Phase II Environmental Site Assessment Report

Conducted on:
Franciscan West Seattle
4550 Fauntleroy Way SW
Seattle, Washington 98126

Prepared for:
Huling Brothers Properties LLC
c/o Mr. Ken Lederman
McCullough Hill Leary, PS
701 Fifth Avenue, Suite 6600
Seattle, Washington 98104

Prepared & Reviewed by:

Paul Hitch
Project Geologist

Scott Rose, L.H.G.
Director of Technical Services

State of Washington
Hydrogeologist
2635
Licensed Geologist
SCOTT I ROSE

AEG Project #: 22-148
Date of Report: March 15, 2023

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1.0 INTRODUCTION

AEG Atlas, LLC (AEG) completed a Phase II Environmental Site Assessment (ESA) for the real property located at 4550 Fauntleroy Way SW in Seattle, King County, Washington (Site). This investigation was performed in accordance with Washington Administrative Code (WAC) 173-340 – Model Toxics Control Act (MTCA). The objective of this Phase II ESA was to investigate the Site for potential historic releases to soil and/or groundwater (along with potential impacts to sub-slab vapor) associated with alleged historical use as an auto body shop.

1.1 Site and Vicinity Area Background

The Site consists of one King County Assessor Tax Parcel (09520-07545) totaling 0.64 acres and is situated on an irregular-shaped block formed by Fauntleroy Way Southwest to the north, a Shell-branded fueling station to the west, Southwest Alaska Street to the south, and 38th Avenue Southwest to the east. According to the King County Assessor, the Site is currently owned by Huling Brothers Properties LLC. Access to the Site is either from Fauntleroy Way SW, Southwest Alaska Street, or 38th Avenue SW. The Site currently maintains a medical office building operated by Franciscan West Seattle. The building includes basement offices and exam rooms, with associated asphalt-paved parking and landscaping.

The immediate surrounding properties include Fauntleroy Way SW followed by a grocery store (Trader Joe's) to the northwest; a narrow alleyway to the west immediately followed by a historic and active fueling station (Shell); SW Alaska St followed by a tire shop (Les Schwab Tire Center) to the south; and 38th Avenue SW followed by a restaurant (West of Chicago Pizza Company) and apartments to the east. The location of the Sit is illustrated in Figure 1, *Site Vicinity Map*, and the Site layout is illustrated in Figure 2, *Site Map*.

The Shell station located adjacent to the west and upgradient of the Site is an active MTCA cleanup site (Facility/Site ID No. 99437681). The cleanup was initiated by Arcadis U.S., Inc. (Arcadis), and is currently being performed by Antea Group (Antea) on behalf of BP West Coast Products, LLC (BP). A release of gasoline was first discovered and reported to the Washington State Department of Ecology (Ecology) in 1992. Characterization and cleanup of the release has been ongoing since. Groundwater data collected to date has identified concentrations of gasoline-, diesel-, and oil-range petroleum hydrocarbons (TPH), benzene, toluene, ethylbenzene, and xylenes (BTEX), and methyl tert-butyl ether (MTBE) above MTCA cleanup levels. Currently, Antea is operating an air sparging/soil vapor extraction (AS/SVE) system on the property, which was started in April 2016. Multiple AS/SVE wells are located throughout that property, as well as multiple groundwater monitoring wells to monitor the performance of the system. Some of these wells, including MW-9, MW-11, MW-12, and GMW-1, are located on the Site (an Arcadis figure illustrating the locations of these wells is included in Appendix B). Light non-aqueous phase liquid

(LNAPL) has historically been measured in wells EW-1, EW-3, GWM-1, MW-4, and VE-1. As stated above, GWM-1 is located on the Site.

1.2 Site History

According to available historical sources, the Site was undeveloped land in an undeveloped area of Seattle as early as 1895. The Site appears to have remained unimproved until sometime between 1917 and 1929 when the Site was developed with one structure labeled to be a milk depot (Sanborn Fire Insurance Map, dated 1929). The physical address of the Site was listed as 3808 Alaska Street and 4554 Fauntleroy Avenue in the 1929 Sanborn map.

According to the Sanborn Fire Insurance Maps, the building was remodeled for the Young Men's Christian Association (YMCA) circa 1940. A swimming pool was added circa 1960. The YMCA was the identified occupant of the structure until circa 1980.

From the mid-1950s until circa 2009, the northern portion of the Site was an automotive sales lot. In 2011, the City of Seattle issued a permit to change the use from automotive sales to medical services. The Site has been operated by Franciscan West Seattle as an Urgent Care and Women's Health Clinic since that time.

In May 2018, NOW Environmental Services (NOW) collected two rounds of indoor air samples from basement areas of the medical office building in response to complaints from staff of petroleum odors in the building. Analytical results indicated the presence of gasoline-range organics (GRO) and associated volatile organic compounds (VOCs) at concentrations exceeding their respective MTCA Method B indoor air cleanup levels.

In July 2018, AEG was retained to evaluate soil gas surrounding the Site building and sub-slab vapors beneath the building. Analytical results of soil gas and sub-slab vapor indicated the presence of air-phase hydrocarbons (APH) and multiple VOCs above their respective MTCA Method B sub-slab screening levels. An exceedance of these levels indicates a contaminant is present at a concentration that has the potential to migrate into a surrounding structure.

In November 2018, in response to the vapor and indoor air assessment results, AEG installed a sub-slab depressurization (SSD) system at the Site as a mitigation measure. This SSD system was installed to prevent any potential vapors that might collect beneath the slab from migrating into the indoor air of the offices and exam rooms. The SSD system was designed to redirect any sub-slab vapors that may collect below the building slab to the outside air via an exhaust port on the roof. The system has been operating continuously since installation, and no further complaints from staff regarding odors have since been reported.

AEG completed a Phase I ESA for the Site in August 2022. Recognized environmental conditions (RECs) identified by AEG included the following:

- *AEG understands that the Washington State Department of Ecology (Ecology) listed the subject property on the CSCSL, ALLSITES, and SPILLS databases following receipt of indoor air data indicating the presence of aliphatic hydrocarbons in the air-phase (APH) and selected volatile organic compounds (VOCs) above their respective Model Toxics Control Act (MTCA) Method B cleanup levels in the subject structure. The unknown source of these substances combined with the presence of these vapors inside the building is classified as a REC for the subject property.*
- *The west-adjoining property has operated as a gasoline station since at least 1930. A release to soil and groundwater was reported to Ecology in 1992. Multiple environmental investigations have been conducted at this site since that time. According to the 2020 Annual Groundwater Monitoring Report prepared by Antea Group and submitted to Ecology in February 2021, groundwater remains impacted by benzene, methyl tertiary-butyl ether, non-halogenated solvents, and gasoline. This site is equipped with 13 monitoring wells and five vapor extraction wells. Given that no regulatory closure has been issued and its adjoining upgradient position relative to the subject property, this site is classified as a REC for the subject property.*

In response to these RECs, AEG performed the Phase II ESA summarized in this report.

1.3 Site Geology and Hydrogeology

The Site is zoned neighborhood and commercial by King County. The Site is located in the region of the Puget Lowlands an elongated topographic and structural depression filled with complex sequences of glacial and non-glacial sediments that overlie bedrock. Continental ice sheets up to 3,000 feet thick covered portions of the Puget Lowland several times during the Quaternary period. Retreating ice carved new landscapes, rechanneled rivers, drained or formed lakes, and deposited glacial drift including till and outwash. The geology is variable within one-half mile of the Site. According to the Geologic Map of Seattle, the Site and surrounding properties overlie Pre-Fraser glaciation age deposits that primarily consist of horizontally bedded to cross bedded, coarse lag sand and gravel deposited in outwash channels that carried south draining glacial meltwater during ice retreat.

During AEG's investigation, soils encountered mostly consisted of sandy silt. Groundwater was encountered at about 20 feet bgs.

2.0 FIELD METHODOLOGY

2.1 Soil Borings

AEG advanced six soil borings throughout the Site to a maximum depth of 30 feet below ground surface (bgs). The samples were delivered to a State-accredited analytical laboratory for analysis.

From October 18 to 20, 2022, AEG supervised the advancement of soil borings B-1 through B-6 at the Site via a truck-mounted hollow-stem auger rig operated by subcontractor Cascade Drilling, Inc. (Cascade). Boring locations are illustrated on Figure 2, Site Map. The soil borings were advanced to a maximum depth of 30 feet bgs. Soil samples were collected from the borings for laboratory analysis, and temporary wells were installed to collect groundwater samples. Groundwater was encountered at about 20 feet bgs in borings B-1 through B-6.

Cascade also installed five sub-slab vapor pins (SS-1 through SS-5) through the basement slab of the building to allow for the collection of sub-slab vapor samples. The locations of the sub-slab vapor points are illustrated on Figure 3, *Sub-Slab Vapor Locations*.

As noted in Section 1.2, AEG is currently operating an SSD system on Site. During the October mobilization, the SSD system was operational when AEG collected the sub-slab vapor samples. However, AEG returned to the Site on December 14, 2022, to collect a second round of samples after the SSD system had been temporarily turned off.

2.2 Soil Sampling Procedures

Soil sampling methods for this work followed the protocols established by the Washington State Department of Ecology (Ecology) and EPA. To minimize volatile organic compound (VOC) losses, soil sampling and field preservation methods for VOCs followed methods set forth by EPA's Method 5035A and Ecology's guidance, "*Collecting and Preparing Soil Samples for VOC Analysis*". Soil samples were collected from the soil borings at 5-foot intervals via a steel split-barrel sampler. Soils were observed to document soil lithology, color, moisture content, and sensory evidence of contamination.

Soil samples were selected for laboratory analysis based on field observations. Soil samples were collected and placed into laboratory provided 40-milliliter (mL) vials and 4-ounce jars for the analyses of constituents of concern. The soil samples were transported to Libby Environmental, Inc. (Libby), a Washington State accredited laboratory, for analyses following standard chain-of-custody procedures.

2.3 Sub-slab Procedures

Five sub-slab vapor pins were installed at the Site. Vapor pins were roto-hammered through the building's basement-level slab-on-grade foundation. The sampling ports were sealed to the surrounding cement using a bentonite seal and checked for leaks using a water bath technique. Samples were collected in 1-liter (L) vacuum bottles with 10-minute regulators. The sub-slab vapor samples were transported to Fremont Laboratories, a Washington State accredited laboratory, for analyses following standard chain-of-custody procedures.

2.4 Groundwater Procedures

Temporary wells were installed in each of the completed boring locations to a depth of 30 feet bgs with screen intervals between 20 and 30 feet bgs. A peristaltic pump was used to purge groundwater from the temporary wells and to collect groundwater samples. Groundwater samples were collected and placed into laboratory provided 40 mL vials and 0.5-L bottles for the analyses of constituents of concern. The groundwater samples were transported to Libby, a Washington State accredited laboratory, for analyses following standard chain-of-custody procedures.

2.5 Laboratory Analyses

Soil and groundwater samples were analyzed for the following analyses:

- Gasoline-range petroleum hydrocarbons (TPH) using Northwest Method NWTPH-Gx.
- Benzene, toluene, ethylbenzene, and xylene (BTEX) compounds and tetrachloroethylene (PCE) and daughter products using EPA Method 8260.
- Diesel- and Oil-range TPH using Northwest Method NWTPH-Dx/Dx Extended

Sub-slab vapor samples were analyzed for the following analyses:

- Low-level VOCs and air-phase hydrocarbons (APH) via Method TO-15 SIM.

2.6 Quality Controls

To ensure that quality information was obtained at the Site:

- All samples were collected in general accordance with industry protocols for the collection, documentation, and handling of environmental samples.
- Descriptions of soil sampling depths were carefully logged in the field. The driller and geologist confirmed sample depths as soil samples were collected.
- Nitrile gloves were worn when handling all sampling containers and sampling devices. Clean gloves were used at each soil boring to prevent cross contamination.

- The sampling equipment was scrubbed with Alconox detergent and rinsed with water prior to each sample extracted.
- Soil samples were tightly packed into laboratory-provided dedicated sampling containers to eliminate sample headspace.
- Upon sampling, all soil samples were immediately placed into chilled ice chests and transported for analysis under a chain-of-custody protocol to the Libby analytical laboratory in Olympia, Washington.

The analytical laboratory provided project quality assurance/quality control (QA/QC), including:

- Surrogate recoveries for each sample.
- Method blank results.
- Duplicate analysis.
- Laboratory control samples.

All analytical laboratory QA/QC results were within required limits. Analytical Laboratory results are provided in Appendix B, Supporting Documents, *Laboratory Datasheets.*

3.0 ANALYTICAL RESULTS

Analytical results obtained from soil and groundwater samples were compared to MTCA Method A cleanup levels for all land uses, and sub-slab vapor samples were compared to MTCA Method B sub-slab screening levels. Copies of the laboratory analytical results are provided in Appendix B, Supporting Documents, *Laboratory Datasheets*.

3.1 Soil Results

Three soil samples from each of the six borings were collected and submitted for laboratory analysis. Analytical results indicated all constituents analyzed for were non-detect in all soil samples.

Table 1, *Summary of Soil Analytical Results*, presents the soil analytical results for all soil samples analyzed as compared to MTCA Method A cleanup levels.

3.2 Groundwater Results

Analytical results of the groundwater samples collected during this investigation indicated the presence of gasoline-range TPH (1,200 micrograms per liter [µg/L]), and diesel-range TPH (2,100 µg/L) above the MTCA Method A cleanup levels in groundwater collected from SB-5. Diesel-range TPH (1,300 µg/L) was also present at concentrations exceeding MTCA Method A cleanup levels in groundwater collected from SB-6. Analytical results from all other groundwater samples were either non-detect or below MTCA Method A cleanup levels.

Borings SB-5 and SB-6 were located in the alley between the Site and the upgradient, west-adjacent Shell station property. The contaminants detected in groundwater in these two borings are consistent with those confirmed in groundwater on the neighboring property.

Table 2, *Summary of Groundwater Analytical Results*, presents the groundwater analytical results for all groundwater samples analyzed as compared to MTCA Method A cleanup levels.

3.3 Sub-Slab Vapor Results

Two rounds of sub-slab vapor samples were collected from each of the five vapor pins installed in the building basement and submitted for laboratory analysis. The first round of sub-slab vapor samples was collected with the sub-slab depressurization (SSD) system activated. The second round of sub-slab vapor samples was collected with the SSD system deactivated.

Analytical results from the first round of samples were either non-detect or below MTCA Method B sub-slab screening levels.

Analytical results from the first round of samples indicated the presence of naphthalene in SS-1 (2.59 micrograms per cubic meter [µg/m^3]), SS-2 (2.59 µg/m^3), SS-4 (2.98 µg/m^3), and SS-5 (2.56 µg/m^3) at concentrations exceeding MTCA Method B sub-slab screening levels for a 24-hour residential exposure scenario. However, the detections were well below the MTCA Method B sub-slab screening level of 11 µg/m^3 for an 8-hour commercial worker exposure scenario. Analytical results from all other sub-slab vapor samples were either non-detect or below MTCA Method B sub-slab screening levels.

Table 3, *Summary of Sub-Slab Vapor Analytical Results*, presents the sub-slab vapor analytical results for all samples analyzed as compared to MTCA Method B sub-slab screening levels for both a residential and commercial worker scenario.

4.0 CONCLUSIONS AND RECOMMENDATIONS

The conclusions and recommendations derived during the subsurface assessment activities at the Site are as follows:

4.1 Conclusions

Conclusions derived from the Phase II ESA include the following:

- Analytical results of soil samples indicated all constituents analyzed for were non-detect. No visual or olfactory evidence of contamination was noted in any of the borings during sample collection.
- Analytical results of the groundwater samples indicated gasoline-, and/or diesel-range TPH above MTCA Method A cleanup levels in borings SB-5 and SB-6, which were located in the alley between the Site and the upgradient, west-adjacent Shell station property. The contaminants detected in groundwater in these two borings are consistent with those confirmed in groundwater on the neighboring property. Analytical results from all other groundwater samples on the Site were either non-detect or below MTCA Method A cleanup levels.
- Analytical results from the first round of soil gas samples were either non-detect or below MTCA Method B sub-slab screening levels. Analytical results from the second round of samples indicated the presence of naphthalene in selected samples at concentrations exceeding MTCA Method B sub-slab screening levels for a 24-hour residential exposure scenario. However, the detections were well below the MTCA Method B sub-slab screening level of 11 µg/m^3 for an 8-hour commercial worker exposure scenario. Analytical results from all other sub-slab vapor samples were either non-detect or below MTCA Method B sub-slab screening levels.

4.2 Recommendations

Based on the work performed as part of this Phase II ESA, no further investigative work appears warranted for the Site as there is no indication of any "release" on or from the Site from prior operations.

The adjacent Shell station is currently undergoing a cleanup action to remove TPH constituents from the soil and groundwater on their property. The SSD system is still operating on the adjacent property, with periodic monitoring of conditions on the Site.

5.0 LIMITATIONS

This report summarizes the findings of the services authorized under our agreement with the Huling Brothers Properties, LLC. It has been prepared using generally accepted professional practices, related to the nature of the work accomplished. This report was prepared for the exclusive use of the Huling Brothers Properties, LLC, and their designated representatives, for the specific application to the project purpose.

Recommendations, opinions, Site history, and proposed actions contained in this report apply to conditions and information available at the time this report was completed. Since conditions and regulations beyond our control can change at any time after completion of this report, or our proposed work, we are not responsible for any impacts of any changes in conditions, standards, practices, and/or regulations subsequent to our performance of services. We cannot warrant or validate the accuracy of information supplied by others, in whole or part.

6.0 REFERENCES

American Society for Testing and Materials (ASTM) Standard E 1903-97. *Standard Guide Environmental Site Assessments: Phase II Environmental Site Assessment Process*.

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Washington State Department of Natural Resources. 2005. *Geologic Map of Washington State*.

Washington State Department of Ecology. 2004. *Collecting and Preparing Soil Samples for VOC Analysis*, Implementation Memorandum #5.

Washington State Department of Ecology. 2007. *Model Toxic Control Act Statute and Regulation – Chapter 173-340 WAC*, Publication number 94-06 (Revised November 2007).

FIGURES

2633 PARKMONT LANE SW, SUITE A • OLYMPIA, WA • 98502-5751
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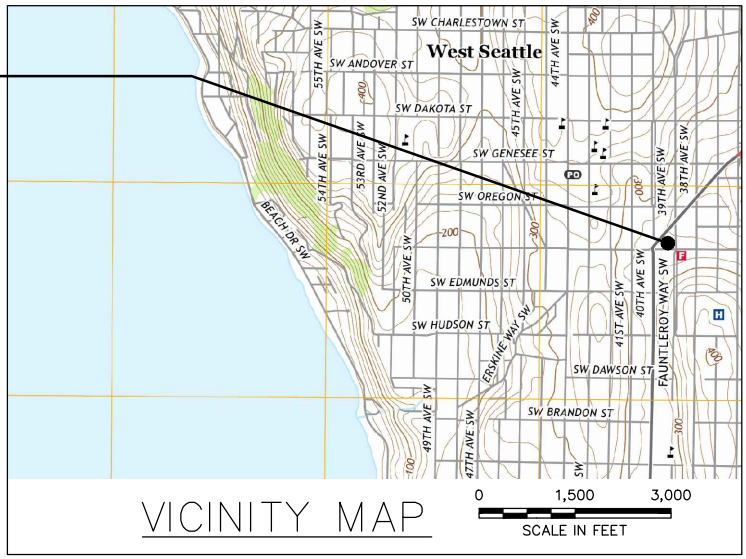
FILENAME	DRAWN BY		CHECKED BY		APPROVED BY		PROJECT NUMBER
18-172_18Q3.DWG	ICD	8/8/2018	SL	8/8/2018	SL	8/8/2018	18-172

N
W E
S

PROJECT LOCATION



VICINITY MAP

NOTES

1. THE LOCATIONS OF ALL FEATURES SHOWN ARE APPROXIMATE
2. THIS DRAWING IS FOR INFORMATION PURPOSES. IT IS INTENDED TO ASSIST IN SHOWING FEATURES DISCUSSED IN AN ATTACHED DOCUMENT.

REFERENCE

DRAWING CREATED FROM AERIAL PHOTOGRAPH AND NOTES PROVIDED BY AEG, LLC.
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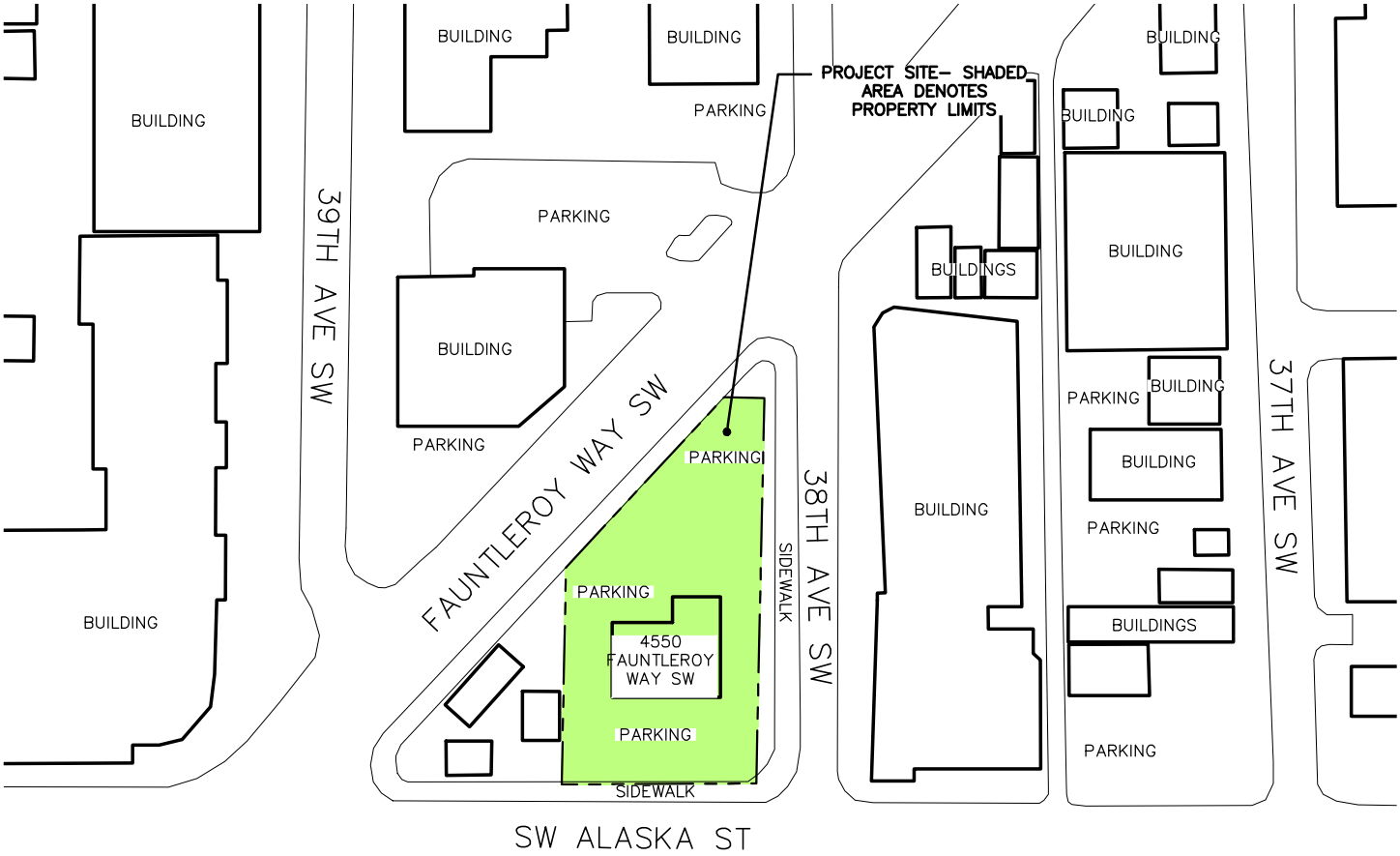
DUWAMISH HEAD, WASHINGTON



SW ALASKA ST

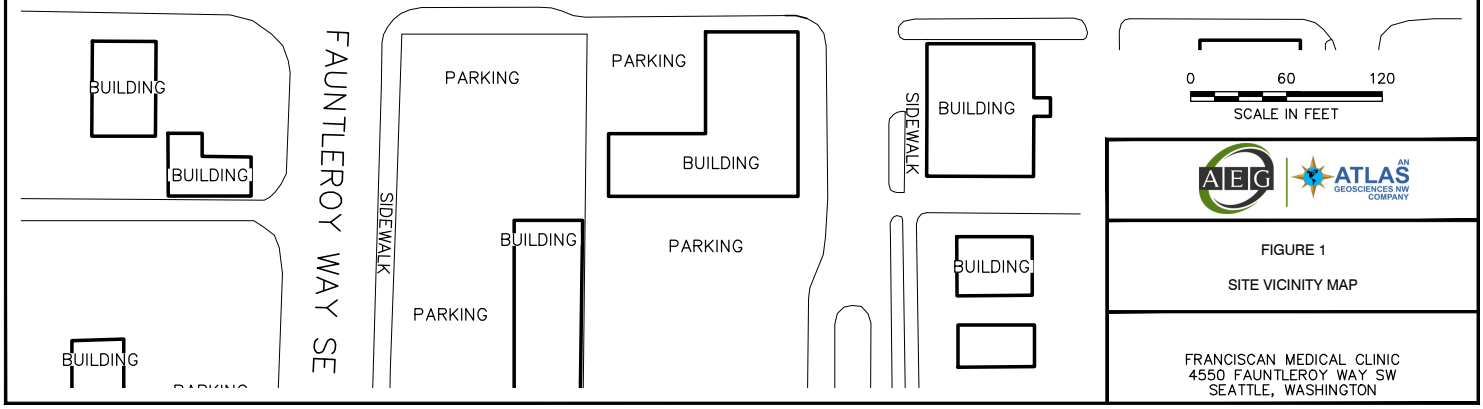


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FIGURE 1

SITE VICINITY MAP

FRANCISCAN MEDICAL CLINIC
4550 FAUNTLEROY WAY SW
SEATTLE, WASHINGTON

FILENAME	DRAWN BY	CHECKED BY	APPROVED BY	PROJECT NUMBER
22-148-FWS.DWG	ICD 10/24/2022	SL 10/24/2022	SL 10/24/2022	18-172

N
W E
S

LEGEND

- PROPERTY LINE
- SAMPLED PART OF THE BASEMENT
- ▲ APPROXIMATE SOIL VAPOR BORING
- ○ BORING LOCATION

NOTES

1. THE LOCATIONS OF ALL FEATURES SHOWN ARE APPROXIMATE
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REFERENCE

DRAWING CREATED FROM AERIAL PHOTOGRAPH AND NOTES PROVIDED BY AEG, LLC.

0 15 30
SCALE IN FEET

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FIGURE 2

SITE MAP

FRANCISCAN MEDICAL CLINIC
4550 FAUNTLEROY WAY SW
SEATTLE, WASHINGTON

FILENAME	DRAWN BY	CHECKED BY	APPROVED BY	PROJECT NUMBER
22-148-FWS.DWG	FR 10/24/2022	PH 10/24/2022	PH 10/24/2022	22-148

BUILDING

PARKING

PARKING

PARKING

FAUNTLEROY WAY SW

SIDEWALK

38TH AVE SW

FUEL CANOPY

SHELL C STORE

FUEL CANOPY

SS-1

SS-2

SS-3

SS-4

SS-5

SIDEWALK

SW ALASKA ST

N

W E

S

LEGEND

PROPERTY LINE

SUB-SLAB LOCATION

NOTES

1. THE LOCATIONS OF ALL FEATURES SHOWN ARE APPROXIMATE
2. THIS DRAWING IS FOR INFORMATION PURPOSES. IT INTENDED TO ASSIST IN SHOWING FEATURES DISCUSSED IN AN ATTACHED DOCUMENT.

REFERENCE

DRAWING CREATED FROM AERIAL PHOTOGRAPH AND NOTES PROVIDED BY AEG, LLC.

0 15 30

SCALE IN FEET

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FIGURE 3

SUB-SLAB VAPOR LOCATIONS

FRANCISCAN MEDICAL CLINIC
4550 FAUNTLEROY WAY SW
SEATTLE, WASHINGTON

TABLES

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Table 1 - Summary of Soil Analytical Results
Franciscan West - Huling (22-148)
Seattle, Washington

Sample Number	Depth Collected (feet)	Date Collected	Total Petroleum Hydrocarbons (TPH)			Selected Volatile Organic Compounds								
			Gasoline	Diesel	Heavy Oil	Benzene	Toluene	Ethyl-benzene	Xylenes	VC	TCE	PCE	cis-1,2-DCE	trans-1,2-DCE
SB-1	20.0	10/18/2022	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	<0.2	<0.2	<0.03	<0.03	<0.03
SB-1	25.0	10/18/2022	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	<0.2	<0.2	<0.03	<0.03	<0.03
SB-1	30.0	10/18/2022	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	<0.2	<0.2	<0.03	<0.03	<0.03
SB-2	20.0	10/18/2022	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	<0.2	<0.2	<0.03	<0.03	<0.03
SB-2	25.0	10/18/2022	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	<0.2	<0.2	<0.03	<0.03	<0.03
SB-2	30.0	10/18/2022	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	<0.2	<0.2	<0.03	<0.03	<0.03
SB-3	20.0	10/19/2022	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	<0.2	<0.2	<0.03	<0.03	<0.03
SB-3	25.0	10/19/2022	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	<0.2	<0.2	<0.03	<0.03	<0.03
SB-3	30.0	10/19/2022	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	<0.2	<0.2	<0.03	<0.03	<0.03
SB-4	20.0	10/19/2022	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	<0.2	<0.2	<0.03	<0.03	<0.03
SB-4	25.0	10/19/2022	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	<0.2	<0.2	<0.03	<0.03	<0.03
SB-4	30.0	10/19/2022	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	<0.2	<0.2	<0.03	<0.03	<0.03
SB-5	20.0	10/19/2022	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	<0.2	<0.2	<0.03	<0.03	<0.03
SB-5	25.0	10/19/2022	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	<0.2	<0.2	<0.03	<0.03	<0.03
SB-5	30.0	10/19/2022	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	<0.2	<0.2	<0.03	<0.03	<0.03
SB-6	20.0	7/20/2022	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	<0.2	<0.2	<0.03	<0.03	<0.03
SB-6	25.0	7/20/2022	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	<0.2	<0.2	<0.03	<0.03	<0.03
SB-6	30.0	7/21/2022	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	<0.2	<0.2	<0.03	<0.03	<0.03
PQL			10	50	250	0.02	0.10	0.05	0.15	0.02	0.02	0.03	0.03	0.03
MTCA Method A Cleanup Levels			100	2,000		0.03	7.0	6.0	9.0	0.67*	0.03	0.05	160*	1,600*

Notes:
All values are presented in milligrams per kilogram (mg/kg)
< = Not detected at the listed laboratory detection limits
-- = Not analyzed for constituent/not available/not applicable
PQL = Practical Quantification Limit (laboratory detection limit)
Red Bold indicates the detected concentration exceeds Ecology MTCA Method A cleanup level
Bold indicates the detected concentration is below Ecology MTCA Method A cleanup levels
* Method B cleanup level; no Method A cleanup level has been established.

