

**SITE REMEDIATION, CHARACTERIZATION
and GROUNDWATER MONITORING REPORT**

January 31, 2025

Cameo Boutique

6871 East State Route 106

Union, WA 98592

Simpson Geosciences Project Number SG2024-107



16425 Northeast 128th Street
Redmond, Washington 98052

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SITE REMEDIATION, CHARACTERIZATION and GROUNDWATER MONITORING REPORT

January 31, 2025

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Union, Washington 98592

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FIGURE 1: Vicinity Map

FIGURE 2: Geology Map

FIGURE 3: Site Plan Showing Groundwater Elevation Contours

FIGURE 4: Project Photographs

APPENDIX A: ANALYTICAL RESULTS

APPENDIX B: SOIL PROBE LOGS



SITE REMEDIATION, CHARACTERIZATION and GROUNDWATER MONITORING REPORT

January 31, 2025

Cameo Boutique

6871 East State Route 106

Union, Washington 98592

Simpson Geosciences Project Number SG2024-107

1.0 Project Background

The subject property is location of a gift shop, Cameo Boutique, located at 6871 East State Route 106, Union, Washington. The project area is near Hood Canal and is accessed from East State Route 106 near the intersection with East Dalby Road. The general location of the Subject Property is shown in Figure 1, *Vicinity Map*. The local geology is mapped as alluvial fan deposits (Qaf) as shown in Figure 2, *Geology Map*. Simpson Geosciences was retained by the owner of Cameo Boutique, Pam Hanson, to remove petroleum impacted soil from a former tank basin, followed by installation of an air sparging system for groundwater remediation purposes. Groundwater monitoring wells were installed on December 20, 2024 by a licensed well driller, Holocene Drilling. Soil samples were collected from continuous cores retrieved during drilling using a direct push soil probe and field screened for the presence of petroleum hydrocarbons and to log the soil types encountered. Additional details are presented in Section 3 below.

2.0 General Site Conditions

The general area of the Subject Property slopes to the north at a grade of approximately 8%. The average elevation of the Subject Property is approximately 14 feet above mean sea level (AMSL/Source Google Earth) as shown on Figure 3. Hood Canal is located along the northern boundary (shoreline) of the Subject Property. A freshwater creek flows into the saltwater canal, forming a small delta of coarse sand and gravel sediments as part of a larger, laterally extensive, alluvial fan deposit.

3.0 Installation of the Air Sparging System and Groundwater Monitoring Wells

Simpson Geosciences mobilized to the Subject Property on September 23, 2024 to observe remedial excavation of suspected GRO impacted soil in the vicinity of the former USTs. Soil impacted with gasoline range organics (GROs) was excavated near the south side of the building in the former location of underground storage tanks removed previously by Cascade Environmental in the 1990's. The GRO impacted soil encountered during excavation was confined to a narrow 2-inch thick seam of sandy gravel directly above the water table. Approximately 2-3 cubic yards of moderately impacted soil was removed and transported offsite for disposal. Documentation of the soil disposal at the landfill is pending.

Following removal of the soil, a one-inch diameter slotted PVC pipe was laid horizontally below the water saturated zone at a depth of approximately 9 fbg with 4-inch diameter passive air return pipe. The sparge line was connected to a one-inch riser which was plumbed into a rotary vane air compressor. A 15-foot long trench was also dug north of Cameo Boutique building in the inferred down gradient location of the tank nest. A second one-inch diameter slotted PVC air sparging line was installed to a depth of approximately 6 fbg with 4-inch passive air return pipe. Both sparge circuits are shown in Figure 3.



Simpson Geosciences remobilized to the Subject Property on December 20, 2024 to install groundwater monitoring wells. Four groundwater monitoring wells were installed by a licensed driller, Holocene, on the Cameo Boutique property. Two soil borings were advanced to 15 feet below grade (fbg) south of the building in the vicinity of the former USTs. Groundwater monitoring well MW1 was advanced into the remedial excavation south of and adjacent to the building. MW2 was installed in the inferred upgradient location of the former tank basin.

Two soil borings were advanced to 12 fbg north of the northern air sparging circuit within fifteen feet of the surface water body. Soil samples were collected for analytical testing directly above the water saturated zone from each of the four soil borings. Each of the soil borings were converted into four, one-inch diameter, groundwater monitoring wells. Monitoring well MW1 was installed to 15 fbg with a 10-foot section of screen inside the remedial excavation, north (inferred downgradient location) of the sparge circuit. MW2 was installed to 15 fbg with a 10-foot section of PVC screen south of the building and upgradient of the former tank basin. Two monitoring wells were installed in the inferred downgradient location of the northern air sparging circuit. MW3 and MW4 were both advanced to 12 fbg. MW3 and MW4 were converted to groundwater monitoring wells. Each well was constructed with a ten-foot section of 1-inch diameter slotted PVC screen, a porous Colorado sand filter pack, solid riser, then bentonite chips, with a steel, flush mount, monitoring well monument set in concrete to seal the well from surface water intrusion.

