SUCCEED
ENVIRONMENTAL
CONSULTING, LLC

PHASE II SUBSURFACE INVESTIGATION
8510 SW Terwilliger Boulevard
Portland, Oregon 97219

Prepared For:
TR A

January 8, 2024
Project ID: BH-1-01

1631 NE Broadway #211 | Portland, OR 97232 | 971.371.0404 | www.succeed-env.com

SUCCEED ENVIRONMENTAL CONSULTING, LLC

January 8, 2024

TR A
660 Berkeley Ave
Menlo Park, CA 94025

Attn: Terra Miller

PHASE II SUBSURFACE INVESTIGATION
8510 SW Terwilliger Boulevard
Portland, Oregon 97219
SEC Project: BH-1-01

Succeed Environmental Consulting LLC is pleased to submit the results of our Phase II subsurface investigation of the above-referenced property. Contractual terms for our services are contained in our proposal dated December 7, 2023. We appreciate the opportunity to be of service to you. Please contact us if you have questions regarding this report.

Sincerely,

Succeed Environmental Consulting LLC

Andrew S. Blake, R.G., L.G.
Principal Geologist

cc: Jorie Girod, Berkshire Hathaway (via email)

ASB
Attachments
One electronic copy submitted
Document ID: BH-1-01-010824-SI-8510_SW_Terwilliger_Blvd

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1.0 INTRODUCTION AND BACKGROUND

This report summarizes the results of environmental subsurface investigation activities conducted at 8510 SW Terwilliger Boulevard in Portland, Oregon (project site). The approximately 0.25-acre Subject Property includes Multnomah County Tax Parcel No. 1S1E21DD-09100. The Subject Property is currently occupied by a commercial restaurant with associated landscaped and parking areas. SEC recently reviewed information pertaining to the project site, which is on file with the Oregon Department of Environmental Quality (DEQ)[1].

Based on our review of publicly available information, the project site was historically occupied by a Unocal branded service station, which was decommissioned between 1989 and 1994. A release of petroleum hydrocarbons was identified at the site in 1989, but was ultimately addressed to the satisfaction of DEQ, who closed Leaking Underground Storage Tank (LUST) File No. 26-89-0188 in 1994. As part of site remediation activities, groundwater monitoring wells were installed and monitored at the project site. Shallow groundwater collected at the project site was analyzed for volatile organic compounds (VOCs) and revealed the occasional presence of tetrachloroethylene (PCE) in apparent perched groundwater at the site. Upon discovery of PCE, DEQ added the project site to the Environmental Cleanup Site Information (ECSI) database (ECSI File No. 1069). The source of PCE was generally attributed to a release that occurred on the upgradient Classic Cleaners & Draperies site (ECSI File No. 1605), which adjoins the project site to the south.

Since that time, ECSI File No. 1605 was closed by DEQ; the site was redeveloped with a new parking area, new hardscaped areas, and a restaurant building; and the project site wells were removed. However, ECSI File No. 1069 was not addressed, and no further environmental inquiry appears to have been conducted at the project site since approximately 1994.

At your request, SEC has performed a subsurface investigation of the project site to evaluate the current subsurface conditions at the property. This report has been prepared to summarize the results of the SEC's investigation. The project site is shown relative to surrounding physical features on Figure 1. The project site layout is presented on Figure 2. Acronyms and abbreviations used herein are defined at the end of this report.

2.0 PURPOSE AND SCOPE OF SERVICES

The subsurface investigation was conducted to evaluate subsurface conditions at the project site. The specific scope of services was conducted by an environmental professional and included the following:

- Coordinated and managed the field investigation, including utility checks, project site access authorizations, access preparations, and scheduling of subcontractors.
- Contacted the Oregon One-Call Utility Notification Center to mark the location of public utilities beneath the ROWs surrounding the project site.
- Subcontracted Pacific Northwest Locates of Gresham, Oregon to conduct a clear proposed borings of utility conflicts prior to drilling.

[1] ECSI File No. 1605, ECSI File No. 1069, and LUST File No. 26-89-0188

- Subcontracted Standard Probe, LLC of Spanaway, Washington to advance 7 direct-push explorations (DP-1 through DP-7) to depths up to 20.0 feet BGS at the project site.
- Collected continuous soil samples from each exploration for visual identification and field screening. Field screening consisted of visual observation, the use of a photoionization detector (PID), and water sheen testing.
- Collected one soil vapor sample (SV-01) at the Subject Property.
- Submitted the selected soil and vapor samples to Friedman & Bruya of Seattle, Washington, for chemical analysis.
- Following sampling, abandoned each exploration by repairing the ground surface, as appropriate.
- Prepared this report presenting our findings and provides conclusions and recommendations.

3.0 FIELD ACTIVITIES

Field activities conducted by SEC on December 18, 2023, consisted of the collection of one soil vapor sample (SV-01), and the advancement of seven direct-push borings (DP-1 through DP-7), as discussed in the following sections. The approximate exploration locations are presented on Figure 2.

3.1 SOIL VAPOR SAMPLING

On December 18, 2023, SEC collected one soil vapor sample (SV-01) from the project site at the approximate location shown on Figure 2. The sample was collected as described below:

- Advanced decontaminated stainless-steel soil gas probe connected to disposable polytetrafluoroethylene tubing to an approximate depth of 0.5-feet BGS.
- Use a vacuum pump to ensure that the sample train was airtight prior to use.
- Sealed the annular space between the vapor point and the boring sidewall with hydrated bentonite to minimize ambient air migration into the sampling zone.
- Dedicated tubing was attached to the sample point and connected to the sampling manifold.
- Swagelok™ fittings were used to create a closed system.
- Approximately 30 minutes after installing the sampling train, the sample was collected in a laboratory-supplied 6-liter summa canister equipped with a flow controller.

The vapor sample was transported under chain-of-custody procedures to Friedman & Bruya of Seattle, Washington.

3.2 SUBSURFACE BORINGS

On December 18, 2023, SEC advanced seven direct-push borings (DP-1 through DP-7) to evaluate subsurface conditions beneath the project site. The borings were advanced to depths of up to 20.0 feet BGS using drilling equipment that is owned and operated by Standard Probe, LLC.

SEC personnel observed the exploration activities and collected field samples for soil classification, field screening, and chemical analysis. A description of our field exploration and the exploration logs are presented in Appendix A.

3.2.1 Subsurface Conditions

Soil beneath exterior portions of the project site is generally capped by a layer of asphalt or concrete pavement and/or gravelly fill material. Subsurface soil encountered in the explorations primarily consists of silt, which overlies a layer of clay that was generally encountered at depths ranging between approximately 16 and 16.5 feet below the ground surface (BGS). Clay was encountered to the maximum depths explored, with the exception of boring DP-6, where gravel was encountered at a depth of approximately 18.0 feet BGS.

Upon completion of each boring, boreholes were left open to allow groundwater infiltration. Groundwater was not observed by SEC in any of the borings during drilling. Based on our review of previous groundwater sample logs, water was historically encountered at depths ranging between approximately 16.0 and 22.0 feet BGS at the site. The observed absence of groundwater in each boring could be attributable to seasonal groundwater fluctuations. Alternatively, the new pavement may inhibit water from accumulating atop the clay layer that was exists at the site. Although groundwater was not encountered, SEC collected soil samples from the terminus of our borings to represent subsurface conditions where PCE-impacted groundwater was historically encountered. The exploration logs are presented in Appendix A.