VC = Vinyl Chloride
TCE = Trichloroethylene
PCE = Tetrachloroethylene
DCE = Dichloroethylene

Table 2 - Summary of Groundwater Analytical Results

Franciscan West - Huling (22-148)

Seattle, Washington

Sample Number	Date Collected	Total Petroleum Hydrocarbons (TPH)			Selected Volatile Organic Compounds								
		Gasoline	Diesel	Heavy Oil	Benzene	Toluene	Ethyl-benzene	Xylenes	VC	TCE	PCE	cis-1,2-DCE	trans-1,2-DCE
SB-1	10/18/2022	<100	**320**	<400	<1.0	<2.0	<1.0	<2.0	<2.0	<0.4	<1.0	<1.0	<1.0
SB-3	10/19/2022	<100	<500	<400	<1.0	<2.0	<1.0	<2.0	<2.0	<0.4	<1.0	<1.0	<1.0
SB-4	10/19/2022	<100	<500	<400	<1.0	<2.0	<1.0	<2.0	<2.0	<0.4	<1.0	<1.0	<1.0
SB-5	10/19/2022	**1,200**	**2,100**	<400	<1.0	<2.0	<1.0	<2.0	<2.0	<0.4	<1.0	<1.0	<1.0
SB-6	10/20/2022	<100	**1,300**	<400	<1.0	<2.0	<1.0	<2.0	<2.0	<0.4	<1.0	<1.0	<1.0
PQL		100	200	400	1.0	2.0	1.0	2.0	2.0	0.4	1.0	1.0	1.0
MTCA Method A Cleanup Levels		1,000	500		5	1,000	700	1,000	0.2	5	5	16*	160*

Notes:

All values are presented in micrograms per liter (µg/L)

< = Not detected at the listed laboratory detection limits

-- = Not analyzed for constituent/not available/not applicable

PQL = Practical Quantification Limit (laboratory detection limit)

Red Bold indicates the detected concentration exceeds Ecology MTCA Method A cleanup level

Bold indicates the detected concentration is below Ecology MTCA Method A cleanup levels

* MTCA Method B cleanup level; Method A cleanup level not established

VC = Vinyl Chloride

TCE = Trichloroethylene

PCE = Tetrachloroethylene

DCE = Dichloroethylene

Table 3 - Summary of Sub-Slab Vapor Analytical Results
Franciscan West - Huling (22-148)
Seattle, WA

Sample Number		SS-1	SS-2	SS-3	SS-4	SS-5	SS-1	SS-2	SS-3	SS-4	SS-5	Method B Sub-Slab Screening Level	Method B Sub-Slab Screening Level Commercial Worker
Date Collected		10/19/2022	10/19/2022	10/19/2022	10/19/2022	10/19/2022	12/14/2022	12/14/2022	12/14/2022	12/14/2022	12/14/2022		
APH - Air Phase Hydrocarbons	EC5-8 Aliphatics	**294**	**193**	**343**	**618**	**380**	**307**	**253**	**393**	**569**	**311**	90,000	NL
	EC 9-12 Aliphatics	<118	<118	<118	<118	<118	**243**	**226**	**129**	**315**	**249**	4,700	NL
	EC 9-10 Aromatics	<25.2	<25.2	<25.2	<25.2	<25.2	<25.2	<25.2	**64.0**	<25.2	<25.2	6,000	NL
TO-15 - Volatile Organic Compounds	Benzene	**3.17**	**3.69**	**4.81**	**4.28**	**1.40**	**0.525**	**0.519**	**1.11**	**1.87**	**0.580**	11*	50*
	Toluene	**6.68**	**4.94**	**6.28**	**4.96**	**4.69**	**3.11**	**3.47**	**3.95**	**6.19**	**2.38**	76,000	650,000
	Ethylbenzene	<6.95	<6.95	<6.95	<6.95	<6.95	<4.34	<4.34	<4.34	<4.34	**6.73**	15,000	130,000
	m,p-Xylene	**7.37**	**7.60**	**32**	**7.78**	<6.95	<17.4	<17.4	<17.4	<17.4	**36.7**	1,500	13,000
	o-Xylene	<1.74	<1.74	<1.74	<1.74	<1.74	<5.21	<5.21	<5.21	<5.21	**16.4**	1,500	13,000
	Naphthalene	**1.63**	**0.343**	**1.90**	**0.537**	<0.210	**2.59**	**2.56**	**2.24**	**2.98**	**2.56**	2.5*	11*
	Vinyl Chloride	<0.102	<0.102	<0.102	<0.102	<0.102	<0.204	<0.204	<0.204	<0.204	<0.204	9.5*	44*
	trans-1,2-Dichloroethylene	<0.793	<0.793	<0.793	<0.793	<0.793	<0.476	<0.476	<0.476	<0.476	<0.476	610	5,200
	cis-1,2-Dichloroethylene	<1.59	<1.59	<1.59	<1.59	<1.59	<0.476	<0.476	<0.476	<0.476	<0.476	NL	NL
	Trichloroethylene	<0.215	<0.215	<0.215	<0.215	<0.215	<0.269	<0.269	<0.269	<0.269	<0.269	11*	95*
	Tetrachloroethylene	**47.7**	**0.849**	**0.388**	**4.50**	<0.271	<13.6	<13.6	<13.6	<13.6	<13.6	320*	1,500*

Notes:

All values presented in micrograms per cubic meter ($\mu g/m^3$)

< = Not detected above laboratory reporting limits

NL = Not Listed; no screening level has been established for this constituent.

E = Value above quantitation range

* Cancer screening level (all other constituents listed are non-cancer values)

Red Bold indicates the detected concentration exceeds one or more MTCA Method B sub-slab screening levels

Bold indicates the detected concentration is below MTCA Method B sub-slab screening levels

APPENDIX A

Supporting Documents:
Photo Log

2633 PARKMONT LANE SW SUITE A • OLYMPIA, WA • 98502-5751
Phone: 360.352.9835 • Fax: 360.352.8164 • Email: admin@aegwa.com

PROPERTY AND VICINITY PHOTOGRAPHIC RECORD

Project No.: 22-148

Project Name: Franciscan West – Huling, Seattle, Washington
October 18, 2022 – October 20, 2022

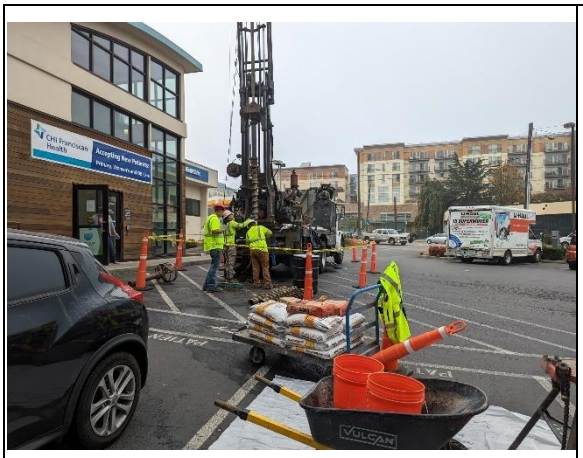				
Photo # 1	Cascade advancing SB-1, facing west.		Photo # 2	SB-1 patched.
				
Photo # 3	Cascade advancing SB-2, facing southwest.		Photo # 4	SB-2 patched.
				
Photo # 5	Cascade advancing SB-3, facing southeast.		Photo # 6	SB-3 patched.

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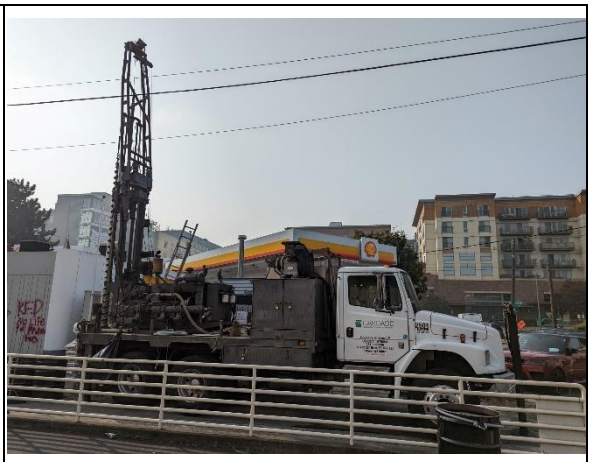
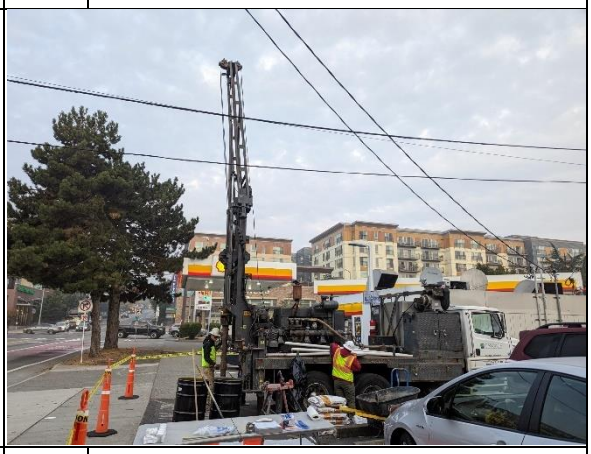
PROPERTY AND VICINITY PHOTOGRAPHIC RECORD

Project No.: 22-148

Project Name: Franciscan West – Huling, Seattle, Washington
October 18, 2022 – October 20, 2022

				
Photo # 7	SB-4 patched.		Photo # 8	Cascade advancing SB-5, facing west.
				
Photo # 9	SB-5 patched.		Photo # 10	Cascade advancing SB-6 facing west.
				
Photo # 11	SB-6 patched.		Photo # 12	IDW drum staging area. West of the clinic between west alley and clinic, facing south.

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PROPERTY AND VICINITY PHOTOGRAPHIC RECORD

Project No.: 22-148

Project Name: Franciscan West – Huling, Seattle, Washington
October 18, 2022 – October 20, 2022

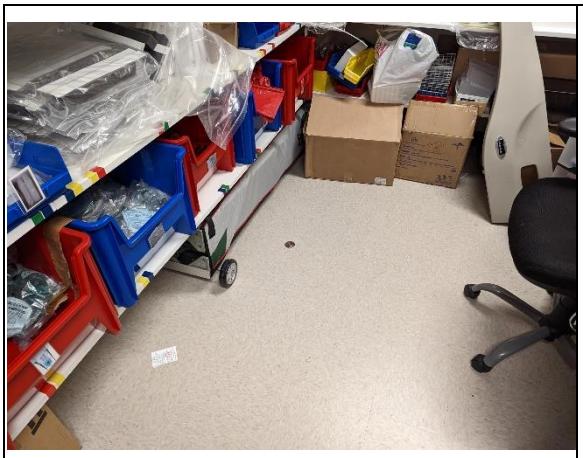				
Photo # 13	SS-1 vapor pin in storage room.		Photo # 14	SS-2 vapor pin in break room, near lockers.
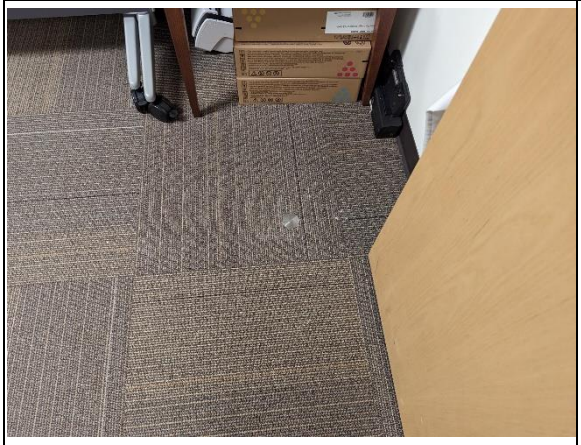				
Photo # 15	SS-3 vapor pin in old supply room.		Photo # 16	SS-5 vapor pin in reception area.

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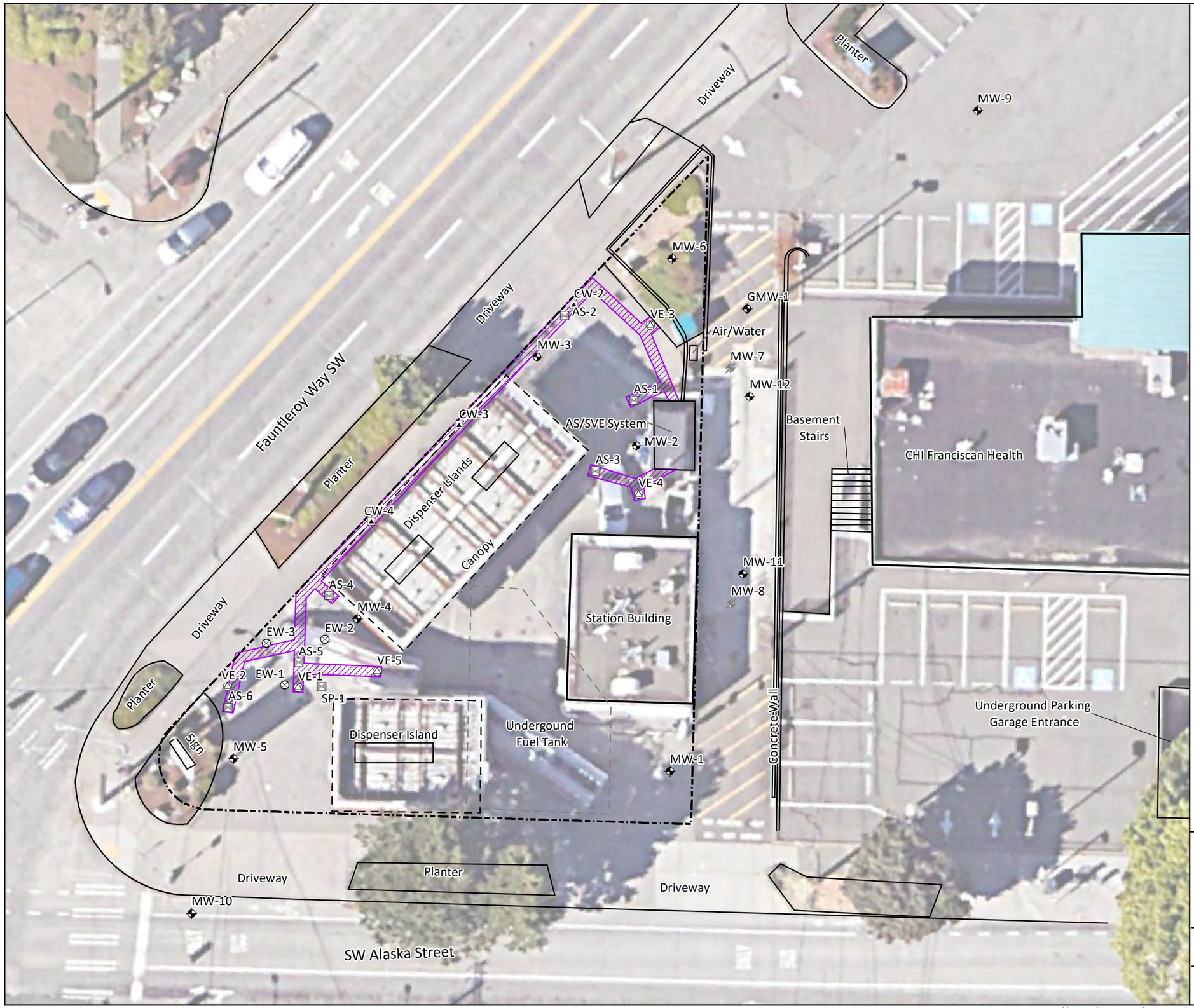
APPENDIX B

Supporting Documents:

Site Aerial Map - Antea Group
Boring Logs
Laboratory Datasheets

2633 PARKMONT LANE SW SUITE A • OLYMPIA, WA • 98502-5751
Phone: 360.352.9835 • Fax: 360.352.8164 • Email: admin@aegwa.com



Legend

- Air Sparge
- Vapor Extraction Well
- Combination Air Sparge and Vapor Extraction Well
- Extraction Well
- Monitoring Well
- Abanonded Monitoring Well
- Approximate Property Boundary
- Trench Location

0 4 8 12 16 20 40 60 Feet

N

FIGURE 2

SITE AERIAL MAP
FORMER BP FACILITY #11060
4580 FAUNTLEROY WAY
SEATTLE, WA

PROJECT NO.	PREPARED BY	REF SCALE
11060	*SAA*	*1:240*
DATE	**REVIEWED BY**	**MAP SCALE**
2/15/2021	*JS*	*1 INCH = 20 FEET*

antea group

\\gis-s3\GIS_Data\Sandbox\!Projects\A-E\BP_WA\11060 Seattle\Project Number\Layout\11060 Aerial Site Map.mxd

LOG OF BOREHOLE

PROJECT: *Franciscan West Seattle*		**JOB #** ***22-148***	**BORING #**	***SB-1***	**PAGE 1 of 1**
Location: *4550 Fauntleroay Way SW*		**Approximate elevation:**			
Subcontractor/Driller: *Cascade*		**Equipment / Drilling Method:** *Truck mounted auger - Hollow stem auger*			
Date: *October 18, 2022*		**Logged by:** *Paul Hitch*			

Boring Depth (feet)	Soil Description	Unified Soil Symbol	Sample Type	Sample Recovery	Sample Number	Time	Blows/Foot	PID Reading	Sheen	Comments
5	Dark gray to light gray, well graded sandy gravel, dry.	GW	SS	18/18	SB-1-5	10:05		0.0	N	
10	Gray, soft, silty sand, some weathered stone, dry.	SM	SS	18/18	SB-1-10	10:33	5-7-8	0.0	N	
15	Gray silty sand, soft, moist.	SM	SS	18/18	SB-1-15	10:37	7-10-15	0.0	N	
20	Light gray silty sand, dense, wet.	SM	SS	18/18	SB-1-20	10:42	13-15-19	0.0	N	
25	Gray to brown silty clay, some sand, soft to dense, wet.	CL	SS	18/18	SB-1-25	10:52	6-11-14	0.0	N	
30	Light brown silty sand, some weathered stone, dense, wet. End of boring at 30 ft bgs.	SM	SS GW	18/18	SB-1-30	11:00 for SS, 11:42 for GW	14-16-22	0.0	N	Temporary well set with a screen interval between 20-30 feet for groundwater sample collection.

Explanation

- Soil sample interval
- No Recovery
- Contact located approximately
- ATD — Groundwater level at time of drilling or date of measurement

LOG OF BOREHOLE

PROJECT: *Franciscan West Seattle*	**JOB #** ***22-148***	**BORING #** ***SB-2***	**PAGE 1 of 1**	
Location: *4550 Fauntleroay Way SW*	**Approximate elevation:**			
Subcontractor/Driller: *Cascade*	**Equipment / Drilling Method:** *Truck mounted auger - Hollow stem auger*			
Date: *October 18, 2022*	**Logged by:** *Paul Hitch*			

Boring Depth (feet)	Soil Description	Unified Soil Symbol	Sample Type	Sample Recovery	Sample Number	Time	Blows/Foot	PID Reading	Sheen	Comments
5	Tan poorly graded sand, some weathered stone, soft, dry.	SW	SS	18/18	SB-2-5	13:01	6-6-7	0.0	N	
10	Brown silty sand, soft, loose weathered stone, dry.	SM	SS	18/18	SB-2-10	13:05	6-10-10	0.0	N	
15	Brown to gray silt, red mottling, dense, dry.	OL	SS	18/18	SB-2-15	13:15	11-13-15	0.0	N	
20	Brown to gray silt, some loose weathered stone, dense, mo	OL	SS	18/18	SB-2-20	13:21	13-15-17	0.0	N	
25	Brown to gray silty sand, dense, wet.	SM	SS	18/18	SB-2-25	13:32	11-15-17	0.0	N	
30	Brown to gray silty sand, dense, wet. End of boring at 30 ft bgs.	SM	SS	18/18	SB-2-30	13:36	13-15-8	0.0	N	Temporary well set with a screen interval between 20-30 feet for groundwater sample collection. The well did not charge and a GW sample was **not** collected.

Explanation

- Soil sample interval
- No Recovery
- Contact located approximately
- ATD — Groundwater level at time of drilling or date of measurement

LOG OF BOREHOLE

PROJECT: *Franciscan West Seattle*	**JOB #** ***22-148***	**BORING #** ***SB-3***	**PAGE 1 of 1**
Location: *4550 Fauntleroay Way SW*	**Approximate elevation:**		
Subcontractor/Driller: *Cascade*	**Equipment / Drilling Method:** *Truck mounted auger - Hollow stem auger*		
Date: *October 19, 2022*	**Logged by:** *Paul Hitch*		

Boring Depth (feet)	Soil Description	Unified Soil Symbol	Sample Type	Sample Recovery	Sample Number	Time	Blows/Foot	PID Reading	Sheen	Comments
5	Dark gray sandy gravel, loose, soft, dry.	GW	SS	4/18	SB-3-5	8:31		0.0	N	
10	Dark gray sandy gravel, loose, soft, dry.	GW	SS	2/18	SB-3-10	8:37	9-11-10	0.0	N	Poor recovery.
15	Brown sandy clay, dense, dry.	SC	SS	10/18	SB-3-15	8:45	7-18-22	0.0	N	
20	Brown sandy clay, dense, dry.	SC	SS	10/18	SB-3-20	8:59	11-22-27	0.0	N	
25	Brown silty sand, dense, large weathered stone, moist.	SM	SS	18/18	SB-3-25	9:03	22-23-25	0.0	N	
30	Brown silty sand, small weathered stone, moist-wet, dense. End of broing at 30 ft bgs.	SM	SS GW	18/18	SB-3-30 for SS and SB-3-W for GW	9:10 for SS and 9:55 for GW	22-24-26	0.0	N	Temporary well set with a screen interval between 20-30 feet for groundwater sample collection.

Explanation

- Soil sample interval
- No Recovery
- Contact located approximately
- ATD — Groundwater level at time of drilling or date of measurement

LOG OF BOREHOLE

PROJECT: *Franciscan West Seattle*	**JOB #** ***22-148***	**BORING #** ***SB-4***	**PAGE 1 of 1**	
Location: *4550 Fauntleroay Way SW*	**Approximate elevation:**			
Subcontractor/Driller: *Cascade*	**Equipment / Drilling Method:** *Truck mounted auger - Hollow stem auger*			
Date: *October 19, 2022*	**Logged by:** *Paul Hitch*			

Boring Depth (feet)	Soil Description	Unified Soil Symbol	Sample Type	Sample Recovery	Sample Number	Time	Blows/Foot	PID Reading	Sheen	Comments
5	Brown sandy silt, red mottling, some weathered stone, soft, dry.	GW	SS	18/18	SB-4-5	11:00	3-3-3	0.0	N	
10	Brown sandy silt, some gray clay, red mottling, soft, moist.	CL	SS	18/18	SB-4-10	11:08	4-4-6	0.0	N	
15	Brown sandy silt, some gray clay, red mottling, soft, moist.	SM	SS	6/18	SB-4-15	11:18	11-13-16	0.3	N	
20	Gray clay to sandy silt, some weathered stone, dense, mois	SM	SS	18/18	SB-4-20	11:25	12-17-18	12.5	N	Some odor.
25	Gray sandy silt, some weathered stone, dense, moist.	SM	SS	18/18	SB-4-25	11:33	16-18-22	0.1	N	
30	Gray sandy silt, some weathered stone, dense, moist. End of boring at 30 ft bgs.	SM	SS GW	18/18	SB-4-30 for SS and SB-4-W for GW	11:39 for SS and 12:30 for GW	19-22-27	0.0	N	Temporary well set with a screen interval between 20-30 feet for groundwater sample collection.

Explanation

- Soil sample interval
- No Recovery
- Contact located approximately
- ATD — Groundwater level at time of drilling or date of measurement

LOG OF BOREHOLE

PROJECT: *Franciscan West Seattle*	**JOB #** ***22-148***	**BORING #**	***SB-5***	**PAGE 1 of 1**
Location: *4550 Fauntleroay Way SW*	**Approximate elevation:**			
Subcontractor/Driller: *Cascade*	**Equipment / Drilling Method:** *Truck mounted auger - Hollow stem auger*			
Date: *October 19, 2022*	**Logged by:** *Paul Hitch*			

Boring Depth (feet)	Soil Description	Unified Soil Symbol	Sample Type	Sample Recovery	Sample Number	Time	Blows/Foot	PID Reading	Sheen	Comments
5	Brown sandy silt, some weathered stone, soft, dry.	SM	SS	18/18	SB-5-5	14:05	3-4-4	0.0	N	
10	Brown sandy silt, med-dense, to gray clay, dense dry to moist.	SM	SS	18/18	SB-5-10	14:10	3-4-5	0.0	N	
15	Brown sandy silt, gray mottling, dense, moist.	SM	SS	18/18	SB-5-15	14:15	11-13-15	0.1	N	
20	Brown to gray sandy silt, large weathered stone, dense, moist.	SM	SS	18/18	SB-5-20	14:25	13-19-19	0.0	N	
25	Gray sandy silt, dene, wet.	SM	SS	18/18	SB-5-25	14:32	9-13-14	0.0	N	
30	Gray sandy silt, some clay, dense, wet. End of boring at 30 ft bgs.	SM	SS GW	18/18	SB-5-30 for SS and SB-5-W for GW	14:38 for SS and 15:35 for GW	10-13-17	0.0	N	Temporary well set with a screen interval between 20-30 feet for groundwater sample collection.

Explanation

- Soil sample interval
- No Recovery
- Contact located approximately
- ATD — Groundwater level at time of drilling or date of measurement

LOG OF BOREHOLE

PROJECT: *Franciscan West Seattle*	**JOB #** ***22-148***	**BORING #**	***SB-6***	**PAGE 1 of 1**
Location: *4550 Fauntleroay Way SW*	**Approximate elevation:**			
Subcontractor/Driller: *Cascade*	**Equipment / Drilling Method:** *Truck mounted auger - Hollow stem auger*			
Date: *October 20, 2022*	**Logged by:** *Paul Hitch*			

Boring Depth (feet)	Soil Description	Unified Soil Symbol	Sample Type	Sample Recovery	Sample Number	Time	Blows/Foot	PID Reading	Sheen	Comments
5	Brown sandy silt to gray clay, soft, dry.	SM	SS	18/18	SB-6-5	8:11	3-4-4	0.0	N	
10	Gray clay, soft, dry.	CL	SS	18/18	SB-6-10	8:16	4-5-5	0.0	N	
15	Brown sandy silt, dense, dry.	SM	SS	18/18	SB-6-15	8:21	14-18-20	0.0	N	
20	Gray sandy silt, red mottling, dene, moist.	SM	SS	18/18	SB-6-20	8:25	6-11-13	0.0	N	
25	Light brown to gray andy silt, dense, wet.	SM	SS	18/18	SB-6-25	8:31	11-13-16	0.0	N	
30	Light brown to gray andy silt, dense, wet. End of boring at 30 ft bgs.	SM	SS GW	18/18	SB-6-30 for SS and SB-6-W for GW	8:36 for SS and 9:11 for GW	15-17-19	0.0	N	Temporary well set with a screen interval between 20-30 feet for groundwater sample collection.

Explanation

- Soil sample interval
- No Recovery
- Contact located approximately
- ATD — Groundwater level at time of drilling or date of measurement

Libby Environmental, Inc.
3322 South Bay Road NE • Olympia, WA 98506-2957

October 27, 2022

Scott Rose
AEG an Atlas Geosciences NW Company
2633 Parkmont Lane SW, Suite A
Olympia, WA 98502

Dear Mr. Rose:

Please find enclosed the analytical data report for the Franciscan West Seattle project located in Seattle, Washington.

The results of the analyses are summarized in the attached tables. Applicable detection limits and QA/QC data are included. The sample(s) will be disposed of within 30 days unless we are contacted to arrange long term storage.

Libby Environmental, Inc. appreciates the opportunity to have provided analytical services for this project. If you have any further questions about the data report, please give me a call. It was a pleasure working with you on this project, and we are looking forward to the next opportunity to work together.

Sincerely,

Sherry L. Chilcutt
Senior Chemist
Libby Environmental, Inc.

Phone (360) 352-2110 • Fax (360) 352-4154 • libbyenv@gmail.com

Libby Environmental, Inc.

3322 South Bay Road NE
Olympia, WA 98506
Phone: (360) 352-2110
FAX: (360) 352-4154
Email: libbyenv@gmail.com

FRANCISCAN WEST SEATTLE PROJECT
AEG an Atlas Geosciences NW Company
Seattle, Washington
Libby Project # L22J085
Client Project # 22-148

Analyses of Gasoline (NWTPH-Gx) & BTEX (EPA Method 8260D) in Soil

Sample Description		Method Blank	SB-1-20	SB-1-25	SB-1-30	SB-2-20	SB-2-25
Date Sampled		N/A	10/18/2022	10/18/2022	10/18/2022	10/18/2022	10/18/2022
Date Analyzed	PQL (mg/kg)	10/21/2022 (mg/kg)	10/21/2022 (mg/kg)	10/21/2022 (mg/kg)	10/21/2022 (mg/kg)	10/21/2022 (mg/kg)	10/21/2022 (mg/kg)
Benzene	0.02	nd	nd	nd	nd	nd	nd
Toluene	0.10	nd	nd	nd	nd	nd	nd
Ethylbenzene	0.05	nd	nd	nd	nd	nd	nd
Total Xylenes	0.15	nd	nd	nd	nd	nd	nd
Gasoline	10	nd	nd	nd	nd	nd	nd

Surrogate Recovery	Acceptable Limits (%)						
Dibromofluoromethane	27-188	113	116	101	100	111	110
1,2-Dichloroethane-d4	17-212	105	117	92	92	110	102
Toluene-d8	41-142	94	93	95	97	94	94
4-Bromofluorobenzene	47-167	95	90	97	99	94	88

"nd" Indicates not detected at listed detection limit.
"int" Indicates that interference prevents determination.

ANALYSES PERFORMED BY: Sherry Chilcutt

Libby Environmental, Inc.

3322 South Bay Road NE
Olympia, WA 98506
Phone: (360) 352-2110
FAX: (360) 352-4154
Email: libbyenv@gmail.com

FRANCISCAN WEST SEATTLE PROJECT
AEG an Atlas Geosciences NW Company
Seattle, Washington
Libby Project # L22J085
Client Project # 22-148

Analyses of Gasoline (NWTPH-Gx) & BTEX (EPA Method 8260D) in Soil

Sample Description		SB-2-30	SB-3-20	SB-3-25	SB-3-30	SB-3-30 Dup	SB-4-20
Date Sampled		10/18/2022	10/19/2022	10/19/2022	10/19/2022	10/19/2022	10/19/2022
Date Analyzed	PQL (mg/kg)	10/21/2022 (mg/kg)	10/21/2022 (mg/kg)	10/21/2022 (mg/kg)	10/21/2022 (mg/kg)	10/21/2022 (mg/kg)	10/21/2022 (mg/kg)
Benzene	0.02	nd	nd	nd	nd	nd	nd
Toluene	0.10	nd	nd	nd	nd	nd	nd
Ethylbenzene	0.05	nd	nd	nd	nd	nd	nd
Total Xylenes	0.15	nd	nd	nd	nd	nd	nd
Gasoline	10	nd	nd	nd	nd	nd	nd

Surrogate Recovery	Acceptable Limits (%)						
Dibromofluoromethane	27-188	114	111	113	112	120	121
1,2-Dichloroethane-d4	17-212	113	114	115	112	125	128
Toluene-d8	41-142	95	94	93	93	94	93
4-Bromofluorobenzene	47-167	96	92	92	90	91	91

"nd" Indicates not detected at listed detection limit.
"int" Indicates that interference prevents determination.

ANALYSES PERFORMED BY: Sherry Chilcutt

Libby Environmental, Inc.

