



MODEL REMEDY SITE CLOSURE REPORT



FORMER TEXACO 211544 FACILITY

8701 Greenwood Avenue North
Seattle, WA 98103

Prepared for:



Attn: Maninder Singh

1260 NE 85th Street

Suite-108

Kirkland, Washington 98033

Issued on:

November 22, 2022

EVREN NORTHWEST, INC.

Project No. 1581-21001-03

This

Model Remedy Site Closure Report

Report for:

Former Texaco 211544 Facility

8701 Greenwood Avenue North
Seattle, Washington 98103

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

and its assignees

KIDDIE  **ACADEMY.**
EDUCATIONAL CHILD CARE

Attn: Maninder Singh

12620 NE 85th Street

Suite-108

Kirkland, Washington 98033

Issued November 22, 2022 by:



Lynn D. Green

EXP. 12/14/2022



EVREN NORTHWEST INC.
environmental natural resource consultants



Lynn D. Green, L.E.G.
Principal Engineering Geologist

Erik RD Chapman, L.G.
Senior Geologist

EXP 7/20/23

Table of Contents

1.0	Introduction	1
2.0	Background	1
2.1	Site Location and History	1
2.2	Physical Setting	1
2.3	Previous Environmental Investigations	2
2.4	Recent Investigations by Others	4
2.4.1	Partner Engineering and Science, Inc. – Phase I ESA, December 2020	4
2.4.2	Focused Phase II ESA – ENW and UAI, October 2020	5
2.4.3	Phase II Subsurface Investigation Report – February 2021	5
2.4.4	Installation of Compliance Monitoring Wells - May/June 2021	5
4.0	Site Characterization	7
4.1	Focused Sub-Slab Vapor Investigation – February 2022	7
4.1.1	Sub-Slab Vapor Sampling Methods.....	7
4.1.2	Results.....	8
4.2	Focused Right-of-Way Investigation – April 2022	9
4.2.1	Soil and Reconnaissance Sample Collection.....	9
4.2.2	Results - Soil	9
4.2.3	Results – Reconnaissance Ground Water	10
4.3	Monitoring Well Installation Report with Additional Delineation: July 18, 2022.....	11
4.3.1	Results – Soil	12
4.3.2	Results – Reconnaissance Ground Water	13
4.4	Ground Water Monitoring and Sampling Activities	13
4.4.1	Results.....	13
5.0	Conceptual Site Model	14
5.1	Constituents of Interest	14
5.2	Potential Release Mechanisms and Contaminant Sources	14
5.3	Current Understanding of the Magnitude and Extent of Impacts.....	16
5.3.1	Soil.....	16
5.3.2	Ground Water	16
5.4	Determination of Applicable Exposure Pathways and Receptor Scenarios	16
5.4.1	Land Use and Zoning.....	17
5.4.2	Beneficial Use of Ground Water and Surface Water	17
5.4.3	Evaluation of Applicable Pathways and Receptors.....	17
5.4.4	Further Evaluation of the Leaching Pathway (Empirical Demonstration of Leaching Potential)	19
5.5	Proposed Cleanup Standards.....	19
5.6	Initial Evaluation of COPCs to Applicable MTCA Cleanup Levels	21
5.7	Further Exposure Assessment for COPCs	21
5.7.1	Assessment of Soil via Direct Contact Exposure – DRO and RRO.....	21
5.7.2	Assessment of Soil via Direct Contact Exposure – cPAHs.....	22

5.7.3	<i>Further Assessment of Ingestion of Ground Water Exposure Pathway</i>	22
5.7.4	<i>Assessment of Vapor Intrusion into Buildings</i>	23
5.8	Terrestrial Ecological Evaluation (TEE).....	23
6.0	Summary and Conclusions	24
7.0	Recommendations	26
8.0	Limitations	26

List of Tables, Figures and Appendices

Tables

IN TEXT (*labeled by Section – Number*)

- 2-1 Summary of Previous Sample Locations by Media and Source Area.
- 3-1 Potential Source Areas and COPCs
- 4-1 Summary of Tier I Vapor Intrusion Results – Sub-slab Vapors
- 4-2 Summary of Focused ROW Investigation Results – Soil
- 4-3 Summary of Focused ROW Investigation Results – Reconnaissance Ground Water
- 4-4 Summary of Additional Delineation, SE Corner ROW – Soil
- 5-1 Pathway Analysis for Human Receptors
- 5-2 Summary Statistics – DRO/RRO 95% Upper Confidence Level Calculations

AFTER TEXT (*following 'Tables' tab*)

- 1 Cumulative Summary of Analytical Data, Soil
- 2 Summary of Analytical Data, Sub-Slab Vapor and Soil Gas
- 3 Summary of Analytical Data, Ambient Air
- 4 Summary of Analytical Data, Reconnaissance Ground Water
- 5 Summary of Ground Water Elevations
- 6 Summary of Analytical Data, Ground Water (Monitoring Wells)
- 7 Comparison of COPCs in Soil to MTCA Cleanup Levels
- 8 Comparison of Ground Water Data to MTCA Cleanup Levels

Figures

- 1 Site Vicinity Map
- 2 Site Plan Showing Historical Site Features of Interest
- 3 Sample Location Diagram
- 3A Sample Location Diagram (Southern Portion of Site)
- 3B Sample Location Diagram (Sub-Slab Vapor Samples)
- 4 Ground Water Monitoring Well Location Map
- 5 Line of Section A – A'
- 6 Line of Section B – B'
- 7 Conceptual Site Model

Appendices

- A Boring and Well Logs
- B Laboratory Analytical Reports
- C Ecology's Workbook for Calculation of Cleanup Level Results
- D EPA ProUCL Statistical Results
- E VCP Terrestrial Ecological Evaluation Forms

List of Acronyms and Abbreviations

bgs	below ground surface	TPH	total petroleum hydrocarbons
BTEX	benzene, toluene, ethylbenzene, and xylenes	µg/L	micrograms per liter
BTOC	below top of casing	µg/m ³	micrograms per cubic meter
Client	Kiddie Academy	UAI	Universal Applicators, Inc.
COI	constituent of interest	UST	underground storage tank
COPC	constituent of potential concern	VCP	Voluntary Cleanup Program
cPAHS	carcinogenic polynuclear aromatic hydrocarbons	VOCs	volatile organic constituents
CSCSL	Confirmed and Suspected Contaminated Sites List	VPH	Volatile Petroleum Hydrocarbons
CSM	conceptual site model	WAC	Washington Administrative Code
CUL	cleanup level		
DRO	diesel-range organics		
EAS	Environmental Analytical Services, Inc.		
Ecology	Washington Department of Ecology		
EDR	Environmental Data Resources, Inc.		
ENW	EVREN Northwest, Inc.		
EPA	US Environmental Protection Agency		
EPH	Extractable Petroleum Hydrocarbons		
ERI	Environmental Resolutions, Inc.		
ES	Environmental Specialties, Inc.		
ft/ft	vertical foot per lineal foot		
GRO	gasoline-range organics		
HSL	Hazardous Site List		
HVOC	halogenated volatile organic compounds		
LCS	Left Coast Services (Universal Applicators, Inc. [UAI])		
LDPE	low-density polyethylene		
mg/Kg	milligram per kilogram		
MRL	method reporting limit		
MTCA	Model Toxics Control Act		
non-aqueous phase liquid (NAPL)			
NFA	No Further Action		
PAH	polynuclear aromatic hydrocarbon		
PCS	petroleum-contaminated soil		
PVC	polyvinyl chloride		
ROW	right-of-way		
RRO	residual (oil)-range organics		
SWI	soil-water interface		
TEE	Terrestrial Ecological Evaluation		
TES	Texaco Environmental Services		

1.0 Introduction

At the request of Kiddie Academy (Client), EVREN Northwest, Inc. (ENW) has prepared this report of remedial actions completed at the commercial property located at 8701 Greenwood Avenue North in Seattle, Washington (the “subject property”) (see Figures 1 and 2). This summary of cleanup activities and evaluation of site characterization were conducted pursuant to ENW’s Work Plan¹ to fulfill Washington Department of Ecology’s (Ecology) requirements² pursuant to Client’s plans to redevelop the subject property. The work was designed to support state cleanup requirements of Ecology’s Model Toxics Control Act (MTCA), Chapter 70.105D RCW, and its implementing regulations, Chapter 173-340 Washington Administrative Code (WAC).

This report summarizes previous environmental work, evaluates site characterization findings, and requests a No Further Action under one of Ecology’s Model Remedies. This work was authorized by Client on December 29, 2021.

2.0 Background

2.1 Site Location and History

The subject property occupies 0.75 acres of commercial property occupying the northwest corner of the intersection of Greenwood Avenue N and N 87th Street in Seattle, Washington. The subject property is currently developed with one vacant commercial building and an asphalt parking lot with no current onsite operations. Land use in the surrounding area consists of a mix of commercial and residential uses.

Historical land use of the subject property has included a Texaco-branded gasoline service station, a cleaners and dyers operation (Vanity Cleaners), residential dwellings and several commercial businesses. In 1994, the service station ceased operations and all underground storage tanks (USTs) and associated product dispensing systems were removed. In 1996, a new commercial building was constructed across the entire site and Walgreens occupied the new commercial building from 1996 until 2009.

Previous site structures, including the former Vanity Cleaners building and the former Texaco service station are illustrated on the Site Plan on Figure 2.

2.2 Physical Setting

Topography. The subject property is at an approximate elevation of 260 feet above mean sea level and slopes to the west-southwest (Figure 1). The subject vicinity is in a densely developed urban environment. Greenwood Park to the east and Sandel Park to the northeast are the nearest green spaces to the subject property, both of which are approximately 0.2 miles distance from the subject property. Approximately 95% of the subject property is covered by impervious surfaces.

¹ ENW, December 8, 2021. December 2021 Work Plan for Focused Data Gap Investigation, Future Kiddie Academy, Former Texaco #2111544, 8701 Greenwood Avenue North, Seattle, Washington, Facility/Site ID# 6416: Prepared for Kiddie Academy.

² Ecology, March 8, 2021. Response to Change of Use Request at the Following Cleanup Site: Name: Texaco 211544, Address: 8701 Greenwood Ave N, Seattle, Washington, Facility/Site No.: 63538329, Cleanup Site ID No.: 6416.

Local and Regional Geology. The subject site is underlain by Holocene age Peat deposits, which are accumulations of wood and other plant material forming layers of greater than about 1 meter (3.3 feet) thickness and of mappable extent.³ The peat units are underlain by Pleistocene age glacial deposits consisting of glacially transported silt, sand and sub-rounded to well-rounded gravel.

Local Hydrogeologic Setting. Soils encountered at the site during previous investigations consisted of poorly graded sands and gravels to a depth of between two and 10 feet below ground surface (bgs) overlying organic silts and peat ranging up to 12 feet thick. A wet sand to silty sand layer was encountered below the organic silt and peat layer. Underlying the wet silty sands was a gray gravel/silt hard pan layer at approximately 20 feet bgs.

Shallow (perched) ground water occurs within the silty sands beneath the peat layer and above the sand and gravel hardpan layer under confined to semi-confined conditions. Stabilized static ground water levels in monitoring wells have ranged from approximately 0.0 feet below top of casing (BTOC) to 3.45 feet BTOC and flows generally to the southwest.⁴

Utilities. There is one storm water catchment basin on the subject site serving the asphalt parking lot in the north. During storm events, surface drainage from the parking lot is captured by the catch basin and discharged to a municipal storm drainage pipe beneath N 87th Street.

Domestic water is provided to the subject site and vicinity by the City of Seattle, which has a water main beneath Greenwood Avenue N. Wastewater is discharged to a municipal line beneath the west-adjacent alleyway and to a sewer main beneath N 87th Street. Known utility locations are shown on Figure 3.

2.3 Previous Environmental Investigations

Please refer to Table 1 and Figures 3 and 3A for a summary of all soil data and sample locations.

Petroleum-impacted soil was first discovered at the former Texaco site during an Initial Assessment by Texaco Environmental Services in 1991 (TES).⁵ Seven borings were advanced near the USTs, pump island, waste oil UST, and fuel oil UST, five of which were converted to ground water monitoring wells (AGW-1 through AGW-5). Soils contained gasoline-range organics (GRO), diesel-range organics (DRO), residual-range organics (RRO), benzene, toluene, ethylbenzene, and xylenes (BTEX), metals, and halogenated volatile organic compounds (HVOCs). Ground water samples collected during sampling events between May 1991 and June 1993 reported concentrations of total petroleum hydrocarbons (GRO by TPH-G) and BTEX exceeding MTCA Method A Cleanup Levels.⁶

In January 1994, the gasoline, diesel, heating oil and waste oil USTs were decommissioned and removed along with product piping and pump islands. The station building was razed, the hoists removed, along with an approximately 1,230-gallon concrete sump.

³ Booth, D.B., Goetz, K., Schimel, S.A., 2009, Geologic Map of Northeastern Seattle (Part of the Seattle North 7.5' x 15' Quadrangle), King County, Washington: U.S. Geological Survey Scientific Investigations Map 3065, Map 1:24,000.

⁴ ENW, February 28, 2022. *Ground Water Monitoring: First Quarter 2022*, Future Kiddie Academy Property, 8701 Greenwood Avenue North, Seattle, Washington 98103: Prepare for Kiddie Academy, Attn: Maninder Singh.

⁵ Texaco Environmental Services, Initial Assessment, dated July 1991.

⁶ EMCON, Quarterly Ground Water Sampling Report, dated September 23, 1993.

During UST decommissioning activities, approximately 680 cubic yards of petroleum-impacted soils were removed from the areas of the former waste oil UST, hoists, and dispenser islands and transported off-site for treatment. Confirmation soil samples at the former gasoline, diesel, and heating oil USTs, pump island, and hoist areas contained total petroleum hydrocarbons (TPH) and BTEX below MTCA Method A Soil Cleanup levels. Soils in the excavation sidewalls in the waste oil/sump locations in the west contained impacts above MTCA Method A Cleanup Levels.

In the latter part of 1994, Texaco installed a combined air sparge/vapor extraction system, which was designed to address residual soil and ground impacts in the vicinities of the former gasoline and diesel UST excavations. Approximately 45 pounds of volatile hydrocarbons were extracted and approximately 650,000 gallons of groundwater were discharged during the treatment period between December 1994 and June 1995. Laboratory results conducted during subsequent ground water sampling events in February 1995 through February 1996 showed four consecutive quarters with analytical results below the MTCA cleanup levels in ground water in all five wells samples. Based upon remedial actions and ground water sampling results, Ecology issued a Conditional No Further Action (NFA) determination for the Texaco site in July 1996, with regulatory closure contingent upon the recording of a restrictive covenant with the property deed. The restrictive covenant documents residual soil impacts remaining at the former Texaco site, stipulated long-term ground water monitoring, and proper management of impacted soil during future construction projects involving excavation in contaminated areas.

Post Remedial Ground Water Monitoring (1997-1998). Following issuance of the NFA, Texaco continued regular ground water monitoring at monitoring well MW8 in the southwest (down gradient) corner of the subject property. GRO, DRO, RRO, and BTEX were either not detected or were below MTCA Method A Cleanup Levels during four consecutive quarterly events between November 1997 and August 1998.

Excavation Soil Sampling and Construction Coordination – ERI, February 1997. In September 1996, Seattle/Village Partnership, the owner of the subject property at that time, began construction of the approximately 12,000-square-foot Walgreens building and an adjacent paved parking lot. During early stages of construction of the Walgreens building in September and October 1996, a Texaco consultant Environmental Resolutions, Inc. (ERI) directed the removal of additional petroleum-contaminated soil (PCS) identified by constructions workers. Impacted soils were removed from six excavations (EX1 through EX6) in the northern, western, east-central, and west-central portions of the former Texaco facility. Approximately 275 cubic yards (420 tons) of additional PCS was disposed offsite for treatment.

Residual soil impacts were reportedly left in-place at concentrations above MTCA Method A Cleanup Level in the areas of samples WOEWM-6 (340 mg/Kg RRO) and sample EX1-W-3 (209 mg/Kg RRO) in the southwest and northern portions of the former station property, respectively. Former excavations and confirmation soil sample locations are identified on the Sample Location Diagram on Figure 3.

Additional Excavation and Soil Sampling – ERI, June 1997. During February and March 1997, ERI oversaw additional soil removal from plumbing excavations at four locations (Excavations 1A, 1B, 2, 3, and 4) during installation of new water service near the southeast corner of the facility. Laboratory results of confirmation soil samples reported petroleum concentrations exceeding MTCA Method A Cleanup Levels in samples from four of the five excavations (Excavations 1A, 1B, 3, and 4), and PAH compounds exceeding MTCA Method A Cleanup Level in two excavations (Excavation 1B and 4) (samples EX-BS-6 and EX4-E-3 Excavation 4). Figure 3 and 3A illustrate the locations of the excavations and confirmation soil samples.

2.4 Recent Investigations by Others

In 2020 and 2021, Mr. Maninder Singh, the property owner at the time, engaged with several environmental firms to conduct additional investigation of the subject site as part of environmental due diligence in preparation of redeveloping the site into a daycare facility (Kiddie Academy). Recent investigations by others are included in the following reports.

- Partner, Phase I Environmental Site Assessment, dated September 29, 2020
- Left Cost Services, Limited Stie Characterization Report, dated November 23, 2020
- ENW, Focused Phase II Environmental Stie Assessment, dated December 30, 2020 Partner, Phase II Environmental Site Assessment, dated March 9, 2021
- Environmental Specialties, *Level II Investigation, Soil Boring & Ground Water Monitoring Well Installation*, dated July 1, 2021.

A summary of recent work by previous consultants is provided below. Table 2-1 summarizes the sample locations, and media sampled by each of the areas investigated. Sample locations are presented on Figure 3 and 3A. Cumulative soil, soil gas/sub-slab vapor, reconnaissance ground water, and monitoring well sample results conducted to date are provided in Tables 1, 2, 3, and 5, respectively, behind the Tables tab following text.

Table 2-1. Summary of Previous Sample Locations by Media and Source Area.

Investigation Area	Medium	Borehole Location Identification
Former Dry Cleaners	Soil	GSB-1, GSB-2, B3, 16-10-14(Well 11)
	Ground Water	B-3, Well 11
	Soil Gas	B3-SG, Well 11(soil gas)
Off-site SMI Industries facility	Soil	GSB-3, GSB-4, B4, Well 6, Well 8, SB1, SB2, SB3, Well 12 (SB4)
	Ground Water	B-4, Well 6, Well 8, Well 12
	Soil Gas	B4-SG
North Parking Area/Central Play Area	Soil	GSB-4, B1, B2, 3-3-10(Well 3), 4-4-16, 5-4-13, 6-4-16(Well 4), 7-5-13, 8-5-16(Well 5), 12-7-14 (Well 7), 14-9-17, 15-9-17(Well 9), SB5, SB6, SB7, SB8(Well 13)
	Ground Water	B-1, B-2, Well 3, Well 4, Well 5, Well 7, Well 8, Well 9, Well 13
	Soil Gas	B2-SG
Former Texaco Station Historical Features	Soil	B5 , 1-2-17 (Well 2), 2-2-11(Well 2)
	Ground Water	MW08, B-5, Well 2, Well 3
	Soil Gas	B5-SG, SS1, SS2, SS3

2.4.1 Partner Engineering and Science, Inc. – Phase I ESA, December 2020

Partner Engineering and Science, Inc. performed a Phase I ESA at the site. The findings of the Phase I ESA identified the following potential concerns related to the site:

- Vanity Cleaners occupied the stie as a cleaners and dryers between 1951 and 1955.
- The adjacent property identified as SMI Inc Trust at 8733 North Greenwood Avenue, is located to the north of the subject property and hydrologically up-gradient. According to Environmental

Data Resources, Inc. (EDR), this property was listed on several databases including the Hazardous Site List (HSL) and Confirmed and Suspected Contaminated Sites List (CSCL). This property had a confirmed release of conventional contaminants, including organics and metals which have impacted soil. The site status is currently awaiting cleanup by Ecology.

- The southern portion of the site was previously occupied by a gasoline station from at least 1940 to 1994. Based on cleanup efforts completed, regulatory oversight and closure, removal of USTs, remedial activities, analytical results, and the property use restrictions currently in-place, the former gas station and USTs were identified as a controlled recognized condition.

Based on their findings, Partner recommended that a limited subsurface investigation be performed to determine the presence or absence of soil and/or ground water contamination due to the former drycleaner and active releases on the adjacent property to the north.

2.4.2 Focused Phase II ESA – ENW and UAI, October 2020

A Focused Phase II ESA was completed by ENW in December 2020, which summarized work completed by Left Coast Services, LLC (LCS [Universal Applicators, UAI]) in November 2020. The purpose of the Phase II was to investigate the historical dry cleaner on the property and any potential impacts from the north-adjointing property (SMI Inc Trust). This initial soil and ground water investigation included advancement of four DPT borings (GSB-1 through GSB-4) in the areas of the former Vanity dry-cleaning facility and down gradient of the off-site SMI cleanup site. LCS also sampled the former Texaco’s existing monitoring well MW08.⁷

2.4.3 Phase II Subsurface Investigation Report – February 2021

An expanded subsurface investigation was conducted in February 2021 (*Partner Engineering 2021, Phase II Subsurface Investigation Report, Maninder Singh - Expansion*).⁸ Five soil borings (B1 through B5), four soil gas wells (B2-SG, B3-SG, B4-SG, and B5-SG) and three sub-slab vapor samples (SS1 through SS3) were installed and sampled during this work. The investigation focused on characterizing soil, ground water and soil gas conditions at the northern property boundary, in the central portion of a proposed play area (future Kiddie Academy), and in the southwest portion of the former Texaco station. Soil gas samples were collected beneath the Walgreens building and at the former dry-cleaning facility, north property boundary, former remedial excavations, and beneath the subject building.

2.4.4 Installation of Compliance Monitoring Wells - May/June 2021

In April through June 2021, twelve “compliance” ground water monitoring wells (Well 2 through Well 13) were installed at the site to allow collection of soil and ground water samples for the purpose of establishing baseline contaminant concentrations (*Environmental Specialties [ES] 2021, Phase II, Groundwater & Gas Investigation & Analysis, Installation of 12 Groundwater Monitoring Wells, 19 Soil Borings, One Soil Gas Well*). Additional soil borings were advanced in the planned Kiddie Academy outdoor play area and along the north site boundary. In total, ES collected 15 soil samples (samples “1” through “15”) and one soil gas sample (Well 11 soil gas) beneath the former Vanity dry cleaner during this investigation.

⁷ Partner Engineering, LLC, *Phase I Environmental Site Assessment*, dated September 29, 2020

⁸ Partner Engineering, LLC, *Phase I Environmental Site Assessment*, dated September 29, 2020

3.0 Regulatory Status

In January 2021, Maninder Singh, owner of the subject property submitted a Change of Use Request to Ecology to change the use of the subject property from a Walgreens retail building to a Kiddie Academy daycare facility, including performing interior and exterior remodeling activities and the addition of an outdoor playground.

In a letter dated March 8, 2021, Ecology outlined requirements for improvements in accordance with the existing Environmental Covenant previously issued to Texaco by Ecology. Ecology cited specifically that additional petroleum impacts were discovered during the redevelopment of the site into a Walgreens store in 1996, and that additional soil impacts were left in place after the 1996 soil removal. Ecology further stated that the extent of soil and ground water contamination was not delineated and is potentially present at the east, south, and west property boundaries, and contaminated ground water is potentially located near the southern property boundary.

Based on site characterization information including recent investigations by UAI and Partner, Ecology developed a list of data gaps and requested additional investigation in the following areas:

- A vapor intrusion assessment needs to be completed to address impacts from residual contamination, as well as potential impacts from the historical dry cleaners. The potential vapor intrusion risk to residences west of the site needs to be evaluated concurrently, given the extent of residual petroleum contamination is unknown. Ecology recommended a Tier I vapor intrusion assessment be completed since the interior remodel has not yet completed.
- Residual contamination needs to be evaluated in the proposed playground area to ensure protectiveness from direct contact.
- The historical dry cleaner needs to be thoroughly investigated to determine whether there has been a release to soil, ground water, or air.
- Contaminated soil and ground water associated with the historical gasoline service station may have migrated off-site and should be characterized.

Under the current ownership (8701 Greenwood Avenue, LLC), the subject property applied to, and was accepted into, Ecology's Voluntary Cleanup Program (VCP) and is currently identified in State's cleanup database as Facility/Site 6416. The objective of entering the VCP was to enlist Ecology in identifying data gaps and gather sufficient characterization data to support state cleanup requirements under MTCA.

In December 2021, at the request of Kiddie Academy, ENW submitted a work plan to Ecology designed to support state cleanup requirements of Ecology's MTCA cleanup regulations. A scope of work was developed in the work plan to address data gaps identified in Ecology's 2021 letter to re-evaluate the previous closure.

Potential contaminant sources were addressed based on the understanding of site conditions at the time, including:

- **On-site Source Areas** - To include former dry-cleaning operations in the 1950s, and former gasoline service station operations in the 1960s through the 1990s (approximately). Sources related to the gasoline service station operations include former USTs and dispenser island, a *Former Waste Oil UST, Former Fuel Oil UST, and Former Concrete Sump / Separators*. Additional

on-site sources include residual soil and ground water impacts beneath the northern parking area, potentially caused by migration from an off-site source to the north.

- **Off-site Suspect Source Areas** – to include a former commercial enterprise on the north-adjacent property with known releases of petroleum products and suspected releases of HVOCs.

Investigative data gaps addressed in the work plan focused on the following areas:

- Lateral and vertical delineation of soil impacts in the SE corner of the site.
- Lateral delineation and confirmation of hydraulic gradient associated with ground water impacts likely sourced from the off-site SMI Inc. Trust facility.
- Evaluation of vapor intrusion.
- Assessment of ground water in existing monitoring wells for the presence of GRO, RRO, DRO, benzene and HVOCs.

4.0 Site Characterization

In accordance with ENW's Work Plan, subsurface investigations were conducted during several phases for the collection of soil, soil gas, and ground water samples. These investigations are documented in the following reports submitted to Ecology:

- Focused Sub-Slab Investigation: ENW, February 23, 2022
- Focused Right-of-Way Investigation: ENW, April 7, 2022
- Monitoring Well Installation Report with Additional Delineation: ENW, July 18, 2022.

Descriptions of field methods deployed for the various investigations completed as part of this investigation are provided in separate reports and summarized in the following sections.

4.1 Focused Sub-Slab Vapor Investigation – February 2022

ENW evaluated the VI pathway beneath the existing building by installing six sub-slab vapor probes and collecting sub-slab vapor samples from the six locations. Field sampling activities were conducted in general accordance with Ecology's *Guidance for Evaluating Vapor Intrusion in Washington State (Ecology Guidance)*⁹ and summarized below. The locations of sub-slab vapor samples are provided on Figure 3B laboratory reports are included in Appendix B.

4.1.1 Sub-Slab Vapor Sampling Methods

Sub-slab vapor samples were collected from temporary stainless-steel Vapor Pin® inserts installed through the floor slab of the building. Prior to sampling, the vapor probes were purged, and sampling manifolds were tested for leaks. As per Ecology guidance, leak testing of the entire sample string was completed through the use of a non-target analyte tracer. Vapor samples were collected into pre-pressurized SUMA cannisters and submitted to Environmental Analytical Services, Inc. (EAS) of San Luis Obispo, California

⁹ Ecology, 2009. *Guidance for Evaluating Vapor Intrusion in Washington State: Investigation and Remedial Action*, Toxics Cleanup Program, Washington State Dept. of Ecology, publication No. 09-09-047. Revised March 2022.

and analyzed for volatile constituents, including gasoline-range organics, VOCs, and 2-propanol (as leak detection) using Environmental Protection Agency (EPA) Method TO-15 Modified.

4.1.2 Results

The results of laboratory analysis of sub-slab vapor samples are presented in Table 4-1 along with Ecology’s MTCA Method B soil gas screening levels. A summary of cumulative soil gas and sub-slab vapor samples collected to date are summarized in Table 2 behind the Tables tab following text.

Table 4-1. Summary of Sub-Slab Vapor Sample Results

Location ID	SUB01	SUB02	SUB03	SUB04	SUB05	SUB06	MTCA Sub-Slab Soil Gas Screening Level Method B ¹
Sample ID	SUB01-220125	SUB02-220125	SUB03-220125	SUB04-220125	SUB05-220125	SUB06-220125	
Date Sampled	1/25/2022	1/25/2022	1/25/2022	1/25/2022	1/25/2022	1/25/2022	
Depth Sampled (feet)	0.5	0.5	0.5	0.5	0.5	0.5	
Location	Slab beneath NE building corner	Slab beneath E central part of building	Slab beneath SE building corner	Slab beneath SW building corner	Slab beneath VV central part of building	Slab beneath NW building corner	
Constituent of Interest	Note	µg/m ³ (ppb)	µg/m ³ (ppb)	µg/m ³ (ppb)	µg/m ³ (ppb)	µg/m ³ (ppb)	µg/m ³
Volatile Organic Constituents (VOCs)							
Acetone	nc, v	70.59	162.43	96.62	613.60	291.13	470000
Benzene	c, v	4.52	10.96	10.25	15.89	7.50	11
Toluene	nc, v	2.96 J	10.23	21.65	10.16	8.59	76000
Xylenes	nc, v	<5.60 (ND)	<6.60 (ND)	3.16 J	4.49 J	4.08 J	1500
Remaining VOCs	nc, nv	ND	ND	ND	ND	ND	---
Total Petroleum Hydrocarbons							
GRO	nc, v	<854.59 (ND)	<854.59 (ND)	658.71 J	329.46 J	<854.59 (ND)	4700
Leak Detection							
2-Propanol		<9.23 (ND)	<9.23 (ND)	514.20	244.97	<9.23 (ND)	4039.45

Notes:
 — = not analyzed or not applicable.
 ND = not detected at or above the method reporting limit show n.
 µg/m³ = micrograms per cubic meter
 c = carcinogenic
 nc = noncarcinogenic
 v = volatile
 (Y) indicates analyte not detected, but detection limit is above screening concentration.
Bolded concentrations exceed MTCA Method B Cleanup Levels
 1. CLARC Vapor Intrusion Method B Table - July 2021

As indicated in Table 4-1, laboratory analysis detected GRO at a maximum concentration of 994.71 micrograms per cubic meter (µg/m³) (SUB06), which is less than the MTCA Method B generic screening level for total petroleum hydrocarbons of 4,700 µg/m³. Several VOCs were detected in sub-slab vapor samples. However, only benzene in the sample from SUB04 was detected at a concentration exceeding the MTCA Method B screening level for sub-slab vapor.

The sub-slab vapor data is generally consistent with previous sub-slab vapor samples collected in February 2021, which reported benzene in two of three samples (SS1 and SS2) at concentrations greater than MTCA Method B screening levels.¹⁰

To further evaluate results, sub-slab data from ENW’s results was entered into the EPA’s ProUCL software to determine the exposure point concentration for benzene in sub-slab vapors. The exposure point concentration calculated in sub-slab vapor beneath the building was 11.5 µg/m³, which is essentially equal to the MTCA cleanup level and therefore concentrations of benzene in sub-slab vapor were determined not to currently pose an unacceptable vapor intrusion risk.

During a previous investigation on April 28, 2021, by Environmental Specialties,¹¹ an 8-hour time-weighted sample was collected inside the building (sample “1”, Table 3) and a second ambient air sample was

¹⁰ Partner, 2021. *Phase II Subsurface Investigation Report, Maninder Singh – Expansion*, 8701 Greenwood Avenue North, Seattle, Washington, March 9, 2022.

¹¹ Environmental Specialties, 2021, *Level II Investigation: Soil Boring & Groundwater Monitoring Well Installation*, 8701 Greenwood Avenue North, Seattle, WA 98101, July 1, 2021.

collected outside the building (sample “2”). Results of indoor and outdoor samples detected benzene roughly the same concentration, suggesting the source of benzene in indoor air was likely outdoor ambient makeup air. None of the other detected VOCs exceeded a MTCA air screening level. This further suggested that sub-slab concentrations of benzene are not likely leading to unacceptable exposure in indoor air to future receptors.

4.2 Focused Right-of-Way Investigation – April 2022

In March 2022, ENW conducted a subsurface investigation in the right-of-way adjacent to the southeast corner of the subject property to characterize the current condition of soil and ground water, including installation of four soil borings (EB01 through EB04). Borings EB01 through EB03 were advanced in the ROW of 87th and Greenwood Avenue to depths of 16 feet bgs and soil samples were collected from five (5) to 14 feet bgs. Boring EB01 was advanced in the vicinity of residual impacts at previous samples EX-N-4, and boring EB02 was placed in the vicinity of residual impacts at previous sample EX-BS-6 where previous investigations had identified residual soil impacts remaining at concentrations exceeding MTCA Method A soil cleanup levels (CUL).

4.2.1 Soil and Reconnaissance Sample Collection

At boring EB01, one soil sample was collected from 5 to 7 feet bgs (where impacts were observed) and from deeper native soils at 9 feet bgs and 14 feet bgs. At EB02, one soil sample was collected from “clean” soils at 13.5 feet bgs, and at EB03, one soil sample was collected from native soils at 12 feet bgs.

To characterize ground water conditions in the ROW, borings EB01 through EB03, reconnaissance ground water samples were collected from temporary well points using a peristaltic pump and dedicated PE tubing.

Soil and ground water samples were analyzed for GRO, DRO, and RRO by NWTPH-GRO and NWTPH-DRO, GRO-related VOCs by EPA Method 8260, polynuclear aromatic hydrocarbons (PAHs) by EPA Method 8270. Select samples were passed through a silica gel column and re-analyzed for DRO and RRO to remove effects of biogenic interference.

Shallow ground water sufficient for water sampling was encountered within the silty sands underlying the peat layer. To characterize ground water conditions, borings EB01 through EB04 were completed as temporary wells, purged, and sampled using a low-flow peristaltic pump and new dedicated low-density polyethylene (LDPE).

4.2.2 Results - Soil

Laboratory results of soil samples are compared to their respective MTCA Method A and Method B soil cleanup levels on Table 4-2 below. A cumulative summary of soil results is presented on Table 1 (following Tables Tab following text). Sample locations are illustrated on Figure 3A.

Table 4-2. Focused ROW Investigation - Reconnaissance Ground Water

Sample ID	EB01/5-7	EB01/9	EB01-SWI/14	EB02-SWI/13.5	EB03-SWI/12	MTCA Method A Unrestricted Land Use (Table 740-1)	MTCA Method B Direct Contact Lowest of Standard Values for Noncancer and Cancer (Eq. 740-1, -2)	MTCA Method B Protective of Ground Water - vadose zone soil (Eq. 747-1)	
Date Sampled	3/15/2022	3/15/2022	3/15/2022	3/15/2022	3/15/2022				
Depth Sampled (feet)	5-7'	9	14	13.5	12				
Location	N of sidewalk, S of building, ~35' W of crosswalk			N side of 87th St in ROW, W side of crosswalk	S side of 87th in parking lane, W side of crosswalk				
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)	
Volatile Organic Constituents (VOCs)									
Cumene	nc, v	<0.05 (ND)	0.082	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	NE	8000	15
Trimethylbenzene;1,3,5-	nc, v	<0.05 (ND)	0.14	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	NE	800	1.3
Remaining VOCs	c, v	ND	ND	ND	ND	ND	---	---	---
Polycyclic Aromatic Hydrocarbons									
All PAHs	c, nv	ND	ND	ND	ND	ND	---	---	---
Total Petroleum Hydrocarbons									
TPH: gasoline range organics, benzene present	nc, v	<20 (ND)	190	<5 (ND)	<5 (ND)	<5 (ND)	100	NE	NE
TPH, diesel range organics	nc, nv	680	2600	<50 (ND)	<50 (ND)	<50 (ND)	2000	NE	NE
TPH, heavyoils	nc, nv	<1000 (ND)	<1000 (ND)	<250 (ND)	<250 (ND)	<250 (ND)			
Notes:									
ND = not detected at or above laboratory method reporting limits									
NE = not established.									
--- = not analyzed or not applicable.									
< = not detected at or above the method reporting limit shown.									
mg/Kg = milligram per kilogram.									
c = carcinogenic									
nc = noncarcinogenic									
v = volatile									
nv = nonvolatile									
GRO = gasoline-range organics.									
DRO = diesel-range organics.									
RRO = residual-range organics.									
Bolded concentrations exceed calculated site-specific MTCA Method B Cleanup Levels.									

Laboratory results of soil samples from the Focused Right-of-Way Investigation reported the following constituents:

- GRO was detected at 190 mg/Kg in soil sample EB01/9 collected at 9 feet bgs at the first-encountered ground water table, GRO was not detected above the laboratory method reporting limits (MRLs) in samples EB01/5-7, EB01-SWI-14, EB02-SWI/13.5 (20 feet to the southeast of EB01), or EB03-SWI/12 (30 feet to the south-southeast of EB02).
- DRO was present in EB01/5-7 at a concentration of 680 mg/Kg and in EB01/9 at 2,600 mg/Kg, exceeding the MTCA Method A soil CUL of 2000 mg/Kg. DRO was not reported above the laboratory MRL in EB01/14 nor in borings EB02 or EB03, located to the east and south, respectively.
- RRO was not detected in any of the borings completed in the ROW in the SE corner of the site.
- GRO-related VOCs constituents cumene and 1,3,5-trimethylbenzene were detected at concentrations below their respective MTCA Method A CULs.
- PAHs were not detected above their respective MRLs in any of the soil samples in the ROW borings.

4.2.3 Results – Reconnaissance Ground Water

The results of laboratory analysis for reconnaissance ground water samples from EB01 through EB03 are presented in Table 4 (behind Tables tab following text) and summarized below in Table 4-3.

Table 4-3 – Focused ROW Investigation - Reconnaissance Ground Water

Location ID		EB01	EB02	EB03	MTCA Method A Cleanup Levels for Ground Water (Unrestricted Land Use)
Date Sampled		3/15/2022	3/15/2022	3/15/2022	
Location		N of sidewalk, S of building, ~35' W of crosswalk	N side of 87th St in ROW, W side of crosswalk	S side of 87th in parking lane, W side of crosswalk	
Constituent of Interest	Note	µg/L (ppb)	µg/L (ppb)	µg/L (ppb)	µg/L (ppb)
Volatile Organic Constituents (VOCs)					
All VOCs	c, v	ND	ND	ND	---
Polyaromatic Hydrocarbons (Carcinogenic)					
All PAHs	c, nv	ND	ND	ND	---
Total Petroleum Hydrocarbons					
GRO	nc, v	<100 (ND)	<100 (ND)	<100 (ND)	800
DRO	nc, nv	120	<75 (ND) *	<50 (ND)	500
RRO	nc, nv	<250 (ND)	<380 (ND)	<250 (ND)	
Notes:					
— = not analyzed or not applicable.					
ND = not detected at or above the method reporting limit (MRL)					
NE = not established.					
µg/L = micrograms per Liter					
GRO = gasoline-range organics.					
DRO = diesel-range organics.					
RRO = residual (oil)-range organics.					
* Sample Extract passed through a silica gel column prior to analysis.					

As indicated in Table 4-3, laboratory analysis reported DRO in EB01 at 120 micrograms per liter (µg/L). The sample from EB02 was reported with a DRO concentration of 78 µg/L, but results were flagged with an “x” qualifier indicating a chromatographic signature not typical of the petroleum product being analyzed, suggesting likely matrix interference. After running the extract through a silica gel column, the DRO concentration in EB02 was reported below laboratory MRL of 75 µg/L.

Neither GRO, RRO and all GRO-related VOCs and PAHs were below their respective MRL.

4.3 Monitoring Well Installation Report with Additional Delineation: July 18, 2022

ENW conducted additional site characterization activities in response to Ecology’s April 25, 2022. The objective of this investigation was to establish a permanent ground water monitoring point in the southeast corner of the site to monitor ground water quality, further characterize residual soil west of the former at the former waste oil tank excavation in the western portion of the site, further delineate the north and east extent of contaminated soil in the loading dock (SE corner of site), and characterize appropriate soil impacts for Extractable Petroleum Hydrocarbons (EPH) and Volatile Petroleum Hydrocarbons (VPH) to calculate a site-specific Method B cleanup level for total petroleum hydrocarbons

On May 31, 2022, ENW advanced three soil borings (EB04, EB05, and EMW01) as illustrated on the Sample Location Diagram on Figure 3A. Soil borings were advanced to a maximum depth of just over 19 feet below ground surface bgs in the areas of just beyond the southeastern property boundary (EB04), next to the loading dock (EMW01) and next to the former used oil tank (EB05). New monitoring well EMW01 was completed as a 0.75-inch polyvinyl chloride (PVC) well in the ROW next to the loading dock area (former utility excavation area).

Soil samples were collected from EB04 from the base of the peat layer at 13 feet bgs and from EB05 at 14 feet bgs. Boring EB05 penetrated pea gravel (fill) from 4 feet to 12 feet bgs, interpreted as backfill material

from a previous remedial excavation. Below the pea gravel was organic rich soil and peat extending to 13.5 feet bgs, then gray, saturated silt to the maximum depth drilled of 16 feet bgs. One soil sample was collected from EB05 below the base of the peat layer at 14 bgs. Boring logs are presented in Appendix A.

First-encountered ground water was encountered in borings EB04 and EB05 at approximately 67 to 15 feet bgs. To characterize ground water conditions, a reconnaissance ground water sample was collected from EB04. Soil samples from both borings were analyzed for GRO, DRO, GRO-related VOCs, PAHs and dissolved lead. Reconnaissance ground water samples from EB04 were analyzed for GRO, DRO, RRO, GRO-related VOCs, PAHs and dissolved lead. Based on absence of soil impacts, a reconnaissance ground water sample from EB05 was not analyzed.

4.3.1 Results – Soil

Laboratory results of soil are compared to their respective MTCA Method A and Method B soil cleanup levels on Table 4-4 below. A cumulative summary of soil results is presented on Table 1 (following Tables Tab following text) Sample locations are illustrated on Figure 3A.

Table 4-4. Additional Delineation SE ROW Investigation - Soil

Sample ID	EB04-SWI-13	EB05-SWI-14	MTCA Method A Unrestricted Land Use (Table 740-1)	MTCA Method B Direct Contact Lowest of Standard Values for Noncancer and Cancer (Eq. 740-1, -2)	MTCA Method B Protective of Ground Water - vadose zone soil (Eq. 747-1)
Date Sampled	5/31/2022	5/31/2022			
Depth Sampled (feet)	13	14			
Location	East of Loading Dock	West of Building			
Constituent of Interest	mg/Kg (ppm)	mg/Kg (ppm)	mg/Kg (ppm)	mg/Kg (ppm)	mg/Kg (ppm)
Volatile Organic Constituents (VOCs)					
Naphthalene	<0.05 (ND)	0.057	5	1600	4.5
Remaining VOCs	ND	ND	---	---	---
Polyaromatic Hydrocarbons					
Naphthalene	<0.01 (ND)	0.019	5	1600	4.5
Remaining PAHs	ND	ND	---	---	---
Metals					
Lead	1.08	2.24	250	NE	400
Total Petroleum Hydrocarbons					
TPH: gasoline range organics, benzene present	<5 (ND)	<5 (ND)	100	NE	NE
TPH, diesel range organics	110	<50 (ND)	2000	NE	NE
TPH, heavy oils	<250 (ND)	<250 (ND)			
Notes:					
ND = not detected at or above laboratory method reporting					
NE = not established.					
(Y) indicates analyte not detected, but detection limit is above screening concentration.					
— = not analyzed or not applicable.					
< = not detected at or above the method reporting limit show n.					
mg/Kg = milligram per kilogram.					
GRO = gasoline-range organics.					
DRO = diesel-range organics.					

As indicated, DRO was detected in the soil/water interface sample in EB04 (sample EB04-SWI-13) at 110 milligrams per kilogram (mg/Kg). GRO, RRO, and dissolved lead were below the MTCA Method A soil CULs at both borings. Contaminants of interest in soil from EB05 were either not detected or were below their respective CUL.

4.3.2 Results – Reconnaissance Ground Water

Laboratory results of the reconnaissance ground water sample from EB04 are provided in Table 4, behind the Tables tab following text and reconnaissance sample locations are presented on Figure 3A. Laboratory analysis reported no detectable concentrations of GRO, DRO, RRO, VOCs or PAHs. Total lead was detected at 7.74 µg/L, which is less than the MTCA Method A ground water CUL of 15 µg/L.

The reconnaissance ground water data suggests that the lateral extent of residual impacts previously detected at former excavation 1A has been delineated and significant ground-water impacts do not migrate off-site at the southeastern site boundary.

4.4 Ground Water Monitoring and Sampling Activities

Ground water monitoring and sampling activities were conducted during consecutive quarterly events as required under MTCA to gather information on water levels and contaminant concentrations over a range of seasons. Four consecutive quarters of compliance ground water monitoring and sampling are required for MTCA cleanup sites prior to regulatory approval of site closure.

Ground water monitoring and sampling events were completed from select wells on January 26, 2022, April 21, 2022, July 25, 2022, and October 5, 2022. During each sampling event, depth to ground water measurements were collected using an electronic water level indicator referenced to the surveyed markings on the top of casing of each well. Water level measurements collected during the four consecutive quarterly monitoring and sampling events are presented in Table 5.

Depth to ground water measurements during the four quarterly monitoring events ranged from zero to 3.45 feet BTOC. “Zero” depth to water measurements occurred during all four quarters in wells located in the central portion of the site (monitoring wells Well-4, Well-5, Well-7, Well-11, and Well-13). Ground water elevation contours, flow direction, and ground water gradient were calculated for each of the four quarterly monitoring events using the depth to ground water measurements and top of casing elevations. During the quarterly monitoring events, ground water contours depicted a generally west to southwest flow direction under gradient ranging from 0.020 feet per foot (ft/ft) to 0.062 ft/ft.

4.4.1 Results

Analytical results of ground water samples from monitoring wells Well-2 through Well-13, EMW01 and MW-8 are presented on Table 6. Monitoring well locations are presented on Figure 4. Copies of the laboratory reports and chain-of-custody are included in Appendix B.

Regular quarterly ground water monitoring and sampling of onsite monitoring wells detected relatively low concentrations of naphthalene, acenaphthene, fluorene, 1-methylnaphthalene, and 2-methylnaphthalene in ground water in Well #11 near the former dry cleaners. Detections of 1-methylnaphthalene occurred in well #11 at concentrations marginally exceeding MTCA Method B for carcinogenic exposure via the ground water ingestion pathway. This constituent has not been detected in ground water samples from any of the remaining monitoring wells or reconnaissance ground water samples collected at the site, nor has this constituent been detected in soil at the site. 1-methylnaphthalene is not typically associated with dry cleaning solvents and may be the result of broader low-level fuel- (i.e., diesel-) related impacts on a more regional scale. Due to the absence of impacts elsewhere on the site, and the location of Well #11 near the upgradient property boundary, the presence of 1-methylnaphthalene in ground water could potentially be from an offsite source to the northeast.

Relatively elevated concentrations of DRO and RRO (300 µg/L and 510 µg/L, respectively) were detected during the initial quarterly sampling event in Well #3 near the western property boundary. GRO, DRO, and RRO were not detected above the MRL in subsequent ground water sampling events at this location.

Relatively low concentration of DRO and RRO were also reported in at least one of the five quarterly events at Well #2 (southwest corner of the subject property) and DRO was present in Well #5 (western property boundary in the north parking lot area); however, the reported concentrations in both wells did not exceed the MTCA Method A ground water cleanup levels.

Toluene was detected during the initial round of sampling in wells #12 and #13 in the vicinities of the SMI Inc Trust site and Proposed Playground areas. Toluene was not detected during the four subsequent sampling events in either well.

Ethylbenzene was detected in Well #3 (SW portion of the site) at the MRL during one sampling event. Several low-level PAH constituents (naphthalene, acenaphthylene, fluorene, fluoranthene and pyrene) were also present in one or more wells during the quarterly monitoring and sampling events. All VOCs and PAHs were well below their respective MTCA Method A ground water cleanup levels during these events.

5.0 Conceptual Site Model

This section presents a Conceptual Site Model (CSM) developed for the site. The CSM includes identification of contaminants of concern, the nature and extent of contaminants, and presents an evaluation of exposure pathways and potential receptors.

5.1 Constituents of Interest

Based on the knowledge of the site history and laboratory analysis of soil and groundwater samples collected from the site, the following contaminants of interest (COI) have been identified:

- Gasoline-, diesel- and heavy oil-range petroleum hydrocarbons
- Petroleum-related VOCs,
- Chlorinated VOCs,
- PAHs and
- Heavy metals. Potential Contaminant Sources

5.2 Potential Release Mechanisms and Contaminant Sources

Based on understanding of historical land use and site characterization, the following known or suspected sources of contaminants have been identified at the site.

Table 5-1 summarizes these areas by year of operation and constituents of potential concern (COPCs).

Table 5-1. Potential Source Areas and COPCs

Potential Source Area	Location	Approximate Years of Operation	COPC
Former Dry Cleaners	East-Central (former building no longer present)	1950-1955	GRO, DRO, VOCs
Former Texaco Station	Central and Southern portion of site	1960s to 1990s	GRO, DRO, RRO, VOCs, cPAHs
Former Off-site Commercial Operation	Off-site on North-Adjoining Property	unknown	GRO, DRO, RRO, VOCs, cPAHs

Former Vanity Dry Cleaners. Dry cleaning operations associated with the Vanity Cleaners (operating in the 1950s) have not been confirmed but were identified as a potential source of contamination at the subject property. Subsurface conditions beneath the former Vanity Cleaners have been thoroughly characterized by previous investigations (i.e., soil borings B-1, GSB-1, GSB-2, B-3, and borings #10 and #11). Laboratory results of soil and ground water from these previous investigations have not revealed the presence of dry-cleaning solvents at concentrations greater than MTCA Method A CULs, including in soils at the top of the hard pan layer at 14 feet bgs where heavier HVOCs are likely to be present. Based on laboratory analytical results from previous investigations, Vanity Cleaners is considered to have been adequately characterized and does not appear to be a source of potential ongoing source of contamination.

SMI Inc. Trust Site. Recent investigations have confirmed that releases from the SMI Inc. Trust site have impacted soil and ground water near the shared property boundary. Potential contaminants associated with the SMI Inc. Trust site include petroleum hydrocarbons, halogenated organics petroleum products and metals. Primary sources of impacts are off-site; therefore, impacts at the subject property are present as secondary sources of contamination to soils, ground water, and soil gas. Refer to Figure 5 for a line of section through this area.

ENW understands the SMI Inc Trust site has not been fully characterized and is currently under investigation by another party under Ecology oversight. This CSM distinguishes impacts from the SMI Inc Trust as a separate release and assumes off-site sources and impacts will be evaluated and addressed under a separate cleanup effort.

Former Texaco Station. Releases of petroleum hydrocarbons and automotive related hazardous substances occurred prior to the mid- 1990s. The sources of petroleum releases included product storage systems, piping systems, fuel dispensers, and surface spills/overfills. All primary sources of the release have been removed and emergency/interim actions and an adequate site characterization were completed as part of a major cleanup effort by Texaco Environmental Services.

Most of the contaminant mass in soil and ground water remains as isolated pockets of petroleum-related impacts in soil and ground water. Impacts remaining in soil and ground water act as secondary contaminant sources which potentially drive further contaminant transport through leaching, (soil), advection and diffusion (ground water), and volatilization (soil and ground water). Refer to Figure 6 for a line of section through this area.

Proposed Playground Area. In February 2021, Partner’s soil borings B1 and B2 revealed low concentrations of GRO (up to 4.33 mg/Kg), DRO (up to 5.72 mg/Kg), and RRO (up to 26.2 mg/Kg) as well

as low concentrations of several VOCs in shallow soils (2 feet bgs). The source of shallow soil impacts is not known, but site characterization of this area indicates these impacts have not reached the shallow ground water table. Low petroleum and VOC impacts are present as sorbed-phase contaminants. Laboratory results of soil and ground water in deeper soils and shallow ground water have not identified COPC at concentrations greater than the most stringent MTCA Method A and/or MTCA Method B soil cleanup levels. Based on laboratory analytical results from previous investigations, the Proposed Playground area is considered to have been adequately characterized and does not appear to be a source of potential ongoing source of contamination.

5.3 Current Understanding of the Magnitude and Extent of Impacts

The following section describes the current understanding of the magnitude and extent of contaminants of potential concern.

5.3.1 Soil

Soil data suggests two isolated pockets of petroleum impacted soils remain in the southeast corner of the subject property centered on previous confirmation soil samples EX4-E-3 and EX-BS-6 where low-level concentrations of GRO, DRO and RRO remain approximately 4 feet to 6 feet bgs. The highest petroleum impacts remaining contain DRO and RRO at 374 mg/Kg and 2,270 mg/Kg, respectively. These shallow impacts are vertically delineated near the soil/water interface by soil samples from EB01 and EB02 (samples EB01-SWI/14 and EB01-SWI/13.5). The lateral extent of soil impacts is delineated to the east by EB04 and to the south by EB04. Based on soil data, residual soil impacts do not appear to extend off-site in the vicinity of residual soil impacts at the SE corner of the property.

Soil data also suggests the presence of a relatively isolated area of soil impacts centered near Well #12, immediately down-gradient of the SMI Inc. Trust facility. Soil impacts remain in this location at depths of between approximately 5 feet and 10 feet bgs and have impacted the upper unconsolidated sediments and the underlying peat layer. Soil data suggests the highest petroleum impacts in SB4/Well #12 (GRO and DRO at 1,200 mg/Kg and 4,700 mg/Kg, respectively). The vertical extent of petroleum impacts is delineated at SB4 at the 16-foot depth (ES' sample #8 collected on May 26, 2021, from SB4) at the interface between the peat layer and underlying saturated glacial deposits. The estimated lateral extent of soil impacts is approximately delineated to the west by boring GSB-4, to the east by boring SB2, and to the south by boring SB3.

5.3.2 Ground Water

Based on regular quarterly ground water monitoring and sampling of onsite monitoring wells, DRO and 1-methylnaphthalene may be present in ground water beneath the vicinity of monitoring well Well #11. Detections of 1-methylnaphthalene in well #11 marginally exceeded the MTCA Method B for carcinogenic exposure via the ground water ingestion pathway. These constituents are not likely associated with dry cleaning solvents and are likely the result of broader low-level fuel- (i.e., diesel-) related impacts on a more regional scale (i.e., offsite source to the northeast).

5.4 Determination of Applicable Exposure Pathways and Receptor Scenarios

Within WAC Chapter 173-340, and MTCA guidance documents, the various potential exposure pathways and human and ecological receptors are identified, based largely on current and future land use of the

site and adjacent/nearby properties. It considers availability of potable ground water, leaching of contaminants in soil into the ground water table, and the local connection of ground water to surface water. MTCA regulation further requires that vapor intrusion is also evaluated at cleanup sites impacted by volatile constituents.

5.4.1 Land Use and Zoning

Land use zoning of the site and surrounding properties Greenwood Avenue N and N 87th Street is a mixed-use zone (NC2P-55 (M)) where both residential and commercial development is allowed. Properties to the west are zoned NR3, which is a neighborhood residential zone which generally allows detached single-family houses and attached and detached accessory dwellings. Currently, the site is bounded by commercial properties to the south, east and west and residential properties to the west. Land use is not expected to change in the future since this area is well-established in its use.

5.4.2 Beneficial Use of Ground Water and Surface Water

Beneficial water use at the site and surrounding areas was evaluated by searching water well records maintained by Ecology's Water Resources Department. Wells were searched within an approximately 0.25-mile radius of the site. A summary of the results is as follows.

In total, there were 45 records of water wells identified within the 0.25-mile search distance. Forty of the wells are listed for the purpose of dewatering and five wells were listed as "unknown." Wells with unknown status are located at the following locations:

- Altenay & Associates, 504 McGilvea, Seattle
- Erric's Fuel Stop, 2184 84th Avenue S. Kent
- Les Knudson, 6000 Phinney North, Seattle
- Seattle Parks Department, SE-NW/S-06/T-25-N/R-04-E
- Willoughby Holt, 1423 McGilvra Boulevard E. Seattle

Of the five wells found, none of them are documented by Ecology as a registered domestic water well. There were no water wells identified on the subject property or adjacent properties.

The subject property and all developed adjacent properties are served by a municipal water supply system.

5.4.3 Evaluation of Applicable Pathways and Receptors

Based on site conditions, extent of contamination, types of media impacted, and physical setting, the following receptor scenarios are considered applicable at the site:

Future Residents
Occupational
Construction Worker, and
Excavation Workers

Routes of entry associated with chemical intake include inhalation of vapors, direct ingestion, and chemical absorption. Site conditions were evaluated to assess potential exposure to COPC in contaminated soil and ground water.

An evaluation of applicable exposure pathways is summarized in table 5-2.

Table 5-2. Pathway Analysis for Human Receptors

Potentially Exposed Population	Exposure Route, Medium and Exposure Point	Pathway Considered Potentially Complete?	Reason for Selection or Exclusion
Soil			
Future Resident Current/Future Occupational Worker	Soil ingestion, dermal contact, and Inhalation	YES	Soil impacts are present within the 15 feet of surface (Ecology Point of Compliance).
	Inhalation of volatiles from impacted soil (indoor and outdoor air)	YES	Soil impacts may contain volatile contaminants, though sub-slab vapor sampling suggests that concentrations are less than screening levels established by Ecology.
	Leaching to ground water, followed by direct ingestion	NO	The results of site investigations confirm that the releases have resulted in impacts to ground water beneath the site. However, this CSM considers leaching to ground water for the residential receptor incomplete based on empirical demonstration (see Section 5.4.4).
Current/Future Construction and Excavation Worker	Direct ingestion, inhalation of volatiles and dermal contact with soil	YES	However, under current land use, the potential for incidental ingestion, inhalation, and dermal contact with contaminated soils is interpreted to be generally restricted to limited-duration construction projects performed in conjunction with utility trench work or future construction in the future.
Ground Water			
Current/Future Occupational Worker	Ingestion, and Inhalation from tap water	YES	Though no drinking water wells are present onsite or on adjoining sites, CSM presumes that shallow ground water is used for drinking water.
	Inhalation of volatiles (indoor or outdoor air)	YES	Ground water is impacted with low-level hazardous volatile constituents, though sub-slab vapor sampling suggests that resulting indoor air, and by inference outdoor air, concentrations, are less than CULs.
Current/Future Construction Worker	Direct contact	YES	Ground water impacts are within the depths that a construction worker is likely to encounter
Current/Future Excavation Worker	GW in an excavation	YES	Excavation workers may encounter impacted ground water at depth during utility work or excavation for a basement.

