

Remedial Investigation Report

Conducted on:

Franciscan Medical Clinic
4550 Fauntleroy Way SW
Seattle, Washington 98126

Prepared for:

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AEG Atlas Project #: 22-148
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1.0 INTRODUCTION

This report presents the findings of a Remedial Investigation (RI) conducted by AEG Atlas, LLC (AEG) for the Franciscan Medical Clinic, located at 4550 Fautleroy Way SW in Seattle, King County, Washington (Site). The purpose of this report is to document the completion of the RI and provide a summary of the work performed. Based on the work and the results, we are requesting a no further action (NFA) determination for the Site.

The scope of work for this investigation was developed based on our professional judgment and experience in accordance with requirements in the Washington State Department of Ecology (Ecology) Model Toxics Control Act (MTCA) Cleanup Regulations (Chapter 173-340 Washington Administrative Code [WAC]).

1.1 General Site Information

Site Name: Franciscan Medical Clinic

Site Address: 4550 Fautleroy Way SW, Seattle, Washington 98126

Facility/Site ID No.: 97678

King County Parcel No.: 09520-07545

Property Owner: Huling Brothers Properties, LLC

1.2 Site Description & History

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 Fautleroy 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. Access to the Site is either from Fautleroy Way SW, Southwest Alaska Street, or 38th Avenue SW. The Site currently maintains a medical office building operated by CHI Franciscan. The building includes basement offices and exam rooms, with associated asphalt-paved parking and landscaping.

The immediate surrounding properties include Fautleroy 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 Site is illustrated in Figure 1, *Site Vicinity Map*, and the Site layout is illustrated in Figure 2, *Site Map*.

MTCA defines a Site as “...any area where a hazardous substance has been deposited, stored, disposed of, or placed, or otherwise come to be located.” (WAC 173-340-200). The results of the RI have not documented any releases on or from the Site.

The Shell station located adjacent to the west and upgradient of the Site is an active MTCA cleanup site (West Seattle ARCO, Facility/Site ID [FSID] No. 99437681, Cleanup Site ID [CSID] 11357). 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 that time. 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.

1.3 Site Population

In accordance with Ecology's Implementation Memorandum No. 25 (Ecology publication 24-09-044), the demographics of the population potentially threatened by Site contaminants were assessed for the inclusion of likely vulnerable populations or overburdened communities (WAC 173-340-310[1][c]). Site-specific demographic data for the potentially threatened population was not provided to AEG, so the Site demographics were assessed based on the census tract it is located within (#53033010501).

The Washington State Department of Health (WA DOH) Environmental Health Disparities (EHD) Map, which ranks census tracts on a scale from 1 (low) to 10 (high), indicates the census tract containing the Site has a rank of 5.

A Community Report was generated for the census tract from the U.S. Environmental Protection Agency's (EPA's) EJScreen tool. The Demographic Index for the census tract containing the Site is 1, which is less than 80th percentile in the state of Washington. The Supplemental Demographic Index is 0.92, which is less than 80th percentile in the state of Washington.

Based on the EHD Map and EJScreen Community Report, the population potentially threatened by contamination on this Site includes likely vulnerable populations or overburdened communities. The WA DOH EHD Map and EPA EJScreen Community Report are included in Appendix B.

1.4 *Climate*

Current and projected local and regional climatological characteristics were assessed based on Ecology's *Sustainable Remediation* guidance (Ecology publication No. 17-09-052). The following sources were reviewed: the 2022 Washington State Climate Summary from the National Oceanic and Atmospheric Administration (NOAA) National Centers for Environmental Information (NCEI), climate projections presented on the WA DOH EHD Map, and Federal Emergency Management Agency (FEMA) flood maps.

1.4.1 **Regional Concerns**

The NOAA NCEI 2022 Washington State Climate Summary indicates that average near-surface air temperatures in Washington have increased by approximately 2 degrees Fahrenheit (°F) since the beginning of the 20th century and are projected to continue increasing through the year 2100, resulting in fewer freezing days (maximum daily temperature less than 32°F) and additional hot days (maximum daily temperature greater than 90°F) over time. The projected change in total annual precipitation is uncertain, but seasonal patterns are projected to change resulting in decreasing precipitation during summer and increasing precipitation during winter. Winter snowpack volumes are projected to decrease as precipitation is projected to increasingly fall as rain instead of snow across the state due to increasing average temperatures. These changes in precipitation patterns would decrease water availability during summer and increase the risk of spring flooding. Heavy rainfall events (greater than 1 inch of precipitation in Eastern Washington; greater than 2 inches of precipitation in Western Washington) are projected to occur with increased frequency, which would increase flood risk relative to historical patterns. Since 1900, global mean sea level has risen by approximately 7-8 inches and is likely to increase an additional 1-4 feet by 2100. Rising sea levels will increase the frequency of tidal floods and seawater incursion on coastal sites.

1.4.2 **Site Concerns**

The WA EHD map presents statistics reflecting the projected changes in average temperature and average precipitation for the 30-year period centered around 2050 (2036 to 2065) relative to a historical baseline period (1976 to 2005). Data is presented for each census tract and ranked from 1 (low) to 10 (high) among census tracts in Washington. Projected changes in annual cooling degree days, annual heating degree days, annual days over 99th percentile historical temperature, and annual precipitation are summarized in Appendix B, *Supporting Documents, Table C1 – Summary of Projected Climate*. Relative to the rest of Washington, the Site is projected to experience moderate increase in cool weather, a moderate increase in hot weather, and moderate change in annual precipitation.

The FEMA Flood Insurance Rate Map (FIRM) depicts areas impacted by flooding at least once every 100 years (1% annual chance flood) according to historical data and modeling. The map shows that the Site is in an area of minimal flood hazard. Projected changes in seasonal precipitation patterns may increase the annual chance of flood. A “FIRMette” for the Site is included in Appendix C, *Supporting Documents*.

2.0 FIELD INVESTIGATIONS

2.1 *Site Characterization History*

This section includes summaries of environmental activities completed prior to and during the involvement of AEG at the Site. Analytical data provided in historical reports as compared to applicable MTCA Method A or B cleanup levels are presented in Table 1, *Summary of Soil Analytical Results*, Table 2, *Summary of Groundwater Analytical Results*, Table 3, *Summary of Sub-Slab Depressurization System Analytical Results*, Table 4, *Summary of Sub-Slab Vapor Analytical Results*, Table 5, *Summary of Indoor Air Analytical Results*, Table 6, *Summary of NOW Indoor Air Analytical Results*, and Table 7, *Summary of Soil Gas and Temporary Sub-Slab Vapor Analytical Results*. Sample locations are illustrated on Figure 2, *Site Map*, and Figure 3, *Vapor Sample Locations*. Laboratory reports and boring logs, when provided with historical reports, are included in Appendix B, *Supporting Documents*.

2.1.1 **Limited Indoor Air Quality Assessment – NOW, May 2018**

In response to complaints from staff of the presence of petroleum odors in the building, NOW Environmental Services (NOW) collected two rounds of indoor air samples on May 3 and May 23, 2018, from the basement areas of the medical office.

Analytical results indicated the presence of gasoline-range organics (GRO) at concentrations exceeding their respective MTCA Method B indoor air screening levels for commercial workers. The presence of GRO was an anomaly that required further investigation. Being that the Site is directly adjacent to the registered cleanup West Seattle ARCO (CSID 11357) cleanup site, NOW suspected the presence of GRO was due to vapor intrusion from impacted soil associated with the West Seattle ARCO site.

Between the initial and follow-up vapor assessments, the HVAC system was set to operate 24 hours per day to increase the positive pressure within the building and mitigate the constituents of concern (COCs) detected in the initial vapor assessment.

2.1.2 **Vapor Intrusion Assessment – AEG, July 2018**

To confirm the source of COCs detected in the limited indoor air quality assessment, AEG advanced five soil gas borings (SGV-1 through SGV-5) to approximately 13 feet below ground surface (bgs), and eight temporary sub-slab vapor points (SS1 through SS8) within the basement of the clinic. The soil gas borings were advanced to 13 feet bgs as that is the estimated depth of the basement slab. All sampling locations were located west of the clinic, and within the west side of the basement near the adjacent West Seattle ARCO site.

Analytical results indicated the presence of air-phase hydrocarbons (APH) and selected volatile organic compounds (VOCs) at concentrations exceeding their respective MTCA Method B sub-slab screening levels for commercial workers. These COCs are consistent with those confirmed at the adjacent West Seattle ARCO site. AEG recommended installing a Soil Vapor Extraction (SVE) system with a manifolded vapor point depressurization system within the western access road to intercept the vapors prior to reaching the building basement wall or sub-slab areas that were found to be impacted by vapors.

2.1.3 Follow-Up Limited Indoor Air Quality Assessment – NOW, September 2018

On September 7 and 24, 2018, NOW performed additional air quality assessments by collecting indoor air samples. Analytical results indicated the presence of GRO and selected VOCs at concentrations below their respective MTCA Method B indoor air screening levels for commercial workers. NOW concluded that the installation of an SVE depressurization system would be an appropriate course of action to mitigate the potential for vapor intrusion.

2.1.4 Vapor Mitigation System Installation – AEG, November 2018

AEG installed a sub-slab depressurization (SSD) system, which provides a pressure differential using vertical vapor collection points (SSD points). Three 4-inch borings were installed in the approximately 6-inch-thick concrete slab of the Site basement. A further 10- to 12-inch sump was hand excavated to install 2-inch slotted PVC extraction pipe in each boring. The annular space around the extraction pipe was then backfilled with clean pea gravel and sealed at the floor surface with concrete. The three borings serve as SSD points and were connected to PVC conveyance piping manifolded to a single location through the western wall of the building. The single location was equipped with an in-line weatherproof radial blower to create a pressure differential and emit exhaust approximately 3 feet above the roof surface. The exhaust stack was located a sufficient distance from all windows, doors, and heating and ventilation systems to prevent a reintroduction of extracted vapors. A schematic of the SSD points is illustrated in Figure 7, *SSD System Detail*.

An initial round of vapor samples was collected from each SSD point approximately 45 minutes after the SSD system began operation. Analytical results of the vapor samples collected from the SSD points did not indicate the presence of GRO or associated VOC constituents at any of the three locations.

In addition to installing the SSD system, AEG conducted a ground-penetrating radar (GPR) survey of the Site parking lot. The GPR survey was conducted to determine if undocumented underground storage tanks (USTs) were present as a potential source of GRO. The completed survey found no evidence of USTs or other anomalies in the parking lot.

2.1.5 Follow-Up Limited Indoor Air Quality Assessment – NOW, January 2019

On January 17 and 18, 2019, NOW performed a follow up air quality assessment. Analytical results indicated the presence of GRO and selected VOCs at concentrations below their respective MTCA Method B indoor air screening levels for commercial workers. However, concentrations were similar to the round collected prior to SSD installation. NOW concluded that, based on the results, the SSD system was not performing at its optimal capacity. AEG mobilized to the Site to install a new fan in the SSD system and install a telemetry unit to remotely monitor the system operation.

