQ files, ODEQ collected sediment samples from two ponds at the subject property in early 2000s and found them to contain elevated PCBs along with petroleum hydrocarbons. The sediment impacts by PCBs and petroleum were attributed to the site's history of drum/container management operations.

Source control measures were implemented at the site in 2003, including removal of PCB-impacted sediments from the two ponds and beneath a catch basin and a storm water pipeline. In 2012, additional soils testing found contamination in the upper 1.5 feet of soil at the subject site. Further source control measures were conducted under a Final Removal Action Work Plan prepared for the subject property in August 2013 by SLR international Corporation (SLR). Additional contaminated soil and sediment were removed at this time.

The ODEQ issued a No Further Action Memorandum in 2014, stating the source control measures adequately addressed the PCB impacts; however, ODEQ also stated that source control measures did not address all potential PCB impacts identified in shallow soils at the subject property.

2.2.2 ODEQ LUST # 26-97-0561 (1997)

According to ODEQ's Leaking Underground Storage Tank (LUST) Cleanup Site Database, two (2) 2,000-gallon underground storage tanks (USTs) were decommissioned by removal at the subject property in 1997. Up to 302 parts per million (ppm) diesel-range petroleum hydrocarbons were discovered in soil during the decommissioning. Ground water was not encountered, and the concentration of diesel in soil was below the ODEQ's Soil Matrix Cleanup level. The ODEQ issued an NFA letter for the two reported 2,000-gallon tanks on September 26, 2000.

2.3 Phase I ESA Findings

Blackstone prepared a Draft Phase I ESA (Draft for Discussion Purposes Only) of the 5.3-acre subject property in January 2023. The stated purpose of Blackstone's Phase I ESA was to "investigate and identify *recognized environmental conditions* (RECs) in accordance with American Society for Testing and Materials (ASTM) Standard E1527-21. ENW understands the Phase I ESA was performed in anticipation of a potential property transaction.

The findings of the Phase I ESA were as follows:

- ***Prior Use of Subject Property:*** *The subject property is listed on various regulatory databases for the generation of hazardous wastes, including ignitable/corrosive wastes, chromium, lead, and solvents; and the Underground Injection Control (UIC) database for an unregistered storm water drainage UIC. The subject property was identified as a "significant noncomplier" between 2020 and 2022, with informal enforcement actions issued. Although previous environmental investigations have been completed at the subject property, the investigations were limited to surficial soil sampling, did not include characterization or investigation of groundwater, and did*

not address the prior operational areas within the warehouse building. Based on the long-term use of the subject property as a drum reconditioning and container processing facility (approximately 45 years), the limited data available regarding the prior operational areas and groundwater at the subject property, and the recent regulatory violations issued, the prior use of the subject property as a steel drum reconditioning and container processing facility is considered a REC.

- ***Current/Prior Use of Adjoining Properties:*** *Industrial uses on adjoining properties to the east, southeast, and southwest date to the 1960s and 1970s and include an auto wrecking/salvage yard, vehicle maintenance, sandblasting, steam cleaning, engine rebuilding/repair, and recycling operations. Regulatory listings associated with the properties note the use of underground storage tanks (USTs), hazardous waste generation and management, and ODEQ involvement recommending further investigation. In addition, the industrial property uses in the subject property area commenced prior to the establishment of modern regulations regarding the handling of hazardous materials and waste. Blackstone encountered no evidence of comprehensive environmental investigations into historical adjoining property uses from ODEQ online resources; therefore, based on the inferred groundwater flow direction and close proximity to the subject property, the current and former industrial uses of adjoining properties are considered RECs and vapor encroachment concerns (VECs).*

- ***Polychlorinated biphenyl (PCB)-Impacted Soil and Stormwater Runoff:*** *The subject property (also known as the Former Myers Container Site) was identified as Environmental Cleanup Site Information (ECSI) Site ID #2062 in association with the investigation and cleanup actions focused on PCB-contaminated soil in stormwater. According to ODEQ records, the subject property was previously owned by various entities and operated as a drum reconditioning and intermediate bulk container processing facility since 1977. In the late-1990s/early-2000s, the subject property was evaluated due to elevated levels of PCBs found in sediment in the nearby Johnson Lake to the west, which is the discharge point for the two stormwater runoff ponds located on the subject property. A potential source of the PCBs was attributed to historical container management operations at the subject property. Source control measures were conducted at the subject property in 2003, and later in 2012-2013. These cleanup measures included the excavation and removal of PCB contaminated shallow soil and sediment from select surface areas, the on-site ponds, and the associated catch basin/pipeline/culvert. These source control measures adequately addressed PCB contamination along the stormwater migration pathway and residual PCB contamination identified in the subject property shallow soil. A No Further Action (NFA) determination was issued by ODEQ for the subject property on September 17, 2014. Based on the completed cleanup actions and the issuance of a NFA letter, the PCB contamination identified in near-surface soil resulting from historic container management operations at the subject property is considered a HREC.*

- ***Former Underground Storage Tanks (USTs):*** *Two former USTs were located at the subject property and removed in 1997. The locations and contents of the USTs were not reported. However, regulatory information indicated that confirmation soil sampling was performed, and up to 302 parts per million (ppm) diesel-range petroleum hydrocarbon contamination was discovered during the decommissioning, which was below the applicable 500 ppm cleanup level. Groundwater was reportedly not encountered during the UST removal activities. The ODEQ issued*

a NFA determination for the removal of the USTs on September 26, 2000. Based on the absence of significant contamination and issuance of a NFA letter, the former USTs are considered a HREC.

- ***Asbestos-Containing Materials (ACM):*** *Based on the construction date of the subject property building (circa 1977-1978) and the limited nature of Blackstone's visual survey, Blackstone recommends preparing and implementing a subject property-specific Asbestos Operations and Maintenance (O&M) Program. In addition, Blackstone recommends compliance with OSHA regulations requiring the identification of presumed ACM as well as training, notification, and labeling requirements in operational areas.*

In February 2023, Blackstone engaged ENW to conduct a Focused Phase II to further investigate possible environmental concerns associated with the historical uses of the subject property. ENW presented a scope of work and cost estimate to Blackstone to perform the Phase II ESA in a proposal dated February 1, 2023, and Blackstone authorized the scope of work on February 9, 2023.

The proposed scope of work addresses all but the last of the above-listed environmental concerns at the site. ENW understands an investigation and/or management of ACMs, if elected to be performed, will be conducted under a separate scope of work.

3.0 Scope of Work

ENW completed the following Scope of Work (SOW) for this project:

- Called One Call Utility Notification Service to identify and locate all public utilities near each of the proposed sampling locations.
- Performed a geophysical survey at the site to screen for the presence of subsurface features of potential environmental concern (i.e., USTs, UICs, sumps, drains, etc.) and clear proposed boring locations.
- Advanced 12 temporary soil borings and collected soil and reconnaissance ground water samples from select soil borings for laboratory analysis.
- Assessed the vapor intrusion pathway by collecting four (4) sub-slab vapor samples inside the onsite building and two (2) soil gas probes along the eastern property margin for laboratory analysis of VOCs.
- Submitted soil, reconnaissance ground water, and soil vapor samples to an independent laboratory for appropriate analysis.
- Evaluated analytical results with respect to Oregon Department of Environmental Quality (ODEQ) cleanup standards and risk-based guidance documents.
- Prepared this report documenting the work conducted with findings.

4.0 Site Setting

Description and Location. The 5.3-acre subject property is identified as Multnomah County property IDs: R235908 and R235911. The subject address is 10103 NE Marx Street in northeast Portland, Oregon (Figures 1 and 2).

The property is located in an industrial district reclaimed from former wetlands within the alluvial flood plain of the Columbia River. At the time of this focused Phase II assessment, the subject property was noted to be developed with a single-story warehouse constructed in the 1970s. The building was surrounded by asphaltic concrete, two retention ponds/bioswales, and some gravel and dirt open areas. A chain link and corrugated metal fence surrounded the site perimeter. Land use in the vicinity includes a mix of industrial properties and Interstate 205 (I-205).

At the time of the assessment, the subject property was vacant and not in use. The most recent use of the property was as a container processing facility.

The subject property is bounded to the northwest by I-205. Jonson Lake lies beyond the I-205 right-of-way. To the southwest, south, east, and northeast, the subject property is bounded by several industrial properties, including an Auto body shop and Painting business, automobile salvage yard, and industrial warehouse buildings.

Geographic Setting and Topography. The subject site is generally level with elevations of around 20 to 30 feet above mean sea level (see Figure 1). The subject property and surrounding area lie within the historic flood plain of the Columbia River, between the Columbia River and the Columbia Slough in Northeast Portland, Oregon. Prior to 1917, the Columbia Slough mainstem channel was seasonally connected to the Columbia River, and part of the active floodplain of the Columbia River, seasonally inundated forming and re-forming side channels, wetlands, sloughs, and shallow lakes. Between 1917 and 1919, several levees were constructed along eth Columbia River to control seasonal flooding and promote agricultural development of the area.

Geologic Setting. The subject property is located within the Portland Basin, a down warped northwest trending basin with a bowl-like structure filled with up to 1,700 feet of sedimentary materials that are thickest near the Columbia and Willamette rivers. Columbia River Basalt forms the basement rock of the basin. Sedimentary deposits within the basin from oldest to youngest include: Sandy River Mudstone, Troutdale Formation, and Younger alluvial sediments. Near the Columbia River, flood deposits are coarse-grained, consisting of basaltic sand and gravel with cobbles and boulders and can range up to 200 feet thick. Overbank Deposits consist of finer-grained sediments in flood plains adjacent to river channels. These deposits can form natural levees along the riverbank immediately adjacent to the river channel. Floodplain environments are characterized by low relief, generally poor drainage, slow rates of accumulation, and fine, organic rich sediment such as silt or clay. The Overbank Deposits consist of soft to stiff, gray/brown layers of silty clay, silt, silty sand, and sandy silt.

According to the U.S. Geological Survey (USGS) *Water-Supply Paper 1793, titled Ground Water in the East Portland Area, Oregon*, the subject property and surrounding properties are underlain by Recent Younger Alluvium (Pal) composed of gravel, sand, silt, and clay, slightly stratified. Soils encountered during this assessment included silts and fine sands overlying medium to coarse gravels, consistent with alluvium.

Hydrogeologic Setting. Current nearby surface water bodies include Johnson Lake and the Columbia Slough, located within approximately one-quarter (0.25) mile of the property. The Columbia River is located approximately 1 mile north of the subject property.

The upper-most regional ground water aquifer which supplies occur within the water-bearing gravels of the Troutdale Gravel Aquifer (TGA) beginning at depths of over 200 feet bgs. In addition to the regional ground water aquifer, soil borings advanced at the subject site encountered a shallow, perched ground water aquifer within fine-grained sediments less than 15 feet bgs beneath the subject property. Due to the close proximity to the Columbia River, which is tidally influenced in the Portland area, the general flow of ground water beneath the subject vicinity is also anticipated to be partially influenced by tidal fluctuations. However, the predominant ground water flow direction is anticipated to follow regional surface topography and generally flow north to northwest.

5.0 Methods

5.1 Objectives

The assessment objectives were to:

- Assess whether any previously undiscovered features of concern remain at the site with focus on additional USTs and drywells.
- Assess soil and ground water conditions in former operational areas of potential concern relative to the presence of petroleum products and hazardous substances.
- Assess whether historical onsite and offsite land uses have resulted in vapor phase hazardous substances beneath the subject property.

Additional objectives for the work included:

- 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 residents.
- To document information and data generated in a professional manner that is valid for the intended use.

5.2 Preparation Activities

ENW performed or coordinated the following activities before commencing all field activities.

Plan Preparation. In-house Sampling and Analysis were prepared for the project.

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.

5.3 Geophysical Survey

A geophysical survey was conducted at the subject property on February 14, 2023. Geophysical services were subcontracted to GeoPotential of Clackamas, Oregon to: 1) confirm the location of private utilities not covered by One Call; and, 2) scan the site for buried tanks or other environmental features of concern. Results were considered in placement of final boring locations, as necessary.

The survey utilized the following equipment:

Aqua-Tronics Electronic Tracer - electromagnetic sensing equipment designed to identify subsurface anomalies. In the inductive mode, the equipment is used to sense metallic objects in the subsurface. A conductive mode allows for tracing electrical conduit and metallic pipelines.

Magnetometer - used as a complement to the Aqua-Tronics instrument, the magnetometer senses horizontal variations in the local magnetic field caused by buried ferrous metal objects such as USTs, drums, pipes, and debris-filled trenches. (Magnetic surveys can only detect ferrous metal objects. Interference caused by observed surface metal objects limits the accuracy of the survey. The anomalies produced by fences, power lines, cars, and buildings can easily mask an anomaly caused by an underground target.)

Ground Penetrating Radar (GPR) - GPR uses short impulses of high-frequency radio waves directed into the ground to acquire information about the subsurface. GPR can be used to accurately locate both metallic and non-metallic objects (e.g., USTs, utilities, and drums) from a few inches below the surface to depths of up to 30 feet. GPR may also be effective at delineating trenches and excavations.

5.4 Surface Soil and Sediment Investigation

To assess sediments within the two ponded areas, ENW staff collected two (2) incremental soil samples on February 14, 2023, using ISM developed by the ITRC.[2] Under this method, the area of interest is referred to as a decision unit (DU) and the compositing and subsequent laboratory processing provides a reliable estimate of the average contaminant concentration across the DU that can be used to make risk-based decisions. For the purpose of this investigation, decision units DU01 and DU02 are defined as the present footprint of the west and east retention ponds, respectively, as illustrated on Figure 3.

The samples from each DU consisted of 50 equal-volume incremental subsamples collected from pond sediments from the water-sediment interface to 0.5-foot depth at systematic random positions across the pond using a stainless-steel hand auger.

In many of the increment locations, auger refusal was caused by coarse gravels and cobbles lining the pond bottom before a sample could be collected. In these instances, additional attempts were made within a few feet of the original increment location until adequate sample volume was recovered. Each incremental soil or sediment sub-sample consisted of an approximate 40-gram soil mass. Gravel (>1/8-inch diameter) and debris (roots, twigs, bark) were removed prior to collection.

[2] The ISM protocol is explained in detail in a February 2012 guidance document issued by the Interstate Technology Regulatory Council.

The 50 sample increments from each DU were collected and placed into a laboratory-provided one-gallon glass sample jars (one for each DU), using clean nitrile gloves. Sample jars were sealed with a Teflon-lined lids, uniquely labelled, and preserved on ice pending transport to the laboratory under chain-of-custody procedures.

5.5 Soil Boring and Sampling

Using information in Blackstone's Phase I ESA and results from the geophysical survey, ENW advanced 12 hand auger/direct-push borings (B01 through B12) proximate to features of possible concern for the purposes of collecting soil and reconnaissance ground water samples for laboratory analysis. ENW advanced the soil borings using a decontaminated hand auger to between 3 and 7 feet bgs and the remaining borings to between 02 and 15 feet bgs using a percussive Direct Push Technology (DPT) drill rig operated by Cascade Drilling of Clackamas, Oregon under the direction of an ENW geologist. The locations of borings B01 through B12 are illustrated on Figure 3. Soil materials recovered from the hand auger bucket or DPT sleeves were inspected continuously for the presence of contamination by visual and olfactory inspection. In addition, semi-quantitative headspace screening was performed by placing selected soil samples in a plastic sealable bag, breaking the soil core to expose surface area inside the bag, and inserting a photoionization detector (PID) tip into the top of the bag. The cores were logged (Appendix B) with special attention to description of lithology, color, moisture, physical properties and odor.

Soil borings intended for collection of reconnaissance ground water samples were completed to approximately five (5) feet below the first observed ground water table (i.e., approximately 10 to 15 feet bgs). During each sampling interval, select portions of the soil core were retained for possible laboratory analysis. Soil samples were retained for possible laboratory analysis from zones where field screening identified evidence of possible impacts. If soil impacts were not indicated, at least one soil sample was collected from each boring from appropriate depths unique to the feature being explored.

Soil samples were placed directly into labeled laboratory-prepared glass sample jars using clean Nitrile-gloved hands and sealed with a Teflon-lined lid. Samples for analysis of volatile constituents were additionally collected using sampling procedures prescribed by the Environmental Protection Agency (EPA) Method 5035. All samples were preserved on ice in a cooler pending transport to the laboratory following chain-of-custody protocols.

5.5.1 Reconnaissance Ground Water Sampling

Upon reaching total depth, the drill tooling was removed from select borings, and a temporary well point was installed in preparation for reconnaissance ground water sampling. Approximately one (1) to three (3) liters of ground water was pumped from each boring using a low-flow peristaltic pump and dedicated polyethylene tubing to "purge" the standing water from the borehole and to draw representative ground water into the temporary well point. Following purging, a reconnaissance ground water sample was collected from clean, dedicated polyethylene tubing connected to a peristaltic pump set at a low rate to minimize off gassing of volatile contaminants. The sample was transferred into laboratory-supplied containers with appropriate preservative, uniquely labelled, documented on a chain-of-custody record, and placed in a cooler on ice pending transport to the laboratory. Reconnaissance ground water field sampling data sheets (FSDS) are included in Appendix C.

Each boring was designated with a "B" prefix and a number (e.g., B01, B02, etc.). Individual soil samples were designated with the sample's depth appended to the boring number, e.g., B01-6.5 would indicate a sample collected at 5 feet bgs in boring B01. Additional qualifiers such as a sample collected at the soil/water interface (SWI) were appended to the boring number as appropriate (e.g., B05-9-SWI would indicate a soil water interface sample collected from 9 feet bgs in boring B05). Reconnaissance ground water samples were labeled B07-GW-15 indicating the sample was collected from boring B07 with the bottom of the temporary well screen located at 15 feet bgs.

All non-disposable sampling equipment was decontaminated to minimize the potential for cross-contamination. Following sampling, all borings were properly abandoned in accordance with Oregon regulations and the pavement/asphalt surface restored, as applicable. Start cards and well reports will be submitted to the OWRD as required.

5.6 Waste Management and Disposal

Investigation-derived waste (soil and purge water) was contained inside labelled Department of Transportation (DOT)-certified 55-gallon drums and staged on-site pending appropriate disposal.

5.7 Laboratory Sub-sampling, Compositing, and Analytical Methods

Soil and sediment samples for this investigation were delivered to Friedman & Bruya, Inc. (F&BI) of Seattle, Washington for analysis under formal chain-of-custody protocol. Prior to analysis, F&BI processed the ISM samples in accordance with ITRC protocols (air dried, sieved, subsampled, and composited).

Samples were analyzed for select constituents using the analytical methods presented in Table 5-1. Copies of the F&BI and Fremont laboratory analytical reports and chain-of-custody documentation are provided in Appendix B.

Table 5-1. Analytical Plan

Analytical Method	Constituents	Soil	Reconnaissance Ground Water	Sub-slab/Soil Gas
NWTPH-HCID	Total petroleum hydrocarbon identification (HCID)	All samples	--	--
NWTPH-Gx	Total Petroleum Hydrocarbons (TPH)–Gasoline-range quantification (GRO)	Samples where GRO indicated present by TPH-HCID.	All samples	--
NWTPH-Dx	TPH as Diesel- and Residual-range organics (DRO and RRO, respectively)	Samples where DRO and/or RRO were indicated present by TPH-HCID.	All samples	--
Environmental Protection Agency (EPA) 8260B	Volatile organic compounds (VOCs) – Full List	Samples where GRO, DRO and/or RRO were detected by NWTPH-HCID.	All samples.	--
EPA 6020B	Resource Conservation and Recovery Act (RCRA) 8 Metals (Totals)	All samples	All samples	--
EPA Method 8082E	Polychlorinated Biphenyls (PCBs)	Samples where RRO was detected by NWTPH-Dx	All samples	--
EPA Method 8070A	Polynuclear Aromatic Hydrocarbons (PAHs)	Samples where DRO and/or RRO were detected by NWTPH-Dx	All samples	--
EPA Method TO-15	Gasoline-range organics (GRO) and select VOCs 2-Propanol (as leak detection)	--	--	All Samples

5.8 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. 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 ($1x10^{-6}$), 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.

Soil gas results were compared to ODEQ's screening level RBC (SLRBC) for the Vapor Intrusion into Buildings pathway based on a residential exposure scenario.

EPA Vapor Intrusion Screening Levels. U.S. Environmental Protection Agency's (EPA's) vapor intrusion screening levels (VISLs) for residential and commercial receptors were utilized for screening soil gas and sub-slab vapor.

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.
- **Clean Fill Screening Levels.** Analytical data for organics were compared to clean fill screening levels (CFSLs) for upland sites established by the ODEQ.[3] ODEQ does not require materials in which contaminant concentrations are less than or equal to CFSLs to be regulated as a solid waste. Rather, these materials may be placed at upland locations that are far enough away from a surface water body, or where there are sufficient controls to avoid erosion into surface water. CFSLs are used to determine if impacts to soil may require future management and are not used for risk screening.

6.0 Findings

The findings of this Focused Phase II ESA are presented in this section. Please reference:

- Figure 2 for the site layout and locations of magnetic anomalies.
- Figure 3 for sampling locations.
- Appendix A for a photolog of site work.
- Appendix B for boring logs.
- Appendix C for reconnaissance ground water FSDS sheets.

[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.

[3] ODEQ. July 2014. Clean Fill Determinations: Internal Management Directive, last updated February 21, 2019, by Heather Kuoppamaki.

- Tables 1, 2, and 3 for a comprehensive summary of analytical results for soil, reconnaissance ground water, and sub-slab vapor/soil gas, respectively.
- Appendix D for laboratory analytical reports.
- Table 6-1 (below) for a list of sampling locations.

Table 6-1. Summary of Sampling Locations

Borehole / Location ID	Date Sampled	Depth Sampled (feet)	Sampled By	Location
Soil				
DU01	2/14/2023	0.5	ENW	West Retention Pond
DU02	2/14/2023	0.5	ENW	East Retention Pond
B01	2/14/2023	2	ENW	MA01
B02	2/14/2023	2	ENW	MA03
B03	2/15/2023	5	ENW	MA04: Filled Sump
		7	ENW	
B04	2/15/2023	9	ENW	South of Suspected UST
B05	2/16/2023	9	ENW	MA13: Former ASTs
B06	2/16/2023	1	ENW	MA11: Filled Septic
		9		
B07	2/16/2023	9	ENW	West Yard
B08	2/16/2023	9	ENW	North Yard
B09	2/16/2023	7	ENW	North Yard
B10	2/16/2023	9	ENW	North Yard
B11	2/16/2023	5	ENW	North Yard
B12	2/16/2023	9	ENW	MA10
Reconnaissance Ground Water				
B04	2/16/23	12.5	ENW	South of Suspected UST
B05	2/16/23	12.5	ENW	MA13: Former ASTs
B06	2/16/23	15	ENW	MA11: Filled Septic
B07	2/16/23	15	ENW	West Yard
B08	2/16/23	13	ENW	North Yard
B09	2/16/23	14.5	ENW	North Yard
B10	2/16/23	14.5	ENW	North Yard
B11	2/16/23	15	ENW	North Yard
B12	2/16/23	15	ENW	North Yard
Soil Gas				
SUB01	2/15/23	sub-slab	ENW	Below building slab
SUB02	2/15/23	sub-slab	ENW	Below building slab
SUB03	2/15/23	sub-slab	ENW	Below building slab
SUB04	2/15/23	sub-slab	ENW	Below building slab
SG01	2/15/23	5	ENW	East side of building
SG02	2/15/23	5	ENW	East side of building

6.1 Geophysical Survey

On February 14, 2023, GeoPotential conducted the geophysical survey of accessible portions of the site using the electromagnetic scanner followed by the magnetometer and GPR to further investigate magnetic anomalies. Additionally, ENW used a RIGID SeeSnake® downhole camera system to trace a buried storm sewer line in the southwest corner of the site to further evaluate potential environmental concerns. Twenty magnetic anomalies (MA01 through MA20) were detected by the survey and their locations are presented on Figure 2.

Of the anomalies discovered, the following were interpreted as potential features of environmental concern and were further explored with additional soil borings and sample collection. The geophysical survey did not identify evidence of any UICs on the subject property:

- **MA01** –above ground storage tank (AST) for boiler located inside a curbed containment area. Floor of containment observed to be stained with a petroleum odor. Concrete floor of containment had cracks filled in with caulking.
    - Sited boring B01 in containment floor to evaluate whether petroleum had impacted subsurface soils beneath the concrete containment feature.
- **MA02/MA03** – Zipper trench system filled in with concrete (MA02). Trench appeared to connect to a 3' x 4' sump feature (MA03). Estimated depth = 3'.
    - Site boring B02 on west side of sump to assess soils below the sump.
- **MA04** –trench leading to a 7' x 7' square patch in concrete (MA04). Based on GPR reflection, the estimated depth of the anomaly was approximately 3'.
    - Boring B03 placed in center of 7' x 7' anomaly to assess underlying soils.
- **MA10 – Suspected UST.** Large metallic object measuring 8.5' x 18' and oriented in the north-south direction. The GPR reflection suggested the feature was buried approximately 3' below surface with a radiused top and a magnetic high detected at its south end. These characteristics could be suggestive of a cylindrical UST with a manway and fill port. Limited physical investigation suggested that the object appeared to contain sand and may have been previously decommissioned. The extent and volume of sand fill material, if present in the tank, could not be determined given the limited access to the suspected UST's interior.
    - Borings B04 and B12 sited on either end of MA10 to assess if the suspected UST had leaked.
- **MA11 – Suspected former septic tank feature.** Anomaly immediately south of MA11 surrounded by square, buried concrete walls containing an area measuring 20' x 14' in size. Interior of concrete border was filled with a soil material exhibiting an organic odor. A signature suggestive of a buried utility ran from this feature toward an existing drain feature to the west. A SeeSnake was used to trace two lines from the drain feature; however, the camera met with refusal inside the clogged pipe before the outlets could be determined. The pipe ran along west side of MA11 in north-south orientation. MA11 and piping is suggestive of a possible former septic tank system.

  - Boring B06 was placed next to MA11 to assess subsurface soil and shallow ground water conditions below the feature.

- **MA13 –** two fabricated metal saddles next to reinforced concrete apron along south side of building; possible former AST location; staining and odor on ground surface nearby.
  - Boring B05 was sighted to assess subsurface conditions beneath the surface-stained area.

The remaining magnetic anomalies were either too small, did not exhibit features typical of a tank, drywell, sump, or other environmental feature of potential concern, or the feature was confirmed by excavation and determined to pose a low or no environmental threat:

- **MA05 MA06/MA07–**circular patches in warehouse floor measuring 10.5" diameter, some with metal rings around them. Interpreted as former footings for machinery.
- **MA08/MA09 –** Two patches measuring 8' x 7' and 5' x 12,' respectively. No metallic objects confirmed. GPR reflections were not suggestive of fill such as would be placed in a former tank excavation.
- **MA12 –** 4" dia. PVC cleanout west of catch basin on west side of building.
- **MA14 –** Survey marker on east side of building.
- **MA15 –** ABS cleanout southwest corner of site.
- **MA16 –** 2.5' x 2.5' square magnetic signal. Explored with shovel and hand auger to refusal at 3'.
- **MA17 –** 3' x 4' magnetic signal. Explored with shovel but nothing definitive uncovered.
- **MA18 –** 2.5' x 2.5' magnetic signal in loading dock asphalt. GPR scan inconclusive; may have flat or curved top.
- **MA19/MA20 –** buried diamond plated piece of metal next to old concrete pad.

6.2 Soil and Ground Water Investigation

Except for borings inside the warehouse, subsurface soil materials in borings generally consisted of approximately nine (9) to 14 feet of unconsolidated silts, medium-grained sands, and silty sands. These fine-grained soil materials were underlain by coarse gravels with silt and sand which extended to the maximum depth drilled of 15 feet bgs. Saturated conditions (i.e., shallow ground water) occurred in all borings at between five (5) and 12 feet bgs.

Borings inside the warehouse building (B01 through B03) penetrated six (6) to eight (8) inches of reinforced concrete slab, then up to seven (7) feet of fine-grained sand (engineered fill material).

Woody debris suggestive of Undocumented Fill was encountered in borings B03, B07, and B11.

During drilling, ENW observed field evidence of impacts in three (3) borings (B01 B02 and B03) indicated by soil vapor headspace readings up to 46.8 parts per million by volume (ppmv).

6.2.1 Laboratory Results – Soil

The results of laboratory analysis of soil samples are summarized on Table 1, behind the Tables tab following text. The results on Table 1 are compared to ODEQs Soil Matrix cleanup levels, ODEQ SLRBCs, ODEQ clean fill screening levels, and Regional Background Concentrations of Metals in Soils in the Portland Basin Region.

Petroleum Hydrocarbons. Laboratory analysis by NWTPH-HCID did not detect the presence of GRO above the laboratory method reporting limit (MRL) in any of the soil samples analyzed. DRO and RRO were detected in the 0.5-foot samples from DU01 and DU02, the 2-foot sample at B02, and the 1-foot sample at B06. In addition, RRO was detected in the 2-foot sample in boring B01.

DRO in sample B02-2 and B06-1 exceeded ODEQ's Level 2 Soil Matrix Cleanup Level of 500 milligrams per kilogram (mg/Kg), and ODEQ's SLRBC of 1,100 mg/Kg. RRO in the same two samples exceeded the Soil Matrix Cleanup Level and the SLRBC for RRO of 2,800 mg/Kg. Both DRO and RRO in B02-2 and B06-1 also exceeded their respective and CFSLs.

Volatile Organic Constituents (VOCs). Soil samples DU01-0.5, DU02-0.5, B01-2, B02-2, and B06-1 were further analyzed for VOCs typically related to DRO and RRO petroleum mixtures by EPA 8260. Laboratory analysis reported the following.

- Dichloromethane was detected in samples from DU01 and DU02; however, the laboratory determined its presence was due to a laboratory contaminant and not the result of a release at the site.
- Naphthalene, tetrachloroethylene (PCE), and trichloroethylene (TCE)were detected in the sample from B02 at 0.16 mg/Kg, 13 mg/Kg, and 0.056 mg/Kg, respectively. These concentrations are greater than the respective ODEQ SLRBCs and CFSLs for these constituents.
- All remaining VOCs were either not detected or were detected below the ODEQs most stringent human health risk-based screening levels.

Polynuclear Aromatic Hydrocarbons (PAHs). Samples containing DRO or RRO were further characterized for PAHs by EPA Method 8270. Laboratory analysis detected several PAH constituents above MRLs in four of the five samples analyzed.

- Benzo(a)pyrene (B[a]P) at 0.06 mg/Kg and 0.16 mg/Kg were reported in samples from DU01 and DU02, respectively. The reported concentration in DU02 exceeded the ODEQ SLRBC of 0.11 mg/Kg.
- Benzo(b)fluoranthene, chrysene, fluoranthene, indeno(1,2,3-cd)pyrene, and pyrene were detected at concentrations above their respective laboratory MRL in samples from DU01 and DU02; however, none of the detections exceeded the respective ODEQ SLRBCs.
- Acenaphthene, anthracene, chrysene, fluoranthene, fluorene, and pyrene were detected in the sample from B02; however, none of the detections exceeded the respective SLRBCs.

Polychlorinated Biphenyls (PCBs). Since PCBs can be associated with certain heavy petroleum range mixtures, soil samples from DU01, DU02, B01, B02, and B06 were further analyzed for PCBs (as Aroclors)

by EPA Method 8082. Laboratory analysis of soil samples detected PCBs at concentrations above the laboratory MRL in four of five samples analyzed.

- PCBs were detected in ISM pond sediment samples DU01 and DU02 and the sample from B06 at the 1-foot sample depth at 0.3 mg/Kg, 0.51 mg/Kg, and 0.34 mg/Kg, respectively. All PCB detections exceeded the respective ODEQ SLRBC for total Aroclors of 0.23 mg/Kg and the ODEQ CFSL of 0.034 mg/Kg.
- PCBs were detected in the soil sample from B01 above the laboratory MRL; however, the detection was not greater than the ODEQ SLRBC. The reported concentration marginally exceeded the ODEQ CFSL of 0.034 mg/Kg.

RCRA Metals. All soil samples were analyzed by EPA 6020 to screen for the presence of total RCRA metals in soil and pertinent results were as follows:

- While total arsenic exceeded ODEQ's SLRBC, its concentration was less than the regional default background concentration of 8.8 mg/Kg for the Portland Basin, suggesting arsenic is not enriched at this location.
- Total lead was detected at concentrations ranging from 4.06 mg/Kg to 54.3 mg/Kg. The reported concentrations in DU01 and B06 exceeded ODEQ's SLRBC of 30 mg/Kg and the ODEQs regional default background concentration of 28 mg/Kg, suggesting lead in soil/sediment may be enriched at these locations.
- Barium and chromium were detected above the laboratory MRL in all samples; however, none of the detections of up to 148 mg/Kg barium and up to 20 mg/Kg chromium exceeded the respective ODEQ's SLRBCs or regional default background /CFSLs.
- Total cadmium, mercury and silver were below the laboratory MRL in all samples.

6.2.2 Laboratory Results – Reconnaissance Ground Water

The results of laboratory analysis of reconnaissance ground water samples are summarized on Table 2, behind the Tables tab following text. Results in Table 2 are compared to ODEQs SLRBCs and ODEQ suggested default background concentrations for inorganic contaminants in fresh water.[3]

Petroleum Hydrocarbons. GRO and RRO in the sample from boring B12, and DRO in borings B06 through B12 exceeded ODEQ's respective SLRBCs; however, the laboratory noted that the pattern of peaks associated with the DRO detections at all locations is not indicative of the fuel standard used for quantitation, suggesting that DRO in the sample may be overlap from the gasoline or heavy oil range, or representative of a weathered product. RRO was not reported above the laboratory MRL in borings B04 through B11.

Volatile Organic Constituents (VOCs). Nine reconnaissance ground water samples were analyzed for VOCs and the following pertinent results were reported.

[3] For reference only. ODEQ prefers a site-specific determination of background concentrations; however, the default values may be used during the screening phase of a site investigation to make an initial assessment of whether metals concentrations at that site exceed regional background concentrations.

- Chloroform was detected in samples from B09, B10, and B11 at concentrations above the SLRBC for chloroform of 0.22 micrograms per liter (µg/L).
- Naphthalene at 1.1 µg/L in the sample from boring B12 exceeded the SLRBC of 0.17 µg/L.
- All remaining VOC constituents were either not detected or were detected below screening level concentrations that would be of concern.

Semi-Volatile Organic Constituents (SVOCs). The results of PCBs and PAHs analysis did not detect SVOC constituents except for two constituents (acenaphthene and fluorene) in the sample from boring B12 which did not exceed their respective SLRBCs.

Dissolved Metals. Of the RCRA 8 metals analyzed, barium was the only constituent detected in all samples. Its concentration did not exceed its screening level RBC in any of the samples.

6.2.3 Laboratory Results – Sub-slab Vapor/Soil Gas

The results of laboratory analysis of sub-slab vapor and soil gas samples are summarized on Table 3, behind the Tables tab following text. Table 3 compares results to the most stringent of ODEQ's generic default RBCs for the *Vapor Intrusion into Buildings* and *Volatilization to Outdoor Air* exposure pathways, as well as EPA's residential Vapor Intrusion Screening Levels (VISLs).

Laboratory analysis detected several VOC constituents in one or more samples during the sampling event. Of the detected VOCs, cis-1,2-DCE , naphthalene, PCE, and TCE were greater than their respective SLRBCs for the *Vapor Intrusion into Buildings* exposure scenario and their respective EPA VISLs.

6.2.4 Data Validation

A review of the laboratory reports for soil, ground water and soil gas samples indicates samples were generally analyzed within appropriate quality assurance/quality control procedures and specified holding times (see Appendix D for laboratory data validation form completed for this project).

The levels of isopropyl alcohol in sub-slab vapor samples SUB01 through SUB04 and soil gas samples SG01 and SG02 were within ODEQ sampling requirements of less than five (5) percent ambient air contribution, and ENW's more conservative in-house screening level of 5,000 ug/m^3, during the sampling event.[4]

7.0 Discussion

This section presents a discussion of the location of impacted media at the site, including areas where site contaminant poses a potentially unacceptable human health risk, and areas where impacts do not likely pose an environmental concern. This discussion is followed by a preliminary screening of human health risk drivers and considerations for contaminated media disposal to provide further understanding of potential environmental liabilities.

[4] ODEQ, March 25, 2010. *Guidance for Assessing and Remediating Vapor Intrusion in Buildings*.

7.1 Further Evaluation of Contaminants by Area

The following site features and locations reported contaminants of interest (COI) at concentrations exceeding their respective human health screening levels, and therefore, may represent a potentially unacceptable human health risk under the most stringent residential land use scenario.

- **Pond Sediments (DU01 and DU01).** Laboratory analysis of ISM samples collected from storm water pond sediments revealed the presence of PCBs, total lead, and B(a)P at concentrations greater than their respective SLRBCs. The impacted pond sediments represent a potential future liability associated with offsite discharge of storm water pollutants to nearby surface water bodies within the Columbia Slough Source Control Study Area.
- **Sump Features Inside Warehouse (MA02 and MA03).** The analytical results of the soil samples collected from boring B02 revealed concentrations of DRO, RRO, naphthalene, PCE and TCE at concentrations exceeding the applicable ODEQ SLRBCs. Soil impacts were identified in the sample from two (2) feet bgs. No additional soil samples were collected; therefore, the vertical extent of shallow impacts is unknown at this time and ground water at this location was not assessed as part of this investigation.
- **Potential Septic Tank Feature (MA11).** Laboratory analysis of a soil sample collected adjacent to MA11 from boring B06 reported DRO, RRO, PCBs and total lead at concentrations greater than the applicable ODEQ SLRBCs. A deeper sample collected at 9 feet bgs did not contain total petroleum hydrocarbons above the laboratory MRL. Several metals were reported; however, all detections were below their respective SLRBCs. The soil data suggests that shallow soil impacts are vertically isolated. A reconnaissance ground water sample collected from B06 (next to the septic feature) contained DRO above the ODEQ SLRBC. It is unclear whether DRO impacts to ground water are from a potential historical septic tank release or due to more widespread ground water impacts.
- **Vapor Intrusion Conditions Beneath On-site Warehouse Building.** Several VOCs, including PCE and TCE, exceeded the Vapor Intrusion screening levels in sub-slab vapor samples collected from SUB01 through SUB04 beneath the building slab. TCE was also detected above the screening level in soil gas sample SG01 located outside the east side of the building. The presence of VOCs in sub-slab vapor and soil gas indicates a potential contaminant source in soil and/or ground water beneath, and/or in the vicinity of, the onsite building.
- **West Yard and North Yard Areas.** Laboratory analysis of soil water interface samples from borings B07 through B11 did not detect petroleum hydrocarbons in soil at concentrations above the laboratory MRL. Several total metals were detected in soil; however, none of the detections were greater than the respective ODEQ SLRBCs. Reconnaissance ground water samples collected from B07 through B11 revealed the presence of DRO at concentrations greater than the SLRBC. Ground water impacts by DRO appear to be widespread beneath the site, and lateral extent of ground impacts beneath the subject site is not delineated at this time.
- **Suspected UST.** Several metals were detected in soil samples from borings B04 and B12 at either end of the suspected UST (MA10). Additionally, barium and several VOCs were detected in reconnaissance ground water samples from these borings at concentrations greater than the

laboratory MRL but below their respective SLRBCs. The reconnaissance ground water sample from B12 also contained elevated concentrations of GRO, RRO and naphthalene above the applicable respective SLRBCs which may be suggestive of a release.

7.2 Soil Disposal Considerations

Several constituents in soil exceed ODEQ's CSFLs and therefore further characterization is required prior to future activities in which subsurface soils are disturbed and possibly removed from the subject site (i.e., excavation, trenching, etc.).