Groundwater flow direction and elevations appear to be highly variable depending on the incoming and outgoing tides as well as infiltration from a freshwater creek that flows into a shallow delta deposit along the shoreline.

4.0 Determination of Groundwater Elevations

Groundwater elevations were determined using a NAVD88 reference measurement of 14 feet above mean sea level at a location shown on Figure 3. A laser level was used to find the top of casing (TOC) elevations by using the optical differential leveling technique. The depth to static water was determined using an electronic groundwater measuring tape. The depth of groundwater was subtracted from the TOC elevation to find the groundwater elevation. The direction of groundwater flow (at high tide) was determined from the elevation calculations.

Table 1. Water Level Measurements (December 21, 2024)
Referenced to the estimated NAVD88 elevation of 14 feet Above Mean Sea Level
All measurements in tenths and hundredths of a foot

Well	TOC ¹⁴ NAVD88	Depth to Static Groundwater 12/21/24	Groundwater Elevation
MW1	17.525'	7.20'	10.325'
MW2	18.015'	7.12'	10.895'
MW3	13.325'	1.61'*	11.715'
MW4	12.275'	1.37'*	10.905'

**Incoming High Tide*

5.0 Soil and Groundwater Sampling Summary

A total of four site assessment samples were collected from the soil probe cores. The soil type primarily consisted of a medium dense, poorly graded (Unified Soil Classification symbol SP), brown to gray-brown, medium grained, gravelly sand with varying silt content. Density increased with depth starting at 8 fbg. Direct push technology provides a continuous soil core for efficient field testing for petroleum hydrocarbons. Each length of the four-foot core was examined and field tested using a photoionization detector (PID), sheen testing, and noting if an odor or discoloration were present. Soil samples collected for GROs and benzene, toluene, ethylbenzene, and total xylenes (BTEX) followed



EPA Method 5035-A sampling protocols to preserve volatiles, using specialized pre-weighed, sample collection containers supplied by the laboratory.

The groundwater wells were sampled the day after installation on December 21, 2024 to allow groundwater conditions to stabilize. The water quality parameters were monitored for temperature, dissolved oxygen, conductivity, salinity, pH, total dissolved solids and oxygen reduction potential during purging of the wells. Once the parameters stabilized to within 10% of two consecutive readings, the water samples were decanted into specialized VOA (volatile organic analysis) containers using a low flow peristaltic pump, checking to be sure no air bubbles were present when capped. The samples were labeled, logged in on the chain of custody, chilled with ice in an insulated cooler and transferred directly to the Washington State accredited environmental laboratory (Friedman and Bruya, Inc.) in Seattle following chain of custody procedures by the site assessor.

6.0 Discussion of Soil and Groundwater Analytical Results

Soil sample analytical test results are summarized by well number and depth in sections 6.1 through 6.4. Groundwater samples results are summarized in sections 6.5 through 6.8.

Table 2. Site Assessment Soil Sample Analytical Results
Cameo Boutique
Results from the Analysis of Soil Samples for Benzene,
Toluene, Ethylbenzene, Xylenes and Total Petroleum Hydrocarbons (TPH)
as Gasoline using Methods 8021B and NWTPH-Gx
Analytical results in milligrams per kilogram (mg/kg) equivalent to parts per million (ppm)

Sample	Date	Sampled By	Benzene	Toluene	Ethylbenzene	Xylenes	Gasoline Range
MW1-7.5'	12/20/2024	Simpson Geo	<0.02	0.025	<0.02	<0.06	<5
MW2-7.5'	12/20/2024	Simpson Geo	<0.02	<0.02	<0.02	<0.06	<5
MW3-5'	12/20/2024	Simpson Geo	<0.02	<0.02	<0.02	<0.06	<5
MW4-5.5'	12/20/2024	Simpson Geo	<0.02	<0.02	<0.02	<0.06	<5
Model Toxics Control Act Method A Cleanup Levels			0.03	7.0	6.0	9.0	30/100*

*GRO = Gasoline Range Organics*If Benzene is present and the totals of toluene, ethylbenzene and xylenes (TEX) are greater than 1% of the gasoline mixture, then the cleanup level for GRO is 30 ppm. If benzene is absent and total TEX<1% then the cleanup level for GRO is 100 ppm. BTEX = Benzene, Toluene, Ethylbenzene, Xylenes*

6.1 Q4 2024 Soil Sample Analytical Results: MW1-7.5'

Toluene was present at 0.025 ppm, below the MTCA A cleanup level of 7 ppm. GROs and benzene, ethylbenzene, and xylenes were not present above laboratory method reporting limits (MRLs).

6.2 Q4 2024 Soil Sample Analytical Results: MW2-7.5'

GROs and BTEX were not present above laboratory MRLs.