3322 South Bay Road NE
Olympia, WA 98506
Phone: (360) 352-2110
FAX: (360) 352-4154
Email: libbyenv@gmail.com

FRANCISCAN WEST SEATTLE PROJECT
AEG an Atlas Geosciences NW Company
Seattle, Washington
Libby Project # L22J085
Client Project # 22-148

Analyses of Gasoline (NWTPH-Gx) & BTEX (EPA Method 8260D) in Soil

Sample Description		SB-4-25	SB-4-30	SB-5-20	SB-5-25	SB-5-30	SB-6-20
Date Sampled		10/19/2022	10/19/2022	10/19/2022	10/19/2022	10/19/2022	10/20/2022
Date Analyzed	PQL	10/21/2022	10/21/2022	10/21/2022	10/21/2022	10/21/2022	10/21/2022
	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Benzene	0.02	nd	nd	nd	nd	nd	nd
Toluene	0.10	nd	nd	nd	nd	nd	nd
Ethylbenzene	0.05	nd	nd	nd	nd	nd	nd
Total Xylenes	0.15	nd	nd	nd	nd	nd	nd
Gasoline	10	nd	nd	nd	nd	nd	nd
Surrogate Recovery	Acceptable Limits (%)						
Dibromofluoromethane	27-188	81	123	119	118	120	122
1,2-Dichloroethane-d4	17-212	126	125	125	123	133	128
Toluene-d8	41-142	94	95	94	94	94	94
4-Bromofluorobenzene	47-167	91	92	98	94	97	92

"nd" Indicates not detected at listed detection limit.
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FAX: (360) 352-4154
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Client Project # 22-148

Analyses of Gasoline (NWTPH-Gx) & BTEX (EPA Method 8260D) in Soil

Sample Description		SB-6-25	SB-6-30	SB-6-30 Dup
Date Sampled		10/20/2022	10/20/2022	10/20/2022
Date Analyzed	PQL	10/21/2022	10/21/2022	10/21/2022
	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Benzene	0.02	nd	nd	nd
Toluene	0.10	nd	nd	nd
Ethylbenzene	0.05	nd	nd	nd
Total Xylenes	0.15	nd	nd	nd
Gasoline	10	nd	nd	nd

Surrogate Recovery	Acceptable Limits (%)			
Dibromofluoromethane	27-188	121	120	118
1,2-Dichloroethane-d4	17-212	129	114	124
Toluene-d8	41-142	94	95	92
4-Bromofluorobenzene	47-167	89	90	87

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Olympia, WA 98506
Phone: (360) 352-2110
FAX: (360) 352-4154
Email: libbyenv@gmail.com

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Client Project # 22-148

QA/QC for Volatile Organic Compounds by EPA Method 8260D in Soil

Matrix Spike Sample Identification: SB-6-30
Date Analyzed: 10/21/2022

	Spiked Conc. (mg/kg)	MS Response (mg/kg)	MSD Response (mg/kg)	MS Recovery (%)	MSD Recovery (%)	RPD (%)	Recovery Limits (%)	Data Flag
Benzene	0.25	0.21	0.21	85	83	2.1	65-126	
Toluene	0.25	0.20	0.20	81	81	0.5	67-136	
Ethylbenzene	0.25	0.20	0.20	80	80	1.0	55-140	
Total Xylenes	0.75	0.61	0.61	82	82	0.3	43-149	

Surrogate Recovery (%)	MS	MSD	
Dibromofluoromethane	121	118	27-188
1,2-Dichloroethane-d4	119	112	17-212
Toluene-d8	97	96	41-142
4-Bromofluorobenzene	99	97	47-167

ACCEPTABLE RPD IS 35%

ANALYSES PERFORMED BY: Sherry Chilcutt

Laboratory Control Sample

Date Analyzed: 10/21/2022

	Spiked Conc. (mg/kg)	LCS Response (mg/kg)	LCS Recovery (%)	Recovery Limits (%)	Data Flag
Benzene	0.25	0.22	86	65-118	
Toluene	0.25	0.21	84	68-125	
Ethylbenzene	0.25	0.22	90	49-144	
Total Xylenes	0.75	0.65	87	38-140	

Surrogate Recovery		
Dibromofluoromethane	112	27-188
1,2-Dichloroethane-d4	103	17-212
Toluene-d8	97	41-142
4-Bromofluorobenzene	101	47-167

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Client Project # 22-148

Volatile Organic Compounds by EPA Method 8260D in Soil

Sample Description		Method Blank	SB-1-20	SB-1-25	SB-1-30	SB-2-20	SB-2-25
Date Sampled		N/A	10/18/2022	10/18/2022	10/18/2022	10/18/2022	10/18/2022
Date Analyzed	PQL (mg/kg)	10/21/2022 (mg/kg)	10/21/2022 (mg/kg)	10/21/2022 (mg/kg)	10/21/2022 (mg/kg)	10/21/2022 (mg/kg)	10/21/2022 (mg/kg)
Vinyl Chloride (VC)	0.02	nd	nd	nd	nd	nd	nd
1,1-Dichloroethene	0.05	nd	nd	nd	nd	nd	nd
trans-1,2-Dichloroethene	0.03	nd	nd	nd	nd	nd	nd
cis -1,2-Dichloroethene	0.03	nd	nd	nd	nd	nd	nd
Trichloroethene (TCE)	0.02	nd	nd	nd	nd	nd	nd
Tetrachloroethene (PCE)	0.03	nd	nd	nd	nd	nd	nd
Surrogate Recovery	Acceptable Limits (%)						
Dibromofluoromethane	27-188	113	116	101	100	111	110
1,2-Dichloroethane-d4	17-212	105	117	92	92	110	102
Toluene-d8	41-142	94	93	95	97	94	94
4-Bromofluorobenzene	47-167	95	90	97	99	94	88

"nd" Indicates not detected at listed detection limit.
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Volatile Organic Compounds by EPA Method 8260D in Soil

Sample Description		SB-2-30	SB-3-20	SB-3-25	SB-3-30	SB-3-30 Dup	SB-4-20
Date Sampled		10/18/2022	10/19/2022	10/19/2022	10/19/2022	10/19/2022	10/19/2022
Date Analyzed	PQL (mg/kg)	10/21/2022 (mg/kg)	10/21/2022 (mg/kg)	10/21/2022 (mg/kg)	10/21/2022 (mg/kg)	10/21/2022 (mg/kg)	10/21/2022 (mg/kg)
Vinyl Chloride (VC)	0.02	nd	nd	nd	nd	nd	nd
1,1-Dichloroethene	0.05	nd	nd	nd	nd	nd	nd
trans-1,2-Dichloroethene	0.03	nd	nd	nd	nd	nd	nd
cis -1,2-Dichloroethene	0.03	nd	nd	nd	nd	nd	nd
Trichloroethene (TCE)	0.02	nd	nd	nd	nd	nd	nd
Tetrachloroethene (PCE)	0.03	nd	nd	nd	nd	nd	nd
Surrogate Recovery	Acceptable Limits (%)						
Dibromofluoromethane	27-188	114	111	113	112	120	121
1,2-Dichloroethane-d4	17-212	113	114	115	112	125	128
Toluene-d8	41-142	95	94	93	93	94	93
4-Bromofluorobenzene	47-167	96	92	92	90	91	91

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Volatile Organic Compounds by EPA Method 8260D in Soil

Sample Description		SB-4-25	SB-4-30	SB-5-20	SB-5-25	SB-5-30	SB-6-20
Date Sampled		10/19/2022	10/19/2022	10/19/2022	10/19/2022	10/19/2022	1/0/1900
Date Analyzed	PQL	10/21/2022	10/21/2022	10/21/2022	10/21/2022	10/21/2022	10/21/2022
	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Vinyl Chloride (VC)	0.02	nd	nd	nd	nd	nd	nd
1,1-Dichloroethene	0.05	nd	nd	nd	nd	nd	nd
trans-1,2-Dichloroethene	0.03	nd	nd	nd	nd	nd	nd
cis -1,2-Dichloroethene	0.03	nd	nd	nd	nd	nd	nd
Trichloroethene (TCE)	0.02	nd	nd	nd	nd	nd	nd
Tetrachloroethene (PCE)	0.03	nd	nd	nd	nd	nd	nd
Surrogate Recovery	Acceptable Limits (%)						
Dibromofluoromethane	27-188	81	123	119	118	120	122
1,2-Dichloroethane-d4	17-212	126	125	125	123	133	128
Toluene-d8	41-142	94	95	94	94	94	94
4-Bromofluorobenzene	47-167	91	92	98	94	97	92

"nd" Indicates not detected at listed detection limit.
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Volatile Organic Compounds by EPA Method 8260D in Soil

Sample Description		SB-6-25	SB-6-30	SB-6-30 Dup
Date Sampled		1/0/1900	10/20/2022	10/20/2022
Date Analyzed	PQL (mg/kg)	10/21/2022 (mg/kg)	10/21/2022 (mg/kg)	10/21/2022 (mg/kg)
Vinyl Chloride (VC)	0.02	nd	nd	nd
1,1-Dichloroethene	0.05	nd	nd	nd
trans-1,2-Dichloroethene	0.03	nd	nd	nd
cis -1,2-Dichloroethene	0.03	nd	nd	nd
Trichloroethene (TCE)	0.02	nd	nd	nd
Tetrachloroethene (PCE)	0.03	nd	nd	nd

Surrogate Recovery	Acceptable Limits (%)			
Dibromofluoromethane	27-188	121	120	118
1,2-Dichloroethane-d4	17-212	129	114	124
Toluene-d8	41-142	94	95	92
4-Bromofluorobenzene	47-167	89	90	87

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QA/QC for Volatile Organic Compounds by EPA Method 8260D in Soil

Matrix Spike Sample Identification: SB-6-30

Date Analyzed: 10/21/2022

	Spiked Conc. (mg/kg)	MS Response (mg/kg)	MSD Response (mg/kg)	MS Recovery (%)	MSD Recovery (%)	RPD (%)	Recovery Limits (%)	Data Flag
Vinyl chloride	0.25	0.22	0.22	88	88	0.5	10-208	
1,1-Dichloroethene	0.25	0.36	0.34	142	138	3.1	50-187	
trans -1,2-Dichloroethene	0.25	0.24	0.23	97	91	6.0	38-175	
cis -1,2-Dichloroethene	0.25	0.23	0.22	92	89	3.5	33-166	
Trichloroethene (TCE)	0.25	0.21	0.21	85	85	0.0	71-126	
Tetrachloroethene (PCE)	0.25	0.19	0.20	75	79	5.7	45-166	

Surrogate Recovery (%)	MS	MSD	
Dibromofluoromethane	121	118	27-188
1,2-Dichloroethane-d4	119	112	17-212
Toluene-d8	97	96	41-142
4-Bromofluorobenzene	99	97	47-167

ACCEPTABLE RPD IS 35%

ANALYSES PERFORMED BY: Sherry Chilcutt

Laboratory Control Sample

Date Analyzed: 10/21/2022

	Spiked Conc. (mg/kg)	LCS Response (mg/kg)	LCS Recovery (%)	Recovery Limits (%)	Data Flag
Vinyl chloride	0.25	0.20	79	15-226	
1,1-Dichloroethene	0.25	0.29	115	38-193	
trans -1,2-Dichloroethene	0.25	0.27	107	53-156	
cis -1,2-Dichloroethene	0.25	0.24	94	10-219	
Trichloroethene (TCE)	0.25	0.22	87	67-121	
Tetrachloroethene (PCE)	0.25	0.23	93	46-159	

Surrogate Recovery			
Dibromofluoromethane	112	27-188	
1,2-Dichloroethane-d4	103	17-212	
Toluene-d8	97	41-142	
4-Bromofluorobenzene	101	47-167	

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Analyses of Gasoline (NWTPH-Gx) & BTEX (EPA Method 8260D) in Water

Sample Description		Method Blank	SB-1-W	SB-3-W	SB-4-W	SB-5-W	SB-6-W
Date Sampled		N/A	10/18/2022	10/19/2022	10/19/2022	10/19/2022	10/20/2022
Date Analyzed	PQL (µg/L)	10/21/2022 (µg/L)	10/21/2022 (µg/L)	10/21/2022 (µg/L)	10/21/2022 (µg/L)	10/21/2022 (µg/L)	10/21/2022 (µg/L)
Benzene	1.0	nd	nd	nd	nd	nd	nd
Toluene	2.0	nd	nd	nd	nd	nd	nd
Ethylbenzene	1.0	nd	nd	nd	nd	nd	nd
Total Xylenes	2.0	nd	nd	nd	nd	nd	nd
Gasoline	100	nd	nd	nd	nd	1200	nd
Surrogate Recovery	Acceptable Limits (%)						
Dibromofluoromethane	27-188	167	171	186	208 S	212 S	197 S
1,2-Dichloroethane-d4	17-212	111	113	124	122	120	120
Toluene-d8	41-142	80	78	83	88	87	81
4-Bromofluorobenzene	47-167	90	88	82	80	103	85

"nd" Indicates not detected at listed detection limit.
"S" Spike compound recovery is outside acceptance limits.
"int" Indicates that interference prevents determination.

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Client Project # 22-148

Analyses of Gasoline (NWTPH-Gx) & BTEX (EPA Method 8260D) in Water

Sample Description		B6-W Dup
Date Sampled		10/20/2022
Date Analyzed	PQL (µg/L)	10/21/2022 (µg/L)
Benzene	1.0	nd
Toluene	2.0	nd
Ethylbenzene	1.0	nd
Total Xylenes	2.0	nd
Gasoline	100	nd

Surrogate Recovery	Acceptable Limits (%)	
Dibromofluoromethane	27-188	217 S
1,2-Dichloroethane-d4	17-212	125
Toluene-d8	41-142	82
4-Bromofluorobenzene	47-167	85

"nd" Indicates not detected at listed detection limit.
"S" Spike compound recovery is outside acceptance limits.
"int" Indicates that interference prevents determination.

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Client Project # 22-148

QA/QC for Volatile Organic Compounds by EPA Method 8260D in Water

Matrix Spike Sample Identification: SB-6-W
Date Analyzed: 10/21/2022

	Spiked Conc. (µg/L)	MS Response (µg/L)	MSD Response (µg/L)	MS Recovery (%)	MSD Recovery (%)	RPD (%)	Recovery Limits (%)	Data Flag
Benzene	5.0	4.6	4.5	92	90	1.8	62-137	
Toluene	5.0	3.7	3.8	73	76	3.8	63-139	
Ethylbenzene	5.0	3.0	3.0	60	59	1.0	57-131	
Total Xylenes	15.0	10.7	10.2	71	68	4.8	44-143	

Surrogate Recovery (%)	MS	MSD	
Dibromofluoromethane	194 S	193 S	27-188
1,2-Dichloroethane-d4	125	127	17-212
Toluene-d8	86	86	41-142
4-Bromofluorobenzene	99	93	47-167

ACCEPTABLE RPD IS 35%
"S" Spike compound recovery is outside acceptance limits.

ANALYSES PERFORMED BY: Sherry Chilcutt

Laboratory Control Sample

Date Analyzed: 10/21/2022

	Spiked Conc. (µg/L)	LCS Response (µg/L)	LCS Recovery (%)	Recovery Limits (%)	Data Flag
Benzene	10.0	10.0	100	65-118	
Toluene	10.0	8.0	80	68-125	
Ethylbenzene	10.0	7.7	77	49-144	
Total Xylenes	30.0	27.7	92	38-140	

Surrogate Recovery		
Dibromofluoromethane	144	27-188
1,2-Dichloroethane-d4	111	17-212
Toluene-d8	81	41-142
4-Bromofluorobenzene	97	47-167

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Volatile Organic Compounds by EPA Method 8260D in Water

Sample Description		Method Blank	SB-1-W	SB-3-W	SB-4-W	SB-5-W	SB-6-W
Date Sampled		N/A	10/18/2022	10/19/2022	10/19/2022	10/19/2022	10/20/2022
Date Analyzed	PQL (µg/L)	10/21/2022 (µg/L)	10/21/2022 (µg/L)	10/21/2022 (µg/L)	10/21/2022 (µg/L)	10/21/2022 (µg/L)	10/21/2022 (µg/L)
Vinyl Chloride (VC)	0.2	nd	nd	nd	nd	nd	nd
1,1-Dichloroethene	0.5	nd	nd	nd	nd	nd	nd
trans-1,2-Dichloroethene	1.0	nd	nd	nd	nd	nd	nd
cis -1,2-Dichloroethene	1.0	nd	nd	nd	nd	nd	nd
Trichloroethene (TCE)	0.4	nd	nd	nd	nd	nd	nd
Tetrachloroethene (PCE)	1.0	nd	nd	nd	nd	nd	nd

Surrogate Recovery	Acceptable Limits (%)						
Dibromofluoromethane	27-188	167	171	186	208 S	212 S	197 S
1,2-Dichloroethane-d4	17-212	111	113	124	122	120	120
Toluene-d8	41-142	80	78	83	88	87	81
4-Bromofluorobenzene	47-167	90	88	82	80	103	85

"nd" Indicates not detected at listed detection limit.
"S" Spike compound recovery is outside acceptance limits.
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Volatile Organic Compounds by EPA Method 8260D in Water

Sample Description		B6-W Dup
Date Sampled		10/20/2022
Date Analyzed	PQL (µg/L)	10/21/2022 (µg/L)
Vinyl Chloride (VC)	0.2	nd
1,1-Dichloroethene	0.5	nd
trans-1,2-Dichloroethene	1.0	nd
cis -1,2-Dichloroethene	1.0	nd
Trichloroethene (TCE)	0.4	nd
Tetrachloroethene (PCE)	1.0	nd

Surrogate Recovery	Acceptable Limits (%)	
Dibromofluoromethane	27-188	217 S
1,2-Dichloroethane-d4	17-212	125
Toluene-d8	41-142	82
4-Bromofluorobenzene	47-167	85

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QA/QC for Volatile Organic Compounds by EPA Method 8260D in Water

Matrix Spike Sample Identification: SB-6-W
Date Analyzed: 10/21/2022

	Spiked Conc. (µg/L)	MS Response (µg/L)	MSD Response (µg/L)	MS Recovery (%)	MSD Recovery (%)	RPD (%)	Recovery Limits (%)	Data Flag
Vinyl chloride	5.0	3.4	3.4	68	68	0.9	10-234	
1,1-Dichloroethene	5.0	3.6	4.1	73	82	12.4	15-233	
trans-1,2-Dichloroethene	5.0	4.8	5.0	97	99	2.4	54-165	
cis-1,2-Dichloroethene	5.0	4.7	4.6	94	92	2.6	35-167	
Trichloroethene (TCE)	5.0	5.1	4.7	101	94	7.2	64-141	
Tetrachloroethene (PCE)	5.0	5.0	4.7	100	93	6.6	42-173	

Surrogate Recovery (%)	MS	MSD	
Dibromofluoromethane	194 S	193 S	27-188
1,2-Dichloroethane-d4	125	127	17-212
Toluene-d8	86	86	41-142
4-Bromofluorobenzene	99	93	47-167

ACCEPTABLE RPD IS 35%
"S" Spike compound recovery is outside acceptance limits.

ANALYSES PERFORMED BY: Sherry Chilcutt

Laboratory Control Sample

Date Analyzed: 10/21/2022

	Spiked Conc. (µg/L)	LCS Response (µg/L)	LCS Recovery (%)	Recovery Limits (%)	Data Flag
Vinyl chloride	10.0	8.5	85	15-226	
1,1-Dichloroethene	10.0	8.9	89	38-193	
trans-1,2-Dichloroethene	10.0	11.4	114	53-156	
cis-1,2-Dichloroethene	10.0	11.1	111	10-219	
Trichloroethene (TCE)	10.0	11.7	117	37-121	
Tetrachloroethene (PCE)	10.0	12.5	125	46-159	

Surrogate Recovery			
Dibromofluoromethane	144	27-188	
1,2-Dichloroethane-d4	111	17-212	
Toluene-d8	81	41-142	
4-Bromofluorobenzene	97	47-167	

ANALYSES PERFORMED BY: Sherry Chilcutt

Libby Environmental, Inc.

3322 South Bay Road NE
Olympia, WA 98506
Phone: (360) 352-2110
FAX: (360) 352-4154
Email: libbyenv@gmail.com

FRANCISCAN WEST SEATTLE PROJECT
AEG an Atlas Geosciences NW Company
Seattle, Washington
Libby Project # L22J085
Client Project # 22-148

Analyses of Diesel & Oil (NWTPH-Dx/Dx Extended) in Soil

Sample Number	Date Analyzed	Surrogate Recovery (%)	Diesel (mg/kg)	Oil (mg/kg)
Method Blank	10/21/2022	84	nd	nd
SB-1-20	10/21/2022	101	nd	nd
SB-1-20 Dup	10/21/2022	103	nd	nd
SB-1-25	10/21/2022	104	nd	nd
SB-1-30	10/21/2022	116	nd	nd
SB-2-20	10/21/2022	98	nd	nd
SB-2-25	10/21/2022	110	nd	nd
SB-2-30	10/21/2022	108	nd	nd
SB-3-20	10/21/2022	100	nd	nd
SB-3-25	10/21/2022	102	nd	nd
SB-3-30	10/21/2022	100	nd	nd
SB-4-20	10/21/2022	96	nd	nd
SB-4-25	10/21/2022	99	nd	nd
SB-4-30	10/21/2022	98	nd	nd
SB-5-20	10/21/2022	103	nd	nd
SB-5-25	10/21/2022	99	nd	nd
SB-5-30	10/21/2022	105	nd	nd
SB-6-20	10/21/2022	104	nd	nd
SB-6-25	10/21/2022	105	nd	nd
SB-6-30	10/21/2022	101	nd	nd
Practical Quantitation Limit			50	250

"nd" Indicates not detected at the listed detection limits.
"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (2-F Biphenyl): 65% TO 135%

ANALYSES PERFORMED BY: Lucy Owens

Libby Environmental, Inc.

3322 South Bay Road NE
Olympia, WA 98506
Phone: (360) 352-2110
FAX: (360) 352-4154
Email: libbyenv@gmail.com

FRANCISCAN WEST SEATTLE PROJECT
AEG an Atlas Geosciences NW Company
Seattle, Washington
Libby Project # L22J085
Client Project # 22-148

Analyses of Diesel & Oil (NWTPH-Dx/Dx Extended) in Water

Sample Number	Date Analyzed	Surrogate Recovery (%)	Diesel (µg/L)	Oil (µg/L)
Method Blank	10/25/2022	110	nd	nd
SB-1-W	10/25/2022	96	320	nd
SB-3-W	10/25/2022	102	nd	nd
SB-4-W	10/25/2022	93	nd	nd
SB-5-W	10/25/2022	126	2100	nd
SB-6-W	10/25/2022	105	1300	nd
Practical Quantitation Limit			200	400

"nd" Indicates not detected at the listed detection limits.
"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (2-F Biphenyl): 42% TO 150%

ANALYSES PERFORMED BY: Lucy Owens

Libby Environmental, Inc.

3322 South Bay Road NE
Olympia, WA 98506
Phone: (360) 352-2110
FAX: (360) 352-4154
Email: libbyenv@gmail.com

FRANCISCAN WEST SEATTLE PROJECT
AEG an Atlas Geosciences NW Company
Libby Project # L22J085
Date Received 10/20/22 12:18

Received By MRH

Sample Receipt Checklist

Chain of Custody

1. Is the Chain of Custody complete?	☑ Yes	☐ No	
2. How was the sample delivered?	☑ Hand Delivered	☐ Picked Up	☐ Shipped

Log In

3. Cooler or Shipping Container is present.	☑ Yes	☐ No	☐ N/A
4. Cooler or Shipping Container is in good condition.	☑ Yes	☐ No	☐ N/A
5. Cooler or Shipping Container has Custody Seals present.	☐ Yes	☑ No	☐ N/A
6. Was an attempt made to cool the samples?	☑ Yes	☐ No	☐ N/A
7. Temperature of cooler (0°C to 8°C recommended)	0.6 °C		
8. Temperature of sample(s) (0°C to 8°C recommended)	5.6 °C		
9. Did all containers arrive in good condition (unbroken)?	☑ Yes	☐ No	
10. Is it clear what analyses were requested?	☑ Yes	☐ No	
11. Did container labels match Chain of Custody?	☐ Yes	☑ No	
12. Are matrices correctly identified on Chain of Custody?	☑ Yes	☐ No	
13. Are correct containers used for the analysis indicated?	☑ Yes	☐ No	
14. Is there sufficient sample volume for indicated analysis?	☑ Yes	☐ No	
15. Were all containers properly preserved per each analysis?	☑ Yes	☐ No	
16. Were VOA vials collected correctly (no headspace)?	☑ Yes	☐ No	☐ N/A
17. Were all holding times able to be met?	☑ Yes	☐ No	

Discrepancies/ Notes

18. Was client notified of all discrepancies? ☑ Yes ☐ No ☐ N/A

Person Notified: Paul Hitch Date: 10/20/2022

By Whom: MRH Via: in person

Regarding: Project Name Mismatch

19. Comments. Project name on sample containers does not match CoC. The CoC has the correct project name.

Libby Environmental, Inc.

Chain of Custody Record

www.LibbyEnvironmental.com

3322 South Bay Road NE
Olympia, WA 98506
Ph: 360-352-2110
Fax: 360-352-4154

Date: 10/18/22-10/20/22 Page: 2 of 3

Client: AEG

Project Manager: Scott Rose

Address: 2633 Parkmont Lane SW, STE A

Project Name: Franciscan West Seattle

City: Olympia State: WA Zip: 98502

Location: 4550 Fauntleroy Way SW City, State: Seattle, WA

Phone: 360-352-9835 Fax: 360-352-8164

Collector: Paul Hitch Date of Collection: 10/18/22-10/20/22

Client Project # 22-148

Email: SROSE@AEGWA.COM

	Sample Number	Depth	Time	Sample Type	Container Type	VOC 8260	PCE & Daughter Prod.	NWTPH-Gx	BTEX (8260) / (8021)	NWTPH-HCID	NWTPH-Dx / Dx	PCB 8082	MTCA 5 Metals	RCRA 8 Metals	cPAH 8270	PAH 8270	Semi Vol 8270	Field Notes
1	SB-3-30	30	0910	Soil	4oz jar x1, 40mL VOA x2		⊗	⊗	⊗		⊗							
2	SB-4-5	5	1100															
3	SB-4-10	10	1108															
4	SB-4-15	15	1118															
5	SB-4-20	20	1125				⊗	⊗	⊗		⊗							
6	SB-4-25	25	1133				⊗	⊗	⊗		⊗							
7	SB-4-30	30	1139				⊗	⊗	⊗		⊗							
8	SB-5-5	5	1405															
9	SB-5-10	10	1410															
10	SB-5-15	15	1415															
11	SB-5-20	20	1425				⊗	⊗	⊗		⊗							
12	SB-5-25	25	1432				⊗	⊗	⊗		⊗							
13	SB-5-30	30	1438				⊗	⊗	⊗		⊗							
14	SB-6-5	5	0811															
15	SB-6-10	10	0816															
16	SB-6-15	15	0821															
17	SB-6-20	20	0825	↓	↓		⊗	⊗	⊗		⊗							

Relinquished by:	Date / Time	Received by:	Date / Time
Paul Hitch	10/20/22 (1215)	[signature]	10/20/22 1218

Sample Receipt

Good Condition? (Y) N
Cooler Temp. °C
Sample Temp. °C
Total Number of Containers

Remarks: 10-20-22 Analyze samples marked ⊗, hold all others per Paul via email.

TAT: 24HR 48HR (5-DAY)

LEGAL ACTION CLAUSE: *In the event of default of payment and/or failure to pay, Client agrees to pay the costs of collection including court costs and reasonable attorney fees to be determined by a court of law.*

Distribution: White - Lab, Yellow - Originator

Libby Environmental, Inc.

3322 South Bay Road NE
Olympia, WA 98506
Ph: 360-352-2110
Fax: 360-352-4154

Chain of Custody Record

www.LibbyEnvironmental.com

Date: 10/18/22 - 10/20/22 Page: 1 of 3

Client: AEG
Project Manager: Scott Rose
Address: 2633 Parkmont Lane SW, Ste A
Project Name: Franciscan West Seattle
City: Olympia State: WA Zip: 98502
Location: 4550 Fauntleroy Way SW City, State: Seattle, WA
Phone: ~~360-890-9~~ 360-352-9835 Fax: 360-352-8164
Collector: Paul Hitch Date of Collection: 10/18/22-10/20/22
Client Project # ~~18-172~~ (PA) 22-148
Email: SROSE@AEGWA.COM

Sample Number	Depth	Time	Sample Type	Container Type	VOC 8260	PCE & Daughter Prod.	NWTPH-Gx	BTEX (8260) / (8021)	NWTPH-HCID	NWTPH-Dx / Dx	PCB 8082	MTCA 5 Metals	RCRA 8 Metals	c PAH 8270	PAH 8270	Semi Vol 8270	Field Notes
1 SB-1-5	5	1005	Soil	4oz jar x1 40ml VOA x2	X	X	X		X								
2 SB-1-10	10	1033															
3 SB-1-15	15	1037															
4 SB-1-20	20	1042			⊗	⊗	⊗		⊗								
5 SB-1-25	25	1052			⊗	⊗	⊗		⊗								
6 SB-1-30	30	1100			⊗	⊗	⊗		⊗								
7 SB-2-5	5	1301															
8 SB-2-10	10	1305															
9 SB-2-15	15	1315															
10 SB-2-20	20	1321			⊗	⊗	⊗		⊗								
11 SB-2-25	25	1332			⊗	⊗	⊗		⊗								
12 SB-2-30	30	1336			⊗	⊗	⊗		⊗								
13 SB-3-5	5	0830															Poor Recovery prioritize VOCs
14 SB-3-10	10	0837															
15 SB-3-15	15	0845															
16 SB-3-20	20	0859			⊗	⊗	⊗		⊗								
17 SB-3-25	25	0903			⊗	⊗	⊗		⊗								

Relinquished by:	Date / Time	Received by:	Date / Time
Paul Hitch	10/20/22 (1215)		10/20/22 1218
Relinquished by:	Date / Time	Received by:	Date / Time
Relinquished by:	Date / Time	Received by:	Date / Time

Sample Receipt

Good Condition?	(Y) N
Cooler Temp.	°C
Sample Temp.	°C
Total Number of Containers	

Remarks:
10-20-22 Analyze samples marked ⊗, hold all others per Paul via email.

TAT: 24HR 48HR (5-DAY)

LEGAL ACTION CLAUSE: *In the event of default of payment and/or failure to pay, Client agrees to pay the costs of collection including court costs and reasonable attorney fees to be determined by a court of law.*

Distribution: White - Lab, Yellow - Originator

Libby Environmental, Inc.

Chain of Custody Record

www.LibbyEnvironmental.com

3322 South Bay Road NE
Olympia, WA 98506
Ph: 360-352-2110
Fax: 360-352-4154

Date: 10/18/22 - 10/20/22 Page: 3 of 3

Client: AEG

Project Manager: Scott Rose

Address: 2653 Parkmont Lane SW, Ste A

Project Name: Franciscan West Seattle

City: Olympia State: WA Zip: 98502

Location: 4550 Fauntleroy Way SW City, State: Seattle, WA

Phone: 360-352-8164 ↔ Fax: 360-352-9835

Collector: Paul Hitch Date of Collection: 10/18/22 - 10/20/22

Client Project # 22-148

Email: SROSE@AEGWA.COM

Sample Number	Depth	Time	Sample Type	Container Type	VOC 8260	PCE & Daughter Prod.	NWTPH-Gx	BTEX (8260) / (8021)	NWTPH-HCID	NWTPH-Dx / Dx	PCB 8082	MTCA 5 Metals	RCRA 8 Metals	c PAH 8270	PAH 8270	Semi Vol 8270	Field Notes
1 SB-6-25	25	0831	Soil	4oz jar x1 40ml VOA x3	X	X	X			X							
2 SB-6-30	30	0836	↓	↓	X	X	X			X							
3 SB-1-W	20-30	1142	Water	0.5L Amber x1 40ml VOA x3	X	X	X			X							
4 SB-3-W	20-30	0955			X	X	X			X							
5 SB-4-W	20-30	1230			X	X	X			X							
6 SB-5-W	20-30	1535			X	X	X			X							
7 SB-6-W	20-30	0911	↓	↓	X	X	X			X							
8																	
9																	
10																	
11																	
12																	
13																	
14																	
15																	
16																	
17																	

pH

Relinquished by:	Date / Time	Received by:	Date / Time
Paul Hitch	10/20/22 (1218)		10/20/22 1218
Relinquished by:	Date / Time	Received by:	Date / Time
Relinquished by:	Date / Time	Received by:	Date / Time

Sample Receipt

Good Condition?	(Y) N
Cooler Temp.	°C
Sample Temp.	°C
Total Number of Containers	

Remarks:
10-20-22 Analyze samples marked as ⊗, hold all others per Paul via email.

TAT: 24HR 48HR (5-DAY)

Distribution: White - Lab, Yellow - Originator

Libby Environmental, Inc.
3322 South Bay Road NE • Olympia, WA 98506-2957

November 1, 2022

Scott Rose
AEG an Atlas Geosciences NW Company
2633 Parkmont Lane SW, Suite A
Olympia, WA 98502

Dear Mr. Rose:

Please find enclosed the analytical data report for the Seattle West-Huling project located in Seattle, Washington.

The results of the analyses are summarized in the attached tables. Applicable detection limits and QA/QC data are included. The sample(s) will be disposed of within 30 days unless we are contacted to arrange long term storage.

Libby Environmental, Inc. appreciates the opportunity to have provided analytical services for this project. If you have any further questions about the data report, please give me a call. It was a pleasure working with you on this project, and we are looking forward to the next opportunity to work together.

Sincerely,

Sherry L. Chilcutt
Senior Chemist
Libby Environmental, Inc.

Phone (360) 352-2110 • Fax (360) 352-4154 • libbyenv@gmail.com

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

Libby Environmental
Sherry Chilcutt
3322 South Bay Road NE
Olympia, WA 98506

RE: Seattle West-Huling
Work Order Number: 2210319

October 31, 2022

Attention Sherry Chilcutt:

Fremont Analytical, Inc. received 5 sample(s) on 10/20/2022 for the analyses presented in the following report.

Petroleum Fractionation by EPA Method TO-15
Volatile Organic Compounds by EPA Method TO-15

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

Date: *10/31/2022*

CLIENT: Libby Environmental
Project: Seattle West-Huling
Work Order: 2210319

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
2210319-001	SS-1	10/19/2022 5:59 PM	10/20/2022 10:55 AM
2210319-002	SS-2	10/19/2022 6:12 PM	10/20/2022 10:55 AM
2210319-003	SS-3	10/19/2022 6:23 PM	10/20/2022 10:55 AM
2210319-004	SS-4	10/19/2022 6:33 PM	10/20/2022 10:55 AM
2210319-005	SS-5	10/19/2022 6:48 PM	10/20/2022 10:55 AM

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

Case Narrative

WO#: **2210319**
Date: **10/31/2022**

CLIENT: Libby Environmental
Project: Seattle West-Huling

I. SAMPLE RECEIPT:
Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:
Air samples are reported in ppbv and ug/m3.

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 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.

Standard temperature and pressure assumes 24.45 = (25C and 1 atm).

*Acrolein: Reporting Limit noted is the laboratory Limit of Detection (LOD). Any detections below 0.0229 ug/m3 (0.01 ppbv) are considered an estimate.

*1,2-Dibromoethane (EDB): Reporting Limit noted is the Method Detection Limit (MDL). Any detections below 0.00768 ug/m3 (0.001 ppbv) are considered an estimate.