8.0 Conclusions and Recommendations

The information presented in this report has allowed ENW to draw the following conclusions regarding subsurface conditions at the subject property:

- A UST is suggested present near the southwest corner of the on-site warehouse building; however, this was not identified during a review of regulatory databases during Blackstone's previous Phase I ESA. Analytical findings suggest impacts to ground water adjacent to the feature.
- The subject property is reportedly listed on ODEQ's UIC database for operation of an unregistered UIC. Current ODEQ regulations require all UICs to be registered with ODEQ's UIC Program. No UIC devices were identified at the subject property during this assessment.
- Laboratory analysis of soil and sediment samples collected from twelve temporary borings and two decision units has revealed impacts to surface soils and subsurface soils at concentrations exceeding SLRBCs.
- ISM samples collected from two storm water retention ponds identified PCBs and petroleum hydrocarbons in sediments within both ponded areas. These ponds function as storm water retention facilities and are part of the site's storm water management system. Blackstone's Phase I ESA indicated the subject property was added to the ECSI database in 2012 due to concerns of stormwater runoff draining to the subject property and Johnson Lake. Sediments in the ponds were reportedly removed during a source control action in 2013. Depending on the storm water design, the presence of PCBs in pond sediments do not necessarily suggest a current threat to sediments in Johnson Lake. However, if the storm water retention ponds are not designed to trap sediment and are not properly maintained, the presence of PCBs in sediments could be considered a source of PCBs in storm water discharges to Johnson Lake.
- Shallow ground water impacts by DRO are widespread across the west and north yards of the facility. It should be noted that ground-water samples were not collected at all temporary boring locations during this focused assessment and therefore is considered a data gap.
- Several VOCs were detected in soil gas and/or sub-slab vapor at concentration exceeding SLRBC, some of which could pose a potential vapor intrusion risk to occupational occupants inside the warehouse building.

Based on the above findings, ENW recommends:

- The anomaly suggested to be a possible UST in the southwest portion of the subject property should be further investigated to confirm the source of this anomaly. If confirmed to be a UST, its regulatory status should be confirmed and further actions taken, as appropriate.
- Further site characterization is recommended to further understand the magnitude and extent of contamination beneath the subject property. This additional characterization should include, but is not limited to, further investigation to confirm the source of VOCs beneath the warehouse building. Following the completion of further investigation, an assessment of risk should be conducted to evaluate all soil, ground water and vapor exposure pathways.
- An engineering evaluation of the existing storm water controls, including two retention ponds, should be performed to ensure impacted sediment is not discharged to receiving waters.
- If a UIC(s) are discovered at the site, they should be properly registered and decommissioned, if appropriate.
- To address residual impacts to soil and ground water, a Contaminated Media Management Plan (CMMP) should be prepared to ensure appropriate future management and handling of impacted soil and shallow ground water media.

9.0 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 work 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, and
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 Scope of Work. Therefore, if contamination other than that specifically mentioned is present and not identified as part of a limited Scope of Work, ENW's environmental investigation shall not be construed as a guaranteed absence of such materials. ENW have 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.

Tables

Table 1 - Summary of Analytical Data, Soil

Location ID		DU01	DU02	B01	B02	B03		B04	B05	B06		B07	B08	B09
Sample ID		DU01-230214-0.5-IS	DU02-230214-0.5-IS	B01-2	B02-2	B03-5	B03-7	B04-9-SWI	B05-9-SWI	B06-1	B06-9-SWI	B07-9-SWI	B08-9-SWI	B09-7-SWI
Date Sampled		2/14/2023	2/14/2023	2/14/2023	2/14/2023	2/15/2023	2/15/2023	2/15/2023	2/16/2023	2/16/2023	2/16/2023	2/16/2023	2/16/2023	2/16/2023
Depth Sampled (feet)		0.5	0.5	2	2	5	7	9	9	1	9	9	9	7
Sampled By		ENW	ENW	ENW	ENW	ENW	ENW	ENW	ENW	ENW	ENW	ENW	ENW	ENW
Location		West Retention Pond	East Retention Pond	MA01: Stained concrete floor of AST compound inside Warehouse	MA02/MA03: trench and sump feature	MA04: Potential Filled Sump	MA04: Potential Filled Sump	South of Suspected UST	MA13: Former ASTs	MA11: Filled Septic		West Yard	North Yard	North Yard
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)
Volatile Organic Constituents														
Benzene	c, v	<0.03 (ND)	<0.03 (ND)	<0.03 (ND)	<0.03 (ND)	---	---	---	---	<0.03 (ND)	---	---	---	---
Bromodichloromethane	c, v	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	---	---	---	---	<0.05 (ND)	---	---	---	---
Bromoform	c, v	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	---	---	---	---	<0.05 (ND)	---	---	---	---
Bromomethane	nc, v	<0.5 (ND)	<0.5 (ND)	<0.5 (ND)	<0.5 (ND)	---	---	---	---	<0.5 (ND)	---	---	---	---
Carbon tetrachloride	c, v	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	---	---	---	---	<0.05 (ND)	---	---	---	---
Chlorobenzene	nc, v	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	---	---	---	---	<0.05 (ND)	---	---	---	---
Chlorodibromomethane (dibromochloromethane)	c, v	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	---	---	---	---	<0.05 (ND)	---	---	---	---
Chloroethane (ethyl chloride)	nc, v	<0.5 (ND)	<0.5 (ND)	<0.5 (ND)	<0.5 (ND)	---	---	---	---	<0.5 (ND)	---	---	---	---
Chloroform	c, v	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	---	---	---	---	<0.05 (ND)	---	---	---	---
Chloromethane	nc, v	<0.5 (ND)	<0.5 (ND)	<0.5 (ND)	<0.5 (ND)	---	---	---	---	<0.5 (ND)	---	---	---	---
1,2-Dichlorobenzene	nc, v	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	0.13	---	---	---	---	<0.05 (ND)	---	---	---	---
1,4-Dichlorobenzene	c, v	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	---	---	---	---	<0.05 (ND)	---	---	---	---
1,1-Dichloroethane	c, v	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	---	---	---	---	<0.05 (ND)	---	---	---	---
1,1-Dichloroethene	nc, v	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	---	---	---	---	<0.05 (ND)	---	---	---	---
cis-1,2-Dichloroethene	nc, v	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	---	---	---	---	<0.05 (ND)	---	---	---	---
trans-1,2-Dichloroethene	nc, v	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	---	---	---	---	<0.05 (ND)	---	---	---	---
Dichloromethane	c, v	**11 lc**	**6.8 lc**	<0.5 (ND)	<0.5 (ND)	---	---	---	---	<0.5 (ND)	---	---	---	---
EDB (1,2-dibromoethane)	c, v	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	---	---	---	---	<0.05 (ND)	---	---	---	---
EDC (1,2-dichloroethane)	c, v	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	---	---	---	---	<0.05 (ND)	---	---	---	---
Ethylbenzene	c, v	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	---	---	---	---	<0.05 (ND)	---	---	---	---
MTBE (methyl t-butyl ether)	c, v	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	---	---	---	---	<0.05 (ND)	---	---	---	---
Naphthalene	c, v	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	**0.16**	---	---	---	---	<0.05 (ND)	---	---	---	---
iso-Propylbenzene (cumene)	nc, v	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	---	---	---	---	<0.05 (ND)	---	---	---	---
Tetrachloroethene (PCE)	c, v	<0.025 (ND)	<0.025 (ND)	0.3	**13**	---	---	---	---	0.041	---	---	---	---
Toluene	nc, v	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	---	---	---	---	<0.05 (ND)	---	---	---	---
1,1,1-Trichloroethane	nc, v	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	---	---	---	---	<0.05 (ND)	---	---	---	---
1,1,2-Trichloroethane	c, v	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	---	---	---	---	<0.05 (ND)	---	---	---	---
Trichloroethene	NA, v	<0.02 (ND)	<0.02 (ND)	<0.02 (ND)	**0.056**	---	---	---	---	<0.02 (ND)	---	---	---	---
Trichlorofluoromethane (Freon 11)	nc, v	<0.5 (ND)	<0.5 (ND)	<0.5 (ND)	<0.5 (ND)	---	---	---	---	<0.5 (ND)	---	---	---	---
1,2,4-Trimethylbenzene	nc, v	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	0.091	---	---	---	---	<0.05 (ND)	---	---	---	---
1,3,5-Trimethylbenzene	nc, v	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	0.058	---	---	---	---	<0.05 (ND)	---	---	---	---
Vinyl chloride	c, v	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	---	---	---	---	<0.05 (ND)	---	---	---	---
Xylenes	nc, v	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	---	---	---	---	<0.05 (ND)	---	---	---	---
Metals														
Arsenic	c, nv	2.66	3.47	2.89	2.27	5.73	4.05	3.23	3.92	3.23	2.67	4.12	6.92	5.23
Barium	nc, nv	140	147	90.1	95.5	135	148	103	108	88.8	89.6	95.3	92.5	149
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)
Chromium (III)	nc, nv	26.2	32.8	6.79	13.5	14	20	11.5	10.2	11.8	18.8	16.5	18.9	20.4
Lead	NA, nv	**54.3**	37.9	8.56	6.73	10.2	5.53	7.34	6.24	**34.4**	4.06	4.76	5.93	6.62
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)
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)

Table 1 - Summary of Analytical Data, Soil

Location ID		DU01	DU02	B01	B02	B03		B04	B05	B06		B07	B08	B09
Sample ID		DU01-230214-0.5-IS	DU02-230214-0.5-IS	B01-2	B02-2	B03-5	B03-7	B04-9-SWI	B05-9-SWI	B06-1	B06-9-SWI	B07-9-SWI	B08-9-SWI	B09-7-SWI
Date Sampled		2/14/2023	2/14/2023	2/14/2023	2/14/2023	2/15/2023	2/15/2023	2/15/2023	2/16/2023	2/16/2023	2/16/2023	2/16/2023	2/16/2023	2/16/2023
Depth Sampled (feet)		0.5	0.5	2	2	5	7	9	9	1	9	9	9	7
Sampled By		ENW	ENW	ENW	ENW	ENW	ENW	ENW	ENW	ENW	ENW	ENW	ENW	ENW
Location		West Retention Pond	East Retention Pond	MA01: Stained concrete floor of AST compound inside Warehouse	MA02/MA03: trench and sump feature	MA04: Potential Filled Sump	MA04: Potential Filled Sump	South of Suspected UST	MA13: Former ASTs	MA11: Filled Septic		West Yard	North Yard	North Yard
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)
Semivolatile Organic Constituents														
Polychlorinated biphenyls (Total PCBs)	c, v	**0.3**	**0.51**	0.035	<0.02 (ND)	---	---	---	---	**0.34**	---	---	---	---
Polycyclic Aromatic Hydrocarbons														
Acenaphthene	nc, v	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	0.25	---	---	---	---	<0.05 (ND)	---	---	---	---
Anthracene	nc, v	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	0.18	---	---	---	---	<0.05 (ND)	---	---	---	---
Benz[a]anthracene	c, v	<0.05 (ND)	0.088	<0.05 (ND)	<0.05 (ND)	---	---	---	---	<0.05 (ND)	---	---	---	---
Benzo[a]pyrene (BaP equivalents)	c, nv	0.06	**0.16**	<0.05 (ND)	<0.05 (ND)	---	---	---	---	<0.05 (ND)	---	---	---	---
Benzo[b]fluoranthene	c, nv	0.085	0.18	<0.05 (ND)	<0.05 (ND)	---	---	---	---	<0.05 (ND)	---	---	---	---
Benzo[k]fluoranthene	c, nv	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	---	---	---	---	<0.05 (ND)	---	---	---	---
Chrysene	c, nv	0.064	0.12	<0.05 (ND)	0.062	---	---	---	---	<0.05 (ND)	---	---	---	---
Dibenz[a,h]anthracene	c, nv	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	---	---	---	---	<0.05 (ND)	---	---	---	---
Fluoranthene	nc, nv	0.058	0.16	<0.05 (ND)	0.083	---	---	---	---	<0.05 (ND)	---	---	---	---
Fluorene	nc, v	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	0.43	---	---	---	---	<0.05 (ND)	---	---	---	---
Indeno[1,2,3-cd]pyrene	c, nv	0.057	0.14	<0.05 (ND)	<0.05 (ND)	---	---	---	---	<0.05 (ND)	---	---	---	---
Pyrene	nc, v	0.088	0.23	<0.05 (ND)	0.17	---	---	---	---	0.061	---	---	---	---
Total Petroleum Hydrocarbons														
Generic Gasoline (GRO)	nc, v	<20 (NP)	<20 (NP)	<20 (NP)	<20 (NP)	<20 (NP)	<20 (NP)	<20 (NP)	<20 (NP)	<20 (NP)	<20 (NP)	<20 (NP)	<20 (NP)	<20 (NP)
Generic Diesel / Heating Oil (DRO)	nc, v	35 x	41 x	<50 (ND)	**1600**	<50 (NP)	<50 (NP)	<50 (NP)	<50 (NP)	**2000 x**	<50 (NP)	<50 (NP)	<50 (NP)	<50 (NP)
Generic Mineral Insulating Oil (RRO)	nc, nv	920	570	1300	**11000**	<250 (NP)	<250 (NP)	<250 (NP)	<250 (NP)	**7200**	<250 (NP)	<250 (NP)	<250 (NP)	<250 (NP)

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.
NP = not present at or above the laboratory method reporting limit shown (HCID analysis).
— = not analyzed or not applicable.
c = carcinogenic
nc = noncarcinogenic
v = volatile
nv = nonvolatile
GRO = gasoline-range organics.
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.
j = The result is below method reporting limits. The value reported is an estimate.
x = the pattern of peaks is not indicative of the fuel standard used for quantitation.

lc = The presence of the compound indicated is likely due to laboratory contamination.

BKG = constituent exceeded its SLRBC; however, was not detected above default backgound concentrations in soil
Note, B(a)P equivelents is calcuculated using Toxicity Equivelent Factors for all carcinogenic PAHs, per ODEQ guidance.

Table 1 - Summary of Analytical Data, Soil

Location ID		B10	B11	B12	Maximum Soil Concentration (remaining soil)	Soil Matrix Cleanup Level	ODEQs Screening-Level Risk-Based Concentrations SLRBCs[1] (Soil)	Background Concentrations (Regional Default)	Clean Fill Screening Levels or Background Concentrations (as applicable)	Exceeds ODEQs Screening-Level SLRBCs (Soil) and/or Soil Matrix Cleanup Level
Sample ID		B10-9-SWI	B11-5-SWI	B12-9-SWI						
Date Sampled		2/16/2023	2/16/2023	2/16/2023						
Depth Sampled (feet)		9	5	9						
Sampled By		ENW	ENW	ENW						
Location		North Yard	North Yard	MA10				Portland Basin		TRUE OR Y FALSE OR N
Constituent of Interest	Note	mg/Kg (ppm)	mg/Kg (ppm)	mg/Kg (ppm)	mg/Kg (ppm)					
Volatile Organic Constituents										
Benzene	c, v	---	---	---	<0.03 (ND)	NE	0.023	---	0.023	(Y)
Bromodichloromethane	c, v	---	---	---	<0.05 (ND)	NE	0.002	---	0.002	(Y)
Bromoform	c, v	---	---	---	<0.05 (ND)	NE	0.046	---	0.046	(Y)
Bromomethane	nc, v	---	---	---	<0.5 (ND)	NE	0.083	---	0.083	(Y)
Carbon tetrachloride	c, v	---	---	---	<0.05 (ND)	NE	0.013	---	0.013	(Y)
Chlorobenzene	nc, v	---	---	---	<0.05 (ND)	NE	5.8	---	2.4	N
Chlorodibromomethane (dibromochloromethane)	c, v	---	---	---	<0.05 (ND)	NE	0.0024	---	0.0024	(Y)
Chloroethane (ethyl chloride)	nc, v	---	---	---	<0.5 (ND)	NE	310	---	310	N
Chloroform	c, v	---	---	---	<0.05 (ND)	NE	0.0034	---	0.0034	(Y)
Chloromethane	nc, v	---	---	---	<0.5 (ND)	NE	2.2	---	2.2	N
1,2-Dichlorobenzene	nc, v	---	---	---	0.13	NE	36	---	0.92	N
1,4-Dichlorobenzene	c, v	---	---	---	<0.05 (ND)	NE	0.057	---	0.057	N
1,1-Dichloroethane	c, v	---	---	---	<0.05 (ND)	NE	0.044	---	0.044	(Y)
1,1-Dichloroethene	nc, v	---	---	---	<0.05 (ND)	NE	6.7	---	6.7	N
cis-1,2-Dichloroethene	nc, v	---	---	---	<0.05 (ND)	NE	0.63	---	0.63	N
trans-1,2-Dichloroethene	nc, v	---	---	---	<0.05 (ND)	NE	7.0	---	7	N
Dichloromethane	c, v	---	---	---	**11 lc**	NE	0.14	---	0.14	LC
EDB (1,2-dibromoethane)	c, v	---	---	---	<0.05 (ND)	NE	0.00012	---	0.00012	(Y)
EDC (1,2-dichloroethane)	c, v	---	---	---	<0.05 (ND)	NE	0.0028	---	0.0028	(Y)
Ethylbenzene	c, v	---	---	---	<0.05 (ND)	NE	0.22	---	0.22	N
MTBE (methyl t-butyl ether)	c, v	---	---	---	<0.05 (ND)	NE	0.11	---	0.11	N
Naphthalene	c, v	---	---	---	**0.16**	NE	0.077	---	0.077	Y
iso-Propylbenzene (cumene)	nc, v	---	---	---	<0.05 (ND)	NE	96	---	96	N
Tetrachloroethene (PCE)	c, v	---	---	---	**13**	NE	0.46	---	0.18	Y
Toluene	nc, v	---	---	---	<0.05 (ND)	NE	83	---	23	N
1,1,1-Trichloroethane	nc, v	---	---	---	<0.05 (ND)	NE	190	---	190	N
1,1,2-Trichloroethane	c, v	---	---	---	<0.05 (ND)	NE	0.0063	---	0.0063	(Y)
Trichloroethene	NA, v	---	---	---	**0.056**	NE	0.013	---	0.013	Y
Trichlorofluoromethane (Freon 11)	nc, v	---	---	---	<0.5 (ND)	NE	61	---	52	N
1,2,4-Trimethylbenzene	nc, v	---	---	---	0.091	NE	10	---	10	N
1,3,5-Trimethylbenzene	nc, v	---	---	---	0.058	NE	11	---	11	N
Vinyl chloride	c, v	---	---	---	<0.05 (ND)	NE	0.00057	---	0.00057	(Y)
Xylenes	nc, v	---	---	---	<0.05 (ND)	NE	23	---	1.4	N
Metals										
Arsenic	c, nv	5.91	2.65	2.02	6.92	NE	0.43	8.8	8.8	BKG
Barium	nc, nv	93.2	158	74.7	158	NE	15000	790	790	N
Cadmium	nc, nv	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	NE	78	0.63	0.63	N
Chromium (III)	nc, nv	22.1	19	5.42	32.8	NE	120000	76	76	N
Lead	NA, nv	5.91	8.62	2.72	**54.3**	NE	30	28	28	Y
Mercury	nc, nv	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	NE	23	0.23	0.23	N
Silver	nc, nv	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	NE	390	0.82	0.82	N

Table 1 - Summary of Analytical Data, Soil

Location ID		B10	B11	B12	Maximum Soil Concentration (remaining soil)	Soil Matrix Cleanup Level	ODEQs Screening-Level Risk-Based Concentrations SLRBCs[1] (Soil)	Background Concentrations (Regional Default)	Clean Fill Screening Levels or Background Concentrations (as applicable)	Exceeds ODEQs Screening-Level SLRBCs (Soil) and/or Soil Matrix Cleanup Level
Sample ID		B10-9-SWI	B11-5-SWI	B12-9-SWI						
Date Sampled		2/16/2023	2/16/2023	2/16/2023						
Depth Sampled (feet)		9	5	9						
Sampled By		ENW	ENW	ENW				Portland Basin		
Location		North Yard	North Yard	MA10						TRUE OR Y FALSE OR N
Constituent of Interest	Note	mg/Kg (ppm)	mg/Kg (ppm)	mg/Kg (ppm)	mg/Kg (ppm)					
Semivolatile Organic Constituents										
Polychlorinated biphenyls (Total PCBs)	c, v	---	---	---	**0.51**	NE	0.23	---	0.23	Y
Polycyclic Aromatic Hydrocarbons										
Acenaphthene	nc, v	---	---	---	0.25	NE	770	---	0.25	N
Anthracene	nc, v	---	---	---	0.18	NE	8200	---	6.8	N
Benz[a]anthracene	c, v	---	---	---	0.088	NE	1.1	---	0.73	N
Benzo[a]pyrene (BaP equivalents)	c, nv	---	---	---	**0.16**	NE	0.11	---	0.11	Y
Benzo[b]fluoranthene	c, nv	---	---	---	0.18	NE	1.1	---	1.1	N
Benzo[k]fluoranthene	c, nv	---	---	---	<0.05 (ND)	NE	11	---	11	N
Chrysene	c, nv	---	---	---	0.12	NE	110	---	3.1	N
Dibenz[a,h]anthracene	c, nv	---	---	---	<0.05 (ND)	NE	0.11	---	0.11	N
Fluoranthene	nc, nv	---	---	---	0.16	NE	2400	---	10	N
Fluorene	nc, v	---	---	---	0.43	NE	770	---	3.7	N
Indeno[1,2,3-cd]pyrene	c, nv	---	---	---	0.14	NE	1.1	---	1.1	N
Pyrene	nc, v	---	---	---	0.23	NE	1800	---	10	N
Total Petroleum Hydrocarbons										
Generic Gasoline (GRO)	nc, v	<20 (NP)	<20 (NP)	<20 (NP)	<20 (NP)	80	31	---	520	N
Generic Diesel / Heating Oil (DRO)	nc, v	<50 (NP)	<50 (NP)	<50 (NP)	**2000 x**	500	1100	---	90	Y
Generic Mineral Insulating Oil (RRO)	nc, nv	<250 (NP)	<250 (NP)	<250 (NP)	**11000**		2800	---	140,000	Y

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.
NP = not present at or above the laboratory method reporting limit shown (HCID analysis).
— = not analyzed or not applicable.
c = carcinogenic
nc = noncarcinogenic
v = volatile
nv = nonvolatile
GRO = gasoline-range organics.
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.
j = The result is below method reporting limits. The value reported is an estimate.
x = the pattern of peaks is not indicative of the fuel standard used for quantitation.

lc = The presence of the compound indicated is likely due to laboratory contamination.

BKG = constituent exceeded its SLRBC; however, was not detected above default backgound concentrations in soil
Note, B(a)P equivelents is calcuculated using Toxicity Equivelent Factors for all carcinogenic PAHs, per ODEQ guidance.

Table 2 - Summary of Analytical Data, Reconnaissance Ground Water

Location ID		B04	B05	B06	B07	B08	B09	B10	B11	B12	Maximum Ground Water Concentration	ODEQs Screening-level Risk-Based Concentrations (SLRBCs) [1]	Background Concentrations (metals)	Exceeds Background Concentrations (metals)?	COPC?
Sample ID		B04-GW-12.5	B05-GW-12.5	B06-GW-15	B07-GW-15	B08-GW-13	B09-GW-14.5	B10-GW-14.5	B11-GW-15	B12-GW-230216					
Date Sampled		2/16/23	2/16/23	2/16/23	2/16/23	2/16/23	2/16/23	2/16/23	2/16/23	2/16/23					
Depth Sampled (feet)		12.5	12.5	15	15	13	14.5	14.5	15	15					
Sampled By		ENW	ENW	ENW	ENW	ENW	ENW	ENW	ENW	ENW					
Location		South of Suspected UST	MA13: Former ASTs	MA11: Filled Septic	West Yard	North Yard	North Yard	North Yard	North Yard	North Yard				TRUE OR Y FALSE OR N	TRUE OR Y FALSE OR N
Constituent of Interest	Note	µg/L (ppb)	µg/L (ppb)	µg/L (ppb)	µg/L (ppb)	µg/L (ppb)	µg/L (ppb)	µg/L (ppb)	µg/L (ppb)	µg/L (ppb)	µg/L (ppb)				
Volatile Organic Constituents															
Benzene	c, v	<0.35 (ND)	<0.35 (ND)	<0.35 (ND)	<0.35 (ND)	<0.35 (ND)	<0.35 (ND)	<0.35 (ND)	<0.35 (ND)	<0.35 (ND)	<0.35 (ND)	0.46	NE	N	N
Bromodichloromethane	c, v	<0.5 (ND)	<0.5 (ND)	<0.5 (ND)	<0.5 (ND)	<0.5 (ND)	<0.5 (ND)	<0.5 (ND)	<0.5 (ND)	<0.5 (ND)	<0.5 (ND)	0.13	NE	N	(Y)
Bromoform	c, v	<5 (ND)	<5 (ND)	<5 (ND)	<5 (ND)	<5 (ND)	<5 (ND)	<5 (ND)	<5 (ND)	<5 (ND)	<5 (ND)	3.3	NE	N	(Y)
Bromomethane	nc, v	<5 (ND)	<5 (ND)	<5 (ND)	<5 (ND)	<5 (ND)	<5 (ND)	<5 (ND)	<5 (ND)	<5 (ND)	<5 (ND)	7.5	NE	N	N
Carbon tetrachloride	c, v	<0.5 (ND)	<0.5 (ND)	<0.5 (ND)	<0.5 (ND)	<0.5 (ND)	<0.5 (ND)	<0.5 (ND)	<0.5 (ND)	<0.5 (ND)	<0.5 (ND)	0.46	NE	N	(Y)
Chlorobenzene	nc, v	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	77	NE	N	N
Chlorodibromomethane (dibromochloromethane)	c, v	<0.5 (ND)	<0.5 (ND)	<0.5 (ND)	<0.5 (ND)	<0.5 (ND)	<0.5 (ND)	<0.5 (ND)	<0.5 (ND)	<0.5 (ND)	<0.5 (ND)	0.17	NE	N	(Y)
Chloroethane (ethyl chloride)	nc, v	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	21000	NE	N	N
Chloroform	c, v	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	**1.1**	**1.0**	**1.0**	<1 (ND)	**1.1**	0.22	NE	N	Y
Chloromethane	nc, v	<10 (ND)	<10 (ND)	<10 (ND)	<10 (ND)	<10 (ND)	<10 (ND)	<10 (ND)	<10 (ND)	<10 (ND)	<10 (ND)	190	NE	N	N
1,2-Dichlorobenzene	nc, v	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	300	NE	N	N
1,4-Dichlorobenzene	c, v	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	0.48	NE	N	(Y)
1,1-Dichloroethane	c, v	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	2.8	NE	N	N
1,1-Dichloroethene	nc, v	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	280	NE	N	N
cis-1,2-Dichloroethene	nc, v	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	36	NE	N	N
trans-1,2-Dichloroethene	nc, v	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	360	NE	N	N
Dichloromethane	c, v	<5 (ND)	<5 (ND)	<5 (ND)	<5 (ND)	<5 (ND)	<5 (ND)	<5 (ND)	<5 (ND)	<5 (ND)	<5 (ND)	11	NE	N	N
EDB (1,2-dibromoethane)	c, v	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	0.0075	NE	N	(Y)
EDC (1,2-dichloroethane)	c, v	<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)	0.17	NE	N	(Y)
Ethylbenzene	c, v	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	1.5	NE	N	N
MTBE (methyl t-butyl ether)	c, v	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	14	NE	N	N
Naphthalene	c, v	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	**1.1**	**1.1**	0.17	NE	N	Y
iso-Propylbenzene (cumene)	nc, v	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	440	NE	N	N
Tetrachloroethene (PCE)	c, v	2.3	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	1.2	<1 (ND)	<1 (ND)	2.3	12	NE	N	N
Toluene	nc, v	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	1100	NE	N	N
1,1,1-Trichloroethane	nc, v	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	8000	NE	N	N
1,1,2-Trichloroethane	c, v	<0.5 (ND)	<0.5 (ND)	<0.5 (ND)	<0.5 (ND)	<0.5 (ND)	<0.5 (ND)	<0.5 (ND)	<0.5 (ND)	<0.5 (ND)	<0.5 (ND)	0.28	NE	N	(Y)
Trichloroethene	NA, v	<0.5 (ND)	<0.5 (ND)	<0.5 (ND)	<0.5 (ND)	<0.5 (ND)	<0.5 (ND)	<0.5 (ND)	<0.5 (ND)	<0.5 (ND)	<0.5 (ND)	0.49	NE	N	(Y)
Trichlorofluoromethane (Freon 11)	nc, v	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	1100	NE	N	N
1,2,4-Trimethylbenzene	nc, v	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	1.3	1.3	54	NE	N	N
1,3,5-Trimethylbenzene	nc, v	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	59	NE	N	N
Vinyl chloride	c, v	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	0.021	<0.05 (ND)	0.027	NE	N	(Y)
Xylenes	nc, v	<3 (ND)	<3 (ND)	<3 (ND)	<3 (ND)	<3 (ND)	<3 (ND)	<3 (ND)	<3 (ND)	2.1	2.1	190	NE	N	N
Metals															
Arsenic	c, nv	<5 (ND)	<5 (ND)	<5 (ND)	<5 (ND)	<5 (ND)	<5 (ND)	<5 (ND)	<1 (ND)	<5 (ND)	<5 (ND)	0.052	2	Y	(Y)
Barium	nc, nv	28.0	10.9	9.13	60.6	49.2	1870	20.3	13.9	21.4	1870	4000	NE	N	N
Cadmium	nc, nv	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	1.44	<1 (ND)	<1 (ND)	<1 (ND)	1.44	20	1	Y	N
Chromium (III)	nc, nv	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	32.2	<1 (ND)	<1 (ND)	<1 (ND)	32.2	30000	1	Y	N
Lead	NA, nv	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	8.81	<1 (ND)	<1 (ND)	<1 (ND)	8.81	15	13.3	N	N
Mercury	nc, nv	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<5 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<5 (ND)	6	0.1	(Y)	N
Silver	nc, nv	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<5 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<5 (ND)	100	1	(Y)	N

Table 2 - Summary of Analytical Data, Reconnaissance Ground Water

Location ID		B04	B05	B06	B07	B08	B09	B10	B11	B12	Maximum Ground Water Concentration	ODEQs Screening-level Risk-Based Concentrations (SLRBCs) [1]	Background Concentrations (metals)	Exceeds Background Concentrations (metals)?	COPC?
Sample ID		B04-GW-12.5	B05-GW-12.5	B06-GW-15	B07-GW-15	B08-GW-13	B09-GW-14.5	B10-GW-14.5	B11-GW-15	B12-GW-230216					
Date Sampled		2/16/23	2/16/23	2/16/23	2/16/23	2/16/23	2/16/23	2/16/23	2/16/23	2/16/23					
Depth Sampled (feet)		12.5	12.5	15	15	13	14.5	14.5	15	15					
Sampled By		ENW	ENW	ENW	ENW	ENW	ENW	ENW	ENW	ENW					
Location		South of Suspected UST	MA13: Former ASTs	MA11: Filled Septic	West Yard	North Yard	North Yard	North Yard	North Yard	North Yard				TRUE OR Y FALSE OR N	TRUE OR Y FALSE OR N
Constituent of Interest	Note	µg/L (ppb)	µg/L (ppb)	µg/L (ppb)	µg/L (ppb)	µg/L (ppb)	µg/L (ppb)	µg/L (ppb)	µg/L (ppb)	µg/L (ppb)	µg/L (ppb)				
Semivolatile Organic Constituents															
Polychlorinated biphenyls (Total PCBs)	c, v	<0.1 (ND)	<0.1 (ND)	<0.1 (ND)	<0.1 (ND)	<0.1 (ND)	<0.1 (ND)	<0.1 (ND)	<0.1 (ND)	<0.1 (ND)	<0.1 (ND)	0.006	NE	N	(Y)
Polycyclic Aromatic Hydrocarbons															
Acenaphthene	nc, v	---	---	<0.04 (ND)	<0.04 (ND)	<0.04 (ND)	<0.04 (ND)	<0.04 (ND)	<0.04 (ND)	0.051	0.051	510	NE	N	N
Anthracene	nc, v	---	---	<0.04 (ND)	<0.04 (ND)	<0.04 (ND)	<0.04 (ND)	<0.04 (ND)	<0.04 (ND)	<0.04 (ND)	<0.04 (ND)	>S	NE	N	N
Benz[a]anthracene	c, v	---	---	<0.04 (ND)	<0.04 (ND)	<0.04 (ND)	<0.04 (ND)	<0.04 (ND)	<0.04 (ND)	<0.04 (ND)	<0.04 (ND)	0.03	NE	N	(Y)
Benzo[a]pyrene (BaP equivalents)	c, nv	---	---	<0.04 (ND)	<0.04 (ND)	<0.04 (ND)	<0.04 (ND)	<0.04 (ND)	<0.04 (ND)	<0.04 (ND)	<0.04 (ND)	0.025	NE	N	(Y)
Benzo[b]fluoranthene	c, nv	---	---	<0.04 (ND)	<0.04 (ND)	<0.04 (ND)	<0.04 (ND)	<0.04 (ND)	<0.04 (ND)	<0.04 (ND)	<0.04 (ND)	0.25	NE	N	N
Benzo[k]fluoranthene	c, nv	---	---	<0.04 (ND)	<0.04 (ND)	<0.04 (ND)	<0.04 (ND)	<0.04 (ND)	<0.04 (ND)	<0.04 (ND)	<0.04 (ND)	2.5	NE	N	N
Chrysene	c, nv	---	---	<0.04 (ND)	<0.04 (ND)	<0.04 (ND)	<0.04 (ND)	<0.04 (ND)	<0.04 (ND)	<0.04 (ND)	<0.04 (ND)	>S	NE	N	N
Dibenz[a,h]anthracene	c, nv	---	---	<0.04 (ND)	<0.04 (ND)	<0.04 (ND)	<0.04 (ND)	<0.04 (ND)	<0.04 (ND)	<0.04 (ND)	<0.04 (ND)	0.025	NE	N	(Y)
Fluoranthene	nc, nv	---	---	<0.04 (ND)	<0.04 (ND)	<0.04 (ND)	<0.04 (ND)	<0.04 (ND)	<0.04 (ND)	<0.04 (ND)	<0.04 (ND)	>S	NE	N	N
Fluorene	nc, v	---	---	<0.04 (ND)	<0.04 (ND)	<0.04 (ND)	<0.04 (ND)	<0.04 (ND)	<0.04 (ND)	0.32	0.32	280	NE	N	N
Indeno[1,2,3-cd]pyrene	c, nv	---	---	<0.04 (ND)	<0.04 (ND)	<0.04 (ND)	<0.04 (ND)	<0.04 (ND)	<0.04 (ND)	<0.04 (ND)	<0.04 (ND)	>S	NE	N	N
Pyrene	nc, v	---	---	<0.04 (ND)	<0.04 (ND)	<0.04 (ND)	<0.04 (ND)	<0.04 (ND)	<0.04 (ND)	<0.04 (ND)	<0.04 (ND)	>S	NE	N	N
Total Petroleum Hydrocarbons															
Generic Gasoline (GRO)	nc, v	<100 (ND)	<100 (ND)	<100 (ND)	<100 (ND)	<100 (ND)	<100 (ND)	<100 (ND)	<100 (ND)	**120**	**120**	110	NE	N	Y
Generic Diesel / Heating Oil (DRO)	nc, v	<50 (ND)	<50 (ND)	**890 x**	**1300 x**	**340 x**	**420 x**	**310 x**	**1300 x**	**1100 x**	**1300 x**	100	NE	N	Y
Generic Mineral Insulating Oil (RRO)	nc, nv	<250 (ND)	<250 (ND)	<250 (ND)	<250 (ND)	<250 (ND)	<250 (ND)	<250 (ND)	<250 (ND)	**6800**	**6800**	300	NE	N	Y

Notes:
ug/L = micrograms per Liter or parts per billion (ppb).
<# (ND) = not detected at or above the laboratory method reporting limit shown.
NE = not established.
NP = not present at or above the laboratory method reporting limit shown (HCID analysis).

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

— = not analyzed or not applicable.
c = carcinogenic
nc = noncarcinogenic
v = volatile
nv = nonvolatile
GRO = gasoline-range organics.
DRO = diesel-range organics.
RRO = residual-range organics.
BKG = constituent exceeded its SLRBC; however, was not detected above default backgound concentrations in soil

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

[1] Lowest Risk-Based Concentration for ground water (screening level).

(Y) indicates analyte not detected, but detection limit is above screening concentration.
x = the pattern of peaks is not indicative of the fuel standard used for quantitation.