3.2.2 Soil Sample Field Analysis

Soil samples were collected from each boring and screened in the field using visual examination, water sheen screening, and headspace vapor screening using a hand-held PID. Petroleum-like odors were not observed in soil obtained during this investigation. Field screening results are presented on the exploration logs in Appendix A.

3.2.3 Soil Sample Selection and Laboratory Submittal

SEC selected at least one soil sample from each direct push boring for chemical analysis. The soil samples selected for analysis were placed into labeled, laboratory-prepared containers and immediately placed in a cooler with ice and transported under chain-of-custody procedures to Friedman & Bruya of Seattle, Washington.

4.0 CHEMICAL ANALYITCAL PROGRAM

The samples submitted by SEC were received by both laboratories with no significant quality control exceptions noted. The selected samples were analyzed for one or more of the following:

- cVOCs by EPA Method 5035A/8260D (Soil)
- cVOCs by EPA Method TO-15 (Soil Gas)

The chemical analytical results are summarized in Tables 1 and 2, and are discussed (as appropriate) in the following sections. Chemical analytical program details, laboratory reports, and chain-of-custody documentation are presented in Appendix B.

5.0 REGULATORY SCREENING LEVELS

Based on our understanding of the current and anticipated future commercial or mixed use of the project site, the following screening levels were compared to the chemical analytical results

from this investigation:

- Oregon DEQ RBCs for soil ingestion, dermal contact, and inhalation, Commercial Occupant
- Oregon DEQ RBCs for soil ingestion, dermal contact, and inhalation, Construction Worker
- Oregon DEQ RBCs for soil ingestion, dermal contact, and inhalation, Excavation Worker
- Oregon DEQ RBCs for soil volatilization to outdoor air, Commercial Occupant
- Oregon DEQ RBCs for soil leaching to groundwater, Commercial Occupant
- Oregon DEQ RBCs for vapor intrusion: Commercial Receptor: Acute & Chronic Scenario

A comparison of the chemical analytical results to applicable regulatory screening levels are presented in Tables 1 & 2 and are discussed in the following sections.

6.0 SOIL CHEMICAL ANALYTICAL RESULTS

6.1 cVOCs

Eleven soil samples[2] were analyzed for cVOCs by EPA Method 5035A/8260D. cVOCs were not detected at concentrations greater than laboratory RDLs or were detected at concentrations less than applicable screening levels in the samples submitted for analysis.

6.2 VAPOR CHEMICAL ANALYITCAL RESULTS

Vapor sample SV-01 was analyzed for VOCs by EPA method TO-15. VOCs were not detected at concentrations greater than laboratory RDLs or were detected at concentrations less than applicable screening levels in the samples submitted for analysis.

7.0 CONCLUSIONS AND RECOMMENDATIONS

Succeed Environmental Consulting LLC (SEC) performed a subsurface investigation in conformance with the proposal dated December 7, 2023, for the property located at 8510 SW Terwilliger Boulevard in Portland, Oregon. Field activities conducted by SEC in October 2023 consisted of the collection of one soil vapor sample (SV-01), and the advancement of seven borings (DP-1 through DP-7) for the collection of soil samples. This assessment has revealed the following:

- No contaminants of concern were identified at the Subject Property at concentrations that exceed corresponding cleanup levels.

Based on these results, the project site does not appear to have been adversely impacted by cVOCs. No further environmental inquiry is recommended at the Subject Property at this time.

12.0 DECLARATIONS

We declare that, to the best of our professional knowledge and belief, we meet the definition of Environmental Professional as defined in 40 CFR Part 312.10. We have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the

[2]DP-2(1.5-3.5), DP-3(5.0-7.0), DP-4(1.0-3.0), DP-5(2.0-3.0), DP-6(18.0-20.0), DP-7(10.0-12.0), DP-8(5.0-6.0), DP-8(11.0-13.0), DP-9(5.0-7.0), DP-9(10.0-11.0), and DP-10(2.5-3.5)

project site. We developed and performed all the appropriate inquiries in accordance with the standards and practices set forth in 40 CFR Part 312.

13.0 LIMITATIONS

This report has been prepared for use by your firm. SEC makes no warranties or guarantees regarding the accuracy or completeness of information provided or compiled by others. The information presented in this report is based on the above-described research and a single recent site visit. Information provided by others was relied on in our description of historical conditions and review of regulatory databases and files.

No environmental site assessment can wholly eliminate uncertainty regarding the potential for recognized environmental conditions relating to a property. Performance of this practice is intended to reduce, but not eliminate, uncertainty regarding the potential for recognized environmental conditions relating to a property.

There is always a potential that areas with contamination that were not identified during this assessment exist at the project site or in the study areas. Further evaluation of such potential would require additional research, subsurface exploration, sampling, and/or testing. Some substances may be present in the project site vicinity in quantities or under conditions that may have led or may lead to contamination of the project site but are not included in current local, state, or federal regulatory definitions of hazardous substances or do not otherwise present current potential liability.

SEC cannot be responsible if the standards of all appropriate inquiry or regulatory definitions of hazardous substance change or if you are required to meet more stringent standards in the future. This report is not intended for use by others, and the information contained herein is not applicable to other sites.

Reliance on this report by other parties is strictly at the risk of those parties, and SEC will grant no third-party reliance unless specifically requested in writing by our client for whom this report was prepared. Within the limitations of scope, schedule, and budget, our services have been executed in accordance with the generally accepted environmental science practices for environmental services in this area at the time this report was prepared. No warranty or other conditions, express or implied, should be understood.

We appreciate the opportunity to be of service to you. Please call if you have questions regarding this report.