6.3 Q4 2024 Soil Sample Analytical Results: MW3-5'

GROs and BTEX were not present above laboratory MRLs.

6.4 Q4 2024 Soil Sample Analytical Results: MW4-5.5'

GROs and BTEX were not present above laboratory MRLs.



Table 3. Site Assessment Water Sample Analytical Results
Cameo Boutique
Results from the Analysis of Groundwater Samples for Benzene,
Toluene, Ethylbenzene, Xylenes and Total Petroleum Hydrocarbons (TPH)
as Gasoline using Methods 8021B and NWTPH-Gx
Analytical results in micrograms per liter (ug/L) equivalent to parts per billion (ppb)

Sample	Date	Sampled By	Benzene	Toluene	Ethylbenzene	Xylenes	Gasoline Range
MW1	12/21/2024	Simpson Geo	<1	<1	4.3	<3	380
MW2	12/21/2024	Simpson Geo	<1	<1	<1	<3	<100
MW3	12/21/2024	Simpson Geo	<1	<1	<1	<3	<100
MW4	12/21/2024	Simpson Geo	<1	<1	<1	<3	<100
Model Toxics Control Act Method A Cleanup Levels			5	1,000	700	1,000	800/1,000

*GRO = Gasoline Range Organics*If Benzene is present and the totals of toluene, ethylbenzene and xylenes (TEX) are greater than 1% of the gasoline mixture, then the cleanup level for GRO is 800 ppb. If benzene is absent and total TEX<1% then the cleanup level for GRO is 1,000 ppb. BTEX = Benzene, Toluene, Ethylbenzene, Xylenes*

6.5 Q4 2024 Groundwater Sample Analytical Results: MW1

GROs were present at 380 ppb, below the most stringent MTCA Method A Cleanup Level of 800 ppb. Ethylbenzene was present at 4.3 ppb, below the MTCA Method A CI of 700 ppb. Benzene, toluene, and xylenes were not present above laboratory MRLs.

6.6 Q4 2024 Groundwater Sample Analytical Results: MW2

GROs and BTEX were not present above laboratory MRLs.

6.7 Q4 2024 Groundwater Sample Analytical Results: MW3

GROs and BTEX were not present above laboratory MRLs.

6.8 Q4 2024 Groundwater Sample Analytical Results: MW4

GROs and BTEX were not present above laboratory MRLs.

7.0 Conclusions and Recommendations

Based on our observations of soil conditions, field screening and site assessment soil sample and groundwater analytical results, total gasoline range petroleum hydrocarbons and BTEX were below laboratory MRLs or the respective MTCA Method A cleanup levels. The direction of groundwater flow was primarily to the west. This may be due to the incoming tide and the commingling of fresh water and salt near the mouth of the creek. The direction of groundwater flow may change if the tide is receding. The very low salinity reading on MW3 indicated fresh water, whereas the high salinity reading for MW4 indicated salt water. The soil probe/well logs are located in Appendix B. Simpson Geosciences recommends continued operation of the air sparging system with additional quarterly groundwater monitoring as needed.

8.0 Statement of Existing Conditions and Limitations

The data, interpretations, findings, and our recommendations are based solely upon data obtained at the time of our field work based on standard field practices in Washington State. The site characterization pertains to the Cameo Boutique property only, no other areas on or near the Subject Property were assessed or investigated during our fieldwork and are excluded from our field investigations and findings. Soil samples were logged in, stored in an insulated cooler with ice, and delivered to the Friedman Bruya Analytical Laboratory in Seattle following chain of custody procedures.

SIMPSON GEOSCIENCES



Richard N. Simpson, LG/LHg
Senior Geologist/Hydrogeologist
Washington State Site Assessor (WAC 173-360A-940-3d)

- FIGURE 1: Vicinity Map
- FIGURE 2: Geology Map
- FIGURE 3: Site Plan Showing Groundwater Elevation Contours
- FIGURE 4: Project Photographs

APPENDIX A: ANALYTICAL RESULTS

APPENDIX B: SOIL PROBE LOGS

9.0 References

1. Site Assessment Guidance for Underground Storage Tank Systems – Washington State Department of Ecology, (Revised April 2021).
2. Washington State Model Toxics Control Act – Chapter 173-340 WAC (Revised 2013).