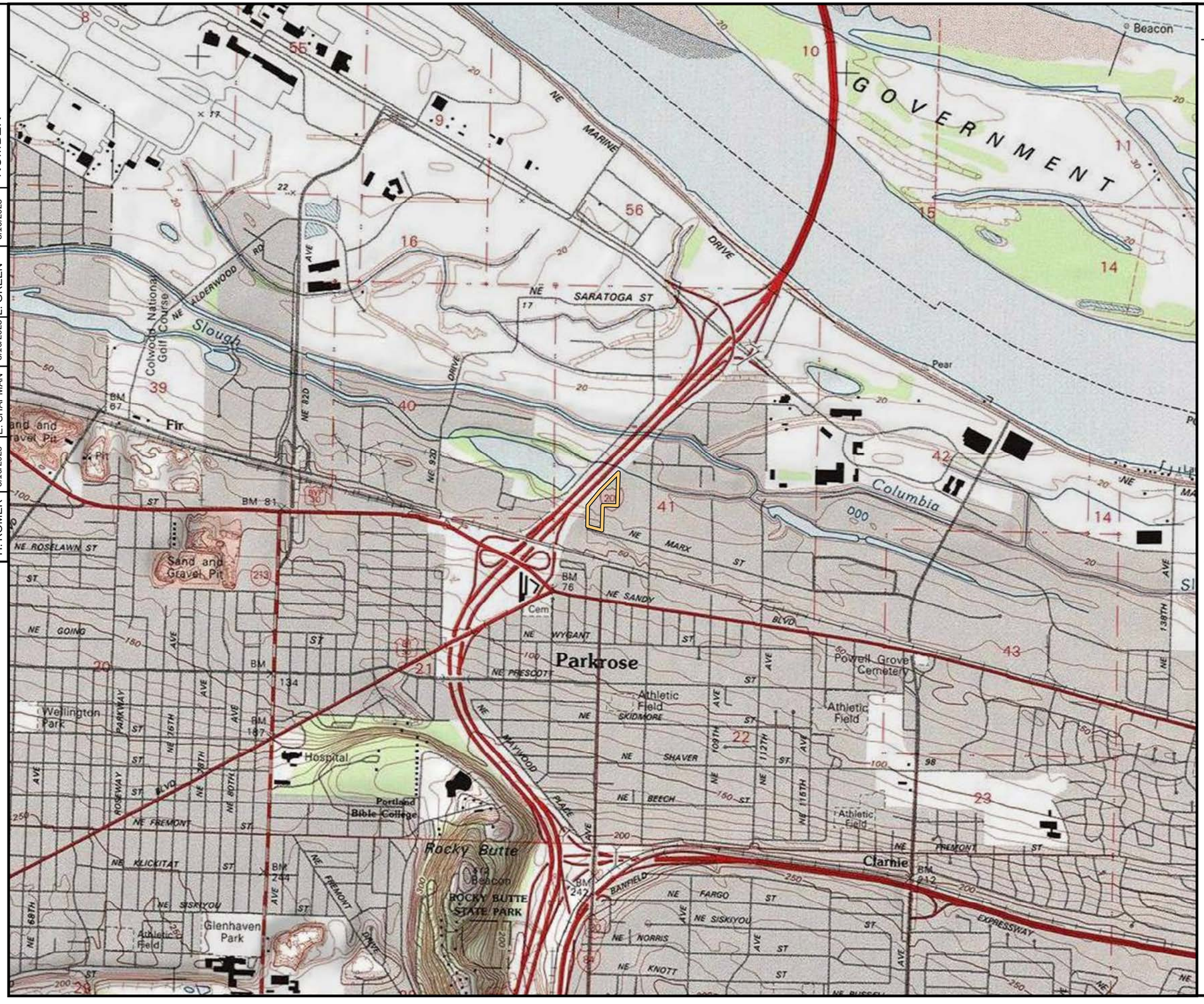
Table 3 - Summary of Analytical Data, Sub-Slab Vapor and Soil Gas

Sample ID		SUB01-230215	SUB02-230215	SUB03-230215	SUB04-230215	SG01-230215-5	SG02-230215-5	Maximum Soil-Gas Concentration	ODEQs Screening-level RBCs (Soil Gas) [1]	EPA Residential VISL [2]	Constituent of Concern (COC)
Date Sampled		2/15/23	2/15/23	2/15/23	2/15/23	2/15/23	2/15/23				
Depth Sampled (feet)		sub-slab	sub-slab	sub-slab	sub-slab	5	5				
Sampled By		ENW	ENW	ENW	ENW	ENW	ENW				
Location		Below building slab	Below building slab	Below building slab	Below building slab	East side of building	East side of building				TRUE OR Y FALSE OR N
Constituent of Interest	Note	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m^3			
Volatile Organic Constituents											
Acetone	c,v	828.86	781.86	250.96	89.32	24.91	2.6 J	828.86	NE	NE	N
Benzene	c, v	3.13	3.62	2.17	1.24 J	1.78 J	1.14 J	3.62	72	12.00	N
Bromodichloromethane	c, v	<2.26 (ND)	<2.26 (ND)	<2.26 (ND)	<2.26 (ND)	<2.26 (ND)	<2.26 (ND)	<2.26 (ND)	15	2.53	N
Bromoform	c, v	<2.31 (ND)	<2.31 (ND)	<2.31 (ND)	<2.31 (ND)	<2.31 (ND)	<2.31 (ND)	<2.31 (ND)	510	85.1	N
Bromomethane	nc, v	<3.26 (ND)	<3.26 (ND)	<3.26 (ND)	<3.26 (ND)	<3.26 (ND)	<3.26 (ND)	<3.26 (ND)	1000	174	N
Carbon tetrachloride	c, v	<4.98 (ND)	<4.98 (ND)	<4.98 (ND)	<4.98 (ND)	<4.98 (ND)	<4.98 (ND)	<4.98 (ND)	94	15.6	N
Chlorobenzene	nc, v	<3.5 (ND)	<3.5 (ND)	<3.5 (ND)	<3.5 (ND)	<3.5 (ND)	<3.5 (ND)	<3.5 (ND)	10000	1740	N
Chlorodibromomethane (dibromochloromethane)	c, v	<2.84 (ND)	<2.84 (ND)	<2.84 (ND)	<2.84 (ND)	<2.84 (ND)	<2.84 (ND)	<2.84 (ND)	21	---	N
Chloroethane (ethyl chloride)	nc, v	<2.21 (ND)	<2.21 (ND)	<2.21 (ND)	<2.21 (ND)	<2.21 (ND)	<2.21 (ND)	<2.21 (ND)	2100000	139000	N
Chloroform	c, v	**50.95**	**5.41**	<3.88 (ND)	<3.88 (ND)	<3.88 (ND)	<3.88 (ND)	**50.95**	24	4.07	Y
Chloromethane	nc, v	<1.74 (ND)	<1.74 (ND)	<1.74 (ND)	<1.74 (ND)	<1.74 (ND)	<1.74 (ND)	<1.74 (ND)	19000	3130	N
1,2-Dichlorobenzene	nc, v	<5.02 (ND)	<5.02 (ND)	<5.02 (ND)	<5.02 (ND)	<5.02 (ND)	<5.02 (ND)	<5.02 (ND)	42,000	6,950	N
1,4-Dichlorobenzene	c, v	<3.47 (ND)	<3.47 (ND)	<3.47 (ND)	<3.47 (ND)	<3.47 (ND)	<3.47 (ND)	<3.47 (ND)	51	9	N
1,1-Dichloroethane	c, v	1.31 J	<3.37 (ND)	<3.37 (ND)	<3.37 (ND)	<3.37 (ND)	<3.37 (ND)	1.31 J	350	58.5	N
1,1-Dichloroethene	nc, v	<3.28 (ND)	<3.28 (ND)	<3.28 (ND)	<3.28 (ND)	<3.28 (ND)	<3.28 (ND)	<3.28 (ND)	42000	6950	N
cis-1,2-Dichloroethene	nc, v	252.71	**4164.5**	3.15 J	<3.56 (ND)	<3.56 (ND)	<3.56 (ND)	**4164.5**	>Pv	1390	**VISL**
trans-1,2-Dichloroethene	nc, v	11.09	11.26	<2.39 (ND)	<2.39 (ND)	<2.39 (ND)	<2.39 (ND)	11.26	>Pv	1390	N
Dichloromethane	c, v	<2.79 (ND)	<2.79 (ND)	<2.79 (ND)	<2.79 (ND)	<2.79 (ND)	<2.79 (ND)	<2.79 (ND)	20000	3380	N
EDB (1,2-dibromoethane)	c, v	<3.11 (ND)	<3.11 (ND)	<3.11 (ND)	<3.11 (ND)	<3.11 (ND)	<3.11 (ND)	<3.11 (ND)	0.94	0.156	(Y)
EDC (1,2-dichloroethane)	c, v	<3.08 (ND)	<3.08 (ND)	<3.08 (ND)	<3.08 (ND)	<3.08 (ND)	<3.08 (ND)	<3.08 (ND)	22	3.6	N
Ethylbenzene	c, v	<3.83 (ND)	<3.83 (ND)	<3.83 (ND)	<3.83 (ND)	2.96 J	<3.83 (ND)	2.96 J	220	37.4	N
MTBE (methyl t-butyl ether)	c, v	<2.22 (ND)	<2.22 (ND)	<2.22 (ND)	1.41 J	<2.22 (ND)	2.22 J	2.22 J	2200	360	N
Naphthalene	c, v	<1.4 (ND)	1.67	**26.01**	8.82	4.77	1.61	**26.01**	17	2.75	Y
Tetrachloroethene (PCE)	c, v	**21804.15**	3561.1	26.53	339.78	**726.65**	8.02	**21804.15**	2200	360	Y
Toluene	nc, v	17.34	8.53	26.05	3.56	18.87	2.33 J	26.05	1000000	174000	N
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	nc, v	2.59 J	<6.12 (ND)	<6.12 (ND)	<6.12 (ND)	<6.12 (ND)	8.73	8.73	6300000	174000	N
1,1,1-Trichloroethane	nc, v	22.87	<4.04 (ND)	<4.04 (ND)	<4.04 (ND)	<4.04 (ND)	<4.04 (ND)	22.87	1000000	174000	N
1,1,2-Trichloroethane	c, v	<4.68 (ND)	<4.68 (ND)	<4.68 (ND)	<4.68 (ND)	<4.68 (ND)	<4.68 (ND)	<4.68 (ND)	35	5.85	N
Trichloroethene	NA, v	**3940.43**	**767.76**	1.71 J	2.27 J	9.14	1.36 J	**3940.43**	95	15.9	Y
Trichlorofluoromethane (Freon 11)	nc, v	14.9	<4.73 (ND)	<4.73 (ND)	<4.73 (ND)	15.32	<4.73 (ND)	15.32	150000	0	N
1,2,4-Trimethylbenzene	nc, v	<4.17 (ND)	7.44	<4.17 (ND)	<4.17 (ND)	2.65 J	<4.17 (ND)	7.44	13000	2090	N
1,3,5-Trimethylbenzene	nc, v	<4.24 (ND)	3.62 J	<4.24 (ND)	<4.24 (ND)	<4.24 (ND)	<4.24 (ND)	3.62 J	13000	2090	N
Vinyl chloride	c, v	<2.15 (ND)	1.44 J	<2.15 (ND)	<2.15 (ND)	<2.15 (ND)	<2.15 (ND)	1.44 J	33	5.59	N
Xylenes	nc, v	2.48 J	4.74 J	2.16 J	2.18 J	8.56 J	3.31 J	8.56 J	21000	3480	N
Total Petroleum Hydrocarbons											
Generic Gasoline (GRO)	nc, v	2340.63	1765.63	460.55 J	795.32	609.03	569.73	2340.63	79000	13900	N
Leak Detection								**Maximum Soil-Gas Concentration**	**Leak Screenining Level**		**Leak Suggested?**
2-Propanol		64.67	69.29	110.62	24.42	28.8	6.15	110.62	5000		N

Notes:
ND = not detected at or above laboratory method reporting limits.
— = not analyzed or not applicable.
< = not detected above method reporting limit shown.
NE = not established.
ug/m^3 = micrograms per cubic meter of air .
c = carcinogenic
nc = noncarcinogenic
v = volatile
nv = nonvolatile
GRO = gasoline-range organics.
DRO = diesel-range organics.
RRO = residual-range organics.
Bolded concentrations exceed screening level risk-based concentrations and reference concentrations, as applicable.
[1] Lowest Risk-Based Concentration for soil gas/sub-slab vapor (screening level).
[2] EPA Vapor Intrusion Screening Level
(Y) indicates analyte not detected, but detection limit is above screening concentration.
J = inidicates the internal standard associated with the analyte is out of control limits; the reported concentration is an estimate.
y = the pattern of peaks is not indicative of motor oil.
>Pv = indicates this constituent cannot present an unacceptable health risk by the vapor intrusion pathway

Figures

DRAWN BY	H. ROMER	3/16/2023
CHECKED BY	E. CHAPMAN	3/16/2023
APPROVED BY	L. GREEN	3/16/2023
DRAWING NUMBER	1460-23001(V01)	



LEGEND:

SUBJECT PROPERTY BOUNDARY

NOTES:

1. BASE MAP DEVELOPED BY THE USGS

0 1,125 2,250 4,500

Feet

N

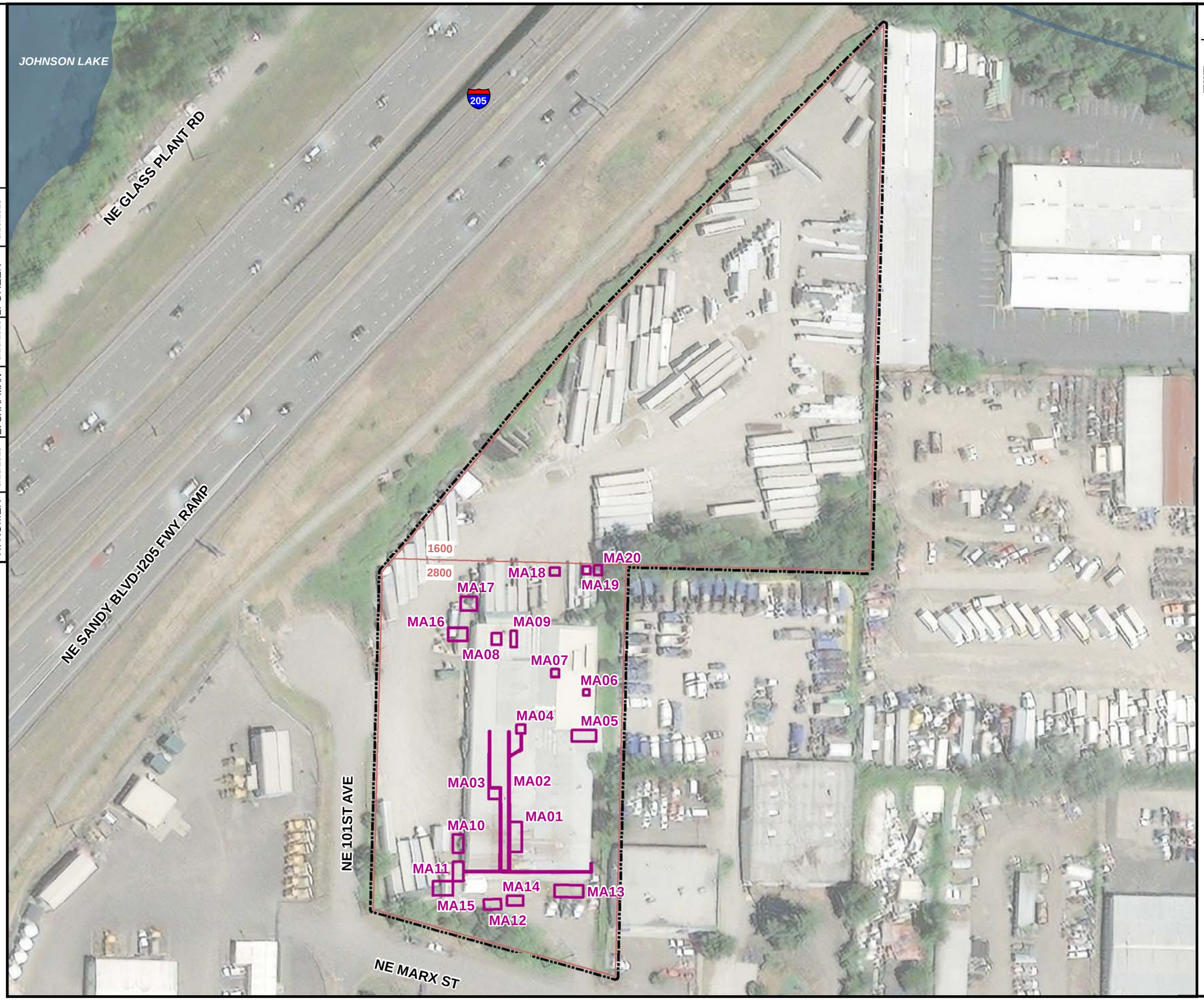
EVREN NORTHWEST INC.
environmental natural resource consultants

FIGURE 1

SITE VICINITY

5.3-ACRE INDUSTRIAL PROPERTY
10103 NE MARX STREET
PORTLAND, OREGON

DRAWING NUMBER	1460-23001(V01)
APPROVED BY	L. GREEN 3/16/2023
CHECKED BY	E. CHAPMAN 3/16/2023
DRAWN BY	H. ROMER 3/16/2023



LEGEND:

- SUBJECT PROPERTY BOUNDARY
- TAX LOT
- MAGNETIC ANOMALY

NOTES:

1. BASE MAP DEVELOPED FROM AN AERIAL PHOTOGRAPH MAP DATED 2021 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

0 65 130 260

Feet

N

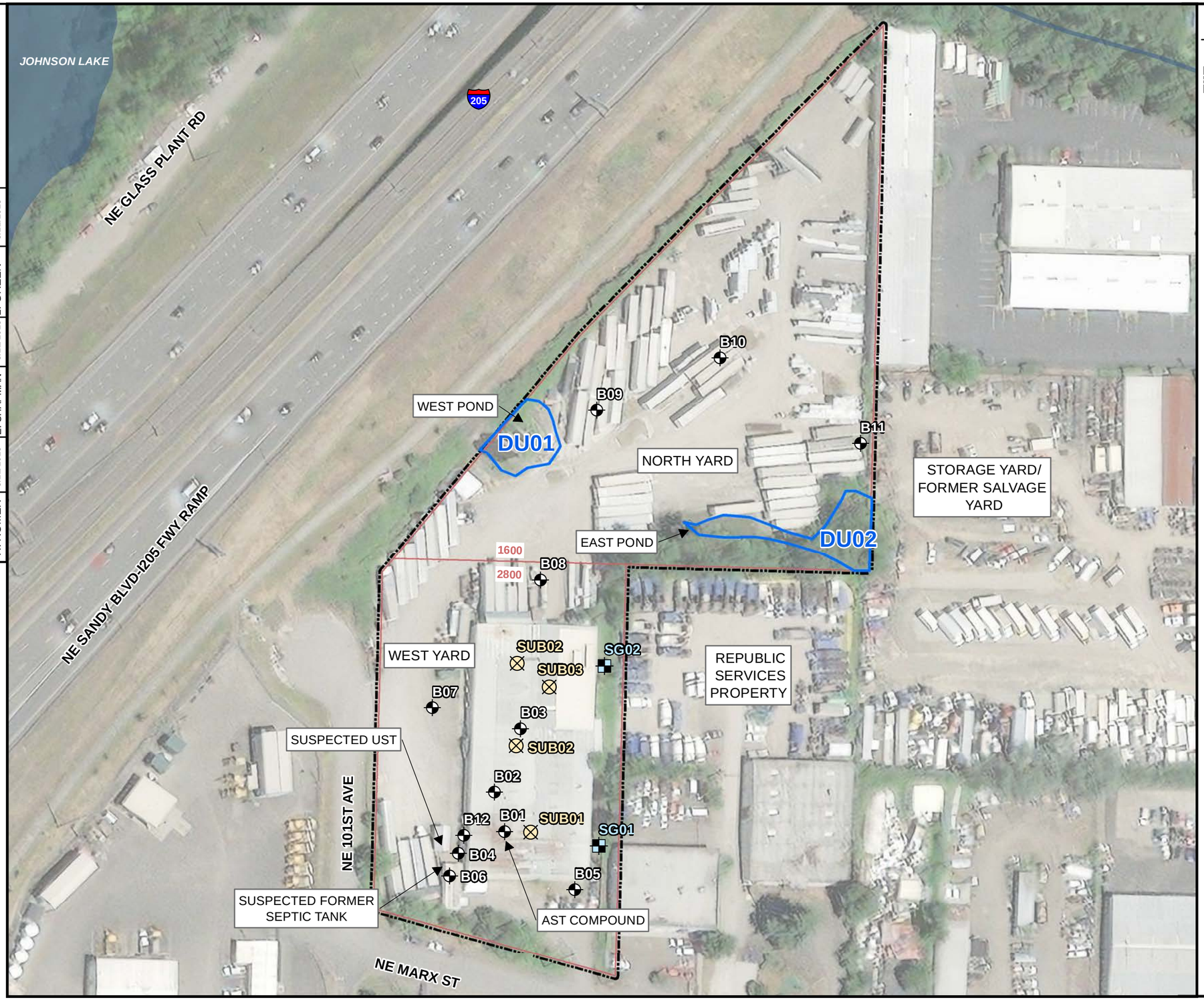
EVREN NORTHWEST INC.
environmental natural resource consultants

FIGURE 2

SITE PLAN WITH GEOPHYSICAL FINDINGS

5.3-ACRE INDUSTRIAL PROPERTY
10103 NE MARX STREET
PORTLAND, OREGON

DRAWING NUMBER	1460-23001(V01)
APPROVED BY	L. GREEN 3/21/2023
CHECKED BY	E. CHAPMAN 3/21/2023
DRAWN BY	H. ROMER 3/21/2023



LEGEND:

- SUBJECT PROPERTY BOUNDARY
- TAX LOT
- DECISION UNIT
- ENW BORING LOCATION
- ENW SUB-SLAB SAMPLE LOCATION
- ENW SOILGAS SAMPLE LOCATION

NOTES:

1. BASE MAP DEVELOPED FROM AN AERIAL PHOTOGRAPH MAP DATED 2021 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

0 65 130 260 Feet

N

EVREN NORTHWEST INC.
environmental natural resource consultants

FIGURE 3

SAMPLE LOCATION DIAGRAM

5.3-ACRE INDUSTRIAL PROPERTY
10103 NE MARX STREET
PORTLAND, OREGON

Appendix A

Site Photographs

View of the geophysical survey using ground-penetrating radar.

View of the geophysical survey using electromagnetic scanner.

View of ISM sample collection within decision unit DU02 using a stainless-steel hand auger.

A slide hammer was utilized to set temporary soil gas sample probes.

EVREN NORTHWEST INC environmental natural resource consultants	10103 NE Marx St Portland, OR 97220	**Site Photographs**	Project No. 1460-23001-01 Appendix **A**

View of sub-slab vapor sampling using TO-15 equipment. Note the rags treated with isopropyl alcohol for leak detection.

View of advancing a temporary soil boring indoors using a stainless-steel hand auger.

View of direct-push (DPT) drill rig installing a temporary boring for the purpose of sampling soil and reconnaissance ground water.

View of reconnaissance ground water sampleing from temporary DPT boring.

EVREN NORTHWEST INC. environmental / natural resource consultants	10103 NE Marx St Portland, OR 97220	**Site Photographs**	Project No. 1460-23001-01 Appendix **A**

Appendix B

Soil Boring Logs

EVREN Northwest, Inc.

DRILL LOG

PROJECT		PROJECT NO.		BORING NO.
		1460-23001-01		**B01**
SITE	BEGUN	COMPLETED	HOLE SIZE	ANGLE FROM HORIZ.
NE Marx St	02-14-23	02-14-23	2"	
COORDINATES	DEPTH GROUND WATER / DATE SL	STATIC LEVEL	FIRST WATER	GROUND ELEVATION
DRILLER	CORE RECOVERY (%)	# SAMPLES	# CORE BOXES	DEPTH TOP OF ROCK
Evren Northwest		2		
DRILL MAKE AND MODEL	LOGGED BY:			DEPTH BOTTOM OF HOLE
Hand Auger	Jordan Morris			3

DEPTH	STRATA ELEVATION/ DEPTH	GRAPHIC LOG	DESCRIPTION	SAMPLE DATA: SAMPLE NO.	SAMPLE DATA: SAMPLE TYPE	SAMPLE DATA: CORE RECOVERY	SAMPLE DATA: MW Const./ Completion	PID/OVM	REMARKS: NOTES ON WATER LEVELS, LOSSES, CAVING, CASING, DEPTH & DRILLING CONDITIONS.
0			Concrete slab						
			Brown loose medium sand, barely moist, non-cohesive, smells like diesel. Micaceous. No fines, no gravel.	B01-2				19.6 22.8	
			End of boring.	B01-3				8.1 3.0	
5									
10									
15									
20									
25									
30									
35									

EVREN Northwest, Inc.

DRILL LOG

PROJECT		PROJECT NO.	BORING NO.
		1460-23001-01	**B02**

SITE	BEGUN	COMPLETED	HOLE SIZE	ANGLE FROM HORIZ.
NE Marx St	02-14-23	02-14-23	2"	

COORDINATES	DEPTH GROUND WATER	DATE SL	STATIC LEVEL	FIRST WATER	GROUND ELEVATION

DRILLER	CORE RECOVERY (%)	# SAMPLES	# CORE BOXES	DEPTH TOP OF ROCK
Evren Northwest				

DRILL MAKE AND MODEL	LOGGED BY:	DEPTH BOTTOM OF HOLE
Hand Auger	Jordan Morris	5

DEPTH	STRATA ELEVATION/ DEPTH	GRAPHIC LOG	DESCRIPTION	SAMPLE DATA: SAMPLE NO.	SAMPLE DATA: SAMPLE TYPE	SAMPLE DATA: CORE RECOVERY	SAMPLE DATA: MW Const./ Completion	PID/OVM	REMARKS: NOTES ON WATER LEVELS, LOSSES, CAVING, CASING, DEPTH & DRILLING CONDITIONS.
0			Concrete slab						
			Brown loose sand, moist, non cohesive, smells of diesel, micaceous.	B02-2				36.0 46.8 38.5 32.1	
5			End of boring.	B02-5				46.6	
10									
15									
20									
25									
30									
35									

EVREN Northwest, Inc.

DRILL LOG

PROJECT		PROJECT NO.	BORING NO.
		1460-23001-01	**B03**

SITE	BEGUN	COMPLETED	HOLE SIZE	ANGLE FROM HORIZ.
NE Marx St	02-15-23	02-15-23	2"	

COORDINATES	DEPTH GROUND WATER	DATE SL	STATIC LEVEL	FIRST WATER	GROUND ELEVATION

DRILLER	CORE RECOVERY (%)	# SAMPLES	# CORE BOXES	DEPTH TOP OF ROCK
Evren Northwest				

DRILL MAKE AND MODEL	LOGGED BY:	DEPTH BOTTOM OF HOLE
Hand Auger	Jordan Morris	7

DEPTH	STRATA ELEVATION/ DEPTH	GRAPHIC LOG	DESCRIPTION	SAMPLE DATA: SAMPLE NO.	SAMPLE DATA: SAMPLE TYPE	SAMPLE DATA: CORE RECOVERY	SAMPLE DATA: MW Const./ Completion	PID/OVM	REMARKS: NOTES ON WATER LEVELS, LOSSES, CAVING, CASING, DEPTH & DRILLING CONDITIONS.
0			Slab						
			Dark brown loose fine sand, no gravel, no fines. Moist, cohesionless, micaceous. Dark color may indicate impacts; no smell. Not much PID response.					1.7	
								2.9	
								1.7	
			5% fines show up at 4'. Chunks of wood at 4'. >5% fines fraction continues downbore, wood does not.					3.8	
5				B03-5				4.4	
								1.9	
			End of boring.	B03-7				0.8	
10									
15									
20									
25									
30									
35									

EVREN Northwest, Inc.

DRILL LOG

PROJECT		PROJECT NO.		BORING NO.
		1460-23001-01		**B04**
SITE	BEGUN	COMPLETED	HOLE SIZE	ANGLE FROM HORIZ.
NE Marx St	02-15-23	02-16-23	2"	
COORDINATES	DEPTH GROUND WATER / DATE SL	STATIC LEVEL	FIRST WATER	GROUND ELEVATION
DRILLER	CORE RECOVERY (%)	# SAMPLES	# CORE BOXES	DEPTH TOP OF ROCK
Everen Northwest				
DRILL MAKE AND MODEL	LOGGED BY:			DEPTH BOTTOM OF HOLE
Hand Auger and 7822DT	Jordan Morris			15

DEPTH	STRATA ELEVATION/ DEPTH	GRAPHIC LOG	DESCRIPTION	SAMPLE DATA: SAMPLE NO.	SAMPLE DATA: SAMPLE TYPE	SAMPLE DATA: CORE RECOVERY	SAMPLE DATA: MW Const./ Completion	PID/OVM	REMARKS: NOTES ON WATER LEVELS, LOSSES, CAVING, CASING, DEPTH & DRILLING CONDITIONS.
0			Asphalt, then concrete						
			Base gravel--coarse, rounded.						
			Loose brown medium sand, moist, strongly micaceous, >5% gravel, no fines.					0.6	
			At 3.5', silt appears, 30%. Silt is light brown.					0.0	
5			Moisture increases to wet.					0.0	
			Silt disappears. Mica disappears. Quartz sand with 40% lithics. Occasional rounded 1/2" to 1" gravel grains.						
			Silt reappears. Bore becomes wet.	B04-9-SWI				0.0	
10			SWI at 9'.					0.0	
			Gray and brown coarse gravel with silt and sand, wet, no mica.						
			Bore becomes saturated at 13.5.						
15			End of boring.						
20									
25									
30									
35									

EVREN Northwest, Inc.

DRILL LOG	PROJECT		PROJECT NO.	BORING NO.
			1460-23001-01	**B05**

SITE	BEGUN	COMPLETED	HOLE SIZE	ANGLE FROM HORIZ.
NE Marx St	02-16-23	02-16-23	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				

DRILL MAKE AND MODEL	LOGGED BY:	DEPTH BOTTOM OF HOLE
7822 DT	Jordan Morris	13

DEPTH	STRATA ELEVATION/ DEPTH	GRAPHIC LOG	DESCRIPTION	SAMPLE DATA: SAMPLE NO.	SAMPLE DATA: SAMPLE TYPE	SAMPLE DATA: CORE RECOVERY	SAMPLE DATA: MW Const./ Completion	PID/OVM	REMARKS: NOTES ON WATER LEVELS, LOSSES, CAVING, CASING, DEPTH & DRILLING CONDITIONS.
0			Asphalt and base gravel.						
			Brown loose medium sand with little silt, moist, micaceous.					0.0	
			Gray-brown looser medium sand , no fines, no gravel, moist, non-micaceous, quartz-rich, 30% lithics.			80			
5								0.0	
			1" lens of GW (fine rounded gravel with sand and silt) at 6', dark brown, moist, no mica.						
			Interbedded lenses of silty fine brown loose sand (micaceous) at 8, 8.5, and 9'.			70			
			Saturated lens of silty sand at 9'. SWI at 9.	B05-9-SWI				0.0	
10			Medium subangular gravel with sand and some silt, moist, no mica.					0.0	
			Gravel becomes saturated at 12'.			90			
			Drill refusal at 13'.					0.0	
15									
20									
25									
30									
35									

EVREN Northwest, Inc.

DRILL LOG

PROJECT	PROJECT NO.	BORING NO.
	1460-23001-01	**B06**

SITE	BEGUN	COMPLETED	HOLE SIZE	ANGLE FROM HORIZ.
NE Marx St	02-16-23	02-16-23	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				

DRILL MAKE AND MODEL	LOGGED BY:	DEPTH BOTTOM OF HOLE
7822 DT	Jordan Morris	15

DEPTH	STRATA ELEVATION/ DEPTH	GRAPHIC LOG	DESCRIPTION	SAMPLE DATA: SAMPLE NO.	SAMPLE DATA: SAMPLE TYPE	SAMPLE DATA: CORE RECOVERY	SAMPLE DATA: MW Const./ Completion	PID/OVM	REMARKS: NOTES ON WATER LEVELS, LOSSES, CAVING, CASING, DEPTH & DRILLING CONDITIONS.
0			Asphalt and base gravel						
			Gray-brown loose medium sand, some silt present down to 3'. Moist, slight orange mottling, no mica.	B06-1		80		1.3	
			Mottling disappears by 4'.						
5								0.0	
						80			
			Silt fraction (25%) returns at 9'. Bore becomes wet. SWI at 9'.	B06-9-SWI				0.0	
10			Subangular medium gray gravel with sand and silt, moist, no mica.					0.0	
			Bore becomes saturated at 14'.						
15			End of boring.					0.0	
20									
25									
30									
35									

EVREN Northwest, Inc.

DRILL LOG

PROJECT		PROJECT NO.		BORING NO.
		1460-23001-01		**B07**
SITE	BEGUN	COMPLETED	HOLE SIZE	ANGLE FROM HORIZ.
NE Marx St	02-16-23	02-16-23	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				
DRILL MAKE AND MODEL	LOGGED BY:			DEPTH BOTTOM OF HOLE
7822 DT	Jordan Morris			11.3

DEPTH	STRATA ELEVATION/ DEPTH	GRAPHIC LOG	DESCRIPTION	SAMPLE DATA: SAMPLE NO.	SAMPLE DATA: SAMPLE TYPE	SAMPLE DATA: CORE RECOVERY	SAMPLE DATA: MW Const./ Completion	PID/OVM	REMARKS: NOTES ON WATER LEVELS, LOSSES, CAVING, CASING, DEPTH & DRILLING CONDITIONS.
0			Base gravel						
			Loose orange-brown medium sand, some silt, moist, micaceous.			90			
			From 2-3' color becomes gray.						
			At 4', dark brown silt becomes 40%.						
5			Chunks of wood at 5'.	B07-5				0.0	
			SWI at 9'.	B07-9-SWI.				0.0	
10								0.0	
			Boring ends when rig runs into a big rock.					0.6	
15									
20									
25									
30									
35									

EVREN Northwest, Inc.

DRILL LOG	PROJECT	PROJECT NO.	BORING NO.
		1460-23001-01	**B07'**

SITE	BEGUN	COMPLETED	HOLE SIZE	ANGLE FROM HORIZ.
NE Marx St	02-16-23	02-16-23	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				

DRILL MAKE AND MODEL	LOGGED BY:	DEPTH BOTTOM OF HOLE
7822 DT	Jordan Morris	15

DEPTH	STRATA ELEVATION/ DEPTH	GRAPHIC LOG	DESCRIPTION	SAMPLE DATA: SAMPLE NO.	SAMPLE DATA: SAMPLE TYPE	SAMPLE DATA: CORE RECOVERY	SAMPLE DATA: MW Const./ Completion	PID/OVM	REMARKS: NOTES ON WATER LEVELS, LOSSES, CAVING, CASING, DEPTH & DRILLING CONDITIONS.
0			Base gravel						
			Medium dense brown fine, rounded gravel with sand and silt, barely moist, micaceous.						
			Loose gray medium sand, no gravel, no fines, moist, mostly quartz.			80			
5			Medium loose fine brown sand with 25% silt, moist, micaceous. Lens of dark-brown, wood-rich material.					0.0	
						90			
			Wet at 9'.						
10								0.0	
			Coarse gray, medium dense gravel with sand and silt, moist, no mica.			70			
15			End of boring.					0.0	
20									
25									
30									
35									

EVREN Northwest, Inc.

DRILL LOG

PROJECT	PROJECT NO.	BORING NO.
	1460-23001-01	**B08**

SITE	BEGUN	COMPLETED	HOLE SIZE	ANGLE FROM HORIZ.
NE Marx St	02-16-23	02-16-23	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				

DRILL MAKE AND MODEL	LOGGED BY:	DEPTH BOTTOM OF HOLE
7822 DT	Jordan Morris	13

DEPTH	STRATA ELEVATION/ DEPTH	GRAPHIC LOG	DESCRIPTION	SAMPLE DATA: SAMPLE NO.	SAMPLE DATA: SAMPLE TYPE	SAMPLE DATA: CORE RECOVERY	SAMPLE DATA: MW Const./ Completion	PID/OVM	REMARKS: NOTES ON WATER LEVELS, LOSSES, CAVING, CASING, DEPTH & DRILLING CONDITIONS.
0			Base gravel						
			Loose gray sand, medium, micaceous, wet.			50			
5			Medium dense fine gravel with sand and some silt. Wet, weakly micaceous.					0.0	
			Gray dense silt, moist, cohesive, weakly micaceous.			90			
			At 8', becomes brown with gray mottling.						
10			Wet at 9'; SWI at 9'.	B08-9-SWI				0.0	
			Coarse gray gravel with brown silt, medium dense, wet weakly micaceous.			80			
			End of boring.						
15									
20									
25									
30									
35									

EVREN Northwest, Inc.

DRILL LOG

PROJECT		PROJECT NO.	BORING NO.
		1460-23001-01	**B09**

SITE	BEGUN	COMPLETED	HOLE SIZE	ANGLE FROM HORIZ.
NE Marx St	02-16-23	02-16-23	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				

DRILL MAKE AND MODEL	LOGGED BY:	DEPTH BOTTOM OF HOLE
7822 DT	Jordan Morris	15

DEPTH	STRATA ELEVATION/ DEPTH	GRAPHIC LOG	DESCRIPTION	SAMPLE DATA: SAMPLE NO.	SAMPLE DATA: SAMPLE TYPE	SAMPLE DATA: CORE RECOVERY	SAMPLE DATA: MW Const./ Completion	PID/OVM	REMARKS: NOTES ON WATER LEVELS, LOSSES, CAVING, CASING, DEPTH & DRILLING CONDITIONS.
0			Base gravel						
			Gray dense silt with fine sand, moist, cohesive, low plasticity, mottled light gray, micaceous.			90			
5			Brown mottling appears.					0.0	
			Bore becomes wet, color changes to brown with gray and orange mottling; SWI at 7'.	B09-7-SWI		100		0.0	
10								0.0	
						100			
			Brown coarse medium-dense rounded gravel with sand and silt, saturated, gray mottling, no mica.						
15			End of boring.					0.0	
20									
25									
30									
35									

EVREN Northwest, Inc.

DRILL LOG

PROJECT	PROJECT NO.	BORING NO.
	1460-23001-01	**B10**

SITE	BEGUN	COMPLETED	HOLE SIZE	ANGLE FROM HORIZ.
NE Marx St	02-16-23	02-16-23	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				

DRILL MAKE AND MODEL	LOGGED BY:	DEPTH BOTTOM OF HOLE
7822 DT	Jordan Morris	15

DEPTH	STRATA ELEVATION/ DEPTH	GRAPHIC LOG	DESCRIPTION	SAMPLE DATA: SAMPLE NO.	SAMPLE DATA: SAMPLE TYPE	SAMPLE DATA: CORE RECOVERY	SAMPLE DATA: MW Const./ Completion	PID/OVM	REMARKS: NOTES ON WATER LEVELS, LOSSES, CAVING, CASING, DEPTH & DRILLING CONDITIONS.
0			Base gravel						
			Dense gray silt with fine sand, moist, cohesive, dark gray mottling, micaceous.			85			
5			Orange mottling appears.					0.0	
			Bore becomes wet; SWI at 9'.	B10-9-SWI		100			
10			Loose brown coarse subrounded gravel with sand and silt, saturated, no mica.					0.0	
			Color changes to gray.			100			
15			End of boring.					0.0	
20									
25									
30									
35									

EVREN Northwest, Inc.

DRILL LOG	PROJECT	PROJECT NO.	BORING NO.
		1460-23001-01	**B11**

SITE	BEGUN	COMPLETED	HOLE SIZE	ANGLE FROM HORIZ.
NE Marx St	02-16-23	02-16-23	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				

DRILL MAKE AND MODEL	LOGGED BY:	DEPTH BOTTOM OF HOLE
7822 DT	Jordan Morris	10

DEPTH	STRATA ELEVATION/ DEPTH	GRAPHIC LOG	DESCRIPTION	SAMPLE DATA: SAMPLE NO.	SAMPLE DATA: SAMPLE TYPE	SAMPLE DATA: CORE RECOVERY	SAMPLE DATA: MW Const./ Completion	PID/OVM	REMARKS: NOTES ON WATER LEVELS, LOSSES, CAVING, CASING, DEPTH & DRILLING CONDITIONS.
0			Base gravel						
			Gray dense silt with little fine sand, moist, mottled light gray, micaceous. Lens of wood at 2'.			70			
5			Bore becomes saturated at 5'; SWI at 5'.	B11-5-SWI				0.0	
			Color changes to brown.			50			
10			End of boring.					0.0	
15									
20									
25									
30									
35									

EVREN Northwest, Inc.