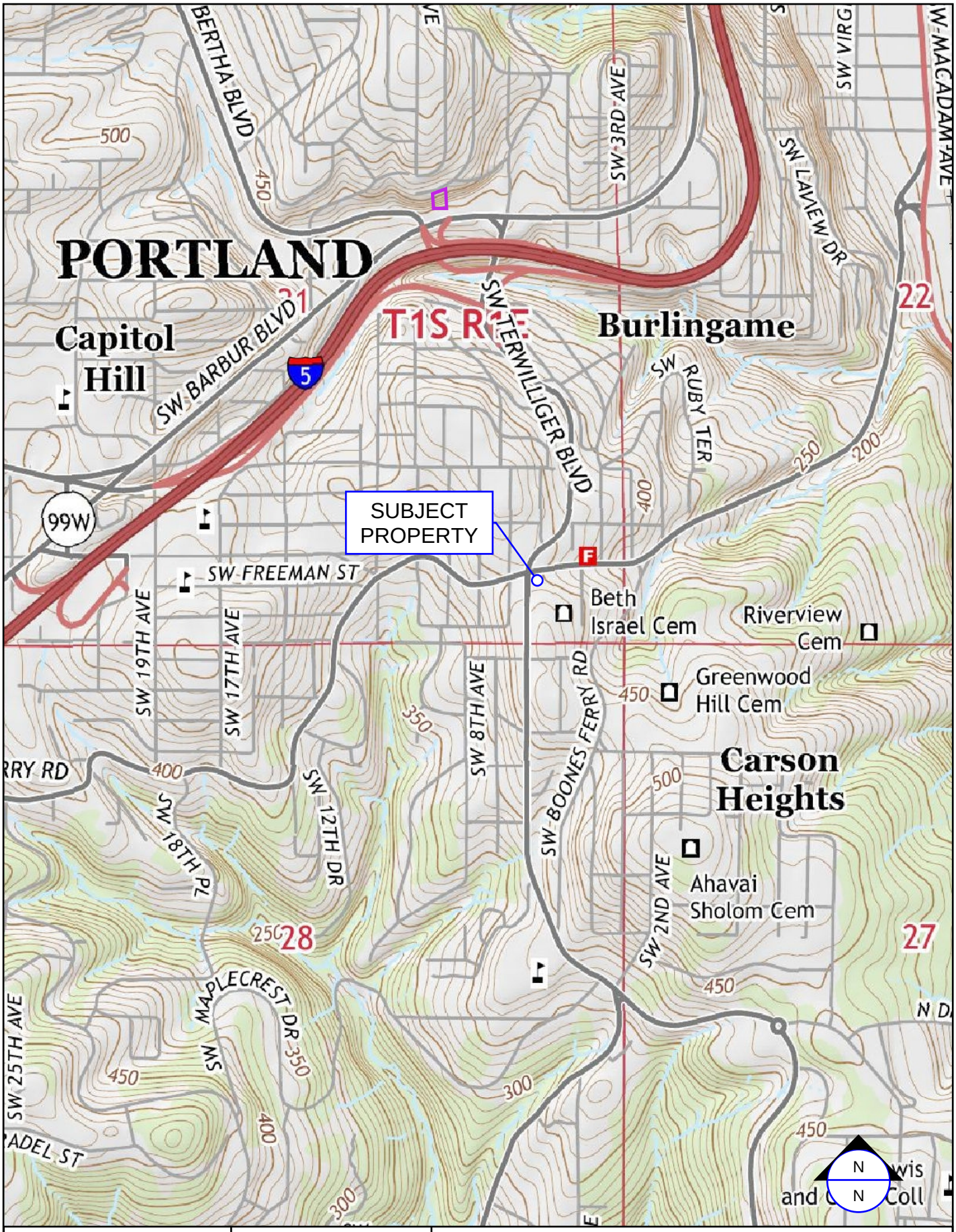
Sincerely,

Succeed Environmental Consulting LLC

Andrew S. Blake, R.G.
Principal Geologist

Expires 06/30/2024

FIGURES



SUCCEED ENVIRONMENTAL CONSULTING, LLC	BH-1-01	VICINITY MAP	
	JANUARY 2024	8510 SW TERWILLIGER BLVD PORTLAND, OREGON	FIGURE 1

LEGEND:

- APPROXIMATE SITE BOUNDARY (SHOWN IN YELLOW)
- STORMWATER CATCH BASIN/DRAIN (NO SHEEN OBSERVED)
- SOLID WASTE ENCLOSURE (NO HAZARDOUS MATERIALS)
- SUBSURFACE EXPLORATION (APPROXIMATE)
- 1 VAPOR SAMPLE LOCATION (APPROXIAMTE)

N
N

(APPROXIMATE SCALE IN FEET)

25

SITE PLAN BASED ON OBSERVATIONS MADE BY SEC. MEASUREMENTS DERIVED FROM THIS FIGURE SHOULD BE CONSIDERED APPROXIMATE.

SITE PLAN

8510 SW TERWILLIGER BLVD
PORTLAND, OREGON

FIGURE 2

BH-1-01

JANUARY 2024

SUCCEED ENVIRONMENTAL CONSULTING, LLC

TABLES

TABLE 1
SOIL CHEMICAL ANALYTICAL RESULTS
SUMMARY OF DETECTED ANALYTES (cVOCs)
8510 SW TERWILLIGER BLVD
PORTLAND, OREGON

Sample ID	Date Collected	Method	5035/8260D	5035/8260D	5035/8260D	5035/8260D	5035/8260D	5035/8260D	5035/8260D	5035/8260D	5035/8260D	5035/8260D	5035/8260D
		Analyte	Vinyl Chloride	Chloroethane	1,1-Dichloroethene	Methylene Chloride	trans-1,2-DCE	1,1-DCE	cis-1,2-DCE	EDC	1,1,1-Trichloroethane	TCE	PCE
		Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
DP-1(12.0-14.0)	12/18/2023	Result	0.05 U	0.5 U	0.05 U	0.5 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.02 U	0.025 U
DP-2(10.0-12.0)	12/18/2023	Result	0.05 U	0.5 U	0.05 U	0.5 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.02 U	0.025 U
DP-2(18.0-20.0)	12/18/2023	Result	0.05 U	0.5 U	0.05 U	0.5 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.02 U	0.025 U
DP-3(5.0-7.0)	12/18/2023	Result	0.05 U	0.5 U	0.05 U	0.5 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.02 U	0.025 U
DP-3(13.0-15.0)	12/18/2023	Result	0.05 U	0.5 U	0.05 U	0.5 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.02 U	0.025 U
DP-4(12.0-14.0)	12/18/2023	Result	0.05 U	0.5 U	0.05 U	0.5 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.02 U	0.025 U
DP-5(10.0-12.0)	12/18/2023	Result	0.05 U	0.5 U	0.05 U	0.5 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.02 U	0.025 U
DP-5(18.0-20.0)	12/18/2023	Result	0.05 U	0.5 U	0.05 U	0.5 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.02 U	**0.051**
DP-6(12.0-14.0)	12/18/2023	Result	0.05 U	0.5 U	0.05 U	0.5 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.02 U	0.025 U
DP-6(18.0-20.0)	12/18/2023	Result	0.05 U	0.5 U	0.05 U	0.5 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.02 U	0.025 U
DP-7(26.0-8.0)	12/18/2023	Result	0.05 U	0.5 U	0.05 U	0.5 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.02 U	0.025 U
DEQ RBCs	OCCUPATIONAL (SIDCI)		4	> Max	29,000	1,600	23,000	260	2,300	16	870,000	51	1,000
	CONST. WORKER (SIDCI)		34	> Max	13,000	2,100	7,100	3,200	710	200	470,000	130	1,800
	EXC. WORKER (SIDCI)		960	> Max	370,000	58,000	20,000	89,000	20,000	5,600	> Max	3,700	50,000
	OCCUPATIONAL (VOL)		89	>Csat	>Csat	>Csat	> Max	240	> Max	15	>Csat	96	>Csat
	OCCUPATIONAL (LTG)		0.01	1,300	32	2	51	0.20	4.5	0.013	880	0.087	1.9

Notes:
U: Not Detected at a Concentration Greater Than Corresponding RDL (Noted)
Bolding Indicates Analyte Detection.
VOL: Volatilization to Outdoor Air
SIDCI: Soil Ingestion, Dermal Contact, and Inhalation.
LTG: Leaching to Groundwater
> Max: The constituent RBC for this pathway is calculated as greater than 1,000,000 mg/kg or 1,000,000 mg/L. Therefore, this substance is deemed not to pose risks in this scenario.
>Csat: This soil RBC exceeds the limit of three-phase equilibrium partitioning.

TABLE 2
SUMMARY OF DETECTED SOIL VAPOR CHEMICAL ANALYTICAL RESULTS
8510 SW TERWILLIGER BLVD
PORTLAND, OREGON

Lab Sample ID			**310416-01**	**OREGON DEQ RBCs (REV. 2023)**	
Client Sample ID			**SV-01**		
Date Collected			**12/18/2023**	**COMMERCIAL**	
Method	**Analyte**	**Units**	**Result**	**ACUTE**	**CHRONIC**
TO-15	Vinyl Chloride	ug/m3	2.6 U	130,000	93
TO-15	Chloroethane	ug/m3	26 U	NE	NE
TO-15	1,1-Dichloroethene	ug/m3	4 U	NE	260
TO-15	trans-1,2-DCE	ug/m3	4 U	80,000	5,800
TO-15	1,1-DCE	ug/m3	4 U	20,000	29,000
TO-15	cis-1,2-DCE	ug/m3	4 U	NE	5,800
TO-15	EDC	ug/m3	0.4 U	NE	NE
TO-15	1,1,1-Trichloroethane	ug/m3	5.5 U	1,100,000	730,000
TO-15	TCE	ug/m3	1.1 U	210	100
TO-15	1,1,2-Trichloroethane	ug/m3	0.55 U	NE	26
TO-15	PCE	ug/m3	**170**	4,000	1,600

Notes:

U: Not Detected at a Concentration Greater Than Corresponding RDL (Noted)

Bolding Indicates Analyte Detection.