2.1.6 SSD Performance Sampling – AEG, April 2019

AEG mobilized to the Site on April 4, 2019, to collect sub-slab vapor samples from the three SSD points using 1-liter Summa canisters equipped with 10-minute regulators. The analytical results of the performance sampling indicated that the SSD system was reducing the accumulation of vapors beneath the sub-slab and reducing the potential for worker exposure to the vapors in the basement.

2.1.7 Follow-Up Limited Indoor Air Quality Assessment – NOW, April 2019

On April 4 and 5, 2019, NOW performed a follow up air quality assessment to evaluate the performance of the SSD system following modification. Analytical results indicated concentrations of GRO and VOC were generally lower than the previous assessment. NOW concluded the SSD system was properly functioning.

2.1.8 Phase I Environmental Site Assessment (ESA) – AEG, August 2022

AEG completed a Phase I ESA for the Site in August 2022 to identify potential sources on or beneath the Site associated with the COCs detected in sub-slab vapor and indoor air. 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-adjointing 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.

2.1.9 Phase II ESA and Sub-Slab Vapor Sampling – AEG, October and December 2022

To investigate potential impacts to soil and groundwater associated with the allegation of historical use of the Site as an auto body shop, AEG mobilized to the Site to advance six soil borings (SB-1 through SB-6) up to 30 feet bgs and collected soil and groundwater samples from the borings. In addition to the soil borings, five permanent sub-slab vapor pins (SS-1 through SS-5) were installed throughout the basement to collect sub-slab vapor samples. Analytical results of the soil samples were non-detect for all constituents analyzed.

Analytical results for the groundwater samples indicated the presence of gasoline-, and diesel-range petroleum hydrocarbons (TPH) at concentrations exceeding MTCA Method A cleanup levels in two of the five groundwater samples collected. The groundwater samples with exceedances were collected from the alley between the Site and the west adjacent listed West Seattle ARCO site. COCs detected the samples were consistent with those confirmed in groundwater at the Shell Site.

In October 2022, AEG conducted the first of two sub-slab vapor sampling events in 2022. During the first event, samples were collected while the SSD system was activated. AEG returned to the Site in December 2022, after the SSD system had been deactivated, to collect conduct the second sub-slab vapor sampling even. Analytical results for COCs analyzed during both events were either non-detect or detected below MTCA Method B screening levels for commercial workers.

2.1.10 Data Gap Investigation – AEG, January - February 2024

AEG mobilized to the Site in February 2024 to assess impacts in areas previously inaccessible and to conduct an SSD performance sampling event. AEG advanced two soil borings (SB-7 and SB-8) up to 35 feet bgs, to collect soil and groundwater samples. SB-7 was advanced east of the Site on 38th Ave SW, and SB-8 was advanced south of the Site in the driveway to the above basement parking lot. Analytical results of the soil and groundwater samples were non-detect for COCs analyzed.

Following the soil borings, AEG collected soil vapor samples from the three independent SSD points. Analytical results of these samples indicated that chloroform was detected in sample SSD-E3 in concentrations exceeding MTCA Method B screening levels for commercial workers. All other COCs analyzed were either non-detect or detected below screening levels. The SSD system was deactivated following this event to allow the subsurface vacuum pressure to return to natural conditions.

On February 17, 2024, AEG returned to the Site to collect sub-slab vapor samples from vapor pins SS-1 through SS-5, while the SSD system was deactivated. Two indoor air and one ambient air samples were collected during the sub-slab vapor sampling event. Analytical results of the sub-slab vapor samples were either non-detect or below MTCA Method B screening levels for commercial workers, with the exception of chloroform. Analytical results of the indoor air samples indicated the presence of chloroform and isopropylbenzene at concentrations exceeding their respective MTCA Method B screening levels for commercial workers; however, all other COCs were either non-detect or detected below MTCA Method B screening levels.

2.2 Field Methodology

2.2.1 Soil Sampling Procedures

Soil sampling methods for this work followed the protocols established by Ecology and EPA. To minimize 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 steel split barrel sampler inside the auger tooling core barrel. Soils were observed to document soil lithology, color, moisture content, and sensory evidence of contamination. A photoionization detector (PID) was used to evaluate locations of possible contamination in the cores.

Samples were transported via laboratory-provided pre-weighed 20-milliliter (ml) volatile organic analysis (VOA) glass vials and pre-weighted 4-ounce glass jars for analysis under chain-of-custody protocols to a Washington State accredited analytical laboratory for analyses.

2.2.2 Boring Groundwater Sampling Procedures

AEG sampled the groundwater from borings where groundwater was present. For one-time borings, a temporary well screen was installed to collect a groundwater sample. The temporary well screen was placed at the interval below the vadose zone where groundwater was encountered during drilling activities. Dedicated polyethylene tubing was inserted into the retractable screen and groundwater purged via the EPA-approved low-flow purge technique. A peristaltic pump was used to purge the well until the discharge was relatively free of sediment.

Groundwater monitoring wells were sampled via the low flow-purging technique, and purged until the field parameters, including pH, temperature, specific conductivity, dissolved oxygen, and/or total dissolved solids were stabilized, and the water was relatively free of sediment.

Groundwater samples were collected in laboratory-provided bottles. Upon collection, the samples were placed in a chilled cooler for transport to the analytical laboratory.

2.2.3 Soil Gas and Sub-Slab Vapor Sampling Procedures

For soil gas samples, a direct-push post-run tubing (PRT) expendable tip was mounted on the specialized rod and probed directly to the desired depth. Once the rod was pushed to the desired depth, the rod was slightly retracted to expose the base of the PRT rod to soil gas vapors. An O-ring PRT coupler was then threaded with nylon tubing to the specialized tip to control interference with ambient and atmospheric gasses. An air-tight seal was created between the upper end of the casing and the nylon tube at the surface using hydrated bentonite and checked for leaks using a water dam technique. Upon confirming the seal was adequate, a minimum of one volume of tubing air was purged from the sample tubing and samples were collected in a 1-liter passivated stainless-steel canisters equipped with 10-minute regulators.

For temporary sub-slab vapor samples, 3/8-inch diameter borings were drilled into the concrete slab using a rotary hammer drill. The borings were drilled into the subsurface material beneath the building slab where soil gas vapors accumulate. Upon clearing the boring, a stainless-steel sample port was inserted into the boring and sealed with either bentonite (for temporary points) or concrete (for permanent points). The bentonite or concrete seals were checked using a water dam technique before purging at least three volumes of the sample tubing. Samples were collected in evacuated 1-liter passivated stainless-steel canisters or evacuated 1-liter passivated glass amber bottles equipped with 10-minute regulators.

For permanently installed vapor pins, tubing was connected to the pins before purging at least three volumes of the sample tubing. Samples were collected in evacuated 1-liter passivated stainless-steel canisters or evacuated 1-liter passivated glass amber bottles equipped with 10-minute regulators.

2.2.4 Indoor Air Sampling Procedures

Indoor and ambient air samples were collected in accordance with Ecology's *Guidance for Evaluating Soil Vapor Intrusion in Washington State*. Samples were collected in evacuated 6-liter passivated stainless-steel canisters equipped with 8- and 24-hour regulators. Indoor air samples were collected from breathing height at about 4 to 6 feet above ground surface. Ambient air samples were collected upwind of source areas.

2.2.5 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 samples.

- Descriptions of soil sampling depths were carefully logged in the field; the driller and Site geologist confirmed sample depths as soil samples were collected.
- Nitrile gloves were used in handling all sampling containers and sampling devices.
- Soil samples were tightly packed into jars to eliminate sample headspace.
- Upon sampling, all samples were placed immediately into chilled ice chests.
- The samples were transported under a chain-of-custody to the analytical laboratory for analysis.

Analytical laboratories used for this investigation provided quality assurance/quality control (QA/QC), which included:

- Method blank results.
- Laboratory Control Samples, and Laboratory Control Duplicate Samples.
- Duplicate analyses.

2.2.6 Investigation-Derived Waste

Investigation-derived waste for this project consisted of soil cuttings and purge water from the subsurface exploration activities and decontamination water from decontamination of the drilling core barrel and associated equipment. These wastes were separated and placed in U.S. Department of Transportation (DOT)-approved 55-gallon drums. The drums were appropriately labelled and stored on Site for subsequent characterization and disposal.

2.3 Analytical Results

Samples collected to date on and beneath the Site have been analyzed for one or more of the following analyses:

- Gasoline-range TPH by Northwest Method NWTPH-Gx.
- Diesel-, and heavy-oil range TPH by Northwest Method NWTPH-Dx Extended.
- Benzene, Toluene, Ethylbenzene, and Xylenes (BTEX) by EPA Method 8260.
- Tetrachloroethylene (PCE) and daughter products by EPA Method 8260.
- VOCs by Method MA-APH and TO-15.

All soil and groundwater analytical results were compared to MTCA Method A cleanup levels for all land uses. Sub-slab vapor, soil gas, and indoor air samples are compared to MTCA Method B

screening levels for commercial workers. Copies of the laboratory analytical results are provided in Appendix B, Supporting Documents, *Laboratory Datasheets*.

2.3.1 Soil Results

Analytical results for all soil samples collected to date on or beneath the Site indicated the constituents analyzed were non-detect. Table 1, *Summary of Soil Analytical Results*, presents the soil results for all soil samples analyzed to date. Sample locations are illustrated on Figure 2, *Site Map*.

2.3.2 Groundwater Results

Analytical results of the groundwater samples collected to date indicated the presence of gasoline- and diesel-range TPH above MTCA Method A cleanup levels in boring SB-5. Diesel-range TPH was detected above MTCA Method A cleanup levels in boring SB-6. The analytical results of all other groundwater samples were either non-detect or below MTCA Method A cleanup levels. Analytical results of all groundwater samples collected from the Site are summarized in Table 2, *Summary of Groundwater Analytical Results*. Sample locations are illustrated on Figure 2, *Site Map*.

2.3.3 Soil Gas and Sub-Slab Results

Analytical results of the soil gas and sub-slab vapor samples collected to date indicated the presence of GRO and selected VOCs at concentrations exceeding their respective MTCA Method B sub-slab screening levels in select samples. Analytical results are presented in Table 3, *Summary of Sub-Slab Depressurization System Analytical Results*, Table 4, *Summary of Sub-Slab Vapor Analytical Results*, and Table 7, *Summary of Soil Gas and Temporary Sub-Slab Vapor Analytical Results*. Sample locations are illustrated on Figure 2, *Site Map*, and Figure 3, *Vapor Sample Locations*.

2.3.4 Indoor Air and Vapor Results

Analytical results of the indoor air samples initially collected by NOW indicated the presence of GRO at concentrations exceeding MTCA Method B screening levels for commercial workers; however, results from sampling events occurring after activation of the SSD system have indicated a decrease in concentrations of constituents previously detected in samples. Analytical results are presented in Table 5, *Summary of Indoor Air Analytical Results*, and Table 6, *Summary of NOW Indoor Air Analytical Results*. Air sampling locations are illustrated on Figure 3, *Vapor Sample Locations*.

3.0 CONCEPTUAL SITE MODEL

This section provides a conceptual understanding of the Site, derived from the results of the subsurface investigations and previous remedial actions performed at the Site. The Conceptual Site Model (CSM) is dynamic and may be refined if additional information becomes available.