DRILL LOG

PROJECT	PROJECT NO.	BORING NO.
	1460-23001-01	**B12**

SITE	BEGUN	COMPLETED	HOLE SIZE	ANGLE FROM HORIZ.
NE Marx St	02-16-23	02-16-23	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				

DRILL MAKE AND MODEL	LOGGED BY:	DEPTH BOTTOM OF HOLE
7822 DT	Jordan Morris	15

DEPTH	STRATA ELEVATION/ DEPTH	GRAPHIC LOG	DESCRIPTION	SAMPLE DATA: SAMPLE NO.	SAMPLE DATA: SAMPLE TYPE	SAMPLE DATA: CORE RECOVERY	SAMPLE DATA: MW Const./ Completion	PID/OVM	REMARKS: NOTES ON WATER LEVELS, LOSSES, CAVING, CASING, DEPTH & DRILLING CONDITIONS.
0			Base gravel						
			Loose gray-brown sand, trace silt, moist, non-cohesive, quartz-rich, no mica.			80			
5								0.0	
						100			
			Bore becomes wet. SWI at 9.	B12-9-SWI				0.0	
10			Gray medium-loose coarse gravel with silt and sand, much of larger grains broken by shoe. No mica.					0.0	
						60			
15			End of boring.					0.0	
20									
25									
30									
35									

Appendix C

Field Sampling Data Sheets

EVREN Northwest

GROUND WATER FIELD SAMPLING DATA FORM (FIELD)

PROJECT NAME: _____ PROJECT NUMBER: _____

Event: _____ Date: 02-16-23

Field Personnel: Bailey F. Monitoring Well ID: B04

Weather Conditions: Cloudy, 40° Start Time: 13:25

DTW (prior to purging): _____

WELL PURGING INFORMATION

Time	DTW During Purging (feet)	Pumping Rate (L/min)	Temperature (degree C)	Specific Conductivity (mS/cm), ±3%	Dissolved Oxygen (mg/L), ±10%	Water pH (S.U.), , ±0.1%	ORP (mV), , ±10 mV	Turbidity (NTU), , ±10%	Total Quantity Purged (gallons/liters)
13:25	5.16	Turbid	Water / Brown			150mL/m			
13:35		Turbid	Light rust Brown						
13:40		Slightly	turb						

Total Purged:

Tubing: 1/4" LDPE

Purge Pumping Rate (approx. L/m): _____ Well casing (in. diam): _____

Decontamination method: _____ Approx. Pump/Intake Depth: _____

Well Conversion Factors: 2" = 0.17 gal / foot; 5/8" = 0.02 gal/foot

WELL CONDITION

Recommended Well Repairs/Additional Notes: _____

QA/QC Sample: ☐ Duplicate ☐ Lab QA/QC ☐ Equipment Blank ☐ None

Sampling Method: ☐ Grundfos Pump ☒ Peristaltic Pump ☐ Bladder Pump ☐ Dual Valve

SAMPLE INFORMATION

Analytical Parameters	Destination Laboratory	Preservative	Bottle Size	Number of bottles	Sample ID	Time Sampled
	FB	HCL	40mL	4	B04-GW-125	13:42
		None	500mL	3		
		HNO3	250mL	1		

Method of Transportation of samples: FedEx Courier

All samples were immediately placed into a cooler and packed with ice or "blue Ice" ☒ Yes ☐ No

Field Observations/Notes of sampling event: ENW Tubing used

Signature of Field Personnel: _____

EVREN Northwest

GROUND WATER FIELD SAMPLING DATA FORM (FIELD)

PROJECT NAME:

PROJECT NUMBER: 1460-23001-01

Event: GW assessment

Date: 02/16/23

Field Personnel: Dan Sayko

Monitoring Well ID: B05

Weather Conditions: overcast 37°

Start Time: 9:20

DTW (prior to purging): 11.25' bgs

WELL PURGING INFORMATION

Time	DTW During Purging (feet)	Pumping Rate (L/min)	Temperature (degree C)	Specific Conductivity (mS/cm), ±3%	Dissolved Oxygen (mg/L), ±10%	Water pH (S.U.), , ±0.1%	ORP (mV), , ±10 mV	Turbidity (NTU), , ±10%	Total Quantity Purged (gallons/liters)
9:22		150	Brown	very turbid					0
9:26		"	light	brown - turbid					0.60
9:30		"	tan						1.20
9:33		"	mostly	clear					1.65
9:34			Begin	sampling		(amber	1st)		

Total Purged:

Tubing: 3/8" LDPE

Purge Pumping Rate (approx. L/m): 150 ml/min

Well casing (in. diam): 1" PVC

Decontamination method:

Approx. Pump/Intake Depth: 12.5'

Well Conversion Factors: 2" = 0.17 gal / foot; 5/8" = 0.02 gal/foot

WELL CONDITION

Recommended Well Repairs/Additional Notes:

QA/QC Sample: ☐ Duplicate ☐ Lab QA/QC ☐ Equipment Blank ☒ None

Sampling Method: ☐ Grundfos Pump ☒ Peristaltic Pump ☐ Bladder Pump ☐ Dual Valve

SAMPLE INFORMATION

Analytical Parameters	Destination Laboratory	Preservative	Bottle Size	Number of bottles	Sample ID	Time Sampled
Cat, VOCs	Test	HCl	40ml	4		
PAHs		none	1liter	1	B05-GW-12-5	9:47
DX (PCBs		none		1		
dissolved RCRA)		HNO3		1		

Method of Transportation of samples: FedEx (Courier)

All samples were immediately placed into a cooler and packed with ice or "blue Ice" ☒ Yes ☐ No

Field Observations/Notes of sampling event:

Signature of Field Personnel:

EVREN Northwest

GROUND WATER FIELD SAMPLING DATA FORM (FIELD)

PROJECT NAME: _____ PROJECT NUMBER: _____

Event: GW assessment Date: _____

Field Personnel: Dan Sayku Monitoring Well ID: Bob

Weather Conditions: Sunny 40's Start Time: 9:59

DTW (prior to purging): 12.70'

WELL PURGING INFORMATION

Time	DTW During Purging (feet)	Pumping Rate (L/min)	Temperature (degree C)	Specific Conductivity (mS/cm), ±3%	Dissolved Oxygen (mg/L), ±10%	Water pH (S.U.), , ±0.1%	ORP (mV), , ±10 mV	Turbidity (NTU), , ±10%	Total Quantity Purged (gallons/liters)
10:01		100	Dark Brown -			turbid			
10:06		100	light brown -			& slightly turbid			0.40
10:10		150	mostly clear						0.80
10:12			Begin sampling			(max 15ft)			1.10

Total Purged: 1.10

Tubing: 3/8" LDPE

Purge Pumping Rate (approx. L/m): 150 ml/min

Well casing (in. diam): 1" PVC

Decontamination method:

Approx. Pump/Intake Depth: ~13.5'

Well Conversion Factors: 2" = 0.17 gal / foot; 5/8" = 0.02 gal/foot

WELL CONDITION

Recommended Well Repairs/Additional Notes: Screened from 10'-15'

QA/QC Sample: ☐ Duplicate ☐ Lab QA/QC ☐ Equipment Blank ☒ None ☐ Dual Valve

Sampling Method: ☐ Grundfos Pump ☒ Peristaltic Pump ☐ Bladder Pump

SAMPLE INFORMATION

Analytical Parameters	Destination Laboratory	Preservative	Bottle Size	Number of bottles	Sample ID	Time Sampled
GX, VOCs	FTB	HCl	40mL			
PAHs		1 liter	None		Bob-GW-15	10:20
PCBs		500 ml	None			
dissolved RCRA8		250 ml	HNO3			

Method of Transportation of samples: FedEx (Courier)

All samples were immediately placed into a cooler and packed with ice or "blue ice" ☒ Yes ☐ No

Field Observations/Notes of sampling event:

Signature of Field Personnel:

EVREN Northwest

GROUND WATER FIELD SAMPLING DATA FORM (FIELD)

PROJECT NAME: 1460-23001-01

PROJECT NUMBER: 1460-23001-01

Event: GW assessment

Date: 02/16/23

Field Personnel: Dan Sayko

Monitoring Well ID: B07

Weather Conditions: Sunny, 42°F overcast

Start Time: 11:37

DTW (prior to purging): 12.67' bgs

WELL PURGING INFORMATION

Time	DTW During Purging (feet)	Pumping Rate (L/min)	Temperature (degree C)	Specific Conductivity (mS/cm), ±3%	Dissolved Oxygen (mg/L), ±10%	Water pH (S.U.), , ±0.1%	ORP (mV), , ±10 mV	Turbidity (NTU), , ±10%	Total Quantity Purged (gallons/liters)
11:39			Brown - Turbid						0
11:41			light brown						0.30
11:43			mostly clear						0.60
11:47			Began sampling						1.20
			Lowered intake & Grab sampling						

Total Purged: 1.20

Tubing: 3/8" LDPE

Purge Pumping Rate (approx. L/m): 150 ml/min

Well casing (in. diam): 1" PVC

Decontamination method:

Approx. Pump/Intake Depth: ~14'

Well Conversion Factors: 2" = 0.17 gal / foot; 5/8" = 0.02 gal/foot

WELL CONDITION

Recommended Well Repairs/Additional Notes:

QA/QC Sample: ☐ Duplicate ☐ Lab QA/QC ☐ Equipment Blank ☒ None

Sampling Method: ☐ Grundfos Pump ☒ Peristaltic Pump ☐ Bladder Pump ☐ Dual Valve

SAMPLE INFORMATION

Analytical Parameters	Destination Laboratory	Preservative	Bottle Size	Number of bottles	Sample ID	Time Sampled
			40 ml	4		
			1 Liter	1	B07-GW-15	12:21
			500 ml	1		
			250 ml	1		

Method of Transportation of samples: FedEx Courier

All samples were immediately placed into a cooler and packed with ice or "blue Ice" ☐ Yes ☐ No

Field Observations/Notes of sampling event:

collected in B07* (Primer)

Signature of Field Personnel:

EVREN Northwest

GROUND WATER FIELD SAMPLING DATA FORM (FIELD)

PROJECT NAME: 1460-23001-01 PROJECT NUMBER: 1460-23001-01

Event: GW assessment Date: 02/16/23

Field Personnel: Dan Sayko Monitoring Well ID: BOB

Weather Conditions: Partly cloudy 40° Start Time: 10:46

DTW (prior to purging): 5.95

WELL PURGING INFORMATION

Time	DTW During Purging (feet)	Pumping Rate (L/min)	Temperature (degree C)	Specific Conductivity (mS/cm), ±3%	Dissolved Oxygen (mg/L), ±10%	Water pH (S.U.), , ±0.1%	ORP (mV), , ±10 mV	Turbidity (NTU), , ±10%	Total Quantity Purged (gallons/liters)
10:48		150	Dark brown very turbid						0
10:57		11	Brown turbid						1.35
11:07			light brown -						2.85
			began sampling (grab 1st)						3.00

Total Purged: 3.00

Tubing: 3/8" LDPE

Purge Pumping Rate (approx. L/m): 150 ml/min

Decontamination method:

Well casing (in. diam): 1" PVC

Approx. Pump/Intake Depth: ~9.5

Well Conversion Factors: 2" = 0.17 gal / foot; 5/8" = 0.02 gal/foot

WELL CONDITION

Recommended Well Repairs/Additional Notes: Screened from 8'-13'

QA/QC Sample: ☐ Duplicate ☐ Lab QA/QC ☐ Equipment Blank ☒ None ☐ Dual Valve

Sampling Method: ☐ Grundfos Pump ☒ Peristaltic Pump ☐ Bladder Pump

SAMPLE INFORMATION

Analytical Parameters	Destination Laboratory	Preservative	Bottle Size	Number of bottles	Sample ID	Time Sampled
6x VOC	Ftz3	HCL	40ml	4	BOB-GW-13	11:23
DX PCBs	↓	none	500ml	1		
PAHs		none	1 liter	1		
dissolved RCRA8		HNO3	250 ml	1		

Method of Transportation of samples: FedEx (Courier)

All samples were immediately placed into a cooler and packed with ice or "blue Ice" ☒ Yes ☐ No

Field Observations/Notes of sampling event:

Signature of Field Personnel:

EVREN Northwest

GROUND WATER FIELD SAMPLING DATA FORM (FIELD)

PROJECT NAME: 1460-23001-01 PROJECT NUMBER: 1460-23001-01

Event: GW assessment Date: 2/16/23

Field Personnel: Dan Saylor Monitoring Well ID: B09

Weather Conditions: Sunny 43°F Start Time: 12:33

DTW (prior to purging): 2.0' bgs

WELL PURGING INFORMATION

Time	DTW During Purging (feet)	Pumping Rate (mL/min)	Temperature (degree C)	Specific Conductivity (mS/cm), ±3%	Dissolved Oxygen (mg/L), ±10%	Water pH (S.U.), , ±0.1%	ORP (mV), , ±10 mV	Turbidity (NTU), , ±10%	Total Quantity Purged (gallons/liters)
12:35		150	Brown slightly turbid						0
12:40		11	increase in turbidity						0.90
12:46		11	light brown turbid						1.80
12:47			Begin sampling (Amber 1st)						

Total Purged:

Tubing: 3/8

Purge Pumping Rate (approx. L/m): 150 ml/min

Well casing (in. diam): 1" PVC

Decontamination method:

Approx. Pump/Intake Depth: ~

Well Conversion Factors: 2" = 0.17 gal / foot; 5/8" = 0.02 gal/foot

WELL CONDITION

Recommended Well Repairs/Additional Notes: Screened from 9.5'-14.5'

QA/QC Sample: ☐ Duplicate ☐ Lab QA/QC ☐ Equipment Blank ☐ None

Sampling Method: ☐ Grundfos Pump ☐ Peristaltic Pump ☐ Bladder Pump ☐ Dual Valve

SAMPLE INFORMATION

Analytical Parameters	Destination Laboratory	Preservative	Bottle Size	Number of bottles	Sample ID	Time Sampled
GX VOCs	Eurofins	HCl	40 ml	4	B09-GW-H5	12:57
TAMS		none	1 liter	1		
Dissolved RSKAB		none	250 ml	1		
		HNO3	250 ml	1		

Method of Transportation of samples: FedEx Courier

All samples were immediately placed into a cooler and packed with ice or "blue Ice" ☐ Yes ☐ No

Field Observations/Notes of sampling event:

* Field Filtered sample broke through instantly/ material very fine suspended in water

Signature of Field Personnel:

EVREN Northwest

GROUND WATER FIELD SAMPLING DATA FORM (FIELD)

PROJECT NAME: 1460-23001-01 PROJECT NUMBER: 1460-23001-01

Event: Date:

Field Personnel: Dan Saijo Monitoring Well ID: B10

Weather Conditions: Overcast Start Time: 13:16

DTW (prior to purging): 25' bgs

WELL PURGING INFORMATION

Time	DTW During Purging (feet)	Pumping Rate (L/min)	Temperature (degree C)	Specific Conductivity (mS/cm), ±3%	Dissolved Oxygen (mg/L), ±10%	Water pH (S.U.), ±0.1%	ORP (mV), ±10 mV	Turbidity (NTU), ±10%	Total Quantity Purged (gallons/liters)
13:17		200	light brown turbid						
13:20		11		very fine suspended solids					0.60
13:29		11		water quality appears same					2.40
13:31			begin collecting sample (Amber 1st)						2.8

Total Purged:

Tubing: 3/8" LDPE

Purge Pumping Rate (approx. L/m): 200 ml/min

Decontamination method:

Well casing (in. diam):

Approx. Pump/Intake Depth: ~ 12.0

Well Conversion Factors: 2" = 0.17 gal / foot; 5/8" = 0.02 gal/foot

WELL CONDITION

Recommended Well Repairs/Additional Notes: Screened from 9.5' - 14.5'

QA/QC Sample: ☐ Duplicate ☐ Lab QA/QC ☐ Equipment Blank ☐ None

Sampling Method: ☐ Grundfos Pump ☒ Peristaltic Pump ☐ Bladder Pump ☐ Dual Valve

SAMPLE INFORMATION

Analytical Parameters	Destination Laboratory	Preservative	Bottle Size	Number of bottles	Sample ID	Time Sampled
Gx, VOCs	Fem3	HCl	40ml	4	B10-GW-14.5	13:45
PAHs, Dx, PCBs	↓	none	500ml	3		
dissolved RCRA8		HNO3	250ml	1		

Method of Transportation of samples: FedEx (Courier)

All samples were immediately placed into a cooler and packed with ice or "blue Ice" ☒ Yes ☐ No

Field Observations/Notes of sampling event:

Signature of Field Personnel: [signature]

EVREN Northwest GROUND WATER FIELD SAMPLING DATA FORM (FIELD)

PROJECT NAME: 1460-230010' PROJECT NUMBER: 1460-230010

Event: GW assessment Date:

Field Personnel: Dan Saiki Monitoring Well ID: B11

Weather Conditions: partly cloudy Start Time: 13:53

DTW (prior to purging): 2.0 bgs

WELL PURGING INFORMATION

Time	DTW During Purging (feet)	Pumping Rate (L/min)	Temperature (degree C)	Specific Conductivity (mS/cm), ±3%	Dissolved Oxygen (mg/L), ±10%	Water pH (S.U.), , ±0.1%	ORP (mV), , ±10 mV	Turbidity (NTU), , ±10%	Total Quantity Purged (gallons/liters)
1354		200	Brown - turbid						0
13:59		"	drying up						1.0
14:05			continually drying up - screen may be						1.20
			silted up. Intake to free up						
14:20			ask cascade to place new screen						
			cascade re-drill nearby to 15'						
16:15			Start pump						
16:16		200	Dark brown turbid						
16:24		"	Brown turbid						2.00
16:28			Begin collecting sample						2.4
									2.4

Total Purged:

Tubing: 3/8" LDPE

Purge Pumping Rate (approx. L/m): 200 ml/min

Well casing (in. diam): 1" PVC

Decontamination method:

Approx. Pump/Intake Depth: 15'

Well Conversion Factors: 2" = 0.17 gal / foot; 5/8" = 0.02 gal/foot

WELL CONDITION

Recommended Well Repairs/Additional Notes:

lowered intake after 5 minutes. - from screened from 5-10'

QA/QC Sample: ☐ Duplicate ☐ Lab QA/QC ☐ Equipment Blank ☒ None

Sampling Method: ☐ Grundfos Pump ☒ Peristaltic Pump ☐ Bladder Pump ☐ Dual Valve

SAMPLE INFORMATION

Analytical Parameters	Destination Laboratory	Preservative	Bottle Size	Number of bottles	Sample ID	Time Sampled
GT, VOCs	Eurofins	HCl	40ml	4		
DX, iPCBs, PAHs	↓	none	500ml	3	B11-GW-15	1640
dissolved Mg/Mn		HNO3	250ml	1		

Method of Transportation of samples: FedEx Courier

All samples were immediately placed into a cooler and packed with ice or "blue Ice" ☒ Yes ☐ No

Field Observations/Notes of sampling event:

Screen from 11' - 15'

Signature of Field Personnel:

EVREN Northwest **GROUND WATER FIELD SAMPLING DATA FORM (FIELD)**

PROJECT NAME: _____ PROJECT NUMBER: 1460-23001-01

Event: _____ Date: 02-16-23

Field Personnel: Bailey F. Monitoring Well ID: B12

Weather Conditions: _____ Start Time: 14:07

DTW (prior to purging): 7.69

WELL PURGING INFORMATION

Time	DTW During Purging (feet)	Pumping Rate (L/min)	Temperature (degree C)	Specific Conductivity (mS/cm), ±3%	Dissolved Oxygen (mg/L), ±10%	Water pH (S.U.), , ±0.1%	ORP (mV), , ±10 mV	Turbidity (NTU), , ±10%	Total Quantity Purged (gallons/liters)
14:07	7.69	150mL	Turbid	brown water					
14:07		150mL							
								Total Purged:	

Tubing: 1/4" LDPE

Purge Pumping Rate (approx. L/m): 150mL Well casing (in. diam): 2in

Decontamination method: Approx. Pump/Intake Depth: 15ft

Well Conversion Factors: 2" = 0.17 gal / foot; 5/8" = 0.02 gal/foot

WELL CONDITION

Recommended Well Repairs/Additional Notes:

QA/QC Sample: ☐ Duplicate ☐ Lab QA/QC ☐ Equipment Blank ☐ None

Sampling Method: ☐ Grundfos Pump ☒ Peristaltic Pump ☐ Bladder Pump ☐ Dual Valve

SAMPLE INFORMATION

Analytical Parameters	Destination Laboratory	Preservative	Bottle Size	Number of bottles	Sample ID	Time Sampled
		HCL	40mL	9	B12-GW-230216	14:17
	FB	HNO3	250mL	1		
		NONE	500mL	3		

Method of Transportation of samples: FedEx Courier

All samples were immediately placed into a cooler and packed with ice or "blue Ice" ☒ Yes ☐ No

Field Observations/Notes of sampling event:

Signature of Field Personnel:

FIELD SAMPLING DATA SHEET

EVREN NORTHWEST

PO Box 14488
Portland, Oregon, 97293
503-452-5561 Fax: 503-452-7669

PROJECT NAME/NUMBER: 1460-23001-01 **SAMPLE LOCATION:** SUB01

SITE ADDRESS: **DUP ID:**

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY
WEATHER:	SUNNY		CLOUDY		RAIN		?				

Temp., C	Humidity (%)

SOIL GAS SETUP DATA

Container Type	Date	Volume (L)	Sample Depth (ft.)	Sample ID	Summa ID	Flow Controler		Flow Meter ID	Purge Vessel ID
Tedlar/Summa	02/15/23	0.5L, 1L, 3L, 5L, 6L	SUB	SUB01-230215	327	YES	NO	2625	850

SOIL GAS SAMPLING DATA

Action	Start Time	Finish Time	Init Pressue (mmHg)	Final Pressue (mmHg)
Leak-Test	9:35	9:40	28	28
Purge	10:09	10:11	28	27
Sample	10:12	10:41	28	5

SOIL GAS SCREENING

Date	Time	Depth (ft)	PID (ppm)	O_2 (%)	CO (ppm)	CO_2 (%)
02-15-23	10:43	SUB	20.1			
↓	10:44	↓	20.1			
	10:45		19.2			
	10:46		18.8			
↓	10:47	↓	18.6			
			[	14.7	0	4.5

CH_4	Benl
0.0	78.5

Analysis Allowed per Bottle Type

CONTAINER TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
	BTEX/TPH (TO-3) PESTICIDE/PCSs (TO-4) ALDEHYDES/KEYTONES (TO-5) PESTICIDES/PCBs (TO-10) ALDEHYDES/KEYTONES (TO-11)
	NON-METHANE ORGANIC CMPDS (TO-12) PAHs/SVOCs (TO-13) VOCs (TO-15)
	TPH as Diesel (TO-17)
	SPECIFIC CHEMICAL ANALYSIS [ ]

NOTES:

SAMPLER: Jordan Mamis
(PRINTED NAME)

(SIGNATURE)

FIELD SAMPLING DATA SHEET

EVREN NORTHWEST

PO Box 14488
Portland, Oregon, 97293
503-452-5561 Fax: 503-452-7669

PROJECT NAME/NUMBER: 1460 - 230001-01 **SAMPLE LOCATION:** SUB02-230215

SITE ADDRESS: **DUP ID:**

												Temp., C	Humidity (%)
WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY		
WEATHER:	SUNNY		CLOUDY		RAIN		?						

SOIL GAS SETUP DATA

Container Type	Date	Volume (L)	Sample Depth (ft.)	Sample ID	Summa ID	Flow Controler		Flow Meter ID	Purge Vessel ID
Tedlar/Summa	02/15/23	0.5L, 1L, 3L, 5L, 6L	SUB	SUB02-230215	387	YES	NO	2631	850

SOIL GAS SAMPLING DATA

Action	Start Time	Finish Time	Init Pressue (mmHg)	Final Pressue (mmHg)
Leak-Test	9:34	9:39	30	30
Purge	10:15	10:17	28	29
Sample	10:18	10:50	30	4

SOIL GAS SCREENING

Date	Time	Depth (ft)	PID (ppm)	O_2 (%)	CO (ppm)	CO_2 (%)		
02-15-23	10:56	SUB	2.1					
"	10:57	"	1.9					
"	10:58	"	1.8					
"	10:59	"	1.7					
"	11:00	"	1.7					
				10.5	0	3.1	CH4 0.0	Bal 78.4

Analysis Allowed per Bottle Type	CONTAINER TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
		BTEX/TPH (TO-3) PESTICIDE/PCSs (TO-4) ALDEHYDES/KEYTONES (TO-5) PESTICIDES/PCBs (TO-10) ALDEHYDES/KEYTONES (TO-11)
		NON-METHANE ORGANIC CMPDS (TO-12) PAHs/SVOCs (TO-13) VOCs (TO-15)
		TPH as Diesel (TO-17)
		SPECIFIC CHEMICAL ANALYSIS [ ]

NOTES:

SAMPLER: Jordan Morris
(PRINTED NAME)

(SIGNATURE)

FIELD SAMPLING DATA SHEET

EVREN NORTHWEST

PO Box 14488
Portland, Oregon, 97293
503-452-5561 Fax: 503-452-7669

PROJECT NAME/NUMBER: **SAMPLE LOCATION:** SUB03

SITE ADDRESS: **DUP ID:**

												Temp., C	Humidity (%)
WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY		
WEATHER:	SUNNY		CLOUDY		RAIN		?						

SOIL GAS SETUP DATA

Container Type	Date	Volume (L)	Sample Depth (ft.)	Sample ID	Summa ID	Flow Controler		Flow Meter ID	Purge Vessel ID
Tedlar/Summa	02/15/23	0.5L, 1L, 3L, 5L, 6L	SUB	SUB03-230215	359	YES	NO	2527	850

SOIL GAS SAMPLING DATA

Action	Start Time	Finish Time	Init Pressue (mmHg)	Final Pressue (mmHg)
Leak-Test	9:50	10:00	>30	>30
Purge	~~10:00~~ 10:24	10:24	29	28
Sample	10:25	12:46	>30	7

SOIL GAS SCREENING

Date	Time	Depth (ft)	PID (ppm)	O_2 (%)	CO (ppm)	CO_2 (%)		
02-15-23	12:15	SUB	0.2					
	12:16		0.1					
	12:17		0.1					
	12:18		0.1					
	12:19		0.1					
				17.3	0	3.4	CHy 0.0	Bal 79.3

Analysis Allowed per Bottle Type	CONTAINER TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
		BTEX/TPH (TO-3) PESTICIDE/PCSs (TO-4) ALDEHYDES/KEYTONES (TO-5) PESTICIDES/PCBs (TO-10) ALDEHYDES/KEYTONES (TO-11)
		NON-METHANE ORGANIC CMPDS (TO-12) PAHs/SVOCs (TO-13) VOCs (TO-15)
		TPH as Diesel (TO-17)
		SPECIFIC CHEMICAL ANALYSIS [ ]

NOTES:

SAMPLER: Jordan Morris
(PRINTED NAME)

(SIGNATURE)

FIELD SAMPLING DATA SHEET

EVREN NORTHWEST

PO Box 14488
Portland, Oregon, 97293
503-452-5561 Fax: 503-452-7669

PROJECT NAME/NUMBER: 1460-23001-01 **SAMPLE LOCATION:** SUB04

SITE ADDRESS: **DUP ID:**

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY
WEATHER:	SUNNY		CLOUDY		RAIN		?				

Temp., C	Humidity (%)

SOIL GAS SETUP DATA

Container Type	Date	Volume (L)	Sample Depth (ft.)	Sample ID	Summa ID	Flow Controler		Flow Meter ID	Purge Vessel ID
Tedlar/Summa	02/15/23	0.5L, 1L, 3L, 5L, 6L	SUB	SUB04-230215	312	YES	NO	2627	850

SOIL GAS SAMPLING DATA

Action	Start Time	Finish Time	Init Pressue (mmHg)	Final Pressue (mmHg)
Leak-Test	9:41	9:46	27	27
Purge	10:30	10:32	25	24
Sample	10:33	11:00	27	5

SOIL GAS SCREENING

Date	Time	Depth (ft)	PID (ppm)	O_2 (%)	CO (ppm)	CO_2 (%)		
02-15-23	11:49	SUB	0.2					
	11:50		0.2					
	11:51		0.2					
	11:52		0.2					
	11:53		0.2					
				20.2	0	4.3	CH4 0.10	Bal 93.5

Analysis Allowed per Bottle Type	CONTAINER TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
		BTEX/TPH (TO-3) PESTICIDE/PCSs (TO-4) ALDEHYDES/KEYTONES (TO-5) PESTICIDES/PCBs (TO-10) ALDEHYDES/KEYTONES (TO-11)
		NON-METHANE ORGANIC CMPDS (TO-12) PAHs/SVOCs (TO-13) VOCs (TO-15)
		TPH as Diesel (TO-17)
		SPECIFIC CHEMICAL ANALYSIS [ ]

NOTES:

SAMPLER: Jordan Manera
(PRINTED NAME)

(SIGNATURE)

FIELD SAMPLING DATA SHEET

EVREN NORTHWEST

PO Box 14488
Portland, Oregon, 97293
503-452-5561 Fax: 503-452-7669

PROJECT NAME/NUMBER: 1460-23001-01 **SAMPLE LOCATION:** SG01

SITE ADDRESS: **DUP ID:**

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY
WEATHER:	SUNNY		CLOUDY		RAIN		?				

Temp., C	Humidity (%)

SOIL GAS SETUP DATA

Container Type	Date	Volume (L)	Sample Depth (ft.)	Sample ID	Summa ID	Flow Controler		Flow Meter ID	Purge Vessel ID
Tedlar/Summa	02-15-23	0.5L, 1L, 3L, 5L, 6L	5	SG01-230215-5	372	YES	NO	2639	850

SOIL GAS SAMPLING DATA

Action	Start Time	Finish Time	Init Pressue (mmHg)	Final Pressue (mmHg)
Leak-Test	9:50	9:59	30	30
Purge	11:21	11:25	26	24
Sample	11:26	12:01	30	5

SOIL GAS SCREENING

Date	Time	Depth (ft)	PID (ppm)	O_2 (%)	CO (ppm)	CO_2 (%)		
02-15-23	12:15	5	0.2					
	12:16		0.1					
	12:17		0.1					
	12:18		0.1					
	12:19		0.1					
				17.4	Fluctuates between 0 and 0	1.7	CH4 0.0	Bal 81.0

Analysis Allowed per Bottle Type	CONTAINER TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
		BTEX/TPH (TO-3) PESTICIDE/PCSs (TO-4) ALDEHYDES/KEYTONES (TO-5) PESTICIDES/PCBs (TO-10) ALDEHYDES/KEYTONES (TO-11)
		NON-METHANE ORGANIC CMPDS (TO-12) PAHs/SVOCs (TO-13) VOCs (TO-15)
		TPH as Diesel (TO-17)
		SPECIFIC CHEMICAL ANALYSIS [ ]

NOTES:

SAMPLER: Jordan Mann
(PRINTED NAME)

(SIGNATURE)

FIELD SAMPLING DATA SHEET

EVREN NORTHWEST

PO Box 14488
Portland, Oregon, 97293
503-452-5561 Fax: 503-452-7669

PROJECT NAME/NUMBER: 1460-23001-01 **SAMPLE LOCATION:** SG02

SITE ADDRESS: **DUP ID:**

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY
WEATHER:	SUNNY		CLOUDY		RAIN		?				

Temp., C	Humidity (%)

SOIL GAS SETUP DATA

Container Type	Date	Volume (L)	Sample Depth (ft.)	Sample ID	Summa ID	Flow Controler		Flow Meter ID	Purge Vessel ID
Tedlar/Summa	02/15/23	0.5L, 1L, 3L, 5L, 6L	3	SG02-230215-3	3230	YES	NO	2643	850

SOIL GAS SAMPLING DATA

Action	Start Time	Finish Time	Init Pressue (mmHg)	Final Pressue (mmHg)
Leak-Test	11:50	12:02	28	28
Purge	12:10	12:16	23	21
Sample	12:17	12:43	~~30~~ 28	7

SOIL GAS SCREENING

Date	Time	Depth (ft)	PID (ppm)	O_2 (%)	CO (ppm)	CO_2 (%)		
02-15-23	13:01	3	0.2					
	13:02		0.1					
	13:03		0.1					
	13:04		0.1					
↓	13:05	↓	0.1				CH4	Bal
				16.9	0	2.4	0.0	80.7

Analysis Allowed per Bottle Type	CONTAINER TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
		BTEX/TPH (TO-3) PESTICIDE/PCSs (TO-4) ALDEHYDES/KEYTONES (TO-5) PESTICIDES/PCBs (TO-10) ALDEHYDES/KEYTONES (TO-11)
		NON-METHANE ORGANIC CMPDS (TO-12) PAHs/SVOCs (TO-13) VOCs (TO-15)
		TPH as Diesel (TO-17)
		SPECIFIC CHEMICAL ANALYSIS [ ]

NOTES:

SAMPLER: Jordan Mannis
(PRINTED NAME)

(SIGNATURE)

Appendix D

Laboratory Analytical Reports

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

February 27, 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 February 18, 2023 from the 1460-23001-01, F&BI 302273 project. There are 16 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
ENW0227R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on February 18, 2023 by Friedman & Bruya, Inc. from the Evren Northwest 1460-23001-01, F&BI 302273 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Evren Northwest
302273 -01	B11-GW-15

Chromium in the 6020B matrix spike and matrix spike duplicate failed the acceptance criteria. The laboratory control sample passed the acceptance criteria, therefore the results were due to matrix effect.

Several 8260D compounds failed below the acceptance criteria in the matrix spike sample. The laboratory control samples met the acceptance criteria, therefore the data were likely due to sample matrix effect.

All other quality control requirements were acceptable.

Date of Report: 02/27/23
Date Received: 02/18/23
Project: 1460-23001-01, F&BI 302273
Date Extracted: 02/23/23
Date Analyzed: 02/23/23

RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE USING METHOD NWTPH-Gx

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
B11-GW-15 302273-01	<100	104
Method Blank 03-459 MB	<100	103

Date of Report: 02/27/23
Date Received: 02/18/23
Project: 1460-23001-01, F&BI 302273
Date Extracted: 02/21/23
Date Analyzed: 02/21/23

RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND RESIDUAL RANGE USING METHOD NWTPH-Dx

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Residual Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
B11-GW-15 302273-01	1,300 x	<250	114
Method Blank 03-451 MB	<50	<250	114

Analysis For Dissolved Metals By EPA Method 6020B

Client ID:	B11-GW-15	Client:	Evren Northwest
Date Received:	02/18/23	Project:	1460-23001-01, F&BI 302273
Date Extracted:	02/21/23	Lab ID:	302273-01
Date Analyzed:	02/22/23	Data File:	302273-01.172
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Arsenic	<1
Barium	13.9
Cadmium	<1
Chromium	<1
Lead	<1
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Dissolved Metals By EPA Method 6020B

Client ID:	Method Blank	Client:	Evren Northwest
Date Received:	NA	Project:	1460-23001-01, F&BI 302273
Date Extracted:	02/21/23	Lab ID:	I3-118 mb
Date Analyzed:	02/21/23	Data File:	I3-118 mb.148
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Arsenic	<1
Barium	<1
Cadmium	<1
Chromium	<1
Lead	<1
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	B11-GW-15	Client:	Evren Northwest
Date Received:	02/18/23	Project:	1460-23001-01, F&BI 302273
Date Extracted:	02/20/23	Lab ID:	302273-01
Date Analyzed:	02/20/23	Data File:	022024.D
Matrix:	Water	Instrument:	GCMS13
Units:	ug/L (ppb)	Operator:	lm

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	92	71	132
Toluene-d8	93	68	139
4-Bromofluorobenzene	100	62	136

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.02	Dibromochloromethane	<0.5
Bromomethane	<5	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<50	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Hexane	<5	o-Xylene	<1
Methylene chloride	<5	Styrene	<1
Methyl t-butyl ether (MTBE)	<1	Isopropylbenzene	<1
trans-1,2-Dichloroethene	<1	Bromoform	<5
1,1-Dichloroethane	<1	n-Propylbenzene	<1
2,2-Dichloropropane	<1	Bromobenzene	<1
cis-1,2-Dichloroethene	<1	1,3,5-Trimethylbenzene	<1
Chloroform	1.0	1,1,2,2-Tetrachloroethane	<0.2
2-Butanone (MEK)	<20	1,2,3-Trichloropropane	<1
1,2-Dichloroethane (EDC)	<0.2	2-Chlorotoluene	<1
1,1,1-Trichloroethane	<1	4-Chlorotoluene	<1
1,1-Dichloropropene	<1	tert-Butylbenzene	<1
Carbon tetrachloride	<0.5	1,2,4-Trimethylbenzene	<1
Benzene	<0.35	sec-Butylbenzene	<1
Trichloroethene	<0.5	p-Isopropyltoluene	<1
1,2-Dichloropropane	<1	1,3-Dichlorobenzene	<1
Bromodichloromethane	<0.5	1,4-Dichlorobenzene	<1
Dibromomethane	<1	1,2-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dibromo-3-chloropropane	<10
cis-1,3-Dichloropropene	<0.4	1,2,4-Trichlorobenzene	<1
Toluene	<1	Hexachlorobutadiene	<0.5
trans-1,3-Dichloropropene	<0.4	Naphthalene	<1
1,1,2-Trichloroethane	<0.5	1,2,3-Trichlorobenzene	<1
2-Hexanone	<10		

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	Method Blank	Client:	Evren Northwest
Date Received:	Not Applicable	Project:	1460-23001-01, F&BI 302273
Date Extracted:	02/20/23	Lab ID:	03-0340 mb
Date Analyzed:	02/20/23	Data File:	022007.D
Matrix:	Water	Instrument:	GCMS13
Units:	ug/L (ppb)	Operator:	lm

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	71	132
Toluene-d8	103	68	139
4-Bromofluorobenzene	104	62	136

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.02	Dibromochloromethane	<0.5
Bromomethane	<5	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<50	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Hexane	<5	o-Xylene	<1
Methylene chloride	<5	Styrene	<1
Methyl t-butyl ether (MTBE)	<1	Isopropylbenzene	<1
trans-1,2-Dichloroethene	<1	Bromoform	<5
1,1-Dichloroethane	<1	n-Propylbenzene	<1
2,2-Dichloropropane	<1	Bromobenzene	<1
cis-1,2-Dichloroethene	<1	1,3,5-Trimethylbenzene	<1
Chloroform	<1	1,1,2,2-Tetrachloroethane	<0.2
2-Butanone (MEK)	<20	1,2,3-Trichloropropane	<1
1,2-Dichloroethane (EDC)	<0.2	2-Chlorotoluene	<1
1,1,1-Trichloroethane	<1	4-Chlorotoluene	<1
1,1-Dichloropropene	<1	tert-Butylbenzene	<1
Carbon tetrachloride	<0.5	1,2,4-Trimethylbenzene	<1
Benzene	<0.35	sec-Butylbenzene	<1
Trichloroethene	<0.5	p-Isopropyltoluene	<1
1,2-Dichloropropane	<1	1,3-Dichlorobenzene	<1
Bromodichloromethane	<0.5	1,4-Dichlorobenzene	<1
Dibromomethane	<1	1,2-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dibromo-3-chloropropane	<10
cis-1,3-Dichloropropene	<0.4	1,2,4-Trichlorobenzene	<1
Toluene	<1	Hexachlorobutadiene	<0.5
trans-1,3-Dichloropropene	<0.4	Naphthalene	<1
1,1,2-Trichloroethane	<0.5	1,2,3-Trichlorobenzene	<1
2-Hexanone	<10		

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	B11-GW-15	Client:	Evren Northwest
Date Received:	02/18/23	Project:	1460-23001-01, F&BI 302273
Date Extracted:	02/20/23	Lab ID:	302273-01
Date Analyzed:	02/21/23	Data File:	022129.D
Matrix:	Water	Instrument:	GC7
Units:	ug/L (ppb)	Operator:	MG

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Tetrachlorometaxylene	42	24	127
Decachlorobiphenyl	43	11	152

Compounds:	Concentration ug/L (ppb)
Aroclor 1221	<0.1
Aroclor 1232	<0.1
Aroclor 1016	<0.1
Aroclor 1242	<0.1
Aroclor 1248	<0.1
Aroclor 1254	<0.1
Aroclor 1260	<0.1
Aroclor 1262	<0.1
Aroclor 1268	<0.1

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	Method Blank	Client:	Evren Northwest
Date Received:	Not Applicable	Project:	1460-23001-01, F&BI 302273
Date Extracted:	02/20/23	Lab ID:	03-441 mb
Date Analyzed:	02/21/23	Data File:	022110.D
Matrix:	Water	Instrument:	GC7
Units:	ug/L (ppb)	Operator:	MG

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Tetrachlorometaxylene	56	24	127
Decachlorobiphenyl	63	11	152

Compounds:	Concentration ug/L (ppb)
Aroclor 1221	<0.1
Aroclor 1232	<0.1
Aroclor 1016	<0.1
Aroclor 1242	<0.1
Aroclor 1248	<0.1
Aroclor 1254	<0.1
Aroclor 1260	<0.1
Aroclor 1262	<0.1
Aroclor 1268	<0.1

Date of Report: 02/27/23
Date Received: 02/18/23
Project: 1460-23001-01, F&BI 302273

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TPH AS GASOLINE USING METHOD NWTPH-Gx

Laboratory Code: 302273-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 20)
Gasoline	ug/L (ppb)	<100	<100	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	ug/L (ppb)	1,000	89	70-130

Date of Report: 02/27/23
Date Received: 02/18/23
Project: 1460-23001-01, F&BI 302273

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	104	112	70-130	7

Date of Report: 02/27/23
Date Received: 02/18/23
Project: 1460-23001-01, F&BI 302273

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR DISSOLVED METALS USING EPA METHOD 6020B

Laboratory Code: 302270-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	ug/L (ppb)	10	2.42	103	103	75-125	0
Barium	ug/L (ppb)	50	60.8	98	102	75-125	4
Cadmium	ug/L (ppb)	5	<1	98	98	75-125	0
Chromium	ug/L (ppb)	20	<1	74 vo	74 vo	75-125	0
Lead	ug/L (ppb)	10	<1	91	91	75-125	0
Mercury	ug/L (ppb)	5	<1	89	90	75-125	1
Selenium	ug/L (ppb)	5	5.71	102	98	75-125	4
Silver	ug/L (ppb)	5	<1	79	81	75-125	2

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	ug/L (ppb)	10	99	80-120
Barium	ug/L (ppb)	50	98	80-120
Cadmium	ug/L (ppb)	5	100	80-120
Chromium	ug/L (ppb)	20	98	80-120
Lead	ug/L (ppb)	10	97	80-120
Mercury	ug/L (ppb)	5	95	80-120
Selenium	ug/L (ppb)	5	99	80-120
Silver	ug/L (ppb)	5	97	80-120

Date of Report: 02/27/23
Date Received: 02/18/23
Project: 1460-23001-01, F&BI 302273

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR VOLATILES BY EPA METHOD 8260D