FIGURES

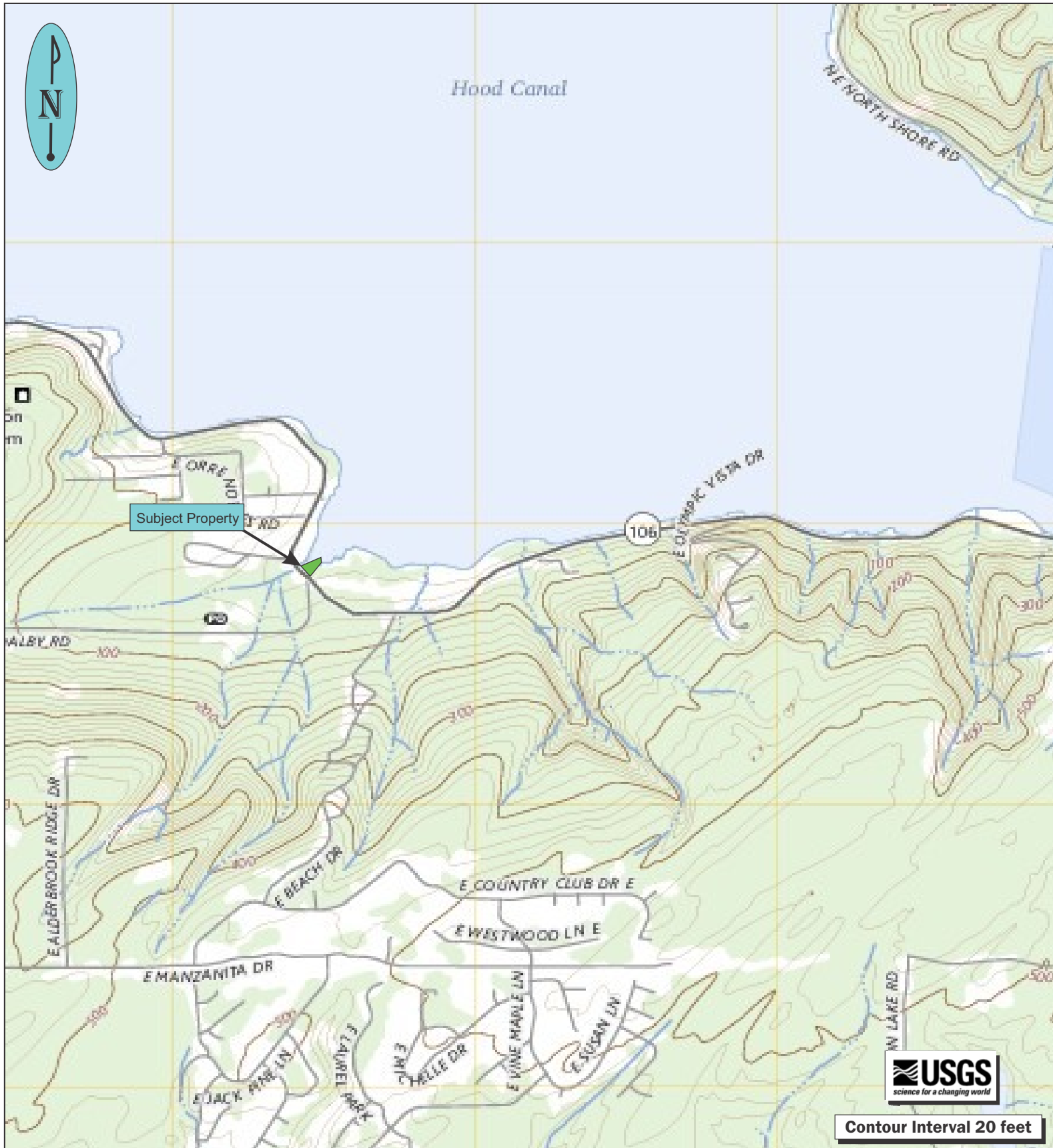
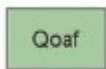


Figure 1. Vicinity Map
USGS Union Washington Topographic Map 2023

Cameo Boutique Property
6871 East State Route 106
Union, Washington 98592
Job Number SG2024107

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Redmond, Washington





Alluvium fan deposits—Cobbles, pebbles, sand, silt, and boulders; poorly sorted and stratified; forms concentric lobes where streams emerge from valleys; relict where Qoaf.