3.1 *Constituents of Concern and Affected Media*

The Site operated as an automotive sales lot from the mid-1950s to 2009, and since then has maintained a medical office building operated by CHI Franciscan. No auto repair, auto body, or fueling activities are known to have been conducted at the Site. The building includes basement offices and exam rooms at approximately 13 feet below ground surface, with associated asphalt-paved parking and landscaping.

Adjacent to the west and upgradient of the Site is an active MTCA cleanup site (West Seattle ARCO [CSID 11357]). A release of gasoline was first discovered and reported at the West Seattle ARCO facility in 1992, and characterization and cleanup of the release has been ongoing since. Groundwater data collected from the adjacent West Seattle ARCO site has identified concentrations of TPH and related constituents above their respective MTCA cleanup levels, and groundwater generally flows towards the Site.

Investigative work conducted by AEG, including soil and groundwater sampling throughout the Site, concluded there is no indication of a release on or from the Site associated with its prior use as an automotive sales facility. Impacts present at the Site, as shown in groundwater samples collected from soil borings SB-5 and SB-6 located in the alley between the Site and the adjacent West Seattle ARCO facility, indicate impacts to the Site groundwater are consistent with the adjacent TPH plume.

COC impacts to air and vapor were initially found at concentrations exceeding MTCA Method B screening levels for commercial workers. However, the Site has been equipped with an SSD system, and analytical data collected since the activation of this system have either been non-detect or below MTCA Method B screening levels for commercial workers.

3.2 *Site Geology and Hydrogeology*

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 DNR Northwest Geologic Quadrant,

the Site and surrounding properties are underlain by Vashon till. These deposits consist of a dense mixture of silt, sand, gravel, and clay, which typically are characterized by relatively low vertical hydraulic conductivity.

Soils encountered by AEG during drilling indicated dense coarse sand and silt to the maximum depth explored of about 36.5 feet bgs. Groundwater was encountered in borings between 20 and 30 feet bgs.

3.3 Environmental Fate of TPH in the Subsurface

TPH compounds are soluble and migrate in groundwater. These compounds have a specific gravity that is less than water and can be measured in monitoring wells as Light Non-Aqueous Phase Liquid (LNAPL). LNAPL can also exist as a residual non-mobile phase that is either sorbed to the soil or trapped in the pore spaces between the soil particles. Unless treated, residual LNAPL can act as a long-term source for groundwater contamination.

To date, no LNAPL has been identified at the Site.

3.4 Potential Exposure Pathways

As defined in WAC 173-340-200, an exposure pathway describes the mechanism by which a hazardous substance takes or could take a pathway from a source or contaminated medium to an exposed receptor.

3.4.1 Potential Soil Exposure Pathways

- Contact (dermal contact, incidental ingestion) with hazardous substances in soil by visitors, residents, and workers (including excavation workers). Direct ingestion of, or dermal contact with, soil containing TPH is considered an incomplete exposure pathway. Soil data collected from areas of the Site investigated to date has indicated that all constituents analyzed are non-detect.
- Groundwater Leaching Pathway. The groundwater leaching pathway is considered incomplete at this Site. Soil data collected to date indicate impacts to soil are non-detect. As such, impacts are not available to leach into groundwater.

3.4.2 Potential Groundwater Exposure Pathways

- Contact (dermal, incidental ingestion) with hazardous substances dissolved in groundwater by visitors, residents, and workers (including excavation workers). Groundwater is considered an incomplete pathway for direct contact and ingestion because of the depth of its occurrence. With the exception of two groundwater samples collected from soil borings near the adjacent West Seattle ARCO site that contained concentrations of diesel- and

gasoline-range TPH in excess of MTCA cleanup levels, constituents analyzed in all other groundwater samples have been non-detect. As such, impacted groundwater is not available for potential direct contact or ingestion.

- Consumption of hazardous substances in groundwater. Currently, drinking water is provided by the City of Seattle. Groundwater beneath the Site is not utilized for domestic purposes. As such, consumption of hazardous substances in groundwater is not considered a completed pathway. Regardless, MTCA Method A cleanup levels have been used to evaluate the Site.

3.4.3 Potential Air Exposure Pathways

- Inhalation of hazardous substances in soil vapor by visitors, residents, and workers (including excavation workers). The air exposure pathway is considered partially complete at this Site. Prior soil gas and indoor air data collected from soil gas borings, indoor air samples, and sub-slab vapor samples have shown detections of COCs exceeding MTCA Method B screening levels for commercial workers. However, the building has been equipped with an SSD system. As of the date the SSD system began operating, analytical data for air samples have indicated concentrations of these constituents below their respective MTCA Method B screening levels for commercial workers.

3.4.4 Terrestrial Ecological Evaluation

Exclusion from further evaluation is appropriate for this Site for the following reasons:

- Undeveloped Land: WAC 173-340-7491(1)(c): There is less than 1.5 acres of contiguous undeveloped land on or within 500 feet of any area of the Site.

The Terrestrial Ecological Evaluation Form (TEE) is included in Appendix B.

4.0 CLEANUP STANDARDS

The following sections identify applicable or relevant and appropriate requirements (ARARs), remedial action objectives (RAOs), and preliminary cleanup standards for the Site, which were developed to address Ecology's requirements for cleanup. These requirements address conditions relative to potential identified impacts. Together, ARARs, RAOs, and cleanup standards provide the framework for evaluating remedial alternatives.

4.1 *Potentially Applicable Laws*

All cleanup actions conducted under MTCA shall comply with applicable state and federal laws [WAC 173-340-710(1)]. MTCA defines applicable state and federal laws to include legally applicable requirements and those requirements that are relevant and appropriate. Collectively, these requirements are referred to as ARARs. The primary ARAR is the MTCA regulation (WAC 173-340), especially with regard to the development of cleanup levels and procedures for development and implementation of a cleanup under MTCA. ARARs for the Site cleanup also include the following:

- Federal Safe Drinking Water Act Maximum Contaminant Levels (MCLs; 40 CFR Part 141).
- Washington Clean Air Act (Chapter 70.94 RCW).
- Puget Sound Clean Air Agency (PSCAA), Regulation I.
- Washington Solid and Hazardous Waste Management (RCW 70.105); Chapter 173-303 WAC; 40 CFR 241, 257; Chapter 173-350 and 173-351 WAC) and Land Disposal Restrictions (40 CFR 268; WAC 173-303-340).
- Washington Industrial Safety and Health Act (RCW 49.17) and other Federal Occupational Safety and Health Act (29 CFR 1910, 1926).

Federal MCLs are minimum requirements for drinking water. MTCA Method A cleanup levels for groundwater are set at least as low as federal MCLs. State and federal groundwater and air quality criteria are considered in the development of cleanup levels. State dangerous waste regulations may be applicable to contaminated soil removed from the Site.

4.2 *Remedial Action Objectives (RAOs)*

RAOs have been established for the Site to establish remedial alternatives protective of human health and the environment under the MTCA cleanup process (WAC 173-340-350). The primary RAO for this cleanup action focuses on substantially eliminating, reducing, and controlling unacceptable risks to human health and the environment posed by the COCs, to the greatest extent practicable.

RAOs are important for the evaluation of the general response actions, technologies, process options, and cleanup action alternatives. Based on the assessment of Site-specific conditions and the potentially applicable cleanup levels presented below, the RAOs for the Site have been established as follows:

- *In a reasonable restoration time frame, reduce concentrations of COCs in Site soils, groundwater, and air to levels protective of human health and the environment and which are protective of groundwater quality.*

4.3 Cleanup Standards

Cleanup standards include cleanup levels and points of compliance (POCs) as described in WAC 173-340-700 through WAC 173-340-760. Cleanup standards must also incorporate other state and federal regulatory requirements applicable.

4.3.1 Cleanup Levels

MTCA Method A cleanup levels for soil and groundwater exposure pathways are appropriate for this Site. MTCA Method B screening levels for a commercial worker scenario are appropriate for the air exposure pathway. These cleanup levels are based on the most stringent values for each exposure pathway and are considered appropriate for the Site COCs. Proposed MTCA cleanup levels for the Site COCs that have been measured in soil, groundwater, and air at the Site include:

<u>Constituent</u>	<u>Soil</u>	<u>Groundwater</u>	<u>Air</u>
• Total TPH			390 $\mu\text{g}/\text{m}^3$
• Gasoline-range TPH:	30 mg/kg	800 $\mu\text{g}/\text{L}$	NL
• Diesel/oil-range TPH:	2,000 mg/kg	500 $\mu\text{g}/\text{L}$	NL
• Benzene	0.03 mg/kg	5 $\mu\text{g}/\text{L}$	1.5 $\mu\text{g}/\text{m}^3$
• Toluene	7 mg/kg	1,000 $\mu\text{g}/\text{L}$	19,500 $\mu\text{g}/\text{m}^3$
• Ethylbenzene	6 mg/kg	700 $\mu\text{g}/\text{L}$	3,890 $\mu\text{g}/\text{m}^3$
• Total Xylenes	9 mg/kg	1,000 $\mu\text{g}/\text{L}$	389 $\mu\text{g}/\text{m}^3$

mg/kg = milligrams per kilogram

$\mu\text{g}/\text{L}$ = micrograms per liter

$\mu\text{g}/\text{m}^3$ = micrograms per cubic meter

NL = Not listed.

4.3.2 Points of Compliance

For this Site, it is assumed that standard points of compliance will be used.

- Soil – Direct Contact: For soil cleanup levels based on human exposure via direct contact, the point of compliance is throughout the Site from the ground surface to 15 feet bgs.
- Soil – Leaching: For soil cleanup levels based on protection of groundwater, the point of compliance is throughout the Site.
- Groundwater: For groundwater, the point of compliance is throughout the Site from the uppermost level of the saturated zone extending vertically to the lowest most depth that could potentially be affected by the Site.
- Indoor Air/Soil Gas: The point of compliance is ambient and indoor air throughout the Site.

5.0 CONCLUSIONS AND RECOMMENDATIONS

5.1 *Conclusions*

Conclusions derived from the RI at the Site are as follows:

- Data collected to date has not documented a release sourced on or from the Site.
- Analytical results of the soil samples collected from the Site to date indicated all COCs were non-detect.
- Analytical results of the groundwater samples collected from soil borings SB-5 and SB-6 indicated the presence of gasoline- and diesel-range TPH at concentrations above MTCA Method A cleanup levels. All other COCs were either non-detect or below MTCA Method A cleanup levels. These borings are located in the alley between the Site and the adjacent West Seattle ARCO site, and the impacts are consistent with the adjacent TPH plume.
- Analytical results of indoor air and soil gas/sub-slab vapor samples initially found COCs at concentrations exceeding MTCA Method B screening levels for commercial workers; however, sampling conducted since the activation of the SSD system indicate these have decreased to either non-detect or below MTCA screening levels.