5.4.4 Further Evaluation of the Leaching Pathway (Empirical Demonstration of Leaching Potential)

As Ecology allows in WAC 173-340-747 (3)(f), ground water data may provide empirical evidence that the leaching to ground water exposure pathway is protective of the MTCA Method A ground water cleanup level such that

- Ground water currently meets CULs
- Soil not likely to impact ground water (soil contamination is in the saturated zone), and
- Soil conditions won't change to increase leaching.

The results of four quarters of ground water monitoring and sampling has demonstrated that a limited amount of leaching of residual contaminants in soil is occurring. However, resulting ground water concentrations have not exceeded MTCA Method A ground water cleanup levels during the four quarterly sampling events (except 1-naphthalene, see further evaluation of 1-methylnaphthalene in Section 5.8.2).

Soil is not likely to impact ground water as suggested by soil and ground water data collected from release areas at the north property boundary and SE property boundary where soil impacts are in direct contact with, or just above the ground water table but have not resulted in impacts to ground water (i.e., ES' soil samples #3, #7 and #8 at SB2 and SB4 in the north property boundary area, and samples EX-N-4, EX-BS-6, and EB01/9 in the SE corner of the property).

ENW concludes that existing data empirically demonstrates that residual soil impacts are protective of ground water via leaching. Therefore, this CSM considers leaching as an **INCOMPLETE** pathway at the site.

5.5 Proposed Cleanup Standards

Presumed exposure scenario cleanup levels are based on estimated of the reasonable maximum exposure expected to occur under both current and future site conditions. Ecology has determined that residential land use is generally the site use requiring the most protective cleanup levels and that exposure to hazardous substances under residential land use conditions represents the reasonable maximum exposure scenario. Unless a site qualifies for use of an industrial soil cleanup level under WAC 173-340-74, soil cleanup levels shall use this presumed exposure scenario.

Cleanup Levels – MTCA Method A. Under WAC 173 340 704, MTCA Method A soil CULs may be used to establish cleanup levels at sites that have few hazardous substances, sites undergoing a routine cleanup action as defined in WAC 173 340 200, or sites “where numerical standards are available in this chapter or applicable state and federal laws for all indicator hazardous substances in the media for which the Method A cleanup level is being used.” Additionally, concentrations cannot result in significant adverse effects on the protection and propagation of terrestrial ecological receptors.

The site qualifies as a “routine cleanup” based on the following observations:

- Contaminants of concern identified at the site are related to one source of contamination (i.e., petroleum release from an underground tank system).
- The majority of the cleanup of site contaminants was accomplished by excavation.
- Site contaminants in soil and groundwater are delineated and do not extend off-site.

- The areas of residual soil and groundwater impacts are limited in volume.
- The site qualifies for an exclusion from conducting a simplified or site-specific terrestrial ecological evaluation.

Cleanup Levels – MTCA Method B. Under WAC 173-340-705, MTCA Method B provides cleanup levels using risk assessment equations developed for various exposure pathways, while considering for other applicable standards specified by state and federal laws.

Laboratory results of residual soil concentrations are compared to the Standard Method B soil cleanup levels (developed using generic default assumptions and procedures) Since the leaching pathway has been empirically demonstrated to be protective, the Method B soil CUL for direct contact is used where the MTCA Method A soil cleanup level is based on protection of ground water.

Cleanup Levels for Total Petroleum Hydrocarbons – MTCA Method B. The MTCA Cleanup regulation allows the use of site-specific petroleum composition to calculate site-specific Method B TPH cleanup levels. Under this method, petroleum sample are analyzed via methods EPH and VPH for petroleum fraction. The concentrations of several specific chemicals and toxicity information for the fractions and the specific chemicals is used to determine appropriate cleanup level for the TPH mixture as a whole.

ENW has selected the MTCA Method B approach to calculate a site-specific cleanup level for TPH. This approach was followed after thoroughly investigating site conditions, including the volume and location of residual soil impacts. Samples collected for the purpose of determining TPH fractions were collected from the highest TPH concentrations (residual sources) at the site so that an estimate of the contaminated soil volume could be made.

Based on the estimated volume of residual soil impacts (less than 100 cubic yards), and conversations with Ecology, ENW collected one sample (sample EB01/9) from a zone of residual soil impacts representative of the type of contaminants released (immediately adjacent to former release areas at the former Texaco facility). The sample was collected and analyzed for EPH/VPH analysis to determine the petroleum mixture released at the site. In addition to EPH/VPH fractions, the following input (generic) parameters were entered into Ecology's MTCA TPH 11.1 Workbook tool.

Total soil porosity:	43 unitless (default)
Volumetric Water Content:	0.3 unitless (default)
Volumetric air constant:	0.13 unitless (default)
Soil bulk density:	1.5 kg/L
Fraction organic Carbon	0.309 unitless
Dilution Factor:	20 unitless (default)
Target TPH GW Conc.	500 µg/L (Method A per Table 720-1)

Based on the results, the most stringent cleanup concentration between the direct contact and leaching human exposure pathways were selected. Before using the result as the TPH cleanup level for the site, the TPH soil cleanup level was adjusted downward to the residual saturation maximum allowed screening concentrations in Table 8.8 of Ecology's Petroleum guidance (appropriate to the product type present at the site (primarily middle distillate and heavy oils). A copy of the output of the MTCA TPH 11.1 workbook results is provided as Appendix C.

The model calculated an acceptable direct contact CUL of 1,706 mg/Kg. Given the composition of TPH at the site, the model-calculated concentration of TPH in soil that is protective of the 500 µg/L ground water cleanup level is greater than 100% non-aqueous phase liquid (NAPL) saturation in soil, so the model defaulted to the NAPL saturation of 2,000 mg/Kg.

5.6 Initial Evaluation of COPCs to Applicable MTCA Cleanup Levels

Residual Soil. COPCs in soil were evaluated by comparing the highest soil analytical results of residual soil impacts to the selected soil cleanup level. “Worse-case” soil results representing all remaining residual soil impacts associated with on-site releases are summarized on Table 7. *Releases that have migrated onto the subject property from the SMI Inc. Trust site are excluded as these impacts are presumably being evaluated under a different cleanup effort.*

Evaluation of soil sample results from soil samples representing residual soil conditions indicate the following:

- The maximum concentration of DRO, RRO, and carcinogenic polynuclear aromatic hydrocarbons (cPAHs [calculated benzo(a)pyrene toxic equivalent value]) exceed their respective cleanup levels, based on direct contact exposure. Therefore, DRO, RRO and benzo(a)pyrene (TEQ), should be considered soil COPCs for the site.

Residual Ground Water. COPCs in ground water were evaluated by comparing the highest concentrations of COPC in ground water to the MTCA Method A or B ground water cleanup levels. “Worse-case” ground water results representing all remaining residual soil impacts associated with on-site releases are summarized on Table 8.

Evaluation of ground water sample results from ground water samples representing residual conditions indicate the following:

- The maximum concentration of 1-methylnaphthalene exceeded its respective cleanup level. Therefore, 1-methylnaphthalene should be considered a ground water COPC for the site.

5.7 Further Exposure Assessment for COPCs

Based on laboratory analysis of soil and ground water samples collected beneath the site, soil COPCs may present a potential risk to site receptors via the direct contact exposure pathway. In addition, ground water COPCs may present a potential risk via ingestion of potable ground water. Therefore, further evaluation of each of the COPCs and exposure pathways is presented below.

5.7.1 Assessment of Soil via Direct Contact Exposure – DRO and RRO

Since the DRO and RRO results exceeded the CUL by direct comparison, ENW performed a statistical evaluation of compliance sampling data. Under MTCA there are three parts to demonstrating compliance through statistical evaluation:

- The upper 95th percentile confidence limit on the true mean concentration at the site must be less than the soil cleanup level
- Less than 10 percent of the samples can exceed the soil cleanup level
- No single sample can be greater than two times the soil cleanup level.

ENW used EPA’s ProUCL software package (ProUCL version 5.1) to evaluate the residual concentrations of DRO and RRO in soil. Data from the SMI Inc Trust were not included in the analysis (samples GSB-3-5.5, B4-5, 11-6-8, 9-6-14, 10-6-16, SB1, SB2, SB3, SB4, and 13-8-19).

As noted in Ecology’s petroleum guidance document, the true mean is not the average of the samples. Rather it is the average value that would be obtained if the entire contaminated soil volume could be analyzed. Because it is impractical to analyze the entire soil mass, the true mean is estimated using the sample data and statistical methods. To better approximate the true mean value, ENW conservatively entered the detection limit for non-detect results. Where DRO and RRO detection limits in the same sample differed, the higher of the two detection limits were used. When only one of the two constituent was detected in a sample, the detection limit for the non-detect constituent was not added to the detected results as this could skew the data.

Results of the statistical analysis are presented on Table 5-3. A copy of the ProUCL input data and model results are included for reference in Appendix D.

Table 5-3. Summary Statistics – DRO + RRO 95% UCL Calculations

No. Observations	No. Detects	No. Distinct Detects	Min Detected	Max Detectd	% Observations > CUL	No. Observations > 2x CUL	Distribution Type	95% Camma Approximate KM-UCL
68	27	27	11.86	2644	3%	0	Gamma (KM)	460.6

The statistical analysis of the combined dataset of DRO and RRO (excluding SMI Inc Trust release area) produced the following results:

- 95% UCL = 460.6
- % Observations > CUL = 3%
- No. Observations > 2x CUL.

This analysis demonstrates that the detected concentrations of DRO and RRO in soil are compliant with the soil cleanup level of 2000 mg/Kg.

5.7.2 Assessment of Soil via Direct Contact Exposure – cPAHs

cPAHs were indicated in soil above the MTCA Method A CUL in two previous samples EX-BS-6 and EX4-E-3 collected in 1997. During ENW’s investigations, these areas were re-assessed by installation of borings EB01 and EB02 and collecting samples from both zones of residual soil impact. Results of soil samples from EB01 and EB02 show that cPAHs in soil were either not detected or were well below their respective MTCA Method A cleanup level.

Based on recent laboratory analysis, cPAHs appear to be compliant by direct comparison with the soil cleanup levels established for the site and do not appear to pose any risk via the direct contact pathway.

5.7.3 Further Assessment of Ingestion of Ground Water Exposure Pathway

Laboratory analysis of groundwater samples collected from Well #11 indicate that dissolved 1-methylnaphthalene was present in groundwater during two quarterly sampling events in Well #11 at concentrations exceeding the MTCA Method A ground water cleanup levels for unrestricted land use.

The results of four quarters of ground water monitoring and sampling has delineated the extent of ground water impacts to a small area of the site beneath the eastern (upgradient) site boundary (Well #11

beneath the former Vanity Dry Cleaners). Based on the results from downgradient monitoring wells, the groundwater plume is limited in extent and does not extend offsite.

1-methylnaphthalene is not typically associated with dry-cleaning solvents. Rather it is more likely associated with a diesel product and related to DRO detections in Well #11 during four of the last five quarterly sampling events. DRO did not exceed the MTCA Method A ground water cleanup level during any of the sampling events. Results of the highest 1-methylnaphthalene detection fell outside acceptable quality control limits and were flagged as an estimated concentration. The next highest concentration (1.8 µg/L) was only marginally above the MTCA Method A ground water cleanup level of 1.5 µg/L.

1-methylnaphthalene is not volatile nor is it present at concentrations significantly above the CUL. Thus, 1-methylnaphthalene does not pose a threat of vapor intrusion into future buildings.

5.7.4 Assessment of Vapor Intrusion into Buildings

The results of ENW's Tier I Vapor Screening indicated the presence of benzene in sub-slab vapors beneath the existing commercial building. Benzene exceeded the MTCA Method B screening level for soil gas in Table B-1 of Ecology's VI guidance document. Since the screening levels were not exceeded by more than 100 times, the risk to indoor air quality was completed by evaluating indoor and outdoor air sample results by others to determine if benzene in soil gas could result in unacceptable indoor air inhalation risk to site occupants. Based on this assessment, benzene concentrations in indoor air approximate those in outdoor ambient air and do not suggest enrichment in the indoor air space. Therefore, benzene does not pose an unacceptable human health risk to current or future site receptors.

5.8 Terrestrial Ecological Evaluation (TEE)

Ecology requires an investigation of the current and potential threats to plants and animals that may be posed by hazardous substances under WAC 173-340-7490. The purpose of a Terrestrial Ecological Evaluation (TEE) is to protect land-based plants and animals from exposure to contaminated soil.

The first step in the TEE process is to determine if the site (area where contaminants have come to be located) has the potential to pose a risk to wildlife or plants or affect the soil biota at the site. Certain site circumstances provide an exclusion from any further ecological evaluation at a site because the contaminants either have no pathway to harm the plants or animals, e.g., they are under buildings or deep in the ground; or there is no habitat where plants or animals live near the contamination; or finally, the contamination does not occur at concentrations higher than is found naturally occurring in the area.

It can be demonstrated that:

- There is insufficient habitat surrounding the site to endanger ecological receptors. Specifically, there is less than 1.5 acres of contiguous undeveloped land on or within 500 feet of any area of the site.

Based on the above observations, and the limited volume of impacted soil remaining in-place, the site conditions provide sufficient protection to eliminate any direct contact exposure pathway to plants and wildlife.

A completed copy of the Voluntary Cleanup Program TEE Form is included in Appendix E.

6.0 Summary and Conclusions

Based on the findings of investigations completed, the following summary and conclusions are provided:

- ENWs investigation activities were preceded by numerous phases of previous investigations and cleanup efforts at the subject site. Previous investigations confirmed a release of petroleum to the environment and Ecology was notified of the release in the early 1990s. Emergency/interim actions were implemented to address soil and ground water impacts and an adequate site characterization was completed. The remedial action utilized source removal and contaminated soil removal to the greatest extent possible.
- Between January and May 2022, ENW completed further site characterization activities in accordance with an Ecology-approved work plan. The objective of these tasks was to complete site characterize activities and conduct compliance monitoring in support of closure under Ecology's VCP. Investigation activities included completion of a Tier I vapor intrusion investigation, completion of a subsurface soil and ground water investigation in areas of residual impacts, and compliance ground water sampling.
- Soil borings were installed within two areas of residual impacted soils, one in the SE corner of the site and one in the vicinity of a former used oil tank in the western portion of the site. Soil samples collected from the borings to re-characterize the nature of residual impacts found petroleum impacts at concentrations exceeding MTCA Method A soil cleanup levels. To assess the extent of contamination, additional soil samples were collected. Laboratory analysis of delineation samples did not detect petroleum hydrocarbons exceeding MTCA Method A soil Cleanup Levels. During this phase of investigation, reconnaissance ground water samples were collected from temporary wells and analyzed for petroleum constituents detected in soil. Reconnaissance ground water samples did not contain dissolved COIs above the MTCA Method A ground water cleanup level. One of the borings was completed as a permanent monitoring well to improve understanding of ground-water flow conditions and provide for compliance monitoring at the SE corner of the site.
- Between January 26 and October 5, 2022, ENW compliance ground-water samples from 14 ground water monitoring wells at the subject property, including the newly installed well at the SE corner of the property (EMW01) and a legacy monitoring well in the southwest corner (down gradient) portion of the site (MW8). Ground water samples were selectively analyzed for petroleum hydrocarbons, gasoline-related VOCs, and PAHs. Additionally, samples from monitoring wells near the offsite SMI Inc. Trust site and former on-site dry cleaners were analyzed for HVOCs and metals.
- Results of up to four consecutive quarters of ground water monitoring and sampling has demonstrated that ground water COIs were below MTCA Method A ground water cleanup levels except for one PAH constituent (1-methylnaphthalene) identified in a well located beneath the former dry-cleaning facility.
- ENW updated a CSM for the site. The CSM identifies the current understanding of the magnitude and extent of residual impacts, evaluates land and ground water use, and identifies complete exposure pathways and reasonably likely receptors that could potentially be exposed to residual soil and ground water contaminants. Current soil and ground water conditions support an

empirical demonstration that has determined that the leaching to ground water pathway is incomplete.

- Cleanup levels were established for soil and ground water and a comparison of residual contaminant concentrations were evaluated. Soil cleanup levels are a combination of:
 - MTCA Method B calculated TPH cleanup level for soil of 2,000 mg/Kg
 - MTCA Method A cleanup level for ground water.

Since the leaching pathway was deemed incomplete, cleanup levels were evaluated for the direct contact exposure pathway using appropriate Method A and Standard Method B cleanup levels. Ground water cleanup levels were established as the most stringent of Method A and Method B ground water cleanup levels.

Based on an analysis of soil and ground water samples collected from the site, DRO, RRO and cPAHs were retained as COPCs in soil and 1-methylnaphthalene was retained as the only potential COPC in ground water.

- Since DRO and RRO did not meet cleanup levels by direct comparison, DRO and RRO data was further evaluated using a three-point statistical analysis. Results of the analysis determined that the “worse-case DRO and RRO concentrations are compliant with the established soil CUL of 2000 mg/Kg.
- “Worse-case” cPAH concentrations were detected back in 1997 in two isolated pockets near the SE corner of the site at previous samples EX-BS-6 and EX4-E-3. Recent sampling of this area (EB01 and EB02) shows that cPAHs in soil in these areas were either not detected or were well below their respective MTCA Method A cleanup level. Based on this observation, cPAHs in the “worse-case” soil impacts were eliminated as a COPC for soil at the site. No other cPAH concentrations were reported above MTCA Method A soil cleanup levels.
- As part of the site characterization activities, ENW further evaluated results from previous investigations in the remaining areas of potential concern. Based on this review, ENW concludes the former Vanity Cleaners and Proposed Playground Area have been adequately assessed and that soil and ground water contaminants are in compliance with the established MTCA Method A and Method B cleanup levels.
- The results of samples in the vicinity of the SMI Inc. Trust site indicate that contaminants have migrated onto the site. The impacts to soil and ground water in samples collected immediately down gradient of the SMI Inc. Trust site exceed soil and ground water cleanup levels for DRO and RRO. These impacts have been delineated laterally and vertically and appear isolated. Since contaminants appear to originate off-site, and the cleanup status of the SMI Inc. Trust site is ongoing, Ecology has stated that impacts at the north property boundary will likely be addressed under a separate remedial investigation.
- As required under MTCA, ENW evaluated the vapor intrusion pathway and potential impacts to ecological receptors.
 - Results of the Tier I Vapor Screening found no significant risk in the areas of known residual volatile constituents in soil. Therefore, the vapor intrusion has been eliminated as a complete exposure pathway at the site.

- A TEE was completed for the site. The TEE documents an exclusion from further evaluation using the criteria in WAC 173-340-7491.
- The site meets the eligibility criteria and standardized cleanup methods of MTCA's Model Remedies for Sites with Petroleum Contaminated Soils. Specifically, that a release of petroleum has been confirmed and Ecology was notified of the release and petroleum impacts were addressed largely by source and soil removal. Adequate characterization of the site is completed and following remediation of petroleum impacts, confirmation testing documented that the Method B direct contact cleanup levels have been met and the vapor intrusion pathway has been evaluated and adequately addressed. The site investigations specifically meet the provisions of Ecology's Model Remedy No. 4 in which no disproportionate cost analysis or feasibility study is recommended, and an institutional control will not be necessary.

7.0 Recommendations

Based on the results of the investigative and remedial measures completed at the site, ENW recommends completion of required data entry into Ecology's Environmental Information Management database, and submittal of this report to Ecology for review and a consideration for no further action under the provisions of Ecology's Model Remedy No. 4, including lifting the existing institutional controls at the site.

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

8.0 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 - Cumulative Summary of Analytical Data, Soil

Constituent of Interest	Sample ID	Date Sampled	Depth Sampled (feet)	Location	Sampled by:	EX1-E3	EX1-W3	EX2-W1.5	EX2-E2	EX4-B-1	EX5-S-3	EX6-E-3	EX7-N-3	EX8-W-3	EX5-NE-3	EX5-NW-3	EX5-NW2-3	EX5-NE1-3	EX5-NE1-3 Dup	EX5-NE2-3	EX5-BE1-3	EX5-SE2-3	EX5-SE2-3 Dup	
						9/11/1996	9/11/1996	9/11/1996	9/11/1996	9/12/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996
Volatile Organic Constituents (VOCs)																								
Benzene	c, v			East wall of excavation 1		mg/kg (ppm)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	0.11	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)
Ethylene dibromide (EDB)	c, v			East wall of excavation 3		mg/kg (ppm)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)
Dichloroethane 1,2-	c, v			East wall of excavation 3		mg/kg (ppm)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)
Heptane n-	nc, v			East wall of excavation 3		mg/kg (ppm)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)
Methyl tert-butyl ether	nc, v			East wall of excavation 3		mg/kg (ppm)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)
Naphthalene	c, v			East wall of excavation 3		mg/kg (ppm)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)
Cumene	nc, v			East wall of excavation 3		mg/kg (ppm)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)
Propylbenzene n-	nc, v			East wall of excavation 3		mg/kg (ppm)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)
Toluene	nc, v			East wall of excavation 3		mg/kg (ppm)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)
Triethylbenzene 1,2,4-	nc, v			East wall of excavation 3		mg/kg (ppm)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)
Triethylbenzene 1,3,5-	nc, v			East wall of excavation 3		mg/kg (ppm)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)
Vinyl chloride	c, v			East wall of excavation 3		mg/kg (ppm)	<0.1 (ND)	<0.1 (ND)	<0.138	<0.1 (ND)	<0.05 (ND)	<0.05 (ND)	1.42	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)
Xylenes	nc, v			East wall of excavation 3		mg/kg (ppm)	<0.1 (ND)	<0.1 (ND)	0.138	<0.1 (ND)	<0.05 (ND)	<0.05 (ND)	1.42	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)

Table 1 - Cumulative Summary of Analytical Data, Soil

Constituent of Interest	Sample ID	Date Sampled	Depth Sampled (feet)	Location	Sampled by:	EX1-E3	EX1-W-3	EX2-W-1.5	EX2-E-2	EX4-B-1	EX5-S-3	EX6-E-3	EX6-N-3	EX6-W-3	EX6-NE-3	EX6-NW-3	EX6-NW2-3	EX6-NE1-3	EX6-NE1-3 Dup	EX6-NE2-3	EX6-BE1-3	EX6-SE2-3	EX6-SE2-3 Dup
						9/11/1996	9/11/1996	9/11/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996
						Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions
Constituent of Interest						East wall of excavation 1	West wall of excavation 1	West wall of excavation 2	East wall of excavation 3	Bottom of excavation 4	South wall of southwest lobe of excavation 5	East wall of southwest lobe of excavation 5	North wall of southwest lobe of excavation 5	West wall of southwest lobe of excavation 5	NE area of southwest lobe of excavation 5	NW wall of excavation 5	NW wall of excavation 5	NE wall of excavation 5	NE wall of excavation 5	east wall of southeast lobe of excavation 5	west wall of southeast lobe of excavation 5		
Polyaromatic Hydrocarbons						mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)
Benzo[a]anthracene	C, nr																						
Benzo[b]fluoranthene	C, nr																						
Benzo[k]fluoranthene	C, nr																						
Chrysene	C, nr																						
Dibenz[a,h]anthracene	C, nr																						
Indeno[1,2,3-cd]pyrene	C, nr																						
Naphthalene	C, nr																						
Methyl naphthalene, 1-	DC, Y																						
Phenyl naphthalene, 2-	DC, Y																						
Pyrene	DC, nr																						
Benzo[b]fluoranthene, TCO																							
Metals																							
Lead	NA, nr																						
Total Petroleum Hydrocarbons																							
TPH, gasoline range organics, benzene present	DC, Y					<5 (ND)	<5 (ND)	18.2	6.93	<5 (ND)	12	37	16	35	840	<10 (ND)	<10 (ND)	<10 (ND)	<10 (ND)	<10 (ND)	<10 (ND)	<10 (ND)	<10 (ND)
TPH, diesel range organics	DC, nr					<10 (ND)	43.7	53.6	285	27.5	24	15	25.4	1.6	<20 (ND)	<20 (ND)	<20 (ND)	<20 (ND)	<20 (ND)	<20 (ND)	<20 (ND)	<20 (ND)	
TPH, heavy oils	DC, nr					27.7	209	348	1020	163	1120	1010	1680	1680	<40 (ND)	<40 (ND)	<40 (ND)	<40 (ND)	<40 (ND)	<40 (ND)	<40 (ND)	<40 (ND)	

Table 1 - Cumulative Summary of Analytical Data, Soil

Sample ID	Sample Date	Depth Sampled (feet)	Location	Constituent of Interest	Notes	EXH-E3	EX1-W-3	EX2-W-1.5	EX3-E-2	EX4-B-1	EX5-S-3	EX6-E-3	EX7-N-3	EX8-W-3	EX9-NE-3	EX10-NW-3	EX11-NW-3	EX12-NW-3	EX13-NE-1.3	EX14-NE-1.3 Dup	EX15-NE-3	EX16-BE-1.3	EX17-SE-2.3	EX18-SE-2.3 Dup	
						9/11/1996	9/11/1996	9/11/1996	9/17/1996	9/12/1996	9/7/1996	9/7/1996	9/7/1996	9/17/1996	9/18/1996	9/18/1996	9/18/1996	9/18/1996	9/18/1996	9/18/1996	9/18/1996	9/18/1996	9/18/1996	9/18/1996	
						3	3	1.5	2	1	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
						Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	
						East wall of excavation 1	West wall of excavation 1	West wall of excavation 2	East wall of excavation 3	Bottom of excavation 4	South wall of southwest lobe of excavation 3	East wall of southwest lobe of excavation 3	North wall of southwest lobe of excavation 3	West wall of southwest lobe of excavation 3	NE area of southwest lobe of excavation 3	NW wall of excavation 5	NW wall of excavation 5	NW wall of excavation 5	NE wall of excavation 5	NE wall of excavation 5	east wall of southeast lobe of excavation 3	west wall of southeast lobe of excavation 5		east wall of southeast lobe of excavation 5	
						mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)

Notes:

UAI - Universal Applications
 Partner - Partner Engineering
 NE = not established.
 ND = not detected, based on laboratory method reporting limits.

(*) indicates analyte not detected, but detection limit is above screening concentration.
 < = not detected at or above the method reporting limit shown.
 c = carcinogenic
 nc = noncarcinogenic
 n = nonvolatile

GR0 = gasoline-range organics.
 DR0 = diesel-range organics.
 RRO = residual-range organics.
 BBO = boiling-range organics.
 BBO = boiling-range organics.

Bolded concentrations exceed calculated site-specific MPCA Method B Cleanup levels.

(*) Based on benzene (b) by mass.

B = analyte was also found in the blank sample
 J = the identification of the analyte is acceptable; the reported value is an estimate
 L = the analyte was also found in the blank sample
 B = the analyte indicated was also found in the blank sample

b = quantified as diesel. The sample contained components that eluted in the diesel range, but the chromatogram did not match the typical diesel fingerprint.

d = unspecified diesel. The sample contained components that eluted in the diesel range, but the chromatogram did not match the typical diesel fingerprint.

g = the diesel range organics present are due to hydrocarbons eluting primarily in the gasoline range.

f = the chromatogram for this sample does not resemble a typical gasoline pattern
 g = the hydrocarbon concentration result in this sample is partially due to one or more individual peaks eluting in the diesel/heavy oil range. Quantitation by EPA method is not possible.
 h = the diesel range organics present are due to hydrocarbons eluting primarily in the heavy oil range.

k = unspecified kerosene. This sample's hydrocarbon components do not match the diesel fingerprint, but the chromatogram did not match the typical gas fingerprint. The result is primarily due to the beginning of oil, which elutes in the diesel region.

k = this result is primarily due to the beginning of oil, which elutes in the diesel region
 l = the sample chromatographic pattern does not resemble the fuel standard used for quantification. A fuel fingerprint is advised.

i = the hydrocarbon concentration result in this sample is partially due to an individual peak eluting in the diesel/heavy oil range.
 j = the sample appears to contain volatile gasoline range organics
 v = this comes from a single peak which elutes between C18 and C20
 ** Cleanup level of carcinogenic PAHs based on the quotient of first Toxicity Equivalency with respect to Benzo(a)pyrene

ES sample designation: 1-2-17: sample number-boring/well number-depth
 TEF = Toxicity Equivalency Factor per Ecology
 TEQ = Toxicity Equivalency Quotient

1 = 1,2,3,4,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60
 PAHs (gPAHs) using 1 TEF as specified in MPCA Method B.

Table 1 - Cumulative Summary of Analytical Data, Soil

Constituent of Interest	Sample ID	Date Sampled (feet)	Depth Sampled (feet)	Sampled by:	Location	EX6-E2-3		EX6-2-W		EX6-2-W		SP1-1		SP1-2		SP1-317		SP1-100396		SP2-1		SP2-917		SP3-100496		SP4-1		T1-1-3		T2-1-3		T2-1-3 Dup		T3-1-3					
						mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)
Constituent of Interest																																							
Volatile Organic Constituents (VOCs)																																							
Benzene																																							
Ethylene dibromide (EDB)																																							
Dichloroethane 1,2-																																							
Heptane																																							
Methyl tert-butyl ether																																							
Naphthalene																																							
Cumene																																							
Propylbenzene																																							
Toluene																																							
Trimethylbenzene 1,2,4-																																							
Trimethylbenzene 1,3,5-																																							
Vinyl chloride																																							
Xylenes																																							

Table 1 - Cumulative Summary of Analytical Data, Soil

Constituent of Interest	Sample ID	Date Sampled	Depth Sampled (feet)	EXG-2-W	EXG-2-W	EXG-2-W	SP-1-1	SP-1-2	SP-1-3/17	SP-1-10/3/96	SP-2-1	SP-2-9/17	SP-3-10/4/96	SP-3-10/4/96	SP-4-1	T1-1-3	T1-1-3 Dup	T2-1-3	T2-1-3 Dup	T3-1-3	
																					9/18/1996
Polyaromatic Hydrocarbons																					
Benzofluoranthene																					
Benzofluoranthene																					
Benzofluoranthene																					
Chrysene																					
Dibenz[a,h]anthracene																					
Benzo[1,2,3-cd]pyrene																					
Naphthalene																					
Methyl naphthalene, 1-																					
Pyrene																					
Benzobicyclo[2.2.1]hept-2-ene																					
Metals																					
Lead																					
Total Petroleum Hydrocarbons																					
TPH, gasoline range organics, benzene present																					
TPH, diesel range organics																					
TPH, heavy oils																					

Table 1 - Cumulative Summary of Analytical Data, Soil

Sample ID	Sample Date	Depth Sampled (feet)	Location	SP1-1	SP1-2	SP1-3/17	SP1-10/396	SP2-1	SP2-9/17	SP2-10/496	SP3-1	SP3-10/496	SP4-1	T1-1-3	T1-1-3 Dup	T2-1-3	T2-1-3 Dup	T3-1-3
EXG-E2-3	9/18/1996	3	east wall of excavation 5	9/10/1996	9/10/1996	9/17/1996	10/3/1996	9/17/1996	10/4/1996	9/17/1996	9/17/1996	10/4/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996
EXG-2-W	9/18/1996	2	west wall of excavation 6	9/10/1996	9/10/1996	9/17/1996	10/3/1996	9/17/1996	10/4/1996	9/17/1996	9/17/1996	10/4/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996
EXG-2-W***	9/18/1996	2	west wall of excavation 6	9/10/1996	9/10/1996	9/17/1996	10/3/1996	9/17/1996	10/4/1996	9/17/1996	9/17/1996	10/4/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996
SP1-1	9/10/1996	1	west side of soil pile 1	9/10/1996	9/10/1996	9/17/1996	10/3/1996	9/17/1996	10/4/1996	9/17/1996	9/17/1996	10/4/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996
SP1-2	9/10/1996	1	east side of soil pile 1	9/10/1996	9/10/1996	9/17/1996	10/3/1996	9/17/1996	10/4/1996	9/17/1996	9/17/1996	10/4/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996
SP1-3/17	9/17/1996		soil pile 1	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996
SP1-10/396	10/3/1996		soil pile 1	10/3/1996	10/3/1996	10/3/1996	10/3/1996	10/3/1996	10/3/1996	10/3/1996	10/3/1996	10/3/1996	10/3/1996	10/3/1996	10/3/1996	10/3/1996	10/3/1996	10/3/1996
SP2-1	9/17/1996		soil pile 2	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996
SP2-9/17	9/17/1996		soil pile 2	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996
SP2-10/496	10/4/1996		soil pile 2	10/4/1996	10/4/1996	10/4/1996	10/4/1996	10/4/1996	10/4/1996	10/4/1996	10/4/1996	10/4/1996	10/4/1996	10/4/1996	10/4/1996	10/4/1996	10/4/1996	10/4/1996
SP3-1	9/17/1996		soil pile 3	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996
SP3-10/496	10/4/1996		soil pile 3	10/4/1996	10/4/1996	10/4/1996	10/4/1996	10/4/1996	10/4/1996	10/4/1996	10/4/1996	10/4/1996	10/4/1996	10/4/1996	10/4/1996	10/4/1996	10/4/1996	10/4/1996
SP4-1	9/17/1996		soil pile 4	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996
T1-1-3	9/17/1996	3	north wall of excavation 5	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996
T1-1-3 Dup	9/17/1996	3	north wall of excavation 5	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996
T2-1-3	9/17/1996	3	northwest wall of excavation 5	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996
T2-1-3 Dup	9/17/1996	3	northwest wall of excavation 5	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996
T3-1-3	9/17/1996	3	east side of excavation 5	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996
T3-1-3 Dup	9/17/1996	3	east side of excavation 5	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996	9/17/1996

Constituent of Interest

Note

Units

*** Unlabeled Analytes

PAHs = Partner Engineering and Consulting, Inc.

ND = not detected, due to laboratory method reporting limits

NE = not established.

(*) indicates analyte not detected, but detection limit is above screening concentration. Analyte is not applicable.

< = not detected at or above the method reporting limit shown.

c = carcinogenic

nc = noncarcinogenic

nr = nonreportable

GR0 = gasoline-range organics.

DR0 = diesel-range organics.

RRO = residual-range organics.

Bolded concentrations exceed calculated site-specific MCA Method B Cleanup levels.

(*) based on benz(a)pyrene

J = the identification of the analyte is acceptable; the reported value is an estimate

K = the analyte was subsequently removed by excavation and no longer represents residual conditions.

B = the analyte indicated was also found in the blank sample

b = quantified as diesel. The sample contained components that eluted in the diesel range, but the chromatogram did not match the typical diesel fingerprint

d = unspecified diesel. The sample contained components that eluted in the diesel range, but the chromatogram did not match the typical diesel fingerprint

o = the diesel range organics present are due to hydrocarbons eluting primarily in the specified diesel range

f = the chromatogram for this sample does not resemble a typical gasoline pattern

g = the hydrocarbon concentration result in this sample is partially due to one or more individual peaks eluting in the diesel/range of range. Quantitation by EPA method is not possible

h = the diesel range organics present are due to hydrocarbons eluting primarily in the heavy oil range

k = unspecified diesel. The sample contained components that eluted in the diesel range, but the chromatogram did not match the typical diesel fingerprint. The result is primarily due to the beginning of oil, which elutes in the diesel region

l = this result is primarily due to the beginning of oil, which elutes in the diesel region

i = the sample chromatographic pattern does not resemble the fuel standard used for quantification. A fuel fingerprint is advised

m = the hydrocarbon concentration result in this sample is partially due to an individual peak eluting in the diesel range

n = the sample appears to contain volatile gasoline range organics

v = this comes from a single peak which elutes between C18 and C20

** Cleanup level of carcinogenic PAHs based on the quotient of first Toxicity Equivalency with respect to Benzo(a)pyrene

ES sample designation: 1-2-17: sample number-boring/well number-depth

TEF = Toxicity Equivalency Factor per EPA

TEF = Toxicity Equivalency Factor per Ecology

1 = 1,2,3,4,6,7,8,9,10,11,12,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60

PAHs (gPAHs) using TEF as quantification factor based on EPA

Table 1 - Cumulative Summary of Analytical Data, Soil

Sample ID	Sample Date	Depth Sampled (feet)	TS-2-2	TS-3-3	Backfill	S1-2	SS-2	SS-1	EXNW-4	SP-021297	EXNT-5	EXN5-5	EXS1-5	EXS2-5	EXS3-5	EXW-5	EXE-5
Location	Sampled by:	Location	TS-2-2	TS-3-3	Backfill	S1-2	SS-2	SS-1	EXNW-4	SP-021297	EXNT-5	EXN5-5	EXS1-5	EXS2-5	EXS3-5	EXW-5	EXE-5
Constituent of Interest	Unit	Location	TS-2-2	TS-3-3	Backfill	S1-2	SS-2	SS-1	EXNW-4	SP-021297	EXNT-5	EXN5-5	EXS1-5	EXS2-5	EXS3-5	EXW-5	EXE-5
Constituent of Interest	Unit	Location	TS-2-2	TS-3-3	Backfill	S1-2	SS-2	SS-1	EXNW-4	SP-021297	EXNT-5	EXN5-5	EXS1-5	EXS2-5	EXS3-5	EXW-5	EXE-5
Volatile Organic Constituents (VOCs)	mg/kg (ppm)	Location	TS-2-2	TS-3-3	Backfill	S1-2	SS-2	SS-1	EXNW-4	SP-021297	EXNT-5	EXN5-5	EXS1-5	EXS2-5	EXS3-5	EXW-5	EXE-5
Benzene	c, v	Location	1.34	<0.05 (ND)	---	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	0.243	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	0.0752
Ethylene dibromide (EDB)	c, v	Location	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Dichloroethane 1,2-	c, v	Location	9.98	<0.05 (ND)	---	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.1 (ND)	3.08	<0.05 (ND)	0.589	<0.05 (ND)	0.0865	0.0767	<0.05 (ND)	0.268
Heptane-	nc, v	Location	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Methyl tert-butyl ether	nc, v	Location	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Naphthalene	c, v	Location	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Cumene	nc, v	Location	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Propylbenzene-	nc, v	Location	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Toluene	nc, v	Location	5.22	<0.05 (ND)	---	<0.05 (ND)	<0.05 (ND)	<0.1 (ND)	<0.1 (ND)	3.25	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)	<0.05 (ND)
Trimethylbenzene 1,2,4-	nc, v	Location	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Trimethylbenzene 1,3,5-	nc, v	Location	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Vinyl chloride	c, v	Location	25.5	<0.05 (ND)	---	<0.1 (ND)	<0.1 (ND)	<0.1 (ND)	<0.1 (ND)	21.2	<0.1 (ND)	0.359	<0.1 (ND)	0.330	0.281	<0.1 (ND)	0.393
Xylenes	nc, v	Location	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

Table 1 - Cumulative Summary of Analytical Data, Soil

Constituent of Interest	Sample ID	Date Sampled (month)	Depth Sampled (feet)	Location	Sampled by:	TS-2-2	TS-3-3	Backfill	S1-2	S2-2	S3-1	EXNE-4	EXNW-4	SP-021297	EXNT-5	EXN2-5	EXN3-5	EXS1-5	EXS2-5	EXS3-5	EXW-5	EXE-5
Polyaromatic Hydrocarbons																						
Benzofluoranthene																						
Benzofluoranthene																						
Benzofluoranthene																						
Chrysene																						
Dibenz(a,h)anthracene																						
Benzo(1,2,3-cd)pyrene																						
Naphthalene																						
Methyl naphthalene 1:																						
Methyl naphthalene 2:																						
Pyrene																						
Benzobicyclo[2.2.1]hept-2-ene																						
Metals																						
Lead																						
Total Petroleum Hydrocarbons																						
TPH (excluding naphthalene, benzene present)																						
TPH (excluding naphthalene, benzene present)																						
TPH, heavy oils																						

Table 1 - Cumulative Summary of Analytical Data, Soil

Sample ID	Date Sampled	Depth Sampled (feet)	Location	Note	EX-E3	EX-N-1	EX-WN-1	EX-W5-5	EX-N-4	EX-N-4	EX-E-3	EX-E-3	EX-E-3	EX-S-5	EX-S-5	EX-BN-5	EX-B-4	GSB-1-7	GSB-2-5	GSB-3-5	GSB-4-3	BI-2	B-22			
					3/10/1997	3/10/1997	3/10/1997	3/10/1997	3/10/1997	3/10/1997	3/10/1997	3/10/1997	3/10/1997	3/10/1997	3/10/1997	3/10/1997	3/10/1997	3/10/1997	3/10/1997	3/10/1997	3/10/1997	3/10/1997	3/10/1997	3/10/1997	3/10/1997	3/10/1997
Constituent of Interest																										
Volatile Organic Constituents (VOCs)																										
Benzene																										
Ethylene dichloride (EDC)																										
Dichloroethane 1,2-																										
Ethylbenzene																										
Heptane																										
Methyl tert-butyl ether																										
Naphthalene																										
Octane																										
Propylbenzene																										
Toluene																										
Triethylbenzene 1,2,4-																										
Triethylbenzene 1,3,5-																										
Vinyl chloride																										
Xylenes																										

Table 1 - Cumulative Summary of Analytical Data, Soil

Sample ID	Date Sampled	Depth Sampled (feet)	Location	EX-E3	EX-N-4	EX-WN-4	EXWS-5	EXEN-4	EXES-5	EXBN-5	EXS-5	EX-E-3	EM-E-3	B-1-4	GSB-1-7	GSB-2-5	GSB-3-5	GSB-4-3	B-1-2	B-2-2
	3/10/1997	3	East wall of excavation 2	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions
	3/10/1997	4	Northern area of west wall of excavation 1B	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions
	3/10/1997	4	Northern area of west wall of excavation 1B	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions
	3/10/1997	5	Southern area of west wall of excavation 1B	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions
	3/10/1997	6	Southern area of floor of excavation 1B	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions
	3/10/1997	5	Northern area of floor of excavation 1B	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions
	3/10/1997	5	Southern area of floor of excavation 1B	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions
	3/10/1997	7	Former Dry Cleaners	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions
	10/29/2020	5	Former Dry Cleaners	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions
	10/29/2020	5.5	Central northern site boundary	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions
	10/29/2020	3	Northwest corner of property	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions
	2/18/2021	2	Central portion of proposed play area 2	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions
	2/18/2021	2	Central portion of proposed play area 3	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions	Environmental Resolutions

Consistent of highest

Note:

UAT/Unswat/Applebee

Partner = Partner Engineering

Operational, Inc.

NE = not established or above laboratory method reporting limits

(V) indicate analyte not detected, but detection limit is above screening concentration and not reported or not applicable

< = not detected at or above the method reporting limit shown.

mg/Kg = milligram per kilogram.

c = carcinogenic

nc = noncarcinogenic

nr = nonreportable

ni = noninhalable

GRO = gasoline-range organics.

DRO = diesel-range organics.

FRRO = residual-range organics.

Bolded concentrations exceed calculated site-specific MTC/MCA Method B Cleanup levels.

ni = not in list of dioxin/chlorinated dibenzofuran congeners

(*) Based on benzene (b)1/2/3/4

B = analyte was also found in the blank sample

J = the identification of the analyte is acceptable; the reported value is an estimate

U = the analyte was subsequently removed by excavation and no longer represents residual conditions.

B = the analyte indicated was also found in the blank sample

a = results from a reanalysis performed 10/11/99

b = quantified as diesel oil. The sample contained components that eluted in the diesel range, but the chromatogram did not match the typical diesel oil fingerprint.

c = specified as diesel. The sample contained components that eluted in the diesel range, but the chromatogram did not match the typical diesel fingerprint

h = the diesel range organics present are due to hydrocarbons eluting primarily in the petroleum range

f = the chromatogram for the sample does not resemble a typical gasoline pattern

g = the hydrocarbon concentration result in this sample is partially due to one or more individual peak eluting in the diesel/heavy oil range. Quantitation by EPA method 8210 is not applicable. The sample contained components that eluted in the diesel range organics present are due to hydrocarbons eluting primarily in the heavy oil range

h = specified as gas. The sample contained components that eluted in the gas range, but the chromatogram did not match the typical gas fingerprint. The result is primarily due to the beginning of oil, which elutes in the diesel region

k = the result is primarily due to the beginning of oil, which elutes in the diesel region

i = the sample chromatographic pattern does not resemble the fuel standard used for quantification. A fuel fingerprint is advised

l = the hydrocarbon concentration result in the sample is quantified due to an individual peak eluting in the diesel/heavy oil range. Quantitation by EPA method 8210 is not applicable. The sample contained components that eluted in the diesel range organics present are due to hydrocarbons eluting primarily in the diesel range

ll = this sample appears to contain volatile petroleum source organics

vi = this comes from a sample peak which elutes between C16 and C20

** Cleanup level of carcinogenic PAHs based on the quotient of first Toxicity Equivalency with respect to Benzo(a)pyrene

ES sample designation: 1-2-17: sample number-boring/well number-depth

TEF = Toxicity Equivalency Factor per Ecology

TEQ = Toxicity Equivalency Factor per Ecology

PAHs (OPAHs) Using IEFs in petroleum Meteorological

Table 1 - Cumulative Summary of Analytical Data, Soil

Sample ID	B5-5	B4-5	B5-5
Date Sampled	2/18/2021	2/18/2021	2/18/2021
Depth Sampled (feet)	5	5	5
Sampled by:	Partner	Partner	Partner
Location	Central portion of former dry cleaning facility	Central portion of north property boundary	Central portion of exterior area of proposed impacted lot
Constituent of Interest	Note	mg/kg (ppm)	mg/kg (ppm)
Volatile Organic Constituents (VOCs)			
Benzene	c, v -<0.000918 (ND)	<0.0117 (ND)	0.00143 J
Ethylene dibromide (EDB)	c, v -<0.00127 (ND)	<0.0162 (ND)	<0.00109 (ND)
Dichloroethane, 1,2-	c, v -<0.00127 (ND)	<0.0162 (ND)	<0.00109 (ND)
Ethylbenzene	nc, v 0.00387 J	0.0318 J	0.0024 J
Heptane	nc, v ---	---	---
Methyl tert-butyl ether	c, v -<0.000686 (ND)	<0.00874 (ND)	---
Naphthalene	c, v -<0.00957 (ND)	0.212 J	---
Curcane	nc, v -<0.000832 (ND)	0.0200 J	---
Propylbenzene	nc, v -<0.00186 (ND)	0.0262 J	---
Toluene	nc, v 0.00786 J	0.104 J	0.00606 J
Triethylbenzene, 1,2,4-	nc, v 0.00657 J	0.112 J	0.00606 J
Triethylbenzene, 1,3,5-	nc, v -<0.00322 (ND)	<0.0498 (ND)	<0.00306 (ND)
Vinyl chloride	c, v -<0.00227 (ND)	<0.0291 (ND)	<0.00198 (ND)
Xylenes	nc, v 0.0135	0.218	0.0118

Table 1 - Cumulative Summary of Analytical Data, Soil

Sample ID	Date Sampled	BS-5	B4-5	B5-5
Depth Sampled (feet)	5	5	5	5
Sampled by:	Partner	Partner	Partner	Partner
Location	Central portion of former dry cleaning facility	Central portion of north property boundary	Central portion of north property boundary	Central portion of exterior area of proposed impoundment
Note	None	None	None	None
Constituent of Interest				
Polyaromatic Hydrocarbons				
Benzo[a]fluoranthene	C, N	---	---	---
Benzo[b]fluoranthene	C, N	---	---	---
Benzo[k]fluoranthene	C, N	---	---	---
Benzo[e]pyrene	C, N	---	---	---
Benzo[a]pyrene	C, N	---	---	---
Benzo[a]anthracene	C, N	---	---	---
Benzo[ghi]perylene	C, N	---	---	---
Indeno[1,2,3-cd]pyrene	C, N	---	---	---
Naphthalene	NC, N	---	---	---
Methyl naphthalene 1:	NC, N	---	---	---
Methyl naphthalene 2:	NC, N	---	---	---
Phenanthrene	NC, N	---	---	---
Benzo[ghi]perylene [EQ]	NC, N	---	---	---
Metals				
Lead	NA, N	---	---	---
Total Petroleum Hydrocarbons				
TPH (passive matrix organics, benzene present)	NC, N	1,94.1	651	2,53.1
TPH (direct large organics)	NC, N	6,336	11,600	17.6
TPH, heavy oils	NC, N	10.3	579	37.2

Table 1 - Cumulative Summary of Analytical Data, Soil

Sample ID	Date Sampled	Depth Sampled (feet)	3	4	5	6	7	8	9	10	11	12	13	14	15	16	EBO15-7	EBO19	EBO1-SW1/4	EBO2-SW1/3.5
Constituent of Interest	Location	SR02 North Prop Boundary	SR03 North Prop Boundary		SR04 North Prop Boundary		SR04/Well #12 North Prop Boundary		SR05 Proposed Play Area		SR06 Proposed Play Area		SR07 Proposed Play Area		SR08/Well #13 Proposed Play Area		N of sidewalk, S of building, ~35' W of crosswalk		N side of 87th St in ROW, W side of crosswalk	
			mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)
Polycyclic Aromatic Hydrocarbons																				
Benzofluoranthene	C, NW																			
Benzofluoranthene	C, NW																			
Benzofluoranthene	C, NW																			
Chrysene	C, NW																			
Dibenzofluoranthene	C, NW																			
Indeno[1,2,3-cd]perylene	C, NW																			
Naphthalene	PC, W																			
Methyl naphthalene,1-	PC, W																			
Pyrene	PC, W																			
Benzobiphenyl	PC, NW																			
Metals																				
Lead	NA, NW																			
Total Petroleum Hydrocarbons																				
TPH (petroleum naphthalenes, benzene present)	PC, W	130	<5 (ND)	64	<5 (ND)	<5 (ND)	1200	<5 (ND)	<5 (ND)	<5 (ND)	<5 (ND)	<5 (ND)	<5 (ND)	<5 (ND)	<5 (ND)	<5 (ND)	<50 (ND)	190	<5 (ND)	<5 (ND)
TPH (total naphthalenes)	PC, NW	370	<50 (ND)	<100 (ND)	<50 (ND)	<50 (ND)	4700	<50 (ND)	<50 (ND)	<50 (ND)	<50 (ND)	<50 (ND)	<50 (ND)	<50 (ND)	<50 (ND)	<50 (ND)	680	2600	<50 (ND)	<50 (ND)
TPH (heavy oils)	PC, NW	<500 (ND)	<250 (ND)	<500 (ND)	<250 (ND)	<250 (ND)	<500 (ND)	<250 (ND)	640	<250 (ND)	<250 (ND)	<250 (ND)	<250 (ND)	<250 (ND)	<250 (ND)	<250 (ND)	<1000 (ND)	<1000 (ND)	<250 (ND)	<250 (ND)

Table 1 - Cumulative Summary of Analytical Data, Soil

Sample ID	EGG-SW12
Date Sampled	3/15/2022
Depth Sampled (feet)	12
Sampled by:	ENW
Location	S side of 87th in parking lane, W side of crosswalk
Note	maple (pen)
Constituent of Interest	
Volatile Organic Constituents (VOCs)	
Benzene	c, v <-0.03 (ND)
Ethylene dibromide (EDB)	c, v <-0.05 (ND)
Dichloroethane, 1,2-	c, v <-0.05 (ND)
Ethylbenzene	nc, v <-0.05 (ND)
Hexane 2-	nc, v
Methyl tert-butyl ether	c, v <-0.05 (ND)
Naphthalene	c, v <-0.05 (ND)
Cumene	nc, v <-0.05 (ND)
Propylbenzene 2-	nc, v <-0.05 (ND)
Toluene	nc, v <-0.05 (ND)
Trimethylbenzene, 1,2,4-	nc, v <-0.05 (ND)
Trimethylbenzene, 1,3,5-	nc, v <-0.05 (ND)
Vinyl chloride	c, v --
Xylenes	nc, v <-0.15 (ND)

Table 1 - Cumulative Summary of Analytical Data, Soil

Sample ID	EBG-SW112
Date Sampled	3/15/2022
Depth Sampled (feet)	12
Sampled by:	ENW
Location	S side of 87th in parking lane, W side of crosswalk
Notes	mg/kg (ppm)
Constituent of Interest	
Polycyclic Aromatic Hydrocarbons	
Benzo[a]anthracene	< 0.01 (ND)
Benzo[b]fluoranthene	< 0.01 (ND)
Benzo[k]fluoranthene	< 0.01 (ND)
Benzo[e]pyrene	< 0.01 (ND)
Benzo[a]pyrene	< 0.01 (ND)
Chrysene	< 0.01 (ND)
Dibenz[a,h]anthracene	< 0.01 (ND)
Indeno[1,2,3-cd]perylene	< 0.01 (ND)
Naphthalene	< 0.01 (ND)
Methyl naphthalenes 1-	nd, y
Methyl naphthalenes 2-	nd, y
Pyrene	nd, y
Benzo[ghi]perylene	nd, y
Metals	
Lead	nd, y
Total Petroleum Hydrocarbons	
TPH, gasoline range organics, benzene present	nd, y
TPH, diesel range organics	< 50 (ND)
TPH, heavy oil	< 250 (ND)

Table 1 - Cumulative Summary of Analytical Data, Soil

Sample ID	EQG-SW112
Date Sampled	3/15/2022
Depth Sampled (feet)	12
Sampled by:	ENW
Location	S side of 87th in parking lane, W side of crosswalk
Constituent of Interest	
Notes	(mg/kg, ppm)

PAHs = Polynuclear Aromatic Hydrocarbons
 PCBs = Polychlorinated Biphenyls
 NDA = not detected at or above laboratory method reporting limits
 NE = not established
 (Y) indicates analyte not detected, but detection limit is above screening concentration.
 < = not detected at or above the method reporting limit shown.
 mg/kg = milligram per kilogram
 c = carcinogenic
 nc = noncarcinogenic
 p = probable
 n = not evaluable
 GRO = gasoline-range organics
 DRO = diesel-range organics
 RRO = residual-range organics
Bolded concentrations exceed California state-specific MTCA Method B Cleanup limits.
 * = result is not typical of diesel chromatographic fingerprint
 ** = based on blank oil panes
 J = the identification of the analyte is acceptable; the reported value is an estimate
 J* = the analyte was subsequently removed by evaporation and no longer represents residual conditions.
 B = the analyte indicated was also found in the blank sample
 a = result is from a reanalysis performed 10/11/98
 b = quantifier as described. The sample contained components that eluted in the diesel range, but the chromatogram did not match the typical diesel fingerprint.

f = the chromatogram for this sample does not resemble a typical gasoline pattern
 g = the hydrocarbon concentration result in this sample is partially due to one or more individual peaks eluting in the diesel/heavy oil range. Quantitation by EPA method is not applicable.
 h = the diesel range organics present are due to hydrocarbons eluting primarily in the heavy oil range
 i = this result is primarily due to the beginning of oil, which elutes in the diesel region
 l = the sample chromatographic pattern does not resemble the fuel standard used for quantification. A fuel fingerprint is advised
 ll = the hydrocarbon concentration result in this sample is partially due to an individual peak eluting in the diesel/heavy oil range. Quantitation by EPA method is not applicable.
 m = the sample appears to contain volatile gasoline range organics
 v = this comes from a single peak, which elutes between C18 and C20
 ** = Cleanup level of carcinogenic PAHs based on the quotient of their Toxicity Equivalency with respect to Benzo(a)pyrene
 ES sample designation: 1,2-17: sample number-boring/well number-depth
 ETC = Environmental Toxicity Equivalency (TEQ) Soil Concentration
 TEQ = Toxicity Equivalency Factor per Energy
 L = Laboratory Method Listing
 T = Testing Method
 PAHs (gPAHs) Using TEQs: Hydrocarbon Measurement at 0

Table 1 - Cumulative Summary of Analytical Data, Soil

Constituent of Interest	Sample ID	Date Sampled	Depth Sampled (feet)	Sampled by:	EB04-SW1-13		EB05-SW1-14		EB05-72-12		EB05-72-15.5		EAW01-SW1-HS-5		Maximum Residual Soil Concentration (remaining impacts from SWI Inc Trust)	MTCA Method A Unrestricted Land Use (Table 740-1)	MTCA Method B Direct Contact Lowest of Standard Values for Noncancer (Eq. 740-1, -2)	MTCA Method B Ground Water - vadose zone soil (Eq. 747-1)	MTCA Method B Calculated Soil Cleanup Level	Constituent of Potential Concern (COPC, Calculated Soil Method A or B CULs)?
					East of Loading Dock	West of Building	West of Building	South of Loading Dock	5/31/2022	12-15.5	5/31/2022	15.5	mg/kg (ppm)	mg/kg (ppm)						
Constituent of Interest																				
Volatile Organic Constituents (VOCs)																				
Benzene																18	NA	---		Y
Ethylene dibromide (EDB)																0.5	0.0027	---		(Y)
Dichloroethane, 1,2-																11	0.023	---		N
Ethylbenzene																8000	5.9	---		N
Hexane n-																4800	NE	---		N
Methyl tert-butyl ether																560	0.1	---		(Y)
Methyl ethyl ketone																1600	4.5	---		N
Naphthalene																8000	15	---		N
Cumene																8000	16	---		N
Propylbenzene n-																8000	4.5	---		N
Toluene																8000	16	---		N
Triethylbenzene, 1,2,4-																800	1.3	---		N
Triethylbenzene, 1,3,5-																800	1.3	---		N
Vinyl chloride																NE	0.0017	---		N
Xylenes																9	14	---		N