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: **Libby Environmental**
WorkOrder: 2210319
Project: Seattle West-Huling

Client Sample ID: SS-1
Lab ID: 2210319-001A
Sample Type: Summa Canister

Date Sampled: 10/19/2022
Date Received: 10/20/2022

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst	
Petroleum Fractionation by EPA Method TO-15	**(ppbv)**	**(ug/m³)**	**(ppbv)**	**(ug/m³)**				
Aliphatic Hydrocarbon (EC5-8)	77.3	294	30.0	114		EPA-TO-15	10/28/2022	TC
Aliphatic Hydrocarbon (EC9-12)	<20.0	<118	20.0	118		EPA-TO-15	10/28/2022	TC
Aromatic Hydrocarbon (EC9-10)	<5.00	<25.2	5.00	25.2		EPA-TO-15	10/28/2022	TC
Surr: 4-Bromofluorobenzene	94.5 %Rec	--	70-130	--		EPA-TO-15	10/28/2022	TC
Volatile Organic Compounds by EPA Method TO-15	**(ppbv)**	**(ug/m³)**	**(ppbv)**	**(ug/m³)**				
1,1,1-Trichloroethane	<0.200	<1.09	0.200	1.09		EPA-TO-15	10/28/2022	TC
1,1,2,2-Tetrachloroethane	<0.0400	<0.275	0.0400	0.275		EPA-TO-15	10/28/2022	TC
CFC-113	<0.200	<1.53	0.200	1.53		EPA-TO-15	10/28/2022	TC
1,1,2-Trichloroethane (TCA)	<0.0400	<0.218	0.0400	0.218		EPA-TO-15	10/28/2022	TC
1,1-Dichloroethane	<0.0400	<0.162	0.0400	0.162		EPA-TO-15	10/28/2022	TC
1,1-Dichloroethene (DCE)	<0.0400	<0.159	0.0400	0.159		EPA-TO-15	10/28/2022	TC
1,2,4-Trichlorobenzene	<0.400	<2.97	0.400	2.97		EPA-TO-15	10/28/2022	TC
1,2,4-Trimethylbenzene	2.23	11.0	2.00	9.83		EPA-TO-15	10/28/2022	TC
1,2-Dibromoethane (EDB)*	<0.00119	<0.00915	0.00119	0.00915		EPA-TO-15	10/28/2022	TC
1,2-Dichlorobenzene	0.0632	0.380	0.0400	0.240		EPA-TO-15	10/28/2022	TC
1,2-Dichloroethane	<0.0400	<0.162	0.0400	0.162		EPA-TO-15	10/28/2022	TC
1,2-Dichloropropane	<0.200	<0.924	0.200	0.924		EPA-TO-15	10/28/2022	TC
1,3,5-Trimethylbenzene	<1.60	<7.87	1.60	7.87		EPA-TO-15	10/28/2022	TC
1,3-Butadiene	1.99	4.41	0.0400	0.0885		EPA-TO-15	10/28/2022	TC
1,3-Dichlorobenzene	0.0960	0.577	0.0400	0.241		EPA-TO-15	10/28/2022	TC
1,4-Dichlorobenzene	0.112	0.672	0.0400	0.241		EPA-TO-15	10/28/2022	TC
1,4-Dioxane	<1.60	<5.77	1.60	5.77		EPA-TO-15	10/28/2022	TC
(MEK) 2-Butanone	3.62	10.7	1.60	4.72		EPA-TO-15	10/28/2022	TC
2-Hexanone	<4.00	<16.4	4.00	16.4	*	EPA-TO-15	10/28/2022	TC
Isopropyl Alcohol	114	280	4.00	9.83	E	EPA-TO-15	10/28/2022	TC
4-Methyl-2-pentanone (MIBK)	<4.00	<16.4	4.00	16.4		EPA-TO-15	10/28/2022	TC
Acetone	69.4	165	8.00	19.0		EPA-TO-15	10/28/2022	TC
Acrolein*	0.728	1.67	0.00400	0.00917		EPA-TO-15	10/28/2022	TC
Benzene	0.992	3.17	0.0400	0.128		EPA-TO-15	10/28/2022	TC

Client: **Libby Environmental**
WorkOrder: 2210319
Project: Seattle West-Huling

Client Sample ID: SS-1
Lab ID: 2210319-001A
Sample Type: Summa Canister

Date Sampled: 10/19/2022
Date Received: 10/20/2022

Volatile Organic Compounds by EPA Method TO-15

Analyte	Concentration (ppbv)	Concentration (ug/m³)	Reporting Limit (ppbv)	Reporting Limit (ug/m³)	Qual	Method	Date/Analyst	
Benzyl chloride	<0.400	<2.07	0.400	2.07		EPA-TO-15	10/28/2022	TC
Dichlorobromomethane	<0.400	<2.68	0.400	2.68		EPA-TO-15	10/28/2022	TC
Bromoform	<0.0400	<0.414	0.0400	0.414		EPA-TO-15	10/28/2022	TC
Bromomethane	<0.400	<1.55	0.400	1.55		EPA-TO-15	10/28/2022	TC
Carbon disulfide	<1.60	<4.98	1.60	4.98		EPA-TO-15	10/28/2022	TC
Carbon tetrachloride	0.0722	0.455	0.0400	0.252		EPA-TO-15	10/28/2022	TC
Chlorobenzene	<0.0400	<0.184	0.0400	0.184		EPA-TO-15	10/28/2022	TC
Dibromochloromethane	<0.0400	<0.341	0.0400	0.341		EPA-TO-15	10/28/2022	TC
Chloroethane	<1.60	<4.22	1.60	4.22		EPA-TO-15	10/28/2022	TC
Chloroform	0.0986	0.481	0.0400	0.195		EPA-TO-15	10/28/2022	TC
Chloromethane	0.577	1.19	0.200	0.413		EPA-TO-15	10/28/2022	TC
cis-1,2-Dichloroethene	<0.400	<1.59	0.400	1.59		EPA-TO-15	10/28/2022	TC
cis-1,3-dichloropropene	<0.200	<0.908	0.200	0.908		EPA-TO-15	10/28/2022	TC
Cyclohexane	3.86	13.3	0.400	1.38		EPA-TO-15	10/28/2022	TC
Dichlorodifluoromethane (CFC-12)	0.384	1.90	0.200	0.989		EPA-TO-15	10/28/2022	TC
Dichlorotetrafluoroethane (CFC-114)	<0.200	<1.40	0.200	1.40		EPA-TO-15	10/28/2022	TC
Ethyl acetate	<1.60	<5.77	1.60	5.77		EPA-TO-15	10/28/2022	TC
Ethylbenzene	<1.60	<6.95	1.60	6.95		EPA-TO-15	10/28/2022	TC
Heptane	<1.60	<6.43	1.60	6.43		EPA-TO-15	10/28/2022	TC
Hexachlorobutadiene	<0.400	<4.27	0.400	4.27		EPA-TO-15	10/28/2022	TC
m,p-Xylene	1.70	7.37	1.60	6.95		EPA-TO-15	10/28/2022	TC
Methyl methacrylate	<1.60	<6.55	1.60	6.55		EPA-TO-15	10/28/2022	TC
Methylene chloride	1.71	5.93	1.60	5.56		EPA-TO-15	10/28/2022	TC
Naphthalene	0.310	1.63	0.0400	0.210		EPA-TO-15	10/28/2022	TC
n-Hexane	2.18	7.67	2.00	7.05		EPA-TO-15	10/28/2022	TC
o-Xylene	<0.400	<1.74	0.400	1.74		EPA-TO-15	10/28/2022	TC
4-Ethyltoluene	0.234	1.15	0.200	0.983		EPA-TO-15	10/28/2022	TC
Propylene	33.8	58.2	1.60	2.75		EPA-TO-15	10/28/2022	TC
Styrene	<1.60	<6.81	1.60	6.81		EPA-TO-15	10/28/2022	TC
Methyl tert-butyl ether (MTBE)	<0.200	<0.721	0.200	0.721		EPA-TO-15	10/28/2022	TC

Client: **Libby Environmental**
WorkOrder: 2210319
Project: Seattle West-Huling

Client Sample ID: SS-1
Lab ID: 2210319-001A
Sample Type: Summa Canister

Date Sampled: 10/19/2022
Date Received: 10/20/2022

Volatile Organic Compounds by EPA Method TO-15

Analyte	Concentration (ppbv)	Concentration (ug/m³)	Reporting Limit (ppbv)	Reporting Limit (ug/m³)	Qual	Method	Date/Analyst	
Tetrachloroethene (PCE)	7.03	47.7	0.0400	0.271		EPA-TO-15	10/28/2022	TC
Tetrahydrofuran	<1.60	<4.72	1.60	4.72		EPA-TO-15	10/28/2022	TC
Toluene	1.77	6.68	0.400	1.51		EPA-TO-15	10/28/2022	TC
trans-1,2-Dichloroethene	<0.200	<0.793	0.200	0.793		EPA-TO-15	10/28/2022	TC
trans-1,3-dichloropropene	<0.200	<0.908	0.200	0.908		EPA-TO-15	10/28/2022	TC
Trichloroethene (TCE)	<0.0400	<0.215	0.0400	0.215		EPA-TO-15	10/28/2022	TC
Trichlorofluoromethane (CFC-11)	<0.200	<1.12	0.200	1.12		EPA-TO-15	10/28/2022	TC
Vinyl acetate	1.97	6.94	1.60	5.63		EPA-TO-15	10/28/2022	TC
Vinyl chloride	<0.0400	<0.102	0.0400	0.102		EPA-TO-15	10/28/2022	TC
Surr: 4-Bromofluorobenzene	116 %Rec	--	70-130	--		EPA-TO-15	10/28/2022	TC

NOTES:
* - Associated LCS is below acceptance criteria. Result may be low-biased.

Client: **Libby Environmental**
WorkOrder: 2210319
Project: Seattle West-Huling

Client Sample ID: SS-2
Lab ID: 2210319-002A
Sample Type: Summa Canister

Date Sampled: 10/19/2022
Date Received: 10/20/2022

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst	
Petroleum Fractionation by EPA Method TO-15								
	(ppbv)	**(ug/m³)**	**(ppbv)**	**(ug/m³)**				
Aliphatic Hydrocarbon (EC5-8)	50.8	193	30.0	114		EPA-TO-15	10/28/2022	TC
Aliphatic Hydrocarbon (EC9-12)	<20.0	<118	20.0	118		EPA-TO-15	10/28/2022	TC
Aromatic Hydrocarbon (EC9-10)	<5.00	<25.2	5.00	25.2		EPA-TO-15	10/28/2022	TC
Surr: 4-Bromofluorobenzene	86.2 %Rec	--	70-130	--		EPA-TO-15	10/28/2022	TC
Volatile Organic Compounds by EPA Method TO-15								
	(ppbv)	**(ug/m³)**	**(ppbv)**	**(ug/m³)**				
1,1,1-Trichloroethane	<0.200	<1.09	0.200	1.09		EPA-TO-15	10/28/2022	TC
1,1,2,2-Tetrachloroethane	<0.0400	<0.275	0.0400	0.275		EPA-TO-15	10/28/2022	TC
CFC-113	<0.200	<1.53	0.200	1.53		EPA-TO-15	10/28/2022	TC
1,1,2-Trichloroethane (TCA)	<0.0400	<0.218	0.0400	0.218		EPA-TO-15	10/28/2022	TC
1,1-Dichloroethane	<0.0400	<0.162	0.0400	0.162		EPA-TO-15	10/28/2022	TC
1,1-Dichloroethene (DCE)	0.0473	0.188	0.0400	0.159		EPA-TO-15	10/28/2022	TC
1,2,4-Trichlorobenzene	<0.400	<2.97	0.400	2.97		EPA-TO-15	10/28/2022	TC
1,2,4-Trimethylbenzene	2.45	12.1	2.00	9.83		EPA-TO-15	10/28/2022	TC
1,2-Dibromoethane (EDB)*	<0.00119	<0.00915	0.00119	0.00915		EPA-TO-15	10/28/2022	TC
1,2-Dichlorobenzene	0.0472	0.284	0.0400	0.240		EPA-TO-15	10/28/2022	TC
1,2-Dichloroethane	<0.0400	<0.162	0.0400	0.162		EPA-TO-15	10/28/2022	TC
1,2-Dichloropropane	<0.200	<0.924	0.200	0.924		EPA-TO-15	10/28/2022	TC
1,3,5-Trimethylbenzene	<1.60	<7.87	1.60	7.87		EPA-TO-15	10/28/2022	TC
1,3-Butadiene	2.10	4.65	0.0400	0.0885		EPA-TO-15	10/28/2022	TC
1,3-Dichlorobenzene	0.112	0.676	0.0400	0.241		EPA-TO-15	10/28/2022	TC
1,4-Dichlorobenzene	0.0834	0.502	0.0400	0.241		EPA-TO-15	10/28/2022	TC
1,4-Dioxane	<1.60	<5.77	1.60	5.77		EPA-TO-15	10/28/2022	TC
(MEK) 2-Butanone	2.79	8.21	1.60	4.72		EPA-TO-15	10/28/2022	TC
2-Hexanone	<4.00	<16.4	4.00	16.4	*	EPA-TO-15	10/28/2022	TC
Isopropyl Alcohol	71.4	176	4.00	9.83		EPA-TO-15	10/28/2022	TC
4-Methyl-2-pentanone (MIBK)	<4.00	<16.4	4.00	16.4		EPA-TO-15	10/28/2022	TC
Acetone	250	594	8.00	19.0	E	EPA-TO-15	10/28/2022	TC
Acrolein*	0.700	1.60	0.00400	0.00917		EPA-TO-15	10/28/2022	TC
Benzene	1.16	3.69	0.0400	0.128		EPA-TO-15	10/28/2022	TC

Client: **Libby Environmental**
WorkOrder: 2210319
Project: Seattle West-Huling

Client Sample ID: SS-2
Lab ID: 2210319-002A
Sample Type: Summa Canister

Date Sampled: 10/19/2022
Date Received: 10/20/2022

Volatile Organic Compounds by EPA Method TO-15

Analyte	Concentration (ppbv)	Concentration (ug/m³)	Reporting Limit (ppbv)	Reporting Limit (ug/m³)	Qual	Method	Date/Analyst	
Benzyl chloride	<0.400	<2.07	0.400	2.07		EPA-TO-15	10/28/2022	TC
Dichlorobromomethane	<0.400	<2.68	0.400	2.68		EPA-TO-15	10/28/2022	TC
Bromoform	<0.0400	<0.414	0.0400	0.414		EPA-TO-15	10/28/2022	TC
Bromomethane	<0.400	<1.55	0.400	1.55		EPA-TO-15	10/28/2022	TC
Carbon disulfide	<1.60	<4.98	1.60	4.98		EPA-TO-15	10/28/2022	TC
Carbon tetrachloride	0.0754	0.475	0.0400	0.252		EPA-TO-15	10/28/2022	TC
Chlorobenzene	<0.0400	<0.184	0.0400	0.184		EPA-TO-15	10/28/2022	TC
Dibromochloromethane	<0.0400	<0.341	0.0400	0.341		EPA-TO-15	10/28/2022	TC
Chloroethane	<1.60	<4.22	1.60	4.22		EPA-TO-15	10/28/2022	TC
Chloroform	0.220	1.08	0.0400	0.195		EPA-TO-15	10/28/2022	TC
Chloromethane	0.596	1.23	0.200	0.413		EPA-TO-15	10/28/2022	TC
cis-1,2-Dichloroethene	<0.400	<1.59	0.400	1.59		EPA-TO-15	10/28/2022	TC
cis-1,3-dichloropropene	<0.200	<0.908	0.200	0.908		EPA-TO-15	10/28/2022	TC
Cyclohexane	0.498	1.72	0.400	1.38		EPA-TO-15	10/28/2022	TC
Dichlorodifluoromethane (CFC-12)	0.419	2.07	0.200	0.989		EPA-TO-15	10/28/2022	TC
Dichlorotetrafluoroethane (CFC-114)	<0.200	<1.40	0.200	1.40		EPA-TO-15	10/28/2022	TC
Ethyl acetate	<1.60	<5.77	1.60	5.77		EPA-TO-15	10/28/2022	TC
Ethylbenzene	<1.60	<6.95	1.60	6.95		EPA-TO-15	10/28/2022	TC
Heptane	<1.60	<6.43	1.60	6.43		EPA-TO-15	10/28/2022	TC
Hexachlorobutadiene	<0.400	<4.27	0.400	4.27		EPA-TO-15	10/28/2022	TC
m,p-Xylene	1.75	7.60	1.60	6.95		EPA-TO-15	10/28/2022	TC
Methyl methacrylate	<1.60	<6.55	1.60	6.55		EPA-TO-15	10/28/2022	TC
Methylene chloride	<1.60	<5.56	1.60	5.56		EPA-TO-15	10/28/2022	TC
Naphthalene	0.0654	0.343	0.0400	0.210		EPA-TO-15	10/28/2022	TC
n-Hexane	2.42	8.51	2.00	7.05		EPA-TO-15	10/28/2022	TC
o-Xylene	<0.400	<1.74	0.400	1.74		EPA-TO-15	10/28/2022	TC
4-Ethyltoluene	0.292	1.44	0.200	0.983		EPA-TO-15	10/28/2022	TC
Propylene	48.8	84.0	1.60	2.75		EPA-TO-15	10/28/2022	TC
Styrene	<1.60	<6.81	1.60	6.81		EPA-TO-15	10/28/2022	TC
Methyl tert-butyl ether (MTBE)	<0.200	<0.721	0.200	0.721		EPA-TO-15	10/28/2022	TC

Client: **Libby Environmental**
WorkOrder: 2210319
Project: Seattle West-Huling

Client Sample ID: SS-2
Lab ID: 2210319-002A
Sample Type: Summa Canister

Date Sampled: 10/19/2022
Date Received: 10/20/2022

Volatile Organic Compounds by EPA Method TO-15

Analyte	Concentration (ppbv)	Concentration (ug/m³)	Reporting Limit (ppbv)	Reporting Limit (ug/m³)	Qual	Method	Date/Analyst	
Tetrachloroethene (PCE)	0.125	0.849	0.0400	0.271		EPA-TO-15	10/28/2022	TC
Tetrahydrofuran	<1.60	<4.72	1.60	4.72		EPA-TO-15	10/28/2022	TC
Toluene	1.31	4.94	0.400	1.51		EPA-TO-15	10/28/2022	TC
trans-1,2-Dichloroethene	<0.200	<0.793	0.200	0.793		EPA-TO-15	10/28/2022	TC
trans-1,3-dichloropropene	<0.200	<0.908	0.200	0.908		EPA-TO-15	10/28/2022	TC
Trichloroethene (TCE)	<0.0400	<0.215	0.0400	0.215		EPA-TO-15	10/28/2022	TC
Trichlorofluoromethane (CFC-11)	<0.200	<1.12	0.200	1.12		EPA-TO-15	10/28/2022	TC
Vinyl acetate	<1.60	<5.63	1.60	5.63		EPA-TO-15	10/28/2022	TC
Vinyl chloride	<0.0400	<0.102	0.0400	0.102		EPA-TO-15	10/28/2022	TC
Surr: 4-Bromofluorobenzene	109 %Rec	--	70-130	--		EPA-TO-15	10/28/2022	TC

NOTES:
* - Associated LCS is below acceptance criteria. Result may be low-biased.

Client: **Libby Environmental**
WorkOrder: 2210319
Project: Seattle West-Huling

Client Sample ID: SS-3
Lab ID: 2210319-003A
Sample Type: Summa Canister

Date Sampled: 10/19/2022
Date Received: 10/20/2022

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst	
Petroleum Fractionation by EPA Method TO-15	**(ppbv)**	**(ug/m³)**	**(ppbv)**	**(ug/m³)**				
Aliphatic Hydrocarbon (EC5-8)	90.2	343	30.0	114		EPA-TO-15	10/28/2022	TC
Aliphatic Hydrocarbon (EC9-12)	<20.0	<118	20.0	118		EPA-TO-15	10/28/2022	TC
Aromatic Hydrocarbon (EC9-10)	<5.00	<25.2	5.00	25.2		EPA-TO-15	10/28/2022	TC
Surr: 4-Bromofluorobenzene	90.0 %Rec	--	70-130	--		EPA-TO-15	10/28/2022	TC
Volatile Organic Compounds by EPA Method TO-15	**(ppbv)**	**(ug/m³)**	**(ppbv)**	**(ug/m³)**				
1,1,1-Trichloroethane	<0.200	<1.09	0.200	1.09		EPA-TO-15	10/28/2022	TC
1,1,2,2-Tetrachloroethane	<0.0400	<0.275	0.0400	0.275		EPA-TO-15	10/28/2022	TC
CFC-113	<0.200	<1.53	0.200	1.53		EPA-TO-15	10/28/2022	TC
1,1,2-Trichloroethane (TCA)	<0.0400	<0.218	0.0400	0.218		EPA-TO-15	10/28/2022	TC
1,1-Dichloroethane	<0.0400	<0.162	0.0400	0.162		EPA-TO-15	10/28/2022	TC
1,1-Dichloroethene (DCE)	0.0710	0.281	0.0400	0.159		EPA-TO-15	10/28/2022	TC
1,2,4-Trichlorobenzene	<0.400	<2.97	0.400	2.97		EPA-TO-15	10/28/2022	TC
1,2,4-Trimethylbenzene	2.27	11.2	2.00	9.83		EPA-TO-15	10/28/2022	TC
1,2-Dibromoethane (EDB)*	<0.00119	<0.00915	0.00119	0.00915		EPA-TO-15	10/28/2022	TC
1,2-Dichlorobenzene	0.0468	0.282	0.0400	0.240		EPA-TO-15	10/28/2022	TC
1,2-Dichloroethane	<0.0400	<0.162	0.0400	0.162		EPA-TO-15	10/28/2022	TC
1,2-Dichloropropane	<0.200	<0.924	0.200	0.924		EPA-TO-15	10/28/2022	TC
1,3,5-Trimethylbenzene	<1.60	<7.87	1.60	7.87		EPA-TO-15	10/28/2022	TC
1,3-Butadiene	1.83	4.05	0.0400	0.0885		EPA-TO-15	10/28/2022	TC
1,3-Dichlorobenzene	0.135	0.811	0.0400	0.241		EPA-TO-15	10/28/2022	TC
1,4-Dichlorobenzene	0.0789	0.474	0.0400	0.241		EPA-TO-15	10/28/2022	TC
1,4-Dioxane	<1.60	<5.77	1.60	5.77		EPA-TO-15	10/28/2022	TC
(MEK) 2-Butanone	3.69	10.9	1.60	4.72		EPA-TO-15	10/28/2022	TC
2-Hexanone	<4.00	<16.4	4.00	16.4	*	EPA-TO-15	10/28/2022	TC
Isopropyl Alcohol	51.6	127	4.00	9.83		EPA-TO-15	10/28/2022	TC
4-Methyl-2-pentanone (MIBK)	<4.00	<16.4	4.00	16.4		EPA-TO-15	10/28/2022	TC
Acetone	428	1,020	8.00	19.0	E	EPA-TO-15	10/28/2022	TC
Acrolein*	0.890	2.04	0.00400	0.00917		EPA-TO-15	10/28/2022	TC
Benzene	1.51	4.81	0.0400	0.128		EPA-TO-15	10/28/2022	TC

Client: **Libby Environmental**
WorkOrder: 2210319
Project: Seattle West-Huling

Client Sample ID: SS-3
Lab ID: 2210319-003A
Sample Type: Summa Canister

Date Sampled: 10/19/2022
Date Received: 10/20/2022

Volatile Organic Compounds by EPA Method TO-15

Analyte	Concentration (ppbv)	Concentration (ug/m³)	Reporting Limit (ppbv)	Reporting Limit (ug/m³)	Qual	Method	Date/Analyst	
Benzyl chloride	<0.400	<2.07	0.400	2.07		EPA-TO-15	10/28/2022	TC
Dichlorobromomethane	<0.400	<2.68	0.400	2.68		EPA-TO-15	10/28/2022	TC
Bromoform	<0.0400	<0.414	0.0400	0.414		EPA-TO-15	10/28/2022	TC
Bromomethane	<0.400	<1.55	0.400	1.55		EPA-TO-15	10/28/2022	TC
Carbon disulfide	<1.60	<4.98	1.60	4.98		EPA-TO-15	10/28/2022	TC
Carbon tetrachloride	0.0784	0.494	0.0400	0.252		EPA-TO-15	10/28/2022	TC
Chlorobenzene	<0.0400	<0.184	0.0400	0.184		EPA-TO-15	10/28/2022	TC
Dibromochloromethane	<0.0400	<0.341	0.0400	0.341		EPA-TO-15	10/28/2022	TC
Chloroethane	<1.60	<4.22	1.60	4.22		EPA-TO-15	10/28/2022	TC
Chloroform	0.343	1.68	0.0400	0.195		EPA-TO-15	10/28/2022	TC
Chloromethane	0.714	1.47	0.200	0.413		EPA-TO-15	10/28/2022	TC
cis-1,2-Dichloroethene	<0.400	<1.59	0.400	1.59		EPA-TO-15	10/28/2022	TC
cis-1,3-dichloropropene	<0.200	<0.908	0.200	0.908		EPA-TO-15	10/28/2022	TC
Cyclohexane	1.44	4.95	0.400	1.38		EPA-TO-15	10/28/2022	TC
Dichlorodifluoromethane (CFC-12)	0.387	1.91	0.200	0.989		EPA-TO-15	10/28/2022	TC
Dichlorotetrafluoroethane (CFC-114)	<0.200	<1.40	0.200	1.40		EPA-TO-15	10/28/2022	TC
Ethyl acetate	<1.60	<5.77	1.60	5.77		EPA-TO-15	10/28/2022	TC
Ethylbenzene	<1.60	<6.95	1.60	6.95		EPA-TO-15	10/28/2022	TC
Heptane	<1.60	<6.43	1.60	6.43		EPA-TO-15	10/28/2022	TC
Hexachlorobutadiene	<0.400	<4.27	0.400	4.27		EPA-TO-15	10/28/2022	TC
m,p-Xylene	1.81	7.86	1.60	6.95		EPA-TO-15	10/28/2022	TC
Methyl methacrylate	<1.60	<6.55	1.60	6.55		EPA-TO-15	10/28/2022	TC
Methylene chloride	<1.60	<5.56	1.60	5.56		EPA-TO-15	10/28/2022	TC
Naphthalene	0.0800	0.420	0.0400	0.210		EPA-TO-15	10/28/2022	TC
n-Hexane	2.94	10.4	2.00	7.05		EPA-TO-15	10/28/2022	TC
o-Xylene	<0.400	<1.74	0.400	1.74		EPA-TO-15	10/28/2022	TC
4-Ethyltoluene	0.236	1.16	0.200	0.983		EPA-TO-15	10/28/2022	TC
Propylene	37.3	64.3	1.60	2.75		EPA-TO-15	10/28/2022	TC
Styrene	<1.60	<6.81	1.60	6.81		EPA-TO-15	10/28/2022	TC
Methyl tert-butyl ether (MTBE)	<0.200	<0.721	0.200	0.721		EPA-TO-15	10/28/2022	TC

Client: **Libby Environmental**
WorkOrder: 2210319
Project: Seattle West-Huling

Client Sample ID: SS-3
Lab ID: 2210319-003A
Sample Type: Summa Canister

Date Sampled: 10/19/2022
Date Received: 10/20/2022

Volatile Organic Compounds by EPA Method TO-15

Analyte	Concentration (ppbv)	Concentration (ug/m³)	Reporting Limit (ppbv)	Reporting Limit (ug/m³)	Qual	Method	Date/Analyst	
Tetrachloroethene (PCE)	0.0572	0.388	0.0400	0.271		EPA-TO-15	10/28/2022	TC
Tetrahydrofuran	<1.60	<4.72	1.60	4.72		EPA-TO-15	10/28/2022	TC
Toluene	1.67	6.28	0.400	1.51		EPA-TO-15	10/28/2022	TC
trans-1,2-Dichloroethene	<0.200	<0.793	0.200	0.793		EPA-TO-15	10/28/2022	TC
trans-1,3-dichloropropene	<0.200	<0.908	0.200	0.908		EPA-TO-15	10/28/2022	TC
Trichloroethene (TCE)	<0.0400	<0.215	0.0400	0.215		EPA-TO-15	10/28/2022	TC
Trichlorofluoromethane (CFC-11)	<0.200	<1.12	0.200	1.12		EPA-TO-15	10/28/2022	TC
Vinyl acetate	1.96	6.90	1.60	5.63		EPA-TO-15	10/28/2022	TC
Vinyl chloride	<0.0400	<0.102	0.0400	0.102		EPA-TO-15	10/28/2022	TC
Surr: 4-Bromofluorobenzene	109 %Rec	--	70-130	--		EPA-TO-15	10/28/2022	TC

NOTES:
* - Associated LCS is below acceptance criteria. Result may be low-biased.

Client: **Libby Environmental**
WorkOrder: 2210319
Project: Seattle West-Huling

Client Sample ID: SS-4
Lab ID: 2210319-004A
Sample Type: Summa Canister

Date Sampled: 10/19/2022
Date Received: 10/20/2022

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst	
Petroleum Fractionation by EPA Method TO-15								
	(ppbv)	**(ug/m³)**	**(ppbv)**	**(ug/m³)**				
Aliphatic Hydrocarbon (EC5-8)	163	618	30.0	114		EPA-TO-15	10/28/2022	TC
Aliphatic Hydrocarbon (EC9-12)	<20.0	<118	20.0	118		EPA-TO-15	10/28/2022	TC
Aromatic Hydrocarbon (EC9-10)	<5.00	<25.2	5.00	25.2		EPA-TO-15	10/28/2022	TC
Surr: 4-Bromofluorobenzene	95.1 %Rec	--	70-130	--		EPA-TO-15	10/28/2022	TC
Volatile Organic Compounds by EPA Method TO-15								
	(ppbv)	**(ug/m³)**	**(ppbv)**	**(ug/m³)**				
1,1,1-Trichloroethane	<0.200	<1.09	0.200	1.09		EPA-TO-15	10/28/2022	TC
1,1,2,2-Tetrachloroethane	<0.0400	<0.275	0.0400	0.275		EPA-TO-15	10/28/2022	TC
CFC-113	<0.200	<1.53	0.200	1.53		EPA-TO-15	10/28/2022	TC
1,1,2-Trichloroethane (TCA)	<0.0400	<0.218	0.0400	0.218		EPA-TO-15	10/28/2022	TC
1,1-Dichloroethane	<0.0400	<0.162	0.0400	0.162		EPA-TO-15	10/28/2022	TC
1,1-Dichloroethene (DCE)	0.0563	0.223	0.0400	0.159		EPA-TO-15	10/28/2022	TC
1,2,4-Trichlorobenzene	<0.400	<2.97	0.400	2.97		EPA-TO-15	10/28/2022	TC
1,2,4-Trimethylbenzene	2.22	10.9	2.00	9.83		EPA-TO-15	10/28/2022	TC
1,2-Dibromoethane (EDB)*	<0.00119	<0.00915	0.00119	0.00915		EPA-TO-15	10/28/2022	TC
1,2-Dichlorobenzene	0.0490	0.295	0.0400	0.240		EPA-TO-15	10/28/2022	TC
1,2-Dichloroethane	<0.0400	<0.162	0.0400	0.162		EPA-TO-15	10/28/2022	TC
1,2-Dichloropropane	<0.200	<0.924	0.200	0.924		EPA-TO-15	10/28/2022	TC
1,3,5-Trimethylbenzene	<1.60	<7.87	1.60	7.87		EPA-TO-15	10/28/2022	TC
1,3-Butadiene	3.10	6.85	0.0400	0.0885		EPA-TO-15	10/28/2022	TC
1,3-Dichlorobenzene	0.126	0.760	0.0400	0.241		EPA-TO-15	10/28/2022	TC
1,4-Dichlorobenzene	0.0813	0.489	0.0400	0.241		EPA-TO-15	10/28/2022	TC
1,4-Dioxane	<1.60	<5.77	1.60	5.77		EPA-TO-15	10/28/2022	TC
(MEK) 2-Butanone	2.38	7.02	1.60	4.72		EPA-TO-15	10/28/2022	TC
2-Hexanone	<4.00	<16.4	4.00	16.4	*	EPA-TO-15	10/28/2022	TC
Isopropyl Alcohol	127	312	4.00	9.83	E	EPA-TO-15	10/28/2022	TC
4-Methyl-2-pentanone (MIBK)	<4.00	<16.4	4.00	16.4		EPA-TO-15	10/28/2022	TC
Acetone	248	588	8.00	19.0	E	EPA-TO-15	10/28/2022	TC
Acrolein*	1.03	2.37	0.00400	0.00917		EPA-TO-15	10/28/2022	TC
Benzene	1.34	4.28	0.0400	0.128		EPA-TO-15	10/28/2022	TC

Client: **Libby Environmental**
WorkOrder: 2210319
Project: Seattle West-Huling

Client Sample ID: SS-4
Lab ID: 2210319-004A
Sample Type: Summa Canister

Date Sampled: 10/19/2022
Date Received: 10/20/2022

Volatile Organic Compounds by EPA Method TO-15

Analyte	Concentration (ppbv)	Concentration (ug/m³)	Reporting Limit (ppbv)	Reporting Limit (ug/m³)	Qual	Method	Date/Analyst	
Benzyl chloride	<0.400	<2.07	0.400	2.07		EPA-TO-15	10/28/2022	TC
Dichlorobromomethane	<0.400	<2.68	0.400	2.68		EPA-TO-15	10/28/2022	TC
Bromoform	<0.0400	<0.414	0.0400	0.414		EPA-TO-15	10/28/2022	TC
Bromomethane	<0.400	<1.55	0.400	1.55		EPA-TO-15	10/28/2022	TC
Carbon disulfide	<1.60	<4.98	1.60	4.98		EPA-TO-15	10/28/2022	TC
Carbon tetrachloride	0.0754	0.474	0.0400	0.252		EPA-TO-15	10/28/2022	TC
Chlorobenzene	<0.0400	<0.184	0.0400	0.184		EPA-TO-15	10/28/2022	TC
Dibromochloromethane	<0.0400	<0.341	0.0400	0.341		EPA-TO-15	10/28/2022	TC
Chloroethane	<1.60	<4.22	1.60	4.22		EPA-TO-15	10/28/2022	TC
Chloroform	0.326	1.59	0.0400	0.195		EPA-TO-15	10/28/2022	TC
Chloromethane	1.07	2.21	0.200	0.413		EPA-TO-15	10/28/2022	TC
cis-1,2-Dichloroethene	<0.400	<1.59	0.400	1.59		EPA-TO-15	10/28/2022	TC
cis-1,3-dichloropropene	<0.200	<0.908	0.200	0.908		EPA-TO-15	10/28/2022	TC
Cyclohexane	0.645	2.22	0.400	1.38		EPA-TO-15	10/28/2022	TC
Dichlorodifluoromethane (CFC-12)	0.695	3.44	0.200	0.989		EPA-TO-15	10/28/2022	TC
Dichlorotetrafluoroethane (CFC-114)	<0.200	<1.40	0.200	1.40		EPA-TO-15	10/28/2022	TC
Ethyl acetate	<1.60	<5.77	1.60	5.77		EPA-TO-15	10/28/2022	TC
Ethylbenzene	<1.60	<6.95	1.60	6.95		EPA-TO-15	10/28/2022	TC
Heptane	<1.60	<6.43	1.60	6.43		EPA-TO-15	10/28/2022	TC
Hexachlorobutadiene	<0.400	<4.27	0.400	4.27		EPA-TO-15	10/28/2022	TC
m,p-Xylene	1.79	7.78	1.60	6.95		EPA-TO-15	10/28/2022	TC
Methyl methacrylate	<1.60	<6.55	1.60	6.55		EPA-TO-15	10/28/2022	TC
Methylene chloride	<1.60	<5.56	1.60	5.56		EPA-TO-15	10/28/2022	TC
Naphthalene	0.102	0.537	0.0400	0.210		EPA-TO-15	10/28/2022	TC
n-Hexane	2.63	9.25	2.00	7.05		EPA-TO-15	10/28/2022	TC
o-Xylene	<0.400	<1.74	0.400	1.74		EPA-TO-15	10/28/2022	TC
4-Ethyltoluene	0.244	1.20	0.200	0.983		EPA-TO-15	10/28/2022	TC
Propylene	69.4	119	1.60	2.75		EPA-TO-15	10/28/2022	TC
Styrene	<1.60	<6.81	1.60	6.81		EPA-TO-15	10/28/2022	TC
Methyl tert-butyl ether (MTBE)	<0.200	<0.721	0.200	0.721		EPA-TO-15	10/28/2022	TC

Client: **Libby Environmental**
WorkOrder: 2210319
Project: Seattle West-Huling

Client Sample ID: SS-4
Lab ID: 2210319-004A
Sample Type: Summa Canister

Date Sampled: 10/19/2022
Date Received: 10/20/2022

Volatile Organic Compounds by EPA Method TO-15

Analyte	Concentration (ppbv)	Concentration (ug/m³)	Reporting Limit (ppbv)	Reporting Limit (ug/m³)	Qual	Method	Date/Analyst	
Tetrachloroethene (PCE)	0.663	4.50	0.0400	0.271		EPA-TO-15	10/28/2022	TC
Tetrahydrofuran	<1.60	<4.72	1.60	4.72		EPA-TO-15	10/28/2022	TC
Toluene	1.32	4.96	0.400	1.51		EPA-TO-15	10/28/2022	TC
trans-1,2-Dichloroethene	<0.200	<0.793	0.200	0.793		EPA-TO-15	10/28/2022	TC
trans-1,3-dichloropropene	<0.200	<0.908	0.200	0.908		EPA-TO-15	10/28/2022	TC
Trichloroethene (TCE)	<0.0400	<0.215	0.0400	0.215		EPA-TO-15	10/28/2022	TC
Trichlorofluoromethane (CFC-11)	<0.200	<1.12	0.200	1.12		EPA-TO-15	10/28/2022	TC
Vinyl acetate	<1.60	<5.63	1.60	5.63		EPA-TO-15	10/28/2022	TC
Vinyl chloride	<0.0400	<0.102	0.0400	0.102		EPA-TO-15	10/28/2022	TC
Surr: 4-Bromofluorobenzene	108 %Rec	--	70-130	--		EPA-TO-15	10/28/2022	TC

NOTES:
* - Associated LCS is below acceptance criteria. Result may be low-biased.