5.2 *Recommendations*

Based on the work performed to date, it is AEG's professional opinion that the Site warrants a determination of an unrestricted no further action (NFA) without the need for an environmental covenant for the following reasons:

- Soil and groundwater sampling performed to date targeted areas where impacts would be expected to be found from prior releases on or from the Site based on the historical information available. There have been no impacts in soil identified to date and impacts to groundwater appear to be from the west adjacent MTCA cleanup Site.
- Initial soil gas and sub-slab vapor sampling indicated concentrations of Site COCs in concentrations exceeding MTCA Method B screening levels for commercial workers. The Site was equipped with an SSD system in November 2018, and since the activation of the SSD system, analytical results from air and vapor samples indicate these concentrations have either been non-detect or below MTCA screening levels. Continued operation of the SSD system may be warranted in the short term; however, once the West Seattle ARCO site moves closer to achieving MTCA cleanup standards, the SSD system should no longer be needed.

6.0 LIMITATIONS

This report summarizes the findings of the services authorized under our agreement with 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 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.

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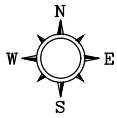
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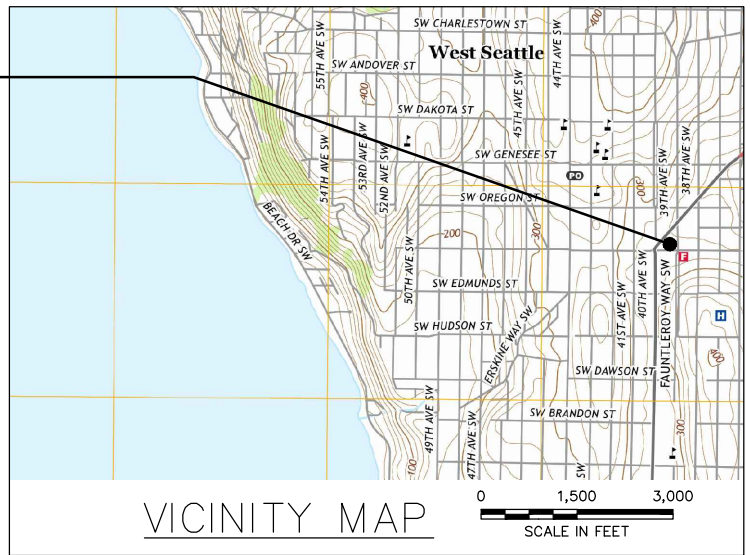
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FIGURES

FILENAME 18-172_1803.DWG	DRAWN BY ICD	CHECKED BY SL	APPROVED BY SL	PROJECT NUMBER 18-172
	8/8/2018	8/8/2018	8/8/2018	



PROJECT LOCATION



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.
VICINITY IMAGE SOURCE: U.S. GEOLOGICAL SURVEY-2017, 7.5 MINUTE QUADRANGLE MAP DUWAMISH HEAD, WASHINGTON

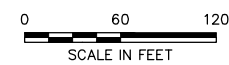
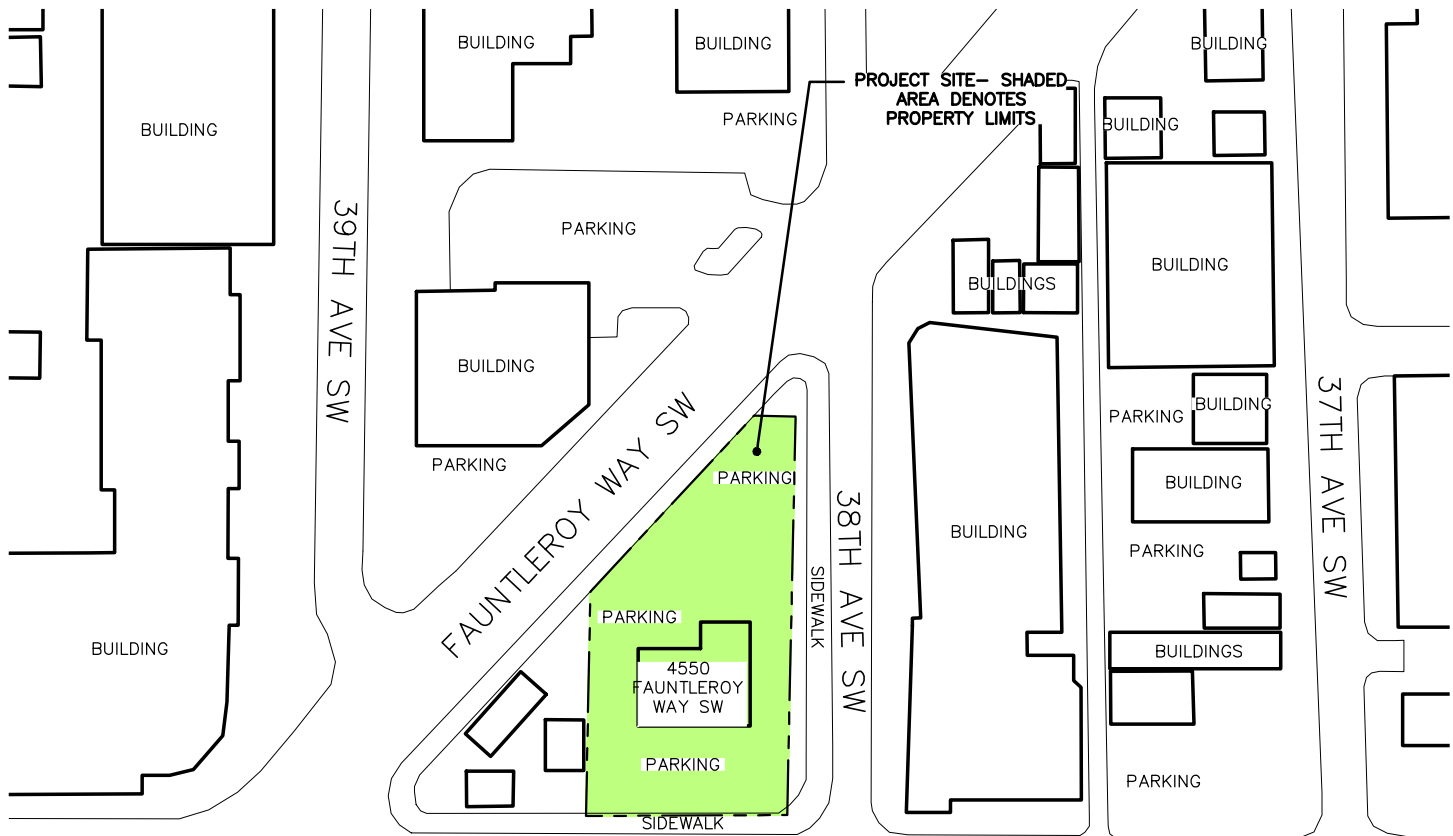
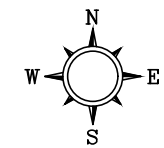
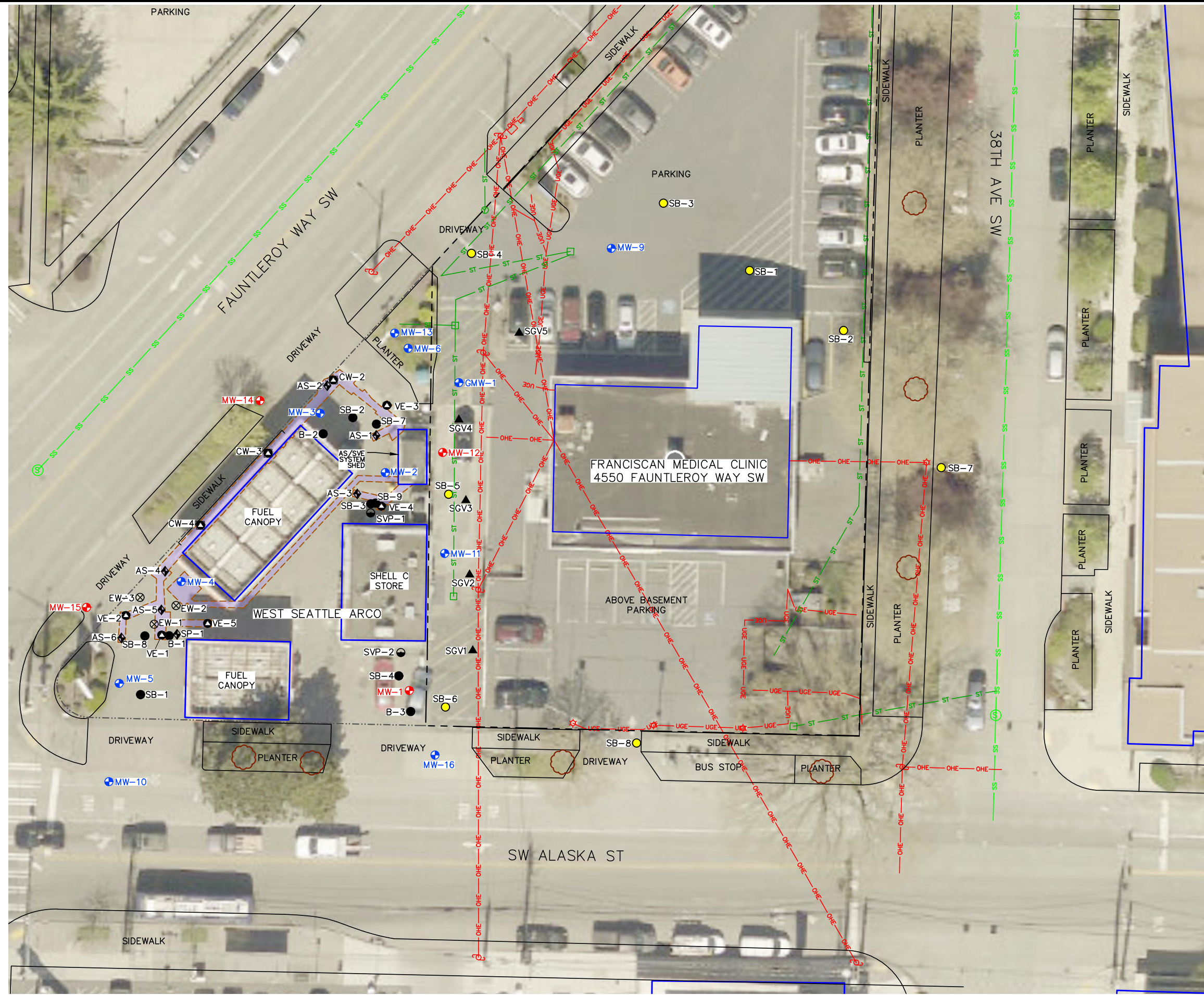


FIGURE 1
SITE VICINITY MAP

FRANCISCAN MEDICAL CLINIC
4550 FAUNTLEROY WAY SW
SEATTLE, WASHINGTON

FILENAME 22-148-FWS-SITE_ARCO.DWG
 DRAWN BY JGM 8/8/2024
 CHECKED BY ND 8/8/2024
 APPROVED BY ND 8/8/2024
 PROJECT NUMBER 22-148



