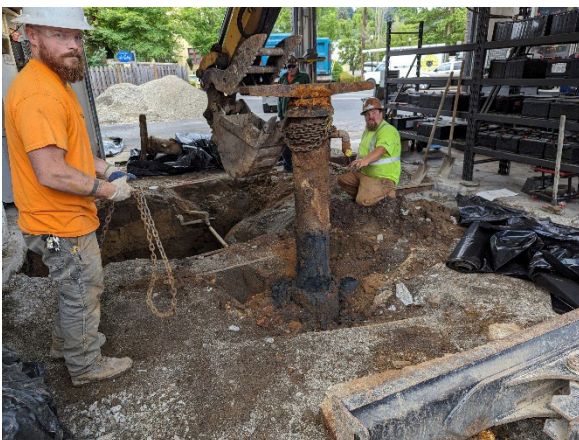




INTERIM REMEDIAL ACTION MEASURES: USED OIL TANK AND HOIST DECOMMISSIONING, PETROLEUM-IMPACTED SOIL AND GROUND WATER REMOVAL



OREGON CITY BATTERY EXCHANGE

603 7th Street and 710 Washington Street
Oregon City, Oregon

Agency Information

ODEQ LUST File Number 03-06-1606

Prepared for:

JWM Properties LLC

Attn: James McCarter

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Lake Oswego, Oregon 97035

Issued on:

December 4, 2023

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Project No. 1337-22001-02

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This

Interim Remedial Action Measures: Used Oil Tank and Hoist Decommissioning and Petroleum-Impacted Soil and Ground Water Removal

Report for:

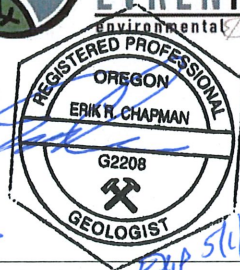
Oregon City Battery Exchange
603 7th Street and 710 Washington Street
Oregon City, Oregon

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

JWM Properties LLC
Attn: James McCarter
12990 SW Canyon Road
Beaverton, OR 97005

and its assignees

Issued December 4, 2023 by:



EXP. 2/1/2024

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List of Acronyms and Abbreviations

bgs	below ground surface	RCRA	Resource Conservation and Recovery Act
CFSs	clean fill screening levels	ROW	right-of-way
Client	Beaverton 2002, LLC	RRO	residual (oil)-range organics
CMMP	contaminated media management plan	SAP	Sampling and Analysis Plan
COIs	constituents of interest	SLRBCs	screening-level risk-based concentrations
COPCs	constituents of potential concern	SOW	scope of work
DRO	diesel-range organics	SWI	soil-water interface
ENW	EVREN Northwest, Inc.	Tgsb	Grande Ronde Basalt, Sentinel Bluffs Member
EPA	US Environmental Protection Agency	SVOCs	semi-volatile organic constituents
GRO	gasoline-range organics	1,2,4-TMB	1,2,4-trimethylbenzene
JEI	Janz Enterprises Inc.	TPH	Total Petroleum Hydrocarbons
LEL	Lower Explosive Level	UST	underground storage tank
LUST	Leaking Underground Storage Tank	VOA	volatile organic analysis
LOF	Locality of Facility	VOCs	volatile organic constituents
µg/L	micrograms per Liter		
mg/Kg	milligrams per Kilogram		
MRL	method reporting limit		
MTBE	methyl t-butyl ether		
NIOSH	National Institute for Occupational Safety and Health		
OAR	Oregon Administrative Rules		
ODEQ	Oregon Department of Environmental Quality		
ODOT	Oregon Department of Transportation		
ORC	oxygen reduction		
ORRCO	Oil Re-Refining Company		
OWRD	Oregon Water Resources Department		
PAHs	polynuclear aromatic hydrocarbons		
PCBs	polychlorinated biphenyls		
PCS	petroleum-impacted soil		
PID	photoionization detector		
ppmv	parts per million by volume		
RBCs	risk-based concentrations		
RBDM	ODEQ's <i>Risk-Based Decision Making for the Remediation of Contaminated Sites</i> guidance document		

1.0 Introduction

At the request of JWM Properties LLC (Client), EVREN Northwest, Inc. (ENW) prepared this report documenting the decommissioning of an existing used oil underground storage tank (UST) and subsequent soil removal at the subject site (603 7th Street and 710 Washington Street, Oregon City, Oregon; see Figures 1 and 2).

This report summarizes the findings of investigative activities, including an initial subsurface soil and ground water investigation, the assessment and decommissioning of the UST, soil removal and confirmation soil sampling, and further investigation of residual impacts, including an assessment of the Vapor intrusion pathway. An argument for risk-based closure is presented in accordance ODEQ's Underground Storage Tank UST Cleanup Manual¹ and cleanup guidance.²

This report is focused on the release from the used oil UST and three in-ground hoists, which shared locations inside the two service bays in the east end of the Oregon City Battery Exchange building. A separate release from a former UST nest in the western portion of the site will be addressed under a separate cover.

Site work was conducted between September 2022 and October 2023 and is documented by photographs presented in Appendix A.

1.1 Site Setting

The property is currently the site of an automobile repair business (Battery Exchange, 603 7th Street) and Mexican restaurant (Super Torta, 710 Washington Street). Land use in the immediate vicinity of the subject property consists of a restaurant to the east and an undeveloped parking lot to the north, a 7 Eleven convenience store west of Washington Street, and a mixed-use commercial building south of 7th Street. The Oregon City Fire Station and public library are on the city block southeast of the subject property.

1.2 Background

According to historical land use records, the subject property was the site of an Atlantic Richfield Co. (Arco) branded gasoline service station from 1953 until 1979 which operated three (3) gasoline underground storage tanks (USTs) in a common tank pit near the western site boundary and one 300-gallon used oil UST inside the building. Three (3) underground hydraulic vehicle lifts (two of which were discovered during this investigation) occupied the two service bays inside the east portion of the building when JWM Properties LLC purchased the site in 2006. The three gasoline UST were removed in 1985, but the used oil UST, which is the focus of this investigation, remained in place but had been out of service for many years prior to this purchase.

Petroleum hydrocarbons and petroleum-related constituents were first discovered in soils next to the former gasoline UST nest, the used oil UST, and hydraulic hoists during a subsurface investigation conducted on behalf of JWM Properties LLC by PBS Engineering and Environmental in April 2006. A release

¹ <http://www.deq.state.or.us/lq/pubs/docs/tanks/USTCleanupManual.pdf>

² <http://www.deq.state.or.us/pubs/reports.htm#cuguidance>

was reported to the Oregon Department of Environmental Quality (ODEQ) on September 6, 2006, and the site was assigned to Leaking Underground Storage Tank (LUST) site # 03-06-1606. No further assessment or remediation of the soils was conducted at the subject property because PBS determined the concentrations in soil did not pose an unacceptable risk to human health as long as the commercial land use of the site did not change. However, PBS recommended the USTs be decommissioned if the property were to be redeveloped. Further details of previous investigations at the site are presented in Section 1.3.

In June 2022, at JWM Properties LLC's request, ENW reviewed PBS' previous reports to identify data gaps and recommend next steps for closing out the LUST file. Based on this review, ENW recommended a Subsurface Investigation be conducted to gather data on current site conditions regarding the petroleum releases from the gasoline USTs and Used Oil UST. Based on new subsurface data, ENW advised JWM Properties LLC to decommission the Used Oil UST and submit a report to ODEQ for review and consideration of a No Further Action determination for the Used Oil UST alone with the intention of evaluating the gasoline release as a separate investigation. JWM Properties LLC approved the combined investigative tasks in separate work orders dated September 7, 2022, and November 17, 2022.

1.3 Previous Investigations

PBS Engineering and Environmental – September to October, 2006

PBS Engineering and Environmental (PBS) conducted their Subsurface Investigation in conjunction with a Phase I ESA at the subject property in October 2006. PBS advanced eleven (11) soil borings in the general vicinities of the former gasoline UST nest, dispenser islands, the out-of-service used oil UST, and an unknown magnetic anomaly identified during a geophysical survey. Except for borings that penetrated the former gasoline UST excavation in the western part of the subject site, PBS reported generally variable amounts of silty clay up to 15 feet bgs underlain in areas by basalt bedrock between 7.5 and 15 feet bgs. Borings near the former gasoline UST nest encountered coarser gravel fill materials interpreted by PBS as backfill material. PBS collected 21 discrete soil samples from the soil borings for laboratory analysis of petroleum hydrocarbons, metals, and petroleum-related constituents. PBS did not encounter ground water during their investigation; therefore, PBS did not assess ground water conditions during their subsurface investigation.

PBS reported detections of gasoline-range organics (GRO) and/or residual-range organics (RRO) in five of the 21 samples analyzed. Of four soil samples containing GRO, the sample collected within the former gasoline tank nest (GP9-7') contained the highest GRO concentration at 831 milligrams per kilogram (mg/Kg). Relatively low concentrations of GRO-related volatile organic compounds (VOCs) ethylbenzene, toluene, and xylenes were detected in the sample, and benzene was absent in the sample, suggesting an older, weathered release. Leachable quantities of lead were not present in the sample.

Three samples containing RRO were collected from the vicinity of the used oil UST. The highest concentration (8,240 mg/Kg) was detected in soil adjacent to the tank location (sample GP2-5') where benzene, ethylbenzene, several polycyclic aromatic hydrocarbon (PAH) constituents, and RRO-related VOCs were also present; however, no halogenated VOCs were detected in the sample.

Based on an evaluation of the data, PBS concluded that residual soil impacts did not pose a human health risk under the current occupational setting and that no further remediation was warranted; however, recommended the used oil UST be decommissioned should the property be redeveloped.

1.3.1 Purpose and Scope of Work

The purpose of this work was twofold: 1) to evaluate the results of previous investigations at the subject property and collect supplemental contaminant data to allow for the completion of an accurate conceptual site model and risk-based analysis of the site; and, 2) to decommission by removal the used oil UST and remove accessible petroleum impacted soil from the vicinity of the tank and nearby abandoned hoist locations.

ENW completed the following Scope of Work (SOW) for this project pursuant to ENW's supplemental task order and project cost estimates submitted on November 17, 2022 to Mr. James McCarter, representative for the Client.

- Review the previous environmental investigations at the subject property from file reports provided by the client.
- Cleared the proposed soil boring and excavation work area of utilities and determined the accurate location and orientation of the used oil UST using geophysical equipment.
- Advanced ten direct-push borings in selected locations of the site and collected soil and reconnaissance ground water samples from the borings for laboratory analysis.
- Decommissioned by removal the used oil UST and three abandoned in-ground hydraulic lifts.
- Excavated accessible petroleum-impacted soils next to the former UST and hoists for offsite disposal.
- Collected confirmation soil samples from the margins of excavations to confirm removal of the impacted soils and/or document residual impacts to soil.
- Collected sub-slab vapor samples beneath the occupied building to assess the vapor intrusion exposure pathway.
- Submitted all samples to an independent analytical laboratory under chain-of-custody protocols for appropriate analysis.
- Evaluated analytical results with respect to ODEQ UST cleanup standards and guidance documents.
- Prepared this report presenting the methods, results, and conclusions of this investigation including the preparation of a Conceptual Site Model (CSM), and characterization of human health risk for applicable exposure pathways and receptor populations.

2.0 Site Description and Physical Setting

The subject property consists of two contiguous, generally rectangular lots located in the NE $\frac{1}{4}$ of the NE $\frac{1}{4}$ of Section 31, Township 2 south, Range 2 east of the Willamette Meridian, Clackamas County Oregon. It is situated in downtown Oregon City in an area of mixed residential and commercial development. The street address is 603 7th Street and 710 Washington Street. The site covers approximately 11,760 square-feet (0.32 acres) with a north-south length of approximately 132' and an east-west width of approximately 105.' A Site Vicinity Map is included as Figure 1.

The subject property is developed with two buildings, one in the southern portion of the site occupied by Battery Exchange (former ARCO station building, 603 7th Street) and one in the northern portion of the site currently occupied by a Mexican restaurant (Super Torta, 710 Washington Street). Except for a small planter at the southwest corner, the entire site has been paved. The paved portions are used strictly for employee and customer parking and based on observations made during this assessment, the paved portions of the site and the concrete slab of the Battery Exchange building are underlain by a base layer of gravel. Buried utility trenches (sewer, water, natural gas and electricity) are present beneath the asphalt.

The leaking used oil UST was located inside the service bays of the Battery Exchange building. The date of installation and previous use of the tank is not listed on file with ODEQ and was unregistered when discovered in 2006. The locations of primary features of the site are illustrated on the Site Plan presented on Figure 2.

Land Use. The subject property and adjoining properties to the east, north, south, and west are zoned Mixed-Use Corridor 1 (*MUC-1*) by the City of Oregon City. The MUC zoning districts promote commercial development and is characterized by retail stores, office, multi-family residential, lodging and recreation facilities. The MUC-1 sub-zoning designation in which the site is located strongly encourages a mix of multi-family, office, and small-scale retail uses. The MUC-1 designation does not allow for single-family residential use. The nearest multi-family use property is currently on the adjoining property across 7th Street to the south. A residential neighborhood one block north, northeast, and east of the subject property is the closest single-family land use to the site. The neighborhood is zoned R-3.5 zoning restricting lot sizes to 3,500 square feet per dwelling unit.

A small Institutional district (I) is located between two and four blocks south of the subject property and contains the Clackamas Fire (Station 15), Pioneer Library City Park, the Oregon City Public Library, and Carnegie Park.

Topography. The site is in a portion of Oregon City that is situated on a hillside terrace with gentle slope toward the Willamette River located approximately 1,300 feet from the subject property. The US Geological Survey (USGS) Oregon City topographic quadrangle indicates the subject property is located at an approximate elevation of 250 feet above mean sea level (see Figure 1). The regional topography is indicated to slope slightly less steeply to the southeast than to the northwest where the land surface slopes more abruptly towards Abernathy Creek.

Geologic Setting. The subject property is situated on a volcanic upland rising above the low-lying portion of downtown Oregon City. The surficial geology beneath the subject property is mapped as Quaternary Alluvial deposits (Qal) in the southern portion of the property and Miocene volcanics of the Grande Ronde Basalt, Sentinel Bluffs Member (Tgsb) of Madin et. al.³ The QAL deposits consist of gravel, sand, silt, and clay, and typically deposited in the active channels and floodplains of rivers and streams and are likely benched over the Tgsb lava flows, which is present approximately 10 to 15 feet beneath the subject property. Based on observations during this investigation, the shallow alluvium is a fine-grained and layered material most likely deposited in a low energy environment near, or at the margins of an ancient Willamette River.

³ Madin, I.P., Geologic Map of the Oregon City 7.5' Quadrangle, Clackamas County, Oregon, Publication GMS 119, Plate 1, Oregon Department of geology and Mineral Industries.

Surface Waters. There are no natural or manmade surface water bodies on the subject property or adjacent properties. The closest surface water bodies are Abernathy Creek to the north and the Willamette River to the west, which is 1,300 feet from the subject property at its closest point.

Ground Water. Based on temporary borings advanced at the site, ground water can be expected to occur as shallow as 10 feet bgs. The direction of ground water flow was not measured during this investigation. The local topography is relatively flat, and under these conditions, interpretation of ground-water flow based on topography is not always reliable. However, the regional surface topography, which slopes toward the northwest from higher terraces to the southeast, suggests the general ground water flow direction is likely to be oriented generally west to northwest toward the Willamette River and Abernathy Creek. As a result, properties to the southeast are considered to be upgradient from the subject property (Figure 1).

3.0 Approach

3.1 Objectives

The objectives for the site were to:

- 1) Gather current data on site conditions relative to the presence of petroleum hydrocarbons in soil and shallow ground water.
- 2) Register and decommission the abandoned used oil UST in accordance with ODEQ's UST rules for UST systems.
- 3) Assess and decommission any additional existing subsurface features of potential environmental concern.
- 4) Remove accessible PCS to the extent practicable to reduce potential migration of contaminants via ground water and/or soil gas and where risk-based regulatory closure can be completed without engineering controls.
- 5) Evaluate residual soil and ground water impacts against risk-based screening levels published in ODEQs guidance *Risk-Based Decision Making for the Remediation of Contaminated Sites* (ODEQ, September 22, 2003, updated June 2023).

3.2 Roles and Responsibilities

ENW was the contracted environmental consultant and provided on-site oversight to collect additional samples, direct extent and depth of excavations, collect samples as appropriate, and arrange for material disposal. In addition,

- Janz Environmental, Inc. (JEI) acted as the excavation contractor for the project.
- Alpha Locating and GeoPotential provided services related to locating existing underground piping and utilities.
- Tidewater Environmental Services, Inc. provided plastic-lined dumpsters for temporary safe storage/drainage of removed hoists, and pumped the contents of the used oil tank and rinsed and cleaned the interior of the tank.

- WasteXpresss pumped and disposed sediments from the used oil tank as hazardous waste.
- Metallic debris (used oil tank, hoists, and piping) were recycled at PNW Metals Recycling, Inc.
- PCS generated from soil removal activities was disposed at Hillsboro landfill.
- Friedman & Bruya of Seattle, Washington and Environmental Analytical Services of San Luis Obispo, California provided laboratory services.

3.3 Process

The initial intention of this project was to decommission and remove one regulated 300-gallon used oil UST, one hydraulic hoist, and over-excavate PCS. During soil removal activities, two additional underground hoists and one suspected oil/water separator were discovered. With the owner's permission, the two additional hoists and oil/water separator were decommissioned by removal and additional associated PCS was excavated.

Soil and water samples were collected as appropriate to direct work, to provide laboratory results for material disposal profiles and to provide sample data at excavation margins. All waste soils, pumped product, and pit water were properly disposed of, and the excavations were appropriately backfilled with concrete restoration.

Following an evaluation of residual ground water impacts, further assessment of the Vapor Intrusion into Buildings exposure pathway was deemed warranted through collection of sub-slab vapor samples beneath the station building.

4.0 Methods and Procedures

4.1 Preparation Activities

Plan Preparation. Internal Sampling and Analysis Plan (SAP) and a Health and Safety Plan were prepared for the project.

ODEQ Notification. On June 30, 2023, ENW submitted a General permit Registration form to Decommission Existing Unregistered Tanks and 30-Day Notice of Intent to decommission USTs to ODEQ, along with the required \$500 fee. Once approval of the 30-day notice of decommissioning of the used oil UST was received from ODEQ, ENW performed or coordinated the following activities.

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. Private onsite utilities were located by a contracted private utility locator.

Acquired Permit. ENW prepared an application and obtained a disposal permit from Waste Management's Hillsboro Landfill for disposal of PCS. No permits were required from the City of Oregon City to conduct the planned SOW.

Planning. ENW scheduled and coordinated with JEI to begin site work.

4.2 Geophysical Survey

The geophysical survey and interpretation of the geophysical data was performed on August 29, 2023, by Geopotential, Inc. of Clackamas, Oregon under ENW's oversight. The survey was performed to screen for the presence of buried features of potential environmental concern and to clear boring locations of underground utilities.

The survey utilized geophysical instruments to identify subsurface magnetic "anomalies." Geophysical anomalies result from contrasts of geophysical signatures of subsurface materials but can also result from interference with surface and overhead features. Geophysical characteristics result from a variety of factors (e.g., density, distribution, porosity, fill placement, contrasts in soil composition, intergranular fluid composition and saturation, contaminant impacts, etc.), as well as buried artifacts, and similar anomalies may be produced by different sources. Except where investigated by excavation, all anomalies and interpretations should be considered (somewhat) speculative.

Multiple instrument types were used during the survey to maximize recognition of contrasting subsurface materials. These included:

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.

Schonstedt Gradiometer (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.)

Mala High Dynamic Range (HDR) 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.

4.3 Direct Push and Hand-Augered Borings

Eight temporary direct-push technology (DPT) borings and two (2) hand-augered borings were completed at the subject property between September 19 and 20, 2022, and an additional hand-augered boring was advanced on September 6, 2023. The direct-push borings were completed by Cascade Drilling of Clackamas, Oregon with a track-mounted GeoProbe model 7720DT. The approximate boring locations are illustrated on Figure 3.

Soil materials recovered from the borings were examined continuously for lithology and visual and olfactory evidence of petroleum contamination by an Oregon registered geologist. Soils were examined periodically for headspace screening for volatile organic compounds using a MultiRAE photoionization detector equipped with a 10.6 eV lamp. Soil lithology, field screening results, and other observations were recorded onto soil boring logs presented in Appendix B.

Direct-push borings EB03 through EB11 were advanced to approximately five feet below the water table (i.e., approximately 11 to 15 feet bgs) or until refusal. During each sampling interval, select portions of the soil core were retained for possible laboratory analysis. Soils were selected from portions of the soil core where field screening indicated the presence of contamination. In the absence of contamination, at least one soil sample was collected from each direct push boring from the soil/ground water interface (SWI). Soil samples from hand-augered probes EB01 and EB02 were collected from beneath the floor of the used oil UST for assessment purposes. Soil samples were placed directly into laboratory prepared glass containers, sealed with a Teflon-lined cap, uniquely labeled, and preserved on ice in a cooler pending transport to the laboratory. Soil samples retained for volatile organic constituent (VOC) analysis were preserved in the field utilizing US Environmental Protection Agency (EPA) Method 5035. Soil samples were labeled using the convention "EB01-10" where EB01 indicates the boring number and "10" indicates the depth of the soil sample. The modifier "SWI" was appended to the sample number to indicate a soil/water interface sample.

Upon reaching the total depth of the direct push boring, the GeoProbe drill tooling was removed and a temporary well casing comprised of machine-slotted, 1-inch diameter polyvinyl chloride (PVC) was placed in open borehole in preparation for ground water sampling. Water levels were measured in the temporary well points to assure adequate water volume for sampling. Prior to collecting the sample, an appropriate volume of ground water was purged from the well point to remove suspended sediment and draw representative ground water into the temporary well point. Ground water samples were collected from dedicated polyethylene tubing and a peristaltic pump set at approximately 150 milliliters per minute to minimize off gassing of volatile contaminants. Samples were transferred into laboratory-supplied containers with appropriate preservative, uniquely labeled, documented on a chain-of-custody record, and placed in a cooler on ice pending transport to the laboratory. Reconnaissance ground water samples were labeled with the boring number followed by the suffix "GW" and a number indicating the total depth of the temporary boring (i.e., B01-GW-13). Temporary well purging and sampling data are recorded on Field Sampling Data Sheets (FSDS) included in Appendix C.

Following sampling, each of the temporary borings were sealed with hydrated bentonite chips to within six (6) inches of the ground surface. The borings were patched using materials to match the existing ground surface (i.e., concrete).

4.4 Tank Decommissioning

Decommissioning of the regulated used oil UST was based on the procedures referenced in the following documents:

- American Petroleum Institute RP 1604, "Closure of Underground Petroleum Storage Tanks"
- American Petroleum Institute Publication 2015, "Cleaning Petroleum Storage Tanks"
- The National Institute for Occupational Safety and Health (NIOSH) "Criteria for a Recommended Standard: Working in Confined Space" (Publication No. 80-106; guidance for conducting safe closure procedures at some hazardous substance underground storage tanks)
- ODEQ's "Cleanup Rules for Leaking Petroleum UST Systems," November 1998
- Oregon Administrative Rule (OAR) Division 150 regulations

Decommissioning activities were performed as follows:

- Secured the site with perimeter fencing to prevent inadvertent incursion by passers-by into the work area.
- The pavement and any concrete ballast over the top of the tank were removed.
- The tank was exposed by excavation, and the interiors of the tanks were pumped by Oil Re-Refining Company (ORRCO) of Portland, Oregon.
- Using a Lower Explosive Level (LEL) meter, the tank interior was checked for explosivity. Where explosive conditions were present, dry ice was introduced into the interiors to inert the tanks, at 1.5 pounds per 100 gallons capacity. The tank was then allowed to sit until the volatile vapors were displaced.
- After verifying the tank was successfully inerted, an opening was cut into the top of the tank to eliminate the explosivity hazard and to allow access to the interiors.
- The interior of the tank was then cleaned by Tide Water with the contents placed in an onsite Tote for characterization.
- After cleaning, the tank was further exposed and removed from its excavation and placed on a trailer for transport to PNW Metals Recycling, Inc., located in Portland, Oregon, for recycling.
- Product lines were cut and vacuumed out to remove residual fluids where they extended into interior of the building.

4.5 Hoist Decommissioning

Three (3) in-ground hydraulic hoists (H1 through H3) were decommissioned by removal following the basic procedures below:

- Prior to decommissioning, the hydraulic oils contained in the hoists were characterized for disposal through sampling and laboratory analyses.
- The oil in the reservoirs, cylinders and all feeder pipes were pumped out as much as possible and placed in drums and eventually transported to the recycling facility for disposal. The hoist's superstructure (bolster, arms, and sleeves) was also removed, as necessary.
- The hoists, reservoirs and feeder pipes were removed by excavation, cut open and additional oil was removed.
- The hoists, reservoirs, feeder pipes and superstructures were loaded onto a dump truck and transported to PNW Metal Recycling located in Portland, Oregon for recycling.
- All oil or other liquids from the hoists were removed from the site by WasteXpress.

4.6 Soil Removal

ENW supervised excavation of approximately 40 tons of PCS from three excavations arbitrarily identified as EX01, EX02, and EX03 (see Figure 4) between June 19-26, 2023. Soil excavation was directed by ENW and performed by JEI using an excavator. During excavation, all overburden soil and PCS was direct-loaded into trucks for transport to the receiving landfill. Work conducted each day was documented into a field notebook, including the lateral and vertical extent of progressive excavation, field inspection results

(lithology, photoionization detector (PID) measurements, sheen testing, odor, olfactory evidence, etc.), the disposition of soils, samples collected, and loads of PCS hauled offsite.

4.6.1 Field Screening

In general, PCS was readily apparent based on visual appearance (e.g., green or gray staining, sheen, petroleum odor). Field headspace screening of soil samples collected from the floor and sidewalls of the excavations was conducted to guide the excavation of PCS. Field headspace was measured by placing an aliquot of soil to be tested in a resealable plastic bag and inserting the tip of a PID into the bag and reading headspace volatiles in parts per million by volume (ppmv).

4.6.2 Confirmation Soil Sampling.

Confirmation soil samples were collected consistent with Oregon regulations and ODEQ guidance regarding locations and number of samples to demonstrate that an area meets cleanup criteria. Typically, one set of sidewall samples were collected every 20 linear feet for sidewall and one floor sample was collected for every 450 square feet of floor area.

All soil samples were collected under the supervision of an ENW licensed geologist using current industry-standard protocol. Non-disposable sample tools were decontaminated with a sequential wash of Alconox-water, ½ Alconox-water (diluted), and distilled water before and after each sample. Grab samples were collected with a decontaminated stainless-steel sampling trowel or with Nitrile-gloved hands from the excavator bucket (at a position where soils were not in contact).

Soil samples were transferred into sample containers provided by the laboratory. The containers were filled to minimize headspace before immediate sealing. The jar was then labeled with a distinctive designation, the date, time, project number, and sampler's name, and then immediately placed in cooled storage until they were delivered to the laboratory. Chain-of-custody protocols were implemented.

4.6.3 Excavation (Pit) Water Management

During soil removal activities, ground water was encountered at approximately 5.5 feet bgs in the excavation sidewalls and slowly accumulated at the base of the excavation. A pit water sample was collected from approximately 1 to 2 feet of accumulated pit water in excavation EX01 on June 20, 2023, following pumping out the water and allowing it to recharge over a period of several hours. A second pit water sample was collected on June 26, 2023, from excavation EX02 in the west bay of the building. The approximately 6 inches of pit water was not pumped out before sampling due to slow recharge and limited volume of water present in the excavation. The pit water samples were collected by a ENW licensed geologist using current industry-standard protocol. Water samples were transferred with fresh Nitrile gloves slowly into volatile organic analysis (VOA) containers without turbulence and eliminating all air bubbles within the container before sealing. Additional laboratory-supplied sample containers were filled, as appropriate, and each sample container was labeled with the sample location, depth of sample, date, time, sampler name, and analysis required. Samples were immediately placed in cooled storage until delivered to the laboratory under chain-of-custody protocols.

4.6.4 Excavation Backfill

Each of the excavations was backfilled with ¾-inch minus rock, compacted in lifts.

4.7 Sub-Slab Vapor Sampling

Because of the volatile constituents in used oil mixtures, soil vapor sampling was performed to evaluate the potential for vapor intrusion of these constituents into the current onsite service building and future onsite buildings. ENW performed sub-slab vapor sampling on October 9, 2023, at two locations shown on Figure 5. Field sampling activities were conducted in general accordance with the methods and procedures presented in ODEQ's *"Guidance for Assessing and Remediating Vapor Intrusion in Buildings."*⁴

Vapor Pin Installation. Sub-slab vapor pin SUB01 was advanced inside the West Service Bay and SUB02 was advanced beneath the East Service Bay in the eastern portion of the onsite building. The sampling points were advanced by drilling a 5/8-inch hole through the approximately four (4) to six (6) inch concrete floor slab and pressing a dedicated Vapor Pin® with a silicon sleeve into the drilled sampling point. Disposable Teflon sample tubing was connected to a barbed fitting on the Vapor Pin at the ground surface to allow for purging and collection of the sub-slab vapor samples.

Sample Collection. The Teflon sample tubing from each sampling point was connected to a flow regulator and finally to a low-flow vacuum pump. The pump was activated and, using the flow regulator, the flow rate was calibrated to 50 milliliters per minute. The vacuum pump was then operated until at least three (3) air volumes of the sample tubing were purged to ensure that stagnant or ambient air was removed from the sampling system and to ensure that samples collected were representative of soil gas conditions. Following purging, a sample cartridge was inserted into the sampling train in between the down-hole tubing and the flow regulator. The sample cartridges consisted of a stainless-steel sorbent tube packed with activated carbon composed of Carbopack C (a weak sorbent), Carbopack B (a medium sorbent) and Carbosieve SIII (a strong sorbent). The sample cartridges were delivered, stored and transported on ice, for optimal preservation.

Prior to commencement of sampling, a rag saturated with isopropyl alcohol was placed around each sampler stem and seal on the ground surface to test for leakage. All samples were sampled for 20 minutes (total of 1,000 milliliters of air). All measurements were recorded on Field Sampling Data Sheets (Appendix C). After sampling the floor surface was restored. Each sampling cartridge was appropriately labeled, wrapped and immediately placed on ice. After sampling, each sorbent tube was appropriately labeled and rushed by FedEx to Environmental Analytical Service of San Luis, Obispo, California under chain-of-custody protocols.

All sampling equipment was decontaminated before and after sampling by undergoing a wash sequence of Alconox® solution, tap water, and then deionized water final rinse. Clean Nitrile gloves were used during sample collection.

4.8 Laboratory Analysis

All water and soil samples were analyzed by Friedman and Bruya, Inc. (F&BI) of Seattle, Washington and samples for sub-slab vapor were analyzed by Environmental Analytical Services (EAS) of San Luis Obispo, according to the analytical plan presented in Table 4-1. Laboratory analytical reports are included in Appendix D.

⁴ DEQ, 2010. *Guidance for Assessing and Remediating Vapor Intrusion in Buildings* dated March 2010, last updated May 29, 2020.

Table 4-1. Analytical Plan

Analytical Method	Constituents	Soil	Water	Tank Contents	Sub-Slab Vapor
NWTPH-HCID	Northwest Total Petroleum Hydrocarbons – Hydrocarbon Identification (HCID)	---	—	UST contents	—
NWTPH-Gx	Northwest Total Petroleum Hydrocarbons – Gasoline-Range Organics (GRO)	All confirmation soil samples	All pit water samples	---	—
NWTPH-Dx	Northwest Total Petroleum Hydrocarbons – Diesel-Range Organics (DRO) and Residual-Range Organics (RRO)	All confirmation soil samples	All pit water samples	---	—
EPA 8260B	GRO-Related Volatile Organic Constituents (VOCs)	Confirmation soil samples containing highest GRO	---	---	—
EPA 8260B	Volatile Organic Constituents (VOCs)	Confirmation soil samples containing highest RRO	All pit water samples	---	—
EPA 8270D SIM	Polynuclear Aromatic Hydrocarbons (PAHs)	Confirmation soil samples containing highest DRO and/or RRO	All pit water samples	UST contents sample	—
EPA 8082A	Polychlorinated Biphenyls (PCBs)	Confirmation soil samples containing highest RRO	---	UST contents sample	—
EPA 6020A	Total lead	Selected confirmation soil samples	---	---	—
EPA 6020A	Toxicity Characteristic Leachate Procedure (TCLP) RCRA Metals	Samples containing total metals above 20x RCRA characteristic concentration	---	Solids sample from UST	—
TO-17	GRO, DRO, and GRO-related VOCs	—	—	—	All

4.9 Applicable Cleanup Standards

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 [Oregon Administrative 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.). The Soil Matrix Cleanup Score Sheet and Checklist for the site are presented in Appendix E. The score calculated for the site is 37, indicating that Soil Matrix Level 2 cleanup standards would apply to the site if closed under Soil Matrix Rules. 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, and may require remedial action. Concentrations of total petroleum hydrocarbons lower than their corresponding Soil Matrix Cleanup Level usually do not require any additional cleanup or risk management.

Risk-Based Cleanup. Risk-based cleanup standards are derived in accordance with ODEQ's *Risk-Based Decision Making for the Remediation of Contaminated Sites* (RBDM) guidance document for:

- Underground storage tanks regulated under the Cleanup Rules for Leaking Petroleum Underground Storage Tank Systems (OAR 340-122-0205 through 340-122-0360).
- Other sources of contamination regulated under the Hazardous Substance Remedial Action Rules (OAR 340-122-0010 through 340-122-0115).

RBCs are based on Oregon unacceptable additional risk criteria for cancer occurrence and for non-carcinogenic health impacts. The State of Oregon considers acceptable additional risk of cancer from contact with carcinogenic constituents at less than one in one million incidences, or, for non-carcinogenic constituents, below the constituent threshold concentration at which health impacts would occur. RBCs are generally used to evaluate sampling analytical results as follows:

- ODEQ's lowest RBC for residential receptors is used as an initial 'conservative' screening of a constituent. If a constituent's concentration exceeds its SLRBC, it requires further evaluation. Otherwise, the constituent is considered unlikely to pose unacceptable risk to any human receptor.
- Those constituents identified by initial screening as exceeding their SLRBC should be further evaluated through a risk-based assessment, which evaluates site-specific exposure pathways and receptors against generic ODEQ-provided RBCs.

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.).

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. ODEQ's screening levels for soil vapor are based on the U.S. Environmental Protection Agency's (EPA's) vapor intrusion screening levels (VISLs) for residential receptors. The ODEQ RBCs for soil vapor represent an incremental risk of 1×10^{-6} for carcinogens and hazard quotient of 1 for non-carcinogens.

4.10 Other Numeric Criteria

Background Metals. Analytical data were compared with background concentrations established by ODEQ.^{5,6} ODEQ does not require cleanup for metals concentrations below default background concentrations. Background concentrations are used for screening data for metals in soil as part of the risk assessment.

4.11 Waste Disposal

Wastes were disposed as follows during this scope of work:

- A total of 126 gallons of rinse water generated during UST01 cleaning and a small amount of pit water removed during PCS removal was removed from the site to ORRCO for disposal.
- The USTs (and all associated metal elements) were removed from the site and taken to PNW Metals Recycling, Inc., of Longview, Washington for recycling.
- A total of 40.48 tons of PCS was transported to Hillsboro Landfill for disposal under Permit 139996OR issued to JEI by Waste Management, Inc.
- A total of 20 gallons of lead-impacted oil sludge from the UST and PCB-impacted oils from the hoists were transported by WasteXpress to their facility on July 19, 2023, as hazardous waste under a hazardous waste manifest.

Disposal receipts hazardous waste manifests are included in Appendix F.

5.0 Site Work Results

This section describes the findings of the soil boring investigation, used oil UST decommissioning, and impacted soil removal activities. Site work was completed between September 19, 2022 June 27, 2023. Please reference:

- Figures 3, 4 and 5 for locations: borings, grab samples, sub-slab vapor samples, tanks, hoists, sump, and excavation margins.
- Figures 6 for estimate extent of residual impacts to both soil and ground water (related to the release from the used oil UST and in-ground hoists).

⁵ ODEQ, March 2013. Development of Oregon Background Metals Concentrations in Soil: Technical Report, Land Quality Division Cleanup Program.

⁶ 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.

- Figure 7 for lines of section A-A' and B-B'
- Appendix A for a photolog of site work.
- Table 1 for a summary of soil analytical data (note, the borings site around the former UST nest, which are not the subject of this report, are not shown in this table).
- Table 2 for a summary of leachable metals data.
- Table 3 for a summary of ground water analytical data (note, the borings site around the former UST nest, which are not the subject of this report, are not shown in this table).
- Table 4 for a summary of sub-slab vapor sample data.

5.1 Description of Tank System and Other Features

Underground Storage Tank. The used oil UST was discovered at the site by geophysical survey in 2006. For the purpose of this report, this UST was arbitrarily designated UST01 and the subsequent excavation at the Used Oil UST was arbitrarily designated as EX01. The fill port of UST01 was directly above the tank and the vent pipe ran east under the building floor to the east exterior wall of the building.

Table 5-1 summarizes the characteristics of the Used Oil Tank and its regulatory status.

Table 5-1. Summary Characteristics of Decommissioned UST

Tank/Hoist ID	Type	Dimensions or Capacity	Contents	Status
UST01	Single-wall steel	300 gallons	Used Oil	Regulated

Used oil tank UST01 and associated fill port and vent pipe were decommissioned by removal using an excavator and operator provided by JEI. Prior to decommissioning, the tank interior was pumped of any remaining liquids and the interior of the tank was cleaned with a detergent pressure wash and triple-rinsed prior to removal using services and equipment provided by Tide Water. Once removed, the tank was inspected for leaks, then the tank and associated piping were recycled at PNW Metals.

During PCS removal activities at UST01, ENW encountered two (2) hydraulic lifts in the east service bay of the Battery Exchange building. The two hoists and a third hoist that had been previously identified in the west service bay are arbitrarily identified as hoists H01 through H03. In addition to hoists H01 through H03, JEI encountered a single-walled, welded steel box of unknown use several feet west of UST01 in the East Bay of the building. Piping ran east from the unidentified sump into a small room; however, the sump feature had been previously backfilled with sand and was no longer in use. The former use of the sump is unknown. The locations of hoists H01 through H03 and the sump feature, arbitrarily designated SUMP01, are presented on Figure 4.

Table 5-2 summarizes the characteristics of hoists H01 through H03 and SUMP01.

Table 5-2. Summary Characteristics of Buried Hoists and Unknown Sump Feature

Tank/Hoist ID	Type	Dimensions or Capacity	Contents	Status
Hoist01 (East Bay - south)	Shared above ground reservoir	8 ft to base	Hydraulic Oil	Non regulated
Hoist02 (East Bay - north)		8 ft to base	Hydraulic Oil	Non regulated
Hoist03 (West Bay)	Integrated reservoir	8 ft to base	Hydraulic Oil	Non regulated
SUMP01	Single-wall welded steel	82" x 27" x 48" deep	Sand and gravel filled	Abandoned

UST01 and hoists H01 and H02 were removed from excavation EX01, SUMP01 was removed from excavation EX02, and hoist H03 was removed from excavation (EX03) using an excavator and operator provided by JEI. Prior to removal, the remaining liquids in each of the cylindrical hoists, and the sandy backfill in SUMP01 were pumped/excavated, then the hoists and sump were removed using a backhoe. All metallic parts and associated piping were inspected for leaks, then recycled at PNW Metals.

5.2 Tank Assessment and Decommissioning

Tank decommissioning by removal was completed on June 19, 2023. The following sections describe subsurface features and conditions, impacts encountered, and assessment samples collected to characterize the nature of impacts beneath the tank system.

Assessment soil sample locations are described in the following table and shown on the Sample Location Diagram on Figure 3.

Table 5-3. UST Assessment Sample Locations

Borehole / Location ID	Date Sampled	Depth Sampled (feet)	PID Headspace (ppmv)	Sampled By	Location
EB01-2.5	9/19/2022	2.5	4.9	ENW	West end of UST01
EB01-6	9/19/2022	6	503.4	ENW	
EB02-1.5	9/19/2022	1.5	33.5	ENW	East end of UST01
EB02-6	9/19/2022	6	162.8	ENW	

UST01 was located inside the East Bay of the Battery Exchange building beneath a reinforced concrete floor (see Figures 3 and 4). The top of the north-south oriented tank was buried approximately 12 inches below the concrete floor and its bottom was tagged at approximately 4.5 feet (53 inches) bgs. At the time of decommissioning, approximately four (4) inches of product and water were observed inside the tank. After pumping the tank contents and removing the soil overburden, soil staining and petroleum odors were evident at 1.5 feet bgs. Assessment soil samples EB01-2.5, EB01-6, EB02-1.5, and EB02-6 had been previously collected at the sides of the tank from an impacted zone directly below the bottom elevation of the tank.

Prior to loading the tank onto a flatbed truck, the 300-gallon capacity single-wall steel tank was inspected and was found to contain several through-going corrosion holes near the lower half of the tank.

5.3 Initial Assessment Results

The locations of initial assessment boreholes during this investigation are presented on Figure 3. A summary of results is presented in Table 1 and in the following paragraphs.

- Soil borings EB01 and EB02 sited on the west and east sides of UST01, respectively, contained impacts of GRO, DRO⁶ and RRO up to 8-, 670- and 5,500-mg/Kg, respectively, between 1.5 and 2.5-feet depth (below the building). At 6-feet depth, impacts of GRO, DRO⁷ and RRO increased to 700-, 13,000-, and 46,000 mg/Kg, with the greatest magnitude of impact on the west end of the UST.
- Further analysis of the sample with highest petroleum impact (EB01-6) confirmed no chlorinated VOCs were present in soil at this location; however, lead at 438 mg/Kg exceeded the SLRBC for lead of 28 mg/Kg. Sample EB01-6 was further analyzed by the Toxicity Characteristic Leachate Procedure (TCLP) method to determine if the soil, once removed, may be characteristic of hazardous waste. Laboratory TCLP analysis reported lead at 0.235 milligrams per liter, which is below EPA's Resource Conservation and Recovery Act (RCRA) toxicity characteristic concentration of 5 mg/L (Table 2).
- Arsenic, barium, chromium, total PCBs, and several PAH constituents were present in sample EB01-6; however, at concentrations below their respective SLRBCs and/or regional default background concentrations.

Because DRO was flagged as a possible overlap from gasoline or heavy oil, and since diesel was not used at the site, a diesel release is not suspected; however, a release of heavy oil was suggested at UST01.

5.4 Petroleum-Impacted Soil Removal

Based on assessment results, impacted soil was excavated from the tank pit of former tank UST01 using PID field screening to direct the excavation of accessible petroleum-impacted soil. Excavation EX01 removed PCS associated with UST01 and at its final limits extended from the south to north ends of the East Service Bay of the Battery Exchange building and from the east wall of the service bay to the west margin of the service bay where several structural beams and structural footings supported the building. Excavation EX02 focused on limited soil removal at the former SUMP01 location in the west part of the East Service Bay. Its final limits extended just about a foot wider and longer than the dimensions of the sump. Hoist H03 was the focus of excavation EX03 in the West Service Bay. The final soil removal excavations were completed at variable depths ranging from 4- to 8.5-feet bgs.

Soil removal continued until field evidence of impacts indicated the limits of contamination had been reached or until further excavation was deemed unsafe to the building structure. The final limits are shown on Figure 4, and were:

- **EX01.** Approximately 14 feet south to north and 10 feet west to east by up to 8.5 feet deep.
- **EX02.** Approximately nine feet south to north and five feet west to east by 4.5 feet deep.
- **EX03.** Approximately 8 feet south to north and 5.5 feet west to east by up to 8.5 feet deep.

⁷ Flagged "x": the pattern of peaks is not indicative of the fuel standard (diesel) used for quantitation, suggesting the presence of DRO is likely overlap from the gasoline or heavy oil range.

A total of approximately 40 tons of PCS were disposed of at Hillsboro Landfill under Waste Management, Inc. Permit 139996OR.

The general chronology of events is provided below.

June 19, 2023. After removing UST01, accessible PCS was removed in the area immediately around the former tank. Hoist H01 was exposed in the western portion of the excavation. Associated piping at the hoist cylinders was wrapped in plastic to prevent a release and ENW collected a sample of the oil for disposal characterization purposes (samples “Hoist Oil-230619). A total of 8.23 tons of PCS were loaded onto a truck and disposed of at Hillsboro Landfill on the first day.

June 20, 2023. At the beginning of the second day, approximately 25 gallons of standing water had accumulated from a seep in the sidewall of EX01. The pit water was pumped into a 55-gallon drum prior to commencing further soil removal, and once the water was removed, PCS was removed to a depth of 7.5 feet bgs below the UST where screening of soils reported headspace readings of 296 ppmv. As additional PCS was removed more concrete flooring, several hydraulic lines and eventually hoist H02 were encountered in the central and northern part of the service bay, bedded in the gravel fill underlying the concrete floor. To facilitate further soil removal, the hydraulic oil inside hoists H01 and H02 was pumped into a drum, then both hoists were removed and placed into a covered waste bin lined with plastic sheeting to capture additional drained oil. The hoists appeared to share common oil supply lines that had been cut at the floor surface, suggesting they both also shared an above ground reservoir tank. The reservoir had been previously removed; however, all hydraulic supply lines were removed and placed in a bin for later recycling. A grab assessment sample taken from soils near hoist H01 exhibited evidence of petroleum impacts which registered a PID headspace reading of 308 ppmv, so additional soil was removed to a depth of 8.5 feet bgs (six inches below the former hoist location). The excavation EX01 continued northward toward hoist H02, removing a 3.5-foot-thick band of PCS in the north sidewall, and eventually extending the excavation northward past former hoist H02, to within a few feet of the building’s north exterior wall, and to a depth of approximately 8.5 feet bgs (approximately six inches below former hoist H02). Although PID readings suggested that PCS remained at the final limits of the excavation, no additional soil was removed from EX01 due to structural concerns for the building foundation.

EX02 focused on the removal of SUMP01. Petroleum-impacted sandy fill materials inside SUMP01 were removed followed by removal of the metal structure comprising SUMP01, petroleum-impacted pea gravel and accessible PCS from the immediate area around the removed SUMP01 location. The metal structure was removed and placed into a bin for recycling.

Confirmation soil samples were collected from the final limits of EX01 and EX02 (see Table 5-4) and an additional 13.86 tons of PCS was hauled to Hillsboro Landfill by end of second day.

Table 5-4. EX01 and EX02 Confirmation Soil Samples – June 20, 2023

Sample ID	Date	PID Headspace (ppmv)	Sample Method	Location
GS01-SF-8.5	6/20/2023	20.6	Grab from Excavation Bucket	EX01 Below H01
GS02-CF-7.5	6/20/2023	296	Grab from Excavation Bucket	EX01 Below UST01
GS03-SW-5.5	6/20/2023	417.8	Grab from Excavation Bucket	EX01 South Wall
GS04-EW-5.5	6/20/2023	590	Grab from Excavation Bucket	EX01 East Wall
GS05-CS-4.5	6/20/2023	5.4	Grab from Excavation Bucket	EX02 Beneath SUMP01
GS06-NF-8.5	6/20/2023	644.8	Grab from Excavation Bucket	EX01 Under H02
GS07-NWW-5.5	6/20/2023	546.2	Grab from Excavation Bucket	EX01 NW Sidewall
GS08-WW-5.5	6/20/2023	461.5	Grab from Excavation Bucket	EX01 West Wall
GS09-NW-5.5	6/20/2023	511.2	Grab from Excavation Bucket	EX01 North Wall

Following a period of pumping petroleum-impacted pit water to facilitate removal of PCS, ENW collected pit water sample PitWater-230520 from a temporary well point placed in the south end of the EX01 at a depth of 8.5 feet bgs.

June 26, 2023. EX03 was started with the removal of hoist H03 after collecting a sample of the oil from the reservoir for waste characterization purposes (sample “HOIST OIL-230620”). Prior to removing hoist H03, ENW pumped approximately 10 gallons of hydraulic fluids inside the base of the hoist into a 55-gallon drum. The remaining concrete floor around the hoist was removed and accessible PCS was direct-loaded for off-site disposal at Hillsboro Landfill. Using the backhoe, the hoist cylinder and casing were removed and placed directly into a plastic lined and covered bin for additional oil collection. Field screening of exposed soils in excavation EX03 suggested PID readings ranging from 18.3 ppmv to 91.2 ppmv at the 5.5-foot depth. Additional PCS was removed to a depth of 8.5 feet bgs (approximately six inches below the base of the hoist) where a grab confirmation samples sample was collected. Based on a PID reading of 0.0 ppmv at this location, ENW concluded the vertical extent of PCS had been reached in excavation EX03. Additional confirmation soil samples were collected from EX03 as shown in Table 5-5. A total of 13.67 tons of PCS was hauled to Hillsboro Landfill by end of day 3.

Table 5-5. EX03 Confirmation Soil Samples – June 26, 2023

Sample ID	Date	Depth Sampled (feet)	PID Headspace (ppmv)	Sample Method	Location
GS10-F-8.5	6/27/2023	8.5	0	Grab from Excavation Bucket	EX03 Floor
GS11-NW-5.5	6/27/2023	5.5	18.3	Grab from Excavation Bucket	EX03 North Sidewall
GS12-EW-5.5	6/27/2023	5.5	91.2	Grab from Excavation Bucket	EX03 Northeast Sidewall
GS13-SW-5.5	6/27/2023	5.5	36.5	Grab from Excavation Bucket	EX03 Northwest Sidewall
GS14-WW-5.5	6/27/2023	5.5	23.6	Grab from Excavation Bucket	EX03 South Sidewall

Water began entering excavation EX03, and following a period of pumping pit water, ENW collected pit water sample PitWater-230626 from base of EX03 at a depth of 8.5 feet bgs. Excavations EX01, EX02 and EX03 were backfilled by JEI in lifts with compaction.

June 27, 2023. JEI swept the three excavation areas and consolidated plastic and waste from the hoist cleanup.

June 28, 2023. Concrete flooring was poured in the West and East service bays.

5.5 Soil Confirmation Results Compared to Soil Matrix Cleanup Levels (Initial Screening)

Confirmation soil samples were collected from the floors and sidewalls of each excavation. See Figure 4 for confirmation soil sample locations. Analytical results for confirmation soil samples are presented in Table 1 (following text).

As indicated in Table 1, confirmation sampling from the perimeter of the excavations indicate:

- GRO and/or RRO remain at the excavation margins of EX01 in the north, east, south, and west sidewalls and floor at concentrations greater than Soil Matrix Cleanup Level II. DRO is also present; however, was flagged by the laboratory as a possible overlap from other petroleum ranges.
- RRO remains in the floor of EX02 above Soil Matrix Cleanup Level II at the 4.5-foot depth.
- GRO remains in the northeast, northwest, and south margins of EX03 at concentrations above Soil Matrix Cleanup Level II.

Given that residual concentrations of GRO, DRO and RRO exceed Soil Matrix Cleanup Levels, additional evaluation of risk will be required.