Client: **Libby Environmental**
WorkOrder: 2210319
Project: Seattle West-Huling

Client Sample ID: SS-5
Lab ID: 2210319-005A
Sample Type: Summa Canister

Date Sampled: 10/19/2022
Date Received: 10/20/2022

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst	
Petroleum Fractionation by EPA Method TO-15								
	(ppbv)	**(ug/m³)**	**(ppbv)**	**(ug/m³)**				
Aliphatic Hydrocarbon (EC5-8)	99.9	380	30.0	114		EPA-TO-15	10/28/2022	TC
Aliphatic Hydrocarbon (EC9-12)	<20.0	<118	20.0	118		EPA-TO-15	10/28/2022	TC
Aromatic Hydrocarbon (EC9-10)	<5.00	<25.2	5.00	25.2		EPA-TO-15	10/28/2022	TC
Surr: 4-Bromofluorobenzene	95.4 %Rec	--	70-130	--		EPA-TO-15	10/28/2022	TC
Volatile Organic Compounds by EPA Method TO-15								
	(ppbv)	**(ug/m³)**	**(ppbv)**	**(ug/m³)**				
1,1,1-Trichloroethane	<0.200	<1.09	0.200	1.09		EPA-TO-15	10/29/2022	TC
1,1,2,2-Tetrachloroethane	<0.0400	<0.275	0.0400	0.275		EPA-TO-15	10/29/2022	TC
CFC-113	<0.200	<1.53	0.200	1.53		EPA-TO-15	10/29/2022	TC
1,1,2-Trichloroethane (TCA)	<0.0400	<0.218	0.0400	0.218		EPA-TO-15	10/29/2022	TC
1,1-Dichloroethane	<0.0400	<0.162	0.0400	0.162		EPA-TO-15	10/29/2022	TC
1,1-Dichloroethene (DCE)	<0.0400	<0.159	0.0400	0.159		EPA-TO-15	10/29/2022	TC
1,2,4-Trichlorobenzene	<0.400	<2.97	0.400	2.97		EPA-TO-15	10/29/2022	TC
1,2,4-Trimethylbenzene	2.15	10.5	2.00	9.83		EPA-TO-15	10/29/2022	TC
1,2-Dibromoethane (EDB)*	<0.00119	<0.00915	0.00119	0.00915		EPA-TO-15	10/29/2022	TC
1,2-Dichlorobenzene	<0.0400	<0.240	0.0400	0.240		EPA-TO-15	10/29/2022	TC
1,2-Dichloroethane	<0.0400	<0.162	0.0400	0.162		EPA-TO-15	10/29/2022	TC
1,2-Dichloropropane	<0.200	<0.924	0.200	0.924		EPA-TO-15	10/29/2022	TC
1,3,5-Trimethylbenzene	<1.60	<7.87	1.60	7.87		EPA-TO-15	10/29/2022	TC
1,3-Butadiene	0.272	0.601	0.0400	0.0885		EPA-TO-15	10/29/2022	TC
1,3-Dichlorobenzene	<0.0400	<0.241	0.0400	0.241		EPA-TO-15	10/29/2022	TC
1,4-Dichlorobenzene	0.0528	0.317	0.0400	0.241		EPA-TO-15	10/29/2022	TC
1,4-Dioxane	<1.60	<5.77	1.60	5.77		EPA-TO-15	10/29/2022	TC
(MEK) 2-Butanone	<1.60	<4.72	1.60	4.72		EPA-TO-15	10/29/2022	TC
2-Hexanone	<4.00	<16.4	4.00	16.4	*	EPA-TO-15	10/29/2022	TC
Isopropyl Alcohol	130	318	4.00	9.83	E	EPA-TO-15	10/29/2022	TC
4-Methyl-2-pentanone (MIBK)	<4.00	<16.4	4.00	16.4		EPA-TO-15	10/29/2022	TC
Acetone	34.1	81.0	8.00	19.0		EPA-TO-15	10/29/2022	TC
Acrolein*	0.347	0.796	0.00400	0.00917		EPA-TO-15	10/29/2022	TC
Benzene	0.439	1.40	0.0400	0.128		EPA-TO-15	10/29/2022	TC

Client: **Libby Environmental**
WorkOrder: 2210319
Project: Seattle West-Huling

Client Sample ID: SS-5
Lab ID: 2210319-005A
Sample Type: Summa Canister

Date Sampled: 10/19/2022
Date Received: 10/20/2022

Volatile Organic Compounds by EPA Method TO-15

Analyte	Concentration (ppbv)	Concentration (ug/m³)	Reporting Limit (ppbv)	Reporting Limit (ug/m³)	Qual	Method	Date/Analyst	
Benzyl chloride	<0.400	<2.07	0.400	2.07		EPA-TO-15	10/29/2022	TC
Dichlorobromomethane	<0.400	<2.68	0.400	2.68		EPA-TO-15	10/29/2022	TC
Bromoform	<0.0400	<0.414	0.0400	0.414		EPA-TO-15	10/29/2022	TC
Bromomethane	<0.400	<1.55	0.400	1.55		EPA-TO-15	10/29/2022	TC
Carbon disulfide	<1.60	<4.98	1.60	4.98		EPA-TO-15	10/29/2022	TC
Carbon tetrachloride	0.0697	0.438	0.0400	0.252		EPA-TO-15	10/29/2022	TC
Chlorobenzene	<0.0400	<0.184	0.0400	0.184		EPA-TO-15	10/29/2022	TC
Dibromochloromethane	<0.0400	<0.341	0.0400	0.341		EPA-TO-15	10/29/2022	TC
Chloroethane	<1.60	<4.22	1.60	4.22		EPA-TO-15	10/29/2022	TC
Chloroform	0.202	0.985	0.0400	0.195		EPA-TO-15	10/29/2022	TC
Chloromethane	0.465	0.961	0.200	0.413		EPA-TO-15	10/29/2022	TC
cis-1,2-Dichloroethene	<0.400	<1.59	0.400	1.59		EPA-TO-15	10/29/2022	TC
cis-1,3-dichloropropene	<0.200	<0.908	0.200	0.908		EPA-TO-15	10/29/2022	TC
Cyclohexane	<0.400	<1.38	0.400	1.38		EPA-TO-15	10/29/2022	TC
Dichlorodifluoromethane (CFC-12)	0.448	2.21	0.200	0.989		EPA-TO-15	10/29/2022	TC
Dichlorotetrafluoroethane (CFC-114)	<0.200	<1.40	0.200	1.40		EPA-TO-15	10/29/2022	TC
Ethyl acetate	<1.60	<5.77	1.60	5.77		EPA-TO-15	10/29/2022	TC
Ethylbenzene	<1.60	<6.95	1.60	6.95		EPA-TO-15	10/29/2022	TC
Heptane	<1.60	<6.43	1.60	6.43		EPA-TO-15	10/29/2022	TC
Hexachlorobutadiene	<0.400	<4.27	0.400	4.27		EPA-TO-15	10/29/2022	TC
m,p-Xylene	<1.60	<6.95	1.60	6.95		EPA-TO-15	10/29/2022	TC
Methyl methacrylate	<1.60	<6.55	1.60	6.55		EPA-TO-15	10/29/2022	TC
Methylene chloride	4.45	15.4	1.60	5.56		EPA-TO-15	10/29/2022	TC
Naphthalene	<0.0400	<0.210	0.0400	0.210		EPA-TO-15	10/29/2022	TC
n-Hexane	<2.00	<7.05	2.00	7.05		EPA-TO-15	10/29/2022	TC
o-Xylene	<0.400	<1.74	0.400	1.74		EPA-TO-15	10/29/2022	TC
4-Ethyltoluene	0.205	1.01	0.200	0.983		EPA-TO-15	10/29/2022	TC
Propylene	4.60	7.92	1.60	2.75		EPA-TO-15	10/29/2022	TC
Styrene	<1.60	<6.81	1.60	6.81		EPA-TO-15	10/29/2022	TC
Methyl tert-butyl ether (MTBE)	<0.200	<0.721	0.200	0.721		EPA-TO-15	10/29/2022	TC

Client: **Libby Environmental**
WorkOrder: 2210319
Project: Seattle West-Huling

Client Sample ID: SS-5
Lab ID: 2210319-005A
Sample Type: Summa Canister

Date Sampled: 10/19/2022
Date Received: 10/20/2022

Volatile Organic Compounds by EPA Method TO-15

Analyte	Concentration (ppbv)	Concentration (ug/m³)	Reporting Limit (ppbv)	Reporting Limit (ug/m³)	Qual	Method	Date/Analyst	
Tetrachloroethene (PCE)	<0.0400	<0.271	0.0400	0.271		EPA-TO-15	10/29/2022	TC
Tetrahydrofuran	<1.60	<4.72	1.60	4.72		EPA-TO-15	10/29/2022	TC
Toluene	1.24	4.69	0.400	1.51		EPA-TO-15	10/29/2022	TC
trans-1,2-Dichloroethene	<0.200	<0.793	0.200	0.793		EPA-TO-15	10/29/2022	TC
trans-1,3-dichloropropene	<0.200	<0.908	0.200	0.908		EPA-TO-15	10/29/2022	TC
Trichloroethene (TCE)	<0.0400	<0.215	0.0400	0.215		EPA-TO-15	10/29/2022	TC
Trichlorofluoromethane (CFC-11)	<0.200	<1.12	0.200	1.12		EPA-TO-15	10/29/2022	TC
Vinyl acetate	<1.60	<5.63	1.60	5.63		EPA-TO-15	10/29/2022	TC
Vinyl chloride	<0.0400	<0.102	0.0400	0.102		EPA-TO-15	10/29/2022	TC
Surr: 4-Bromofluorobenzene	103 %Rec	--	70-130	--		EPA-TO-15	10/29/2022	TC

NOTES:
* - Associated LCS is below acceptance criteria. Result may be low-biased.

Work Order: 2210319
CLIENT: Libby Environmental
Project: Seattle West-Huling

QC SUMMARY REPORT

Petroleum Fractionation by EPA Method TO-15

Sample ID: **LCS-79405** SampType: **LCS** Units: **ppbv** Prep Date: **10/28/2022** RunNo: **79405**
Client ID: **LCSW** Batch ID: **R79405** Analysis Date: **10/28/2022** SeqNo: **1635986**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (EC5-8)	13.3	7.50	11.89	0	111	70	130				
Aliphatic Hydrocarbon (EC9-12)	12.8	5.00	12.58	0	102	70	130				
Aromatic Hydrocarbon (EC9-10)	11.0	1.25	10.30	0	107	70	130				
Surr: 4-Bromofluorobenzene	3.82		4.000		95.6	70	130				

Sample ID: **MB-79405** SampType: **MBLK** Units: **ppbv** Prep Date: **10/28/2022** RunNo: **79405**
Client ID: **MBLKW** Batch ID: **R79405** Analysis Date: **10/28/2022** SeqNo: **1635987**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (EC5-8)	ND	7.50									
Aliphatic Hydrocarbon (EC9-12)	ND	5.00									
Aromatic Hydrocarbon (EC9-10)	ND	1.25									
Surr: 4-Bromofluorobenzene	3.24		4.000		80.9	70	130				

Sample ID: **2210319-001AREP** SampType: **REP** Units: **ppbv** Prep Date: **10/28/2022** RunNo: **79405**
Client ID: **SS-1** Batch ID: **R79405** Analysis Date: **10/28/2022** SeqNo: **1635989**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (EC5-8)	77.6	30.0						77.33	0.355	25	
Aliphatic Hydrocarbon (EC9-12)	ND	20.0						0		25	
Aromatic Hydrocarbon (EC9-10)	ND	5.00						0		25	
Surr: 4-Bromofluorobenzene	13.6		16.00		85.1	70	130		0		

Work Order: 2210319
CLIENT: Libby Environmental
Project: Seattle West-Huling

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method TO-15

Sample ID: **LCS-R79416** SampType: **LCS** Units: **ppbv** Prep Date: **10/28/2022** RunNo: **79416**
Client ID: **LCSW** Batch ID: **R79416** Analysis Date: **10/28/2022** SeqNo: **1636377**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Propylene	1.60	0.400	2.000	0	80.0	70	130				
Dichlorodifluoromethane (CFC-12)	1.98	0.0500	2.000	0	99.2	70	130				
Chloromethane	1.75	0.0500	2.000	0	87.3	70	130				
Dichlorotetrafluoroethane (CFC-114)	1.77	0.0500	2.000	0	88.4	70	130				
Vinyl chloride	1.93	0.0100	2.000	0	96.3	70	130				
1,3-Butadiene	1.90	0.0100	2.000	0	95.1	70	130				
Bromomethane	1.90	0.100	2.000	0	95.0	70	130				
Trichlorofluoromethane (CFC-11)	2.02	0.0500	2.000	0	101	70	130				
Chloroethane	1.92	0.400	2.000	0	95.8	70	130				
Acrolein*	1.86	0.00100	2.000	0	93.1	70	130				
1,1-Dichloroethene (DCE)	1.97	0.0100	2.000	0	98.3	70	130				
Acetone	2.58	2.00	2.000	0	129	70	130				
Isopropyl Alcohol	2.05	1.00	2.000	0	103	70	130				
Methylene chloride	1.86	0.400	2.000	0	92.9	70	130				
Carbon disulfide	2.04	0.400	2.000	0	102	70	130				
trans-1,2-Dichloroethene	2.05	0.0500	2.000	0	102	70	130				
Methyl tert-butyl ether (MTBE)	1.84	0.0500	2.000	0	92.2	70	130				
n-Hexane	1.76	0.500	2.000	0	87.9	70	130				
1,1-Dichloroethane	2.05	0.0100	2.000	0	103	70	130				
Vinyl acetate	1.71	0.400	2.000	0	85.6	70	130				
cis-1,2-Dichloroethene	2.04	0.100	2.000	0	102	70	130				
(MEK) 2-Butanone	1.77	0.400	2.000	0	88.4	70	130				
Ethyl acetate	1.64	0.400	2.000	0	82.0	70	130				
Chloroform	2.04	0.0100	2.000	0	102	70	130				
Tetrahydrofuran	1.86	0.400	2.000	0	93.0	70	130				
1,1,1-Trichloroethane	1.97	0.0500	2.000	0	98.3	70	130				
Carbon tetrachloride	1.91	0.0100	2.000	0	95.7	70	130				
1,2-Dichloroethane	2.16	0.0100	2.000	0	108	70	130				
Benzene	2.08	0.0100	2.000	0	104	70	130				
Cyclohexane	1.85	0.100	2.000	0	92.3	70	130				
Trichloroethene (TCE)	1.76	0.0100	2.000	0	87.8	70	130				
1,2-Dichloropropane	1.79	0.0500	2.000	0	89.7	70	130				

Work Order: 2210319
CLIENT: Libby Environmental
Project: Seattle West-Huling

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method TO-15

Sample ID: **LCS-R79416** SampType: **LCS** Units: **ppbv** Prep Date: **10/28/2022** RunNo: **79416**
Client ID: **LCSW** Batch ID: **R79416** Analysis Date: **10/28/2022** SeqNo: **1636377**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl methacrylate	1.69	0.400	2.000	0	84.5	70	130				
Dichlorobromomethane	1.81	0.100	2.000	0	90.7	70	130				
1,4-Dioxane	1.64	0.400	2.000	0	82.0	70	130				
cis-1,3-dichloropropene	1.62	0.0500	2.000	0	81.1	70	130				
Toluene	1.86	0.100	2.000	0	93.2	70	130				
trans-1,3-dichloropropene	1.81	0.0500	2.000	0	90.7	70	130				
1,1,2-Trichloroethane (TCA)	1.70	0.0100	2.000	0	84.9	70	130				
Tetrachloroethene (PCE)	1.57	0.0100	2.000	0	78.5	70	130				
Dibromochloromethane	1.99	0.0100	2.000	0	99.7	70	130				
1,2-Dibromoethane (EDB)*	1.77	0.000298	2.000	0	88.3	70	130				
Chlorobenzene	1.90	0.0100	2.000	0	94.9	70	130				
Ethylbenzene	1.90	0.400	2.000	0	94.9	70	130				
m,p-Xylene	3.52	0.400	4.000	0	88.0	70	130				
o-Xylene	1.70	0.100	2.000	0	84.8	70	130				
Styrene	1.65	0.400	2.000	0	82.6	70	130				
Bromoform	1.70	0.0100	2.000	0	84.9	70	130				
1,1,2,2-Tetrachloroethane	1.62	0.0100	2.000	0	81.1	70	130				
1,3,5-Trimethylbenzene	1.76	0.400	2.000	0	88.0	70	130				
1,2,4-Trimethylbenzene	1.52	0.500	2.000	0	76.1	70	130				B
Benzyl chloride	1.76	0.100	2.000	0	87.9	70	130				
4-Ethyltoluene	2.11	0.0500	2.000	0	105	70	130				
1,3-Dichlorobenzene	1.91	0.0100	2.000	0	95.5	70	130				
1,4-Dichlorobenzene	1.91	0.0100	2.000	0	95.6	70	130				
1,2-Dichlorobenzene	1.93	0.0100	2.000	0	96.7	70	130				
1,2,4-Trichlorobenzene	2.07	0.100	2.000	0	104	70	130				
Hexachlorobutadiene	1.83	0.100	2.000	0	91.6	70	130				
Naphthalene	2.02	0.0100	2.000	0	101	70	130				
2-Hexanone	ND	1.00	2.000	0	24.2	70	130				S
4-Methyl-2-pentanone (MIBK)	1.63	1.00	2.000	0	81.5	70	130				
CFC-113	1.95	0.0500	2.000	0	97.4	70	130				
Heptane	1.83	0.400	2.000	0	91.5	70	130				
Surr: 4-Bromofluorobenzene	3.73		4.000		93.3	70	130				

Work Order: 2210319
CLIENT: Libby Environmental
Project: Seattle West-Huling

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method TO-15

Sample ID: **LCS-R79416** SampType: **LCS** Units: **ppbv** Prep Date: **10/28/2022** RunNo: **79416**
Client ID: **LCSW** Batch ID: **R79416** Analysis Date: **10/28/2022** SeqNo: **1636377**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

NOTES:
S - Outlying spike recovery observed (low bias). Samples will be qualified with a *.
B - Indicates a detection in the ICB or CCB.

Sample ID: **MB-R79416** SampType: **MBLK** Units: **ppbv** Prep Date: **10/28/2022** RunNo: **79416**
Client ID: **MBLKW** Batch ID: **R79416** Analysis Date: **10/28/2022** SeqNo: **1636400**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Propylene	ND	0.400									
Dichlorodifluoromethane (CFC-12)	ND	0.0500									
Chloromethane	ND	0.0500									
Dichlorotetrafluoroethane (CFC-114)	ND	0.0500									
Vinyl chloride	ND	0.0100									
1,3-Butadiene	ND	0.0100									
Bromomethane	ND	0.100									
Trichlorofluoromethane (CFC-11)	ND	0.0500									
Chloroethane	ND	0.400									
Acrolein*	0.00215	0.00100									
1,1-Dichloroethene (DCE)	ND	0.0100									
Acetone	ND	2.00									
Isopropyl Alcohol	ND	1.00									
Methylene chloride	ND	0.400									
Carbon disulfide	ND	0.400									
trans-1,2-Dichloroethene	ND	0.0500									
Methyl tert-butyl ether (MTBE)	ND	0.0500									
n-Hexane	ND	0.500									
1,1-Dichloroethane	ND	0.0100									
Vinyl acetate	ND	0.400									
cis-1,2-Dichloroethene	ND	0.100									
(MEK) 2-Butanone	ND	0.400									
Ethyl acetate	ND	0.400									
Chloroform	ND	0.0100									

Work Order: 2210319
CLIENT: Libby Environmental
Project: Seattle West-Huling

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method TO-15

Sample ID: **MB-R79416** SampType: **MBLK** Units: **ppbv** Prep Date: **10/28/2022** RunNo: **79416**
Client ID: **MBLKW** Batch ID: **R79416** Analysis Date: **10/28/2022** SeqNo: **1636400**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Tetrahydrofuran	ND	0.400									
1,1,1-Trichloroethane	ND	0.0500									
Carbon tetrachloride	ND	0.0100									
1,2-Dichloroethane	ND	0.0100									
Benzene	ND	0.0100									
Cyclohexane	ND	0.100									
Trichloroethene (TCE)	ND	0.0100									
1,2-Dichloropropane	ND	0.0500									
Methyl methacrylate	ND	0.400									
Dichlorobromomethane	ND	0.100									
1,4-Dioxane	ND	0.400									
cis-1,3-dichloropropene	ND	0.0500									
Toluene	ND	0.100									
trans-1,3-dichloropropene	ND	0.0500									
1,1,2-Trichloroethane (TCA)	ND	0.0100									
Tetrachloroethene (PCE)	ND	0.0100									
Dibromochloromethane	ND	0.0100									
1,2-Dibromoethane (EDB)*	ND	0.000298									
Chlorobenzene	ND	0.0100									
Ethylbenzene	ND	0.400									
m,p-Xylene	ND	0.400									
o-Xylene	ND	0.100									
Styrene	ND	0.400									
Bromoform	ND	0.0100									
1,1,2,2-Tetrachloroethane	ND	0.0100									
1,3,5-Trimethylbenzene	ND	0.400									
1,2,4-Trimethylbenzene	0.520	0.500									
Benzyl chloride	ND	0.100									
4-Ethyltoluene	ND	0.0500									
1,3-Dichlorobenzene	ND	0.0100									
1,4-Dichlorobenzene	ND	0.0100									
1,2-Dichlorobenzene	0.0117	0.0100									

Work Order: 2210319
CLIENT: Libby Environmental
Project: Seattle West-Huling

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method TO-15

Sample ID: **MB-R79416** SampType: **MBLK** Units: **ppbv** Prep Date: **10/28/2022** RunNo: **79416**
Client ID: **MBLKW** Batch ID: **R79416** Analysis Date: **10/28/2022** SeqNo: **1636400**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,4-Trichlorobenzene	ND	0.100									
Hexachlorobutadiene	ND	0.100									
Naphthalene	0.0102	0.0100									
2-Hexanone	ND	1.00									*
4-Methyl-2-pentanone (MIBK)	ND	1.00									
CFC-113	ND	0.0500									
Heptane	ND	0.400									
Surr: 4-Bromofluorobenzene	3.30		4.000		82.5	70	130				

NOTES:
* - Associated LCS is below acceptance criteria. Result may be low-biased.

Sample ID: **2210346-002AREP** SampType: **REP** Units: **ppbv** Prep Date: **10/28/2022** RunNo: **79416**
Client ID: **BATCH** Batch ID: **R79416** Analysis Date: **10/28/2022** SeqNo: **1636380**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Propylene	ND	1.60						0		25	
Dichlorodifluoromethane (CFC-12)	0.711	0.200						0.7112	0.0225	25	
Chloromethane	ND	0.200						0		25	
Dichlorotetrafluoroethane (CFC-114)	6.50	0.200						6.465	0.509	25	
Vinyl chloride	ND	0.0400						0		25	
1,3-Butadiene	ND	0.0400						0.04236	40.0	25	
Bromomethane	ND	0.400						0		25	
Trichlorofluoromethane (CFC-11)	1.41	0.200						1.409	0.320	25	
Chloroethane	ND	1.60						0		25	
Acrolein*	0.174	0.00400						0.1662	4.36	25	
1,1-Dichloroethene (DCE)	ND	0.0400						0		25	
Acetone	ND	8.00						0		25	
Isopropyl Alcohol	ND	4.00						4.318	61.7	25	
Methylene chloride	ND	1.60						0		25	
Carbon disulfide	ND	1.60						0		25	
trans-1,2-Dichloroethene	ND	0.200						0		25	
Methyl tert-butyl ether (MTBE)	ND	0.200						0		25	

Work Order: 2210319
CLIENT: Libby Environmental
Project: Seattle West-Huling

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method TO-15

Sample ID: **2210346-002AREP** SampType: **REP** Units: **ppbv** Prep Date: **10/28/2022** RunNo: **79416**
Client ID: **BATCH** Batch ID: **R79416** Analysis Date: **10/28/2022** SeqNo: **1636380**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
n-Hexane	ND	2.00						0		25	
1,1-Dichloroethane	ND	0.0400						0		25	
Vinyl acetate	ND	1.60						0		25	
cis-1,2-Dichloroethene	0.526	0.400						0.5372	2.18	25	
(MEK) 2-Butanone	ND	1.60						0		25	
Ethyl acetate	ND	1.60						0		25	
Chloroform	4.91	0.0400						4.893	0.405	25	
Tetrahydrofuran	ND	1.60						0		25	
1,1,1-Trichloroethane	0.489	0.200						0.5125	4.64	25	
Carbon tetrachloride	0.145	0.0400						0.1473	1.78	25	
1,2-Dichloroethane	ND	0.0400						0		25	
Benzene	0.0758	0.0400						0.08624	12.9	25	
Cyclohexane	ND	0.400						0		25	
Trichloroethene (TCE)	1.38	0.0400						1.410	2.39	25	
1,2-Dichloropropane	ND	0.200						0		25	
Methyl methacrylate	ND	1.60						0		25	
Dichlorobromomethane	ND	0.400						0		25	
1,4-Dioxane	ND	1.60						0		25	
cis-1,3-dichloropropene	ND	0.200						0		25	
Toluene	1.16	0.400						1.970	51.5	25	R
trans-1,3-dichloropropene	ND	0.200						0		25	
1,1,2-Trichloroethane (TCA)	ND	0.0400						0		25	
Tetrachloroethene (PCE)	91.9	0.0400						82.65	10.6	25	
Dibromochloromethane	ND	0.0400						0		25	
1,2-Dibromoethane (EDB)*	ND	0.00119						0		25	
Chlorobenzene	ND	0.0400						0		25	
Ethylbenzene	ND	1.60						0		25	
m,p-Xylene	ND	1.60						0		25	
o-Xylene	ND	0.400						0		25	
Styrene	ND	1.60						0		25	
Bromoform	ND	0.0400						0		25	
1,1,2,2-Tetrachloroethane	ND	0.0400						0		25	

Work Order: 2210319
CLIENT: Libby Environmental
Project: Seattle West-Huling

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method TO-15

Sample ID: **2210346-002AREP** SampType: **REP** Units: **ppbv** Prep Date: **10/28/2022** RunNo: **79416**
Client ID: **BATCH** Batch ID: **R79416** Analysis Date: **10/28/2022** SeqNo: **1636380**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,3,5-Trimethylbenzene	ND	1.60						0		25	
1,2,4-Trimethylbenzene	2.12	2.00						2.113	0.372	25	
Benzyl chloride	ND	0.400						0		25	
4-Ethyltoluene	0.201	0.200						0.1933	3.97	25	
1,3-Dichlorobenzene	ND	0.0400						0		25	
1,4-Dichlorobenzene	0.0696	0.0400						0.06148	12.4	25	
1,2-Dichlorobenzene	0.0430	0.0400						0.03492	20.6	25	
1,2,4-Trichlorobenzene	ND	0.400						0		25	
Hexachlorobutadiene	ND	0.400						0		25	
Naphthalene	ND	0.0400						0.04232	200	25	R
2-Hexanone	ND	4.00						0		25	*
4-Methyl-2-pentanone (MIBK)	ND	4.00						0		25	
CFC-113	ND	0.200						0		25	
Heptane	ND	1.60						0		25	
Surr: 4-Bromofluorobenzene	15.6		16.00		97.4	70	130		0		

NOTES:
R - High RPD observed due to carry over from previous sample.
* - Associated LCS is below acceptance criteria. Result may be low-biased.

Sample Log-In Check List

Client Name:	LIBBY	Work Order Number:	2210319
Logged by:	Clare Griggs	Date Received:	10/20/2022 10:55:00 AM

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 ☐	
		Air Samples			
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:	Scott Rose	Date:	10/20/2022
By Whom:	Clare Griggs	Via:	☑ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:	Confirming COC.		
Client Instructions:	Client is Libby, see revised COC.		