Table 1 - Cumulative Summary of Analytical Data, Soil

Constituent of Interest	Sample ID	Date Sampled	Depth Sampled (feet)	Sampled by:	Location	EB04-SW1-13		EB05-SW1-14		EB05/ 8-12		EB05/ 12-15.5		EAW01-SW1-HS.5		Maximum Residual Soil Concentration (remaining impacts from SMI Inc Trust)	MTCVA Method A Unrestricted Land Use (Table 740-1)	MTCVA Method B Direct Contact Lowest of Standard Values for Noncancer (Eq. 740-1, -2)	MTCVA Method B Ground Water - volatile zone soil (Eq. 747-1)	MTCVA Method B Calculated Soil Cleanup Level	Constituent of Potential Concern (COPC, Method A or B CULs)?
						3	ENW	14	ENW	12-Aug	ENW	12-15.5	ENW	5/31/2022	15.5						
Polyaromatic Hydrocarbons						East of Loading Dock	West of Building	West of Building	South of Loading Dock												
Benzo(a)anthracene	C, W					<0.01 (ND)	<0.01 (ND)	<0.01 (ND)	<0.01 (ND)						0.208	**	**	**	---	---	Y/N
Benzo(b)fluoranthene	C, W					<0.01 (ND)	<0.01 (ND)	<0.01 (ND)	<0.01 (ND)						0.284	0.1 (**)	3.9 (**)	---	---	---	
Benzo(k)fluoranthene	C, W					<0.01 (ND)	<0.01 (ND)	<0.01 (ND)	<0.01 (ND)						0.324	**	**	---	---	---	
Chrysene	C, W					<0.01 (ND)	<0.01 (ND)	<0.01 (ND)	<0.01 (ND)						0.113	**	**	---	---	---	
Dibenz(a,h)anthracene	C, W					<0.01 (ND)	<0.01 (ND)	<0.01 (ND)	<0.01 (ND)						0.273	**	**	---	---	---	
Indeno(1,2,3-cd)pyrene	C, W					<0.01 (ND)	<0.01 (ND)	<0.01 (ND)	<0.01 (ND)						0.087	**	**	---	---	---	
Naphthalene	C, W					<0.01 (ND)	<0.01 (ND)	<0.01 (ND)	<0.01 (ND)						0.218	**	**	---	---	---	
Methylanthracene 1-	C, V					<0.01 (ND)	<0.01 (ND)	<0.01 (ND)	<0.01 (ND)						0.019	5	1600	4.5	---	N	
Methylanthracene 2-	C, V					<0.01 (ND)	<0.01 (ND)	<0.01 (ND)	<0.01 (ND)						<0.01 (ND)	NE	34	NE	---	N	
Phenanthrene	C, V					<0.01 (ND)	<0.01 (ND)	<0.01 (ND)	<0.01 (ND)						0.025	NE	300	NE	---	N	
Benzo(a)pyrene, TCO	PC, W					---	---	---	---						0.352	0.1 (**)	0.19 (**)	650	---	Y	
Lead	NA, W					1.08	2.24	---	---						2.24	250	400	---	---	N	
Total Petroleum Hydrocarbons	C, V					<5 (ND)	<5 (ND)	---	---						55	100	NE	---	---	Y	
TPH, gasoline range organics, benzene present	PC, W					110	<50 (ND)	---	---						2600	2000	---	---	---	---	
TPH, diesel range organics	PC, W					<250 (ND)	<250 (ND)	---	---						2270	---	---	---	---	---	
TPH, heavy oils	PC, W					<250 (ND)	<250 (ND)	---	---						---	---	---	---	---	---	

Table 3. Summary of Analytical Data, Ambient Air

Constituent of Interest	Location ID		Location	Maximum Indoor Air Concentration		MTCA Indoor Air Method B ¹	Constituent of Potential Concern (COPC) ²	
	Sample ID	1		2	1			2
	Date Sampled	4/28/2021		4/28/2021	inside building			outside building (reference)
Volatile Organic Constituents (VOCs)								
Benzene	c, v	0.44	0.44	0.33	0.44	0.32	Y	
Chloroethane	c, v	<2.6 (ND)	<2.6 (ND)	<2.6 (ND)	<2.6 (ND)	4570	N	
Dichloroethane, 1,1-	c, v	<0.4 (ND)	<0.4 (ND)	<0.4 (ND)	<0.4 (ND)	1.56	N	
Dichloroethane, 1,1-	nc, v	<0.4 (ND)	<0.4 (ND)	<0.4 (ND)	<0.4 (ND)	91.4	N	
Dichloroethane, cis-1,2-	nc, v	<0.4 (ND)	<0.4 (ND)	<0.4 (ND)	<0.4 (ND)	---	N	
Dichloroethane, trans-1,2-	nc, v	<0.4 (ND)	<0.4 (ND)	<0.4 (ND)	<0.4 (ND)	---	N	
EDC (1,2-dichloroethane)	c, v	0.073	0.077	0.077	0.077	3.2	N	
Ethylbenzene	c, v	<0.43 (ND)	<0.43 (ND)	<0.43 (ND)	0.43	457	N	
MTBE (methyl t-butyl ether)	c, v	---	---	---	---	9.62	(Y)	
Naphthalene	nc, v	<0.058 (ND) J	<0.058 (ND) J	<0.058 (ND) J	<0.058 (ND)	1.37	N	
Tetrachloroethene (PCE)	c, v	<6.8 (ND)	<6.8 (ND)	<6.8 (ND)	<6.8 (ND)	1.83	(Y)	
Toluene	nc, v	<19 (ND)	<19 (ND)	<19 (ND)	19	2290	N	
Trichloroethane, 1,1,1-	nc, v	<0.55 (ND)	<0.55 (ND)	<0.55 (ND)	<0.55 (ND)	2290	N	
Trichloroethane, 1,1,2-	nc, v	<0.055 (ND)	<0.055 (ND)	<0.055 (ND)	<0.055 (ND)	0.0914	N	
Trichloroethene	c, v	<0.11 (ND)	<0.11 (ND)	<0.11 (ND)	<0.11 (ND)	0.914	N	
Trimethylbenzene, 1,2,4-	nc, v	---	---	---	---	27.4	---	
Trimethylbenzene, 1,3,5-	nc, v	---	---	---	---	---	---	
Vinyl chloride	c, v	<0.26 (ND)	<0.26 (ND)	<0.26 (ND)	<0.26 (ND)	0.284	N	
Xylenes	nc, v	<0.43 (ND)	<0.43 (ND)	<0.43 (ND)	<0.43 (ND)	45.7	N	
Total Petroleum Hydrocarbons								
APH [EC5-8 aliphatics] fraction	nc, v	76	83	83	83	---	N	
APH [EC9-12 aliphatics] fraction	nc, v	<25 (ND)	<25 (ND)	<25 (ND)	<25 (ND)	140	N	
APH [EC9-10 aromatics] fraction	nc, nv	<25 (ND)	<25 (ND)	<25 (ND)	<25 (ND)	---	N	

Notes:

- = not analyzed or not applicable.
- ND = not detected at or above the method reporting limit shown.
- NE = not established.
- µg/M³ = micrograms per cubic meter
- c = carcinogenic
- nc = noncarcinogenic
- v = volatile
- (Y) indicates analyte not detected, but detection limit is above screening concentration.
- Bolded** concentrations exceed MTCA Method B Cleanup Levels

Table 4 - Summary of Analytical Data, Reconnaissance Ground Water

Constituent of Interest	Location ID	Location	Sample ID	Date Sampled	Depth Sampled (feet)	EB01 EB01-GW-16 3/15/2022 16 N of sidewalk, S of building, ~35' W of crosswalk	EB02 EB02-GW-16 3/15/2022 16 N side of 87th St in ROW, W side of crosswalk	EB03 EB03-GW-16 3/15/2022 16 S side of 87th in parking lane, W side of crosswalk	EB04 EB04-GW-15 6/1/2022 15 East Property Boundary near SE Corner of Site	MTCA Method A Cleanup Levels for Ground Water (Unrestricted Land Use)	MTCA Method B Cleanup Levels for Ground Water (Eq 720-1 and 720-2)	Constituent of Potential Concern (COPC)? ¹
Volatile Organic Constituents (VOCs)												
Benzene	C, V	<0.35 (ND)	<0.35 (ND)	<0.35 (ND)	<0.35 (ND)	<0.35 (ND)	<0.35 (ND)	<0.35 (ND)	<0.35 (ND)	5	0.8	N
Ethylene dibromide (EDB)	C, V	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	0.01	0.022	(Y)
Dichloroethane:1,2- (EDC)	C, V	<0.2 (ND)	<0.2 (ND)	<0.2 (ND)	<0.2 (ND)	<0.2 (ND)	<0.2 (ND)	<0.2 (ND)	<0.2 (ND)	5	0.48	N
Ethylbenzene	C, V	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	700	800	N
Methyl tert-butyl ether (MTBE)	C, V	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	20	24	N
Naphthalene	nc, v	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	160	160	N
Toluene	nc, v	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	1000	640	N
Xylenes	nc, v	<3 (ND)	<3 (ND)	<3 (ND)	<3 (ND)	<3 (ND)	<3 (ND)	<3 (ND)	<3 (ND)	1000	1600	N
Polycyclic Aromatic Hydrocarbons (Carcinogenic)												
Benzofluoranthracene	C, NV	<0.02 (ND)	<0.02 (ND)	<0.02 (ND)	<0.02 (ND)	<0.02 (ND)	<0.02 (ND)	<0.02 (ND)	<0.02 (ND)	0.1 (*)	0.023 (**)	---
Benzo[a]pyrene	C, NV	<0.02 (ND)	<0.02 (ND)	<0.02 (ND)	<0.02 (ND)	<0.02 (ND)	<0.02 (ND)	<0.02 (ND)	<0.02 (ND)	0.1 (*)	0.023 (**)	---
Benzo[b]fluoranthene	C, NV	<0.02 (ND)	<0.02 (ND)	<0.02 (ND)	<0.02 (ND)	<0.02 (ND)	<0.02 (ND)	<0.02 (ND)	<0.02 (ND)	0.1 (*)	0.023 (**)	---
Benzo[k]fluoranthene	C, NV	<0.02 (ND)	<0.02 (ND)	<0.02 (ND)	<0.02 (ND)	<0.02 (ND)	<0.02 (ND)	<0.02 (ND)	<0.02 (ND)	0.1 (*)	0.023 (**)	---
Chrysene	C, NV	<0.02 (ND)	<0.02 (ND)	<0.02 (ND)	<0.02 (ND)	<0.02 (ND)	<0.02 (ND)	<0.02 (ND)	<0.02 (ND)	0.1 (*)	0.023 (**)	---
Dibenzofluoranthracene	C, NV	<0.02 (ND)	<0.02 (ND)	<0.02 (ND)	<0.02 (ND)	<0.02 (ND)	<0.02 (ND)	<0.02 (ND)	<0.02 (ND)	0.1 (*)	0.023 (**)	---
Indeno[1,2,3-cd]pyrene	C, NV	<0.02 (ND)	<0.02 (ND)	<0.02 (ND)	<0.02 (ND)	<0.02 (ND)	<0.02 (ND)	<0.02 (ND)	<0.02 (ND)	0.1 (*)	0.023 (**)	---
Naphthalene	C, V	---	---	---	---	---	---	---	---	160	160	(Y)
1-Methylnaphthalene	nc, v	---	---	---	---	---	---	---	---	NE	1.5	(Y)
2-Methylnaphthalene	nc, v	---	---	---	---	---	---	---	---	NE	32	(Y)
Total Metals												
Lead	NA, NV									15	---	(Y)
Total Petroleum Hydrocarbons												
GRO	nc, v	<100 (ND)	<100 (ND)	<100 (ND)	<100 (ND)	<100 (ND)	<100 (ND)	<100 (ND)	<100 (ND)	800	---	N
DRO	nc, nv	120	<15 (ND)*	<50 (ND)	<15 (ND)*	<50 (ND)	<15 (ND)*	<50 (ND)	<15 (ND)*	500	---	N
RRO	nc, nv	<250 (ND)	<380 (ND)	<250 (ND)	<380 (ND)	<250 (ND)	<380 (ND)	<250 (ND)	<380 (ND)	500	---	N

Notes:
 --- = not analyzed or not applicable.
 nd = not detected or above the minimum reporting limit (mrl) or practical quantification limit (pql).
 (Y) indicates analyte not detected, but detection limit is above screening concentration.
 µg/L = micrograms per liter
 c = carcinogenic
 nc = noncarcinogenic
 v = volatile
 nv = nonvolatile
 x = the sample chromatographic pattern does not resemble the fuel standard used for quantitation.
 GRO = gasoline-range organics.
 DRO = diesel-range organics.
 RRO = residual (oil)-range organics.
 * Sample Extract passed through a silica gel column prior to analysis.
 TEF = Toxicity Equivalency Factor per Ecology¹
 TEQ = Toxicity Equivalency Quotient per Ecology¹
 1. Ecology. April 20, 2015. Evaluating the Human Health Toxicity of Carcinogenic PAHs (cPAHs) Using Toxicity Equivalency Factors (TEFs): Implementation Memorandum #10.

Table 5. Summary of Ground Water Elevations

Monitoring Well Designation	Date	Surveyed Top of Casing (TOC) Elevation (feet AMSL) ¹	Depth to Water (DTW) (feet below TOC)	Relative Elevation (feet)
WELL-2	1/26/2022	255.26	2.78	252.48
	4/21/2022		2.64	252.62
	7/25/2022		3.20	252.06
	10/5/2022		2.02	253.24
Minimum			2.02	252.06
Maximum			3.20	253.24
WELL-3	1/26/2022	259.53	1.54	257.99
	4/21/2022		1.39	258.14
	7/25/2022		1.80	257.73
	10/5/2022		1.92	257.61
Minimum			1.39	257.61
Maximum			1.92	258.14
WELL-4	1/26/2022	257.52	0.00	257.52
	4/21/2022		0.00	257.52
	7/25/2022		0.00	257.52
	10/5/2022		0.00	257.52
Minimum			0.00	---
Maximum			0.00	---
WELL-5	1/26/2022	258.22	0.02	258.20
	4/21/2022		0.00	258.22
	7/25/2022		0.00	258.22
	10/5/2022		0.00	258.22
Minimum			0.00	258.20
Maximum			0.02	258.22
WELL-6	1/26/2022	259.31	1.05	258.26
	4/21/2022		0.87	258.44
	7/25/2022		1.25	258.06
Minimum			0.87	258.06
Maximum			1.25	258.44
WELL-7	1/26/2022	260.39	0.00	260.39
	4/21/2022		0.00	260.39
	7/25/2022		0.00	260.39
	10/5/2022		0.00	260.39
Minimum			0.00	---
Maximum			0.00	---
WELL-8	1/26/2022	263.42	2.31	261.11
	4/21/2022		2.10	261.32
	7/25/2022		0.00	---
	10/5/2022		2.04	261.38
Minimum			0.00	261.11
Maximum			2.31	261.38
WELL-9	1/26/2022	262.74	1.48	261.26
	4/21/2022		1.51	261.23
	7/25/2022		1.19	261.55
	10/5/2022		1.29	261.45
Minimum			1.19	261.23
Maximum			1.51	261.55
WELL-10	1/26/2022	261.52	0.10	261.42
	4/21/2022		0.35	261.17
	7/25/2022		0.00	261.52
	10/5/2022		0.00	261.52
Minimum			0.00	261.17
Maximum			0.35	261.52
WELL-11	1/26/2022	261.05	0.05	261.00
	4/21/2022		0.00	261.05
	7/25/2022		0.00	261.05
	10/5/2022		0.00	261.05
Minimum			0.00	261.00
Maximum			0.05	261.05
WELL-12	1/26/2022	261.11	0.95	260.16
	4/21/2022		0.50	260.61
	7/25/2022		0.60	260.51
	10/5/2022		0.50	260.61
Minimum			0.50	260.16
Maximum			0.95	260.61
WELL-13	1/26/2022	258.39	0.00	258.39
	4/21/2022		0.00	258.39
	7/25/2022		0.00	258.39
	10/5/2022		0.00	258.39
Minimum			0.00	---
Maximum			0.00	---
EMW01	7/25/2022	258.92	2.75	256.17
	10/5/2022		3.92	255.00
Minimum			2.75	255.00
Maximum			2.75	256.17
MW-8	7/25/2022	255.42	3.45	251.97
	10/5/2022		3.65	251.77
Minimum			3.45	251.77
Maximum			3.45	251.97

¹ Survey conducted on March 15, 2022 and July 25, 2022, relative to NAD83 and NAVD88.
TOC = top of casing

Table 7 - Comparison of COPCs in Soil to MTCA Cleanup Levels

Contaminant of Concern	Maximum Residual Soil Concentration (remaining soil)	Selected Soil Cleanup Level				Constituent of Potential Concern (GOPC assuming Industrial Use?)
		MTCA Method A Soil Cleanup Levels Unrestricted Land Use (Table 740-1)	MTCA Method B Direct Contact Noncancer (Eq. 740-1)	MTCA Method B Direct Contact Cancer (Eq. 740-2)	MTCA Method B Site-specific Soil CUL (Calculated)	
Volatiles Organic Constituents (VOCs)		mg/kg (ppm)				
Benzene	0.218	---	---	18	---	N
Polyaromatic Hydrocarbons						
Benz[a]pyrene (TEF applied to all cPAHs)	0.352	0.1 ²	---	---	---	Y
Total Petroleum Hydrocarbons						
DRO	2600	2000	---	---	---	Y
RRO	2270	---	---	---	1706	Y

Notes:

mg/kg = milligram per kilogram.

c = carcinogenic

v = volatile

nv = nonvolatile

GRO = gasoline-range organics.

DRO = diesel-range organics.

Bolded concentrations exceed MTCA Method C Cleanup Levels

1. value based on protection of groundwater; does not apply based on Empirical demonstration of Leaching Pathway

2. value based on direct contact

Table 8 - Comparison of Ground Water Data to MTCA Cleanup Levels

Constituent of Interest	Location	Maximum Ground Water Concentration	MTCA Method B Non-cancer (Eq. 720-1)	MTCA Method B Cancer (Eq. 720-2)	Constituent of Potential Concern (COPC)? ³
Polyaromatic Hydrocarbons	Note				
1-Methylnaphthalene	c, nc	2.8 jl	560	1.5	Y

Notes:

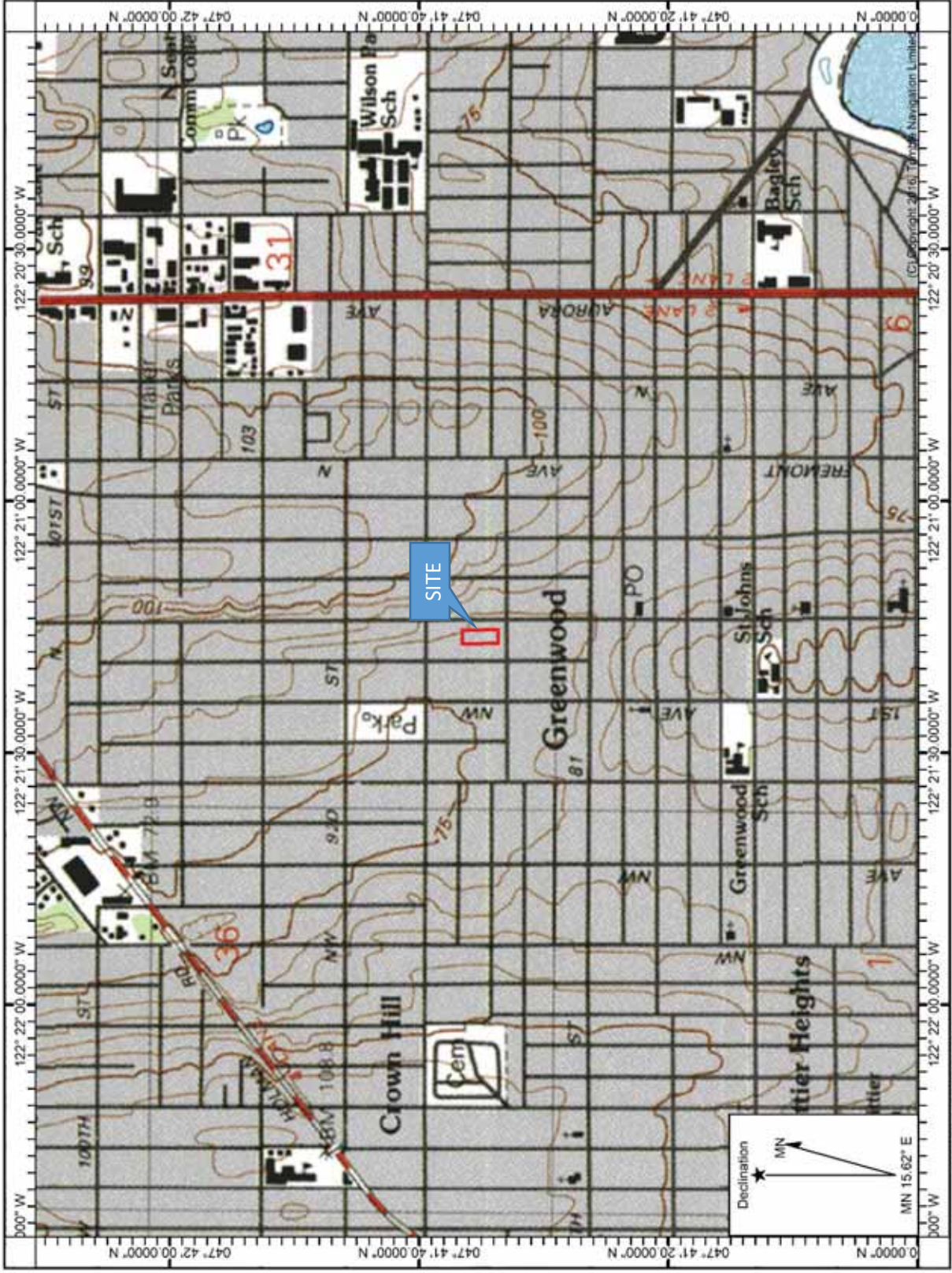
µg/L = micrograms per Liter

nc = carcinogenic


c = noncarcinogenic

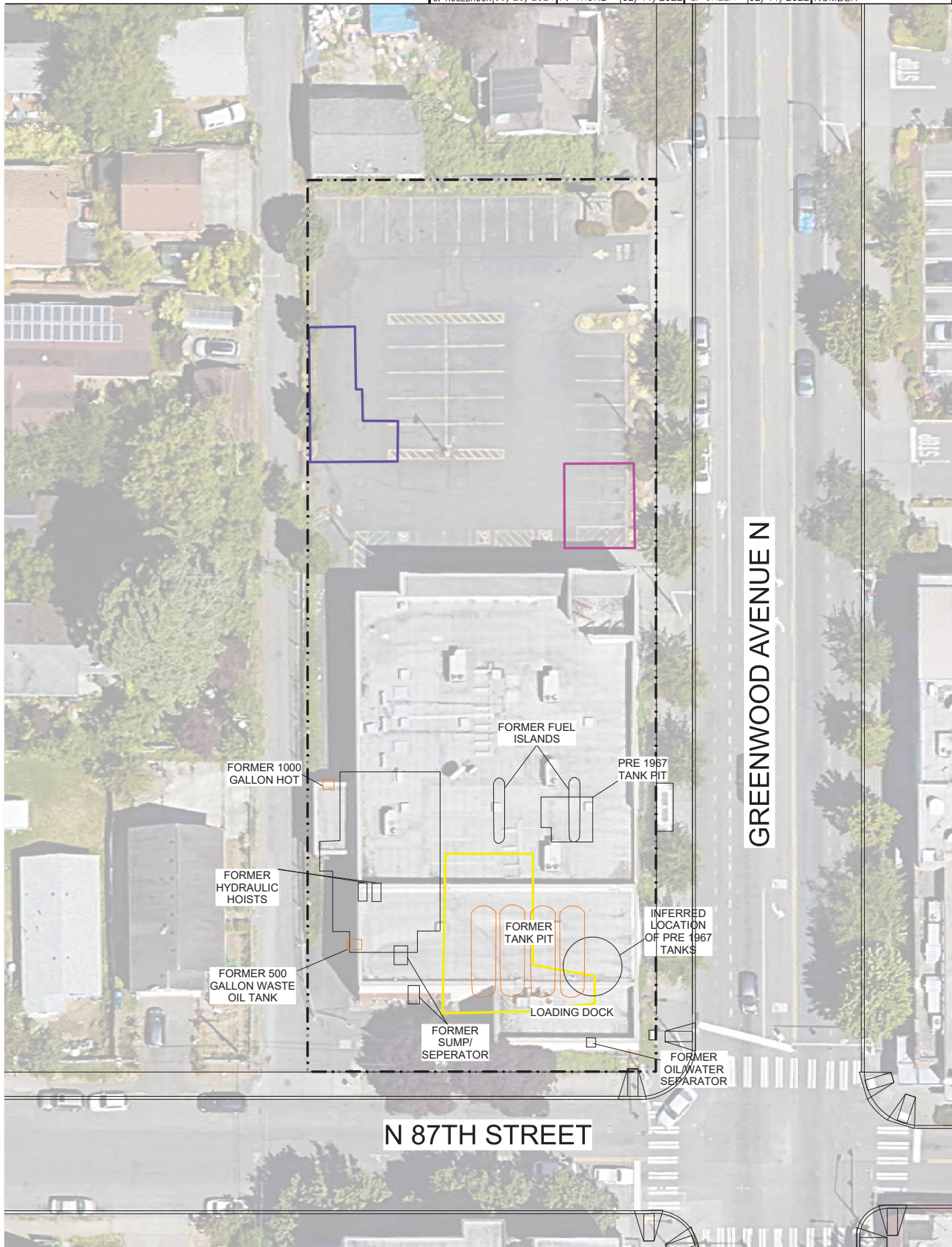
Bolded concentrations exceed selected MTCA Cleanup Level

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








Name: SEATTLE NORTH
 Date: 09/20/21
 Location: 047° 41' 35.3419" N, 122° 21' 15.9186" W
 Contour Interval: 16 ft

	<p>Date Drawn: 11/22/2022 CAD File Name: 1581-21001-01_fig1sv_map Drawn By: CLR Approved By: LDG</p>	<p>Former Texaco 211544 Facility 8701 Greenwood Avenue N Seattle, Washington</p>	<p>Project No. 1581-21001 Figure No. 1</p>
---	---	--	--



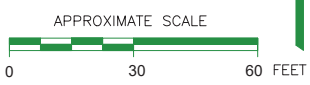
LEGEND:

-  SUBJECT BUILDINGS
-  SUBJECT PROPERTY BOUNDARIES
-  FORMER GAS STATION PER 1950 HISTORICAL SANBORN MAP
-  FORMER VANITY CLEANERS PER CITY DIRECTORY 1951-1955, LOCATION BASED ON 1950-1966 SANBORN MAP
-  FORMER LAUNDRY PER 1930 HISTORICAL SANBORN MAP

* FORMER FEATURES PER 1994 EMCON NORTHWEST INC. AND TEXACO 1991 AND ENVIRO. RESOLUTION INC. 1994 AND 1996

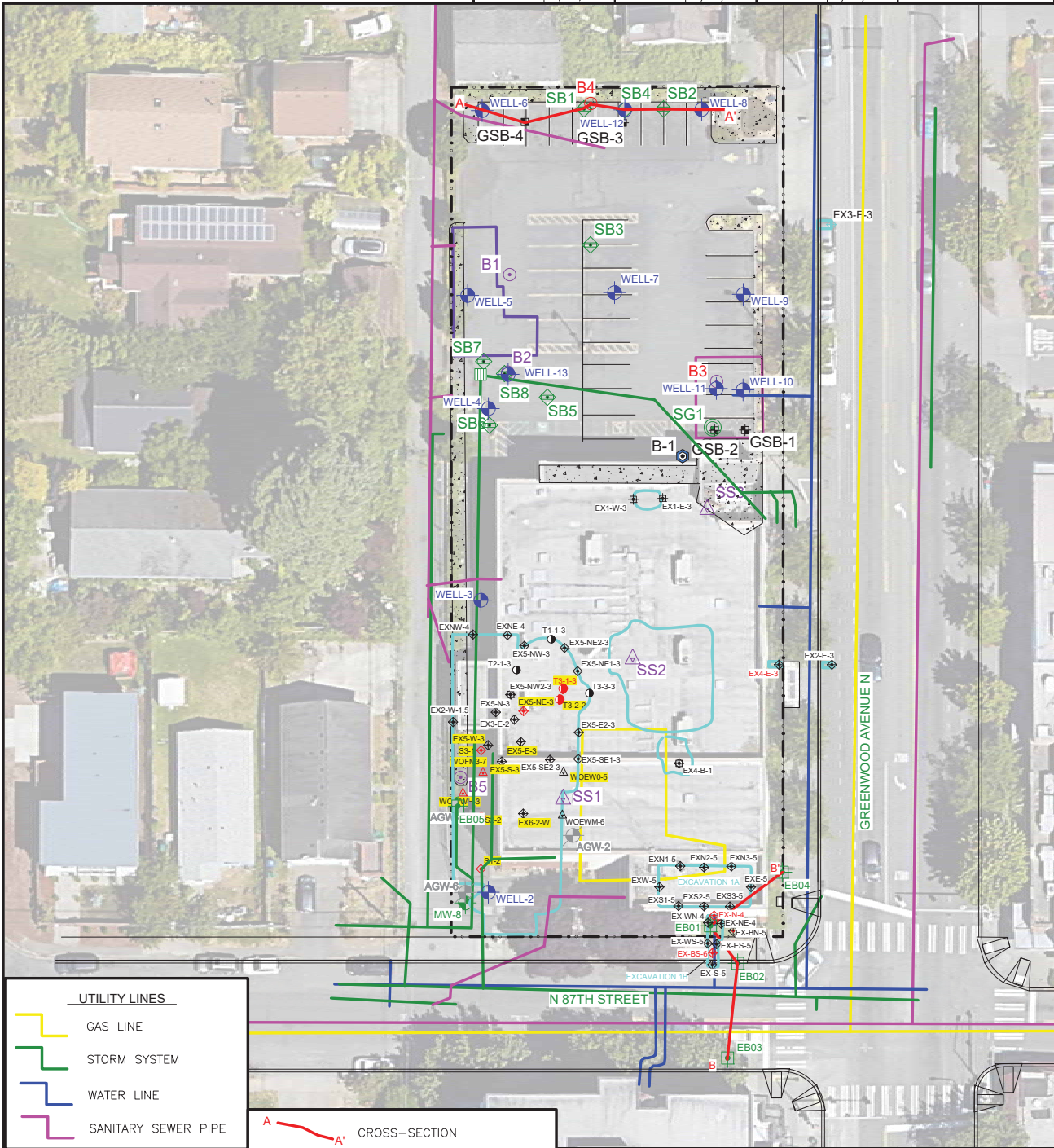
NOTES:

1. BASE MAP DEVELOPED FROM AN AERIAL PHOTOGRAPH MAP DATED 2019 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.



PO BOX 14488, PORTLAND, OREGON 97293
P: (503)452-5561, E: ENW@EVREN-NW.COM

FIGURE 2
SITE PLAN WITH HISTORICAL
FEATURES OF INTEREST
FORMER TEXACO 211544 FACILITY
8701 GREENWOOD AVENUE N
SEATTLE, WASHINGTON



UTILITY LINES

- GAS LINE
- STORM SYSTEM
- WATER LINE
- SANITARY SEWER PIPE

A — A' CROSS-SECTION

- LEGEND:**
- PROPOSED STRUCTURE LOCATION
 - SUBJECT PROPERTY BOUNDARIES
 - ENVIRONMENTAL ASSOCIATES, INC SOIL BORING LOCATION APRIL 1997
 - LEFT COAST SERVICES LLC SOIL BORING LOCATION NOVEMBER 2020
 - PARTNER SOIL BORING LOCATION MARCH 2021
 - PARTNER SUB-SLAB SOIL GAS PROBE LOCATION MARCH 2021
 - ENVIRO. RESOLUTION INC. SOIL SAMPLE LOCATION REMAINING FOLLOWING EXCAVATION 1996
 - MONITORING WELL LOCATION PER ENVIRO RESOLUTIONS INC.
 - FORMER VANITY CLEANERS PER CITY DIRECTORY 1951-1955, LOCATION BASED ON 1950 SANBORN MAP
 - FORMER LAUNDRY PER 1930 HISTORICAL SANBORN MAP
 - PRIOR PCS EXCAVATION MARGINS
 - SG1 ENVIRONMENTAL SPECIALTIES SOIL GAS PROBE LOCATION MARCH 2021
 - SB1 ENVIRONMENTAL SPECIALTIES SOIL BORING LOCATION MAY 2021
 - + MONITORING WELL LOCATION PER ENVIRONMENTAL SPECIALTIES MAY 2021
 - YELLOW INDICATES SOIL WHERE SAMPLE WAS COLLECTED HAS BEEN REMOVED
 - EXE-5 LABELS IN RED EXCEED MTCA METHOD A CLEANUP LEVELS
 - + ENW BORING LOCATION

NOTES:

- BASE MAP DEVELOPED FROM AN AERIAL PHOTOGRAPH MAP DATED 2019 AND ENW FIELD NOTES.
- ALL BUILDING, STREET, AND FEATURE LOCATIONS ARE APPROXIMATE.
- SYMBOLS REPRESENT LOCATION AND DO NOT ALWAYS REPRESENT EXACT SHAPE, SIZE, OR ORIENTATION.

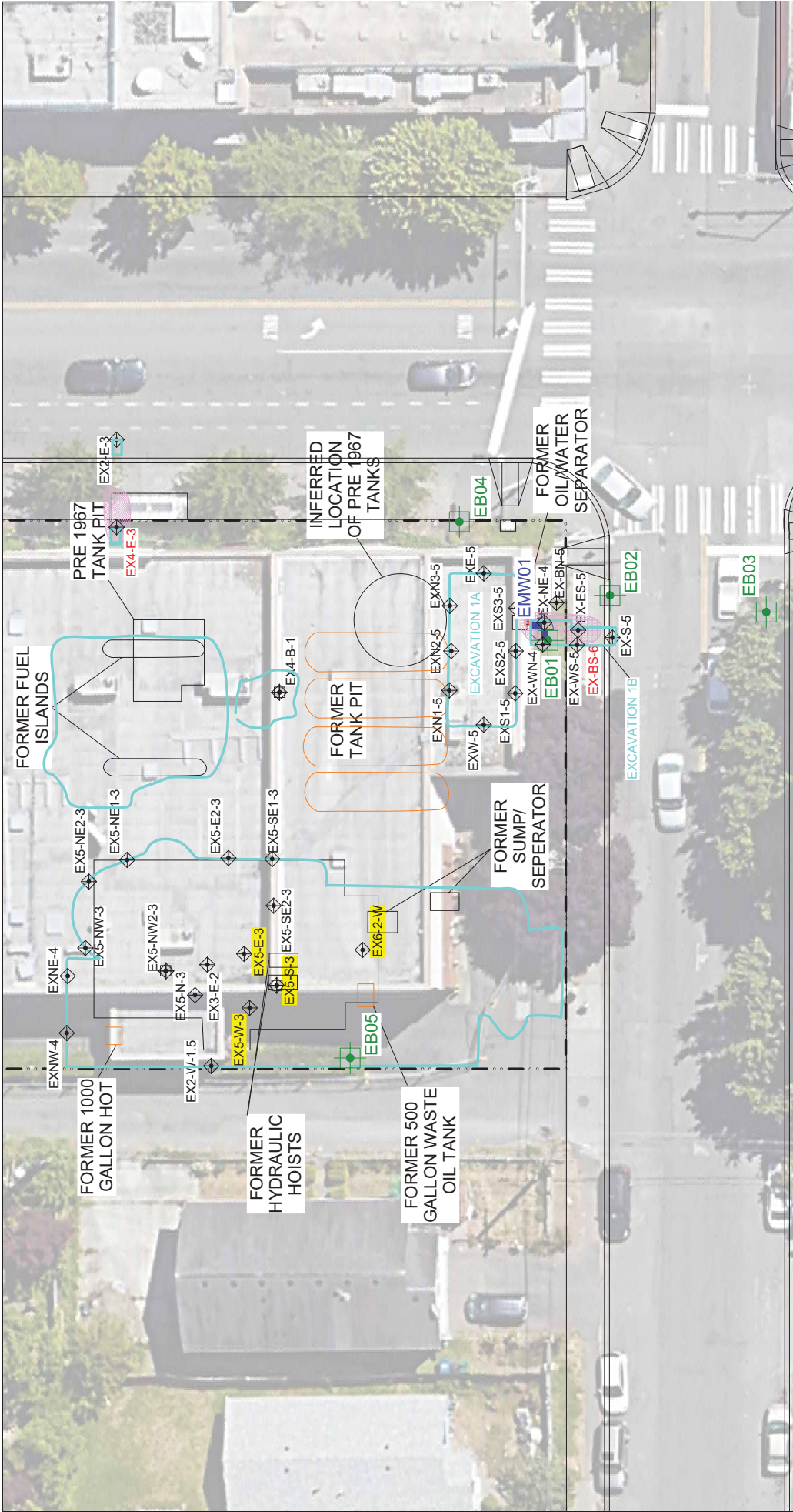
APPROXIMATE SCALE

0 35 70 FEET

PO BOX 14488, PORTLAND, OREGON 97293
P. (503)452-5561, E. ENW@EVREN-NW.COM

FIGURE 3
SAMPLE LOCATION DIAGRAM

FORMER TEXACO 211544 FACILITY
8701 GREENWOOD AVENUE N
SEATTLE, WASHINGTON



EVREN NORTHWEST
 ENVIRONMENTAL SCIENCE & TECHNOLOGY
 PO BOX 14488, PORTLAND, OREGON 97293
 P. (503)452-5561, E. ENW@EVREN-NW.COM

FIGURE 3A
 SAMPLE LOCATION DIAGRAM
 (SOUTHERN PORTION OF SITE)
 FORMER TEXACO 211544 FACILITY
 8701 GREENWOOD AVENUE N
 SEATTLE, WASHINGTON

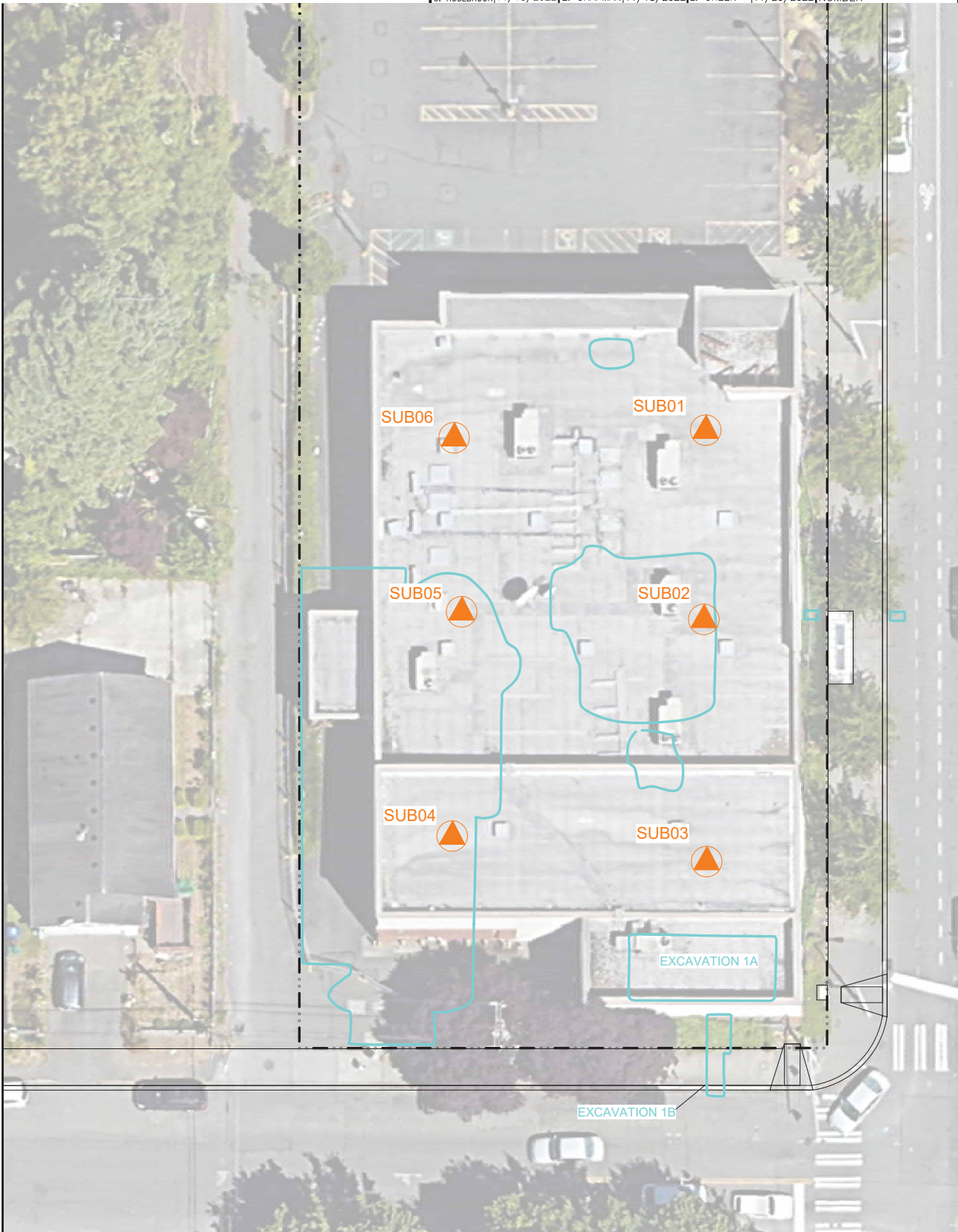
NOTES:

1. BASE MAP DEVELOPED FROM AN AERIAL PHOTOGRAPH MAP DATED 2019 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 20 40 FEET

LEGEND:

	SUBJECT BUILDINGS		MONITORING WELL INSTALLED BY ENW
	SUBJECT PROPERTY BOUNDARIES		EMW01
	ENW ASSESSMENT BORING SAMPLE LOCATION		INFERRED AREA OF RESIDUAL PETROLEUM IMPACTED SOIL EXCEEDING MTCA METHOD A CULS
	PRIOR PCS EXCAVATION MARGINS		ENVIRO. RESOLUTION INC. SOIL SAMPLE LOCATION REMAINING FOLLOWING EXCAVATION 1996
			YELLOW INDICATES SOIL WHERE SAMPLE WAS COLLECTED HAS BEEN REMOVED
			LABELS IN RED EXCEED MTCA METHOD A CLEANUP LEVELS



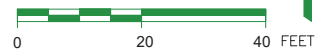
LEGEND:

-  SUBJECT BUILDING
-  SUBJECT PROPERTY BOUNDARIES
-  PRIOR PCS EXCAVATION MARGINS
-  ENW SUB-SLAB VAPOR SAMPLE LOCATION

NOTES:

1. BASE MAP DEVELOPED FROM AN AERIAL PHOTOGRAPH MAP DATED 2019 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






PO BOX 14488, PORTLAND, OREGON 97293
P. (503)452-5561, E. ENW@EVREN-NW.COM

FIGURE 3B

SAMPLE LOCATION DIAGRAM
(SUB-SLAB VAPOR SAMPLES)
FORMER TEXACO 211544 FACILITY
8701 GREENWOOD AVENUE N
SEATTLE, WASHINGTON

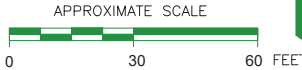


LEGEND:

-  SUBJECT BUILDING
-  SUBJECT PROPERTY BOUNDARIES
-  MONITORING WELL LOCATION PER ENVIRONMENTAL SPECIALTIES MAY 2021

NOTES:

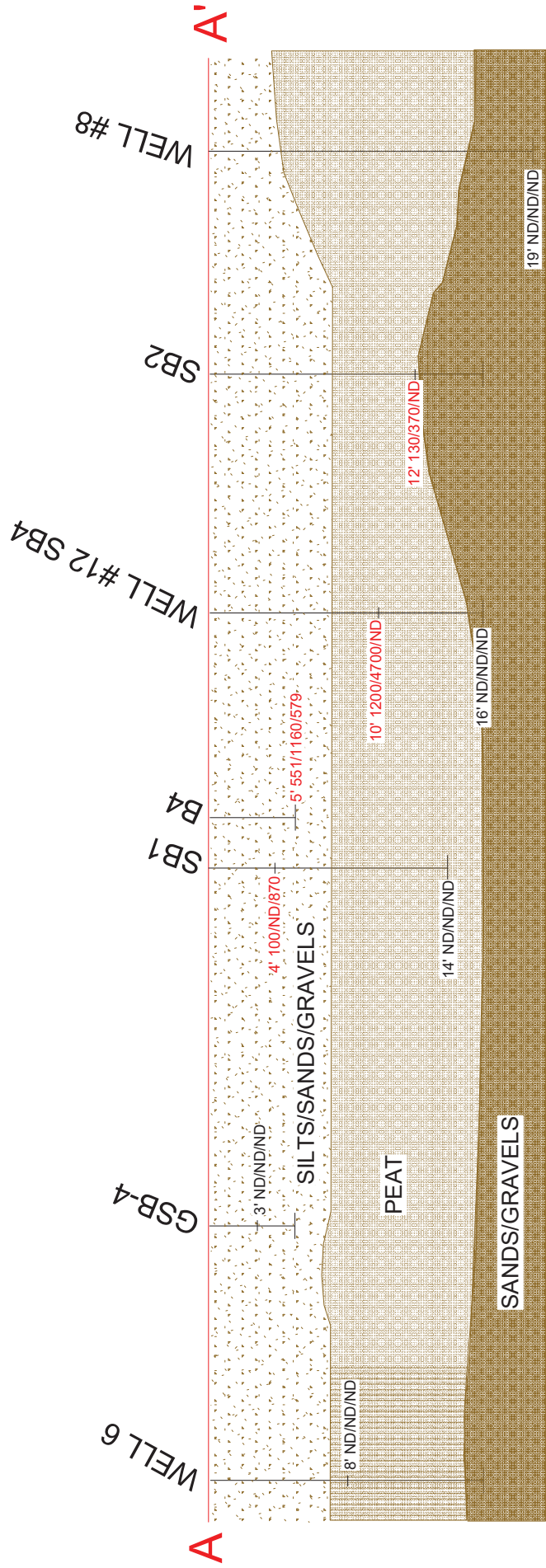
1. BASE MAP DEVELOPED FROM AN AERIAL PHOTOGRAPH MAP DATED 2019 AND ENW FIELD NOTES.
2. ALL BUILDING, STREET, AND FEATURE LOCATIONS ARE APPROXIMATE.
3. SYMBOLS REPRESENT LOCATION AND DO NOT ALWAYS REPRESENT EXACT SHAPE, SIZE, OR ORIENTATION.



PO BOX 14488, PORTLAND, OREGON 97293
P. (503)452-5561, E. ENW@EVREN-NW.COM

FIGURE 4
GROUND WATER MONITORING WELL LOCATION MAP

FORMER TEXACO 211544 FACILITY
8701 GREENWOOD AVENUE N
SEATTLE, WASHINGTON

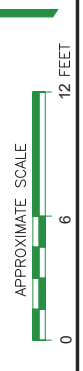


LEGEND:

- A - CROSS-SECTION REFER TO FIGURE 3
- ND = NOT DETECTED AT OR ABOVE LABORATORY METHOD REPORTING LIMIT
- #/#/# = CONCENTRATIONS OF GRO/DRO/RRO (RESPECTIVELY) IN MG/KG
- GRO = GASOLINE-RANGE ORGANICS
- DRO = DIESEL-RANGE ORGANICS
- RRO = RESIDUAL-RANGE ORGANICS

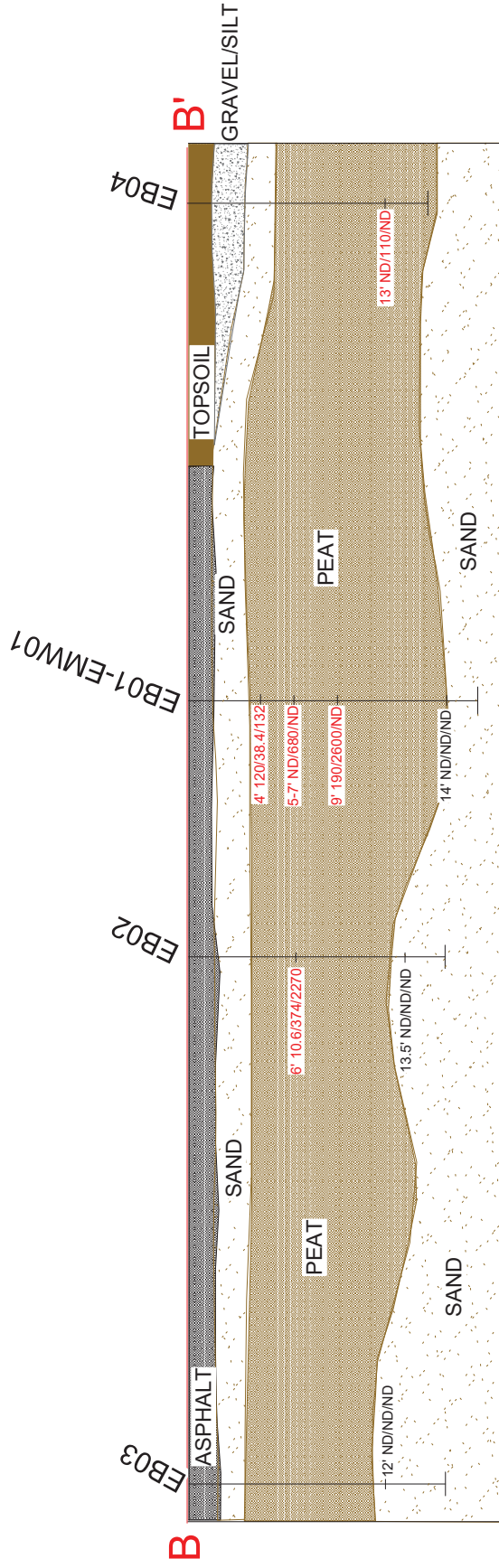
NOTES:

1. BASE MAP DEVELOPED FROM AN AERIAL PHOTOGRAPH MAP DATED 2019 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



EVERETT NORTHWEST
 ENVIRONMENTAL SCIENCE TECHNOLOGY CONSULTANTS
 PO BOX 14488, PORTLAND, OREGON 97293
 P. (503)452-5561, E. ENW@EVREN-NW.COM

FIGURE 5
 LINE OF SECTION A-A'
 FORMER TEXACO 211544 FACILITY
 8701 GREENWOOD AVENUE N
 SEATTLE, WASHINGTON



LEGEND:

B — CROSS-SECTION REFER TO FIGURE 3

ND = NOT DETECTED AT OR ABOVE LABORATORY METHOD REPORTING LIMIT

#/#/# = CONCENTRATIONS OF GRO/DRO/RR0 (RESPECTIVELY) IN MG/KG

GRO = GASOLINE-RANGE ORGANICS

DRO = DIESEL-RANGE ORGANICS

RR0 = RESIDUAL-RANGE ORGANICS

NOTES:

1. BASE MAP DEVELOPED FROM AN AERIAL PHOTOGRAPH MAP DATED 2019 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 6 12 FEET

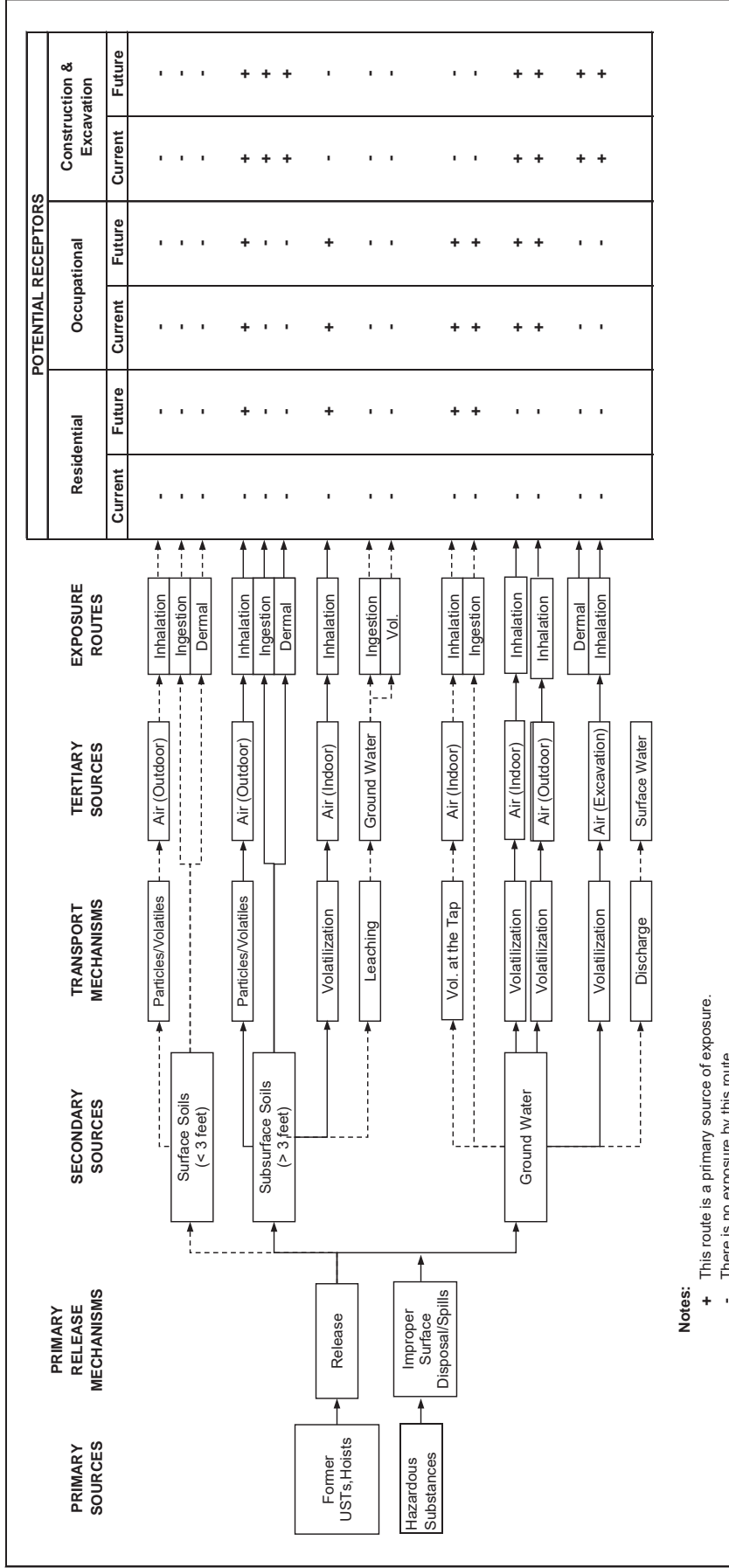


PO BOX 14488, PORTLAND, OREGON 97293
 P. (503)452-5561, E. ENW@EVREN-NW.COM

FIGURE 6

LINE OF SECTION B-B'
 FORMER TEXACO 211544 FACILITY
 8701 GREENWOOD AVENUE N
 SEATTLE, WASHINGTON

Figure 7. Conceptual Site Model (Human Health)



Appendix A

Boring and Well Logs







EVREN Northwest, Inc.

DRILL LOG	PROJECT	PROJECT NO.	BORING NO.
	Focused Subsurface Investigation		1581-21001-02
SITE	BEGUN	COMPLETED	HOLE SIZE
8701 Greenwood Ave N., Seattle, WA	3/15/22	3/15/22	2in
COORDINATES	DEPTH GROUND WATER	DATE SL	STATIC LEVEL
		3/15/22	5.52
DRILLER	CORE RECOVERY (%)	# SAMPLES	# CORE BOXES
Standard Probe			
DRILL MAKE AND MODEL	LOGGED BY:		DEPTH BOTTOM OF HOLE
	E.Bruggeman		16

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 (SW); medium brown; fine to coarse-grained sand; some silt; medium dense; slightly moist			50			
4			PEAT; dark brown; moist; soft organic rich; petroleum odor; poor recovery	EB01/5-7	soil	35		0.0 21.3	
8			wet but not produceable	EB01/9	soil	90		15.2	
12			1 inch thick layer of sand; tan; fine-grained sand					0.0	
			strong decay/organic odor (methane?)						
16			Silty fine SAND (SM); light gray; medium dense; grain size gets finer with depth.	EB01-SW/14	soil	100		Reconn ground water sample collected	
16			SILT and CLAY (MH); light gray; high plasticity; soft to medium stiff; wet End of boring					0.0	
20									
24									
28									









EVREN Northwest, Inc.

DRILL LOG	PROJECT	PROJECT NO.	BORING NO.
	Focused Subsurface Investigation		1581-21001-02
SITE	BEGUN	COMPLETED	HOLE SIZE
8701 Greenwood Ave N., Seattle, WA	3/15/22	3/15/22	2in
COORDINATES	DEPTH GROUND WATER	DATE SL	STATIC LEVEL
		3/15/22	9.85
DRILLER	CORE RECOVERY (%)		# CORE BOXES
Standard Probe			
DRILL MAKE AND MODEL	LOGGED BY:		
	E.Bruggeman		
			DEPTH BOTTOM OF HOLE
			16

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 (SW); light brown; fine to coarse sand; some silt; medium dense; slightly moist						
			PEAT; dark brown; moist; soft			50			
4			strong odor of decay/organics/methane(?) grades to medim brown			100		0.1	
8			very moist			100		0.2	
			3 inch thick sand layer; tan; fine-grained; moist			100		0.0	
12			Silty fine SAND (SM); light gray; soft; medium dense	EB02-SW/13.5	soil	100		0.0	
16			End of boring					0.0	reconn ground water sample collected
20									
24									
28									

EVREN Northwest, Inc.

DRILL LOG	PROJECT	PROJECT NO.	BORING NO.
	Focused Subsurface Investigation		1581-21001-02
SITE	BEGUN	COMPLETED	HOLE SIZE
8701 Greenwood Ave N., Seattle, WA	3/15/22	3/15/22	2in
COORDINATES	DEPTH GROUND WATER	DATE SL	STATIC LEVEL
		3/15/22	6.98
DRILLER	CORE RECOVERY (%)	# SAMPLES	# CORE BOXES
Standard Probe			
DRILL MAKE AND MODEL	LOGGED BY:		DEPTH BOTTOM OF HOLE
	E. Bruggeman		16

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 over concrete						
			SAND (SW); light brown; fine to coarse grained sand; medium dense; dry			35			
			PEAT; dark brown; moist; soft						
4			decay/organic odor (methane?)			100		0.0	
8			2 inch thin sand layer; tan			100		0.0	
12			Silty fine SAND (SM); light gray; medium dense; wet	EB03-SW/12		80		0.0	
			begins to get finer						
16			SILT and CLAY (MH); highly plastic; soft; wet; medium stiff					0.0	
			End of boring					0.0	
20									
24									
28									

EVREN Northwest, Inc.

DRILL LOG	PROJECT	PROJECT NO.	BORING NO.
	Focused Subsurface Investigation		1581-21001-02
SITE	BEGUN	COMPLETED	HOLE SIZE
8701 Greenwood Ave N., Seattle, WA	5/31/22	5/31/22	
COORDINATES	DEPTH GROUND WATER	DATE SL	STATIC LEVEL
			FIRST WATER
DRILLER	CORE RECOVERY (%)		# CORE BOXES
Standard Environmental Probe			
DRILL MAKE AND MODEL	LOGGED BY:		
DPT 54LT	Jordan Morris		
			DEPTH BOTTOM OF HOLE
			16

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			Topsoil						
			Gravelly silt with sand. Rounded clasts. Brown and gray. Medium plasticity.			60			
4			Sandy silt, gravel almost absent. High plasticity. Slightly wetter than above. Gray.					0.0	
			Organic soil. Medium plasticity. Less than 10% sand. Dark brown.			60			
			Organic soil. Low plasticity. No sand. 50% peat. Dark brown.						
8			Organic peat, can hardly even call soil. Very wet. Brown to dark brown.					0.0	
						60			
12									
			Medium plasticity silty sand. Wet. Gray.	EB04-swi-13		70			Soil-water interface
16			Bottom of boring.						
20									
24									
28									

EVREN Northwest, Inc.