5.6 Pit Water Sampling Results

Both pits water samples (one collected from water recharge in excavation EX01 and the other from recharge in excavation EX03) contained DRO (flagged) and RRO at maximum concentrations of 4,500 micrograms per liter ($\mu\text{g/L}$) and 16,000 $\mu\text{g/L}$, respectively. Pit water sample collected from water recharge in excavation EX01 contained GRO; however, no GRO-related constituents were detected above laboratory MRL. Several PAH constituents and VOCs were detected; however, the concentrations of PAHs and VOCs in samples were all below their respective SLRBCs. Dissolved lead was not detected in either pit water sample. Laboratory analysis of pit water samples is presented in Table 2 (following text).

5.7 Delineation Sample Results

On September 20, 2022, ENW installed soil borings EB03 through EB10 in step-out locations proximal to former Used Oil Tank UST01, former hoists H01 through H03, and former SUMP01. A summary of soil and reconnaissance ground water samples collected from the borings is respectively provided on Tables 5-6 and 5-7. Pit water samples collected during soil removal activities are included for reference in Table 5-7.

Table 5-6. Summary of Soil Samples from Delineation Soil Borings

Borehole / Location ID	Date Sampled	Depth Sampled (feet)	PID Headspace (ppmv)	Sampled By	Location
EB03-11.5	9/20/2022	11.5	0.2	ENW	10' west of Used Oil UST
EB04-7-SWI	9/20/2022	7	815	ENW	Former UST Pit
EB05-7	9/20/2022	7	1096	ENW	
EB05-12	9/20/2022	12	2	ENW	
EB06-7	9/20/2022	7	89.9	ENW	
EB07-7	9/20/2022	7	45.3	ENW	
EB07-9.5-SWI	9/20/2022	9.5	0.4	ENW	Northwest of Used Oil UST
EB08-10-SWI	9/20/2022	10	0.2	ENW	East of Used Oil UST
EB09-7	9/20/2022	7	25.9	ENW	South of Used Oil UST
EB09-10-SWI	9/20/2022	10	6.2	ENW	
EB10-5-SWI	9/20/2022	5	0.4	ENW	South of Used Oil UST
EB11-6-SWI	9/6/2023	6	340.8	ENW	Between Building & EB09; 4' from Building

Table 5-7. Summary of Reconnaissance Ground Water Samples from Delineation Soil Borings and Pit Water Samples

Borehole / Location ID	Date Sampled	Depth Sampled (feet)	Sampled By	Location
EB04-GW-12	9/20/22	12	Former UST Pit	Former UST Pit
EB05-GW-12	9/20/22	12		
EB08-GW-15	9/20/22	15	ENW	Step-Out Boring East of Used Oil UST
EB09-GW-13	9/20/22	13	ENW	Step-Out Boring South of Used Oil UST (REMOVED)
EB10-GW-10	9/20/22	10	ENW	Step-Out Boring South of Used Oil UST
EB11-GW-9.5	9/6/23	10	ENW	Between Building & EB09; 4' from Building
Pit Water-230620	6/20/23	8.5	ENW	EX01 Pit Water
Pit Water-230626	6/26/23	8.5	ENW	EX03 Pit Water

Soil boring EB03 was advanced inside the East Service Bay approximately 10 feet west of the former UST01 location and former Hoist H01. Soil borings EB07, EB08, EB09, and EB10 were advanced in step out locations northwest, east, south, and south-southwest of former UST01, respectively.

Because elevated concentrations of RRO were observed in EB09 prior to soil removal activities, ENW conducted the geophysical survey on August 29, 2023, to investigate additional potential sources of contamination. Initial results from boring EB09 showed an increasing trend in contaminant concentrations to the south, in the presumed upgradient direction.

Boring EB11 was installed on September 6, 2023, following soil removal from excavations EX01 through EX03. The purpose of EB11 was to confirm contaminant concentrations closer to the south wall of the onsite building, just north of EB09, and to monitor potential beneficial effects from soil removal activities.

Results of the geophysical survey and analytical results of soil and reconnaissance ground water sampling are presented in the following sections. The location of delineation borings are presented on Figure 3. Laboratory results of delineation soil and reconnaissance ground water samples collected from delineation borings are summarized on Tables 1 and 3, respectively.

5.7.1 Geophysical Survey Results

ENW oversaw the geophysical survey on August 29, 2023 as described in Section 4.2. The survey was conducted on the south side the station building between the building and adjoining right-of-way to the south. The findings of the geophysical survey revealed no additional tanks or other subsurface features of potential environmental concern. However, GPR signals in the vicinity of EB09 detected possible fill beneath the building apron underlain by a sloping layer of denser material. Several transects by the GPR were made and reflections indicate a north sloping contact between the shallow fill and underlying denser material. ENW concludes that such a slope in soil type could influence contaminant migration in the vicinity of EB09.

On September 6, 2023, ENW advanced EB11 and collected equivalent depth discrete soil samples closer to the building.

5.7.2 Laboratory Results - Soil

All delineation soil samples were analyzed for GRO, DRO, and RRO and pertinent results were as follows.

- GRO was detected in sample EB07-7 at the 7-foot sample depth at a concentration of 65 mg/Kg, which exceeds the ODEQ SLRBC of 31 mg/Kg. GRO in sample EB11-6-SWI on the south side of the building was higher at a reported 130 mg/Kg. GRO was not detected above the laboratory MRL in samples EB03-11.5, EB07-9.5-SWI, EB08, EB09-10-SWI or EB10-5-SWI.
- RRO was detected in sample EB09-7 at a concentration of 3,700 mg/Kg, which exceeds the ODEQ SLRBC of 2,800 mg/Kg. RRO in samples EB07-7 and EB11-6-SWI were lower at reported concentrations of 2,800 mg/Kg and 910 mg/Kg, respectively. RRO was not detected in samples EB03-11.5, EB07-9.5-SWI, EB08-10-SWI, EB09-10-SWI, and EB10-5-SWI.
- DRO concentrations reported in three of eight soil samples were flagged by the laboratory indicating a possible overlap from either GRO or RRO.

Based on presence of impacts at boring EB09, soil sample EB09-10-SWI at the SWI was further analyzed for BTEX. Soil sample EB11-6-SWI containing the highest GRO concentration was further analyzed for full list VOCs by EPA Method 8260. Samples EB03 and EB11-6-SWI were also further analyzed for total lead to characterize for the presence of older leaded fuel mixture.

- VOCs and BTEX constituents were either not detected or were below their respective SLRBCs in both samples analyzed.
- The maximum detected concentration of total lead (26.6 mg/Kg) is below both the ODEQ SLRBC of 30 mg/Kg and the regional background concentration of 28 mg/Kg.

5.7.3 Laboratory Results - Ground Water

Reconnaissance ground water samples collected from select temporary borings proximal to UST01 (borings EB08, EB09, EB10 and EB11). It should be noted that borings EB08, EB09, and EB10 were

completed prior to the recommissioning of UST01 and removal of accessible soil in that area. Boring EB11 was sampled after soil removal was completed; therefore, provides first indications of post-remedial subsurface conditions.

The data from these location reported the following results:

Petroleum Hydrocarbons.

- GRO was present in samples from EB09 and EB11 at 2,600 micrograms per liter (ug/L) and 3,000 ug/L, respectively, which both exceed the SLRBC for GRO of 31 ug/L. GRO was not detected at boring locations EB08 or EB10.
- DRO was detected in the sample from boring EB09 at 240,000 (flagged), which exceeds the SLRBC of 100 ug/L. DRO was detected at concentrations below its SLRBC at borings locations EB08 and EB10.
- RRO was detected in sample borings EB08 at 910 ug/L, EB09 at 1,400,000 ug/L, and EB10 at 400 ug/L, all at concentrations exceeding its SLRBC (as mineral oil) of 300 ug/L.

Volatile Organic Constituents. All three samples were further analyzed for VOCs. Except for a detection of dichloromethane (methylene chloride) in sample EB08, there were no VOCs detected above the laboratory MRL. The detection of dichloromethane in EB08 was flagged as a laboratory contaminant and is therefore not considered a constituent of the released petroleum product at the site.

Based on these results, Figure 5 presents the extent of residual petroleum hydrocarbons in ground water associated with the release from the former UST01 and hoists H01 through H03.

5.8 Sub-Slab Vapor Sample Results

The results of sub-slab vapor samples collected on October 9, 2023, are summarized below and respectively evaluated against appropriate screening levels as shown in Table 4 (behind the tables tab following text).

GRO and DRO. Laboratory analysis did not detect GRO and/or DRO in either of the two sub-slab vapor samples collected during the assessment.

GRO-related VOCs. Laboratory analysis detected naphthalene, toluene, 1,2,4-trimethylbenzene, and 1,3,5-trimethylbenzene in both samples; however, all below their respective ODEQ SLRBCs for soil vapor.

Leak Detection. The levels of isopropyl alcohol in samples SUB01 SUB02 were within ODEQ sampling requirements of less than five (5) percent ambient air contribution during the sampling event.⁸

6.0 Nature and Extent of Impacted Media

Characterization has included the analysis of soil and ground water samples collected from the limits of excavations and step-out soil borings placed proximal to UST01. Lines of sections A-A' and B-B' provide a visual aid to the following discussion.

⁸ ODEQ, March 25, 2010. *Guidance for Assessing and Remediating Vapor Intrusion in Buildings.*

6.1 Soil

Seven surface soil and 44 subsurface soil samples have been collected and analyzed (including previous PBS sampling) since the petroleum release was reported in 2006. Soil samples included bottom and sidewall samples collected following UST and hoist decommissioning and PCS removal and step out soil boring samples.

Analytical results indicate that petroleum compounds are primarily RRO in the vicinity of the former UST01. In this area, primarily at the limits of excavations, residual concentrations of GRO, DRO, RRO, benzene, ethylbenzene, naphthalene, 1,2,4-trimethylbenzene, and lead remain in soil at concentrations above their respective SLRBCs. Low-level PAHs and PCBs were detected at concentrations less than their SLRBCs.

The fuel additives 1,2-dibromoethane (EDB), 1,2-dichloroethane (EDC), methyl tert-butyl ether (MTBE), were not detected in the analyzed samples nor in a sample of tank contents from UST01. The sample of tank contents from UST01 did contain some chlorinated constituents (PCE, TCE, etc.); however, soil data from the former UST01 location suggest none of these solvent-related constituents are present in soil. PCBs were not detected in the sample of tank contents from UST01, and they were either not detected or detected at a concentration less than its SLRBC in subsurface soil. Leachable lead was detected at a concentration exceeding the RCRA toxicity characteristic for total lead in the sample of sludge from UST01.

The lateral extent of RRO in residual soil associated with the release from the former UST01 and hoists H01 through H03 is shown on Figure 5 and the vertical extent is estimated to be the soil/water interface.

6.2 Ground Water

Reconnaissance ground water samples were collected from temporary well points from borings EB04, EB05, EB08, EB09, and EB10 in September 2022, EB11 in September 2023, and from recharge pit water following PCS removal at excavations EX01 and EX03 in June 2023.

Analytical results indicate that residual petroleum hydrocarbons are primarily GRO- and DRO-related. Boring EB04 (advanced at the former UST nest location) contained the highest concentration of GRO (10,000 micrograms per liter [µg/L]), benzene (2.8 µg/L), ethylbenzene (190 µg/L), and naphthalene (94 µg/L). Conversely, the highest concentration of RRO (1,400,000 ug/L) was detected at EB09, located just south of the former tank UST01 (collected prior to the decommissioning of UST01 and removal of PCS from this area). Boring EB11 had lower RRO concentrations, possible due to previous source removal in the EX01 excavation immediately to the north. Only trace concentrations of GRO-related VOCs (isopropylbenzene, 1,2,4-trimethylbenzene, and xylenes) were detected in pit water from EX01; the sample from EB09 did not detect any VOCs, including PCE, TCE or gasoline-related constituents. In both pit water samples from EX01 and EX03, PAHs were either not detected or were below SLRBCs. Considering the absence of VOCs in ground water near UST01 and historical knowledge, there appears to be two comingled plumes; one containing GRO from the former gasoline UST nest and one containing RRO from former tank UST01.

The lateral extent of RRO in ground water associated with the release from the former UST01 and hoists H01 through H03 is shown on Figure 5.

7.0 Locality of Facility

The Locality of Facility (LOF) is defined as any point where a human or an ecological receptor is reasonably likely to come into contact with facility-related hazardous substances. A Preliminary LOF for the site related with the release from the former UST01 and hoists H01 through H03 is presented after consideration of the estimated nature of impacts and the likelihood that low levels of site contaminants from the former tank releases could migrate off-site. The Preliminary LOF is conservatively estimated on Figure 6.

8.0 Risk Assessment

Where Soil Matrix Cleanup standards are not met or where ground water impacts are present, the State of Oregon requires that the impacts are evaluated using a risk-based approach described in ODEQ's RBDM guidance document, 2011 revision. The RBDM guidance document and its supplemental updates periodically provided by the agency provide pre-calculated RBCs which were developed as screening levels for suspect sites, based on Oregon's unacceptable additional risk criteria for cancer occurrence and for non-carcinogenic health impacts. The State of Oregon considers acceptable additional risk of cancer from contact with carcinogenic constituents at less than one in one million incidences, or for non-carcinogenic constituents, the constituent threshold concentration at which health impacts would occur.

This section conducts a risk-based assessment for residual impacted media at the site, based on analytical data collected during the site activities described above.

8.1 Potential Sources

The site has a history of gasoline service station operations. Potential primary petroleum hydrocarbons sources at the site include historical USTs, joints and connections in underground conveyance piping and fuel dispensers or pumps, overfills from fuel deliveries and surface spills. Evidence suggests that old clay tile storm water drains may have helped convey released product. Therefore, the primary sources of impact include historical USTs, fuel dispensers or pumps, and associated product supply piping.

8.2 Identification of Constituents of Interest

One unregulated and four regulated USTs have been located at the site. According to ODEQ's RBDM document, constituents of interest (COIs) in soil and ground water may include the following:

- GRO
- DRO
- RRO
- DRO-related volatiles
 - Benzene
 - Toluene
 - Ethylbenzene
 - Xylenes (total)

- GRO-related additional volatiles
 - Naphthalene
 - 1,2-dichloroethane (EDC)
 - 1,2-dichloromethane (EDB)
 - methyl-tert-butyl ether (MTBE)
 - 1,2,4-trimethylbenzene (1,2,4-TMB)
 - 1,3,5-TMB
 - Isopropylbenzene
 - n-Propylbenzene
- DRO- and RRO-related semi-volatiles
 - PAHs
- GRO-related metals
 - Lead
- RRO-related VOCs and SVOCs
 - Chlorinated VOCs
 - PCBs
- RRO-related metals
 - Lead
 - Cadmium
 - Chromium

This Risk Assessment will follow the conservative approach of using the highest detected concentration of each constituent for each medium.

8.3 Identification of Constituents of Potential Concern

COIs were initially compared to conservative SLRBCs to identify constituents of potential concern (COPCs) in each media. The residential SLRBCs in ODEQ's updated RBC tables were used since this approach is the most conservative method in assessing potential risk to human health. The lowest residential SLRBC is used in the screening process regardless of whether a pathway is complete or not.

Several of the constituents of Tables 1 and 3 were not detected above their respective MRLs; however, those detection limits that exceeded the RBCs were indicated with a "(Y)" in the final column. ODEQ guidance states that in general, if a contaminant is not detected by the department-specified analytical methods and if standard method detection limits are met, that this is considered acceptable proof that the contaminant is not present in that medium.⁹ Therefore, these constituents will not be further addressed in the risk assessment.

8.3.1 Soil

The comparison of laboratory results for soil samples to ODEQ's SLRBCs is provided in Table 1. Results of this comparison identified the following COPCs in soil.

- benzene,
- ethylbenzene,
- naphthalene,
- 1,2,4-TMB
- Total lead
- and GRO

⁹ ODEQ. 2003. RBDM Guidance Document, Pg. 13, Footnote 7.

As a note, ODEQ does not provide RBCs for RRO, except for mineral oil; therefore, RRO will be evaluated based on further evaluation of constituents related to RRO in line with ODEQ guidance.

8.3.2 Reconnaissance Ground Water

The comparison of laboratory results for reconnaissance ground water samples to ODEQ's SLRBCs is provided in Table 3. It should be noted that, since this assessment is limited to the release from former UST01 and three former in-ground hoists, only the data from borings EB08 through EB10 and the pit water samples collected from the PCS removal excavations was used for this assessment. Results of this comparison identified the following COPCs in ground water.

- GRO, and
- DRO

As a note, ODEQ does not provide RBCs for RRO, except for mineral oil; therefore, RRO will be evaluated based on further evaluation of constituents related to RRO in line with ODEQ guidance.

8.4 Conceptual Site Model

8.4.1 Media of Concern

Laboratory results of soil and reconnaissance ground water indicate soil impacts were detected at depths ranging between 5- and 11.5-feet bgs. Ground water was encountered between 10 and 15-feet depth bgs and is impacted at the former UST01 location. Therefore, both soil and ground water are considered media of concern.

8.4.2 Land Use— Potential Receptors

The site is in a mixed-use and densely developed urban area of Oregon City. Current land use of nearby surrounding properties is a mix of commercial businesses and multi-family apartments. Single-family residences are located a couple of blocks northwest and north of the subject property.

According to the City of Oregon City Zoning code allows for multi-family residential use but restricts development of single-family residences.

The subject property owner currently has no site redevelopment plans that include construction of residential buildings on site and the site is not expected to be redeveloped for residential use in the future based on his intention to continue to use the site as a Battery Exchange. However, zoning does allow for future residential use and as such, occupational workers and urban residents are retained as potential receptors.

Shallow soil and a shallow water-bearing unit are shallow enough that a construction and/or excavation worker could come into contact with impacted media.

8.4.3 Ground Water Use

Beneficial water use was evaluated according to ODEQ guidance.¹⁰ This evaluation included a review of water well construction reports (well logs) on file in the Oregon Water Resources Department (OWRD) well log database (Groundwater Resource Information Database [GRID]) for Section 31 (a one square mile area). The results of these activities are presented and discussed below.

OWRD Well Records

There are 390 boring logs in the OWRD database that are reported as being in the same one square mile area (Section 31). These include logs for four (4) water supply wells, three of which were mis-mapped by OWRD and found to be located several miles distal to the subject property. The remaining water well is an old industrial well drilled to 250 feet bgs. No water wells are reported to be on the subject property.

The listed industrial water supply well (CLAC 4419) is reported to have been drilled for Publisher's Paper Company in Oregon City in 1940 and appears to be located at the old Blue Heron Plant at an altitude of 120 feet amsl. The Blue Heron Plant is located approximately 0.4 miles southwest of the subject property. The well log reports encountering first ground water at 89 feet bgs and had a static water level of 49 feet in 1940. The well is cased to a depth of 17 feet bgs and has a production rate of 220 gallons per minute. According to well driller's notes, the well encountered hard rock beginning at 14 feet and water-bearing zones within "honeycomb rock below 89 feet and as deep as 225 feet. It is important to note that the well did not encounter shallow ground water less than 89 feet and that it develops water from deep confines aquifers.

A well report for industrial water well CLAC 4419 and a well summary table are included in Appendix G.

Municipal Drinking Water Source

The drinking water for city of Oregon City-South Fork Water Board, North Clackamas County Water Commission, and Clackamas River Water is supplied by three individual intakes on the Clackamas River¹¹. No portion of the city of Oregon City's water demand is supplied by ground water wells. ODEQ's Facility Profiler GIS database shows that the subject site location is outside the 10-year time of travel to any municipal water system ground water source well.

Ground Water Use Findings

Ground water at the site and nearby surrounding areas is not currently used as a potable water supply or domestic water source. Since the city has a reliable and available municipal water supply, ground water at the site is not anticipated to be used as a source of domestic water in the future.

8.4.4 Pathways of Concern

An exposure pathway is the course a constituent takes from a source to an exposed population. Exposure pathways include four elements: (1) the source of contamination; (2) the means by which a constituent will be released, retained, or travel in a given medium (e.g., air or ground water); (3) a point of potential

¹⁰ ODEQ, 1998. Guidance for Conducting Beneficial Water Use Determinations at Environmental Cleanup Sites.

¹¹ <http://www.orcity.org/sites/default/files/citydocumentes/pubworks/SWAR.pdf>

contact with a receptor; and (4) the means by which contact will occur (e.g., inhalation, ingestion). If any of these elements are missing, the pathway is considered incomplete.

The evaluation of release mechanisms and exposure pathways considered the following:

- **Direct Contact with Soil Impacts:** Possible routes of exposure for on-site receptors include incidental ingestion of and dermal contact with soil, and for on-site and off-site receptors, by inhalation of dust particles released by wind erosion into air. Currently, direct contact exposures to contaminants in soil are not likely since the site and surrounding area are covered with pavement and soil is not exposed. However, if the site were redeveloped and pavement removed, for risk-based decision making, the direct contact exposure pathway for soil is considered complete for the future construction and/or excavation worker.
- **Direct Contact with Ground Water Impacts:** Possible routes of exposure to contaminated ground water by direct contact include ingestion of tap water, dermal contact with tap water, and inhalation of volatile constituents released from tap water. However, ground water at the site is not currently used as a potable water source. The site and surrounding areas are provided with municipal drinking water service and in the future are expected to continue to receive drinking water from a municipal water source. A search of water well records did not identify any domestic water wells closer than 0.5 miles and no domestic water wells down gradient of the site. Therefore, the direct contact pathway for ground water, including leaching pathways, are not complete exposure pathways for current and potential future on- and off-site receptors.

Due to the shallow occurrence of ground water in the site vicinity (as shallow as 10 feet), future development on-site and at adjoining off-site properties is possible and construction and excavation workers may encounter ground water at shallow depths. Direct contact with ground water is typically managed by dewatering when ground water is exposed at construction sites, reducing exposure to construction workers. However, future excavation workers may be exposed by dermal contact, incidental ingestion, or inhalation of volatile constituents in ground water in an excavation. Therefore, direct contact with ground water in an excavation is considered potentially complete.

Table 8-1 presents a full summary of the pathway analysis for human receptors.

Table 8-1. Summary of Pathway Analysis for Human Receptors

Potentially Exposed Population	Exposure Route, Medium and Exposure Point	Pathway Considered	Reason for Selection or Exclusion
Soil			
Current/Future Occupational Worker and Urban Resident	Soil ingestion, dermal contact, and Inhalation	No	No surface soil impacts are present on the subject site.
	Inhalation of volatiles (outdoor air)	YES	Soil is impacted with hazardous volatile constituents.
	Inhalation of volatiles from impacted soil intruding into building (indoor air)	YES	Soil is impacted with hazardous volatile constituents.
	Leaching to ground water, followed by direct ingestion	NO	Ground water not in use for drinking water
Future Construction and/or Excavation Worker	Direct ingestion, inhalation of volatiles and dermal contact with soil	YES	Soil impacts are within depths that a construction and/or excavation worker is likely to encounter
Ground Water			
Current/Future Occupational Worker and Urban Resident	Ingestion, and Inhalation from tap water	NO	Ground water not in use for drinking water
	Inhalation of volatiles (outdoor air)	YES	Ground water is impacted with GRO and DRO, which include volatile fractions.
	Inhalation of volatiles from impacted GW intruding into building (indoor air)	YES	Ground water is impacted with GRO and DRO, which include volatile fractions.
Future Construction and/or Excavation Worker	GW in an excavation	YES	Ground water impacts are within depths that a construction and/or excavation worker is likely to encounter

8.5 Conceptual Model

Based on the above discussion, a conceptual site model has been developed for the site, depicting all exposure pathways evaluated and retained for evaluation of human health risk. The conceptual site model is presented in Figure 7.

8.6 Further Evaluation of Constituents of Potential Concern

8.6.1 Soil

COPCs in soil are further evaluated by comparing RBCs for complete exposure pathways for applicable receptors to determine if they are COCs at the site (Table 5). Based on this further evaluation:

- Residual concentrations of benzene and GRO in soil exceed RBCs for the *Vapor Intrusion into Buildings* pathway for a future urban residential receptor. Therefore, benzene and GRO are identified as COCs in soil under this specific exposure pathway.
- Residual concentrations of total lead in soil exceed its RBCs for the *Soil Ingestions, Dermal Contact and Inhalation* pathway for both construction and excavation workers. Therefore, total lead is identified as COCs in soil under this specific exposure pathway.

8.6.2 Ground Water

Since GRO and DRO were identified by the initial screening as COPCs in ground water, these COPCs are further evaluated by comparing RBCs for complete exposure pathways for applicable receptors to determine if they are constituents of concern (COCs) at the site (Table 6).

- Residual concentrations of GRO and DRO in reconnaissance ground water exceed RBCs for the *Vapor Intrusion into Buildings* pathway for a future urban residential receptor and an current occupational receptor. Therefore, GRO and DRO are identified as COCs in ground water under this specific exposure pathway for these receptors.

8.7 Further Evaluation of the Vapor Intrusion Pathway

As discussed in Section 5.8, given the detection of GRO and related VOCs in soil and ground-water COPCs identified for the vapor intrusion pathway, to further evaluate the vapor intrusion pathway, sub-slab vapor samples were collected from the area where the used oil UST and former inground hoists were located. The results of this additional assessment determined:

- **GRO and DRO** were not detected in either of the two sub-slab vapor samples collected during the assessment.
- **GRO-related VOCs.** Laboratory analysis detected naphthalene, toluene, 1,2,4-trimethylbenzene, and 1,3,5-trimethylbenzene in both samples; however, all below their respective ODEQ SLRBCs for soil vapor.

Therefore, based on this additional assessment, the vapor intrusion pathway is not a current concern.

8.8 Scoping Level Ecological Risk Assessment

ODEQ regulations (OAR 340-122-244(3)) generally do not require screening for potential ecological impact if the Site is devoid of ecologically important species and habitat and if the following conditions can be demonstrated:

1. Contaminated soils are only present at depths greater than 3 feet bgs, or, if present at a shallower depth, such soils cover an area no greater than 0.125 acre;
2. Surface water has not been affected by the release;
3. Contaminated ground water does not, and is not, reasonably likely to discharge to surface waters or otherwise reach the surface in a manner that might result in contact with ecological receptors; and
4. Contaminated ground water does not and is not reasonably likely to come into contact with aquatic sediments (OAR 340-122-0244(3)).

Use of the site for foraging is limited for all species given the commercial land use, impermeable ground cover on site, and no available habitat on or adjacent to the site. No sensitive environments exist on or immediately adjacent to the site. The closest surface water bodies are Abernathy Creek and the Willamette River and although ground water likely flows toward these water bodies, it is at a large

distance from the site. No significant source of ground water impacts remains at the site. The lack of receptors strongly suggests ecological risks are unlikely due to site related COCs in residual soil and ground water. Therefore, since conditions 1 through 4 listed above appear to be true for the Site, ENW concludes that ecological screening is not warranted.

9.0 Discussion and Recommendations

This report has presented the findings of site investigation activities conducted at the site, evaluated beneficial water use near the site, and presented a human health risk-based assessment. One UST was successfully decommissioned by removal in accordance with state and federal regulations. In total, approximately 40.48 tons of PCS was excavated and transported off-site for disposal at Hillsboro Landfill, all wastes were appropriately disposed, and the site surfaces have been restored and repaved. Excavation has effectively removed the release source area (area of highest impacts). The risk assessment of residual soil and ground water impacts remaining at the margins of the excavations has indicated the following:

- Soil
 - Volatile COCs are present in soil and thus present a potential *Vapor Intrusion into Buildings* risk at the subject site. However, based on further evaluation of this pathway through the collection of sub-slab vapor samples, this pathway does not appear to present an unacceptable risk at this time.
 - Residual concentrations of total lead in soil exceed its RBCs for the *Soil Ingestions, Dermal Contact and Inhalation* pathway for both construction and excavation workers. This pathway can be controlled through the implementation of a Contaminated Media Management Plan to ensure lead-enriched soil is properly handled and managed during any future earthworks project.
- Ground Water
 - Though residual concentrations of GRO and DRO in reconnaissance ground water exceed RBCs for the Vapor Intrusion into Buildings pathway for a future urban residential receptor and a current occupational receptor, based on further evaluation of this pathway through the collection of sub-slab vapor samples, this pathway does not appear to present an unacceptable risk at this time.

Based on the findings, ENW presents the following recommendations to continue the site toward regulatory closure:

- Since soil and ground water COPC exceed ODEQ CFSs, and since lead is present in soil at concentrations exceeding applicable pathways for a future construction worker and/or excavation worker, a Contaminated Media Management Plan (CMMP) should be developed to eliminate possible risks to inform future workers on site on proper management of impacted media during earth-moving activities (utility repair, excavations, and site improvements) in the

event of site redevelopment. The CMMP will identify human health risks associated with site COCs and outline procedures to mitigate the risks associated with direct contact with residual soil and ground water. The CMMP will outline proper characterization, storage, and disposal of impacted soil and ground water in the event that waste is generated.

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

10.0 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:

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

There is no practice that is thorough enough to absolutely identify the presence of all hazardous substances that may be present at a given site. ENW's investigation has been focused only on the potential for contamination that was specifically identified in the 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 has endeavored to collect representative analytical samples for the locations and depths indicated in this report. However, no sampling program can thoroughly identify all variations in contaminant distribution.

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

ENW performed this study under a limited scope of services per our agreement. 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.

Table 1 - Summary of Analytical Data, Soil

Location ID		GP1		GP2			GP3		GP11		EB01		EB02	
Sample ID		GP1-3	GP1-9	GP2-5	GP2-10	GP2-15	GP3-6	GP3-10	GP11-2	GP11-7.5	EB01-2.5	EB01-6	EB02-1.5	EB02-6
Date Sampled		8/30/2006	8/30/2006	8/30/2006	8/30/2006	8/30/2006	8/30/2006	8/30/2006	8/30/2006	8/30/2006	9/19/2022	9/19/2022	9/19/2022	9/19/2022
Depth Sampled (feet)		3	9	5	10	15	6	10	2	7.5	2.5	6	1.5	6
Sampled By		PBS	PBS	PBS	PBS	PBS	PBS	PBS	PBS	PBS	ENW	ENW	ENW	ENW
Location		Abandoned hoist		Abandoned Used Oil UST - West End			Abandoned Used Oil UST - East End		Former Southern Dispenser Island		West end of Used Oil UST		East end of Used Oil UST	
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	---	---	0.475	---	---	---	---	---	---	---	2.8	---	---
Bromodichloromethane	C, V	---	---	---	---	---	---	---	---	---	---	<0.05 (ND)	---	---
Bromoform	C, V	---	---	---	---	---	---	---	---	---	---	<0.05 (ND)	---	---
Bromomethane	nc, V	---	---	---	---	---	---	---	---	---	---	<0.5 (ND)	---	---
Carbon tetrachloride	C, V	---	---	---	---	---	---	---	---	---	---	<0.05 (ND)	---	---
Chlorobenzene	nc, V	---	---	---	---	---	---	---	---	---	---	<0.05 (ND)	---	---
Chlorodibromomethane (dibromochloromethane)	C, V	---	---	---	---	---	---	---	---	---	---	<0.05 (ND)	---	---
Chloroethane (ethyl chloride)	nc, V	---	---	---	---	---	---	---	---	---	---	<0.5 (ND)	---	---
Chloroform	C, V	---	---	---	---	---	---	---	---	---	---	<0.05 (ND)	---	---
Chloromethane	nc, V	---	---	---	---	---	---	---	---	---	---	<0.5 (ND)	---	---
1,2-Dichlorobenzene	nc, V	---	---	---	---	---	---	---	---	---	---	<0.05 (ND)	---	---
1,4-Dichlorobenzene	C, V	---	---	---	---	---	---	---	---	---	---	<0.05 (ND)	---	---
1,1-Dichloroethane	C, V	---	---	---	---	---	---	---	---	---	---	<0.05 (ND)	---	---
1,1-Dichloroethene	nc, V	---	---	---	---	---	---	---	---	---	---	<0.05 (ND)	---	---
cis-1,2-Dichloroethene	nc, V	---	---	---	---	---	---	---	---	---	---	<0.05 (ND)	---	---
trans-1,2-Dichloroethene	nc, V	---	---	---	---	---	---	---	---	---	---	<0.05 (ND)	---	---
Dichloromethane	C, V	---	---	---	---	---	---	---	---	---	---	<0.5 (ND) ca jl	---	---
EDB (1,2-dibromoethane)	C, V	---	---	---	---	---	---	---	---	---	---	<0.05 (ND)	---	---
EDC (1,2-dichloroethane)	C, V	---	---	---	---	---	---	---	---	---	---	<0.05 (ND)	---	---
Ethylbenzene	C, V	---	---	1.88	---	---	---	---	---	---	---	0.74	---	---
MTBE (methyl t-butyl ether)	C, V	---	---	---	---	---	---	---	---	---	---	<0.05 (ND)	---	---
Naphthalene	C, V	---	---	---	---	---	---	---	---	---	---	0.43	---	---
iso-Propylbenzene (cumene)	nc, V	---	---	0.629	---	---	---	---	---	---	---	1.2	---	---
Tetrachloroethene (PCE)	C, V	---	---	---	---	---	---	---	---	---	---	<0.025 (ND)	---	---
Toluene	nc, V	---	---	0.15	---	---	---	---	---	---	---	0.11	---	---
1,1,1-Trichloroethane	nc, V	---	---	---	---	---	---	---	---	---	---	<0.05 (ND)	---	---
1,1,2-Trichloroethane	C, V	---	---	---	---	---	---	---	---	---	---	<0.05 (ND)	---	---
Trichloroethene	NA, V	---	---	---	---	---	---	---	---	---	---	<0.02 (ND)	---	---
Trichlorofluoromethane (Freon 11)	nc, V	---	---	---	---	---	---	---	---	---	---	<0.5 (ND)	---	---
1,2,4-Trimethylbenzene	nc, V	---	---	8.89	---	---	---	---	---	---	---	20	---	---
1,3,5-Trimethylbenzene	nc, V	---	---	3.55	---	---	---	---	---	---	---	5.2	---	---
Vinyl chloride	C, V	---	---	---	---	---	---	---	---	---	---	<0.05 (ND)	---	---
Xylenes	nc, V	---	---	13.64	---	---	---	---	---	---	---	18.5	---	---
Metals														
Arsenic	C, nv	---	---	---	---	---	---	---	---	---	---	3.02	---	---
Barium	nc, nv	---	---	---	---	---	---	---	---	---	---	297	---	---
Cadmium	nc, nv	---	---	---	---	---	---	---	---	---	---	<1 (ND)	---	---
Chromium (III)	nc, nv	---	---	---	---	---	---	---	---	---	---	28.5	---	---
Lead	NA, nv	---	---	---	---	---	---	---	---	---	---	438	---	---
Mercury	nc, nv	---	---	---	---	---	---	---	---	---	---	<1 (ND)	---	---
Silver	nc, nv	---	---	---	---	---	---	---	---	---	---	<1 (ND)	---	---

Table 1 - Summary of Analytical Data, Soil

Location ID		GP1		GP2			GP3		GP11		EB01		EB02	
Sample ID		GP1-3	GP1-9	GP2-5	GP2-10	GP2-15	GP3-6	GP3-10	GP11-2	GP11-7.5	EB01-2.5	EB01-6	EB02-1.5	EB02-6
Date Sampled		8/30/2006	8/30/2006	8/30/2006	8/30/2006	8/30/2006	8/30/2006	8/30/2006	8/30/2006	8/30/2006	9/19/2022	9/19/2022	9/19/2022	9/19/2022
Depth Sampled (feet)		3	9	5	10	15	6	10	2	7.5	2.5	6	1.5	6
Sampled By		PBS	PBS	PBS	PBS	PBS	PBS	PBS	PBS	PBS	ENW	ENW	ENW	ENW
Location		Abandoned hoist		Abandoned Used Oil UST - West End			Abandoned Used Oil UST - East End		Former Southern Dispenser Island		West end of Used Oil UST		East end of Used Oil UST	
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)
Semivolatile Organic Constituents														
Polychlorinated biphenyls (Total PCBs)	c, v	---	---	<0.05 (ND)	---	---	---	---	---	---	---	0.069	---	---
Polycyclic Aromatic Hydrocarbons														
Acenaphthene	nc, v	---	---	0.0173	---	---	---	---	---	---	---	0.32	---	---
Anthracene	nc, v	---	---	0.0387	---	---	---	---	---	---	---	0.66	---	---
Benz[a]anthracene	c, v	---	---	0.0573	---	---	---	---	---	---	---	1.3	---	---
Benzo[a]pyrene (BaP equivalents)	c, nv	---	---	0.0367	---	---	---	---	---	---	---	<2 (ND)	---	---
Benzo[b]fluoranthene	c, nv	---	---	0.0433	---	---	---	---	---	---	---	<2 (ND)	---	---
Benzo[k]fluoranthene	c, nv	---	---	0.016	---	---	---	---	---	---	---	<2 (ND)	---	---
Chrysene	c, nv	---	---	0.04	---	---	---	---	---	---	---	1.2	---	---
Dibenz[a,h]anthracene	c, nv	---	---	<0.00667 (ND)	---	---	---	---	---	---	---	<2 (ND)	---	---
Fluoranthene	nc, nv	---	---	0.0787	---	---	---	---	---	---	---	1.6	---	---
Fluorene	nc, v	---	---	0.0527	---	---	---	---	---	---	---	1.2	---	---
Indeno[1,2,3-cd]pyrene	c, nv	---	---	0.00733	---	---	---	---	---	---	---	<2 (ND)	---	---
Pyrene	nc, v	---	---	0.246	---	---	---	---	---	---	---	4.3	---	---
Total Petroleum Hydrocarbons														
Generic Gasoline (GRO)	nc, v	<25.5 (NP)	<26.6 (NP)	536	<27.6 (NP)	<24.8 (NP)	160	<28.6 (NP)	71.5	<25.9 (NP)	8	700	30	260
Generic Diesel / Heating Oil (DRO)	nc, v	<63.7 (NP)	<66.5 (NP)	<19.1 (ND)	<20.7 (ND)	<62.1 (NP)	<19.3 (ND)	<71.4 (NP)	<63.6 (NP)	<64.7 (NP)	670 x	13000 x	260 x	180 x
Generic Mineral Insulating Oil (RRO)	nc, nv	<127 (NP)	<133 (NP)	8240	2090	<124 (NP)	5060	<143 (NP)	<127 (NP)	<129 (NP)	5500	46000	3400	1500

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.

x = the pattern of peaks is not indicative of the fuel standard used for quantitation.

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

Pink shaded cells in table indicate sampled location has been subsequently removed to appropriate waste disposal/recycling location and no longer represents current conditions.

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

(2) The generic SLRBC for RRO is based on mineral oil. Therefore, risk screening for RRO will be based on testing of constituents typically associated with RRO.

Table 1 - Summary of Analytical Data, Soil

Location ID		EB03	EB07		EB08	EB09		EB10	EB11	GS01	GS02	GS03	GS04	GS05	GS06
Sample ID		EB03-11.5	EB07-7	EB07-9.5-SWI	EB08-10-SWI	EB09-7	EB09-10-SWI	EB10-5-SWI	EB11-6-SWI	GS01-SF-8.5	GS02-CF-7.5	GS03-SW-5.5	GS04-EW-5.5	GS05-CS-4.5	GS06-NF-8.5
Date Sampled		9/20/2022	9/20/2022	9/20/2022	9/20/2022	9/20/2022	9/20/2022	9/20/2022	9/6/2023	6/20/2023	6/20/2023	6/20/2023	6/20/2023	6/20/2023	6/20/2023
Depth Sampled (feet)		11.5	7	9.5	10	7	10	5	6	8.5	7.5	5.5	5.5	4.5	8.5
Sampled By		ENW	ENW	ENW	ENW	ENW	ENW	ENW	ENW	ENW	ENW	ENW	ENW	ENW	ENW
Location		10' west of Used Oil UST	North side of buidling, north of "West Bay"		East of Used Oil UST	South of Used Oil UST		South of Used Oil UST	Between Building & EB09; 4' from Building (EX03)	Floor Below Hoist H01 (EX01)	Floor (EX01)	South Sidewall (EX01)	East Sidewall (EX01)	Floor (EX02)	Floor Below Hoist H02 (EX01)
Constituent of Interest	Note	mg/Kg (ppm)	mg/Kg (ppm)	mg/Kg (ppm)	mg/Kg (ppm)	mg/Kg (ppm)	mg/Kg (ppm)	mg/Kg (ppm)	mg/Kg (ppm)	mg/Kg (ppm)	mg/Kg (ppm)	mg/Kg (ppm)	mg/Kg (ppm)	mg/Kg (ppm)	mg/Kg (ppm)
Volatile Organic Constituents															
Benzene	c, v	---	---	---	---	---	<0.02 (ND)	---	<0.03 (ND)	---	---	---	1.1	<0.03 (ND)	---
Bromodichloromethane	c, v	---	---	---	---	---	---	---	<0.05 (ND)	---	---	---	---	<0.05 (ND)	---
Bromoform	c, v	---	---	---	---	---	---	---	<0.05 (ND)	---	---	---	---	<0.05 (ND)	---
Bromomethane	nc, v	---	---	---	---	---	---	---	<0.5 (ND) k	---	---	---	---	<0.5 (ND)	---
Carbon tetrachloride	c, v	---	---	---	---	---	---	---	<0.05 (ND)	---	---	---	---	<0.05 (ND)	---
Chlorobenzene	nc, v	---	---	---	---	---	---	---	<0.05 (ND)	---	---	---	---	<0.05 (ND)	---
Chlorodibromomethane (dibromochloromethane)	c, v	---	---	---	---	---	---	---	<0.05 (ND)	---	---	---	---	<0.05 (ND)	---
Chloroethane (ethyl chloride)	nc, v	---	---	---	---	---	---	---	<0.5 (ND)	---	---	---	---	<0.5 (ND)	---
Chloroform	c, v	---	---	---	---	---	---	---	<0.05 (ND)	---	---	---	---	<0.05 (ND)	---
Chloromethane	nc, v	---	---	---	---	---	---	---	<0.5 (ND)	---	---	---	---	<0.5 (ND)	---
1,2-Dichlorobenzene	nc, v	---	---	---	---	---	---	---	<0.05 (ND)	---	---	---	---	<0.05 (ND)	---
1,4-Dichlorobenzene	c, v	---	---	---	---	---	---	---	<0.05 (ND)	---	---	---	---	<0.05 (ND)	---
1,1-Dichloroethane	c, v	---	---	---	---	---	---	---	<0.05 (ND)	---	---	---	---	<0.05 (ND)	---
1,1-Dichloroethene	nc, v	---	---	---	---	---	---	---	<0.05 (ND)	---	---	---	---	<0.05 (ND)	---
cis-1,2-Dichloroethene	nc, v	---	---	---	---	---	---	---	<0.05 (ND)	---	---	---	---	<0.05 (ND)	---
trans-1,2-Dichloroethene	nc, v	---	---	---	---	---	---	---	<0.05 (ND)	---	---	---	---	<0.05 (ND)	---
Dichloromethane	c, v	---	---	---	---	---	---	---	<0.5 (ND)	---	---	---	---	<0.5 (ND)	---
EDB (1,2-dibromoethane)	c, v	---	---	---	---	---	---	---	<0.05 (ND)	---	---	---	<0.05 (ND)	<0.05 (ND)	---
EDC (1,2-dichloroethane)	c, v	---	---	---	---	---	---	---	<0.05 (ND)	---	---	---	<0.05 (ND)	<0.05 (ND)	---
Ethylbenzene	c, v	---	---	---	---	---	<0.02 (ND)	---	<0.05 (ND)	---	---	---	1.7	<0.05 (ND)	---
MTBE (methyl t-butyl ether)	c, v	---	---	---	---	---	---	---	<0.05 (ND)	---	---	---	<0.05 (ND)	<0.05 (ND)	---
Naphthalene	c, v	---	---	---	---	---	---	---	<0.05 (ND)	---	---	---	2.9	<0.05 (ND)	---
iso-Propylbenzene (cumene)	nc, v	---	---	---	---	---	---	---	<0.05 (ND)	---	---	---	0.53	<0.05 (ND)	---
Tetrachloroethene (PCE)	c, v	---	---	---	---	---	---	---	<0.025 (ND)	---	---	---	---	<0.025 (ND)	---
Toluene	nc, v	---	---	---	---	---	<0.02 (ND)	---	<0.05 (ND)	---	---	---	0.1	<0.05 (ND)	---
1,1,1-Trichloroethane	nc, v	---	---	---	---	---	---	---	<0.05 (ND)	---	---	---	---	<0.05 (ND)	---
1,1,2-Trichloroethane	c, v	---	---	---	---	---	---	---	<0.05 (ND)	---	---	---	---	<0.05 (ND)	---
Trichloroethene	NA, v	---	---	---	---	---	---	---	<0.02 (ND)	---	---	---	---	<0.02 (ND)	---
Trichlorofluoromethane (Freon 11)	nc, v	---	---	---	---	---	---	---	<0.5 (ND)	---	---	---	---	<0.5 (ND)	---
1,2,4-Trimethylbenzene	nc, v	---	---	---	---	---	---	---	<0.05 (ND)	---	---	---	12	<0.05 (ND)	---
1,3,5-Trimethylbenzene	nc, v	---	---	---	---	---	---	---	<0.05 (ND)	---	---	---	2.5	<0.05 (ND)	---
Vinyl chloride	c, v	---	---	---	---	---	---	---	<0.05 (ND)	---	---	---	---	<0.05 (ND)	---
Xylenes	nc, v	---	---	---	---	---	<0.06 (ND)	---	<0.1 (ND)	---	---	---	13.4	<0.05 (ND)	---
Metals															
Arsenic	c, nv	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Barium	nc, nv	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Cadmium	nc, nv	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Chromium (III)	nc, nv	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Lead	NA, nv	7.70	---	---	---	---	---	---	26.6	---	---	---	169	965	---
Mercury	nc, nv	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Silver	nc, nv	---	---	---	---	---	---	---	---	---	---	---	---	---	---

Table 1 - Summary of Analytical Data, Soil

Location ID		EB03	EB07		EB08	EB09		EB10	EB11	GS01	GS02	GS03	GS04	GS05	GS06
Sample ID		EB03-11.5	EB07-7	EB07-9.5-SWI	EB08-10-SWI	EB09-7	EB09-10-SWI	EB10-5-SWI	EB11-6-SWI	GS01-SF-8.5	GS02-CF-7.5	GS03-SW-5.5	GS04-EW-5.5	GS05-CS-4.5	GS06-NF-8.5
Date Sampled		9/20/2022	9/20/2022	9/20/2022	9/20/2022	9/20/2022	9/20/2022	9/20/2022	9/6/2023	6/20/2023	6/20/2023	6/20/2023	6/20/2023	6/20/2023	6/20/2023
Depth Sampled (feet)		11.5	7	9.5	10	7	10	5	6	8.5	7.5	5.5	5.5	4.5	8.5
Sampled By		ENW	ENW	ENW	ENW	ENW	ENW	ENW	ENW	ENW	ENW	ENW	ENW	ENW	ENW
Location		10' west of Used Oil UST	North side of buidling, north of "West Bay"		East of Used Oil UST	South of Used Oil UST		South of Used Oil UST	Between Building & EB09; 4' from Building (EX03)	Floor Below Hoist H01 (EX01)	Floor (EX01)	South Sidewall (EX01)	East Sidewall (EX01)	Floor (EX02)	Floor Below Hoist H02 (EX01)
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	---	---	---	---	---	---	---		---	---	---	---	0.074	---
Polycyclic Aromatic Hydrocarbons															
Acenaphthene	nc, v	---	---	---	---	---	---	---	<0.05 (ND)	---	---	---	0.043	<0.05 (ND)	---
Anthracene	nc, v	---	---	---	---	---	---	---	<0.05 (ND)	---	---	---	0.047	<0.05 (ND)	---
Benz[a]anthracene	c, v	---	---	---	---	---	---	---	<0.05 (ND)	---	---	---	0.094	<0.05 (ND)	---
Benzo[a]pyrene (BaP equivalents)	c, nv	---	---	---	---	---	---	---	<0.05 (ND)	---	---	---	0.039	<0.05 (ND)	---
Benzo[b]fluoranthene	c, nv	---	---	---	---	---	---	---	<0.05 (ND)	---	---	---	0.048	<0.05 (ND)	---
Benzo[k]fluoranthene	c, nv	---	---	---	---	---	---	---	<0.05 (ND)	---	---	---	0.017	<0.05 (ND)	---
Chrysene	c, nv	---	---	---	---	---	---	---	<0.05 (ND)	---	---	---	0.077	<0.05 (ND)	---
Dibenz[a,h]anthracene	c, nv	---	---	---	---	---	---	---	<0.05 (ND)	---	---	---	<0.01 (ND)	<0.05 (ND)	---
Fluoranthene	nc, nv	---	---	---	---	---	---	---	0.060	---	---	---	0.11	<0.05 (ND)	---
Fluorene	nc, v	---	---	---	---	---	---	---	0.60	---	---	---	0.1	<0.05 (ND)	---
Indeno[1,2,3-cd]pyrene	c, nv	---	---	---	---	---	---	---	<0.05 (ND)	---	---	---	0.013	<0.05 (ND)	---
Pyrene	nc, v	---	---	---	---	---	---	---	0.13 ca jl	---	---	---	0.23	<0.05 (ND)	---
Total Petroleum Hydrocarbons															
Generic Gasoline (GRO)	nc, v	<5 (ND)	65	<5 (ND)	<5 (ND)	19	<5 (ND)	<5 (ND)	130	12	86	180	530	<5 (ND)	240
Generic Diesel / Heating Oil (DRO)	nc, v	<50 (ND)	470 x	<50 (ND)	<50 (ND)	340 x	<50 (ND)	<50 (ND)	140 x	<50 (ND)	180 x	370 x	420 x	<50 (ND)	300 x
Generic Mineral Insulating Oil (RRO)	nc, nv	<250 (ND)	2800	<250 (ND)	<250 (ND)	3700	<250 (ND)	<250 (ND)	910	<250 (ND)	3100	4400	4300	7200	3600

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.

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.

Pink shaded cells in table indicate sampled location has been subsequently removed to appropriate waste disposal/recycling location and no longer represents current conditions.

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

(2) The generic SLRBC for RRO is based on mineral oil. Therefore, risk screening for RRO will be based on testing of constituents tpecially associated with RRO.