NE: Not Established

APPENDIX A

APPENDIX A

SUBSURFACE EXPLORATIONS

SEC observed subsurface explorations and obtained soil samples during this assessment. The soil encountered in the explorations was visually classified in general accordance with ASTM D 2488.

SOIL SAMPLING

Continuous soil samples were collected from the explorations. Soil samples obtained from the explorations were collected from decontaminated hand augers. Soil samples were placed in laboratory-supplied containers and immediately placed in an ice chest and kept cool until delivery to the laboratory. Standard chain-of-custody procedures were observed during transport of the samples to the laboratory.

SOIL SAMPLE FIELD SCREENING METHODS

SEC performed field screening tests on selected soil samples collected from the explorations. Field screening results aided in the selection of soil samples for chemical analysis. Screening methods included visual examination, water sheen screening, and headspace vapor screening using a MiniRAE PID.

Visual screening consisted of inspecting the soil for discoloration indicative of the presence of petroleum material in the sample. Water sheen screening involved placing soil in water and observing the water surface for signs of sheen. Sheen classifications are as follows:

No Sheen	No visible sheen on the water surface.
Slight Sheen	Light, colorless, dull sheen; spread is irregular, not rapid; sheen dissipates rapidly. Natural organic matter in the soil may produce a slight sheen.
Moderate Sheen	Light to heavy sheen; may have some color/iridescence; spread is irregular to flowing, may be rapid; few remaining areas of no sheen on water surface.
Heavy Sheen	Heavy sheen with color/iridescence; spread is rapid; entire water surface may be covered with sheen.

Headspace vapor screening is performed by placing a soil sample in a plastic bag. Air is captured in the bag, and the bag is shaken to expose the soil to the air trapped in the bag. The probe of a MiniRAE PID is inserted into the bag, and the MiniRAE PID measures VOC vapor concentrations in units of ppm. The MiniRAE PID is calibrated to isobutylene. The MiniRAE PID is designed to quantify VOC vapor concentrations in the range between 1 and 2,000 ppm with an accuracy of 10 percent of the reading and between 2,000 and 10,000 ppm with an accuracy of 20 percent of the reading.

Field screening results are site and exploration specific. The results may vary with temperature, soil moisture content, soil type, and type of contaminant.

VAPOR SAMPLING

SEC collected soil vapor by installing sampling systems that consisted of a decontaminated 0.5-foot-long stainless-steel sampling probe that were connected to laboratory-provided 6-liter sample canisters with in-line filters (0.7 micron), flow controllers (allowing less than 200 milliliters per minute), stainless-steel Swagelok™ fittings, and polytetrafluoroethylene tubing. A portable hand pump was used to verify that each sample train was airtight prior to installation. SEC Sealed the annular space between each sampling probe and the boring sidewalls with hydrated bentonite to minimize ambient air migration into the soil-gas sampling zone.

SEC Purged each sample train using a photoionization detector, then allowed each sampling system to equilibrate for approximately 30 to 60 minutes prior to collecting sample.

DECONTAMINATION

All sampling equipment used in the collection of samples was decontaminated prior to use. Decontamination was performed on all sample re-usable processing equipment that came into contact with sampling media, including tools, stainless steel implements, trowels, etc. Decontamination was performed prior to sampling each location using the following procedures:

1. Rinsed with tap water and scrubbed with a scrub brush until free of large particles (e.g., sediment or soil)
2. Washed with phosphate-free (Alconox™) detergent solution
3. Rinsed with tap water
4. Rinsed with distilled water

Logged By:	A.B.	Date	Started:	12/18/23	Drilling Contractor:	Drill Rig Type:
Driller:	B.C.		Completed:	12/18/23	Standard Probe, LLC	GeoProbe 6600
Locate Number:			Backfilled:	12/18/23	Bit Type: 3"	Diameter: 3"
23343197			Groundwater Depth: NOT ENCOUNTERED		Elevation: NOT MEASURED	Total Depth of Boring: 20

Depth (feet)	Graphic Log	Drilled Depth	Depth Recovered	Description	Odor / Staining	Sheen Test / PID Result	Additional Comments
		5	4	~5" Concrete Slab Tan to Gray Silty/Sandy Gravel (GM), Moist - FILL	No	NS 0.0	Soil Sample DP-1(12.0-14.0) Collected
				Brown SILT (ML), trace Sand, Moist	No	NS 0.0	
4					No	NS 0.0	
		5	4		No	NS 0.0	
8					No	NS 0.0	
					No	NS 0.0	
12		5	4	Moisture Content Increases	No	NS 0.0	
					No	NS 0.0	
16					No	NS 0.0	
		5	5	Reddish-Brown CLAY (CL) with Mottles, Moist	No	NS 0.0	
20				Boring Complete at 20' BGS			

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BH-1-01	Boring DP-1	
JANUARY 2024	8510 SW TERWILLIGER BLVD PORTLAND, OR	APPENDIX A

Logged By:	A.B.	Date	Started:	12/18/23	Drilling Contractor:	Drill Rig Type:
Driller:	B.C.		Completed:	12/18/23	Standard Probe, LLC	GeoProbe 6600
Locate Number:			Backfilled:	12/18/23	Bit Type: 3"	Diameter: 3"
23343197			Groundwater Depth: NOT ENCOUNTERED		Elevation: NOT MEASURED	Total Depth of Boring: 20

Depth (feet)	Graphic Log	Drilled Depth	Depth Recovered	Description	Odor / Staining	Sheen Test / PID Result	Additional Comments
				~5" Asphalt Slab			
		5	4	Tan to Gray Silty/Sandy Gravel (GM), Moist - FILL	No	NS 0.0	
				Brown SILT (ML), trace Sand, Moist	No	NS 0.0	
4					No	NS 0.0	
		5	4		No	NS 0.0	Soil Samples DP-2(10.0-12.0) DP-2(18.0-20.0) Collected
8					No	NS 0.0	
				Moisture Content Increases	No	NS 0.0	
12		5	4		No	NS 0.0	
					No	NS 0.0	
16		5	5	Reddish-Brown CLAY (CL) with Mottles, Moist	No	NS 0.0	
					No	NS 0.0	
20				Boring Complete at 20' BGS			

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BH-1-01	Boring DP-2	
JANUARY 2024	8510 SW TERWILLIGER BLVD PORTLAND, OR	APPENDIX A

Logged By:	A.B.	Date	Started:	12/18/23	Drilling Contractor:	Drill Rig Type:
Driller:	B.C.		Completed:	12/18/23	Standard Probe, LLC	GeoProbe 6600
Locate Number:			Backfilled:	12/18/23	Bit Type: 3"	Diameter: 3"
23343197			Groundwater Depth: NOT ENCOUNTERED		Elevation: NOT MEASURED	Total Depth of Boring: 20