- LEGEND**
- PROPERTY LINE
 - ▲ APPROXIMATE SOIL VAPOR BORING LOCATION
 - SOIL BORING LOCATION
 - PROPERTY LINE (ARCO)
 - ⊕ MONITORING WELL LOCATION (ARCO)
 - ⊕ MONITORING WELL LOCATION (ARCO) > MTCA CULs
 - SOIL BORING LOCATION (ARCO)
 - ⚡ AIR SPARGE WELL LOCATION (ARCO)
 - ⊗ VAPOR EXTRACTION WELL LOCATION (ARCO)
 - ⊗ EXTRACTION WELL LOCATION (ARCO)
 - SOIL VAPOR PROBE LOCATION (ARCO)
 - ⊗ COMBINATION AIR SPARGE VAPOR EXTRACTION WELL LOCATION (ARCO)
 - SYSTEM TRENCH
 - APPROXIMATE TREE TRUNK LOCATION
 - OHE — OHE OVERHEAD ELECTRIC
 - UGE — UGE UNDERGROUND ELECTRIC
 - SS — SS SANITARY SEWER
 - ST — ST STORM SEWER

- 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

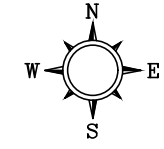
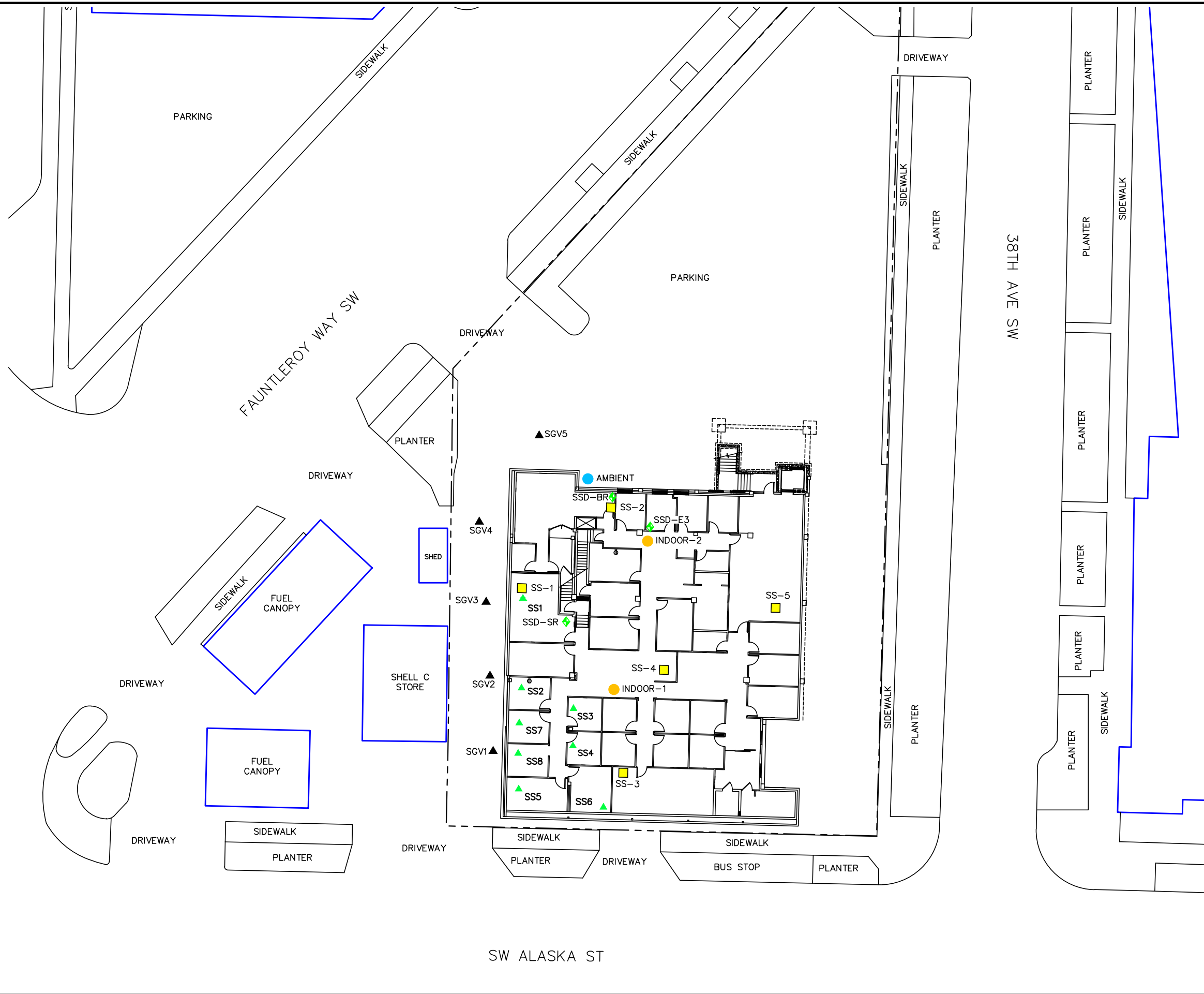
DRAWING CREATED FROM AERIAL PHOTOGRAPH AND NOTES PROVIDED BY AEG ATLAS, LLC.



FIGURE 2
SITE MAP

FRANCISCAN MEDICAL CLINIC
 4550 FAUNTLEROY WAY SW
 SEATTLE, WASHINGTON

FILENAME 22-148-FWS-SITE.DWG DRAWN BY JGM 3/8/2024 CHECKED BY ND 3/8/2024 APPROVED BY ND 3/8/2024 PROJECT NUMBER 22-148



- LEGEND**
- PROPERTY LINE
 - ▲ APPROXIMATE SOIL VAPOR BORING LOCATION
 - SUB-SLAB VAPOR LOCATION
 - ◆ SUB-SLAB DEPRESSURIZATION SYSTEM SAMPLE PORT LOCATION
 - AMBIENT AIR SAMPLE LOCATION
 - INDOOR AIR SAMPLE LOCATION
 - ▲ TEMPORARY SUB-SLAB VAPOR LOCATION

- 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

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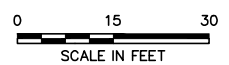
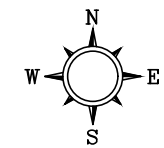
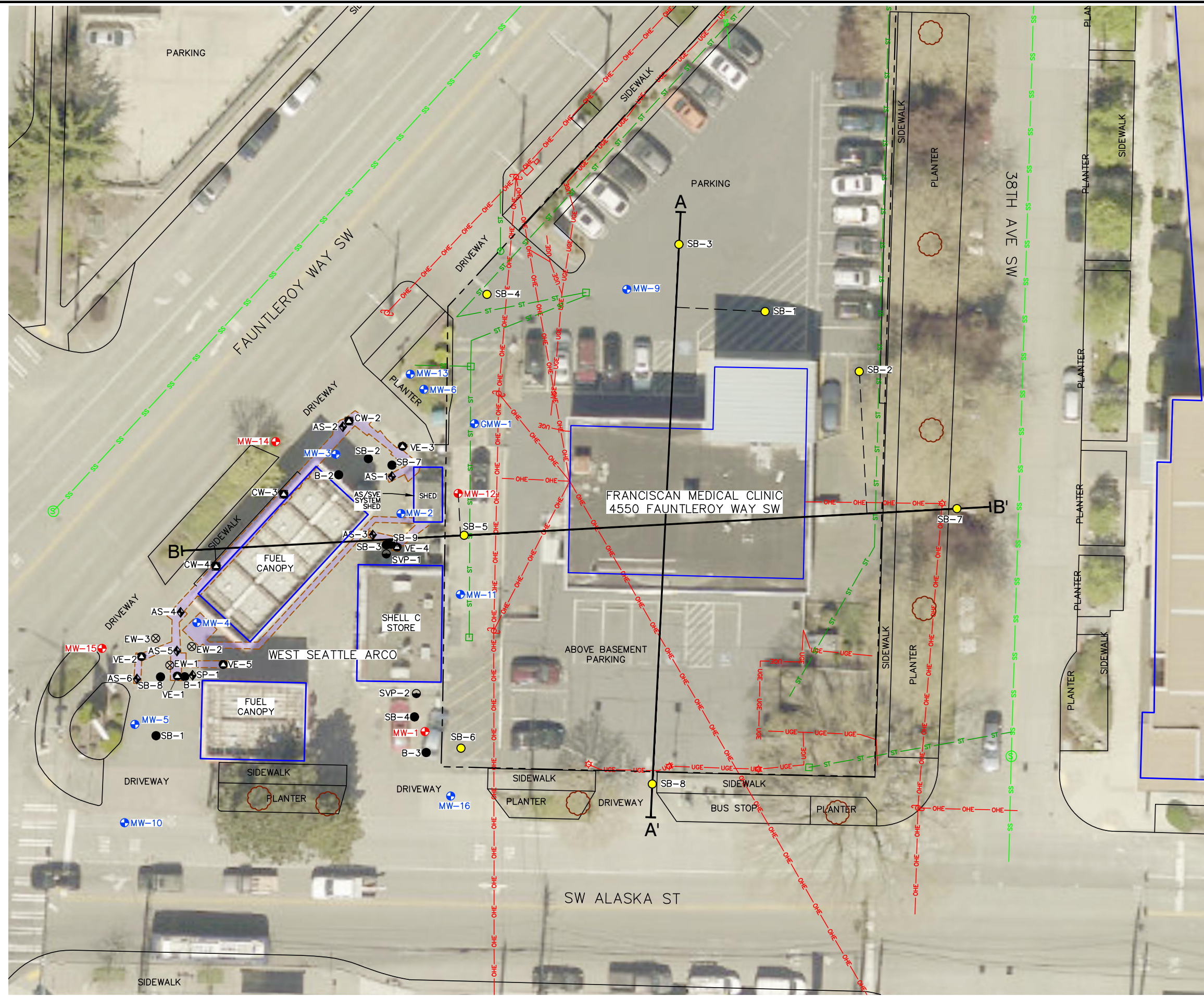


FIGURE 3
VAPOR SAMPLE LOCATIONS

FRANCISCAN MEDICAL CLINIC
4550 FAUNTLEROY WAY SW
SEATTLE, WASHINGTON

FILENAME 22-148-FWS-XSEC.DWG
 DRAWN BY JGM 8/8/2024
 CHECKED BY ND 8/8/2024
 APPROVED BY ND 8/8/2024
 PROJECT NUMBER 22-148



- LEGEND**
- PROPERTY LINE
 - SOIL BORING LOCATION
 - PROPERTY LINE (ARCO)
 - ⊕ MONITORING WELL LOCATION (ARCO)
 - ⊕ MONITORING WELL LOCATION (ARCO) > MTCA CULs
 - SOIL BORING LOCATION (ARCO)
 - ◆ AIR SPARGE WELL LOCATION (ARCO)
 - ⊖ VAPOR EXTRACTION WELL LOCATION (ARCO)
 - ⊗ EXTRACTION WELL LOCATION (ARCO)
 - SOIL VAPOR PROBE LOCATION (ARCO)
 - ⊖ COMBINATION AIR SPARGE VAPOR EXTRACTION WELL LOCATION (ARCO)
 - SYSTEM TRENCH
 - APPROXIMATE TREE TRUNK LOCATION
 - OHE OVERHEAD ELECTRIC
 - UGE UNDERGROUND ELECTRIC
 - SS SANITARY SEWER
 - ST STORM SEWER
 - A-A' LINE OF LITHOLOGIC CROSS SECTION AND PROJECTION LINE TO BORING/WELL

- 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 ATLAS, LLC.