Table 1 - Summary of Analytical Data, Soil

Location ID		GS07	GS08	GS09	GS10	GS11	GS12	GS13	GS14
Sample ID		GS07-NWW-5.5	GS08-WW-5.5	GS09-NW-5.5	GS10-F-8.5	GS11-NW-5.5	GS12-EW-5.5	GS13-SW-5.5	GS14-WW-5.5
Date Sampled		6/20/2023	6/20/2023	6/20/2023	6/27/2023	6/27/2023	6/27/2023	6/27/2023	6/27/2023
Depth Sampled (feet)		5.5	5.5	5.5	8.5	5.5	5.5	5.5	5.5
Sampled By		ENW	ENW	ENW	ENW	ENW	ENW	ENW	ENW
Location		Northwest Sidewall (EX01)	West Sidewall (EX01)	North Sidewall (EX01)	Floor (EX03)	North Sidewall (EX03)	Northeast Sidewall (EX03)	Northwest Sidewall (EX03)	South Sidewall (EX03)
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)
Volatile Organic Constituents									
Benzene	c, v	---	---	---	---	---	<0.03 (ND)	---	---
Bromodichloromethane	c, v	---	---	---	---	---	<0.05 (ND)	---	---
Bromoform	c, v	---	---	---	---	---	<0.05 (ND)	---	---
Bromomethane	nc, v	---	---	---	---	---	<0.05 (ND) k	---	---
Carbon tetrachloride	c, v	---	---	---	---	---	<0.05 (ND)	---	---
Chlorobenzene	nc, v	---	---	---	---	---	<0.05 (ND)	---	---
Chlorodibromomethane (dibromochloromethane)	c, v	---	---	---	---	---	<0.05 (ND)	---	---
Chloroethane (ethyl chloride)	nc, v	---	---	---	---	---	<0.5 (ND) k	---	---
Chloroform	c, v	---	---	---	---	---	<0.05 (ND)	---	---
Chloromethane	nc, v	---	---	---	---	---	<0.5 (ND)	---	---
1,2-Dichlorobenzene	nc, v	---	---	---	---	---	<0.05 (ND)	---	---
1,4-Dichlorobenzene	c, v	---	---	---	---	---	<0.05 (ND)	---	---
1,1-Dichloroethane	c, v	---	---	---	---	---	<0.05 (ND)	---	---
1,1-Dichloroethene	nc, v	---	---	---	---	---	<0.05 (ND)	---	---
cis-1,2-Dichloroethene	nc, v	---	---	---	---	---	<0.05 (ND)	---	---
trans-1,2-Dichloroethene	nc, v	---	---	---	---	---	<0.05 (ND)	---	---
Dichloromethane	c, v	---	---	---	---	---	---	---	---
EDB (1,2-dibromoethane)	c, v	---	---	---	---	---	<0.05 (ND)	---	---
EDC (1,2-dichloroethane)	c, v	---	---	---	---	---	<0.05 (ND)	---	---
Ethylbenzene	c, v	---	---	---	---	---	<0.05 (ND)	---	---
MTBE (methyl t-butyl ether)	c, v	---	---	---	---	---	<0.05 (ND)	---	---
Naphthalene	c, v	---	---	---	---	---	<0.05 (ND)	---	---
iso-Propylbenzene (cumene)	nc, v	---	---	---	---	---	0.061	---	---
Tetrachloroethene (PCE)	c, v	---	---	---	---	---	<0.025 (ND)	---	---
Toluene	nc, v	---	---	---	---	---	0.062	---	---
1,1,1-Trichloroethane	nc, v	---	---	---	---	---	<0.05 (ND)	---	---
1,1,2-Trichloroethane	c, v	---	---	---	---	---	<0.05 (ND)	---	---
Trichloroethene	NA, v	---	---	---	---	---	<0.02 (ND)	---	---
Trichlorofluoromethane (Freon 11)	nc, v	---	---	---	---	---	<0.5 (ND)	---	---
1,2,4-Trimethylbenzene	nc, v	---	---	---	---	---	0.082	---	---
1,3,5-Trimethylbenzene	nc, v	---	---	---	---	---	<0.05 (ND)	---	---
Vinyl chloride	c, v	---	---	---	---	---	<0.05 (ND)	---	---
Xylenes	nc, v	---	---	---	---	---	0.24	---	---
Metals									
Arsenic	c, nv	---	---	---	---	---	---	---	---
Barium	nc, nv	---	---	---	---	---	---	---	---
Cadmium	nc, nv	---	---	---	---	---	---	---	---
Chromium (III)	nc, nv	---	---	---	---	---	---	---	---
Lead	NA, nv	---	---	---	---	---	8.31	---	---
Mercury	nc, nv	---	---	---	---	---	---	---	---
Silver	nc, nv	---	---	---	---	---	---	---	---

Table 1 - Summary of Analytical Data, Soil

Location ID		GS07	GS08	GS09	GS10	GS11	GS12	GS13	GS14
Sample ID		GS07-NWW-5.5	GS08-WW-5.5	GS09-NW-5.5	GS10-F-8.5	GS11-NW-5.5	GS12-EW-5.5	GS13-SW-5.5	GS14-WW-5.5
Date Sampled		6/20/2023	6/20/2023	6/20/2023	6/27/2023	6/27/2023	6/27/2023	6/27/2023	6/27/2023
Depth Sampled (feet)		5.5	5.5	5.5	8.5	5.5	5.5	5.5	5.5
Sampled By		ENW	ENW	ENW	ENW	ENW	ENW	ENW	ENW
Location		Northwest Sidewall (EX01)	West Sidewall (EX01)	North Sidewall (EX01)	Floor (EX03)	North Sidewall (EX03)	Northeast Sidewall (EX03)	Northwest Sidewall (EX03)	South Sidewall (EX03)
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)
Semivolatile Organic Constituents									
Polychlorinated biphenyls (Total PCBs)	c, v	---	---	---	---	---	<0.02 (ND)	---	---
Polycyclic Aromatic Hydrocarbons									
Acenaphthene	nc, v	---	---	---	---	---	<0.01 (ND)	---	---
Anthracene	nc, v	---	---	---	---	---	<0.01 (ND)	---	---
Benz[a]anthracene	c, v	---	---	---	---	---	0.011	---	---
Benzo[a]pyrene (BaP equivalents)	c, nv	---	---	---	---	---	<0.01 (ND)	---	---
Benzo[b]fluoranthene	c, nv	---	---	---	---	---	<0.01 (ND)	---	---
Benzo[k]fluoranthene	c, nv	---	---	---	---	---	<0.01 (ND)	---	---
Chrysene	c, nv	---	---	---	---	---	0.019	---	---
Dibenz[a,h]anthracene	c, nv	---	---	---	---	---	<0.01 (ND)	---	---
Fluoranthene	nc, nv	---	---	---	---	---	0.017	---	---
Fluorene	nc, v	---	---	---	---	---	0.019	---	---
Indeno[1,2,3-cd]pyrene	c, nv	---	---	---	---	---	<0.01 (ND)	---	---
Pyrene	nc, v	---	---	---	---	---	0.028	---	---
Total Petroleum Hydrocarbons									
Generic Gasoline (GRO)	nc, v	330	230	120	<5 (ND)	23	130	120	64
Generic Diesel / Heating Oil (DRO)	nc, v	98 x	220 x	190 x	<50 (ND)	100 x	240 x	150 x	73 x
Generic Mineral Insulating Oil (RRO)	nc, nv	1300	2400	2300	<250 (ND)	750	1300	1100	950

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.

x = the pattern of peaks is not indicative of the fuel standard used for quantitation.

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

Pink shaded cells in table indicate sampled location has been subsequently removed to appropriate waste disposal/recycling location and no longer represents current conditions.

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

(2) The generic SLRBC for RRO is based on mineral oil. Therefore, risk screening for RRO will be based on testing of constituents typically associated with RRO.

Table 1 - Summary of Analytical Data, Soil

Location ID		Maximum Soil Concentration (remaining soil, used oil area (does not include borings sited near former UST nest)	Soil Matrix Cleanup Level	ODEQs Screening-Level Risk-Based Concentrations SLRBCs ¹ (Soil)	Background Concentrations (Regional Default)	Exceeds ODEQs Screening-Level SLRBCs (Soil) and/or Soil Matrix Cleanup Level
Sample ID					Portland Basin	TRUE OR Y FALSE OR N
Date Sampled						
Depth Sampled (feet)						
Sampled By						
Location						
Constituent of Interest		Note	mg/Kg (ppm)			
Volatile Organic Constituents						
Benzene	c, v	1.1	NE	0.023	---	Y
Bromodichloromethane	c, v	<0.05 (ND)	NE	0.002	---	(Y)
Bromoform	c, v	<0.05 (ND)	NE	0.046	---	(Y)
Bromomethane	nc, v	<0.5 (ND)	NE	0.083	---	(Y)
Carbon tetrachloride	c, v	<0.05 (ND)	NE	0.013	---	(Y)
Chlorobenzene	nc, v	<0.05 (ND)	NE	5.8	---	N
Chlorodibromomethane (dibromochloromethane)	c, v	<0.05 (ND)	NE	0.0024	---	(Y)
Chloroethane (ethyl chloride)	nc, v	<0.5 (ND)	NE	310	---	N
Chloroform	c, v	<0.05 (ND)	NE	0.0034	---	(Y)
Chloromethane	nc, v	<0.5 (ND)	NE	2.2	---	N
1,2-Dichlorobenzene	nc, v	<0.05 (ND)	NE	36	---	N
1,4-Dichlorobenzene	c, v	<0.05 (ND)	NE	0.057	---	N
1,1-Dichloroethane	c, v	<0.05 (ND)	NE	0.044	---	(Y)
1,1-Dichloroethene	nc, v	<0.05 (ND)	NE	6.7	---	N
cis-1,2-Dichloroethene	nc, v	<0.05 (ND)	NE	0.63	---	N
trans-1,2-Dichloroethene	nc, v	<0.05 (ND)	NE	7.0	---	N
Dichloromethane	c, v	<0.5 (ND)	NE	0.14	---	(Y)
EDB (1,2-dibromoethane)	c, v	<0.05 (ND)	NE	0.00012	---	(Y)
EDC (1,2-dichloroethane)	c, v	<0.05 (ND)	NE	0.0028	---	(Y)
Ethylbenzene	c, v	2.16	NE	0.22	---	Y
MTBE (methyl t-butyl ether)	c, v	<0.05 (ND)	NE	0.11	---	N
Naphthalene	c, v	2.9	NE	0.077	---	Y
iso-Propylbenzene (cumene)	nc, v	0.53	NE	96	---	N
Tetrachloroethene (PCE)	c, v	<0.025 (ND)	NE	0.46	---	N
Toluene	nc, v	0.438	NE	83	---	N
1,1,1-Trichloroethane	nc, v	<0.05 (ND)	NE	190	---	N
1,1,2-Trichloroethane	c, v	<0.05 (ND)	NE	0.0063	---	(Y)
Trichloroethene	NA, v	<0.02 (ND)	NE	0.013	---	(Y)
Trichlorofluoromethane (Freon 11)	nc, v	<0.5 (ND)	NE	61	---	N
1,2,4-Trimethylbenzene	nc, v	12	NE	10	---	Y
1,3,5-Trimethylbenzene	nc, v	2.5	NE	11	---	N
Vinyl chloride	c, v	<0.05 (ND)	NE	0.00057	---	(Y)
Xylenes	nc, v	13.4	NE	23	---	N
Metals						
Arsenic	c, nv	0	NE	0.43	8.8	N
Barium	nc, nv	0	NE	15000	790	N
Cadmium	nc, nv	---	NE	78	0.63	N
Chromium (III)	nc, nv	---	NE	120000	76	N
Lead	NA, nv	965	NE	30	28	Y
Mercury	nc, nv	---	NE	23	0.23	N
Silver	nc, nv	---	NE	390	0.82	N

Table 1 - Summary of Analytical Data, Soil

Location ID		Maximum Soil Concentration (remaining soil, used oil area (does not include borings sited near former UST nest)	Soil Matrix Cleanup Level	ODEQs Screening-Level Risk-Based Concentrations SLRBCs ¹ (Soil)	Background Concentrations (Regional Default)	Exceeds ODEQs Screening-Level SLRBCs (Soil) and/or Soil Matrix Cleanup Level
Sample ID					Portland Basin	TRUE OR Y FALSE OR N
Date Sampled						
Depth Sampled (feet)						
Sampled By						
Location						
Constituent of Interest		Note	mg/Kg (ppm)			
Semivolatile Organic Constituents						
Polychlorinated biphenyls (Total PCBs)	c, v	0.074	NE	0.23	---	N
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	nc, v	0.043	NE	770	---	N
Anthracene	nc, v	0.047	NE	8200	---	N
Benz[a]anthracene	c, v	0.094	NE	1.1	---	N
Benzo[a]pyrene (BaP equivalents)	c, nv	0.039	NE	0.11	---	N
Benzo[b]fluoranthene	c, nv	0.048	NE	1.1	---	N
Benzo[k]fluoranthene	c, nv	0.017	NE	11	---	N
Chrysene	c, nv	0.077	NE	110	---	N
Dibenz[a,h]anthracene	c, nv	<0.05 (ND)	NE	0.11	---	N
Fluoranthene	nc, nv	0.11	NE	2400	---	N
Fluorene	nc, v	0.6	NE	770	---	N
Indeno[1,2,3-cd]pyrene	c, nv	0.013	NE	1.1	---	N
Pyrene	nc, v	0.23	NE	1800	---	N
Total Petroleum Hydrocarbons						
Generic Gasoline (GRO)	nc, v	831	80	31	---	Y
Generic Diesel / Heating Oil (DRO)	nc, v	470 x	500	1100	---	N
Generic Mineral Insulating Oil (RRO)	nc, nv	7200		2800	---	(2)

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.

x = the pattern of peaks is not indicative of the fuel standard used for quantitation.

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

Pink shaded cells in table indicate sampled location has been subsequently removed to appropriate waste disposal/recycling location and no longer represents current conditions.

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

(2) The generic SLRBC for RRO is based on mineral oil. Therefore, risk screening for RRO will be based on testing of constituents typically associated with RRO.



Table 2. Summary of Analytical Data - TCLP Metals

Location ID		GP2	GP9	EB01	TC-Solids	GS04	GS05	RCRA ¹ Toxicity Characteristic
Sample ID		GP2-5'	GP9-7	EB01-6	TC-Solids	GS04-EW-5.5	GS05-CS-4.5	
Date Sampled		8/30/2006	8/30/2006	9/19/2022	9/20/2022	6/20/2023	6/20/23	
Depth Sampled (feet)		5	7	6	--			
Sampled By		PBS	PBS	ENW	ENW	ENW	ENW	
Location		West End of Used Oil UST	Former UST Pit	East end of Used Oil UST	Tank Contents of UST01	Former UST Pit	Floor (EX02)	
Constituent of Interest	Note	mg/L (ppm)	mg/L (ppm)	mg/L (ppm)	mg/L (ppm)	mg/L (ppm)	mg/L (ppm)	mg/L (ppm)
Metals								
Arsenic	c, nv	---	---	---	<1 (ND)	---	---	5
Barium	nc, nv	---	---	---	<1 (ND)	---	---	100
Cadmium	nc, nv	<0.005 (ND)	---	---	<1 (ND)	---	---	1
Chromium (III)	nc, nv	<0.025 (ND)	---	---	<1 (ND)	---	---	5
Lead	NA, nv	<0.1 (ND)	<0.1 (ND)	0.235	16.8	0.059	4.15	5
Mercury	nc, nv	---	---	---	<0.1 (ND)	---	---	0.2
Silver	nc, nv	---	---	---	<1 (ND)	---	---	5

Notes:

¹ Resource Conservation and Recovery Act, 1976

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

nv = nonvolatile

Pink shaded cells in table indicate sampled location has been subsequently removed to appropriate waste disposal/recycling location and no longer represents current conditions.



Table 3 - Summary of Analytical Data, Reconnaissance Ground Water and Pit Water

Location ID		EB08	EB09	EB10	EB11	Pit Water	Pit Water	Maximum Ground Water Concentration (Borings EB08, EB10, EB11 and Pit Water)	ODEQs Screening-level Risk-Based Concentrations (SLRBCs) ¹	Background Concentrations (metals)	Exceeds Background Concentrations (metals)?	COPC?
Sample ID		EB08-GW-15	EB09-GW-13	EB10-GW-10	EB11-GW-9.5	Pit Water-230620	Pit Water-230626				TRUE OR Y FALSE OR N	TRUE OR Y FALSE OR N
Date Sampled		9/20/22	9/20/22	9/20/22	9/6/23	6/20/23	6/26/23					
Depth Sampled (feet)		15	13	10	10	8.5	8.5					
Sampled By		ENW	ENW	ENW	ENW	ENW	ENW					
Location		Step-Out Boring East of Used Oil UST	Step-Out Boring South of Used Oil UST (REMOVED)	Step-Out Boring South of Used Oil UST	Between Building & EB09; 4' from Building	EX01 Pit Water	EX03 Pit Water					
Constituent of Interest		Note	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)	0.46	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)	0.13	NE	N	(Y)
Bromoform	c, v	<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) k	<5 (ND) k	<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)	0.46	NE	N	(Y)
Chlorobenzene	nc, v	<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)	0.17	NE	N	(Y)
Chloroethane (ethyl chloride)	nc, v	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND) k	<1 (ND)	<1 (ND)	21000	NE	N	N
Chloroform	c, v	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	0.22	NE	N	(Y)
Chloromethane	nc, v	<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)	300	NE	N	N
1,4-Dichlorobenzene	c, v	<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)	2.8	NE	N	N
1,1-Dichloroethene	nc, v	<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)	36	NE	N	N
trans-1,2-Dichloroethene	nc, v	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	360	NE	N	N
Dichloromethane	c, v	13 lc	<5 (ND) jl	<5 (ND) jl	<5 (ND)	<5 (ND)	<1 (ND)	13 lc	11	NE	N	LC
EDB (1,2-dibromoethane)	c, v	<1 (ND)	<1 (ND)	<1 (ND)	<0.01 (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)	0.17	NE	N	(Y)
Ethylbenzene	c, v	<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)	14	NE	N	N
Naphthalene	c, v	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<0.2 (ND)	<1 (ND)	0.17	NE	N	(Y)
iso-Propylbenzene (cumene)	nc, v	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	1.4	<1 (ND)	1.4	440	NE	N	N
Tetrachloroethene (PCE)	c, v	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	12	NE	N	N
Toluene	nc, v	<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)	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)	<1 (ND)	<1 (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)	0.49	NE	N	(Y)
Trichlorofluoromethane (Freon 11)	nc, v	<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)	1.5	<1 (ND)	1.5	54	NE	N	N
1,3,5-Trimethylbenzene	nc, v	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	59	NE	N	N
Vinyl chloride	c, v	<0.02 (ND)	<0.02 (ND)	<0.02 (ND)	<0.02 (ND)	<0.02 (ND)	<0.02 (ND)	<0.02 (ND)	0.027	NE	N	N
Xylenes	nc, v	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	1.9	<1 (ND)	1.9	190	NE	N	N
Metals												
Arsenic	c, nv	---	---	---	2.23	---	---	2.23	0.052	2	BKG	BKG
Barium	nc, nv	---	---	---	24.9	---	---	24.9	4000	NE	N	N
Cadmium	nc, nv	---	---	---	<1 (ND)	---	---	<1 (ND)	20	1	N	N
Chromium (III)	nc, nv	---	---	---	<1 (ND)	---	---	<1 (ND)	30000	1	N	N
Lead	NA, nv	---	---	---	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	15	13.3	N	N
Mercury	nc, nv	---	---	---	<1 (ND)	---	---	<1 (ND)	6	0.1	(Y)	N
Silver	nc, nv	---	---	---	<1 (ND)	---	---	<1 (ND)	100	1	N	N

Table 3 - Summary of Analytical Data, Reconnaissance Ground Water and Pit Water

Location ID		EB08	EB09	EB10	EB11	Pit Water	Pit Water	Maximum Ground Water Concentration (Borings EB08, EB10, EB11 and Pit Water)	ODEQs Screening-level Risk-Based Concentrations (SLRBCs) ¹	Background Concentrations (metals)	Exceeds Background Concentrations (metals)?	COPC?
Sample ID		EB08-GW-15	EB09-GW-13	EB10-GW-10	EB11-GW-9.5	Pit Water-230620	Pit Water-230626					
Date Sampled		9/20/22	9/20/22	9/20/22	9/6/23	6/20/23	6/26/23					
Depth Sampled (feet)		15	13	10	10	8.5	8.5					
Sampled By		ENW	ENW	ENW	ENW	ENW	ENW					
Location		Step-Out Boring East of Used Oil UST	Step-Out Boring South of Used Oil UST (REMOVED)	Step-Out Boring South of Used Oil UST	Between Building & EB09; 4' from Building	EX01 Pit Water	EX03 Pit Water				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)				
Semivolatile Organic Constituents												
Polycyclic Aromatic Hydrocarbons												
Acenaphthene	nc, v	---	---	---	1.8	0.058	<0.02 (ND)	1.8	510	NE	N	N
Anthracene	nc, v	---	---	---	1.8	<0.02 (ND)	<0.02 (ND)	1.8	>S	NE	N	N
Benz[a]anthracene	c, v	---	---	---	2.5	0.028	<0.02 (ND)	2.5	0.03	NE	N	Y
Benzo[a]pyrene (BaP equivalents)	c, nv	---	---	---	1.2	<0.02 (ND)	<0.02 (ND)	1.2	0.025	NE	N	Y
Benzo[b]fluoranthene	c, nv	---	---	---	1.5	<0.02 (ND)	<0.02 (ND)	1.5	0.25	NE	N	Y
Benzo[k]fluoranthene	c, nv	---	---	---	0.42	<0.02 (ND)	<0.02 (ND)	0.42	2.5	NE	N	N
Chrysene	c, nv	---	---	---	2.2	0.023	<0.02 (ND)	2.2	>S	NE	N	N
Dibenz[a,h]anthracene	c, nv	---	---	---	<0.2 (ND)	<0.02 (ND)	<0.04 (ND)	<0.2 (ND)	0.025	NE	N	(Y)
Fluoranthene	nc, nv	---	---	---	4.1	0.048	0.025	4.1	>S	NE	N	N
Fluorene	nc, v	---	---	---	3.0	0.13	0.037	3	280	NE	N	N
Indeno[1,2,3-cd]pyrene	c, nv	---	---	---	0.25	<0.02 (ND)	<0.02 (ND)	0.25	>S	NE	N	N
Pyrene	nc, v	---	---	---	7.5	0.084	0.04	7.5	>S	NE	N	N
Total Petroleum Hydrocarbons												
Generic Gasoline (GRO)	nc, v	<100 (ND)	2600	<100 (ND)	3000	140	<100 (ND)	3000	110	NE	N	Y
Generic Diesel / Heating Oil (DRO)	nc, v	90 x	240000 x	75 x	21000 x	4500 x	1400 x	240000 x	100	NE	N	Y
Generic Mineral Insulating Oil (RRO)	nc, nv	910	1400000	400	120000	16000	4000	1400000	300	NE	N	(2)

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.
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.
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.
BKG = constituent exceeded its SLRBC; however, was not detected above default background concentrations in soil
x = the pattern of peaks is not indicative of the fuel standard used for quantitation.

(2) The generic SLRBC for RRO is based on mineral oil. Therefore, risk screening for RRO will be based on testing of constituents typcially associated with RRO.

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

Table 4 - Summary of Analytical Data, Sub-Slab Vapor

Sample ID		SUB01-231009	SUB02-231009	Maximum Soil-Gas Concentration	ODEQs Screening-level RBCs (Soil Gas) ¹	Constituent of Concern (COC) TRUE OR Y FALSE OR N
Date Sampled		10/9/23	10/9/23			
Depth Sampled (feet)		sub-slab	sub-slab			
Sampled By		ENW	ENW			
Location		Building interior West Service Bay	Building interior East Service Bay			
Constituent of Interest	Note	µg/m3	µg/m3	µg/m ³		
Volatile Organic Constituents						
Benzene	c, v	<13 (ND)	<13 (ND)	<13 (ND)	12	(Y)
EDB (1,2-dibromoethane)	c, v	<6.5 (ND)	<6.5 (ND)	<6.5 (ND)	0.16	(Y)
EDC (1,2-dichloroethane)	c, v	<6.5 (ND)	<6.5 (ND)	<6.5 (ND)	3.6	(Y)
Ethylbenzene	c, v	<6.5 (ND)	<6.5 (ND)	<6.5 (ND)	37	N
MTBE (methyl t-butyl ether)	c, v	<32 (ND)	<32 (ND)	<32 (ND)	360	N
Naphthalene	c, v	1.7	1.6	1.7	2.8	N
iso-Propylbenzene (cumene)	nc, v	<6.5 (ND)	<6.5 (ND)	<6.5 (ND)	14000	N
Toluene	nc, v	11	10	11	170000	N
1,2,4-Trimethylbenzene	nc, v	5.9	5.5	5.9	2100	N
1,3,5-Trimethylbenzene	nc, v	1.5	1.5	1.5	2100	N
Xylenes	nc, v	<19.5 (ND)	<19.5 (ND)	<19.5 (ND)	3500	N
Total Petroleum Hydrocarbons						
Generic Gasoline (GRO)	nc, v	<3300 (ND)	<3300 (ND)	<3300 (ND)	79000	N
Generic Diesel / Heating Oil (DRO)	nc, v	<2100 (ND)	<2100 (ND)	<2100 (ND)	3300	N
Leak Detection				Maximum Soil-Gas Concentration	Leak Screening Level	Leak Suggested?
2-Propanol		<320 (ND)	<320 (ND)	<320 (ND)	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.
ug/m³ = micrograms per cubic meter of air .
c = carcinogenic
nc = noncarcinogenic
v = volatile
nv = nonvolatile
DRO = diesel-range organics.
RRO = residual-range organics.
¹ Lowest Risk-Based Concentration for soil gas/sub-slab vapor (screening level).
(Y) indicates analyte not detected, but detection limit is above screening concentration.

Table 5. Further Evaluation of COPCs in Soil

Contaminated Medium				SOIL mg/Kg (ppm)										Maximum Detected Concentration	Lowest Applicable RBC (Soil)	Constituent of Concern (COC)?		
Exposure Pathway				Soil Ingestion, Dermal Contact, and Inhalation				Volatilization to Outdoor Air				Vapor Intrusion into Buildings						
				RBC _{ss}				RBC _{so}				RBC _{si}						
Receptor Scenario				Construction Worker		Excavation Worker		Urban Residential		Occupational		Urban Residential					Occupational	
Direct or Indirect Pathway (see notes)				DC		DC		IVS		IVS		IVS					IVS	
Contaminant of Concern		Note			Note		Note		Note		Note		Note	mg/Kg (ppm)	mg/Kg (ppm)	Y/N		
Volatile Organic Constituents																		
Benzene		c, v		380		11000	>Csat	27		50		0.38		2.1		1.1	0.38	Y
Ethylbenzene		c, v		1700	>Csat	49000	>Csat	85		160		3		17		2.16	3	N
Naphthalene		c, v		580	>Csat	16000	>Csat	15		83		15		83		2.9	15	N
1,2,4-Trimethylbenzene		nc, v		2900	>Csat	81000	>Csat	2000		8400		140		1800		12	140	N
Metals																		
Lead		NA, nv		800	L	800	L	-	NV	-	NV	-	NV	-	NV	965	800	Y
Total Petroleum Hydrocarbons																		
Generic Gasoline (GRO)		nc, v		9700		-	>Max	5900		69000		94		-	>Max	831	94	Y

Notes:

— = not analyzed or not applicable.

< = not detected above method reporting limit shown.

mg/Kg = milligrams per Kilogram or parts per million (ppm).

c = carcinogenic

nc = noncarcinogenic

v = volatile

nv = nonvolatile

GRO = gasoline-range organics.

>Csat = This soil RBC exceeds the limit of three-phase equilibrium partitioning.

>Max = The constituent RBC for this pathway is greater than 100,000 mg/kg. The Department believes it is highly unlikely that such concentrations will ever be encountered.

Table 6. Further Evaluation of COPCs, Reconnaissance Ground Water

Contaminated Medium			GROUND WATER µg/L (ppb)																		Maximum Detected Concentration	Lowest Applicable RBC (Ground Water) ¹	Constituent of Concern (COC)?		
Exposure Pathway		Ingestion & Inhalation from Tapwater RBC _{tw}						Volatilization to Outdoor Air RBC _{wo}						Vapor Intrusion Screening Levels (VISL) RBC _{wi}						GW in Excavation RBC _{we}					
		Residential		Urban Residential		Occupational		Residential		Urban Residential		Occupational		Residential		Residential/ Urban Residential		Occupational		Construction & Excavation Worker					
Receptor Scenario			DS		DS		DS		IVW		IVW		IVW		IVW		IVW		IVW					DS	
Direct or Indirect Pathway (see notes)			DS		DS		DS		IVW		IVW		IVW		IVW		IVW		IVW		DS				
Contaminant of Concern		Note		Note		Note		Note		Note		Note		Note		Note		Note		Note		Note	µg/L (ppb)	µg/L (ppb)	Y/N
Volatile Organic Constituents																									
Benzene	c, v	0.46		2		2.1		3100		7400		14000		2.8		2.8		12		1800		2.8	2.8	N	
Ethylbenzene	c, v	1.5		6.7		6.4		9900		23000		43000		620		7.1		31		4500		190	7.1	Y	
Naphthalene	c, v	0.17		0.78		0.72		3600		8500		16000		840		11		50		500		94	11	Y	
1,2,4-Trimethylbenzene	nc, v	54		230		250		720000	>S	720000	>S	3000000	>S	50000		560		2400	>S	6300		480	560	N	
1,3,5-Trimethylbenzene	nc, v	59		240		280		570000	>S	570000	>S	2400000	>S	36000	>S	400	>S	1700	>S	7500		130	400	N	
Xylenes	nc, v	190		710		830		1200000	>S	1200000	>S	5100000	>S	86000		780		3300	>S	23000		1080	780	Y	
Total Petroleum Hydrocarbons																									
Generic Gasoline (GRO)	nc, v	110		110		450		-	>S	-	>S	-	>S	22000		124		519	>S	14000		10000	124	Y	
Generic Diesel / Heating Oil (DRO)	nc, v	100		100		430		-	>S	-	>S	-	>S	-	>S	403	>S	1650	>S	-	>S	240000	403	Y	
Generic Mineral Insulating Oil (RRO)	nc, nv	300		300		1300		-	>S	-	>S	-	>S	-	>S	358	>S	1504	>S	-	>S	1400000	358	Y	

Notes:

ND = not detected at or above laboratory method reporting limits

— = not analyzed or not applicable.

ug/L = micrograms per Liter or parts per billion (ppb).

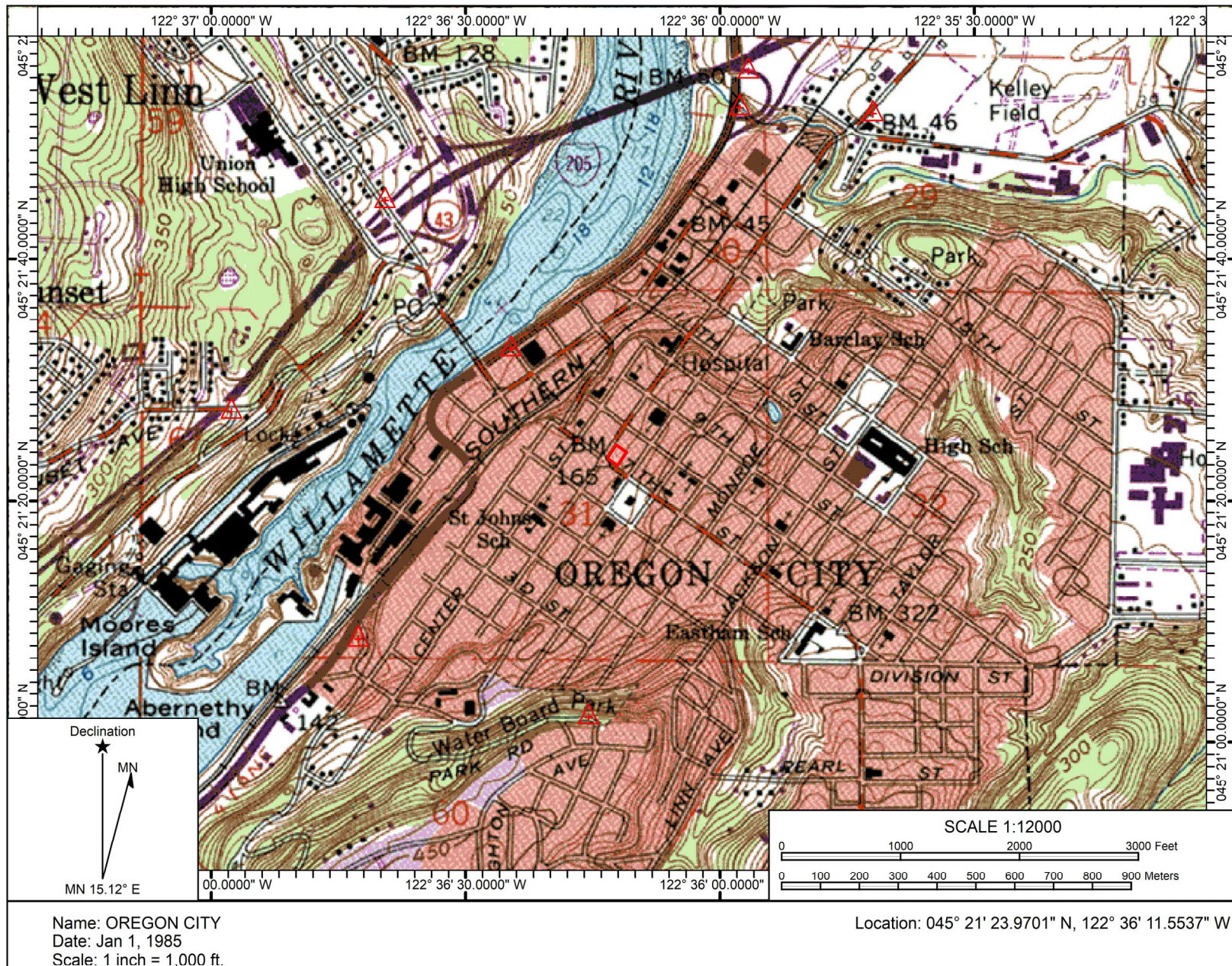
c = carcinogenic

nc = noncarcinogenic

nv = nonvolatile

DRO = diesel-range organics.

<S = This groundwater RBC exceeds the solubility limit.



Date Drawn: 9/21/2022
 CAD File Name: fig1sv_map(v01)
 Drawn By: JOB
 Approved By: LDG

Battery Exchange
 603 7th Street
 Oregon City, Oregon

Site Vicinity Map

Project No.
 1337-22001
 Figure No.
1



LEGEND:

	SUBJECT BUILDINGS
	SUBJECT PROPERTY BOUNDARIES

- 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.

APPROXIMATE SCALE

0 50 100 FEET

N

environmental natural resource consultants

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FIGURE 2

SITE PLAN

OREGON CITY BATTERY EXCHANGE
603 7TH STREET & 710 WASHINGTON STREET
OREGON CITY, OREGON



LEGEND:

SUBJECT BUILDINGS

SUBJECT PROPERTY BOUNDARIES

FORMER UNDERGROUND STORAGE TANK

ABANDONED UNDERGROUND HOIST

CATCH BASIN

PBS SAMPLE LOCATIONS (APRIL 2006)

PBS SAMPLE LOCATIONS (OCTOBER 2006)

ENW BORING SAMPLE LOCATION

LINE OF SECTION

- 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.

APPROXIMATE SCALE

0

25

50 FEET

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FIGURE 3

BOREHOLE LOCATION DIAGRAM

OREGON CITY BATTERY EXCHANGE

603 7TH STREET & 710 WASHINGTON STREET

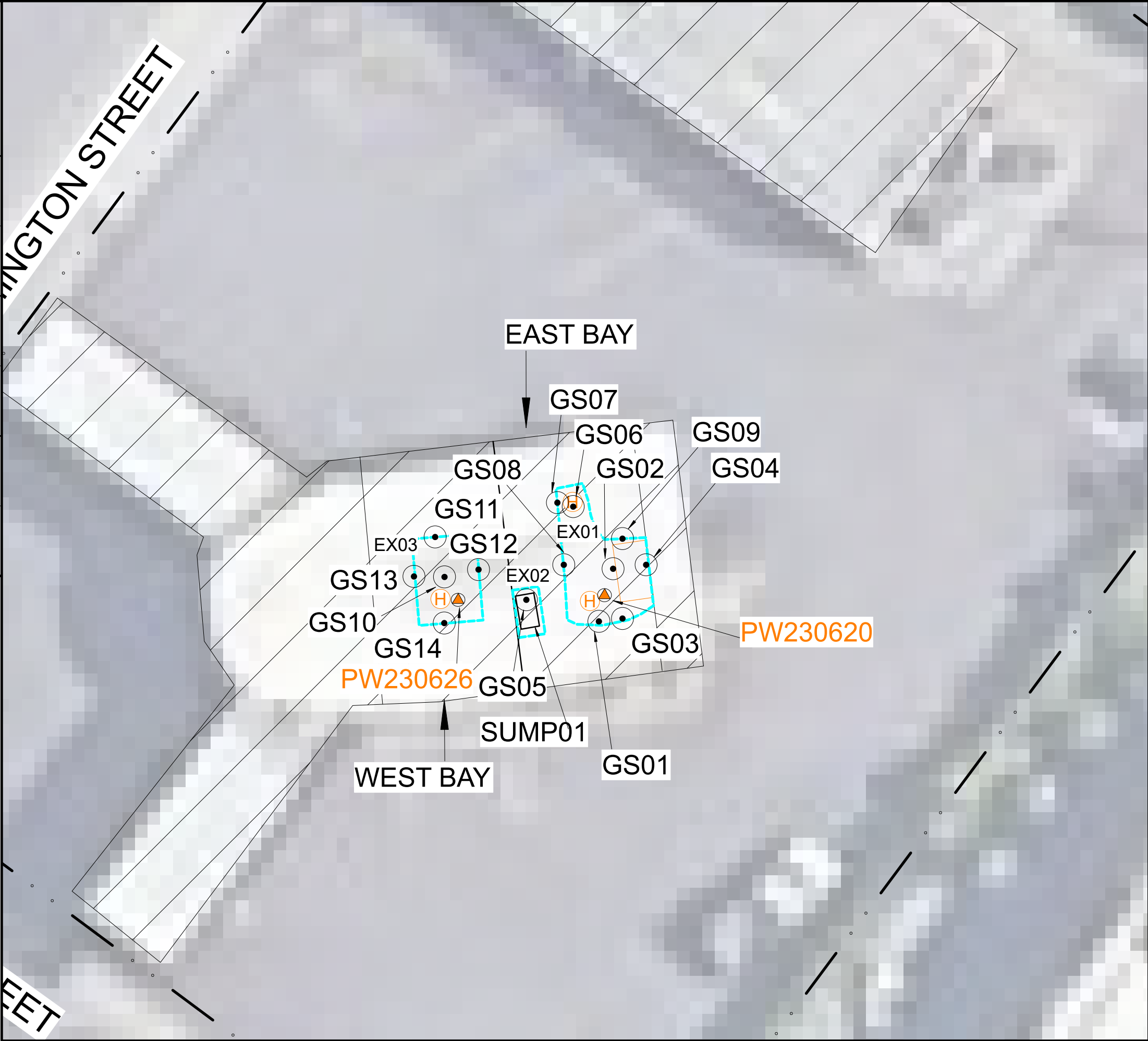
OREGON CITY, OREGON

DRAWN BY
C. ROSEBROOK 07/03/2023

CHECKED BY
T. BENNETT 07/03/2023

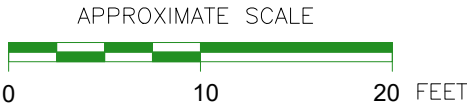
APPROVED BY
L. GREEN 07/28/2023

DRAWING NUMBER
1337-22001(v01)



- LEGEND:
- SUBJECT BUILDINGS
 - SUBJECT PROPERTY BOUNDARIES
 - UNDERGROUND STORAGE TANK
 - EXCAVATION BOUNDARY
 - ABANDONED UNDERGROUND HOIST
 - ENW PIT WATER SAMPLE LOCATION (JUNE 2023)
 - ENW GRAB SAMPLE LOCATION (JUNE 2023)

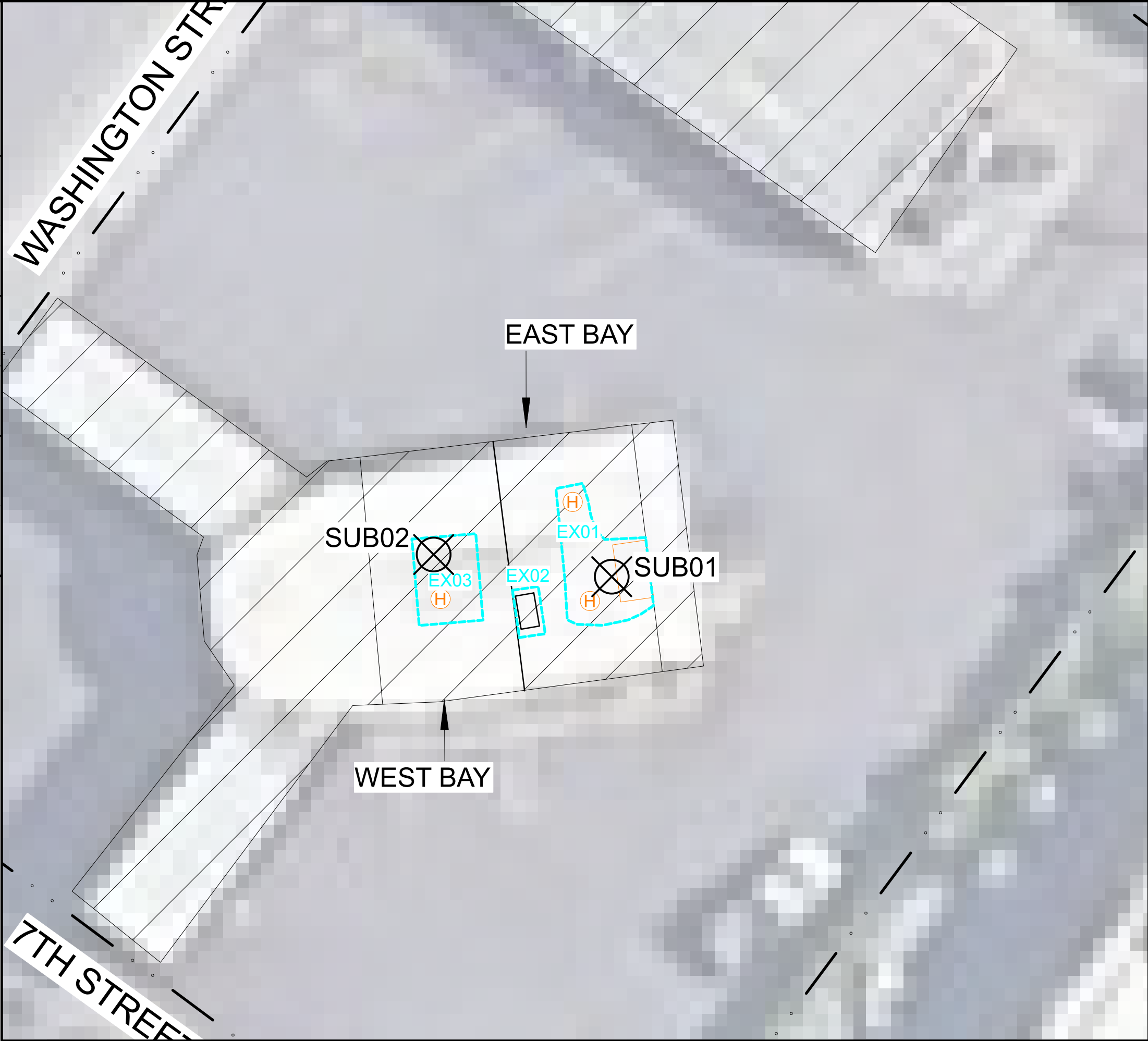
- NOTES:
1. BASE MAP DEVELOPED FROM AN AERIAL PHOTOGRAPH MAP DATED 2021 AND ENW FIELD NOTES.
 2. ALL BUILDING, STREET, AND FEATURE LOCATIONS ARE APPROXIMATE.
 3. SYMBOLS REPRESENT LOCATION AND DO NOT ALWAYS REPRESENT EXACT SHAPE, SIZE, OR ORIENTATION.



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FIGURE 4
GRAB SAMPLE LOCATION DIAGRAM
OREGON CITY BATTERY EXCHANGE
603 7TH STREET & 710 WASHINGTON STREET
OREGON CITY, OREGON

DRAWN BY: H. ROMER | 11/06/2023 | CHECKED BY: T. BENNETT | 11/06/2023 | APPROVED BY: L. GREEN | 11/06/2023 | DRAWING NUMBER: 1337-22001(v01)



- LEGEND:
- SUBJECT BUILDINGS
 - SUBJECT PROPERTY BOUNDARIES
 - UNDERGROUND STORAGE TANK
 - EXCAVATION BOUNDARY
 - ABANDONED UNDERGROUND HOIST
 - ENW SUB-SLAB VAPOR 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.

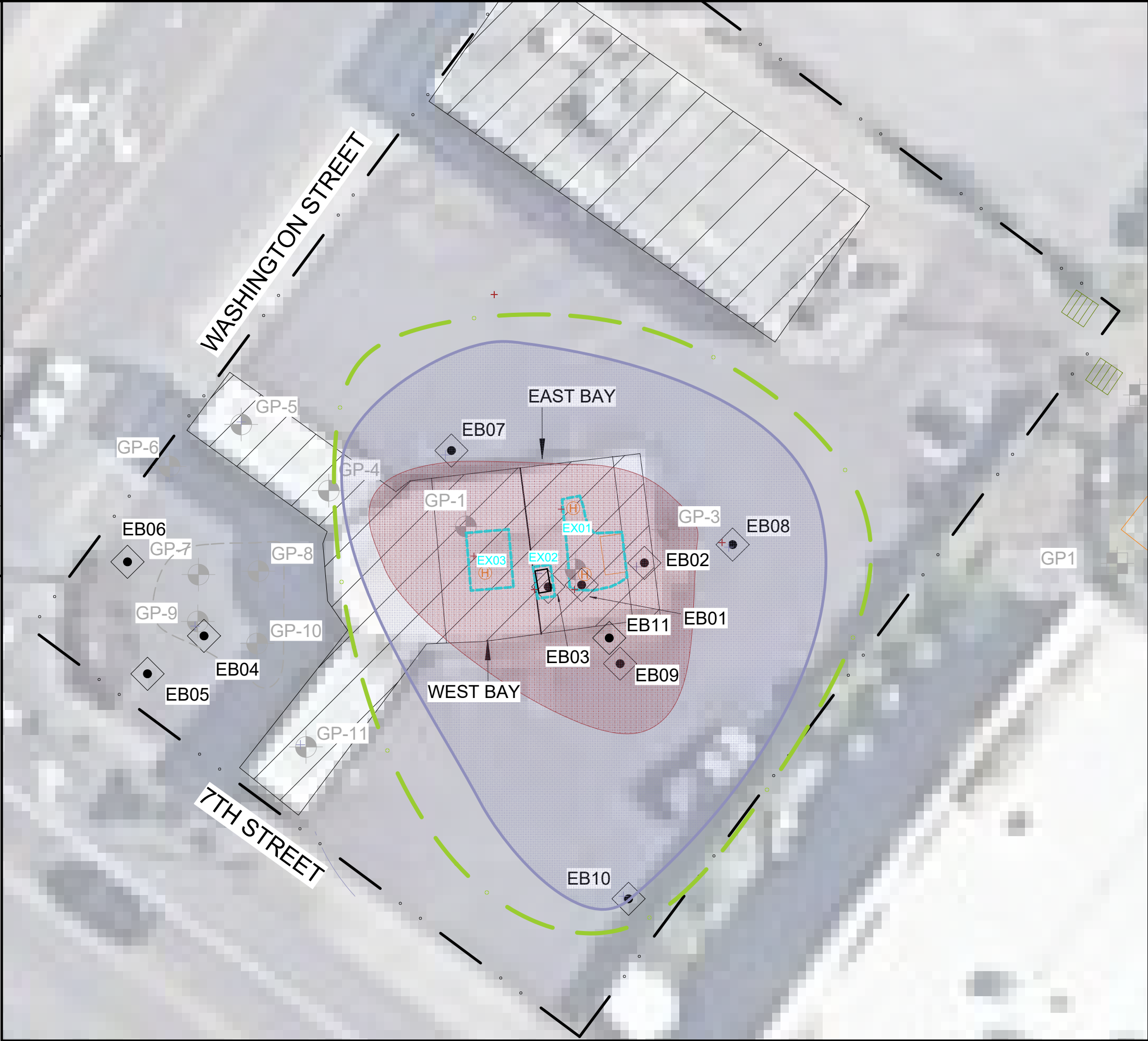
APPROXIMATE SCALE

0 10 20 FEET

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FIGURE 5
SUB-SLAB VAPOR
SAMPLE LOCATION DIAGRAM
OREGON CITY BATTERY EXCHANGE
603 7TH STREET & 710 WASHINGTON STREET
OREGON CITY, OREGON



LEGEND:

SUBJECT BUILDINGS

SUBJECT PROPERTY BOUNDARIES

FORMER UNDERGROUND STORAGE TANK LOCATIONS

EXCAVATION BOUNDARY

FORMER ABANDONED UNDERGROUND HOIST LOCATION

CATCH BASIN

PBS SAMPLE LOCATIONS (APRIL 2006)

PBS SAMPLE LOCATIONS (OCTOBER 2006)

ENW BORING SAMPLE LOCATION (SEPTEMBER 2022)

ESTIMATED EXTENT OF RESIDUAL PETROLEUM HYDROCARBONS
IN GROUND WATER ASSOCIATED WITH THE RELEASE FROM THE
USED OIL UST AND IN-GROUND HOISTS

ESTIMATED EXTENT OF RESIDUAL PETROLEUM HYDROCARBONS
SOIL ASSOCIATED WITH THE RELEASE FROM THE USED OIL UST
AND IN-GROUND HOISTS

ESTIMATED LOCALITY OF FACILITY
(USED OIL UST AND HOIST RELEASES)

- 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.