Laboratory Code: 302251-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Dichlorodifluoromethane	ug/L (ppb)	10	<1	7 vo	50-150
Chloromethane	ug/L (ppb)	10	<10	21 vo	50-150
Vinyl chloride	ug/L (ppb)	10	<0.02	33	16-176
Bromomethane	ug/L (ppb)	10	<5	58	10-193
Chloroethane	ug/L (ppb)	10	<1	61	50-150
Trichlorofluoromethane	ug/L (ppb)	10	<1	57	50-150
Acetone	ug/L (ppb)	50	<50	93	15-179
1,1-Dichloroethene	ug/L (ppb)	10	<1	80	50-150
Hexane	ug/L (ppb)	10	<5	83	49-161
Methylene chloride	ug/L (ppb)	10	<5	82	40-143
Methyl t-butyl ether (MTBE)	ug/L (ppb)	10	<1	89	50-150
trans-1,2-Dichloroethene	ug/L (ppb)	10	<1	88	50-150
1,1-Dichloroethane	ug/L (ppb)	10	<1	93	50-150
2,2-Dichloropropane	ug/L (ppb)	10	<1	107	10-335
cis-1,2-Dichloroethene	ug/L (ppb)	10	<1	97	50-150
Chloroform	ug/L (ppb)	10	<1	96	50-150
2-Butanone (MEK)	ug/L (ppb)	50	<20	99	34-168
1,2-Dichloroethane (EDC)	ug/L (ppb)	10	<0.2	95	50-150
1,1,1-Trichloroethane	ug/L (ppb)	10	<1	95	50-150
1,1-Dichloropropene	ug/L (ppb)	10	<1	94	50-150
Carbon tetrachloride	ug/L (ppb)	10	<0.5	90	50-150
Benzene	ug/L (ppb)	10	<0.35	95	50-150
Trichloroethene	ug/L (ppb)	10	<0.5	94	43-133
1,2-Dichloropropane	ug/L (ppb)	10	<1	99	50-150
Bromodichloromethane	ug/L (ppb)	10	<0.5	94	50-150
Dibromomethane	ug/L (ppb)	10	<1	101	50-150
4-Methyl-2-pentanone	ug/L (ppb)	50	<10	102	50-150
cis-1,3-Dichloropropene	ug/L (ppb)	10	<0.4	103	48-145
Toluene	ug/L (ppb)	10	<1	105	50-150
trans-1,3-Dichloropropene	ug/L (ppb)	10	<0.4	107	37-152
1,1,2-Trichloroethane	ug/L (ppb)	10	<0.5	106	50-150
2-Hexanone	ug/L (ppb)	50	<10	107	50-150
1,3-Dichloropropane	ug/L (ppb)	10	<1	106	50-150
Tetrachloroethene	ug/L (ppb)	10	<1	103	50-150
Dibromochloromethane	ug/L (ppb)	10	<0.5	107	33-164
1,2-Dibromoethane (EDB)	ug/L (ppb)	10	<1	106	50-150
Chlorobenzene	ug/L (ppb)	10	<1	105	50-150
Ethylbenzene	ug/L (ppb)	10	<1	108	50-150
1,1,1,2-Tetrachloroethane	ug/L (ppb)	10	<1	111	50-150
m,p-Xylene	ug/L (ppb)	20	<2	109	50-150
o-Xylene	ug/L (ppb)	10	<1	109	50-150
Styrene	ug/L (ppb)	10	<1	106	50-150
Isopropylbenzene	ug/L (ppb)	10	<1	102	50-150
Bromoform	ug/L (ppb)	10	<5	105	23-161
n-Propylbenzene	ug/L (ppb)	10	<1	108	50-150
Bromobenzene	ug/L (ppb)	10	<1	107	50-150
1,3,5-Trimethylbenzene	ug/L (ppb)	10	<1	110	50-150
1,1,2,2-Tetrachloroethane	ug/L (ppb)	10	<0.2	113	10-235
1,2,3-Trichloropropane	ug/L (ppb)	10	<1	106	33-151
2-Chlorotoluene	ug/L (ppb)	10	<1	111	50-150
4-Chlorotoluene	ug/L (ppb)	10	<1	109	50-150
tert-Butylbenzene	ug/L (ppb)	10	<1	107	50-150
1,2,4-Trimethylbenzene	ug/L (ppb)	10	<1	109	50-150
sec-Butylbenzene	ug/L (ppb)	10	<1	107	46-139
p-Isopropyltoluene	ug/L (ppb)	10	<1	109	46-140
1,3-Dichlorobenzene	ug/L (ppb)	10	<1	106	50-150
1,4-Dichlorobenzene	ug/L (ppb)	10	<1	108	50-150
1,2-Dichlorobenzene	ug/L (ppb)	10	<1	102	50-150
1,2-Dibromo-3-chloropropane	ug/L (ppb)	10	<10	104	50-150
1,2,4-Trichlorobenzene	ug/L (ppb)	10	<1	106	50-150
Hexachlorobutadiene	ug/L (ppb)	10	<0.5	102	42-150
Naphthalene	ug/L (ppb)	10	<1	121	50-150
1,2,3-Trichlorobenzene	ug/L (ppb)	10	<1	113	44-155

Date of Report: 02/27/23
Date Received: 02/18/23
Project: 1460-23001-01, F&BI 302273

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR VOLATILES BY EPA METHOD 8260D

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Dichlorodifluoromethane	ug/L (ppb)	10	101	98	70-130	3
Chloromethane	ug/L (ppb)	10	90	88	70-130	2
Vinyl chloride	ug/L (ppb)	10	92	92	70-130	0
Bromomethane	ug/L (ppb)	10	109	108	28-182	1
Chloroethane	ug/L (ppb)	10	104	101	70-130	3
Trichlorofluoromethane	ug/L (ppb)	10	98	98	70-130	0
Acetone	ug/L (ppb)	50	118	103	42-155	14
1,1-Dichloroethene	ug/L (ppb)	10	102	100	70-130	2
Hexane	ug/L (ppb)	10	91	92	50-161	1
Methylene chloride	ug/L (ppb)	10	99	97	29-192	2
Methyl t-butyl ether (MTBE)	ug/L (ppb)	10	105	103	70-130	2
trans-1,2-Dichloroethene	ug/L (ppb)	10	100	98	70-130	2
1,1-Dichloroethane	ug/L (ppb)	10	104	102	70-130	2
2,2-Dichloropropane	ug/L (ppb)	10	104	116	70-130	11
cis-1,2-Dichloroethene	ug/L (ppb)	10	107	105	70-130	2
Chloroform	ug/L (ppb)	10	102	102	70-130	0
2-Butanone (MEK)	ug/L (ppb)	50	115	111	50-157	4
1,2-Dichloroethane (EDC)	ug/L (ppb)	10	104	102	70-130	2
1,1,1-Trichloroethane	ug/L (ppb)	10	109	107	70-130	2
1,1-Dichloropropene	ug/L (ppb)	10	103	100	70-130	3
Carbon tetrachloride	ug/L (ppb)	10	104	98	70-130	6
Benzene	ug/L (ppb)	10	105	103	70-130	2
Trichloroethene	ug/L (ppb)	10	101	99	70-130	2
1,2-Dichloropropane	ug/L (ppb)	10	107	103	70-130	4
Bromodichloromethane	ug/L (ppb)	10	100	99	70-130	1
Dibromomethane	ug/L (ppb)	10	104	108	70-130	4
4-Methyl-2-pentanone	ug/L (ppb)	50	110	113	70-130	3
cis-1,3-Dichloropropene	ug/L (ppb)	10	111	110	70-130	1
Toluene	ug/L (ppb)	10	103	100	70-130	3
trans-1,3-Dichloropropene	ug/L (ppb)	10	110	106	70-130	4
1,1,2-Trichloroethane	ug/L (ppb)	10	104	101	70-130	3
2-Hexanone	ug/L (ppb)	50	103	102	69-130	1
1,3-Dichloropropane	ug/L (ppb)	10	105	102	70-130	3
Tetrachloroethene	ug/L (ppb)	10	98	96	70-130	2
Dibromochloromethane	ug/L (ppb)	10	104	104	63-142	0
1,2-Dibromoethane (EDB)	ug/L (ppb)	10	105	102	70-130	3
Chlorobenzene	ug/L (ppb)	10	102	101	70-130	1
Ethylbenzene	ug/L (ppb)	10	104	102	70-130	2
1,1,1,2-Tetrachloroethane	ug/L (ppb)	10	114	109	70-130	4
m,p-Xylene	ug/L (ppb)	20	105	103	70-130	2
o-Xylene	ug/L (ppb)	10	107	104	70-130	3
Styrene	ug/L (ppb)	10	102	102	70-130	0
Isopropylbenzene	ug/L (ppb)	10	101	98	70-130	3
Bromoform	ug/L (ppb)	10	108	107	50-157	1
n-Propylbenzene	ug/L (ppb)	10	99	100	70-130	1
Bromobenzene	ug/L (ppb)	10	102	99	70-130	3
1,3,5-Trimethylbenzene	ug/L (ppb)	10	101	100	52-150	1
1,1,2,2-Tetrachloroethane	ug/L (ppb)	10	107	107	70-130	0
1,2,3-Trichloropropane	ug/L (ppb)	10	103	103	70-130	0
2-Chlorotoluene	ug/L (ppb)	10	105	105	70-130	0
4-Chlorotoluene	ug/L (ppb)	10	104	101	70-130	3
tert-Butylbenzene	ug/L (ppb)	10	101	100	70-130	1
1,2,4-Trimethylbenzene	ug/L (ppb)	10	102	100	70-130	2
sec-Butylbenzene	ug/L (ppb)	10	100	100	70-130	0
p-Isopropyltoluene	ug/L (ppb)	10	101	102	70-130	1
1,3-Dichlorobenzene	ug/L (ppb)	10	98	98	70-130	0
1,4-Dichlorobenzene	ug/L (ppb)	10	101	101	70-130	0
1,2-Dichlorobenzene	ug/L (ppb)	10	98	99	70-130	1
1,2-Dibromo-3-chloropropane	ug/L (ppb)	10	105	103	70-130	2
1,2,4-Trichlorobenzene	ug/L (ppb)	10	98	101	70-130	3
Hexachlorobutadiene	ug/L (ppb)	10	95	96	70-130	1
Naphthalene	ug/L (ppb)	10	113	116	70-130	3
1,2,3-Trichlorobenzene	ug/L (ppb)	10	108	108	69-143	0

Date of Report: 02/27/23
Date Received: 02/18/23
Project: 1460-23001-01, F&BI 302273

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR POLYCHLORINATED BIPHENYLS AS AROCLOR 1016/1260 BY EPA METHOD 8082A

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Aroclor 1016	ug/L (ppb)	0.25	72	68	25-111	6
Aroclor 1260	ug/L (ppb)	0.25	81	79	23-123	2

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 high; 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.

302273

SAMPLE CHAIN OF CUSTODY

VW2/F2/K1 (NP)

02/18/23

Page # 1 of 1

VW2 F2 K1

Report To Lynn Green
Company Evren Northwest
Address Po Box 14480
City, State, ZIP Portland OR 97214
Phone 503 452-5561 Email lynng@evrennw.com

SAMPLERS (*signature*)

PROJECT NAME: 1460-2301-01

PO #

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
X Standard turnaround
☐ RUSH
Rush charges authorized by:

SAMPLE DISPOSAL
☐ Archive samples
☐ Other
Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	Dissolved Lead-B				Notes
						ANALYSES REQUESTED											
B11-GW-15	01A-H	02/16/23	16:40	GW	8	X	X			X		X	X				

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Dan Sajko	ENW	02/17/23	18:00
Received by:	James Bruya	F&B	2/18	1600
Relinquished by:				
Received by:				

Samples received at 6 °C

Friedman & Bruya, Inc.
Ph. (206) 285-8282

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

March 7, 2023

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

Dear Mr Green:

Included are the additional results from the testing of material submitted on February 18, 2023 from the 1460-23001-01, F&BI 302273 project. There are 5 pages included in this report.

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
ENW0307R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on February 18, 2023 by Friedman & Bruya, Inc. from the Evren Northwest 1460-23001-01, F&BI 302273 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Evren Northwest
302273 -01	B11-GW-15

All quality control requirements were acceptable.

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	B11-GW-15	Client:	Evren Northwest
Date Received:	02/18/23	Project:	1460-23001-01, F&BI 302273
Date Extracted:	03/01/23	Lab ID:	302273-01 1/2
Date Analyzed:	03/01/23	Data File:	030118.D
Matrix:	Water	Instrument:	GCMS12
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Nitrobenzene-d5	81	11	173
2-Fluorobiphenyl	81	44	108
2,4,6-Tribromophenol	60	10	140
Terphenyl-d14	86	50	150

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.4
2-Methylnaphthalene	<0.4
1-Methylnaphthalene	<0.4
Acenaphthylene	<0.04
Acenaphthene	<0.04
Fluorene	<0.04
Phenanthrene	<0.04
Anthracene	<0.04
Fluoranthene	<0.04
Pyrene	<0.04
Benz(a)anthracene	<0.04
Chrysene	<0.04
Benzo(a)pyrene	<0.04
Benzo(b)fluoranthene	<0.04
Benzo(k)fluoranthene	<0.04
Indeno(1,2,3-cd)pyrene	<0.04
Dibenz(a,h)anthracene	<0.04
Benzo(g,h,i)perylene	<0.08

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	Method Blank	Client:	Evren Northwest
Date Received:	Not Applicable	Project:	1460-23001-01, F&BI 302273
Date Extracted:	03/01/23	Lab ID:	03-505 mb
Date Analyzed:	03/01/23	Data File:	030111.D
Matrix:	Water	Instrument:	GCMS12
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Nitrobenzene-d5	87	11	173
2-Fluorobiphenyl	84	44	108
2,4,6-Tribromophenol	91	10	140
Terphenyl-d14	96	50	150

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.2
2-Methylnaphthalene	<0.2
1-Methylnaphthalene	<0.2
Acenaphthylene	<0.02
Acenaphthene	<0.02
Fluorene	<0.02
Phenanthrene	<0.02
Anthracene	<0.02
Fluoranthene	<0.02
Pyrene	<0.02
Benz(a)anthracene	<0.02
Chrysene	<0.02
Benzo(a)pyrene	<0.02
Benzo(b)fluoranthene	<0.02
Benzo(k)fluoranthene	<0.02
Indeno(1,2,3-cd)pyrene	<0.02
Dibenz(a,h)anthracene	<0.02
Benzo(g,h,i)perylene	<0.04

Date of Report: 03/07/23
Date Received: 02/18/23
Project: 1460-23001-01, F&BI 302273

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR SEMIVOLATILES BY EPA METHOD 8270E

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Naphthalene	ug/L (ppb)	5	88	87	62-97	1
2-Methylnaphthalene	ug/L (ppb)	5	95	94	64-101	1
1-Methylnaphthalene	ug/L (ppb)	5	98 vo	96 vo	64-93	2
Acenaphthylene	ug/L (ppb)	5	105	102	70-130	3
Acenaphthene	ug/L (ppb)	5	95	93	70-130	2
Fluorene	ug/L (ppb)	5	104	101	70-130	3
Phenanthrene	ug/L (ppb)	5	97	95	70-130	2
Anthracene	ug/L (ppb)	5	98	96	70-130	2
Fluoranthene	ug/L (ppb)	5	103	101	70-130	2
Pyrene	ug/L (ppb)	5	93	95	70-130	2
Benz(a)anthracene	ug/L (ppb)	5	102	101	70-130	1
Chrysene	ug/L (ppb)	5	100	99	70-130	1
Benzo(a)pyrene	ug/L (ppb)	5	97	96	70-130	1
Benzo(b)fluoranthene	ug/L (ppb)	5	98	94	70-130	4
Benzo(k)fluoranthene	ug/L (ppb)	5	95	92	70-130	3
Indeno(1,2,3-cd)pyrene	ug/L (ppb)	5	94	99	70-130	5
Dibenz(a,h)anthracene	ug/L (ppb)	5	88	93	70-130	6
Benzo(g,h,i)perylene	ug/L (ppb)	5	84	91	70-130	8

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.

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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.

302273

SAMPLE CHAIN OF CUSTODY

VW2/F2/K1 (NP)

02/18/23

VW2 F2 K1

Page (of)

Report To Lynn Green
Company Evren Northwest
Address Po Box 14480
City, State, ZIP Portland OR 97214
Phone 503 452-5561 Email lynng@evrennw.com

SAMPLERS (*signature*)

PROJECT NAME: 1460-2301-01

PO #

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
X Standard turnaround
RUSH
Rush charges authorized by:

SAMPLE DISPOSAL
Archive samples
Other
Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	Dissolved Pb/As-D				Notes
B11-GW-15	01A-H	02/16/23	16:40	GW	8	X	X			X	●	X	X				● per EB 2/18/23 MG

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Dan Sajko	ENW	02/17/23	18:00
Received by:	James Bruya	F&B	2/18	1600
Relinquished by:				
Received by:				

Samples received at 4 °C

Friedman & Bruya, Inc.
Ph. (206) 285-8282

Summary: DATA VALID? ☒YES

Analytical Laboratory Data Validation Check Sheet

Project Name: 10103 NE Marx, Portland

Project Number: 1460-23001-01

Date of Review: 3/8/23 Lab. Name: F&BI Lab Batch ID #: 302273 additional

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

The value reported fell outside the control limits established for 2-Methylnaphthalene.

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
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:

Initial Review By: AR

Final Review By: EB

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

March 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 February 15, 2023 from the 1460-23001-01, F&BI 302203 project. There are 37 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
ENW0308R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on February 15, 2023 by Friedman & Bruya, Inc. from the Evren Northwest 1460-23001-01, F&BI 302203 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Evren Northwest
302203 -01	DU01-230214-0.5-IS
302203 -02	DU02-230214-0.5-IS
302203 -03	B01-2
302203 -04	B01-3
302203 -05	B02-2
302203 -06	B02-5

The 8260D samples were taken from a glass jars. The data were flagged accordingly.

Methylene chloride was detected in the 8260D analysis. The results were flagged as laboratory contamination.

The 8260D matrix spike and matrix spike duplicate failed the relative percent difference for several compounds. The analytes were not detected therefore the data were acceptable.

All other quality control requirements were acceptable.

Date of Report: 03/08/23
Date Received: 02/15/23
Project: 1460-23001-01, F&BI 302203
Date Extracted: 02/16/23 and 02/17/23
Date Analyzed: 02/16/23 and 02/17/23

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR GASOLINE, DIESEL AND HEAVY OIL BY NWTPH-HCID

Results Reported on a Dry Weight Basis
Results Reported as Not Detected (ND) or Detected (D)

THE DATA PROVIDED BELOW WAS PERFORMED PER THE GUIDELINES ESTABLISHED BY THE WASHINGTON DEPARTMENT OF ECOLOGY AND WERE NOT DESIGNED TO PROVIDE INFORMATION WITH REGARDS TO THE ACTUAL IDENTIFICATION OF ANY MATERIAL PRESENT

Sample ID Laboratory ID	Gasoline	Diesel	Heavy Oil	Surrogate (% Recovery) (Limit 50-150)
DU01-230214-0.5-IS 302203-01	ND	ND	D	106
DU02-230214-0.5-IS 302203-02	ND	ND	D	100
B01-2 302203-03	ND	ND	D	87
B02-2 302203-05	ND	D	D	106
Method Blank 03-421 MB2	ND	ND	ND	101
Method Blank 03-439 MB	ND	ND	ND	89

ND - Material not detected at or above 20 mg/kg gas, 50 mg/kg diesel and 250 mg/kg heavy oil.

Date of Report: 03/08/23
Date Received: 02/15/23
Project: 1460-23001-01, F&BI 302203
Date Extracted: 02/21/23 and 02/22/23
Date Analyzed: 02/21/23 and 02/22/23

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

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

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Residual Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
DU01-230214-0.5-IS 302203-01	35 x	920	100
DU02-230214-0.5-IS 302203-02	41 x	570	103
B01-2 302203-03	<50	1,300	105
B02-2 302203-05	1,600	11,000	103
Method Blank 03-452 MB	<50	<250	105
Method Blank 03-485 MB	<5	<25	115

Analysis For Total Metals By EPA Method 6020B

Client ID:	DU01-230214-0.5-IS	Client:	Evren Northwest
Date Received:	02/15/23	Project:	1460-23001-01, F&BI 302203
Date Extracted:	02/20/23	Lab ID:	302203-01
Date Analyzed:	02/22/23	Data File:	302203-01.063
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.66
Barium	140
Cadmium	<1
Chromium	26.2
Lead	54.3
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	DU02-230214-0.5-IS	Client:	Evren Northwest
Date Received:	02/15/23	Project:	1460-23001-01, F&BI 302203
Date Extracted:	02/20/23	Lab ID:	302203-02
Date Analyzed:	02/22/23	Data File:	302203-02.064
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	3.47
Barium	147
Cadmium	<1
Chromium	32.8
Lead	37.9
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	B01-2	Client:	Evren Northwest
Date Received:	02/15/23	Project:	1460-23001-01, F&BI 302203
Date Extracted:	02/16/23	Lab ID:	302203-03
Date Analyzed:	02/16/23 17:07:47	Data File:	302203-03.105
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm) Dry Weight
Arsenic	2.89
Barium	90.1
Cadmium	<1
Lead	8.56
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	B01-2	Client:	Evren Northwest
Date Received:	02/15/23	Project:	1460-23001-01, F&BI 302203
Date Extracted:	02/16/23	Lab ID:	302203-03 x5
Date Analyzed:	02/16/23 16:54:08	Data File:	302203-03 x5.102
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Chromium	6.79

Analysis For Total Metals By EPA Method 6020B

Client ID:	B02-2	Client:	Evren Northwest
Date Received:	02/15/23	Project:	1460-23001-01, F&BI 302203
Date Extracted:	02/16/23	Lab ID:	302203-05
Date Analyzed:	02/16/23 17:30:37	Data File:	302203-05.110
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.27
Barium	95.5
Cadmium	<1
Lead	6.73
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	B02-2	Client:	Evren Northwest
Date Received:	02/15/23	Project:	1460-23001-01, F&BI 302203
Date Extracted:	02/16/23	Lab ID:	302203-05 x5
Date Analyzed:	02/17/23 13:14:35	Data File:	302203-05 x5.060
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Chromium	13.5

Analysis For Total Metals By EPA Method 6020B

Client ID:	Method Blank	Client:	Evren Northwest
Date Received:	Not Applicable	Project:	1460-23001-01, F&BI 302203
Date Extracted:	02/16/23	Lab ID:	I3-111 mb
Date Analyzed:	02/16/23 16:45:01	Data File:	I3-111 mb.100
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

Analysis For Total Metals By EPA Method 6020B

Client ID:	Method Blank	Client:	Evren Northwest
Date Received:	NA	Project:	1460-23001-01, F&BI 302203
Date Extracted:	02/20/23	Lab ID:	I3-114 mb
Date Analyzed:	02/20/23	Data File:	I3-114 mb.084
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	MG

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

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	DU01-230214-0.5-IS pc	Client:	Evren Northwest
Date Received:	02/15/23	Project:	1460-23001-01, F&BI 302203
Date Extracted:	03/01/23	Lab ID:	302203-01
Date Analyzed:	03/01/23	Data File:	030124.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	lm

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	90	109
Toluene-d8	102	89	112
4-Bromofluorobenzene	98	84	115

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<5 ca	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Hexane	<0.25	o-Xylene	<0.05
Methylene chloride	11 lc	Styrene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Isopropylbenzene	<0.05
trans-1,2-Dichloroethene	<0.05	Bromoform	<0.05
1,1-Dichloroethane	<0.05	n-Propylbenzene	<0.05
2,2-Dichloropropane	<0.05	Bromobenzene	<0.05
cis-1,2-Dichloroethene	<0.05	1,3,5-Trimethylbenzene	<0.05
Chloroform	<0.05	1,1,2,2-Tetrachloroethane	<0.05
2-Butanone (MEK)	<1	1,2,3-Trichloropropane	<0.05
1,2-Dichloroethane (EDC)	<0.05	2-Chlorotoluene	<0.05
1,1,1-Trichloroethane	<0.05	4-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	tert-Butylbenzene	<0.05
Carbon tetrachloride	<0.05	1,2,4-Trimethylbenzene	<0.05
Benzene	<0.03	sec-Butylbenzene	<0.05
Trichloroethene	<0.02	p-Isopropyltoluene	<0.05
1,2-Dichloropropane	<0.05	1,3-Dichlorobenzene	<0.05
Bromodichloromethane	<0.05	1,4-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,2-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<1	1,2-Dibromo-3-chloropropane	<0.5
cis-1,3-Dichloropropene	<0.05	1,2,4-Trichlorobenzene	<0.25
Toluene	<0.05	Hexachlorobutadiene	<0.25
trans-1,3-Dichloropropene	<0.05	Naphthalene	<0.05
1,1,2-Trichloroethane	<0.05	1,2,3-Trichlorobenzene	<0.25
2-Hexanone	<0.5		

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	DU02-230214-0.5-IS pc	Client:	Evren Northwest
Date Received:	02/15/23	Project:	1460-23001-01, F&BI 302203
Date Extracted:	03/01/23	Lab ID:	302203-02
Date Analyzed:	03/01/23	Data File:	030125.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	lm

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	95	90	109
Toluene-d8	102	89	112
4-Bromofluorobenzene	96	84	115

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<5 ca	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Hexane	<0.25	o-Xylene	<0.05
Methylene chloride	6.8 lc	Styrene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Isopropylbenzene	<0.05
trans-1,2-Dichloroethene	<0.05	Bromoform	<0.05
1,1-Dichloroethane	<0.05	n-Propylbenzene	<0.05
2,2-Dichloropropane	<0.05	Bromobenzene	<0.05
cis-1,2-Dichloroethene	<0.05	1,3,5-Trimethylbenzene	<0.05
Chloroform	<0.05	1,1,2,2-Tetrachloroethane	<0.05
2-Butanone (MEK)	<1	1,2,3-Trichloropropane	<0.05
1,2-Dichloroethane (EDC)	<0.05	2-Chlorotoluene	<0.05
1,1,1-Trichloroethane	<0.05	4-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	tert-Butylbenzene	<0.05
Carbon tetrachloride	<0.05	1,2,4-Trimethylbenzene	<0.05
Benzene	<0.03	sec-Butylbenzene	<0.05
Trichloroethene	<0.02	p-Isopropyltoluene	<0.05
1,2-Dichloropropane	<0.05	1,3-Dichlorobenzene	<0.05
Bromodichloromethane	<0.05	1,4-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,2-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<1	1,2-Dibromo-3-chloropropane	<0.5
cis-1,3-Dichloropropene	<0.05	1,2,4-Trichlorobenzene	<0.25
Toluene	<0.05	Hexachlorobutadiene	<0.25
trans-1,3-Dichloropropene	<0.05	Naphthalene	<0.05
1,1,2-Trichloroethane	<0.05	1,2,3-Trichlorobenzene	<0.25
2-Hexanone	<0.5		

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	B01-2 pc	Client:	Evren Northwest
Date Received:	02/15/23	Project:	1460-23001-01, F&BI 302203
Date Extracted:	03/01/23	Lab ID:	302203-03
Date Analyzed:	03/01/23	Data File:	030126.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	lm

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	97	90	109
Toluene-d8	102	89	112
4-Bromofluorobenzene	96	84	115

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	0.30
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<5 ca	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Hexane	<0.25	o-Xylene	<0.05
Methylene chloride	<0.5	Styrene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Isopropylbenzene	<0.05
trans-1,2-Dichloroethene	<0.05	Bromoform	<0.05
1,1-Dichloroethane	<0.05	n-Propylbenzene	<0.05
2,2-Dichloropropane	<0.05	Bromobenzene	<0.05
cis-1,2-Dichloroethene	<0.05	1,3,5-Trimethylbenzene	<0.05
Chloroform	<0.05	1,1,2,2-Tetrachloroethane	<0.05
2-Butanone (MEK)	<1	1,2,3-Trichloropropane	<0.05
1,2-Dichloroethane (EDC)	<0.05	2-Chlorotoluene	<0.05
1,1,1-Trichloroethane	<0.05	4-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	tert-Butylbenzene	<0.05
Carbon tetrachloride	<0.05	1,2,4-Trimethylbenzene	<0.05
Benzene	<0.03	sec-Butylbenzene	<0.05
Trichloroethene	<0.02	p-Isopropyltoluene	<0.05
1,2-Dichloropropane	<0.05	1,3-Dichlorobenzene	<0.05
Bromodichloromethane	<0.05	1,4-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,2-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<1	1,2-Dibromo-3-chloropropane	<0.5
cis-1,3-Dichloropropene	<0.05	1,2,4-Trichlorobenzene	<0.25
Toluene	<0.05	Hexachlorobutadiene	<0.25
trans-1,3-Dichloropropene	<0.05	Naphthalene	<0.05
1,1,2-Trichloroethane	<0.05	1,2,3-Trichlorobenzene	<0.25
2-Hexanone	<0.5		

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	B02-2 pc	Client:	Evren Northwest
Date Received:	02/15/23	Project:	1460-23001-01, F&BI 302203
Date Extracted:	03/01/23	Lab ID:	302203-05
Date Analyzed:	03/01/23	Data File:	030127.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	lm

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	90	109
Toluene-d8	100	89	112
4-Bromofluorobenzene	97	84	115

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	13
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<5 ca	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Hexane	<0.25	o-Xylene	<0.05
Methylene chloride	<0.5	Styrene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Isopropylbenzene	<0.05
trans-1,2-Dichloroethene	<0.05	Bromoform	<0.05
1,1-Dichloroethane	<0.05	n-Propylbenzene	<0.05
2,2-Dichloropropane	<0.05	Bromobenzene	<0.05
cis-1,2-Dichloroethene	<0.05	1,3,5-Trimethylbenzene	0.091
Chloroform	<0.05	1,1,2,2-Tetrachloroethane	<0.05
2-Butanone (MEK)	<1	1,2,3-Trichloropropane	<0.05
1,2-Dichloroethane (EDC)	<0.05	2-Chlorotoluene	<0.05
1,1,1-Trichloroethane	<0.05	4-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	tert-Butylbenzene	<0.05
Carbon tetrachloride	<0.05	1,2,4-Trimethylbenzene	0.058
Benzene	<0.03	sec-Butylbenzene	<0.05
Trichloroethene	0.056	p-Isopropyltoluene	<0.05
1,2-Dichloropropane	<0.05	1,3-Dichlorobenzene	<0.05
Bromodichloromethane	<0.05	1,4-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,2-Dichlorobenzene	0.13
4-Methyl-2-pentanone	<1	1,2-Dibromo-3-chloropropane	<0.5
cis-1,3-Dichloropropene	<0.05	1,2,4-Trichlorobenzene	<0.25
Toluene	<0.05	Hexachlorobutadiene	<0.25
trans-1,3-Dichloropropene	<0.05	Naphthalene	0.16
1,1,2-Trichloroethane	<0.05	1,2,3-Trichlorobenzene	<0.25
2-Hexanone	<0.5		

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	Method Blank	Client:	Evren Northwest
Date Received:	Not Applicable	Project:	1460-23001-01, F&BI 302203
Date Extracted:	03/01/23	Lab ID:	03-0359 mb
Date Analyzed:	03/01/23	Data File:	030113.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	lm

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	90	109
Toluene-d8	100	89	112
4-Bromofluorobenzene	96	84	115

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<5 ca	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Hexane	<0.25	o-Xylene	<0.05
Methylene chloride	<0.5	Styrene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Isopropylbenzene	<0.05
trans-1,2-Dichloroethene	<0.05	Bromoform	<0.05
1,1-Dichloroethane	<0.05	n-Propylbenzene	<0.05
2,2-Dichloropropane	<0.05	Bromobenzene	<0.05
cis-1,2-Dichloroethene	<0.05	1,3,5-Trimethylbenzene	<0.05
Chloroform	<0.05	1,1,2,2-Tetrachloroethane	<0.05
2-Butanone (MEK)	<1	1,2,3-Trichloropropane	<0.05
1,2-Dichloroethane (EDC)	<0.05	2-Chlorotoluene	<0.05
1,1,1-Trichloroethane	<0.05	4-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	tert-Butylbenzene	<0.05
Carbon tetrachloride	<0.05	1,2,4-Trimethylbenzene	<0.05
Benzene	<0.03	sec-Butylbenzene	<0.05
Trichloroethene	<0.02	p-Isopropyltoluene	<0.05
1,2-Dichloropropane	<0.05	1,3-Dichlorobenzene	<0.05
Bromodichloromethane	<0.05	1,4-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,2-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<1	1,2-Dibromo-3-chloropropane	<0.5
cis-1,3-Dichloropropene	<0.05	1,2,4-Trichlorobenzene	<0.25
Toluene	<0.05	Hexachlorobutadiene	<0.25
trans-1,3-Dichloropropene	<0.05	Naphthalene	<0.05
1,1,2-Trichloroethane	<0.05	1,2,3-Trichlorobenzene	<0.25
2-Hexanone	<0.5		

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	DU01-230214-0.5-IS	Client:	Evren Northwest
Date Received:	02/15/23	Project:	1460-23001-01, F&BI 302203
Date Extracted:	03/01/23	Lab ID:	302203-01 1/25
Date Analyzed:	03/02/23	Data File:	030216.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Nitrobenzene-d5	71 d	10	198
2-Fluorobiphenyl	85 d	45	117
2,4,6-Tribromophenol	88 d	11	158
Terphenyl-d14	104 d	50	124

Compounds:	Concentration mg/kg (ppm)
Naphthalene	<0.05
2-Methylnaphthalene	<0.05
1-Methylnaphthalene	<0.05
Acenaphthylene	<0.05
Acenaphthene	<0.05
Fluorene	<0.05
Phenanthrene	<0.05
Anthracene	<0.05
Fluoranthene	0.058
Pyrene	0.088
Benz(a)anthracene	<0.05
Chrysene	0.064
Benzo(a)pyrene	0.060
Benzo(b)fluoranthene	0.085
Benzo(k)fluoranthene	<0.05
Indeno(1,2,3-cd)pyrene	0.057
Dibenz(a,h)anthracene	<0.05
Benzo(g,h,i)perylene	0.086

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	DU02-230214-0.5-IS	Client:	Evren Northwest
Date Received:	02/15/23	Project:	1460-23001-01, F&BI 302203
Date Extracted:	03/01/23	Lab ID:	302203-02 1/25
Date Analyzed:	03/01/23	Data File:	030117.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Nitrobenzene-d5	68 d	10	198
2-Fluorobiphenyl	84 d	45	117
2,4,6-Tribromophenol	93 d	11	158
Terphenyl-d14	105 d	50	124

Compounds:	Concentration mg/kg (ppm)
Naphthalene	<0.05
2-Methylnaphthalene	<0.05
1-Methylnaphthalene	<0.05
Acenaphthylene	<0.05
Acenaphthene	<0.05
Fluorene	<0.05
Phenanthrene	<0.05
Anthracene	<0.05
Fluoranthene	0.16
Pyrene	0.23
Benz(a)anthracene	0.088
Chrysene	0.12
Benzo(a)pyrene	0.16
Benzo(b)fluoranthene	0.18
Benzo(k)fluoranthene	<0.05
Indeno(1,2,3-cd)pyrene	0.14
Dibenz(a,h)anthracene	<0.05
Benzo(g,h,i)perylene	0.16

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	B01-2	Client:	Evren Northwest
Date Received:	02/15/23	Project:	1460-23001-01, F&BI 302203
Date Extracted:	03/01/23	Lab ID:	302203-03 1/25
Date Analyzed:	03/01/23	Data File:	030113.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Nitrobenzene-d5	74 d	10	198
2-Fluorobiphenyl	90 d	45	117
2,4,6-Tribromophenol	94 d	11	158
Terphenyl-d14	105 d	50	124

Compounds:	Concentration mg/kg (ppm)
Naphthalene	<0.05
2-Methylnaphthalene	<0.05
1-Methylnaphthalene	<0.05
Acenaphthylene	<0.05
Acenaphthene	<0.05
Fluorene	<0.05
Phenanthrene	<0.05
Anthracene	<0.05
Fluoranthene	<0.05
Pyrene	<0.05
Benz(a)anthracene	<0.05
Chrysene	<0.05
Benzo(a)pyrene	<0.05
Benzo(b)fluoranthene	<0.05
Benzo(k)fluoranthene	<0.05
Indeno(1,2,3-cd)pyrene	<0.05
Dibenz(a,h)anthracene	<0.05
Benzo(g,h,i)perylene	<0.05

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	B02-2	Client:	Evren Northwest
Date Received:	02/15/23	Project:	1460-23001-01, F&BI 302203
Date Extracted:	03/01/23	Lab ID:	302203-05 1/25
Date Analyzed:	03/01/23	Data File:	030114.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Nitrobenzene-d5	79 d	10	198
2-Fluorobiphenyl	90 d	45	117
2,4,6-Tribromophenol	99 d	11	158
Terphenyl-d14	117 d	50	124

Compounds:	Concentration mg/kg (ppm)
Naphthalene	0.15
2-Methylnaphthalene	1.3
1-Methylnaphthalene	1.5
Acenaphthylene	<0.05
Acenaphthene	0.25
Fluorene	0.43
Phenanthrene	0.95
Anthracene	0.18
Fluoranthene	0.083
Pyrene	0.17
Benz(a)anthracene	<0.05
Chrysene	0.062
Benzo(a)pyrene	<0.05
Benzo(b)fluoranthene	<0.05
Benzo(k)fluoranthene	<0.05
Indeno(1,2,3-cd)pyrene	<0.05
Dibenz(a,h)anthracene	<0.05
Benzo(g,h,i)perylene	<0.05

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	Method Blank	Client:	Evren Northwest
Date Received:	Not Applicable	Project:	1460-23001-01, F&BI 302203
Date Extracted:	03/01/23	Lab ID:	03-496 mb2 1/5
Date Analyzed:	03/01/23	Data File:	030108.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Nitrobenzene-d5	81	10	198
2-Fluorobiphenyl	96	45	117
2,4,6-Tribromophenol	89	11	158
Terphenyl-d14	123	50	124

Compounds:	Concentration mg/kg (ppm)
Naphthalene	<0.01
2-Methylnaphthalene	<0.01
1-Methylnaphthalene	<0.01
Acenaphthylene	<0.01
Acenaphthene	<0.01
Fluorene	<0.01
Phenanthrene	<0.01
Anthracene	<0.01
Fluoranthene	<0.01
Pyrene	<0.01
Benz(a)anthracene	<0.01
Chrysene	<0.01
Benzo(a)pyrene	<0.01
Benzo(b)fluoranthene	<0.01
Benzo(k)fluoranthene	<0.01
Indeno(1,2,3-cd)pyrene	<0.01
Dibenz(a,h)anthracene	<0.01
Benzo(g,h,i)perylene	<0.01

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	DU01-230214-0.5-IS	Client:	Evren Northwest
Date Received:	02/15/23	Project:	1460-23001-01, F&BI 302203
Date Extracted:	02/17/23	Lab ID:	302203-01 1/6
Date Analyzed:	02/17/23	Data File:	021722.D
Matrix:	Soil	Instrument:	GC9
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Tetrachlorometaxylene	112	23	120
Decachlorobiphenyl	91	47	114

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	0.30
Aroclor 1262	<0.02
Aroclor 1268	<0.02

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	DU02-230214-0.5-IS	Client:	Evren Northwest
Date Received:	02/15/23	Project:	1460-23001-01, F&BI 302203
Date Extracted:	02/17/23	Lab ID:	302203-02 1/6
Date Analyzed:	02/17/23	Data File:	021723.D
Matrix:	Soil	Instrument:	GC9
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Tetrachlorometaxylene	121	23	120
Decachlorobiphenyl	94	47	114

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	0.51
Aroclor 1262	<0.02
Aroclor 1268	<0.02

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	B01-2	Client:	Evren Northwest
Date Received:	02/15/23	Project:	1460-23001-01, F&BI 302203
Date Extracted:	02/21/22	Lab ID:	302203-03 1/30
Date Analyzed:	02/22/23	Data File:	022214.D
Matrix:	Soil	Instrument:	GC7
Units:	mg/kg (ppm) Dry Weight	Operator:	MG

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Tetrachlorometaxylene	81	29	154
Decachlorobiphenyl	95	11	152

Compounds:	Concentration mg/kg (ppm)
Aroclor 1221	<0.02
Aroclor 1232	<0.02
Aroclor 1016	<0.02
Aroclor 1242	0.035
Aroclor 1248	<0.02
Aroclor 1254	<0.02
Aroclor 1260	<0.02
Aroclor 1262	<0.02
Aroclor 1268	<0.02

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	B02-2	Client:	Evren Northwest
Date Received:	02/15/23	Project:	1460-23001-01, F&BI 302203
Date Extracted:	02/21/23	Lab ID:	302203-05 1/30
Date Analyzed:	02/23/23	Data File:	022308.D
Matrix:	Soil	Instrument:	GC7
Units:	mg/kg (ppm) Dry Weight	Operator:	MG

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Tetrachlorometaxylene	73	29	154
Decachlorobiphenyl	112	11	152

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

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	Method Blank	Client:	Evren Northwest
Date Received:	Not Applicable	Project:	1460-23001-01, F&BI 302203
Date Extracted:	02/17/23	Lab ID:	03-437 mb2 1/6
Date Analyzed:	02/17/23	Data File:	021720.D
Matrix:	Soil	Instrument:	GC9
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Tetrachlorometaxylene	116	23	120
Decachlorobiphenyl	112	47	114

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

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	Method Blank	Client:	Evren Northwest
Date Received:	Not Applicable	Project:	1460-23001-01, F&BI 302203
Date Extracted:	02/21/22	Lab ID:	03-447 mb2 1/30
Date Analyzed:	02/22/23	Data File:	022207.D
Matrix:	Soil	Instrument:	GC7
Units:	mg/kg (ppm) Dry Weight	Operator:	MG