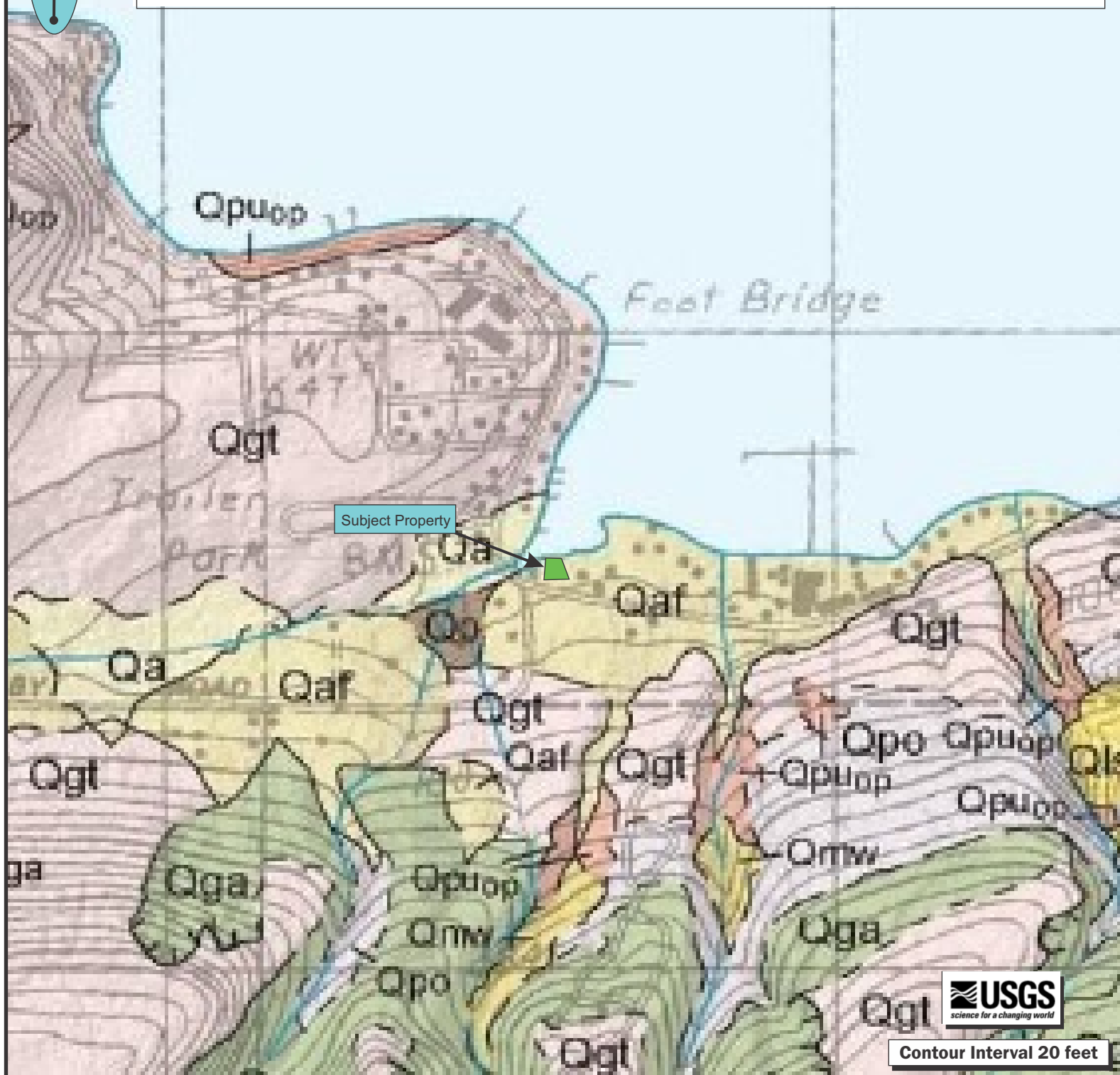


Figure 2. Geology Map
Washington Geological Survey Geology Map OFR 2010-3

Cameo Boutique Property
6871 East State Route 106
Union, Washington 98592
Job Number SG2024107