APPROXIMATE SCALE

0

15

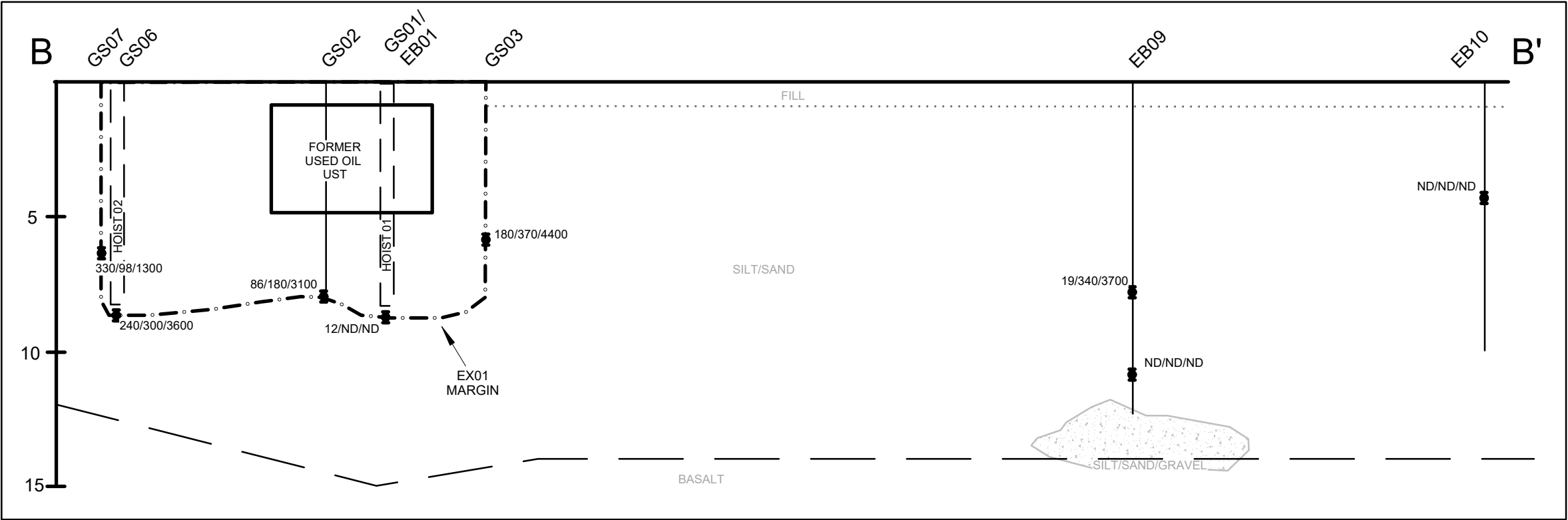
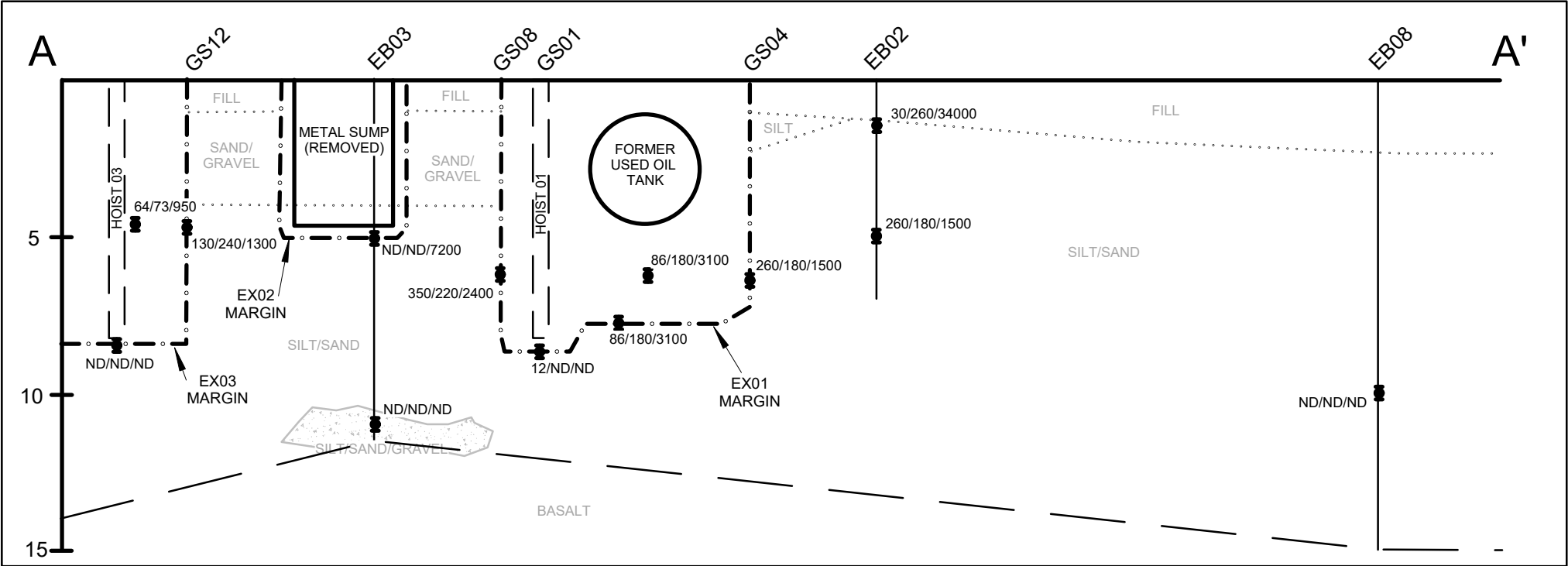
30 FEET

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FIGURE 6

ESTIMATED EXTENT OF DRO AND RRO
IN RESIDUAL SOIL AND GROUND WATER
(USED OIL UST RELEASE)

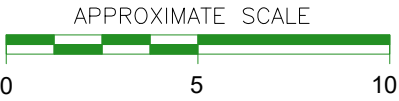
OREGON CITY BATTERY EXCHANGE
603 7TH STREET & 710 WASHINGTON STREET
OREGON CITY, OREGON



LEGEND:

Φ GRO/DRO/RRO

ND=NON-DETECT

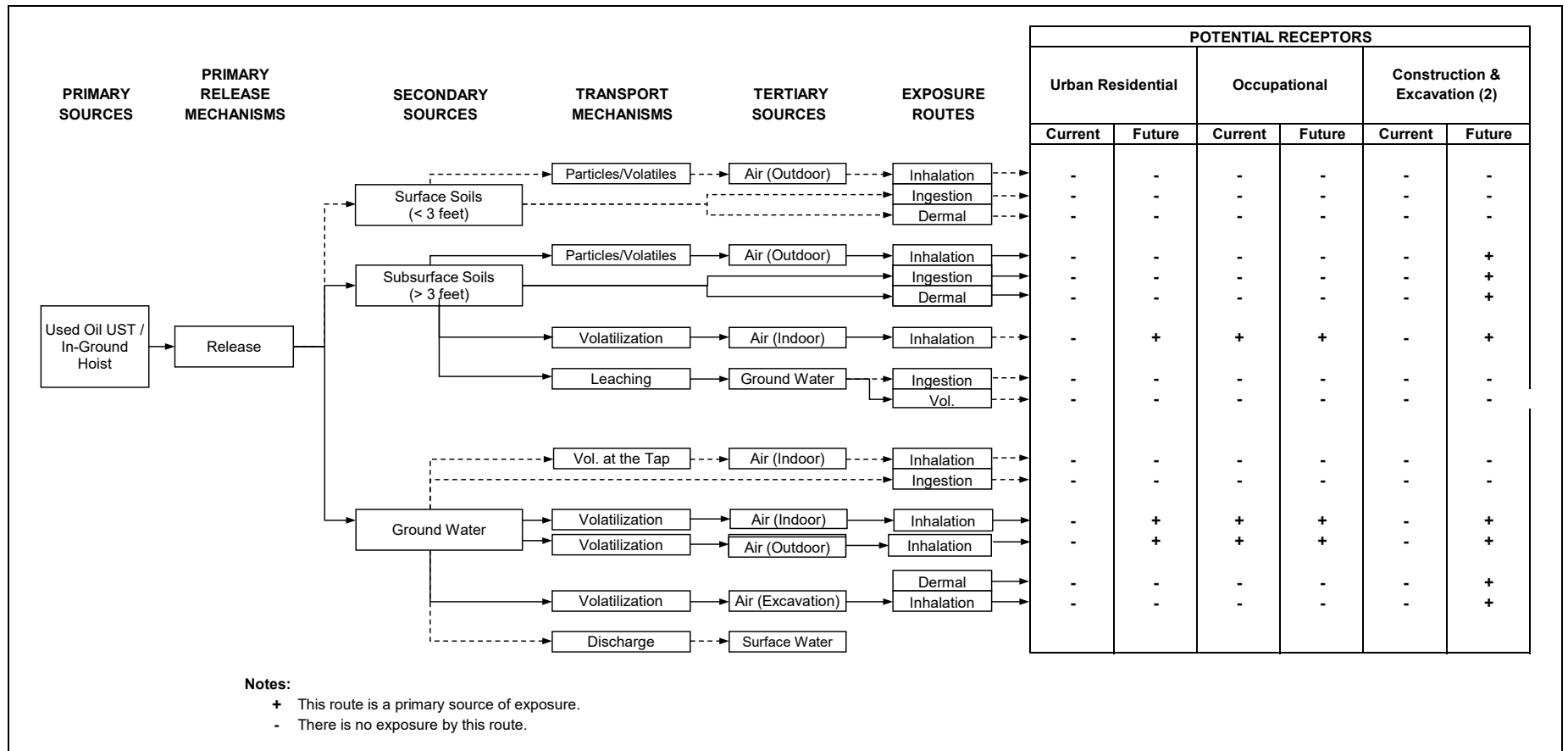


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FIGURE 7
LINE OF SECTIONS

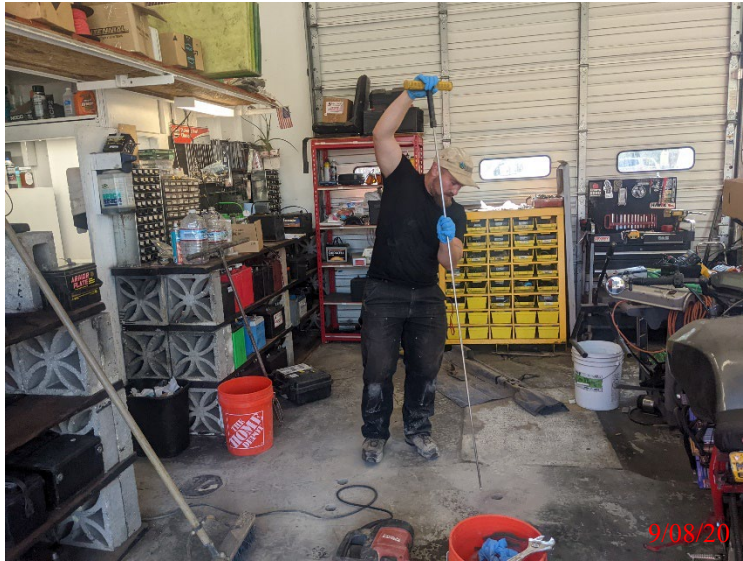
OREGON CITY BATTERY EXCHANGE
603 7TH STREET & 710 WASHINGTON STREET
OREGON CITY, OREGON

Figure 8. Conceptual Site Model (Human Health)



Appendix A

Site Photographs



Assessment sample boring EB01 being advanced on 9/19/22.



Using a drill rig to drill boring EB04 near former gasoline UST pit.



Collecting reconnaissance ground water sample from EB04, view south.



Drill rig advancing EB03 inside building next to UST01.

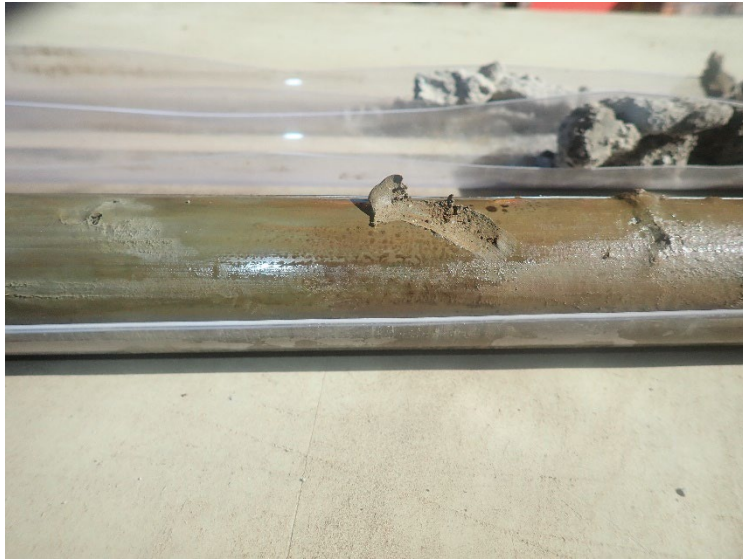


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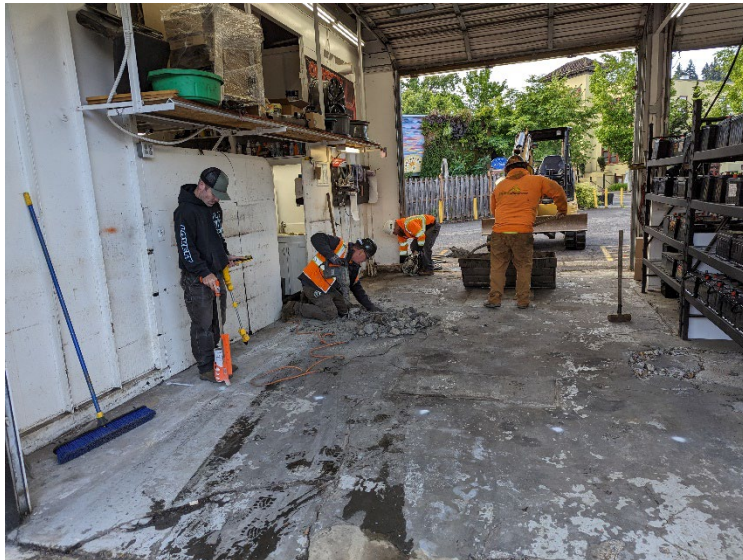
Site Photographs

Project No.
1337-22001-02

Appendix
A



Soil core from EB03 with oily sheen.



View of East Service Bay, view north.



Fill port of UST01.



Top of UST01 exposed on June 19, 2023.



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Site Photographs

Project No.
1337-22001-02

Appendix
A



View south at UST01 after cutting a hole in its top. Note vent pipe heading east.



The interior of UST01 being thoroughly cleaned.



Exposed hydraulic lines under the concrete.



View of EX01 on June 20, 2023. Note band of stained soil (PCS) in sidewall.



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Oregon City, Oregon

Site Photographs

Project No.
1337-22001-02

Appendix
A



Labeled tote used to store liquid contents of UST01.



A sample of hydraulic liquid being sampled from hoist H01.



Expanding the limits of excavation EX01 on June 20, 2023.



Pulling hoist H01 from the ground.



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Oregon City, Oregon

Site Photographs

Project No.
1337-22001-02

Appendix
A



Hoist H01 on ground after being removed.



Removing unknown sump feature (SUMP01) from East Service Bay.



View of excavation EX02 where SUMP01 had been located.



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Site Photographs

Project No.
1337-22001-02

Appendix
A



Final limits of EX01 on June 20, 2023, view south.



Pumping oil contents from hoist H03 into a drum.



Hoist H03 in West Service Bay.



Hoist H01 and H02 stored over a plastic lined bin while draining residual oil.



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Oregon City, Oregon

Site Photographs

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Appendix
A



Exposing hoist H03.



Pulling Hoist H03.



Limits of excavation EX03 in West Service Bay.



Tide Water pumping the liquid contents of tote from the used oil UST and drums of used oil from the hoists into a tanker truck for disposal.



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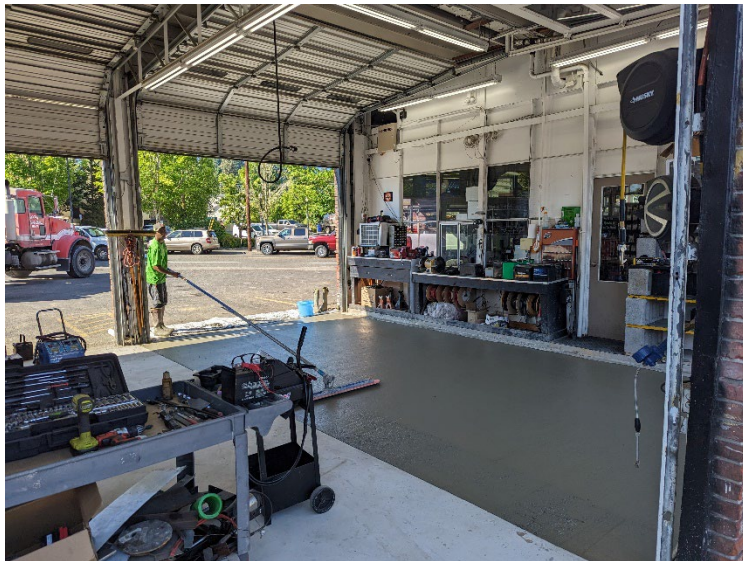
Site Photographs

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Appendix
A



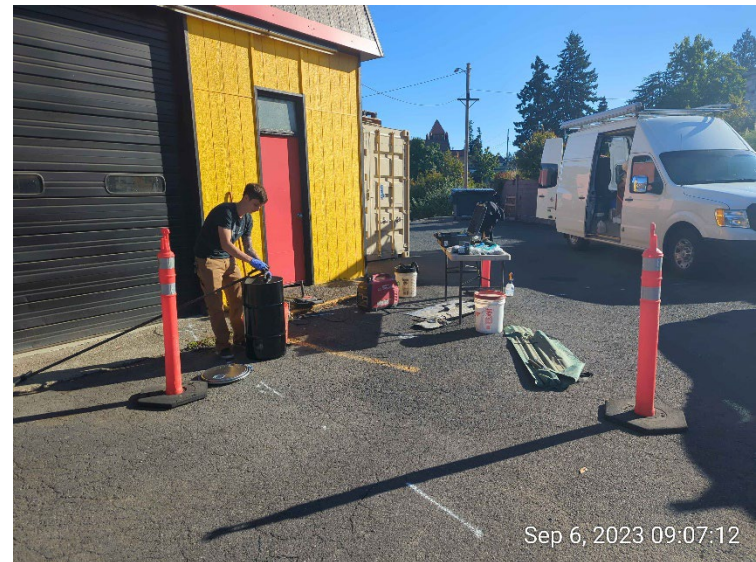
Backfilled and compacted excavation EX01 view south.



View of poured slab in West Service Bay.



A geophysical survey was conducted to assist in siting location for additional soil boring EB11 south (presumed down gradient) of EB09.



View northeast of boring EB11 being drilled in September 2023.



Oregon City Battery Exchange
603 7th St. and 710 Washington St
Oregon City, Oregon

Site Photographs

Project No.
1337-22001-02

Appendix
A



Oct 9, 2023 09:09:30

A 5/8-inch hole drilled through building slab floor in preparation of sub-slab vapor sampling.



Oct 9, 2023 10:21:44

Rags treated with isopropyl alcohol were placed at connections along sample string for leak detection purposes.



Oct 9, 2023 09:51:59

Flow meter and pump set up for TO-17 sampling.



Oct 9, 2023 10:51:03

Post sample photo showing floor slab patched with hydraulic cement.



Oregon City Battery Exchange
603 7th St. and 710 Washington St
Oregon City, Oregon

Site Photographs

Project No.
1337-22001-02

Appendix
A

Appendix B

Boring Logs

DRILL LOG		PROJECT Used Oil UST Decommissioning and Subsurface Investigation		PROJECT NO. 1337-22001-02		BORING NO. EB01	
SITE 603 7th Street and 710 Washington Street, Oregon City, OR		BEGUN 9/19/22		COMPLETED 9/19/22		HOLE SIZE 2	
COORDINATES		DEPTH GROUND WATER 9/19/22		STATIC LEVEL		FIRST WATER 5.5	
DRILLER ENW		CORE RECOVERY (%)		# SAMPLES		# CORE BOXES	
DRILL MAKE AND MODEL		LOGGED BY: Jordan Morris				DEPTH BOTTOM OF HOLE 6	

DEPTH	STRATA ELEVATION/ DEPTH	GRAPHIC LOG	DESCRIPTION	SAMPLE DATA				PID/OVM	REMARKS: NOTES ON WATER LEVELS, LOSSES, CAVING, CASING, DEPTH & DRILLING CONDITIONS.
				SAMPLE NO.	SAMPLE TYPE	CORE RECOVERY	MW Const./ Completion		
0			Concrete and gravel						
			SILT (ML); dark brown; medium stiff; orange mottling; decayed organics (black); micaceous; moist					1.1	
			SILT with fine sand (ML); light brown; medium stiff; strong orange and gray mottling; micaceous petroleum staining	EB01-2.5	grab	100		4.9	
5				EB01-6	grab			30.8	
			saturated; free-phase liquid					22.6	
			End of boring					503.4	
10									
15									
20									
25									
30									
35									

DRILL LOG		PROJECT Used Oil UST Decommissioning and Subsurface Investigation		PROJECT NO. 1337-22001-02		BORING NO. EB02	
SITE 603 7th Street and 710 Washington Street, Oregon City, OR		BEGUN 9/19/22		COMPLETED 9/19/22		HOLE SIZE 2	
COORDINATES		DEPTH GROUND WATER 9/19/22		STATIC LEVEL		FIRST WATER 6.5	
DRILLER ENW		CORE RECOVERY (%)		# SAMPLES		# CORE BOXES	
DRILL MAKE AND MODEL		LOGGED BY: Jordan Morris				DEPTH BOTTOM OF HOLE 7.5	

DEPTH	STRATA ELEVATION/ DEPTH	GRAPHIC LOG	DESCRIPTION	SAMPLE DATA				PID/OVM	REMARKS: NOTES ON WATER LEVELS, LOSSES, CAVING, CASING, DEPTH & DRILLING CONDITIONS.
				SAMPLE NO.	SAMPLE TYPE	CORE RECOVERY	MW Const./ Completion		
0			Concrete fragments and gravel; possibly trench fill						
			Fine SAND with silt (SM); brown; loose; some rounded gravel<0.5" dia.; orange mottling; moist; micaceous	EB02-2.5	grab	100		33.5 42.8	
5			petroleum staining and odor					265.1	
			becomes saturated; soft; free-phase product on top of water	EB02-6	grab			162.8	
			End of boring					52.9	
10									
15									
20									
25									
30									
35									

DRILL LOG		PROJECT Used Oil UST Decommissioning and Subsurface Investigation		PROJECT NO. 1337-22001-02		BORING NO. EB03	
SITE 603 7th Street and 710 Washington Street, Oregon City, OR		BEGUN 9/20/22		COMPLETED 9/20/22		HOLE SIZE 2.25	
COORDINATES		DEPTH GROUND WATER		DATE SL		STATIC LEVEL	
DRILLER Cascade		CORE RECOVERY (%)		# SAMPLES		# CORE BOXES	
DRILL MAKE AND MODEL		LOGGED BY: Jordan Morris				DEPTH TOP OF ROCK	
						DEPTH BOTTOM OF HOLE 12	

DEPTH	STRATA ELEVATION/ DEPTH	GRAPHIC LOG	DESCRIPTION	SAMPLE DATA				PID/OVM	REMARKS: NOTES ON WATER LEVELS, LOSSES, CAVING, CASING, DEPTH & DRILLING CONDITIONS.
				SAMPLE NO.	SAMPLE TYPE	CORE RECOVERY	MW Const./ Completion		
0			Concrete, broken concrete, gravel						
			SILT with sand (ML); brown; medium dense; mottled orange and red; moist; micaceous			20			
			SAND with coarse gravel (SP); white; loose; slightly moist; no fines;						
5			SILT with sand (ML); gray; medium soft; slightly stained; mottled brown and orange; moist; micaceous			85		9.2	
								84.3	
10								19.5	
			SAND with silt (SM); gray; medium dense; moist; micaceous			100		0.7	
			GRAVEL with silt and sand (GM) ; gray; coarse, angular gravel; >2" in dia; moist	EB03-11.5	grab			0.2	
			Refusal @ 12'					0.2	
15									
20									
25									
30									
35									

DRILL LOG		PROJECT Used Oil UST Decommissioning and Subsurface Investigation		PROJECT NO. 1337-22001-02		BORING NO. EB04	
SITE 603 7th Street and 710 Washington Street, Oregon City, OR		BEGUN 9/20/22		COMPLETED 9/20/22		HOLE SIZE 2.25	
COORDINATES		DEPTH GROUND WATER 9/20/22		STATIC LEVEL 5.5		FIRST WATER 7	
DRILLER Cascade Drilling		CORE RECOVERY (%)		# SAMPLES		# CORE BOXES	
DRILL MAKE AND MODEL		LOGGED BY: Jordan Morris				DEPTH BOTTOM OF HOLE 12	

DEPTH	STRATA ELEVATION/ DEPTH	GRAPHIC LOG	DESCRIPTION	SAMPLE DATA				PID/OVM	REMARKS: NOTES ON WATER LEVELS, LOSSES, CAVING, CASING, DEPTH & DRILLING CONDITIONS.
				SAMPLE NO.	SAMPLE TYPE	CORE RECOVERY	MW Const./ Completion		
0			Asphalt; gravel fill						
			Gravel with sand and silt (GM) ; gray; medium dense; angular gravel; moist; weakly micaceous			60			
5			SILT with gravel (ML); brown; medium stiff; orange mottling; moist; micaceous					882.7	
			SILT with coarse sand (ML); brown; medium soft; wet; micaceous; petroleum staining	EB04-7-SWI	grab	75		815.3	
10			GRAVEL (GW); gray; well-sorted; rounded to subrounded gravel; wet						
			SILT with gravel (ML); brown; medium soft; mottled gray and orange; saturated; micaceous stiff; moist			100		2.9	
			Refusal@ 12'	EB04-12	grab			22.8	
15									
20									
25									
30									
35									

DRILL LOG		PROJECT Used Oil UST Decommissioning and Subsurface Investigation		PROJECT NO. 1337-22001-02		BORING NO. EB05	
SITE 603 7th Street and 710 Washington Street, Oregon City, OR		BEGUN 9/20/22		COMPLETED 9/20/22		HOLE SIZE 2.25	
COORDINATES		DEPTH GROUND WATER 9/20/22		STATIC LEVEL 9.3		FIRST WATER 10.5	
DRILLER Cascade		CORE RECOVERY (%)		# SAMPLES		# CORE BOXES	
DRILL MAKE AND MODEL		LOGGED BY: Jordan Morris				DEPTH TOP OF ROCK	
						DEPTH BOTTOM OF HOLE 12	

DEPTH	STRATA ELEVATION/ DEPTH	GRAPHIC LOG	DESCRIPTION	SAMPLE DATA				PID/OVM	REMARKS: NOTES ON WATER LEVELS, LOSSES, CAVING, CASING, DEPTH & DRILLING CONDITIONS.
				SAMPLE NO.	SAMPLE TYPE	CORE RECOVERY	MW Const./ Completion		
0			Fill gravel						
5			SILT with fine sand (ML); brown; medium stiff; mottled orange and gray; occasional black organics; moist; micaceous			90		5.7	
10			SILT with gravel (ML); gray; medium stiff; mottled orange and brown; subangular gravel; moist	EB05-7	grab	90		1096	
			GRAVEL with silt (GM); gray; coarse gravel up to 2" dia.; moist					1.9	
			SILT with gravel (ML); gray; medium soft; mottled brown and orange; wet; micaceous			50			
			GRAVEL with silt (GM); gray; stiff; coarse subangular gravel up to 2" dia.; wet	EB05-12	grab			2.0	
			Refusal @12'						
15									
20									
25									
30									
35									

DRILL LOG		PROJECT Used Oil UST Decommissioning and Subsurface Investigation		PROJECT NO. 1337-22001-02		BORING NO. EB06	
SITE 603 7th Street and 710 Washington Street, Oregon City, OR		BEGUN 9/20/22		COMPLETED 9/20/22		HOLE SIZE 2.25	
COORDINATES		DEPTH GROUND WATER		DATE SL		STATIC LEVEL	
DRILLER Cascade		CORE RECOVERY (%)		# SAMPLES		# CORE BOXES	
DRILL MAKE AND MODEL		LOGGED BY: Jordan Morris				DEPTH TOP OF ROCK	
						DEPTH BOTTOM OF HOLE 11	

DEPTH	STRATA ELEVATION/ DEPTH	GRAPHIC LOG	DESCRIPTION	SAMPLE DATA				PID/OVM	REMARKS: NOTES ON WATER LEVELS, LOSSES, CAVING, CASING, DEPTH & DRILLING CONDITIONS.
				SAMPLE NO.	SAMPLE TYPE	CORE RECOVERY	MW Const./ Completion		
0			Gravel fill						
5			SILT with some sand (ML); brown; medium stiff; mottled orange-red-gray; medium stiff; dense; friable; micaceous			95		3.0	
				EB06-7	grab	100		89.8	
10			GRAVEL with silt (GM); gray; dense; coarse, subrounded gravel up to >2" dia.' moist; micaceous						
				EB06-11	grab	25		0.6	
			Refusal @11'					4.0	
15									
20									
25									
30									
35									

DRILL LOG		PROJECT Used Oil UST Decommissioning and Subsurface Investigation		PROJECT NO. 1337-22001-02		BORING NO. EB07	
SITE 603 7th Street and 710 Washington Street, Oregon City, OR		BEGUN 9/20/22		COMPLETED 9/20/22		HOLE SIZE 2.25	
COORDINATES		DEPTH GROUND WATER 9/20/22		STATIC LEVEL		FIRST WATER 9.5	
DRILLER Cascade Drilling		CORE RECOVERY (%)		# SAMPLES		# CORE BOXES	
DRILL MAKE AND MODEL		LOGGED BY: Jordan Morris				DEPTH BOTTOM OF HOLE 10	

DEPTH	STRATA ELEVATION/ DEPTH	GRAPHIC LOG	DESCRIPTION	SAMPLE DATA				PID/OVM	REMARKS: NOTES ON WATER LEVELS, LOSSES, CAVING, CASING, DEPTH & DRILLING CONDITIONS.
				SAMPLE NO.	SAMPLE TYPE	CORE RECOVERY	MW Const./ Completion		
0			SAND (SP); white; loose; some poorly sorted rounded gravel; GRAVEL with sand and silt (GM) ; gray; sub-rounded gravel clasts up to 2" dia. SILT with sand (ML); brown; medium soft; fine sand; strong orange-gray mottling; moist; micaceous SILT with sand (ML); gray; medium stiff; mottled orange; fine sand; some black mottling; petroleum staining SILT with sand (ML); gray; medium stiff; fine sand; orange-black-yellow mottling; moist; micaceous GRAVEL with silt and sand (GM); brown; gray-orange-yellow mottling; medium to coarse gravel; vesicular basalt clasts up to 2" dia.; moist becomes saturated Refusal @ 10'			40			
5				EB07-7	grab			55.5	
10				EB07-9.5-SWI	grab			45.3	
								0.4	
15									
20									
25									
30									
35									

DRILL LOG		PROJECT Used Oil UST Decommissioning and Subsurface Investigation		PROJECT NO. 1337-22001-02		BORING NO. EB08	
SITE 603 7th Street and 710 Washington Street, Oregon City, OR		BEGUN 9/20/22		COMPLETED 9/20/22		HOLE SIZE 2.25	
COORDINATES		DEPTH GROUND WATER 9/20/22		STATIC LEVEL 4.13		FIRST WATER 10	
DRILLER Cascade Drilling		CORE RECOVERY (%)		# SAMPLES		# CORE BOXES	
DRILL MAKE AND MODEL		LOGGED BY: Jordan Morris				DEPTH BOTTOM OF HOLE 15	

DEPTH	STRATA ELEVATION/ DEPTH	GRAPHIC LOG	DESCRIPTION	SAMPLE DATA				PID/OVM	REMARKS: NOTES ON WATER LEVELS, LOSSES, CAVING, CASING, DEPTH & DRILLING CONDITIONS.
				SAMPLE NO.	SAMPLE TYPE	CORE RECOVERY	MW Const./ Completion		
0			Asphalt and sandy gravel fill						
			SILT with sand (ML); gray; medium stiff; mottled brown and orange; moist; micaceous			50			
5			SAND with gravel(SP); white; medium loose; poorly sorted sand; old concrete?					0.4	
			SILT with sand (ML);gray; soft; mottled black; decayed organics; weakly micaceous becomes stiff; strong orange-yellow mottling; low plasticity/cohesion; moist; micaceous					0.1	
10			SAND with silt (SM); brown; medium dense; subrounded to rounded gravel; orange-gray-black mottling (slight yellow mottling); moist	EB08-10-SWI	grab			0.2	
			SILT with sand (ML); gray; soft; orange mottling; micaceous; wet						
			SAND with silt (SM); brown; loose; mottled gray-orange; saturated			80			
			SILT with fine sand (ML); gray; medium stiff; orange mottling; moist; micaceous						
15			End of boring					0.4	
20									
25									
30									
35									

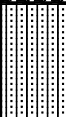
DRILL LOG		PROJECT Used Oil UST Decommissioning and Subsurface Investigation		PROJECT NO. 1337-22001-02		BORING NO. EB09	
SITE 603 7th Street and 710 Washington Street, Oregon City, OR		BEGUN 9/20/22		COMPLETED 9/20/22		HOLE SIZE 2.25	
COORDINATES		DEPTH GROUND WATER 9/20/22		STATIC LEVEL		FIRST WATER 10	
DRILLER Cascade Drilling		CORE RECOVERY (%)		# SAMPLES		# CORE BOXES	
DRILL MAKE AND MODEL		LOGGED BY: Jordan Morris				DEPTH BOTTOM OF HOLE 13	

DEPTH	STRATA ELEVATION/ DEPTH	GRAPHIC LOG	DESCRIPTION	SAMPLE DATA				PID/OVM	REMARKS: NOTES ON WATER LEVELS, LOSSES, CAVING, CASING, DEPTH & DRILLING CONDITIONS.
				SAMPLE NO.	SAMPLE TYPE	CORE RECOVERY	MW Const./ Completion		
0			Asphalt and gravel						
			SAND with silt (SM); yellow and gray; medium loose; moist; mottled orange-black; abrupt color change at 4' (orange to gray)			70			
5			SILT with sand (ML); brown; medium loose; mottled orange gray; moist; micaceous @ 5' becomes gray; medium soft; mottled orange-brown; weakly micaceous; wet			80			
			SAND with silt (SM); dark brown; dense; mottled gray-orange; some yellow; weakly micaceous						
10			SILT with fine sand (ML); gray; medium dense; strong orange mottling; micaceous; moist; becomes saturated, soft at 10'; 6 inch mottle gray-orange layer 11-11.5'			80			
			SAND with silt (SM); gray; medium dense; wet						
			GRAVEL with silt and sand (GM) ; dark gray; angular gravel; fractured vesicular basalt clasts; wet						
15			Refusal @ 13'						
20									
25									
30									
35									

DRILL LOG		PROJECT Used Oil UST Decommissioning and Subsurface Investigation		PROJECT NO. 1337-22001-02		BORING NO. EB10	
SITE 603 7th Street and 710 Washington Street, Oregon City, OR		BEGUN 9/20/22		COMPLETED 9/20/22		HOLE SIZE 2.25	
COORDINATES		DEPTH GROUND WATER 9/20/22		STATIC LEVEL 4.13		FIRST WATER 5	
DRILLER Cascade Drilling		CORE RECOVERY (%)		# SAMPLES		# CORE BOXES	
DRILL MAKE AND MODEL		LOGGED BY: Jordan Morris					DEPTH TOP OF ROCK
							DEPTH BOTTOM OF HOLE 10

DEPTH	STRATA ELEVATION/ DEPTH	GRAPHIC LOG	DESCRIPTION	SAMPLE DATA				PID/OVM	REMARKS: NOTES ON WATER LEVELS, LOSSES, CAVING, CASING, DEPTH & DRILLING CONDITIONS.
				SAMPLE NO.	SAMPLE TYPE	CORE RECOVERY	MW Const./ Completion		
0			Concrete and gravel						
			SILT with sand and gravel (ML); dark brown; medium soft; weak orange mottling; strongly micaceous; moist			80			
			SAND with silt (SM); yellow gray; medium loose; medium to coarse sand; rounded to subrounded gravel; micaceous; moist						
5			SILT with fine sand (ML); very light gray; medium soft; micaceous; moist	EB10-5-SWI	grab			0.4	
			SILT with coarse sand (ML); orange mottling; saturated			100			
			SILT with medium sand (ML); medium stiff; orange mottling; micaceous						
10			SAND with silt (SM); dark brown; medium loose; orange mottling; moist; weakly micaceous					0.4	
			SILT with fine sand (ML); gray; medium stiff; orange mottling; moist; micaceous						
			End of boring						
15									
20									
25									
30									
35									

DRILL LOG		PROJECT Used Oil UST Decommissioning and Subsurface Investigation		PROJECT NO. 1337-22001-02		BORING NO. EB11	
SITE 603 7th Street and 710 Washington Street, Oregon City, OR		BEGUN 9/06/23		COMPLETED 9/06/23		HOLE SIZE 2	
COORDINATES		DEPTH GROUND WATER 9/06/23		STATIC LEVEL 4.55		FIRST WATER 6	
DRILLER ENW		CORE RECOVERY (%)		# SAMPLES		# CORE BOXES	
DRILL MAKE AND MODEL		LOGGED BY: Dan Sajko				DEPTH TOP OF ROCK	
						9.5	

DEPTH	STRATA ELEVATION/ DEPTH	GRAPHIC LOG	DESCRIPTION	SAMPLE DATA				PID/OVM	REMARKS: NOTES ON WATER LEVELS, LOSSES, CAVING, CASING, DEPTH & DRILLING CONDITIONS.
				SAMPLE NO.	SAMPLE TYPE	CORE RECOVERY	MW Const./ Completion		
0			Asphalt and gravel base rock (fill)						
			SAND with silt (SM); brown with orange mottling; medium stiff; moist; micaceous					0.1	
								0.1	
5			Sandy SILT (ML); increasing gray mottling; very moist; begin to see gray staining and petroleum odor					0.3	
			very wet	EB11-6-SWI	grab			29.3	
			SAND with silt; coarse sand; increased stiffness; few MgO nodules; strong petroleum odor					340.8	
								398.8	
10			End of boring						
15									
20									
25									
30									
35									

Appendix C

Field Sampling Data Sheets

GROUND WATER FIELD SAMPLING DATA FORM (FIELD)

PROJECT NUMBER: 1337-2200-21
Date: 9/20/27

Monitoring Well ID: EB05
Start Time: 11:50

[illegible]

Pumping: 3/8" LOPE
 Surge Pumping Rate (approx. L/m): 150 ml/min
 Contamination method:
 Well Conversion Factors: 2" = 0.17 gal / foot; 5/8" = 0.02 gal/foot

Well casing (in. diam): 16
Approx. Pump/Intake Depth: a 16.5

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

Analytical Parameters	Destination Laboratory	Preservative	Bottle Size	Number of bottles	Sample ID	Time Sampled
Cx VOCs Dx PAH	FBI "	HCL none	40mL 500mL	4 1	FBO5-CW-12	12:00

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:

* 500 ml filled completed @ 12:45

Signature of Field Personnel:

GROUND WATER FIELD SAMPLING DATA FORM (FIELD)

Battery & change of instrument

Event:

PROJECT NUMBER: 1337-22001-01
Date: 9/20/22

Field Personnel:

Jan Saw

Monitoring Well ID: EBO 9

Weather Conditions:

Sunny

030 F

Start Time: 14:35

ITW (prior to purging):

[illegible]

Total Purged: 1.25

Guiding:

3/8" LDPE

Purge Pumping Rate (approx. L/m):

150 ml/min

Well casing (in. diam): 1" Dvc

Decontamination method:

Approx. Pump/Intake Depth: 91

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

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

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

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

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

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

Analytical Parameters	Destination Laboratory	Preservative	Bottle Size	Number of bottles	Sample ID	Time Sampled
GP yes DP yes	FrB	HCL	Met 40	4	EB09 - GW-13	14:00
PF described Pn		HAZ	Met 500 Met 1.0m Met 3 250p			

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:

we predict (Globules) observed in
pore and sample

Signature of Field Personnel:

GROUND WATER FIELD SAMPLING DATA FORM (FIELD)

Battery X change O.C.

PROJECT NUMBER: 1337-2200-01

Gen assessment

Date: 9/20/22

Don Silk

Monitoring Well ID: EB 08

Summit 100

Start Time: 13:28

4.13

Time	DTW During Purging (feet)	Pumping Rate (L/min)	Temperature (degree C)	Specific Conductivity (mS/cm), $\pm 3\%$	Dissolved Oxygen (mg/L), $\pm 10\%$	Water pH (S.U.), $\pm 0.1\%$	ORP (mV), ± 10 mV	Turbidity (NTU), $\pm 10\%$	Total Quantity Purged (gallons/liters)
13-30	-	150		Dark brown					
13-44		11		light brown					2.1
13-45				region collecting sample numbers first					

Total Purged: 2.1

 $3/10^4$

150 ml/min

Well casing (in. diam): 12
Approx. Pump/Intake Depth: 101

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

Recommended Well Repairs/Additional Notes:

Screened from 10¹-15

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

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

Analytical Parameters	Destination Laboratory	Preservative	Bottle Size	Number of bottles	Sample ID	Time Sampled
Vols / Gx Pb	K23	NCL	(4) — 40 ml	(4)		
		none	(1) — 500 ml		EB08-GW	
		none	(2) — 1 liter			
F. dissolved Pb	↓	HNO3	250	(F)	↓	15 13:55

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:

GROUND WATER FIELD SAMPLING DATA FORM (FIELD)

PROJECT NAME: Battery X change O.C.
Event: CW Assessment

PROJECT NUMBER: 1337-22001-01
Date: 09/20/22

Field Personnel: Dan Sayko
Weather Conditions: Sunny 59°F
DTW (prior to purging): 5.55'

Monitoring Well ID: EBOV
Start Time: 9:14

WELL PURGING INFORMATION

[illegible]

Total Purged:

Tubing: 3/8" UDE
Purge Pumping Rate (approx. L/min): 100 ml/min
Decontamination method:

Well casing (in. diam): 1" PVC
Approx. Pump/Intake Depth: ~ 9'

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

WELL CONDITION

Recommended Well Repairs/Additional Notes:

Screened from 7-12

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
Dx, PAHs	Env3	none	1 liter	1		
"	↓	none	500ml	1	EB04-GW-12	9.30
Gr, vocs	↓	HCL	40ml	4		

Method of Transportation of samples:	FedEx	Courier
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All samples were immediately placed into a cooler and packed with ice or "blue Ice"

☐ Yes ☐ No

Field Observations/Notes of sampling event:

Odor and St. Sheen observed during Purge

Signature of Field Personnel:

FIELD SAMPLING DATA SHEET

EVREN NORTHWEST

PO Box 14488
Portland, Oregon, 97293
503-452-5561 enw@evren-nw.com

PROJECT NAME/NUMBER: 1337-22001-02

SAMPLE LOCATION / ID: SUB 02

SITE ADDRESS: 603 7th St. oregon city

SAMPLE DATE: 6/09/13

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

Temp., C Humidity (%)
61 61

SCREENING

Purge Time (start)				Purge Time (finish)		
Date	Time	Depth (ft)	PID (ppm)	O ₂ (ppm)	CO (ppm)	CO ₂ (ppm)
10/09/13	9:42		1.7			
	30 sec		1.0			
	60 sec		1.0			
	90 sec		0.9			

VOLUME CALCULATION

Flow Rate (mL/min)	Sample Time (min)	Total Volume (L)
50	15	.75

SAMPLING DATA

Sample ID	Tube ID	Sample Depth	Sample Time (start)	Sample Time (finish)
SUB02-231009	31374	SUB	9:52	10:07

CONTAINER TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
	PESTICIDE/PCBs (TO-4) ALDEHYDES/KEYTONES (TO-5) PESTICIDES/PCBs (TO-10) ALDEHYDES/KEYTONES (TO-11)
	TPH as Diesel (TO-17)
	SPECIFIC CHEMICAL ANALYSIS []

NOTES:

4.5" concrete slab

Post screening O₂ = 19.3% O₂ = 0.0
CO = 0 ppm

SAMPLER:

(PRINTED NAME)

Dan Sayko

(SIGNATURE)

[Signature]

FIELD SAMPLING DATA SHEET

EVREN NORTHWEST

PO Box 14488
Portland, Oregon, 97293
503-452-5561 enw@evren-nw.com

PROJECT NAME/NUMBER: 1337-22001-02

SAMPLE LOCATION / ID: SUB01

SITE ADDRESS: 603 7th St oregon city

SAMPLE DATE: 10/09/23

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

Temp., C Humidity (%)
61 81

SCREENING

Purge Time (start)				Purge Time (finish)		
Date	Time	Depth (ft)	PID (ppm)	O ₂ (ppm)	CO (ppm)	CO ₂ (ppm)
10/09/23	1030	SUB	3.0			
↓	30 sec	↓	2.6			
↓	60 sec	↓	2.8			
↓	90 sec	↓	2.9			

VOLUME CALCULATION

Flow Rate (mL/min)	Sample Time (min)	Total Volume (L)
50	15	0.75

SAMPLING DATA

Sample ID	Tube ID	Sample Depth	Sample Time (start)	Sample Time (finish)
SUB01-231009	752876	SUB	10:19	10:34

CONTAINER TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
	PESTICIDE/PCSs (TO-4) ALDEHYDES/KEYTONES (TO-5) PESTICIDES/PCBs (TO-10) ALDEHYDES/KEYTONES (TO-11)
	TPH as Diesel (TO-17)
	SPECIFIC CHEMICAL ANALYSIS []

NOTES:

10:40 - Best PID = 0.4 ppm
O₂ = 16.9% CO₂ = 0.00%
CO = 0 ppm

SAMPLER:

(PRINTED NAME)

Dan Sayko

(SIGNATURE)

[Signature]

Appendix D

Laboratory Analytical Results

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.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

October 3, 2022

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 September 21, 2022 from the 1337-22001-01, F&BI 209324 project. There are 27 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
ENW1003R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on September 21, 2022 by Friedman & Bruya, Inc. from the Evren Northwest 1337-22001-01, F&BI 209324 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>Evren Northwest</u>
209324 -01	EB03-11.5
209324 -02	EB04-7-SWI
209324 -03	EB04-12
209324 -04	EB05-7
209324 -05	EB05-12
209324 -06	EB06-7
209324 -07	EB06-11
209324 -08	EB07-7
209324 -09	EB07-9.5-SWI
209324 -10	EB08-10-SWI
209324 -11	EB09-7
209324 -12	EB10-5-SWI
209324 -13	TC-Solids-220920
209324 -14	Tank Contents-220920
209324 -15	EB09-10-SWI

Several NWTPH-Gx samples were received in four ounce glass jars. The data were flagged accordingly.

The 8260D laboratory control sample exceeded the acceptance criteria for chloroethane. The compound was not detected, therefore the data were acceptable.