19. Additional remarks:

Item Information

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

Air Chain of Custody Record & Laboratory Services Agreement

Fremont Analytical
3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Date: 10/19/2022 Page: 1 of: 1

Laboratory Project No (Internal): 2210319

Project Name: Seattle West - Huling

Special Remarks:

Project No: 22 - 148

Location: 4550 Fauntleroy Way SW

Client: AEG

Collected by: Paul Hitch

Address: 2633 Parkmont Lane SW, Suite A

Reports to (PM): Scott Rose

Air samples are disposed of one week after report is submitted to client unless otherwise requested. ☐ OK to Dispose ☐ Hold (fees may apply)

City, State, Zip: Olympia, WA 98502

Email (PM): SROSE@AEGWA.COM

Telephone: 360-352-9835

Fax:

	Sample Name	Canister / Flow Reg Serial #	Sample Type (Matrix) *	Container Type **	Expected Fill Time / Flow Rate	Sample Start Date & Time	Field Initial Sample Pressure ("Hg)	Sample End Date & Time	Field Final Sample Pressure ("Hg)	Analysis: Full list VOCs TO15	Select VOCs TO15 ***	APH TO15	Siloxanes TO15	Sulfur TO15	Major Gases 3C	Helium 3C Mod	VOCs 8260	GX/BTEX 8260	Low level Naphthalene	Comments	Internal: Final Pressure ("Hg)
1	SS-1	48903 / FC-11	S	BV	5.5"/min	10/19/22 1759	28	10/19/22 1803	6			X					X		X		
2	SS-2	48904 / FC5	S	BV	3.42"/min	10/19/22 1812	30	10/19/22 1819	6			X					X		X		
3	SS-3	48905 / FC-12	S	BV	36/min	10/19/22 1823	24	10/19/22 1828	6			X					X		X		
4	SS-4	48906 / FC13	S	BV	4.4"/min	10/19/22 1833	28	10/19/22 1838	6			X					X		X		
5	SS-5	48907 / FC-8	S	BV	4.5"/min	10/19/22 1848	24	10/19/22 1852	6			X					X		X		

* Matrix Codes: AA = Ambient Air OA = Outdoor Air IA = Indoor Air S = Subslab / Soil Gas SVE = SVE L = Landfill D = Digester

** Container Codes: BV = 1 Liter Bottle Vac 6L = 6L Canister 1L = 1L Canister CYL = High Pressure Cylinder F = Filter S = Sorbent Tube TB = Tedlar Bag

*** Select one: ☐ BTEXN & APH ☐ PCE & Breakdown ☐ Other, specify in comments

Turn-Around Time:
☒ Standard ☐ Next Day ☐ 3 Day ☐ Same Day ☐ 2 Day specify

I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above, that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Relinquished (Signature)	Print Name	Date/Time	Received (Signature)	Print Name	Date/Time
x	Paul Hitch	10/20/22 (10:30)	x	Steven Sotka	10/20/22 10:55
Relinquished (Signature)	Print Name	Date/Time	Received (Signature)	Print Name	Date/Time
x			x		

COC Air 1.6 - 2.15.21

Air Chain of Custody Record & Laboratory Services Agreement

Fremont Analytical
3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Laboratory Project No (Internal): 2210319

Date: 10/19/2022 Page: 1 of: 1

Special Remarks: edit per SR 10/20/22 -CG

Project Name: Seattle West - Huling

Project No: 22 - 148

Client: ~~AEG~~ Libby Environmental

Address: 2633 Parkmont Lane SW, Suite A

City, State, Zip: Olympia, WA 98502

Telephone: 360-352-9835

Fax:

Location: 4550 Fauntleroy Way SW

Collected by: Paul Hitch

Reports to (PM): Scott Rose

Email (PM): SROSE@AEGWA.COM

Air samples are disposed of one week after report is submitted to client unless otherwise requested. ☐ OK to Dispose ☐ Hold (fees may apply)

	Sample Name	Canister / Flow Reg Serial #	Sample Type (Matrix) *	Container Type **	Expected Fill Time / Flow Rate	Sample Start Date & Time	Field Initial Sample Pressure ("Hg)	Sample End Date & Time	Field Final Sample Pressure ("Hg)	Analysis: Full list VOCs TO15	Select VOCs TO15 ***	APH TO15	Siloxanes TO15	Sulfur TO15	Major Gases 3C	Helium 3C Mod	VOCs 8260	GX/BTEX 8260	Low level Naphthalene	Comments	Internal: Final Pressure ("Hg)
1	SS-1	48903 / FC-11	S	BV	5.5"/min	10/19/22 1759	28	10/19/22 1803	6	X		X					X		X		
2	SS-2	48904 / FC5	S	BV	3.42"/min	10/19/22 1812	30	10/19/22 1819	6	X		X					X		X		
3	SS-3	48905 / FC-12	S	BV	36/min	10/19/22 1823	24	10/19/22 1828	6	X		X					X		X		
4	SS-4	48906 / FC13	S	BV	4.4"/min	10/19/22 1833	28	10/19/22 1838	6	X		X					X		X		
5	SS-5	48907 / FC-8	S	BV	4.5"/min	10/19/22 1848	24	10/19/22 1852	6	X		X					X		X		

* Matrix Codes: AA = Ambient Air OA = Outdoor Air IA = Indoor Air S = Subslab / Soil Gas SVE = SVE L = Landfill D = Digester

** Container Codes: BV = 1 Liter Bottle Vac 6L = 6L Canister 1L = 1L Canister CYL = High Pressure Cylinder F = Filter S = Sorbent Tube TB = Tedlar Bag

*** Select one: ☐ BTEXN & APH ☐ PCE & Breakdown ☐ Other, specify in comments

Turn-Around Time:
☒ Standard ☐ Next Day
☐ 3 Day ☐ Same Day
☐ 2 Day specify

I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above, that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Relinquished (Signature)	Print Name	Date/Time	Received (Signature)	Print Name	Date/Time
x [signature]	Paul Hitch	10/20/22 (10:30)	x [signature]	Steven Sethi	10/20/22 10:55
Relinquished (Signature)	Print Name	Date/Time	Received (Signature)	Print Name	Date/Time
x			x		

Page 1 of 2

COC Air 1.6 - 2.15.21

Libby Environmental, Inc.
3322 South Bay Road NE • Olympia, WA 98506-2957

December 30, 2022

Scott Rose
AEG an Atlas Geosciences NW Company
2633 Parkmont Lane SW, Suite A
Olympia, WA 98502

Dear Scott Rose:

Please find enclosed the analytical data report for the Franciscan Seattle-Huling project located in Seattle, Washington.

The results of the analyses are summarized in the attached tables. Applicable detection limits and QA/QC data are included. The sample(s) will be disposed of within 30 days unless we are contacted to arrange long term storage.

Libby Environmental, Inc. appreciates the opportunity to have provided analytical services for this project. If you have any further questions about the data report, please give me a call. It was a pleasure working with you on this project, and we are looking forward to the next opportunity to work together.

Sincerely,

Sherry L. Chilcutt
Senior Chemist
Libby Environmental, Inc.

Phone (360) 352-2110 • Fax (360) 352-4154 • libbyenv@gmail.com

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

Libby Environmental
Emily Bushlen
3322 South Bay Road NE
Olympia, WA 98506

RE: Franciscan Seattle- Huling
Work Order Number: 2212398

December 29, 2022

Attention Emily Bushlen:

Fremont Analytical, Inc. received 5 sample(s) on 12/19/2022 for the analyses presented in the following report.

Petroleum Fractionation by EPA Method TO-15
Volatile Organic Compounds by EPA Method TO-15

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

Date: *12/29/2022*

CLIENT: Libby Environmental
Project: Franciscan Seattle- Huling
Work Order: 2212398

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
2212398-001	SS-4	12/14/2022 6:56 PM	12/19/2022 1:57 PM
2212398-002	SS-2	12/14/2022 6:19 PM	12/19/2022 1:57 PM
2212398-003	SS-5	12/14/2022 6:06 PM	12/19/2022 1:57 PM
2212398-004	SS-1	12/14/2022 7:11 PM	12/19/2022 1:57 PM
2212398-005	SS-3	12/14/2022 6:37 PM	12/19/2022 1:57 PM

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

Case Narrative

WO#: **2212398**
Date: **12/29/2022**

CLIENT: Libby Environmental
Project: Franciscan Seattle- Huling

I. SAMPLE RECEIPT:
Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:
Air samples are reported in ppbv and ug/m3.

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 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.

Standard temperature and pressure assumes 24.45 = (25C and 1 atm).

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: **Libby Environmental**
WorkOrder: 2212398
Project: Franciscan Seattle- Huling

Client Sample ID: SS-4
Lab ID: 2212398-001A
Sample Type: Summa Canister

Date Sampled: 12/14/2022
Date Received: 12/19/2022

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst	
Petroleum Fractionation by EPA Method TO-15								
	(ppbv)	**(ug/m³)**	**(ppbv)**	**(ug/m³)**				
Aliphatic Hydrocarbon (EC5-8)	150	569	30.0	114		EPA-TO-15	12/28/2022	MS
Aliphatic Hydrocarbon (EC9-12)	53.4	315	20.0	118		EPA-TO-15	12/28/2022	MS
Aromatic Hydrocarbon (EC9-10)	<5.00	<25.2	5.00	25.2		EPA-TO-15	12/28/2022	MS
Surr: 4-Bromofluorobenzene	112 %Rec	--	70-130	--		EPA-TO-15	12/28/2022	MS
Volatile Organic Compounds by EPA Method TO-15								
	(ppbv)	**(ug/m³)**	**(ppbv)**	**(ug/m³)**				
Benzene	0.584	1.87	0.160	0.511		EPA-TO-15	12/28/2022	MS
Ethylbenzene	<1.00	<4.34	1.00	4.34		EPA-TO-15	12/28/2022	MS
m,p-Xylene	<4.00	<17.4	4.00	17.4		EPA-TO-15	12/28/2022	MS
Naphthalene	0.568	2.98	0.240	1.26		EPA-TO-15	12/28/2022	MS
o-Xylene	<1.20	<5.21	1.20	5.21		EPA-TO-15	12/28/2022	MS
Toluene	1.64	6.19	0.500	1.88		EPA-TO-15	12/28/2022	MS
Surr: 4-Bromofluorobenzene	101 %Rec	--	70-130	--		EPA-TO-15	12/28/2022	MS

Client: **Libby Environmental**
WorkOrder: 2212398
Project: Franciscan Seattle- Huling

Client Sample ID: SS-2
Lab ID: 2212398-002A
Sample Type: Summa Canister

Date Sampled: 12/14/2022
Date Received: 12/19/2022

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst	
Petroleum Fractionation by EPA Method TO-15								
	(ppbv)	**(ug/m³)**	**(ppbv)**	**(ug/m³)**				
Aliphatic Hydrocarbon (EC5-8)	66.6	253	30.0	114		EPA-TO-15	12/28/2022	MS
Aliphatic Hydrocarbon (EC9-12)	38.4	226	20.0	118		EPA-TO-15	12/28/2022	MS
Aromatic Hydrocarbon (EC9-10)	<5.00	<25.2	5.00	25.2		EPA-TO-15	12/28/2022	MS
Surr: 4-Bromofluorobenzene	116 %Rec	--	70-130	--		EPA-TO-15	12/28/2022	MS
Volatile Organic Compounds by EPA Method TO-15								
	(ppbv)	**(ug/m³)**	**(ppbv)**	**(ug/m³)**				
Benzene	0.163	0.519	0.160	0.511		EPA-TO-15	12/28/2022	MS
Ethylbenzene	<1.00	<4.34	1.00	4.34		EPA-TO-15	12/28/2022	MS
m,p-Xylene	<4.00	<17.4	4.00	17.4		EPA-TO-15	12/28/2022	MS
Naphthalene	0.488	2.56	0.240	1.26		EPA-TO-15	12/28/2022	MS
o-Xylene	<1.20	<5.21	1.20	5.21		EPA-TO-15	12/28/2022	MS
Toluene	0.921	3.47	0.500	1.88		EPA-TO-15	12/28/2022	MS
Surr: 4-Bromofluorobenzene	104 %Rec	--	70-130	--		EPA-TO-15	12/28/2022	MS

Client: **Libby Environmental**
WorkOrder: 2212398
Project: Franciscan Seattle- Huling

Client Sample ID: SS-5
Lab ID: 2212398-003A
Sample Type: Summa Canister

Date Sampled: 12/14/2022
Date Received: 12/19/2022

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst	
Petroleum Fractionation by EPA Method TO-15								
	(ppbv)	**(ug/m³)**	**(ppbv)**	**(ug/m³)**				
Aliphatic Hydrocarbon (EC5-8)	81.7	311	30.0	114		EPA-TO-15	12/28/2022	MS
Aliphatic Hydrocarbon (EC9-12)	42.2	249	20.0	118		EPA-TO-15	12/28/2022	MS
Aromatic Hydrocarbon (EC9-10)	<5.00	<25.2	5.00	25.2		EPA-TO-15	12/28/2022	MS
Surr: 4-Bromofluorobenzene	115 %Rec	--	70-130	--		EPA-TO-15	12/28/2022	MS
Volatile Organic Compounds by EPA Method TO-15								
	(ppbv)	**(ug/m³)**	**(ppbv)**	**(ug/m³)**				
Benzene	0.182	0.580	0.160	0.511		EPA-TO-15	12/28/2022	MS
Ethylbenzene	1.55	6.73	1.00	4.34		EPA-TO-15	12/28/2022	MS
m,p-Xylene	8.44	36.7	4.00	17.4		EPA-TO-15	12/28/2022	MS
Naphthalene	0.488	2.56	0.240	1.26		EPA-TO-15	12/28/2022	MS
o-Xylene	3.78	16.4	1.20	5.21		EPA-TO-15	12/28/2022	MS
Toluene	0.633	2.38	0.500	1.88		EPA-TO-15	12/28/2022	MS
Surr: 4-Bromofluorobenzene	102 %Rec	--	70-130	--		EPA-TO-15	12/28/2022	MS

Client: **Libby Environmental**
WorkOrder: 2212398
Project: Franciscan Seattle- Huling

Client Sample ID: SS-1
Lab ID: 2212398-004A
Sample Type: Summa Canister

Date Sampled: 12/14/2022
Date Received: 12/19/2022

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst	
Petroleum Fractionation by EPA Method TO-15								
	(ppbv)	**(ug/m³)**	**(ppbv)**	**(ug/m³)**				
Aliphatic Hydrocarbon (EC5-8)	80.8	307	30.0	114		EPA-TO-15	12/28/2022	MS
Aliphatic Hydrocarbon (EC9-12)	41.3	243	20.0	118		EPA-TO-15	12/28/2022	MS
Aromatic Hydrocarbon (EC9-10)	<5.00	<25.2	5.00	25.2		EPA-TO-15	12/28/2022	MS
Surr: 4-Bromofluorobenzene	120 %Rec	--	70-130	--		EPA-TO-15	12/28/2022	MS
Volatile Organic Compounds by EPA Method TO-15								
	(ppbv)	**(ug/m³)**	**(ppbv)**	**(ug/m³)**				
Benzene	0.164	0.525	0.160	0.511		EPA-TO-15	12/28/2022	MS
Ethylbenzene	<1.00	<4.34	1.00	4.34		EPA-TO-15	12/28/2022	MS
m,p-Xylene	<4.00	<17.4	4.00	17.4		EPA-TO-15	12/28/2022	MS
Naphthalene	0.494	2.59	0.240	1.26		EPA-TO-15	12/28/2022	MS
o-Xylene	<1.20	<5.21	1.20	5.21		EPA-TO-15	12/28/2022	MS
Toluene	0.825	3.11	0.500	1.88		EPA-TO-15	12/28/2022	MS
Surr: 4-Bromofluorobenzene	106 %Rec	--	70-130	--		EPA-TO-15	12/28/2022	MS

Client: **Libby Environmental**
WorkOrder: 2212398
Project: Franciscan Seattle- Huling

Client Sample ID: SS-3
Lab ID: 2212398-005A
Sample Type: Summa Canister

Date Sampled: 12/14/2022
Date Received: 12/19/2022

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst	
Petroleum Fractionation by EPA Method TO-15								
	(ppbv)	**(ug/m³)**	**(ppbv)**	**(ug/m³)**				
Aliphatic Hydrocarbon (EC5-8)	103	393	30.0	114		EPA-TO-15	12/28/2022	MS
Aliphatic Hydrocarbon (EC9-12)	21.9	129	20.0	118		EPA-TO-15	12/28/2022	MS
Aromatic Hydrocarbon (EC9-10)	12.7	64.0	5.00	25.2		EPA-TO-15	12/28/2022	MS
Surr: 4-Bromofluorobenzene	111 %Rec	--	70-130	--		EPA-TO-15	12/28/2022	MS
Volatile Organic Compounds by EPA Method TO-15								
	(ppbv)	**(ug/m³)**	**(ppbv)**	**(ug/m³)**				
Benzene	0.348	1.11	0.160	0.511		EPA-TO-15	12/28/2022	MS
Ethylbenzene	<1.00	<4.34	1.00	4.34		EPA-TO-15	12/28/2022	MS
m,p-Xylene	<4.00	<17.4	4.00	17.4		EPA-TO-15	12/28/2022	MS
Naphthalene	0.428	2.24	0.240	1.26		EPA-TO-15	12/28/2022	MS
o-Xylene	<1.20	<5.21	1.20	5.21		EPA-TO-15	12/28/2022	MS
Toluene	1.05	3.95	0.500	1.88		EPA-TO-15	12/28/2022	MS
Surr: 4-Bromofluorobenzene	96.8 %Rec	--	70-130	--		EPA-TO-15	12/28/2022	MS

Work Order: 2212398
CLIENT: Libby Environmental
Project: Franciscan Seattle- Huling

QC SUMMARY REPORT

Petroleum Fractionation by EPA Method TO-15

Sample ID: **LCS-R80795** SampType: **LCS** Units: **ppbv** Prep Date: **12/28/2022** RunNo: **80795**
Client ID: **LCSW** Batch ID: **R80795** Analysis Date: **12/28/2022** SeqNo: **1671326**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (EC5-8)	12.4	7.50	12.00	0	103	70	130				
Aliphatic Hydrocarbon (EC9-12)	15.1	5.00	12.00	0	126	70	130				
Aromatic Hydrocarbon (EC9-10)	12.9	1.25	10.00	0	129	70	130				
Surr: 4-Bromofluorobenzene	3.81		4.000		95.3	70	130				

Sample ID: **MB-R80795** SampType: **MBLK** Units: **ppbv** Prep Date: **12/28/2022** RunNo: **80795**
Client ID: **MBLKW** Batch ID: **R80795** Analysis Date: **12/28/2022** SeqNo: **1671396**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (EC5-8)	ND	7.50									
Aliphatic Hydrocarbon (EC9-12)	ND	5.00									
Aromatic Hydrocarbon (EC9-10)	ND	1.25									
Surr: 4-Bromofluorobenzene	2.11		4.000		52.7	70	130				S

NOTES:
S - Outlying surrogate recovery(ies) observed.

Sample ID: **2212370-001AREP** SampType: **REP** Units: **ppbv** Prep Date: **12/28/2022** RunNo: **80795**
Client ID: **BATCH** Batch ID: **R80795** Analysis Date: **12/28/2022** SeqNo: **1671329**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (EC5-8)	157	30.0						128.7	19.5	25	
Aliphatic Hydrocarbon (EC9-12)	39.5	20.0						38.06	3.84	25	
Aromatic Hydrocarbon (EC9-10)	ND	5.00						0		25	
Surr: 4-Bromofluorobenzene	13.3		16.00		83.4	70	130		0		

Work Order: 2212398
CLIENT: Libby Environmental
Project: Franciscan Seattle- Huling

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method TO-15

Sample ID: **LCS-R80788** SampType: **LCS** Units: **ppbv** Prep Date: **12/28/2022** RunNo: **80788**
Client ID: **LCSW** Batch ID: **R80788** Analysis Date: **12/28/2022** SeqNo: **1671151**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	1.95	0.0400	2.000	0	97.7	70	130				
Toluene	1.76	0.125	2.000	0	88.1	70	130				
Ethylbenzene	2.10	0.250	2.000	0	105	70	130				
m,p-Xylene	4.31	1.00	4.000	0	108	70	130				
o-Xylene	2.04	0.300	2.000	0	102	70	130				
Naphthalene	1.64	0.0600	2.000	0	82.1	70	130				
Surr: 4-Bromofluorobenzene	4.03		4.000		101	70	130				

Sample ID: **MB-R80788** SampType: **MBLK** Units: **ppbv** Prep Date: **12/28/2022** RunNo: **80788**
Client ID: **MBLKW** Batch ID: **R80788** Analysis Date: **12/28/2022** SeqNo: **1671152**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.0400									
Toluene	ND	0.125									
Ethylbenzene	ND	0.250									
m,p-Xylene	ND	1.00									
o-Xylene	ND	0.300									
Naphthalene	0.112	0.0600									
Surr: 4-Bromofluorobenzene	1.59		4.000		39.8	70	130				S

NOTES:
S - Outlying surrogate recovery(ies) observed.

Sample ID: **2212370-001AREP** SampType: **REP** Units: **ppbv** Prep Date: **12/28/2022** RunNo: **80788**
Client ID: **BATCH** Batch ID: **R80788** Analysis Date: **12/28/2022** SeqNo: **1671154**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	2.63	0.160						2.610	0.736	25	
Toluene	9.07	0.500						7.886	14.0	25	
Ethylbenzene	ND	1.00						0		25	
m,p-Xylene	ND	4.00						0		25	
o-Xylene	ND	1.20						0		25	
Naphthalene	0.396	0.240						0.4029	1.67	25	

Work Order: 2212398
CLIENT: Libby Environmental
Project: Franciscan Seattle- Huling

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method TO-15

Sample ID: **2212370-001AREP** SampType: **REP** Units: **ppbv** Prep Date: **12/28/2022** RunNo: **80788**
Client ID: **BATCH** Batch ID: **R80788** Analysis Date: **12/28/2022** SeqNo: **1671154**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	11.9		16.00		74.4	70	130		0		

Sample Log-In Check List

Client Name:	LIBBY	Work Order Number:	2212398
Logged by:	Clare Griggs	Date Received:	12/19/2022 1:57:00 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 ☐
		Air Samples				
4.	Shipping container/cooler in good condition?	Yes	☑	No	☐	
5.	Custody Seals present on shipping container/cooler? (Refer to comments for Custody Seals not intact)	Yes	☐	No	☐	Not Present ☑
6.	Was an attempt made to cool the samples?	Yes	☐	No	☐	NA ☑
7.	Were all items received at a temperature of >2°C to 6°C *	Yes	☐	No	☐	NA ☑
8.	Sample(s) in proper container(s)?	Yes	☑	No	☐	
9.	Sufficient sample volume for indicated test(s)?	Yes	☑	No	☐	
10.	Are samples properly preserved?	Yes	☑	No	☐	
11.	Was preservative added to bottles?	Yes	☐	No	☑	NA ☐
12.	Is there headspace in the VOA vials?	Yes	☐	No	☐	NA ☑
13.	Did all samples containers arrive in good condition(unbroken)?	Yes	☑	No	☐	
14.	Does paperwork match bottle labels?	Yes	☑	No	☐	
15.	Are matrices correctly identified on Chain of Custody?	Yes	☑	No	☐	
16.	Is it clear what analyses were requested?	Yes	☑	No	☐	
17.	Were all holding times able to be met?	Yes	☑	No	☐	

Special Handling (if applicable)

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

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

19. Additional remarks:

Item Information

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

Air Chain of Custody Record & Laboratory Services Agreement

Fremont Analytical
3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Date: 12/14/22 Page: 1 of: 1

Laboratory Project No (Internal): 2212398

Project Name: Franciscan Seattle - Huling

Special Remarks:

Project No: 22-148

Client: Libby

Location: 4550 Fauntleroy Way SW, Seattle

Address:

Collected by: Paul Ditch

City, State, Zip:

Reports to (PM): Emily Bushlen

Air samples are disposed of one week after report is submitted to client unless otherwise requested. ☒ OK to Dispose ☐ Hold (fees may apply)

Telephone:

Email (PM): SROSE@AEGWA.COM

Fax:

	Sample Name	Canister / Flow Reg Serial #	Sample Type (Matrix) *	Container Type **	Expected Fill Time / Flow Rate	Sample Start Date & Time	Field Initial Sample Pressure (" Hg)	Sample End Date & Time	Field Final Sample Pressure (" Hg)	Analysis: Full list VOCs TO15	Select VOCs TO15 ***	APH TO15	Siloxanes TO15	Sulfur TO15	Major Gases 3C	Helium 3C Mod	VOCs 8260	GX/BTEX 8260	Comments	Internal: Final Pressure ("Hg)
1	SS-4	5666 Canister / FC-3 Flow Reg	S	BV		12/14/22 Date / 1856 Time	-28 Pressure	12/14/22 Date / 1902 Time	-4 Pressure		X								Low level Naphthalene	-4
2	SS-2	5642 Canister / FC-15 Flow Reg		BV		12/14/22 Date / 1819 Time	-26 Pressure	12/14/22 Date / 1825 Time	-4 Pressure											-6
3	SS-5	5640 Canister / FC-6 Flow Reg		BV		12/14/22 Date / 1806 Time	-26 Pressure	12/14/22 Date / 1811 Time	-4 Pressure											-6
4	SS-1	5637 Canister / FC-10 Flow Reg		BV		12/14/22 Date / 1911 Time	-28 Pressure	12/14/22 Date / 1918 Time	-4 Pressure											-4
5	SS-3	5636 Canister / FC-28 Flow Reg		BV		12/14/22 Date / 1837 Time	-28 Pressure	12/14/22 Date / 1843 Time	-4 Pressure											-6

* Matrix Codes: AA = Ambient Air OA = Outdoor Air IA = Indoor Air S = Subslab / Soil Gas SVE = SVE L = Landfill D = Digester

** Container Codes: BV = 1 Liter Bottle Vac 6L = 6L Canister 1L = 1L Canister CYL = High Pressure Cylinder F = Filter S = Sorbent Tube TB = Tedlar Bag

*** Select one: ☒ BTEXN & APH ☐ PCE & Breakdown ☐ Other, specify in comments

Turn-Around Time: ☒ Standard ☐ Next Day ☐ 3 Day ☐ Same Day ☐ 2 Day ☐ specify

I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above, that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Relinquished (Signature)	Print Name	Date/Time	Received (Signature)	Print Name	Date/Time
x Paul Ditch	Paul Ditch	12/14/22 (1955)	x Clare O'Connor	Clare O'Connor	12/19/22 13:57
Relinquished (Signature)	Print Name	Date/Time	Received (Signature)	Print Name	Date/Time
x			x		

Libby Environmental, Inc.
3322 South Bay Road NE • Olympia, WA 98506-2957

January 11, 2023

Scott Rose
AEG an Atlas Geosciences NW Company
2633 Parkmont Lane SW, Suite A
Olympia, WA 98502

Dear Scott Rose:

Please find enclosed the analytical data report for the Franciscan Seattle-Huling project located in Seattle, Washington.

The results of the analyses are summarized in the attached tables. Applicable detection limits and QA/QC data are included. The sample(s) will be disposed of within 30 days unless we are contacted to arrange long term storage.

Libby Environmental, Inc. appreciates the opportunity to have provided analytical services for this project. If you have any further questions about the data report, please give me a call. It was a pleasure working with you on this project, and we are looking forward to the next opportunity to work together.

Sincerely,

Sherry L. Chilcutt
Senior Chemist
Libby Environmental, Inc.

Phone (360) 352-2110 • Fax (360) 352-4154 • libbyenv@gmail.com

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

Libby Environmental
Emily Bushlen
3322 South Bay Road NE
Olympia, WA 98506

RE: Franciscan Seattle- Huling
Work Order Number: 2212398

January 10, 2023

Attention Emily Bushlen:

Fremont Analytical, Inc. received 5 sample(s) on 12/19/2022 for the analyses presented in the following report.

Petroleum Fractionation by EPA Method TO-15
Volatile Organic Compounds by EPA Method TO-15

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

Date: *01/10/2023*

CLIENT: Libby Environmental
Project: Franciscan Seattle- Huling
Work Order: 2212398

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
2212398-001	SS-4	12/14/2022 6:56 PM	12/19/2022 1:57 PM
2212398-002	SS-2	12/14/2022 6:19 PM	12/19/2022 1:57 PM
2212398-003	SS-5	12/14/2022 6:06 PM	12/19/2022 1:57 PM
2212398-004	SS-1	12/14/2022 7:11 PM	12/19/2022 1:57 PM
2212398-005	SS-3	12/14/2022 6:37 PM	12/19/2022 1:57 PM

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

Case Narrative

WO#: **2212398**
Date: **1/10/2023**

CLIENT: Libby Environmental
Project: Franciscan Seattle- Huling

I. SAMPLE RECEIPT:
Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:
Air samples are reported in ppbv and ug/m3.

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 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.

Standard temperature and pressure assumes 24.45 = (25C and 1 atm).

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: **Libby Environmental**
WorkOrder: 2212398
Project: Franciscan Seattle- Huling

Client Sample ID: SS-4
Lab ID: 2212398-001A
Sample Type: Summa Canister

Date Sampled: 12/14/2022
Date Received: 12/19/2022

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst	
Petroleum Fractionation by EPA Method TO-15								
	(ppbv)	**(ug/m³)**	**(ppbv)**	**(ug/m³)**				
Aliphatic Hydrocarbon (EC5-8)	150	569	30.0	114		EPA-TO-15	12/28/2022	MS
Aliphatic Hydrocarbon (EC9-12)	53.4	315	20.0	118		EPA-TO-15	12/28/2022	MS
Aromatic Hydrocarbon (EC9-10)	<5.00	<25.2	5.00	25.2		EPA-TO-15	12/28/2022	MS
Surr: 4-Bromofluorobenzene	112 %Rec	--	70-130	--		EPA-TO-15	12/28/2022	MS
Volatile Organic Compounds by EPA Method TO-15								
	(ppbv)	**(ug/m³)**	**(ppbv)**	**(ug/m³)**				
1,1,1-Trichloroethane	<0.0800	<0.437	0.0800	0.437		EPA-TO-15	12/28/2022	MS
1,1,2,2-Tetrachloroethane	<0.0600	<0.412	0.0600	0.412		EPA-TO-15	12/28/2022	MS
CFC-113	<0.0600	<0.460	0.0600	0.460		EPA-TO-15	12/28/2022	MS
1,1,2-Trichloroethane (TCA)	<0.0400	<0.218	0.0400	0.218		EPA-TO-15	12/28/2022	MS
1,1-Dichloroethane	<0.0600	<0.243	0.0600	0.243		EPA-TO-15	12/28/2022	MS
1,1-Dichloroethene (DCE)	<0.0800	<0.317	0.0800	0.317		EPA-TO-15	12/28/2022	MS
1,2,4-Trichlorobenzene	<0.900	<6.68	0.900	6.68	*	EPA-TO-15	12/28/2022	MS
1,2,4-Trimethylbenzene	<4.00	<19.7	4.00	19.7	*	EPA-TO-15	12/28/2022	MS
1,2-Dibromoethane (EDB)*	<0.0122	<0.0935	0.0122	0.0935		EPA-TO-15	12/28/2022	MS
1,2-Dichlorobenzene	<0.100	<0.601	0.100	0.601		EPA-TO-15	12/28/2022	MS
1,2-Dichloroethane	<0.0500	<0.202	0.0500	0.202		EPA-TO-15	12/28/2022	MS
1,2-Dichloropropane	<0.100	<0.462	0.100	0.462		EPA-TO-15	12/28/2022	MS
1,3,5-Trimethylbenzene	<2.40	<11.8	2.40	11.8		EPA-TO-15	12/28/2022	MS
1,3-Butadiene	<0.400	<0.885	0.400	0.885		EPA-TO-15	12/28/2022	MS
1,3-Dichlorobenzene	<0.100	<0.601	0.100	0.601		EPA-TO-15	12/28/2022	MS
1,4-Dichlorobenzene	<0.100	<0.601	0.100	0.601		EPA-TO-15	12/28/2022	MS
1,4-Dioxane	<0.400	<1.44	0.400	1.44		EPA-TO-15	12/28/2022	MS
(MEK) 2-Butanone	12.8	37.9	1.20	3.54		EPA-TO-15	12/28/2022	MS
2-Hexanone	<2.00	<8.19	2.00	8.19		EPA-TO-15	12/28/2022	MS
Isopropyl Alcohol	74.2	182	12.5	30.7		EPA-TO-15	12/28/2022	MS
4-Methyl-2-pentanone (MIBK)	4.81	19.7	1.60	6.55		EPA-TO-15	12/28/2022	MS
Acetone	2,240	5,320	2.00	4.75	E	EPA-TO-15	12/28/2022	MS
Acrolein*	<0.0367	<0.0841	0.0367	0.0841		EPA-TO-15	12/28/2022	MS
Benzene	0.584	1.87	0.160	0.511		EPA-TO-15	12/28/2022	MS

Client: **Libby Environmental**
WorkOrder: 2212398
Project: Franciscan Seattle- Huling

Client Sample ID: SS-4
Lab ID: 2212398-001A
Sample Type: Summa Canister

Date Sampled: 12/14/2022
Date Received: 12/19/2022

Volatile Organic Compounds by EPA Method TO-15

Analyte	Concentration (ppbv)	Concentration (ug/m³)	Reporting Limit (ppbv)	Reporting Limit (ug/m³)	Qual	Method	Date/Analyst	
Benzyl chloride	<0.500	<2.59	0.500	2.59		EPA-TO-15	12/28/2022	MS
Dichlorobromomethane	<0.0800	<0.536	0.0800	0.536		EPA-TO-15	12/28/2022	MS
Bromoform	<0.0500	<0.517	0.0500	0.517		EPA-TO-15	12/28/2022	MS
Bromomethane	<0.0600	<0.233	0.0600	0.233		EPA-TO-15	12/28/2022	MS
Carbon disulfide	<1.20	<3.74	1.20	3.74		EPA-TO-15	12/28/2022	MS
Carbon tetrachloride	<0.0600	<0.378	0.0600	0.378		EPA-TO-15	12/28/2022	MS
Chlorobenzene	<0.0400	<0.184	0.0400	0.184		EPA-TO-15	12/28/2022	MS
Dibromochloromethane	<0.0600	<0.511	0.0600	0.511		EPA-TO-15	12/28/2022	MS
Chloroethane	<0.600	<1.58	0.600	1.58		EPA-TO-15	12/28/2022	MS
Chloroform	0.212	1.03	0.0600	0.293		EPA-TO-15	12/28/2022	MS
Chloromethane	0.235	0.486	0.100	0.207		EPA-TO-15	12/28/2022	MS
cis-1,2-Dichloroethene	<0.120	<0.476	0.120	0.476		EPA-TO-15	12/28/2022	MS
cis-1,3-dichloropropene	<0.240	<1.09	0.240	1.09		EPA-TO-15	12/28/2022	MS
Cyclohexane	<0.240	<0.826	0.240	0.826		EPA-TO-15	12/28/2022	MS
Dichlorodifluoromethane (CFC-12)	0.342	1.69	0.0400	0.198	*	EPA-TO-15	12/28/2022	MS
Dichlorotetrafluoroethane (CFC-114)	<0.0400	<0.280	0.0400	0.280		EPA-TO-15	12/28/2022	MS
Ethyl acetate	<1.60	<5.77	1.60	5.77		EPA-TO-15	12/28/2022	MS
Ethylbenzene	<1.00	<4.34	1.00	4.34		EPA-TO-15	12/28/2022	MS
Heptane	<0.800	<3.21	0.800	3.21		EPA-TO-15	12/28/2022	MS
Hexachlorobutadiene	<0.400	<4.27	0.400	4.27		EPA-TO-15	12/28/2022	MS
m,p-Xylene	<4.00	<17.4	4.00	17.4		EPA-TO-15	12/28/2022	MS
Methyl methacrylate	<0.400	<1.64	0.400	1.64		EPA-TO-15	12/28/2022	MS
Methylene chloride	<4.00	<13.9	4.00	13.9		EPA-TO-15	12/28/2022	MS
Naphthalene	0.568	2.98	0.240	1.26		EPA-TO-15	12/28/2022	MS
n-Hexane	<2.40	<8.46	2.40	8.46		EPA-TO-15	12/28/2022	MS
o-Xylene	<1.20	<5.21	1.20	5.21		EPA-TO-15	12/28/2022	MS
4-Ethyltoluene	<0.500	<2.46	0.500	2.46		EPA-TO-15	12/28/2022	MS
Propylene	7.94	13.7	1.60	2.75		EPA-TO-15	12/28/2022	MS
Styrene	<0.800	<3.41	0.800	3.41		EPA-TO-15	12/28/2022	MS
Methyl tert-butyl ether (MTBE)	<0.300	<1.08	0.300	1.08		EPA-TO-15	12/28/2022	MS