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Redmond, Washington



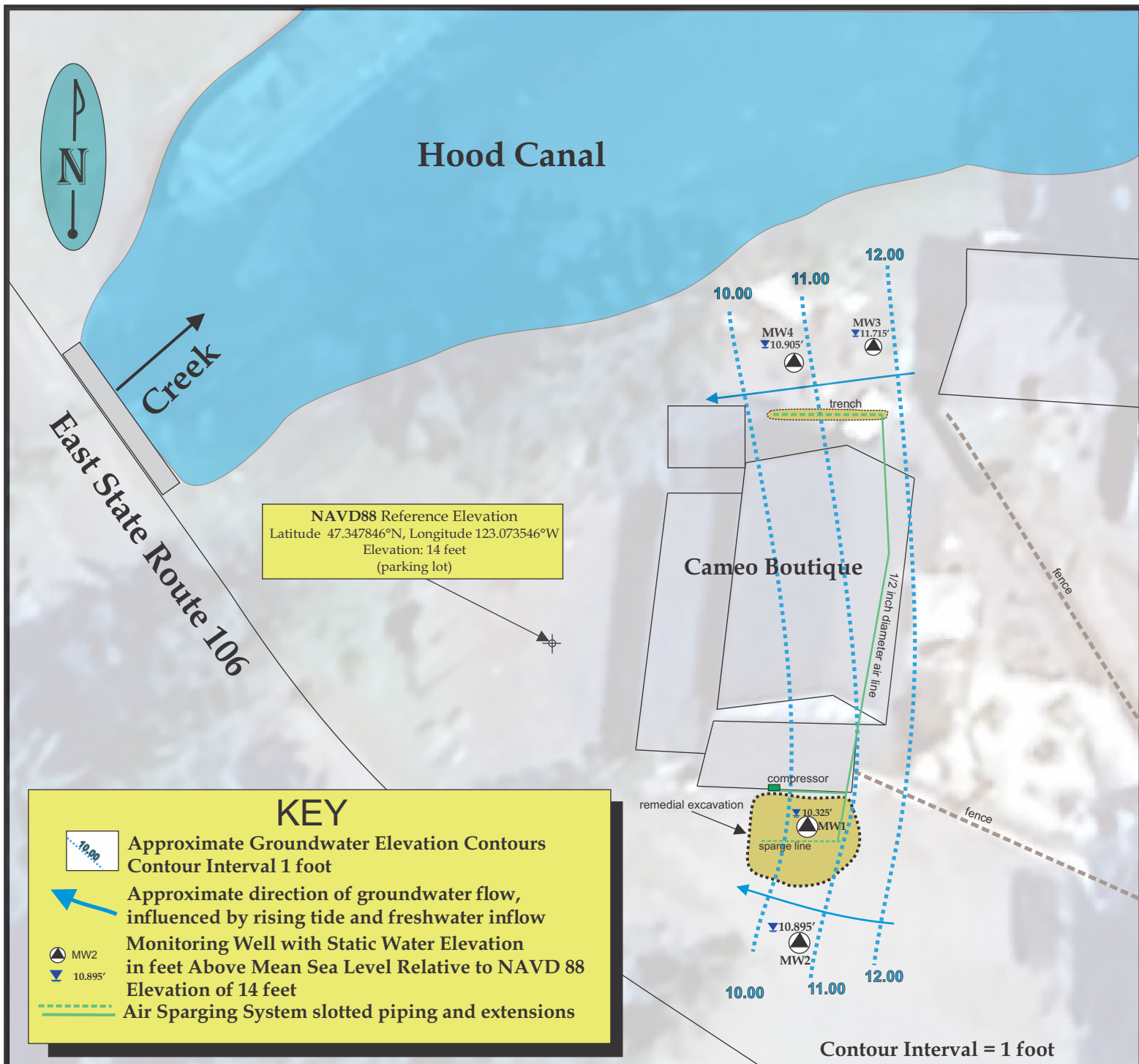


FIGURE 3
SITE PLAN SHOWING
GROUNDWATER ELEVATION CONTOURS
QUARTER 4, 2024
 6871 East State Route 106, Union, WA
 Cameo Boutique
 Depth to Static Water Measured December 20, 2024
 Approximate scale 1 inch = 25 feet

NAVD88 Elevation of 14 feet above mean sea level
 Latitude 47.347846°N, Longitude 123.073546°W



Project Number SG2024107
SIMPSON GEOSCIENCES
 Redmond, Washington

FIGURE 4



Photograph 4.1 View looking east of the project area. The asphalt was saw cut to prevent cracking.



Photograph 4.2 The asphalt cover was removed from the project area.

FIGURE 4



Photograph 4.3 The remedial excavation proceeded until a thin lens of GRO impacted soil was removed directly above the static water level.



Photograph 4.4 View of the air sparging line being placed in a bed of pea gravel.

FIGURE 4



Photograph 4.5 The pea gravel was filled up above the water level, then a 4-inch diameter passive air return was installed, and covered with filter fabric.



Photograph 4.6. View of the rotary vane compressor used to pump air into the groundwater. The compressor was on a timer for nighttime operation.

FIGURE 4



Photograph 4.7. View of the northern air sparging line laid out prior to the excavation of the sparging trench.



Photograph 4.8. View of trench excavated to install the northern sparge line.

FIGURE 4



Photograph 4.9. View of Monitoring Well MW1 being installed.



Photograph 4.10. View of typical groundwater sampling setup showing a peristaltic pump, discharge bucket, distilled rinse water and water chemistry meter.

LABORATORY ANALYTICAL REPORTS

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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5500 4th Ave South
Seattle, WA 98108-2419
(206) 285-8282
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www.friedmanandbruya.com

January 2, 2025

Richard Simpson, Project Manager
Simpson Geosciences
16425 NE 128th Street
Redmond, WA 98052

Dear Mr Simpson:

Included are the results from the testing of material submitted on December 23, 2024 from the Cameo Botique 2024-107, F&BI 412437 project. There are 6 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 should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Mac Goldman
Project Manager

Enclosures
NAA0102R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on December 23, 2024 by Friedman & Bruya, Inc. from the Simpson Geosciences Cameo Botique 2024-107, F&BI 412437 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>Simpson Geosciences</u>
412437 -01	MW1
412437 -02	MW2
412437 -03	MW3
412437 -04	MW4
412437 -05	MW1-7.5'
412437 -06	MW2-7.5'
412437 -07	MW3-5'
412437 -08	MW4-5.5'

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 01/02/25

Date Received: 12/23/24

Project: Cameo Botique 2024-107, F&BI 412437

Date Extracted: 12/23/24

Date Analyzed: 12/24/24 and 12/26/24

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

Results Reported on a Dry Weight Basis

Results Reported as mg/kg (ppm)