All other quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/03/22
Date Received: 09/21/22
Project: 1337-22001-01, F&BI 209324
Date Extracted: 09/23/22
Date Analyzed: 09/23/22

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

<u>Sample ID</u> Laboratory ID	<u>Gasoline</u>	<u>Diesel</u>	<u>Heavy Oil</u>	Surrogate (% Recovery) (Limit 56-165)
Tank Contents-220920 209324-14	ND	D x	D x	157
Method Blank 02-2250 MB	ND	ND	ND	133

ND - Material not detected at or above 0.2 mg/L gas, 0.5 mg/L diesel and 0.5 mg/L heavy oil.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/03/22
Date Received: 09/21/22
Project: 1337-22001-01, F&BI 209324
Date Extracted: 09/27/22
Date Analyzed: 09/27/22

**RESULTS FROM THE ANALYSIS OF SOIL SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
USING METHOD NWTPH-G_x**

Results Reported on a Dry Weight Basis

Results Reported as mg/kg (ppm)

<u>Sample ID</u>	<u>Gasoline Range</u>	Surrogate (% Recovery)
Laboratory ID		(Limit 58-139)
EB03-11.5 pc 209324-01	<5	90
EB04-7-SWI 209324-02 1/50	130	119
EB05-7 209324-04 1/10	570	130
EB05-12 pc 209324-05	<5	101
EB06-7 209324-06	36	97
EB07-7 209324-08	65	96
EB07-9.5-SWI pc 209324-09	<5	92
EB08-10-SWI 209324-10	<5	92
EB09-7 209324-11	19	104
EB10-5-SWI 209324-12	<5	90
Method Blank 02-2093 MB	<5	89

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/03/22
Date Received: 09/21/22
Project: 1337-22001-01, F&BI 209324
Date Extracted: 09/27/22
Date Analyzed: 09/27/22

**RESULTS FROM THE ANALYSIS OF SOIL SAMPLES
FOR BENZENE, TOLUENE, ETHYLBENZENE,
XYLENES AND TPH AS GASOLINE
USING METHODS 8021B AND NWTPH-Gx**

Results Reported on a Dry Weight Basis

Results Reported as mg/kg (ppm)

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl</u> <u>Benzene</u>	<u>Total</u> <u>Xylenes</u>	<u>Gasoline</u> <u>Range</u>	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 50-150)
EB09-10-SWI pc 209324-15	<0.02	<0.02	<0.02	<0.06	<5	101
Method Blank 02-2100 MB	<0.02	<0.02	<0.02	<0.06	<5	100

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/03/22

Date Received: 09/21/22

Project: 1337-22001-01, F&BI 209324

Date Extracted: 09/22/22, 09/23/22 and 09/26/22

Date Analyzed: 09/22/22, 09/23/22 and 09/26/22

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

Results Reported on a Dry Weight Basis

Results Reported as mg/kg (ppm)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>Residual Range</u> (C ₂₅ -C ₃₆)	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 48-168)
EB03-11.5 209324-01	<50	<250	90
EB07-7 209324-08	470 x	2,800	104
EB07-9.5-SWI 209324-09	<50	<250	97
EB08-10-SWI 209324-10	<50	<250	94
EB09-7 209324-11	340 x	3,700	98
EB10-5-SWI 209324-12	<50	<250	91
EB09-10-SWI 209324-15	<50	<250	96
Method Blank 02-2247 MB	<50	<250	104
Method Blank 02-2283 MB	<50	<250	91

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	EB03-11.5	Client:	Evren Northwest
Date Received:	09/21/22	Project:	1337-22001-01, F&BI 209324
Date Extracted:	09/27/22	Lab ID:	209324-01
Date Analyzed:	09/27/22	Data File:	209324-01.189
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
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Lead	7.70
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	Method Blank	Client:	Evren Northwest
Date Received:	NA	Project:	1337-22001-01, F&BI 209324
Date Extracted:	09/27/22	Lab ID:	I2-681 mb2
Date Analyzed:	09/28/22	Data File:	I2-681 mb2.122
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
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Lead	<1
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	EB05-7	Client:	Evren Northwest
Date Received:	09/21/22	Project:	1337-22001-01, F&BI 209324
Date Extracted:	09/28/22	Lab ID:	209324-04
Date Analyzed:	09/28/22	Data File:	092808.D
Matrix:	Soil	Instrument:	GCMS11
Units:	mg/kg (ppm) Dry Weight	Operator:	LM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	79	128
Toluene-d8	96	84	121
4-Bromofluorobenzene	103	84	116

Compounds:	Concentration mg/kg (ppm)
Methyl t-butyl ether (MTBE)	<0.05
1,2-Dichloroethane (EDC)	<0.05
Benzene	<0.03
Toluene	<0.05
1,2-Dibromoethane (EDB)	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
Isopropylbenzene	0.066
n-Propylbenzene	0.29
1,3,5-Trimethylbenzene	<0.05
1,2,4-Trimethylbenzene	<0.05
Naphthalene	<0.05

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	Method Blank	Client:	Evren Northwest
Date Received:	Not Applicable	Project:	1337-22001-01, F&BI 209324
Date Extracted:	09/28/22	Lab ID:	02-2294 mb
Date Analyzed:	09/28/22	Data File:	092806.D
Matrix:	Soil	Instrument:	GCMS11
Units:	mg/kg (ppm) Dry Weight	Operator:	LM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	79	128
Toluene-d8	104	84	121
4-Bromofluorobenzene	104	84	116

Compounds:	Concentration mg/kg (ppm)
Methyl t-butyl ether (MTBE)	<0.05
1,2-Dichloroethane (EDC)	<0.05
Benzene	<0.03
Toluene	<0.05
1,2-Dibromoethane (EDB)	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
Isopropylbenzene	<0.05
n-Propylbenzene	<0.05
1,3,5-Trimethylbenzene	<0.05
1,2,4-Trimethylbenzene	<0.05
Naphthalene	<0.05

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	Tank Contents-220920	Client:	Evren Northwest
Date Received:	09/21/22	Project:	1337-22001-01, F&BI 209324
Date Extracted:	09/26/22	Lab ID:	209324-14
Date Analyzed:	09/26/22	Data File:	092631.D
Matrix:	Water	Instrument:	GCMS13
Units:	ug/L (ppb)	Operator:	LM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	71	132
Toluene-d8	104	68	139
4-Bromofluorobenzene	94	62	136

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	6.0
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	2.8	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	18	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		

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	Method Blank	Client:	Evren Northwest
Date Received:	Not Applicable	Project:	1337-22001-01, F&BI 209324
Date Extracted:	09/22/22	Lab ID:	02-2173 mb
Date Analyzed:	09/22/22	Data File:	092207.D
Matrix:	Water	Instrument:	GCMS13
Units:	ug/L (ppb)	Operator:	LM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	106	71	132
Toluene-d8	101	68	139
4-Bromofluorobenzene	95	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		

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	Tank Contents-220920	Client:	Evren Northwest
Date Received:	09/21/22	Project:	1337-22001-01, F&BI 209324
Date Extracted:	09/27/22	Lab ID:	209324-14
Date Analyzed:	09/27/22	Data File:	092723.D
Matrix:	Water	Instrument:	GC9
Units:	ug/L (ppb)	Operator:	MG

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
TCMX	46	25	160

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	Method Blank	Client:	Evren Northwest
Date Received:	Not Applicable	Project:	1337-22001-01, F&BI 209324
Date Extracted:	09/27/22	Lab ID:	02-2288 mb2
Date Analyzed:	09/27/22	Data File:	092722.D
Matrix:	Water	Instrument:	GC9
Units:	ug/L (ppb)	Operator:	MG

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
TCMX	39	25	160

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis for TCLP Metals By EPA Method 6020B and 1311

Client ID:	TC-Solids-220920	Client:	Evren Northwest
Date Received:	09/21/22	Project:	1337-22001-01, F&BI 209324
Date Extracted:	09/23/22	Lab ID:	209324-13 and 209324-13 x2
Date Analyzed:	09/23/22 and 09/24/22	Data File:	209324-13.200 and 209324-13 x2.217
Matrix:	Soil/Solid	Instrument:	ICPMS2
Units:	mg/L (ppm)	Operator:	SP

Analyte:	Concentration mg/L (ppm)	TCLP Limit
Arsenic	<1	5.0
Barium	<1	100
Cadmium	<1	1.0
Chromium	<1	5.0
Lead	16.8	5.0
Mercury	<0.1	0.2
Selenium	<1	1.0
Silver	<1	5.0

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis for TCLP Metals By EPA Method 6020B and 1311

Client ID:	Method Blank	Client:	Evren Northwest
Date Received:	NA	Project:	1337-22001-01, F&BI 209324
Date Extracted:	09/22/22	Lab ID:	I2-672 mb
Date Analyzed:	09/23/22	Data File:	I2-672 mb.077
Matrix:	Soil/Solid	Instrument:	ICPMS2
Units:	mg/L (ppm)	Operator:	SP

Analyte:	Concentration mg/L (ppm)	TCLP Limit
Arsenic	<1	5.0
Barium	<1	100
Cadmium	<1	1.0
Chromium	<1	5.0
Lead	<1	5.0
Mercury	<0.1	0.2
Selenium	<1	1.0
Silver	<1	5.0

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/03/22

Date Received: 09/21/22

Project: 1337-22001-01, F&BI 209324

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES
FOR TPH AS GASOLINE
USING METHOD NWTPH-G_x**

Laboratory Code: 209324-12 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (Limit 20)
Gasoline	mg/kg (ppm)	<5	<5	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	mg/kg (ppm)	20	100	61-153

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/03/22

Date Received: 09/21/22

Project: 1337-22001-01, F&BI 209324

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES
FOR BENZENE, TOLUENE, ETHYLBENZENE,
XYLENES, AND TPH AS GASOLINE
USING EPA METHOD 8021B AND NWTPH-Gx**

Laboratory Code: 209402-01 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (Limit 20)
Benzene	mg/kg (ppm)	<0.02	<0.02	nm
Toluene	mg/kg (ppm)	<0.02	<0.02	nm
Ethylbenzene	mg/kg (ppm)	<0.02	<0.02	nm
Xylenes	mg/kg (ppm)	<0.06	<0.06	nm
Gasoline	mg/kg (ppm)	<5	<5	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent	
			Recovery LCS	Acceptance Criteria
Benzene	mg/kg (ppm)	0.5	99	69-120
Toluene	mg/kg (ppm)	0.5	98	70-117
Ethylbenzene	mg/kg (ppm)	0.5	95	65-123
Xylenes	mg/kg (ppm)	1.5	96	66-120
Gasoline	mg/kg (ppm)	20	105	71-131

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/03/22

Date Received: 09/21/22

Project: 1337-22001-01, F&BI 209324

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

Laboratory Code: 209318-03 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet Wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	9,000	60 b	40 b	73-135	40 b

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	102	74-139

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/03/22

Date Received: 09/21/22

Project: 1337-22001-01, F&BI 209324

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

Laboratory Code: 209403-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet Wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	110	104	73-135	6

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	100	74-139

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/03/22

Date Received: 09/21/22

Project: 1337-22001-01, F&BI 209324

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

Laboratory Code: 209367-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Lead	mg/kg (ppm)	50	65.8	97	170 b	75-125	55 b

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Lead	mg/kg (ppm)	50	105	80-120

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/03/22

Date Received: 09/21/22

Project: 1337-22001-01, F&BI 209324

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

Laboratory Code: 209324-04 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	1.0	<0.05	66	71	50-150	7
1,2-Dichloroethane (EDC)	mg/kg (ppm)	1.0	<0.05	65	70	50-150	7
Benzene	mg/kg (ppm)	1.0	<0.03	67	73	50-150	9
Toluene	mg/kg (ppm)	1.0	<0.05	69	75	50-150	8
1,2-Dibromoethane (EDB)	mg/kg (ppm)	1.0	<0.05	68	75	50-150	10
Ethylbenzene	mg/kg (ppm)	1.0	<0.05	72	79	50-150	9
m,p-Xylene	mg/kg (ppm)	2.0	<0.1	72	78	50-150	8
o-Xylene	mg/kg (ppm)	1.0	<0.05	74	80	50-150	8
Isopropylbenzene	mg/kg (ppm)	1.0	0.051	75	79	50-150	5
n-Propylbenzene	mg/kg (ppm)	1.0	0.22	79 b	82 b	50-150	4 b
1,3,5-Trimethylbenzene	mg/kg (ppm)	1.0	<0.05	72	80	50-150	11
1,2,4-Trimethylbenzene	mg/kg (ppm)	1.0	<0.05	70	78	50-150	11
Naphthalene	mg/kg (ppm)	1.0	<0.05	70	79	50-150	12

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/03/22

Date Received: 09/21/22

Project: 1337-22001-01, F&BI 209324

**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
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	1.0	74	65-129
1,2-Dichloroethane (EDC)	mg/kg (ppm)	1.0	81	73-123
Benzene	mg/kg (ppm)	1.0	74	70-130
Toluene	mg/kg (ppm)	1.0	73	70-130
1,2-Dibromoethane (EDB)	mg/kg (ppm)	1.0	70	70-130
Ethylbenzene	mg/kg (ppm)	1.0	75	70-130
m,p-Xylene	mg/kg (ppm)	2.0	74	70-130
o-Xylene	mg/kg (ppm)	1.0	78	70-130
Isopropylbenzene	mg/kg (ppm)	1.0	78	67-131
n-Propylbenzene	mg/kg (ppm)	1.0	75	70-130
1,3,5-Trimethylbenzene	mg/kg (ppm)	1.0	74	70-130
1,2,4-Trimethylbenzene	mg/kg (ppm)	1.0	73	70-130
Naphthalene	mg/kg (ppm)	1.0	73	69-119

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/03/22

Date Received: 09/21/22

Project: 1337-22001-01, F&BI 209324

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

Laboratory Code: 209359-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent	Acceptance Criteria
				Recovery MS	
Dichlorodifluoromethane	ug/L (ppb)	10	<1	108	50-150
Chloromethane	ug/L (ppb)	10	<10	101	50-150
Vinyl chloride	ug/L (ppb)	10	<0.02	106	16-176
Bromomethane	ug/L (ppb)	10	<5	100	10-193
Chloroethane	ug/L (ppb)	10	<1	126	50-150
Trichlorofluoromethane	ug/L (ppb)	10	<1	96	50-150
Acetone	ug/L (ppb)	50	<50	95	15-179
1,1-Dichloroethene	ug/L (ppb)	10	<1	107	50-150
Hexane	ug/L (ppb)	10	<5	115	49-161
Methylene chloride	ug/L (ppb)	10	5.5	42 b	40-143
Methyl t-butyl ether (MTBE)	ug/L (ppb)	10	<1	98	50-150
trans-1,2-Dichloroethene	ug/L (ppb)	10	<1	99	50-150
1,1-Dichloroethane	ug/L (ppb)	10	<1	100	50-150
2,2-Dichloropropane	ug/L (ppb)	10	<1	108	10-335
cis-1,2-Dichloroethene	ug/L (ppb)	10	<1	101	50-150
Chloroform	ug/L (ppb)	10	<1	99	50-150
2-Butanone (MEK)	ug/L (ppb)	50	<20	98	34-168
1,2-Dichloroethane (EDC)	ug/L (ppb)	10	<0.2	99	50-150
1,1,1-Trichloroethane	ug/L (ppb)	10	<1	100	50-150
1,1-Dichloropropene	ug/L (ppb)	10	<1	100	50-150
Carbon tetrachloride	ug/L (ppb)	10	<0.5	100	50-150
Benzene	ug/L (ppb)	10	<0.35	96	50-150
Trichloroethene	ug/L (ppb)	10	<0.5	98	43-133
1,2-Dichloropropane	ug/L (ppb)	10	<1	96	50-150
Bromodichloromethane	ug/L (ppb)	10	<0.5	93	50-150
Dibromomethane	ug/L (ppb)	10	<1	96	50-150
4-Methyl-2-pentanone	ug/L (ppb)	50	<10	99	50-150
cis-1,3-Dichloropropene	ug/L (ppb)	10	<0.4	96	48-145
Toluene	ug/L (ppb)	10	<1	94	50-150
trans-1,3-Dichloropropene	ug/L (ppb)	10	<0.4	86	37-152
1,1,2-Trichloroethane	ug/L (ppb)	10	<0.5	94	50-150
2-Hexanone	ug/L (ppb)	50	<10	92	50-150
1,3-Dichloropropane	ug/L (ppb)	10	<1	96	50-150
Tetrachloroethene	ug/L (ppb)	10	<1	99	50-150
Dibromochloromethane	ug/L (ppb)	10	<0.5	89	33-164
1,2-Dibromoethane (EDB)	ug/L (ppb)	10	<1	89	50-150
Chlorobenzene	ug/L (ppb)	10	<1	92	50-150
Ethylbenzene	ug/L (ppb)	10	<1	90	50-150
1,1,1,2-Tetrachloroethane	ug/L (ppb)	10	<1	92	50-150
m,p-Xylene	ug/L (ppb)	20	<2	98	50-150
o-Xylene	ug/L (ppb)	10	<1	90	50-150
Styrene	ug/L (ppb)	10	<1	93	50-150
Isopropylbenzene	ug/L (ppb)	10	<1	95	50-150
Bromoform	ug/L (ppb)	10	<5	81	23-161
n-Propylbenzene	ug/L (ppb)	10	<1	95	50-150
Bromobenzene	ug/L (ppb)	10	<1	93	50-150
1,3,5-Trimethylbenzene	ug/L (ppb)	10	<1	95	50-150
1,1,2,2-Tetrachloroethane	ug/L (ppb)	10	<0.2	90	10-235
1,2,3-Trichloropropane	ug/L (ppb)	10	<1	89	33-151
2-Chlorotoluene	ug/L (ppb)	10	<1	93	50-150
4-Chlorotoluene	ug/L (ppb)	10	<1	94	50-150
tert-Butylbenzene	ug/L (ppb)	10	<1	91	50-150
1,2,4-Trimethylbenzene	ug/L (ppb)	10	<1	92	50-150
sec-Butylbenzene	ug/L (ppb)	10	<1	92	46-139
p-Isopropyltoluene	ug/L (ppb)	10	<1	95	46-140
1,3-Dichlorobenzene	ug/L (ppb)	10	<1	94	50-150
1,4-Dichlorobenzene	ug/L (ppb)	10	<1	101	50-150
1,2-Dichlorobenzene	ug/L (ppb)	10	<1	94	50-150
1,2-Dibromo-3-chloropropane	ug/L (ppb)	10	<10	87	50-150
1,2,4-Trichlorobenzene	ug/L (ppb)	10	<1	91	50-150
Hexachlorobutadiene	ug/L (ppb)	10	<0.5	90	42-150
Naphthalene	ug/L (ppb)	10	<1	87	50-150
1,2,3-Trichlorobenzene	ug/L (ppb)	10	<1	86	44-155

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/03/22

Date Received: 09/21/22

Project: 1337-22001-01, F&BI 209324

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	116	119	70-130	3
Chloromethane	ug/L (ppb)	10	100	112	70-130	11
Vinyl chloride	ug/L (ppb)	10	111	115	70-130	4
Bromomethane	ug/L (ppb)	10	115	104	28-182	10
Chloroethane	ug/L (ppb)	10	136 vo	135 vo	70-130	1
Trichlorofluoromethane	ug/L (ppb)	10	104	116	70-130	11
Acetone	ug/L (ppb)	50	96	99	42-155	3
1,1-Dichloroethene	ug/L (ppb)	10	112	114	70-130	2
Hexane	ug/L (ppb)	10	108	132	50-161	20
Methylene chloride	ug/L (ppb)	10	88	91	29-192	3
Methyl t-butyl ether (MTBE)	ug/L (ppb)	10	102	107	70-130	5
trans-1,2-Dichloroethene	ug/L (ppb)	10	102	108	70-130	6
1,1-Dichloroethane	ug/L (ppb)	10	105	109	70-130	4
2,2-Dichloropropane	ug/L (ppb)	10	121	122	70-130	1
cis-1,2-Dichloroethene	ug/L (ppb)	10	104	111	70-130	7
Chloroform	ug/L (ppb)	10	101	109	70-130	8
2-Butanone (MEK)	ug/L (ppb)	50	94	97	50-157	3
1,2-Dichloroethane (EDC)	ug/L (ppb)	10	99	110	70-130	11
1,1,1-Trichloroethane	ug/L (ppb)	10	104	110	70-130	6
1,1-Dichloropropene	ug/L (ppb)	10	97	112	70-130	14
Carbon tetrachloride	ug/L (ppb)	10	103	113	70-130	9
Benzene	ug/L (ppb)	10	96	106	70-130	10
Trichloroethene	ug/L (ppb)	10	98	110	70-130	12
1,2-Dichloropropane	ug/L (ppb)	10	98	109	70-130	11
Bromodichloromethane	ug/L (ppb)	10	92	102	70-130	10
Dibromomethane	ug/L (ppb)	10	98	105	70-130	7
4-Methyl-2-pentanone	ug/L (ppb)	50	96	111	70-130	14
cis-1,3-Dichloropropene	ug/L (ppb)	10	91	105	70-130	14
Toluene	ug/L (ppb)	10	101	102	70-130	1
trans-1,3-Dichloropropene	ug/L (ppb)	10	88	89	70-130	1
1,1,2-Trichloroethane	ug/L (ppb)	10	98	100	70-130	2
2-Hexanone	ug/L (ppb)	50	94	99	69-130	5
1,3-Dichloropropane	ug/L (ppb)	10	99	103	70-130	4
Tetrachloroethene	ug/L (ppb)	10	106	109	70-130	3
Dibromochloromethane	ug/L (ppb)	10	92	92	63-142	0
1,2-Dibromoethane (EDB)	ug/L (ppb)	10	94	95	70-130	1
Chlorobenzene	ug/L (ppb)	10	99	104	70-130	5
Ethylbenzene	ug/L (ppb)	10	97	98	70-130	1
1,1,1,2-Tetrachloroethane	ug/L (ppb)	10	102	103	70-130	1
m,p-Xylene	ug/L (ppb)	20	106	106	70-130	0
o-Xylene	ug/L (ppb)	10	100	98	70-130	2
Styrene	ug/L (ppb)	10	98	101	70-130	3
Isopropylbenzene	ug/L (ppb)	10	103	102	70-130	1
Bromoform	ug/L (ppb)	10	87	89	50-157	2
n-Propylbenzene	ug/L (ppb)	10	98	101	70-130	3
Bromobenzene	ug/L (ppb)	10	101	101	70-130	0
1,3,5-Trimethylbenzene	ug/L (ppb)	10	102	100	52-150	2
1,1,2,2-Tetrachloroethane	ug/L (ppb)	10	89	92	70-130	3
1,2,3-Trichloropropane	ug/L (ppb)	10	94	97	70-130	3
2-Chlorotoluene	ug/L (ppb)	10	99	98	70-130	1
4-Chlorotoluene	ug/L (ppb)	10	98	99	70-130	1
tert-Butylbenzene	ug/L (ppb)	10	97	100	70-130	3
1,2,4-Trimethylbenzene	ug/L (ppb)	10	98	99	70-130	1
sec-Butylbenzene	ug/L (ppb)	10	98	100	70-130	2
p-Isopropyltoluene	ug/L (ppb)	10	101	102	70-130	1
1,3-Dichlorobenzene	ug/L (ppb)	10	102	102	70-130	0
1,4-Dichlorobenzene	ug/L (ppb)	10	104	106	70-130	2
1,2-Dichlorobenzene	ug/L (ppb)	10	102	103	70-130	1
1,2-Dibromo-3-chloropropane	ug/L (ppb)	10	90	86	70-130	5
1,2,4-Trichlorobenzene	ug/L (ppb)	10	101	98	70-130	3
Hexachlorobutadiene	ug/L (ppb)	10	101	101	70-130	0
Naphthalene	ug/L (ppb)	10	94	93	70-130	1
1,2,3-Trichlorobenzene	ug/L (ppb)	10	97	94	69-143	3

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/03/22

Date Received: 09/21/22

Project: 1337-22001-01, F&BI 209324

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

Laboratory Code: Laboratory Control Sample 1/0.5

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Aroclor 1016	ug/L (ppb)	0.25	58	59	25-165	2
Aroclor 1260	ug/L (ppb)	0.25	77	77	25-163	0

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/03/22

Date Received: 09/21/22

Project: 1337-22001-01, F&BI 209324

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

Laboratory Code: 209324-13 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	mg/L (ppm)	1.0	<1	95	98	75-125	3
Barium	mg/L (ppm)	5.0	<1	94	96	75-125	2
Cadmium	mg/L (ppm)	0.5	<1	93	95	75-125	2
Chromium	mg/L (ppm)	2.0	<1	94	93	75-125	1
Lead	mg/L (ppm)	1.0	15.9	111	107	75-125	4
Mercury	mg/L (ppm)	1.0	<0.1	94	98	75-125	4
Selenium	mg/L (ppm)	0.5	<1	101	106	75-125	5
Silver	mg/L (ppm)	0.5	<1	95	98	75-125	3

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	mg/L (ppm)	1.0	94	80-120
Barium	mg/L (ppm)	5.0	97	80-120
Cadmium	mg/L (ppm)	0.5	97	80-120
Chromium	mg/L (ppm)	2.0	97	80-120
Lead	mg/L (ppm)	1.0	100	80-120
Mercury	mg/L (ppm)	1.0	98	80-120
Selenium	mg/L (ppm)	0.5	102	80-120
Silver	mg/L (ppm)	0.5	92	80-120

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

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

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. 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 lowest calibration standard. 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.

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.

20923419
209324

Report To Lynn Green

Company Euren Northwest

Address P.O. Box 14488

City, State, ZIP Portland, OR 97293

Phone (503) 452-5761 Email lynn@euren-nw.com

SAMPLE CHAIN OF CUSTODY

SAMPLERS (signature) Jordan Morris

PROJECT NAME

1337-22001-01

PO #

REMARKS

INVOICE TO

Project specific RIS? - Yes / No

Page # 1 of 1

TURNAROUND TIME

☒ Standard turnaround
☐ RUSH
Rush charges authorized by:

SAMPLE DISPOSAL

☐ Archive samples
☐ Other
Default: Dispose after 30 days

						ANALYSES REQUESTED										
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	RBDM vols	Total Lead	Notes	
EB03-11.5	01	09-20-22	11:15	Soil	1	X	X								● per LG	
EB04-7-5WI	02A-E	09-20-22	8:25	Soil	5		X								q/25m wt	
EB04-12	03	09-20-22	8:40	Soil	1											
EB05-7	04A-E	09-20-22	9:30	Soil	5		X						●	●		
EB05-12	05	09-20-22	9:40	Soil	1	●										
EB06-4	06A-E	09-20-22	10:10	Soil	5	X										
EB06-11	07	09-20-22	10:20	Soil	1											
EB07-7	08A-E	09-20-22	12:37	Soil	5	X	X									
EB07-9.5-5WI	09	09-20-22	12:42	Soil	1	X	X									
EB08-10-5WI	10A-E	09-20-22	13:19	Soil	5	X	X									

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

SIGNATURE

PRINT NAME

COMPANY

DATE TIME

Relinquished by: Jordan Morris

Received by: Jordan Morris

Relinquished by: Euren Northwest

Received by: FRB

Relinquished by: FRB

Received by: FRB

Relinquished by: FRB

Received by: FRB

Received by: FRB

Samples received at 5 °C

SAMPLE CHAIN OF CUSTODY

09-24-22

Page # 153 of 104

209324

Report To

Lynn Green

Company

Everen Northwest

Address

P.O. Box 14488

City, State, ZIP

Portland OR 97293

Phone

(503) 452-5551 Email lynn@everen-nw.com

SAMPLERS (signature)

PROJECT NAME

1537-22001-01

PO #

REMARKS

INVOICE TO

Project specific RLS? - Yes / No

SAMPLE DISPOSAL

- ☒ Standard turnaround
- ☐ RUSH
- ☐ Rush charges authorized by:
- ☐ Other
- Default: Dispose after 30 days

ANALYSES REQUESTED

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	TCLP RCRA	HClD	PCPs	Notes
EB09-4	11A-E	09-20-22	14:09	Soil	5	X	X									
EB10-5-SWI	121	09-20-22	15:25	Soil	5	X	X									
TC-Solids-220920	13	09-20-22	16:20	Sludges	1							X				
Tank contents-220920	14A-F	9-20-22	15:15	liquid	6					X				X	X	
EB09-ID-SWI	15A-E	9/20/22	14:18	Soil	5	●	●	●								Added in lab EWS 9/21

SIGNATURE

Relinquished by:

[Signature]

PRINT NAME

Taden Morris

COMPANY

Everen Northwest

DATE

09-20-22

TIME

18:00

3012 16th Avenue West

Seattle, WA 98119-2029

Received by:

[Signature]

PRINT NAME

ANNNNN

COMPANY

FW

DATE

9/21/22

TIME

1130

Relinquished by:

[Signature]

PRINT NAME

ANNNNN

COMPANY

FW

DATE

9/21/22

TIME

1130

Ph. (206) 285-8282

Received by:

[Signature]

PRINT NAME

ANNNNN

COMPANY

FW

DATE

9/21/22

TIME

1130

Samples received at 5 °C

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

October 7, 2022

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

Dear Mr Green:

Included are the initial results from the testing of material submitted on September 20, 2022 from the 1337-22001-01, F&BI 209291 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
ENW1007R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on September 20, 2022 by Friedman & Bruya, Inc. from the Evren Northwest 1337-22001-01, F&BI 209291 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>Evren Northwest</u>
209291 -01	EB01-2.5
209291 -02	EB01-6
209291 -03	EB02-1.5
209291 -04	EB02-6

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis for TCLP Metals By EPA Method 6020B and 1311

Client ID:	EB01-6	Client:	Evren Northwest
Date Received:	09/20/22	Project:	1337-22001-01, F&BI 209291
Date Extracted:	10/04/22	Lab ID:	209291-02 x0.1
Date Analyzed:	10/05/22	Data File:	209291-02 x0.1.053
Matrix:	Soil/Solid	Instrument:	ICPMS2
Units:	mg/L (ppm)	Operator:	SP

Analyte:	Concentration mg/L (ppm)	TCLP Limit
Lead	0.235	5.0

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis for TCLP Metals By EPA Method 6020B and 1311

Client ID:	Method Blank	Client:	Evren Northwest
Date Received:	Not Applicable	Project:	1337-22001-01, F&BI 209291
Date Extracted:	10/04/22	Lab ID:	I2-706 mb x0.1
Date Analyzed:	10/05/22	Data File:	I2-706 mb x0.1.051
Matrix:	Soil/Solid	Instrument:	ICPMS2
Units:	mg/L (ppm)	Operator:	SP

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/07/22

Date Received: 09/20/22

Project: 1337-22001-01, F&BI 209291

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

Laboratory Code: 209023-19 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Lead	mg/L (ppm)	1.0	<1	94	92	75-125	2

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Lead	mg/L (ppm)	1.0	94	80-120

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

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

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. 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 lowest calibration standard. 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.

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.

209291

SAMPLE CHAIN OF CUSTODY

09/20/22

CT-2

Report to

Lynn Green

Company

Ever Northwest

Address

P.O. Box 14488

City, State, ZIP

Portland, OR 97293

Phone

(503) 457-5561

Email

lynn@evernw.com

SAMPLERS (signature)

Jordan Allen

PROJECT NAME

1337-2004-01

PO #

REMARKS

INVOICE TO

Project specific RLS? - Yes / No

TURNAROUND TIME
☒ Standard turnaround
☐ RUSH
 Rush charges authorized by: _____

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

ANALYSES REQUESTED

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	RCRA Metals	TCLP Lead	
EB01-2.5	01A-E	09-19-22	10:30	Soil	5										held
EB01-6	02	09-19-22	10:45	Soil	5	X	X								held
EB02-1.5	03	09-19-22	11:30	Soil	5										held
EB02-6	04	09-19-22	11:50	Soil	5	X	X								

SIGNATURE

PRINT NAME

COMPANY

DATE

TIME

Friedman & Bruya, Inc.

Ph. (206) 285-8282

Relinquished by:

Jordan Allen

Jordan Allen

Jordan Allen

Ever Northwest

09-19-22

18:00

Received by:

Jordan Allen

Jordan Allen

Jordan Allen

Ever Northwest

09-20-22

11:00

Relinquished by:

Jordan Allen

Jordan Allen

Jordan Allen

Ever Northwest

09-20-22

11:00

Received by:

Jordan Allen

Jordan Allen

Jordan Allen

Ever Northwest

09-20-22

11:00

Received by:

Jordan Allen

Jordan Allen

Jordan Allen

Ever Northwest

09-20-22

11:00

Samples received at:

6:00

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.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

October 19, 2022

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 September 21, 2022 from the 1337-22001-01, F&BI 209325 project. There are 13 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
ENW1019R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on September 21, 2022 by Friedman & Bruya, Inc. from the Evren Northwest 1337-22001-01, F&BI 209325 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>Evren Northwest</u>
209325 -01	EB04-GW-12
209325 -02	EB05-GW-12
209325 -03	EB08-GW-15
209325 -04	EB09-GW-13
209325 -05	EB10-GW-10

Sample EB05-GW-12 was sent to Fremont Analytical for dissolved lead analysis. The report is enclosed.

The NWTPH-Gx, NWTPH-Dx, and 8260D analyses were requested outside of the holding time. The data were flagged accordingly.

Methylene chloride in the 8260D matrix spike, laboratory control sample, and laboratory control sample duplicate failed the acceptance criteria. The data were flagged accordingly.

All other quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/19/22

Date Received: 09/21/22

Project: 1337-22001-01, F&BI 209325

Date Extracted: 10/12/22

Date Analyzed: 10/12/22

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
USING METHOD NWTPH-G_x**
Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Gasoline Range</u>	Surrogate (% Recovery) (Limit 51-134)
EB04-GW-12 ht 209325-01 1/5	10,000	89
EB05-GW-12 ht 209325-02	110	103
EB09-GW-13 ht 209325-04	2,600	ip
EB10-GW-10 ht 209325-05	<100	89
Method Blank 02-2353 mb	<100	92

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/19/22

Date Received: 09/21/22

Project: 1337-22001-01, F&BI 209325

Date Extracted: 10/11/22

Date Analyzed: 10/12/22 and 10/13/22

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

Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>Residual Range</u> (C ₂₅ -C ₃₆)	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 41-152)
EB09-GW-13 ht 209325-04 1/100	240,000 x	1,400,000	ip
EB10-GW-10 ht 209325-05	75 x	400	69
Method Blank 02-2446 MB2	<50	<250	112

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	EB04-GW-12 ht	Client:	Evren Northwest
Date Received:	09/21/22	Project:	1337-22001-01, F&BI 209325
Date Extracted:	10/13/22	Lab ID:	209325-01 1/50
Date Analyzed:	10/13/22	Data File:	101333.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	78	126
Toluene-d8	95	84	115
4-Bromofluorobenzene	94	72	130

Compounds:	Concentration ug/L (ppb)
Methyl t-butyl ether (MTBE)	<50
1,2-Dichloroethane (EDC)	<10
Benzene	2.8 j
Toluene	<50
1,2-Dibromoethane (EDB)	<50
Ethylbenzene	190
m,p-Xylene	780
o-Xylene	300
Isopropylbenzene	53
n-Propylbenzene	150
1,3,5-Trimethylbenzene	130
1,2,4-Trimethylbenzene	480
Naphthalene	94

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	EB05-GW-12 ht	Client:	Evren Northwest
Date Received:	09/21/22	Project:	1337-22001-01, F&BI 209325
Date Extracted:	10/13/22	Lab ID:	209325-02
Date Analyzed:	10/13/22	Data File:	101331.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	96	78	126
Toluene-d8	99	84	115
4-Bromofluorobenzene	100	72	130

Compounds:	Concentration ug/L (ppb)
Methyl t-butyl ether (MTBE)	<1
1,2-Dichloroethane (EDC)	<0.2
Benzene	<0.35
Toluene	<1
1,2-Dibromoethane (EDB)	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Isopropylbenzene	3.4
n-Propylbenzene	11
1,3,5-Trimethylbenzene	<1
1,2,4-Trimethylbenzene	<1
Naphthalene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	EB09-GW-13 ht	Client:	Evren Northwest
Date Received:	09/21/22	Project:	1337-22001-01, F&BI 209325
Date Extracted:	10/13/22	Lab ID:	209325-04
Date Analyzed:	10/14/22	Data File:	101334.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	78	126
Toluene-d8	96	84	115
4-Bromofluorobenzene	81	72	130

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 jl	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	6.1
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		

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	EB10-GW-10 ht	Client:	Evren Northwest
Date Received:	09/21/22	Project:	1337-22001-01, F&BI 209325
Date Extracted:	10/13/22	Lab ID:	209325-05
Date Analyzed:	10/13/22	Data File:	101332.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	94	78	126
Toluene-d8	93	84	115
4-Bromofluorobenzene	95	72	130

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 jl	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		

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	Method Blank	Client:	Evren Northwest
Date Received:	Not Applicable	Project:	1337-22001-01, F&BI 209325
Date Extracted:	10/13/22	Lab ID:	02-2479 mb
Date Analyzed:	10/13/22	Data File:	101307.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	78	126
Toluene-d8	96	84	115
4-Bromofluorobenzene	95	72	130

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 jl	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	<0.05 j	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		

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/19/22

Date Received: 09/21/22

Project: 1337-22001-01, F&BI 209325

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

Laboratory Code: 210115-01 (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	102	69-134

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/19/22

Date Received: 09/21/22

Project: 1337-22001-01, F&BI 209325

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

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	92	92	63-142	0

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/19/22

Date Received: 09/21/22

Project: 1337-22001-01, F&BI 209325

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

Laboratory Code: 210080-02 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent	Acceptance Criteria
				Recovery MS	
Dichlorodifluoromethane	ug/L (ppb)	10	<1	107	50-150
Chloromethane	ug/L (ppb)	10	<10	107	50-150
Vinyl chloride	ug/L (ppb)	10	<0.02	111	50-150
Bromomethane	ug/L (ppb)	10	<5	102	50-150
Chloroethane	ug/L (ppb)	10	<1	108	50-150
Trichlorofluoromethane	ug/L (ppb)	10	<1	99	50-150
Acetone	ug/L (ppb)	50	<50	97	50-150
1,1-Dichloroethene	ug/L (ppb)	10	<1	101	50-150
Hexane	ug/L (ppb)	10	<5	114	50-150
Methylene chloride	ug/L (ppb)	10	<5	38 vo	50-150
Methyl t-butyl ether (MTBE)	ug/L (ppb)	10	<1	100	50-150
trans-1,2-Dichloroethene	ug/L (ppb)	10	<1	99	50-150
1,1-Dichloroethane	ug/L (ppb)	10	<1	107	50-150
2,2-Dichloropropane	ug/L (ppb)	10	<1	120	50-150
cis-1,2-Dichloroethene	ug/L (ppb)	10	<1	106	50-150
Chloroform	ug/L (ppb)	10	<1	102	50-150
2-Butanone (MEK)	ug/L (ppb)	50	<20	89	50-150
1,2-Dichloroethane (EDC)	ug/L (ppb)	10	<0.2	96	50-150
1,1,1-Trichloroethane	ug/L (ppb)	10	<1	101	50-150
1,1-Dichloropropene	ug/L (ppb)	10	<1	98	50-150
Carbon tetrachloride	ug/L (ppb)	10	<0.5	101	50-150
Benzene	ug/L (ppb)	10	<0.35	98	50-150
Trichloroethene	ug/L (ppb)	10	<0.5	96	50-150
1,2-Dichloropropane	ug/L (ppb)	10	<1	93	50-150
Bromodichloromethane	ug/L (ppb)	10	<0.5	92	50-150
Dibromomethane	ug/L (ppb)	10	<1	94	50-150
4-Methyl-2-pentanone	ug/L (ppb)	50	<10	95	50-150
cis-1,3-Dichloropropene	ug/L (ppb)	10	<0.4	88	50-150
Toluene	ug/L (ppb)	10	<1	95	50-150
trans-1,3-Dichloropropene	ug/L (ppb)	10	<0.4	85	50-150
1,1,2-Trichloroethane	ug/L (ppb)	10	<0.5	90	50-150
2-Hexanone	ug/L (ppb)	50	<10	105	50-150
1,3-Dichloropropene	ug/L (ppb)	10	<1	94	50-150
Tetrachloroethene	ug/L (ppb)	10	<1	95	50-150
Dibromochloromethane	ug/L (ppb)	10	<0.5	92	50-150
1,2-Dibromoethane (EDB)	ug/L (ppb)	10	<1	94	50-150
Chlorobenzene	ug/L (ppb)	10	<1	92	50-150
Ethylbenzene	ug/L (ppb)	10	<1	98	50-150
1,1,1,2-Tetrachloroethane	ug/L (ppb)	10	<1	99	50-150
m,p-Xylene	ug/L (ppb)	20	<2	97	50-150
o-Xylene	ug/L (ppb)	10	<1	101	50-150
Styrene	ug/L (ppb)	10	<1	95	50-150
Isopropylbenzene	ug/L (ppb)	10	<1	101	50-150
Bromoform	ug/L (ppb)	10	<5	91	50-150
n-Propylbenzene	ug/L (ppb)	10	<1	97	50-150
Bromobenzene	ug/L (ppb)	10	<1	91	50-150
1,3,5-Trimethylbenzene	ug/L (ppb)	10	<1	94	50-150
1,1,2,2-Tetrachloroethane	ug/L (ppb)	10	<0.2	100	50-150
1,2,3-Trichloropropane	ug/L (ppb)	10	<1	98	50-150
2-Chlorotoluene	ug/L (ppb)	10	<1	97	50-150
4-Chlorotoluene	ug/L (ppb)	10	<1	94	50-150
tert-Butylbenzene	ug/L (ppb)	10	<1	95	50-150
1,2,4-Trimethylbenzene	ug/L (ppb)	10	<1	93	50-150
sec-Butylbenzene	ug/L (ppb)	10	<1	97	50-150
p-Isopropyltoluene	ug/L (ppb)	10	<1	97	50-150
1,3-Dichlorobenzene	ug/L (ppb)	10	<1	95	50-150
1,4-Dichlorobenzene	ug/L (ppb)	10	<1	99	50-150
1,2-Dichlorobenzene	ug/L (ppb)	10	<1	96	50-150
1,2-Dibromo-3-chloropropane	ug/L (ppb)	10	<10	104	50-150
1,2,4-Trichlorobenzene	ug/L (ppb)	10	<1	102	50-150
Hexachlorobutadiene	ug/L (ppb)	10	<0.5	101	50-150
Naphthalene	ug/L (ppb)	10	<1	107	50-150
1,2,3-Trichlorobenzene	ug/L (ppb)	10	<1	101	50-150

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/19/22

Date Received: 09/21/22

Project: 1337-22001-01, F&BI 209325

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	85	85	46-206	0
Chloromethane	ug/L (ppb)	10	101	100	70-142	1
Vinyl chloride	ug/L (ppb)	10	96	97	70-130	1
Bromomethane	ug/L (ppb)	10	93	92	56-197	1
Chloroethane	ug/L (ppb)	10	98	97	70-130	1
Trichlorofluoromethane	ug/L (ppb)	10	87	86	70-130	1
Acetone	ug/L (ppb)	50	96	91	10-140	5
1,1-Dichloroethene	ug/L (ppb)	10	89	89	70-130	0
Hexane	ug/L (ppb)	10	104	103	54-136	1
Methylene chloride	ug/L (ppb)	10	11 vo	9 vo	43-134	20
Methyl t-butyl ether (MTBE)	ug/L (ppb)	10	92	90	70-130	2
trans-1,2-Dichloroethene	ug/L (ppb)	10	88	87	70-130	1
1,1-Dichloroethane	ug/L (ppb)	10	93	94	70-130	1
2,2-Dichloropropane	ug/L (ppb)	10	106	110	70-130	4
cis-1,2-Dichloroethene	ug/L (ppb)	10	91	95	70-130	4
Chloroform	ug/L (ppb)	10	90	90	70-130	0
2-Butanone (MEK)	ug/L (ppb)	50	101	111	17-154	9
1,2-Dichloroethane (EDC)	ug/L (ppb)	10	93	93	70-130	0
1,1,1-Trichloroethane	ug/L (ppb)	10	91	92	70-130	1
1,1-Dichloropropene	ug/L (ppb)	10	91	94	70-130	3
Carbon tetrachloride	ug/L (ppb)	10	89	90	70-130	1
Benzene	ug/L (ppb)	10	93	95	70-130	2
Trichloroethene	ug/L (ppb)	10	93	92	70-130	1
1,2-Dichloropropane	ug/L (ppb)	10	95	95	70-130	0
Bromodichloromethane	ug/L (ppb)	10	93	92	70-130	1
Dibromomethane	ug/L (ppb)	10	92	95	70-130	3
4-Methyl-2-pentanone	ug/L (ppb)	50	105	104	68-130	1
cis-1,3-Dichloropropene	ug/L (ppb)	10	91	93	69-131	2
Toluene	ug/L (ppb)	10	93	95	70-130	2
trans-1,3-Dichloropropene	ug/L (ppb)	10	91	91	70-130	0
1,1,2-Trichloroethane	ug/L (ppb)	10	94	94	70-130	0
2-Hexanone	ug/L (ppb)	50	119	112	45-138	6
1,3-Dichloropropane	ug/L (ppb)	10	102	102	70-130	0
Tetrachloroethene	ug/L (ppb)	10	92	93	70-130	1
Dibromochloromethane	ug/L (ppb)	10	95	94	60-148	1
1,2-Dibromoethane (EDB)	ug/L (ppb)	10	98	99	70-130	1
Chlorobenzene	ug/L (ppb)	10	92	93	70-130	1
Ethylbenzene	ug/L (ppb)	10	94	95	70-130	1
1,1,1,2-Tetrachloroethane	ug/L (ppb)	10	93	94	70-130	1
m,p-Xylene	ug/L (ppb)	20	94	94	70-130	0
o-Xylene	ug/L (ppb)	10	95	95	70-130	0
Styrene	ug/L (ppb)	10	95	94	70-130	1
Isopropylbenzene	ug/L (ppb)	10	93	94	70-130	1
Bromoform	ug/L (ppb)	10	98	97	69-138	1
n-Propylbenzene	ug/L (ppb)	10	94	93	70-130	1
Bromobenzene	ug/L (ppb)	10	88	89	70-130	1
1,3,5-Trimethylbenzene	ug/L (ppb)	10	92	90	70-130	2
1,1,2,2-Tetrachloroethane	ug/L (ppb)	10	100	101	70-130	1
1,2,3-Trichloropropane	ug/L (ppb)	10	99	101	70-130	2
2-Chlorotoluene	ug/L (ppb)	10	93	93	70-130	0
4-Chlorotoluene	ug/L (ppb)	10	93	91	70-130	2
tert-Butylbenzene	ug/L (ppb)	10	93	93	70-130	0
1,2,4-Trimethylbenzene	ug/L (ppb)	10	89	89	70-130	0
sec-Butylbenzene	ug/L (ppb)	10	93	92	70-130	1
p-Isopropyltoluene	ug/L (ppb)	10	92	91	70-130	1
1,3-Dichlorobenzene	ug/L (ppb)	10	92	91	70-130	1
1,4-Dichlorobenzene	ug/L (ppb)	10	97	96	70-130	1
1,2-Dichlorobenzene	ug/L (ppb)	10	93	90	70-130	3
1,2-Dibromo-3-chloropropane	ug/L (ppb)	10	102	99	70-130	3
1,2,4-Trichlorobenzene	ug/L (ppb)	10	90	92	70-130	2
Hexachlorobutadiene	ug/L (ppb)	10	90	93	70-130	3
Naphthalene	ug/L (ppb)	10	92	95	70-130	3
1,2,3-Trichlorobenzene	ug/L (ppb)	10	88	91	70-130	3

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

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

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

ca - The calibration results for the analyte were outside of acceptance criteria. 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 lowest calibration standard. 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.

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.

03/AF2/W5
of

Phone 203 452-5561 Email lynn@70ev14.com

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: 	Dan Saks	PHU	09/20/22	6:00
Received by: 	William	F&BT	9/21/22	1:30
Relinquished by:				
Received by:				
Received by:		Samples received at	4 °C	



Fremont
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Friedman & Bruya
Michael Erdahl
3012 16th Ave. W.
Seattle, WA 98119

RE: 209325
Work Order Number: 2210164

October 18, 2022

Attention Michael Erdahl:

Fremont Analytical, Inc. received 1 sample(s) on 10/11/2022 for the analyses presented in the following report.

Dissolved Metals by EPA Method 200.8

This report consists of the following:

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

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

Thank you for using Fremont Analytical.

Sincerely,

Brianna Barnes
Project Manager

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

Original

www.fremontanalytical.com

CLIENT: Friedman & Bruya
Project: 209325
Work Order: 2210164

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
2210164-001	EB05-GW-12	09/20/2022 12:00 PM	10/11/2022 1:22 PM

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

CLIENT: Friedman & Bruya
Project: 209325

I. SAMPLE RECEIPT:

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

II. GENERAL REPORTING COMMENTS:

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

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

III. ANALYSES AND EXCEPTIONS:

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

Qualifiers:

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

Acronyms:

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



Analytical Report

Work Order: 2210164
Date Reported: 10/18/2022

Client: Friedman & Bruya

Collection Date: 9/20/2022 12:00:00 PM

Project: 209325

Lab ID: 2210164-001

Matrix: Water

Client Sample ID: EB05-GW-12

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Dissolved Metals by EPA Method 200.8

Batch ID: 38177

Analyst: EH

Lead	ND	0.500		µg/L	1	10/18/2022 12:24:21 PM
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Work Order: 2210164
CLIENT: Friedman & Bruya
Project: 209325

QC SUMMARY REPORT

Dissolved Metals by EPA Method 200.8

Sample ID: MB-38177		SampType: MBLK			Units: µg/L		Prep Date: 10/18/2022			RunNo: 79112		
Client ID: MBLKW		Batch ID: 38177						Analysis Date: 10/18/2022			SeqNo: 1629007	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead		ND	0.500									

Sample ID: MB-38178FB		SampType: MBLK			Units: µg/L		Prep Date: 10/18/2022			RunNo: 79112		
Client ID: MBLKW		Batch ID: 38177						Analysis Date: 10/18/2022			SeqNo: 1629008	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead		ND	0.500									

Sample ID: LCS-38177		SampType: LCS			Units: µg/L		Prep Date: 10/18/2022			RunNo: 79112		
Client ID: LCSW		Batch ID: 38177						Analysis Date: 10/18/2022			SeqNo: 1629009	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead		255	0.500	250.0	0	102	85	115				

Sample ID: 2210213-002BDUP		SampType: DUP			Units: µg/L		Prep Date: 10/18/2022			RunNo: 79112		
Client ID: BATCH		Batch ID: 38177						Analysis Date: 10/18/2022			SeqNo: 1629011	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead		ND	0.500						0		30	

Sample ID: 2210213-002BMS		SampType: MS			Units: µg/L		Prep Date: 10/18/2022			RunNo: 79112		
Client ID: BATCH		Batch ID: 38177						Analysis Date: 10/18/2022			SeqNo: 1629012	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead		252	0.500	250.0	0	101	70	130				



Work Order: 2210164
CLIENT: Friedman & Bruya
Project: 209325

QC SUMMARY REPORT

Dissolved Metals by EPA Method 200.8

Sample ID: 2210231-003AMS		SampType: MS			Units: µg/L		Prep Date: 10/18/2022		RunNo: 79112		
Client ID: BATCH		Batch ID: 38177			Analysis Date: 10/18/2022				SeqNo: 1629023		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	254	0.500	250.0	0	102	70	130				

Client Name: FB
 Logged by: Elisabeth Samoray

Work Order Number: 2210164
 Date Received: 10/11/2022 1:22:00 PM

Chain of Custody

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

Log In

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

Special Handling (if applicable)

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

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

19. Additional remarks:

Item Information

Item #	Temp °C
Sample 1	2.1

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

3012 16th Avenue West
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fbi@isomedia.com
www.friedmanandbruya.com

October 21, 2022

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 September 21, 2022 from the 1337-22001-01, F&BI 209325 project. There are 10 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
ENW1021R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on September 21, 2022 by Friedman & Bruya, Inc. from the Evren Northwest 1337-22001-01, F&BI 209325 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>Evren Northwest</u>
209325 -01	EB04-GW-12
209325 -02	EB05-GW-12
209325 -03	EB08-GW-15
209325 -04	EB09-GW-13
209325 -05	EB10-GW-10

The NWTPH-Gx, NWTPH-Dx, and 8260D analyses were requested outside of the holding time. The data were flagged accordingly.

Methylene chloride was detected in the 8260D analysis of sample EB08-GW-15. The data were flagged as due to laboratory contamination.

The 8260D laboratory control sample exceeded the acceptance criteria for several analytes. The compounds were not detected, therefore the data were acceptable.

Acetone 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.

The 8260D laboratory control sample exceeded the acceptance criteria for several analytes. The compounds were not detected, therefore the data were acceptable.