DRILL LOG	PROJECT	PROJECT NO.	BORING NO.
	Focused Subsurface Investigation		1581-21001-02
SITE	BEGUN	COMPLETED	HOLE SIZE
8701 Greenwood Ave N., Seattle, WA	5-31-22	5-31-22	
COORDINATES	DEPTH GROUND WATER	DATE SL	STATIC LEVEL
			FIRST WATER
DRILLER	CORE RECOVERY (%)		# CORE BOXES
Standard Environmental Probe			
DRILL MAKE AND MODEL	LOGGED BY:		
DPT 54LT	Jordan Morris		
			DEPTH BOTTOM OF HOLE
			16

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			40		0.0	Interval sample Soil-water interface
			Dry, angular gravel. 50% fines.						
4			Very wet rounded pea gravel. <15% fines.			30			
8			Interval sample			30			
12			Organic soil and peat. Wet. Dark brown.	EB05/8-12					
16			Grades from sandy silt to silty sand. Very wet. Gray.	EB05/12-13.5 EB-SWI-14		90			
16			Bottom of core.						
20									
24									
28									


















EVREN Northwest, Inc.

DRILL LOG	PROJECT	PROJECT NO.	BORING NO.
	Focused Subsurface Investigation		1581-21001-02
SITE	BEGUN	COMPLETED	HOLE SIZE
8701 Greenwood Ave N., Seattle, WA	5-31-22	5-31-22	3"
COORDINATES	DEPTH GROUND WATER	DATE SL	STATIC LEVEL
			FIRST WATER
			15.5'
DRILLER	CORE RECOVERY (%)	# SAMPLES	# CORE BOXES
Standard Environmental Probe		1	
DRILL MAKE AND MODEL	LOGGED BY:		DEPTH BOTTOM OF HOLE
DPT 54LT	Jordan Morris		19.15

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			Dry concrete			20		0.00	soil- water int erface , 15.5'
			Poorly-graded sand with gravel. Slightly damp. Olive-gray. Poor recovery.			20			
4			Medium-plasticity organic soil, very damp. All fines, no visible sand. Non-micaceous. Dark brown. Poor recovery.			80			
8			Silty sand with gravel. Slightly damp. Dark olive-brown. 0.5-inch clasts of concrete mixed in.			40			
12			Organic soil, very damp. All fines, no visible sand. Dark brown with light brown strands of peat.			50			
16			Soil-water interface.	ENW01					
			Silt with sand. Wet, grading to damp at bottom of drill case. Low plasticity. Light gray. High recovery.	SWI-15.5		100			
20			Bottom of well.						
24									
28									











EVREN Northwest, Inc.

DRILL LOG	PROJECT	PROJECT NO.	BORING NO.
	Focused Subsurface Investigation		1581-21001-02
SITE	BEGUN	COMPLETED	HOLE SIZE
8701 Greenwood Ave N., Seattle, WA	4-27-2022	4-27-2022	2"
COORDINATES	DEPTH GROUND WATER	DATE SL	STATIC LEVEL
		4-27-2022	FIRST WATER
DRILLER	CORE RECOVERY (%)		# CORE BOXES
Standard Probe			2
DRILL MAKE AND MODEL	LOGGED BY:		DEPTH BOTTOM OF HOLE
	Robert Simons		19.5

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			Gray gravel			40			
			Peat			40			
4			Peat			90			
									
									
8									
			Silt/Sand, gray	P-2		90			
12			Peat			90			
			Peat			80			
									
16			Wet Gray Silt/Sand	P-1		40			
									
20			Wet Gray Silt/Sand			40		Bottom of Core	
									
24									
									
28									












EVREN Northwest, Inc.

DRILL LOG	PROJECT	PROJECT NO.	BORING NO.
	Focused Subsurface Investigation		1581-21001-02
SITE	BEGUN	COMPLETED	HOLE SIZE
8701 Greenwood Ave N., Seattle, WA	4-27-2022	4-27-2022	2"
COORDINATES	DEPTH GROUND WATER	DATE SL	STATIC LEVEL
		4-27-2022	FIRST WATER
DRILLER	CORE RECOVERY (%)		# CORE BOXES
Standard Probe			2
DRILL MAKE AND MODEL	LOGGED BY:		DEPTH BOTTOM OF HOLE
	Robert Simons		19.5

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			Gray Gravel			60			
			Tan Sand/Gravel						
4			Tan Sand/Gravel			80			
			Gray Sand, Wet			80			
8			Gray Sand, Wet	P-3					
			Peat			80			
12			Peat			90			
			Wet Silt Slurry, Gray	P-4		90			
16			Wet Silt Slurry, Gray			70			
20			Wet Silt Slurry, Gray					Bottom of Core	
24									
28									





EVREN Northwest, Inc.

DRILL LOG	PROJECT	PROJECT NO.	BORING NO.
	Focused Subsurface Investigation		1581-21001-02
SITE	BEGUN	COMPLETED	HOLE SIZE
8701 Greenwood Ave N., Seattle, WA	4-27-2022	4-27-2022	2"
COORDINATES	DEPTH GROUND WATER	DATE SL	STATIC LEVEL
		4-27-2022	FIRST WATER
DRILLER	CORE RECOVERY (%)		# CORE BOXES
Standard Probe			2
DRILL MAKE AND MODEL	LOGGED BY:		DEPTH BOTTOM OF HOLE
	Robert Simons		19.4

DEPTH	STRATA ELEVATION/DEPTH	GRAPHIC LOG	DESCRIPTION	SAMPLE DATA				PID/OVM	REMARKS: NOTES ON WATER LEVELS, LOSSES, CAVING, CASING, DEPTH & DRILLING CONDITIONS.
				SAMPLE NO.	SAMPLE TYPE	CORE RECOVERY	MW Const./Completion		
0			Gray Gravel			60			
			Brown Gravel			60			
4			Brown Gravel			50			
			Peat			50			
8			Peat			90			
			Peat			50			
12			Peat	P-5		50			
			Gray Wet Silt	P-6		50			
16			Hard Pan, Gray			50			
			Hard Pan, Gray			50			
20			Hard Pan, Gray			50		Bottom of Core	
24									
28									











EVREN Northwest, Inc.

DRILL LOG	PROJECT	PROJECT NO.	BORING NO.
	Focused Subsurface Investigation		1581-21001-02 Well 5
SITE	BEGUN	COMPLETED	HOLE SIZE
8701 Greenwood Ave N., Seattle, WA	4-27-2021	4-27-2021	2"
COORDINATES	DEPTH GROUND WATER	DATE SL	STATIC LEVEL
		4-27-2022	FIRST WATER
DRILLER	CORE RECOVERY (%)		# CORE BOXES
Standard Probe			2
DRILL MAKE AND MODEL	LOGGED BY:		DEPTH BOTTOM OF HOLE
	Robert Simons		17.5

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			Gray Gravel			50			
			Brown Gravel			50			
4			Silt Silt			50 80			
			Peat			80			
8									
			Peat			50			
12			Peat	P-7		50			
16			Wet Gray Silt	P-8		50			
20			Hard Pan, Gray			50			
			Hard Pan, Gray			50		Bottom of Core	
24									
28									












EVREN Northwest, Inc.

DRILL LOG	PROJECT	PROJECT NO.	BORING NO.
	Focused Subsurface Investigation		1581-21001-02
SITE	BEGUN	COMPLETED	HOLE SIZE
8701 Greenwood Ave N., Seattle, WA	4-28-2022	4-28-2022	2"
COORDINATES	DEPTH GROUND WATER	DATE SL	STATIC LEVEL
		4-28-2022	FIRST WATER
DRILLER	CORE RECOVERY (%)		# CORE BOXES
Standard Probe			3
DRILL MAKE AND MODEL	LOGGED BY:		
	Robert Simons		
			DEPTH TOP OF ROCK
			2'
			DEPTH BOTTOM OF HOLE
			17.7

DEPTH	STRATA ELEVATION/DEPTH	GRAPHIC LOG	DESCRIPTION	SAMPLE DATA				PID/OVM	REMARKS: NOTES ON WATER LEVELS, LOSSES, CAVING, CASING, DEPTH & DRILLING CONDITIONS.
				SAMPLE NO.	SAMPLE TYPE	CORE RECOVERY	MW Const./Completion		
0			Gray Gravel			50			
			Brown Gravel			50			
4			Brown Gravel			70			
				P-11					
8			Brown Gravel			40			
			Peat			40			
			Gray Silt/Sand, Wet			40			
12			Gray Silt/Sand, Wet			40			
				P-9					
			Gray Silt/Sand, Wet			30			
			Hard Pan, Gray			30			
16			Hard Pan, Gray			30			
				P-10					
20			Hard Pan, Gray			30			
								Bottom of Core	
24									
28									











EVREN Northwest, Inc.

DRILL LOG	PROJECT	PROJECT NO.	BORING NO.
	Focused Subsurface Investigation		1581-21001-02
SITE	BEGUN	COMPLETED	HOLE SIZE
8701 Greenwood Ave N., Seattle, WA	4-28-2022	4-28-2022	2"
COORDINATES	DEPTH GROUND WATER	DATE SL	STATIC LEVEL
		4-28-2022	FIRST WATER
DRILLER	CORE RECOVERY (%)		# CORE BOXES
Standard Probe			0
DRILL MAKE AND MODEL	LOGGED BY:		DEPTH TOP OF ROCK
	Robert Simons		3'
			DEPTH BOTTOM OF HOLE
			19.4

DEPTH	STRATA ELEVATION/DEPTH	GRAPHIC LOG	DESCRIPTION	SAMPLE DATA				PID/OVM	REMARKS: NOTES ON WATER LEVELS, LOSSES, CAVING, CASING, DEPTH & DRILLING CONDITIONS.
				SAMPLE NO.	SAMPLE TYPE	CORE RECOVERY	MW Const./Completion		
0			Gray Gravel			50			
4			Gravel & Peat			50			
			Gravel & Peat			60			
			Peat			60			
8			Peat			70			
			Peat			70			
12			Peat	P-12		70			
			Silt/Sand, Gray and Wet			70			
16			Silt/Sand, Gray and Wet			50			
			Hard Pan, Gray			50			
20			Hard Pan, Gray					Bottom of Core	
24									
28									

EVREN Northwest, Inc.

DRILL LOG	PROJECT	PROJECT NO.	BORING NO.
	Focused Subsurface Investigation		1581-21001-02
SITE	BEGUN	COMPLETED	HOLE SIZE
8701 Greenwood Ave N., Seattle, WA	4-28-2022	4-28-2022	2"
COORDINATES	DEPTH GROUND WATER	DATE SL	STATIC LEVEL
	4-28-2022		FIRST WATER
DRILLER	CORE RECOVERY (%)		# CORE BOXES
Standard Probe			1
DRILL MAKE AND MODEL	LOGGED BY:		
	Robert Simons		
			DEPTH BOTTOM OF HOLE
			19.4

DEPTH	STRATA ELEVATION/ DEPTH	GRAPHIC LOG	DESCRIPTION	SAMPLE DATA				PID/OVM	REMARKS: NOTES ON WATER LEVELS, LOSSES, CAVING, CASING, DEPTH & DRILLING CONDITIONS.
				SAMPLE NO.	SAMPLE TYPE	CORE RECOVERY	MW Const./ Completion		
0			Gray Gravel			50			
			Brown Gravel			50			
4			Brown Gravel			80			
			Peat			80			
8			Peat			90			
			Peat			70			
12			Peat			70			
16			Silt, Wet			40			
			Silt, Wet	P-13					
20			Silt, Wet			40			Bottom of Core
24									
28									












EVREN Northwest, Inc.

DRILL LOG	PROJECT	PROJECT NO.	BORING NO.
	Focused Subsurface Investigation		1581-21001-02
SITE	BEGUN	COMPLETED	HOLE SIZE
8701 Greenwood Ave N., Seattle, WA	4-28-2021	4-28-2021	2"
COORDINATES	DEPTH GROUND WATER	DATE SL	STATIC LEVEL
		4-28-2022	FIRST WATER
DRILLER	CORE RECOVERY (%)		# CORE BOXES
Standard Probe			2
DRILL MAKE AND MODEL	LOGGED BY:		DEPTH BOTTOM OF HOLE
	Robert Simons		19.4

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			40			
			Gravel, Tan			40			
4			Gray Silty Sand			40			
8			Gray Silty Sand			70			
			Peat			70			
12			Peat	P-9		70			
			Peat	P-10		70			
16			Silt, Wet			50			
			Hard Pan, Gray			50			
20			Hard Pan, Gray					Bottom of Core	
24									
28									

EVREN Northwest, Inc.

DRILL LOG	PROJECT	PROJECT NO.	BORING NO.
	Focused Subsurface Investigation		1581-21001-02
SITE	BEGUN	COMPLETED	HOLE SIZE
8701 Greenwood Ave N., Seattle, WA	4/28/2021	4/28/2021	2"
COORDINATES	DEPTH GROUND WATER	DATE SL	STATIC LEVEL
		4-28-2022	FIRST WATER
DRILLER	CORE RECOVERY (%)		# CORE BOXES
Standard Probe			2
DRILL MAKE AND MODEL	LOGGED BY:		DEPTH BOTTOM OF HOLE
	Robert Simons		19.3

DEPTH	STRATA ELEVATION/ DEPTH	GRAPHIC LOG	DESCRIPTION	SAMPLE DATA				PID/OVM	REMARKS: NOTES ON WATER LEVELS, LOSSES, CAVING, CASING, DEPTH & DRILLING CONDITIONS.
				SAMPLE NO.	SAMPLE TYPE	CORE RECOVERY	MW Const./ Completion		
0			Gray Gravel			30			
			Brown Gravel			30			
4			Peat			30			
			Peat			90			
8			Peat			70			
			Peat	P-9					
12			Peat			70			
			Peat	P-10					
16			Sand, Wet			70			
			Gray Hard Pan, Silt, Gravel			30			
20			Gray Hard Pan Silt, Gravel			30		Bottom of Core	
24									
28									





EVREN Northwest, Inc.

DRILL LOG	PROJECT	PROJECT NO.	BORING NO.
	Focused Subsurface Investigation		1581-21001-02
SITE	BEGUN	COMPLETED	HOLE SIZE
8701 Greenwood Ave N., Seattle, WA	4-27-2021	4-27-2021	2"
COORDINATES	DEPTH GROUND WATER	DATE SL	STATIC LEVEL
	4-27-2022		FIRST WATER
DRILLER	CORE RECOVERY (%)	# SAMPLES	# CORE BOXES
Standard Probe		2	
DRILL MAKE AND MODEL	LOGGED BY:		DEPTH BOTTOM OF HOLE
	Robert Simons		19.4

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			Mixed Gravel			40			
			Peat			40			
4			Peat	P-2		90			
8			Peat			60			
			Silt/Sand			60			
12			Peat	P-1		60			
			Peat			80			
16			Silt/Wet Sand			60			
20			Silt/Wet Sand						Bottom of Core
24									
28									









EVREN Northwest, Inc.

DRILL LOG	PROJECT	PROJECT NO.	BORING NO.		
	Focused Subsurface Investigation		1581-21001-02	Well 12	
SITE	BEGUN	COMPLETED	HOLE SIZE	ANGLE FROM HORIZ.	
8701 Greenwood Ave N., Seattle, WA	5-26-2021	5-26-2021	2"		
COORDINATES	DEPTH GROUND WATER	DATE SL	STATIC LEVEL	FIRST WATER	GROUND ELEVATION
		5-26-2021		16"	
DRILLER	CORE RECOVERY (%)		# SAMPLES	# CORE BOXES	DEPTH TOP OF ROCK
Standard Probe			2		1'
DRILL MAKE AND MODEL	LOGGED BY:				DEPTH BOTTOM OF HOLE
	Robert Simons				20

DEPTH	STRATA ELEVATION/DEPTH	GRAPHIC LOG	DESCRIPTION	SAMPLE DATA				PID/OVM	REMARKS: NOTES ON WATER LEVELS, LOSSES, CAVING, CASING, DEPTH & DRILLING CONDITIONS.
				SAMPLE NO.	SAMPLE TYPE	CORE RECOVERY	MW Const./Completion		
0			Gray Gravel			30			
			Gray Sand Silt Clay			30			
4									
			Peat			30			
8			Peat	P-33		50			
12			Peat	P-34		80			
			Wet Sand Silt Clay			80			
16									
20			Wet Sand Silt Clay						Bottom of Core
24									
28									

EVREN Northwest, Inc.

DRILL LOG	PROJECT	PROJECT NO.	BORING NO.
	Focused Subsurface Investigation		1581-21001-02
SITE	BEGUN	COMPLETED	HOLE SIZE
8701 Greenwood Ave N., Seattle, WA	5-26-2021	5-26-2021	2"
COORDINATES	DEPTH GROUND WATER	DATE SL	STATIC LEVEL
		5-26-2021	FIRST WATER
DRILLER	CORE RECOVERY (%)		# CORE BOXES
Standard Probe			2
DRILL MAKE AND MODEL	LOGGED BY:		DEPTH BOTTOM OF HOLE
	Robert Simons		20

DEPTH	STRATA ELEVATION/DEPTH	GRAPHIC LOG	DESCRIPTION	SAMPLE DATA				PID/OVM	REMARKS: NOTES ON WATER LEVELS, LOSSES, CAVING, CASING, DEPTH & DRILLING CONDITIONS.
				SAMPLE NO.	SAMPLE TYPE	CORE RECOVERY	MW Const./Completion		
0			Gray Gravel			50			
			Gray Mixed Brown Gravel & Peat			50			
4									
			Wet Peat			50			
8			Wet Peat			90			
12									
			Wet Peat	P-42		90			
			Wet Peat	P-43		90			
16			Wet Gray Sand			90			
20			Wet Gray Sand						Bottom of Core
24									
28									

Appendix B

Laboratory Analytical Reports

Analytical Report

Project Name:

8701 Greenwood Ave

EAS SDG Number: **222042**

Client Project Manager: Lynn Green

Prepared For:

Evren Northwest Inc.

40 SE 24th Avenue, Suite A

Portland

OR 97214

Project Number: 17696

Sample Event Date: 01/25/2022

Received Date: 1/28/2022

Report Date: 2/2/2022

Revised Report 2/10/2022

Project Number: 1581-21001-02

PO Number:

This is the Laboratory Report for the samples in the indicated Sample Delivery Group (SDG). Each sample received in the group is assigned a Laboratory ID number. The combination of the SDG number and the Lab ID number is a unique identifier for the sample.

This Report Contains:

Laboratory Work Order

Project Sample Media

Laboratory Case Narrative and Chain of Custody

Method Description (when applicable)

Quality Control Reports

Analytical Reports

NELAC Certification: Florida E871125

173 Cross Street, San Luis Obispo, CA 93401 (805) 781-3585

Laboratory Work Order

SDG Number: 222042

Client: Lynn Green

Evren Northwest Inc.

Project Number: 17696

Received: 1/28/2022

SAMPLE DESCRIPTION AND ANALYSIS REQUESTED

Client Sample ID	EAS Lab No.	Analysis Requested	Date Sampled
SUB01-220125	222042 1	EPA TO-15 VOC + IPA	1/25/2022
SUB02-220125	222042 2	EPA TO-15 VOC + IPA	1/25/2022
SUB03-220125	222042 3	EPA TO-15 VOC + IPA	1/25/2022
SUB04-220125	222042 4	EPA TO-15 VOC + IPA	1/25/2022
SUB05-220125	222042 5	EPA TO-15 VOC + IPA	1/25/2022
SUB06-220125	222042 6	EPA TO-15 VOC + IPA	1/25/2022

Project Sample Media

SDG Number: 222042

The following sample media was used for this Sample Delivery Group (SDG). The Sample Media column identifies the type of media. For canisters, the Sample Media Batch gives the canister number followed by the cleaning batch number, which is a unique identification. The initial pressure of the canister when it is received is recorded. If the canister is not pressurized, the final pressure will be the same as the initial pressure. If the canister is pressurized the final pressure will be recorded, and the canister dilution factor is calculated as the ratio of the final to initial pressure. The results are adjusted for the can dilution factor.

SDG	Lab ID	Client Sample No.	Sample		Pressure, torr		Can Factor
			Media	Batch	Initial	Final	
222042	1	SUB01-220125	935	122221B	695	695	1.00
222042	2	SUB02-220125	364	123021A	721	721	1.00
222042	3	SUB03-220125	311	123021A	679	679	1.00
222042	4	SUB04-220125	345	123021A	753	753	1.00
222042	5	SUB05-220125	313	122221B	742	742	1.00
222042	6	SUB06-220125	310	122221B	739	739	1.00

Laboratory Case Narrative

EAS SDG Number: 222042

Project Number: 17696

Client: Evren Northwest Inc.

The Laboratory Case Narrative for the SDG is below. The Chain of Custody form(s) follow the Laboratory Case Narrative.

Sample Control Narrative

The samples were all received in good condition and with proper preservation.

Analytical Methods

The methods used for sample analysis are listed on the Analytical Report header, and have been modified as described in the EAS Quality Manual..

Case Narrative

QC Narrative

All analyses met EAS method criteria as defined in the Quality Manual, except as noted in the report or QC reports with data qualifiers.

Subcontract Narrative

No sample analysis was subcontracted for this project

Laboratory Certification

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness other than the condition(s) noted above. The Laboratory Report is property of EAS and its client. The entire report has been reviewed and approved.



Date Approved: 2/2/2022

Steven D. Hoyt, Ph.D.
Environmental Analytical Service
Laboratory Director

Quality Control Report

EAS SDG Number: 222042

Project Number: 17696

QC Narrative

Samples were analyzed in a daily analytical batch (DAB) designated by a QC batch number, and were analyzed using EAS standard laboratory QC specified in the EAS Quality Manual which may be different than the referenced agency method. Any deviations from the EAS QC criteria are flagged in the Laboratory Control Reports or in the sample Analytical Reports.

Standard Laboratory QC Report

Unless project specific QC was requested, this Section containing the standard laboratory QC (Level 2) supplied with the Analytical Reports. Each sample is analyzed in a Daily Analytical Batch (DAB) which includes the method blank, a laboratory control spike (LCS) and a laboratory control duplicate (LCD). A Daily Analytical Batch QC report is supplied for each method requested.

Method Blank

The method blank is a laboratory generated sample which assesses the degree to which laboratory operations cause a false positive. The target analytes in the analytical reports for a daily analytical batch are "B" flagged if their concentrations are present in the Method Blank above the RL, unless the result is greater than ten times the blank value..

Laboratory Control Spike

A laboratory control spike is a well characterized matrix similar to the sample which is spiked and run in duplicate with each Daily Analytical Batch. The laboratory control spike results are reported as a percent recovery. The QC Criteria for the control spike is listed in the Laboratory Control Report. Any results outside the control limits are flagged with a "Q" on the Laboratory Control Report. The control spike contains an abbreviated list of compounds in the method, and may contain compounds not on the target list for the specified report.

Laboratory Control Duplicate

The laboratory control duplicate is a duplicate analysis of the laboratory control spike, a standard, or a sample depending on the method. The results are reported as a relative percent difference (RPD). The criteria for the duplicate is in the Laboratory Control Report for the Daily Analytical Batch. Any results outside the control limits are flagged with a "Q" on the Laboratory Control Report.

METHOD BLANK REPORT

EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: LABQC

Laboratory ID: B01312

File Name: B01312D.D
Description: METHOD BLANK
Canister:
QC_Batch: 013122-MA1

Date Sampled:
Date Analyzed: 1/31/2022
Can Dilution Factor: 1.00
Air Volume: 200.00 ml
Time:
Time: 13:47

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.65	1.25	ND	3.22	6.19	ND	
74-87-3	Chloromethane	0.65	1.26	ND	1.34	2.61	ND	
76-14-2	Freon 114	0.25	1.26	ND	1.75	8.80	ND	
75-01-4	Vinyl chloride	0.25	1.26	ND	0.64	3.22	ND	
106-99-0	1,3-Butadiene	0.25	1.26	ND	0.55	2.79	ND	
74-83-9	Bromomethane	0.50	1.26	ND	1.94	4.89	ND	
75-00-3	Chloroethane	0.25	1.26	ND	0.66	3.32	ND	
64-17-5	Ethanol	1.25	3.75	ND	2.36	7.08	ND	
75-69-4	Trichlorofluoromethane	0.35	1.26	ND	1.97	7.09	ND	
67-64-1	Acetone	1.25	3.75	ND	2.97	8.92	ND	
75-35-4	1,1-Dichloroethene	0.25	1.24	ND	0.99	4.92	ND	
76-13-1	Freon 113	0.25	1.20	ND	1.92	9.18	ND	
75-09-2	Dichloromethane	0.50	1.20	ND	1.74	4.19	ND	
75-15-0	Carbon disulfide	1.25	2.32	ND	3.90	7.23	ND	
156-60-5	trans-1,2-Dichloroethene	0.25	0.90	ND	0.99	3.58	ND	
1634-04-4	Methyl tert butyl ether	0.25	0.92	ND	0.90	3.33	ND	
75-34-3	1,1-Dichloroethane	0.25	1.25	ND	1.01	5.06	ND	
108-05-4	Vinyl acetate	0.25	1.10	ND	0.88	3.87	ND	
78-93-3	2-Butanone	1.00	2.55	ND	2.95	7.52	ND	
141-78-6	Ethyl acetate	0.50	1.10	ND	1.80	3.95	ND	
74-97-5	Bromochloromethane	0.25	0.67	ND	1.32	3.53	ND	
109-99-9	Tetrahydrofuran	0.50	1.26	ND	1.48	3.71	ND	
156-59-2	cis-1,2-Dichloroethene	0.50	1.35	ND	1.98	5.34	ND	
67-66-3	Chloroform	0.25	1.19	ND	1.22	5.82	ND	
71-55-6	1,1,1-Trichloroethane	0.25	1.11	ND	1.37	6.06	ND	
107-06-2	1,2-Dichloroethane	0.25	1.14	ND	1.01	4.62	ND	
110-82-7	Cyclohexane	0.25	0.96	ND	0.87	3.31	ND	
71-43-2	Benzene	0.50	1.00	ND	1.60	3.20	ND	
56-23-5	Carbon tetrachloride	0.23	1.19	ND	1.42	7.46	ND	
142-82-5	n-Heptane	1.25	3.03	ND	5.13	12.43	ND	
78-87-5	1,2-Dichloropropane	0.25	1.20	ND	1.16	5.57	ND	
123-91-1	1,4 Dioxane	1.00	2.05	ND	3.61	7.38	ND	
79-01-6	Trichloroethene	0.15	1.16	ND	0.81	6.27	ND	
75-27-4	Bromodichloromethane	0.25	0.51	ND	1.68	3.39	ND	
80-62-6	Methyl methacrylate	1.00	3.38	ND	4.10	13.86	ND	
108-10-1	4-Methyl-2-pentanone	1.00	3.79	ND	4.10	15.53	ND	
10061-01-5	cis-1,3-Dichloropropene	0.25	1.30	ND	1.14	5.89	ND	

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
108-88-3	Toluene	0.50	1.31	ND	1.89	4.92	ND	
10061-02-6	trans-1,3-Dichloropropene	0.25	1.30	ND	1.14	5.89	ND	
79-00-5	1,1,2-Trichloroethane	0.25	1.29	ND	1.37	7.02	ND	
591-78-6	2-Hexanone	1.25	3.55	ND	5.13	14.55	ND	
124-48-1	Dibromochloromethane	0.25	0.50	ND	2.13	4.26	ND	
106-93-4	1,2-Dibromoethane	0.25	0.61	ND	1.92	4.67	ND	
127-18-4	Tetrachloroethene	0.15	0.61	ND	1.02	4.13	ND	
108-90-7	Chlorobenzene	0.25	1.14	ND	1.15	5.25	ND	
100-41-4	Ethylbenzene	0.53	1.32	ND	2.30	5.75	ND	
1330-20-7	m,p-Xylenes	0.53	1.32	ND	2.30	5.76	ND	
100-42-5	Styrene	0.52	1.29	ND	2.21	5.52	ND	
75-25-2	Bromoform	0.25	0.34	ND	2.59	3.47	ND	
95-47-6	o-Xylene	0.52	1.29	ND	2.24	5.60	ND	
79-34-5	1,1,2,2-Tetrachloroethane	0.25	0.62	ND	1.70	4.25	ND	
622-96-8	4-Ethyltoluene	0.83	2.07	ND	4.08	10.20	ND	
108-67-8	1,3,5-Trimethylbenzene	0.52	1.29	ND	2.54	6.36	ND	
95-63-6	1,2,4-Trimethylbenzene	0.51	1.27	ND	2.50	6.25	ND	
541-73-1	1,3-Dichlorobenzene	0.50	0.93	ND	3.01	5.57	ND	
100-44-7	Benzyl chloride	0.50	3.03	ND	2.59	15.71	ND	
106-46-7	1,4-Dichlorobenzene	0.50	0.87	ND	3.01	5.21	ND	
95-50-1	1,2-Dichlorobenzene	1.00	1.25	ND	6.02	7.53	ND	
120-82-1	1,2,4-Trichlorobenzene	1.25	1.72	ND	9.29	12.78	ND	
91-20-3	Naphthalene	0.26	0.40	ND	1.34	2.10	ND	
87-68-3	Hexachlorobutadiene	0.25	0.32	ND	2.67	3.36	ND	
	Surrogate Recovery				% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8				85	70	130	

METHOD BLANK REPORT

EPA Method TO-15 Modified TPH

Analytical Method: TO-15

SDG: LABQC
Laboratory ID: B01312

File Name: B01312D.D
Description: METHOD BLANK
Canister:
QC_Batch: 013122-MA1

Date Sampled:
Date Analyzed: 1/31/2022
Can Dilution Factor: 1.00
Air Volume: 200 ml
Time:
Time: 13:47

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
1330-20-7	Gas Range Organics (C6-C10)	60.00	180.00	ND	284.86	854.59	ND	

METHOD BLANK REPORT

EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: LABQC

Laboratory ID: B01312

File Name: B01312D.D

Description: METHOD BLANK

Can/Tube#:

QC_Batch: 013122-MA1

Date Sampled:

Date Analyzed: 1/31/2022

Can Dilution Factor: 1.00

Air Volume: 200 ml

Time:

Time: 13:47

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
67-63-0	2-propanol (Isopropyl Alcohol)	1.25	3.75	ND	3.08	9.23	ND	

Surrogate Recovery		% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8	85	70	130	

QUALITY CONTROL REPORT

Laboratory Control Spike and Spike Duplicate Report

TO15 Volatile Organic Compounds by GC/MS

QC_Batch: 013122-MA1

Date: 01/31/22

CAS#	Compound	LCS		LCD		Spike Limit		Duplicate		Flag
		Recovery %	Flag	Recovery %	Flag	LCL %	UCL %	Duplicate %	Limit %	
75-01-4	Vinyl chloride	92		86		70	130	7	25	
75-35-4	1,1-Dichloroethene	94		88		70	130	6	25	
75-09-2	Dichloromethane	107		99		70	130	7	25	
75-34-3	1,1-Dichloroethane	96		84		70	130	13	25	
67-66-3	Chloroform	81		82		70	130	1	25	
71-55-6	1,1,1-Trichloroethane	84		77		70	130	8	25	
107-06-2	1,2-Dichloroethane	82		73		70	130	11	25	
71-43-2	Benzene	83		82		70	130	2	25	
56-23-5	Carbon tetrachloride	91		80		70	130	13	25	
79-01-6	Trichloroethene	99		94		70	130	5	25	
108-88-3	Toluene	100		79		70	130	23	25	
106-93-4	1,2-Dibromoethane	119		95		70	130	23	25	
127-18-4	Tetrachloroethene	115		91		70	130	24	25	
100-41-4	Ethylbenzene	87		78		70	130	10	25	
1330-20-7	m,p-Xylenes	85		74		70	130	13	25	
95-47-6	o-Xylene	92		80		70	130	15	25	
108-67-8	1,3,5-Trimethylbenzene	101		84		70	130	18	25	
95-63-6	1,2,4-Trimethylbenzene	94		102		70	130	8	25	

LCS - Laboratory Control Spike

LCD - Laboratory Control Duplicate

Flag - Q indicated out of Limits

Analytical Reports

EAS SDG Number: 222042

Project Number: 17696

The following pages contain the certified Analytical Reports for the samples submitted in the Sample Delivery Group (SDG) and are in order of the EAS Lab ID number. All of the analytical methods used are modifications of the published methods. Procedural method modifications, QC modifications, QC Criteria modifications, target lists, definitions of detection limits, and flags are all explained in detail in the EAS Quality Manual.

The Analytical Report has columns for the method detection limit (MDL), the reporting limit (RL), and the Amount. The Amount is the concentration of the compound in the sample. The report usually has the results reported with two commonly used units. The MDL, RL, and Amount are adjusted for the canister dilution factor and any dilution caused by sample matrix effects.

NELAC CERTIFICATION

EAS is accredited by the National Environmental Laboratory Accreditation (NELAC) with the Florida Department of Health, one of the NELAC certifying states. EAS is certified for the EPA TO-15, EPA TO-11 and EPA TO-4 methods. A list of accredited compounds is available on request.

DETECTION LIMITS

MDL: The MDL is lowest concentration that can be measured to be statistically above the noise level and is determined using the EPA 2016 method which uses the standard deviation of replicate measurements made over time. The method also incorporates systematic instrumentation blank levels. See Quality Manual for detailed explanation.

RL: The reporting limit (RL) is the lowest concentration that can be reliably reported for each compound that meets the QC Criteria for the method, background levels, or project specific considerations. The QC criteria level for the method blank is to be less than the RL. See Quality Manual for more information.

DATA FLAGS

In the standard report, if a compound is not detected above the method detection limit, a "ND" is in the Amount column. The flag column is used for both the not detect flag and for any data flags.

B - This compound was detected in the batch method blank above the reporting limit and is greater than one tenth the amount in the sample.

E - This compound exceeds the calibration range for this sample volume.

J - The amount reported is estimated because it was below the RL and could be below the lowest calibration point, have higher uncertainty, or could be the result of system background

UNITS

PPBV or PPMV: Parts-per-billion (or million) by volume is a mole (volume) ratio of the moles of analyte divided by the moles of air (gas). This is the primary unit used to report air or gas concentrations and is independent of temperature and pressure.

UG/M3 OR MG/M3: The reported result was calculated based on 1 atm pressure and a temperature of 25C. The conversion from PPBV is: $UG/M3 = PPBV \times MW/24.46$ where 24.46 is the gas constant and MW is the Compounds Molecular Weight (sometimes called Formula Weight)

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 222042

Analytical Method: TO-15

Laboratory ID: 01

File Name: 2204201A.D
Description: SUB01-220125
Canister: 935
QC_Batch: 013122-MA1

Date Sampled: 1/25/2022 Time: 12:20
Date Analyzed: 1/31/2022 Time: 17:27
Can Dilution Factor: 1.00
Air Volume: 200.00 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.65	1.25	ND	3.22	6.19	ND	
74-87-3	Chloromethane	0.65	1.26	ND	1.34	2.61	ND	
76-14-2	Freon 114	0.25	1.26	ND	1.75	8.80	ND	
75-01-4	Vinyl chloride	0.25	1.26	ND	0.64	3.22	ND	
106-99-0	1,3-Butadiene	0.25	1.26	ND	0.55	2.79	ND	
74-83-9	Bromomethane	0.50	1.26	ND	1.94	4.89	ND	
75-00-3	Chloroethane	0.25	1.26	ND	0.66	3.32	ND	
64-17-5	Ethanol	1.25	3.75	41.86	2.36	7.08	79.03	
75-69-4	Trichlorofluoromethane	0.35	1.26	ND	1.97	7.09	ND	
67-64-1	Acetone	1.25	3.75	29.66	2.97	8.92	70.59	
75-35-4	1,1-Dichloroethene	0.25	1.24	ND	0.99	4.92	ND	
76-13-1	Freon 113	0.25	1.20	ND	1.92	9.18	ND	
75-09-2	Dichloromethane	0.50	1.20	ND	1.74	4.19	ND	
75-15-0	Carbon disulfide	1.25	2.32	ND	3.90	7.23	ND	
156-60-5	trans-1,2-Dichloroethene	0.25	0.90	ND	0.99	3.58	ND	
1634-04-4	Methyl tert butyl ether	0.25	0.92	ND	0.90	3.33	ND	
75-34-3	1,1-Dichloroethane	0.25	1.25	ND	1.01	5.06	ND	
108-05-4	Vinyl acetate	0.25	1.10	ND	0.88	3.87	ND	
78-93-3	2-Butanone	1.00	2.55	ND	2.95	7.52	ND	
141-78-6	Ethyl acetate	0.50	1.10	ND	1.80	3.95	ND	
74-97-5	Bromochloromethane	0.25	0.67	ND	1.32	3.53	ND	
109-99-9	Tetrahydrofuran	0.50	1.26	ND	1.48	3.71	ND	
156-59-2	cis-1,2-Dichloroethene	0.50	1.35	ND	1.98	5.34	ND	
67-66-3	Chloroform	0.25	1.19	ND	1.22	5.82	ND	
71-55-6	1,1,1-Trichloroethane	0.25	1.11	ND	1.37	6.06	ND	
107-06-2	1,2-Dichloroethane	0.25	1.14	ND	1.01	4.62	ND	
110-82-7	Cyclohexane	0.25	0.96	ND	0.87	3.31	ND	
71-43-2	Benzene	0.50	1.00	1.41	1.60	3.20	4.52	
56-23-5	Carbon tetrachloride	0.23	1.19	ND	1.42	7.46	ND	
142-82-5	n-Heptane	1.25	3.03	ND	5.13	12.43	ND	
78-87-5	1,2-Dichloropropane	0.25	1.20	ND	1.16	5.57	ND	
123-91-1	1,4 Dioxane	1.00	2.05	ND	3.61	7.38	ND	
79-01-6	Trichloroethene	0.15	1.16	ND	0.81	6.27	ND	
75-27-4	Bromodichloromethane	0.25	0.51	ND	1.68	3.39	ND	
80-62-6	Methyl methacrylate	1.00	3.38	ND	4.10	13.86	ND	
108-10-1	4-Methyl-2-pentanone	1.00	3.79	ND	4.10	15.53	ND	
10061-01-5	cis-1,3-Dichloropropene	0.25	1.30	ND	1.14	5.89	ND	
108-88-3	Toluene	0.50	1.31	0.79	1.89	4.92	2.96	J
10061-02-6	trans-1,3-Dichloropropene	0.25	1.30	ND	1.14	5.89	ND	

CAS#	Compound	MDL	RL	Amount	MDL	RL	Amount	Flag
		PPBV	PPBV	PPBV	UG/M3	UG/M3	UG/M3	
79-00-5	1,1,2-Trichloroethane	0.25	1.29	ND	1.37	7.02	ND	
591-78-6	2-Hexanone	1.25	3.55	ND	5.13	14.55	ND	
124-48-1	Dibromochloromethane	0.25	0.50	ND	2.13	4.26	ND	
106-93-4	1,2-Dibromoethane	0.25	0.61	ND	1.92	4.67	ND	
127-18-4	Tetrachloroethene	0.15	0.61	ND	1.02	4.13	ND	
108-90-7	Chlorobenzene	0.25	1.14	ND	1.15	5.25	ND	
100-41-4	Ethylbenzene	0.53	1.32	ND	2.30	5.75	ND	
1330-20-7	m,p-Xylenes	0.53	1.32	ND	2.30	5.76	ND	
100-42-5	Styrene	0.52	1.29	ND	2.21	5.52	ND	
75-25-2	Bromoform	0.25	0.34	ND	2.59	3.47	ND	
95-47-6	o-Xylene	0.52	1.29	ND	2.24	5.60	ND	
79-34-5	1,1,2,2-Tetrachloroethane	0.25	0.62	ND	1.70	4.25	ND	
622-96-8	4-Ethyltoluene	0.83	2.07	ND	4.08	10.20	ND	
108-67-8	1,3,5-Trimethylbenzene	0.52	1.29	ND	2.54	6.36	ND	
95-63-6	1,2,4-Trimethylbenzene	0.51	1.27	ND	2.50	6.25	ND	
541-73-1	1,3-Dichlorobenzene	0.50	0.93	ND	3.01	5.57	ND	
100-44-7	Benzyl chloride	0.50	3.03	ND	2.59	15.71	ND	
106-46-7	1,4-Dichlorobenzene	0.50	0.87	ND	3.01	5.21	ND	
95-50-1	1,2-Dichlorobenzene	1.00	1.25	ND	6.02	7.53	ND	
120-82-1	1,2,4-Trichlorobenzene	1.25	1.72	ND	9.29	12.78	ND	
91-20-3	Naphthalene	0.26	0.40	ND	1.34	2.10	ND	
87-68-3	Hexachlorobutadiene	0.25	0.32	ND	2.67	3.36	ND	
						QC	Limits	
Surrogate Recovery					% Rec.	LCL	UCL	Flag
2037-26-5	Toluene-d8				78	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified TPH

Analytical Method: TO-15

SDG: 222042

Laboratory ID: 01

File Name: 2204201A.D
Description: SUB01-220125
Canister: 935
QC_Batch: 013122-MA1

Date Sampled: 1/25/2022 Time: 12:20
Date Analyzed: 1/31/2022 Time: 17:27
Can Dilution Factor: 1.00
Air Volume: 200 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
1330-20-7	Gas Range Organics (C6-C10)	60.00	180.00	ND	284.86	854.59	ND	

ANALYTICAL REPORT

EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 222042
Laboratory ID: 01

File Name: 2204201A.D
Description: SUB01-220125
Can/Tube#: 935
QC_Batch: 013122-MA1

Date Sampled: 1/25/2022 Time: 12:20
Date Analyzed: 1/31/2022 Time: 17:27
Can Dilution Factor: 1.00
Air Volume: 200 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
67-63-0	2-propanol (Isopropyl Alcohol)	1.25	3.75	ND	3.08	9.23	ND	

Surrogate Recovery		% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8	78	70	130	

ANALYTICAL REPORT

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 222042

Analytical Method: TO-15

Laboratory ID: 02

File Name: 2204202A.D
Description: SUB02-220125
Canister: 364
QC_Batch: 013122-MA1

Date Sampled: 1/25/2022 Time: 12:30
Date Analyzed: 1/31/2022 Time: 18:03
Can Dilution Factor: 1.00
Air Volume: 200.00 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.65	1.25	ND	3.22	6.19	ND	
74-87-3	Chloromethane	0.65	1.26	ND	1.34	2.61	ND	
76-14-2	Freon 114	0.25	1.26	ND	1.75	8.80	ND	
75-01-4	Vinyl chloride	0.25	1.26	ND	0.64	3.22	ND	
106-99-0	1,3-Butadiene	0.25	1.26	ND	0.55	2.79	ND	
74-83-9	Bromomethane	0.50	1.26	ND	1.94	4.89	ND	
75-00-3	Chloroethane	0.25	1.26	ND	0.66	3.32	ND	
64-17-5	Ethanol	1.25	3.75	23.40	2.36	7.08	44.18	
75-69-4	Trichlorofluoromethane	0.35	1.26	ND	1.97	7.09	ND	
67-64-1	Acetone	1.25	3.75	68.26	2.97	8.92	162.43	
75-35-4	1,1-Dichloroethene	0.25	1.24	ND	0.99	4.92	ND	
76-13-1	Freon 113	0.25	1.20	ND	1.92	9.18	ND	
75-09-2	Dichloromethane	0.50	1.20	ND	1.74	4.19	ND	
75-15-0	Carbon disulfide	1.25	2.32	2.62	3.90	7.23	8.17	
156-60-5	trans-1,2-Dichloroethene	0.25	0.90	ND	0.99	3.58	ND	
1634-04-4	Methyl tert butyl ether	0.25	0.92	ND	0.90	3.33	ND	
75-34-3	1,1-Dichloroethane	0.25	1.25	ND	1.01	5.06	ND	
108-05-4	Vinyl acetate	0.25	1.10	ND	0.88	3.87	ND	
78-93-3	2-Butanone	1.00	2.55	4.32	2.95	7.52	12.76	
141-78-6	Ethyl acetate	0.50	1.10	ND	1.80	3.95	ND	
74-97-5	Bromochloromethane	0.25	0.67	ND	1.32	3.53	ND	
109-99-9	Tetrahydrofuran	0.50	1.26	ND	1.48	3.71	ND	
156-59-2	cis-1,2-Dichloroethene	0.50	1.35	ND	1.98	5.34	ND	
67-66-3	Chloroform	0.25	1.19	ND	1.22	5.82	ND	
71-55-6	1,1,1-Trichloroethane	0.25	1.11	ND	1.37	6.06	ND	
107-06-2	1,2-Dichloroethane	0.25	1.14	ND	1.01	4.62	ND	
110-82-7	Cyclohexane	0.25	0.96	ND	0.87	3.31	ND	
71-43-2	Benzene	0.50	1.00	3.43	1.60	3.20	10.96	
56-23-5	Carbon tetrachloride	0.23	1.19	ND	1.42	7.46	ND	
142-82-5	n-Heptane	1.25	3.03	ND	5.13	12.43	ND	
78-87-5	1,2-Dichloropropane	0.25	1.20	ND	1.16	5.57	ND	
123-91-1	1,4 Dioxane	1.00	2.05	ND	3.61	7.38	ND	
79-01-6	Trichloroethene	0.15	1.16	ND	0.81	6.27	ND	
75-27-4	Bromodichloromethane	0.25	0.51	ND	1.68	3.39	ND	
80-62-6	Methyl methacrylate	1.00	3.38	ND	4.10	13.86	ND	
108-10-1	4-Methyl-2-pentanone	1.00	3.79	ND	4.10	15.53	ND	
10061-01-5	cis-1,3-Dichloropropene	0.25	1.30	ND	1.14	5.89	ND	

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
108-88-3	Toluene	0.50	1.31	2.71	1.89	4.92	10.23	
10061-02-6	trans-1,3-Dichloropropene	0.25	1.30	ND	1.14	5.89	ND	
79-00-5	1,1,2-Trichloroethane	0.25	1.29	ND	1.37	7.02	ND	
591-78-6	2-Hexanone	1.25	3.55	ND	5.13	14.55	ND	
124-48-1	Dibromochloromethane	0.25	0.50	ND	2.13	4.26	ND	
106-93-4	1,2-Dibromoethane	0.25	0.61	ND	1.92	4.67	ND	
127-18-4	Tetrachloroethene	0.15	0.61	ND	1.02	4.13	ND	
108-90-7	Chlorobenzene	0.25	1.14	ND	1.15	5.25	ND	
100-41-4	Ethylbenzene	0.53	1.32	ND	2.30	5.75	ND	
1330-20-7	m,p-Xylenes	0.53	1.32	ND	2.30	5.76	ND	
100-42-5	Styrene	0.52	1.29	ND	2.21	5.52	ND	
75-25-2	Bromoform	0.25	0.34	ND	2.59	3.47	ND	
95-47-6	o-Xylene	0.52	1.29	ND	2.24	5.60	ND	
79-34-5	1,1,2,2-Tetrachloroethane	0.25	0.62	ND	1.70	4.25	ND	
622-96-8	4-Ethyltoluene	0.83	2.07	ND	4.08	10.20	ND	
108-67-8	1,3,5-Trimethylbenzene	0.52	1.29	ND	2.54	6.36	ND	
95-63-6	1,2,4-Trimethylbenzene	0.51	1.27	ND	2.50	6.25	ND	
541-73-1	1,3-Dichlorobenzene	0.50	0.93	ND	3.01	5.57	ND	
100-44-7	Benzyl chloride	0.50	3.03	ND	2.59	15.71	ND	
106-46-7	1,4-Dichlorobenzene	0.50	0.87	ND	3.01	5.21	ND	
95-50-1	1,2-Dichlorobenzene	1.00	1.25	ND	6.02	7.53	ND	
120-82-1	1,2,4-Trichlorobenzene	1.25	1.72	ND	9.29	12.78	ND	
91-20-3	Naphthalene	0.26	0.40	ND	1.34	2.10	ND	
87-68-3	Hexachlorobutadiene	0.25	0.32	ND	2.67	3.36	ND	

Surrogate Recovery		% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8	87	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified TPH

Analytical Method: TO-15

SDG: 222042

Laboratory ID: 02

File Name: 2204202A.D
Description: SUB02-220125
Canister: 364
QC_Batch: 013122-MA1

Date Sampled: 1/25/2022 Time: 12:30
Date Analyzed: 1/31/2022 Time: 18:03
Can Dilution Factor: 1.00
Air Volume: 200 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
1330-20-7	Gas Range Organics (C6-C10)	60.00	180.00	ND	284.86	854.59	ND	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 222042
Laboratory ID: 02

File Name: 2204202A.D
Description: SUB02-220125
Can/Tube#: 364
QC_Batch: 013122-MA1

Date Sampled: 1/25/2022 Time: 12:30
Date Analyzed: 1/31/2022 Time: 18:03
Can Dilution Factor: 1.00
Air Volume: 200 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
67-63-0	2-propanol (Isopropyl Alcohol)	1.25	3.75	ND	3.08	9.23	ND	

Surrogate Recovery		% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8	87	70	130	

ANALYTICAL REPORT

EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 222042

Laboratory ID: 03

File Name: 2204203A.D
Description: SUB03-220125
Canister: 311
QC_Batch: 013122-MA1

Date Sampled: 1/25/2022 Time: 13:01
Date Analyzed: 1/31/2022 Time: 18:38
Can Dilution Factor: 1.00
Air Volume: 200.00 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.65	1.25	ND	3.22	6.19	ND	
74-87-3	Chloromethane	0.65	1.26	ND	1.34	2.61	ND	
76-14-2	Freon 114	0.25	1.26	ND	1.75	8.80	ND	
75-01-4	Vinyl chloride	0.25	1.26	ND	0.64	3.22	ND	
106-99-0	1,3-Butadiene	0.25	1.26	ND	0.55	2.79	ND	
74-83-9	Bromomethane	0.50	1.26	ND	1.94	4.89	ND	
75-00-3	Chloroethane	0.25	1.26	ND	0.66	3.32	ND	
64-17-5	Ethanol	1.25	3.75	7.90	2.36	7.08	14.92	
75-69-4	Trichlorofluoromethane	0.35	1.26	ND	1.97	7.09	ND	
67-64-1	Acetone	1.25	3.75	40.61	2.97	8.92	96.62	
75-35-4	1,1-Dichloroethene	0.25	1.24	ND	0.99	4.92	ND	
76-13-1	Freon 113	0.25	1.20	ND	1.92	9.18	ND	
75-09-2	Dichloromethane	0.50	1.20	ND	1.74	4.19	ND	
75-15-0	Carbon disulfide	1.25	2.32	ND	3.90	7.23	ND	
156-60-5	trans-1,2-Dichloroethene	0.25	0.90	ND	0.99	3.58	ND	
1634-04-4	Methyl tert butyl ether	0.25	0.92	ND	0.90	3.33	ND	
75-34-3	1,1-Dichloroethane	0.25	1.25	ND	1.01	5.06	ND	
108-05-4	Vinyl acetate	0.25	1.10	ND	0.88	3.87	ND	
78-93-3	2-Butanone	1.00	2.55	ND	2.95	7.52	ND	
141-78-6	Ethyl acetate	0.50	1.10	ND	1.80	3.95	ND	
74-97-5	Bromochloromethane	0.25	0.67	ND	1.32	3.53	ND	
109-99-9	Tetrahydrofuran	0.50	1.26	ND	1.48	3.71	ND	
156-59-2	cis-1,2-Dichloroethene	0.50	1.35	ND	1.98	5.34	ND	
67-66-3	Chloroform	0.25	1.19	ND	1.22	5.82	ND	
71-55-6	1,1,1-Trichloroethane	0.25	1.11	ND	1.37	6.06	ND	
107-06-2	1,2-Dichloroethane	0.25	1.14	ND	1.01	4.62	ND	
110-82-7	Cyclohexane	0.25	0.96	ND	0.87	3.31	ND	
71-43-2	Benzene	0.50	1.00	3.20	1.60	3.20	10.25	
56-23-5	Carbon tetrachloride	0.23	1.19	ND	1.42	7.46	ND	
142-82-5	n-Heptane	1.25	3.03	ND	5.13	12.43	ND	
78-87-5	1,2-Dichloropropane	0.25	1.20	ND	1.16	5.57	ND	
123-91-1	1,4 Dioxane	1.00	2.05	ND	3.61	7.38	ND	
79-01-6	Trichloroethene	0.15	1.16	ND	0.81	6.27	ND	
75-27-4	Bromodichloromethane	0.25	0.51	ND	1.68	3.39	ND	
80-62-6	Methyl methacrylate	1.00	3.38	ND	4.10	13.86	ND	
108-10-1	4-Methyl-2-pentanone	1.00	3.79	ND	4.10	15.53	ND	
10061-01-5	cis-1,3-Dichloropropene	0.25	1.30	ND	1.14	5.89	ND	

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
108-88-3	Toluene	0.50	1.31	5.74	1.89	4.92	21.65	
10061-02-6	trans-1,3-Dichloropropene	0.25	1.30	ND	1.14	5.89	ND	
79-00-5	1,1,2-Trichloroethane	0.25	1.29	ND	1.37	7.02	ND	
591-78-6	2-Hexanone	1.25	3.55	ND	5.13	14.55	ND	
124-48-1	Dibromochloromethane	0.25	0.50	ND	2.13	4.26	ND	
106-93-4	1,2-Dibromoethane	0.25	0.61	ND	1.92	4.67	ND	
127-18-4	Tetrachloroethene	0.15	0.61	0.27	1.02	4.13	1.86	J
108-90-7	Chlorobenzene	0.25	1.14	ND	1.15	5.25	ND	
100-41-4	Ethylbenzene	0.53	1.32	ND	2.30	5.75	ND	
1330-20-7	m,p-Xylenes	0.53	1.32	0.73	2.30	5.76	3.16	J
100-42-5	Styrene	0.52	1.29	ND	2.21	5.52	ND	
75-25-2	Bromoform	0.25	0.34	ND	2.59	3.47	ND	
95-47-6	o-Xylene	0.52	1.29	ND	2.24	5.60	ND	
79-34-5	1,1,2,2-Tetrachloroethane	0.25	0.62	ND	1.70	4.25	ND	
622-96-8	4-Ethyltoluene	0.83	2.07	ND	4.08	10.20	ND	
108-67-8	1,3,5-Trimethylbenzene	0.52	1.29	ND	2.54	6.36	ND	
95-63-6	1,2,4-Trimethylbenzene	0.51	1.27	ND	2.50	6.25	ND	
541-73-1	1,3-Dichlorobenzene	0.50	0.93	ND	3.01	5.57	ND	
100-44-7	Benzyl chloride	0.50	3.03	ND	2.59	15.71	ND	
106-46-7	1,4-Dichlorobenzene	0.50	0.87	ND	3.01	5.21	ND	
95-50-1	1,2-Dichlorobenzene	1.00	1.25	ND	6.02	7.53	ND	
120-82-1	1,2,4-Trichlorobenzene	1.25	1.72	ND	9.29	12.78	ND	
91-20-3	Naphthalene	0.26	0.40	ND	1.34	2.10	ND	
87-68-3	Hexachlorobutadiene	0.25	0.32	ND	2.67	3.36	ND	

Surrogate Recovery		% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8	82	70	130	

ANALYTICAL REPORT

EPA Method TO-15 Modified TPH

Analytical Method: TO-15

SDG: 222042

Laboratory ID: 03

File Name: 2204203A.D
Description: SUB03-220125
Canister: 311
QC_Batch: 013122-MA1

Date Sampled: 1/25/2022 Time: 13:01
Date Analyzed: 1/31/2022 Time: 18:38
Can Dilution Factor: 1.00
Air Volume: 200 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
1330-20-7	Gas Range Organics (C6-C10)	60.00	180.00	137.22	284.86	854.59	658.71	J

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 222042
Laboratory ID: 03

File Name: 2204203A.D
Description: SUB03-220125
Can/Tube#: 311
QC_Batch: 013122-MA1

Date Sampled: 1/25/2022 Time: 13:01
Date Analyzed: 1/31/2022 Time: 18:38
Can Dilution Factor: 1.00
Air Volume: 200 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
67-63-0	2-propanol (Isopropyl Alcohol)	1.25	3.75	208.91	3.08	9.23	514.20	

Surrogate Recovery		% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8	82	70	130	

ANALYTICAL REPORT

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 222042

Analytical Method: TO-15

Laboratory ID: 04

File Name: 2204204A.D
Description: SUB04-220125
Canister: 345
QC_Batch: 013122-MA1