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Tetrachlorometaxylene	90	29	154
Decachlorobiphenyl	113	11	152

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

Date of Report: 03/08/23
Date Received: 02/15/23
Project: 1460-23001-01, F&BI 302203

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

Laboratory Code: 302203-03 (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	790	98	96	70-130	2

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	102	70-130

Date of Report: 03/08/23
Date Received: 02/15/23
Project: 1460-23001-01, F&BI 302203

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

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	500	99	102	70-130	3

Date of Report: 03/08/23
Date Received: 02/15/23
Project: 1460-23001-01, F&BI 302203

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

Laboratory Code: 302234-05 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	98	101	75-125	3
Barium	mg/kg (ppm)	50	38.0	99	95	75-125	4
Cadmium	mg/kg (ppm)	10	<5	98	96	75-125	2
Chromium	mg/kg (ppm)	50	19.1	95	96	75-125	1
Lead	mg/kg (ppm)	50	<5	89	89	75-125	0
Mercury	mg/kg (ppm	5	<5	91	93	75-125	2
Selenium	mg/kg (ppm)	5	<5	97	101	75-125	4
Silver	mg/kg (ppm)	10	<5	92	92	75-125	0

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	mg/kg (ppm)	10	95	80-120
Barium	mg/kg (ppm)	50	102	80-120
Cadmium	mg/kg (ppm)	10	103	80-120
Chromium	mg/kg (ppm)	50	116	80-120
Lead	mg/kg (ppm)	50	103	80-120
Mercury	mg/kg (ppm)	5	99	80-120
Selenium	mg/kg (ppm)	5	101	80-120
Silver	mg/kg (ppm)	10	95	80-120

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

Laboratory Code: 302203-03 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	94	85	75-125	10
Barium	mg/kg (ppm)	50	77.0	129 b	113	75-125	13
Cadmium	mg/kg (ppm)	10	<5	99	94	75-125	5
Chromium	mg/kg (ppm)	50	6.24	98	93	75-125	5
Lead	mg/kg (ppm)	50	9.11	102	95	75-125	7
Mercury	mg/kg (ppm	5	<5	101	99	75-125	2
Selenium	mg/kg (ppm)	5	<5	96	88	75-125	9
Silver	mg/kg (ppm)	10	<5	96	91	75-125	5

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	mg/kg (ppm)	10	93	80-120
Barium	mg/kg (ppm)	50	98	80-120
Cadmium	mg/kg (ppm)	10	98	80-120
Chromium	mg/kg (ppm)	50	104	80-120
Lead	mg/kg (ppm)	50	102	80-120
Mercury	mg/kg (ppm)	5	104	80-120
Selenium	mg/kg (ppm)	5	95	80-120
Silver	mg/kg (ppm)	10	100	80-120

Date of Report: 03/08/23
Date Received: 02/15/23
Project: 1460-23001-01, F&BI 302203

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR VOLATILES BY EPA METHOD 8260D

Laboratory Code: 302382-04 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Dichlorodifluoromethane	mg/kg (ppm)	2	<0.5	14	10	10-142	33 vo
Chloromethane	mg/kg (ppm)	2	<0.5	42	33	10-126	24 vo
Vinyl chloride	mg/kg (ppm)	2	<0.05	38	31	10-138	20
Bromomethane	mg/kg (ppm)	2	<0.5	83	72	10-163	14
Chloroethane	mg/kg (ppm)	2	<0.5	55	48	10-176	14
Trichlorofluoromethane	mg/kg (ppm)	2	<0.5	50	39	10-176	25 vo
Acetone	mg/kg (ppm)	10	<5	57	52	10-163	9
1,1-Dichloroethene	mg/kg (ppm)	2	<0.05	64	51	10-160	23 vo
Hexane	mg/kg (ppm)	2	<0.25	35	25	10-137	33 vo
Methylene chloride	mg/kg (ppm)	2	<0.5	78	64	10-156	20
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	2	<0.05	83	71	21-145	16
trans-1,2-Dichloroethene	mg/kg (ppm)	2	<0.05	71	58	14-137	20
1,1-Dichloroethane	mg/kg (ppm)	2	<0.05	72	60	19-140	18
2,2-Dichloropropane	mg/kg (ppm)	2	<0.05	68	59	10-158	14
cis-1,2-Dichloroethene	mg/kg (ppm)	2	<0.05	77	66	25-135	15
Chloroform	mg/kg (ppm)	2	<0.05	81	68	21-145	17
2-Butanone (MEK)	mg/kg (ppm)	10	<1	76	67	19-147	13
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2	<0.05	82	69	12-160	17
1,1,1-Trichloroethane	mg/kg (ppm)	2	<0.05	81	68	10-156	17
1,1-Dichloropropene	mg/kg (ppm)	2	<0.05	71	59	17-140	18
Carbon tetrachloride	mg/kg (ppm)	2	<0.05	74	62	9-164	18
Benzene	mg/kg (ppm)	2	<0.03	77	66	29-129	15
Trichloroethene	mg/kg (ppm)	2	<0.02	80	67	21-139	18
1,2-Dichloropropane	mg/kg (ppm)	2	<0.05	72	61	30-135	17
Bromodichloromethane	mg/kg (ppm)	2	<0.05	81	69	23-155	16
Dibromomethane	mg/kg (ppm)	2	<0.05	81	71	23-145	13
4-Methyl-2-pentanone	mg/kg (ppm)	10	<1	87	76	24-155	13
cis-1,3-Dichloropropene	mg/kg (ppm)	2	<0.05	74	64	28-144	14
Toluene	mg/kg (ppm)	2	<0.05	76	65	35-130	16
trans-1,3-Dichloropropene	mg/kg (ppm)	2	<0.05	72	63	26-149	13
1,1,2-Trichloroethane	mg/kg (ppm)	2	<0.05	72	62	10-205	15
2-Hexanone	mg/kg (ppm)	10	<0.5	87	77	15-166	12
1,3-Dichloropropane	mg/kg (ppm)	2	<0.05	77	67	31-137	14
Tetrachloroethene	mg/kg (ppm)	2	<0.025	83	70	20-133	17
Dibromochloromethane	mg/kg (ppm)	2	<0.05	72	63	28-150	13
1,2-Dibromoethane (EDB)	mg/kg (ppm)	2	<0.05	75	65	28-142	14
Chlorobenzene	mg/kg (ppm)	2	<0.05	80	69	32-129	15
Ethylbenzene	mg/kg (ppm)	2	<0.05	80	68	32-137	16
1,1,1,2-Tetrachloroethane	mg/kg (ppm)	2	<0.05	78	68	31-143	14
m,p-Xylene	mg/kg (ppm)	4	<0.1	80	69	34-136	15
o-Xylene	mg/kg (ppm)	2	<0.05	80	69	33-134	15
Styrene	mg/kg (ppm)	2	<0.05	80	68	35-137	16
Isopropylbenzene	mg/kg (ppm)	2	<0.05	85	72	31-142	17
Bromoform	mg/kg (ppm)	2	<0.05	73	64	21-156	13
n-Propylbenzene	mg/kg (ppm)	2	<0.05	79	68	23-146	15
Bromobenzene	mg/kg (ppm)	2	<0.05	84	73	34-130	14
1,3,5-Trimethylbenzene	mg/kg (ppm)	2	<0.05	81	70	18-149	15
1,1,2,2-Tetrachloroethane	mg/kg (ppm)	2	<0.05	76	67	28-140	13
1,2,3-Trichloropropane	mg/kg (ppm)	2	<0.05	76	66	25-144	14
2-Chlorotoluene	mg/kg (ppm)	2	<0.05	80	69	31-134	15
4-Chlorotoluene	mg/kg (ppm)	2	<0.05	78	67	31-136	15
tert-Butylbenzene	mg/kg (ppm)	2	<0.05	84	72	30-137	15
1,2,4-Trimethylbenzene	mg/kg (ppm)	2	<0.05	81	70	10-182	15
sec-Butylbenzene	mg/kg (ppm)	2	<0.05	82	71	23-145	14
p-Isopropyltoluene	mg/kg (ppm)	2	<0.05	82	70	21-149	16
1,3-Dichlorobenzene	mg/kg (ppm)	2	<0.05	83	72	30-131	14
1,4-Dichlorobenzene	mg/kg (ppm)	2	<0.05	84	72	29-129	15
1,2-Dichlorobenzene	mg/kg (ppm)	2	<0.05	85	74	31-132	14
1,2-Dibromo-3-chloropropane	mg/kg (ppm)	2	<0.5	72	63	11-161	13
1,2,4-Trichlorobenzene	mg/kg (ppm)	2	<0.25	86	75	22-142	14
Hexachlorobutadiene	mg/kg (ppm)	2	<0.25	94	84	10-142	11
Naphthalene	mg/kg (ppm)	2	<0.05	82	72	14-157	13
1,2,3-Trichlorobenzene	mg/kg (ppm)	2	<0.25	89	76	20-144	16

Date of Report: 03/08/23
Date Received: 02/15/23
Project: 1460-23001-01, F&BI 302203

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR VOLATILES BY EPA METHOD 8260D

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Dichlorodifluoromethane	mg/kg (ppm)	2	49	10-146
Chloromethane	mg/kg (ppm)	2	62	27-133
Vinyl chloride	mg/kg (ppm)	2	67	22-139
Bromomethane	mg/kg (ppm)	2	106	38-114
Chloroethane	mg/kg (ppm)	2	83	9-163
Trichlorofluoromethane	mg/kg (ppm)	2	91	10-196
Acetone	mg/kg (ppm)	10	68	52-141
1,1-Dichloroethene	mg/kg (ppm)	2	93	47-128
Hexane	mg/kg (ppm)	2	89	43-142
Methylene chloride	mg/kg (ppm)	2	93	10-184
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	2	98	60-123
trans-1,2-Dichloroethene	mg/kg (ppm)	2	92	67-129
1,1-Dichloroethane	mg/kg (ppm)	2	90	68-115
2,2-Dichloropropane	mg/kg (ppm)	2	104	52-170
cis-1,2-Dichloroethene	mg/kg (ppm)	2	94	72-127
Chloroform	mg/kg (ppm)	2	97	66-120
2-Butanone (MEK)	mg/kg (ppm)	10	88	30-197
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2	95	56-135
1,1,1-Trichloroethane	mg/kg (ppm)	2	101	62-131
1,1-Dichloropropene	mg/kg (ppm)	2	94	69-128
Carbon tetrachloride	mg/kg (ppm)	2	95	60-139
Benzene	mg/kg (ppm)	2	93	71-118
Trichloroethene	mg/kg (ppm)	2	94	63-121
1,2-Dichloropropane	mg/kg (ppm)	2	86	72-127
Bromodichloromethane	mg/kg (ppm)	2	96	57-126
Dibromomethane	mg/kg (ppm)	2	96	62-123
4-Methyl-2-pentanone	mg/kg (ppm)	10	103	45-145
cis-1,3-Dichloropropene	mg/kg (ppm)	2	90	67-122
Toluene	mg/kg (ppm)	2	90	66-126
trans-1,3-Dichloropropene	mg/kg (ppm)	2	89	72-132
1,1,2-Trichloroethane	mg/kg (ppm)	2	85	64-115
2-Hexanone	mg/kg (ppm)	10	108	33-152
1,3-Dichloropropane	mg/kg (ppm)	2	90	72-130
Tetrachloroethene	mg/kg (ppm)	2	101	72-114
Dibromochloromethane	mg/kg (ppm)	2	88	55-121
1,2-Dibromoethane (EDB)	mg/kg (ppm)	2	88	74-132
Chlorobenzene	mg/kg (ppm)	2	93	76-111
Ethylbenzene	mg/kg (ppm)	2	94	64-123
1,1,1,2-Tetrachloroethane	mg/kg (ppm)	2	93	64-121
m,p-Xylene	mg/kg (ppm)	4	94	78-122
o-Xylene	mg/kg (ppm)	2	94	77-124
Styrene	mg/kg (ppm)	2	93	74-126
Isopropylbenzene	mg/kg (ppm)	2	99	76-127
Bromoform	mg/kg (ppm)	2	90	56-132
n-Propylbenzene	mg/kg (ppm)	2	96	74-124
Bromobenzene	mg/kg (ppm)	2	98	72-122
1,3,5-Trimethylbenzene	mg/kg (ppm)	2	98	76-126
1,1,2,2-Tetrachloroethane	mg/kg (ppm)	2	94	56-143
1,2,3-Trichloropropane	mg/kg (ppm)	2	91	61-137
2-Chlorotoluene	mg/kg (ppm)	2	95	74-121
4-Chlorotoluene	mg/kg (ppm)	2	93	75-122
tert-Butylbenzene	mg/kg (ppm)	2	100	73-130
1,2,4-Trimethylbenzene	mg/kg (ppm)	2	97	76-125
sec-Butylbenzene	mg/kg (ppm)	2	98	71-130
p-Isopropyltoluene	mg/kg (ppm)	2	98	70-132
1,3-Dichlorobenzene	mg/kg (ppm)	2	98	75-121
1,4-Dichlorobenzene	mg/kg (ppm)	2	98	74-117
1,2-Dichlorobenzene	mg/kg (ppm)	2	100	76-121
1,2-Dibromo-3-chloropropane	mg/kg (ppm)	2	87	58-138
1,2,4-Trichlorobenzene	mg/kg (ppm)	2	101	64-135
Hexachlorobutadiene	mg/kg (ppm)	2	117	50-153
Naphthalene	mg/kg (ppm)	2	94	63-140
1,2,3-Trichlorobenzene	mg/kg (ppm)	2	101	63-138

Date of Report: 03/08/23
Date Received: 02/15/23
Project: 1460-23001-01, F&BI 302203

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR SEMIVOLATILES BY EPA METHOD 8270E

Laboratory Code: 302350-17 1/5 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Naphthalene	mg/kg (ppm)	0.83	0.024	80	82	50-150	2
2-Methylnaphthalene	mg/kg (ppm)	0.83	0.076	80	86	50-150	7
1-Methylnaphthalene	mg/kg (ppm)	0.83	0.042	84	89	50-150	6
Acenaphthylene	mg/kg (ppm)	0.83	<0.01	96	95	50-150	1
Acenaphthene	mg/kg (ppm)	0.83	<0.01	87	86	50-150	1
Fluorene	mg/kg (ppm)	0.83	<0.01	89	90	50-150	1
Phenanthrene	mg/kg (ppm)	0.83	<0.01	91	89	10-170	2
Anthracene	mg/kg (ppm)	0.83	<0.01	91	88	50-150	3
Fluoranthene	mg/kg (ppm)	0.83	<0.01	92	90	10-203	2
Pyrene	mg/kg (ppm)	0.83	<0.01	90	87	10-208	3
Benz(a)anthracene	mg/kg (ppm)	0.83	<0.01	92	92	37-146	0
Chrysene	mg/kg (ppm)	0.83	<0.01	91	91	36-144	0
Benzo(a)pyrene	mg/kg (ppm)	0.83	<0.01	88	88	40-150	0
Benzo(b)fluoranthene	mg/kg (ppm)	0.83	<0.01	91	91	45-157	0
Benzo(k)fluoranthene	mg/kg (ppm)	0.83	<0.01	84	86	50-150	2
Indeno(1,2,3-cd)pyrene	mg/kg (ppm)	0.83	<0.01	89	77	24-145	14
Dibenz(a,h)anthracene	mg/kg (ppm)	0.83	<0.01	85	74	31-137	14
Benzo(g,h,i)perylene	mg/kg (ppm)	0.83	<0.01	83	71	14-141	16

Laboratory Code: Laboratory Control Sample 1/5

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Naphthalene	mg/kg (ppm)	0.83	83	58-108
2-Methylnaphthalene	mg/kg (ppm)	0.83	86	67-109
1-Methylnaphthalene	mg/kg (ppm)	0.83	89	66-107
Acenaphthylene	mg/kg (ppm)	0.83	100	70-130
Acenaphthene	mg/kg (ppm)	0.83	91	66-112
Fluorene	mg/kg (ppm)	0.83	94	67-117
Phenanthrene	mg/kg (ppm)	0.83	91	70-130
Anthracene	mg/kg (ppm)	0.83	90	70-130
Fluoranthene	mg/kg (ppm)	0.83	94	70-130
Pyrene	mg/kg (ppm)	0.83	88	70-130
Benz(a)anthracene	mg/kg (ppm)	0.83	94	70-130
Chrysene	mg/kg (ppm)	0.83	93	70-130
Benzo(a)pyrene	mg/kg (ppm)	0.83	90	68-120
Benzo(b)fluoranthene	mg/kg (ppm)	0.83	93	69-125
Benzo(k)fluoranthene	mg/kg (ppm)	0.83	86	70-130
Indeno(1,2,3-cd)pyrene	mg/kg (ppm)	0.83	89	67-129
Dibenz(a,h)anthracene	mg/kg (ppm)	0.83	84	67-128
Benzo(g,h,i)perylene	mg/kg (ppm)	0.83	81	67-127

Date of Report: 03/08/23
Date Received: 02/15/23
Project: 1460-23001-01, F&BI 302203

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

Laboratory Code: 302218-02 (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)	0.042	<0.004	74	77	44-107	4
Aroclor 1260	mg/kg (ppm)	0.042	<0.004	81	80	38-124	1

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Aroclor 1016	mg/kg (ppm)	0.042	88	55-137
Aroclor 1260	mg/kg (ppm)	0.042	89	51-150

Date of Report: 03/08/23
Date Received: 02/15/23
Project: 1460-23001-01, F&BI 302203

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

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Aroclor 1016	mg/kg (ppm)	0.25	116	103	47-158	12
Aroclor 1260	mg/kg (ppm)	0.25	114	105	69-147	8

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 high; 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.

302203

SAMPLE CHAIN OF CUSTODY

02/15/23 M1/ISM

Page # 1 of 1

Report To Lynn Green
Company Evren Northwest
Address P.O. Box 14488
City, State, ZIP Portland, OR 97293
Phone (503) 452-5561 Email lynng@evren-nw.com

SAMPLERS (*signature*)

PROJECT NAME: 1460-23E01-01

PO #

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
☑ Standard turnaround
☐ RUSH
Rush charges authorized by:

SAMPLE DISPOSAL
☐ Archive samples
☐ Other
Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 8 Total				Notes
																	⊗ Per LG 2/20/23
DU01-230214-0.5-IS	01	02-14-23	9:50	Soil	1	⊗			X			X	X				
DU02-230214-0.5-IS	02	02-14-23	13:30	Soil	1	⊗			X			X	X				
B01-2	03	02-14-23	11:15	Soil	1	⊗			X			⊗	X				
B01-3	04	02-14-23	11:20	Soil	1												Hold
B02-2	05	02-14-23	12:07	Soil	1	⊗			X			⊗	X				
B02-5	06	02-14-23	12:21	Soil	1												Hold

Samples received at 3 °C

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Jordan Manes	Evren Northwest	02-14-23	18:00
Received by:	Nhan Pham	FEBI	02-15-23	1022
Relinquished by:				
Received by:				

Friedman & Bruya, Inc.
Ph. (206) 285-8282

Summary: DATA VALID? ☒YES

Analytical Laboratory Data Validation Check Sheet

Project Name: 10103 NE Marx - Portland Project Number: 1460-23001-01

Date of Review: 3/9/2023 Lab. Name: F&BI Lab Batch ID #: 302203

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

Barium 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

The values reported for dichlorodifluoromethane, chloromethane, trichlorofluoromethane, 1,1-Dichloroethene, and hexane fell outside the control limits established for these analytes. The analytes were not detected therefore the data were acceptable. (vo)

21.) Do all RPD calculations for Field Duplicates meet accepted criteria? ☐yes ☐no ☒NA

Comments:

The calibration results for acetone, in samples DU01, DU02, B01-2, B02 and the method blank for method 8260D, were outside of acceptance criteria, biased high; 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. (ca)

Samples DU01, DU02, B01, and B02 were diluted. Detection limits were raised, and surrogate recoveries may not be meaningful. (d)

The presence of methylene chloride, in samples DU01 and DU02, is likely due to laboratory contamination. (lc)

Samples DU01, DU02, B01, and B02 were received in a container not approved by method 8260D. The values reported should be considered estimates. (pc)

The chromatographic pattern of samples DU01 and DU02 does not resemble the diesel fuel standard used for quantitation. (x)

Initial Review By: LP **Final** Review By: EB

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

March 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 February 17, 2023 from the 1460-23001-01, F&BI 302250 project. There are 95 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
ENW0308R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on February 17, 2023 by Friedman & Bruya, Inc. from the Evren Northwest 1460-23001-01, F&BI 302250 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Evren Northwest
302250 -01	GS01-SS
302250 -02	B03-5
302250 -03	B03-7
302250 -04	B04-9-SWI
302250 -05	B05-9-SWI
302250 -06	B06-1
302250 -07	B06-9-SWI
302250 -08	B07-5
302250 -09	B07-9-SWI
302250 -10	B08-9-SWI
302250 -11	B09-7-SWI
302250 -12	B10-9-SWI
302250 -13	B11-5-SWI
302250 -14	B12-9-SWI
302250 -15	B04-GW-12.5
302250 -16	B05-GW-12.5
302250 -17	B06-GW-15
302250 -18	B07-GW-15
302250 -19	B08-GW-13
302250 -20	B09-GW-14.5
302250 -21	B10-GW-14.5
302250 -22	B12-GW-230216

The 6020B calibration standard failed the acceptance criteria for arsenic and selenium in the sample B09-GW-14.5. The data were flagged accordingly. The sample was diluted and reanalyzed. Both data sets were reported.

The 8260D matrix spike and matrix spike duplicate failed the relative percent difference for several compounds. The analytes were not detected therefore the data were acceptable.

The 8260D sample B06-1 was taken from a four ounce glass jar. The data were flagged accordingly.

The 8260D calibration standard failed the acceptance criteria for acetone. The data were flagged accordingly.

The 1-methylnaphthalene in the 8270E laboratory control sample and laboratory control sample duplicate exceeded the acceptance criteria. The affected data were flagged accordingly.

All other quality control requirements were acceptable.

Date of Report: 03/08/23
Date Received: 02/17/23
Project: 1460-23001-01, F&BI 302250
Date Extracted: 02/17/23
Date Analyzed: 02/17/23

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR GASOLINE, DIESEL AND HEAVY OIL BY NWTPH-HCID

Results Reported on a Dry Weight Basis
Results Reported as Not Detected (ND) or Detected (D)

THE DATA PROVIDED BELOW WAS PERFORMED PER THE GUIDELINES ESTABLISHED BY THE WASHINGTON DEPARTMENT OF ECOLOGY AND WERE NOT DESIGNED TO PROVIDE INFORMATION WITH REGARDS TO THE ACTUAL IDENTIFICATION OF ANY MATERIAL PRESENT

Sample ID Laboratory ID	Gasoline	Diesel	Heavy Oil	Surrogate (% Recovery) (Limit 50-150)
B03-5 302250-02	ND	ND	ND	91
B03-7 302250-03	ND	ND	ND	92
B04-9-SWI 302250-04	ND	ND	ND	90
B05-9-SWI 302250-05	ND	ND	ND	91
B06-1 302250-06	ND	ND	D	142
B06-9-SWI 302250-07	ND	ND	ND	92
B07-9-SWI 302250-09	ND	ND	ND	92
B08-9-SWI 302250-10	ND	ND	ND	94
B09-7-SWI 302250-11	ND	ND	ND	93
B10-9-SWI 302250-12	ND	ND	ND	95

ND - Material not detected at or above 20 mg/kg gas, 50 mg/kg diesel and 250 mg/kg heavy oil.

Date of Report: 03/08/23
Date Received: 02/17/23
Project: 1460-23001-01, F&BI 302250
Date Extracted: 02/17/23
Date Analyzed: 02/17/23

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR GASOLINE, DIESEL AND HEAVY OIL BY NWTPH-HCID

Results Reported on a Dry Weight Basis
Results Reported as Not Detected (ND) or Detected (D)

THE DATA PROVIDED BELOW WAS PERFORMED PER THE GUIDELINES ESTABLISHED BY THE WASHINGTON DEPARTMENT OF ECOLOGY AND WERE NOT DESIGNED TO PROVIDE INFORMATION WITH REGARDS TO THE ACTUAL IDENTIFICATION OF ANY MATERIAL PRESENT

Sample ID Laboratory ID	Gasoline	Diesel	Heavy Oil	Surrogate (% Recovery) (Limit 50-150)
B11-5-SWI 302250-13	ND	ND	ND	93
B12-9-SWI 302250-14	ND	ND	ND	91
Method Blank 03-439 MB	ND	ND	ND	89

ND - Material not detected at or above 20 mg/kg gas, 50 mg/kg diesel and 250 mg/kg heavy oil.

Date of Report: 03/08/23
Date Received: 02/17/23
Project: 1460-23001-01, F&BI 302250
Date Extracted: 02/21/23
Date Analyzed: 02/21/23

RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE USING METHOD NWTPH-Gx

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
B04-GW-12.5 302250-15	<100	104
B05-GW-12.5 302250-16	<100	105
B06-GW-15 302250-17	<100	106
B07-GW-15 302250-18	<100	102
B08-GW-13 302250-19	<100	107
B09-GW-14.5 302250-20	<100	102
B10-GW-14.5 302250-21	<100	107
B12-GW-230216 302250-22	120	109
Method Blank 03-242 MB	<100	102

Date of Report: 03/08/23
Date Received: 02/17/23
Project: 1460-23001-01, F&BI 302250
Date Extracted: 02/21/23
Date Analyzed: 02/21/23

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

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

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Residual Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
B06-1 302250-06	2,000 x	7,200	83
Method Blank 03-446 MB2	<50	<250	85

Date of Report: 03/08/23
Date Received: 02/17/23
Project: 1460-23001-01, F&BI 302250
Date Extracted: 02/20/23
Date Analyzed: 02/20/23

RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND RESIDUAL RANGE USING METHOD NWTPH-Dx

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Residual Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 41-152)
B04-GW-12.5 302250-15	<50	<250	54
B05-GW-12.5 302250-16	<50	<250	80
B06-GW-15 302250-17	890 x	<250	ip
B07-GW-15 302250-18	1,300 x	<250	ip
B08-GW-13 302250-19	340 x	<250	ip
B09-GW-14.5 302250-20	420 x	<250	ip
B10-GW-14.5 302250-21	310 x	<250	ip
B12-GW-230216 302250-22	1,100 x	6,800	72
Method Blank 03-440 MB	<50	<250	110

Analysis For Dissolved Metals By EPA Method 6020B

Client ID:	B04-GW-12.5	Client:	Evren Northwest
Date Received:	02/17/23	Project:	1460-23001-01, F&BI 302250
Date Extracted:	02/22/23	Lab ID:	302250-15
Date Analyzed:	02/22/23	Data File:	302250-15.210
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Barium	28.0
Cadmium	<1
Chromium	<1
Lead	<1
Mercury	<1
Silver	<1

Analysis For Dissolved Metals By EPA Method 6020B

Client ID:	B04-GW-12.5	Client:	Evren Northwest
Date Received:	02/17/23	Project:	1460-23001-01, F&BI 302250
Date Extracted:	02/22/23	Lab ID:	302250-15 x5
Date Analyzed:	02/23/23	Data File:	302250-15 x5.153
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Arsenic	<5
Selenium	<5

Analysis For Dissolved Metals By EPA Method 6020B

Client ID:	B05-GW-12.5	Client:	Evren Northwest
Date Received:	02/17/23	Project:	1460-23001-01, F&BI 302250
Date Extracted:	02/22/23	Lab ID:	302250-16
Date Analyzed:	02/22/23	Data File:	302250-16.213
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Barium	10.9
Cadmium	<1
Chromium	<1
Lead	<1
Mercury	<1
Silver	<1

Analysis For Dissolved Metals By EPA Method 6020B

Client ID:	B05-GW-12.5	Client:	Evren Northwest
Date Received:	02/17/23	Project:	1460-23001-01, F&BI 302250
Date Extracted:	02/22/23	Lab ID:	302250-16 x5
Date Analyzed:	02/23/23	Data File:	302250-16 x5.154
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Arsenic	<5
Selenium	<5

Analysis For Dissolved Metals By EPA Method 6020B

Client ID:	B06-GW-15	Client:	Evren Northwest
Date Received:	02/17/23	Project:	1460-23001-01, F&BI 302250
Date Extracted:	02/22/23	Lab ID:	302250-17
Date Analyzed:	02/22/23	Data File:	302250-17.214
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Barium	9.13
Cadmium	<1
Chromium	<1
Lead	<1
Mercury	<1
Silver	<1

Analysis For Dissolved Metals By EPA Method 6020B

Client ID:	B06-GW-15	Client:	Evren Northwest
Date Received:	02/17/23	Project:	1460-23001-01, F&BI 302250
Date Extracted:	02/22/23	Lab ID:	302250-17 x5
Date Analyzed:	02/23/23	Data File:	302250-17 x5.159
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Arsenic	<5
Selenium	<5

Analysis For Dissolved Metals By EPA Method 6020B

Client ID:	B07-GW-15	Client:	Evren Northwest
Date Received:	02/17/23	Project:	1460-23001-01, F&BI 302250
Date Extracted:	02/22/23	Lab ID:	302250-18
Date Analyzed:	02/22/23	Data File:	302250-18.215
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Barium	60.6
Cadmium	<1
Chromium	<1
Lead	<1
Mercury	<1
Silver	<1

Analysis For Dissolved Metals By EPA Method 6020B

Client ID:	B07-GW-15	Client:	Evren Northwest
Date Received:	02/17/23	Project:	1460-23001-01, F&BI 302250
Date Extracted:	02/22/23	Lab ID:	302250-18 x5
Date Analyzed:	02/23/23	Data File:	302250-18 x5.160
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Arsenic	<5
Selenium	<5

Analysis For Dissolved Metals By EPA Method 6020B

Client ID:	B08-GW-13	Client:	Evren Northwest
Date Received:	02/17/23	Project:	1460-23001-01, F&BI 302250
Date Extracted:	02/22/23	Lab ID:	302250-19
Date Analyzed:	02/22/23	Data File:	302250-19.216
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Barium	49.2
Cadmium	<1
Chromium	<1
Lead	<1
Mercury	<1
Silver	<1

Analysis For Dissolved Metals By EPA Method 6020B

Client ID:	B08-GW-13	Client:	Evren Northwest
Date Received:	02/17/23	Project:	1460-23001-01, F&BI 302250
Date Extracted:	02/22/23	Lab ID:	302250-19 x5
Date Analyzed:	02/23/23	Data File:	302250-19 x5.161
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Arsenic	<5
Selenium	<5

Analysis For Dissolved Metals By EPA Method 6020B

Client ID:	B09-GW-14.5	Client:	Evren Northwest
Date Received:	02/17/23	Project:	1460-23001-01, F&BI 302250
Date Extracted:	02/22/23	Lab ID:	302250-20
Date Analyzed:	02/22/23	Data File:	302250-20.217
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Arsenic	3.98 ca
Cadmium	1.44
Mercury	<1 J
Selenium	1.66 ca

Analysis For Dissolved Metals By EPA Method 6020B

Client ID:	B09-GW-14.5	Client:	Evren Northwest
Date Received:	02/17/23	Project:	1460-23001-01, F&BI 302250
Date Extracted:	02/22/23	Lab ID:	302250-20 x5
Date Analyzed:	02/23/23	Data File:	302250-20 x5.074
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Arsenic	<5
Chromium	32.2
Lead	8.81
Mercury	<5
Selenium	<5
Silver	<5

Analysis For Dissolved Metals By EPA Method 6020B

Client ID:	B09-GW-14.5	Client:	Evren Northwest
Date Received:	02/17/23	Project:	1460-23001-01, F&BI 302250
Date Extracted:	02/22/23	Lab ID:	302250-20 x100
Date Analyzed:	02/27/23	Data File:	302250-20 x100.171
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	MG

Analyte:	Concentration ug/L (ppb)
Barium	1,870

Analysis For Dissolved Metals By EPA Method 6020B

Client ID:	B10-GW-14.5	Client:	Evren Northwest
Date Received:	02/17/23	Project:	1460-23001-01, F&BI 302250
Date Extracted:	02/22/23	Lab ID:	302250-21
Date Analyzed:	02/22/23	Data File:	302250-21.218
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Barium	20.3
Cadmium	<1
Chromium	<1
Lead	<1
Mercury	<1
Silver	<1

Analysis For Dissolved Metals By EPA Method 6020B

Client ID:	B10-GW-14.5	Client:	Evren Northwest
Date Received:	02/17/23	Project:	1460-23001-01, F&BI 302250
Date Extracted:	02/22/23	Lab ID:	302250-21 x5
Date Analyzed:	02/23/23	Data File:	302250-21 x5.162
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Arsenic	<5
Selenium	<5

Analysis For Dissolved Metals By EPA Method 6020B

Client ID:	B12-GW-230216	Client:	Evren Northwest
Date Received:	02/17/23	Project:	1460-23001-01, F&BI 302250
Date Extracted:	02/22/23	Lab ID:	302250-22
Date Analyzed:	02/22/23	Data File:	302250-22.219
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Barium	21.4
Cadmium	<1
Chromium	<1
Lead	<1
Mercury	<1
Silver	<1

Analysis For Dissolved Metals By EPA Method 6020B

Client ID:	B12-GW-230216	Client:	Evren Northwest
Date Received:	02/17/23	Project:	1460-23001-01, F&BI 302250
Date Extracted:	02/22/23	Lab ID:	302250-22 x5
Date Analyzed:	02/23/23	Data File:	302250-22 x5.163
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Arsenic	<5
Selenium	<5

Analysis For Dissolved Metals By EPA Method 6020B

Client ID:	Method Blank	Client:	Evren Northwest
Date Received:	NA	Project:	1460-23001-01, F&BI 302250
Date Extracted:	02/22/23	Lab ID:	I3-129 mb
Date Analyzed:	02/22/23	Data File:	I3-129 mb.075
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Arsenic	<1
Barium	<1
Cadmium	<1
Chromium	<1
Lead	<1
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	B03-5	Client:	Evren Northwest
Date Received:	02/17/23	Project:	1460-23001-01, F&BI 302250
Date Extracted:	02/21/23	Lab ID:	302250-02
Date Analyzed:	02/21/23	Data File:	302250-02.103
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	5.73
Barium	135
Cadmium	<1
Lead	10.2
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	B03-5	Client:	Evren Northwest
Date Received:	02/17/23	Project:	1460-23001-01, F&BI 302250
Date Extracted:	02/21/23	Lab ID:	302250-02 x5
Date Analyzed:	02/21/23	Data File:	302250-02 x5.122
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Chromium	14.0

Analysis For Total Metals By EPA Method 6020B

Client ID:	B03-7	Client:	Evren Northwest
Date Received:	02/17/23	Project:	1460-23001-01, F&BI 302250
Date Extracted:	02/21/23	Lab ID:	302250-03
Date Analyzed:	02/21/23	Data File:	302250-03.125
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	4.05
Barium	148
Cadmium	<1
Lead	5.53
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	B03-7	Client:	Evren Northwest
Date Received:	02/17/23	Project:	1460-23001-01, F&BI 302250
Date Extracted:	02/21/23	Lab ID:	302250-03 x5
Date Analyzed:	02/22/23	Data File:	302250-03 x5.071
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Chromium	20.0

Analysis For Total Metals By EPA Method 6020B

Client ID:	B04-9-SWI	Client:	Evren Northwest
Date Received:	02/17/23	Project:	1460-23001-01, F&BI 302250
Date Extracted:	02/21/23	Lab ID:	302250-04
Date Analyzed:	02/21/23	Data File:	302250-04.126
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	3.23
Barium	103
Cadmium	<1
Lead	7.34
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	B04-9-SWI	Client:	Evren Northwest
Date Received:	02/17/23	Project:	1460-23001-01, F&BI 302250
Date Extracted:	02/21/23	Lab ID:	302250-04 x5
Date Analyzed:	02/22/23	Data File:	302250-04 x5.072
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Chromium	11.5

Analysis For Total Metals By EPA Method 6020B

Client ID:	B05-9-SWI	Client:	Evren Northwest
Date Received:	02/17/23	Project:	1460-23001-01, F&BI 302250
Date Extracted:	02/21/23	Lab ID:	302250-05
Date Analyzed:	02/21/23	Data File:	302250-05.127
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	3.92
Barium	108
Cadmium	<1
Lead	6.24
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	B05-9-SWI	Client:	Evren Northwest
Date Received:	02/17/23	Project:	1460-23001-01, F&BI 302250
Date Extracted:	02/21/23	Lab ID:	302250-05 x5
Date Analyzed:	02/22/23	Data File:	302250-05 x5.130
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Chromium	10.2

Analysis For Total Metals By EPA Method 6020B

Client ID:	B06-1	Client:	Evren Northwest
Date Received:	02/17/23	Project:	1460-23001-01, F&BI 302250
Date Extracted:	02/21/23	Lab ID:	302250-06
Date Analyzed:	02/21/23	Data File:	302250-06.128
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	3.23
Barium	88.8
Cadmium	<1
Lead	34.4
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	B06-1	Client:	Evren Northwest
Date Received:	02/17/23	Project:	1460-23001-01, F&BI 302250
Date Extracted:	02/21/23	Lab ID:	302250-06 x5
Date Analyzed:	02/22/23	Data File:	302250-06 x5.194
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Chromium	11.8

Analysis For Total Metals By EPA Method 6020B

Client ID:	B06-9-SWI	Client:	Evren Northwest
Date Received:	02/17/23	Project:	1460-23001-01, F&BI 302250
Date Extracted:	02/21/23	Lab ID:	302250-07
Date Analyzed:	02/21/23	Data File:	302250-07.129
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.67
Barium	89.6
Cadmium	<1
Lead	4.06
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	B06-9-SWI	Client:	Evren Northwest
Date Received:	02/17/23	Project:	1460-23001-01, F&BI 302250
Date Extracted:	02/21/23	Lab ID:	302250-07 x5
Date Analyzed:	02/22/23	Data File:	302250-07 x5.132
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Chromium	18.8

Analysis For Total Metals By EPA Method 6020B

Client ID:	B07-9-SWI	Client:	Evren Northwest
Date Received:	02/17/23	Project:	1460-23001-01, F&BI 302250
Date Extracted:	02/21/23	Lab ID:	302250-09
Date Analyzed:	02/21/23	Data File:	302250-09.130
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	4.12
Barium	95.3
Cadmium	<1
Lead	4.76
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	B07-9-SWI	Client:	Evren Northwest
Date Received:	02/17/23	Project:	1460-23001-01, F&BI 302250
Date Extracted:	02/21/23	Lab ID:	302250-09 x5
Date Analyzed:	02/22/23	Data File:	302250-09 x5.133
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Chromium	16.5

Analysis For Total Metals By EPA Method 6020B

Client ID:	B08-9-SWI	Client:	Evren Northwest
Date Received:	02/17/23	Project:	1460-23001-01, F&BI 302250
Date Extracted:	02/21/23	Lab ID:	302250-10
Date Analyzed:	02/21/23	Data File:	302250-10.131
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	6.92
Barium	92.5
Cadmium	<1
Lead	5.93
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	B08-9-SWI	Client:	Evren Northwest
Date Received:	02/17/23	Project:	1460-23001-01, F&BI 302250
Date Extracted:	02/21/23	Lab ID:	302250-10 x5
Date Analyzed:	02/22/23	Data File:	302250-10 x5.136
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Chromium	18.9

Analysis For Total Metals By EPA Method 6020B

Client ID:	B09-7-SWI	Client:	Evren Northwest
Date Received:	02/17/23	Project:	1460-23001-01, F&BI 302250
Date Extracted:	02/21/23	Lab ID:	302250-11
Date Analyzed:	02/21/23	Data File:	302250-11.134
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	5.23
Barium	149
Cadmium	<1
Lead	6.62
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	B09-7-SWI	Client:	Evren Northwest
Date Received:	02/17/23	Project:	1460-23001-01, F&BI 302250
Date Extracted:	02/21/23	Lab ID:	302250-11 x5
Date Analyzed:	02/22/23	Data File:	302250-11 x5.139
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Chromium	20.4