All other quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/21/22

Date Received: 09/21/22

Project: 1337-22001-01, F&BI 209325

Date Extracted: 10/19/22

Date Analyzed: 10/19/22

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

Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Gasoline Range</u>	Surrogate <u>(% Recovery)</u> (Limit 50-150)
EB08-GW-15 ht 209325-03	<100	105
Method Blank 02-2514 MB	<100	89

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/21/22

Date Received: 09/21/22

Project: 1337-22001-01, F&BI 209325

Date Extracted: 10/19/22

Date Analyzed: 10/19/22

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

Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>Residual Range</u> (C ₂₅ -C ₃₆)	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 41-152)
EB08-GW-15 ht 209325-03	90 x	910	ip
Method Blank 02-2534 MB3	<50	<250	108

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	EB08-GW-15 ht	Client:	Evren Northwest
Date Received:	09/21/22	Project:	1337-22001-01, F&BI 209325
Date Extracted:	10/19/22	Lab ID:	209325-03
Date Analyzed:	10/19/22	Data File:	101935.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	LM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	78	126
Toluene-d8	98	84	115
4-Bromofluorobenzene	95	72	130

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	13 lc	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		

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	Method Blank	Client:	Evren Northwest
Date Received:	Not Applicable	Project:	1337-22001-01, F&BI 209325
Date Extracted:	10/19/22	Lab ID:	02-2488 mb
Date Analyzed:	10/19/22	Data File:	101907.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	LM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	78	126
Toluene-d8	96	84	115
4-Bromofluorobenzene	95	72	130

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		

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/21/22

Date Received: 09/21/22

Project: 1337-22001-01, F&BI 209325

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

Laboratory Code: 210236-01 (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	108	69-134

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/21/22

Date Received: 09/21/22

Project: 1337-22001-01, F&BI 209325

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

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	84	92	63-142	9

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/21/22

Date Received: 09/21/22

Project: 1337-22001-01, F&BI 209325

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

Laboratory Code: 210249-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent	Acceptance Criteria
				Recovery MS	
Dichlorodifluoromethane	ug/L (ppb)	10	<1	98	50-150
Chloromethane	ug/L (ppb)	10	11	90 b	50-150
Vinyl chloride	ug/L (ppb)	10	<0.02	98	50-150
Bromomethane	ug/L (ppb)	10	<5	101	50-150
Chloroethane	ug/L (ppb)	10	<1	96	50-150
Trichlorofluoromethane	ug/L (ppb)	10	<1	95	50-150
Acetone	ug/L (ppb)	50	<50	44 vo	50-150
1,1-Dichloroethene	ug/L (ppb)	10	<1	92	50-150
Hexane	ug/L (ppb)	10	<5	108	50-150
Methylene chloride	ug/L (ppb)	10	<5	81	50-150
Methyl t-butyl ether (MTBE)	ug/L (ppb)	10	<1	92	50-150
trans-1,2-Dichloroethene	ug/L (ppb)	10	<1	97	50-150
1,1-Dichloroethane	ug/L (ppb)	10	<1	94	50-150
2,2-Dichloropropane	ug/L (ppb)	10	<1	123	50-150
cis-1,2-Dichloroethene	ug/L (ppb)	10	<1	94	50-150
Chloroform	ug/L (ppb)	10	<1	102	50-150
2-Butanone (MEK)	ug/L (ppb)	50	<20	69	50-150
1,2-Dichloroethane (EDC)	ug/L (ppb)	10	<0.2	97	50-150
1,1,1-Trichloroethane	ug/L (ppb)	10	<1	92	50-150
1,1-Dichloropropene	ug/L (ppb)	10	<1	97	50-150
Carbon tetrachloride	ug/L (ppb)	10	<0.5	94	50-150
Benzene	ug/L (ppb)	10	<0.35	99	50-150
Trichloroethene	ug/L (ppb)	10	<0.5	93	50-150
1,2-Dichloropropane	ug/L (ppb)	10	<1	100	50-150
Bromodichloromethane	ug/L (ppb)	10	<0.5	101	50-150
Dibromomethane	ug/L (ppb)	10	<1	102	50-150
4-Methyl-2-pentanone	ug/L (ppb)	50	<10	98	50-150
cis-1,3-Dichloropropene	ug/L (ppb)	10	<0.4	101	50-150
Toluene	ug/L (ppb)	10	<1	101	50-150
trans-1,3-Dichloropropene	ug/L (ppb)	10	<0.4	102	50-150
1,1,2-Trichloroethane	ug/L (ppb)	10	<0.5	101	50-150
2-Hexanone	ug/L (ppb)	50	<10	88	50-150
1,3-Dichloropropane	ug/L (ppb)	10	<1	104	50-150
Tetrachloroethene	ug/L (ppb)	10	<1	103	50-150
Dibromochloromethane	ug/L (ppb)	10	<0.5	101	50-150
1,2-Dibromoethane (EDB)	ug/L (ppb)	10	<1	102	50-150
Chlorobenzene	ug/L (ppb)	10	<1	99	50-150
Ethylbenzene	ug/L (ppb)	10	<1	99	50-150
1,1,1,2-Tetrachloroethane	ug/L (ppb)	10	<1	97	50-150
m,p-Xylene	ug/L (ppb)	20	<2	99	50-150
o-Xylene	ug/L (ppb)	10	<1	97	50-150
Styrene	ug/L (ppb)	10	<1	94	50-150
Isopropylbenzene	ug/L (ppb)	10	<1	96	50-150
Bromoform	ug/L (ppb)	10	<5	94	50-150
n-Propylbenzene	ug/L (ppb)	10	<1	100	50-150
Bromobenzene	ug/L (ppb)	10	<1	100	50-150
1,3,5-Trimethylbenzene	ug/L (ppb)	10	<1	100	50-150
1,1,2,2-Tetrachloroethane	ug/L (ppb)	10	<0.2	111	50-150
1,2,3-Trichloropropane	ug/L (ppb)	10	<1	98	50-150
2-Chlorotoluene	ug/L (ppb)	10	<1	97	50-150
4-Chlorotoluene	ug/L (ppb)	10	<1	99	50-150
tert-Butylbenzene	ug/L (ppb)	10	<1	102	50-150
1,2,4-Trimethylbenzene	ug/L (ppb)	10	<1	97	50-150
sec-Butylbenzene	ug/L (ppb)	10	<1	100	50-150
p-Isopropyltoluene	ug/L (ppb)	10	<1	102	50-150
1,3-Dichlorobenzene	ug/L (ppb)	10	<1	97	50-150
1,4-Dichlorobenzene	ug/L (ppb)	10	<1	100	50-150
1,2-Dichlorobenzene	ug/L (ppb)	10	<1	95	50-150
1,2-Dibromo-3-chloropropane	ug/L (ppb)	10	<10	99	50-150
1,2,4-Trichlorobenzene	ug/L (ppb)	10	<1	98	50-150
Hexachlorobutadiene	ug/L (ppb)	10	<0.5	102	50-150
Naphthalene	ug/L (ppb)	10	<1	96	50-150
1,2,3-Trichlorobenzene	ug/L (ppb)	10	<1	99	50-150

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/21/22

Date Received: 09/21/22

Project: 1337-22001-01, F&BI 209325

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	128	112	46-206	13
Chloromethane	ug/L (ppb)	10	136	114	70-142	18
Vinyl chloride	ug/L (ppb)	10	125	107	70-130	16
Bromomethane	ug/L (ppb)	10	129	114	56-197	12
Chloroethane	ug/L (ppb)	10	120	105	70-130	13
Trichlorofluoromethane	ug/L (ppb)	10	115	97	70-130	17
Acetone	ug/L (ppb)	50	49	43	10-140	13
1,1-Dichloroethene	ug/L (ppb)	10	112	96	70-130	15
Hexane	ug/L (ppb)	10	122	112	54-136	9
Methylene chloride	ug/L (ppb)	10	114	90	43-134	24 vo
Methyl t-butyl ether (MTBE)	ug/L (ppb)	10	108	92	70-130	16
trans-1,2-Dichloroethene	ug/L (ppb)	10	117	99	70-130	17
1,1-Dichloroethane	ug/L (ppb)	10	108	92	70-130	16
2,2-Dichloropropane	ug/L (ppb)	10	149 vo	120	70-130	22 vo
cis-1,2-Dichloroethene	ug/L (ppb)	10	116	98	70-130	17
Chloroform	ug/L (ppb)	10	115	97	70-130	17
2-Butanone (MEK)	ug/L (ppb)	50	70	68	17-154	3
1,2-Dichloroethane (EDC)	ug/L (ppb)	10	101	96	70-130	5
1,1,1-Trichloroethane	ug/L (ppb)	10	107	92	70-130	15
1,1-Dichloropropene	ug/L (ppb)	10	107	98	70-130	9
Carbon tetrachloride	ug/L (ppb)	10	110	95	70-130	15
Benzene	ug/L (ppb)	10	105	99	70-130	6
Trichloroethene	ug/L (ppb)	10	95	91	70-130	4
1,2-Dichloropropane	ug/L (ppb)	10	93	94	70-130	1
Bromodichloromethane	ug/L (ppb)	10	96	94	70-130	2
Dibromomethane	ug/L (ppb)	10	104	102	70-130	2
4-Methyl-2-pentanone	ug/L (ppb)	50	97	100	68-130	3
cis-1,3-Dichloropropene	ug/L (ppb)	10	88	100	69-131	13
Toluene	ug/L (ppb)	10	100	98	70-130	2
trans-1,3-Dichloropropene	ug/L (ppb)	10	86	101	70-130	16
1,1,2-Trichloroethane	ug/L (ppb)	10	93	96	70-130	3
2-Hexanone	ug/L (ppb)	50	81	86	45-138	6
1,3-Dichloropropene	ug/L (ppb)	10	94	100	70-130	6
Tetrachloroethene	ug/L (ppb)	10	103	99	70-130	4
Dibromochloromethane	ug/L (ppb)	10	98	97	60-148	1
1,2-Dibromoethane (EDB)	ug/L (ppb)	10	92	97	70-130	5
Chlorobenzene	ug/L (ppb)	10	96	96	70-130	0
Ethylbenzene	ug/L (ppb)	10	103	97	70-130	6
1,1,1,2-Tetrachloroethane	ug/L (ppb)	10	105	93	70-130	12
m,p-Xylene	ug/L (ppb)	20	103	96	70-130	7
o-Xylene	ug/L (ppb)	10	104	94	70-130	10
Styrene	ug/L (ppb)	10	99	94	70-130	5
Isopropylbenzene	ug/L (ppb)	10	103	94	70-130	9
Bromoform	ug/L (ppb)	10	99	93	69-138	6
n-Propylbenzene	ug/L (ppb)	10	100	96	70-130	4
Bromobenzene	ug/L (ppb)	10	93	92	70-130	1
1,3,5-Trimethylbenzene	ug/L (ppb)	10	98	94	70-130	4
1,1,2,2-Tetrachloroethane	ug/L (ppb)	10	106	102	70-130	4
1,2,3-Trichloropropane	ug/L (ppb)	10	93	94	70-130	1
2-Chlorotoluene	ug/L (ppb)	10	96	93	70-130	3
4-Chlorotoluene	ug/L (ppb)	10	94	96	70-130	2
tert-Butylbenzene	ug/L (ppb)	10	92	97	70-130	5
1,2,4-Trimethylbenzene	ug/L (ppb)	10	100	93	70-130	7
sec-Butylbenzene	ug/L (ppb)	10	97	95	70-130	2
p-Isopropyltoluene	ug/L (ppb)	10	99	94	70-130	5
1,3-Dichlorobenzene	ug/L (ppb)	10	97	92	70-130	5
1,4-Dichlorobenzene	ug/L (ppb)	10	96	94	70-130	2
1,2-Dichlorobenzene	ug/L (ppb)	10	96	91	70-130	5
1,2-Dibromo-3-chloropropane	ug/L (ppb)	10	103	88	70-130	16
1,2,4-Trichlorobenzene	ug/L (ppb)	10	101	91	70-130	10
Hexachlorobutadiene	ug/L (ppb)	10	103	95	70-130	8
Naphthalene	ug/L (ppb)	10	100	89	70-130	12
1,2,3-Trichlorobenzene	ug/L (ppb)	10	101	90	70-130	12

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

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

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

ca - The calibration results for the analyte were outside of acceptance criteria. 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 lowest calibration standard. 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.

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.

20923

209325

SAMPLE CHAIN OF CUSTODY

09-21-22

Page #

09/11/21/11/15

Report To Lyne GreenCompany Furner NorthwestAddress PO Box 14488City, State, ZIP Portland OR 97223Phone 503 452-5561 Email lyne@green.comSAMPLERS (signature) [Signature]

PROJECT NAME

1337-22001-01

PO #

INVOICE TO

REMARKS
Please hold all samples
Pending Client approval

TURNAROUND TIME

☒ Standard turnaround

☐ RUSH

Rush charges authorized by: _____

SAMPLE DISPOSAL

☐ Archive samples

☐ Other _____

Default: Dispose after 30 days

ANALYSES REQUESTED

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	RBDM VOCs	Notes
EB04-GW-12	014-F	09/20/22	9:38	GW	6	✓	✓						✓	
EB05-GW-12	014-F	09/20/22	12:00	GW	5	✓	✓						✓	
EB08-GW-15	034-G	09/20/22	13:55	GW	7	✓	✓							
EB09-GW-13	04	09/20/22	14:56	GW	7	✓	✓							
EB10-GW-10	05	09/20/22	15:55	GW	7	✓	✓							

*Please call for future disposal PI

Friedman & Bruya, Inc.

Ph. (206) 285-8282

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: <u>[Signature]</u>	<u>Don Sofka</u>	<u>EBW</u>	09/20/22	(6:30)
Received by: <u>[Signature]</u>	<u>Nhien Phien</u>	<u>EBT</u>	09/21/22	1130
Relinquished by: _____				
Received by: _____				

Samples received at 4 °C



Fremont
Analytical

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

Friedman & Bruya
Michael Erdahl
3012 16th Ave. W.
Seattle, WA 98119

RE: 209325
Work Order Number: 2210164

October 18, 2022

Attention Michael Erdahl:

Fremont Analytical, Inc. received 1 sample(s) on 10/11/2022 for the analyses presented in the following report.

Dissolved Metals by EPA Method 200.8

This report consists of the following:

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

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

Thank you for using Fremont Analytical.

Sincerely,

Brianna Barnes
Project Manager

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

Original

www.fremontanalytical.com

CLIENT: Friedman & Bruya
Project: 209325
Work Order: 2210164

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
2210164-001	EB05-GW-12	09/20/2022 12:00 PM	10/11/2022 1:22 PM

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

CLIENT: Friedman & Bruya
Project: 209325

I. SAMPLE RECEIPT:

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

II. GENERAL REPORTING COMMENTS:

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

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

III. ANALYSES AND EXCEPTIONS:

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

Qualifiers:

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

Acronyms:

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



Analytical Report

Work Order: 2210164
Date Reported: 10/18/2022

Client: Friedman & Bruya

Collection Date: 9/20/2022 12:00:00 PM

Project: 209325

Lab ID: 2210164-001

Matrix: Water

Client Sample ID: EB05-GW-12

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Dissolved Metals by EPA Method 200.8

Batch ID: 38177

Analyst: EH

Lead	ND	0.500		µg/L	1	10/18/2022 12:24:21 PM
------	----	-------	--	------	---	------------------------

Work Order: 2210164
CLIENT: Friedman & Bruya
Project: 209325

QC SUMMARY REPORT

Dissolved Metals by EPA Method 200.8

Sample ID: MB-38177		SampType: MBLK			Units: µg/L		Prep Date: 10/18/2022			RunNo: 79112		
Client ID: MBLKW		Batch ID: 38177						Analysis Date: 10/18/2022			SeqNo: 1629007	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead		ND	0.500									

Sample ID: MB-38178FB		SampType: MBLK			Units: µg/L		Prep Date: 10/18/2022			RunNo: 79112		
Client ID: MBLKW		Batch ID: 38177						Analysis Date: 10/18/2022			SeqNo: 1629008	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead		ND	0.500									

Sample ID: LCS-38177		SampType: LCS			Units: µg/L		Prep Date: 10/18/2022			RunNo: 79112		
Client ID: LCSW		Batch ID: 38177						Analysis Date: 10/18/2022			SeqNo: 1629009	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead		255	0.500	250.0	0	102	85	115				

Sample ID: 2210213-002BDUP		SampType: DUP			Units: µg/L		Prep Date: 10/18/2022			RunNo: 79112		
Client ID: BATCH		Batch ID: 38177						Analysis Date: 10/18/2022			SeqNo: 1629011	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead		ND	0.500						0		30	

Sample ID: 2210213-002BMS		SampType: MS			Units: µg/L		Prep Date: 10/18/2022			RunNo: 79112		
Client ID: BATCH		Batch ID: 38177						Analysis Date: 10/18/2022			SeqNo: 1629012	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead		252	0.500	250.0	0	101	70	130				



Work Order: 2210164
CLIENT: Friedman & Bruya
Project: 209325

QC SUMMARY REPORT

Dissolved Metals by EPA Method 200.8

Sample ID: 2210231-003AMS		SampType: MS			Units: µg/L		Prep Date: 10/18/2022		RunNo: 79112		
Client ID: BATCH		Batch ID: 38177			Analysis Date: 10/18/2022				SeqNo: 1629023		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	254	0.500	250.0	0	102	70	130				

Client Name: FB
 Logged by: Elisabeth Samoray

Work Order Number: 2210164
 Date Received: 10/11/2022 1:22:00 PM

Chain of Custody

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

Log In

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

Special Handling (if applicable)

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

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

19. Additional remarks:

Item Information

Item #	Temp °C
Sample 1	2.1

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

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

July 7, 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 June 21, 2023 from the 1337-22001-02, F&BI 306340 project. There are 40 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
ENW0707R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on June 21, 2023 by Friedman & Bruya, Inc. from the Evren Northwest 1337-22001-02, F&BI 306340 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>Evren Northwest</u>
306340 -01	GS01-SF-8.5
306340 -02	GS02-CF-7.5
306340 -03	GS03-SW-5.5
306340 -04	GS04-EW-5.5
306340 -05	GS05-CS-4.5
306340 -06	GS06-NF-8.5
306340 -07	GS07-NWW-5.5
306340 -08	GS08-WW-5.5
306340 -09	GS09-NW-5.5
306340 -10	Hoist Oil-230620
306340 -11	Pit Water-230620

Sample GS05-CS-4.5 was extracted from a 4 ounce jar for NWTPH-Gx and 8260 analyses. The data were qualified accordingly.

Sample Pit Water-230620 was filtered at Friedman and Bruya. The data were flagged accordingly.

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

The 8260D 2,2-dichloropropane soil calibration standard and the bromomethane and chloroethane water calibration standards exceeded the acceptance criteria. The compounds were not detected, therefore the result did not represent an out of control condition.

All other quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 07/07/23

Date Received: 06/21/23

Project: 1337-22001-02, F&BI 306340

Date Extracted: 06/21/23

Date Analyzed: 06/22/23

**RESULTS FROM THE ANALYSIS OF SOIL SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
USING METHOD NWTPH-G_x**

Results Reported on a Dry Weight Basis

Results Reported as mg/kg (ppm)

<u>Sample ID</u>	<u>Gasoline Range</u>	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 50-150)
Laboratory ID		
GS01-SF-8.5 306340-01	12	141
GS02-CF-7.5 306340-02 1/5	86	147
GS03-SW-5.5 306340-03 1/5	180	ip
GS04-EW-5.5 306340-04 1/5	530	ip
GS05-CS-4.5 pc 306340-05	<5	126
GS06-NF-8.5 306340-06 1/5	240	ip
GS07-NWW-5.5 306340-07 1/5	330	147
GS08-WW-5.5 306340-08 1/5	230	ip
GS09-NW-5.5 306340-09 1/5	120	146
Method Blank 03-1392 MB	<5	111
Method Blank 03-1394 MB	<5	125

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 07/07/23
Date Received: 06/21/23
Project: 1337-22001-02, F&BI 306340
Date Extracted: 06/21/23
Date Analyzed: 06/22/23

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
USING METHOD NWTPH-G_x**
Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Gasoline Range</u>	Surrogate <u>(% Recovery)</u> (Limit 50-150)
Pit Water-230620 306340-11	140	111
Method Blank 03-1393 MB	<100	118

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 07/07/23

Date Received: 06/21/23

Project: 1337-22001-02, F&BI 306340

Date Extracted: 06/21/23

Date Analyzed: 06/21/23

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

Results Reported on a Dry Weight Basis

Results Reported as mg/kg (ppm)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>Residual Range</u> (C ₂₅ -C ₃₆)	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 50-150)
GS01-SF-8.5 306340-01	<50	<250	106
GS02-CF-7.5 306340-02	180 x	3,100	104
GS03-SW-5.5 306340-03	370 x	4,400	104
GS04-EW-5.5 306340-04	420 x	4,300	102
GS05-CS-4.5 306340-05	<50	7,200	104
GS06-NF-8.5 306340-06	300 x	3,600	100
GS07-NWW-5.5 306340-07	98 x	1,300	100
GS08-WW-5.5 306340-08	220 x	2,400	101
GS09-NW-5.5 306340-09	190 x	2,300	99
Method Blank 03-1498 MB	<50	<250	100

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 07/07/23

Date Received: 06/21/23

Project: 1337-22001-02, F&BI 306340

Date Extracted: 06/22/23

Date Analyzed: 06/22/23

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

Results Reported as ug/L (ppb)

<u>Sample ID</u>	<u>Diesel Range</u>	<u>Residual Range</u>	<u>Surrogate</u>
Laboratory ID	(C ₁₀ -C ₂₅)	(C ₂₅ -C ₃₆)	(% Recovery)
			(Limit 50-150)
Pit Water-230620	4,500 x	16,000	112
306340-11			
Method Blank	<50	<250	120
03-1500 MB2			

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Metals By EPA Method 6020B

Client ID:	Pit Water-230620 f	Client:	Evren Northwest
Date Received:	06/21/23	Project:	1337-22001-02, F&BI 306340
Date Extracted:	06/27/23	Lab ID:	306340-11
Date Analyzed:	06/27/23	Data File:	306340-11.144
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
----------	-----------------------------

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Metals By EPA Method 6020B

Client ID:	Method Blank f	Client:	Evren Northwest
Date Received:	NA	Project:	1337-22001-02, F&BI 306340
Date Extracted:	06/27/23	Lab ID:	I3-515 mb
Date Analyzed:	06/27/23	Data File:	I3-515 mb.140
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
----------	-----------------------------

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	GS04-EW-5.5	Client:	Evren Northwest
Date Received:	06/21/23	Project:	1337-22001-02, F&BI 306340
Date Extracted:	06/26/23	Lab ID:	306340-04 x5
Date Analyzed:	06/27/23	Data File:	306340-04 x5.167
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

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

Lead	169
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	GS05-CS-4.5	Client:	Evren Northwest
Date Received:	06/21/23	Project:	1337-22001-02, F&BI 306340
Date Extracted:	06/26/23	Lab ID:	306340-05 x25
Date Analyzed:	06/27/23	Data File:	306340-05 x25.168
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

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

Lead	965
------	-----

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	Method Blank	Client:	Evren Northwest
Date Received:	NA	Project:	1337-22001-02, F&BI 306340
Date Extracted:	06/26/23	Lab ID:	I3-510 mb
Date Analyzed:	06/26/23	Data File:	I3-510 mb.112
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

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

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	GS04-EW-5.5	Client:	Evren Northwest
Date Received:	06/21/23	Project:	1337-22001-02, F&BI 306340
Date Extracted:	06/29/23	Lab ID:	306340-04
Date Analyzed:	06/29/23	Data File:	062934.D
Matrix:	Soil	Instrument:	GCMS11
Units:	mg/kg (ppm) Dry Weight	Operator:	MD

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	92	79	128
Toluene-d8	103	84	121
4-Bromofluorobenzene	93	84	116

Compounds:	Concentration mg/kg (ppm)
Methyl t-butyl ether (MTBE)	<0.05
1,2-Dichloroethane (EDC)	<0.05
Benzene	1.1
Toluene	0.10
1,2-Dibromoethane (EDB)	<0.05
Ethylbenzene	1.7
m,p-Xylene	9.4
o-Xylene	4.0
Isopropylbenzene	0.53
n-Propylbenzene	1.6
1,3,5-Trimethylbenzene	2.5
1,2,4-Trimethylbenzene	12
Naphthalene	2.9

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	GS05-CS-4.5 pc	Client:	Evren Northwest
Date Received:	06/21/23	Project:	1337-22001-02, F&BI 306340
Date Extracted:	06/29/23	Lab ID:	306340-05
Date Analyzed:	06/29/23	Data File:	062933.D
Matrix:	Soil	Instrument:	GCMS11
Units:	mg/kg (ppm) Dry Weight	Operator:	MD

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	97	79	128
Toluene-d8	101	84	121
4-Bromofluorobenzene	108	84	116

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 k	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		

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	Method Blank	Client:	Evren Northwest
Date Received:	Not Applicable	Project:	1337-22001-02, F&BI 306340
Date Extracted:	06/29/23	Lab ID:	03-1524 mb
Date Analyzed:	06/29/23	Data File:	062909.D
Matrix:	Soil	Instrument:	GCMS11
Units:	mg/kg (ppm) Dry Weight	Operator:	MD

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	106	79	128
Toluene-d8	100	84	121
4-Bromofluorobenzene	106	84	116

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 k	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 k	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		

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	Pit Water-230620	Client:	Evren Northwest
Date Received:	06/21/23	Project:	1337-22001-02, F&BI 306340
Date Extracted:	06/28/23	Lab ID:	306340-11
Date Analyzed:	06/28/23	Data File:	062815.D
Matrix:	Water	Instrument:	GCMS13
Units:	ug/L (ppb)	Operator:	MD

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	107	71	132
Toluene-d8	99	68	139
4-Bromofluorobenzene	95	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 k	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1 k	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	1.9
Methylene chloride	<5	Styrene	<1
Methyl t-butyl ether (MTBE)	<1	Isopropylbenzene	1.4
trans-1,2-Dichloroethene	<1	Bromoform	<5
1,1-Dichloroethane	<1	n-Propylbenzene	1.8
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	3.1
1,1,1-Trichloroethane	<1	4-Chlorotoluene	1.4
1,1-Dichloropropene	<1	tert-Butylbenzene	<1
Carbon tetrachloride	<0.5	1,2,4-Trimethylbenzene	1.5
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		

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	Method Blank	Client:	Evren Northwest
Date Received:	Not Applicable	Project:	1337-22001-02, F&BI 306340
Date Extracted:	06/28/23	Lab ID:	03-1521 mb
Date Analyzed:	06/28/23	Data File:	062807.D
Matrix:	Water	Instrument:	GCMS13
Units:	ug/L (ppb)	Operator:	MD

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	71	132
Toluene-d8	101	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 k	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1 k	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		

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	GS04-EW-5.5	Client:	Evren Northwest
Date Received:	06/21/23	Project:	1337-22001-02, F&BI 306340
Date Extracted:	06/27/23	Lab ID:	306340-04 1/5
Date Analyzed:	06/27/23	Data File:	062710.D
Matrix:	Soil	Instrument:	GCMS12
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Nitrobenzene-d5	79	16	137
2-Fluorobiphenyl	80	46	122
2,4,6-Tribromophenol	82	17	154
Terphenyl-d14	100	31	167

Compounds:	Concentration mg/kg (ppm)
Naphthalene	1.7
2-Methylnaphthalene	3.1
1-Methylnaphthalene	2.0
Acenaphthylene	<0.01
Acenaphthene	0.043
Fluorene	0.10
Phenanthrene	0.22
Anthracene	0.047
Fluoranthene	0.11
Pyrene	0.23
Benz(a)anthracene	0.094
Chrysene	0.077
Benzo(a)pyrene	0.039
Benzo(b)fluoranthene	0.048
Benzo(k)fluoranthene	0.017
Indeno(1,2,3-cd)pyrene	0.013
Dibenz(a,h)anthracene	<0.01
Benzo(g,h,i)perylene	0.037

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	GS05-CS-4.5	Client:	Evren Northwest
Date Received:	06/21/23	Project:	1337-22001-02, F&BI 306340
Date Extracted:	06/27/23	Lab ID:	306340-05 1/25
Date Analyzed:	06/27/23	Data File:	062714.D
Matrix:	Soil	Instrument:	GCMS12
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Nitrobenzene-d5	71 d	16	137
2-Fluorobiphenyl	78 d	46	122
2,4,6-Tribromophenol	72 d	17	154
Terphenyl-d14	95 d	31	167

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	0.18

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	Method Blank	Client:	Evren Northwest
Date Received:	Not Applicable	Project:	1337-22001-02, F&BI 306340
Date Extracted:	06/27/23	Lab ID:	03-1511 mb2 1/5
Date Analyzed:	06/27/23	Data File:	062709.D
Matrix:	Soil	Instrument:	GCMS12
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Nitrobenzene-d5	81	16	137
2-Fluorobiphenyl	86	46	122
2,4,6-Tribromophenol	85	17	154
Terphenyl-d14	93	31	167

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	Pit Water-230620	Client:	Evren Northwest
Date Received:	06/21/23	Project:	1337-22001-02, F&BI 306340
Date Extracted:	06/27/23	Lab ID:	306340-11
Date Analyzed:	06/27/23	Data File:	062708.D
Matrix:	Water	Instrument:	GCMS12
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Nitrobenzene-d5	63	11	173
2-Fluorobiphenyl	72	25	128
2,4,6-Tribromophenol	95	10	140
Terphenyl-d14	89	50	150

Compounds:	Concentration ug/L (ppb)
Naphthalene	0.23
2-Methylnaphthalene	0.51
1-Methylnaphthalene	1.6
Acenaphthylene	0.044
Acenaphthene	0.058
Fluorene	0.13
Phenanthrene	0.14
Anthracene	<0.02
Fluoranthene	0.048
Pyrene	0.084
Benz(a)anthracene	0.028
Chrysene	0.023
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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	Method Blank	Client:	Evren Northwest
Date Received:	Not Applicable	Project:	1337-22001-02, F&BI 306340
Date Extracted:	06/27/23	Lab ID:	03-1512 mb2
Date Analyzed:	06/27/23	Data File:	062707.D
Matrix:	Water	Instrument:	GCMS12
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Nitrobenzene-d5	69	11	173
2-Fluorobiphenyl	78	25	128
2,4,6-Tribromophenol	68	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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	GS05-CS-4.5	Client:	Evren Northwest
Date Received:	06/21/23	Project:	1337-22001-02, F&BI 306340
Date Extracted:	06/27/23	Lab ID:	306340-05 1/30
Date Analyzed:	06/28/23	Data File:	062812.D
Matrix:	Soil	Instrument:	GC9
Units:	mg/kg (ppm) Dry Weight	Operator:	MG

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Tetrachlorometaxylene	142 ca	11	184
Decachlorobiphenyl	92	25	127

Compounds:	Concentration mg/kg (ppm)
Aroclor 1221	<0.02
Aroclor 1232	<0.02
Aroclor 1016	<0.02
Aroclor 1242	<0.02
Aroclor 1248	<0.02
Aroclor 1254	<0.02
Aroclor 1260	0.074
Aroclor 1262	<0.02
Aroclor 1268	<0.02

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	Method Blank	Client:	Evren Northwest
Date Received:	Not Applicable	Project:	1337-22001-02, F&BI 306340
Date Extracted:	06/27/23	Lab ID:	03-1561 mb 1/30
Date Analyzed:	06/27/23	Data File:	062713.D
Matrix:	Soil	Instrument:	GC9
Units:	mg/kg (ppm) Dry Weight	Operator:	MG

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Tetrachlorometaxylene	165	11	184
Decachlorobiphenyl	157 vo	25	127

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	Hoist Oil-230620	Client:	Evren Northwest
Date Received:	06/21/23	Project:	1337-22001-02, F&BI 306340
Date Extracted:	06/21/23	Lab ID:	306340-10 1/0.5
Date Analyzed:	06/21/23	Data File:	062113.D
Matrix:	Product	Instrument:	GC7
Units:	mg/kg (ppm)	Operator:	MG

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Tetrachlorometaxylene	107	37	158
Decachlorobiphenyl	83	50	150

Compounds:	Concentration mg/kg (ppm)
Aroclor 1221	<1
Aroclor 1232	<1
Aroclor 1016	<1
Aroclor 1242	<1
Aroclor 1248	2.3
Aroclor 1254	<1
Aroclor 1260	<1
Aroclor 1262	<1
Aroclor 1268	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	Method Blank	Client:	Evren Northwest
Date Received:	Not Applicable	Project:	1337-22001-02, F&BI 306340
Date Extracted:	06/21/23	Lab ID:	03-1501 mb 1/0.5
Date Analyzed:	06/21/23	Data File:	062112.D
Matrix:	Product	Instrument:	GC7
Units:	mg/kg (ppm)	Operator:	MG

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Tetrachlorometaxylene	122	37	158
Decachlorobiphenyl	132	50	150

Compounds:	Concentration mg/kg (ppm)
Aroclor 1221	<1
Aroclor 1232	<1
Aroclor 1016	<1
Aroclor 1242	<1
Aroclor 1248	<1
Aroclor 1254	<1
Aroclor 1260	<1
Aroclor 1262	<1
Aroclor 1268	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 07/07/23

Date Received: 06/21/23

Project: 1337-22001-02, F&BI 306340

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES
FOR TPH AS GASOLINE
USING METHOD NWTPH-G_x**

Laboratory Code: 306341-01 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (Limit 20)
Gasoline	mg/kg (ppm)	<5	<5	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	mg/kg (ppm)	40	102	70-130

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 07/07/23

Date Received: 06/21/23

Project: 1337-22001-02, F&BI 306340

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES
FOR TPH AS GASOLINE
USING METHOD NWTPH-G_x**

Laboratory Code: 306309-01 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (Limit 20)
Gasoline	mg/kg (ppm)	<5	<5	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	mg/kg (ppm)	40	97	70-130

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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Project: 1337-22001-02, F&BI 306340

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

Laboratory Code: 306261-16 (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	100	70-130

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

Laboratory Code: 306340-01 (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	77	93	94	53-141	1

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	94	71-126

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

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	108	104	65-151	4

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

Laboratory Code: 306340-11 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Lead	ug/L (ppb)	10	<1	80	77	75-125	4

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Lead	ug/L (ppb)	10	92	80-120

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

Laboratory Code: 306340-05 x5 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Lead	mg/kg (ppm)	50	874	0 b	374 b	75-125	200 b

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Lead	mg/kg (ppm)	50	104	80-120

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

Laboratory Code: 306424-02 (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	50	51	50-150	2
Chloromethane	mg/kg (ppm)	2	<0.5	70	76	50-150	8
Vinyl chloride	mg/kg (ppm)	2	<0.05	87	90	50-150	3
Bromomethane	mg/kg (ppm)	2	<0.5	105	98	50-150	7
Chloroethane	mg/kg (ppm)	2	<0.5	112	112	50-150	0
Trichlorofluoromethane	mg/kg (ppm)	2	<0.5	87	88	50-150	1
Acetone	mg/kg (ppm)	10	<5	62	64	50-150	3
1,1-Dichloroethene	mg/kg (ppm)	2	<0.05	91	92	50-150	1
Hexane	mg/kg (ppm)	2	<0.25	86	81	50-150	6
Methylene chloride	mg/kg (ppm)	2	<0.5	97	97	50-150	0
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	2	<0.05	94	96	50-150	2
trans-1,2-Dichloroethene	mg/kg (ppm)	2	<0.05	95	96	50-150	1
1,1-Dichloroethane	mg/kg (ppm)	2	<0.05	95	95	50-150	0
2,2-Dichloropropane	mg/kg (ppm)	2	<0.05	100	107	50-150	7
cis-1,2-Dichloroethene	mg/kg (ppm)	2	<0.05	92	95	50-150	3
Chloroform	mg/kg (ppm)	2	<0.05	92	95	50-150	3
2-Butanone (MEK)	mg/kg (ppm)	10	<1	78	75	50-150	4
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2	<0.05	98	99	50-150	1
1,1,1-Trichloroethane	mg/kg (ppm)	2	<0.05	96	97	50-150	1
1,1-Dichloropropene	mg/kg (ppm)	2	<0.05	92	95	50-150	3
Carbon tetrachloride	mg/kg (ppm)	2	<0.05	94	93	50-150	1
Benzene	mg/kg (ppm)	2	<0.03	95	96	50-150	1
Trichloroethene	mg/kg (ppm)	2	<0.02	95	97	50-150	2
1,2-Dichloropropane	mg/kg (ppm)	2	<0.05	89	91	50-150	2
Bromodichloromethane	mg/kg (ppm)	2	<0.05	100	97	50-150	3
Dibromomethane	mg/kg (ppm)	2	<0.05	98	97	50-150	1
4-Methyl-2-pentanone	mg/kg (ppm)	10	<1	103	100	50-150	3
cis-1,3-Dichloropropene	mg/kg (ppm)	2	<0.05	95	99	50-150	4
Toluene	mg/kg (ppm)	2	<0.05	95	99	50-150	4
trans-1,3-Dichloropropene	mg/kg (ppm)	2	<0.05	92	98	50-150	6
1,1,2-Trichloroethane	mg/kg (ppm)	2	<0.05	93	97	50-150	4
2-Hexanone	mg/kg (ppm)	10	<0.5	99	103	50-150	4
1,3-Dichloropropane	mg/kg (ppm)	2	<0.05	85	90	50-150	6
Tetrachloroethene	mg/kg (ppm)	2	<0.025	97	100	50-150	3
Dibromochloromethane	mg/kg (ppm)	2	<0.05	94	97	50-150	3
1,2-Dibromoethane (EDB)	mg/kg (ppm)	2	<0.05	93	96	50-150	3
Chlorobenzene	mg/kg (ppm)	2	<0.05	95	96	50-150	1
Ethylbenzene	mg/kg (ppm)	2	<0.05	96	100	50-150	4
1,1,1,2-Tetrachloroethane	mg/kg (ppm)	2	<0.05	99	100	50-150	1
m,p-Xylene	mg/kg (ppm)	4	<0.1	95	99	50-150	4
o-Xylene	mg/kg (ppm)	2	<0.05	95	100	50-150	5
Styrene	mg/kg (ppm)	2	<0.05	88	94	50-150	7
Isopropylbenzene	mg/kg (ppm)	2	<0.05	101	101	50-150	0
Bromoform	mg/kg (ppm)	2	<0.05	96	100	50-150	4
n-Propylbenzene	mg/kg (ppm)	2	<0.05	92	99	50-150	7
Bromobenzene	mg/kg (ppm)	2	<0.05	88	95	50-150	8
1,3,5-Trimethylbenzene	mg/kg (ppm)	2	<0.05	92	99	50-150	7
1,1,2,2-Tetrachloroethane	mg/kg (ppm)	2	<0.05	86	92	50-150	7
1,2,3-Trichloropropane	mg/kg (ppm)	2	<0.05	86	91	50-150	6
2-Chlorotoluene	mg/kg (ppm)	2	<0.05	88	93	50-150	6
4-Chlorotoluene	mg/kg (ppm)	2	<0.05	90	97	50-150	7
tert-Butylbenzene	mg/kg (ppm)	2	<0.05	94	102	50-150	8
1,2,4-Trimethylbenzene	mg/kg (ppm)	2	<0.05	92	99	50-150	7
sec-Butylbenzene	mg/kg (ppm)	2	<0.05	95	101	50-150	6
p-Isopropyltoluene	mg/kg (ppm)	2	<0.05	98	104	50-150	6
1,3-Dichlorobenzene	mg/kg (ppm)	2	<0.05	90	96	50-150	6
1,4-Dichlorobenzene	mg/kg (ppm)	2	<0.05	92	96	50-150	4
1,2-Dichlorobenzene	mg/kg (ppm)	2	<0.05	90	98	50-150	9
1,2-Dibromo-3-chloropropane	mg/kg (ppm)	2	<0.5	83	83	50-150	0
1,2,4-Trichlorobenzene	mg/kg (ppm)	2	<0.25	99	102	50-150	3
Hexachlorobutadiene	mg/kg (ppm)	2	<0.25	101	106	50-150	5
Naphthalene	mg/kg (ppm)	2	0.15	91	96	50-150	5
1,2,3-Trichlorobenzene	mg/kg (ppm)	2	<0.25	95	101	50-150	6

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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Project: 1337-22001-02, F&BI 306340

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	68	10-150
Chloromethane	mg/kg (ppm)	2	83	21-140
Vinyl chloride	mg/kg (ppm)	2	101	35-135
Bromomethane	mg/kg (ppm)	2	131	20-151
Chloroethane	mg/kg (ppm)	2	110	21-147
Trichlorofluoromethane	mg/kg (ppm)	2	98	47-143
Acetone	mg/kg (ppm)	10	67	13-169
1,1-Dichloroethene	mg/kg (ppm)	2	100	49-138
Hexane	mg/kg (ppm)	2	95	61-141
Methylene chloride	mg/kg (ppm)	2	105	25-146
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	2	103	65-129
trans-1,2-Dichloroethene	mg/kg (ppm)	2	104	62-126
1,1-Dichloroethane	mg/kg (ppm)	2	105	64-131
2,2-Dichloropropane	mg/kg (ppm)	2	123	76-150
cis-1,2-Dichloroethene	mg/kg (ppm)	2	102	62-127
Chloroform	mg/kg (ppm)	2	99	67-129
2-Butanone (MEK)	mg/kg (ppm)	10	85	19-171
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2	107	73-123
1,1,1-Trichloroethane	mg/kg (ppm)	2	105	66-125
1,1-Dichloropropene	mg/kg (ppm)	2	102	70-131
Carbon tetrachloride	mg/kg (ppm)	2	106	53-135
Benzene	mg/kg (ppm)	2	104	70-130
Trichloroethene	mg/kg (ppm)	2	103	62-116
1,2-Dichloropropane	mg/kg (ppm)	2	94	70-130
Bromodichloromethane	mg/kg (ppm)	2	106	70-130
Dibromomethane	mg/kg (ppm)	2	105	70-130
4-Methyl-2-pentanone	mg/kg (ppm)	10	113	64-137
cis-1,3-Dichloropropene	mg/kg (ppm)	2	104	68-137
Toluene	mg/kg (ppm)	2	102	70-130
trans-1,3-Dichloropropene	mg/kg (ppm)	2	104	70-130
1,1,2-Trichloroethane	mg/kg (ppm)	2	101	70-130
2-Hexanone	mg/kg (ppm)	10	111	55-145
1,3-Dichloropropane	mg/kg (ppm)	2	95	70-130
Tetrachloroethene	mg/kg (ppm)	2	104	69-131
Dibromochloromethane	mg/kg (ppm)	2	97	61-137
1,2-Dibromoethane (EDB)	mg/kg (ppm)	2	101	70-130
Chlorobenzene	mg/kg (ppm)	2	103	70-130
Ethylbenzene	mg/kg (ppm)	2	103	70-130
1,1,1,2-Tetrachloroethane	mg/kg (ppm)	2	106	56-134
m,p-Xylene	mg/kg (ppm)	4	104	70-130
o-Xylene	mg/kg (ppm)	2	103	70-130
Styrene	mg/kg (ppm)	2	99	70-130
Isopropylbenzene	mg/kg (ppm)	2	107	67-131
Bromoform	mg/kg (ppm)	2	107	70-130
n-Propylbenzene	mg/kg (ppm)	2	111	70-130
Bromobenzene	mg/kg (ppm)	2	102	70-130
1,3,5-Trimethylbenzene	mg/kg (ppm)	2	111	70-130
1,1,2,2-Tetrachloroethane	mg/kg (ppm)	2	107	70-130
1,2,3-Trichloropropane	mg/kg (ppm)	2	106	70-130
2-Chlorotoluene	mg/kg (ppm)	2	105	70-130
4-Chlorotoluene	mg/kg (ppm)	2	109	70-130
tert-Butylbenzene	mg/kg (ppm)	2	112	70-130
1,2,4-Trimethylbenzene	mg/kg (ppm)	2	112	70-130
sec-Butylbenzene	mg/kg (ppm)	2	113	68-131
p-Isopropyltoluene	mg/kg (ppm)	2	116	70-130
1,3-Dichlorobenzene	mg/kg (ppm)	2	106	70-130
1,4-Dichlorobenzene	mg/kg (ppm)	2	110	70-130
1,2-Dichlorobenzene	mg/kg (ppm)	2	107	70-130
1,2-Dibromo-3-chloropropane	mg/kg (ppm)	2	105	70-130
1,2,4-Trichlorobenzene	mg/kg (ppm)	2	111	66-140
Hexachlorobutadiene	mg/kg (ppm)	2	111	67-141
Naphthalene	mg/kg (ppm)	2	107	69-119
1,2,3-Trichlorobenzene	mg/kg (ppm)	2	108	66-138

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

Laboratory Code: 306383-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent	Acceptance Criteria
				Recovery MS	
Dichlorodifluoromethane	ug/L (ppb)	10	<1	117	27-164
Chloromethane	ug/L (ppb)	10	<10	94	34-141
Vinyl chloride	ug/L (ppb)	10	<0.02	126	16-176
Bromomethane	ug/L (ppb)	10	<5	158	10-193
Chloroethane	ug/L (ppb)	10	<1	137	50-150
Trichlorofluoromethane	ug/L (ppb)	10	<1	106	50-150
Acetone	ug/L (ppb)	50	<50	75	15-179
1,1-Dichloroethene	ug/L (ppb)	10	<1	107	50-150
Hexane	ug/L (ppb)	10	<5	109	49-161
Methylene chloride	ug/L (ppb)	10	<5	102	40-143
Methyl t-butyl ether (MTBE)	ug/L (ppb)	10	<1	105	50-150
trans-1,2-Dichloroethene	ug/L (ppb)	10	<1	104	50-150
1,1-Dichloroethane	ug/L (ppb)	10	<1	103	50-150
2,2-Dichloropropane	ug/L (ppb)	10	<1	124	62-152
cis-1,2-Dichloroethene	ug/L (ppb)	10	<1	104	50-150
Chloroform	ug/L (ppb)	10	<1	105	50-150
2-Butanone (MEK)	ug/L (ppb)	50	<20	91	34-168
1,2-Dichloroethane (EDC)	ug/L (ppb)	10	<0.2	109	50-150
1,1,1-Trichloroethane	ug/L (ppb)	10	<1	105	50-150
1,1-Dichloropropene	ug/L (ppb)	10	<1	104	50-150
Carbon tetrachloride	ug/L (ppb)	10	<0.5	106	50-150
Benzene	ug/L (ppb)	10	<0.35	102	50-150
Trichloroethene	ug/L (ppb)	10	<0.5	101	43-133
1,2-Dichloropropane	ug/L (ppb)	10	<1	98	50-150
Bromodichloromethane	ug/L (ppb)	10	<0.5	105	50-150
Dibromomethane	ug/L (ppb)	10	<1	105	50-150
4-Methyl-2-pentanone	ug/L (ppb)	50	<10	98	50-150
cis-1,3-Dichloropropene	ug/L (ppb)	10	<0.4	105	48-145
Toluene	ug/L (ppb)	10	<1	100	50-150
trans-1,3-Dichloropropene	ug/L (ppb)	10	<0.4	100	37-152
1,1,2-Trichloroethane	ug/L (ppb)	10	<0.5	98	50-150
2-Hexanone	ug/L (ppb)	50	<10	89	50-150
1,3-Dichloropropene	ug/L (ppb)	10	<1	100	50-150
Tetrachloroethene	ug/L (ppb)	10	<1	104	50-150
Dibromochloromethane	ug/L (ppb)	10	<0.5	103	33-164
1,2-Dibromoethane (EDB)	ug/L (ppb)	10	<1	100	50-150
Chlorobenzene	ug/L (ppb)	10	<1	100	50-150
Ethylbenzene	ug/L (ppb)	10	<1	98	50-150
1,1,1,2-Tetrachloroethane	ug/L (ppb)	10	<1	99	50-150
m,p-Xylene	ug/L (ppb)	20	<2	98	50-150
o-Xylene	ug/L (ppb)	10	<1	97	50-150
Styrene	ug/L (ppb)	10	<1	99	50-150
Isopropylbenzene	ug/L (ppb)	10	<1	100	50-150
Bromoform	ug/L (ppb)	10	<5	99	23-161
n-Propylbenzene	ug/L (ppb)	10	<1	96	50-150
Bromobenzene	ug/L (ppb)	10	<1	96	50-150
1,3,5-Trimethylbenzene	ug/L (ppb)	10	<1	96	50-150
1,1,2,2-Tetrachloroethane	ug/L (ppb)	10	<0.2	101	57-162
1,2,3-Trichloropropane	ug/L (ppb)	10	<1	90	33-151
2-Chlorotoluene	ug/L (ppb)	10	<1	99	50-150
4-Chlorotoluene	ug/L (ppb)	10	<1	94	50-150
tert-Butylbenzene	ug/L (ppb)	10	<1	101	50-150
1,2,4-Trimethylbenzene	ug/L (ppb)	10	<1	103	50-150
sec-Butylbenzene	ug/L (ppb)	10	<1	105	46-139
p-Isopropyltoluene	ug/L (ppb)	10	<1	102	46-140
1,3-Dichlorobenzene	ug/L (ppb)	10	<1	103	50-150
1,4-Dichlorobenzene	ug/L (ppb)	10	<1	103	50-150
1,2-Dichlorobenzene	ug/L (ppb)	10	<1	100	50-150
1,2-Dibromo-3-chloropropane	ug/L (ppb)	10	<10	88	50-150
1,2,4-Trichlorobenzene	ug/L (ppb)	10	<1	94	50-150
Hexachlorobutadiene	ug/L (ppb)	10	<0.5	93	42-150
Naphthalene	ug/L (ppb)	10	<1	90	50-150
1,2,3-Trichlorobenzene	ug/L (ppb)	10	<1	89	44-155

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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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 LCS D	Acceptance Criteria	RPD (Limit 20)
Dichlorodifluoromethane	ug/L (ppb)	10	115	104	49-149	10
Chloromethane	ug/L (ppb)	10	93	90	34-143	3
Vinyl chloride	ug/L (ppb)	10	102	119	43-149	15
Bromomethane	ug/L (ppb)	10	129	115	28-182	11
Chloroethane	ug/L (ppb)	10	132	123	59-157	7
Trichlorofluoromethane	ug/L (ppb)	10	107	103	59-141	4
Acetone	ug/L (ppb)	50	71	63	20-139	12
1,1-Dichloroethene	ug/L (ppb)	10	108	97	67-138	11
Hexane	ug/L (ppb)	10	106	96	50-161	10
Methylene chloride	ug/L (ppb)	10	100	90	29-192	11
Methyl t-butyl ether (MTBE)	ug/L (ppb)	10	105	96	70-130	9
trans-1,2-Dichloroethene	ug/L (ppb)	10	105	95	70-130	10
1,1-Dichloroethane	ug/L (ppb)	10	104	94	70-130	10
2,2-Dichloropropane	ug/L (ppb)	10	120	110	71-148	9
cis-1,2-Dichloroethene	ug/L (ppb)	10	109	94	70-130	15
Chloroform	ug/L (ppb)	10	105	94	70-130	11
2-Butanone (MEK)	ug/L (ppb)	50	95	87	50-157	9
1,2-Dichloroethane (EDC)	ug/L (ppb)	10	111	100	70-130	10
1,1,1-Trichloroethane	ug/L (ppb)	10	106	97	70-130	9
1,1-Dichloropropene	ug/L (ppb)	10	109	95	70-130	14
Carbon tetrachloride	ug/L (ppb)	10	110	98	70-130	12
Benzene	ug/L (ppb)	10	102	93	70-130	9
Trichloroethene	ug/L (ppb)	10	101	92	70-130	9
1,2-Dichloropropane	ug/L (ppb)	10	104	91	70-130	13
Bromodichloromethane	ug/L (ppb)	10	108	98	70-130	10
Dibromomethane	ug/L (ppb)	10	106	99	70-130	7
4-Methyl-2-pentanone	ug/L (ppb)	50	99	96	70-130	3
cis-1,3-Dichloropropene	ug/L (ppb)	10	108	95	70-130	13
Toluene	ug/L (ppb)	10	102	100	70-130	2
trans-1,3-Dichloropropene	ug/L (ppb)	10	103	100	70-130	3
1,1,2-Trichloroethane	ug/L (ppb)	10	101	99	70-130	2
2-Hexanone	ug/L (ppb)	50	90	91	66-132	1
1,3-Dichloropropene	ug/L (ppb)	10	102	103	70-130	1
Tetrachloroethene	ug/L (ppb)	10	108	105	70-130	3
Dibromochloromethane	ug/L (ppb)	10	110	106	63-142	4
1,2-Dibromoethane (EDB)	ug/L (ppb)	10	105	101	70-130	4
Chlorobenzene	ug/L (ppb)	10	105	101	70-130	4
Ethylbenzene	ug/L (ppb)	10	102	99	70-130	3
1,1,1,2-Tetrachloroethane	ug/L (ppb)	10	107	105	70-130	2
m,p-Xylene	ug/L (ppb)	20	103	100	70-130	3
o-Xylene	ug/L (ppb)	10	101	98	70-130	3
Styrene	ug/L (ppb)	10	105	100	70-130	5
Isopropylbenzene	ug/L (ppb)	10	105	100	70-130	5
Bromoform	ug/L (ppb)	10	100	100	50-157	0
n-Propylbenzene	ug/L (ppb)	10	101	99	70-130	2
Bromobenzene	ug/L (ppb)	10	100	99	70-130	1
1,3,5-Trimethylbenzene	ug/L (ppb)	10	104	104	52-150	0
1,1,2,2-Tetrachloroethane	ug/L (ppb)	10	113	111	75-140	2
1,2,3-Trichloropropane	ug/L (ppb)	10	115	101	40-153	13
2-Chlorotoluene	ug/L (ppb)	10	102	102	70-130	0
4-Chlorotoluene	ug/L (ppb)	10	102	99	70-130	3
tert-Butylbenzene	ug/L (ppb)	10	103	104	70-130	1
1,2,4-Trimethylbenzene	ug/L (ppb)	10	102	100	70-130	2
sec-Butylbenzene	ug/L (ppb)	10	104	101	70-130	3
p-Isopropyltoluene	ug/L (ppb)	10	102	101	70-130	1
1,3-Dichlorobenzene	ug/L (ppb)	10	104	101	70-130	3
1,4-Dichlorobenzene	ug/L (ppb)	10	103	102	70-130	1
1,2-Dichlorobenzene	ug/L (ppb)	10	103	102	70-130	1
1,2-Dibromo-3-chloropropane	ug/L (ppb)	10	95	99	70-130	4
1,2,4-Trichlorobenzene	ug/L (ppb)	10	100	98	70-130	2
Hexachlorobutadiene	ug/L (ppb)	10	105	105	70-130	0
Naphthalene	ug/L (ppb)	10	96	95	61-133	1
1,2,3-Trichlorobenzene	ug/L (ppb)	10	96	99	69-143	3

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 07/07/23

Date Received: 06/21/23

Project: 1337-22001-02, F&BI 306340

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

Laboratory Code: 306385-01 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	0.0083	82	78	50-150	5
2-Methylnaphthalene	mg/kg (ppm)	0.83	<0.01	92	86	50-150	7
1-Methylnaphthalene	mg/kg (ppm)	0.83	<0.01	92	85	50-150	8
Acenaphthylene	mg/kg (ppm)	0.83	<0.01	87	84	50-150	4
Acenaphthene	mg/kg (ppm)	0.83	0.036	88	85	50-150	3
Fluorene	mg/kg (ppm)	0.83	0.0085	90	87	50-150	3
Phenanthrene	mg/kg (ppm)	0.83	0.017	91	91	10-170	0
Anthracene	mg/kg (ppm)	0.83	<0.01	92	88	37-139	4
Fluoranthene	mg/kg (ppm)	0.83	0.023	95	97	10-203	2
Pyrene	mg/kg (ppm)	0.83	0.027	93	94	10-208	1
Benz(a)anthracene	mg/kg (ppm)	0.83	0.010	96	94	37-146	2
Chrysene	mg/kg (ppm)	0.83	0.013	95	93	36-144	2
Benzo(a)pyrene	mg/kg (ppm)	0.83	0.013	98	96	40-150	2
Benzo(b)fluoranthene	mg/kg (ppm)	0.83	0.015	94	92	45-157	2
Benzo(k)fluoranthene	mg/kg (ppm)	0.83	<0.01	94	94	50-150	0
Indeno(1,2,3-cd)pyrene	mg/kg (ppm)	0.83	0.0094	98	98	24-145	0
Dibenz(a,h)anthracene	mg/kg (ppm)	0.83	<0.01	101	98	31-137	3
Benzo(g,h,i)perylene	mg/kg (ppm)	0.83	0.011	95	94	14-141	1

Laboratory Code: Laboratory Control Sample 1/5

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Naphthalene	mg/kg (ppm)	0.83	84	59-105
2-Methylnaphthalene	mg/kg (ppm)	0.83	92	62-108
1-Methylnaphthalene	mg/kg (ppm)	0.83	93	62-108
Acenaphthylene	mg/kg (ppm)	0.83	92	61-111
Acenaphthene	mg/kg (ppm)	0.83	91	61-110
Fluorene	mg/kg (ppm)	0.83	95	62-114
Phenanthrene	mg/kg (ppm)	0.83	95	64-112
Anthracene	mg/kg (ppm)	0.83	92	63-111
Fluoranthene	mg/kg (ppm)	0.83	94	66-115
Pyrene	mg/kg (ppm)	0.83	99	65-112
Benz(a)anthracene	mg/kg (ppm)	0.83	97	64-116
Chrysene	mg/kg (ppm)	0.83	99	66-119
Benzo(a)pyrene	mg/kg (ppm)	0.83	97	62-116
Benzo(b)fluoranthene	mg/kg (ppm)	0.83	100	61-118
Benzo(k)fluoranthene	mg/kg (ppm)	0.83	102	65-119
Indeno(1,2,3-cd)pyrene	mg/kg (ppm)	0.83	94	64-130
Dibenz(a,h)anthracene	mg/kg (ppm)	0.83	95	67-131
Benzo(g,h,i)perylene	mg/kg (ppm)	0.83	95	67-126

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 07/07/23

Date Received: 06/21/23

Project: 1337-22001-02, F&BI 306340

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	72	74	50-104	3
2-Methylnaphthalene	ug/L (ppb)	5	81	85	52-113	5
1-Methylnaphthalene	ug/L (ppb)	5	81	86	51-115	6
Acenaphthylene	ug/L (ppb)	5	83	86	60-114	4
Acenaphthene	ug/L (ppb)	5	83	85	57-110	2
Fluorene	ug/L (ppb)	5	91	93	61-115	2
Phenanthrene	ug/L (ppb)	5	91	95	63-113	4
Anthracene	ug/L (ppb)	5	86	92	65-117	7
Fluoranthene	ug/L (ppb)	5	96	101	68-121	5
Pyrene	ug/L (ppb)	5	83	88	62-133	6
Benzo(a)anthracene	ug/L (ppb)	5	92	93	66-131	1
Chrysene	ug/L (ppb)	5	101	103	66-129	2
Benzo(a)pyrene	ug/L (ppb)	5	100	103	66-129	3
Benzo(b)fluoranthene	ug/L (ppb)	5	94	96	55-144	2
Benzo(k)fluoranthene	ug/L (ppb)	5	99	104	58-139	5
Indeno(1,2,3-cd)pyrene	ug/L (ppb)	5	96	100	62-136	4
Dibenz(a,h)anthracene	ug/L (ppb)	5	101	106	55-146	5
Benzo(g,h,i)perylene	ug/L (ppb)	5	94	99	58-137	5

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 07/07/23

Date Received: 06/21/23

Project: 1337-22001-02, F&BI 306340

**QUALITY ASSURANCE RESULTS
FOR THE ANALYSIS OF SOIL SAMPLES FOR
POLYCHLORINATED BIPHENYLS AS
AROCOR 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	126	119	47-158	6
Aroclor 1260	mg/kg (ppm)	0.25	130	131	69-141	1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 07/07/23

Date Received: 06/21/23

Project: 1337-22001-02, F&BI 306340

**QUALITY ASSURANCE RESULTS
FOR THE ANALYSIS OF PRODUCT SAMPLES FOR
POLYCHLORINATED BIPHENYLS AS
AROCOR 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)	13	109	117	69-151	7
Aroclor 1260	mg/kg (ppm)	13	110	116	67-169	5

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

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

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

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

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

cf - The sample was centrifuged prior to analysis.