Depth (feet)	Graphic Log	Drilled Depth	Depth Recovered	Description	Odor / Staining	Sheen Test / PID Result	Additional Comments
				~5" Asphalt Slab			
		5	4	Tan to Gray Silty/Sandy Gravel (GM), Moist - FILL	No	NS 0.0	
				Brown SILT (ML), trace Sand, Moist	No	NS 0.0	
4					No	NS 0.0	
		5	4		No	NS 0.0	Soil Samples DP-3(5.0-7.0) DP-3(13.0-15.0) Collected
8					No	NS 0.0	
				Moisture Content Increases	No	NS 0.0	
12		5	4		No	NS 0.0	
					No	NS 0.0	
16		5	5	Reddish-Brown CLAY (CL) with Mottles, Moist	No	NS 0.0	
					No	NS 0.0	
20				Boring Complete at 20' BGS			

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BH-1-01	Boring DP-3	
JANUARY 2024	8510 SW TERWILLIGER BLVD PORTLAND, OR	APPENDIX A

Logged By:	A.B.	Date	Started:	12/18/23	Drilling Contractor:	Drill Rig Type:
Driller:	B.C.		Completed:	12/18/23	Standard Probe, LLC	GeoProbe 6600
Locate Number:			Backfilled:	12/18/23	Bit Type: 3"	Diameter: 3"
23343197			Groundwater Depth: NOT ENCOUNTERED		Elevation: NOT MEASURED	Total Depth of Boring: 15'

Depth (feet)	Graphic Log	Drilled Depth	Depth Recovered	Description	Odor / Staining	Sheen Test / PID Result	Additional Comments
		5	2	~5" Asphalt Slab Tan to Gray Silty/Sandy Gravel (GM), Moist - FILL	No	NS 0.0	Soil Sample DP-4(12.0-14.0) Collected
				Brown SILT (ML), trace Sand, Moist	No	NS 0.0	
4					No	NS 0.0	
		5	5		No	NS 0.0	
8					No	NS 0.0	
					No	NS 0.0	
12		5	4	Moisture Content Increases	No	NS 0.0	
				Boring Complete at 15' BGS (Drilling Difficulties)			
16							
20							

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BH-1-01	Boring DP-4	
JANUARY 2024	8510 SW TERWILLIGER BLVD PORTLAND, OR	APPENDIX A

Logged By:	A.B.	Date	Started:	12/18/23	Drilling Contractor:	Drill Rig Type:
Driller:	B.C.		Completed:	12/18/23	Standard Probe, LLC	GeoProbe 6600
Locate Number:			Backfilled:	12/18/23	Bit Type: 3"	Diameter: 3"
23343197			Groundwater Depth: NOT ENCOUNTERED		Elevation: NOT MEASURED	Total Depth of Boring: 20

Depth (feet)	Graphic Log	Drilled Depth	Depth Recovered	Description	Odor / Staining	Sheen Test / PID Result	Additional Comments
		5	3	~5" Asphalt Slab Tan to Gray Silty/Sandy Gravel (GM), Moist - FILL	No	NS 0.0	Soil Samples DP-5(10.0-12.0) DP-5(18.0-20.0) Collected
				Brown SILT (ML), trace Sand, Moist	No	NS 0.0	
4					No	NS 0.0	
		5	4		No	NS 0.0	
8					No	NS 0.0	
				Moisture Content Increases	No	NS 0.0	
12		5	4		No	NS 0.0	
					No	NS 0.0	
16		5	5	Reddish-Brown CLAY (CL) with Mottles, Moist	No	NS 0.0	
					No	NS 0.0	
20				Boring Complete at 20' BGS			

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BH-1-01	Boring DP-5	
JANUARY 2024	8510 SW TERWILLIGER BLVD PORTLAND, OR	APPENDIX A

Logged By:	A.B.	Date	Started:	12/18/23	Drilling Contractor:	Drill Rig Type:
Driller:	B.C.		Completed:	12/18/23	Standard Probe, LLC	GeoProbe 6600
Locate Number:			Backfilled:	12/18/23	Bit Type: 3"	Diameter: 3"
23343197			Groundwater Depth: NOT ENCOUNTERED		Elevation: NOT MEASURED	Total Depth of Boring: 20

Depth (feet)	Graphic Log	Drilled Depth	Depth Recovered	Description	Odor / Staining	Sheen Test / PID Result	Additional Comments
				~5" Asphalt Slab			
		5	3	Tan to Gray Silty/Sandy Gravel (GM), Moist - FILL	No	NS 0.0	
				Brown SILT (ML), trace Sand, Moist	No	NS 0.0	
4					No	NS 0.0	
		5	4		No	NS 0.0	Soil Samples DP-6(12.0-14.0) DP-6(18.0-20.0) Collected
8					No	NS 0.0	
				Moisture Content Increases	No	NS 0.0	
12		5	4	Becomes Gray-Blue	No	NS 1.0	
				Becomes Brown	No	NS 0.0	
16					No	NS 0.0	
		5	5	Gray Gravel (GP), with Sand, Moist	No	NS 0.0	
20				Boring Complete at 20' BGS			

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BH-1-01	Boring DP-6	
JANUARY 2024	8510 SW TERWILLIGER BLVD PORTLAND, OR	APPENDIX A

Logged By:	A.B.	Date	Started:	12/18/23	Drilling Contractor:	Drill Rig Type:
Driller:	B.C.		Completed:	12/18/23	Standard Probe, LLC	GeoProbe 6600
Locate Number:			Backfilled:	12/18/23	Bit Type: 3"	Diameter: 3"
23343197			Groundwater Depth: NOT ENCOUNTERED		Elevation: NOT MEASURED	Total Depth of Boring: 8'

Depth (feet)	Graphic Log	Drilled Depth	Depth Recovered	Description	Odor / Staining	Sheen Test / PID Result	Additional Comments
		5	2	Bark Chips (2" Layer)	No	NS 0.0	Soil Sample DP-7(6.0-8.0) Collected
				Brown SILT (ML), trace Sand, Moist	No	NS 0.0	
4				Gravel layer encountered at 3' BGS	No	NS 0.0	
		5	5	Brown Silty/Sandy Gravel (GM), Moist	No	NS 0.0	
8				Boring Complete at 8' BGS (Drilling Refusal)			
12		5	4				
16							
20							

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BH-1-01	Boring DP-7	
JANUARY 2024	8510 SW TERWILLIGER BLVD PORTLAND, OR	APPENDIX A

APPENDIX B

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

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

December 27, 2023

Andrew Blake, Project Manager
Succeed Environmental Consulting, LLC
1631 NE Broadway 211
Portland, OR 97232

Dear Mr Blake:

Included are the results from the testing of material submitted on December 19, 2023 from the BN-1, F&BI 312341 project. There are 15 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
SCD1227R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on December 19, 2023 by Friedman & Bruya, Inc. from the Succeed Environmental Consulting, LLC BN-1, F&BI 312341 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Succeed Environmental Consulting, LLC
312341 -01	DP-1(12.0-14.0)
312341 -02	DP-2(10.0-12.0)
312341 -03	DP-2(18.0-20.0)
312341 -04	DP-3(5.0-7.0)
312341 -05	DP-3(13.0-15.0)
312341 -06	DP-4(12.0-14.0)
312341 -07	DP-5(10.0-12.0)
312341 -08	DP-5(18.0-20.0)
312341 -09	DP-6(12.0-14.0)
312341 -10	DP-6(18.0-20.0)
312341 -11	DP-7(6.0-8.0)

All quality control requirements were acceptable.