Client: **Libby Environmental**
WorkOrder: 2212398
Project: Franciscan Seattle- Huling

Client Sample ID: SS-4
Lab ID: 2212398-001A
Sample Type: Summa Canister

Date Sampled: 12/14/2022
Date Received: 12/19/2022

Volatile Organic Compounds by EPA Method TO-15

Analyte	Concentration (ppbv)	Concentration (ug/m³)	Reporting Limit (ppbv)	Reporting Limit (ug/m³)	Qual	Method	Date/Analyst	
Tetrachloroethene (PCE)	<2.00	<13.6	2.00	13.6		EPA-TO-15	12/28/2022	MS
Tetrahydrofuran	2.71	8.00	0.500	1.47		EPA-TO-15	12/28/2022	MS
Toluene	1.64	6.19	0.500	1.88		EPA-TO-15	12/28/2022	MS
trans-1,2-Dichloroethene	<0.120	<0.476	0.120	0.476		EPA-TO-15	12/28/2022	MS
trans-1,3-dichloropropene	<0.400	<1.82	0.400	1.82		EPA-TO-15	12/28/2022	MS
Trichloroethene (TCE)	<0.0500	<0.269	0.0500	0.269		EPA-TO-15	12/28/2022	MS
Trichlorofluoromethane (CFC-11)	0.273	1.53	0.0500	0.281		EPA-TO-15	12/28/2022	MS
Vinyl acetate	7.30	25.7	1.40	4.93		EPA-TO-15	12/28/2022	MS
Vinyl chloride	<0.0800	<0.204	0.0800	0.204		EPA-TO-15	12/28/2022	MS
Surr: 4-Bromofluorobenzene	101 %Rec	--	70-130	--		EPA-TO-15	12/28/2022	MS

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

Client: **Libby Environmental**
WorkOrder: 2212398
Project: Franciscan Seattle- Huling

Client Sample ID: SS-2
Lab ID: 2212398-002A
Sample Type: Summa Canister

Date Sampled: 12/14/2022
Date Received: 12/19/2022

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst	
Petroleum Fractionation by EPA Method TO-15								
	(ppbv)	**(ug/m³)**	**(ppbv)**	**(ug/m³)**				
Aliphatic Hydrocarbon (EC5-8)	66.6	253	30.0	114		EPA-TO-15	12/28/2022	MS
Aliphatic Hydrocarbon (EC9-12)	38.4	226	20.0	118		EPA-TO-15	12/28/2022	MS
Aromatic Hydrocarbon (EC9-10)	<5.00	<25.2	5.00	25.2		EPA-TO-15	12/28/2022	MS
Surr: 4-Bromofluorobenzene	116 %Rec	--	70-130	--		EPA-TO-15	12/28/2022	MS
Volatile Organic Compounds by EPA Method TO-15								
	(ppbv)	**(ug/m³)**	**(ppbv)**	**(ug/m³)**				
1,1,1-Trichloroethane	<0.0800	<0.437	0.0800	0.437		EPA-TO-15	12/28/2022	MS
1,1,2,2-Tetrachloroethane	<0.0600	<0.412	0.0600	0.412		EPA-TO-15	12/28/2022	MS
CFC-113	<0.0600	<0.460	0.0600	0.460		EPA-TO-15	12/28/2022	MS
1,1,2-Trichloroethane (TCA)	<0.0400	<0.218	0.0400	0.218		EPA-TO-15	12/28/2022	MS
1,1-Dichloroethane	<0.0600	<0.243	0.0600	0.243		EPA-TO-15	12/28/2022	MS
1,1-Dichloroethene (DCE)	<0.0800	<0.317	0.0800	0.317		EPA-TO-15	12/28/2022	MS
1,2,4-Trichlorobenzene	<0.900	<6.68	0.900	6.68	*	EPA-TO-15	12/28/2022	MS
1,2,4-Trimethylbenzene	<4.00	<19.7	4.00	19.7	*	EPA-TO-15	12/28/2022	MS
1,2-Dibromoethane (EDB)*	<0.0122	<0.0935	0.0122	0.0935		EPA-TO-15	12/28/2022	MS
1,2-Dichlorobenzene	<0.100	<0.601	0.100	0.601		EPA-TO-15	12/28/2022	MS
1,2-Dichloroethane	<0.0500	<0.202	0.0500	0.202		EPA-TO-15	12/28/2022	MS
1,2-Dichloropropane	<0.100	<0.462	0.100	0.462		EPA-TO-15	12/28/2022	MS
1,3,5-Trimethylbenzene	<2.40	<11.8	2.40	11.8		EPA-TO-15	12/28/2022	MS
1,3-Butadiene	<0.400	<0.885	0.400	0.885		EPA-TO-15	12/28/2022	MS
1,3-Dichlorobenzene	<0.100	<0.601	0.100	0.601		EPA-TO-15	12/28/2022	MS
1,4-Dichlorobenzene	<0.100	<0.601	0.100	0.601		EPA-TO-15	12/28/2022	MS
1,4-Dioxane	<0.400	<1.44	0.400	1.44		EPA-TO-15	12/28/2022	MS
(MEK) 2-Butanone	5.33	15.7	1.20	3.54		EPA-TO-15	12/28/2022	MS
2-Hexanone	<2.00	<8.19	2.00	8.19		EPA-TO-15	12/28/2022	MS
Isopropyl Alcohol	44.2	109	12.5	30.7		EPA-TO-15	12/28/2022	MS
4-Methyl-2-pentanone (MIBK)	2.75	11.3	1.60	6.55		EPA-TO-15	12/28/2022	MS
Acetone	929	2,210	2.00	4.75	E	EPA-TO-15	12/28/2022	MS
Acrolein*	<0.0367	<0.0841	0.0367	0.0841		EPA-TO-15	12/28/2022	MS
Benzene	0.163	0.519	0.160	0.511		EPA-TO-15	12/28/2022	MS

Client: **Libby Environmental**
WorkOrder: 2212398
Project: Franciscan Seattle- Huling

Client Sample ID: SS-2
Lab ID: 2212398-002A
Sample Type: Summa Canister

Date Sampled: 12/14/2022
Date Received: 12/19/2022

Volatile Organic Compounds by EPA Method TO-15

Analyte	Concentration (ppbv)	Concentration (ug/m³)	Reporting Limit (ppbv)	Reporting Limit (ug/m³)	Qual	Method	Date/Analyst	
Benzyl chloride	<0.500	<2.59	0.500	2.59		EPA-TO-15	12/28/2022	MS
Dichlorobromomethane	<0.0800	<0.536	0.0800	0.536		EPA-TO-15	12/28/2022	MS
Bromoform	<0.0500	<0.517	0.0500	0.517		EPA-TO-15	12/28/2022	MS
Bromomethane	<0.0600	<0.233	0.0600	0.233		EPA-TO-15	12/28/2022	MS
Carbon disulfide	<1.20	<3.74	1.20	3.74		EPA-TO-15	12/28/2022	MS
Carbon tetrachloride	0.0608	0.383	0.0600	0.378		EPA-TO-15	12/28/2022	MS
Chlorobenzene	<0.0400	<0.184	0.0400	0.184		EPA-TO-15	12/28/2022	MS
Dibromochloromethane	<0.0600	<0.511	0.0600	0.511		EPA-TO-15	12/28/2022	MS
Chloroethane	<0.600	<1.58	0.600	1.58		EPA-TO-15	12/28/2022	MS
Chloroform	1.36	6.63	0.0600	0.293		EPA-TO-15	12/28/2022	MS
Chloromethane	<0.100	<0.207	0.100	0.207		EPA-TO-15	12/28/2022	MS
cis-1,2-Dichloroethene	<0.120	<0.476	0.120	0.476		EPA-TO-15	12/28/2022	MS
cis-1,3-dichloropropene	<0.240	<1.09	0.240	1.09		EPA-TO-15	12/28/2022	MS
Cyclohexane	<0.240	<0.826	0.240	0.826		EPA-TO-15	12/28/2022	MS
Dichlorodifluoromethane (CFC-12)	0.286	1.41	0.0400	0.198	*	EPA-TO-15	12/28/2022	MS
Dichlorotetrafluoroethane (CFC-114)	<0.0400	<0.280	0.0400	0.280		EPA-TO-15	12/28/2022	MS
Ethyl acetate	<1.60	<5.77	1.60	5.77		EPA-TO-15	12/28/2022	MS
Ethylbenzene	<1.00	<4.34	1.00	4.34		EPA-TO-15	12/28/2022	MS
Heptane	<0.800	<3.21	0.800	3.21		EPA-TO-15	12/28/2022	MS
Hexachlorobutadiene	<0.400	<4.27	0.400	4.27		EPA-TO-15	12/28/2022	MS
m,p-Xylene	<4.00	<17.4	4.00	17.4		EPA-TO-15	12/28/2022	MS
Methyl methacrylate	<0.400	<1.64	0.400	1.64		EPA-TO-15	12/28/2022	MS
Methylene chloride	<4.00	<13.9	4.00	13.9		EPA-TO-15	12/28/2022	MS
Naphthalene	0.488	2.56	0.240	1.26		EPA-TO-15	12/28/2022	MS
n-Hexane	<2.40	<8.46	2.40	8.46		EPA-TO-15	12/28/2022	MS
o-Xylene	<1.20	<5.21	1.20	5.21		EPA-TO-15	12/28/2022	MS
4-Ethyltoluene	<0.500	<2.46	0.500	2.46		EPA-TO-15	12/28/2022	MS
Propylene	1.94	3.33	1.60	2.75		EPA-TO-15	12/28/2022	MS
Styrene	<0.800	<3.41	0.800	3.41		EPA-TO-15	12/28/2022	MS
Methyl tert-butyl ether (MTBE)	<0.300	<1.08	0.300	1.08		EPA-TO-15	12/28/2022	MS

Client: **Libby Environmental**
WorkOrder: 2212398
Project: Franciscan Seattle- Huling

Client Sample ID: SS-2
Lab ID: 2212398-002A
Sample Type: Summa Canister

Date Sampled: 12/14/2022
Date Received: 12/19/2022

Volatile Organic Compounds by EPA Method TO-15

Analyte	Concentration (ppbv)	Concentration (ug/m³)	Reporting Limit (ppbv)	Reporting Limit (ug/m³)	Qual	Method	Date/Analyst	
Tetrachloroethene (PCE)	<2.00	<13.6	2.00	13.6		EPA-TO-15	12/28/2022	MS
Tetrahydrofuran	2.31	6.80	0.500	1.47		EPA-TO-15	12/28/2022	MS
Toluene	0.921	3.47	0.500	1.88		EPA-TO-15	12/28/2022	MS
trans-1,2-Dichloroethene	<0.120	<0.476	0.120	0.476		EPA-TO-15	12/28/2022	MS
trans-1,3-dichloropropene	<0.400	<1.82	0.400	1.82		EPA-TO-15	12/28/2022	MS
Trichloroethene (TCE)	<0.0500	<0.269	0.0500	0.269		EPA-TO-15	12/28/2022	MS
Trichlorofluoromethane (CFC-11)	0.216	1.21	0.0500	0.281		EPA-TO-15	12/28/2022	MS
Vinyl acetate	3.24	11.4	1.40	4.93		EPA-TO-15	12/28/2022	MS
Vinyl chloride	<0.0800	<0.204	0.0800	0.204		EPA-TO-15	12/28/2022	MS
Surr: 4-Bromofluorobenzene	104 %Rec	--	70-130	--		EPA-TO-15	12/28/2022	MS

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

Client: **Libby Environmental**
WorkOrder: 2212398
Project: Franciscan Seattle- Huling

Client Sample ID: SS-5
Lab ID: 2212398-003A
Sample Type: Summa Canister

Date Sampled: 12/14/2022
Date Received: 12/19/2022

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst	
Petroleum Fractionation by EPA Method TO-15								
	(ppbv)	**(ug/m³)**	**(ppbv)**	**(ug/m³)**				
Aliphatic Hydrocarbon (EC5-8)	81.7	311	30.0	114		EPA-TO-15	12/28/2022	MS
Aliphatic Hydrocarbon (EC9-12)	42.2	249	20.0	118		EPA-TO-15	12/28/2022	MS
Aromatic Hydrocarbon (EC9-10)	<5.00	<25.2	5.00	25.2		EPA-TO-15	12/28/2022	MS
Surr: 4-Bromofluorobenzene	115 %Rec	--	70-130	--		EPA-TO-15	12/28/2022	MS
Volatile Organic Compounds by EPA Method TO-15								
	(ppbv)	**(ug/m³)**	**(ppbv)**	**(ug/m³)**				
1,1,1-Trichloroethane	<0.0800	<0.437	0.0800	0.437		EPA-TO-15	12/28/2022	MS
1,1,2,2-Tetrachloroethane	<0.0600	<0.412	0.0600	0.412		EPA-TO-15	12/28/2022	MS
CFC-113	<0.0600	<0.460	0.0600	0.460		EPA-TO-15	12/28/2022	MS
1,1,2-Trichloroethane (TCA)	<0.0400	<0.218	0.0400	0.218		EPA-TO-15	12/28/2022	MS
1,1-Dichloroethane	<0.0600	<0.243	0.0600	0.243		EPA-TO-15	12/28/2022	MS
1,1-Dichloroethene (DCE)	<0.0800	<0.317	0.0800	0.317		EPA-TO-15	12/28/2022	MS
1,2,4-Trichlorobenzene	<0.900	<6.68	0.900	6.68	*	EPA-TO-15	12/28/2022	MS
1,2,4-Trimethylbenzene	<4.00	<19.7	4.00	19.7	*	EPA-TO-15	12/28/2022	MS
1,2-Dibromoethane (EDB)*	<0.0122	<0.0935	0.0122	0.0935		EPA-TO-15	12/28/2022	MS
1,2-Dichlorobenzene	<0.100	<0.601	0.100	0.601		EPA-TO-15	12/28/2022	MS
1,2-Dichloroethane	<0.0500	<0.202	0.0500	0.202		EPA-TO-15	12/28/2022	MS
1,2-Dichloropropane	<0.100	<0.462	0.100	0.462		EPA-TO-15	12/28/2022	MS
1,3,5-Trimethylbenzene	<2.40	<11.8	2.40	11.8		EPA-TO-15	12/28/2022	MS
1,3-Butadiene	<0.400	<0.885	0.400	0.885		EPA-TO-15	12/28/2022	MS
1,3-Dichlorobenzene	<0.100	<0.601	0.100	0.601		EPA-TO-15	12/28/2022	MS
1,4-Dichlorobenzene	<0.100	<0.601	0.100	0.601		EPA-TO-15	12/28/2022	MS
1,4-Dioxane	<0.400	<1.44	0.400	1.44		EPA-TO-15	12/28/2022	MS
(MEK) 2-Butanone	5.87	17.3	1.20	3.54		EPA-TO-15	12/28/2022	MS
2-Hexanone	<2.00	<8.19	2.00	8.19		EPA-TO-15	12/28/2022	MS
Isopropyl Alcohol	44.7	110	12.5	30.7		EPA-TO-15	12/28/2022	MS
4-Methyl-2-pentanone (MIBK)	4.58	18.8	1.60	6.55		EPA-TO-15	12/28/2022	MS
Acetone	1,250	2,970	2.00	4.75	E	EPA-TO-15	12/28/2022	MS
Acrolein*	<0.0367	<0.0841	0.0367	0.0841		EPA-TO-15	12/28/2022	MS
Benzene	0.182	0.580	0.160	0.511		EPA-TO-15	12/28/2022	MS

Client: **Libby Environmental**
WorkOrder: 2212398
Project: Franciscan Seattle- Huling

Client Sample ID: SS-5
Lab ID: 2212398-003A
Sample Type: Summa Canister

Date Sampled: 12/14/2022
Date Received: 12/19/2022

Volatile Organic Compounds by EPA Method TO-15

Analyte	Concentration (ppbv)	Concentration (ug/m³)	Reporting Limit (ppbv)	Reporting Limit (ug/m³)	Qual	Method	Date/Analyst	
Benzyl chloride	<0.500	<2.59	0.500	2.59		EPA-TO-15	12/28/2022	MS
Dichlorobromomethane	0.318	2.13	0.0800	0.536		EPA-TO-15	12/28/2022	MS
Bromoform	<0.0500	<0.517	0.0500	0.517		EPA-TO-15	12/28/2022	MS
Bromomethane	<0.0600	<0.233	0.0600	0.233		EPA-TO-15	12/28/2022	MS
Carbon disulfide	<1.20	<3.74	1.20	3.74		EPA-TO-15	12/28/2022	MS
Carbon tetrachloride	0.0751	0.473	0.0600	0.378		EPA-TO-15	12/28/2022	MS
Chlorobenzene	<0.0400	<0.184	0.0400	0.184		EPA-TO-15	12/28/2022	MS
Dibromochloromethane	<0.0600	<0.511	0.0600	0.511		EPA-TO-15	12/28/2022	MS
Chloroethane	<0.600	<1.58	0.600	1.58		EPA-TO-15	12/28/2022	MS
Chloroform	5.96	29.1	0.0600	0.293		EPA-TO-15	12/28/2022	MS
Chloromethane	<0.100	<0.207	0.100	0.207		EPA-TO-15	12/28/2022	MS
cis-1,2-Dichloroethene	<0.120	<0.476	0.120	0.476		EPA-TO-15	12/28/2022	MS
cis-1,3-dichloropropene	<0.240	<1.09	0.240	1.09		EPA-TO-15	12/28/2022	MS
Cyclohexane	<0.240	<0.826	0.240	0.826		EPA-TO-15	12/28/2022	MS
Dichlorodifluoromethane (CFC-12)	0.415	2.05	0.0400	0.198	*	EPA-TO-15	12/28/2022	MS
Dichlorotetrafluoroethane (CFC-114)	<0.0400	<0.280	0.0400	0.280		EPA-TO-15	12/28/2022	MS
Ethyl acetate	<1.60	<5.77	1.60	5.77		EPA-TO-15	12/28/2022	MS
Ethylbenzene	1.55	6.73	1.00	4.34		EPA-TO-15	12/28/2022	MS
Heptane	<0.800	<3.21	0.800	3.21		EPA-TO-15	12/28/2022	MS
Hexachlorobutadiene	<0.400	<4.27	0.400	4.27		EPA-TO-15	12/28/2022	MS
m,p-Xylene	8.44	36.7	4.00	17.4		EPA-TO-15	12/28/2022	MS
Methyl methacrylate	<0.400	<1.64	0.400	1.64		EPA-TO-15	12/28/2022	MS
Methylene chloride	<4.00	<13.9	4.00	13.9		EPA-TO-15	12/28/2022	MS
Naphthalene	0.488	2.56	0.240	1.26		EPA-TO-15	12/28/2022	MS
n-Hexane	<2.40	<8.46	2.40	8.46		EPA-TO-15	12/28/2022	MS
o-Xylene	3.78	16.4	1.20	5.21		EPA-TO-15	12/28/2022	MS
4-Ethyltoluene	<0.500	<2.46	0.500	2.46		EPA-TO-15	12/28/2022	MS
Propylene	4.82	8.29	1.60	2.75		EPA-TO-15	12/28/2022	MS
Styrene	<0.800	<3.41	0.800	3.41		EPA-TO-15	12/28/2022	MS
Methyl tert-butyl ether (MTBE)	<0.300	<1.08	0.300	1.08		EPA-TO-15	12/28/2022	MS

Client: **Libby Environmental**
WorkOrder: 2212398
Project: Franciscan Seattle- Huling

Client Sample ID: SS-5
Lab ID: 2212398-003A
Sample Type: Summa Canister

Date Sampled: 12/14/2022
Date Received: 12/19/2022

Volatile Organic Compounds by EPA Method TO-15

Analyte	Concentration (ppbv)	Concentration (ug/m³)	Reporting Limit (ppbv)	Reporting Limit (ug/m³)	Qual	Method	Date/Analyst	
Tetrachloroethene (PCE)	<2.00	<13.6	2.00	13.6		EPA-TO-15	12/28/2022	MS
Tetrahydrofuran	1.76	5.18	0.500	1.47		EPA-TO-15	12/28/2022	MS
Toluene	0.633	2.38	0.500	1.88		EPA-TO-15	12/28/2022	MS
trans-1,2-Dichloroethene	<0.120	<0.476	0.120	0.476		EPA-TO-15	12/28/2022	MS
trans-1,3-dichloropropene	<0.400	<1.82	0.400	1.82		EPA-TO-15	12/28/2022	MS
Trichloroethene (TCE)	<0.0500	<0.269	0.0500	0.269		EPA-TO-15	12/28/2022	MS
Trichlorofluoromethane (CFC-11)	0.212	1.19	0.0500	0.281		EPA-TO-15	12/28/2022	MS
Vinyl acetate	3.37	11.9	1.40	4.93		EPA-TO-15	12/28/2022	MS
Vinyl chloride	<0.0800	<0.204	0.0800	0.204		EPA-TO-15	12/28/2022	MS
Surr: 4-Bromofluorobenzene	102 %Rec	--	70-130	--		EPA-TO-15	12/28/2022	MS

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

Client: **Libby Environmental**
WorkOrder: 2212398
Project: Franciscan Seattle- Huling

Client Sample ID: SS-1
Lab ID: 2212398-004A
Sample Type: Summa Canister

Date Sampled: 12/14/2022
Date Received: 12/19/2022

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst	
Petroleum Fractionation by EPA Method TO-15								
	(ppbv)	**(ug/m³)**	**(ppbv)**	**(ug/m³)**				
Aliphatic Hydrocarbon (EC5-8)	80.8	307	30.0	114		EPA-TO-15	12/28/2022	MS
Aliphatic Hydrocarbon (EC9-12)	41.3	243	20.0	118		EPA-TO-15	12/28/2022	MS
Aromatic Hydrocarbon (EC9-10)	<5.00	<25.2	5.00	25.2		EPA-TO-15	12/28/2022	MS
Surr: 4-Bromofluorobenzene	120 %Rec	--	70-130	--		EPA-TO-15	12/28/2022	MS
Volatile Organic Compounds by EPA Method TO-15								
	(ppbv)	**(ug/m³)**	**(ppbv)**	**(ug/m³)**				
1,1,1-Trichloroethane	<0.0800	<0.437	0.0800	0.437		EPA-TO-15	12/28/2022	MS
1,1,2,2-Tetrachloroethane	<0.0600	<0.412	0.0600	0.412		EPA-TO-15	12/28/2022	MS
CFC-113	<0.0600	<0.460	0.0600	0.460		EPA-TO-15	12/28/2022	MS
1,1,2-Trichloroethane (TCA)	<0.0400	<0.218	0.0400	0.218		EPA-TO-15	12/28/2022	MS
1,1-Dichloroethane	<0.0600	<0.243	0.0600	0.243		EPA-TO-15	12/28/2022	MS
1,1-Dichloroethene (DCE)	<0.0800	<0.317	0.0800	0.317		EPA-TO-15	12/28/2022	MS
1,2,4-Trichlorobenzene	<0.900	<6.68	0.900	6.68	*	EPA-TO-15	12/28/2022	MS
1,2,4-Trimethylbenzene	<4.00	<19.7	4.00	19.7	*	EPA-TO-15	12/28/2022	MS
1,2-Dibromoethane (EDB)*	<0.0122	<0.0935	0.0122	0.0935		EPA-TO-15	12/28/2022	MS
1,2-Dichlorobenzene	<0.100	<0.601	0.100	0.601		EPA-TO-15	12/28/2022	MS
1,2-Dichloroethane	<0.0500	<0.202	0.0500	0.202		EPA-TO-15	12/28/2022	MS
1,2-Dichloropropane	<0.100	<0.462	0.100	0.462		EPA-TO-15	12/28/2022	MS
1,3,5-Trimethylbenzene	<2.40	<11.8	2.40	11.8		EPA-TO-15	12/28/2022	MS
1,3-Butadiene	<0.400	<0.885	0.400	0.885		EPA-TO-15	12/28/2022	MS
1,3-Dichlorobenzene	<0.100	<0.601	0.100	0.601		EPA-TO-15	12/28/2022	MS
1,4-Dichlorobenzene	<0.100	<0.601	0.100	0.601		EPA-TO-15	12/28/2022	MS
1,4-Dioxane	<0.400	<1.44	0.400	1.44		EPA-TO-15	12/28/2022	MS
(MEK) 2-Butanone	5.21	15.4	1.20	3.54		EPA-TO-15	12/28/2022	MS
2-Hexanone	<2.00	<8.19	2.00	8.19		EPA-TO-15	12/28/2022	MS
Isopropyl Alcohol	20.7	51.0	12.5	30.7		EPA-TO-15	12/28/2022	MS
4-Methyl-2-pentanone (MIBK)	1.98	8.13	1.60	6.55		EPA-TO-15	12/28/2022	MS
Acetone	230	546	2.00	4.75	E	EPA-TO-15	12/28/2022	MS
Acrolein*	<0.0367	<0.0841	0.0367	0.0841		EPA-TO-15	12/28/2022	MS
Benzene	0.164	0.525	0.160	0.511		EPA-TO-15	12/28/2022	MS

Client: **Libby Environmental**
WorkOrder: 2212398
Project: Franciscan Seattle- Huling

Client Sample ID: SS-1
Lab ID: 2212398-004A
Sample Type: Summa Canister

Date Sampled: 12/14/2022
Date Received: 12/19/2022

Volatile Organic Compounds by EPA Method TO-15

Analyte	Concentration (ppbv)	Concentration (ug/m³)	Reporting Limit (ppbv)	Reporting Limit (ug/m³)	Qual	Method	Date/Analyst	
Benzyl chloride	<0.500	<2.59	0.500	2.59		EPA-TO-15	12/28/2022	MS
Dichlorobromomethane	0.135	0.906	0.0800	0.536		EPA-TO-15	12/28/2022	MS
Bromoform	<0.0500	<0.517	0.0500	0.517		EPA-TO-15	12/28/2022	MS
Bromomethane	<0.0600	<0.233	0.0600	0.233		EPA-TO-15	12/28/2022	MS
Carbon disulfide	<1.20	<3.74	1.20	3.74		EPA-TO-15	12/28/2022	MS
Carbon tetrachloride	0.0772	0.486	0.0600	0.378		EPA-TO-15	12/28/2022	MS
Chlorobenzene	<0.0400	<0.184	0.0400	0.184		EPA-TO-15	12/28/2022	MS
Dibromochloromethane	<0.0600	<0.511	0.0600	0.511		EPA-TO-15	12/28/2022	MS
Chloroethane	<0.600	<1.58	0.600	1.58		EPA-TO-15	12/28/2022	MS
Chloroform	5.74	28.0	0.0600	0.293		EPA-TO-15	12/28/2022	MS
Chloromethane	<0.100	<0.207	0.100	0.207		EPA-TO-15	12/28/2022	MS
cis-1,2-Dichloroethene	<0.120	<0.476	0.120	0.476		EPA-TO-15	12/28/2022	MS
cis-1,3-dichloropropene	<0.240	<1.09	0.240	1.09		EPA-TO-15	12/28/2022	MS
Cyclohexane	<0.240	<0.826	0.240	0.826		EPA-TO-15	12/28/2022	MS
Dichlorodifluoromethane (CFC-12)	0.406	2.01	0.0400	0.198	*	EPA-TO-15	12/28/2022	MS
Dichlorotetrafluoroethane (CFC-114)	<0.0400	<0.280	0.0400	0.280		EPA-TO-15	12/28/2022	MS
Ethyl acetate	<1.60	<5.77	1.60	5.77		EPA-TO-15	12/28/2022	MS
Ethylbenzene	<1.00	<4.34	1.00	4.34		EPA-TO-15	12/28/2022	MS
Heptane	<0.800	<3.21	0.800	3.21		EPA-TO-15	12/28/2022	MS
Hexachlorobutadiene	<0.400	<4.27	0.400	4.27		EPA-TO-15	12/28/2022	MS
m,p-Xylene	<4.00	<17.4	4.00	17.4		EPA-TO-15	12/28/2022	MS
Methyl methacrylate	<0.400	<1.64	0.400	1.64		EPA-TO-15	12/28/2022	MS
Methylene chloride	<4.00	<13.9	4.00	13.9		EPA-TO-15	12/28/2022	MS
Naphthalene	0.494	2.59	0.240	1.26		EPA-TO-15	12/28/2022	MS
n-Hexane	<2.40	<8.46	2.40	8.46		EPA-TO-15	12/28/2022	MS
o-Xylene	<1.20	<5.21	1.20	5.21		EPA-TO-15	12/28/2022	MS
4-Ethyltoluene	<0.500	<2.46	0.500	2.46		EPA-TO-15	12/28/2022	MS
Propylene	<1.60	<2.75	1.60	2.75		EPA-TO-15	12/28/2022	MS
Styrene	<0.800	<3.41	0.800	3.41		EPA-TO-15	12/28/2022	MS
Methyl tert-butyl ether (MTBE)	<0.300	<1.08	0.300	1.08		EPA-TO-15	12/28/2022	MS

Client: **Libby Environmental**
WorkOrder: 2212398
Project: Franciscan Seattle- Huling

Client Sample ID: SS-1
Lab ID: 2212398-004A
Sample Type: Summa Canister

Date Sampled: 12/14/2022
Date Received: 12/19/2022

Volatile Organic Compounds by EPA Method TO-15

Analyte	Concentration (ppbv)	Concentration (ug/m³)	Reporting Limit (ppbv)	Reporting Limit (ug/m³)	Qual	Method	Date/Analyst	
Tetrachloroethene (PCE)	<2.00	<13.6	2.00	13.6		EPA-TO-15	12/28/2022	MS
Tetrahydrofuran	2.95	8.69	0.500	1.47		EPA-TO-15	12/28/2022	MS
Toluene	0.825	3.11	0.500	1.88		EPA-TO-15	12/28/2022	MS
trans-1,2-Dichloroethene	<0.120	<0.476	0.120	0.476		EPA-TO-15	12/28/2022	MS
trans-1,3-dichloropropene	<0.400	<1.82	0.400	1.82		EPA-TO-15	12/28/2022	MS
Trichloroethene (TCE)	<0.0500	<0.269	0.0500	0.269		EPA-TO-15	12/28/2022	MS
Trichlorofluoromethane (CFC-11)	0.228	1.28	0.0500	0.281		EPA-TO-15	12/28/2022	MS
Vinyl acetate	2.94	10.3	1.40	4.93		EPA-TO-15	12/28/2022	MS
Vinyl chloride	<0.0800	<0.204	0.0800	0.204		EPA-TO-15	12/28/2022	MS
Surr: 4-Bromofluorobenzene	106 %Rec	--	70-130	--		EPA-TO-15	12/28/2022	MS

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

Client: **Libby Environmental**
WorkOrder: 2212398
Project: Franciscan Seattle- Huling