Analysis For Total Metals By EPA Method 6020B

Client ID:	B10-9-SWI	Client:	Evren Northwest
Date Received:	02/17/23	Project:	1460-23001-01, F&BI 302250
Date Extracted:	02/21/23	Lab ID:	302250-12
Date Analyzed:	02/21/23	Data File:	302250-12.135
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	5.91
Barium	93.2
Cadmium	<1
Lead	5.91
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	B10-9-SWI	Client:	Evren Northwest
Date Received:	02/17/23	Project:	1460-23001-01, F&BI 302250
Date Extracted:	02/21/23	Lab ID:	302250-12 x5
Date Analyzed:	02/22/23	Data File:	302250-12 x5.140
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Chromium	22.1

Analysis For Total Metals By EPA Method 6020B

Client ID:	B11-5-SWI	Client:	Evren Northwest
Date Received:	02/17/23	Project:	1460-23001-01, F&BI 302250
Date Extracted:	02/21/23	Lab ID:	302250-13
Date Analyzed:	02/21/23	Data File:	302250-13.136
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.65
Barium	158
Cadmium	<1
Lead	8.62
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	B11-5-SWI	Client:	Evren Northwest
Date Received:	02/17/23	Project:	1460-23001-01, F&BI 302250
Date Extracted:	02/21/23	Lab ID:	302250-13 x5
Date Analyzed:	02/22/23	Data File:	302250-13 x5.141
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Chromium	19.0

Analysis For Total Metals By EPA Method 6020B

Client ID:	B12-9-SWI	Client:	Evren Northwest
Date Received:	02/17/23	Project:	1460-23001-01, F&BI 302250
Date Extracted:	02/21/23	Lab ID:	302250-14
Date Analyzed:	02/21/23	Data File:	302250-14.137
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.02
Barium	74.7
Cadmium	<1
Lead	2.72
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	B12-9-SWI	Client:	Evren Northwest
Date Received:	02/17/23	Project:	1460-23001-01, F&BI 302250
Date Extracted:	02/21/23	Lab ID:	302250-14 x5
Date Analyzed:	02/22/23	Data File:	302250-14 x5.145
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Chromium	5.42

Analysis For Total Metals By EPA Method 6020B

Client ID:	Method Blank	Client:	Evren Northwest
Date Received:	NA	Project:	1460-23001-01, F&BI 302250
Date Extracted:	02/21/23	Lab ID:	I3-117 mb
Date Analyzed:	02/21/23	Data File:	I3-117 mb.147
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

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	B06-1 pc	Client:	Evren Northwest
Date Received:	02/17/23	Project:	1460-23001-01, F&BI 302250
Date Extracted:	03/01/23	Lab ID:	302250-06
Date Analyzed:	03/02/23	Data File:	030225.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	lm

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	90	109
Toluene-d8	101	89	112
4-Bromofluorobenzene	98	84	115

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	0.041
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<5 ca	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Hexane	<0.25	o-Xylene	<0.05
Methylene chloride	<0.5	Styrene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Isopropylbenzene	<0.05
trans-1,2-Dichloroethene	<0.05	Bromoform	<0.05
1,1-Dichloroethane	<0.05	n-Propylbenzene	<0.05
2,2-Dichloropropane	<0.05	Bromobenzene	<0.05
cis-1,2-Dichloroethene	<0.05	1,3,5-Trimethylbenzene	<0.05
Chloroform	<0.05	1,1,2,2-Tetrachloroethane	<0.05
2-Butanone (MEK)	<1	1,2,3-Trichloropropane	<0.05
1,2-Dichloroethane (EDC)	<0.05	2-Chlorotoluene	<0.05
1,1,1-Trichloroethane	<0.05	4-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	tert-Butylbenzene	<0.05
Carbon tetrachloride	<0.05	1,2,4-Trimethylbenzene	<0.05
Benzene	<0.03	sec-Butylbenzene	<0.05
Trichloroethene	<0.02	p-Isopropyltoluene	<0.05
1,2-Dichloropropane	<0.05	1,3-Dichlorobenzene	<0.05
Bromodichloromethane	<0.05	1,4-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,2-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<1	1,2-Dibromo-3-chloropropane	<0.5
cis-1,3-Dichloropropene	<0.05	1,2,4-Trichlorobenzene	<0.25
Toluene	<0.05	Hexachlorobutadiene	<0.25
trans-1,3-Dichloropropene	<0.05	Naphthalene	<0.05
1,1,2-Trichloroethane	<0.05	1,2,3-Trichlorobenzene	<0.25
2-Hexanone	<0.5		

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	Method Blank	Client:	Evren Northwest
Date Received:	Not Applicable	Project:	1460-23001-01, F&BI 302250
Date Extracted:	03/01/23	Lab ID:	03-0359 mb
Date Analyzed:	03/01/23	Data File:	030113.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	lm

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	90	109
Toluene-d8	100	89	112
4-Bromofluorobenzene	96	84	115

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<5 ca	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Hexane	<0.25	o-Xylene	<0.05
Methylene chloride	<0.5	Styrene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Isopropylbenzene	<0.05
trans-1,2-Dichloroethene	<0.05	Bromoform	<0.05
1,1-Dichloroethane	<0.05	n-Propylbenzene	<0.05
2,2-Dichloropropane	<0.05	Bromobenzene	<0.05
cis-1,2-Dichloroethene	<0.05	1,3,5-Trimethylbenzene	<0.05
Chloroform	<0.05	1,1,2,2-Tetrachloroethane	<0.05
2-Butanone (MEK)	<1	1,2,3-Trichloropropane	<0.05
1,2-Dichloroethane (EDC)	<0.05	2-Chlorotoluene	<0.05
1,1,1-Trichloroethane	<0.05	4-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	tert-Butylbenzene	<0.05
Carbon tetrachloride	<0.05	1,2,4-Trimethylbenzene	<0.05
Benzene	<0.03	sec-Butylbenzene	<0.05
Trichloroethene	<0.02	p-Isopropyltoluene	<0.05
1,2-Dichloropropane	<0.05	1,3-Dichlorobenzene	<0.05
Bromodichloromethane	<0.05	1,4-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,2-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<1	1,2-Dibromo-3-chloropropane	<0.5
cis-1,3-Dichloropropene	<0.05	1,2,4-Trichlorobenzene	<0.25
Toluene	<0.05	Hexachlorobutadiene	<0.25
trans-1,3-Dichloropropene	<0.05	Naphthalene	<0.05
1,1,2-Trichloroethane	<0.05	1,2,3-Trichlorobenzene	<0.25
2-Hexanone	<0.5		

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	B04-GW-12.5	Client:	Evren Northwest
Date Received:	02/17/23	Project:	1460-23001-01, F&BI 302250
Date Extracted:	02/21/23	Lab ID:	302250-15
Date Analyzed:	02/21/23	Data File:	022120.D
Matrix:	Water	Instrument:	GCMS13
Units:	ug/L (ppb)	Operator:	lm

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	93	71	132
Toluene-d8	95	68	139
4-Bromofluorobenzene	103	62	136

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	2.3
Vinyl chloride	<0.02	Dibromochloromethane	<0.5
Bromomethane	<5	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<50	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Hexane	<5	o-Xylene	<1
Methylene chloride	<5	Styrene	<1
Methyl t-butyl ether (MTBE)	<1	Isopropylbenzene	<1
trans-1,2-Dichloroethene	<1	Bromoform	<5
1,1-Dichloroethane	<1	n-Propylbenzene	<1
2,2-Dichloropropane	<1	Bromobenzene	<1
cis-1,2-Dichloroethene	<1	1,3,5-Trimethylbenzene	<1
Chloroform	<1	1,1,2,2-Tetrachloroethane	<0.2
2-Butanone (MEK)	<20	1,2,3-Trichloropropane	<1
1,2-Dichloroethane (EDC)	<0.2	2-Chlorotoluene	<1
1,1,1-Trichloroethane	<1	4-Chlorotoluene	<1
1,1-Dichloropropene	<1	tert-Butylbenzene	<1
Carbon tetrachloride	<0.5	1,2,4-Trimethylbenzene	<1
Benzene	<0.35	sec-Butylbenzene	<1
Trichloroethene	<0.5	p-Isopropyltoluene	<1
1,2-Dichloropropane	<1	1,3-Dichlorobenzene	<1
Bromodichloromethane	<0.5	1,4-Dichlorobenzene	<1
Dibromomethane	<1	1,2-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dibromo-3-chloropropane	<10
cis-1,3-Dichloropropene	<0.4	1,2,4-Trichlorobenzene	<1
Toluene	<1	Hexachlorobutadiene	<0.5
trans-1,3-Dichloropropene	<0.4	Naphthalene	<1
1,1,2-Trichloroethane	<0.5	1,2,3-Trichlorobenzene	<1
2-Hexanone	<10		

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	B05-GW-12.5	Client:	Evren Northwest
Date Received:	02/17/23	Project:	1460-23001-01, F&BI 302250
Date Extracted:	02/21/23	Lab ID:	302250-16
Date Analyzed:	02/21/23	Data File:	022121.D
Matrix:	Water	Instrument:	GCMS13
Units:	ug/L (ppb)	Operator:	lm

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	71	132
Toluene-d8	100	68	139
4-Bromofluorobenzene	102	62	136

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.02	Dibromochloromethane	<0.5
Bromomethane	<5	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<50	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Hexane	<5	o-Xylene	<1
Methylene chloride	<5	Styrene	<1
Methyl t-butyl ether (MTBE)	<1	Isopropylbenzene	<1
trans-1,2-Dichloroethene	<1	Bromoform	<5
1,1-Dichloroethane	<1	n-Propylbenzene	<1
2,2-Dichloropropane	<1	Bromobenzene	<1
cis-1,2-Dichloroethene	<1	1,3,5-Trimethylbenzene	<1
Chloroform	<1	1,1,2,2-Tetrachloroethane	<0.2
2-Butanone (MEK)	<20	1,2,3-Trichloropropane	<1
1,2-Dichloroethane (EDC)	<0.2	2-Chlorotoluene	<1
1,1,1-Trichloroethane	<1	4-Chlorotoluene	<1
1,1-Dichloropropene	<1	tert-Butylbenzene	<1
Carbon tetrachloride	<0.5	1,2,4-Trimethylbenzene	<1
Benzene	<0.35	sec-Butylbenzene	<1
Trichloroethene	<0.5	p-Isopropyltoluene	<1
1,2-Dichloropropane	<1	1,3-Dichlorobenzene	<1
Bromodichloromethane	<0.5	1,4-Dichlorobenzene	<1
Dibromomethane	<1	1,2-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dibromo-3-chloropropane	<10
cis-1,3-Dichloropropene	<0.4	1,2,4-Trichlorobenzene	<1
Toluene	<1	Hexachlorobutadiene	<0.5
trans-1,3-Dichloropropene	<0.4	Naphthalene	<1
1,1,2-Trichloroethane	<0.5	1,2,3-Trichlorobenzene	<1
2-Hexanone	<10		

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	B06-GW-15	Client:	Evren Northwest
Date Received:	02/17/23	Project:	1460-23001-01, F&BI 302250
Date Extracted:	02/21/23	Lab ID:	302250-17
Date Analyzed:	02/22/23	Data File:	022148.D
Matrix:	Water	Instrument:	GCMS13
Units:	ug/L (ppb)	Operator:	lm

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	90	71	132
Toluene-d8	92	68	139
4-Bromofluorobenzene	101	62	136

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.02	Dibromochloromethane	<0.5
Bromomethane	<5	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<50	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Hexane	<5	o-Xylene	<1
Methylene chloride	<5	Styrene	<1
Methyl t-butyl ether (MTBE)	<1	Isopropylbenzene	<1
trans-1,2-Dichloroethene	<1	Bromoform	<5
1,1-Dichloroethane	<1	n-Propylbenzene	<1
2,2-Dichloropropane	<1	Bromobenzene	<1
cis-1,2-Dichloroethene	<1	1,3,5-Trimethylbenzene	<1
Chloroform	<1	1,1,2,2-Tetrachloroethane	<0.2
2-Butanone (MEK)	<20	1,2,3-Trichloropropane	<1
1,2-Dichloroethane (EDC)	<0.2	2-Chlorotoluene	<1
1,1,1-Trichloroethane	<1	4-Chlorotoluene	<1
1,1-Dichloropropene	<1	tert-Butylbenzene	<1
Carbon tetrachloride	<0.5	1,2,4-Trimethylbenzene	<1
Benzene	<0.35	sec-Butylbenzene	<1
Trichloroethene	<0.5	p-Isopropyltoluene	<1
1,2-Dichloropropane	<1	1,3-Dichlorobenzene	<1
Bromodichloromethane	<0.5	1,4-Dichlorobenzene	<1
Dibromomethane	<1	1,2-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dibromo-3-chloropropane	<10
cis-1,3-Dichloropropene	<0.4	1,2,4-Trichlorobenzene	<1
Toluene	<1	Hexachlorobutadiene	<0.5
trans-1,3-Dichloropropene	<0.4	Naphthalene	<1
1,1,2-Trichloroethane	<0.5	1,2,3-Trichlorobenzene	<1
2-Hexanone	<10		

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	B07-GW-15	Client:	Evren Northwest
Date Received:	02/17/23	Project:	1460-23001-01, F&BI 302250
Date Extracted:	02/21/23	Lab ID:	302250-18
Date Analyzed:	02/22/23	Data File:	022149.D
Matrix:	Water	Instrument:	GCMS13
Units:	ug/L (ppb)	Operator:	lm

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	96	71	132
Toluene-d8	101	68	139
4-Bromofluorobenzene	100	62	136

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.02	Dibromochloromethane	<0.5
Bromomethane	<5	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<50	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Hexane	<5	o-Xylene	<1
Methylene chloride	<5	Styrene	<1
Methyl t-butyl ether (MTBE)	<1	Isopropylbenzene	<1
trans-1,2-Dichloroethene	<1	Bromoform	<5
1,1-Dichloroethane	<1	n-Propylbenzene	<1
2,2-Dichloropropane	<1	Bromobenzene	<1
cis-1,2-Dichloroethene	<1	1,3,5-Trimethylbenzene	<1
Chloroform	<1	1,1,2,2-Tetrachloroethane	<0.2
2-Butanone (MEK)	<20	1,2,3-Trichloropropane	<1
1,2-Dichloroethane (EDC)	<0.2	2-Chlorotoluene	<1
1,1,1-Trichloroethane	<1	4-Chlorotoluene	<1
1,1-Dichloropropene	<1	tert-Butylbenzene	<1
Carbon tetrachloride	<0.5	1,2,4-Trimethylbenzene	<1
Benzene	<0.35	sec-Butylbenzene	<1
Trichloroethene	<0.5	p-Isopropyltoluene	<1
1,2-Dichloropropane	<1	1,3-Dichlorobenzene	<1
Bromodichloromethane	<0.5	1,4-Dichlorobenzene	<1
Dibromomethane	<1	1,2-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dibromo-3-chloropropane	<10
cis-1,3-Dichloropropene	<0.4	1,2,4-Trichlorobenzene	<1
Toluene	<1	Hexachlorobutadiene	<0.5
trans-1,3-Dichloropropene	<0.4	Naphthalene	<1
1,1,2-Trichloroethane	<0.5	1,2,3-Trichlorobenzene	<1
2-Hexanone	<10		

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	B08-GW-13	Client:	Evren Northwest
Date Received:	02/17/23	Project:	1460-23001-01, F&BI 302250
Date Extracted:	02/21/23	Lab ID:	302250-19
Date Analyzed:	02/22/23	Data File:	022150.D
Matrix:	Water	Instrument:	GCMS13
Units:	ug/L (ppb)	Operator:	lm

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	93	71	132
Toluene-d8	101	68	139
4-Bromofluorobenzene	102	62	136

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.02	Dibromochloromethane	<0.5
Bromomethane	<5	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<50	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Hexane	<5	o-Xylene	<1
Methylene chloride	<5	Styrene	<1
Methyl t-butyl ether (MTBE)	<1	Isopropylbenzene	<1
trans-1,2-Dichloroethene	<1	Bromoform	<5
1,1-Dichloroethane	<1	n-Propylbenzene	<1
2,2-Dichloropropane	<1	Bromobenzene	<1
cis-1,2-Dichloroethene	<1	1,3,5-Trimethylbenzene	<1
Chloroform	<1	1,1,2,2-Tetrachloroethane	<0.2
2-Butanone (MEK)	<20	1,2,3-Trichloropropane	<1
1,2-Dichloroethane (EDC)	<0.2	2-Chlorotoluene	<1
1,1,1-Trichloroethane	<1	4-Chlorotoluene	<1
1,1-Dichloropropene	<1	tert-Butylbenzene	<1
Carbon tetrachloride	<0.5	1,2,4-Trimethylbenzene	<1
Benzene	<0.35	sec-Butylbenzene	<1
Trichloroethene	<0.5	p-Isopropyltoluene	<1
1,2-Dichloropropane	<1	1,3-Dichlorobenzene	<1
Bromodichloromethane	<0.5	1,4-Dichlorobenzene	<1
Dibromomethane	<1	1,2-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dibromo-3-chloropropane	<10
cis-1,3-Dichloropropene	<0.4	1,2,4-Trichlorobenzene	<1
Toluene	<1	Hexachlorobutadiene	<0.5
trans-1,3-Dichloropropene	<0.4	Naphthalene	<1
1,1,2-Trichloroethane	<0.5	1,2,3-Trichlorobenzene	<1
2-Hexanone	<10		

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	B09-GW-14.5	Client:	Evren Northwest
Date Received:	02/17/23	Project:	1460-23001-01, F&BI 302250
Date Extracted:	02/21/23	Lab ID:	302250-20
Date Analyzed:	02/22/23	Data File:	022151.D
Matrix:	Water	Instrument:	GCMS13
Units:	ug/L (ppb)	Operator:	lm

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	105	71	132
Toluene-d8	104	68	139
4-Bromofluorobenzene	102	62	136

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.02	Dibromochloromethane	<0.5
Bromomethane	<5	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<50	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Hexane	<5	o-Xylene	<1
Methylene chloride	<5	Styrene	<1
Methyl t-butyl ether (MTBE)	<1	Isopropylbenzene	<1
trans-1,2-Dichloroethene	<1	Bromoform	<5
1,1-Dichloroethane	<1	n-Propylbenzene	<1
2,2-Dichloropropane	<1	Bromobenzene	<1
cis-1,2-Dichloroethene	<1	1,3,5-Trimethylbenzene	<1
Chloroform	1.1	1,1,2,2-Tetrachloroethane	<0.2
2-Butanone (MEK)	<20	1,2,3-Trichloropropane	<1
1,2-Dichloroethane (EDC)	<0.2	2-Chlorotoluene	<1
1,1,1-Trichloroethane	<1	4-Chlorotoluene	<1
1,1-Dichloropropene	<1	tert-Butylbenzene	<1
Carbon tetrachloride	<0.5	1,2,4-Trimethylbenzene	<1
Benzene	<0.35	sec-Butylbenzene	<1
Trichloroethene	<0.5	p-Isopropyltoluene	<1
1,2-Dichloropropane	<1	1,3-Dichlorobenzene	<1
Bromodichloromethane	<0.5	1,4-Dichlorobenzene	<1
Dibromomethane	<1	1,2-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dibromo-3-chloropropane	<10
cis-1,3-Dichloropropene	<0.4	1,2,4-Trichlorobenzene	<1
Toluene	<1	Hexachlorobutadiene	<0.5
trans-1,3-Dichloropropene	<0.4	Naphthalene	<1
1,1,2-Trichloroethane	<0.5	1,2,3-Trichlorobenzene	<1
2-Hexanone	<10		

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	B10-GW-14.5	Client:	Evren Northwest
Date Received:	02/17/23	Project:	1460-23001-01, F&BI 302250
Date Extracted:	02/21/23	Lab ID:	302250-21
Date Analyzed:	02/22/23	Data File:	022152.D
Matrix:	Water	Instrument:	GCMS13
Units:	ug/L (ppb)	Operator:	lm

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	93	71	132
Toluene-d8	95	68	139
4-Bromofluorobenzene	99	62	136

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	1.2
Vinyl chloride	<0.02	Dibromochloromethane	<0.5
Bromomethane	<5	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<50	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Hexane	<5	o-Xylene	<1
Methylene chloride	<5	Styrene	<1
Methyl t-butyl ether (MTBE)	<1	Isopropylbenzene	<1
trans-1,2-Dichloroethene	<1	Bromoform	<5
1,1-Dichloroethane	<1	n-Propylbenzene	<1
2,2-Dichloropropane	<1	Bromobenzene	<1
cis-1,2-Dichloroethene	<1	1,3,5-Trimethylbenzene	<1
Chloroform	1.0	1,1,2,2-Tetrachloroethane	<0.2
2-Butanone (MEK)	<20	1,2,3-Trichloropropane	<1
1,2-Dichloroethane (EDC)	<0.2	2-Chlorotoluene	<1
1,1,1-Trichloroethane	<1	4-Chlorotoluene	<1
1,1-Dichloropropene	<1	tert-Butylbenzene	<1
Carbon tetrachloride	<0.5	1,2,4-Trimethylbenzene	<1
Benzene	<0.35	sec-Butylbenzene	<1
Trichloroethene	<0.5	p-Isopropyltoluene	<1
1,2-Dichloropropane	<1	1,3-Dichlorobenzene	<1
Bromodichloromethane	<0.5	1,4-Dichlorobenzene	<1
Dibromomethane	<1	1,2-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dibromo-3-chloropropane	<10
cis-1,3-Dichloropropene	<0.4	1,2,4-Trichlorobenzene	<1
Toluene	<1	Hexachlorobutadiene	<0.5
trans-1,3-Dichloropropene	<0.4	Naphthalene	<1
1,1,2-Trichloroethane	<0.5	1,2,3-Trichlorobenzene	<1
2-Hexanone	<10		

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	B12-GW-230216	Client:	Evren Northwest
Date Received:	02/17/23	Project:	1460-23001-01, F&BI 302250
Date Extracted:	02/21/23	Lab ID:	302250-22
Date Analyzed:	02/22/23	Data File:	022153.D
Matrix:	Water	Instrument:	GCMS13
Units:	ug/L (ppb)	Operator:	lm

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	90	71	132
Toluene-d8	94	68	139
4-Bromofluorobenzene	103	62	136

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	0.021	Dibromochloromethane	<0.5
Bromomethane	<5	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<50	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Hexane	<5	o-Xylene	2.1
Methylene chloride	<5	Styrene	<1
Methyl t-butyl ether (MTBE)	<1	Isopropylbenzene	<1
trans-1,2-Dichloroethene	<1	Bromoform	<5
1,1-Dichloroethane	<1	n-Propylbenzene	<1
2,2-Dichloropropane	<1	Bromobenzene	<1
cis-1,2-Dichloroethene	<1	1,3,5-Trimethylbenzene	<1
Chloroform	<1	1,1,2,2-Tetrachloroethane	<0.2
2-Butanone (MEK)	<20	1,2,3-Trichloropropane	<1
1,2-Dichloroethane (EDC)	<0.2	2-Chlorotoluene	<1
1,1,1-Trichloroethane	<1	4-Chlorotoluene	<1
1,1-Dichloropropene	<1	tert-Butylbenzene	<1
Carbon tetrachloride	<0.5	1,2,4-Trimethylbenzene	1.3
Benzene	<0.35	sec-Butylbenzene	<1
Trichloroethene	<0.5	p-Isopropyltoluene	<1
1,2-Dichloropropane	<1	1,3-Dichlorobenzene	<1
Bromodichloromethane	<0.5	1,4-Dichlorobenzene	<1
Dibromomethane	<1	1,2-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dibromo-3-chloropropane	<10
cis-1,3-Dichloropropene	<0.4	1,2,4-Trichlorobenzene	<1
Toluene	<1	Hexachlorobutadiene	<0.5
trans-1,3-Dichloropropene	<0.4	Naphthalene	1.1
1,1,2-Trichloroethane	<0.5	1,2,3-Trichlorobenzene	<1
2-Hexanone	<10		

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	Method Blank	Client:	Evren Northwest
Date Received:	Not Applicable	Project:	1460-23001-01, F&BI 302250
Date Extracted:	02/20/23	Lab ID:	03-0340 mb
Date Analyzed:	02/20/23	Data File:	022007.D
Matrix:	Water	Instrument:	GCMS13
Units:	ug/L (ppb)	Operator:	lm

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	71	132
Toluene-d8	103	68	139
4-Bromofluorobenzene	104	62	136

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.02	Dibromochloromethane	<0.5
Bromomethane	<5	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<50	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Hexane	<5	o-Xylene	<1
Methylene chloride	<5	Styrene	<1
Methyl t-butyl ether (MTBE)	<1	Isopropylbenzene	<1
trans-1,2-Dichloroethene	<1	Bromoform	<5
1,1-Dichloroethane	<1	n-Propylbenzene	<1
2,2-Dichloropropane	<1	Bromobenzene	<1
cis-1,2-Dichloroethene	<1	1,3,5-Trimethylbenzene	<1
Chloroform	<1	1,1,2,2-Tetrachloroethane	<0.2
2-Butanone (MEK)	<20	1,2,3-Trichloropropane	<1
1,2-Dichloroethane (EDC)	<0.2	2-Chlorotoluene	<1
1,1,1-Trichloroethane	<1	4-Chlorotoluene	<1
1,1-Dichloropropene	<1	tert-Butylbenzene	<1
Carbon tetrachloride	<0.5	1,2,4-Trimethylbenzene	<1
Benzene	<0.35	sec-Butylbenzene	<1
Trichloroethene	<0.5	p-Isopropyltoluene	<1
1,2-Dichloropropane	<1	1,3-Dichlorobenzene	<1
Bromodichloromethane	<0.5	1,4-Dichlorobenzene	<1
Dibromomethane	<1	1,2-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dibromo-3-chloropropane	<10
cis-1,3-Dichloropropene	<0.4	1,2,4-Trichlorobenzene	<1
Toluene	<1	Hexachlorobutadiene	<0.5
trans-1,3-Dichloropropene	<0.4	Naphthalene	<1
1,1,2-Trichloroethane	<0.5	1,2,3-Trichlorobenzene	<1
2-Hexanone	<10		

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	B06-1	Client:	Evren Northwest
Date Received:	02/17/23	Project:	1460-23001-01, F&BI 302250
Date Extracted:	03/01/23	Lab ID:	302250-06 1/25
Date Analyzed:	03/01/23	Data File:	030115.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Nitrobenzene-d5	79 d	10	198
2-Fluorobiphenyl	90 d	45	117
2,4,6-Tribromophenol	98 d	11	158
Terphenyl-d14	108 d	50	124

Compounds:	Concentration mg/kg (ppm)
Naphthalene	<0.05
2-Methylnaphthalene	<0.05
1-Methylnaphthalene	<0.05
Acenaphthylene	<0.05
Acenaphthene	<0.05
Fluorene	<0.05
Phenanthrene	<0.05
Anthracene	<0.05
Fluoranthene	<0.05
Pyrene	0.061
Benz(a)anthracene	<0.05
Chrysene	<0.05
Benzo(a)pyrene	<0.05
Benzo(b)fluoranthene	<0.05
Benzo(k)fluoranthene	<0.05
Indeno(1,2,3-cd)pyrene	<0.05
Dibenz(a,h)anthracene	<0.05
Benzo(g,h,i)perylene	<0.05

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	Method Blank	Client:	Evren Northwest
Date Received:	Not Applicable	Project:	1460-23001-01, F&BI 302250
Date Extracted:	03/01/23	Lab ID:	03-496 mb2 1/5
Date Analyzed:	03/01/23	Data File:	030108.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Nitrobenzene-d5	81	10	198
2-Fluorobiphenyl	96	45	117
2,4,6-Tribromophenol	89	11	158
Terphenyl-d14	123	50	124

Compounds:	Concentration mg/kg (ppm)
Naphthalene	<0.01
2-Methylnaphthalene	<0.01
1-Methylnaphthalene	<0.01
Acenaphthylene	<0.01
Acenaphthene	<0.01
Fluorene	<0.01
Phenanthrene	<0.01
Anthracene	<0.01
Fluoranthene	<0.01
Pyrene	<0.01
Benz(a)anthracene	<0.01
Chrysene	<0.01
Benzo(a)pyrene	<0.01
Benzo(b)fluoranthene	<0.01
Benzo(k)fluoranthene	<0.01
Indeno(1,2,3-cd)pyrene	<0.01
Dibenz(a,h)anthracene	<0.01
Benzo(g,h,i)perylene	<0.01

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	B06-GW-15	Client:	Evren Northwest
Date Received:	02/17/23	Project:	1460-23001-01, F&BI 302250
Date Extracted:	03/01/23	Lab ID:	302250-17 1/2
Date Analyzed:	03/01/23	Data File:	030112.D
Matrix:	Water	Instrument:	GCMS12
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Nitrobenzene-d5	83	11	173
2-Fluorobiphenyl	85	44	108
2,4,6-Tribromophenol	32	10	140
Terphenyl-d14	83	50	150

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.4
2-Methylnaphthalene	<0.4
1-Methylnaphthalene	<0.4
Acenaphthylene	<0.04
Acenaphthene	<0.04
Fluorene	<0.04
Phenanthrene	<0.04
Anthracene	<0.04
Fluoranthene	<0.04
Pyrene	<0.04
Benz(a)anthracene	<0.04
Chrysene	<0.04
Benzo(a)pyrene	<0.04
Benzo(b)fluoranthene	<0.04
Benzo(k)fluoranthene	<0.04
Indeno(1,2,3-cd)pyrene	<0.04
Dibenz(a,h)anthracene	<0.04
Benzo(g,h,i)perylene	<0.08

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	B07-GW-15	Client:	Evren Northwest
Date Received:	02/17/23	Project:	1460-23001-01, F&BI 302250
Date Extracted:	03/01/23	Lab ID:	302250-18 1/2
Date Analyzed:	03/01/23	Data File:	030113.D
Matrix:	Water	Instrument:	GCMS12
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Nitrobenzene-d5	81	11	173
2-Fluorobiphenyl	80	44	108
2,4,6-Tribromophenol	70	10	140
Terphenyl-d14	83	50	150

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.4
2-Methylnaphthalene	<0.4
1-Methylnaphthalene	<0.4
Acenaphthylene	<0.04
Acenaphthene	<0.04
Fluorene	<0.04
Phenanthrene	<0.04
Anthracene	<0.04
Fluoranthene	<0.04
Pyrene	<0.04
Benz(a)anthracene	<0.04
Chrysene	<0.04
Benzo(a)pyrene	<0.04
Benzo(b)fluoranthene	<0.04
Benzo(k)fluoranthene	<0.04
Indeno(1,2,3-cd)pyrene	<0.04
Dibenz(a,h)anthracene	<0.04
Benzo(g,h,i)perylene	<0.08

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	B08-GW-13	Client:	Evren Northwest
Date Received:	02/17/23	Project:	1460-23001-01, F&BI 302250
Date Extracted:	03/01/23	Lab ID:	302250-19 1/2
Date Analyzed:	03/01/23	Data File:	030114.D
Matrix:	Water	Instrument:	GCMS12
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Nitrobenzene-d5	86	11	173
2-Fluorobiphenyl	85	44	108
2,4,6-Tribromophenol	95	10	140
Terphenyl-d14	90	50	150

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.4
2-Methylnaphthalene	<0.4
1-Methylnaphthalene	<0.4
Acenaphthylene	<0.04
Acenaphthene	<0.04
Fluorene	<0.04
Phenanthrene	<0.04
Anthracene	<0.04
Fluoranthene	<0.04
Pyrene	<0.04
Benz(a)anthracene	<0.04
Chrysene	<0.04
Benzo(a)pyrene	<0.04
Benzo(b)fluoranthene	<0.04
Benzo(k)fluoranthene	<0.04
Indeno(1,2,3-cd)pyrene	<0.04
Dibenz(a,h)anthracene	<0.04
Benzo(g,h,i)perylene	<0.08

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	B09-GW-14.5	Client:	Evren Northwest
Date Received:	02/17/23	Project:	1460-23001-01, F&BI 302250
Date Extracted:	03/01/23	Lab ID:	302250-20 1/2
Date Analyzed:	03/01/23	Data File:	030115.D
Matrix:	Water	Instrument:	GCMS12
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Nitrobenzene-d5	85	11	173
2-Fluorobiphenyl	85	44	108
2,4,6-Tribromophenol	90	10	140
Terphenyl-d14	89	50	150

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.4
2-Methylnaphthalene	<0.4
1-Methylnaphthalene	<0.4
Acenaphthylene	<0.04
Acenaphthene	<0.04
Fluorene	<0.04
Phenanthrene	<0.04
Anthracene	<0.04
Fluoranthene	<0.04
Pyrene	<0.04
Benz(a)anthracene	<0.04
Chrysene	<0.04
Benzo(a)pyrene	<0.04
Benzo(b)fluoranthene	<0.04
Benzo(k)fluoranthene	<0.04
Indeno(1,2,3-cd)pyrene	<0.04
Dibenz(a,h)anthracene	<0.04
Benzo(g,h,i)perylene	<0.08

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	B10-GW-14.5	Client:	Evren Northwest
Date Received:	02/17/23	Project:	1460-23001-01, F&BI 302250
Date Extracted:	03/01/23	Lab ID:	302250-21 1/2
Date Analyzed:	03/01/23	Data File:	030116.D
Matrix:	Water	Instrument:	GCMS12
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Nitrobenzene-d5	91	11	173
2-Fluorobiphenyl	85	44	108
2,4,6-Tribromophenol	81	10	140
Terphenyl-d14	87	50	150

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.4
2-Methylnaphthalene	<0.4
1-Methylnaphthalene	<0.4
Acenaphthylene	<0.04
Acenaphthene	<0.04
Fluorene	<0.04
Phenanthrene	<0.04
Anthracene	<0.04
Fluoranthene	<0.04
Pyrene	<0.04
Benz(a)anthracene	<0.04
Chrysene	<0.04
Benzo(a)pyrene	<0.04
Benzo(b)fluoranthene	<0.04
Benzo(k)fluoranthene	<0.04
Indeno(1,2,3-cd)pyrene	<0.04
Dibenz(a,h)anthracene	<0.04
Benzo(g,h,i)perylene	<0.08

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	B12-GW-230216	Client:	Evren Northwest
Date Received:	02/17/23	Project:	1460-23001-01, F&BI 302250
Date Extracted:	03/01/23	Lab ID:	302250-22 1/2
Date Analyzed:	03/01/23	Data File:	030117.D
Matrix:	Water	Instrument:	GCMS12
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Nitrobenzene-d5	84	11	173
2-Fluorobiphenyl	81	44	108
2,4,6-Tribromophenol	39	10	140
Terphenyl-d14	87	50	150

Compounds:	Concentration ug/L (ppb)
Naphthalene	0.76
2-Methylnaphthalene	1.4
1-Methylnaphthalene	1.5 jl
Acenaphthylene	<0.04
Acenaphthene	0.051
Fluorene	0.32
Phenanthrene	0.34
Anthracene	<0.04
Fluoranthene	<0.04
Pyrene	<0.04
Benz(a)anthracene	<0.04
Chrysene	<0.04
Benzo(a)pyrene	<0.04
Benzo(b)fluoranthene	<0.04
Benzo(k)fluoranthene	<0.04
Indeno(1,2,3-cd)pyrene	<0.04
Dibenz(a,h)anthracene	<0.04
Benzo(g,h,i)perylene	<0.08

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	Method Blank	Client:	Evren Northwest
Date Received:	Not Applicable	Project:	1460-23001-01, F&BI 302250
Date Extracted:	03/01/23	Lab ID:	03-505 mb
Date Analyzed:	03/01/23	Data File:	030111.D
Matrix:	Water	Instrument:	GCMS12
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Nitrobenzene-d5	87	11	173
2-Fluorobiphenyl	84	44	108
2,4,6-Tribromophenol	91	10	140
Terphenyl-d14	96	50	150

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.2
2-Methylnaphthalene	<0.2
1-Methylnaphthalene	<0.2
Acenaphthylene	<0.02
Acenaphthene	<0.02
Fluorene	<0.02
Phenanthrene	<0.02
Anthracene	<0.02
Fluoranthene	<0.02
Pyrene	<0.02
Benz(a)anthracene	<0.02
Chrysene	<0.02
Benzo(a)pyrene	<0.02
Benzo(b)fluoranthene	<0.02
Benzo(k)fluoranthene	<0.02
Indeno(1,2,3-cd)pyrene	<0.02
Dibenz(a,h)anthracene	<0.02
Benzo(g,h,i)perylene	<0.04

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	B06-1	Client:	Evren Northwest
Date Received:	02/17/23	Project:	1460-23001-01, F&BI 302250
Date Extracted:	02/21/22	Lab ID:	302250-06 1/30
Date Analyzed:	02/22/23	Data File:	022208.D
Matrix:	Soil	Instrument:	GC7
Units:	mg/kg (ppm) Dry Weight	Operator:	MG

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Tetrachlorometaxylene	74	29	154
Decachlorobiphenyl	89	11	152

Compounds:	Concentration mg/kg (ppm)
Aroclor 1221	<0.02
Aroclor 1232	<0.02
Aroclor 1016	<0.02
Aroclor 1242	0.34
Aroclor 1248	<0.02
Aroclor 1254	<0.02
Aroclor 1260	<0.02
Aroclor 1262	<0.02
Aroclor 1268	<0.02

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	Method Blank	Client:	Evren Northwest
Date Received:	Not Applicable	Project:	1460-23001-01, F&BI 302250
Date Extracted:	02/21/22	Lab ID:	03-447 mb2 cl 1/30
Date Analyzed:	02/22/23	Data File:	022207.D
Matrix:	Soil	Instrument:	GC7
Units:	mg/kg (ppm) Dry Weight	Operator:	MG

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Tetrachlorometaxylene	90	29	154
Decachlorobiphenyl	113	11	152

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

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	B04-GW-12.5	Client:	Evren Northwest
Date Received:	02/17/23	Project:	1460-23001-01, F&BI 302250
Date Extracted:	02/20/23	Lab ID:	302250-15
Date Analyzed:	02/21/23	Data File:	022118.D
Matrix:	Water	Instrument:	GC7
Units:	ug/L (ppb)	Operator:	MG

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Tetrachlorometaxylene	53	24	127
Decachlorobiphenyl	45	11	152

Compounds:	Concentration ug/L (ppb)
Aroclor 1221	<0.1
Aroclor 1232	<0.1
Aroclor 1016	<0.1
Aroclor 1242	<0.1
Aroclor 1248	<0.1
Aroclor 1254	<0.1
Aroclor 1260	<0.1
Aroclor 1262	<0.1
Aroclor 1268	<0.1

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	B05-GW-12.5	Client:	Evren Northwest
Date Received:	02/17/23	Project:	1460-23001-01, F&BI 302250
Date Extracted:	02/20/23	Lab ID:	302250-16
Date Analyzed:	02/21/23	Data File:	022119.D
Matrix:	Water	Instrument:	GC7
Units:	ug/L (ppb)	Operator:	MG

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Tetrachlorometaxylene	58	24	127
Decachlorobiphenyl	55	11	152

Compounds:	Concentration ug/L (ppb)
Aroclor 1221	<0.1
Aroclor 1232	<0.1
Aroclor 1016	<0.1
Aroclor 1242	<0.1
Aroclor 1248	<0.1
Aroclor 1254	<0.1
Aroclor 1260	<0.1
Aroclor 1262	<0.1
Aroclor 1268	<0.1

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	B06-GW-15	Client:	Evren Northwest
Date Received:	02/17/23	Project:	1460-23001-01, F&BI 302250
Date Extracted:	02/20/23	Lab ID:	302250-17
Date Analyzed:	02/21/23	Data File:	022123.D
Matrix:	Water	Instrument:	GC7
Units:	ug/L (ppb)	Operator:	MG

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Tetrachlorometaxylene	38	24	127
Decachlorobiphenyl	47	11	152

Compounds:	Concentration ug/L (ppb)
Aroclor 1221	<0.1
Aroclor 1232	<0.1
Aroclor 1016	<0.1
Aroclor 1242	<0.1
Aroclor 1248	<0.1
Aroclor 1254	<0.1
Aroclor 1260	<0.1
Aroclor 1262	<0.1
Aroclor 1268	<0.1

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	B07-GW-15	Client:	Evren Northwest
Date Received:	02/17/23	Project:	1460-23001-01, F&BI 302250
Date Extracted:	02/20/23	Lab ID:	302250-18
Date Analyzed:	02/21/23	Data File:	022124.D
Matrix:	Water	Instrument:	GC7
Units:	ug/L (ppb)	Operator:	MG

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Tetrachlorometaxylene	36	24	127
Decachlorobiphenyl	61	11	152