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	DP-1(12.0-14.0)	Client:	Succeed Environmental Consulting, LLC
Date Received:	12/19/23	Project:	BN-1, F&BI 312341
Date Extracted:	12/19/23	Lab ID:	312341-01
Date Analyzed:	12/19/23	Data File:	121919.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MD

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	104	86	114
Toluene-d8	106	86	115
4-Bromofluorobenzene	99	83	116

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.05
Chloroethane	<0.5
1,1-Dichloroethene	<0.05
Methylene chloride	<0.5
trans-1,2-Dichloroethene	<0.05
1,1-Dichloroethane	<0.05
cis-1,2-Dichloroethene	<0.05
1,2-Dichloroethane (EDC)	<0.05
1,1,1-Trichloroethane	<0.05
Trichloroethene	<0.02
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	DP-2(10.0-12.0)	Client:	Succeed Environmental Consulting, LLC
Date Received:	12/19/23	Project:	BN-1, F&BI 312341
Date Extracted:	12/19/23	Lab ID:	312341-02
Date Analyzed:	12/19/23	Data File:	121920.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MD

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	86	114
Toluene-d8	104	86	115
4-Bromofluorobenzene	98	83	116

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.05
Chloroethane	<0.5
1,1-Dichloroethene	<0.05
Methylene chloride	<0.5
trans-1,2-Dichloroethene	<0.05
1,1-Dichloroethane	<0.05
cis-1,2-Dichloroethene	<0.05
1,2-Dichloroethane (EDC)	<0.05
1,1,1-Trichloroethane	<0.05
Trichloroethene	<0.02
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	DP-2(18.0-20.0)	Client:	Succeed Environmental Consulting, LLC
Date Received:	12/19/23	Project:	BN-1, F&BI 312341
Date Extracted:	12/19/23	Lab ID:	312341-03
Date Analyzed:	12/19/23	Data File:	121921.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MD

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	108	86	114
Toluene-d8	105	86	115
4-Bromofluorobenzene	99	83	116

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.05
Chloroethane	<0.5
1,1-Dichloroethene	<0.05
Methylene chloride	<0.5
trans-1,2-Dichloroethene	<0.05
1,1-Dichloroethane	<0.05
cis-1,2-Dichloroethene	<0.05
1,2-Dichloroethane (EDC)	<0.05
1,1,1-Trichloroethane	<0.05
Trichloroethene	<0.02
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	DP-3(5.0-7.0)	Client:	Succeed Environmental Consulting, LLC
Date Received:	12/19/23	Project:	BN-1, F&BI 312341
Date Extracted:	12/19/23	Lab ID:	312341-04
Date Analyzed:	12/19/23	Data File:	121922.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MD

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	107	86	114
Toluene-d8	100	86	115
4-Bromofluorobenzene	100	83	116

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.05
Chloroethane	<0.5
1,1-Dichloroethene	<0.05
Methylene chloride	<0.5
trans-1,2-Dichloroethene	<0.05
1,1-Dichloroethane	<0.05
cis-1,2-Dichloroethene	<0.05
1,2-Dichloroethane (EDC)	<0.05
1,1,1-Trichloroethane	<0.05
Trichloroethene	<0.02
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	DP-3(13.0-15.0)	Client:	Succeed Environmental Consulting, LLC
Date Received:	12/19/23	Project:	BN-1, F&BI 312341
Date Extracted:	12/19/23	Lab ID:	312341-05
Date Analyzed:	12/19/23	Data File:	121923.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MD

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	86	114
Toluene-d8	100	86	115
4-Bromofluorobenzene	98	83	116

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.05
Chloroethane	<0.5
1,1-Dichloroethene	<0.05
Methylene chloride	<0.5
trans-1,2-Dichloroethene	<0.05
1,1-Dichloroethane	<0.05
cis-1,2-Dichloroethene	<0.05
1,2-Dichloroethane (EDC)	<0.05
1,1,1-Trichloroethane	<0.05
Trichloroethene	<0.02
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	DP-4(12.0-14.0)	Client:	Succeed Environmental Consulting, LLC
Date Received:	12/19/23	Project:	BN-1, F&BI 312341
Date Extracted:	12/19/23	Lab ID:	312341-06
Date Analyzed:	12/19/23	Data File:	121924.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MD

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	109	86	114
Toluene-d8	100	86	115
4-Bromofluorobenzene	95	83	116

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.05
Chloroethane	<0.5
1,1-Dichloroethene	<0.05
Methylene chloride	<0.5
trans-1,2-Dichloroethene	<0.05
1,1-Dichloroethane	<0.05
cis-1,2-Dichloroethene	<0.05
1,2-Dichloroethane (EDC)	<0.05
1,1,1-Trichloroethane	<0.05
Trichloroethene	<0.02
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	DP-5(10.0-12.0)	Client:	Succeed Environmental Consulting, LLC
Date Received:	12/19/23	Project:	BN-1, F&BI 312341
Date Extracted:	12/19/23	Lab ID:	312341-07
Date Analyzed:	12/19/23	Data File:	121925.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MD

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	86	114
Toluene-d8	98	86	115
4-Bromofluorobenzene	91	83	116

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.05
Chloroethane	<0.5
1,1-Dichloroethene	<0.05
Methylene chloride	<0.5
trans-1,2-Dichloroethene	<0.05
1,1-Dichloroethane	<0.05
cis-1,2-Dichloroethene	<0.05
1,2-Dichloroethane (EDC)	<0.05
1,1,1-Trichloroethane	<0.05
Trichloroethene	<0.02
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	DP-5(18.0-20.0)	Client:	Succeed Environmental Consulting, LLC
Date Received:	12/19/23	Project:	BN-1, F&BI 312341
Date Extracted:	12/19/23	Lab ID:	312341-08
Date Analyzed:	12/19/23	Data File:	121929.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MD

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	91	86	114
Toluene-d8	104	86	115
4-Bromofluorobenzene	100	83	116

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.05
Chloroethane	<0.5
1,1-Dichloroethene	<0.05
Methylene chloride	<0.5
trans-1,2-Dichloroethene	<0.05
1,1-Dichloroethane	<0.05
cis-1,2-Dichloroethene	<0.05
1,2-Dichloroethane (EDC)	<0.05
1,1,1-Trichloroethane	<0.05
Trichloroethene	<0.02
Tetrachloroethene	0.051

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	DP-6(12.0-14.0)	Client:	Succeed Environmental Consulting, LLC
Date Received:	12/19/23	Project:	BN-1, F&BI 312341
Date Extracted:	12/19/23	Lab ID:	312341-09
Date Analyzed:	12/19/23	Data File:	121926.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MD

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	86	114
Toluene-d8	103	86	115
4-Bromofluorobenzene	96	83	116

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.05
Chloroethane	<0.5
1,1-Dichloroethene	<0.05
Methylene chloride	<0.5
trans-1,2-Dichloroethene	<0.05
1,1-Dichloroethane	<0.05
cis-1,2-Dichloroethene	<0.05
1,2-Dichloroethane (EDC)	<0.05
1,1,1-Trichloroethane	<0.05
Trichloroethene	<0.02
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	DP-6(18.0-20.0)	Client:	Succeed Environmental Consulting, LLC
Date Received:	12/19/23	Project:	BN-1, F&BI 312341
Date Extracted:	12/19/23	Lab ID:	312341-10
Date Analyzed:	12/19/23	Data File:	121927.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MD

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	105	86	114
Toluene-d8	99	86	115
4-Bromofluorobenzene	95	83	116