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl Benzene</u>	<u>Total Xylenes</u>	<u>Gasoline Range</u>	<u>Surrogate (% Recovery)</u> (Limit 50-150)
MW1-7.5' 412437-05	<0.02	0.025	<0.02	<0.06	<5	83
MW2-7.5' 412437-06	<0.02	<0.02	<0.02	<0.06	<5	87
MW3-5' 412437-07	<0.02	<0.02	<0.02	<0.06	<5	87
MW4-5.5' 412437-08	<0.02	<0.02	<0.02	<0.06	<5	86
Method Blank 04-3037 MB	<0.02	<0.02	<0.02	<0.06	<5	92

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 01/02/25

Date Received: 12/23/24

Project: Cameo Botique 2024-107, F&BI 412437

Date Extracted: 12/26/24

Date Analyzed: 12/26/24

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

Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl Benzene</u>	<u>Total Xylenes</u>	<u>Gasoline Range</u>	<u>Surrogate (% Recovery)</u> (Limit 50-150)
MW1 412437-01	<1	<1	4.3	<3	380	87
MW2 412437-02	<1	<1	<1	<3	<100	90
MW3 412437-03	<1	<1	<1	<3	<100	84
MW4 412437-04	<1	<1	<1	<3	<100	84
Method Blank 04-3040 MB	<1	<1	<1	<3	<100	84

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 01/02/25

Date Received: 12/23/24

Project: Cameo Botique 2024-107, F&BI 412437

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

Laboratory Code: 412382-04 (Duplicate)

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

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent	
			Recovery LCS	Acceptance Criteria
Benzene	mg/kg (ppm)	1.0	83	70-130
Toluene	mg/kg (ppm)	1.0	83	70-130
Ethylbenzene	mg/kg (ppm)	1.0	79	70-130
Xylenes	mg/kg (ppm)	3.0	80	70-130
Gasoline	mg/kg (ppm)	40	80	70-130

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 01/02/25

Date Received: 12/23/24

Project: Cameo Botique 2024-107, F&BI 412437

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

Laboratory Code: 412437-02 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 20)
Benzene	ug/L (ppb)	<1	<1	nm
Toluene	ug/L (ppb)	<1	<1	nm
Ethylbenzene	ug/L (ppb)	<1	<1	nm
Xylenes	ug/L (ppb)	<3	<3	nm
Gasoline	ug/L (ppb)	<100	<100	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent	Acceptance Criteria
			Recovery LCS	
Benzene	ug/L (ppb)	50	96	70-130
Toluene	ug/L (ppb)	50	94	70-130
Ethylbenzene	ug/L (ppb)	50	92	70-130
Xylenes	ug/L (ppb)	150	93	70-130
Gasoline	ug/L (ppb)	1,000	100	70-130

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

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

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

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

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

cf - The sample was centrifuged prior to analysis.

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

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

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

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

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

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

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

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

j - The analyte concentration is reported between the method detection limit and the lowest calibration point. The value reported is an estimate.

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

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

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

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

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

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

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

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

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

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

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

412437

SAMPLE CHAIN OF CUSTODY 12/23/24

WA2/MS01

Report To Richard Simpson, LG/LH
 Company: Simpson Geosciences
 Address 16435 NE 128th Street
 City, State, ZIP Redmond, WA 98052
 Phone 425 668 5834 Email simpson@simpsongeosciences.com

SAMPLERS (signature) <u>[Signature]</u>		PROJECT NAME <u>Cameo Refique</u>	PO # <u>2024-107</u>
REMARKS <u>Project Specific RIs - Yes / No</u>		INVOICE TO <u>SG</u>	

Page # <u>1</u> of <u>1</u>	TURNAROUND TIME <u>Standard Turnaround</u> RUSH Rush charges authorized by: _____
SAMPLE DISPOSAL Dispose after 30 days Archive Samples Other _____	

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	ANALYSES REQUESTED										Notes
						NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	NWPH-Gx BTEX	RCRA 8	MTCA 5		
MM1	01 A B	12-21-24	8:30	W	2								X			
MM2	02	↓	9:20	↓	2								X			
MM3	03	↓	9:45	↓	2								X			
MM4	04	12-21-24	10:15	W	2								X			
MM1-7.5'	05 A-C	12-20-24	9:30	Soil	3								X			
MM2-7.5'	06	↓	11:15	↓	3								X			
MM3-5'	07	↓	14:00	↓	3								X			
MM4-5.5'	08	12-20-24	14:30	Soil	3								X			
Samples received at <u>6</u> °C																

SIGNATURE		PRINT NAME		COMPANY		DATE	TIME
Relinquished by: <u>[Signature]</u>		Richard Simpson		Simpson Geosciences		12-23-24	10:12
Received by: <u>[Signature]</u>		Richard T		DLX		12-23-24	10:12
Relinquished by:							
Received by: <u>[Signature]</u>		Anna Banya		FRB		12/23/24	1200