FIGURE 4
CROSS SECTION INDEX MAP

FRANCISCAN MEDICAL CLINIC
 4550 FAUNTLEROY WAY SW
 SEATTLE, WASHINGTON

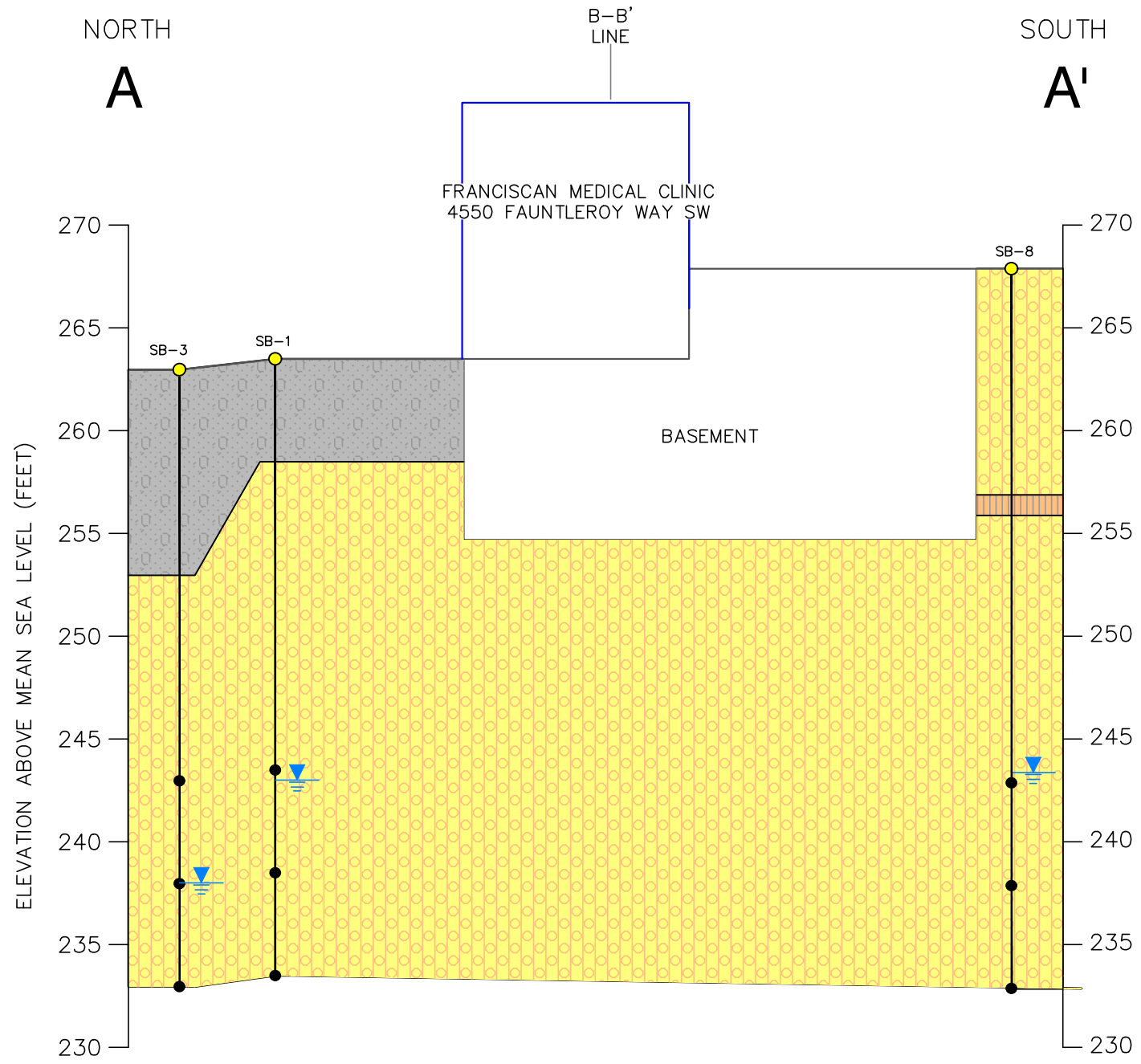
PROJECT NUMBER 22-148

APPROVED BY ND 8/8/2024

CHECKED BY ND 8/8/2024

DRAWN BY JCM 8/8/2024

FILENAME 22-148-FWS-XSEC.DWG



LEGEND

- SB-3 - SOIL BORING
- TYPICAL WATER LEVEL
- GROUNDWATER LEVEL AT TIME OF DRILLING
- SOIL SAMPLE LOCATION (< MTCA CLEANUP LEVELS)
- MAXIMUM DEPTH EXPLORED

- ASPHALT
- SM= SILTY-SANDS, SAND-SILT MIXTURES
- ML= INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS, WITH SLIGHT PLASTICITY
- GW= WELL-GRADED GRAVELS, GRAVEL-SAND MIXTURES, LITTLE OR NO FINES

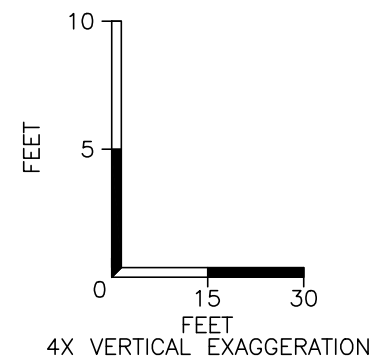


FIGURE 5
GEOLOGIC CROSS SECTION A-A'

FRANCISCAN MEDICAL CLINIC
4550 FAUNTLEROY WAY SW
SEATTLE, WASHINGTON

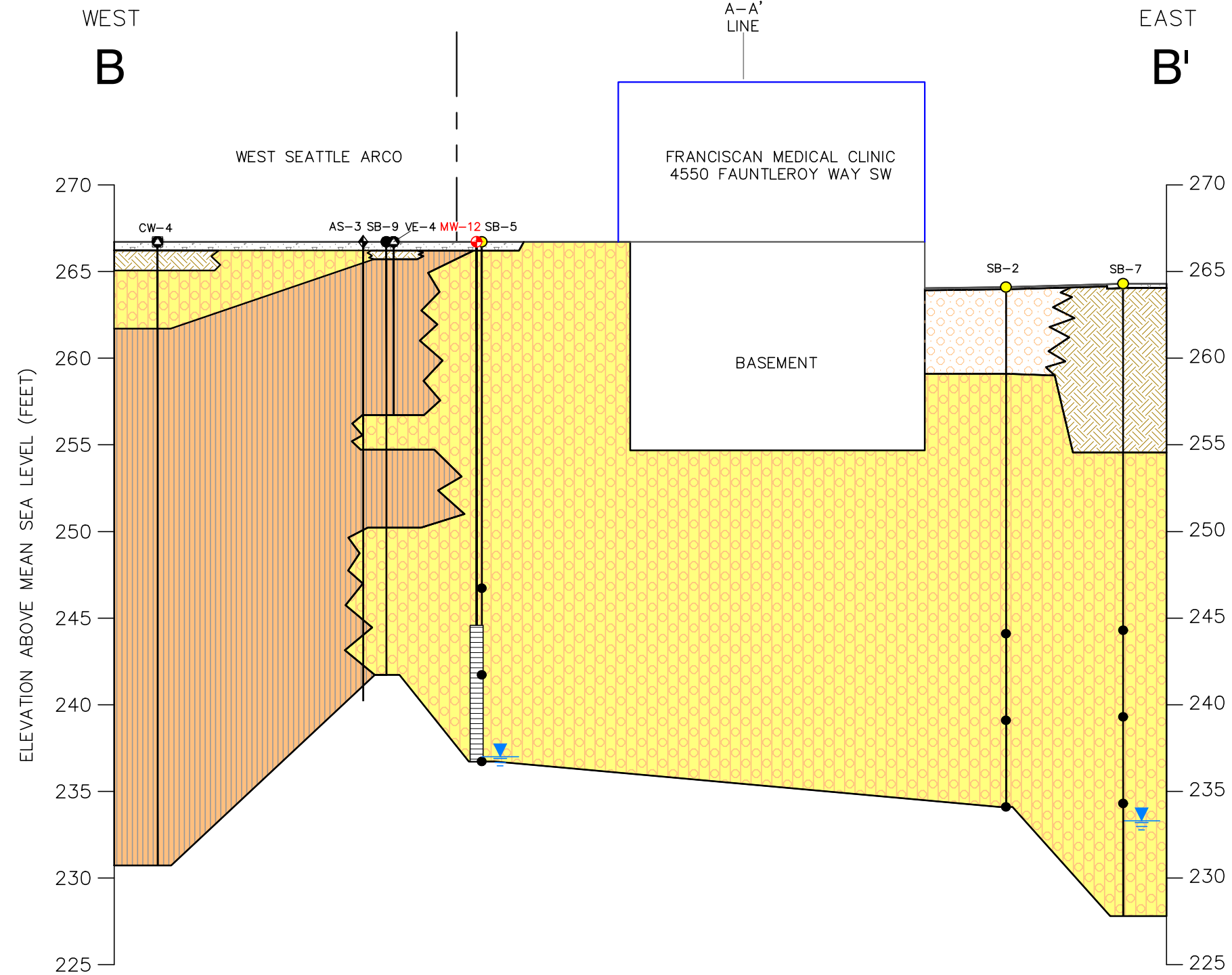
PROJECT NUMBER 22-148

APPROVED BY ND 8/8/2024

CHECKED BY ND 8/8/2024

DRAWN BY JGM 8/8/2024

FILENAME 22-148-FWS-XSEC.DWG



LEGEND

- MW-12 SB-2 - SOIL BORING, WELL
- TYPICAL WATER LEVEL
- GROUNDWATER LEVEL AT TIME OF DRILLING
- SOIL SAMPLE LOCATION (< MTCA CLEANUP LEVELS)
- MAXIMUM DEPTH EXPLORED

- ASPHALT
- CONCRETE
- FILL
- SM= SILTY-SANDS, SAND-SILT MIXTURES
- SW= WELL-GRADED SANDS, GRAVELLY SANDS LITTLE OR NO FINES
- ML= INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS, WITH SLIGHT PLASTICITY