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

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

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Report To Lynne Green
Company Fryer Northwest
Address PO Box 14186
City, State, ZIP Portland OR 97293
Phone 503-452-5561 Email lynnegreen@nw.com

PROJECT NAME 1337-2200102 PO # [Blank]
REMARKS [Blank] INVOICE TO [Blank]

TURNAROUND TIME
☒ Standard turnaround
☐ RUSH
Rush charges authorized by: [Blank]
SAMPLE DISPOSAL
☐ Archive samples
☐ Other [Blank]
Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	ANALYSES REQUESTED										PCER 6/26/23 Notes ME
						NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	Total Lead	RBDM VOCs		
G501-SF-8.5	01 A-E	6/20/23	11:05	Soil	5	X	X									
G502-CF-7.5	02 A-D		11:15	Soil	5	X	X									
G503-SW-5.5	03 A-E		11:25	Soil	5	X	X									
G504-EW-5.5	04 A-E		12:20	Soil	5	X	X									
G505-CS-4.5	05		12:35	Soil	1	X	X									
G506-NF-8.5	06 A-F		13:16	Soil	5	X	X									
G507-NMW-5.5	07		13:52	Soil	5	X	X									
G508-WW-5.5	08		13:58	Soil	5	X	X									
G509-NW-5.5	09		14:03	Soil	5	X	X									
Host air-230620	10		16:57	product	1											
Perth please																

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

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: <u>[Signature]</u>	<u>Don Saito</u>	<u>Fryer</u>	<u>6/26/23</u>	<u>10:50</u>
Received by: <u>[Signature]</u>	<u>Shawn Pham</u>	<u>FeBT</u>	<u>6/21/23</u>	<u>10:52</u>
Relinquished by:				
Received by:				

Samples received at 3 °C

06/11/23

$$P/A3/I3/va1$$

Report To WMA

Company *F. W. Jones*

Address No 107 Widd

City, State, ZIP Portland ME 04103

Phone 573 452 556 Email lynn.colonna-pw.ca

SAMPLETERS (signature) 		Page # <u>1</u> of <u>2</u>	
PROJECT NAME 1337-2001-02	PO #	TURNAROUND TIME ☒ Standard turnaround ☐ RUSH Rush charges authorized by: _____	
REMARKS	INVOICE TO	SAMPLE DISPOSAL ☐ Archive samples ☐ Other _____ Default: Dispose after 30 days	

TURNAROUND TIME

☒ Standard turnaround

☐ RUSH

Rush charges authorized by: _____

SAMPLE DISPOSAL

☐ Archive samples

☐ Other _____

Default: Dispose after 30 days

[illegible]

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

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: 	Dan Sells	DM	06/20/03	10:00
Received by: 	Nathan Pham	FEBI	06/21/03	10:50
Relinquished by:				
Received by:				

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

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

July 14, 2023

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

Dear Mr Green:

Included are the results from the testing of material submitted on June 28, 2023 from the 1337-22001-02, F&BI 306440 project. There are 33 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
ENW0714R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on June 28, 2023 by Friedman & Bruya, Inc. from the Evren Northwest 1337-22001-02, F&BI 306440 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>Evren Northwest</u>
306440 -01	GS10-F-8.5
306440 -02	GS11-NW-5.5
306440 -03	GS12-EW-5.5
306440 -04	GS13-SW-5.5
306440 -05	GS14-WW-5.5
306440 -06	Pit Water - 230626

The 8260D soil bromomethane and chloroethane and water bromomethane and acetone calibration standards exceeded the acceptance criteria. The compounds were not detected, therefore this did not represent an out of control condition.

All other quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 07/14/23
Date Received: 06/28/23
Project: 1337-22001-02, F&BI 306440
Date Extracted: 06/29/23
Date Analyzed: 06/29/23

**RESULTS FROM THE ANALYSIS OF SOIL SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
USING METHOD NWTPH-G_x**

Results Reported on a Dry Weight Basis

Results Reported as mg/kg (ppm)

<u>Sample ID</u> Laboratory ID	<u>Gasoline Range</u>	Surrogate (% Recovery) (Limit 50-150)
GS10-F-8.5 pc 306440-01	<5	130
GS11-NW-5.5 306440-02	23	139
GS12-EW-5.5 306440-03	130	ip
GS13-SW-5.5 306440-04	120	ip
GS14-WW-5.5 306440-05	64	ip
Method Blank 03-1406 MB	<5	138

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 07/14/23

Date Received: 06/28/23

Project: 1337-22001-02, F&BI 306440

Date Extracted: 06/28/23

Date Analyzed: 06/29/23

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

Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Gasoline Range</u>	Surrogate <u>(% Recovery)</u> (Limit 50-150)
Pit Water - 230626 306440-06	<100	132
Method Blank 03-1405 MB	<100	135

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 07/14/23

Date Received: 06/28/23

Project: 1337-22001-02, F&BI 306440

Date Extracted: 06/28/23

Date Analyzed: 06/28/23

**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)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>Residual Range</u> (C ₂₅ -C ₃₆)	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 50-150)
GS10-F-8.5 306440-01	<50	<250	116
GS11-NW-5.5 306440-02	110 x	750	111
GS12-EW-5.5 306440-03	240 x	1,300	113
GS13-SW-5.5 306440-04	150 x	1,100	111
GS14-WW-5.5 306440-05	73 x	950	110
Method Blank 03-1567 mb	<50	<250	113

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 07/14/23

Date Received: 06/28/23

Project: 1337-22001-02, F&BI 306440

Date Extracted: 06/29/23

Date Analyzed: 06/29/23

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

Results Reported as ug/L (ppb)

<u>Sample ID</u>	<u>Diesel Range</u>	<u>Residual Range</u>	<u>Surrogate</u>
Laboratory ID	(C ₁₀ -C ₂₅)	(C ₂₅ -C ₃₆)	(% Recovery)
			(Limit 50-150)
Pit Water - 230626	1,400 x	4,000	118
306440-06			
Method Blank	<50	<250	118
03-1565 MB2			

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Metals By EPA Method 6020B

Client ID:	Pit Water - 230626	Client:	Evren Northwest
Date Received:	06/28/23	Project:	1337-22001-02, F&BI 306440
Date Extracted:	06/30/23	Lab ID:	306440-06
Date Analyzed:	07/03/23	Data File:	306440-06.090
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
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Lead	<1
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	Method Blank	Client:	Evren Northwest
Date Received:	NA	Project:	1337-22001-02, F&BI 306440
Date Extracted:	06/30/23	Lab ID:	I3-521 mb2
Date Analyzed:	06/30/23	Data File:	I3-521 mb2.125
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
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Lead	<1
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	GS12-EW-5.5	Client:	Evren Northwest
Date Received:	06/28/23	Project:	1337-22001-02, F&BI 306440
Date Extracted:	06/30/23	Lab ID:	306440-03 x2
Date Analyzed:	07/05/23	Data File:	306440-03 x2.046
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
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Lead	8.31
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	Method Blank	Client:	Evren Northwest
Date Received:	NA	Project:	1337-22001-02, F&BI 306440
Date Extracted:	06/30/23	Lab ID:	I3-522 mb
Date Analyzed:	06/30/23	Data File:	I3-522 mb.096
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
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Lead	<1
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID: GS12-EW-5.5	Client: Evren Northwest
Date Received: 06/28/23	Project: 1337-22001-02, F&BI 306440
Date Extracted: 07/03/23	Lab ID: 306440-03
Date Analyzed: 07/03/23	Data File: 070312.D
Matrix: Soil	Instrument: GCMS4
Units: mg/kg (ppm) Dry Weight	Operator: MD

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	97	90	109
Toluene-d8	101	86	115
4-Bromofluorobenzene	99	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 k	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5 k	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<5 k	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	0.12
Hexane	<0.25	o-Xylene	0.12
Methylene chloride	<0.5	Styrene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Isopropylbenzene	0.061
trans-1,2-Dichloroethene	<0.05	Bromoform	<0.05
1,1-Dichloroethane	<0.05	n-Propylbenzene	0.13
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	1.8
1,1,1-Trichloroethane	<0.05	4-Chlorotoluene	2.1
1,1-Dichloropropene	<0.05	tert-Butylbenzene	<0.05
Carbon tetrachloride	<0.05	1,2,4-Trimethylbenzene	0.082
Benzene	<0.03	sec-Butylbenzene	0.21
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	0.062	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		

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	Method Blank	Client:	Evren Northwest
Date Received:	Not Applicable	Project:	1337-22001-02, F&BI 306440
Date Extracted:	07/03/23	Lab ID:	03-1525 mb
Date Analyzed:	07/03/23	Data File:	070306.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MD

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	105	90	109
Toluene-d8	101	86	115
4-Bromofluorobenzene	99	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 k	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5 k	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<5 k	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		

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	Pit Water - 230626	Client:	Evren Northwest
Date Received:	06/28/23	Project:	1337-22001-02, F&BI 306440
Date Extracted:	07/03/23	Lab ID:	306440-06
Date Analyzed:	07/03/23	Data File:	070320.D
Matrix:	Water	Instrument:	GCMS13
Units:	ug/L (ppb)	Operator:	MD

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	93	71	132
Toluene-d8	94	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 k	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<50 k	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	5.6
1,1,1-Trichloroethane	<1	4-Chlorotoluene	3.2
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		

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	Method Blank	Client:	Evren Northwest
Date Received:	Not Applicable	Project:	1337-22001-02, F&BI 306440
Date Extracted:	07/03/23	Lab ID:	03-1527 mb
Date Analyzed:	07/03/23	Data File:	070308.D
Matrix:	Water	Instrument:	GCMS13
Units:	ug/L (ppb)	Operator:	MD

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	94	71	132
Toluene-d8	102	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 k	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<50 k	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		

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	GS12-EW-5.5	Client:	Evren Northwest
Date Received:	06/28/23	Project:	1337-22001-02, F&BI 306440
Date Extracted:	06/30/23	Lab ID:	306440-03 1/5
Date Analyzed:	07/03/23	Data File:	070309.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Nitrobenzene-d5	65	10	198
2-Fluorobiphenyl	73	45	117
2,4,6-Tribromophenol	77	11	158
Terphenyl-d14	97	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	0.019
Phenanthrene	<0.01
Anthracene	<0.01
Fluoranthene	0.017
Pyrene	0.028
Benz(a)anthracene	0.011
Chrysene	0.019
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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	Method Blank	Client:	Evren Northwest
Date Received:	Not Applicable	Project:	1337-22001-02, F&BI 306440
Date Extracted:	06/30/23	Lab ID:	03-1575 mb 1/5
Date Analyzed:	06/30/23	Data File:	063013.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Nitrobenzene-d5	74	10	198
2-Fluorobiphenyl	84	45	117
2,4,6-Tribromophenol	81	11	158
Terphenyl-d14	107	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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	Pit Water - 230626	Client:	Evren Northwest
Date Received:	06/28/23	Project:	1337-22001-02, F&BI 306440
Date Extracted:	07/03/23	Lab ID:	306440-06
Date Analyzed:	07/04/23	Data File:	070338.D
Matrix:	Water	Instrument:	GCMS12
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Nitrobenzene-d5	75	11	173
2-Fluorobiphenyl	76	25	128
2,4,6-Tribromophenol	97	10	140
Terphenyl-d14	98	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	0.037
Phenanthrene	0.022
Anthracene	<0.02
Fluoranthene	0.025
Pyrene	0.04
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	<0.04
Benzo(g,h,i)perylene	<0.04

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	Method Blank	Client:	Evren Northwest
Date Received:	Not Applicable	Project:	1337-22001-02, F&BI 306440
Date Extracted:	07/03/23	Lab ID:	03-1581 mb
Date Analyzed:	07/04/23	Data File:	070337.D
Matrix:	Water	Instrument:	GCMS12
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Nitrobenzene-d5	86	11	173
2-Fluorobiphenyl	92	25	128
2,4,6-Tribromophenol	63	10	140
Terphenyl-d14	98	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	<0.04
Benzo(g,h,i)perylene	<0.04

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	GS12-EW-5.5	Client:	Evren Northwest
Date Received:	06/28/23	Project:	1337-22001-02, F&BI 306440
Date Extracted:	07/06/23	Lab ID:	306440-03 1/30
Date Analyzed:	07/06/23	Data File:	070614.D
Matrix:	Soil	Instrument:	GC9
Units:	mg/kg (ppm) Dry Weight	Operator:	MG

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Tetrachlorometaxylene	92	11	184
Decachlorobiphenyl	68	25	127

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	Method Blank	Client:	Evren Northwest
Date Received:	Not Applicable	Project:	1337-22001-02, F&BI 306440
Date Extracted:	07/06/23	Lab ID:	03-1582 mb 1/30
Date Analyzed:	07/06/23	Data File:	070607.D
Matrix:	Soil	Instrument:	GC9
Units:	mg/kg (ppm) Dry Weight	Operator:	MG

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Tetrachlorometaxylene	118	11	184
Decachlorobiphenyl	124	25	127

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 07/14/23

Date Received: 06/28/23

Project: 1337-22001-02, F&BI 306440

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES
FOR TPH AS GASOLINE
USING METHOD NWTPH-G_x**

Laboratory Code: 306440-01 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (Limit 20)
Gasoline	mg/kg (ppm)	<5	<5	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	mg/kg (ppm)	40	95	70-130

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 07/14/23

Date Received: 06/28/23

Project: 1337-22001-02, F&BI 306440

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

Laboratory Code: 306418-01 (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	100	70-130

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 07/14/23

Date Received: 06/28/23

Project: 1337-22001-02, F&BI 306440

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

Laboratory Code: 306431-03 (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	<50	102	100	64-136	2

Laboratory Code: Laboratory Control Sample

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 07/14/23

Date Received: 06/28/23

Project: 1337-22001-02, F&BI 306440

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

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	116	65-151	11

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 07/14/23

Date Received: 06/28/23

Project: 1337-22001-02, F&BI 306440

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

Laboratory Code: 306460-04 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Lead	ug/L (ppb)	10	<1	75	73 vo	75-125	3

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Lead	ug/L (ppb)	10	93	80-120

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 07/14/23

Date Received: 06/28/23

Project: 1337-22001-02, F&BI 306440

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

Laboratory Code: 306479-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Lead	mg/kg (ppm)	50	3.08	97	97	75-125	0

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Lead	mg/kg (ppm)	50	98	80-120

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 07/14/23

Date Received: 06/28/23

Project: 1337-22001-02, F&BI 306440

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

Laboratory Code: 306440-03 (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	50	49	10-142	2
Chloromethane	mg/kg (ppm)	2	<0.5	75	75	10-126	0
Vinyl chloride	mg/kg (ppm)	2	<0.05	78	79	10-138	1
Bromomethane	mg/kg (ppm)	2	<0.5	54	54	10-163	0
Chloroethane	mg/kg (ppm)	2	<0.5	58	59	10-176	2
Trichlorofluoromethane	mg/kg (ppm)	2	<0.5	78	80	10-176	3
Acetone	mg/kg (ppm)	10	<5	75	74	10-163	1
1,1-Dichloroethene	mg/kg (ppm)	2	<0.05	85	88	10-160	3
Hexane	mg/kg (ppm)	2	<0.25	88	87	10-137	1
Methylene chloride	mg/kg (ppm)	2	<0.5	81	83	10-156	2
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	2	<0.05	94	96	21-145	2
trans-1,2-Dichloroethene	mg/kg (ppm)	2	<0.05	94	95	14-137	1
1,1-Dichloroethane	mg/kg (ppm)	2	<0.05	92	92	19-140	0
2,2-Dichloropropane	mg/kg (ppm)	2	<0.05	89	93	10-158	4
cis-1,2-Dichloroethene	mg/kg (ppm)	2	<0.05	94	95	25-135	1
Chloroform	mg/kg (ppm)	2	<0.05	94	96	21-145	2
2-Butanone (MEK)	mg/kg (ppm)	10	<1	88	87	19-147	1
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2	<0.05	94	95	12-160	1
1,1,1-Trichloroethane	mg/kg (ppm)	2	<0.05	97	96	10-156	1
1,1-Dichloropropene	mg/kg (ppm)	2	<0.05	95	97	17-140	2
Carbon tetrachloride	mg/kg (ppm)	2	<0.05	96	96	9-164	0
Benzene	mg/kg (ppm)	2	<0.03	92	93	29-129	1
Trichloroethene	mg/kg (ppm)	2	<0.02	95	97	21-139	2
1,2-Dichloropropane	mg/kg (ppm)	2	<0.05	96	99	30-135	3
Bromodichloromethane	mg/kg (ppm)	2	<0.05	96	97	23-155	1
Dibromomethane	mg/kg (ppm)	2	<0.05	98	97	23-145	1
4-Methyl-2-pentanone	mg/kg (ppm)	10	<1	98	100	24-155	2
cis-1,3-Dichloropropene	mg/kg (ppm)	2	<0.05	97	99	28-144	2
Toluene	mg/kg (ppm)	2	0.079	93	92	35-130	1
trans-1,3-Dichloropropene	mg/kg (ppm)	2	<0.05	91	94	26-149	3
1,1,2-Trichloroethane	mg/kg (ppm)	2	<0.05	91	92	10-205	1
2-Hexanone	mg/kg (ppm)	10	<0.5	91	94	15-166	3
1,3-Dichloropropane	mg/kg (ppm)	2	<0.05	95	96	31-137	1
Tetrachloroethene	mg/kg (ppm)	2	<0.025	95	97	20-133	2
Dibromochloromethane	mg/kg (ppm)	2	<0.05	94	95	28-150	1
1,2-Dibromoethane (EDB)	mg/kg (ppm)	2	<0.05	95	96	28-142	1
Chlorobenzene	mg/kg (ppm)	2	<0.05	94	94	32-129	0
Ethylbenzene	mg/kg (ppm)	2	<0.05	93	94	32-137	1
1,1,1,2-Tetrachloroethane	mg/kg (ppm)	2	<0.05	95	99	31-143	4
m,p-Xylene	mg/kg (ppm)	4	0.15	92	93	34-136	1
o-Xylene	mg/kg (ppm)	2	0.15	89	92	33-134	3
Styrene	mg/kg (ppm)	2	<0.05	96	98	35-137	2
Isopropylbenzene	mg/kg (ppm)	2	0.078	93	95	31-142	2
Bromoform	mg/kg (ppm)	2	<0.05	94	98	21-156	4
n-Propylbenzene	mg/kg (ppm)	2	0.17	84	88	23-146	5
Bromobenzene	mg/kg (ppm)	2	<0.05	90	94	34-130	4
1,3,5-Trimethylbenzene	mg/kg (ppm)	2	<0.05	91	97	18-149	6
1,1,2,2-Tetrachloroethane	mg/kg (ppm)	2	<0.05	98	103	28-140	5
1,2,3-Trichloropropane	mg/kg (ppm)	2	<0.05	88	94	25-144	7
2-Chlorotoluene	mg/kg (ppm)	2	2.3	0 b	6 b	31-134	nm
4-Chlorotoluene	mg/kg (ppm)	2	2.7	0 b	0 b	31-136	nm
tert-Butylbenzene	mg/kg (ppm)	2	<0.05	92	98	30-137	6
1,2,4-Trimethylbenzene	mg/kg (ppm)	2	0.10	89	93	10-182	4
sec-Butylbenzene	mg/kg (ppm)	2	0.27	84	88	23-145	5
p-Isopropyltoluene	mg/kg (ppm)	2	<0.05	94	98	21-149	4
1,3-Dichlorobenzene	mg/kg (ppm)	2	<0.05	92	95	30-131	3
1,4-Dichlorobenzene	mg/kg (ppm)	2	<0.05	91	95	29-129	4
1,2-Dichlorobenzene	mg/kg (ppm)	2	<0.05	94	98	31-132	4
1,2-Dibromo-3-chloropropane	mg/kg (ppm)	2	<0.5	91	98	11-161	7
1,2,4-Trichlorobenzene	mg/kg (ppm)	2	<0.25	101	106	22-142	5
Hexachlorobutadiene	mg/kg (ppm)	2	<0.25	104	108	10-142	4
Naphthalene	mg/kg (ppm)	2	<0.05	105	109	14-157	4
1,2,3-Trichlorobenzene	mg/kg (ppm)	2	<0.25	131	131	20-144	0

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 07/14/23

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Project: 1337-22001-02, F&BI 306440

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	55	10-146
Chloromethane	mg/kg (ppm)	2	78	27-133
Vinyl chloride	mg/kg (ppm)	2	81	22-139
Bromomethane	mg/kg (ppm)	2	58	10-201
Chloroethane	mg/kg (ppm)	2	60	10-163
Trichlorofluoromethane	mg/kg (ppm)	2	84	10-196
Acetone	mg/kg (ppm)	10	119	52-141
1,1-Dichloroethene	mg/kg (ppm)	2	91	47-128
Hexane	mg/kg (ppm)	2	94	43-142
Methylene chloride	mg/kg (ppm)	2	92	10-184
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	2	97	60-123
trans-1,2-Dichloroethene	mg/kg (ppm)	2	97	64-132
1,1-Dichloroethane	mg/kg (ppm)	2	96	64-135
2,2-Dichloropropane	mg/kg (ppm)	2	97	52-170
cis-1,2-Dichloroethene	mg/kg (ppm)	2	100	64-135
Chloroform	mg/kg (ppm)	2	97	61-139
2-Butanone (MEK)	mg/kg (ppm)	10	108	30-197
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2	98	56-135
1,1,1-Trichloroethane	mg/kg (ppm)	2	102	62-131
1,1-Dichloropropene	mg/kg (ppm)	2	97	64-136
Carbon tetrachloride	mg/kg (ppm)	2	102	60-139
Benzene	mg/kg (ppm)	2	95	65-136
Trichloroethene	mg/kg (ppm)	2	98	63-139
1,2-Dichloropropane	mg/kg (ppm)	2	98	61-145
Bromodichloromethane	mg/kg (ppm)	2	100	57-126
Dibromomethane	mg/kg (ppm)	2	101	62-123
4-Methyl-2-pentanone	mg/kg (ppm)	10	103	45-145
cis-1,3-Dichloropropene	mg/kg (ppm)	2	99	65-143
Toluene	mg/kg (ppm)	2	95	66-126
trans-1,3-Dichloropropene	mg/kg (ppm)	2	94	65-131
1,1,2-Trichloroethane	mg/kg (ppm)	2	96	62-131
2-Hexanone	mg/kg (ppm)	10	98	33-152
1,3-Dichloropropane	mg/kg (ppm)	2	95	67-128
Tetrachloroethene	mg/kg (ppm)	2	95	68-128
Dibromochloromethane	mg/kg (ppm)	2	99	55-121
1,2-Dibromoethane (EDB)	mg/kg (ppm)	2	97	66-129
Chlorobenzene	mg/kg (ppm)	2	94	67-128
Ethylbenzene	mg/kg (ppm)	2	95	64-123
1,1,1,2-Tetrachloroethane	mg/kg (ppm)	2	99	64-121
m,p-Xylene	mg/kg (ppm)	4	95	68-128
o-Xylene	mg/kg (ppm)	2	95	67-129
Styrene	mg/kg (ppm)	2	96	67-129
Isopropylbenzene	mg/kg (ppm)	2	95	68-128
Bromoform	mg/kg (ppm)	2	101	56-132
n-Propylbenzene	mg/kg (ppm)	2	93	68-129
Bromobenzene	mg/kg (ppm)	2	95	69-128
1,3,5-Trimethylbenzene	mg/kg (ppm)	2	96	69-129
1,1,2,2-Tetrachloroethane	mg/kg (ppm)	2	96	56-143
1,2,3-Trichloropropane	mg/kg (ppm)	2	93	61-137
2-Chlorotoluene	mg/kg (ppm)	2	93	69-128
4-Chlorotoluene	mg/kg (ppm)	2	94	67-127
tert-Butylbenzene	mg/kg (ppm)	2	95	69-129
1,2,4-Trimethylbenzene	mg/kg (ppm)	2	95	69-128
sec-Butylbenzene	mg/kg (ppm)	2	96	69-130
p-Isopropyltoluene	mg/kg (ppm)	2	97	69-130
1,3-Dichlorobenzene	mg/kg (ppm)	2	94	69-127
1,4-Dichlorobenzene	mg/kg (ppm)	2	95	68-126
1,2-Dichlorobenzene	mg/kg (ppm)	2	96	69-127
1,2-Dibromo-3-chloropropane	mg/kg (ppm)	2	100	58-138
1,2,4-Trichlorobenzene	mg/kg (ppm)	2	101	64-135
Hexachlorobutadiene	mg/kg (ppm)	2	104	50-153
Naphthalene	mg/kg (ppm)	2	103	62-128
1,2,3-Trichlorobenzene	mg/kg (ppm)	2	114	61-126

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 07/14/23

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Project: 1337-22001-02, F&BI 306440

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

Laboratory Code: 306440-06 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent	Acceptance Criteria
				Recovery MS	
Dichlorodifluoromethane	ug/L (ppb)	10	<1	105	27-164
Chloromethane	ug/L (ppb)	10	<10	100	34-141
Vinyl chloride	ug/L (ppb)	10	<0.02	107	16-176
Bromomethane	ug/L (ppb)	10	<5	125	10-193
Chloroethane	ug/L (ppb)	10	<1	123	50-150
Trichlorofluoromethane	ug/L (ppb)	10	<1	104	50-150
Acetone	ug/L (ppb)	50	<50	84	15-179
1,1-Dichloroethene	ug/L (ppb)	10	<1	104	50-150
Hexane	ug/L (ppb)	10	<5	92	49-161
Methylene chloride	ug/L (ppb)	10	<5	91	40-143
Methyl t-butyl ether (MTBE)	ug/L (ppb)	10	<1	107	50-150
trans-1,2-Dichloroethene	ug/L (ppb)	10	<1	102	50-150
1,1-Dichloroethane	ug/L (ppb)	10	<1	101	50-150
2,2-Dichloropropane	ug/L (ppb)	10	<1	102	62-152
cis-1,2-Dichloroethene	ug/L (ppb)	10	<1	102	50-150
Chloroform	ug/L (ppb)	10	<1	100	50-150
2-Butanone (MEK)	ug/L (ppb)	50	<20	99	34-168
1,2-Dichloroethane (EDC)	ug/L (ppb)	10	<0.2	104	50-150
1,1,1-Trichloroethane	ug/L (ppb)	10	<1	102	50-150
1,1-Dichloropropene	ug/L (ppb)	10	<1	99	50-150
Carbon tetrachloride	ug/L (ppb)	10	<0.5	102	50-150
Benzene	ug/L (ppb)	10	<0.35	104	50-150
Trichloroethene	ug/L (ppb)	10	<0.5	106	43-133
1,2-Dichloropropane	ug/L (ppb)	10	<1	101	50-150
Bromodichloromethane	ug/L (ppb)	10	<0.5	100	50-150
Dibromomethane	ug/L (ppb)	10	<1	104	50-150
4-Methyl-2-pentanone	ug/L (ppb)	50	<10	109	50-150
cis-1,3-Dichloropropene	ug/L (ppb)	10	<0.4	102	48-145
Toluene	ug/L (ppb)	10	<1	104	50-150
trans-1,3-Dichloropropene	ug/L (ppb)	10	<0.4	99	37-152
1,1,2-Trichloroethane	ug/L (ppb)	10	<0.5	98	50-150
2-Hexanone	ug/L (ppb)	50	<10	99	50-150
1,3-Dichloropropane	ug/L (ppb)	10	<1	97	50-150
Tetrachloroethene	ug/L (ppb)	10	<1	105	50-150
Dibromochloromethane	ug/L (ppb)	10	<0.5	98	33-164
1,2-Dibromoethane (EDB)	ug/L (ppb)	10	<1	100	50-150
Chlorobenzene	ug/L (ppb)	10	<1	101	50-150
Ethylbenzene	ug/L (ppb)	10	<1	106	50-150
1,1,1,2-Tetrachloroethane	ug/L (ppb)	10	<1	103	50-150
m,p-Xylene	ug/L (ppb)	20	<2	105	50-150
o-Xylene	ug/L (ppb)	10	<1	105	50-150
Styrene	ug/L (ppb)	10	<1	98	50-150
Isopropylbenzene	ug/L (ppb)	10	<1	97	50-150
Bromoform	ug/L (ppb)	10	<5	98	23-161
n-Propylbenzene	ug/L (ppb)	10	<1	96	50-150
Bromobenzene	ug/L (ppb)	10	<1	100	50-150
1,3,5-Trimethylbenzene	ug/L (ppb)	10	<1	99	50-150
1,1,2,2-Tetrachloroethane	ug/L (ppb)	10	<0.2	100	57-162
1,2,3-Trichloropropane	ug/L (ppb)	10	<1	97	33-151
2-Chlorotoluene	ug/L (ppb)	10	5.6	97 b	50-150
4-Chlorotoluene	ug/L (ppb)	10	3.2	100 b	50-150
tert-Butylbenzene	ug/L (ppb)	10	<1	98	50-150
1,2,4-Trimethylbenzene	ug/L (ppb)	10	<1	96	50-150
sec-Butylbenzene	ug/L (ppb)	10	<1	93	46-139
p-Isopropyltoluene	ug/L (ppb)	10	<1	94	46-140
1,3-Dichlorobenzene	ug/L (ppb)	10	<1	100	50-150
1,4-Dichlorobenzene	ug/L (ppb)	10	<1	97	50-150
1,2-Dichlorobenzene	ug/L (ppb)	10	<1	98	50-150
1,2-Dibromo-3-chloropropane	ug/L (ppb)	10	<10	94	50-150
1,2,4-Trichlorobenzene	ug/L (ppb)	10	<1	98	50-150
Hexachlorobutadiene	ug/L (ppb)	10	<0.5	84	42-150
Naphthalene	ug/L (ppb)	10	<1	109	50-150
1,2,3-Trichlorobenzene	ug/L (ppb)	10	<1	98	44-155

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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Project: 1337-22001-02, F&BI 306440

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	82	83	49-149	1
Chloromethane	ug/L (ppb)	10	87	90	34-143	3
Vinyl chloride	ug/L (ppb)	10	96	96	43-149	0
Bromomethane	ug/L (ppb)	10	116	127	28-182	9
Chloroethane	ug/L (ppb)	10	114	114	59-157	0
Trichlorofluoromethane	ug/L (ppb)	10	94	96	59-141	2
Acetone	ug/L (ppb)	50	79	87	20-139	10
1,1-Dichloroethene	ug/L (ppb)	10	99	104	67-138	5
Hexane	ug/L (ppb)	10	95	97	50-161	2
Methylene chloride	ug/L (ppb)	10	93	96	29-192	3
Methyl t-butyl ether (MTBE)	ug/L (ppb)	10	102	104	70-130	2
trans-1,2-Dichloroethene	ug/L (ppb)	10	98	103	70-130	5
1,1-Dichloroethane	ug/L (ppb)	10	97	101	70-130	4
2,2-Dichloropropane	ug/L (ppb)	10	105	101	71-148	4
cis-1,2-Dichloroethene	ug/L (ppb)	10	98	103	70-130	5
Chloroform	ug/L (ppb)	10	98	101	70-130	3
2-Butanone (MEK)	ug/L (ppb)	50	93	96	50-157	3
1,2-Dichloroethane (EDC)	ug/L (ppb)	10	99	104	70-130	5
1,1,1-Trichloroethane	ug/L (ppb)	10	100	102	70-130	2
1,1-Dichloropropene	ug/L (ppb)	10	93	99	70-130	6
Carbon tetrachloride	ug/L (ppb)	10	99	105	70-130	6
Benzene	ug/L (ppb)	10	101	105	70-130	4
Trichloroethene	ug/L (ppb)	10	102	105	70-130	3
1,2-Dichloropropane	ug/L (ppb)	10	97	99	70-130	2
Bromodichloromethane	ug/L (ppb)	10	97	101	70-130	4
Dibromomethane	ug/L (ppb)	10	100	104	70-130	4
4-Methyl-2-pentanone	ug/L (ppb)	50	100	103	70-130	3
cis-1,3-Dichloropropene	ug/L (ppb)	10	102	102	70-130	0
Toluene	ug/L (ppb)	10	103	103	70-130	0
trans-1,3-Dichloropropene	ug/L (ppb)	10	98	95	70-130	3
1,1,2-Trichloroethane	ug/L (ppb)	10	97	98	70-130	1
2-Hexanone	ug/L (ppb)	50	93	93	66-132	0
1,3-Dichloropropane	ug/L (ppb)	10	97	97	70-130	0
Tetrachloroethene	ug/L (ppb)	10	104	105	70-130	1
Dibromochloromethane	ug/L (ppb)	10	102	100	63-142	2
1,2-Dibromoethane (EDB)	ug/L (ppb)	10	100	99	70-130	1
Chlorobenzene	ug/L (ppb)	10	98	99	70-130	1
Ethylbenzene	ug/L (ppb)	10	105	107	70-130	2
1,1,1,2-Tetrachloroethane	ug/L (ppb)	10	99	104	70-130	5
m,p-Xylene	ug/L (ppb)	20	105	106	70-130	1
o-Xylene	ug/L (ppb)	10	104	105	70-130	1
Styrene	ug/L (ppb)	10	100	98	70-130	2
Isopropylbenzene	ug/L (ppb)	10	99	100	70-130	1
Bromoform	ug/L (ppb)	10	101	100	50-157	1
n-Propylbenzene	ug/L (ppb)	10	97	100	70-130	3
Bromobenzene	ug/L (ppb)	10	96	100	70-130	4
1,3,5-Trimethylbenzene	ug/L (ppb)	10	97	102	52-150	5
1,1,2,2-Tetrachloroethane	ug/L (ppb)	10	99	101	75-140	2
1,2,3-Trichloropropane	ug/L (ppb)	10	93	99	40-153	6
2-Chlorotoluene	ug/L (ppb)	10	96	98	70-130	2
4-Chlorotoluene	ug/L (ppb)	10	97	100	70-130	3
tert-Butylbenzene	ug/L (ppb)	10	98	102	70-130	4
1,2,4-Trimethylbenzene	ug/L (ppb)	10	97	101	70-130	4
sec-Butylbenzene	ug/L (ppb)	10	97	100	70-130	3
p-Isopropyltoluene	ug/L (ppb)	10	99	102	70-130	3
1,3-Dichlorobenzene	ug/L (ppb)	10	100	99	70-130	1
1,4-Dichlorobenzene	ug/L (ppb)	10	95	99	70-130	4
1,2-Dichlorobenzene	ug/L (ppb)	10	99	100	70-130	1
1,2-Dibromo-3-chloropropane	ug/L (ppb)	10	95	95	70-130	0
1,2,4-Trichlorobenzene	ug/L (ppb)	10	93	94	70-130	1
Hexachlorobutadiene	ug/L (ppb)	10	95	97	70-130	2
Naphthalene	ug/L (ppb)	10	99	98	61-133	1
1,2,3-Trichlorobenzene	ug/L (ppb)	10	96	96	69-143	0

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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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	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Naphthalene	mg/kg (ppm)	0.83	85	85	57-107	0
2-Methylnaphthalene	mg/kg (ppm)	0.83	98	102	63-112	4
1-Methylnaphthalene	mg/kg (ppm)	0.83	98	102	63-113	4
Acenaphthylene	mg/kg (ppm)	0.83	90	91	70-130	1
Acenaphthene	mg/kg (ppm)	0.83	90	91	66-112	1
Fluorene	mg/kg (ppm)	0.83	97	99	67-117	2
Phenanthrene	mg/kg (ppm)	0.83	88	90	70-130	2
Anthracene	mg/kg (ppm)	0.83	95	96	70-130	1
Fluoranthene	mg/kg (ppm)	0.83	99	100	70-130	1
Pyrene	mg/kg (ppm)	0.83	92	90	70-130	2
Benz(a)anthracene	mg/kg (ppm)	0.83	90	89	70-130	1
Chrysene	mg/kg (ppm)	0.83	93	93	70-130	0
Benzo(a)pyrene	mg/kg (ppm)	0.83	91	92	68-120	1
Benzo(b)fluoranthene	mg/kg (ppm)	0.83	94	92	67-128	2
Benzo(k)fluoranthene	mg/kg (ppm)	0.83	90	92	70-130	2
Indeno(1,2,3-cd)pyrene	mg/kg (ppm)	0.83	84	86	67-129	2
Dibenz(a,h)anthracene	mg/kg (ppm)	0.83	85	93	67-128	9
Benzo(g,h,i)perylene	mg/kg (ppm)	0.83	75	80	65-130	6

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ENVIRONMENTAL CHEMISTS

Date of Report: 07/14/23

Date Received: 06/28/23

Project: 1337-22001-02, F&BI 306440

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	78	76	62-97	3
2-Methylnaphthalene	ug/L (ppb)	5	82	81	64-101	1
1-Methylnaphthalene	ug/L (ppb)	5	83	82	64-103	1
Acenaphthylene	ug/L (ppb)	5	87	84	70-130	4
Acenaphthene	ug/L (ppb)	5	85	83	70-130	2
Fluorene	ug/L (ppb)	5	85	88	70-130	3
Phenanthrene	ug/L (ppb)	5	88	88	70-130	0
Anthracene	ug/L (ppb)	5	89	89	70-130	0
Fluoranthene	ug/L (ppb)	5	95	94	70-130	1
Pyrene	ug/L (ppb)	5	94	91	70-130	3
Benz(a)anthracene	ug/L (ppb)	5	93	93	70-130	0
Chrysene	ug/L (ppb)	5	96	96	70-130	0
Benzo(a)pyrene	ug/L (ppb)	5	96	94	70-130	2
Benzo(b)fluoranthene	ug/L (ppb)	5	96	91	70-130	5
Benzo(k)fluoranthene	ug/L (ppb)	5	99	97	70-130	2
Indeno(1,2,3-cd)pyrene	ug/L (ppb)	5	101	105	70-130	4
Dibenz(a,h)anthracene	ug/L (ppb)	5	98	103	70-130	5
Benzo(g,h,i)perylene	ug/L (ppb)	5	99	104	70-130	5

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 07/14/23

Date Received: 06/28/23

Project: 1337-22001-02, F&BI 306440

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

Laboratory Code: 306440-03 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet Wt)	Percent Recovery MS	Percent Recovery MSD	Control Limits	RPD (Limit 20)
Aroclor 1016	mg/kg (ppm)	0.25	<0.02	87	80	24-163	8
Aroclor 1260	mg/kg (ppm)	0.25	<0.02	66	60	10-194	10

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Aroclor 1016	mg/kg (ppm)	0.25	126	47-158
Aroclor 1260	mg/kg (ppm)	0.25	126	69-141

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

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

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

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

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

cf - The sample was centrifuged prior to analysis.

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

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

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

SAMPLE CHAIN OF CUSTODY

06/28/23 #2/vv1/13/122

Report to: Lynn Green

Company EVREN-NW

Address 40 SE 24th Ave

City, State, ZIP Portland, Oregon 97214

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

SAMPLERS (signature)

PROJECT NAME

1332-22001-02

PO #

REMARKS

INVOICE TO

Project Specific RIs - Yes / No

Page # of

TURNAROUND TIME

Standard Turnaround

RUSH

SAMPLE DISPOSAL

Dispose after 30 days

Archive Samples

Other

ANALYSES REQUESTED

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	Total Lead	Dissolved Lead	Notes
GS10-F-8.5	01	6/26/23	13:05	Soil	1	X	X							● - per EG
GS11-NW-5.5	02 A-E		13:15	Soil	5	X	X							6/30/23 ME
GS12-EW-5.5	03		13:25	Soil	5	X	X							
GS13-SW-5.5	04		13:39	Soil	5	X	X							
GS14-NW-5.5	05		13:52	Soil	5	X	X							
Pit water-230626	06 A-H	6/26/23	16:50	GW	8	X	X							

SIGNATURE

PRINT NAME

COMPANY

DATE

TIME

Relinquished by:

[Signature]

Don Sakko

ENR

6/26/23

18:00

Received by:

[Signature]

Chan PRAN

FEB 2

6/28/23

11:59

Relinquished by:

[Signature]

Ph. (206) 285-8282

Seattle, WA 98119-2029

Friedman & Bruya, Inc.

3012 16th Avenue West

Samples received at 3 °C

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

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

August 24, 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 June 21, 2023 from the 1337-22001-02, F&BI 306340 project. There are 6 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
ENW0824R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on June 21, 2023 by Friedman & Bruya, Inc. from the Evren Northwest 1337-22001-02, F&BI 306340 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>Evren Northwest</u>
306340 -01	GS01-SF-8.5
306340 -02	GS02-CF-7.5
306340 -03	GS03-SW-5.5
306340 -04	GS04-EW-5.5
306340 -05	GS05-CS-4.5
306340 -06	GS06-NF-8.5
306340 -07	GS07-NWW-5.5
306340 -08	GS08-WW-5.5
306340 -09	GS09-NW-5.5
306340 -10	Hoist Oil-230620
306340 -11	Pit Water-230620

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis for TCLP Metals By EPA Method 6020B and 1311

Client ID:	GS04-EW-5.5	Client:	Evren Northwest
Date Received:	06/21/23	Project:	1337-22001-02, F&BI 306340
Date Extracted:	08/21/23	Lab ID:	306340-04 x0.1
Date Analyzed:	08/23/23	Data File:	306340-04 x0.1.038
Matrix:	Soil/Solid	Instrument:	ICPMS2
Units:	mg/L (ppm)	Operator:	SP

Analyte:	Concentration mg/L (ppm)	TCLP Limit
Lead	0.0590	5.0

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis for TCLP Metals By EPA Method 6020B and 1311

Client ID:	GS05-CS-4.5	Client:	Evren Northwest
Date Received:	06/21/23	Project:	1337-22001-02, F&BI 306340
Date Extracted:	08/21/23	Lab ID:	306340-05
Date Analyzed:	08/22/23	Data File:	306340-05.158
Matrix:	Soil/Solid	Instrument:	ICPMS2
Units:	mg/L (ppm)	Operator:	SP

Analyte:	Concentration mg/L (ppm)	TCLP Limit
Lead	4.15	5.0

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis for TCLP Metals By EPA Method 6020B and 1311

Client ID:	Method Blank	Client:	Evren Northwest
Date Received:	Not Applicable	Project:	1337-22001-02, F&BI 306340
Date Extracted:	08/21/23	Lab ID:	I3-656 mb x0.1
Date Analyzed:	08/22/23	Data File:	I3-656 mb x0.1.053
Matrix:	Soil/Solid	Instrument:	ICPMS2
Units:	mg/L (ppm)	Operator:	SP

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 08/24/23

Date Received: 06/21/23

Project: 1337-22001-02, F&BI 306340

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

Laboratory Code: 308269-08 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Lead	mg/L (ppm)	1.0	<1	88	89	75-125	1

Laboratory Code: Laboratory Control Sample

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

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

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

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

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

cf - The sample was centrifuged prior to analysis.

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

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

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

306340
Report To Lynne Green
Company Fryer Northwest
Address PO Box 14186
City, State, ZIP Portland OR 97293
Phone 503-452-5561 Email lynnegreen@nw.com

SAMPLERS (signature) <u>[Signature]</u>	
PROJECT NAME <u>1337-2200102</u>	PO # <u> </u>
REMARKS	INVOICE TO

☒ Standard turnaround ☐ RUSH Rush charges authorized by: <u> </u>	SAMPLE DISPOSAL ☐ Archive samples ☐ Other <u> </u> Default: Dispose after 30 days
---	---

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	ANALYSES REQUESTED										A-per LG 08/16/23 ME
						NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	Total Lead	RBDM VOCs	TCLP lead	
G501-SF-8.5	01 A-E	6/20/23	11:05	Soil	5	X	X									
G502-CF-7.5	02 A/D		11:15	Soil	5	X	X									
G503-SW-5.5	03 A/E		11:25	Soil	5	X	X									
G504-EW-5.5	04 A/E		12:20	Soil	5	X	X									
G505-CS-4.5	05		12:35	Soil	1	X	X									
G506-NF-8.5	06 A-F		13:16	Soil	5	X	X									
G507-NMW-5.5	07		13:52	Soil	5	X	X									
G508-WW-5.5	08		13:58	Soil	5	X	X									
G509-NW-5.5	09		14:03	Soil	5	X	X									
Host air-230620	10		16:57	product	1											

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

SIGNATURE		PRINT NAME		COMPANY		DATE		TIME	
Relinquished by: <u>[Signature]</u>		Dan Saito		Fryer		6/20/23		15:00	
Received by: <u>[Signature]</u>		Lynne Green		F&B		6/21/23		10:50	
Relinquished by:									
Received by:									
Samples received at 3 °C									

Rush please

$$D/A3/I3/vu1$$

Report To What

F. J. Van Fleet

Address No 107 W 40th

City, State, ZIP Portland ME 04103

Phone 573 452 556 Email lynn.coltrn@ps.cu

SAMPLETERS (signature) 		Page # <u>1</u> of <u>2</u>	
PROJECT NAME 1337-2001-02	PO #	TURNAROUND TIME ☒ Standard turnaround ☐ RUSH Rush charges authorized by: _____	
REMARKS	INVOICE TO	SAMPLE DISPOSAL ☐ Archive samples ☐ Other _____ Default: Dispose after 30 days	

TURNAROUND TIME

☒ Standard turnaround

☐ RUSH

Rush charges authorized by: _____

SAMPLE DISPOSAL

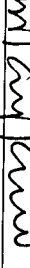
☐ Archive samples

☐ Other _____

Default: Dispose after 30 days

[illegible]

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

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: 	Dan Saks	DNW	06/20/03	10:00
Received by: 	Nelson Pham	FEBI	06/21/03	10:50
Relinquished by:				
Received by:				

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

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

September 21, 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 September 7, 2023 from the 1337-22001-02, F&BI 309072 project. There are 31 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
ENW0921R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on September 7, 2023 by Friedman & Bruya, Inc. from the Evren Northwest 1337-22001-02, F&BI 309072 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>Evren Northwest</u>
309072 -01	EB11-6-SWI
309072 -02	EB11-GW-9.5

Lead in the 6020B matrix spike and matrix spike duplicate did not meet the acceptance criteria. The laboratory control sample passed the acceptance criteria, therefore the results were due to matrix effect.

The 8260D bromomethane soil calibration standard exceeded the acceptance criteria. The compound was not detected, therefore this did not represent an out of control condition.

Acetone in the 8260D soil laboratory control sample did not meet the acceptance criteria. The data were flagged accordingly.

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

Pyrene in the 8270E soil calibration standard and laboratory control sample exceeded the acceptance criteria. The data were flagged accordingly.