Compounds:	Concentration ug/L (ppb)
Aroclor 1221	<0.1
Aroclor 1232	<0.1
Aroclor 1016	<0.1
Aroclor 1242	<0.1
Aroclor 1248	<0.1
Aroclor 1254	<0.1
Aroclor 1260	<0.1
Aroclor 1262	<0.1
Aroclor 1268	<0.1

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	B08-GW-13	Client:	Evren Northwest
Date Received:	02/17/23	Project:	1460-23001-01, F&BI 302250
Date Extracted:	02/20/23	Lab ID:	302250-19
Date Analyzed:	02/21/23	Data File:	022125.D
Matrix:	Water	Instrument:	GC7
Units:	ug/L (ppb)	Operator:	MG

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Tetrachlorometaxylene	45	24	127
Decachlorobiphenyl	70	11	152

Compounds:	Concentration ug/L (ppb)
Aroclor 1221	<0.1
Aroclor 1232	<0.1
Aroclor 1016	<0.1
Aroclor 1242	<0.1
Aroclor 1248	<0.1
Aroclor 1254	<0.1
Aroclor 1260	<0.1
Aroclor 1262	<0.1
Aroclor 1268	<0.1

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	B09-GW-14.5	Client:	Evren Northwest
Date Received:	02/17/23	Project:	1460-23001-01, F&BI 302250
Date Extracted:	02/20/23	Lab ID:	302250-20
Date Analyzed:	02/21/23	Data File:	022126.D
Matrix:	Water	Instrument:	GC7
Units:	ug/L (ppb)	Operator:	MG

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Tetrachlorometaxylene	35	24	127
Decachlorobiphenyl	60	11	152

Compounds:	Concentration ug/L (ppb)
Aroclor 1221	<0.1
Aroclor 1232	<0.1
Aroclor 1016	<0.1
Aroclor 1242	<0.1
Aroclor 1248	<0.1
Aroclor 1254	<0.1
Aroclor 1260	<0.1
Aroclor 1262	<0.1
Aroclor 1268	<0.1

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	B10-GW-14.5	Client:	Evren Northwest
Date Received:	02/17/23	Project:	1460-23001-01, F&BI 302250
Date Extracted:	02/20/23	Lab ID:	302250-21
Date Analyzed:	02/21/23	Data File:	022127.D
Matrix:	Water	Instrument:	GC7
Units:	ug/L (ppb)	Operator:	MG

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Tetrachlorometaxylene	33	24	127
Decachlorobiphenyl	30	11	152

Compounds:	Concentration ug/L (ppb)
Aroclor 1221	<0.1
Aroclor 1232	<0.1
Aroclor 1016	<0.1
Aroclor 1242	<0.1
Aroclor 1248	<0.1
Aroclor 1254	<0.1
Aroclor 1260	<0.1
Aroclor 1262	<0.1
Aroclor 1268	<0.1

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	B12-GW-230216	Client:	Evren Northwest
Date Received:	02/17/23	Project:	1460-23001-01, F&BI 302250
Date Extracted:	02/20/23	Lab ID:	302250-22
Date Analyzed:	02/21/23	Data File:	022128.D
Matrix:	Water	Instrument:	GC7
Units:	ug/L (ppb)	Operator:	MG

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Tetrachlorometaxylene	46	24	127
Decachlorobiphenyl	29	11	152

Compounds:	Concentration ug/L (ppb)
Aroclor 1221	<0.1
Aroclor 1232	<0.1
Aroclor 1016	<0.1
Aroclor 1242	<0.1
Aroclor 1248	<0.1
Aroclor 1254	<0.1
Aroclor 1260	<0.1
Aroclor 1262	<0.1
Aroclor 1268	<0.1

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	Method Blank	Client:	Evren Northwest
Date Received:	Not Applicable	Project:	1460-23001-01, F&BI 302250
Date Extracted:	02/20/23	Lab ID:	03-441 mb
Date Analyzed:	02/21/23	Data File:	022110.D
Matrix:	Water	Instrument:	GC7
Units:	ug/L (ppb)	Operator:	MG

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Tetrachlorometaxylene	56	24	127
Decachlorobiphenyl	63	11	152

Compounds:	Concentration ug/L (ppb)
Aroclor 1221	<0.1
Aroclor 1232	<0.1
Aroclor 1016	<0.1
Aroclor 1242	<0.1
Aroclor 1248	<0.1
Aroclor 1254	<0.1
Aroclor 1260	<0.1
Aroclor 1262	<0.1
Aroclor 1268	<0.1

Date of Report: 03/08/23
Date Received: 02/17/23
Project: 1460-23001-01, F&BI 302250

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TPH AS GASOLINE USING METHOD NWTPH-Gx

Laboratory Code: 302250-15 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 20)
Gasoline	ug/L (ppb)	<100	<100	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	ug/L (ppb)	1,000	90	70-130

Date of Report: 03/08/23
Date Received: 02/17/23
Project: 1460-23001-01, F&BI 302250

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

Laboratory Code: 302277-01 (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	<50	102	102	70-130	0

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	104	70-130

Date of Report: 03/08/23
Date Received: 02/17/23
Project: 1460-23001-01, F&BI 302250

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	88	104	70-130	17

Date of Report: 03/08/23
Date Received: 02/17/23
Project: 1460-23001-01, F&BI 302250

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR DISSOLVED METALS USING EPA METHOD 6020B

Laboratory Code: 302250-15 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	ug/L (ppb)	10	<1	88	82	75-125	7
Barium	ug/L (ppb)	50	28.0	111	103	75-125	7
Cadmium	ug/L (ppb)	5	<1	103	98	75-125	5
Chromium	ug/L (ppb)	20	<1	102	100	75-125	2
Lead	ug/L (ppb)	10	<1	98	94	75-125	4
Mercury	ug/L (ppb)	5	<1	99	95	75-125	4
Selenium	ug/L (ppb)	5	<1	88	84	75-125	5
Silver	ug/L (ppb)	5	<1	96	93	75-125	3

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	ug/L (ppb)	10	92	80-120
Barium	ug/L (ppb)	50	102	80-120
Cadmium	ug/L (ppb)	5	102	80-120
Chromium	ug/L (ppb)	20	107	80-120
Lead	ug/L (ppb)	10	97	80-120
Mercury	ug/L (ppb)	5	99	80-120
Selenium	ug/L (ppb)	5	104	80-120
Silver	ug/L (ppb)	5	91	80-120

Date of Report: 03/08/23
Date Received: 02/17/23
Project: 1460-23001-01, F&BI 302250

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

Laboratory Code: 302250-02 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	90	101	75-125	12
Barium	mg/kg (ppm)	50	114	75	97	75-125	26 b
Cadmium	mg/kg (ppm)	10	<5	93	98	75-125	5
Chromium	mg/kg (ppm)	50	10.5	89	96	75-125	8
Lead	mg/kg (ppm)	50	9.44	88	92	75-125	4
Mercury	mg/kg (ppm	5	<5	92	93	75-125	1
Selenium	mg/kg (ppm)	5	<5	84	89	75-125	6
Silver	mg/kg (ppm)	10	<5	89	95	75-125	7

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	mg/kg (ppm)	10	105	80-120
Barium	mg/kg (ppm)	50	97	80-120
Cadmium	mg/kg (ppm)	10	100	80-120
Chromium	mg/kg (ppm)	50	105	80-120
Lead	mg/kg (ppm)	50	96	80-120
Mercury	mg/kg (ppm)	5	94	80-120
Selenium	mg/kg (ppm)	5	99	80-120
Silver	mg/kg (ppm)	10	97	80-120

Date of Report: 03/08/23
Date Received: 02/17/23
Project: 1460-23001-01, F&BI 302250

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR VOLATILES BY EPA METHOD 8260D

Laboratory Code: 302382-04 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Dichlorodifluoromethane	mg/kg (ppm)	2	<0.5	14	10	10-142	33 vo
Chloromethane	mg/kg (ppm)	2	<0.5	42	33	10-126	24 vo
Vinyl chloride	mg/kg (ppm)	2	<0.05	38	31	10-138	20
Bromomethane	mg/kg (ppm)	2	<0.5	83	72	10-163	14
Chloroethane	mg/kg (ppm)	2	<0.5	55	48	10-176	14
Trichlorofluoromethane	mg/kg (ppm)	2	<0.5	50	39	10-176	25 vo
Acetone	mg/kg (ppm)	10	<5	57	52	10-163	9
1,1-Dichloroethene	mg/kg (ppm)	2	<0.05	64	51	10-160	23 vo
Hexane	mg/kg (ppm)	2	<0.25	35	25	10-137	33 vo
Methylene chloride	mg/kg (ppm)	2	<0.5	78	64	10-156	20
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	2	<0.05	83	71	21-145	16
trans-1,2-Dichloroethene	mg/kg (ppm)	2	<0.05	71	58	14-137	20
1,1-Dichloroethane	mg/kg (ppm)	2	<0.05	72	60	19-140	18
2,2-Dichloropropane	mg/kg (ppm)	2	<0.05	68	59	10-158	14
cis-1,2-Dichloroethene	mg/kg (ppm)	2	<0.05	77	66	25-135	15
Chloroform	mg/kg (ppm)	2	<0.05	81	68	21-145	17
2-Butanone (MEK)	mg/kg (ppm)	10	<1	76	67	19-147	13
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2	<0.05	82	69	12-160	17
1,1,1-Trichloroethane	mg/kg (ppm)	2	<0.05	81	68	10-156	17
1,1-Dichloropropene	mg/kg (ppm)	2	<0.05	71	59	17-140	18
Carbon tetrachloride	mg/kg (ppm)	2	<0.05	74	62	9-164	18
Benzene	mg/kg (ppm)	2	<0.03	77	66	29-129	15
Trichloroethene	mg/kg (ppm)	2	<0.02	80	67	21-139	18
1,2-Dichloropropane	mg/kg (ppm)	2	<0.05	72	61	30-135	17
Bromodichloromethane	mg/kg (ppm)	2	<0.05	81	69	23-155	16
Dibromomethane	mg/kg (ppm)	2	<0.05	81	71	23-145	13
4-Methyl-2-pentanone	mg/kg (ppm)	10	<1	87	76	24-155	13
cis-1,3-Dichloropropene	mg/kg (ppm)	2	<0.05	74	64	28-144	14
Toluene	mg/kg (ppm)	2	<0.05	76	65	35-130	16
trans-1,3-Dichloropropene	mg/kg (ppm)	2	<0.05	72	63	26-149	13
1,1,2-Trichloroethane	mg/kg (ppm)	2	<0.05	72	62	10-205	15
2-Hexanone	mg/kg (ppm)	10	<0.5	87	77	15-166	12
1,3-Dichloropropane	mg/kg (ppm)	2	<0.05	77	67	31-137	14
Tetrachloroethene	mg/kg (ppm)	2	<0.025	83	70	20-133	17
Dibromochloromethane	mg/kg (ppm)	2	<0.05	72	63	28-150	13
1,2-Dibromoethane (EDB)	mg/kg (ppm)	2	<0.05	75	65	28-142	14
Chlorobenzene	mg/kg (ppm)	2	<0.05	80	69	32-129	15
Ethylbenzene	mg/kg (ppm)	2	<0.05	80	68	32-137	16
1,1,1,2-Tetrachloroethane	mg/kg (ppm)	2	<0.05	78	68	31-143	14
m,p-Xylene	mg/kg (ppm)	4	<0.1	80	69	34-136	15
o-Xylene	mg/kg (ppm)	2	<0.05	80	69	33-134	15
Styrene	mg/kg (ppm)	2	<0.05	80	68	35-137	16
Isopropylbenzene	mg/kg (ppm)	2	<0.05	85	72	31-142	17
Bromoform	mg/kg (ppm)	2	<0.05	73	64	21-156	13
n-Propylbenzene	mg/kg (ppm)	2	<0.05	79	68	23-146	15
Bromobenzene	mg/kg (ppm)	2	<0.05	84	73	34-130	14
1,3,5-Trimethylbenzene	mg/kg (ppm)	2	<0.05	81	70	18-149	15
1,1,2,2-Tetrachloroethane	mg/kg (ppm)	2	<0.05	76	67	28-140	13
1,2,3-Trichloropropane	mg/kg (ppm)	2	<0.05	76	66	25-144	14
2-Chlorotoluene	mg/kg (ppm)	2	<0.05	80	69	31-134	15
4-Chlorotoluene	mg/kg (ppm)	2	<0.05	78	67	31-136	15
tert-Butylbenzene	mg/kg (ppm)	2	<0.05	84	72	30-137	15
1,2,4-Trimethylbenzene	mg/kg (ppm)	2	<0.05	81	70	10-182	15
sec-Butylbenzene	mg/kg (ppm)	2	<0.05	82	71	23-145	14
p-Isopropyltoluene	mg/kg (ppm)	2	<0.05	82	70	21-149	16
1,3-Dichlorobenzene	mg/kg (ppm)	2	<0.05	83	72	30-131	14
1,4-Dichlorobenzene	mg/kg (ppm)	2	<0.05	84	72	29-129	15
1,2-Dichlorobenzene	mg/kg (ppm)	2	<0.05	85	74	31-132	14
1,2-Dibromo-3-chloropropane	mg/kg (ppm)	2	<0.5	72	63	11-161	13
1,2,4-Trichlorobenzene	mg/kg (ppm)	2	<0.25	86	75	22-142	14
Hexachlorobutadiene	mg/kg (ppm)	2	<0.25	94	84	10-142	11
Naphthalene	mg/kg (ppm)	2	<0.05	82	72	14-157	13
1,2,3-Trichlorobenzene	mg/kg (ppm)	2	<0.25	89	76	20-144	16

Date of Report: 03/08/23
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Project: 1460-23001-01, F&BI 302250

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR VOLATILES BY EPA METHOD 8260D

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Dichlorodifluoromethane	mg/kg (ppm)	2	49	10-146
Chloromethane	mg/kg (ppm)	2	62	27-133
Vinyl chloride	mg/kg (ppm)	2	67	22-139
Bromomethane	mg/kg (ppm)	2	106	38-114
Chloroethane	mg/kg (ppm)	2	83	9-163
Trichlorofluoromethane	mg/kg (ppm)	2	91	10-196
Acetone	mg/kg (ppm)	10	68	52-141
1,1-Dichloroethene	mg/kg (ppm)	2	93	47-128
Hexane	mg/kg (ppm)	2	89	43-142
Methylene chloride	mg/kg (ppm)	2	93	10-184
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	2	98	60-123
trans-1,2-Dichloroethene	mg/kg (ppm)	2	92	67-129
1,1-Dichloroethane	mg/kg (ppm)	2	90	68-115
2,2-Dichloropropane	mg/kg (ppm)	2	104	52-170
cis-1,2-Dichloroethene	mg/kg (ppm)	2	94	72-127
Chloroform	mg/kg (ppm)	2	97	66-120
2-Butanone (MEK)	mg/kg (ppm)	10	88	30-197
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2	95	56-135
1,1,1-Trichloroethane	mg/kg (ppm)	2	101	62-131
1,1-Dichloropropene	mg/kg (ppm)	2	94	69-128
Carbon tetrachloride	mg/kg (ppm)	2	95	60-139
Benzene	mg/kg (ppm)	2	93	71-118
Trichloroethene	mg/kg (ppm)	2	94	63-121
1,2-Dichloropropane	mg/kg (ppm)	2	86	72-127
Bromodichloromethane	mg/kg (ppm)	2	96	57-126
Dibromomethane	mg/kg (ppm)	2	96	62-123
4-Methyl-2-pentanone	mg/kg (ppm)	10	103	45-145
cis-1,3-Dichloropropene	mg/kg (ppm)	2	90	67-122
Toluene	mg/kg (ppm)	2	90	66-126
trans-1,3-Dichloropropene	mg/kg (ppm)	2	89	72-132
1,1,2-Trichloroethane	mg/kg (ppm)	2	85	64-115
2-Hexanone	mg/kg (ppm)	10	108	33-152
1,3-Dichloropropane	mg/kg (ppm)	2	90	72-130
Tetrachloroethene	mg/kg (ppm)	2	101	72-114
Dibromochloromethane	mg/kg (ppm)	2	88	55-121
1,2-Dibromoethane (EDB)	mg/kg (ppm)	2	88	74-132
Chlorobenzene	mg/kg (ppm)	2	93	76-111
Ethylbenzene	mg/kg (ppm)	2	94	64-123
1,1,1,2-Tetrachloroethane	mg/kg (ppm)	2	93	64-121
m,p-Xylene	mg/kg (ppm)	4	94	78-122
o-Xylene	mg/kg (ppm)	2	94	77-124
Styrene	mg/kg (ppm)	2	93	74-126
Isopropylbenzene	mg/kg (ppm)	2	99	76-127
Bromoform	mg/kg (ppm)	2	90	56-132
n-Propylbenzene	mg/kg (ppm)	2	96	74-124
Bromobenzene	mg/kg (ppm)	2	98	72-122
1,3,5-Trimethylbenzene	mg/kg (ppm)	2	98	76-126
1,1,2,2-Tetrachloroethane	mg/kg (ppm)	2	94	56-143
1,2,3-Trichloropropane	mg/kg (ppm)	2	91	61-137
2-Chlorotoluene	mg/kg (ppm)	2	95	74-121
4-Chlorotoluene	mg/kg (ppm)	2	93	75-122
tert-Butylbenzene	mg/kg (ppm)	2	100	73-130
1,2,4-Trimethylbenzene	mg/kg (ppm)	2	97	76-125
sec-Butylbenzene	mg/kg (ppm)	2	98	71-130
p-Isopropyltoluene	mg/kg (ppm)	2	98	70-132
1,3-Dichlorobenzene	mg/kg (ppm)	2	98	75-121
1,4-Dichlorobenzene	mg/kg (ppm)	2	98	74-117
1,2-Dichlorobenzene	mg/kg (ppm)	2	100	76-121
1,2-Dibromo-3-chloropropane	mg/kg (ppm)	2	87	58-138
1,2,4-Trichlorobenzene	mg/kg (ppm)	2	101	64-135
Hexachlorobutadiene	mg/kg (ppm)	2	117	50-153
Naphthalene	mg/kg (ppm)	2	94	63-140
1,2,3-Trichlorobenzene	mg/kg (ppm)	2	101	63-138

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Project: 1460-23001-01, F&BI 302250

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR VOLATILES BY EPA METHOD 8260D

Laboratory Code: 302251-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Dichlorodifluoromethane	ug/L (ppb)	10	<1	7 vo	50-150
Chloromethane	ug/L (ppb)	10	<10	21 vo	50-150
Vinyl chloride	ug/L (ppb)	10	<0.02	33	16-176
Bromomethane	ug/L (ppb)	10	<5	58	10-193
Chloroethane	ug/L (ppb)	10	<1	61	50-150
Trichlorofluoromethane	ug/L (ppb)	10	<1	57	50-150
Acetone	ug/L (ppb)	50	<50	93	15-179
1,1-Dichloroethene	ug/L (ppb)	10	<1	80	50-150
Hexane	ug/L (ppb)	10	<5	83	49-161
Methylene chloride	ug/L (ppb)	10	<5	82	40-143
Methyl t-butyl ether (MTBE)	ug/L (ppb)	10	<1	89	50-150
trans-1,2-Dichloroethene	ug/L (ppb)	10	<1	88	50-150
1,1-Dichloroethane	ug/L (ppb)	10	<1	93	50-150
2,2-Dichloropropane	ug/L (ppb)	10	<1	107	10-335
cis-1,2-Dichloroethene	ug/L (ppb)	10	<1	97	50-150
Chloroform	ug/L (ppb)	10	<1	96	50-150
2-Butanone (MEK)	ug/L (ppb)	50	<20	99	34-168
1,2-Dichloroethane (EDC)	ug/L (ppb)	10	<0.2	95	50-150
1,1,1-Trichloroethane	ug/L (ppb)	10	<1	95	50-150
1,1-Dichloropropene	ug/L (ppb)	10	<1	94	50-150
Carbon tetrachloride	ug/L (ppb)	10	<0.5	90	50-150
Benzene	ug/L (ppb)	10	<0.35	95	50-150
Trichloroethene	ug/L (ppb)	10	<0.5	94	43-133
1,2-Dichloropropane	ug/L (ppb)	10	<1	99	50-150
Bromodichloromethane	ug/L (ppb)	10	<0.5	94	50-150
Dibromomethane	ug/L (ppb)	10	<1	101	50-150
4-Methyl-2-pentanone	ug/L (ppb)	50	<10	102	50-150
cis-1,3-Dichloropropene	ug/L (ppb)	10	<0.4	103	48-145
Toluene	ug/L (ppb)	10	<1	105	50-150
trans-1,3-Dichloropropene	ug/L (ppb)	10	<0.4	107	37-152
1,1,2-Trichloroethane	ug/L (ppb)	10	<0.5	106	50-150
2-Hexanone	ug/L (ppb)	50	<10	107	50-150
1,3-Dichloropropane	ug/L (ppb)	10	<1	106	50-150
Tetrachloroethene	ug/L (ppb)	10	<1	103	50-150
Dibromochloromethane	ug/L (ppb)	10	<0.5	107	33-164
1,2-Dibromoethane (EDB)	ug/L (ppb)	10	<1	106	50-150
Chlorobenzene	ug/L (ppb)	10	<1	105	50-150
Ethylbenzene	ug/L (ppb)	10	<1	108	50-150
1,1,1,2-Tetrachloroethane	ug/L (ppb)	10	<1	111	50-150
m,p-Xylene	ug/L (ppb)	20	<2	109	50-150
o-Xylene	ug/L (ppb)	10	<1	109	50-150
Styrene	ug/L (ppb)	10	<1	106	50-150
Isopropylbenzene	ug/L (ppb)	10	<1	102	50-150
Bromoform	ug/L (ppb)	10	<5	105	23-161
n-Propylbenzene	ug/L (ppb)	10	<1	108	50-150
Bromobenzene	ug/L (ppb)	10	<1	107	50-150
1,3,5-Trimethylbenzene	ug/L (ppb)	10	<1	110	50-150
1,1,2,2-Tetrachloroethane	ug/L (ppb)	10	<0.2	113	10-235
1,2,3-Trichloropropane	ug/L (ppb)	10	<1	106	33-151
2-Chlorotoluene	ug/L (ppb)	10	<1	111	50-150
4-Chlorotoluene	ug/L (ppb)	10	<1	109	50-150
tert-Butylbenzene	ug/L (ppb)	10	<1	107	50-150
1,2,4-Trimethylbenzene	ug/L (ppb)	10	<1	109	50-150
sec-Butylbenzene	ug/L (ppb)	10	<1	107	46-139
p-Isopropyltoluene	ug/L (ppb)	10	<1	109	46-140
1,3-Dichlorobenzene	ug/L (ppb)	10	<1	106	50-150
1,4-Dichlorobenzene	ug/L (ppb)	10	<1	108	50-150
1,2-Dichlorobenzene	ug/L (ppb)	10	<1	102	50-150
1,2-Dibromo-3-chloropropane	ug/L (ppb)	10	<10	104	50-150
1,2,4-Trichlorobenzene	ug/L (ppb)	10	<1	106	50-150
Hexachlorobutadiene	ug/L (ppb)	10	<0.5	102	42-150
Naphthalene	ug/L (ppb)	10	<1	121	50-150
1,2,3-Trichlorobenzene	ug/L (ppb)	10	<1	113	44-155

Date of Report: 03/08/23
Date Received: 02/17/23
Project: 1460-23001-01, F&BI 302250

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR VOLATILES BY EPA METHOD 8260D

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Dichlorodifluoromethane	ug/L (ppb)	10	101	98	70-130	3
Chloromethane	ug/L (ppb)	10	90	88	70-130	2
Vinyl chloride	ug/L (ppb)	10	92	92	70-130	0
Bromomethane	ug/L (ppb)	10	109	108	28-182	1
Chloroethane	ug/L (ppb)	10	104	101	70-130	3
Trichlorofluoromethane	ug/L (ppb)	10	98	98	70-130	0
Acetone	ug/L (ppb)	50	118	103	42-155	14
1,1-Dichloroethene	ug/L (ppb)	10	102	100	70-130	2
Hexane	ug/L (ppb)	10	91	92	50-161	1
Methylene chloride	ug/L (ppb)	10	99	97	29-192	2
Methyl t-butyl ether (MTBE)	ug/L (ppb)	10	105	103	70-130	2
trans-1,2-Dichloroethene	ug/L (ppb)	10	100	98	70-130	2
1,1-Dichloroethane	ug/L (ppb)	10	104	102	70-130	2
2,2-Dichloropropane	ug/L (ppb)	10	104	116	70-130	11
cis-1,2-Dichloroethene	ug/L (ppb)	10	107	105	70-130	2
Chloroform	ug/L (ppb)	10	102	102	70-130	0
2-Butanone (MEK)	ug/L (ppb)	50	115	111	50-157	4
1,2-Dichloroethane (EDC)	ug/L (ppb)	10	104	102	70-130	2
1,1,1-Trichloroethane	ug/L (ppb)	10	109	107	70-130	2
1,1-Dichloropropene	ug/L (ppb)	10	103	100	70-130	3
Carbon tetrachloride	ug/L (ppb)	10	104	98	70-130	6
Benzene	ug/L (ppb)	10	105	103	70-130	2
Trichloroethene	ug/L (ppb)	10	101	99	70-130	2
1,2-Dichloropropane	ug/L (ppb)	10	107	103	70-130	4
Bromodichloromethane	ug/L (ppb)	10	100	99	70-130	1
Dibromomethane	ug/L (ppb)	10	104	108	70-130	4
4-Methyl-2-pentanone	ug/L (ppb)	50	110	113	70-130	3
cis-1,3-Dichloropropene	ug/L (ppb)	10	111	110	70-130	1
Toluene	ug/L (ppb)	10	103	100	70-130	3
trans-1,3-Dichloropropene	ug/L (ppb)	10	110	106	70-130	4
1,1,2-Trichloroethane	ug/L (ppb)	10	104	101	70-130	3
2-Hexanone	ug/L (ppb)	50	103	102	69-130	1
1,3-Dichloropropane	ug/L (ppb)	10	105	102	70-130	3
Tetrachloroethene	ug/L (ppb)	10	98	96	70-130	2
Dibromochloromethane	ug/L (ppb)	10	104	104	63-142	0
1,2-Dibromoethane (EDB)	ug/L (ppb)	10	105	102	70-130	3
Chlorobenzene	ug/L (ppb)	10	102	101	70-130	1
Ethylbenzene	ug/L (ppb)	10	104	102	70-130	2
1,1,1,2-Tetrachloroethane	ug/L (ppb)	10	114	109	70-130	4
m,p-Xylene	ug/L (ppb)	20	105	103	70-130	2
o-Xylene	ug/L (ppb)	10	107	104	70-130	3
Styrene	ug/L (ppb)	10	102	102	70-130	0
Isopropylbenzene	ug/L (ppb)	10	101	98	70-130	3
Bromoform	ug/L (ppb)	10	108	107	50-157	1
n-Propylbenzene	ug/L (ppb)	10	99	100	70-130	1
Bromobenzene	ug/L (ppb)	10	102	99	70-130	3
1,3,5-Trimethylbenzene	ug/L (ppb)	10	101	100	52-150	1
1,1,2,2-Tetrachloroethane	ug/L (ppb)	10	107	107	70-130	0
1,2,3-Trichloropropane	ug/L (ppb)	10	103	103	70-130	0
2-Chlorotoluene	ug/L (ppb)	10	105	105	70-130	0
4-Chlorotoluene	ug/L (ppb)	10	104	101	70-130	3
tert-Butylbenzene	ug/L (ppb)	10	101	100	70-130	1
1,2,4-Trimethylbenzene	ug/L (ppb)	10	102	100	70-130	2
sec-Butylbenzene	ug/L (ppb)	10	100	100	70-130	0
p-Isopropyltoluene	ug/L (ppb)	10	101	102	70-130	1
1,3-Dichlorobenzene	ug/L (ppb)	10	98	98	70-130	0
1,4-Dichlorobenzene	ug/L (ppb)	10	101	101	70-130	0
1,2-Dichlorobenzene	ug/L (ppb)	10	98	99	70-130	1
1,2-Dibromo-3-chloropropane	ug/L (ppb)	10	105	103	70-130	2
1,2,4-Trichlorobenzene	ug/L (ppb)	10	98	101	70-130	3
Hexachlorobutadiene	ug/L (ppb)	10	95	96	70-130	1
Naphthalene	ug/L (ppb)	10	113	116	70-130	3
1,2,3-Trichlorobenzene	ug/L (ppb)	10	108	108	69-143	0

Date of Report: 03/08/23
Date Received: 02/17/23
Project: 1460-23001-01, F&BI 302250

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR SEMIVOLATILES BY EPA METHOD 8270E

Laboratory Code: 302350-17 1/5 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Naphthalene	mg/kg (ppm)	0.83	0.024	80	82	50-150	2
2-Methylnaphthalene	mg/kg (ppm)	0.83	0.076	80	86	50-150	7
1-Methylnaphthalene	mg/kg (ppm)	0.83	0.042	84	89	50-150	6
Acenaphthylene	mg/kg (ppm)	0.83	<0.01	96	95	50-150	1
Acenaphthene	mg/kg (ppm)	0.83	<0.01	87	86	50-150	1
Fluorene	mg/kg (ppm)	0.83	<0.01	89	90	50-150	1
Phenanthrene	mg/kg (ppm)	0.83	<0.01	91	89	10-170	2
Anthracene	mg/kg (ppm)	0.83	<0.01	91	88	50-150	3
Fluoranthene	mg/kg (ppm)	0.83	<0.01	92	90	10-203	2
Pyrene	mg/kg (ppm)	0.83	<0.01	90	87	10-208	3
Benz(a)anthracene	mg/kg (ppm)	0.83	<0.01	92	92	37-146	0
Chrysene	mg/kg (ppm)	0.83	<0.01	91	91	36-144	0
Benzo(a)pyrene	mg/kg (ppm)	0.83	<0.01	88	88	40-150	0
Benzo(b)fluoranthene	mg/kg (ppm)	0.83	<0.01	91	91	45-157	0
Benzo(k)fluoranthene	mg/kg (ppm)	0.83	<0.01	84	86	50-150	2
Indeno(1,2,3-cd)pyrene	mg/kg (ppm)	0.83	<0.01	89	77	24-145	14
Dibenz(a,h)anthracene	mg/kg (ppm)	0.83	<0.01	85	74	31-137	14
Benzo(g,h,i)perylene	mg/kg (ppm)	0.83	<0.01	83	71	14-141	16

Date of Report: 03/08/23
Date Received: 02/17/23
Project: 1460-23001-01, F&BI 302250

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR SEMIVOLATILES BY EPA METHOD 8270E

Laboratory Code: Laboratory Control Sample 1/5

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Naphthalene	mg/kg (ppm)	0.83	83	58-108
2-Methylnaphthalene	mg/kg (ppm)	0.83	86	67-109
1-Methylnaphthalene	mg/kg (ppm)	0.83	89	66-107
Acenaphthylene	mg/kg (ppm)	0.83	100	70-130
Acenaphthene	mg/kg (ppm)	0.83	91	66-112
Fluorene	mg/kg (ppm)	0.83	94	67-117
Phenanthrene	mg/kg (ppm)	0.83	91	70-130
Anthracene	mg/kg (ppm)	0.83	90	70-130
Fluoranthene	mg/kg (ppm)	0.83	94	70-130
Pyrene	mg/kg (ppm)	0.83	88	70-130
Benz(a)anthracene	mg/kg (ppm)	0.83	94	70-130
Chrysene	mg/kg (ppm)	0.83	93	70-130
Benzo(a)pyrene	mg/kg (ppm)	0.83	90	68-120
Benzo(b)fluoranthene	mg/kg (ppm)	0.83	93	69-125
Benzo(k)fluoranthene	mg/kg (ppm)	0.83	86	70-130
Indeno(1,2,3-cd)pyrene	mg/kg (ppm)	0.83	89	67-129
Dibenz(a,h)anthracene	mg/kg (ppm)	0.83	84	67-128
Benzo(g,h,i)perylene	mg/kg (ppm)	0.83	81	67-127

Date of Report: 03/08/23
Date Received: 02/17/23
Project: 1460-23001-01, F&BI 302250

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR SEMIVOLATILES BY EPA METHOD 8270E

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Naphthalene	ug/L (ppb)	5	88	87	62-97	1
2-Methylnaphthalene	ug/L (ppb)	5	95	94	64-101	1
1-Methylnaphthalene	ug/L (ppb)	5	98 vo	96 vo	64-93	2
Acenaphthylene	ug/L (ppb)	5	105	102	70-130	3
Acenaphthene	ug/L (ppb)	5	95	93	70-130	2
Fluorene	ug/L (ppb)	5	104	101	70-130	3
Phenanthrene	ug/L (ppb)	5	97	95	70-130	2
Anthracene	ug/L (ppb)	5	98	96	70-130	2
Fluoranthene	ug/L (ppb)	5	103	101	70-130	2
Pyrene	ug/L (ppb)	5	93	95	70-130	2
Benz(a)anthracene	ug/L (ppb)	5	102	101	70-130	1
Chrysene	ug/L (ppb)	5	100	99	70-130	1
Benzo(a)pyrene	ug/L (ppb)	5	97	96	70-130	1
Benzo(b)fluoranthene	ug/L (ppb)	5	98	94	70-130	4
Benzo(k)fluoranthene	ug/L (ppb)	5	95	92	70-130	3
Indeno(1,2,3-cd)pyrene	ug/L (ppb)	5	94	99	70-130	5
Dibenz(a,h)anthracene	ug/L (ppb)	5	88	93	70-130	6
Benzo(g,h,i)perylene	ug/L (ppb)	5	84	91	70-130	8

Date of Report: 03/08/23
Date Received: 02/17/23
Project: 1460-23001-01, F&BI 302250

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

Laboratory Code: Laboratory Control Sample 1/6

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Aroclor 1016	mg/kg (ppm)	0.25	116	103	47-158	12
Aroclor 1260	mg/kg (ppm)	0.25	114	105	69-147	8

Date of Report: 03/08/23
Date Received: 02/17/23
Project: 1460-23001-01, F&BI 302250

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR POLYCHLORINATED BIPHENYLS AS AROCLOR 1016/1260 BY EPA METHOD 8082A

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Aroclor 1016	ug/L (ppb)	0.25	72	68	25-111	6
Aroclor 1260	ug/L (ppb)	0.25	81	79	23-123	2

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 high; 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.

302250

SAMPLE CHAIN OF CUSTODY

02/17/23

N3/K4/F3/VW2

Page # 1 of 3

Report To Lynn Green

Company Even Northwest

Address P.O. Box 14488

City, State, ZIP Portland, OR 97293

Phone (503) 452-5521 Email lynng@even-nw.com

SAMPLERS (*signature*)

PROJECT NAME: 1460-23001-01

PO #

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
- ☑ Standard turnaround
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Archive samples
- ☐ Other
- Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	Total 8 RCRA 6				Notes
G01-SS	01	02-16-23	8:30	Soil	1												● per EB 2/28/23 ME Hold
B03-5	02 A-E	02-15-23	14:00	Soil	5				X				X				
B03-7	03	02-15-23	14:05	Soil	1				X				X				
B04-9-SWI	04 A-E	02-15-23	15:00	Soil	5				X				X				
B05-9-SWI	05 V	02-16-23	9:05	Soil	5				X				X				
B06-1	06	02-16-23	9:30	Soil	1	(X)			X	●	●	(X)	X				
B06-9-SWI	07 A-E	02-16-23	9:35	Soil	5				X				X				
B07-5	08	02-16-23	10:15	Soil	1												Hold
B07-9-SWI	09 A-E	02-16-23	10:10	Soil	5				X				X				
B08-9-SWI	10 V	02-16-23	10:40	Soil	5				X				X				

ANALYSES REQUESTED

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Jordan Morris	Even Northwest	02-16-23	16:00
Received by:	Nham Pham	FLBI	02/17/23	1027
Relinquished by:				
Received by:		Samples received at 3 °C		

Friedman & Bruya, Inc.
Ph. (206) 285-8282

302250

SAMPLE CHAIN OF CUSTODY

02/17/23 N3/K4/F3/3 VW2

Page # 2 of 3

Report To Lynn Green

Company Even Northwest

Address P.O. Box 14488

City, State, ZIP Portland, OR 97293

Phone (503) 452-5211 Email lynng@even-nw.com

SAMPLERS (*signature*)

PROJECT NAME: 1460-23001-01

PO #

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
- ☑ Standard turnaround
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Archive samples
- ☐ Other
- Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	Total cPAH TEQ	Dissolved PCB TEQ			Notes
B07-7-5WI	11 A-E	02-16-23	11:35	Soil	5				X				X				
B10-9-5WI	12	02-16-23	12:05	Soil	5				X				X				
B11-5-5WI	13	02-16-23	12:35	Soil	5				X				X				
B12-9-5WI	14	02-16-23	12:50	Soil	5				X				X				
B04-GW-12.5	15 A-H	02-16-23	13:42	GW	8	X	X			X		X		X			
B05-GW-12.5	16 A-G	02-16-23	9:47	GW	7	X	X			X		X		X			
B06-GW-15	17	02-16-23	10:28	GW	7	X	X			X	●	X		X			
B07-GW-15	18	02-16-23	12:21	GW	7	X	X			X	●	X		X			
B08-GW-13	19 A-F	02-16-23	11:23	GW	(6)7	X	X			X	●	X		X			
B09-GW-14.5	20 A-H	02-16-23	12:57	GW	8 7 (SG)	X	X			X	●	X		X			

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Jordan Ahmes	Even Northwest	02-16-23	18:00
Received by:	Nham Pham	FEBT	02/17/23	1027
Relinquished by:				
Received by:		Samples received at 7 °C		

Friedman & Bruya, Inc.
Ph. (206) 285-8282

302250

SAMPLE CHAIN OF CUSTODY

02/17/23 N3/K4/P3/VW2

Page # 3 of 3

Report To Lynn Green

Company Evren Northwest

Address P.O. Box 14488

City, State, ZIP Portland, OR 97293

Phone (503) 452-8561 Email lynn@evren-nw.com

SAMPLERS (*signature*)

PROJECT NAME: 1460-23001-01

PO #

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
- ☑ Standard turnaround
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Archive samples
- ☐ Other
- Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	Dissolved PCBs				Notes
BIO-GW-14.5	21 A-H	02-16-23	13:48	GW	8	X	X			X	●	X	X				
BIZ-GW-230216	22 V	02-16-23	14:17	GW	8	X	X			X	●	X	X				[redacted]

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Jordan Marrs	Evren Northwest	02/16/23	18:00
Received by:	Nhan Phan	FEBI	02/17/23	1027
Relinquished by:				
Received by:		Samples received at 3 °C		

Friedman & Bruya, Inc.
Ph. (206) 285-8282

Summary: DATA VALID? ☒YES

Analytical Laboratory Data Validation Check Sheet

Project Name: 10103 NE Marx - Portland Project Number: 1460-23001-01

Date of Review: 3/9/2023 Lab. Name: F&BI Lab Batch ID #: 302250

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

The values reported for dichlorodifluoromethane and chloromethane fell outside the control limits established for these analytes. The analytes were not detected therefore the data were acceptable. (vo)

20.) Are all matrix spike/matrix spike duplicate RPDs within

acceptable limits? ☐yes ☒no ☐NA

If not, are all discrepancies footnoted? ☒yes ☐no ☐NA

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

Several analytes reported values that fell outside their established control limits. The analytes were not detected therefore the data were acceptable. (vo)

21.) Do all RPD calculations for Field Duplicates meet accepted criteria? ☐yes ☐no ☒NA

Comments:

The calibration results for arsenic and selenium, in sample B09-GW, failed the 6020B calibration standard. The value reported is an estimate. The sample was then diluted and reanalyzed. Both data sets were reported. (ca)

Sample B06-1 was diluted. Detection limits were raised, and surrogate recoveries may not be meaningful. (d)

The internal standard associated with mercury is out of control limits. The reported concentration is an estimate. (J)

The 1-methylnaphthalene in the 8270E laboratory control sample and laboratory control sample duplicate exceeded the acceptance criteria. (jl).

Gasoline was not detected in one or more of the duplicate analyses for method NWTPH-Gx. Therefore, calculation of the RPD is not applicable. (nm)

Sample B06-1 was received in a container not approved by method 8260D. The value reported should be considered an estimate. (pc)

The chromatographic patterns of multiple samples did not resemble the diesel fuel standard used for quantitation. (x)

Initial Review By: LP **Final** Review By: EB