Friedman & Banya, Inc.
 5500 4th Avenue S
 Seattle, WA 98108
 Ph. (206) 285-8282
 FORM VEOC-COC.DOC

SAMPLE CONDITION UPON RECEIPT CHECKLIST

PROJECT # 41243 CLIENT Simpson Geosciences INITIALS/DATE: sub

If custody seals are present on cooler, are they intact? ☒ NA ☐ YES ☐ NO

Cooler/Sample temperature 6 °C
Thermometer ID: Fluke 96312917

Were samples received on ice/cold packs? ☒ YES ☐ NO

How did samples arrive?
☒ Over the Counter ☐ Picked up by F&BI ☒ FedEx/UPS/GSO

Is there a Chain-of-Custody* (COC)? ☒ YES ☐ NO Initials/Date: AWB12/23
*or other representative documents, letters, and/or shipping memos

Number of days samples have been sitting prior to receipt at laboratory 2-3 days

Are the samples clearly identified? (explain "no" answer below) ☒ YES ☐ NO

Were all sample containers received intact (i.e. not broken, leaking etc.)? (explain "no" answer below) ☒ YES ☐ NO

Were appropriate sample containers used? ☒ YES ☐ NO ☐ Unknown

If custody seals are present on samples, are they intact? ☒ NA ☐ YES ☐ NO

Are samples requiring no headspace, headspace free? ☒ NA ☐ YES ☐ NO

Is the following information provided on the COC, and does it match the sample label?
(explain "no" answer below)

Sample ID's	☒ Yes ☐ No	☐ Not on COC/label
Date Sampled	☒ Yes ☐ No	☐ Not on COC/label
Time Sampled	☒ Yes ☐ No	☐ Not on COC/label
# of Containers	☒ Yes ☐ No	
Relinquished	☒ Yes ☐ No	
Requested analysis	☒ Yes ☐ On Hold	

Other comments (use a separate page if needed)

Air Samples: Were any additional canisters/tubes received? ☒ NA ☐ YES ☐ NO

Number of unused TO15 canisters** Number of unused TO17 tubes

**Fill out Green manifolds billing sheet

Simpson Geosciences
Richard Simpson
16425 NE 128th St
Redmond, WA 98052-2112



Sort

Date 12/23/2024
Order DE2470131
Piece 1 of 1
Weight 5.00

Destination

**Friedman & Bruya
Sample Receiving
5500 4th Ave S
Seattle, WA 98108-2419
(206)285-8282**

Zone

Service
Priority - 4 hr

Reference 1

Piece Description
small cooler



APPENDIX B

SOIL PROBE LOGS

BORING NUMBER	DENSITY Blow Counts	MOISTURE Moist, Wet, Sat	COLOR	SOIL TYPE/USCS	PID	ODOR ND T M S	SHEEN ND TR MOD MOD HVY FP	INTERVAL	SAMPLE NUMBER	UN
MW1	MD	M	Br	silty SAND w/ gravel	0	ND	ND	0-3'	NS	
	MD	M	Br	" "	0	ND	ND	3-6'	NS	
	MD	7.5'	Rust Br	silty SAND @ 8.5'	0	ND	ND	6-9'	MW1-7.5'	✓
	MD	Sat	Br	silty SAND w/ gravel	.4	S	Tr	9-12'	NS	
	MD	Sat	Br	" "	.1	ND	ND	12-15'	MW1-12'	
				EOB @ 15 fbg - set well	MW 1					
				BQL 150 10' screen						
MW2	MD	M-	Br/gy	silty SAND w/ grv	0	ND	ND	0-3'	NS	
	MD	M	Br	" "	0	ND	ND	3-6'	NS	
	MD	7.5'	Br	" "	0	ND	ND	6-9'	MW2-7.5'	✓
	MD	Sat	Br	" "	0	ND	ND	9-12	NS	
	MD	Sat	Br	" "	0	ND	ND	12-15'	NS	
				EOB @ 15 fbg BQL 151	10' screen					
MW3		M	Br	silty SAND w/ gravel	0	ND	ND	0-3'	NS	
		5.5'	Br	" " " "	0	ND	ND	3-6	MW3-5.5'	✓
		Sat	Br	" "	0	ND	ND	6-9	NS	
		Sat	Br	" "	0	ND	ND	9-12	NS	
				Set well @ 12 fbg BQL 152						
MW4		M	Br	silty SAND w/ grv	0	ND	ND	0-3'	NS	
		5.5'	Br	silty SAND w/ grv/sand @	0	ND	ND	3-6'	MW4-5.5'	✓
		Sat	Br	" "	0	ND	ND	6-9'	NS	
		Sat	Br	" "	0	ND	ND	9-12'	NS	
				Set well @ 12 fbg BQL 153						