Client Sample ID: SS-3
Lab ID: 2212398-005A
Sample Type: Summa Canister

Date Sampled: 12/14/2022
Date Received: 12/19/2022

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst	
Petroleum Fractionation by EPA Method TO-15								
	(ppbv)	**(ug/m³)**	**(ppbv)**	**(ug/m³)**				
Aliphatic Hydrocarbon (EC5-8)	103	393	30.0	114		EPA-TO-15	12/28/2022	MS
Aliphatic Hydrocarbon (EC9-12)	21.9	129	20.0	118		EPA-TO-15	12/28/2022	MS
Aromatic Hydrocarbon (EC9-10)	12.7	64.0	5.00	25.2		EPA-TO-15	12/28/2022	MS
Surr: 4-Bromofluorobenzene	111 %Rec	--	70-130	--		EPA-TO-15	12/28/2022	MS
Volatile Organic Compounds by EPA Method TO-15								
	(ppbv)	**(ug/m³)**	**(ppbv)**	**(ug/m³)**				
1,1,1-Trichloroethane	<0.0800	<0.437	0.0800	0.437		EPA-TO-15	12/28/2022	MS
1,1,2,2-Tetrachloroethane	<0.0600	<0.412	0.0600	0.412		EPA-TO-15	12/28/2022	MS
CFC-113	<0.0600	<0.460	0.0600	0.460		EPA-TO-15	12/28/2022	MS
1,1,2-Trichloroethane (TCA)	<0.0400	<0.218	0.0400	0.218		EPA-TO-15	12/28/2022	MS
1,1-Dichloroethane	<0.0600	<0.243	0.0600	0.243		EPA-TO-15	12/28/2022	MS
1,1-Dichloroethene (DCE)	<0.0800	<0.317	0.0800	0.317		EPA-TO-15	12/28/2022	MS
1,2,4-Trichlorobenzene	<0.900	<6.68	0.900	6.68	*	EPA-TO-15	12/28/2022	MS
1,2,4-Trimethylbenzene	<4.00	<19.7	4.00	19.7	*	EPA-TO-15	12/28/2022	MS
1,2-Dibromoethane (EDB)*	<0.0122	<0.0935	0.0122	0.0935		EPA-TO-15	12/28/2022	MS
1,2-Dichlorobenzene	<0.100	<0.601	0.100	0.601		EPA-TO-15	12/28/2022	MS
1,2-Dichloroethane	<0.0500	<0.202	0.0500	0.202		EPA-TO-15	12/28/2022	MS
1,2-Dichloropropane	<0.100	<0.462	0.100	0.462		EPA-TO-15	12/28/2022	MS
1,3,5-Trimethylbenzene	<2.40	<11.8	2.40	11.8		EPA-TO-15	12/28/2022	MS
1,3-Butadiene	0.404	0.895	0.400	0.885	*	EPA-TO-15	12/28/2022	MS
1,3-Dichlorobenzene	<0.100	<0.601	0.100	0.601		EPA-TO-15	12/28/2022	MS
1,4-Dichlorobenzene	<0.100	<0.601	0.100	0.601		EPA-TO-15	12/28/2022	MS
1,4-Dioxane	<0.400	<1.44	0.400	1.44		EPA-TO-15	12/28/2022	MS
(MEK) 2-Butanone	7.88	23.2	1.20	3.54		EPA-TO-15	12/28/2022	MS
2-Hexanone	<2.00	<8.19	2.00	8.19		EPA-TO-15	12/28/2022	MS
Isopropyl Alcohol	161	395	12.5	30.7	E	EPA-TO-15	12/28/2022	MS
4-Methyl-2-pentanone (MIBK)	2.22	9.09	1.60	6.55		EPA-TO-15	12/28/2022	MS
Acetone	571	1,360	2.00	4.75	E	EPA-TO-15	12/28/2022	MS
Acrolein*	<0.0367	<0.0841	0.0367	0.0841		EPA-TO-15	12/28/2022	MS
Benzene	0.348	1.11	0.160	0.511		EPA-TO-15	12/28/2022	MS

Client: **Libby Environmental**
WorkOrder: 2212398
Project: Franciscan Seattle- Huling

Client Sample ID: SS-3
Lab ID: 2212398-005A
Sample Type: Summa Canister

Date Sampled: 12/14/2022
Date Received: 12/19/2022

Volatile Organic Compounds by EPA Method TO-15

Analyte	Concentration (ppbv)	Concentration (ug/m³)	Reporting Limit (ppbv)	Reporting Limit (ug/m³)	Qual	Method	Date/Analyst	
Benzyl chloride	<0.500	<2.59	0.500	2.59		EPA-TO-15	12/28/2022	MS
Dichlorobromomethane	<0.0800	<0.536	0.0800	0.536		EPA-TO-15	12/28/2022	MS
Bromoform	<0.0500	<0.517	0.0500	0.517		EPA-TO-15	12/28/2022	MS
Bromomethane	<0.0600	<0.233	0.0600	0.233		EPA-TO-15	12/28/2022	MS
Carbon disulfide	<1.20	<3.74	1.20	3.74		EPA-TO-15	12/28/2022	MS
Carbon tetrachloride	0.0794	0.500	0.0600	0.378		EPA-TO-15	12/28/2022	MS
Chlorobenzene	<0.0400	<0.184	0.0400	0.184		EPA-TO-15	12/28/2022	MS
Dibromochloromethane	<0.0600	<0.511	0.0600	0.511		EPA-TO-15	12/28/2022	MS
Chloroethane	<0.600	<1.58	0.600	1.58		EPA-TO-15	12/28/2022	MS
Chloroform	0.601	2.94	0.0600	0.293		EPA-TO-15	12/28/2022	MS
Chloromethane	0.529	1.09	0.100	0.207		EPA-TO-15	12/28/2022	MS
cis-1,2-Dichloroethene	<0.120	<0.476	0.120	0.476		EPA-TO-15	12/28/2022	MS
cis-1,3-dichloropropene	<0.240	<1.09	0.240	1.09		EPA-TO-15	12/28/2022	MS
Cyclohexane	<0.240	<0.826	0.240	0.826		EPA-TO-15	12/28/2022	MS
Dichlorodifluoromethane (CFC-12)	0.247	1.22	0.0400	0.198	*	EPA-TO-15	12/28/2022	MS
Dichlorotetrafluoroethane (CFC-114)	<0.0400	<0.280	0.0400	0.280		EPA-TO-15	12/28/2022	MS
Ethyl acetate	<1.60	<5.77	1.60	5.77		EPA-TO-15	12/28/2022	MS
Ethylbenzene	<1.00	<4.34	1.00	4.34		EPA-TO-15	12/28/2022	MS
Heptane	<0.800	<3.21	0.800	3.21		EPA-TO-15	12/28/2022	MS
Hexachlorobutadiene	<0.400	<4.27	0.400	4.27		EPA-TO-15	12/28/2022	MS
m,p-Xylene	<4.00	<17.4	4.00	17.4		EPA-TO-15	12/28/2022	MS
Methyl methacrylate	<0.400	<1.64	0.400	1.64		EPA-TO-15	12/28/2022	MS
Methylene chloride	<4.00	<13.9	4.00	13.9		EPA-TO-15	12/28/2022	MS
Naphthalene	0.428	2.24	0.240	1.26		EPA-TO-15	12/28/2022	MS
n-Hexane	<2.40	<8.46	2.40	8.46		EPA-TO-15	12/28/2022	MS
o-Xylene	<1.20	<5.21	1.20	5.21		EPA-TO-15	12/28/2022	MS
4-Ethyltoluene	<0.500	<2.46	0.500	2.46		EPA-TO-15	12/28/2022	MS
Propylene	4.47	7.69	1.60	2.75		EPA-TO-15	12/28/2022	MS
Styrene	<0.800	<3.41	0.800	3.41		EPA-TO-15	12/28/2022	MS
Methyl tert-butyl ether (MTBE)	<0.300	<1.08	0.300	1.08		EPA-TO-15	12/28/2022	MS

Client: **Libby Environmental**
WorkOrder: 2212398
Project: Franciscan Seattle- Huling

Client Sample ID: SS-3
Lab ID: 2212398-005A
Sample Type: Summa Canister

Date Sampled: 12/14/2022
Date Received: 12/19/2022

Volatile Organic Compounds by EPA Method TO-15

Analyte	Concentration (ppbv)	Concentration (ug/m³)	Reporting Limit (ppbv)	Reporting Limit (ug/m³)	Qual	Method	Date/Analyst	
Tetrachloroethene (PCE)	<2.00	<13.6	2.00	13.6		EPA-TO-15	12/28/2022	MS
Tetrahydrofuran	2.14	6.31	0.500	1.47		EPA-TO-15	12/28/2022	MS
Toluene	1.05	3.95	0.500	1.88		EPA-TO-15	12/28/2022	MS
trans-1,2-Dichloroethene	<0.120	<0.476	0.120	0.476		EPA-TO-15	12/28/2022	MS
trans-1,3-dichloropropene	<0.400	<1.82	0.400	1.82		EPA-TO-15	12/28/2022	MS
Trichloroethene (TCE)	<0.0500	<0.269	0.0500	0.269		EPA-TO-15	12/28/2022	MS
Trichlorofluoromethane (CFC-11)	0.219	1.23	0.0500	0.281		EPA-TO-15	12/28/2022	MS
Vinyl acetate	4.24	14.9	1.40	4.93		EPA-TO-15	12/28/2022	MS
Vinyl chloride	<0.0800	<0.204	0.0800	0.204		EPA-TO-15	12/28/2022	MS
Surr: 4-Bromofluorobenzene	96.8 %Rec	--	70-130	--		EPA-TO-15	12/28/2022	MS

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

Work Order: 2212398
CLIENT: Libby Environmental
Project: Franciscan Seattle- Huling

QC SUMMARY REPORT

Petroleum Fractionation by EPA Method TO-15

Sample ID: **LCS-R80795** SampType: **LCS** Units: **ppbv** Prep Date: **12/28/2022** RunNo: **80795**
Client ID: **LCSW** Batch ID: **R80795** Analysis Date: **12/28/2022** SeqNo: **1671326**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (EC5-8)	12.4	7.50	12.00	0	103	70	130				
Aliphatic Hydrocarbon (EC9-12)	15.1	5.00	12.00	0	126	70	130				
Aromatic Hydrocarbon (EC9-10)	12.9	1.25	10.00	0	129	70	130				
Surr: 4-Bromofluorobenzene	3.81		4.000		95.3	70	130				

Sample ID: **MB-R80795** SampType: **MBLK** Units: **ppbv** Prep Date: **12/28/2022** RunNo: **80795**
Client ID: **MBLKW** Batch ID: **R80795** Analysis Date: **12/28/2022** SeqNo: **1671396**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (EC5-8)	ND	7.50									
Aliphatic Hydrocarbon (EC9-12)	ND	5.00									
Aromatic Hydrocarbon (EC9-10)	ND	1.25									
Surr: 4-Bromofluorobenzene	2.11		4.000		52.7	70	130				S

NOTES:
S - Outlying surrogate recovery(ies) observed.

Sample ID: **2212370-001AREP** SampType: **REP** Units: **ppbv** Prep Date: **12/28/2022** RunNo: **80795**
Client ID: **BATCH** Batch ID: **R80795** Analysis Date: **12/28/2022** SeqNo: **1671329**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (EC5-8)	157	30.0						128.7	19.5	25	
Aliphatic Hydrocarbon (EC9-12)	39.5	20.0						38.06	3.84	25	
Aromatic Hydrocarbon (EC9-10)	ND	5.00						0		25	
Surr: 4-Bromofluorobenzene	13.3		16.00		83.4	70	130		0		

Work Order: 2212398
CLIENT: Libby Environmental
Project: Franciscan Seattle- Huling

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method TO-15

Sample ID: **LCS-R80788** SampType: **LCS** Units: **ppbv** Prep Date: **12/28/2022** RunNo: **80788**
Client ID: **LCSW** Batch ID: **R80788** Analysis Date: **12/28/2022** SeqNo: **1671151**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Propylene	2.37	0.400	2.000	0	118	70	130				
Dichlorodifluoromethane (CFC-12)	2.80	0.0100	2.000	0	140	70	130				S
Chloromethane	2.55	0.0250	2.000	0	127	70	130				
Dichlorotetrafluoroethane (CFC-114)	2.75	0.0100	2.000	0	138	70	130				S
Vinyl chloride	2.59	0.0200	2.000	0	130	70	130				
1,3-Butadiene	2.75	0.100	2.000	0	137	70	130				S
Bromomethane	1.90	0.0150	2.000	0	95.2	70	130				
Trichlorofluoromethane (CFC-11)	2.10	0.0125	2.000	0	105	70	130				
Chloroethane	2.04	0.150	2.000	0	102	70	130				
Acrolein*	1.86	0.00917	2.000	0	92.8	70	130				
1,1-Dichloroethene (DCE)	2.23	0.0200	2.000	0	112	70	130				
Acetone	2.55	0.500	2.000	0	127	70	130				
Isopropyl Alcohol	1.95	3.12	2.000	0	97.4	70	130				
Methylene chloride	2.38	1.00	2.000	0	119	70	130				
Carbon disulfide	2.76	0.300	2.000	0	138	70	130				S
trans-1,2-Dichloroethene	2.40	0.0300	2.000	0	120	70	130				
Methyl tert-butyl ether (MTBE)	2.26	0.0750	2.000	0	113	70	130				
n-Hexane	2.18	0.600	2.000	0	109	70	130				
1,1-Dichloroethane	2.52	0.0150	2.000	0	126	70	130				
Vinyl acetate	2.26	0.350	2.000	0	113	70	130				
cis-1,2-Dichloroethene	1.96	0.0300	2.000	0	98.1	70	130				
(MEK) 2-Butanone	1.98	0.300	2.000	0	99.0	70	130				
Ethyl acetate	1.80	0.400	2.000	0	90.2	70	130				
Chloroform	2.03	0.0150	2.000	0	102	70	130				
Tetrahydrofuran	1.80	0.125	2.000	0	90.1	70	130				
1,1,1-Trichloroethane	1.76	0.0200	2.000	0	88.2	70	130				
Carbon tetrachloride	1.82	0.0150	2.000	0	91.2	70	130				
1,2-Dichloroethane	1.93	0.0125	2.000	0	96.4	70	130				
Benzene	1.95	0.0400	2.000	0	97.7	70	130				
Cyclohexane	2.01	0.0600	2.000	0	100	70	130				
Trichloroethene (TCE)	2.03	0.0125	2.000	0	101	70	130				
1,2-Dichloropropane	2.05	0.0250	2.000	0	103	70	130				

Work Order: 2212398
CLIENT: Libby Environmental
Project: Franciscan Seattle- Huling

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method TO-15

Sample ID: **LCS-R80788** SampType: **LCS** Units: **ppbv** Prep Date: **12/28/2022** RunNo: **80788**
Client ID: **LCSW** Batch ID: **R80788** Analysis Date: **12/28/2022** SeqNo: **1671151**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl methacrylate	1.69	0.100	2.000	0	84.3	70	130				
Dichlorobromomethane	2.28	0.0200	2.000	0	114	70	130				
1,4-Dioxane	2.05	0.100	2.000	0	102	70	130				
cis-1,3-dichloropropene	1.81	0.0600	2.000	0	90.5	70	130				
Toluene	1.76	0.125	2.000	0	88.1	70	130				
trans-1,3-dichloropropene	1.74	0.100	2.000	0	86.9	70	130				
1,1,2-Trichloroethane (TCA)	2.25	0.0100	2.000	0	113	70	130				
Tetrachloroethene (PCE)	2.04	0.500	2.000	0	102	70	130				
Dibromochloromethane	1.99	0.0150	2.000	0	99.7	70	130				
1,2-Dibromoethane (EDB)*	1.85	0.00304	2.000	0	92.5	70	130				
Chlorobenzene	2.21	0.0100	2.000	0	111	70	130				
Ethylbenzene	2.10	0.250	2.000	0	105	70	130				
m,p-Xylene	4.31	1.00	4.000	0	108	70	130				
o-Xylene	2.04	0.300	2.000	0	102	70	130				
Styrene	1.92	0.200	2.000	0	95.9	70	130				
Bromoform	2.17	0.0125	2.000	0	109	70	130				
1,1,2,2-Tetrachloroethane	2.33	0.0150	2.000	0	116	70	130				
1,3,5-Trimethylbenzene	1.78	0.600	2.000	0	89.1	70	130				
1,2,4-Trimethylbenzene	1.30	1.00	2.000	0	65.2	70	130				S
Benzyl chloride	1.41	0.125	2.000	0	70.6	70	130				
4-Ethyltoluene	1.93	0.125	2.000	0	96.4	70	130				
1,3-Dichlorobenzene	1.58	0.0250	2.000	0	78.8	70	130				
1,4-Dichlorobenzene	1.62	0.0250	2.000	0	81.0	70	130				
1,2-Dichlorobenzene	1.48	0.0250	2.000	0	73.8	70	130				
1,2,4-Trichlorobenzene	1.18	0.225	2.000	0	59.0	70	130				S
Hexachlorobutadiene	1.60	0.100	2.000	0	80.1	70	130				
Naphthalene	1.64	0.0600	2.000	0	82.1	70	130				
2-Hexanone	2.02	0.500	2.000	0	101	70	130				
4-Methyl-2-pentanone (MIBK)	2.03	0.400	2.000	0	101	70	130				
CFC-113	3.66	0.0150	2.000	0	183	70	130				S
Heptane	2.36	0.200	2.000	0	118	70	130				
Surr: 4-Bromofluorobenzene	4.03		4.000		101	70	130				

Work Order: 2212398
CLIENT: Libby Environmental
Project: Franciscan Seattle- Huling

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method TO-15

Sample ID: **LCS-R80788** SampType: **LCS** Units: **ppbv** Prep Date: **12/28/2022** RunNo: **80788**
Client ID: **LCSW** Batch ID: **R80788** Analysis Date: **12/28/2022** SeqNo: **1671151**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

NOTES:
S - Outlying spike recovery observed (high bias) for Dichlorodifluoromethane, Dichlorotetrafluoroethane, 1,3-Butadiene, Carbon disulfide, and 1,1,2-Trichloro-1,2,2-trifluoroethane. Detections will be qualified with a *.
S - Outlying spike recovery observed (low bias) for 1,2,4-Trimethylbenzene and 1,2,4-Trichlorobenzene. Samples will be qualified with a *.

Sample ID: **MB-R80788** SampType: **MBLK** Units: **ppbv** Prep Date: **12/28/2022** RunNo: **80788**
Client ID: **MBLKW** Batch ID: **R80788** Analysis Date: **12/28/2022** SeqNo: **1671152**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Propylene	ND	0.400									
Dichlorodifluoromethane (CFC-12)	ND	0.0100									
Chloromethane	ND	0.0250									
Dichlorotetrafluoroethane (CFC-114)	ND	0.0100									
Vinyl chloride	ND	0.0200									
1,3-Butadiene	ND	0.100									
Bromomethane	ND	0.0150									
Trichlorofluoromethane (CFC-11)	ND	0.0125									
Chloroethane	ND	0.150									
Acrolein*	ND	0.00917									
1,1-Dichloroethene (DCE)	ND	0.0200									
Acetone	ND	0.500									
Isopropyl Alcohol	ND	3.12									
Methylene chloride	ND	1.00									
Carbon disulfide	ND	0.300									
trans-1,2-Dichloroethene	ND	0.0300									
Methyl tert-butyl ether (MTBE)	ND	0.0750									
n-Hexane	ND	0.600									
1,1-Dichloroethane	ND	0.0150									
Vinyl acetate	ND	0.350									
cis-1,2-Dichloroethene	ND	0.0300									
(MEK) 2-Butanone	ND	0.300									
Ethyl acetate	ND	0.400									
Chloroform	ND	0.0150									

Work Order: 2212398
CLIENT: Libby Environmental
Project: Franciscan Seattle- Huling

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method TO-15

Sample ID: **MB-R80788** SampType: **MBLK** Units: **ppbv** Prep Date: **12/28/2022** RunNo: **80788**
Client ID: **MBLKW** Batch ID: **R80788** Analysis Date: **12/28/2022** SeqNo: **1671152**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Tetrahydrofuran	ND	0.125									
1,1,1-Trichloroethane	ND	0.0200									
Carbon tetrachloride	ND	0.0150									
1,2-Dichloroethane	ND	0.0125									
Benzene	ND	0.0400									
Cyclohexane	ND	0.0600									
Trichloroethene (TCE)	ND	0.0125									
1,2-Dichloropropane	ND	0.0250									
Methyl methacrylate	ND	0.100									
Dichlorobromomethane	ND	0.0200									
1,4-Dioxane	ND	0.100									
cis-1,3-dichloropropene	ND	0.0600									
Toluene	ND	0.125									
trans-1,3-dichloropropene	ND	0.100									
1,1,2-Trichloroethane (TCA)	ND	0.0100									
Tetrachloroethene (PCE)	ND	0.500									
Dibromochloromethane	ND	0.0150									
1,2-Dibromoethane (EDB)*	ND	0.00304									
Chlorobenzene	ND	0.0100									
Ethylbenzene	ND	0.250									
m,p-Xylene	ND	1.00									
o-Xylene	ND	0.300									
Styrene	ND	0.200									
Bromoform	ND	0.0125									
1,1,2,2-Tetrachloroethane	ND	0.0150									
1,3,5-Trimethylbenzene	ND	0.600									
1,2,4-Trimethylbenzene	ND	1.00									*
Benzyl chloride	ND	0.125									
4-Ethyltoluene	ND	0.125									
1,3-Dichlorobenzene	ND	0.0250									
1,4-Dichlorobenzene	ND	0.0250									
1,2-Dichlorobenzene	ND	0.0250									

Work Order: 2212398
CLIENT: Libby Environmental
Project: Franciscan Seattle- Huling

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method TO-15

Sample ID: **MB-R80788** SampType: **MBLK** Units: **ppbv** Prep Date: **12/28/2022** RunNo: **80788**
Client ID: **MBLKW** Batch ID: **R80788** Analysis Date: **12/28/2022** SeqNo: **1671152**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,4-Trichlorobenzene	ND	0.225									*
Hexachlorobutadiene	ND	0.100									
Naphthalene	0.112	0.0600									
2-Hexanone	ND	0.500									
4-Methyl-2-pentanone (MIBK)	ND	0.400									
CFC-113	ND	0.0150									
Heptane	ND	0.200									
Surr: 4-Bromofluorobenzene	1.59		4.000		39.8	70	130				S

NOTES:
* - Associated LCS does not meet acceptance criteria; refer to QC summary.
S - Outlying surrogate recovery(ies) observed.

Sample ID: **2212370-001AREP** SampType: **REP** Units: **ppbv** Prep Date: **12/28/2022** RunNo: **80788**
Client ID: **BATCH** Batch ID: **R80788** Analysis Date: **12/28/2022** SeqNo: **1671154**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Propylene	317	1.60						286.4	10.2	25	E
Dichlorodifluoromethane (CFC-12)	0.279	0.0400						0.2809	0.844	25	*
Chloromethane	ND	0.100						0		25	
Dichlorotetrafluoroethane (CFC-114)	ND	0.0400						0		25	
Vinyl chloride	ND	0.0800						0		25	
1,3-Butadiene	ND	0.400						0		25	
Bromomethane	ND	0.0600						0		25	
Trichlorofluoromethane (CFC-11)	0.498	0.0500						0.4844	2.78	25	
Chloroethane	ND	0.600						0		25	
Acrolein*	ND	0.0367						0		25	
1,1-Dichloroethene (DCE)	ND	0.0800						0		25	
Acetone	46.8	2.00						52.23	10.9	25	
Isopropyl Alcohol	42.2	12.5						30.25	33.0	25	
Methylene chloride	ND	4.00						0		25	
Carbon disulfide	4.94	1.20						4.943	0.000809	25	*
trans-1,2-Dichloroethene	ND	0.120						0		25	

Work Order: 2212398
CLIENT: Libby Environmental
Project: Franciscan Seattle- Huling

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method TO-15

Sample ID: **2212370-001AREP** SampType: **REP** Units: **ppbv** Prep Date: **12/28/2022** RunNo: **80788**
Client ID: **BATCH** Batch ID: **R80788** Analysis Date: **12/28/2022** SeqNo: **1671154**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	0.300						0		25	
n-Hexane	7.88	2.40						6.210	23.7	25	
1,1-Dichloroethane	ND	0.0600						0		25	
Vinyl acetate	ND	1.40						0		25	
cis-1,2-Dichloroethene	ND	0.120						0		25	
(MEK) 2-Butanone	13.1	1.20						10.79	19.2	25	
Ethyl acetate	ND	1.60						0		25	
Chloroform	0.996	0.0600						0.9158	8.37	25	
Tetrahydrofuran	1.50	0.500						1.418	5.39	25	
1,1,1-Trichloroethane	ND	0.0800						0		25	
Carbon tetrachloride	0.0621	0.0600						0.06060	2.41	25	
1,2-Dichloroethane	ND	0.0500						0		25	
Benzene	2.63	0.160						2.610	0.736	25	
Cyclohexane	2.61	0.240						2.332	11.4	25	
Trichloroethene (TCE)	ND	0.0500						0		25	
1,2-Dichloropropane	ND	0.100						0		25	
Methyl methacrylate	ND	0.400						0		25	
Dichlorobromomethane	ND	0.0800						0		25	
1,4-Dioxane	ND	0.400						0		25	
cis-1,3-dichloropropene	ND	0.240						0		25	
Toluene	9.07	0.500						7.886	14.0	25	
trans-1,3-dichloropropene	ND	0.400						0		25	
1,1,2-Trichloroethane (TCA)	ND	0.0400						0		25	
Tetrachloroethene (PCE)	ND	2.00						0		25	
Dibromochloromethane	ND	0.0600						0		25	
1,2-Dibromoethane (EDB)*	0.0248	0.0122						0.02392	3.45	25	
Chlorobenzene	ND	0.0400						0		25	
Ethylbenzene	ND	1.00						0		25	
m,p-Xylene	ND	4.00						0		25	
o-Xylene	ND	1.20						0		25	
Styrene	ND	0.800						0		25	
Bromoform	ND	0.0500						0		25	

Work Order: 2212398
CLIENT: Libby Environmental
Project: Franciscan Seattle- Huling

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method TO-15

Sample ID: **2212370-001AREP** SampType: **REP** Units: **ppbv** Prep Date: **12/28/2022** RunNo: **80788**
Client ID: **BATCH** Batch ID: **R80788** Analysis Date: **12/28/2022** SeqNo: **1671154**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,2,2-Tetrachloroethane	ND	0.0600						0		25	
1,3,5-Trimethylbenzene	ND	2.40						0		25	
1,2,4-Trimethylbenzene	ND	4.00						0		25	*
Benzyl chloride	ND	0.500						0		25	
4-Ethyltoluene	ND	0.500						0		25	
1,3-Dichlorobenzene	ND	0.100						0.1064	9.45	25	
1,4-Dichlorobenzene	ND	0.100						0		25	
1,2-Dichlorobenzene	ND	0.100						0		25	
1,2,4-Trichlorobenzene	ND	0.900						0		25	*
Hexachlorobutadiene	ND	0.400						0		25	
Naphthalene	0.396	0.240						0.4029	1.67	25	
2-Hexanone	ND	2.00						0		25	
4-Methyl-2-pentanone (MIBK)	ND	1.60						0		25	
CFC-113	ND	0.0600						0		25	
Heptane	3.17	0.800						2.957	6.88	25	
Surr: 4-Bromofluorobenzene	11.9		16.00		74.4	70	130		0		

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

Sample Log-In Check List

Client Name:	LIBBY	Work Order Number:	2212398
Logged by:	Clare Griggs	Date Received:	12/19/2022 1:57:00 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 ☐
		Air Samples				
4.	Shipping container/cooler in good condition?	Yes	☑	No	☐	
5.	Custody Seals present on shipping container/cooler? (Refer to comments for Custody Seals not intact)	Yes	☐	No	☐	Not Present ☑
6.	Was an attempt made to cool the samples?	Yes	☐	No	☐	NA ☑
7.	Were all items received at a temperature of >2°C to 6°C *	Yes	☐	No	☐	NA ☑
8.	Sample(s) in proper container(s)?	Yes	☑	No	☐	
9.	Sufficient sample volume for indicated test(s)?	Yes	☑	No	☐	
10.	Are samples properly preserved?	Yes	☑	No	☐	
11.	Was preservative added to bottles?	Yes	☐	No	☑	NA ☐
12.	Is there headspace in the VOA vials?	Yes	☐	No	☐	NA ☑
13.	Did all samples containers arrive in good condition(unbroken)?	Yes	☑	No	☐	
14.	Does paperwork match bottle labels?	Yes	☑	No	☐	
15.	Are matrices correctly identified on Chain of Custody?	Yes	☑	No	☐	
16.	Is it clear what analyses were requested?	Yes	☑	No	☐	
17.	Were all holding times able to be met?	Yes	☑	No	☐	

Special Handling (if applicable)

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

Person Notified: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

19. Additional remarks:

Item Information

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

Air Chain of Custody Record & Laboratory Services Agreement

Fremont Analytical
3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Date: 12/14/22 Page: 1 of: 1

Laboratory Project No (Internal): 2212398

Project Name: Franciscan Seattle - Huling

Special Remarks:

Project No: 22-148

Location: 4550 Fauntleroy Way SW, Seattle

Client: Libby

Collected by: Paul Ditch

Address:

City, State, Zip:

Reports to (PM): Emily Bushlen

Air samples are disposed of one week after report is submitted to client unless otherwise requested. ☒ OK to Dispose ☐ Hold (fees may apply)

Telephone:

Email (PM): SROSE@AEGWA.COM

Fax:

	Sample Name	Canister / Flow Reg Serial #	Sample Type (Matrix) *	Container Type **	Expected Fill Time / Flow Rate	Sample Start Date & Time	Field Initial Sample Pressure (" Hg)	Sample End Date & Time	Field Final Sample Pressure (" Hg)	Analysis: Full list VOCs TO15	Select VOCs TO15 ***	APH TO15	Siloxanes TO15	Sulfur TO15	Major Gases 3C	Helium 3C Mod	VOCs 8260	GX/BTEX 8260	Comments	Internal: Final Pressure ("Hg)
1	SS-4	5666 Canister / FC-3 Flow Reg	S	BV		12/14/22 Date / 1856 Time	-28 Pressure	12/14/22 Date / 1902 Time	-4 Pressure		X								Low level Naphthalene	-4
2	SS-2	5642 Canister / FC-15 Flow Reg		BV		12/14/22 Date / 1819 Time	-26 Pressure	12/14/22 Date / 1825 Time	-4 Pressure											-6
3	SS-5	5640 Canister / FC-6 Flow Reg		BV		12/14/22 Date / 1806 Time	-26 Pressure	12/14/22 Date / 1811 Time	-4 Pressure											-6
4	SS-1	5637 Canister / FC-10 Flow Reg		BV		12/14/22 Date / 1911 Time	-28 Pressure	12/14/22 Date / 1918 Time	-4 Pressure											-4
5	SS-3	5636 Canister / FC-28 Flow Reg		BV		12/14/22 Date / 1837 Time	-28 Pressure	12/14/22 Date / 1843 Time	-4 Pressure											-6

* Matrix Codes: AA = Ambient Air OA = Outdoor Air IA = Indoor Air S = Subslab / Soil Gas SVE = SVE L = Landfill D = Digester

** Container Codes: BV = 1 Liter Bottle Vac 6L = 6L Canister 1L = 1L Canister CYL = High Pressure Cylinder F = Filter S = Sorbent Tube TB = Tedlar Bag

*** Select one: ☒ BTEXN & APH ☐ PCE & Breakdown ☐ Other, specify in comments

Turn-Around Time: ☒ Standard ☐ Next Day ☐ 3 Day ☐ Same Day ☐ 2 Day ____ specify

I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above, that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Relinquished (Signature)	Print Name	Date/Time	Received (Signature)	Print Name	Date/Time
x Paul Ditch	Paul Ditch	12/14/22 (1955)	x Clare O'Connor	Clare O'Connor	12/19/22 13:57
Relinquished (Signature)	Print Name	Date/Time	Received (Signature)	Print Name	Date/Time
x			x		

Air Chain of Custody Record & Laboratory Services Agreement

Fremont Analytical
3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Date: 12/14/22 Page: 1 of: 1

Laboratory Project No (Internal): 2212398

Project Name: Franciscan Seattle - Huling

Special Remarks:

Project No: 22-148

Add full list VOCs to all samples per S.C. 1/3/2023, STD TAT -BB

Location: 4550 Fauntleroy Way SW, Seattle

Client: Libby

Collected by: Paul Ditch

Address:

City, State, Zip:

Reports to (PM): Emily Bushlen

Air samples are disposed of one week after report is submitted to client unless otherwise requested. ☒ OK to Dispose ☐ Hold (fees may apply)

Telephone:

Email (PM): SROSE@AEGWA.COM

Fax:

	Sample Name	Canister / Flow Reg Serial #	Sample Type (Matrix) *	Container Type **	Expected Fill Time / Flow Rate	Sample Start Date & Time	Field Initial Sample Pressure (" Hg)	Sample End Date & Time	Field Final Sample Pressure (" Hg)	Analysis: Full list VOCs TO15	Select VOCs TO15 ***	APH TO15	Siloxanes TO15	Sulfur TO15	Major Gases 3C	Helium 3C Mod	VOCs 8260	GX/BTEX 8260	Comments	Internal: Final Pressure ("Hg)
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2	SS-2	5642 Canister / FC-15 Flow Reg		BV		12/14/22 Date / 1819 Time	-26 Pressure	12/14/22 Date / 1825 Time	-4 Pressure											-6
3	SS-5	5640 Canister / FC-6 Flow Reg		BV		12/14/22 Date / 1806 Time	-26 Pressure	12/14/22 Date / 1811 Time	-4 Pressure											-6
4	SS-1	5637 Canister / FC-10 Flow Reg		BV		12/14/22 Date / 1911 Time	-28 Pressure	12/14/22 Date / 1918 Time	-4 Pressure											-4
5	SS-3	5636 Canister / FC-28 Flow Reg		BV		12/14/22 Date / 1837 Time	-28 Pressure	12/14/22 Date / 1843 Time	-4 Pressure											-6

* Matrix Codes: AA = Ambient Air OA = Outdoor Air IA = Indoor Air S = Subslab / Soil Gas SVE = SVE L = Landfill D = Digester

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*** Select one: ☒ BTEXN & APH ☐ PCE & Breakdown ☐ Other, specify in comments

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Turn-Around Time:
☒ Standard ☐ Next Day ☐ 3 Day ☐ Same Day ☐ 2 Day ☐ specify

Relinquished (Signature)	Print Name	Date/Time	Received (Signature)	Print Name	Date/Time
x Paul Ditch	Paul Ditch	12/14/22 (1955)	x Clare O'Connor	Clare O'Connor	12/19/22 13:57
Relinquished (Signature)	Print Name	Date/Time	Received (Signature)	Print Name	Date/Time
x			x		