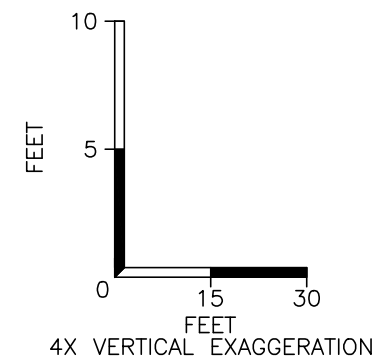
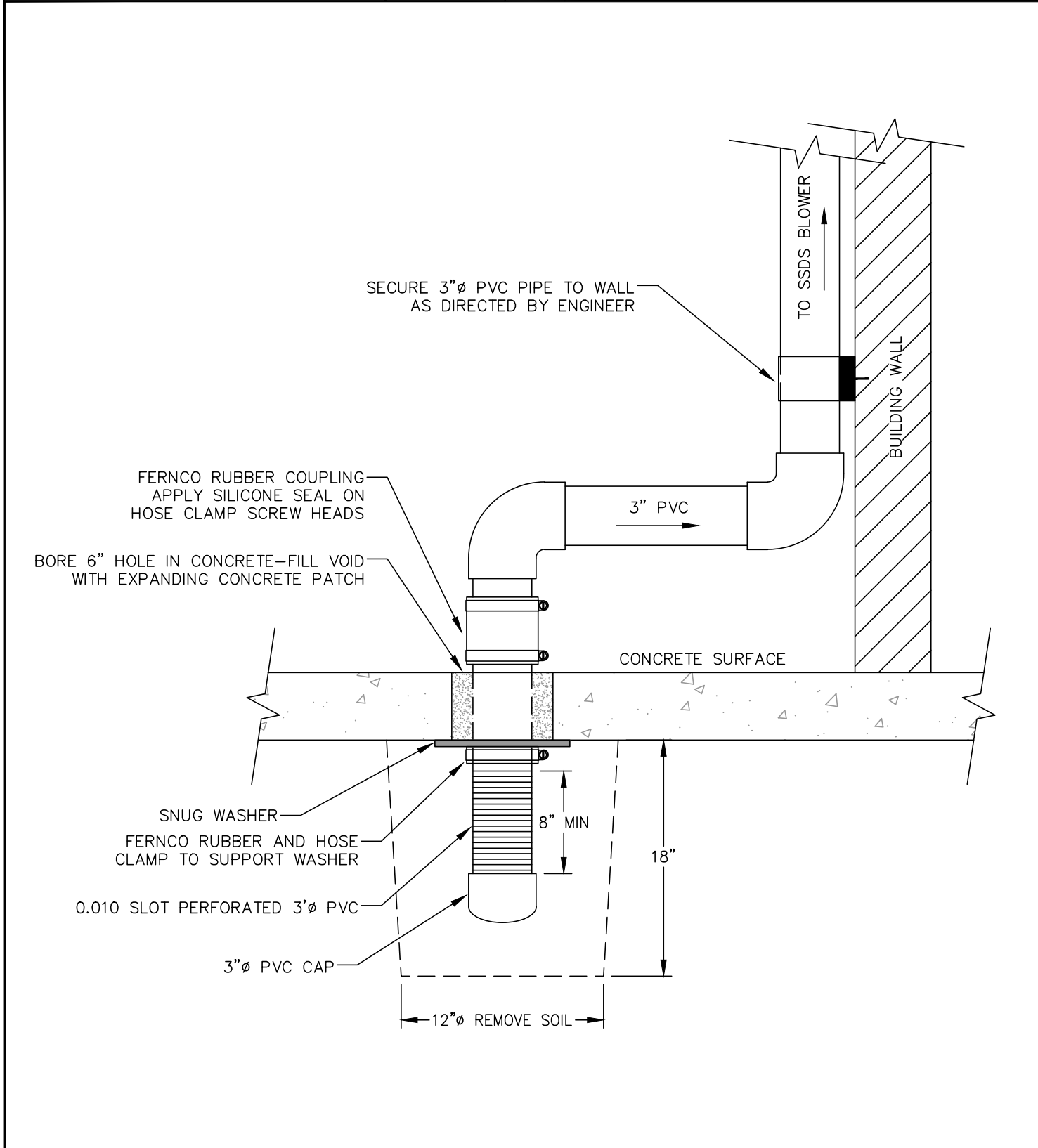


FIGURE 6
GEOLOGIC CROSS SECTION B-B'

FRANCISCAN MEDICAL CLINIC
4550 FAUNTLEROY WAY SW
SEATTLE, WASHINGTON

FILENAME	DRAWN BY	CHECKED BY	APPROVED BY	PROJECT NUMBER
SSD-SYSTEM-DETAIL.DWG	JGM	EM	EM	-----
	4/1/2024	4/1/2024	4/1/2024	



NOT TO SCALE



FIGURE 7

SSD SYSTEM DETAIL

FRANCISCAN MEDICAL CLINIC
4550 FAUNTLEROY WAY SW
SEATTLE, WASHINGTON

TABLES

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	BTEX				Chlorinated Solvents				
						Benzene	Toluene	Ethylbenzene	Xylenes	PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	VC
SB-1	20.0	10/18/2022	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	<0.2	<0.03	<0.03	<0.03	<0.2
SB-1	25.0	10/18/2022	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	<0.2	<0.03	<0.03	<0.03	<0.2
SB-1	30.0	10/18/2022	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	<0.2	<0.03	<0.03	<0.03	<0.2
SB-2	20.0	10/18/2022	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	<0.2	<0.03	<0.03	<0.03	<0.2
SB-2	25.0	10/18/2022	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	<0.2	<0.03	<0.03	<0.03	<0.2
SB-2	30.0	10/18/2022	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	<0.2	<0.03	<0.03	<0.03	<0.2
SB-3	20.0	10/19/2022	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	<0.2	<0.03	<0.03	<0.03	<0.2
SB-3	25.0	10/19/2022	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	<0.2	<0.03	<0.03	<0.03	<0.2
SB-3	30.0	10/19/2022	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	<0.2	<0.03	<0.03	<0.03	<0.2
SB-4	20.0	10/19/2022	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	<0.2	<0.03	<0.03	<0.03	<0.2
SB-4	25.0	10/19/2022	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	<0.2	<0.03	<0.03	<0.03	<0.2
SB-4	30.0	10/19/2022	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	<0.2	<0.03	<0.03	<0.03	<0.2
SB-5	20.0	10/19/2022	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	<0.2	<0.03	<0.03	<0.03	<0.2
SB-5	25.0	10/19/2022	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	<0.2	<0.03	<0.03	<0.03	<0.2
SB-5	30.0	10/19/2022	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	<0.2	<0.03	<0.03	<0.03	<0.2
SB-6	20.0	7/20/2022	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	<0.2	<0.03	<0.03	<0.03	<0.2
SB-6	25.0	7/20/2022	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	<0.2	<0.03	<0.03	<0.03	<0.2
SB-6	30.0	7/21/2022	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	<0.2	<0.03	<0.03	<0.03	<0.2
SB-7	20.0	2/2/2024	< 6.0	< 57	< 290	< 0.012	< 0.060	< 0.030	< 0.089	< 0.012	< 0.012	< 0.030	< 0.018	< 0.012
SB-7	25.0	2/2/2024	< 9.0	< 62	< 310	< 0.018	< 0.090	< 0.045	< 0.14	< 0.018	< 0.018	< 0.045	< 0.027	< 0.018
SB-7	30.0	2/2/2024	< 7.7	< 65	< 320	< 0.015	< 0.077	< 0.038	< 0.12	< 0.015	< 0.015	< 0.038	< 0.023	< 0.015
SB-8	25.0	2/2/2024	< 7.2	< 62	< 310	< 0.014	< 0.072	< 0.036	< 0.11	< 0.014	< 0.014	< 0.036	< 0.022	< 0.014
SB-8	30.0	2/2/2024	< 5.9	< 60	< 300	< 0.012	< 0.059	< 0.029	< 0.088	< 0.012	< 0.012	< 0.029	< 0.018	< 0.012
SB-8	35.0	2/2/2024	< 6.8	< 65	< 320	< 0.014	< 0.068	< 0.034	< 0.10	< 0.014	< 0.014	< 0.034	< 0.020	< 0.014
MTCA Method A Cleanup Levels			100	2,000		0.03	7	6	9	0.03	0.05	160*	1,600*	0.67*

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	Depth to Water (feet)	Ground Surface Elevation (NAVD88)	Estimated Groundwater Elevation	Total Petroleum Hydrocarbons (TPH)			Selected Volatile Organic Compounds								
					Gasoline	Diesel	Heavy Oil	BTEX				Chlorinated Solvents				
								Benzene	Toluene	Ethylbenzene	Xylenes	PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	VC
SB-1	10/18/2022	20*	263.49	243*	< 100	320	< 400	< 1.0	< 2.0	< 1.0	< 2.0	< 1.0	< 2.0	< 1.0	< 1.0	< 2.0
SB-3	10/19/2022	25*	262.96	238*	< 100	< 500	< 400	< 1.0	< 2.0	< 1.0	< 2.0	< 1.0	< 2.0	< 1.0	< 1.0	< 2.0
SB-4	10/19/2022	25*	264.50	240*	< 100	< 500	< 400	< 1.0	< 2.0	< 1.0	< 2.0	< 1.0	< 2.0	< 1.0	< 1.0	< 2.0
SB-5	10/19/2022	30*	266.72	237*	1,200	2,100	< 400	< 1.0	< 2.0	< 1.0	< 2.0	< 1.0	< 2.0	< 1.0	< 1.0	< 2.0
SB-6	10/20/2022	25*	269.97	245*	< 100	1,300	< 400	< 1.0	< 2.0	< 1.0	< 2.0	< 1.0	< 2.0	< 1.0	< 1.0	< 2.0
SB-7	2/2/2024	24.5	264.28	239.8	< 100	< 160	< 330	< 1.0	< 2.0	< 1.0	< 2.0	< 1.0	< 0.40	< 0.50	< 1.0	< 0.20
SB-8	2/2/2024	31.2	267.87	236.7	< 100	240	< 320	< 1.0	< 2.0	< 1.0	< 2.0	< 1.0	< 0.40	< 0.50	< 1.0	< 0.20
PQL					100	200	400	1.0	2.0	1.0	2.0	1.0	2.0	1.0	1.0	2.0
MTCA Method A Cleanup Levels					1,000	500		5	1,000	700	1,000	5	5	16**	160**	0.2

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

* Depth to water approximated based on soil observations.