Date Sampled: 1/25/2022 Time: 13:20
Date Analyzed: 1/31/2022 Time: 19:14
Can Dilution Factor: 1.00
Air Volume: 200.00 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.65	1.25	ND	3.22	6.19	ND	
74-87-3	Chloromethane	0.65	1.26	ND	1.34	2.61	ND	
76-14-2	Freon 114	0.25	1.26	ND	1.75	8.80	ND	
75-01-4	Vinyl chloride	0.25	1.26	ND	0.64	3.22	ND	
106-99-0	1,3-Butadiene	0.25	1.26	ND	0.55	2.79	ND	
74-83-9	Bromomethane	0.50	1.26	ND	1.94	4.89	ND	
75-00-3	Chloroethane	0.25	1.26	ND	0.66	3.32	ND	
64-17-5	Ethanol	1.25	3.75	51.03	2.36	7.08	96.34	
75-69-4	Trichlorofluoromethane	0.35	1.26	ND	1.97	7.09	ND	
67-64-1	Acetone	1.25	3.75	257.87	2.97	8.92	613.60	
75-35-4	1,1-Dichloroethene	0.25	1.24	ND	0.99	4.92	ND	
76-13-1	Freon 113	0.25	1.20	ND	1.92	9.18	ND	
75-09-2	Dichloromethane	0.50	1.20	ND	1.74	4.19	ND	
75-15-0	Carbon disulfide	1.25	2.32	ND	3.90	7.23	ND	
156-60-5	trans-1,2-Dichloroethene	0.25	0.90	ND	0.99	3.58	ND	
1634-04-4	Methyl tert butyl ether	0.25	0.92	ND	0.90	3.33	ND	
75-34-3	1,1-Dichloroethane	0.25	1.25	ND	1.01	5.06	ND	
108-05-4	Vinyl acetate	0.25	1.10	ND	0.88	3.87	ND	
78-93-3	2-Butanone	1.00	2.55	ND	2.95	7.52	ND	
141-78-6	Ethyl acetate	0.50	1.10	ND	1.80	3.95	ND	
74-97-5	Bromochloromethane	0.25	0.67	ND	1.32	3.53	ND	
109-99-9	Tetrahydrofuran	0.50	1.26	ND	1.48	3.71	ND	
156-59-2	cis-1,2-Dichloroethene	0.50	1.35	ND	1.98	5.34	ND	
67-66-3	Chloroform	0.25	1.19	ND	1.22	5.82	ND	
71-55-6	1,1,1-Trichloroethane	0.25	1.11	ND	1.37	6.06	ND	
107-06-2	1,2-Dichloroethane	0.25	1.14	ND	1.01	4.62	ND	
110-82-7	Cyclohexane	0.25	0.96	ND	0.87	3.31	ND	
71-43-2	Benzene	0.50	1.00	4.97	1.60	3.20	15.89	
56-23-5	Carbon tetrachloride	0.23	1.19	ND	1.42	7.46	ND	
142-82-5	n-Heptane	1.25	3.03	ND	5.13	12.43	ND	
78-87-5	1,2-Dichloropropane	0.25	1.20	ND	1.16	5.57	ND	
123-91-1	1,4 Dioxane	1.00	2.05	ND	3.61	7.38	ND	
79-01-6	Trichloroethene	0.15	1.16	ND	0.81	6.27	ND	
75-27-4	Bromodichloromethane	0.25	0.51	ND	1.68	3.39	ND	
80-62-6	Methyl methacrylate	1.00	3.38	ND	4.10	13.86	ND	
108-10-1	4-Methyl-2-pentanone	1.00	3.79	ND	4.10	15.53	ND	
10061-01-5	cis-1,3-Dichloropropene	0.25	1.30	ND	1.14	5.89	ND	

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
108-88-3	Toluene	0.50	1.31	2.69	1.89	4.92	10.16	
10061-02-6	trans-1,3-Dichloropropene	0.25	1.30	ND	1.14	5.89	ND	
79-00-5	1,1,2-Trichloroethane	0.25	1.29	ND	1.37	7.02	ND	
591-78-6	2-Hexanone	1.25	3.55	ND	5.13	14.55	ND	
124-48-1	Dibromochloromethane	0.25	0.50	ND	2.13	4.26	ND	
106-93-4	1,2-Dibromoethane	0.25	0.61	ND	1.92	4.67	ND	
127-18-4	Tetrachloroethene	0.15	0.61	ND	1.02	4.13	ND	
108-90-7	Chlorobenzene	0.25	1.14	ND	1.15	5.25	ND	
100-41-4	Ethylbenzene	0.53	1.32	ND	2.30	5.75	ND	
1330-20-7	m,p-Xylenes	0.53	1.32	1.03	2.30	5.76	4.49	J
100-42-5	Styrene	0.52	1.29	ND	2.21	5.52	ND	
75-25-2	Bromoform	0.25	0.34	ND	2.59	3.47	ND	
95-47-6	o-Xylene	0.52	1.29	ND	2.24	5.60	ND	
79-34-5	1,1,2,2-Tetrachloroethane	0.25	0.62	ND	1.70	4.25	ND	
622-96-8	4-Ethyltoluene	0.83	2.07	ND	4.08	10.20	ND	
108-67-8	1,3,5-Trimethylbenzene	0.52	1.29	ND	2.54	6.36	ND	
95-63-6	1,2,4-Trimethylbenzene	0.51	1.27	ND	2.50	6.25	ND	
541-73-1	1,3-Dichlorobenzene	0.50	0.93	ND	3.01	5.57	ND	
100-44-7	Benzyl chloride	0.50	3.03	ND	2.59	15.71	ND	
106-46-7	1,4-Dichlorobenzene	0.50	0.87	ND	3.01	5.21	ND	
95-50-1	1,2-Dichlorobenzene	1.00	1.25	ND	6.02	7.53	ND	
120-82-1	1,2,4-Trichlorobenzene	1.25	1.72	ND	9.29	12.78	ND	
91-20-3	Naphthalene	0.26	0.40	ND	1.34	2.10	ND	
87-68-3	Hexachlorobutadiene	0.25	0.32	ND	2.67	3.36	ND	
Surrogate Recovery					% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8				87	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified TPH

Analytical Method: TO-15

SDG: 222042

Laboratory ID: 04

File Name: 2204204A.D
Description: SUB04-220125
Canister: 345
QC_Batch: 013122-MA1

Date Sampled: 1/25/2022 Time: 13:20
Date Analyzed: 1/31/2022 Time: 19:14
Can Dilution Factor: 1.00
Air Volume: 200 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
1330-20-7	Gas Range Organics (C6-C10)	60.00	180.00	68.36	284.86	854.59	329.46	J

ANALYTICAL REPORT

EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 222042
Laboratory ID: 04

File Name: 2204204A.D
Description: SUB04-220125
Can/Tube#: 345
QC_Batch: 013122-MA1

Date Sampled: 1/25/2022 Time: 13:20
Date Analyzed: 1/31/2022 Time: 19:14
Can Dilution Factor: 1.00
Air Volume: 200 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
67-63-0	2-propanol (Isopropyl Alcohol)	1.25	3.75	99.52	3.08	9.23	244.97	
Surrogate Recovery				% Rec.	QC LCL	Limits UCL		Flag
2037-26-5	Toluene-d8				87	70	130	

ANALYTICAL REPORT

EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 222042

Laboratory ID: 05

File Name: 2204205A.D
Description: SUB05-220125
Canister: 313
QC_Batch: 013122-MA1

Date Sampled: 1/25/2022 Time: 13:41
Date Analyzed: 1/31/2022 Time: 19:51
Can Dilution Factor: 1.00
Air Volume: 200.00 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.65	1.25	ND	3.22	6.19	ND	
74-87-3	Chloromethane	0.65	1.26	ND	1.34	2.61	ND	
76-14-2	Freon 114	0.25	1.26	ND	1.75	8.80	ND	
75-01-4	Vinyl chloride	0.25	1.26	ND	0.64	3.22	ND	
106-99-0	1,3-Butadiene	0.25	1.26	ND	0.55	2.79	ND	
74-83-9	Bromomethane	0.50	1.26	ND	1.94	4.89	ND	
75-00-3	Chloroethane	0.25	1.26	ND	0.66	3.32	ND	
64-17-5	Ethanol	1.25	3.75	29.48	2.36	7.08	55.66	
75-69-4	Trichlorofluoromethane	0.35	1.26	ND	1.97	7.09	ND	
67-64-1	Acetone	1.25	3.75	122.35	2.97	8.92	291.13	
75-35-4	1,1-Dichloroethene	0.25	1.24	ND	0.99	4.92	ND	
76-13-1	Freon 113	0.25	1.20	ND	1.92	9.18	ND	
75-09-2	Dichloromethane	0.50	1.20	ND	1.74	4.19	ND	
75-15-0	Carbon disulfide	1.25	2.32	ND	3.90	7.23	ND	
156-60-5	trans-1,2-Dichloroethene	0.25	0.90	ND	0.99	3.58	ND	
1634-04-4	Methyl tert butyl ether	0.25	0.92	ND	0.90	3.33	ND	
75-34-3	1,1-Dichloroethane	0.25	1.25	ND	1.01	5.06	ND	
108-05-4	Vinyl acetate	0.25	1.10	ND	0.88	3.87	ND	
78-93-3	2-Butanone	1.00	2.55	ND	2.95	7.52	ND	
141-78-6	Ethyl acetate	0.50	1.10	ND	1.80	3.95	ND	
74-97-5	Bromochloromethane	0.25	0.67	ND	1.32	3.53	ND	
109-99-9	Tetrahydrofuran	0.50	1.26	ND	1.48	3.71	ND	
156-59-2	cis-1,2-Dichloroethene	0.50	1.35	ND	1.98	5.34	ND	
67-66-3	Chloroform	0.25	1.19	ND	1.22	5.82	ND	
71-55-6	1,1,1-Trichloroethane	0.25	1.11	ND	1.37	6.06	ND	
107-06-2	1,2-Dichloroethane	0.25	1.14	ND	1.01	4.62	ND	
110-82-7	Cyclohexane	0.25	0.96	ND	0.87	3.31	ND	
71-43-2	Benzene	0.50	1.00	2.34	1.60	3.20	7.50	
56-23-5	Carbon tetrachloride	0.23	1.19	ND	1.42	7.46	ND	
142-82-5	n-Heptane	1.25	3.03	ND	5.13	12.43	ND	
78-87-5	1,2-Dichloropropane	0.25	1.20	ND	1.16	5.57	ND	
123-91-1	1,4 Dioxane	1.00	2.05	ND	3.61	7.38	ND	
79-01-6	Trichloroethene	0.15	1.16	ND	0.81	6.27	ND	
75-27-4	Bromodichloromethane	0.25	0.51	ND	1.68	3.39	ND	
80-62-6	Methyl methacrylate	1.00	3.38	ND	4.10	13.86	ND	
108-10-1	4-Methyl-2-pentanone	1.00	3.79	ND	4.10	15.53	ND	
10061-01-5	cis-1,3-Dichloropropene	0.25	1.30	ND	1.14	5.89	ND	

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
108-88-3	Toluene	0.50	1.31	2.28	1.89	4.92	8.59	
10061-02-6	trans-1,3-Dichloropropene	0.25	1.30	ND	1.14	5.89	ND	
79-00-5	1,1,2-Trichloroethane	0.25	1.29	ND	1.37	7.02	ND	
591-78-6	2-Hexanone	1.25	3.55	ND	5.13	14.55	ND	
124-48-1	Dibromochloromethane	0.25	0.50	ND	2.13	4.26	ND	
106-93-4	1,2-Dibromoethane	0.25	0.61	ND	1.92	4.67	ND	
127-18-4	Tetrachloroethene	0.15	0.61	ND	1.02	4.13	ND	
108-90-7	Chlorobenzene	0.25	1.14	ND	1.15	5.25	ND	
100-41-4	Ethylbenzene	0.53	1.32	ND	2.30	5.75	ND	
1330-20-7	m,p-Xylenes	0.53	1.32	0.94	2.30	5.76	4.08	J
100-42-5	Styrene	0.52	1.29	ND	2.21	5.52	ND	
75-25-2	Bromoform	0.25	0.34	ND	2.59	3.47	ND	
95-47-6	o-Xylene	0.52	1.29	ND	2.24	5.60	ND	
79-34-5	1,1,2,2-Tetrachloroethane	0.25	0.62	ND	1.70	4.25	ND	
622-96-8	4-Ethyltoluene	0.83	2.07	ND	4.08	10.20	ND	
108-67-8	1,3,5-Trimethylbenzene	0.52	1.29	ND	2.54	6.36	ND	
95-63-6	1,2,4-Trimethylbenzene	0.51	1.27	ND	2.50	6.25	ND	
541-73-1	1,3-Dichlorobenzene	0.50	0.93	ND	3.01	5.57	ND	
100-44-7	Benzyl chloride	0.50	3.03	ND	2.59	15.71	ND	
106-46-7	1,4-Dichlorobenzene	0.50	0.87	ND	3.01	5.21	ND	
95-50-1	1,2-Dichlorobenzene	1.00	1.25	ND	6.02	7.53	ND	
120-82-1	1,2,4-Trichlorobenzene	1.25	1.72	ND	9.29	12.78	ND	
91-20-3	Naphthalene	0.26	0.40	ND	1.34	2.10	ND	
87-68-3	Hexachlorobutadiene	0.25	0.32	ND	2.67	3.36	ND	
Surrogate Recovery					% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8				86	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified TPH

Analytical Method: TO-15

SDG: 222042

Laboratory ID: 05

File Name: 2204205A.D
Description: SUB05-220125
Canister: 313
QC_Batch: 013122-MA1

Date Sampled: 1/25/2022 Time: 13:41
Date Analyzed: 1/31/2022 Time: 19:51
Can Dilution Factor: 1.00
Air Volume: 200 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
1330-20-7	Gas Range Organics (C6-C10)	60.00	180.00	ND	284.86	854.59	ND	

ANALYTICAL REPORT

EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 222042
Laboratory ID: 05

File Name: 2204205A.D
Description: SUB05-220125
Can/Tube#: 313
QC_Batch: 013122-MA1

Date Sampled: 1/25/2022 Time: 13:41
Date Analyzed: 1/31/2022 Time: 19:51
Can Dilution Factor: 1.00
Air Volume: 200 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
67-63-0	2-propanol (Isopropyl Alcohol)	1.25	3.75	ND	3.08	9.23	ND	
	Surrogate Recovery				% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8				86	70	130	

ANALYTICAL REPORT

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 222042

Analytical Method: TO-15

Laboratory ID: 06

File Name: 2204206A.D
Description: SUB06-220125
Canister: 310
QC_Batch: 013122-MA1

Date Sampled: 1/25/2022 Time: 13:54
Date Analyzed: 1/31/2022 Time: 20:27
Can Dilution Factor: 1.00
Air Volume: 200.00 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.65	1.25	ND	3.22	6.19	ND	
74-87-3	Chloromethane	0.65	1.26	ND	1.34	2.61	ND	
76-14-2	Freon 114	0.25	1.26	ND	1.75	8.80	ND	
75-01-4	Vinyl chloride	0.25	1.26	ND	0.64	3.22	ND	
106-99-0	1,3-Butadiene	0.25	1.26	ND	0.55	2.79	ND	
74-83-9	Bromomethane	0.50	1.26	ND	1.94	4.89	ND	
75-00-3	Chloroethane	0.25	1.26	ND	0.66	3.32	ND	
64-17-5	Ethanol	1.25	3.75	41.75	2.36	7.08	78.83	
75-69-4	Trichlorofluoromethane	0.35	1.26	ND	1.97	7.09	ND	
67-64-1	Acetone	1.25	3.75	163.96	2.97	8.92	390.14	
75-35-4	1,1-Dichloroethene	0.25	1.24	ND	0.99	4.92	ND	
76-13-1	Freon 113	0.25	1.20	ND	1.92	9.18	ND	
75-09-2	Dichloromethane	0.50	1.20	ND	1.74	4.19	ND	
75-15-0	Carbon disulfide	1.25	2.32	ND	3.90	7.23	ND	
156-60-5	trans-1,2-Dichloroethene	0.25	0.90	ND	0.99	3.58	ND	
1634-04-4	Methyl tert butyl ether	0.25	0.92	ND	0.90	3.33	ND	
75-34-3	1,1-Dichloroethane	0.25	1.25	ND	1.01	5.06	ND	
108-05-4	Vinyl acetate	0.25	1.10	ND	0.88	3.87	ND	
78-93-3	2-Butanone	1.00	2.55	ND	2.95	7.52	ND	
141-78-6	Ethyl acetate	0.50	1.10	ND	1.80	3.95	ND	
74-97-5	Bromochloromethane	0.25	0.67	ND	1.32	3.53	ND	
109-99-9	Tetrahydrofuran	0.50	1.26	ND	1.48	3.71	ND	
156-59-2	cis-1,2-Dichloroethene	0.50	1.35	ND	1.98	5.34	ND	
67-66-3	Chloroform	0.25	1.19	ND	1.22	5.82	ND	
71-55-6	1,1,1-Trichloroethane	0.25	1.11	ND	1.37	6.06	ND	
107-06-2	1,2-Dichloroethane	0.25	1.14	ND	1.01	4.62	ND	
110-82-7	Cyclohexane	0.25	0.96	ND	0.87	3.31	ND	
71-43-2	Benzene	0.50	1.00	1.27	1.60	3.20	4.06	
56-23-5	Carbon tetrachloride	0.23	1.19	ND	1.42	7.46	ND	
142-82-5	n-Heptane	1.25	3.03	ND	5.13	12.43	ND	
78-87-5	1,2-Dichloropropane	0.25	1.20	ND	1.16	5.57	ND	
123-91-1	1,4 Dioxane	1.00	2.05	ND	3.61	7.38	ND	
79-01-6	Trichloroethene	0.15	1.16	ND	0.81	6.27	ND	
75-27-4	Bromodichloromethane	0.25	0.51	ND	1.68	3.39	ND	
80-62-6	Methyl methacrylate	1.00	3.38	ND	4.10	13.86	ND	
108-10-1	4-Methyl-2-pentanone	1.00	3.79	ND	4.10	15.53	ND	
10061-01-5	cis-1,3-Dichloropropene	0.25	1.30	ND	1.14	5.89	ND	

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
108-88-3	Toluene	0.50	1.31	3.25	1.89	4.92	12.27	
10061-02-6	trans-1,3-Dichloropropene	0.25	1.30	ND	1.14	5.89	ND	
79-00-5	1,1,2-Trichloroethane	0.25	1.29	ND	1.37	7.02	ND	
591-78-6	2-Hexanone	1.25	3.55	ND	5.13	14.55	ND	
124-48-1	Dibromochloromethane	0.25	0.50	ND	2.13	4.26	ND	
106-93-4	1,2-Dibromoethane	0.25	0.61	ND	1.92	4.67	ND	
127-18-4	Tetrachloroethene	0.15	0.61	ND	1.02	4.13	ND	
108-90-7	Chlorobenzene	0.25	1.14	ND	1.15	5.25	ND	
100-41-4	Ethylbenzene	0.53	1.32	ND	2.30	5.75	ND	
1330-20-7	m,p-Xylenes	0.53	1.32	0.80	2.30	5.76	3.47	J
100-42-5	Styrene	0.52	1.29	ND	2.21	5.52	ND	
75-25-2	Bromoform	0.25	0.34	ND	2.59	3.47	ND	
95-47-6	o-Xylene	0.52	1.29	ND	2.24	5.60	ND	
79-34-5	1,1,2,2-Tetrachloroethane	0.25	0.62	ND	1.70	4.25	ND	
622-96-8	4-Ethyltoluene	0.83	2.07	ND	4.08	10.20	ND	
108-67-8	1,3,5-Trimethylbenzene	0.52	1.29	ND	2.54	6.36	ND	
95-63-6	1,2,4-Trimethylbenzene	0.51	1.27	ND	2.50	6.25	ND	
541-73-1	1,3-Dichlorobenzene	0.50	0.93	ND	3.01	5.57	ND	
100-44-7	Benzyl chloride	0.50	3.03	ND	2.59	15.71	ND	
106-46-7	1,4-Dichlorobenzene	0.50	0.87	ND	3.01	5.21	ND	
95-50-1	1,2-Dichlorobenzene	1.00	1.25	ND	6.02	7.53	ND	
120-82-1	1,2,4-Trichlorobenzene	1.25	1.72	ND	9.29	12.78	ND	
91-20-3	Naphthalene	0.26	0.40	ND	1.34	2.10	ND	
87-68-3	Hexachlorobutadiene	0.25	0.32	ND	2.67	3.36	ND	
Surrogate Recovery					% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8				82	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified TPH

Analytical Method: TO-15

SDG: 222042

Laboratory ID: 06

File Name: 2204206A.D
Description: SUB06-220125
Canister: 310
QC_Batch: 013122-MA1

Date Sampled: 1/25/2022 Time: 13:54
Date Analyzed: 1/31/2022 Time: 20:27
Can Dilution Factor: 1.00
Air Volume: 200 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
1330-20-7	Gas Range Organics (C6-C10)	60.00	180.00	206.39	284.86	854.59	994.71	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 222042
Laboratory ID: 06

File Name: 2204206A.D
Description: SUB06-220125
Can/Tube#: 310
QC_Batch: 013122-MA1

Date Sampled: 1/25/2022 Time: 13:54
Date Analyzed: 1/31/2022 Time: 20:27
Can Dilution Factor: 1.00
Air Volume: 200 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
67-63-0	2-propanol (Isopropyl Alcohol)	1.25	3.75	1,641.12	3.08	9.23	4,039.45	

Surrogate Recovery		% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8	82	70	130	

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

March 30, 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 March 15, 2022 from the 1581-21001-02, F&BI 203273 project. There are 36 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
ENW0330R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on March 15, 2022 by Friedman & Bruya, Inc. from the Evren Northwest 1581-21001-02, F&BI 203273 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>Evren Northwest</u>
203273 -01	EB01/5-7
203273 -02	EB01/9
203273 -03	EB01-SWI/14
203273 -04	EB02-SWI/13.5
203273 -05	EB03-SWI/12
203273 -06	EB01-GW-16
203273 -07	EB02-GW-16
203273 -08	EB03-GW-16

Sample EB02-SWI/13.5 was sent to Fremont Analytical for total organic carbon analysis. The report is enclosed.

The reporting limits for samples EB01/5-7 and EB01/9 were raised due to a high percent moisture present in the sample.

The silica gel NWTPH-Dx laboratory control sample and laboratory control sample duplicate relative percent difference exceeded the acceptance criteria. Nothing was detected in the sample, therefore the data were acceptable.

All other quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 03/30/22
Date Received: 03/15/22
Project: 1581-21001-02, F&BI 203273
Date Extracted: 03/16/22
Date Analyzed: 03/17/22

**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> Laboratory ID	<u>Gasoline Range</u>	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 50-150)
EB01/5-7 203273-01 1/4	<20	89
EB01/9 203273-02	190	85
EB01-SWI/14 203273-03	<5	78
EB02-SWI/13.5 203273-04	<5	90
EB03-SWI/12 203273-05	<5	89
Method Blank 02-601 MB	<5	90

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 03/30/22
Date Received: 03/15/22
Project: 1581-21001-02, F&BI 203273
Date Extracted: 03/17/22
Date Analyzed: 03/17/22

**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>	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 51-134)
EB01-GW-16 203273-06	<100	76
EB02-GW-16 203273-07	<100	70
EB03-GW-16 203273-08	<100	69
Method Blank 02-604 MB	<100	72

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 03/30/22
Date Received: 03/15/22
Project: 1581-21001-02, F&BI 203273
Date Extracted: 03/16/22
Date Analyzed: 03/16/22

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

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

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>Motor Oil Range</u> (C ₂₅ -C ₃₆)	<u>Surrogate</u> (% Recovery) (Limit 48-168)
EB01/5-7 203273-01	680	<1,000	91
EB01/9 203273-02	2,600	<1,000	93
EB01-SWI/14 203273-03	<50	<250	90
EB02-SWI/13.5 203273-04	<50	<250	91
EB03-SWI/12 203273-05	<50	<250	93
Method Blank 02-667 MB2	<50	<250	93

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 03/30/22
Date Received: 03/15/22
Project: 1581-21001-02, F&BI 203273
Date Extracted: 03/16/22
Date Analyzed: 03/18/22

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL AND MOTOR OIL
USING METHOD NWTPH-Dx
Sample Extracts Passed Through a
Silica Gel Column Prior to Analysis
Results Reported as ug/L (ppb)**

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>Motor Oil Range</u> (C ₂₅ -C ₃₆)	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 41-152)
EB02-GW-16 203273-07 1/1.5	<75	<380	101
Method Blank 02-669 MB2	<50	<250	95

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 03/30/22
Date Received: 03/15/22
Project: 1581-21001-02, F&BI 203273
Date Extracted: 03/16/22
Date Analyzed: 03/16/22

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

Results Reported as ug/L (ppb)

<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> (% Recovery) (Limit 41-152)
EB01-GW-16 203273-06	120	<250	46
EB02-GW-16 203273-07 1/1.5	78 x	<380	122
EB03-GW-16 203273-08	<50	<250	85
Method Blank 02-669 MB2	<50	<250	131

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	EB01/5-7	Client:	Evren Northwest
Date Received:	03/15/22	Project:	1581-21001-02, F&BI 203273
Date Extracted:	03/21/22	Lab ID:	203273-01 1/0.25
Date Analyzed:	03/21/22	Data File:	032131.D
Matrix:	Soil	Instrument:	GCMS11
Units:	mg/kg (ppm) Dry Weight	Operator:	RF

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	109	79	128
Toluene-d8	99	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)	<0.005
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:	EB01/9	Client:	Evren Northwest
Date Received:	03/15/22	Project:	1581-21001-02, F&BI 203273
Date Extracted:	03/21/22	Lab ID:	203273-02 1/0.25
Date Analyzed:	03/21/22	Data File:	032132.D
Matrix:	Soil	Instrument:	GCMS11
Units:	mg/kg (ppm) Dry Weight	Operator:	RF

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	97	79	128
Toluene-d8	96	84	121
4-Bromofluorobenzene	99	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)	<0.005
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
Isopropylbenzene	0.082
n-Propylbenzene	<0.05
1,3,5-Trimethylbenzene	0.14
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:	EB01-SWI/14	Client:	Evren Northwest
Date Received:	03/15/22	Project:	1581-21001-02, F&BI 203273
Date Extracted:	03/21/22	Lab ID:	203273-03 1/0.25
Date Analyzed:	03/21/22	Data File:	032133.D
Matrix:	Soil	Instrument:	GCMS11
Units:	mg/kg (ppm) Dry Weight	Operator:	RF

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	97	79	128
Toluene-d8	99	84	121
4-Bromofluorobenzene	107	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)	<0.005
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:	EB02-SWI/13.5	Client:	Evren Northwest
Date Received:	03/15/22	Project:	1581-21001-02, F&BI 203273
Date Extracted:	03/21/22	Lab ID:	203273-04 1/0.25
Date Analyzed:	03/21/22	Data File:	032134.D
Matrix:	Soil	Instrument:	GCMS11
Units:	mg/kg (ppm) Dry Weight	Operator:	RF

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	107	79	128
Toluene-d8	94	84	121
4-Bromofluorobenzene	108	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)	<0.005
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:	EB03-SWI/12	Client:	Evren Northwest
Date Received:	03/15/22	Project:	1581-21001-02, F&BI 203273
Date Extracted:	03/21/22	Lab ID:	203273-05 1/0.25
Date Analyzed:	03/21/22	Data File:	032135.D
Matrix:	Soil	Instrument:	GCMS11
Units:	mg/kg (ppm) Dry Weight	Operator:	RF

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	95	79	128
Toluene-d8	98	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)	<0.005
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:	Method Blank	Client:	Evren Northwest
Date Received:	Not Applicable	Project:	1581-21001-02, F&BI 203273
Date Extracted:	03/21/22	Lab ID:	02-0689 mb 1/0.25
Date Analyzed:	03/21/22	Data File:	032127.D
Matrix:	Soil	Instrument:	GCMS11
Units:	mg/kg (ppm) Dry Weight	Operator:	RF

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	95	79	128
Toluene-d8	99	84	121
4-Bromofluorobenzene	107	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)	<0.005
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:	EB01-GW-16	Client:	Evren Northwest
Date Received:	03/15/22	Project:	1581-21001-02, F&BI 203273
Date Extracted:	03/17/22	Lab ID:	203273-06
Date Analyzed:	03/17/22	Data File:	031728.D
Matrix:	Water	Instrument:	GCMS13
Units:	ug/L (ppb)	Operator:	WE

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	104	85	117
Toluene-d8	100	88	112
4-Bromofluorobenzene	101	90	111

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	<1
n-Propylbenzene	<1
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:	EB02-GW-16	Client:	Evren Northwest
Date Received:	03/15/22	Project:	1581-21001-02, F&BI 203273
Date Extracted:	03/17/22	Lab ID:	203273-07
Date Analyzed:	03/17/22	Data File:	031729.D
Matrix:	Water	Instrument:	GCMS13
Units:	ug/L (ppb)	Operator:	WE

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	97	85	117
Toluene-d8	99	88	112
4-Bromofluorobenzene	100	90	111

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	<1
n-Propylbenzene	<1
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:	EB03-GW-16	Client:	Evren Northwest
Date Received:	03/15/22	Project:	1581-21001-02, F&BI 203273
Date Extracted:	03/17/22	Lab ID:	203273-08
Date Analyzed:	03/17/22	Data File:	031730.D
Matrix:	Water	Instrument:	GCMS13
Units:	ug/L (ppb)	Operator:	WE

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	97	85	117
Toluene-d8	97	88	112
4-Bromofluorobenzene	96	90	111

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	<1
n-Propylbenzene	<1
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:	Method Blank	Client:	Evren Northwest
Date Received:	Not Applicable	Project:	1581-21001-02, F&BI 203273
Date Extracted:	03/17/22	Lab ID:	02-655 mb
Date Analyzed:	03/17/22	Data File:	031707.D
Matrix:	Water	Instrument:	GCMS13
Units:	ug/L (ppb)	Operator:	WE

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	96	85	117
Toluene-d8	97	88	112
4-Bromofluorobenzene	103	90	111

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	<1
n-Propylbenzene	<1
1,3,5-Trimethylbenzene	<1
1,2,4-Trimethylbenzene	<1
Naphthalene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	EB01/5-7	Client:	Evren Northwest
Date Received:	03/15/22	Project:	1581-21001-02, F&BI 203273
Date Extracted:	03/17/22	Lab ID:	203273-01 1/25
Date Analyzed:	03/17/22	Data File:	031712.D
Matrix:	Soil	Instrument:	GCMS12
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	63 d	39	103
Phenol-d6	70 d	48	109
Nitrobenzene-d5	74 d	23	138
2-Fluorobiphenyl	79 d	50	150
2,4,6-Tribromophenol	88 d	40	127
Terphenyl-d14	80 d	50	150

Compounds:	Concentration mg/kg (ppm)
Benz(a)anthracene	<0.2
Chrysene	<0.2
Benzo(a)pyrene	<0.2
Benzo(b)fluoranthene	<0.2
Benzo(k)fluoranthene	<0.2
Indeno(1,2,3-cd)pyrene	<0.2
Dibenz(a,h)anthracene	<0.2

Note: Reporting limits were raised due to high moisture content in the sample.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	EB01/9	Client:	Evren Northwest
Date Received:	03/15/22	Project:	1581-21001-02, F&BI 203273
Date Extracted:	03/17/22	Lab ID:	203273-02 1/25
Date Analyzed:	03/17/22	Data File:	031713.D
Matrix:	Soil	Instrument:	GCMS12
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	75 d	39	103
Phenol-d6	84 d	48	109
Nitrobenzene-d5	84 d	23	138
2-Fluorobiphenyl	86 d	50	150
2,4,6-Tribromophenol	103 d	40	127
Terphenyl-d14	86 d	50	150

Compounds:	Concentration mg/kg (ppm)
Benz(a)anthracene	<0.2
Chrysene	<0.2
Benzo(a)pyrene	<0.2
Benzo(b)fluoranthene	<0.2
Benzo(k)fluoranthene	<0.2
Indeno(1,2,3-cd)pyrene	<0.2
Dibenz(a,h)anthracene	<0.2

Note: Reporting limits were raised due to high moisture content in the sample.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	EB01-SWI/14	Client:	Evren Northwest
Date Received:	03/15/22	Project:	1581-21001-02, F&BI 203273
Date Extracted:	03/17/22	Lab ID:	203273-03 1/5
Date Analyzed:	03/17/22	Data File:	031715.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	73	24	111
Phenol-d6	81	37	116
Nitrobenzene-d5	85	38	117
2-Fluorobiphenyl	79	45	117
2,4,6-Tribromophenol	75	11	158
Terphenyl-d14	96	50	124

Compounds:	Concentration mg/kg (ppm)
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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	EB02-SWI/13.5	Client:	Evren Northwest
Date Received:	03/15/22	Project:	1581-21001-02, F&BI 203273
Date Extracted:	03/17/22	Lab ID:	203273-04 1/5
Date Analyzed:	03/17/22	Data File:	031716.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	75	24	111
Phenol-d6	83	37	116
Nitrobenzene-d5	86	38	117
2-Fluorobiphenyl	82	45	117
2,4,6-Tribromophenol	73	11	158
Terphenyl-d14	98	50	124

Compounds:	Concentration mg/kg (ppm)
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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	EB03-SWI/12	Client:	Evren Northwest
Date Received:	03/15/22	Project:	1581-21001-02, F&BI 203273
Date Extracted:	03/17/22	Lab ID:	203273-05 1/5
Date Analyzed:	03/17/22	Data File:	031717.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	78	24	111
Phenol-d6	87	37	116
Nitrobenzene-d5	81	38	117
2-Fluorobiphenyl	86	45	117
2,4,6-Tribromophenol	77	11	158
Terphenyl-d14	100	50	124

Compounds:	Concentration mg/kg (ppm)
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

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:	1581-21001-02, F&BI 203273
Date Extracted:	03/17/22	Lab ID:	02-676 mb2 1/5
Date Analyzed:	03/17/22	Data File:	031711.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	91	24	111
Phenol-d6	97	37	116
Nitrobenzene-d5	109	38	117
2-Fluorobiphenyl	97	45	117
2,4,6-Tribromophenol	83	11	158
Terphenyl-d14	111	50	124

Compounds:	Concentration mg/kg (ppm)
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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	EB01-GW-16	Client:	Evren Northwest
Date Received:	03/15/22	Project:	1581-21001-02, F&BI 203273
Date Extracted:	03/16/22	Lab ID:	203273-06
Date Analyzed:	03/16/22	Data File:	031611.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	43	10	60
Phenol-d6	19	10	49
Nitrobenzene-d5	71	15	144
2-Fluorobiphenyl	70	25	128
2,4,6-Tribromophenol	73	10	142
Terphenyl-d14	80	41	138

Compounds:	Concentration ug/L (ppb)
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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	EB02-GW-16	Client:	Evren Northwest
Date Received:	03/15/22	Project:	1581-21001-02, F&BI 203273
Date Extracted:	03/16/22	Lab ID:	203273-07 1/2
Date Analyzed:	03/16/22	Data File:	031612.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	35	10	60
Phenol-d6	25	10	49
Nitrobenzene-d5	75	15	144
2-Fluorobiphenyl	75	25	128
2,4,6-Tribromophenol	82	10	142
Terphenyl-d14	86	41	138

Compounds:	Concentration ug/L (ppb)
Benz(a)anthracene	<0.04
Chrysene	<0.04
Benzo(a)pyrene	<0.04
Benzo(b)fluoranthene	<0.04
Benzo(k)fluoranthene	<0.04
Indeno(1,2,3-cd)pyrene	<0.04
Dibenz(a,h)anthracene	<0.04

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	EB03-GW-16	Client:	Evren Northwest
Date Received:	03/15/22	Project:	1581-21001-02, F&BI 203273
Date Extracted:	03/16/22	Lab ID:	203273-08
Date Analyzed:	03/16/22	Data File:	031613.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	19	10	60
Phenol-d6	13	10	49
Nitrobenzene-d5	54	15	144
2-Fluorobiphenyl	44	25	128
2,4,6-Tribromophenol	50	10	142
Terphenyl-d14	49	41	138

Compounds:	Concentration ug/L (ppb)
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

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:	1581-21001-02, F&BI 203273
Date Extracted:	03/16/22	Lab ID:	02-663 mb3
Date Analyzed:	03/16/22	Data File:	031610.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	35	10	60
Phenol-d6	14	10	49
Nitrobenzene-d5	86	15	144
2-Fluorobiphenyl	84	25	128
2,4,6-Tribromophenol	77	10	142
Terphenyl-d14	101	41	138

Compounds:	Concentration ug/L (ppb)
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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 03/30/22

Date Received: 03/15/22

Project: 1581-21001-02, F&BI 203273

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

Laboratory Code: 203243-01 (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)	20	85	71-131

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 03/30/22

Date Received: 03/15/22

Project: 1581-21001-02, F&BI 203273

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

Laboratory Code: 203290-02 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 20)
Gasoline	ug/L (ppb)	160	150	6

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	ug/L (ppb)	1,000	88	69-134

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 03/30/22

Date Received: 03/15/22

Project: 1581-21001-02, F&BI 203273

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

Laboratory Code: 203266-01 (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	90	90	64-133	0

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	90	58-147

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 03/30/22

Date Received: 03/15/22

Project: 1581-21001-02, F&BI 203273

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

Laboratory Code: Laboratory Control Sample Silica Gel

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	72	92	63-142	24 vo

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 03/30/22

Date Received: 03/15/22

Project: 1581-21001-02, F&BI 203273

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

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	89	89	63-142	0

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 03/30/22

Date Received: 03/15/22

Project: 1581-21001-02, F&BI 203273

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

Laboratory Code: 203360-01 (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	<0.05	94	95	21-145	1
1,2-Dichloroethane (EDC)	mg/kg (ppm)	1	<0.05	86	87	12-160	1
Benzene	mg/kg (ppm)	1	<0.03	86	85	29-129	1
Toluene	mg/kg (ppm)	1	<0.05	91	93	35-130	2
1,2-Dibromoethane (EDB)	mg/kg (ppm)	1	<0.05	97	98	28-142	1
Ethylbenzene	mg/kg (ppm)	1	<0.05	94	94	32-137	0
m,p-Xylene	mg/kg (ppm)	2	<0.1	94	95	34-136	1
o-Xylene	mg/kg (ppm)	1	<0.05	96	97	33-134	1
Isopropylbenzene	mg/kg (ppm)	1	<0.05	95	96	31-142	1
n-Propylbenzene	mg/kg (ppm)	1	<0.05	98	100	23-146	2
1,3,5-Trimethylbenzene	mg/kg (ppm)	1	<0.05	98	101	18-149	3
1,2,4-Trimethylbenzene	mg/kg (ppm)	1	<0.05	97	99	10-182	2
Naphthalene	mg/kg (ppm)	1	<0.05	103	104	14-157	1

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	1	96	60-123
1,2-Dichloroethane (EDC)	mg/kg (ppm)	1	90	56-135
Benzene	mg/kg (ppm)	1	90	71-118
Toluene	mg/kg (ppm)	1	100	66-126
1,2-Dibromoethane (EDB)	mg/kg (ppm)	1	105	74-132
Ethylbenzene	mg/kg (ppm)	1	100	64-123
m,p-Xylene	mg/kg (ppm)	2	101	78-122
o-Xylene	mg/kg (ppm)	1	101	77-124
Isopropylbenzene	mg/kg (ppm)	1	102	76-127
n-Propylbenzene	mg/kg (ppm)	1	106	74-124
1,3,5-Trimethylbenzene	mg/kg (ppm)	1	105	76-126
1,2,4-Trimethylbenzene	mg/kg (ppm)	1	102	76-125
Naphthalene	mg/kg (ppm)	1	101	63-140

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 03/30/22

Date Received: 03/15/22

Project: 1581-21001-02, F&BI 203273

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

Laboratory Code: 203164-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent	Acceptance Criteria
				Recovery MS	
Methyl t-butyl ether (MTBE)	ug/L (ppb)	10	<1	101	50-150
1,2-Dichloroethane (EDC)	ug/L (ppb)	10	<0.2	91	50-150
Benzene	ug/L (ppb)	10	<0.35	93	50-150
Toluene	ug/L (ppb)	10	<1	95	50-150
1,2-Dibromoethane (EDB)	ug/L (ppb)	10	<1	104	50-150
Ethylbenzene	ug/L (ppb)	10	<1	98	50-150
m,p-Xylene	ug/L (ppb)	20	<2	98	50-150
o-Xylene	ug/L (ppb)	10	<1	98	50-150
Isopropylbenzene	ug/L (ppb)	10	<1	99	50-150
n-Propylbenzene	ug/L (ppb)	10	<1	99	50-150
1,3,5-Trimethylbenzene	ug/L (ppb)	10	<1	99	50-150
1,2,4-Trimethylbenzene	ug/L (ppb)	10	<1	99	50-150
Naphthalene	ug/L (ppb)	10	<1	101	50-150

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent	Percent	Acceptance Criteria	RPD (Limit 20)
			Recovery LCS	Recovery LCSD		
Methyl t-butyl ether (MTBE)	ug/L (ppb)	10	99	99	70-130	0
1,2-Dichloroethane (EDC)	ug/L (ppb)	10	91	92	70-130	1
Benzene	ug/L (ppb)	10	95	94	70-130	1
Toluene	ug/L (ppb)	10	98	98	70-130	0
1,2-Dibromoethane (EDB)	ug/L (ppb)	10	107	104	70-130	3
Ethylbenzene	ug/L (ppb)	10	99	99	70-130	0
m,p-Xylene	ug/L (ppb)	20	99	99	70-130	0
o-Xylene	ug/L (ppb)	10	99	98	70-130	1
Isopropylbenzene	ug/L (ppb)	10	102	100	70-130	2
n-Propylbenzene	ug/L (ppb)	10	101	100	70-130	1
1,3,5-Trimethylbenzene	ug/L (ppb)	10	99	97	52-150	2
1,2,4-Trimethylbenzene	ug/L (ppb)	10	100	101	70-130	1
Naphthalene	ug/L (ppb)	10	101	100	70-130	1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 03/30/22

Date Received: 03/15/22

Project: 1581-21001-02, F&BI 203273

**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)
Benz(a)anthracene	mg/kg (ppm)	0.83	88	92	64-116	4
Chrysene	mg/kg (ppm)	0.83	90	92	66-119	2
Benzo(a)pyrene	mg/kg (ppm)	0.83	93	96	62-116	3
Benzo(b)fluoranthene	mg/kg (ppm)	0.83	94	100	61-118	6
Benzo(k)fluoranthene	mg/kg (ppm)	0.83	91	93	65-119	2
Indeno(1,2,3-cd)pyrene	mg/kg (ppm)	0.83	97	97	64-130	0
Dibenz(a,h)anthracene	mg/kg (ppm)	0.83	99	95	67-131	4

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 03/30/22

Date Received: 03/15/22

Project: 1581-21001-02, F&BI 203273

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

Laboratory Code: Laboratory Control Sample 1/0.5

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Benz(a)anthracene	ug/L (ppb)	5	95	101	70-130	6
Chrysene	ug/L (ppb)	5	96	101	70-130	5
Benzo(a)pyrene	ug/L (ppb)	5	101	106	70-130	5
Benzo(b)fluoranthene	ug/L (ppb)	5	103	107	62-130	4
Benzo(k)fluoranthene	ug/L (ppb)	5	99	108	70-130	9
Indeno(1,2,3-cd)pyrene	ug/L (ppb)	5	101	100	70-130	1
Dibenz(a,h)anthracene	ug/L (ppb)	5	105	98	70-130	7

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.



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: 203273
Work Order Number: 2203431

March 24, 2022

Attention Michael Erdahl:

Fremont Analytical, Inc. received 1 sample(s) on 3/17/2022 for the analyses presented in the following report.

Total Organic Carbon by EPA 9060

This report consists of the following:

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

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

Thank you for using Fremont Analytical.

Sincerely,

A handwritten signature in blue ink, appearing to read "Brianna Barnes".

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



Date: 03/24/2022

CLIENT: Friedman & Bruya
Project: 203273
Work Order: 2203431

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
2203431-001	EB02/SWI/13.5	03/15/2022 9:58 AM	03/17/2022 5:39 PM

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

CLIENT: Friedman & Bruya**Project:** 203273

I. SAMPLE RECEIPT:

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

II. GENERAL REPORTING COMMENTS:

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

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

III. ANALYSES AND EXCEPTIONS:

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

Qualifiers:

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

Acronyms:

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



Client: Friedman & Bruya

Collection Date: 3/15/2022 9:58:00 AM

Project: 203273

Lab ID: 2203431-001

Matrix: Soil

Client Sample ID: EB02/SWI/13.5

Analyses

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
----------	--------	----	------	-------	----	---------------

Total Organic Carbon by EPA 9060

Batch ID: 35857

Analyst: SLL

Total Organic Carbon	0.391	0.150		%-dry	1	3/24/2022 11:48:00 AM
----------------------	-------	-------	--	-------	---	-----------------------



Date: 3/24/2022

Work Order: 2203431
CLIENT: Friedman & Bruya
Project: 203273

QC SUMMARY REPORT
Total Organic Carbon by EPA 9060

Sample ID: MB-35857	Sample Type: MBLK	Units: %-dry	Prep Date: 3/24/2022	RunNo: 74296						
Client ID: MBLKS	Batch ID: 35857		Analysis Date: 3/24/2022	SeqNo: 1523884						
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	ND	0.150								

Sample ID: LCS-35857	Sample Type: LCS	Units: %-dry	Prep Date: 3/24/2022	RunNo: 74296						
Client ID: LCSS	Batch ID: 35857		Analysis Date: 3/24/2022	SeqNo: 1523885						
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	1.06	0.150	1.000	0	106	80	120			

Sample ID: 2203431-001ADUP	Sample Type: DUP	Units: %-dry	Prep Date: 3/24/2022	RunNo: 74296						
Client ID: EB02/SWI/13.5	Batch ID: 35857		Analysis Date: 3/24/2022	SeqNo: 1523887						
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	0.381	0.150				0.3910		2.59	20	

Sample ID: 2203431-001AMS	Sample Type: MS	Units: %-dry	Prep Date: 3/24/2022	RunNo: 74296						
Client ID: EB02/SWI/13.5	Batch ID: 35857		Analysis Date: 3/24/2022	SeqNo: 1523888						
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	1.44	0.150	1.000	0.3910	105	75	125			

Sample ID: 2203431-001AMSD	Sample Type: MSD	Units: %-dry	Prep Date: 3/24/2022	RunNo: 74296						
Client ID: EB02/SWI/13.5	Batch ID: 35857		Analysis Date: 3/24/2022	SeqNo: 1523889						
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	1.64	0.150	1.000	0.3910	125	75	125	1.441	13.1	20

Client Name: **FB**
 Logged by: **Matt Langston**

Work Order Number: **2203431**
 Date Received: **3/17/2022 5:39:00 PM**

Chain of Custody

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

Log In

3. 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:	<input type="text"/>	Date:	<input type="text"/>
By Whom:	<input type="text"/>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text"/>		
Client Instructions:	<input type="text"/>		

19. Additional remarks:

Item Information

Item #	Temp °C
Sample	4.9

* 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
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

April 26, 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 March 15, 2022 from the 1501-21001-02, F&BI 203273 project. There is 1 page 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
ENW0426R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on March 15, 2022 by Friedman & Bruya, Inc. from the Evren Northwest 1501-21001-02, F&BI 203273 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>Evren Northwest</u>
203273 -01	EB01/5-7
203273 -02	EB01/9
203273 -03	EB01-SW1/14
203273 -04	EB02-SW1/13.5
203273 -05	EB03-SW1/12
203273 -06	EB01-GW-16
203273 -07	EB02-GW-16
203273 -08	EB03-GW-16

Samples EB01/5-7 and EB01/9 were sent to Fremont Analytical for total organic carbon analysis. The report is enclosed.

203273

SAMPLE CHAIN OF CUSTODY

03-15-22

CT2
E03
VW1
45-At 091

Send Report To: LYNN GREEN

Company: EVERETT

Address: 40 SK 24th Ave

City, State, ZIP: PORTLAND, OR 97214

Phone # 503-992-5500 Fax # 503-992-5500

SAMPLERS (signature)

PROJECT NUMBER: 1581-21001-02

PO #

ANALYSIS: 1581-21001-02
PEREGRINE
PEREGRINE

ANALYSIS: 3/15/22

Page #

TURNAROUND TIME

Standard (2 Weeks)

RUSH

Flash charges authorized by:

SAFETY DISPOSAL

Dispose after 30 days

Return samples

Wet cell with instructions

ANALYSES REQUESTED

- TPH-Diesel
- TPH-Gasoline
- BTEX by 8021B
- VOCs by 8260
- SVOCs by 8270
- HPS
- BTEX, EPA, M-EDF
- CPMS
- D₁₅G
- TOC

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HPS	BTEX, EPA, M-EDF	CPMS	D ₁₅ G	TOC	Notes	
EB01/5-7	01A-E	3/15/22	9:00	Soil	5	/	/	/	/	/	/	/	/	/	●	●	●
EB01/9	02		9:20		5	/	/	/	/	/	/	/	/	/	●	●	●
EB01-SM1/19	03		10:12		5	/	/	/	/	/	/	/	/	/	●	●	●
EB02-SM1/17.5	04		9:58		5	/	/	/	/	/	/	/	/	/	●	●	●
EB03-SM1/12	05		11:21		5	/	/	/	/	/	/	/	/	/	●	●	●
EB01-FM-16	06A-F		10:55	Water	6	/	/	/	/	/	/	/	/	/	●	●	●
EB02-FM-16	07		13:08		6	/	/	/	/	/	/	/	/	/	●	●	●
EB03-FM-16	08		12:15		6	/	/	/	/	/	/	/	/	/	●	●	●

Frederickson & Bergsma, Inc.
30412 166th Avenue West
Seattle, WA 98119-2008
Ph: (206) 283-8382
Fax: (206) 283-5044

Received by: [Signature]
Refrigerated by:

Received by: [Signature]
Refrigerated by:

Received by: [Signature]
Refrigerated by:

Received by: [Signature]
Refrigerated by:

Received by: [Signature]
Refrigerated by:



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: 203273
Work Order Number: 2204228

April 22, 2022

Attention Michael Erdahl:

Fremont Analytical, Inc. received 2 sample(s) on 4/14/2022 for the analyses presented in the following report.

Total Organic Carbon by EPA 9060

This report consists of the following:

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

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

Thank you for using Fremont Analytical.

Sincerely,

Brianna Barnes
Project Manager

*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*

Revision v1

www.fremontanalytical.com



Date: 04/25/2022

CLIENT: Friedman & Bruya
Project: 203273
Work Order: 2204228

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
2204228-001	EB01/5-7	03/15/2022 9:00 AM	04/14/2022 3:17 PM
2204228-002	EB01/9	03/15/2022 9:20 AM	04/14/2022 3:17 PM

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

CLIENT: Friedman & Bruya

Project: 203273

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.

4/25/22: Revision 1 includes sample name change, EB02/9 to EB01/9, as requested by the client.

Qualifiers:

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

Acronyms:

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



CLIENT: Friedman & Bruya
Project: 203273

Lab ID: 2204228-001

Collection Date: 3/15/2022 9:00:00 AM

Client Sample ID: EB01/5-7

Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
----------	--------	----	------	-------	----	---------------

Total Organic Carbon by EPA 9060

Batch ID: 36179

Analyst: SS

Total Organic Carbon	31.6	0.150	H	%-dry	1	4/22/2022 10:50:00 AM
----------------------	------	-------	---	-------	---	-----------------------

Lab ID: 2204228-002

Collection Date: 3/15/2022 9:20:00 AM

Client Sample ID: EB01/9

Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
----------	--------	----	------	-------	----	---------------

Total Organic Carbon by EPA 9060

Batch ID: 36179

Analyst: SS

Total Organic Carbon	30.9	0.150	H	%-dry	1	4/22/2022 11:56:00 AM
----------------------	------	-------	---	-------	---	-----------------------



Date: 4/22/2022

Work Order: 2204228
 CLIENT: Friedman & Bruya
 Project: 203273

QC SUMMARY REPORT
Total Organic Carbon by EPA 9060

Sample ID: MB-36179	SampType: MBLK	Units: %-dry	Prep Date: 4/21/2022	RunNo: 74950							
Client ID: MBLKS	Batch ID: 36179		Analysis Date: 4/22/2022	SeqNo: 1537740							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	ND	0.150									

Sample ID: LCS-36179	SampType: LCS	Units: %-dry	Prep Date: 4/21/2022	RunNo: 74950							
Client ID: LCSS	Batch ID: 36179		Analysis Date: 4/22/2022	SeqNo: 1537741							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	1.04	0.150	1.000	0	104	80	120				

Sample ID: 2204228-001ADUP	SampType: DUP	Units: %-dry	Prep Date: 4/21/2022	RunNo: 74950							
Client ID: EB01/5-7	Batch ID: 36179		Analysis Date: 4/22/2022	SeqNo: 1537743							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	32.3	0.150						31.58	2.35	20	H

Sample ID: 2204228-001AMS	SampType: MS	Units: %-dry	Prep Date: 4/21/2022	RunNo: 74950							
Client ID: EB01/5-7	Batch ID: 36179		Analysis Date: 4/22/2022	SeqNo: 1537744							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	41.8	0.150	9.524	31.58	107	75	125				H

Sample ID: 2204228-001AMSD	SampType: MSD	Units: %-dry	Prep Date: 4/21/2022	RunNo: 74950							
Client ID: EB01/5-7	Batch ID: 36179		Analysis Date: 4/22/2022	SeqNo: 1537745							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	43.6	0.150	9.804	31.58	123	75	125	41.79	4.26	20	H

Client Name: FB	Work Order Number: 2204228
Logged by: Clare Griggs	Date Received: 4/14/2022 3:17:00 PM

Chain of Custody

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

Log In

3. 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:	<input type="text"/>	Date:	<input type="text"/>
By Whom:	<input type="text"/>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text"/>		
Client Instructions:	<input type="text"/>		

19. Additional remarks:

Item Information

Item #	Temp °C
Sample	4.2

* 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
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

April 26, 2022

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

Dear Mr Green:

Included is the amended report for 1581-21001-02, F&BI 203273 project. The project ID has been corrected.

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
ENW0426R.DOC

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

April 26, 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 March 15, 2022 from the 1581-21001-02, F&BI 203273 project. There is 1 page 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
ENW0426R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on March 15, 2022 by Friedman & Bruya, Inc. from the Evren Northwest 1581-21001-02, F&BI 203273 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>Evren Northwest</u>
203273 -01	EB01/5-7
203273 -02	EB01/9
203273 -03	EB01-SW1/14
203273 -04	EB02-SW1/13.5
203273 -05	EB03-SW1/12
203273 -06	EB01-GW-16
203273 -07	EB02-GW-16
203273 -08	EB03-GW-16

Samples EB01/5-7 and EB01/9 were sent to Fremont Analytical for total organic carbon analysis. The report is enclosed.

203273

SAMPLE CHAIN OF CUSTODY

03-15-22

CT2
E03
VW1
45-At 091

Send Report To: LYNN GREEN

Company: EVERETT

Address: 40 SK 24th Ave

City, State, ZIP: PORTLAND, OR 97214

Phone # 503-992-5501 Fax # 503-992-5501

SAMPLERS (signature) [Signature]

PO #

PROJECT NUMBER: 1581-21001-02
PERER

ANALYSES: PERER

PERER

Page # _____

TURNAROUND TIME

Standard (2 Weeks)

RUSH

Flash charges authorized by: _____

SAMPLE DISPOSAL

Dispose after 30 days

Return samples

Well cell with instructions

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	ANALYSES REQUESTED										Notes	
						TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HPs	BTEX, EPA, M-EDF	CPAHs	D ₁₅ G	TOC		
EB01/5-7	01A-E	3/15/22	9:00	Soil	5	/	/	/	/	/	/	/	/	/	/	/	
EB01/9	02		9:20		5	/	/	/	/	/	/	/	/	/	/	/	poll
EB01-SM1/19	03		10:12		5	/	/	/	/	/	/	/	/	/	/	/	3/12/22 ME
EB02-SM1/17.5	04		9:58		5	/	/	/	/	/	/	/	/	/	/	/	pc
EB03-SM1/12	05		11:21		5	/	/	/	/	/	/	/	/	/	/	/	
EB01-FM-16	06 A-F		10:55	Water	6	/	/	/	/	/	/	/	/	/	/	/	
EB02-FM-16	07		13:08		6	/	/	/	/	/	/	/	/	/	/	/	
EB03-FM-16	08		12:15		6	/	/	/	/	/	/	/	/	/	/	/	

Frederickson & Bergsma, Inc.
30412 166th Avenue West
Seattle, WA 98119-2008
Ph: (206) 283-8382

Requested by: [Signature]

POINT NAME: FOR FACILITY

COMPANY: FOR FACILITY

DATE: 3/15/22 TIME: 14:55

Received by: [Signature]

POINT NAME: DOWN PLAIN

COMPANY: FOR FACILITY

DATE: 3/15/22 TIME: 14:55

Received by: _____

COMPANY: _____

DATE: 4 TIME: 00

NR



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: 203273
Work Order Number: 2204228

April 22, 2022

Attention Michael Erdahl:

Fremont Analytical, Inc. received 2 sample(s) on 4/14/2022 for the analyses presented in the following report.

Total Organic Carbon by EPA 9060

This report consists of the following:

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

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

Thank you for using Fremont Analytical.

Sincerely,

Brianna Barnes
Project Manager

*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*

Revision v1

www.fremontanalytical.com



Date: 04/25/2022

CLIENT: Friedman & Bruya
Project: 203273
Work Order: 2204228

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
2204228-001	EB01/5-7	03/15/2022 9:00 AM	04/14/2022 3:17 PM
2204228-002	EB01/9	03/15/2022 9:20 AM	04/14/2022 3:17 PM

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

CLIENT: Friedman & Bruya

Project: 203273

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.

4/25/22: Revision 1 includes sample name change, EB02/9 to EB01/9, as requested by the client.

Qualifiers:

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

Acronyms:

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



CLIENT: Friedman & Bruya
Project: 203273

Lab ID: 2204228-001

Collection Date: 3/15/2022 9:00:00 AM

Client Sample ID: EB01/5-7

Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Total Organic Carbon by EPA 9060				Batch ID: 36179		Analyst: SS
Total Organic Carbon	31.6	0.150	H	%-dry	1	4/22/2022 10:50:00 AM

Lab ID: 2204228-002

Collection Date: 3/15/2022 9:20:00 AM

Client Sample ID: EB01/9

Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Total Organic Carbon by EPA 9060				Batch ID: 36179		Analyst: SS
Total Organic Carbon	30.9	0.150	H	%-dry	1	4/22/2022 11:56:00 AM



Date: 4/22/2022

Work Order: 2204228
 CLIENT: Friedman & Bruya
 Project: 203273

QC SUMMARY REPORT
Total Organic Carbon by EPA 9060

Sample ID: MB-36179	SampType: MBLK	Units: %-dry	Prep Date: 4/21/2022	RunNo: 74950							
Client ID: MBLKS	Batch ID: 36179		Analysis Date: 4/22/2022	SeqNo: 1537740							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	ND	0.150									

Sample ID: LCS-36179	SampType: LCS	Units: %-dry	Prep Date: 4/21/2022	RunNo: 74950							
Client ID: LCSS	Batch ID: 36179		Analysis Date: 4/22/2022	SeqNo: 1537741							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	1.04	0.150	1.000	0	104	80	120				

Sample ID: 2204228-001ADUP	SampType: DUP	Units: %-dry	Prep Date: 4/21/2022	RunNo: 74950							
Client ID: EB01/5-7	Batch ID: 36179		Analysis Date: 4/22/2022	SeqNo: 1537743							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	32.3	0.150						31.58	2.35	20	H

Sample ID: 2204228-001AMS	SampType: MS	Units: %-dry	Prep Date: 4/21/2022	RunNo: 74950							
Client ID: EB01/5-7	Batch ID: 36179		Analysis Date: 4/22/2022	SeqNo: 1537744							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	41.8	0.150	9.524	31.58	107	75	125				H

Sample ID: 2204228-001AMSD	SampType: MSD	Units: %-dry	Prep Date: 4/21/2022	RunNo: 74950							
Client ID: EB01/5-7	Batch ID: 36179		Analysis Date: 4/22/2022	SeqNo: 1537745							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	43.6	0.150	9.804	31.58	123	75	125	41.79	4.26	20	H

Client Name: FB	Work Order Number: 2204228
Logged by: Clare Griggs	Date Received: 4/14/2022 3:17:00 PM

Chain of Custody

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

Log In

3. 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:	<input type="text"/>	Date:	<input type="text"/>
By Whom:	<input type="text"/>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text"/>		
Client Instructions:	<input type="text"/>		

19. Additional remarks:

Item Information

Item #	Temp °C
Sample	4.2

* 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
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

May 16, 2022

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

Dear Mr Green:

Included are the amended report from the testing of material submitted on March 15, 2022 from the 1581-21001-02, F&BI 203273 project. The project ID has been updated.