All other quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 09/21/23
Date Received: 09/07/23
Project: 1337-22001-02, F&BI 309072
Date Extracted: 09/07/23
Date Analyzed: 09/07/23

**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

<u>Sample ID</u> Laboratory ID	<u>Gasoline</u>	<u>Diesel</u>	<u>Heavy Oil</u>	Surrogate (% Recovery) (Limit 50-150)
EB11-6-SWI 309072-01	D	ND	D	96
Method Blank MB2	ND	ND	ND	81

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 09/21/23

Date Received: 09/07/23

Project: 1337-22001-02, F&BI 309072

Date Extracted: 09/11/23

Date Analyzed: 09/12/23

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

Results Reported on a Dry Weight Basis

Results Reported as mg/kg (ppm)

<u>Sample ID</u>	<u>Gasoline Range</u>	Surrogate (% Recovery)
Laboratory ID		(Limit 50-150)
EB11-6-SWI 309072-01	130	ip
Method Blank 03-2080 MB	<5	117

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 09/21/23

Date Received: 09/07/23

Project: 1337-22001-02, F&BI 309072

Date Extracted: 09/07/23

Date Analyzed: 09/08/23

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
USING METHOD NWTPH-G_x**
Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Gasoline Range</u>	Surrogate <u>(% Recovery)</u> (Limit 50-150)
EB11-GW-9.5 309072-02	3,000	ip
Method Blank 03-2077 MB	<100	100

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 09/21/23

Date Received: 09/07/23

Project: 1337-22001-02, F&BI 309072

Date Extracted: 09/12/23

Date Analyzed: 09/12/23

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

Results Reported on a Dry Weight Basis

Results Reported as mg/kg (ppm)

<u>Sample ID</u>	<u>Diesel Range</u>	<u>Residual Range</u>	Surrogate
Laboratory ID	(C ₁₀ -C ₂₅)	(C ₂₅ -C ₃₆)	<u>(% Recovery)</u>
			(Limit 50-150)
EB11-6-SWI	140 x	910	96
309072-01			
Method Blank	<50	<250	77
03-2164 MB			

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 09/21/23

Date Received: 09/07/23

Project: 1337-22001-02, F&BI 309072

Date Extracted: 09/08/23

Date Analyzed: 09/08/23

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

Results Reported as ug/L (ppb)

<u>Sample ID</u>	<u>Diesel Range</u>	<u>Residual Range</u>	<u>Surrogate</u>
Laboratory ID	(C ₁₀ -C ₂₅)	(C ₂₅ -C ₃₆)	(% Recovery)
			(Limit 50-150)
EB11-GW-9.5	21,000 x	120,000	ip
309072-02 1/10			
Method Blank	<50	<250	113
03-2120 MB			

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	EB11-6-SWI	Client:	Evren Northwest
Date Received:	09/07/23	Project:	1337-22001-02
Date Extracted:	09/13/23	Lab ID:	309072-01
Date Analyzed:	09/13/23	Data File:	309072-01.053
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

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

Lead	26.6
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	Method Blank	Client:	Evren Northwest
Date Received:	NA	Project:	1337-22001-02
Date Extracted:	09/13/23	Lab ID:	I3-703 mb2
Date Analyzed:	09/13/23	Data File:	I3-703 mb2.042
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

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

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	EB11-GW-9.5	Client:	Evren Northwest
Date Received:	09/07/23	Project:	1337-22001-02
Date Extracted:	09/12/23	Lab ID:	309072-02
Date Analyzed:	09/12/23	Data File:	309072-02.073
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Arsenic	2.23
Barium	24.9
Cadmium	<1
Chromium	<1
Lead	<1
Mercury	<1
Selenium	<1
Silver	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	Method Blank	Client:	Evren Northwest
Date Received:	NA	Project:	1337-22001-02
Date Extracted:	09/12/23	Lab ID:	I3-699 mb2
Date Analyzed:	09/12/23	Data File:	I3-699 mb2.063
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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	EB11-6-SWI	Client:	Evren Northwest
Date Received:	09/07/23	Project:	1337-22001-02
Date Extracted:	09/14/23	Lab ID:	309072-01
Date Analyzed:	09/14/23	Data File:	091409.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MD

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	112 vo	90	109
Toluene-d8	107	86	115
4-Bromofluorobenzene	99	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 k	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<5 jl	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	0.21
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		

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	Method Blank	Client:	Evren Northwest
Date Received:	Not Applicable	Project:	1337-22001-02
Date Extracted:	09/14/23	Lab ID:	03-2129 mb
Date Analyzed:	09/14/23	Data File:	091406.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MD

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	108	90	109
Toluene-d8	103	86	115
4-Bromofluorobenzene	107	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 k	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<5 jl	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		

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	EB11-GW-9.5	Client:	Evren Northwest
Date Received:	09/07/23	Project:	1337-22001-02
Date Extracted:	09/13/23	Lab ID:	309072-02
Date Analyzed:	09/13/23	Data File:	091312.D
Matrix:	Water	Instrument:	GCMS13
Units:	ug/L (ppb)	Operator:	MD

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	96	71	132
Toluene-d8	99	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)	<0.01
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	1.9
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		

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	Method Blank	Client:	Evren Northwest
Date Received:	Not Applicable	Project:	1337-22001-02
Date Extracted:	09/13/23	Lab ID:	03-2126 mb
Date Analyzed:	09/13/23	Data File:	091307.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	LM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	104	78	126
Toluene-d8	102	84	115
4-Bromofluorobenzene	104	72	130

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)	0.011 lc
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<50 ca	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		

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	EB11-6-SWI	Client:	Evren Northwest
Date Received:	09/07/23	Project:	1337-22001-02
Date Extracted:	09/14/23	Lab ID:	309072-01 1/25
Date Analyzed:	09/14/23	Data File:	091411.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Nitrobenzene-d5	83 d	10	198
2-Fluorobiphenyl	81 d	45	117
2,4,6-Tribromophenol	72 d	11	158
Terphenyl-d14	92 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	0.060
Phenanthrene	<0.05
Anthracene	<0.05
Fluoranthene	0.060
Pyrene	0.13 ca jl
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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	Method Blank	Client:	Evren Northwest
Date Received:	Not Applicable	Project:	1337-22001-02
Date Extracted:	09/14/23	Lab ID:	03-2193 mb 1/5
Date Analyzed:	09/14/23	Data File:	091410.D
Matrix:	Soil	Instrument:	GCMS12
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Nitrobenzene-d5	100	16	137
2-Fluorobiphenyl	94	46	122
2,4,6-Tribromophenol	64	17	154
Terphenyl-d14	98	31	167

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	EB11-GW-9.5	Client:	Evren Northwest
Date Received:	09/07/23	Project:	1337-22001-02
Date Extracted:	09/12/23	Lab ID:	309072-02 1/10
Date Analyzed:	09/12/23	Data File:	091213.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Nitrobenzene-d5	103 d	15	144
2-Fluorobiphenyl	84 d	25	128
2,4,6-Tribromophenol	94 d	10	142
Terphenyl-d14	105 d	41	138

Compounds:	Concentration ug/L (ppb)
Naphthalene	<2
2-Methylnaphthalene	<2
1-Methylnaphthalene	<2
Acenaphthylene	<0.2
Acenaphthene	1.8
Fluorene	3.0
Phenanthrene	<0.2
Anthracene	1.8
Fluoranthene	4.1
Pyrene	7.5
Benz(a)anthracene	2.5
Chrysene	2.2
Benzo(a)pyrene	1.2
Benzo(b)fluoranthene	1.5
Benzo(k)fluoranthene	0.42
Indeno(1,2,3-cd)pyrene	0.25
Dibenz(a,h)anthracene	<0.2
Benzo(g,h,i)perylene	0.96

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	Method Blank	Client:	Evren Northwest
Date Received:	Not Applicable	Project:	1337-22001-02
Date Extracted:	09/12/23	Lab ID:	03-2165 mb
Date Analyzed:	09/12/23	Data File:	091208.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Nitrobenzene-d5	90	15	144
2-Fluorobiphenyl	87	25	128
2,4,6-Tribromophenol	64	10	142
Terphenyl-d14	114	41	138

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 09/21/23

Date Received: 09/07/23

Project: 1337-22001-02, F&BI 309072

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES
FOR TPH AS GASOLINE
USING METHOD NWTPH-G_x**

Laboratory Code: 309088-01 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (Limit 20)
Gasoline	mg/kg (ppm)	<5	<5	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	mg/kg (ppm)	40	97	70-130

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 09/21/23

Date Received: 09/07/23

Project: 1337-22001-02, F&BI 309072

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

Laboratory Code: 309011-01 (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	110	70-130

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 09/21/23

Date Received: 09/07/23

Project: 1337-22001-02, F&BI 309072

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

Laboratory Code: 309072-01 (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	500	90	94	64-136	4

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	90	78-121

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 09/21/23

Date Received: 09/07/23

Project: 1337-22001-02, F&BI 309072

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

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	124	112	72-139	10

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 09/21/23

Date Received: 09/07/23

Project: 1337-22001-02, F&BI 309072

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

Laboratory Code: 309127-02 x5 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Lead	mg/kg (ppm)	50	104	68 b	131 b	75-125	63 b

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Lead	mg/kg (ppm)	50	102	80-120

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 09/21/23

Date Received: 09/07/23

Project: 1337-22001-02, F&BI 309072

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

Laboratory Code: 309055-05 (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	29.1	94 b	97 b	75-125	3 b
Barium	ug/L (ppb)	50	58.2	106 b	106 b	75-125	0 b
Cadmium	ug/L (ppb)	5	<1	94	93	75-125	1
Chromium	ug/L (ppb)	20	<1	98	98	75-125	0
Lead	ug/L (ppb)	10	<1	72 vo	72 vo	75-125	0
Mercury	ug/L (ppb)	5	<1	78	81	75-125	4
Selenium	ug/L (ppb)	5	<1	97	95	75-125	2
Silver	ug/L (ppb)	5	<1	85	85	75-125	0

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	ug/L (ppb)	10	90	80-120
Barium	ug/L (ppb)	50	92	80-120
Cadmium	ug/L (ppb)	5	93	80-120
Chromium	ug/L (ppb)	20	94	80-120
Lead	ug/L (ppb)	10	95	80-120
Mercury	ug/L (ppb)	5	96	80-120
Selenium	ug/L (ppb)	5	99	80-120
Silver	ug/L (ppb)	5	90	80-120

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 09/21/23

Date Received: 09/07/23

Project: 1337-22001-02, F&BI 309072

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

Laboratory Code: 308395-16 (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	54	53	10-142	2
Chloromethane	mg/kg (ppm)	2	<0.5	90	89	10-126	1
Vinyl chloride	mg/kg (ppm)	2	<0.05	83	81	10-138	2
Bromomethane	mg/kg (ppm)	2	<0.5	92	84	10-163	9
Chloroethane	mg/kg (ppm)	2	<0.5	87	84	10-176	4
Trichlorofluoromethane	mg/kg (ppm)	2	<0.5	82	82	10-176	0
Acetone	mg/kg (ppm)	10	<5	49	50	10-163	2
1,1-Dichloroethene	mg/kg (ppm)	2	<0.05	77	80	10-160	4
Hexane	mg/kg (ppm)	2	<0.25	96	93	10-137	3
Methylene chloride	mg/kg (ppm)	2	<0.5	77	76	10-156	1
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	2	<0.05	85	85	21-145	0
trans-1,2-Dichloroethene	mg/kg (ppm)	2	<0.05	91	91	14-137	0
1,1-Dichloroethane	mg/kg (ppm)	2	<0.05	86	88	19-140	2
2,2-Dichloropropane	mg/kg (ppm)	2	<0.05	89	85	10-158	5
cis-1,2-Dichloroethene	mg/kg (ppm)	2	<0.05	88	91	25-135	3
Chloroform	mg/kg (ppm)	2	<0.05	86	88	21-145	2
2-Butanone (MEK)	mg/kg (ppm)	10	<1	73	72	19-147	1
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2	<0.05	88	86	12-160	2
1,1,1-Trichloroethane	mg/kg (ppm)	2	<0.05	91	92	10-156	1
1,1-Dichloropropene	mg/kg (ppm)	2	<0.05	92	91	17-140	1
Carbon tetrachloride	mg/kg (ppm)	2	<0.05	77	84	9-164	9
Benzene	mg/kg (ppm)	2	<0.03	91	91	29-129	0
Trichloroethene	mg/kg (ppm)	2	<0.02	93	95	21-139	2
1,2-Dichloropropane	mg/kg (ppm)	2	<0.05	98	94	30-135	4
Bromodichloromethane	mg/kg (ppm)	2	<0.05	91	94	23-155	3
Dibromomethane	mg/kg (ppm)	2	<0.05	90	88	23-145	2
4-Methyl-2-pentanone	mg/kg (ppm)	10	<1	92	92	24-155	0
cis-1,3-Dichloropropene	mg/kg (ppm)	2	<0.05	98	95	28-144	3
Toluene	mg/kg (ppm)	2	<0.05	96	94	35-130	2
trans-1,3-Dichloropropene	mg/kg (ppm)	2	<0.05	92	90	26-149	2
1,1,2-Trichloroethane	mg/kg (ppm)	2	<0.05	91	91	10-205	0
2-Hexanone	mg/kg (ppm)	10	<5	82	81	15-166	1
1,3-Dichloropropane	mg/kg (ppm)	2	<0.05	94	91	31-137	3
Tetrachloroethene	mg/kg (ppm)	2	<0.025	102	101	20-133	1
Dibromochloromethane	mg/kg (ppm)	2	<0.05	88	93	28-150	6
1,2-Dibromoethane (EDB)	mg/kg (ppm)	2	<0.05	89	89	28-142	0
Chlorobenzene	mg/kg (ppm)	2	<0.05	95	94	32-129	1
Ethylbenzene	mg/kg (ppm)	2	<0.05	91	92	32-137	1
1,1,1,2-Tetrachloroethane	mg/kg (ppm)	2	<0.05	86	87	31-143	1
m,p-Xylene	mg/kg (ppm)	4	<0.1	97	97	34-136	0
o-Xylene	mg/kg (ppm)	2	<0.05	94	93	33-134	1
Styrene	mg/kg (ppm)	2	<0.05	94	93	35-137	1
Isopropylbenzene	mg/kg (ppm)	2	<0.05	91	91	31-142	0
Bromoform	mg/kg (ppm)	2	<0.05	88	89	21-156	1
n-Propylbenzene	mg/kg (ppm)	2	<0.05	93	97	23-146	4
Bromobenzene	mg/kg (ppm)	2	<0.05	97	105	34-130	8
1,3,5-Trimethylbenzene	mg/kg (ppm)	2	<0.05	94	97	18-149	3
1,1,2,2-Tetrachloroethane	mg/kg (ppm)	2	<0.05	90	93	28-140	3
1,2,3-Trichloropropane	mg/kg (ppm)	2	<0.05	86	89	25-144	3
2-Chlorotoluene	mg/kg (ppm)	2	<0.05	90	96	31-134	6
4-Chlorotoluene	mg/kg (ppm)	2	<0.05	93	96	31-136	3
tert-Butylbenzene	mg/kg (ppm)	2	<0.05	95	101	30-137	6
1,2,4-Trimethylbenzene	mg/kg (ppm)	2	<0.05	93	97	10-182	4
sec-Butylbenzene	mg/kg (ppm)	2	<0.05	93	94	23-145	1
p-Isopropyltoluene	mg/kg (ppm)	2	<0.05	93	97	21-149	4
1,3-Dichlorobenzene	mg/kg (ppm)	2	<0.05	97	99	30-131	2
1,4-Dichlorobenzene	mg/kg (ppm)	2	<0.05	96	99	29-129	3
1,2-Dichlorobenzene	mg/kg (ppm)	2	<0.05	91	96	31-132	5
1,2-Dibromo-3-chloropropane	mg/kg (ppm)	2	<0.5	73	76	11-161	4
1,2,4-Trichlorobenzene	mg/kg (ppm)	2	<0.25	89	92	22-142	3
Hexachlorobutadiene	mg/kg (ppm)	2	<0.25	90	94	10-142	4
Naphthalene	mg/kg (ppm)	2	<0.05	82	86	14-157	5
1,2,3-Trichlorobenzene	mg/kg (ppm)	2	<0.25	89	97	20-144	9

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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Project: 1337-22001-02, F&BI 309072

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	63	10-146
Chloromethane	mg/kg (ppm)	2	96	27-133
Vinyl chloride	mg/kg (ppm)	2	91	22-139
Bromomethane	mg/kg (ppm)	2	92	10-201
Chloroethane	mg/kg (ppm)	2	92	10-163
Trichlorofluoromethane	mg/kg (ppm)	2	87	10-196
Acetone	mg/kg (ppm)	10	50 vo	52-141
1,1-Dichloroethene	mg/kg (ppm)	2	79	47-128
Hexane	mg/kg (ppm)	2	99	43-142
Methylene chloride	mg/kg (ppm)	2	80	10-184
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	2	89	60-123
trans-1,2-Dichloroethene	mg/kg (ppm)	2	93	64-132
1,1-Dichloroethane	mg/kg (ppm)	2	89	64-135
2,2-Dichloropropane	mg/kg (ppm)	2	97	52-170
cis-1,2-Dichloroethene	mg/kg (ppm)	2	95	64-135
Chloroform	mg/kg (ppm)	2	90	61-139
2-Butanone (MEK)	mg/kg (ppm)	10	75	30-197
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2	92	56-135
1,1,1-Trichloroethane	mg/kg (ppm)	2	96	62-131
1,1-Dichloropropene	mg/kg (ppm)	2	95	64-136
Carbon tetrachloride	mg/kg (ppm)	2	88	60-139
Benzene	mg/kg (ppm)	2	93	65-136
Trichloroethene	mg/kg (ppm)	2	96	63-139
1,2-Dichloropropane	mg/kg (ppm)	2	99	61-145
Bromodichloromethane	mg/kg (ppm)	2	98	57-126
Dibromomethane	mg/kg (ppm)	2	95	62-123
4-Methyl-2-pentanone	mg/kg (ppm)	10	95	45-145
cis-1,3-Dichloropropene	mg/kg (ppm)	2	101	65-143
Toluene	mg/kg (ppm)	2	94	66-126
trans-1,3-Dichloropropene	mg/kg (ppm)	2	94	65-131
1,1,2-Trichloroethane	mg/kg (ppm)	2	89	62-131
2-Hexanone	mg/kg (ppm)	10	82	33-152
1,3-Dichloropropane	mg/kg (ppm)	2	93	67-128
Tetrachloroethene	mg/kg (ppm)	2	102	68-128
Dibromochloromethane	mg/kg (ppm)	2	96	55-121
1,2-Dibromoethane (EDB)	mg/kg (ppm)	2	93	66-129
Chlorobenzene	mg/kg (ppm)	2	95	67-128
Ethylbenzene	mg/kg (ppm)	2	90	64-123
1,1,1,2-Tetrachloroethane	mg/kg (ppm)	2	92	64-121
m,p-Xylene	mg/kg (ppm)	4	97	68-128
o-Xylene	mg/kg (ppm)	2	93	67-129
Styrene	mg/kg (ppm)	2	94	67-129
Isopropylbenzene	mg/kg (ppm)	2	91	68-128
Bromoform	mg/kg (ppm)	2	92	56-132
n-Propylbenzene	mg/kg (ppm)	2	91	68-129
Bromobenzene	mg/kg (ppm)	2	100	69-128
1,3,5-Trimethylbenzene	mg/kg (ppm)	2	93	69-129
1,1,2,2-Tetrachloroethane	mg/kg (ppm)	2	89	56-143
1,2,3-Trichloropropane	mg/kg (ppm)	2	86	61-137
2-Chlorotoluene	mg/kg (ppm)	2	90	69-128
4-Chlorotoluene	mg/kg (ppm)	2	92	67-127
tert-Butylbenzene	mg/kg (ppm)	2	96	69-129
1,2,4-Trimethylbenzene	mg/kg (ppm)	2	92	69-128
sec-Butylbenzene	mg/kg (ppm)	2	90	69-130
p-Isopropyltoluene	mg/kg (ppm)	2	93	69-130
1,3-Dichlorobenzene	mg/kg (ppm)	2	95	69-127
1,4-Dichlorobenzene	mg/kg (ppm)	2	97	68-126
1,2-Dichlorobenzene	mg/kg (ppm)	2	87	69-127
1,2-Dibromo-3-chloropropane	mg/kg (ppm)	2	76	58-138
1,2,4-Trichlorobenzene	mg/kg (ppm)	2	90	64-135
Hexachlorobutadiene	mg/kg (ppm)	2	95	50-153
Naphthalene	mg/kg (ppm)	2	83	62-128
1,2,3-Trichlorobenzene	mg/kg (ppm)	2	91	61-126

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

Laboratory Code: 309123-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent	Acceptance Criteria
				Recovery MS	
Dichlorodifluoromethane	ug/L (ppb)	10	<1	100	30-221
Chloromethane	ug/L (ppb)	10	<10	97	50-150
Vinyl chloride	ug/L (ppb)	10	<0.02	107	50-150
Bromomethane	ug/L (ppb)	10	<5	96	50-150
Chloroethane	ug/L (ppb)	10	<1	100	50-150
Trichlorofluoromethane	ug/L (ppb)	10	<1	99	50-150
Acetone	ug/L (ppb)	50	<50	41	18-161
1,1-Dichloroethene	ug/L (ppb)	10	<1	95	50-150
Hexane	ug/L (ppb)	10	<5	103	50-150
Methylene chloride	ug/L (ppb)	10	<5	101	50-150
Methyl t-butyl ether (MTBE)	ug/L (ppb)	10	<1	103	50-150
trans-1,2-Dichloroethene	ug/L (ppb)	10	<1	97	50-150
1,1-Dichloroethane	ug/L (ppb)	10	<1	102	50-150
2,2-Dichloropropane	ug/L (ppb)	10	<1	108	43-171
cis-1,2-Dichloroethene	ug/L (ppb)	10	<1	100	10-211
Chloroform	ug/L (ppb)	10	<1	97	50-150
2-Butanone (MEK)	ug/L (ppb)	50	<20	67	10-192
1,2-Dichloroethane (EDC)	ug/L (ppb)	10	<0.2	111	50-150
1,1,1-Trichloroethane	ug/L (ppb)	10	<1	102	50-150
1,1-Dichloropropene	ug/L (ppb)	10	<1	106	50-150
Carbon tetrachloride	ug/L (ppb)	10	<0.5	99	50-150
Benzene	ug/L (ppb)	10	<0.35	113	50-150
Trichloroethene	ug/L (ppb)	10	1.1	107	35-149
1,2-Dichloropropane	ug/L (ppb)	10	<1	101	50-150
Bromodichloromethane	ug/L (ppb)	10	<0.5	101	50-150
Dibromomethane	ug/L (ppb)	10	<1	104	50-150
4-Methyl-2-pentanone	ug/L (ppb)	50	<10	110	50-150
cis-1,3-Dichloropropene	ug/L (ppb)	10	<0.4	106	50-150
Toluene	ug/L (ppb)	10	<1	112	50-150
trans-1,3-Dichloropropene	ug/L (ppb)	10	<0.4	107	50-150
1,1,2-Trichloroethane	ug/L (ppb)	10	<0.5	104	50-150
2-Hexanone	ug/L (ppb)	50	<10	89	50-150
1,3-Dichloropropane	ug/L (ppb)	10	<1	105	50-150
Tetrachloroethene	ug/L (ppb)	10	40	90 b	50-150
Dibromochloromethane	ug/L (ppb)	10	<0.5	100	50-150
1,2-Dibromoethane (EDB)	ug/L (ppb)	10	<0.01	108	50-150
Chlorobenzene	ug/L (ppb)	10	<1	104	50-150
Ethylbenzene	ug/L (ppb)	10	4.6	112 b	50-150
1,1,1,2-Tetrachloroethane	ug/L (ppb)	10	<1	99	50-150
m,p-Xylene	ug/L (ppb)	20	3.4	109	50-150
o-Xylene	ug/L (ppb)	10	4.5	107 b	50-150
Styrene	ug/L (ppb)	10	<1	104	50-150
Isopropylbenzene	ug/L (ppb)	10	1.6	106	50-150
Bromoform	ug/L (ppb)	10	<5	96	50-150
n-Propylbenzene	ug/L (ppb)	10	1.5	112	50-150
Bromobenzene	ug/L (ppb)	10	<1	108	50-150
1,3,5-Trimethylbenzene	ug/L (ppb)	10	<1	111	50-150
1,1,2,2-Tetrachloroethane	ug/L (ppb)	10	<0.2	107	50-150
1,2,3-Trichloropropane	ug/L (ppb)	10	<1	110	50-150
2-Chlorotoluene	ug/L (ppb)	10	<1	110	50-150
4-Chlorotoluene	ug/L (ppb)	10	<1	111	50-150
tert-Butylbenzene	ug/L (ppb)	10	<1	112	50-150
1,2,4-Trimethylbenzene	ug/L (ppb)	10	9.2	115 b	50-150
sec-Butylbenzene	ug/L (ppb)	10	1.6	110	50-150
p-Isopropyltoluene	ug/L (ppb)	10	1.2	113	50-150
1,3-Dichlorobenzene	ug/L (ppb)	10	<1	109	50-150
1,4-Dichlorobenzene	ug/L (ppb)	10	<1	107	50-150
1,2-Dichlorobenzene	ug/L (ppb)	10	<1	107	50-150
1,2-Dibromo-3-chloropropane	ug/L (ppb)	10	<10	100	50-150
1,2,4-Trichlorobenzene	ug/L (ppb)	10	<1	107	50-150
Hexachlorobutadiene	ug/L (ppb)	10	<0.5	94	50-150
Naphthalene	ug/L (ppb)	10	41	132 b	50-150
1,2,3-Trichlorobenzene	ug/L (ppb)	10	<1		50-150

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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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	105	104	46-206	1
Chloromethane	ug/L (ppb)	10	100	101	59-132	1
Vinyl chloride	ug/L (ppb)	10	105	104	64-142	1
Bromomethane	ug/L (ppb)	10	105	100	50-197	5
Chloroethane	ug/L (ppb)	10	99	102	70-130	3
Trichlorofluoromethane	ug/L (ppb)	10	98	99	51-159	1
Acetone	ug/L (ppb)	50	40	44	10-140	10
1,1-Dichloroethene	ug/L (ppb)	10	94	97	64-140	3
Hexane	ug/L (ppb)	10	109	110	54-136	1
Methylene chloride	ug/L (ppb)	10	99	104	43-134	5
Methyl t-butyl ether (MTBE)	ug/L (ppb)	10	103	105	70-130	2
trans-1,2-Dichloroethene	ug/L (ppb)	10	97	98	70-130	1
1,1-Dichloroethane	ug/L (ppb)	10	101	103	70-130	2
2,2-Dichloropropane	ug/L (ppb)	10	113	104	64-148	8
cis-1,2-Dichloroethene	ug/L (ppb)	10	102	103	70-130	1
Chloroform	ug/L (ppb)	10	97	96	70-130	1
2-Butanone (MEK)	ug/L (ppb)	50	64	71	47-112	10
1,2-Dichloroethane (EDC)	ug/L (ppb)	10	109	111	70-130	2
1,1,1-Trichloroethane	ug/L (ppb)	10	100	102	70-130	2
1,1-Dichloropropene	ug/L (ppb)	10	106	109	70-130	3
Carbon tetrachloride	ug/L (ppb)	10	95	102	70-130	7
Benzene	ug/L (ppb)	10	113	115	70-130	2
Trichloroethene	ug/L (ppb)	10	108	110	70-130	2
1,2-Dichloropropane	ug/L (ppb)	10	102	103	70-130	1
Bromodichloromethane	ug/L (ppb)	10	99	105	70-130	6
Dibromomethane	ug/L (ppb)	10	100	104	70-130	4
4-Methyl-2-pentanone	ug/L (ppb)	50	101	107	68-130	6
cis-1,3-Dichloropropene	ug/L (ppb)	10	105	108	69-131	3
Toluene	ug/L (ppb)	10	112	113	70-130	1
trans-1,3-Dichloropropene	ug/L (ppb)	10	108	107	70-130	1
1,1,2-Trichloroethane	ug/L (ppb)	10	103	104	70-130	1
2-Hexanone	ug/L (ppb)	50	86	90	45-138	5
1,3-Dichloropropene	ug/L (ppb)	10	103	104	70-130	1
Tetrachloroethene	ug/L (ppb)	10	109	111	70-130	2
Dibromochloromethane	ug/L (ppb)	10	97	98	60-148	1
1,2-Dibromoethane (EDB)	ug/L (ppb)	10	109	110	70-130	1
Chlorobenzene	ug/L (ppb)	10	105	107	70-130	2
Ethylbenzene	ug/L (ppb)	10	114	115	70-130	1
1,1,1,2-Tetrachloroethane	ug/L (ppb)	10	100	101	70-130	1
m,p-Xylene	ug/L (ppb)	20	110	110	70-130	0
o-Xylene	ug/L (ppb)	10	108	108	70-130	0
Styrene	ug/L (ppb)	10	105	106	70-130	1
Isopropylbenzene	ug/L (ppb)	10	107	109	70-130	2
Bromoform	ug/L (ppb)	10	97	98	69-138	1
n-Propylbenzene	ug/L (ppb)	10	111	110	70-130	1
Bromobenzene	ug/L (ppb)	10	104	105	70-130	1
1,3,5-Trimethylbenzene	ug/L (ppb)	10	110	109	70-130	1
1,1,2,2-Tetrachloroethane	ug/L (ppb)	10	105	105	70-130	0
1,2,3-Trichloropropane	ug/L (ppb)	10	106	107	70-130	1
2-Chlorotoluene	ug/L (ppb)	10	108	108	70-130	0
4-Chlorotoluene	ug/L (ppb)	10	109	110	70-130	1
tert-Butylbenzene	ug/L (ppb)	10	108	107	70-130	1
1,2,4-Trimethylbenzene	ug/L (ppb)	10	109	108	70-130	1
sec-Butylbenzene	ug/L (ppb)	10	109	108	70-130	1
p-Isopropyltoluene	ug/L (ppb)	10	112	111	70-130	1
1,3-Dichlorobenzene	ug/L (ppb)	10	107	107	70-130	0
1,4-Dichlorobenzene	ug/L (ppb)	10	106	104	70-130	2
1,2-Dichlorobenzene	ug/L (ppb)	10	104	104	70-130	0
1,2-Dibromo-3-chloropropane	ug/L (ppb)	10	102	96	70-130	6
1,2,4-Trichlorobenzene	ug/L (ppb)	10	103	103	70-130	0
Hexachlorobutadiene	ug/L (ppb)	10	105	99	70-130	6
Naphthalene	ug/L (ppb)	10	103	102	70-130	1
1,2,3-Trichlorobenzene	ug/L (ppb)	10	102	97	70-130	5

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

Laboratory Code: 309166-01 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	<0.01	81	80	50-150	1
2-Methylnaphthalene	mg/kg (ppm)	0.83	<0.01	85	81	50-150	5
1-Methylnaphthalene	mg/kg (ppm)	0.83	<0.01	88	83	50-150	6
Acenaphthylene	mg/kg (ppm)	0.83	<0.01	93	94	50-150	1
Acenaphthene	mg/kg (ppm)	0.83	<0.01	86	86	50-150	0
Fluorene	mg/kg (ppm)	0.83	<0.01	88	87	50-150	1
Phenanthrene	mg/kg (ppm)	0.83	<0.01	91	94	10-170	3
Anthracene	mg/kg (ppm)	0.83	<0.01	92	95	37-139	3
Fluoranthene	mg/kg (ppm)	0.83	<0.01	98	98	10-203	0
Pyrene	mg/kg (ppm)	0.83	<0.01	99	105	10-208	6
Benz(a)anthracene	mg/kg (ppm)	0.83	<0.01	100	101	37-146	1
Chrysene	mg/kg (ppm)	0.83	<0.01	99	102	36-144	3
Benzo(a)pyrene	mg/kg (ppm)	0.83	<0.01	101	104	40-150	3
Benzo(b)fluoranthene	mg/kg (ppm)	0.83	<0.01	98	102	45-157	4
Benzo(k)fluoranthene	mg/kg (ppm)	0.83	<0.01	98	104	50-150	6
Indeno(1,2,3-cd)pyrene	mg/kg (ppm)	0.83	<0.01	92	92	24-145	0
Dibenz(a,h)anthracene	mg/kg (ppm)	0.83	<0.01	94	94	31-137	0
Benzo(g,h,i)perylene	mg/kg (ppm)	0.83	<0.01	92	92	14-141	0

Laboratory Code: Laboratory Control Sample 1/5

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Naphthalene	mg/kg (ppm)	0.83	85	59-105
2-Methylnaphthalene	mg/kg (ppm)	0.83	90	62-108
1-Methylnaphthalene	mg/kg (ppm)	0.83	95	62-108
Acenaphthylene	mg/kg (ppm)	0.83	100	61-111
Acenaphthene	mg/kg (ppm)	0.83	93	61-110
Fluorene	mg/kg (ppm)	0.83	96	62-114
Phenanthrene	mg/kg (ppm)	0.83	99	64-112
Anthracene	mg/kg (ppm)	0.83	101	63-111
Fluoranthene	mg/kg (ppm)	0.83	107	66-115
Pyrene	mg/kg (ppm)	0.83	113 vo	65-112
Benz(a)anthracene	mg/kg (ppm)	0.83	107	64-116
Chrysene	mg/kg (ppm)	0.83	106	66-119
Benzo(a)pyrene	mg/kg (ppm)	0.83	108	62-116
Benzo(b)fluoranthene	mg/kg (ppm)	0.83	104	61-118
Benzo(k)fluoranthene	mg/kg (ppm)	0.83	105	65-119
Indeno(1,2,3-cd)pyrene	mg/kg (ppm)	0.83	110	64-130
Dibenz(a,h)anthracene	mg/kg (ppm)	0.83	110	67-131
Benzo(g,h,i)perylene	mg/kg (ppm)	0.83	107	67-126

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 09/21/23

Date Received: 09/07/23

Project: 1337-22001-02, F&BI 309072

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	80	76	50-104	5
2-Methylnaphthalene	ug/L (ppb)	5	84	81	52-113	4
1-Methylnaphthalene	ug/L (ppb)	5	91	88	51-115	3
Acenaphthylene	ug/L (ppb)	5	98	96	60-114	2
Acenaphthene	ug/L (ppb)	5	91	89	57-110	2
Fluorene	ug/L (ppb)	5	97	95	61-115	2
Phenanthrene	ug/L (ppb)	5	97	93	63-113	4
Anthracene	ug/L (ppb)	5	100	96	65-117	4
Fluoranthene	ug/L (ppb)	5	102	96	68-121	6
Pyrene	ug/L (ppb)	5	111	113	62-133	2
Benz(a)anthracene	ug/L (ppb)	5	109	110	66-131	1
Chrysene	ug/L (ppb)	5	110	110	66-129	0
Benzo(a)pyrene	ug/L (ppb)	5	107	107	66-129	0
Benzo(b)fluoranthene	ug/L (ppb)	5	103	105	55-144	2
Benzo(k)fluoranthene	ug/L (ppb)	5	105	101	58-139	4
Indeno(1,2,3-cd)pyrene	ug/L (ppb)	5	101	100	62-136	1
Dibenz(a,h)anthracene	ug/L (ppb)	5	100	100	55-146	0
Benzo(g,h,i)perylene	ug/L (ppb)	5	98	100	58-137	2

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

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

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

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

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

cf - The sample was centrifuged prior to analysis.

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

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

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

October 30, 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 October 10, 2023 from the 1337-22001-02, F&BI 310145 project. There are 6 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
ENW1030R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on October 10, 2023 by Friedman & Bruya, Inc. from the Evren Northwest 1337-22001-02, F&BI 310145 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>Evren Northwest</u>
310145 -01	SUB01-231009
310145 -02	SUB02-231009

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-17

Client Sample ID:	SUB01-231009	Client:	Evren Northwest
Date Received:	10/10/23	Project:	1337-22001-02, F&BI 310145
Date Collected:	10/09/23	Lab ID:	310145-01 1/1.3
Date Analyzed:	10/25/23	Data File:	102446.D
Matrix:	Air	Instrument:	GCMS10
Units:	ug/m3	Operator:	bat

Compounds:	Concentration ug/m3
2-Propanol	<320
Methyl t-butyl ether (MTBE)	<32
1,2-Dichloroethane (EDC)	<6.5
Benzene	<13
Toluene	11
1,2-Dibromoethane (EDB)	<6.5
Ethylbenzene	<6.5
Isopropylbenzene	<6.5
m,p-Xylene	<13
o-Xylene	<6.5
1,3,5-Trimethylbenzene	1.5
1,2,4-Trimethylbenzene	5.9
Naphthalene	1.7
Diesel Fuel Range	<2,100
Gasoline Range Organics	<3,300

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-17

Client Sample ID:	SUB02-231009	Client:	Evren Northwest
Date Received:	10/10/23	Project:	1337-22001-02, F&BI 310145
Date Collected:	10/09/23	Lab ID:	310145-02 1/1.3
Date Analyzed:	10/25/23	Data File:	102447.D
Matrix:	Air	Instrument:	GCMS10
Units:	ug/m3	Operator:	bat

Compounds:	Concentration ug/m3
2-Propanol	<320
Methyl t-butyl ether (MTBE)	<32
1,2-Dichloroethane (EDC)	<6.5
Benzene	<13
Toluene	10
1,2-Dibromoethane (EDB)	<6.5
Ethylbenzene	<6.5
Isopropylbenzene	<6.5
m,p-Xylene	<13
o-Xylene	<6.5
1,3,5-Trimethylbenzene	1.5
1,2,4-Trimethylbenzene	5.5
Naphthalene	1.6
Diesel Fuel Range	<2,100
Gasoline Range Organics	<3,300

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-17

Client Sample ID:	Method Blank	Client:	Evren Northwest
Date Received:	Not Applicable	Project:	1337-22001-02, F&BI 310145
Date Collected:	Not Applicable	Lab ID:	03-2438 mb
Date Analyzed:	10/25/23	Data File:	102424.D
Matrix:	Air	Instrument:	GCMS10
Units:	ug/m3	Operator:	bat

Compounds:	Concentration ug/m3
2-Propanol	<250
Methyl t-butyl ether (MTBE)	<25
1,2-Dichloroethane (EDC)	<5
Benzene	<10
Toluene	<5
1,2-Dibromoethane (EDB)	<5
Ethylbenzene	<5
Isopropylbenzene	<5
m,p-Xylene	<10
o-Xylene	<5
1,3,5-Trimethylbenzene	<1
1,2,4-Trimethylbenzene	<1
Naphthalene	<1
Diesel Fuel Range	<1,600
Gasoline Range Organics	<2,500

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/30/23

Date Received: 10/10/23

Project: 1337-22001-02, F&BI 310145

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF AIR SAMPLES
FOR VOLATILES BY METHOD TO-17**

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
2-Propanol	ng/tube	250	100	70-130
Methyl t-butyl ether (MTBE)	ng/tube	50	101	70-130
1,2-Dichloroethane (EDC)	ng/tube	50	99	70-130
Benzene	ng/tube	50	96	70-130
Toluene	ng/tube	50	97	70-130
1,2-Dibromoethane (EDB)	ng/tube	50	98	70-130
Ethylbenzene	ng/tube	50	101	70-130
m,p-Xylene	ng/tube	100	98	70-130
o-Xylene	ng/tube	50	100	70-130
Isopropylbenzene	ng/tube	50	100	70-130
1,3,5-Trimethylbenzene	ng/tube	50	101	70-130
1,2,4-Trimethylbenzene	ng/tube	50	103	70-130
Naphthalene	ng/tube	50	104	70-130
Diesel Fuel Range	ng/tube	2,500	97	70-130

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

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

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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.

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

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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.

10:20

Appendix E

ODEQ Soil Matrix Cleanup Scoresheet

Soil Matrix Scoresheet

Depth to Ground Water		10
< 25 feet	(10)	
25 – 50 feet	(7)	
51 – 100 feet	(4)	
> 100 feet	(1)	
Mean Annual Precipitation		5
> 45 inches	(10)	
20 – 45 inches	(5)	
< 20 inches	(1)	
Native Soil Types		5
Coarse sands, gravels	(10)	
Silts, fine sands	(5)	
Clays	(1)	
Sensitivity of uppermost Aquifer		7
Sole Source	(10)	
Current Potable	(7)	
Future Potable	(4)	
Non-potable	(1)	
Potential Receptors		10
Many, near	(10)	
Medium	(5)	
Few, far	(1)	
TOTAL SCORE =		37
Matrix Score	Cleanup level in ppm TPH	
	Gasoline	Diesel
Level 1: > 40 pts.	40	100
Level 2: 25 - 40 pts.	80	500
Level 3: < 25 pts.	130	1000

Appendix F

Waste Disposal Receipts

Headquarters
4150 N. Suttle Road
Portland, Oregon 97217
Phone 503-286-8352
Toll Free 800-367-8894
EPA# ORD980975692



Orrco
The oil recycler.

Goshen, OR:
Hoquiam, WA:
Klamath Falls, OR:
Kennewick, WA:
Medford, OR:
Coos Bay, OR:
Spokane, WA:

EPA# ORQ000024941
EPA# WAD988519419
EPA# ORD980980775
EPA# WAH000011577
EPA# ORD987197092
EPA# ORD980978266
EPA# WAH000011585

BILL OF LADING 329674

Date: 6-28-23 Customer #: 8377
Dispatch #

Generator

BEAVERTON 2002 LLC DAN 971-222-5295

Name: 603 7TH ST OREGON CITY, OR. 97045
Address: City: State: Zip: County:

Transportation

Consigned To: OIL REFINING
Destination: 4150 N SUTTLE RD PORTLAND, OR. 97217
Via Carrier: OMULCO
Driver: DANNY W Truck # 4102

Billing Information

EVAN N.W.
Check# JOB# PO# 1337-22001-12

Load Ticket #

Gal./Brl.	Description	Profile Date	CDT / HCDT	pH	Flash Point	Rate per Gal./Brl.	Rate Per Hour	Charge
126	EMULSIFIED OIL & WATER	6/28/23	CDT	> 200				
1	HYDROCLON TEST							
2 Hrs	TRUCK & DRIVER							

Above material is being transported for Recycling

EPA# NONE

Total:

As an authorized representative of the generator of the material described above, I certify that the information contained in this document is 100% accurate and complete. I further certify that this material does NOT constitute a hazardous waste and has NOT been mixed with any hazardous waste such as spent chlorinated solvents or any other contaminants including, without limitation, PCBs, pesticides, or any other hazardous wastes or substances. In the event that the material described in this document is in fact a hazardous waste, or contains 2 ppm or more of PCBs, I guarantee to pay all costs necessary for proper analysis, transportation, storage, and disposal as well as any fines, penalties, attorneys fees, expert witness fees and the loss of the petroleum product resulting from contamination and / or inaccurate and / or incomplete information concerning the material described above.

Signed X

Date:

6-28-23



P.O. Box 267 Vancouver, WA. 98666 Call 855-224-3206 Fax 503-228-9168

Quotation/Authority to Proceed with Work

WXE Job#: 111445

Attention: Dan Sajko

From: Ryan

Date: 7/14/2023

Company: Beaverton 2002 LLC c/o Evren
NW

Email: dans@evren-nw.com

Mobile: 971-222-5295

Job Site: 603 7th St Oregon City, OR 97045

Phone: 503-452-5561

Work:

Item	Unit Price	Unit	Estimated Quantity	Total Estimated	Actual Quantity	Total Actual
UN Rated 250G TP Reconditioned	\$ 325.00	Per Each X		= \$ -	X	= \$ -
UN Rated 85DM Salvage Pack	\$ 325.00	Per Each X		= \$ -	X	= \$ -
UN Rated 55DM OT	\$ 81.00	Per Each X		= \$ -	X	= \$ -
UN Rated 55DF OT	\$ 115.00	Per Each X		= \$ -	X	= \$ -
UN Rated 55DM TH	\$ 85.00	Per Each X		= \$ -	X	= \$ -
55G Used Hydraulic Oil W/PCB <5 ppm FB04	\$ 265.00	Per Drum X	2	= \$ 530.00	X 2	= \$ -
		Per Drum X		= \$ -	X	= \$ -
55 NON-RCRA Solid (Soil) LF01	\$ 171.00	Per Drum X	1	= \$ 171.00	X 1	= \$ -
Labor	\$ 75.00	Per Hour X	1	= \$ 75.00	X 1	= \$ -
Manifest Fee	\$ 30.00	Per Each X	1	= \$ 30.00	X 1	= \$ -
Transportation	\$ 110.00	Per Each X	1	= \$ 110.00	X 1	= \$ -
Fuel, Environmental & Insurance	\$ 916.00	Per Trip X	18%	= \$ 164.88	X 18%	= \$ -

Customer PO#:

Estimated Total Charges: \$ 1,080.88

\$ -

COD?: Yes No

Scheduling requests or notes:

Work Details

Package and ship materials according to hazard class

General Assumptions

Pricing terms are time and materials, and is based on generator status of VSQG. Disposal of odd sized containers (unless quoted) will be priced at 55G rates times the following multipliers 30G=.75, 15G=.5, 5G=.35. Actual quantities and unit prices may vary depending on our inspection of each container and materials encountered onsite. Analytical results may be unexpectedly required and may change pickup schedules as well as disposal and other costs. Final transportation and disposal pricing is pending end facility approval. Charges are based on performing all work priced. Pricing assumes drums are UN rated and in shippable condition. Rusty or damaged containers may require additional time, material, and disposal/recycling costs to handle. Assumes the work will proceed unimpeded through to successful completion.

Terms and Conditions

Please sign below authorizing WasteXpress to proceed with the work as described above. Customer agrees to pay the fee, price or rate given for the work indicated. Rates are valid 60 days from quote date. Customer acknowledges pricing will be increased annually based on consumer price index, customarily ranging between 2%-10%. Wastexpress has sole discretion to adjust Environmental & Insurance surcharge on a quarterly basis according to market conditions. Actual charges will depend on actual amounts of waste managed and time expended. Client agrees to hold harmless and indemnify WasteXpress for all damages, costs, or penalties in connection with WasteXpress' services except as caused solely by WasteXpress. Please sign and return by email to your WasteXpress contact or to info@wastex.com. Sales, waste, and other taxes are not included. Credit card fee: 2.75%. Payment terms are net 30 days. Interest will be charged at 1.5% per month or the maximum allowed by law for all past due amounts. Thank you for your business.

Bill To:

Signature:

Date:

NON-HAZARDOUS WASTE MANIFEST		1. Generator ID Number V S Q G	2. Page 1 of 1	3. Emergency Response Phone 503-224-3206	4. Waste Tracking Number 1 1 1 4 4 5	
5. Generator's Name and Mailing Address Beaverton 2002 LLC 603 7th St. Oregon City OR 97045			Generator's Site Address (if different than mailing address)			
Generator's Phone: 503 452-5561						
6. Transporter 1 Company Name WasteXpress			U.S. EPA ID Number ORQ000023150			
7. Transporter 2 Company Name			U.S. EPA ID Number			
8. Designated Facility Name and Site Address WasteXpress 11615 N Lombard St. Portland OR 97203			U.S. EPA ID Number ORQ000023150			
Facility's Phone: 503 224-3206						
9. Waste Shipping Name and Description		10. Containers		11. Total Quantity	12. Unit Wt./Vol.	
		No.	Type			
1. Non-regulated material, Liquid (Used Oil w/ <5PPM PCB's)		2	Dm	700	P	✓
2. Non-regulated material, Solid (IDW Soil)		1	DM	250	P	✓
3.						
4.						
13. Special Handling Instructions and Additional Information 1) FB01 2X55 2) LF01 1X55						
14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.						
Generator's/Officer's Printed/Typed Name Tracy Whitman				Signature <i>[Signature]</i> on Behalf of EWCA NW		Month Day Year 7 19 23
15. International Shipments ☐ Import to U.S. ☐ Export from U.S.				Port of entry/exit: Date leaving U.S.:		
Transporter Signature (for exports only):						
16. Transporter Acknowledgment of Receipt of Materials						
Transporter 1 Printed/Typed Name Tracy Whitman				Signature <i>[Signature]</i>		Month Day Year 07 19 23
Transporter 2 Printed/Typed Name				Signature		Month Day Year
17. Discrepancy						
17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection						
				Manifest Reference Number:		
17b. Alternate Facility (or Generator)				U.S. EPA ID Number		
Facility's Phone:						
17c. Signature of Alternate Facility (or Generator)				Month Day Year		
18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a						
Printed/Typed Name 19501111111111111111				Signature <i>[Signature]</i>		Month Day Year 7 20 23

GENERATOR

INTL

TRANSPORTER

DESIGNATED FACILITY

DESIGNATED FACILITY TO GENERATOR

Appendix G

OWRD Well Search

county_code	wl_nbr	name_last	name_first	name_company	street	city	state	zip	type_of_log	depth_first_water	depth_drilled	post_static_water_level	start_date	complete_date	work_new	use_domestic	use_industrial	township	township_char	range	range_char	sctn	qtr160	qtr40	street_of_well	max_yield
CLAC	4416	MATHIS	JUDY		22615 SE DOWTY	EAGLE CREEK	OR	97022	W	15	60	16	8/21/1989	9/4/1989	X	X		2 S	2 E			31 NE	NW	22615 SE DOWTY	15	
CLAC	4417	DEININGER	JOHN		18681 S FISCHERS MILL RD	OREGON CITY	OR	97045	W	89	123	73	9/3/1985	9/6/1985	X	X		2 S	2 E			31 SE	SW	18681 S FISCHERS MILL ROAD	25	
CLAC	4418	FISHER	EARL		RT 2 BOX 551	SANDY	OR	97055	W		240	173	7/13/1969	7/30/1969	X	X		2 S	2 E			31 SW	SE		15	
CLAC	4419			PULBLISHERS PAPER CO.		OREGON CITY	OR	97045	W		250	49	12/31/1940	12/31/1940	X		X	2 S	2 E			31 NW	SE		230	

STATE ENGINEER
Salem, Oregon

CLAC

04419

Well Record

STATE WELL NO. 2/2-31F(1)
COUNTY Clackamas
APPLICATION NO. GR-707

OWNER: Publisher's Paper Co.

MAILING
ADDRESS:

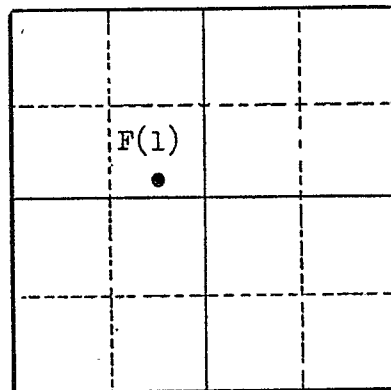
CITY AND

STATE: Oregon City, Oregon

LOCATION OF WELL: Owner's No. 1

SE $\frac{1}{4}$ NW $\frac{1}{4}$ Sec. 31 T. 2 N. S., R. 2 E. W.M.

Bearing and distance from section or subdivision
corner Approx. 3370 feet West & 2380 feet South
from NE corner of Section 31, T.2 S.
R. 2 E.



Section 31

Altitude at well 120' Interpolated

TYPE OF WELL: Drilled Date Constructed 1940

Depth drilled 250' Depth cased 17

CASING RECORD:

12-inch

FINISH:

AQUIFERS:

WATER LEVEL:

49 feet

PUMPING EQUIPMENT: Type Deming turgine H.P. 20
Capacity 220 G.P.M.

WELL TESTS:

Drawdown 41 ft. after _____ hours 230 G.P.M.

Drawdown _____ ft. after _____ hours _____ G.P.M.

USE OF WATER Manufacturing Temp. _____ °F. _____, 19____

SOURCE OF INFORMATION GR-707

DRILLER or DIGGER R.J. Strasser Drilling Co., Portland, Oregon

ADDITIONAL DATA:

Log X Water Level Measurements _____ Chemical Analysis _____ Aquifer Test _____

REMARKS:

State Well No. 2/2-31F(1)
County Clackamas
Application No. GR-707

Owner: Publisher's Paper Company Owner's No. 1
Driller: R. J. Strasser Date Drilled 1940

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