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.05
Chloroethane	<0.5
1,1-Dichloroethene	<0.05
Methylene chloride	<0.5
trans-1,2-Dichloroethene	<0.05
1,1-Dichloroethane	<0.05
cis-1,2-Dichloroethene	<0.05
1,2-Dichloroethane (EDC)	<0.05
1,1,1-Trichloroethane	<0.05
Trichloroethene	<0.02
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	DP-7(6.0-8.0)	Client:	Succeed Environmental Consulting, LLC
Date Received:	12/19/23	Project:	BN-1, F&BI 312341
Date Extracted:	12/19/23	Lab ID:	312341-11
Date Analyzed:	12/19/23	Data File:	121928.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MD

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	105	86	114
Toluene-d8	104	86	115
4-Bromofluorobenzene	96	83	116

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.05
Chloroethane	<0.5
1,1-Dichloroethene	<0.05
Methylene chloride	<0.5
trans-1,2-Dichloroethene	<0.05
1,1-Dichloroethane	<0.05
cis-1,2-Dichloroethene	<0.05
1,2-Dichloroethane (EDC)	<0.05
1,1,1-Trichloroethane	<0.05
Trichloroethene	<0.02
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	Method Blank	Client:	Succeed Environmental Consulting, LLC
Date Received:	Not Applicable	Project:	BN-1, F&BI 312341
Date Extracted:	12/19/23	Lab ID:	03-2909 mb
Date Analyzed:	12/19/23	Data File:	121906.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MD

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	104	86	114
Toluene-d8	103	86	115
4-Bromofluorobenzene	98	83	116

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.05
Chloroethane	<0.5
1,1-Dichloroethene	<0.05
Methylene chloride	<0.5
trans-1,2-Dichloroethene	<0.05
1,1-Dichloroethane	<0.05
cis-1,2-Dichloroethene	<0.05
1,2-Dichloroethane (EDC)	<0.05
1,1,1-Trichloroethane	<0.05
Trichloroethene	<0.02
Tetrachloroethene	<0.025

Date of Report: 12/27/23
Date Received: 12/19/23
Project: BN-1, F&BI 312341

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

Laboratory Code: 312314-05 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Vinyl chloride	mg/kg (ppm)	2	<0.05	61	64	10-138	5
Chloroethane	mg/kg (ppm)	2	<0.5	91	87	10-176	4
1,1-Dichloroethene	mg/kg (ppm)	2	<0.05	69	69	10-160	0
Methylene chloride	mg/kg (ppm)	2	<0.5	79	83	10-156	5
trans-1,2-Dichloroethene	mg/kg (ppm)	2	<0.05	73	73	14-137	0
1,1-Dichloroethane	mg/kg (ppm)	2	<0.05	79	78	19-140	1
cis-1,2-Dichloroethene	mg/kg (ppm)	2	<0.05	75	75	25-135	0
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2	<0.05	81	79	12-160	2
1,1,1-Trichloroethane	mg/kg (ppm)	2	<0.05	81	81	10-156	0
Trichloroethene	mg/kg (ppm)	2	<0.02	82	80	21-139	2
Tetrachloroethene	mg/kg (ppm)	2	<0.025	80	85	20-133	6

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Vinyl chloride	mg/kg (ppm)	2	79	22-139
Chloroethane	mg/kg (ppm)	2	108	10-163
1,1-Dichloroethene	mg/kg (ppm)	2	81	47-128
Methylene chloride	mg/kg (ppm)	2	91	10-184
trans-1,2-Dichloroethene	mg/kg (ppm)	2	89	64-132
1,1-Dichloroethane	mg/kg (ppm)	2	92	64-135
cis-1,2-Dichloroethene	mg/kg (ppm)	2	89	64-135
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2	95	56-135
1,1,1-Trichloroethane	mg/kg (ppm)	2	96	62-131
Trichloroethene	mg/kg (ppm)	2	96	63-139
Tetrachloroethene	mg/kg (ppm)	2	96	68-128

Data Qualifiers & Definitions

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

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

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

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

cf - The sample was centrifuged prior to analysis.

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

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

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

312341

SAMPLE CHAIN OF CUSTODY

12/19/23 N3

Page # 1 of 2

Report To Andrew Blake

Company SEC

Address 16[redacted] NE Broadway #211

City, State, ZIP Portland, OR 97232

Phone 971-371-0404 Email ablake@sweed-envi.com

SAMPLERS (*signature*)

PROJECT NAME	PO #
BH-1	—
REMARKS	**INVOICE TO**
—	SEC
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	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082					Notes
DP-1 (12.0-14.0)	01 A-D	12/18/23	1010	SS	4					X							
DP-2 (10.0-12.0)	02		1030	SS	4					X							
DP-2 (18.0-20.0)	03		1040	SS	4					X							
DP-3 (5.0-7.0)	04		1100	SS	4					X							
DP-3 (13.0-15.0)	05		1110	SS	4					X							
DP-4 (12.0-14.0)	06		1150	SS	4					X							
DP-5 (10.0-12.0)	07		1220	SS	4					X							
DP-5 (18.0-20.0)	08		1225	SS	4					X							Samples received at 4 °C
DP-6 (12.0-14.0)	09		1300	SS	4					X							
DP-6 (18.0-20.0)	10		1310	SS	4					X							

ANALYSES REQUESTED

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	A. Blake	SEC	12/19/23	FEDEX
Received by: D. M-B	Liz Webber-Bruya	F?B	12/19/23	748
Relinquished by:				
Received by:				

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

312341

SAMPLE CHAIN OF CUSTODY 12/19/23 N3

Page # 2 of 2

Report To [redacted] L. Blake

Company SEC

Address 1631 NE Broadway #211

City, State, ZIP Portland, OR 97232

Phone 971-371-0404 Email lblake@secnrl-env.com

SAMPLERS (*signature*) [redacted]	
PROJECT NAME BN-1	PO # —
REMARKS —	INVOICE TO SEC
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	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082					Notes
DP-7 (6.0-8.0)	11 A-D	12/18/23	1340	SS	4					X							
						Samples received at 4 °C											

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Lauren Blake	SEC	12/18/23	FEDEX
Received by: D. M. B	Liz Webster-Bruya	FTB	12/19/23	748
Relinquished by:				
Received by:				

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

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

December 27, 2023

Andrew Blake, Project Manager
Succeed Environmental Consulting, LLC
1631 NE Broadway 211
Portland, OR 97232

Dear Mr Blake:

Included are the results from the testing of material submitted on December 19, 2023 from the BW-1, F&BI 312342 project. There are 5 pages included in this report.

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

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
SCD1227R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on December 19, 2023 by Friedman & Bruya, Inc. from the Succeed Environmental Consulting, LLC BW-1, F&BI 312342 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Succeed Environmental Consulting, LLC
312342 -01	SV-01

All quality control requirements were acceptable.