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
ENW0516R.DOC

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

May 16, 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 March 15, 2022 from the 1581-21001-02, F&BI 203273 project. There is 1 page 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
ENW0516R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on March 15, 2022 by Friedman & Bruya, Inc. from the Evren Northwest 1581-21001-02, F&BI 203273 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>Evren Northwest</u>
203273 -01	EB01/5-7
203273 -02	EB01/9
203273 -03	EB01-SW1/14
203273 -04	EB02-SW1/13.5
203273 -05	EB03-SW1/12
203273 -06	EB01-GW-16
203273 -07	EB02-GW-16
203273 -08	EB03-GW-16

Sample EB01/9 was sent to Fremont Analytical for EPH and VPH analysis. The report is enclosed.



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: 203273
Work Order Number: 2204462

May 10, 2022

Attention Michael Erdahl:

Fremont Analytical, Inc. received 1 sample(s) on 4/26/2022 for the analyses presented in the following report.

Extractable Petroleum Hydrocarbons by NWEPH
Sample Moisture (Percent Moisture)
Volatile Petroleum Hydrocarbons by NWVPH

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



Date: 05/10/2022

CLIENT: Friedman & Bruya
Project: 203273
Work Order: 2204462

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
2204462-001	EB01/9	03/15/2022 9:20 AM	04/26/2022 2:38 PM

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

Original

CLIENT: Friedman & Bruya

Project: 203273

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: 2204462
Date Reported: 5/10/2022

Client: Friedman & Bruya
Project: 203273
Lab ID: 2204462-001
Client Sample ID: EB01/9

Collection Date: 3/15/2022 9:20:00 AM
Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
----------	--------	----	------	-------	----	---------------

Extractable Petroleum Hydrocarbons by NWEPH

Batch ID: 36235 Analyst: MM

Aliphatic Hydrocarbon (C8-C10)	ND	44.8	H	mg/Kg-dry	1	5/9/2022 3:56:52 PM
Aliphatic Hydrocarbon (C10-C12)	ND	22.4	*H	mg/Kg-dry	1	5/9/2022 3:56:52 PM
Aliphatic Hydrocarbon (C12-C16)	38.2	22.4	H	mg/Kg-dry	1	5/9/2022 3:56:52 PM
Aliphatic Hydrocarbon (C16-C21)	ND	22.4	H	mg/Kg-dry	1	5/9/2022 3:56:52 PM
Aliphatic Hydrocarbon (C21-C34)	ND	22.4	H	mg/Kg-dry	1	5/9/2022 3:56:52 PM
Aromatic Hydrocarbon (C8-C10)	ND	44.8	H	mg/Kg-dry	1	5/9/2022 10:10:08 PM
Aromatic Hydrocarbon (C10-C12)	ND	22.4	*H	mg/Kg-dry	1	5/9/2022 10:10:08 PM
Aromatic Hydrocarbon (C12-C16)	ND	22.4	H	mg/Kg-dry	1	5/9/2022 10:10:08 PM
Aromatic Hydrocarbon (C16-C21)	ND	22.4	H	mg/Kg-dry	1	5/9/2022 10:10:08 PM
Aromatic Hydrocarbon (C21-C34)	46.6	22.4	H	mg/Kg-dry	1	5/9/2022 10:10:08 PM
Surr: 1-Chlorooctadecane	67.4	60 - 140	H	%Rec	1	5/9/2022 3:56:52 PM
Surr: o-Terphenyl	61.0	60 - 140	H	%Rec	1	5/9/2022 10:10:08 PM

NOTES:

- * - Associated LCS does not meet acceptance criteria; refer to QC summary.
- * - Associated LCS does not meet acceptance criteria; refer to QC summary.

Volatile Petroleum Hydrocarbons by NWVPH

Batch ID: 36242 Analyst: SG

Aliphatic Hydrocarbon (C5-C6)	ND	3.15	QH	mg/Kg-dry	1	4/28/2022 6:47:52 PM
Aliphatic Hydrocarbon (C6-C8)	ND	1.89	H	mg/Kg-dry	1	4/28/2022 6:47:52 PM
Aliphatic Hydrocarbon (C8-C10)	ND	3.15	H	mg/Kg-dry	1	4/28/2022 6:47:52 PM
Aliphatic Hydrocarbon (C10-C12)	ND	0.631	H	mg/Kg-dry	1	4/28/2022 6:47:52 PM
Aromatic Hydrocarbon (C8-C10)	ND	3.79	H	mg/Kg-dry	1	4/28/2022 6:47:52 PM
Aromatic Hydrocarbon (C10-C12)	1.00	0.631	QH	mg/Kg-dry	1	4/28/2022 6:47:52 PM
Aromatic Hydrocarbon (C12-C13)	2.19	0.631	BQH	mg/Kg-dry	1	4/28/2022 6:47:52 PM
Surr: 1,4-Difluorobenzene	82.5	60 - 140	H	%Rec	1	4/28/2022 6:47:52 PM
Surr: Bromofluorobenzene	79.7	60 - 140	H	%Rec	1	4/28/2022 6:47:52 PM

NOTES:

- Q - Associated calibration verification is below acceptance criteria. Result may be low-biased.

Sample Moisture (Percent Moisture)

Batch ID: R75021 Analyst: CB

Percent Moisture	56.2	0.500		wt%	1	4/27/2022 11:15:37 AM
------------------	------	-------	--	-----	---	-----------------------



Date: 5/10/2022

Work Order: 2204462
CLIENT: Friedman & Bruya
Project: 203273

QC SUMMARY REPORT
Extractable Petroleum Hydrocarbons by NWEPH

Sample ID: MB-36235	SampType: MBLK	Units: mg/Kg	Prep Date: 4/27/2022	RunNo: 75294							
Client ID: MBLKS	Batch ID: 36235		Analysis Date: 5/9/2022	SeqNo: 1544792							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C8-C10)	ND	20.0									*
Aliphatic Hydrocarbon (C10-C12)	ND	10.0									
Aliphatic Hydrocarbon (C12-C16)	ND	10.0									
Aliphatic Hydrocarbon (C16-C21)	ND	10.0									
Aliphatic Hydrocarbon (C21-C34)	ND	10.0									
Surr: 1-Chlorooctadecane	90.0		100.0		90.0	60	140				

NOTES:

* - Associated LCS does not meet acceptance criteria; refer to QC summary.

Sample ID: LCS-36235	SampType: LCS	Units: mg/Kg	Prep Date: 4/27/2022	RunNo: 75294							
Client ID: LCSS	Batch ID: 36235		Analysis Date: 5/9/2022	SeqNo: 1544793							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C8-C10)	104	20.0	250.0		41.8	15.9	130				
Aliphatic Hydrocarbon (C10-C12)	71.7	10.0	125.0		57.3	70	130				S
Aliphatic Hydrocarbon (C12-C16)	87.6	10.0	125.0		70.1	70	130				
Aliphatic Hydrocarbon (C16-C21)	90.7	10.0	125.0		72.6	70	130				
Aliphatic Hydrocarbon (C21-C34)	124	10.0	125.0		99.2	70	130				
Surr: 1-Chlorooctadecane	97.3		100.0		97.3	60	140				

NOTES:

S - Outlying spike recovery observed for Aliphatic Hydrocarbon (C10-C12). Samples will be qualified with an *.

Sample ID: 2204462-001AMS	SampType: MS	Units: mg/Kg-dry	Prep Date: 4/27/2022	RunNo: 75294							
Client ID: EB01/9	Batch ID: 36235		Analysis Date: 5/9/2022	SeqNo: 1544795							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C8-C10)	195	44.6	557.0		34.9	5	130				H
Aliphatic Hydrocarbon (C10-C12)	116	22.3	278.5		41.5	70	130				SH
Aliphatic Hydrocarbon (C12-C16)	201	22.3	278.5		72.2	70	130				H
Aliphatic Hydrocarbon (C16-C21)	158	22.3	278.5		56.6	70	130				SH
Aliphatic Hydrocarbon (C21-C34)	222	22.3	278.5		79.6	70	130				H



Date: 5/10/2022

QC SUMMARY REPORT
Extractable Petroleum Hydrocarbons by NWEPH

Work Order: 2204462
CLIENT: Friedman & Bruya
Project: 203273

Sample ID: **2204462-001AMS** SampType: **MS** Units: **mg/Kg-dry** Prep Date: **4/27/2022** RunNo: **75294**
 Client ID: **EB01/9** Batch ID: **36235** Analysis Date: **5/9/2022** SeqNo: **1544795**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: 1-Chlorooctadecane	147		222.8		66.1	60	140				H

NOTES:
 S - Outlying spike recovery(ies) observed. A duplicate analysis was performed with similar results indicating a possible matrix effect.

Sample ID: **2204462-001AMS** SampType: **MSD** Units: **mg/Kg-dry** Prep Date: **4/27/2022** RunNo: **75294**
 Client ID: **EB01/9** Batch ID: **36235** Analysis Date: **5/9/2022** SeqNo: **1544796**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C8-C10)	157	44.1	551.7	0	28.4	5	130	0	200	30	H
Aliphatic Hydrocarbon (C10-C12)	110	22.1	275.8	0	40.0	70	130	0	200	30	SH
Aliphatic Hydrocarbon (C12-C16)	196	22.1	275.8	0	71.1	70	130	0	200	30	H
Aliphatic Hydrocarbon (C16-C21)	162	22.1	275.8	0	58.8	70	130	0	200	30	SH
Aliphatic Hydrocarbon (C21-C34)	227	22.1	275.8	0	82.3	70	130	0	200	30	H
Surr: 1-Chlorooctadecane	149		220.7		67.7	60	140		0		H

NOTES:
 S - Outlying spike recovery(ies) observed. A duplicate analysis was performed with similar results indicating a possible matrix effect.

Sample ID: **MB-36235** SampType: **MBLK** Units: **mg/Kg** Prep Date: **4/27/2022** RunNo: **75293**
 Client ID: **MBLKS** Batch ID: **36235** Analysis Date: **5/9/2022** SeqNo: **1544760**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aromatic Hydrocarbon (C8-C10)	ND	20.0									*
Aromatic Hydrocarbon (C10-C12)	ND	10.0									
Aromatic Hydrocarbon (C12-C16)	ND	10.0									
Aromatic Hydrocarbon (C16-C21)	ND	10.0									
Aromatic Hydrocarbon (C21-C34)	ND	10.0									
Surr: o-Terphenyl	87.8		100.0		87.8	60	140				

NOTES:
 * - Associated LCS does not meet acceptance criteria; refer to QC summary.



Date: 5/10/2022

Work Order: 2204462
CLIENT: Friedman & Bruya
Project: 203273

QC SUMMARY REPORT
Extractable Petroleum Hydrocarbons by NWEPH

Sample ID:	LCS-36235	SampType:	LCS	Units:	mg/Kg	Prep Date:	4/27/2022	RunNo:	75293		
Client ID:	LCSS	Batch ID:	36235	Analysis Date:	5/9/2022	SeqNo:	1544761				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aromatic Hydrocarbon (C8-C10)	104	20.0	250.0	0	41.7	24	130				
Aromatic Hydrocarbon (C10-C12)	75.3	10.0	125.0	0	60.3	70	130				S
Aromatic Hydrocarbon (C12-C16)	88.1	10.0	125.0	0	70.5	70	130				
Aromatic Hydrocarbon (C16-C21)	98.9	10.0	125.0	0	79.1	70	130				
Aromatic Hydrocarbon (C21-C34)	117	10.0	125.0	0	94.0	70	130				
Surr: o-Terphenyl	93.0		100.0		93.0	60	140				

NOTES:
 S - Outlying spike recovery observed for Aromatic Hydrocarbon (C10-C12). Samples will be qualified with an *.

Sample ID:	2204462-001AMS	SampType:	MS	Units:	mg/Kg-dry	Prep Date:	4/27/2022	RunNo:	75293		
Client ID:	EB01/9	Batch ID:	36235	Analysis Date:	5/9/2022	SeqNo:	1544763				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aromatic Hydrocarbon (C8-C10)	186	44.6	557.0	0	33.4	14	130				H
Aromatic Hydrocarbon (C10-C12)	134	22.3	278.5	0	48.1	70	130				SH
Aromatic Hydrocarbon (C12-C16)	167	22.3	278.5	19.10	53.0	70	130				SH
Aromatic Hydrocarbon (C16-C21)	167	22.3	278.5	0	60.1	70	130				SH
Aromatic Hydrocarbon (C21-C34)	246	22.3	278.5	46.64	71.4	70	130				H
Surr: o-Terphenyl	140		222.8		62.7	60	140				H

NOTES:
 S - Outlying spike recovery(ies) observed. A duplicate analysis was performed with similar results indicating a possible matrix effect.

Sample ID:	2204462-001AMS	SampType:	MSD	Units:	mg/Kg-dry	Prep Date:	4/27/2022	RunNo:	75293		
Client ID:	EB01/9	Batch ID:	36235	Analysis Date:	5/9/2022	SeqNo:	1544764				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aromatic Hydrocarbon (C8-C10)	158	44.1	551.7	0	28.6	14	130	186.3	16.6	30	H
Aromatic Hydrocarbon (C10-C12)	123	22.1	275.8	0	44.5	70	130	134.0	8.79	30	SH
Aromatic Hydrocarbon (C12-C16)	167	22.1	275.8	19.10	53.6	70	130	166.8	0.0514	30	SH
Aromatic Hydrocarbon (C16-C21)	173	22.1	275.8	0	62.7	70	130	167.4	3.22	30	SH
Aromatic Hydrocarbon (C21-C34)	247	22.1	275.8	46.64	72.8	70	130	245.6	0.755	30	H



Work Order: 2204462

CLIENT: Friedman & Bruya

Project: 203273

QC SUMMARY REPORT
Extractable Petroleum Hydrocarbons by NWEPH

Sample ID: 2204462-001AMSD	SampType: MSD	Units: mg/Kg-dry	Prep Date: 4/27/2022	RunNo: 75293							
Client ID: EB01/9	Batch ID: 36235		Analysis Date: 5/9/2022	SeqNo: 1544764							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Surr: o-Terphenyl

134

220.7

60.7

60

140

0

H

NOTES:

S - Outlying spike recovery(ies) observed. A duplicate analysis was performed with similar results indicating a possible matrix effect.



Date: 5/10/2022

Work Order: 2204462
CLIENT: Friedman & Bruya
Project: 203273

QC SUMMARY REPORT
Volatile Petroleum Hydrocarbons by NWVPH

Sample ID:	MB-36242	SampType:	MBLK	Units:	mg/Kg	RunNo:	75101				
Client ID:	MBLKS	Batch ID:	36242	Prep Date:	4/27/2022	SeqNo:	1540634				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C5-C6)	ND	2.50		0	0						
Aliphatic Hydrocarbon (C6-C8)	ND	1.50		0	0						
Aliphatic Hydrocarbon (C8-C10)	ND	2.50		0	0						
Aliphatic Hydrocarbon (C10-C12)	ND	0.500		0	0						
Aromatic Hydrocarbon (C8-C10)	ND	3.00		0	0						
Aromatic Hydrocarbon (C10-C12)	ND	0.500		0	0						
Aromatic Hydrocarbon (C12-C13)	1.83	0.500		0	0						
Surr: 1,4-Difluorobenzene	2.34		2.500		93.4	60	140				
Surr: Bromofluorobenzene	2.40		2.500		96.1	60	140				

Sample ID:	CCVA	SampType:	CCV	Units:	mg/Kg	RunNo:	75101				
Client ID:	CCV	Batch ID:	36242	Prep Date:	4/28/2022	SeqNo:	1540627				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C5-C6)	556	2.50	600.0	0	92.7	80	120				
Aliphatic Hydrocarbon (C6-C8)	173	1.50	200.0	0	86.5	80	120				
Aliphatic Hydrocarbon (C8-C10)	169	2.50	200.0	0	84.5	80	120				
Aliphatic Hydrocarbon (C10-C12)	171	0.500	200.0	0	85.5	80	120				
Aromatic Hydrocarbon (C8-C10)	855	3.00	800.0	0	107	80	120				
Aromatic Hydrocarbon (C10-C12)	172	0.500	200.0	0	86.0	80	120				
Aromatic Hydrocarbon (C12-C13)	182	0.500	200.0	0	91.0	80	120				B
Surr: 1,4-Difluorobenzene	46.0		50.00		92.1	60	140				
Surr: Bromofluorobenzene	47.3		50.00		94.7	60	140				

Sample ID:	LCS-36242	SampType:	LCS	Units:	mg/Kg	RunNo:	75101				
Client ID:	LCSS	Batch ID:	36242	Prep Date:	4/27/2022	SeqNo:	1540630				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C5-C6)	27.8	2.50	30.00	0	92.7	70	130				



Date: 5/10/2022

Work Order: 2204462
CLIENT: Friedman & Bruya
Project: 203273

QC SUMMARY REPORT
Volatile Petroleum Hydrocarbons by NWVPH

Sample ID: LCS-36242	SampType: LCS	Batch ID: 36242	Units: mg/Kg	Prep Date: 4/27/2022		RunNo: 75101					
				HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C6-C8)	8.65	1.50	10.00	0	86.5	70	130				
Aliphatic Hydrocarbon (C8-C10)	8.45	2.50	10.00	0	84.5	70	130				
Aliphatic Hydrocarbon (C10-C12)	8.55	0.500	10.00	0	85.5	70	130				
Aromatic Hydrocarbon (C8-C10)	42.8	3.00	40.00	0	107	70	130				
Aromatic Hydrocarbon (C10-C12)	8.60	0.500	10.00	0	86.0	70	130				
Aromatic Hydrocarbon (C12-C13)	9.10	0.500	10.00	0	91.0	70	130				
Surr: 1,4-Difluorobenzene	2.30		2.500		92.1	60	140				
Surr: Bromofluorobenzene	2.37		2.500		94.7	60	140				

Sample ID: LCS-D-36242	SampType: LCS-D	Batch ID: 36242	Units: mg/Kg	Prep Date: 4/27/2022		RunNo: 75101					
				HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C5-C6)	30.8	2.50	30.00	0	103	70	130	27.80	10.1	20	
Aliphatic Hydrocarbon (C6-C8)	8.71	1.50	10.00	0	87.1	70	130	8.646	0.782	20	
Aliphatic Hydrocarbon (C8-C10)	9.07	2.50	10.00	0	90.7	70	130	8.453	7.02	20	
Aliphatic Hydrocarbon (C10-C12)	8.80	0.500	10.00	0	88.0	70	130	8.546	2.92	20	
Aromatic Hydrocarbon (C8-C10)	44.7	3.00	40.00	0	112	70	130	42.76	4.32	20	
Aromatic Hydrocarbon (C10-C12)	9.60	0.500	10.00	0	96.0	70	130	8.596	11.0	20	
Aromatic Hydrocarbon (C12-C13)	10.4	0.500	10.00	0	104	70	130	9.100	13.8	20	
Surr: 1,4-Difluorobenzene	2.56		2.500		102	60	140		0		
Surr: Bromofluorobenzene	2.51		2.500		101	60	140		0		

Sample ID: 2204462-001BMS	SampType: MS	Batch ID: 36242	Units: mg/Kg-dry	Prep Date: 4/27/2022		RunNo: 75101					
				HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C5-C6)	29.6	3.15	37.86	0	78.3	70	130				H
Aliphatic Hydrocarbon (C6-C8)	7.40	1.89	12.62	0.7938	52.3	70	130				SH



Date: 5/10/2022

Work Order: 2204462
CLIENT: Friedman & Bruya
Project: 203273

QC SUMMARY REPORT
Volatile Petroleum Hydrocarbons by NWWPH

Sample ID:	2204462-001BMS	SampType:	MS	Units:	mg/Kg-dry	Prep Date:	4/27/2022	RunNo:	75101		
Client ID:	EB01/9	Batch ID:	36242	Analysis Date:	4/28/2022	SeqNo:	1540614				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C8-C10)	4.42	3.15	12.62	0	35.0	70	130				SH
Aliphatic Hydrocarbon (C10-C12)	8.81	0.631	12.62	0	69.8	70	130				SH
Aromatic Hydrocarbon (C8-C10)	50.4	3.79	50.48	0	99.9	70	130				H
Aromatic Hydrocarbon (C10-C12)	6.12	0.631	12.62	1.002	40.5	70	130				SH
Aromatic Hydrocarbon (C12-C13)	2.62	0.631	12.62	2.187	3.44	70	130				SH
Surr: 1,4-Difluorobenzene	2.81		3.155		89.0	60	140				H
Surr: Bromofluorobenzene	2.55		3.155		80.8	60	140				H

NOTES:

S - Spike recovery indicates a possible matrix effect.

Sample ID:	CCVB	SampType:	CCV	Units:	mg/Kg	Prep Date:	4/28/2022	RunNo:	75101		
Client ID:	CCV	Batch ID:	36242	Analysis Date:	4/28/2022	SeqNo:	1540628				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C5-C6)	483	2.50	600.0	0	80.5	80	120				
Aliphatic Hydrocarbon (C6-C8)	166	1.50	200.0	0	83.1	80	120				
Aliphatic Hydrocarbon (C8-C10)	187	2.50	200.0	0	93.3	80	120				
Aliphatic Hydrocarbon (C10-C12)	169	0.500	200.0	0	84.7	80	120				
Aromatic Hydrocarbon (C8-C10)	827	3.00	800.0	0	103	80	120				
Aromatic Hydrocarbon (C10-C12)	89.0	0.500	200.0	0	44.5	80	120				S
Aromatic Hydrocarbon (C12-C13)	66.3	0.500	200.0	0	33.1	80	120				BS
Surr: 1,4-Difluorobenzene	55.1		50.00		110	60	140				
Surr: Bromofluorobenzene	41.3		50.00		82.6	60	140				

NOTES:

S - Outlying spike recovery observed (low bias). Samples will be qualified with a Q.

Client Name: FB	Work Order Number: 2204462
Logged by: Gabrielle Coeuille	Date Received: 4/26/2022 2:38:00 PM

Chain of Custody

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

Log In

3. 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:	<input type="text" value="Michael Erdahl"/>	Date:	<input type="text" value="4/26/2022"/>
By Whom:	<input type="text" value="Gabrielle Coeuille"/>	Via:	<input checked="" type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text" value="Ok to proceed out of hold?"/>		
Client Instructions:	<input type="text"/>		

19. Additional remarks:

Item Information

Item #	Temp °C
Sample 1	5.8

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

203273

SAMPLE CHAIN OF CUSTODY

03-15-22

CT2
E03
VW1
45-At 091

Send Report To: LYNN GREEN

Company: EVERETT

Address: 40 SK 24th Ave

City, State, ZIP: PORTLAND, OR 97214

Phone # 503-992-5500 Fax # 503-992-5500

SAMPLERS (signature)

PROJECT NUMBER: 150A-2004-02

PO #

ANALYSIS: 150A-2004-02
1501-21001-02 PETER

REMARKS: 3/17/22 ME

* PBDM VOCs

Page # _____ of _____

TURNAROUND TIME

Standard (2 Weeks)

RUSH

Flash charges authorized by: _____

SAMPLE DISPOSAL

Dispose after 30 days

Return samples

Well cell with instructions

ANALYSES REQUESTED

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	ANALYSES REQUESTED										Notes		
						TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HPs	BTEX, EPA, M-EDF	CPHs	D ₁₅ G	TOC			
EB01/5-7	01A-E	3/15/22	9:00	Soil	5	/	/	/	/	/	/	/	/	/	/	●	●	
EB01/9	02		9:20		5	/	/	/	/	/	/	/	/	/	/	●		●
EB01-SM1/19	03		10:12		5	/	/	/	/	/	/	/	/	/	/			
EB02-SM1/17.5	04		9:58		5	/	/	/	/	/	/	/	/	/	/			
EB03-SM1/12	05		11:21		5	/	/	/	/	/	/	/	/	/	/			
EB01-FM-16	06 A-F		10:55	Water	6	/	/	/	/	/	/	/	/	/	/			
EB02-FM-16	07		13:08		6	/	/	/	/	/	/	/	/	/	/			
EB03-FM-16	08		12:15		6	/	/	/	/	/	/	/	/	/	/			

Frederickson & Bergsma, Inc.
30412 166th Avenue West
Seattle, WA 98119-2008
Ph: (206) 283-8282

Registered by: [Signature]

PRINT NAME: FOR FREDERICKSON

COMPANY: FOR

DATE: 3/15/22 TIME: 14:55

Received by: [Signature]

Registered by: [Signature]

PRINT NAME: DWAIN PHAN

COMPANY: FOR

DATE: 3/15/22 TIME: 14:55

Received by: _____

Registered by: _____

PRINT NAME: _____

COMPANY: _____

DATE: _____ TIME: _____

Received by: _____

Registered by: _____

PRINT NAME: _____

COMPANY: _____

DATE: _____ TIME: _____

Received by: _____

Registered by: _____

PRINT NAME: _____

COMPANY: _____

DATE: _____ TIME: _____

Received by: _____

Registered by: _____

PRINT NAME: _____

COMPANY: _____

DATE: _____ TIME: _____

Received by: _____

Registered by: _____

PRINT NAME: _____

COMPANY: _____

DATE: _____ TIME: _____

Received by: _____

Registered by: _____

PRINT NAME: _____

COMPANY: _____

DATE: _____ TIME: _____

Received by: _____

Registered by: _____

PRINT NAME: _____

COMPANY: _____

DATE: _____ TIME: _____

Received by: _____

Registered by: _____

PRINT NAME: _____

COMPANY: _____

DATE: _____ TIME: _____

Received by: _____

Registered by: _____

PRINT NAME: _____

COMPANY: _____

DATE: _____ TIME: _____

Received by: _____

Registered by: _____

PRINT NAME: _____

COMPANY: _____

DATE: _____ TIME: _____

Received by: _____

Registered by: _____

PRINT NAME: _____

COMPANY: _____

DATE: _____ TIME: _____

Received by: _____

Registered by: _____

PRINT NAME: _____

COMPANY: _____

DATE: _____ TIME: _____

Received by: _____

Registered by: _____

PRINT NAME: _____

COMPANY: _____

DATE: _____ TIME: _____

Received by: _____

Registered by: _____

PRINT NAME: _____

COMPANY: _____

DATE: _____ TIME: _____

Received by: _____

Registered by: _____

PRINT NAME: _____

COMPANY: _____

DATE: _____ TIME: _____

Received by: _____

Registered by: _____

PRINT NAME: _____

COMPANY: _____

DATE: _____ TIME: _____

Received by: _____

Registered by: _____

PRINT NAME: _____

COMPANY: _____

DATE: _____ TIME: _____

Received by: _____

Registered by: _____

PRINT NAME: _____

COMPANY: _____

DATE: _____ TIME: _____

Received by: _____

Registered by: _____

PRINT NAME: _____

COMPANY: _____

DATE: _____ TIME: _____

Received by: _____

Registered by: _____

PRINT NAME: _____

COMPANY: _____

DATE: _____ TIME: _____

Received by: _____

Registered by: _____

PRINT NAME: _____

COMPANY: _____

DATE: _____ TIME: _____

Received by: _____

Registered by: _____

PRINT NAME: _____

COMPANY: _____

DATE: _____ TIME: _____

Received by: _____

Registered by: _____

PRINT NAME: _____

COMPANY: _____

DATE: _____ TIME: _____

Received by: _____

Registered by: _____

PRINT NAME: _____

COMPANY: _____

DATE: _____ TIME: _____

Received by: _____

Registered by: _____

PRINT NAME: _____

COMPANY: _____

DATE: _____ TIME: _____

Received by: _____

Registered by: _____

PRINT NAME: _____

COMPANY: _____

DATE: _____ TIME: _____

Received by: _____

Registered by: _____

PRINT NAME: _____

COMPANY: _____

DATE: _____ TIME: _____

Received by: _____

Registered by: _____

PRINT NAME: _____

COMPANY: _____

DATE: _____ TIME: _____

Received by: _____

Registered by: _____

PRINT NAME: _____

COMPANY: _____

DATE: _____ TIME: _____

Received by: _____

Registered by: _____

PRINT NAME: _____

COMPANY: _____

DATE: _____ TIME: _____

Received by: _____

Registered by: _____

PRINT NAME: _____

COMPANY: _____

DATE: _____ TIME: _____

Received by: _____

Registered by: _____

PRINT NAME: _____

COMPANY: _____

DATE: _____ TIME: _____

Received by: _____

Registered by: _____

PRINT NAME: _____

COMPANY: _____

DATE: _____ TIME: _____

Received by: _____

Registered by: _____

PRINT NAME: _____

COMPANY: _____

DATE: _____ TIME: _____

Received by: _____

Registered by: _____

PRINT NAME: _____

COMPANY: _____

DATE: _____ TIME: _____

Received by: _____

Registered by: _____

PRINT NAME: _____

COMPANY: _____

DATE: _____ TIME: _____

Received by: _____

Registered by: _____

PRINT NAME: _____

COMPANY: _____

DATE: _____ TIME: _____

Received by: _____

Registered by: _____

PRINT NAME: _____

COMPANY: _____

DATE: _____ TIME: _____

Received by: _____

Registered by: _____

PRINT NAME: _____

COMPANY: _____

DATE: _____ TIME: _____

Received by: _____

Registered by: _____

PRINT NAME: _____

COMPANY: _____

DATE: _____ TIME: _____

Received by: _____

Registered by: _____

PRINT NAME: _____

COMPANY: _____

DATE: _____ TIME: _____

Received by: _____

Registered by: _____

PRINT NAME: _____

COMPANY: _____

DATE: _____ TIME: _____

Received by: _____

Registered by: _____

PRINT NAME: _____

COMPANY: _____

DATE: _____ TIME: _____

Received by: _____

Registered by: _____

PRINT NAME: _____

COMPANY: _____

DATE: _____ TIME: _____

Received by: _____

Registered by: _____

PRINT NAME: _____

COMPANY: _____

DATE: _____ TIME: _____

Received by: _____

Registered by: _____

PRINT NAME: _____

COMPANY: _____

DATE: _____ TIME: _____

Received by: _____

Registered by: _____

PRINT NAME: _____

COMPANY: _____

DATE: _____ TIME: _____

Received by: _____

Registered by: _____

PRINT NAME: _____

COMPANY: _____

DATE: _____ TIME: _____

Received by: _____

Registered by: _____

PRINT NAME: _____

COMPANY: _____

DATE: _____ TIME: _____

Received by: _____

Registered by: _____

PRINT NAME: _____

COMPANY: _____

DATE: _____ TIME: _____

Received by: _____

Registered by: _____

PRINT NAME: _____

COMPANY: _____

DATE: _____ TIME: _____

Received by: _____

Registered by: _____

PRINT NAME: _____

COMPANY: _____

DATE: _____ TIME: _____

Received by: _____

Registered by: _____

PRINT NAME: _____

COMPANY: _____

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

June 27, 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 June 1, 2022 from the 1581-21001-02, F&BI 206013 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
ENW0627R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on June 1, 2022 by Friedman & Bruya, Inc. from the Evren Northwest 1581-21001-02, F&BI 206013 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>Evren Northwest</u>
206013 -01	EB04-SWI-13
206013 -02	EB05-SWI-14
206013 -03	EB04-GW-15
206013 -04	EMW01-SWI-15.5
206013 -05	EB05/8-12
206013 -06	EB05/12-13.5

Sample EB04-SWI-13 was sent to Fremont Analytical for EPH and VPH analyses. The report is enclosed.

The 8270E water calibration standard failed the acceptance criteria for indeno(1,2,3-cd)pyrene. The data were flagged accordingly.

All other quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/27/22
Date Received: 06/01/22
Project: 1581-21001-02, F&BI 206013
Date Extracted: 06/02/22
Date Analyzed: 06/02/22

**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> Laboratory ID	<u>Gasoline Range</u>	Surrogate (% Recovery) (Limit 58-139)
EB04-SWI-13 206013-01	<5	112
EB05-SWI-14 206013-02	<5	114
Method Blank 02-1139 MB2	<5	101

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/27/22
Date Received: 06/01/22
Project: 1581-21001-02, F&BI 206013
Date Extracted: 06/06/22
Date Analyzed: 06/06/22

**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 51-134)
EB04-GW-15 206013-03	<100	132
Method Blank 02-1144 MB	<100	142

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/27/22
Date Received: 06/01/22
Project: 1581-21001-02, F&BI 206013
Date Extracted: 06/02/22
Date Analyzed: 06/10/22

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL AND RESIDUAL RANGE
USING METHOD NWTPH-Dx
Sample Extracts Passed Through a
Silica Gel Column Prior to Analysis
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)
EB04-GW-15 206013-03 1/1.2	<60	<300	77
Method Blank 02-1330 MB	<50	<250	137

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/27/22
Date Received: 06/01/22
Project: 1581-21001-02, F&BI 206013
Date Extracted: 06/02/22
Date Analyzed: 06/02/22

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

Results Reported as ug/L (ppb)

<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)
EB04-GW-15 206013-03 1/1.2	120 x	<300	83
Method Blank 02-1330 MB	<50	<250	130

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/27/22
Date Received: 06/01/22
Project: 1581-21001-02, F&BI 206013
Date Extracted: 06/02/22
Date Analyzed: 06/02/22

**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> (% Recovery) (Limit 48-168)
EB04-SWI-13 206013-01	110	<250	107
EB05-SWI-14 206013-02	<50	<250	101
Method Blank 02-1326 MB2	<50	<250	103

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	EB04-SWI-13	Client:	Evren Northwest
Date Received:	06/01/22	Project:	1581-21001-02, F&BI 206013
Date Extracted:	06/03/22	Lab ID:	206013-01
Date Analyzed:	06/03/22	Data File:	206013-01.106
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

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

Lead	1.08
------	------

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	EB05-SWI-14	Client:	Evren Northwest
Date Received:	06/01/22	Project:	1581-21001-02, F&BI 206013
Date Extracted:	06/03/22	Lab ID:	206013-02
Date Analyzed:	06/03/22	Data File:	206013-02.107
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

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

Lead	2.24
------	------

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	Method Blank	Client:	Evren Northwest
Date Received:	NA	Project:	1581-21001-02, F&BI 206013
Date Extracted:	06/03/22	Lab ID:	I2-395 mb
Date Analyzed:	06/03/22	Data File:	I2-395 mb.055
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:	EB04-GW-15	Client:	Evren Northwest
Date Received:	06/01/22	Project:	1581-21001-02, F&BI 206013
Date Extracted:	06/03/22	Lab ID:	206013-03
Date Analyzed:	06/03/22	Data File:	206013-03.072
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

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

Lead	7.74
------	------

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	Method Blank	Client:	Evren Northwest
Date Received:	NA	Project:	1581-21001-02, F&BI 206013
Date Extracted:	06/03/22	Lab ID:	I2-396 mb
Date Analyzed:	06/03/22	Data File:	I2-396 mb.062
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

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

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	EB04-SWI-13	Client:	Evren Northwest
Date Received:	06/01/22	Project:	1581-21001-02, F&BI 206013
Date Extracted:	06/03/22	Lab ID:	206013-01
Date Analyzed:	06/03/22	Data File:	060317.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	RF

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

Compounds:	Concentration mg/kg (ppm)
Methyl t-butyl ether (MTBE)	<0.05
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
1,2-Dichloroethane (EDC)	<0.05
1,2-Dibromoethane (EDB)	<0.05
Hexane	<0.25
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

Client Sample ID:	EB05-SWI-14	Client:	Evren Northwest
Date Received:	06/01/22	Project:	1581-21001-02, F&BI 206013
Date Extracted:	06/03/22	Lab ID:	206013-02
Date Analyzed:	06/03/22	Data File:	060318.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	RF

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	107	90	109
Toluene-d8	99	89	112
4-Bromofluorobenzene	99	84	115

Compounds:	Concentration mg/kg (ppm)
Methyl t-butyl ether (MTBE)	<0.05
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
1,2-Dichloroethane (EDC)	<0.05
1,2-Dibromoethane (EDB)	<0.05
Hexane	<0.25
1,3,5-Trimethylbenzene	<0.05
1,2,4-Trimethylbenzene	<0.05
Naphthalene	0.057

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:	1581-21001-02, F&BI 206013
Date Extracted:	06/03/22	Lab ID:	02-1311 mb
Date Analyzed:	06/03/22	Data File:	060305.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	RF

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

Compounds:	Concentration mg/kg (ppm)
Methyl t-butyl ether (MTBE)	<0.05
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
1,2-Dichloroethane (EDC)	<0.05
1,2-Dibromoethane (EDB)	<0.05
Hexane	<0.25
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:	EB04-GW-15	Client:	Evren Northwest
Date Received:	06/01/22	Project:	1581-21001-02, F&BI 206013
Date Extracted:	06/03/22	Lab ID:	206013-03
Date Analyzed:	06/03/22	Data File:	060328.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	RF

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	111	78	126
Toluene-d8	101	84	115
4-Bromofluorobenzene	98	72	130

Compounds:	Concentration ug/L (ppb)
Hexane	<5
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
Naphthalene	<1

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:	1581-21001-02, F&BI 206013
Date Extracted:	06/03/22	Lab ID:	02-1309 mb
Date Analyzed:	06/03/22	Data File:	060307.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	RF

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	78	126
Toluene-d8	107	84	115
4-Bromofluorobenzene	107	72	130

Compounds:	Concentration ug/L (ppb)
Hexane	<5
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
Naphthalene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	EB04-SWI-13	Client:	Evren Northwest
Date Received:	06/01/22	Project:	1581-21001-02, F&BI 206013
Date Extracted:	06/02/22	Lab ID:	206013-01 1/5
Date Analyzed:	06/03/22	Data File:	060241.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	58	24	111
Phenol-d6	66	37	116
Nitrobenzene-d5	65	38	117
2-Fluorobiphenyl	78	45	117
2,4,6-Tribromophenol	77	11	158
Terphenyl-d14	92	50	124

Compounds:	Concentration mg/kg (ppm)
Naphthalene	<0.01
2-Methylnaphthalene	<0.01
1-Methylnaphthalene	<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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	EB05-SWI-14	Client:	Evren Northwest
Date Received:	06/01/22	Project:	1581-21001-02, F&BI 206013
Date Extracted:	06/02/22	Lab ID:	206013-02 1/5
Date Analyzed:	06/03/22	Data File:	060242.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	72	24	111
Phenol-d6	79	37	116
Nitrobenzene-d5	77	38	117
2-Fluorobiphenyl	84	45	117
2,4,6-Tribromophenol	75	11	158
Terphenyl-d14	89	50	124

Compounds:	Concentration mg/kg (ppm)
Naphthalene	0.019
2-Methylnaphthalene	<0.01
1-Methylnaphthalene	<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

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:	1581-21001-02, F&BI 206013
Date Extracted:	06/02/22	Lab ID:	02-1334 mb 1/5
Date Analyzed:	06/03/22	Data File:	060231.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	67	24	111
Phenol-d6	75	37	116
Nitrobenzene-d5	72	38	117
2-Fluorobiphenyl	85	45	117
2,4,6-Tribromophenol	67	11	158
Terphenyl-d14	85	50	124

Compounds:	Concentration mg/kg (ppm)
Naphthalene	<0.01
2-Methylnaphthalene	<0.01
1-Methylnaphthalene	<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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	EB04-GW-15	Client:	Evren Northwest
Date Received:	06/01/22	Project:	1581-21001-02, F&BI 206013
Date Extracted:	06/02/22	Lab ID:	206013-03 1/2
Date Analyzed:	06/02/22	Data File:	060208.D
Matrix:	Water	Instrument:	GCMS12
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	38	11	65
Phenol-d6	26	11	65
Nitrobenzene-d5	72	50	150
2-Fluorobiphenyl	71	44	108
2,4,6-Tribromophenol	62 ca	10	140
Terphenyl-d14	79	50	150

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.4
2-Methylnaphthalene	<0.4
1-Methylnaphthalene	<0.4
Benz(a)anthracene	<0.04
Chrysene	<0.04
Benzo(a)pyrene	<0.04
Benzo(b)fluoranthene	<0.04
Benzo(k)fluoranthene	<0.04
Indeno(1,2,3-cd)pyrene	<0.04 ca
Dibenz(a,h)anthracene	<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:	1581-21001-02, F&BI 206013
Date Extracted:	06/02/22	Lab ID:	02-1325 mb2
Date Analyzed:	06/02/22	Data File:	060207.D
Matrix:	Water	Instrument:	GCMS12
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	21	11	65
Phenol-d6	13	11	65
Nitrobenzene-d5	82	50	150
2-Fluorobiphenyl	79	44	108
2,4,6-Tribromophenol	64 ca	10	140
Terphenyl-d14	91	50	150

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.2
2-Methylnaphthalene	<0.2
1-Methylnaphthalene	<0.2
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 ca
Dibenz(a,h)anthracene	<0.02

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/27/22

Date Received: 06/01/22

Project: 1581-21001-02, F&BI 206013

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

Laboratory Code: 205490-02 (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	105	71-131

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/27/22

Date Received: 06/01/22

Project: 1581-21001-02, F&BI 206013

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

Laboratory Code: 206013-03 (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	104	69-134

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/27/22

Date Received: 06/01/22

Project: 1581-21001-02, F&BI 206013

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

Laboratory Code: 206001-01 (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	3,400	70 b	112 b	73-135	46 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: 06/27/22

Date Received: 06/01/22

Project: 1581-21001-02, F&BI 206013

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

Laboratory Code: Laboratory Control Sample Silica Gel

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	128	132	63-142	3

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/27/22

Date Received: 06/01/22

Project: 1581-21001-02, F&BI 206013

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

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	124	136	63-142	9

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/27/22

Date Received: 06/01/22

Project: 1581-21001-02, F&BI 206013

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

Laboratory Code: 206021-01 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	5.82	97	92	75-125	5

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: 06/27/22

Date Received: 06/01/22

Project: 1581-21001-02, F&BI 206013

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

Laboratory Code: 205464-01 (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	95	100	75-125	5

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Lead	ug/L (ppb)	10	98	80-120

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/27/22

Date Received: 06/01/22

Project: 1581-21001-02, F&BI 206013

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

Laboratory Code: 206062-02 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Hexane	mg/kg (ppm)	1	<0.25	61	52	10-137	16
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	1	<0.05	95	84	21-145	12
1,2-Dichloroethane (EDC)	mg/kg (ppm)	1	<0.05	81	87	12-160	7
Benzene	mg/kg (ppm)	1	<0.03	80	85	29-129	6
Toluene	mg/kg (ppm)	1	<0.05	86	98	35-130	13
1,2-Dibromoethane (EDB)	mg/kg (ppm)	1	<0.05	85	91	28-142	7
Ethylbenzene	mg/kg (ppm)	1	<0.05	88	92	32-137	4
m,p-Xylene	mg/kg (ppm)	2	<0.1	88	91	34-136	3
o-Xylene	mg/kg (ppm)	1	<0.05	89	90	33-134	1
1,3,5-Trimethylbenzene	mg/kg (ppm)	1	<0.05	85	85	18-149	0
1,2,4-Trimethylbenzene	mg/kg (ppm)	1	<0.05	88	88	10-182	0
Naphthalene	mg/kg (ppm)	1	<0.05	87	81	14-157	7

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Hexane	mg/kg (ppm)	1	93	43-142
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	1	101	60-123
1,2-Dichloroethane (EDC)	mg/kg (ppm)	1	98	56-135
Benzene	mg/kg (ppm)	1	95	71-118
Toluene	mg/kg (ppm)	1	95	66-126
1,2-Dibromoethane (EDB)	mg/kg (ppm)	1	100	74-132
Ethylbenzene	mg/kg (ppm)	1	101	64-123
m,p-Xylene	mg/kg (ppm)	2	98	78-122
o-Xylene	mg/kg (ppm)	1	92	77-124
1,3,5-Trimethylbenzene	mg/kg (ppm)	1	95	76-126
1,2,4-Trimethylbenzene	mg/kg (ppm)	1	92	76-125
Naphthalene	mg/kg (ppm)	1	88	63-140

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/27/22

Date Received: 06/01/22

Project: 1581-21001-02, F&BI 206013

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

Laboratory Code: 206013-03 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent	
				Recovery MS	Acceptance Criteria
Hexane	ug/L (ppb)	10	<5	92	50-150
Methyl t-butyl ether (MTBE)	ug/L (ppb)	10	<1	102	50-150
1,2-Dichloroethane (EDC)	ug/L (ppb)	10	<0.2	99	50-150
Benzene	ug/L (ppb)	10	<0.35	98	50-150
Toluene	ug/L (ppb)	10	<1	99	50-150
1,2-Dibromoethane (EDB)	ug/L (ppb)	10	<1	103	50-150
Ethylbenzene	ug/L (ppb)	10	<1	96	50-150
m,p-Xylene	ug/L (ppb)	20	<2	94	50-150
o-Xylene	ug/L (ppb)	10	<1	95	50-150
Naphthalene	ug/L (ppb)	10	<1	94	50-150

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent		Acceptance Criteria	RPD (Limit 20)
			Recovery LCS	Recovery LCSD		
Hexane	ug/L (ppb)	10	93	102	54-136	9
Methyl t-butyl ether (MTBE)	ug/L (ppb)	10	99	109	70-130	10
1,2-Dichloroethane (EDC)	ug/L (ppb)	10	95	106	70-130	11
Benzene	ug/L (ppb)	10	95	105	70-130	10
Toluene	ug/L (ppb)	10	108	104	70-130	4
1,2-Dibromoethane (EDB)	ug/L (ppb)	10	105	101	70-130	4
Ethylbenzene	ug/L (ppb)	10	100	98	70-130	2
m,p-Xylene	ug/L (ppb)	20	99	97	70-130	2
o-Xylene	ug/L (ppb)	10	97	95	70-130	2
Naphthalene	ug/L (ppb)	10	90	90	70-130	0

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/27/22

Date Received: 06/01/22

Project: 1581-21001-02, F&BI 206013

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

Laboratory Code: 206021-01 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	80	67	34-118	18
2-Methylnaphthalene	mg/kg (ppm)	0.83	<0.01	80	67	29-130	18
1-Methylnaphthalene	mg/kg (ppm)	0.83	<0.01	80	67	37-119	18
Benz(a)anthracene	mg/kg (ppm)	0.83	<0.01	90	83	50-150	8
Chrysene	mg/kg (ppm)	0.83	<0.01	85	81	50-150	5
Benzo(a)pyrene	mg/kg (ppm)	0.83	<0.01	91	82	50-150	10
Benzo(b)fluoranthene	mg/kg (ppm)	0.83	<0.01	93	82	50-150	13
Benzo(k)fluoranthene	mg/kg (ppm)	0.83	<0.01	91	81	50-150	12
Indeno(1,2,3-cd)pyrene	mg/kg (ppm)	0.83	<0.01	88	79	41-134	11
Dibenz(a,h)anthracene	mg/kg (ppm)	0.83	<0.01	89	80	44-130	11

Laboratory Code: Laboratory Control Sample 1/5

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Naphthalene	mg/kg (ppm)	0.83	80	58-108
2-Methylnaphthalene	mg/kg (ppm)	0.83	80	67-108
1-Methylnaphthalene	mg/kg (ppm)	0.83	79	66-107
Benz(a)anthracene	mg/kg (ppm)	0.83	91	70-130
Chrysene	mg/kg (ppm)	0.83	88	70-130
Benzo(a)pyrene	mg/kg (ppm)	0.83	90	68-120
Benzo(b)fluoranthene	mg/kg (ppm)	0.83	95	69-125
Benzo(k)fluoranthene	mg/kg (ppm)	0.83	92	70-130
Indeno(1,2,3-cd)pyrene	mg/kg (ppm)	0.83	80	67-129
Dibenz(a,h)anthracene	mg/kg (ppm)	0.83	83	67-128

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/27/22

Date Received: 06/01/22

Project: 1581-21001-02, F&BI 206013

**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	85	82	62-90	4
2-Methylnaphthalene	ug/L (ppb)	5	86	82	64-93	5
1-Methylnaphthalene	ug/L (ppb)	5	85	81	64-93	5
Benz(a)anthracene	ug/L (ppb)	5	96	93	70-130	3
Chrysene	ug/L (ppb)	5	97	94	70-130	3
Benzo(a)pyrene	ug/L (ppb)	5	103	98	70-130	5
Benzo(b)fluoranthene	ug/L (ppb)	5	97	93	70-130	4
Benzo(k)fluoranthene	ug/L (ppb)	5	106	98	70-130	8
Indeno(1,2,3-cd)pyrene	ug/L (ppb)	5	82	86	70-130	5
Dibenz(a,h)anthracene	ug/L (ppb)	5	88	89	70-130	1

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.

206013

SAMPLE CHAIN OF CUSTODY

06/01/22

CI3/1 of E04 1 W1

Report To Lynn Green
 Company Everen Northwest
 Address Po Box 14908
 City, State, ZIP Portland OR 97293
 Phone 503 452-5500 Email lynn.g@everen-nw.com

SAMPLERS (signature) [Signature] PO # 1501-21001-02

PROJECT NAME 1501-21001-02

REMARKS: ROSS, WLE Future OMW/4.5 INVOICE TO Total CI, W, N, 20

Protect specific RI's? Yes/No Yes

TURNAROUND TIME Standard turnaround

RUSH charges authorized by: [Signature]

SAMPLE DISPOSAL Archive samples

Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	ANALYSES REQUESTED										Notes
						NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	napthalenes (All 3)	total Ph		
EB04-SWI-13	01 A-E	05/31/22	14:20	Soil	5	X	X	X	X	X	X	X	X	X	X	
EB05-SWI-14	02 1	05/31/22	15:50	Soil	5	X	X	X	X	X	X	X	X	X	X	
EB04-GW-15	03 AK	06/01/22	8:56	GW	11	X	X	X	X	X	X	X	X	X	X	**see notes
EMW01-GWI-15.5	04 A-E	05/31/22	12:29	Soil	5											Hold
EB05/R-12	05	05/31/22	15:40	Soil	1											Hold
EB05/12-13.5	06	06/31/22	15:45	Soil	5											Hold
																Samples received at <u>2</u> °C

Friedman & Bruya, Inc.
 3012 16th Avenue West
 Seattle, WA 98119-2029
 Ph. (206) 285-8282

Relinquished by: [Signature] SIGNATURE

Received by: [Signature] PRINT NAME

Relinquished by: Don Sates COMPANY

Received by: Michael Erdahl COMPANY

DATE: 06/01/22 TIME: 12:23

DATE: 6/1/22 TIME: 12:23

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

February 4, 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 January 26, 2022 from the 1581-21001-02, F&BI 201373 project. There are 39 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
ENW0204R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on January 26, 2022 by Friedman & Bruya, Inc. from the Evren Northwest 1581-21001-02, F&BI 201373 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>Evren Northwest</u>
201373 -01	WELL-2-220126
201373 -02	WELL-3-220126
201373 -03	WELL-4-220126
201373 -04	WELL-5-220126
201373 -05	WELL-6-220126
201373 -06	WELL-7-220126
201373 -07	WELL-8-220126
201373 -08	WELL-9-220126
201373 -09	WELL-10-220126
201373 -10	WELL-11-220126
201373 -11	WELL-13-220126
201373 -12	WELL-FD-220126
201373 -13	Trip Blank
201373 -14	WELL-12-220126

Several compounds in the 8270E laboratory control sample and laboratory control sample duplicate exceeded the acceptance criteria. The affected data were flagged accordingly.