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	SV-01	Client:	Succeed Environmental Consulting, LLC
Date Received:	12/19/23	Project:	BW-1, F&BI 312342
Date Collected:	12/18/23	Lab ID:	312342-01 1/10
Date Analyzed:	12/20/23	Data File:	121928.D
Matrix:	Air	Instrument:	GCMS8
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	92	70	130

Compounds:	Concentration ug/m3	ppbv
Vinyl chloride	<2.6	<1
Chloroethane	<26	<10
1,1-Dichloroethene	<4	<1
trans-1,2-Dichloroethene	<4	<1
1,1-Dichloroethane	<4	<1
cis-1,2-Dichloroethene	<4	<1
1,2-Dichloroethane (EDC)	<0.4	<0.1
1,1,1-Trichloroethane	<5.5	<1
Trichloroethene	<1.1	<0.2
1,1,2-Trichloroethane	<0.55	<0.1
Tetrachloroethene	170	25

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	Method Blank	Client:	Succeed Environmental Consulting, LLC
Date Received:	Not Applicable	Project:	BW-1, F&BI 312342
Date Collected:	Not Applicable	Lab ID:	03-2915 mb
Date Analyzed:	12/19/23	Data File:	121911.D
Matrix:	Air	Instrument:	GCMS8
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	89	70	130

Compounds:	Concentration ug/m3	ppbv
Vinyl chloride	<0.26	<0.1
Chloroethane	<2.6	<1
1,1-Dichloroethene	<0.4	<0.1
trans-1,2-Dichloroethene	<0.4	<0.1
1,1-Dichloroethane	<0.4	<0.1
cis-1,2-Dichloroethene	<0.4	<0.1
1,2-Dichloroethane (EDC)	<0.04	<0.01
1,1,1-Trichloroethane	<0.55	<0.1
Trichloroethene	<0.11	<0.02
1,1,2-Trichloroethane	<0.055	<0.01
Tetrachloroethene	<6.8	<1

Date of Report: 12/27/23
Date Received: 12/19/23
Project: BW-1, F&BI 312342

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF AIR SAMPLES FOR VOLATILES BY METHOD TO-15

Laboratory Code: 312298-01 1/5.0 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 30)
Vinyl chloride	ug/m3	<1.3	<1.3	nm
Chloroethane	ug/m3	<13	<13	nm
1,1-Dichloroethene	ug/m3	<2	<2	nm
trans-1,2-Dichloroethene	ug/m3	<2	<2	nm
1,1-Dichloroethane	ug/m3	<2	<2	nm
cis-1,2-Dichloroethene	ug/m3	<2	<2	nm
1,2-Dichloroethane (EDC)	ug/m3	<0.2	<0.2	nm
1,1,1-Trichloroethane	ug/m3	<2.7	<2.7	nm
Trichloroethene	ug/m3	<0.54	<0.54	nm
1,1,2-Trichloroethane	ug/m3	<0.27	<0.27	nm
Tetrachloroethene	ug/m3	<34	<34	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Vinyl chloride	ug/m3	35	85	70-130
Chloroethane	ug/m3	36	92	70-130
1,1-Dichloroethene	ug/m3	54	93	70-130
trans-1,2-Dichloroethene	ug/m3	54	96	70-130
1,1-Dichloroethane	ug/m3	55	95	70-130
cis-1,2-Dichloroethene	ug/m3	54	89	70-130
1,2-Dichloroethane (EDC)	ug/m3	55	92	70-130
1,1,1-Trichloroethane	ug/m3	74	106	70-130
Trichloroethene	ug/m3	73	101	70-130
1,1,2-Trichloroethane	ug/m3	74	110	70-130
Tetrachloroethene	ug/m3	92	113	70-130

Data Qualifiers & Definitions

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

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

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

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

cf - The sample was centrifuged prior to analysis.

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

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

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

312342

SAMPLE CHAIN OF CUSTODY

Report To SEC: Andrew Blake

Company SEC

Address 1631 NE Broadway #211

City, State, ZIP Portland, OR 97232

Phone 971-371-0404 Email ablake@secweb-inc.com

SAMPLERS (*signature*) ME 12-19-23

Page # 1 of 1

PROJECT NAME	PO #
BW-1	–
REMARKS	**INVOICE TO**
–	SEC
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	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	TO-15 cVOCs				Notes
SV-01	01	12/18/23	1125	SV	1 SN:3416								X				Flow Cont: 305
																	-28" HG @ 1125
																	-7" HG @ 1130
																	Can No. 3416
													Samples received at 4 °C				

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Andrew Blake	SEC	12/18	FED EX
Received by:	Liz Webber-Bryan	F?B	12/19	748
Relinquished by:				
Received by:				

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

APPENDIX B

CHEMICAL ANALYTICAL PROGRAM

GENERAL

Chain-of-custody procedures were followed during handling and transport of the samples to the analytical laboratory. The laboratory holds the samples in cold storage pending extraction and/or analysis. The analytical results, analytical methods reference, and laboratory QC records are presented in this appendix. The analytical results also are summarized in the tables of this report.

REVIEW OF ANALYTICAL DATA

The analytical laboratories used for this project maintain an internal quality assurance programs consisting of a combination of the following:

Blanks: Blanks are laboratory-prepared water samples that are free of contaminants. The blanks are carried through the analysis procedure along with the field samples to document that contaminants were not introduced to the samples during sample handling and analysis.

Surrogate Recoveries: Surrogates are organic compounds that are similar in nature to the analytes of concern but are not normally found in nature. The surrogates are added to QC and field samples prior to analysis. The percent recovery of the surrogate is calculated to demonstrate acceptable method performance.

Duplicates: Duplicates are obtained by splitting a sample into two parts. The two separate parts are carried through the analyses. The analytical results are then compared by calculating the RPD between the samples.

MS/MSD Recoveries: An MS sample is a sample that has been split into a second portion. The MSD is obtained by further splitting the MS sample. A known concentration of the analyte of interest is added to the MS and MSD samples. The analytical results for both samples are then compared for RPD and percent recovery to demonstrate acceptable method performance.

BS/BSD Recoveries: BS and BSD samples are obtained and analyzed in the same procedure as the MS/MSD samples; however, the laboratory blank sample is used to obtain the BS/BSD samples. The percent recovery and RPD of the known concentration of analyte of interest added to the BS/BSD sample is calculated after chemical analyses to demonstrate acceptable method performance.

SUMMARY OF ANALYTICAL DATA REVIEW

SEC reviewed the attached analytical data reports for data quality exceptions and deviations from acceptable method performance criteria. Based on our review of the analytical reports, the analytical data appear acceptable for their intended use.

COMMON ACRONYMS AND ABBREVIATIONS

ACM	asbestos-containing material
AST	aboveground storage tank
ASTM	American Society for Testing and Materials
BGS	below ground surface
BS/BSD	blank spike/blank spike duplicate
BTEX	benzene, toluene, ethylbenzene, xylenes
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CFR	Code of Federal Regulations
CFSL	Clean Fill Screening Level
DEQ	Oregon Department of Environmental Quality
Ecology	Washington Department of Ecology
ECSI	Environmental Cleanup Site Information
EPA	U.S. Environmental Protection Agency
ESA	Environmental Site Assessment
GC/MS	gas chromatography/mass spectrometer
HBMS	hazardous building materials survey
HDPE	high density polyethylene
HOT	Heating Oil Tank
HVOC	halogenated volatile organic compound
IDW	investigation-derived waste
kg	kilogram
LBP	lead-based paint
LUST	Leaking Underground Storage Tank
mg/kg	milligrams per kilogram
mg/L	milligrams per liter
MS	matrix spike
ODOT	Oregon Department of Transportation
ORS	Oregon Revised Statute
PAHs	polynuclear aromatic hydrocarbons
PCB	polychlorinated biphenyl
PID	photoionization detector
PPA	Prospective Purchaser Agreement
ppm	parts per million
QC	quality control
RBC	DEQ Risk-Based Concentrations
RCRA	Resource Conservation and Recovery Act
RDL	reported detection limit
ROW	right-of-way
SEC	Succeed Environmental Consulting LLC
TPH	Total Petroleum Hydrocarbons
USGS	U.S. Geological Survey
UST	underground storage tank
VCP	Voluntary Cleanup Program
VOCs	volatile organic compounds