All other quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 02/04/22
Date Received: 01/26/22
Project: 1581-21001-02, F&BI 201373
Date Extracted: 02/02/22
Date Analyzed: 02/02/22

**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>	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 51-134)
WELL-2-220126 201373-01	<100	95
WELL-3-220126 201373-02	<100	93
WELL-4-220126 201373-03	<100	91
WELL-5-220126 201373-04	<100	94
WELL-6-220126 201373-05	<100	95
WELL-7-220126 201373-06	<100	93
WELL-8-220126 201373-07	<100	91
WELL-9-220126 201373-08	<100	90
WELL-10-220126 201373-09	<100	92
WELL-11-220126 201373-10	<100	93
WELL-13-220126 201373-11	<100	93

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 02/04/22
Date Received: 01/26/22
Project: 1581-21001-02, F&BI 201373
Date Extracted: 02/02/22
Date Analyzed: 02/02/22

**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 (% Recovery) (Limit 51-134)
WELL-FD-220126 201373-12	<100	93
WELL-12-220126 201373-14	<100	91
Method Blank 02-0171 mb	<100	93

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 02/04/22
Date Received: 01/26/22
Project: 1581-21001-02, F&BI 201373
Date Extracted: 01/31/22
Date Analyzed: 01/31/22

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL AND RESIDUAL RANGE
USING METHOD NWTPH-Dx**
Results Reported as ug/L (ppb)

<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> (% Recovery) (Limit 41-152)
WELL-2-220126 201373-01	<50	<250	145
WELL-3-220126 201373-02	<50	<250	134
WELL-4-220126 201373-03	<50	<250	141
WELL-5-220126 201373-04	64	<250	116
WELL-6-220126 201373-05	<50	<250	131
WELL-7-220126 201373-06	<50	<250	142
WELL-8-220126 201373-07	<50	<250	127
WELL-9-220126 201373-08	<50	<250	147
WELL-10-220126 201373-09	<50	<250	118
WELL-11-220126 201373-10	170	<250	123
WELL-13-220126 201373-11	<50	<250	134
WELL-FD-220126 201373-12	<50	<250	134

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 02/04/22
Date Received: 01/26/22
Project: 1581-21001-02, F&BI 201373
Date Extracted: 01/31/22
Date Analyzed: 01/31/22

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

Results Reported as ug/L (ppb)

<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)
WELL-12-220126 201373-14	<50	<250	128
Method Blank 02-0270 MB	<50	<250	146

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	WELL-2-220126	Client:	Evren Northwest
Date Received:	01/26/22	Project:	1581-21001-02, F&BI 201373
Date Extracted:	02/01/22	Lab ID:	201373-01
Date Analyzed:	02/01/22	Data File:	020139.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	RF

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	105	78	126
Toluene-d8	95	87	115
4-Bromofluorobenzene	97	92	112

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	WELL-3-220126	Client:	Evren Northwest
Date Received:	01/26/22	Project:	1581-21001-02, F&BI 201373
Date Extracted:	02/01/22	Lab ID:	201373-02
Date Analyzed:	02/02/22	Data File:	020216.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	RF

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	114	78	126
Toluene-d8	97	87	115
4-Bromofluorobenzene	93	92	112

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.02
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
Methyl t-butyl ether (MTBE)	<1
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<0.2
1,1,1-Trichloroethane	<1
Benzene	<0.35
Trichloroethene	<0.5
Toluene	<1
Tetrachloroethene	<1
1,2-Dibromoethane (EDB)	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	WELL-4-220126	Client:	Evren Northwest
Date Received:	01/26/22	Project:	1581-21001-02, F&BI 201373
Date Extracted:	02/01/22	Lab ID:	201373-03
Date Analyzed:	02/02/22	Data File:	020217.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	RF

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	105	78	126
Toluene-d8	94	87	115
4-Bromofluorobenzene	93	92	112

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.02
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
Methyl t-butyl ether (MTBE)	<1
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<0.2
1,1,1-Trichloroethane	<1
Benzene	<0.35
Trichloroethene	<0.5
Toluene	<1
Tetrachloroethene	<1
1,2-Dibromoethane (EDB)	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	WELL-5-220126	Client:	Evren Northwest
Date Received:	01/26/22	Project:	1581-21001-02, F&BI 201373
Date Extracted:	02/01/22	Lab ID:	201373-04
Date Analyzed:	02/02/22	Data File:	020218.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	RF

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	110	78	126
Toluene-d8	88	87	115
4-Bromofluorobenzene	95	92	112

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	WELL-6-220126	Client:	Evren Northwest
Date Received:	01/26/22	Project:	1581-21001-02, F&BI 201373
Date Extracted:	02/01/22	Lab ID:	201373-05
Date Analyzed:	02/02/22	Data File:	020244.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	RF

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	105	78	126
Toluene-d8	94	87	115
4-Bromofluorobenzene	96	92	112

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	WELL-7-220126	Client:	Evren Northwest
Date Received:	01/26/22	Project:	1581-21001-02, F&BI 201373
Date Extracted:	02/01/22	Lab ID:	201373-06
Date Analyzed:	02/02/22	Data File:	020245.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	RF

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	112	78	126
Toluene-d8	96	87	115
4-Bromofluorobenzene	99	92	112

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	WELL-8-220126	Client:	Evren Northwest
Date Received:	01/26/22	Project:	1581-21001-02, F&BI 201373
Date Extracted:	02/01/22	Lab ID:	201373-07
Date Analyzed:	02/02/22	Data File:	020246.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	RF

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	110	78	126
Toluene-d8	96	87	115
4-Bromofluorobenzene	98	92	112

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	WELL-9-220126	Client:	Evren Northwest
Date Received:	01/26/22	Project:	1581-21001-02, F&BI 201373
Date Extracted:	02/01/22	Lab ID:	201373-08
Date Analyzed:	02/02/22	Data File:	020247.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	RF

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	116	78	126
Toluene-d8	94	87	115
4-Bromofluorobenzene	96	92	112

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	WELL-10-220126	Client:	Evren Northwest
Date Received:	01/26/22	Project:	1581-21001-02, F&BI 201373
Date Extracted:	02/01/22	Lab ID:	201373-09
Date Analyzed:	02/02/22	Data File:	020248.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	RF

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	109	78	126
Toluene-d8	96	87	115
4-Bromofluorobenzene	100	92	112

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.02
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
Methyl t-butyl ether (MTBE)	<1
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<0.2
1,1,1-Trichloroethane	<1
Benzene	<0.35
Trichloroethene	<0.5
Toluene	<1
Tetrachloroethene	<1
1,2-Dibromoethane (EDB)	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	WELL-11-220126	Client:	Evren Northwest
Date Received:	01/26/22	Project:	1581-21001-02, F&BI 201373
Date Extracted:	02/01/22	Lab ID:	201373-10
Date Analyzed:	02/02/22	Data File:	020249.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	RF

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	109	78	126
Toluene-d8	92	87	115
4-Bromofluorobenzene	94	92	112

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	WELL-13-220126	Client:	Evren Northwest
Date Received:	01/26/22	Project:	1581-21001-02, F&BI 201373
Date Extracted:	02/01/22	Lab ID:	201373-11
Date Analyzed:	02/03/22	Data File:	020250.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	RF

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	106	78	126
Toluene-d8	96	87	115
4-Bromofluorobenzene	97	92	112

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	WELL-FD-220126	Client:	Evren Northwest
Date Received:	01/26/22	Project:	1581-21001-02, F&BI 201373
Date Extracted:	02/01/22	Lab ID:	201373-12
Date Analyzed:	02/03/22	Data File:	020251.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	RF

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	109	78	126
Toluene-d8	94	87	115
4-Bromofluorobenzene	95	92	112

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.02
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
Methyl t-butyl ether (MTBE)	<1
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<0.2
1,1,1-Trichloroethane	<1
Benzene	<0.35
Trichloroethene	<0.5
Toluene	<1
Tetrachloroethene	<1
1,2-Dibromoethane (EDB)	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	Trip Blank	Client:	Evren Northwest
Date Received:	01/26/22	Project:	1581-21001-02, F&BI 201373
Date Extracted:	02/01/22	Lab ID:	201373-13
Date Analyzed:	02/01/22	Data File:	020138.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	RF

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	96	78	126
Toluene-d8	96	87	115
4-Bromofluorobenzene	102	92	112

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	WELL-12-220126	Client:	Evren Northwest
Date Received:	01/26/22	Project:	1581-21001-02, F&BI 201373
Date Extracted:	02/01/22	Lab ID:	201373-14
Date Analyzed:	02/03/22	Data File:	020252.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	RF

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	111	78	126
Toluene-d8	99	87	115
4-Bromofluorobenzene	101	92	112

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

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:	1581-21001-02, F&BI 201373
Date Extracted:	02/01/22	Lab ID:	02-0280 mb
Date Analyzed:	02/02/22	Data File:	020215.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	RF

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	109	78	126
Toluene-d8	94	87	115
4-Bromofluorobenzene	94	92	112

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.02
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
Methyl t-butyl ether (MTBE)	<1
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<0.2
1,1,1-Trichloroethane	<1
Benzene	<0.35
Trichloroethene	<0.5
Toluene	<1
Tetrachloroethene	<1
1,2-Dibromoethane (EDB)	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	WELL-2-220126	Client:	Evren Northwest
Date Received:	01/26/22	Project:	1581-21001-02, F&BI 201373
Date Extracted:	01/31/22	Lab ID:	201373-01 1/2
Date Analyzed:	02/01/22	Data File:	020110.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	44	10	60
Phenol-d6	31	10	49
Nitrobenzene-d5	104	15	144
2-Fluorobiphenyl	89	25	128
2,4,6-Tribromophenol	89	10	142
Terphenyl-d14	103	41	138

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	WELL-3-220126	Client:	Evren Northwest
Date Received:	01/26/22	Project:	1581-21001-02, F&BI 201373
Date Extracted:	01/31/22	Lab ID:	201373-02 1/2
Date Analyzed:	02/01/22	Data File:	020111.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	44	10	60
Phenol-d6	31	10	49
Nitrobenzene-d5	102	15	144
2-Fluorobiphenyl	83	25	128
2,4,6-Tribromophenol	83	10	142
Terphenyl-d14	103	41	138

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	WELL-4-220126	Client:	Evren Northwest
Date Received:	01/26/22	Project:	1581-21001-02, F&BI 201373
Date Extracted:	01/31/22	Lab ID:	201373-03 1/2
Date Analyzed:	02/01/22	Data File:	020112.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	41	10	60
Phenol-d6	28	10	49
Nitrobenzene-d5	101	15	144
2-Fluorobiphenyl	88	25	128
2,4,6-Tribromophenol	84	10	142
Terphenyl-d14	102	41	138

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.4
2-Methylnaphthalene	<0.4
1-Methylnaphthalene	<0.4
Acenaphthylene	<0.04
Acenaphthene	1.5
Fluorene	0.29
Phenanthrene	0.21
Anthracene	<0.04
Fluoranthene	0.050
Pyrene	<0.04
Benz(a)anthracene	<0.04
Chrysene	<0.04
Benzo(a)pyrene	<0.04
Benzo(b)fluoranthene	<0.04
Benzo(k)fluoranthene	<0.04
Indeno(1,2,3-cd)pyrene	<0.04
Dibenz(a,h)anthracene	<0.04
Benzo(g,h,i)perylene	<0.08

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	WELL-5-220126	Client:	Evren Northwest
Date Received:	01/26/22	Project:	1581-21001-02, F&BI 201373
Date Extracted:	01/31/22	Lab ID:	201373-04 1/2
Date Analyzed:	02/01/22	Data File:	020113.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	38	10	60
Phenol-d6	28	10	49
Nitrobenzene-d5	97	15	144
2-Fluorobiphenyl	83	25	128
2,4,6-Tribromophenol	87	10	142
Terphenyl-d14	102	41	138

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.4
2-Methylnaphthalene	<0.4
1-Methylnaphthalene	<0.4
Acenaphthylene	<0.04
Acenaphthene	4.1
Fluorene	1.3
Phenanthrene	0.36
Anthracene	<0.04
Fluoranthene	<0.04
Pyrene	<0.04
Benz(a)anthracene	<0.04
Chrysene	<0.04
Benzo(a)pyrene	<0.04
Benzo(b)fluoranthene	<0.04
Benzo(k)fluoranthene	<0.04
Indeno(1,2,3-cd)pyrene	<0.04
Dibenz(a,h)anthracene	<0.04
Benzo(g,h,i)perylene	<0.08

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	WELL-6-220126	Client:	Evren Northwest
Date Received:	01/26/22	Project:	1581-21001-02, F&BI 201373
Date Extracted:	01/31/22	Lab ID:	201373-05 1/2
Date Analyzed:	02/01/22	Data File:	020114.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	44	10	60
Phenol-d6	31	10	49
Nitrobenzene-d5	96	15	144
2-Fluorobiphenyl	89	25	128
2,4,6-Tribromophenol	82	10	142
Terphenyl-d14	93	41	138

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	WELL-7-220126	Client:	Evren Northwest
Date Received:	01/26/22	Project:	1581-21001-02, F&BI 201373
Date Extracted:	01/31/22	Lab ID:	201373-06 1/2
Date Analyzed:	02/01/22	Data File:	020115.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	42	10	60
Phenol-d6	30	10	49
Nitrobenzene-d5	108	15	144
2-Fluorobiphenyl	93	25	128
2,4,6-Tribromophenol	88	10	142
Terphenyl-d14	100	41	138

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	WELL-8-220126	Client:	Evren Northwest
Date Received:	01/26/22	Project:	1581-21001-02, F&BI 201373
Date Extracted:	01/31/22	Lab ID:	201373-07 1/2
Date Analyzed:	02/01/22	Data File:	020116.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	42	10	60
Phenol-d6	31	10	49
Nitrobenzene-d5	101	15	144
2-Fluorobiphenyl	93	25	128
2,4,6-Tribromophenol	83	10	142
Terphenyl-d14	101	41	138

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	WELL-9-220126	Client:	Evren Northwest
Date Received:	01/26/22	Project:	1581-21001-02, F&BI 201373
Date Extracted:	01/31/22	Lab ID:	201373-08 1/2
Date Analyzed:	02/01/22	Data File:	020117.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	19	10	60
Phenol-d6	17	10	49
Nitrobenzene-d5	57	15	144
2-Fluorobiphenyl	65	25	128
2,4,6-Tribromophenol	80	10	142
Terphenyl-d14	102	41	138

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	WELL-10-220126	Client:	Evren Northwest
Date Received:	01/26/22	Project:	1581-21001-02, F&BI 201373
Date Extracted:	01/31/22	Lab ID:	201373-09 1/2
Date Analyzed:	02/01/22	Data File:	020118.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	39	10	60
Phenol-d6	28	10	49
Nitrobenzene-d5	94	15	144
2-Fluorobiphenyl	84	25	128
2,4,6-Tribromophenol	87	10	142
Terphenyl-d14	106	41	138

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	WELL-11-220126	Client:	Evren Northwest
Date Received:	01/26/22	Project:	1581-21001-02, F&BI 201373
Date Extracted:	01/31/22	Lab ID:	201373-10 1/2
Date Analyzed:	02/01/22	Data File:	020119.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	37	10	60
Phenol-d6	28	10	49
Nitrobenzene-d5	92	15	144
2-Fluorobiphenyl	81	25	128
2,4,6-Tribromophenol	88	10	142
Terphenyl-d14	101	41	138

Compounds:	Concentration ug/L (ppb)
Naphthalene	26 jl
2-Methylnaphthalene	0.83
1-Methylnaphthalene	2.8 jl
Acenaphthylene	<0.04
Acenaphthene	6.9
Fluorene	2.3
Phenanthrene	<0.04
Anthracene	<0.04
Fluoranthene	<0.04
Pyrene	<0.04
Benz(a)anthracene	<0.04
Chrysene	<0.04
Benzo(a)pyrene	<0.04
Benzo(b)fluoranthene	<0.04
Benzo(k)fluoranthene	<0.04
Indeno(1,2,3-cd)pyrene	<0.04
Dibenz(a,h)anthracene	<0.04
Benzo(g,h,i)perylene	<0.08

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	WELL-13-220126	Client:	Evren Northwest
Date Received:	01/26/22	Project:	1581-21001-02, F&BI 201373
Date Extracted:	01/31/22	Lab ID:	201373-11 1/2
Date Analyzed:	02/01/22	Data File:	020120.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	38	10	60
Phenol-d6	30	10	49
Nitrobenzene-d5	93	15	144
2-Fluorobiphenyl	83	25	128
2,4,6-Tribromophenol	79	10	142
Terphenyl-d14	98	41	138

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	WELL-FD-220126	Client:	Evren Northwest
Date Received:	01/26/22	Project:	1581-21001-02, F&BI 201373
Date Extracted:	01/31/22	Lab ID:	201373-12 1/2
Date Analyzed:	02/01/22	Data File:	020121.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	32	10	60
Phenol-d6	24	10	49
Nitrobenzene-d5	83	15	144
2-Fluorobiphenyl	69	25	128
2,4,6-Tribromophenol	75	10	142
Terphenyl-d14	96	41	138

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	WELL-12-220126	Client:	Evren Northwest
Date Received:	01/26/22	Project:	1581-21001-02, F&BI 201373
Date Extracted:	01/31/22	Lab ID:	201373-14 1/2
Date Analyzed:	02/01/22	Data File:	020122.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	40	10	60
Phenol-d6	29	10	49
Nitrobenzene-d5	89	15	144
2-Fluorobiphenyl	77	25	128
2,4,6-Tribromophenol	86	10	142
Terphenyl-d14	105	41	138

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

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:	1581-21001-02, F&BI 201373
Date Extracted:	01/31/22	Lab ID:	02-271 mb
Date Analyzed:	02/01/22	Data File:	020109.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	22	10	60
Phenol-d6	14	10	49
Nitrobenzene-d5	91	15	144
2-Fluorobiphenyl	84	25	128
2,4,6-Tribromophenol	76	10	142
Terphenyl-d14	91	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: 02/04/22

Date Received: 01/26/22

Project: 1581-21001-02, F&BI 201373

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

Laboratory Code: 201443-01 (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: 02/04/22

Date Received: 01/26/22

Project: 1581-21001-02, F&BI 201373

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

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	120	120	63-142	0

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 02/04/22

Date Received: 01/26/22

Project: 1581-21001-02, F&BI 201373

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

Laboratory Code: 201373-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent	
				Recovery MS	Acceptance Criteria
Vinyl chloride	ug/L (ppb)	10	<0.02	108	50-150
Chloroethane	ug/L (ppb)	10	<1	121	50-150
1,1-Dichloroethene	ug/L (ppb)	10	<1	110	50-150
Methylene chloride	ug/L (ppb)	10	<5	112	50-150
Methyl t-butyl ether (MTBE)	ug/L (ppb)	10	<1	104	50-150
trans-1,2-Dichloroethene	ug/L (ppb)	10	<1	103	50-150
1,1-Dichloroethane	ug/L (ppb)	10	<1	106	50-150
cis-1,2-Dichloroethene	ug/L (ppb)	10	<1	106	50-150
1,2-Dichloroethane (EDC)	ug/L (ppb)	10	<0.2	110	50-150
1,1,1-Trichloroethane	ug/L (ppb)	10	<1	105	50-150
Benzene	ug/L (ppb)	10	<0.35	97	50-150
Trichloroethene	ug/L (ppb)	10	<0.5	105	50-150
Toluene	ug/L (ppb)	10	<1	107	50-150
Tetrachloroethene	ug/L (ppb)	10	<1	103	50-150
1,2-Dibromoethane (EDB)	ug/L (ppb)	10	<1	97	50-150
Ethylbenzene	ug/L (ppb)	10	<1	102	50-150
m,p-Xylene	ug/L (ppb)	20	<2	104	50-150
o-Xylene	ug/L (ppb)	10	<1	105	50-150

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent		Acceptance Criteria	RPD (Limit 20)
			Recovery LCS	Recovery LCSD		
Vinyl chloride	ug/L (ppb)	10	109	116	70-130	6
Chloroethane	ug/L (ppb)	10	119	126	70-130	6
1,1-Dichloroethene	ug/L (ppb)	10	107	114	70-130	6
Methylene chloride	ug/L (ppb)	10	103	117	43-134	13
Methyl t-butyl ether (MTBE)	ug/L (ppb)	10	99	108	70-130	9
trans-1,2-Dichloroethene	ug/L (ppb)	10	101	109	70-130	8
1,1-Dichloroethane	ug/L (ppb)	10	103	110	70-130	7
cis-1,2-Dichloroethene	ug/L (ppb)	10	103	111	70-130	7
1,2-Dichloroethane (EDC)	ug/L (ppb)	10	109	112	70-130	3
1,1,1-Trichloroethane	ug/L (ppb)	10	103	111	70-130	7
Benzene	ug/L (ppb)	10	96	100	70-130	4
Trichloroethene	ug/L (ppb)	10	105	109	70-130	4
Toluene	ug/L (ppb)	10	106	110	70-130	4
Tetrachloroethene	ug/L (ppb)	10	107	111	70-130	4
1,2-Dibromoethane (EDB)	ug/L (ppb)	10	97	99	70-130	2
Ethylbenzene	ug/L (ppb)	10	101	106	70-130	5
m,p-Xylene	ug/L (ppb)	20	103	108	70-130	5
o-Xylene	ug/L (ppb)	10	102	109	70-130	7

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 02/04/22

Date Received: 01/26/22

Project: 1581-21001-02, F&BI 201373

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

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Naphthalene	ug/L (ppb)	5	88	91 vo	62-90	3
2-Methylnaphthalene	ug/L (ppb)	5	92	92	64-93	0
1-Methylnaphthalene	ug/L (ppb)	5	95 vo	95 vo	64-93	0
Acenaphthylene	ug/L (ppb)	5	94	95	70-130	1
Acenaphthene	ug/L (ppb)	5	97	97	70-130	0
Fluorene	ug/L (ppb)	5	105	101	70-130	4
Phenanthrene	ug/L (ppb)	5	97	100	70-130	3
Anthracene	ug/L (ppb)	5	95	100	70-130	5
Fluoranthene	ug/L (ppb)	5	93	102	70-130	9
Pyrene	ug/L (ppb)	5	96	100	70-130	4
Benzo(a)anthracene	ug/L (ppb)	5	100	102	70-130	2
Chrysene	ug/L (ppb)	5	99	101	70-130	2
Benzo(a)pyrene	ug/L (ppb)	5	92	94	70-130	2
Benzo(b)fluoranthene	ug/L (ppb)	5	99	98	70-130	1
Benzo(k)fluoranthene	ug/L (ppb)	5	103	103	70-130	0
Indeno(1,2,3-cd)pyrene	ug/L (ppb)	5	100	113	70-130	12
Dibenz(a,h)anthracene	ug/L (ppb)	5	103	120	70-130	15
Benzo(g,h,i)perylene	ug/L (ppb)	5	103	120	70-130	15

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.

201373

SAMPLE CHAIN OF CUSTODY

01-26-22

Page # 101 of 101
FOY/VW6/VW5/CT4

Report To: Lynn Green
 Company: Furen Northwest
 Address: Box 14486
Portland OR
 City, State, ZIP
 Phone: 503 452-5561 Email: lynn@green-nw.com

SAMPLERS (signature) [Signature]
 PROJECT NAME: 1581-21001-02
 PO #

REMARKS (CRGM)
 * * Concomitant Parts
 Project specific RLS? - Yes / No

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

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	ANALYSES REQUESTED							Notes	
						NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082		
WELL-2-220126	01A-H	01/26/22	12:54	GW	8	X	X	X	X	X	X	X		time = 1244 on label
WELL-3-220126	02	01/26/22	11:43	GW	8	X	X	X	X	X	X	X		VOCs = BTEX
WELL-4-220126	03	01/26/22	12:40	GW	8	X	X	X	X	X	X	X		M&E, EDR, EDC
WELL-5-220126	04	01/26/22	10:37	GW	8	X	X	X	X	X	X	X		per DS 1/27/22 M&E
WELL-6-220126	05	01/26/22	10:30	GW	8	X	X	X	X	X	X	X		
WELL-7-220126	06	01/26/22	9:45	GW	8	X	X	X	X	X	X	X		
WELL-8-220126	07	01/26/22	8:40	GW	8	X	X	X	X	X	X	X		
WELL-9-220126	08	01/26/22	8:50	GW	8	X	X	X	X	X	X	X		
WELL-10-220126	09	01/25/22	16:22	GW	8	X	X	X	X	X	X	X		
WELL-11-220126	10	01/25/22	17:01	GW	8	X	X	X	X	X	X	X		

Friedman & Bruya, Inc.
 3012 16th Avenue West
 Seattle, WA 98119-2039
 Ph. (206) 285-8282

Reinquished by: <u>[Signature]</u>	PRINT NAME: <u>Dan Sako</u>	COMPANY: <u>FNW</u>	DATE: <u>01/26/22</u>	TIME: <u>14:43</u>
Received by: <u>[Signature]</u>	Received by: <u>Tokana Christensen</u>	COMPANY: <u>FRB</u>	DATE: <u>01/26/22</u>	TIME: <u>14:54</u>
Received by:	Received by:	Received by:	Received by:	Received by:

201343

Report No

SAMPLE CHAIN OF CUSTODY

01-26-22

Page # 2 of 2

TURNAROUND TIME

Standard turnaround

RUSH

Rush charges authorized by:

SAMPLE DISPOSAL

Archive samples

Other

Default: Dispose after 30 days

Company

Address

City, State, ZIP

Phone

Email

SAMPLERS (signature)

PROJECT NAME

K81-21001-02

PO #

REMARKS

INVOICE TO

Project specific PIs? - Yes / No

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	Notes
WELB13-220126	11A-H	01/26/22	11:40	Gas	8	X	X			X	X		(X) per DS 1/27/22 ME
WEL-FO-220125	12 J	01/25/22	11:30	Gas	8	X	X			X	X		
Top Blank	13A-8	01/26/22	-	W	2					X			
WEL1-12-220126	14A-H	01/26/22	0938	W	8	(X)	(X)			(X)	(X)		Address Lab Tuc01-26-22

SIGNATURE

PRINT NAME

COMPANY

DATE

TIME

Reinquished by:

Dem Sule

Received by:

Tokala Christensen

F+8

01/26/22

14:31

Reinquished by:

[Signature]

Received by:

Samples received at

600

Friedman & Bryja, Inc.

3012 16th Avenue West

Seattle, WA 98119-2029

Ph. (206) 285-8282

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

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

May 5, 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 April 22, 2022 from the 1581-21001-02, F&BI 204371 project. There are 43 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
ENW0505R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on April 22, 2022 by Friedman & Bruya, Inc. from the Evren Northwest 1581-21001-02, F&BI 204371 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>Evren Northwest</u>
204371 -01	WELL-2-220421
204371 -02	WELL-3-220421
204371 -03	WELL-4-220421
204371 -04	WELL-5-220421
204371 -05	WELL-6-220421
204371 -06	WELL-7-220421
204371 -07	WELL-8-220421
204371 -08	WELL-9-220421
204371 -09	WELL-10-220421
204371 -10	WELL-11-220421
204371 -11	WELL-12-220421
204371 -12	WELL-13-220421
204371 -13	WELL-FD-220421
204371 -14	Trip Blank-220421

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/05/22
Date Received: 04/22/22
Project: 1581-21001-02, F&BI 204371
Date Extracted: 04/25/22
Date Analyzed: 04/25/22

**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>	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 51-134)
WELL-2-220421 204371-01	<100	71
WELL-3-220421 204371-02	<100	62
WELL-4-220421 204371-03	<100	66
WELL-5-220421 204371-04	<100	67
WELL-6-220421 204371-05	<100	63
WELL-7-220421 204371-06	<100	62
WELL-8-220421 204371-07	<100	65
WELL-9-220421 204371-08	<100	64
WELL-10-220421 204371-09	<100	68
WELL-11-220421 204371-10	<100	68
WELL-12-220421 204371-11	<100	71

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/05/22
Date Received: 04/22/22
Project: 1581-21001-02, F&BI 204371
Date Extracted: 04/25/22
Date Analyzed: 04/25/22

**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 51-134)
WELL-13-220421 204371-12	<100	86
WELL-FD-220421 204371-13	<100	89
Method Blank 02-887 MB	<100	69

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/05/22
Date Received: 04/22/22
Project: 1581-21001-02, F&BI 204371
Date Extracted: 04/22/22
Date Analyzed: 04/22/22

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL AND MOTOR OIL
USING METHOD NWTPH-Dx**
Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>Motor Oil Range</u> (C ₂₅ -C ₃₆)	<u>Surrogate</u> (% Recovery) (Limit 41-152)
WELL-2-220421 204371-01	<50	<250	122
WELL-3-220421 204371-02	<50	<250	122
WELL-4-220421 204371-03	<50	<250	132
WELL-5-220421 204371-04	<50	<250	138
WELL-6-220421 204371-05	<50	<250	129
WELL-7-220421 204371-06	<50	<250	128
WELL-8-220421 204371-07	<50	<250	138
WELL-9-220421 204371-08	<50	<250	129
WELL-10-220421 204371-09	<50	<250	120
WELL-11-220421 204371-10	130 x	<250	141
WELL-12-220421 204371-11	<50	<250	141
WELL-13-220421 204371-12	<50	<250	135

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/05/22
Date Received: 04/22/22
Project: 1581-21001-02, F&BI 204371
Date Extracted: 04/22/22
Date Analyzed: 04/22/22

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL AND MOTOR OIL
USING METHOD NWTPH-Dx**
Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>Motor Oil Range</u> (C ₂₅ -C ₃₆)	<u>Surrogate</u> (% Recovery) (Limit 41-152)
WELL-FD-220421 204371-13	<50	<250	128
Method Blank 02-983 MB	<50	<250	131

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	WELL-12-220421	Client:	Evren Northwest
Date Received:	04/22/22	Project:	1581-21001-02, F&BI 204371
Date Extracted:	04/26/22	Lab ID:	204371-11
Date Analyzed:	04/26/22	Data File:	204371-11.047
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Cadmium	<1
Lead	<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:	1581-21001-02, F&BI 204371
Date Extracted:	04/26/22	Lab ID:	I2-308 mb2
Date Analyzed:	04/26/22	Data File:	I2-308 mb2.043
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Cadmium	<1
Lead	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	WELL-2-220421	Client:	Evren Northwest
Date Received:	04/22/22	Project:	1581-21001-02, F&BI 204371
Date Extracted:	04/25/22	Lab ID:	204371-01
Date Analyzed:	04/25/22	Data File:	042533.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	RF

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	78	126
Toluene-d8	96	84	115
4-Bromofluorobenzene	99	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	<1
n-Propylbenzene	<1
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:	WELL-3-220421	Client:	Evren Northwest
Date Received:	04/22/22	Project:	1581-21001-02, F&BI 204371
Date Extracted:	04/25/22	Lab ID:	204371-02
Date Analyzed:	04/26/22	Data File:	042609.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	RF

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	97	78	126
Toluene-d8	97	84	115
4-Bromofluorobenzene	95	72	130

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.02
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
Methyl t-butyl ether (MTBE)	<1
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<0.2
1,1,1-Trichloroethane	<1
Benzene	<0.35
Trichloroethene	<0.5
Toluene	<1
Tetrachloroethene	<1
1,2-Dibromoethane (EDB)	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Isopropylbenzene	<1
n-Propylbenzene	<1
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:	WELL-4-220421	Client:	Evren Northwest
Date Received:	04/22/22	Project:	1581-21001-02, F&BI 204371
Date Extracted:	04/25/22	Lab ID:	204371-03
Date Analyzed:	04/26/22	Data File:	042610.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	RF

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	113	78	126
Toluene-d8	97	84	115
4-Bromofluorobenzene	102	72	130

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.02
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
Methyl t-butyl ether (MTBE)	<1
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<0.2
1,1,1-Trichloroethane	<1
Benzene	<0.35
Trichloroethene	<0.5
Toluene	<1
Tetrachloroethene	<1
1,2-Dibromoethane (EDB)	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Isopropylbenzene	<1
n-Propylbenzene	<1
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:	WELL-5-220421	Client:	Evren Northwest
Date Received:	04/22/22	Project:	1581-21001-02, F&BI 204371
Date Extracted:	04/25/22	Lab ID:	204371-04
Date Analyzed:	04/29/22	Data File:	042941.D
Matrix:	Water	Instrument:	GCMS13
Units:	ug/L (ppb)	Operator:	WE

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	85	117
Toluene-d8	98	88	112
4-Bromofluorobenzene	102	90	111

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	<1
n-Propylbenzene	<1
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:	WELL-6-220421	Client:	Evren Northwest
Date Received:	04/22/22	Project:	1581-21001-02, F&BI 204371
Date Extracted:	04/25/22	Lab ID:	204371-05
Date Analyzed:	04/25/22	Data File:	042535.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	RF

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	108	78	126
Toluene-d8	94	84	115
4-Bromofluorobenzene	96	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	<1
n-Propylbenzene	<1
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:	WELL-7-220421	Client:	Evren Northwest
Date Received:	04/22/22	Project:	1581-21001-02, F&BI 204371
Date Extracted:	04/25/22	Lab ID:	204371-06
Date Analyzed:	04/25/22	Data File:	042536.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	RF

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	105	78	126
Toluene-d8	98	84	115
4-Bromofluorobenzene	96	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	<1
n-Propylbenzene	<1
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:	WELL-8-220421	Client:	Evren Northwest
Date Received:	04/22/22	Project:	1581-21001-02, F&BI 204371
Date Extracted:	04/25/22	Lab ID:	204371-07
Date Analyzed:	04/25/22	Data File:	042537.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	RF

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	78	126
Toluene-d8	100	84	115
4-Bromofluorobenzene	101	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	<1
n-Propylbenzene	<1
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:	WELL-9-220421	Client:	Evren Northwest
Date Received:	04/22/22	Project:	1581-21001-02, F&BI 204371
Date Extracted:	04/25/22	Lab ID:	204371-08
Date Analyzed:	04/25/22	Data File:	042538.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	RF

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	104	78	126
Toluene-d8	100	84	115
4-Bromofluorobenzene	102	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	<1
n-Propylbenzene	<1
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:	WELL-10-220421	Client:	Evren Northwest
Date Received:	04/22/22	Project:	1581-21001-02, F&BI 204371
Date Extracted:	04/25/22	Lab ID:	204371-09
Date Analyzed:	04/26/22	Data File:	042611.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	RF

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	78	126
Toluene-d8	94	84	115
4-Bromofluorobenzene	86	72	130

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.02
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
Methyl t-butyl ether (MTBE)	<1
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<0.2
1,1,1-Trichloroethane	<1
Benzene	<0.35
Trichloroethene	<0.5
Toluene	<1
Tetrachloroethene	<1
1,2-Dibromoethane (EDB)	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Isopropylbenzene	<1
n-Propylbenzene	<1
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:	WELL-11-220421	Client:	Evren Northwest
Date Received:	04/22/22	Project:	1581-21001-02, F&BI 204371
Date Extracted:	04/25/22	Lab ID:	204371-10
Date Analyzed:	04/25/22	Data File:	042539.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	RF

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	112	78	126
Toluene-d8	99	84	115
4-Bromofluorobenzene	97	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	<1
n-Propylbenzene	<1
1,3,5-Trimethylbenzene	<1
1,2,4-Trimethylbenzene	<1
Naphthalene	39

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	WELL-12-220421	Client:	Evren Northwest
Date Received:	04/22/22	Project:	1581-21001-02, F&BI 204371
Date Extracted:	04/25/22	Lab ID:	204371-11
Date Analyzed:	04/25/22	Data File:	042540.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	RF

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	78	126
Toluene-d8	98	84	115
4-Bromofluorobenzene	96	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	<1
n-Propylbenzene	<1
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:	WELL-13-220421	Client:	Evren Northwest
Date Received:	04/22/22	Project:	1581-21001-02, F&BI 204371
Date Extracted:	04/25/22	Lab ID:	204371-12
Date Analyzed:	04/25/22	Data File:	042541.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	RF

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	106	78	126
Toluene-d8	98	84	115
4-Bromofluorobenzene	101	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	<1
n-Propylbenzene	<1
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:	WELL-FD-220421	Client:	Evren Northwest
Date Received:	04/22/22	Project:	1581-21001-02, F&BI 204371
Date Extracted:	04/25/22	Lab ID:	204371-13
Date Analyzed:	04/26/22	Data File:	042612.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	RF

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	106	78	126
Toluene-d8	96	84	115
4-Bromofluorobenzene	96	72	130

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.02
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
Methyl t-butyl ether (MTBE)	<1
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<0.2
1,1,1-Trichloroethane	<1
Benzene	<0.35
Trichloroethene	<0.5
Toluene	<1
Tetrachloroethene	<1
1,2-Dibromoethane (EDB)	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Isopropylbenzene	<1
n-Propylbenzene	<1
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:	Trip Blank-220421	Client:	Evren Northwest
Date Received:	04/22/22	Project:	1581-21001-02, F&BI 204371
Date Extracted:	04/25/22	Lab ID:	204371-14
Date Analyzed:	04/25/22	Data File:	042542.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	RF

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	107	78	126
Toluene-d8	102	84	115
4-Bromofluorobenzene	98	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	<1
n-Propylbenzene	<1
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:	Method Blank	Client:	Evren Northwest
Date Received:	Not Applicable	Project:	1581-21001-02, F&BI 204371
Date Extracted:	04/25/22	Lab ID:	02-984 mb
Date Analyzed:	04/25/22	Data File:	042507.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	RF

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	78	126
Toluene-d8	101	84	115
4-Bromofluorobenzene	101	72	130

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.02
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
Methyl t-butyl ether (MTBE)	<1
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<0.2
1,1,1-Trichloroethane	<1
Benzene	<0.35
Trichloroethene	<0.5
Toluene	<1
Tetrachloroethene	<1
1,2-Dibromoethane (EDB)	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Isopropylbenzene	<1
n-Propylbenzene	<1
1,3,5-Trimethylbenzene	<1
1,2,4-Trimethylbenzene	<1
Naphthalene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	WELL-2-220421	Client:	Evren Northwest
Date Received:	04/22/22	Project:	1581-21001-02, F&BI 204371
Date Extracted:	04/25/22	Lab ID:	204371-01 1/2
Date Analyzed:	04/26/22	Data File:	042615.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	32	10	60
Phenol-d6	28	10	49
Nitrobenzene-d5	82	15	144
2-Fluorobiphenyl	85	25	128
2,4,6-Tribromophenol	87	10	142
Terphenyl-d14	110	41	138

Compounds:	Concentration ug/L (ppb)
Benz(a)anthracene	<0.04
Chrysene	<0.04
Benzo(a)pyrene	<0.04
Benzo(b)fluoranthene	<0.04
Benzo(k)fluoranthene	<0.04
Indeno(1,2,3-cd)pyrene	<0.04
Dibenz(a,h)anthracene	<0.04

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	WELL-3-220421	Client:	Evren Northwest
Date Received:	04/22/22	Project:	1581-21001-02, F&BI 204371
Date Extracted:	04/25/22	Lab ID:	204371-02 1/2
Date Analyzed:	04/26/22	Data File:	042616.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	34	10	60
Phenol-d6	27	10	49
Nitrobenzene-d5	88	15	144
2-Fluorobiphenyl	88	25	128
2,4,6-Tribromophenol	83	10	142
Terphenyl-d14	108	41	138

Compounds:	Concentration ug/L (ppb)
Benz(a)anthracene	<0.04
Chrysene	<0.04
Benzo(a)pyrene	<0.04
Benzo(b)fluoranthene	<0.04
Benzo(k)fluoranthene	<0.04
Indeno(1,2,3-cd)pyrene	<0.04
Dibenz(a,h)anthracene	<0.04

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	WELL-4-220421	Client:	Evren Northwest
Date Received:	04/22/22	Project:	1581-21001-02, F&BI 204371
Date Extracted:	04/25/22	Lab ID:	204371-03 1/2
Date Analyzed:	04/26/22	Data File:	042617.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	40	10	60
Phenol-d6	30	10	49
Nitrobenzene-d5	94	15	144
2-Fluorobiphenyl	92	25	128
2,4,6-Tribromophenol	91	10	142
Terphenyl-d14	112	41	138

Compounds:	Concentration ug/L (ppb)
Benz(a)anthracene	<0.04
Chrysene	<0.04
Benzo(a)pyrene	<0.04
Benzo(b)fluoranthene	<0.04
Benzo(k)fluoranthene	<0.04
Indeno(1,2,3-cd)pyrene	<0.04
Dibenz(a,h)anthracene	<0.04

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	WELL-5-220421	Client:	Evren Northwest
Date Received:	04/22/22	Project:	1581-21001-02, F&BI 204371
Date Extracted:	04/25/22	Lab ID:	204371-04 1/2
Date Analyzed:	04/26/22	Data File:	042618.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	40	10	60
Phenol-d6	30	10	49
Nitrobenzene-d5	86	15	144
2-Fluorobiphenyl	85	25	128
2,4,6-Tribromophenol	94	10	142
Terphenyl-d14	113	41	138

Compounds:	Concentration ug/L (ppb)
Benz(a)anthracene	<0.04
Chrysene	<0.04
Benzo(a)pyrene	<0.04
Benzo(b)fluoranthene	<0.04
Benzo(k)fluoranthene	<0.04
Indeno(1,2,3-cd)pyrene	<0.04
Dibenz(a,h)anthracene	<0.04

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	WELL-6-220421	Client:	Evren Northwest
Date Received:	04/22/22	Project:	1581-21001-02, F&BI 204371
Date Extracted:	04/25/22	Lab ID:	204371-05 1/2
Date Analyzed:	04/26/22	Data File:	042619.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	34	10	60
Phenol-d6	26	10	49
Nitrobenzene-d5	88	15	144
2-Fluorobiphenyl	88	25	128
2,4,6-Tribromophenol	85	10	142
Terphenyl-d14	107	41	138

Compounds:	Concentration ug/L (ppb)
Benz(a)anthracene	<0.04
Chrysene	<0.04
Benzo(a)pyrene	<0.04
Benzo(b)fluoranthene	<0.04
Benzo(k)fluoranthene	<0.04
Indeno(1,2,3-cd)pyrene	<0.04
Dibenz(a,h)anthracene	<0.04

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	WELL-7-220421	Client:	Evren Northwest
Date Received:	04/22/22	Project:	1581-21001-02, F&BI 204371
Date Extracted:	04/25/22	Lab ID:	204371-06 1/2
Date Analyzed:	04/26/22	Data File:	042620.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	14	10	60
Phenol-d6	23	10	49
Nitrobenzene-d5	46	15	144
2-Fluorobiphenyl	74	25	128
2,4,6-Tribromophenol	89	10	142
Terphenyl-d14	113	41	138

Compounds:	Concentration ug/L (ppb)
Benz(a)anthracene	<0.04
Chrysene	<0.04
Benzo(a)pyrene	<0.04
Benzo(b)fluoranthene	<0.04
Benzo(k)fluoranthene	<0.04
Indeno(1,2,3-cd)pyrene	<0.04
Dibenz(a,h)anthracene	<0.04

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	WELL-8-220421	Client:	Evren Northwest
Date Received:	04/22/22	Project:	1581-21001-02, F&BI 204371
Date Extracted:	04/25/22	Lab ID:	204371-07 1/2
Date Analyzed:	04/26/22	Data File:	042621.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	39	10	60
Phenol-d6	28	10	49
Nitrobenzene-d5	87	15	144
2-Fluorobiphenyl	80	25	128
2,4,6-Tribromophenol	85	10	142
Terphenyl-d14	111	41	138

Compounds:	Concentration ug/L (ppb)
Benz(a)anthracene	<0.04
Chrysene	<0.04
Benzo(a)pyrene	<0.04
Benzo(b)fluoranthene	<0.04
Benzo(k)fluoranthene	<0.04
Indeno(1,2,3-cd)pyrene	<0.04
Dibenz(a,h)anthracene	<0.04

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	WELL-9-220421	Client:	Evren Northwest
Date Received:	04/22/22	Project:	1581-21001-02, F&BI 204371
Date Extracted:	04/25/22	Lab ID:	204371-08 1/2
Date Analyzed:	04/26/22	Data File:	042622.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	29	10	60
Phenol-d6	27	10	49
Nitrobenzene-d5	80	15	144
2-Fluorobiphenyl	84	25	128
2,4,6-Tribromophenol	82	10	142
Terphenyl-d14	111	41	138

Compounds:	Concentration ug/L (ppb)
Benz(a)anthracene	<0.04
Chrysene	<0.04
Benzo(a)pyrene	<0.04
Benzo(b)fluoranthene	<0.04
Benzo(k)fluoranthene	<0.04
Indeno(1,2,3-cd)pyrene	<0.04
Dibenz(a,h)anthracene	<0.04

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	WELL-10-220421	Client:	Evren Northwest
Date Received:	04/22/22	Project:	1581-21001-02, F&BI 204371
Date Extracted:	04/25/22	Lab ID:	204371-09 1/2
Date Analyzed:	04/26/22	Data File:	042623.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	24	10	60
Phenol-d6	22	10	49
Nitrobenzene-d5	69	15	144
2-Fluorobiphenyl	76	25	128
2,4,6-Tribromophenol	82	10	142
Terphenyl-d14	108	41	138

Compounds:	Concentration ug/L (ppb)
Benz(a)anthracene	<0.04
Chrysene	<0.04
Benzo(a)pyrene	<0.04
Benzo(b)fluoranthene	<0.04
Benzo(k)fluoranthene	<0.04
Indeno(1,2,3-cd)pyrene	<0.04
Dibenz(a,h)anthracene	<0.04

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	WELL-11-220421	Client:	Evren Northwest
Date Received:	04/22/22	Project:	1581-21001-02, F&BI 204371
Date Extracted:	04/25/22	Lab ID:	204371-10 1/2
Date Analyzed:	04/26/22	Data File:	042624.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	21	10	60
Phenol-d6	21	10	49
Nitrobenzene-d5	72	15	144
2-Fluorobiphenyl	73	25	128
2,4,6-Tribromophenol	88	10	142
Terphenyl-d14	111	41	138

Compounds:	Concentration ug/L (ppb)
Benz(a)anthracene	<0.04
Chrysene	<0.04
Benzo(a)pyrene	<0.04
Benzo(b)fluoranthene	<0.04
Benzo(k)fluoranthene	<0.04
Indeno(1,2,3-cd)pyrene	<0.04
Dibenz(a,h)anthracene	<0.04

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	WELL-12-220421	Client:	Evren Northwest
Date Received:	04/22/22	Project:	1581-21001-02, F&BI 204371
Date Extracted:	04/25/22	Lab ID:	204371-11 1/2
Date Analyzed:	04/26/22	Data File:	042610.D
Matrix:	Water	Instrument:	GCMS12
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	17	11	65
Phenol-d6	17	11	65
Nitrobenzene-d5	52	50	150
2-Fluorobiphenyl	64	44	108
2,4,6-Tribromophenol	65	10	140
Terphenyl-d14	101	50	150

Compounds:	Concentration ug/L (ppb)
Benz(a)anthracene	<0.04
Chrysene	<0.04
Benzo(a)pyrene	<0.04
Benzo(b)fluoranthene	<0.04
Benzo(k)fluoranthene	<0.04
Indeno(1,2,3-cd)pyrene	<0.04
Dibenz(a,h)anthracene	<0.04

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	WELL-13-220421	Client:	Evren Northwest
Date Received:	04/22/22	Project:	1581-21001-02, F&BI 204371
Date Extracted:	04/25/22	Lab ID:	204371-12 1/2
Date Analyzed:	04/26/22	Data File:	042611.D
Matrix:	Water	Instrument:	GCMS12
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	43	11	65
Phenol-d6	33	11	65
Nitrobenzene-d5	83	50	150
2-Fluorobiphenyl	88	44	108
2,4,6-Tribromophenol	85	10	140
Terphenyl-d14	103	50	150

Compounds:	Concentration ug/L (ppb)
Benz(a)anthracene	<0.04
Chrysene	<0.04
Benzo(a)pyrene	<0.04
Benzo(b)fluoranthene	<0.04
Benzo(k)fluoranthene	<0.04
Indeno(1,2,3-cd)pyrene	<0.04
Dibenz(a,h)anthracene	<0.04

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	WELL-FD-220421	Client:	Evren Northwest
Date Received:	04/22/22	Project:	1581-21001-02, F&BI 204371
Date Extracted:	04/25/22	Lab ID:	204371-13 1/2
Date Analyzed:	04/26/22	Data File:	042612.D
Matrix:	Water	Instrument:	GCMS12
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	20	11	65
Phenol-d6	20	11	65
Nitrobenzene-d5	62	50	150
2-Fluorobiphenyl	76	44	108
2,4,6-Tribromophenol	73	10	140
Terphenyl-d14	102	50	150

Compounds:	Concentration ug/L (ppb)
Benz(a)anthracene	<0.04
Chrysene	<0.04
Benzo(a)pyrene	<0.04
Benzo(b)fluoranthene	<0.04
Benzo(k)fluoranthene	<0.04
Indeno(1,2,3-cd)pyrene	<0.04
Dibenz(a,h)anthracene	<0.04

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:	1581-21001-02, F&BI 204371
Date Extracted:	04/25/22	Lab ID:	02-1025 mb
Date Analyzed:	04/26/22	Data File:	042609.D
Matrix:	Water	Instrument:	GCMS12
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	21	11	65
Phenol-d6	14	11	65
Nitrobenzene-d5	87	50	150
2-Fluorobiphenyl	90	44	108
2,4,6-Tribromophenol	80	10	140
Terphenyl-d14	108	50	150

Compounds:	Concentration ug/L (ppb)
Benz(a)anthracene	<0.04
Chrysene	<0.04
Benzo(a)pyrene	<0.04
Benzo(b)fluoranthene	<0.04
Benzo(k)fluoranthene	<0.04
Indeno(1,2,3-cd)pyrene	<0.04
Dibenz(a,h)anthracene	<0.04

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/05/22

Date Received: 04/22/22

Project: 1581-21001-02, F&BI 204371

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

Laboratory Code: 204371-01 (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	80	69-134

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/05/22

Date Received: 04/22/22

Project: 1581-21001-02, F&BI 204371

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

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	96	96	63-142	0

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/05/22

Date Received: 04/22/22

Project: 1581-21001-02, F&BI 204371

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

Laboratory Code: 204333-02 x10 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Cadmium	ug/L (ppb)	5	<10	83	96	75-125	15
Lead	ug/L (ppb)	10	<10	78	87	75-125	11

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Cadmium	ug/L (ppb)	5	96	80-120
Lead	ug/L (ppb)	10	93	80-120

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/05/22

Date Received: 04/22/22

Project: 1581-21001-02, F&BI 204371

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

Laboratory Code: 204374-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent	Acceptance Criteria
				Recovery MS	
Vinyl chloride	ug/L (ppb)	10	0.021	105	50-150
Chloroethane	ug/L (ppb)	10	<1	95	50-150
1,1-Dichloroethene	ug/L (ppb)	10	<1	112	50-150
Methylene chloride	ug/L (ppb)	10	<5	148	50-150
trans-1,2-Dichloroethene	ug/L (ppb)	10	<1	137	50-150
1,1-Dichloroethane	ug/L (ppb)	10	<1	98	50-150
cis-1,2-Dichloroethene	ug/L (ppb)	10	<1	95	50-150
1,2-Dichloroethane (EDC)	ug/L (ppb)	10	<0.2	101	50-150
1,1,1-Trichloroethane	ug/L (ppb)	10	<1	95	50-150
Trichloroethene	ug/L (ppb)	10	<0.5	100	50-150
Tetrachloroethene	ug/L (ppb)	10	<1	101	50-150
Methyl t-butyl ether (MTBE)	ug/L (ppb)	10	<1	129	50-150
1,2-Dichloroethane (EDC)	ug/L (ppb)	10	<0.2	101	50-150
Benzene	ug/L (ppb)	10	<0.35	98	50-150
Toluene	ug/L (ppb)	10	<1	97	50-150
1,2-Dibromoethane (EDB)	ug/L (ppb)	10	<1	102	50-150
Ethylbenzene	ug/L (ppb)	10	<1	98	50-150
m,p-Xylene	ug/L (ppb)	20	<2	97	50-150
o-Xylene	ug/L (ppb)	10	<1	96	50-150
Isopropylbenzene	ug/L (ppb)	10	<1	97	50-150
n-Propylbenzene	ug/L (ppb)	10	<1	100	50-150
1,3,5-Trimethylbenzene	ug/L (ppb)	10	<1	97	50-150
1,2,4-Trimethylbenzene	ug/L (ppb)	10	<1	100	50-150
Naphthalene	ug/L (ppb)	10	<1	109	50-150

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/05/22

Date Received: 04/22/22

Project: 1581-21001-02, F&BI 204371

**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)
Vinyl chloride	ug/L (ppb)	10	109	107	70-130	2
Chloroethane	ug/L (ppb)	10	89	99	70-130	11
1,1-Dichloroethene	ug/L (ppb)	10	109	108	70-130	1
Methylene chloride	ug/L (ppb)	10	107	105	43-134	2
trans-1,2-Dichloroethene	ug/L (ppb)	10	97	96	70-130	1
1,1-Dichloroethane	ug/L (ppb)	10	98	98	70-130	0
cis-1,2-Dichloroethene	ug/L (ppb)	10	96	95	70-130	1
1,2-Dichloroethane (EDC)	ug/L (ppb)	10	99	99	70-130	0
1,1,1-Trichloroethane	ug/L (ppb)	10	99	97	70-130	2
Trichloroethene	ug/L (ppb)	10	97	95	70-130	2
Tetrachloroethene	ug/L (ppb)	10	98	97	70-130	1
Methyl t-butyl ether (MTBE)	ug/L (ppb)	10	95	94	70-130	1
1,2-Dichloroethane (EDC)	ug/L (ppb)	10	99	99	70-130	0
Benzene	ug/L (ppb)	10	94	93	70-130	1
Toluene	ug/L (ppb)	10	95	95	70-130	0
1,2-Dibromoethane (EDB)	ug/L (ppb)	10	100	101	70-130	1
Ethylbenzene	ug/L (ppb)	10	98	98	70-130	0
m,p-Xylene	ug/L (ppb)	20	97	96	70-130	1
o-Xylene	ug/L (ppb)	10	98	97	70-130	1
Isopropylbenzene	ug/L (ppb)	10	99	99	70-130	0
n-Propylbenzene	ug/L (ppb)	10	99	99	70-130	0
1,3,5-Trimethylbenzene	ug/L (ppb)	10	101	97	70-130	4
1,2,4-Trimethylbenzene	ug/L (ppb)	10	102	100	70-130	2
Naphthalene	ug/L (ppb)	10	103	114	70-130	10

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/05/22

Date Received: 04/22/22

Project: 1581-21001-02, F&BI 204371

**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)
Benz(a)anthracene	ug/L (ppb)	5	97	99	70-130	2
Chrysene	ug/L (ppb)	5	99	99	70-130	0
Benzo(a)pyrene	ug/L (ppb)	5	105	106	70-130	1
Benzo(b)fluoranthene	ug/L (ppb)	5	103	105	70-130	2
Benzo(k)fluoranthene	ug/L (ppb)	5	103	102	70-130	1
Indeno(1,2,3-cd)pyrene	ug/L (ppb)	5	105	108	70-130	3
Dibenz(a,h)anthracene	ug/L (ppb)	5	111	112	70-130	1

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.

204371

SAMPLE CHAIN OF CUSTODY

04/22/22

AI V65

Report To Furven Northwest

Company Furven Northwest

Address Po Box 14480

City, State, ZIP Portland OR 97243

Phone 503 452-5561 Email lyng@furvennw.com

SAMPLERS (signature)

PROJECT NAME

1581-21001-02

PO #

REMARKS

* RSDM vials
* ~~CONCERNING~~ PARTS
Project specific RLS? Yes / No

INVOICE TO

Page # of

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	Notes
WELL-2-220421	01A-H	04/21/22	15:55	GW	8	X	X			X	X		
WELL-3-220421			14:30		8	X	X			X	X		
WELL-4-220421			13:30		8	X	X			X	X		
WELL-5-220421			13:00		8	X	X			X	X		
WELL-6-220421			11:19		8	X	X			X	X		
WELL-7-220421			12:24		8	X	X			X	X		
WELL-8-220421			9:55		8	X	X			X	X		
WELL-9-220421			11:35		8	X	X			X	X		
WELL-10-220421			12:07		8	X	X			X	X		
WELL-11-220421			12:45		8	X	X			X	X		

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

SIGNATURE

Relinquished by:

PRINT NAME

Dan Saylor
Dan Saylor

COMPANY

FBI

DATE

04/22/22

TIME

0800

Received by:

Samples received at 400

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

August 8, 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 July 26, 2022 from the 1581-21001-02, F&BI 207422 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
ENW0808R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on July 26, 2022 by Friedman & Bruya, Inc. from the Evren Northwest 1581-21001-02, F&BI 207422 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>Evren Northwest</u>
207422 -01	Well-2-220725
207422 -02	Well-3-220725
207422 -03	Well-4-220725
207422 -04	Well-5-220725
207422 -05	Well-11-220725
207422 -06	Well-12-220725
207422 -07	EMW01-220725
207422 -08	MW-8-220725
207422 -09	Well-FD-220725
207422 -10	Trip Blank-220725

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 08/08/22
Date Received: 07/26/22
Project: 1581-21001-02, F&BI 207422
Date Extracted: 07/27/22
Date Analyzed: 07/28/22

**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>	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 51-134)
Well-2-220725 207422-01	<100	106
Well-3-220725 207422-02	<100	103
Well-4-220725 207422-03	<100	96
Well-5-220725 207422-04	<100	100
Well-11-220725 207422-05	<100	108
Well-12-220725 207422-06	<100	102
EMW01-220725 207422-07	<100	100
MW-8-220725 207422-08	<100	101
Well-FD-220725 207422-09	<100	98
Method Blank 02-1710 MB	<100	96

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 08/08/22
Date Received: 07/26/22
Project: 1581-21001-02, F&BI 207422
Date Extracted: 07/27/22
Date Analyzed: 08/03/22

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL AND RESIDUAL RANGE
USING METHOD NWTPH-Dx
Sample Extracts Passed Through a
Silica Gel Column Prior to Analysis
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)
Well-2-220725 207422-01	120 x	<250	139
Well-5-220725 207422-04	67 x	<250	125
Well-11-220725 207422-05	150 x	<250	119
MW-8-220725 207422-08	130 x	<250	138
Method Blank 02-1847 MB	<50	<250	100

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 08/08/22
 Date Received: 07/26/22
 Project: 1581-21001-02, F&BI 207422
 Date Extracted: 07/27/22
 Date Analyzed: 07/27/22

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
 FOR TOTAL PETROLEUM HYDROCARBONS AS
 DIESEL AND RESIDUAL RANGE
 USING METHOD NWTPH-Dx**
 Results Reported as ug/L (ppb)

<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> (% Recovery) (Limit 41-152)
Well-2-220725 207422-01	93 x	<250	148
Well-3-220725 207422-02	<50	<250	145
Well-4-220725 207422-03	<50	<250	137
Well-5-220725 207422-04	98 x	<250	145
Well-11-220725 207422-05	200 x	<250	140
Well-12-220725 207422-06	<50	<250	118
EMW01-220725 207422-07	<50	<250	153 vo
MW-8-220725 207422-08	760 x	350 x	147
Well-FD-220725 207422-09	<50	<250	143
Method Blank 02-1847 MB	<50	<250	111

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	Well-12-220725	Client:	Evren Northwest
Date Received:	07/26/22	Project:	1581-21001-02, F&BI 207422
Date Extracted:	07/26/22	Lab ID:	207422-06
Date Analyzed:	07/26/22	Data File:	207422-06.138
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	WE

Analyte:	Concentration ug/L (ppb)
Cadmium	<1
Lead	<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:	1581-21001-02, F&BI 207422
Date Extracted:	07/26/22	Lab ID:	I2-507 mb
Date Analyzed:	07/26/22	Data File:	I2-507 mb.132
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	WE

Analyte:	Concentration ug/L (ppb)
Cadmium	<1
Lead	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	Well-2-220725	Client:	Evren Northwest
Date Received:	07/26/22	Project:	1581-21001-02, F&BI 207422
Date Extracted:	07/26/22	Lab ID:	207422-01
Date Analyzed:	07/26/22	Data File:	072644.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	RF

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	95	78	126
Toluene-d8	99	84	115
4-Bromofluorobenzene	96	72	130

Compounds:	Concentration ug/L (ppb)
Hexane	<5
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
Naphthalene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	Well-3-220725	Client:	Evren Northwest
Date Received:	07/26/22	Project:	1581-21001-02, F&BI 207422
Date Extracted:	07/26/22	Lab ID:	207422-02
Date Analyzed:	07/27/22	Data File:	072645.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	RF

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	78	126
Toluene-d8	98	84	115
4-Bromofluorobenzene	99	72	130

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.02
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<0.2
1,1,1-Trichloroethane	<1
Trichloroethene	<0.5
Tetrachloroethene	<1
Hexane	<5
Methyl t-butyl ether (MTBE)	<1
1,2-Dichloroethane (EDC)	<0.2
1,2-Dibromoethane (EDB)	<1
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Naphthalene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	Well-11-220725	Client:	Evren Northwest
Date Received:	07/26/22	Project:	1581-21001-02, F&BI 207422
Date Extracted:	07/26/22	Lab ID:	207422-05
Date Analyzed:	07/27/22	Data File:	072646.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	RF

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	78	126
Toluene-d8	99	84	115
4-Bromofluorobenzene	96	72	130

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.02
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<0.2
1,1,1-Trichloroethane	<1
Trichloroethene	<0.5
Tetrachloroethene	<1
Hexane	<5
Methyl t-butyl ether (MTBE)	<1
1,2-Dichloroethane (EDC)	<0.2
1,2-Dibromoethane (EDB)	<1
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Naphthalene	35

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	Well-12-220725	Client:	Evren Northwest
Date Received:	07/26/22	Project:	1581-21001-02, F&BI 207422
Date Extracted:	07/26/22	Lab ID:	207422-06
Date Analyzed:	07/27/22	Data File:	072647.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	RF

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	78	126
Toluene-d8	101	84	115
4-Bromofluorobenzene	98	72	130

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.02
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<0.2
1,1,1-Trichloroethane	<1
Trichloroethene	<0.5
Tetrachloroethene	<1
Hexane	<5
Methyl t-butyl ether (MTBE)	<1
1,2-Dichloroethane (EDC)	<0.2
1,2-Dibromoethane (EDB)	<1
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Naphthalene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	EMW01-220725	Client:	Evren Northwest
Date Received:	07/26/22	Project:	1581-21001-02, F&BI 207422
Date Extracted:	07/26/22	Lab ID:	207422-07
Date Analyzed:	07/27/22	Data File:	072648.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	RF

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	93	78	126
Toluene-d8	94	84	115
4-Bromofluorobenzene	98	72	130

Compounds:	Concentration ug/L (ppb)
Hexane	<5
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
Naphthalene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	MW-8-220725	Client:	Evren Northwest
Date Received:	07/26/22	Project:	1581-21001-02, F&BI 207422
Date Extracted:	07/26/22	Lab ID:	207422-08
Date Analyzed:	07/27/22	Data File:	072649.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	RF

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	78	126
Toluene-d8	101	84	115
4-Bromofluorobenzene	102	72	130

Compounds:	Concentration ug/L (ppb)
Hexane	<5
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
Naphthalene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	Well-FD-220725	Client:	Evren Northwest
Date Received:	07/26/22	Project:	1581-21001-02, F&BI 207422
Date Extracted:	07/26/22	Lab ID:	207422-09
Date Analyzed:	07/27/22	Data File:	072650.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	RF

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	93	78	126
Toluene-d8	101	84	115
4-Bromofluorobenzene	97	72	130

Compounds:	Concentration ug/L (ppb)
Hexane	<5
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
Naphthalene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	Trip Blank-220725	Client:	Evren Northwest
Date Received:	07/26/22	Project:	1581-21001-02, F&BI 207422
Date Extracted:	07/26/22	Lab ID:	207422-10
Date Analyzed:	07/27/22	Data File:	072651.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	RF

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	78	126
Toluene-d8	104	84	115
4-Bromofluorobenzene	101	72	130

Compounds:	Concentration ug/L (ppb)
Hexane	<5
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
Naphthalene	<1

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:	1581-21001-02, F&BI 207422
Date Extracted:	07/26/22	Lab ID:	02-1778 mb
Date Analyzed:	07/26/22	Data File:	072640.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	RF

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	78	126
Toluene-d8	105	84	115
4-Bromofluorobenzene	94	72	130

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.02
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<0.2
1,1,1-Trichloroethane	<1
Trichloroethene	<0.5
Tetrachloroethene	<1
Hexane	<5
Methyl t-butyl ether (MTBE)	<1
1,2-Dichloroethane (EDC)	<0.2
1,2-Dibromoethane (EDB)	<1
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Naphthalene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	Well-2-220725	Client:	Evren Northwest
Date Received:	07/26/22	Project:	1581-21001-02, F&BI 207422
Date Extracted:	07/26/22	Lab ID:	207422-01
Date Analyzed:	07/26/22	Data File:	072623.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	20	10	60
Phenol-d6	13	10	49
Nitrobenzene-d5	84	15	144
2-Fluorobiphenyl	85	25	128
2,4,6-Tribromophenol	75	10	142
Terphenyl-d14	96	41	138

Compounds:	Concentration ug/L (ppb)
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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	Well-3-220725	Client:	Evren Northwest
Date Received:	07/26/22	Project:	1581-21001-02, F&BI 207422
Date Extracted:	07/26/22	Lab ID:	207422-02
Date Analyzed:	07/26/22	Data File:	072624.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	22	10	60
Phenol-d6	14	10	49
Nitrobenzene-d5	87	15	144
2-Fluorobiphenyl	85	25	128
2,4,6-Tribromophenol	75	10	142
Terphenyl-d14	100	41	138

Compounds:	Concentration ug/L (ppb)
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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	Well-4-220725	Client:	Evren Northwest
Date Received:	07/26/22	Project:	1581-21001-02, F&BI 207422
Date Extracted:	07/26/22	Lab ID:	207422-03
Date Analyzed:	07/26/22	Data File:	072625.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	18	10	60
Phenol-d6	13	10	49
Nitrobenzene-d5	82	15	144
2-Fluorobiphenyl	86	25	128
2,4,6-Tribromophenol	66	10	142
Terphenyl-d14	99	41	138

Compounds:	Concentration ug/L (ppb)
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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	Well-5-220725	Client:	Evren Northwest
Date Received:	07/26/22	Project:	1581-21001-02, F&BI 207422
Date Extracted:	07/26/22	Lab ID:	207422-04
Date Analyzed:	07/26/22	Data File:	072626.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	22	10	60
Phenol-d6	14	10	49
Nitrobenzene-d5	92	15	144
2-Fluorobiphenyl	83	25	128
2,4,6-Tribromophenol	59	10	142
Terphenyl-d14	103	41	138

Compounds:	Concentration ug/L (ppb)
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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	Well-11-220725	Client:	Evren Northwest
Date Received:	07/26/22	Project:	1581-21001-02, F&BI 207422
Date Extracted:	07/26/22	Lab ID:	207422-05
Date Analyzed:	07/26/22	Data File:	072618.D
Matrix:	Water	Instrument:	GCMS12
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	21	11	65
Phenol-d6	13	11	65
Nitrobenzene-d5	82	50	150
2-Fluorobiphenyl	77	44	108
2,4,6-Tribromophenol	89	10	140
Terphenyl-d14	93	50	150

Compounds:	Concentration ug/L (ppb)
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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	Well-12-220725	Client:	Evren Northwest
Date Received:	07/26/22	Project:	1581-21001-02, F&BI 207422
Date Extracted:	07/26/22	Lab ID:	207422-06
Date Analyzed:	07/26/22	Data File:	072619.D
Matrix:	Water	Instrument:	GCMS12
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	19	11	65
Phenol-d6	12	11	65
Nitrobenzene-d5	82	50	150
2-Fluorobiphenyl	79	44	108
2,4,6-Tribromophenol	82	10	140
Terphenyl-d14	98	50	150

Compounds:	Concentration ug/L (ppb)
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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	EMW01-220725	Client:	Evren Northwest
Date Received:	07/26/22	Project:	1581-21001-02, F&BI 207422
Date Extracted:	07/26/22	Lab ID:	207422-07
Date Analyzed:	07/26/22	Data File:	072620.D
Matrix:	Water	Instrument:	GCMS12
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	21	11	65
Phenol-d6	12	11	65
Nitrobenzene-d5	80	50	150
2-Fluorobiphenyl	84	44	108
2,4,6-Tribromophenol	83	10	140
Terphenyl-d14	94	50	150

Compounds:	Concentration ug/L (ppb)
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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	MW-8-220725	Client:	Evren Northwest
Date Received:	07/26/22	Project:	1581-21001-02, F&BI 207422
Date Extracted:	07/26/22	Lab ID:	207422-08
Date Analyzed:	07/26/22	Data File:	072621.D
Matrix:	Water	Instrument:	GCMS12
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	7 vo	11	65
Phenol-d6	9 vo	11	65
Nitrobenzene-d5	62	50	150
2-Fluorobiphenyl	68	44	108
2,4,6-Tribromophenol	56	10	140
Terphenyl-d14	88	50	150

Compounds:	Concentration ug/L (ppb)
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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	Well-FD-220725	Client:	Evren Northwest
Date Received:	07/26/22	Project:	1581-21001-02, F&BI 207422
Date Extracted:	07/26/22	Lab ID:	207422-09
Date Analyzed:	07/26/22	Data File:	072622.D
Matrix:	Water	Instrument:	GCMS12
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	19	11	65
Phenol-d6	12	11	65
Nitrobenzene-d5	81	50	150
2-Fluorobiphenyl	80	44	108
2,4,6-Tribromophenol	81	10	140
Terphenyl-d14	95	50	150

Compounds:	Concentration ug/L (ppb)
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

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:	1581-21001-02, F&BI 207422
Date Extracted:	07/26/22	Lab ID:	02-1832 mb3
Date Analyzed:	07/26/22	Data File:	072621.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	22	10	60
Phenol-d6	13	10	49
Nitrobenzene-d5	87	15	144
2-Fluorobiphenyl	86	25	128
2,4,6-Tribromophenol	81	10	142
Terphenyl-d14	99	41	138

Compounds:	Concentration ug/L (ppb)
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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 08/08/22

Date Received: 07/26/22

Project: 1581-21001-02, F&BI 207422

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

Laboratory Code: 207423-01 (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	103	69-134

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 08/08/22

Date Received: 07/26/22

Project: 1581-21001-02, F&BI 207422

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

Laboratory Code: Laboratory Control Sample Silica Gel

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	100	104	63-142	4

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 08/08/22

Date Received: 07/26/22

Project: 1581-21001-02, F&BI 207422

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

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	108	108	63-142	0

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 08/08/22

Date Received: 07/26/22

Project: 1581-21001-02, F&BI 207422

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

Laboratory Code: 207421-02 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Cadmium	ug/L (ppb)	5	<1	98	99	75-125	1
Lead	ug/L (ppb)	10	<1	89	88	75-125	1

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Cadmium	ug/L (ppb)	5	95	80-120
Lead	ug/L (ppb)	10	94	80-120

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 08/08/22

Date Received: 07/26/22

Project: 1581-21001-02, F&BI 207422

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

Laboratory Code: 207422-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent	Acceptance Criteria
				Recovery MS	
Vinyl chloride	ug/L (ppb)	10	<0.02	92	50-150
Chloroethane	ug/L (ppb)	10	<1	94	50-150
1,1-Dichloroethene	ug/L (ppb)	10	<1	91	50-150
Hexane	ug/L (ppb)	10	<5	84	50-150
Methylene chloride	ug/L (ppb)	10	<5	95	50-150
Methyl t-butyl ether (MTBE)	ug/L (ppb)	10	<1	99	50-150
trans-1,2-Dichloroethene	ug/L (ppb)	10	<1	100	50-150
1,1-Dichloroethane	ug/L (ppb)	10	<1	98	50-150
cis-1,2-Dichloroethene	ug/L (ppb)	10	<1	99	50-150
1,2-Dichloroethane (EDC)	ug/L (ppb)	10	<0.2	90	50-150
1,1,1-Trichloroethane	ug/L (ppb)	10	<1	94	50-150
Benzene	ug/L (ppb)	10	<0.35	98	50-150
Trichloroethene	ug/L (ppb)	10	<0.5	93	50-150
Toluene	ug/L (ppb)	10	<1	98	50-150
Tetrachloroethene	ug/L (ppb)	10	<1	94	50-150
1,2-Dibromoethane (EDB)	ug/L (ppb)	10	<1	101	50-150
Ethylbenzene	ug/L (ppb)	10	<1	94	50-150
m,p-Xylene	ug/L (ppb)	20	<2	94	50-150
o-Xylene	ug/L (ppb)	10	<1	93	50-150
Naphthalene	ug/L (ppb)	10	<1	96	50-150

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 08/08/22

Date Received: 07/26/22

Project: 1581-21001-02, F&BI 207422

**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)
Vinyl chloride	ug/L (ppb)	10	86	88	70-130	2
Chloroethane	ug/L (ppb)	10	89	94	70-130	5
1,1-Dichloroethene	ug/L (ppb)	10	97	91	70-130	6
Hexane	ug/L (ppb)	10	85	84	54-136	1
Methylene chloride	ug/L (ppb)	10	90	93	43-134	3
Methyl t-butyl ether (MTBE)	ug/L (ppb)	10	95	99	70-130	4
trans-1,2-Dichloroethene	ug/L (ppb)	10	96	100	70-130	4
1,1-Dichloroethane	ug/L (ppb)	10	94	97	70-130	3
cis-1,2-Dichloroethene	ug/L (ppb)	10	95	108	70-130	13
1,2-Dichloroethane (EDC)	ug/L (ppb)	10	89	90	70-130	1
1,1,1-Trichloroethane	ug/L (ppb)	10	91	94	70-130	3
Benzene	ug/L (ppb)	10	94	97	70-130	3
Trichloroethene	ug/L (ppb)	10	90	95	70-130	5
Toluene	ug/L (ppb)	10	101	100	70-130	1
Tetrachloroethene	ug/L (ppb)	10	100	99	70-130	1
1,2-Dibromoethane (EDB)	ug/L (ppb)	10	98	96	70-130	2
Ethylbenzene	ug/L (ppb)	10	94	94	70-130	0
m,p-Xylene	ug/L (ppb)	20	95	95	70-130	0
o-Xylene	ug/L (ppb)	10	94	93	70-130	1
Naphthalene	ug/L (ppb)	10	97	97	70-130	0

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 08/08/22

Date Received: 07/26/22

Project: 1581-21001-02, F&BI 207422

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

Laboratory Code: Laboratory Control Sample 1/0.5

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Benz(a)anthracene	ug/L (ppb)	5	90	87	70-130	3
Chrysene	ug/L (ppb)	5	88	84	70-130	5
Benzo(a)pyrene	ug/L (ppb)	5	91	88	70-130	3
Benzo(b)fluoranthene	ug/L (ppb)	5	94	85	70-130	10
Benzo(k)fluoranthene	ug/L (ppb)	5	87	89	70-130	2
Indeno(1,2,3-cd)pyrene	ug/L (ppb)	5	92	90	70-130	2
Dibenz(a,h)anthracene	ug/L (ppb)	5	91	90	70-130	1

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.

207422

SAMPLE CHAIN OF CUSTODY

07-26-22

EO3/AI/1/004

Report To: Lynn Green

Company: EVREN-NW

Address: 40 SE 24th Ave

City, State, ZIP: Portland, Oregon 97214

Phone: 503-452-5561

Email: lynng@evren-nw.com

SAMPLERS (signature)

[Signature]

PO #

Page # 1 of 1
TURNAROUND TIME
Standard Turnaround
RUSH
Rush charges authorized by:

PROJECT NAME

1581-21001-02

REMARKS

MTCR No. 5 and cPahs

INVOICE TO

SAMPLE DISPOSAL
Dispose after 30 days
Archive Samples
Other

Project Specific Ris - Yes / No

ANALYSES REQUESTED

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	MTCR * VOCs EPA 8260	CPAHs EPA 8270	PCBs EPA 8082	CVOCS	total Pb, Cd	Dx=1/SG	Notes
WELL-2-220725	01A-H	07/25/22	14:08	GW	8	X	X	X	X	X					● PELG
WELL-3-220725	02-L		14:05	GW	8	X	X	X	X	X					● 8/3/22 ME
WELL-4-220725	03A-D		12:57	GW	4	X	X	X	X	X					
WELL-5-220725	04-L		11:02	GW	4	X	X	X	X	X					●
WELL-11-220725	05A-H		11:10	GW	8	X	X	X	X	X					●
WELL-12-220725	06A-I		11:50	GW	9	X	X	X	X	X					
EMW01-220725	07A-H		12:49	GW	8	X	X	X	X	X					
WELL-8-220725	08-L		15:03	GW	8	X	X	X	X	X					●
WELL-FD-220725	09-L		9:35	GW	8	X	X	X	X	X					
Tip Blank-220725	10A-B		-	W	2			X							

SIGNATURE

PRINT NAME

COMPANY

DATE

TIME

Relinquished by:

[Signature]

ENW

07/26/22 8:10

Received by:

[Signature]

FRB

7/26/22 08:10

Relinquished by:

Samples received at

5:00

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

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

October 17, 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 October 7, 2022 from the 1581-21001-02, F&BI 210094 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
ENW1017R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on October 7, 2022 by Friedman & Bruya, Inc. from the Evren Northwest 1581-21001-02, F&BI 210094 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>Evren Northwest</u>
210094 -01	EMW01-221005
210094 -02	Well2-221005
210094 -03	Well3-221005
210094 -04	Well4-221005
210094 -05	Well5-221005
210094 -06	MW8-221005
210094 -07	Well11-221005
210094 -08	Well12-221005
210094 -09	FD-221005
210094 -10	Trip Blank

Methylene chloride was detected in the 8260D analysis of sample Well11-221005, Well12-221005, and the method blank. The data were flagged as due to laboratory contamination.

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

The 8270E laboratory control sample and laboratory control sample duplicate exceeded the relative percent difference for several compounds. In addition, 1-methylnaphthalene exceeded the acceptance criteria in the laboratory control sample duplicate. The analytes were not detected therefore the data were acceptable.

All other quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/17/22
Date Received: 10/07/22
Project: 1581-21001-02, F&BI 210094
Date Extracted: 10/11/22
Date Analyzed: 10/11/22

**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>	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 51-134)
EMW01-221005 210094-01	<100	91
Well2-221005 210094-02	<100	91
Well3-221005 210094-03	<100	90
Well4-221005 210094-04	<100	90
Well5-221005 210094-05	<100	95
MW8-221005 210094-06	<100	91
Well11-221005 210094-07	<100	91
Well12-221005 210094-08	<100	91
FD-221005 210094-09	<100	93
Method Blank 02-2353 MB	<100	92

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/17/22
Date Received: 10/07/22
Project: 1581-21001-02, F&BI 210094
Date Extracted: 10/10/22
Date Analyzed: 10/13/22

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL AND RESIDUAL RANGE
USING METHOD NWTPH-Dx
Sample Extracts Passed Through a
Silica Gel Column Prior to Analysis
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 47-140)
EMW01-221005 210094-01	<50	<250	106
Well2-221005 210094-02	<50	<250	120
Well4-221005 210094-04	<50	<250	116
Well5-221005 210094-05	<50	<250	110
MW8-221005 210094-06	<50	<250	124
Well11-221005 210094-07	<50	<250	117
Method Blank 02-2444 MB	<50	<250	91

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/17/22
 Date Received: 10/07/22
 Project: 1581-21001-02, F&BI 210094
 Date Extracted: 10/10/22
 Date Analyzed: 10/10/22

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
 FOR TOTAL PETROLEUM HYDROCARBONS AS
 DIESEL AND RESIDUAL RANGE
 USING METHOD NWTPH-Dx**
 Results Reported as ug/L (ppb)

<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> (% Recovery) (Limit 41-152)
EMW01-221005 210094-01	54 x	<250	123
Well2-221005 210094-02	99 x	<250	129
Well3-221005 210094-03	<50	<250	119
Well4-221005 210094-04	66 x	<250	126
Well5-221005 210094-05	73 x	<250	125
MW8-221005 210094-06	430 x	300 x	123
Well11-221005 210094-07	98 x	<250	131
Well12-221005 210094-08	<50	<250	142
FD-221005 210094-09	<50	<250	124
Method Blank 02-2444 MB	<50	<250	109

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	Well12-221005	Client:	Evren Northwest
Date Received:	10/07/22	Project:	1581-21001-02, F&BI 210094
Date Extracted:	10/07/22	Lab ID:	210094-08
Date Analyzed:	10/07/22	Data File:	210094-08.161
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Cadmium	<1
Lead	<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:	1581-21001-02, F&BI 210094
Date Extracted:	10/07/22	Lab ID:	I2-717 mb
Date Analyzed:	10/07/22	Data File:	I2-717 mb.092
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Cadmium	<1
Lead	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	EMW01-221005	Client:	Evren Northwest
Date Received:	10/07/22	Project:	1581-21001-02, F&BI 210094
Date Extracted:	10/10/22	Lab ID:	210094-01
Date Analyzed:	10/10/22	Data File:	101012.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	97	78	126
Toluene-d8	108	84	115
4-Bromofluorobenzene	102	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	<1
n-Propylbenzene	<1
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:	Well2-221005	Client:	Evren Northwest
Date Received:	10/07/22	Project:	1581-21001-02, F&BI 210094
Date Extracted:	10/10/22	Lab ID:	210094-02
Date Analyzed:	10/10/22	Data File:	101013.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	107	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	<1
n-Propylbenzene	<1
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:	Well3-221005	Client:	Evren Northwest
Date Received:	10/07/22	Project:	1581-21001-02, F&BI 210094
Date Extracted:	10/10/22	Lab ID:	210094-03
Date Analyzed:	10/10/22	Data File:	101014.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	109	84	115
4-Bromofluorobenzene	100	72	130

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.02
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
Methyl t-butyl ether (MTBE)	<1
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<0.2
1,1,1-Trichloroethane	<1
Benzene	<0.35
Trichloroethene	<0.5
Toluene	<1
Tetrachloroethene	<1
1,2-Dibromoethane (EDB)	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Isopropylbenzene	<1
n-Propylbenzene	<1
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:	MW8-221005	Client:	Evren Northwest
Date Received:	10/07/22	Project:	1581-21001-02, F&BI 210094
Date Extracted:	10/10/22	Lab ID:	210094-06
Date Analyzed:	10/10/22	Data File:	101015.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	93	78	126
Toluene-d8	108	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	<1
n-Propylbenzene	<1
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:	Well11-221005	Client:	Evren Northwest
Date Received:	10/07/22	Project:	1581-21001-02, F&BI 210094
Date Extracted:	10/10/22	Lab ID:	210094-07
Date Analyzed:	10/10/22	Data File:	101016.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	105	78	126
Toluene-d8	104	84	115
4-Bromofluorobenzene	98	72	130

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.02
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	5.1 ca jllc
Methyl t-butyl ether (MTBE)	<1
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<0.2
1,1,1-Trichloroethane	<1
Benzene	<0.35
Trichloroethene	<0.5
Toluene	<1
Tetrachloroethene	<1
1,2-Dibromoethane (EDB)	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Isopropylbenzene	<1
n-Propylbenzene	<1
1,3,5-Trimethylbenzene	<1
1,2,4-Trimethylbenzene	<1
Naphthalene	15

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	Well12-221005	Client:	Evren Northwest
Date Received:	10/07/22	Project:	1581-21001-02, F&BI 210094
Date Extracted:	10/10/22	Lab ID:	210094-08
Date Analyzed:	10/10/22	Data File:	101017.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	97	84	115
4-Bromofluorobenzene	94	72	130

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.02
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	7.5 ca jllc
Methyl t-butyl ether (MTBE)	<1
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<0.2
1,1,1-Trichloroethane	<1
Benzene	<0.35
Trichloroethene	<0.5
Toluene	<1
Tetrachloroethene	<1
1,2-Dibromoethane (EDB)	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Isopropylbenzene	<1
n-Propylbenzene	<1
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:	FD-221005	Client:	Evren Northwest
Date Received:	10/07/22	Project:	1581-21001-02, F&BI 210094
Date Extracted:	10/10/22	Lab ID:	210094-09
Date Analyzed:	10/10/22	Data File:	101018.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	105	84	115
4-Bromofluorobenzene	104	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	<1
n-Propylbenzene	<1
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:	Trip Blank	Client:	Evren Northwest
Date Received:	10/07/22	Project:	1581-21001-02, F&BI 210094
Date Extracted:	10/10/22	Lab ID:	210094-10
Date Analyzed:	10/10/22	Data File:	101019.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	105	84	115
4-Bromofluorobenzene	99	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	<1
n-Propylbenzene	<1
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:	Method Blank	Client:	Evren Northwest
Date Received:	Not Applicable	Project:	1581-21001-02, F&BI 210094
Date Extracted:	10/10/22	Lab ID:	02-2326 mb
Date Analyzed:	10/10/22	Data File:	101007.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	LM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	78	126
Toluene-d8	107	84	115
4-Bromofluorobenzene	98	72	130

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.02
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	7.5 ca jllc
Methyl t-butyl ether (MTBE)	<1
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<0.2
1,1,1-Trichloroethane	<1
Benzene	<0.35
Trichloroethene	<0.5
Toluene	<1
Tetrachloroethene	<1
1,2-Dibromoethane (EDB)	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Isopropylbenzene	<1
n-Propylbenzene	<1
1,3,5-Trimethylbenzene	<1
1,2,4-Trimethylbenzene	<1
Naphthalene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	EMW01-221005	Client:	Evren Northwest
Date Received:	10/07/22	Project:	1581-21001-02, F&BI 210094
Date Extracted:	10/10/22	Lab ID:	210094-01
Date Analyzed:	10/11/22	Data File:	101107.D
Matrix:	Water	Instrument:	GCMS12
Units:	ug/L (ppb)	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Nitrobenzene-d5	75	11	173
2-Fluorobiphenyl	85	44	108
2,4,6-Tribromophenol	99	10	140
Terphenyl-d14	92	50	150

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.2
2-Methylnaphthalene	<0.2
1-Methylnaphthalene	<0.2
Acenaphthylene	<0.02
Acenaphthene	0.24
Fluorene	0.042
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 Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	Well2-221005	Client:	Evren Northwest
Date Received:	10/07/22	Project:	1581-21001-02, F&BI 210094
Date Extracted:	10/10/22	Lab ID:	210094-02
Date Analyzed:	10/11/22	Data File:	101108.D
Matrix:	Water	Instrument:	GCMS12
Units:	ug/L (ppb)	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Nitrobenzene-d5	74	11	173
2-Fluorobiphenyl	81	44	108
2,4,6-Tribromophenol	104	10	140
Terphenyl-d14	88	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 Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	Well3-221005	Client:	Evren Northwest
Date Received:	10/07/22	Project:	1581-21001-02, F&BI 210094
Date Extracted:	10/10/22	Lab ID:	210094-03
Date Analyzed:	10/11/22	Data File:	101109.D
Matrix:	Water	Instrument:	GCMS12
Units:	ug/L (ppb)	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Nitrobenzene-d5	81	11	173
2-Fluorobiphenyl	87	44	108
2,4,6-Tribromophenol	108	10	140
Terphenyl-d14	93	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 Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	Well4-221005	Client:	Evren Northwest
Date Received:	10/07/22	Project:	1581-21001-02, F&BI 210094
Date Extracted:	10/10/22	Lab ID:	210094-04
Date Analyzed:	10/11/22	Data File:	101110.D
Matrix:	Water	Instrument:	GCMS12
Units:	ug/L (ppb)	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Nitrobenzene-d5	75	11	173
2-Fluorobiphenyl	84	44	108
2,4,6-Tribromophenol	101	10	140
Terphenyl-d14	90	50	150

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.2
2-Methylnaphthalene	<0.2
1-Methylnaphthalene	<0.2
Acenaphthylene	<0.02
Acenaphthene	1.5
Fluorene	0.35
Phenanthrene	0.14
Anthracene	<0.02
Fluoranthene	0.046
Pyrene	0.023
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 Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	Well5-221005	Client:	Evren Northwest
Date Received:	10/07/22	Project:	1581-21001-02, F&BI 210094
Date Extracted:	10/10/22	Lab ID:	210094-05
Date Analyzed:	10/11/22	Data File:	101111.D
Matrix:	Water	Instrument:	GCMS12
Units:	ug/L (ppb)	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Nitrobenzene-d5	80	11	173
2-Fluorobiphenyl	83	44	108
2,4,6-Tribromophenol	108	10	140
Terphenyl-d14	89	50	150

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.2
2-Methylnaphthalene	<0.2
1-Methylnaphthalene	<0.2
Acenaphthylene	<0.02
Acenaphthene	4.3
Fluorene	1.5
Phenanthrene	0.24
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 Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	MW8-221005	Client:	Evren Northwest
Date Received:	10/07/22	Project:	1581-21001-02, F&BI 210094
Date Extracted:	10/10/22	Lab ID:	210094-06
Date Analyzed:	10/11/22	Data File:	101112.D
Matrix:	Water	Instrument:	GCMS12
Units:	ug/L (ppb)	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Nitrobenzene-d5	72	11	173
2-Fluorobiphenyl	78	44	108
2,4,6-Tribromophenol	113	10	140
Terphenyl-d14	93	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 Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	Well11-221005	Client:	Evren Northwest
Date Received:	10/07/22	Project:	1581-21001-02, F&BI 210094
Date Extracted:	10/10/22	Lab ID:	210094-07
Date Analyzed:	10/11/22	Data File:	101113.D
Matrix:	Water	Instrument:	GCMS12
Units:	ug/L (ppb)	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Nitrobenzene-d5	78	11	173
2-Fluorobiphenyl	79	44	108
2,4,6-Tribromophenol	110	10	140
Terphenyl-d14	89	50	150

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.2
2-Methylnaphthalene	<0.2
1-Methylnaphthalene	<0.2
Acenaphthylene	0.14
Acenaphthene	1.5
Fluorene	0.41
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 Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	Well12-221005	Client:	Evren Northwest
Date Received:	10/07/22	Project:	1581-21001-02, F&BI 210094
Date Extracted:	10/10/22	Lab ID:	210094-08
Date Analyzed:	10/11/22	Data File:	101114.D
Matrix:	Water	Instrument:	GCMS12
Units:	ug/L (ppb)	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Nitrobenzene-d5	82	11	173
2-Fluorobiphenyl	84	44	108
2,4,6-Tribromophenol	100	10	140
Terphenyl-d14	88	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 Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	FD-221005	Client:	Evren Northwest
Date Received:	10/07/22	Project:	1581-21001-02, F&BI 210094
Date Extracted:	10/10/22	Lab ID:	210094-09
Date Analyzed:	10/11/22	Data File:	101115.D
Matrix:	Water	Instrument:	GCMS12
Units:	ug/L (ppb)	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Nitrobenzene-d5	81	11	173
2-Fluorobiphenyl	85	44	108
2,4,6-Tribromophenol	108	10	140
Terphenyl-d14	94	50	150

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.2
2-Methylnaphthalene	<0.2
1-Methylnaphthalene	<0.2
Acenaphthylene	<0.02
Acenaphthene	0.24
Fluorene	0.042
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 Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	Method Blank	Client:	Evren Northwest
Date Received:	Not Applicable	Project:	1581-21001-02, F&BI 210094
Date Extracted:	10/10/22	Lab ID:	02-2443 mb
Date Analyzed:	10/10/22	Data File:	00801009.D
Matrix:	Water	Instrument:	GCMS12
Units:	ug/L (ppb)	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Nitrobenzene-d5	68	11	173
2-Fluorobiphenyl	67	44	108
2,4,6-Tribromophenol	97	10	140
Terphenyl-d14	92	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

Date of Report: 10/17/22

Date Received: 10/07/22

Project: 1581-21001-02, F&BI 210094

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

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: 10/17/22

Date Received: 10/07/22

Project: 1581-21001-02, F&BI 210094

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

Laboratory Code: Laboratory Control Sample Silica Gel

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	84	76	61-133	10

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/17/22

Date Received: 10/07/22

Project: 1581-21001-02, F&BI 210094

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

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	76	92	63-142	19

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/17/22

Date Received: 10/07/22

Project: 1581-21001-02, F&BI 210094

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

Laboratory Code: 210094-08 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Cadmium	ug/L (ppb)	5	<1	97	95	75-125	2
Lead	ug/L (ppb)	10	<1	98	95	75-125	3

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Cadmium	ug/L (ppb)	5	98	80-120
Lead	ug/L (ppb)	10	97	80-120

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/17/22

Date Received: 10/07/22

Project: 1581-21001-02, F&BI 210094

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

Laboratory Code: 210115-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent	Acceptance Criteria
				Recovery MS	
Vinyl chloride	ug/L (ppb)	10	<0.02	108	50-150
Chloroethane	ug/L (ppb)	10	<1	110	50-150
1,1-Dichloroethene	ug/L (ppb)	10	<1	101	50-150
Methylene chloride	ug/L (ppb)	10	8.2	96 b	50-150
Methyl t-butyl ether (MTBE)	ug/L (ppb)	10	<1	99	50-150
trans-1,2-Dichloroethene	ug/L (ppb)	10	<1	98	50-150
1,1-Dichloroethane	ug/L (ppb)	10	<1	103	50-150
cis-1,2-Dichloroethene	ug/L (ppb)	10	<1	101	50-150
1,2-Dichloroethane (EDC)	ug/L (ppb)	10	<0.2	101	50-150
1,1,1-Trichloroethane	ug/L (ppb)	10	<1	101	50-150
Benzene	ug/L (ppb)	10	<0.35	100	50-150
Trichloroethene	ug/L (ppb)	10	<0.5	99	50-150
Toluene	ug/L (ppb)	10	<1	85	50-150
Tetrachloroethene	ug/L (ppb)	10	<1	86	50-150
1,2-Dibromoethane (EDB)	ug/L (ppb)	10	<1	87	50-150
Ethylbenzene	ug/L (ppb)	10	<1	87	50-150
m,p-Xylene	ug/L (ppb)	20	<2	86	50-150
o-Xylene	ug/L (ppb)	10	<1	88	50-150
Isopropylbenzene	ug/L (ppb)	10	<1	86	50-150
n-Propylbenzene	ug/L (ppb)	10	<1	88	50-150
1,3,5-Trimethylbenzene	ug/L (ppb)	10	<1	86	50-150
1,2,4-Trimethylbenzene	ug/L (ppb)	10	<1	84	50-150
Naphthalene	ug/L (ppb)	10	<1	90	50-150

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/17/22

Date Received: 10/07/22

Project: 1581-21001-02, F&BI 210094

**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)
Vinyl chloride	ug/L (ppb)	10	117	123	70-130	5
Chloroethane	ug/L (ppb)	10	117	121	70-130	3
1,1-Dichloroethene	ug/L (ppb)	10	115	122	70-130	6
Methylene chloride	ug/L (ppb)	10	133	140 vo	43-134	5
Methyl t-butyl ether (MTBE)	ug/L (ppb)	10	112	115	70-130	3
trans-1,2-Dichloroethene	ug/L (ppb)	10	112	116	70-130	4
1,1-Dichloroethane	ug/L (ppb)	10	114	118	70-130	3
cis-1,2-Dichloroethene	ug/L (ppb)	10	115	124	70-130	8
1,2-Dichloroethane (EDC)	ug/L (ppb)	10	97	100	70-130	3
1,1,1-Trichloroethane	ug/L (ppb)	10	113	118	70-130	4
Benzene	ug/L (ppb)	10	104	108	70-130	4
Trichloroethene	ug/L (ppb)	10	101	103	70-130	2
Toluene	ug/L (ppb)	10	89	90	70-130	1
Tetrachloroethene	ug/L (ppb)	10	88	89	70-130	1
1,2-Dibromoethane (EDB)	ug/L (ppb)	10	84	83	70-130	1
Ethylbenzene	ug/L (ppb)	10	95	95	70-130	0
m,p-Xylene	ug/L (ppb)	20	94	94	70-130	0
o-Xylene	ug/L (ppb)	10	98	99	70-130	1
Isopropylbenzene	ug/L (ppb)	10	97	96	70-130	1
n-Propylbenzene	ug/L (ppb)	10	88	91	70-130	3
1,3,5-Trimethylbenzene	ug/L (ppb)	10	86	86	70-130	0
1,2,4-Trimethylbenzene	ug/L (ppb)	10	85	85	70-130	0
Naphthalene	ug/L (ppb)	10	81	82	70-130	1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/17/22

Date Received: 10/07/22

Project: 1581-21001-02, F&BI 210094

**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	76	91	62-97	18
2-Methylnaphthalene	ug/L (ppb)	5	83	99	64-101	18
1-Methylnaphthalene	ug/L (ppb)	5	83	98 vo	64-93	17
Acenaphthylene	ug/L (ppb)	5	86	100	70-130	15
Acenaphthene	ug/L (ppb)	5	84	98	70-130	15
Fluorene	ug/L (ppb)	5	90	104	70-130	14
Phenanthrene	ug/L (ppb)	5	93	104	70-130	11
Anthracene	ug/L (ppb)	5	91	104	70-130	13
Fluoranthene	ug/L (ppb)	5	99	110	70-130	11
Pyrene	ug/L (ppb)	5	87	101	70-130	15
Benzo(a)anthracene	ug/L (ppb)	5	93	108	70-130	15
Chrysene	ug/L (ppb)	5	93	108	70-130	15
Benzo(a)pyrene	ug/L (ppb)	5	94	110	70-130	16
Benzo(b)fluoranthene	ug/L (ppb)	5	103	124	70-130	19
Benzo(k)fluoranthene	ug/L (ppb)	5	93	105	70-130	12
Indeno(1,2,3-cd)pyrene	ug/L (ppb)	5	97	126	70-130	26 vo
Dibenz(a,h)anthracene	ug/L (ppb)	5	100	124	70-130	21 vo
Benzo(g,h,i)perylene	ug/L (ppb)	5	96	120	70-130	22 vo

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.

Appendix C

Ecology's Workbook for Calculation of Cleanup Level

A1 Soil Cleanup Levels: Worksheet for Soil Data Entry: Refer to WAC 173-340-720, 740,745, 747, 750

1. Enter Site Information

Date: 05/16/22

Site Name: Fmr Texaco 211544

Sample Name: EB01/9

2. Enter Soil Concentration Measured

Chemical of Concern or Equivalent Carbon Group	Measured Soil Conc dry basis mg/kg	Composition Ratio %
<u>Petroleum EC Fraction</u>		
AL_EC >5-6	1.575	1.23%
AL_EC >6-8	0.945	0.74%
AL_EC >8-10	1.575	1.23%
AL_EC >10-12	0.3155	0.25%
AL_EC >12-16	38.2	29.79%
AL_EC >16-21	11.2	8.73%
AL_EC >21-34	11.2	8.73%
AR_EC >8-10	1.895	1.48%
AR_EC >10-12	1	0.78%
AR_EC >12-16	2.19	1.71%
AR_EC >16-21	11.2	8.73%
AR_EC >21-34	46.6	36.34%
Benzene	0.015	0.01%
Toluene	0.025	0.02%
Ethylbenzene	0.025	0.02%
Total Xylenes	0.075	0.06%
Naphthalene	0.025	0.02%
1-Methyl Naphthalene	0.025	0.02%
2-Methyl Naphthalene	0.025	0.02%
n-Hexane	0.025	0.02%
MTBE	0.025	0.02%
Ethylene Dibromide (EDB)	0.025	0.02%
1,2 Dichloroethane (EDC)	0.025	0.02%
Benzo(a)anthracene	0.005	0.00%
Benzo(b)fluoranthene	0.005	0.00%
Benzo(k)fluoranthene	0.005	0.00%
Benzo(a)pyrene	0.005	0.00%
Chrysene	0.005	0.00%
Dibenz(a,h)anthracene	0.005	0.00%
Indeno(1,2,3-cd)pyrene	0.005	0.00%
Sum	128.2455	100.00%

Notes for Data Entry

Set Default Hydrogeology

Clear All Soil Concentration Data Entry Cells

Restore All Soil Concentration Data cleared previously

REMARK:

Enter site-specific information here.....

3. Enter Site-Specific Hydrogeological Data

Total soil porosity:	0.43	Unitless
Volumetric water content:	0.3	Unitless
Volumetric air content:	0.13	Unitless
Soil bulk density measured:	1.5	kg/L
Fraction Organic Carbon:	0.309	Unitless
Dilution Factor:	20	Unitless

4. Target TPH Ground Water Concentration (if adjusted)

If you adjusted the target TPH ground water

concentration, enter adjusted value here: 500 ug/L

A2 Soil Cleanup Levels: Calculation and Summary of Results. Refer to WAC 173-340-720, 740, 745, 747, 750

Site Information

Date: <u>5/16/2022</u>
Site Name: <u>Fmr Texaco 211544</u>
Sample Name: <u>EB01/9</u>
Measured Soil TPH Concentration, mg/kg: 128.246

1. Summary of Calculation Results

Exposure Pathway	Method/Goal	Protective Soil TPH Conc, mg/kg	With Measured Soil Conc		Does Measured Soil Conc Pass or Fail?
			RISK @	HI @	
Protection of Soil Direct Contact: Human Health	Method B	1,707	6.38E-08	7.51E-02	Pass
	Method C	35,430	9.62E-09	3.62E-03	Pass
Protection of Method B Ground Water Quality (Leaching)	Potable GW: Human Health Protection	42	3.06E-06	5.77E-03	Fail
	Target TPH GW Conc. @ 500 ug/L	100% NAPL	NA	NA	Pass

2. Results for Protection of Soil Direct Contact Pathway: Human Health

	Method B: Unrestricted Land Use	Method C: Industrial Land Use
Protective Soil Concentration, TPH mg/kg	1,706.76	35,430.13
Most Stringent Criterion	HI =1	HI =1

Soil Criteria	Protective Soil Concentration @Method B				Protective Soil Concentration @Method C			
	Most Stringent?	TPH Conc, mg/kg	RISK @	HI @	Most Stringent?	TPH Conc, mg/kg	RISK @	HI @
HI =1	YES	1.71E+03	8.49E-07	1.00E+00	YES	3.54E+04	2.66E-06	1.00E+00
Total Risk=1E-5	NO	2.01E+04	1.00E-05	1.18E+01	NO	1.33E+05	1.00E-05	3.76E+00
Risk of Benzene= 1E-6	NO	1.55E+05	7.73E-05	9.11E+01	NA			
Risk of cPAHs mixture= 1E-6	NO	1.32E+04	6.57E-06	7.74E+00				
EDB	NO	2.56E+03	1.28E-06	1.50E+00				
EDC	NO	5.64E+04	2.80E-05	3.30E+01				

3. Results for Protection of Ground Water Quality (Leaching Pathway)

3.1. Protection of Potable Ground Water Quality (Method B): Human Health Protection

Most Stringent Criterion	Total Risk = 1E-6
Protective Ground Water Concentration, ug/L	0.50
Protective Soil Concentration, mg/kg	41.96

Ground Water Criteria	Protective Potable Ground Water Concentration @Method B				Protective Soil Conc, mg/kg
	Most Stringent?	TPH Conc, ug/L	RISK @	HI @	
HI=1	NO	2.24E+02	5.85E-04	1.00E+00	3.19E+04
Total Risk = 1E-5	NO	4.96E+00	1.00E-05	1.88E-02	4.20E+02
Total Risk = 1E-6	YES	5.00E-01	1.00E-06	1.89E-03	4.20E+01
Risk of cPAHs mixture= 1E-5	NO	4.17E+02	1.08E-03	1.93E+00	100% NAPL
Benzene MCL = 5 ug/L	NO	1.57E+02	3.97E-04	6.77E-01	1.96E+04
MTBE = 20 ug/L	NO	7.17E+01	1.67E-04	2.90E-01	7.42E+03

Note: 100% NAPL is 81000 mg/kg TPH.

3.2. Protection of Ground Water Quality for TPH Ground Water Concentration previously adjusted and entered

Ground Water Criteria	Protective Ground Water Concentration			Protective Soil Conc, mg/kg
	TPH Conc, ug/L	Risk @	HI @	
Target TPH GW Conc = 500 ug/L	4.17E+02	1.08E-03	1.93E+00	100% NAPL

Appendix D

EPA ProUCL Statistical Results

Appendix D. ProUCL Input Data

DRO	d_DRO	RRO	d_RRO	DRO+RRO	d_DRO+RRO
10	0	27.7	1	27.7	1
43.7	1	209	1	252.7	1
53.6	1	348	1	401.6	1
265	1	1620	1	1885	1
27.5	1	183	1	210.5	1
25	1	40	0	25	0
20	0	40	0	40	0
20	0	40	0	40	0
20	0	40	0	40	0
20	0	40	0	40	0
20	0	40	0	40	0
20	0	40	0	40	0
20	0	40	0	40	0
20	0	40	0	40	0
20	0	40	0	40	0
20	0	40	0	40	0
20	0	40	0	40	0
20	0	40	0	40	0
20	0	40	0	40	0
20	0	40	0	40	0
20	0	40	0	40	0
20	0	40	0	40	0
20	0	40	0	40	0
50	0	100	0	100	0
25	0	100	0	100	0
25	0	100	0	100	0
14.1	1	49.3	1	63.4	1
174	1	985	1	1159	1
459	1	402	1	861	1
16	1	75.5	1	91.5	1
38.4	1	132	1	170.4	1
28.3	1	136	1	164.3	1
520	1	788	1	1308	1
10	0	44.2	1	44.2	1
1610	1	799	1	2409	1
51.9	1	165	1	216.9	1
374	1	2270	1	2644	1
354	1	712	1	1066	1
68	1	252	1	320	1
85	1	348	1	433	1
5.32	1	6.54	1	11.86	1
5.72	1	26.2	1	31.92	1
6.38	1	19.3	1	25.68	1
17.8	1	87.2	1	105	1
50	0	250	0	250	0
100	0	500	0	500	0
50	0	250	0	250	0
50	0	250	0	250	0
50	0	250	0	250	0

Appendix D. ProUCL Input Data

50	0	250	0
50	0	250	0
50	0	250	0
50	0	250	0
50	0	250	0
50	0	250	0
100	0	500	0
50	0	640	1
50	0	250	0
50	0	250	0
50	0	250	0
50	0	250	0
50	0	250	0
50	0	250	0
50	0	250	0
50	0	250	0
680	1	1000	0
2600	1	1000	0
50	0	250	0
50	0	250	0
50	0	250	0
110	1	250	0
50	0	250	0

250	0
250	0
250	0
250	0
250	0
250	0
250	0
500	0
640	1
250	0
250	0
250	0
250	0
250	0
250	0
250	0
250	0
680	1
2600	1
250	0
250	0
250	0
110	1
250	0

A	B	C	D	E	F	G	H	I	J	K	L		
1	UCL Statistics for Data Sets with Non-Detects												
2													
3	User Selected Options												
4	Date/Time of Computation		ProUCL 5.111/17/2022 12:56:14 PM										
5	From File		1581-21001(UCL Data).xls										
6	Full Precision		OFF										
7	Confidence Coefficient		95%										
8	Number of Bootstrap Operations		2000										
9													
453	DRO+RRO												
454													
455	General Statistics												
456	Total Number of Observations			68		Number of Distinct Observations			32				
457	Number of Detects			27		Number of Non-Detects			41				
458	Number of Distinct Detects			27		Number of Distinct Non-Detects			5				
459	Minimum Detect			11.86		Minimum Non-Detect			25				
460	Maximum Detect			2644		Maximum Non-Detect			500				
461	Variance Detects			680891		Percent Non-Detects			60.29%				
462	Mean Detects			664.2		SD Detects			825.2				
463	Median Detects			252.7		CV Detects			1.242				
464	Skewness Detects			1.479		Kurtosis Detects			1.079				
465	Mean of Logged Detects			5.58		SD of Logged Detects			1.552				
466													
467	Normal GOF Test on Detects Only												
468	Shapiro Wilk Test Statistic			0.756		Shapiro Wilk GOF Test							
469	5% Shapiro Wilk Critical Value			0.923		Detected Data Not Normal at 5% Significance Level							
470	Lilliefors Test Statistic			0.24		Lilliefors GOF Test							
471	5% Lilliefors Critical Value			0.167		Detected Data Not Normal at 5% Significance Level							
472	Detected Data Not Normal at 5% Significance Level												
473													
474	Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs												
475	KM Mean		288.5		KM Standard Error of Mean			73.87					
476	KM SD		595.7		95% KM (BCA) UCL			413					
477	95% KM (t) UCL		411.7		95% KM (Percentile Bootstrap) UCL			411.8					
478	95% KM (z) UCL		410		95% KM Bootstrap t UCL			457.6					
479	90% KM Chebyshev UCL		510.1		95% KM Chebyshev UCL			610.5					
480	97.5% KM Chebyshev UCL		749.8		99% KM Chebyshev UCL			1024					
481													
482	Gamma GOF Tests on Detected Observations Only												
483	A-D Test Statistic		0.425		Anderson-Darling GOF Test								
484	5% A-D Critical Value		0.792		Detected data appear Gamma Distributed at 5% Significance Level								
485	K-S Test Statistic		0.115		Kolmogorov-Smirnov GOF								
486	5% K-S Critical Value		0.176		Detected data appear Gamma Distributed at 5% Significance Level								
487	Detected data appear Gamma Distributed at 5% Significance Level												
488													
489	Gamma Statistics on Detected Data Only												
490	k hat (MLE)		0.663		k star (bias corrected MLE)			0.614					
491	Theta hat (MLE)		1002		Theta star (bias corrected MLE)			1081					
492	nu hat (MLE)		35.81		nu star (bias corrected)			33.16					
493	Mean (detects)		664.2										
494													
495	Gamma ROS Statistics using Imputed Non-Detects												
496													

A	B	C	D	E	F	G	H	I	J	K	L
496	GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs										
497	GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)										
498	For such situations, GROS method may yield incorrect values of UCLs and BTVs										
499	This is especially true when the sample size is small.										
500	For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates										
501	Minimum	0.01		Mean	278.6						
502	Maximum	2644		Median	0.01						
503	SD	606.1		CV	2.175						
504	k hat (MLE)	0.141		k star (bias corrected MLE)	0.145						
505	Theta hat (MLE)	1970		Theta star (bias corrected MLE)	1921						
506	nu hat (MLE)	19.24		nu star (bias corrected)	19.72						
507	Adjusted Level of Significance (β)	0.0465									
508	Approximate Chi Square Value (19.72, α)	10.65		Adjusted Chi Square Value (19.72, β)	10.5						
509	95% Gamma Approximate UCL (use when $n \geq 50$)	516.1		95% Gamma Adjusted UCL (use when $n < 50$)	523.3						
510											
511	Estimates of Gamma Parameters using KM Estimates										
512	Mean (KM)	288.5		SD (KM)	595.7						
513	Variance (KM)	354848		SE of Mean (KM)	73.87						
514	k hat (KM)	0.235		k star (KM)	0.234						
515	nu hat (KM)	31.9		nu star (KM)	31.83						
516	theta hat (KM)	1230		theta star (KM)	1233						
517	80% gamma percentile (KM)	408.7		90% gamma percentile (KM)	869.4						
518	95% gamma percentile (KM)	1424		99% gamma percentile (KM)	2913						
519											
520	Gamma Kaplan-Meier (KM) Statistics										
521	Approximate Chi Square Value (31.83, α)	19.93		Adjusted Chi Square Value (31.83, β)	19.73						
522	95% Gamma Approximate KM-UCL (use when $n \geq 50$)	460.6		95% Gamma Adjusted KM-UCL (use when $n < 50$)	465.4						
523											
524	Lognormal GOF Test on Detected Observations Only										
525	Shapiro Wilk Test Statistic	0.962		Shapiro Wilk GOF Test							
526	5% Shapiro Wilk Critical Value	0.923	Detected Data appear Lognormal at 5% Significance Level								
527	Lilliefors Test Statistic	0.0853		Lilliefors GOF Test							
528	5% Lilliefors Critical Value	0.167	Detected Data appear Lognormal at 5% Significance Level								
529	Detected Data appear Lognormal at 5% Significance Level										
530											
531	Lognormal ROS Statistics Using Imputed Non-Detects										
532	Mean in Original Scale	289.4		Mean in Log Scale	4.087						
533	SD in Original Scale	599.7		SD in Log Scale	1.828						
534	95% t UCL (assumes normality of ROS data)	410.7		95% Percentile Bootstrap UCL	415.1						
535	95% BCA Bootstrap UCL	455		95% Bootstrap t UCL	447.8						
536	95% H-UCL (Log ROS)	584.1									
537											
538	Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution										
539	KM Mean (logged)	4.204		KM Geo Mean	66.93						
540	KM SD (logged)	1.602		95% Critical H Value (KM-Log)	2.474						
541	KM Standard Error of Mean (logged)	0.237		95% H-UCL (KM -Log)	391.8						
542	KM SD (logged)	1.602		95% Critical H Value (KM-Log)	2.474						
543	KM Standard Error of Mean (logged)	0.237									
544											
545	DL/2 Statistics										
546	DL/2 Normal					DL/2 Log-Transformed					
547	Mean in Original Scale	316.2		Mean in Log Scale	4.696						

	A	B	C	D	E	F	G	H	I	J	K	L
548				SD in Original Scale	589.5						SD in Log Scale	1.406
549				95% t UCL (Assumes normality)	435.4						95% H-Stat UCL	431
550	DL/2 is not a recommended method, provided for comparisons and historical reasons											
551												
552	Nonparametric Distribution Free UCL Statistics											
553	Detected Data appear Gamma Distributed at 5% Significance Level											
554												
555	Suggested UCL to Use											
556				95% KM Approximate Gamma UCL	460.6							
557												
558	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
559	Recommendations are based upon data size, data distribution, and skewness.											
560	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
561	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											

Appendix E

VCP Terrestrial Ecological Evaluation Form



Voluntary Cleanup Program

Washington State Department of Ecology Toxics Cleanup Program

TERRESTRIAL ECOLOGICAL EVALUATION FORM

Under the Model Toxics Control Act (MTCA), a terrestrial ecological evaluation is necessary if hazardous substances are released into the soils at a Site. In the event of such a release, you must take one of the following three actions as part of your investigation and cleanup of the Site:

1. Document an exclusion from further evaluation using the criteria in WAC 173-340-7491.
2. Conduct a simplified evaluation as set forth in WAC 173-340-7492.
3. Conduct a site-specific evaluation as set forth in WAC 173-340-7493.

When requesting a written opinion under the Voluntary Cleanup Program (VCP), you must complete this form and submit it to the Department of Ecology (Ecology). The form documents the type and results of your evaluation.

Completion of this form is not sufficient to document your evaluation. You still need to document your analysis and the basis for your conclusion in your cleanup plan or report.

If you have questions about how to conduct a terrestrial ecological evaluation, please contact the Ecology site manager assigned to your Site. For additional guidance, please refer to <https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Terrestrial-ecological-evaluation>.

Step 1: IDENTIFY HAZARDOUS WASTE SITE

Please identify below the hazardous waste site for which you are documenting an evaluation.

Facility/Site Name: Former Texaco 211544

Facility/Site Address: 8701 Greenwood Avenue North

Facility/Site No: 63538329

VCP Project No.: 6416

Step 2: IDENTIFY EVALUATOR

Please identify below the person who conducted the evaluation and their contact information.

Name: Erik RD Chapman, LG

Principal Geologist

Organization: EVREN Northwest, Inc.

Mailing address: PO Box 14488

City: Portland

State: OR

Zip code: 97293

Phone: 503-452-5561

Fax:

E-mail: erikc@evren-nw.com

Step 3: DOCUMENT EVALUATION TYPE AND RESULTS

A. Exclusion from further evaluation.

1. Does the Site qualify for an exclusion from further evaluation?

- Yes *If you answered "YES," then answer **Question 2**.*
- No or Unknown *If you answered "NO" or "UNKNOWN," then skip to **Step 3B** of this form.*

2. What is the basis for the exclusion? Check all that apply. Then skip to **Step 4** of this form.

Point of Compliance: WAC 173-340-7491(1)(a)

- All soil contamination is, or will be,* at least 15 feet below the surface.
- All soil contamination is, or will be,* at least 6 feet below the surface (or alternative depth if approved by Ecology), and institutional controls are used to manage remaining contamination.

Barriers to Exposure: WAC 173-340-7491(1)(b)

- All contaminated soil, is or will be,* covered by physical barriers (such as buildings or paved roads) that prevent exposure to plants and wildlife, and institutional controls are used to manage remaining contamination.

Undeveloped Land: WAC 173-340-7491(1)(c)

- There is less than 0.25 acres of contiguous# undeveloped± land on or within 500 feet of any area of the Site and any of the following chemicals is present: chlorinated dioxins or furans, PCB mixtures, DDT, DDE, DDD, aldrin, chlordane, dieldrin, endosulfan, endrin, heptachlor, heptachlor epoxide, benzene hexachloride, toxaphene, hexachlorobenzene, pentachlorophenol, or pentachlorobenzene.
- For sites not containing any of the chemicals mentioned above, there is less than 1.5 acres of contiguous# undeveloped± land on or within 500 feet of any area of the Site.

Background Concentrations: WAC 173-340-7491(1)(d)

- Concentrations of hazardous substances in soil do not exceed natural background levels as described in WAC 173-340-200 and 173-340-709.

* An exclusion based on future land use must have a completion date for future development that is acceptable to Ecology.

± "Undeveloped land" is land that is not covered by building, roads, paved areas, or other barriers that would prevent wildlife from feeding on plants, earthworms, insects, or other food in or on the soil.

"Contiguous" undeveloped land is an area of undeveloped land that is not divided into smaller areas of highways, extensive paving, or similar structures that are likely to reduce the potential use of the overall area by wildlife.

B. Simplified evaluation.

1. Does the Site qualify for a simplified evaluation?

- Yes *If you answered "YES," then answer **Question 2** below.*
- No or Unknown *If you answered "NO" or "UNKNOWN," then skip to **Step 3C** of this form.*

2. Did you conduct a simplified evaluation?

- Yes *If you answered "YES," then answer **Question 3** below.*
- No *If you answered "NO," then skip to **Step 3C** of this form.*

3. Was further evaluation necessary?

- Yes *If you answered "YES," then answer **Question 4** below.*
- No *If you answered "NO," then answer **Question 5** below.*

4. If further evaluation was necessary, what did you do?

- Used the concentrations listed in Table 749-2 as cleanup levels. *If so, then skip to **Step 4** of this form.*
- Conducted a site-specific evaluation. *If so, then skip to **Step 3C** of this form.*

5. If no further evaluation was necessary, what was the reason? Check all that apply. Then skip to **Step 4** of this form.

Exposure Analysis: WAC 173-340-7492(2)(a)

- Area of soil contamination at the Site is not more than 350 square feet.
- Current or planned land use makes wildlife exposure unlikely. Used Table 749-1.

Pathway Analysis: WAC 173-340-7492(2)(b)

- No potential exposure pathways from soil contamination to ecological receptors.

Contaminant Analysis: WAC 173-340-7492(2)(c)

- No contaminant listed in Table 749-2 is, or will be, present in the upper 15 feet at concentrations that exceed the values listed in Table 749-2.
- No contaminant listed in Table 749-2 is, or will be, present in the upper 6 feet (or alternative depth if approved by Ecology) at concentrations that exceed the values listed in Table 749-2, and institutional controls are used to manage remaining contamination.
- No contaminant listed in Table 749-2 is, or will be, present in the upper 15 feet at concentrations likely to be toxic or have the potential to bioaccumulate as determined using Ecology-approved bioassays.
- No contaminant listed in Table 749-2 is, or will be, present in the upper 6 feet (or alternative depth if approved by Ecology) at concentrations likely to be toxic or have the potential to bioaccumulate as determined using Ecology-approved bioassays, and institutional controls are used to manage remaining contamination.

C. Site-specific evaluation. A site-specific evaluation process consists of two parts: (1) formulating the problem, and (2) selecting the methods for addressing the identified problem. Both steps require consultation with and approval by Ecology. See WAC 173-340-7493(1)(c).

1. Was there a problem? See WAC 173-340-7493(2).

- Yes *If you answered “YES,” then answer **Question 2** below.*
- No *If you answered “NO,” then identify the reason here and then skip to **Question 5** below:*
- No issues were identified during the problem formulation step.
 - While issues were identified, those issues were addressed by the cleanup actions for protecting human health.

2. What did you do to resolve the problem? See WAC 173-340-7493(3).

- Used the concentrations listed in Table 749-3 as cleanup levels. *If so, then skip to **Question 5** below.*
- Used one or more of the methods listed in WAC 173-340-7493(3) to evaluate and address the identified problem. *If so, then answer **Questions 3 and 4** below.*

3. If you conducted further site-specific evaluations, what methods did you use?

Check all that apply. See WAC 173-340-7493(3).

- Literature surveys.
- Soil bioassays.
- Wildlife exposure model.
- Biomarkers.
- Site-specific field studies.
- Weight of evidence.
- Other methods approved by Ecology. If so, please specify:

4. What was the result of those evaluations?

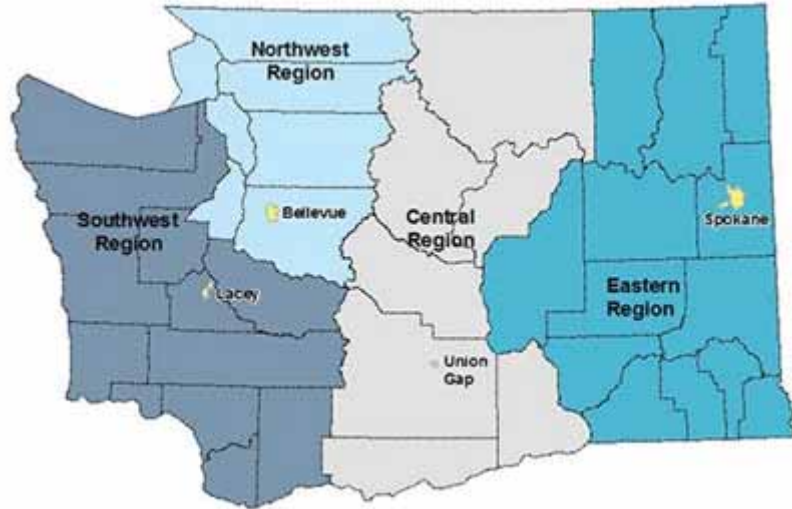
- Confirmed there was no problem.
- Confirmed there was a problem and established site-specific cleanup levels.

5. Have you already obtained Ecology’s approval of both your problem formulation and problem resolution steps?

- Yes If so, please identify the Ecology staff who approved those steps:
- No

Step 4: SUBMITTAL

Please mail your completed form to the Ecology site manager assigned to your Site. If a site manager has not yet been assigned, please mail your completed form to the Ecology regional office for the County in which your Site is located.



Northwest Region: Attn: VCP Coordinator 3190 160 th Ave. SE Bellevue, WA 98008-5452	Central Region: Attn: VCP Coordinator 1250 West Alder St. Union Gap, WA 98903-0009
Southwest Region: Attn: VCP Coordinator P.O. Box 47775 Olympia, WA 98504-7775	Eastern Region: Attn: VCP Coordinator N. 4601 Monroe Spokane WA 99205-1295

If you need this publication in an alternate format, please call the Toxics Cleanup Program at 360-407-7170. People with hearing loss can call 711 for Washington Relay Service. People with a speech disability can call 877-833-6341.