**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 Depressurization System Analytical Results
Franciscan West - Huling (22-148)
Seattle, WA

Analytical Method	Sample Name	SSD-BR	SSD-SR	SSD-E3	Sub-Slab Soil Gas Screening Level: Commercial Workers	
	Date Collected	2/5/2024	2/5/2024	2/5/2024	Noncancer	Cancer
MA-APH: Air Phase Hydrocarbons	EC5-8 Aliphatics	< 270	< 270	< 270	--	--
	EC 9-12 Aliphatics	< 24	< 24	< 24		
	EC 9-10 Aromatics	< 82	< 81	< 82		
	Total TPH*	< 376	< 375	< 376	13,000	--
EPA TO-15: BTEX	Benzene	< 0.066	< 0.065	< 0.066	3,900	50.0
	Toluene	< 0.18	< 0.18	< 0.18	650,000	--
	Ethylbenzene	< 0.054	< 0.053	< 0.054	130,000	--
	o-Xylene	< 0.049	< 0.049	< 0.049	--	--
	m,p-Xylene	< 0.28	< 0.28	< 0.28	--	--
	Total Xylenes*	< 0.329	< 0.329	< 0.329	13,000	--
EPA TO-15: PCE and Degradation Products	Tetrachloroethene (PCE)	< 0.53	< 0.52	< 0.53	5,200	1,500
	Trichloroethene (TCE)	< 0.16	< 0.16	< 0.16	250	95.0
	cis-1,2-Dichloroethene	< 0.11	< 0.11	< 0.11	5,200	--
	trans-1,2-Dichloroethene	< 0.23	< 0.22	< 0.23	5,200	--
	Vinyl chloride	< 0.077	< 0.076	< 0.077	13,000	44.0
EPA TO-15: Volatile Organic Compounds	1,1,1-Trichloroethane	< 0.11	< 0.11	< 0.11	650,000	--
	1,1,2,2-Tetrachloroethane	< 0.06	< 0.059	< 0.06	--	6.70
	1,1,2-Trichloroethane	< 0.16	< 0.16	< 0.16	26	24.0
	1,1-Dichloroethane	< 0.19	< 0.18	< 0.19	--	240
	1,1-Dichloroethene	< 0.88	< 0.86	< 0.88	26,000	--
	1,2,4-Trichlorobenzene	< 0.48	< 0.47	< 0.48	260	--
	1,2,4-Trimethylbenzene	< 0.18	< 0.17	< 0.18	7,800	--
	1,2-Dibromoethane (EDB)	< 0.15	< 0.15	< 0.15	1,200	0.650
	1,2-Dichloroethane (EDC)	< 0.082	< 0.081	< 0.082	910	15.0
	1,2-Dichlorobenzene	< 0.06	< 0.059	< 0.06	26,000	--
	1,2-Dichloropropane	< 0.15	< 0.15	< 0.15	520	110
	1,3,5-Trimethylbenzene	< 1.1	< 1.1	< 1.1	7,800	--
	1,3-Butadiene	< 0.066	< 0.065	< 0.066	260	13.0
	1,3-Dichlorobenzene	< 0.14	< 0.13	< 0.14	--	--
	1,4-Dichlorobenzene	< 0.093	< 0.092	< 0.093	100,000	35.0
	1,4-Dioxane	< 0.29	< 0.28	< 0.29	3,900	78.0
	2,2,4-Trimethylpentane	< 0.6	< 0.59	< 0.6	--	--
	2-Butanone (MEK)	< 12	< 11	< 12	650,000	--
	2-Chlorotoluene	< 0.71	< 0.7	< 0.71	--	--
	2-Hexanone	< 1.2	< 1.2	< 1.2	3,900	--
	2-Propanol	< 0.88	< 0.86	< 0.88	--	--
	3-Chloropropene	< 1.5	< 1.5	< 1.5	130	65.0
	4-Ethyltoluene	< 0.99	< 0.97	< 0.99	--	--
	4-Methyl-2-pentanone	< 9.3	< 9.2	< 9.3	390,000	--
	Acetone	< 0.2	< 0.2	< 0.2	--	--
	Acrolein	< 0.1	< 0.1	< 0.1	2.6	--
Benzyl chloride	< 0.54	< 0.53	< 0.54	130	7.90	
Bromodichloromethane	< 8.2	< 8.1	< 8.2	--	11.0	
Bromoform	< 1.6	< 1.6	< 1.6	--	350	

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

Analytical Method	Sample Name	SSD-BR	SSD-SR	SSD-E3	Sub-Slab Soil Gas Screening Level: Commercial Workers	
	Date Collected	2/5/2024	2/5/2024	2/5/2024	Noncancer	Cancer
	Bromomethane	< 16	< 16	< 16	650	--
	Butane	< 0.093	< 0.092	< 0.093	--	--
	Carbon disulfide	< 1.6	< 1.6	< 1.6	91,000	--
	Carbon tetrachloride	< 4.5	< 4.4	< 4.5	13,000	65.0
	CFC-113	< 1.5	< 1.5	< 1.5	650,000	--
	Chlorobenzene	< 0.66	< 0.65	< 0.66	6,500	--
	Chloroethane	< 0.33	< 0.32	< 0.33	1,300,000	--
	Chloroform	11	5.6	23	13,000	17.0
	Chloromethane	< 0.22	< 0.22	< 0.22	12,000	--
	cis-1,3-Dichloropropene	< 1.7	< 1.7	< 1.7	--	--
	Cyclohexane	< 1.3	< 1.2	< 1.3	780,000	--
	Dibromochloromethane	< 0.12	< 0.11	< 0.12	--	--
	Dichlorodifluoromethane	0.52	< 0.13	0.55	13,000	--
	Ethanol	61	240 E	96	--	--
	Ethyl acetate	< 0.77	< 0.76	< 0.77	9,100	--
	F-114	< 2.4	< 2.4	< 2.4	--	--
	Heptane	< 1	< 1	< 1	52,000	--
	Hexachlorobutadiene	< 0.18	< 0.17	< 0.18	--	18.0
	Hexane	< 0.47	< 0.46	< 0.47	91,000	--
	Isopropylbenzene	100	460 E	160	52,000	--
	Methyl methacrylate	< 0.6	< 0.59	< 0.6	91,000	--
	Methyl t-butyl ether (MTBE)	< 25	< 25	< 25	390,000	1,500
	Methylene chloride	< 1.8	< 1.8	< 1.8	78,000	39,000
	Naphthalene	< 1.2	< 1.1	< 1.2	390	11.0
	Nonane	< 12	< 12	< 12	--	--
	Pentane	< 0.26	< 0.25	< 0.26	--	--
	Propene	< 1.2	< 1.1	< 1.2	--	--
	Propylbenzene	< 7.1	< 7	< 7.1	130,000	--
	Styrene	< 4.7	< 4.6	< 4.7	130,000	--
	t-Butyl alcohol (TBA)	< 0.37	< 0.36	< 0.37	--	--
	Tetrahydrofuran	< 0.88	< 0.86	< 0.88	260,000	--
	trans-1,3-Dichloropropene	< 1.5	< 1.5	< 1.5	--	--
	Trichlorofluoromethane	< 0.24	< 0.23	< 0.24	91,000	--
	Vinyl acetate	39 E	38 E	39 E	26,000	--
	Vinyl bromide	< 0.1	< 0.1	< 0.1	--	--

Notes:

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

< = Not detected at concentration greater than indicated laboratory method detection limit.

-- = MTCA Method B screening level has not been established for this constituent.

E = Laboratory indicated the reported value exceeded the calibrated quantitation range of the instrument; reported value is an estimate.

* Reporting limit calculated as the sum of constituent reporting limits; total detected concentration includes 1/2 reporting limit of constituents.

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

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

Table 4 - 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	SS-1	SS-2	SS-3	SS-4	SS-5	MTCA 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	2/17/2024	2/17/2024	2/17/2024	2/17/2024	2/17/2024	Noncancer	Cancer
APH-Air Phase Hydrocarbons	EC5-8 Aliphatics	294	193	343	618	380	307	253	393	569	311	850	910	1,100	1,100	900	--	--
	EC9-12 Aliphatics	<118	<118	<118	<118	<118	243	226	129	315	249	<20	<20	<19	<21	<21	--	--
	EC9-10 Aromatics	<25.2	<25.2	<25.2	<25.2	<25.2	<25.2	<25.2	64.0	<25.2	<25.2	<20	260	520	<21	<21	--	--
	Total TPH	294	193	343	618	380	550	479	586	884	560	850	1,170	1,620	1,100	900	13,000	--
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	<0.3	<0.3	<0.3	<0.32	<0.32	3,900	50.0
	Toluene	6.68	4.94	6.28	4.96	4.69	3.11	3.47	3.95	6.19	2.38	<0.76	<0.75	<0.74	<0.81	<0.8	650,000	--
	Ethylbenzene	<6.95	<6.95	<6.95	<6.95	<6.95	<4.34	<4.34	<4.34	<4.34	6.73	<0.37	<0.36	<0.36	<0.39	<0.39	130,000	--
	m,p-Xylene	7.37	7.60	32	7.78	<6.95	<17.4	<17.4	<17.4	<17.4	36.7	<1.1	<1.1	<1.1	<1.2	<1.2	13,000	--
	o-Xylene	<1.74	<1.74	<1.74	<1.74	<1.74	<5.21	<5.21	<5.21	<5.21	16.4	<0.46	<0.46	<0.45	<0.49	<0.49	13,000	--
	Naphthalene	1.63	0.343	1.90	0.537	<0.210	2.59	2.56	2.24	2.98	2.56	<5.6	<5.5	<5.5	<5.9	<5.9	390	11.0
	VinylChloride	<0.102	<0.102	<0.102	<0.102	<0.102	<0.204	<0.204	<0.204	<0.204	<0.204	<0.096	<0.095	<0.094	<0.1	<0.1	13,000	44.0
	trans-1,2-Dichloroethylene	<0.793	<0.793	<0.793	<0.793	<0.793	<0.476	<0.476	<0.476	<0.476	<0.476	<0.41	<0.4	<0.4	<0.43	<0.43	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	<0.16	<0.16	<0.16	<0.17	<0.17	5,200	--
	Trichloroethylene	<0.215	<0.215	<0.215	<0.215	<0.215	<0.269	<0.269	<0.269	<0.269	<0.269	<0.41	<0.4	<0.4	<0.43	<0.43	250	95.0
Tetrachloroethylene	47.7	0.849	0.388	4.50	<0.271	<13.6	<13.6	<13.6	<13.6	<13.6	<1.4	<1.4	<1.4	<1.5	<1.5	5,200	1,500	

Notes:

All values presented in micrograms per cubic meter (µg/m3)

<= Not detected above laboratory reporting limits

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

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

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

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

Table 5 - Summary of Indoor Air Analytical Results

Franciscan West - Huling (22-148)
Seattle, WA

Analytical Method	Sample Name	AMBIENT	IA-1		IA-2		MTCA Method B Indoor Air Screening Level: Commercial Worker	
	Date Collected	2/17/2024	2/17/2024	Adjusted	2/17/2024	Adjusted	Noncancer	Cancer
MA-APH: Air Phase Hydrocarbons	EC5-8 Aliphatics	< 50	< 50	~	< 50	~		
	EC 9-12 Aliphatics	< 2.5	< 2.5	~	< 2.5	~	--	--
	EC 9-10 Aromatics	< 2.5	< 2.5	~	< 2.5	~		
	Total TPH*	< 55	< 55	~	< 55	~	390	--
EPA TO-15: BTEX	Benzene	0.38	0.37	~	0.43	0.05	117	1.5
	Toluene	< 0.095	< 0.095	~	< 0.095	~	19,500	--
	Ethylbenzene	< 0.046	< 0.046	~	< 0.046	~	3,890	--
	o-Xylene	< 0.058	< 0.058	~	< 0.058	~	--	--
	m,p-Xylene	< 0.14	< 0.14	~	< 0.14	~	--	--
	Total Xylenes*	< 0.198	< 0.198	~	< 0.198	~	389	--
EPA TO-15: PCE and Degradation Products	Tetrachloroethene (PCE)	< 0.18	< 0.18	~	< 0.18	~	156	44.9
	Trichloroethene (TCE)	< 0.051	< 0.051	~	< 0.051	~	7.5	2.85
	cis-1,2-Dichloroethene	< 0.02	< 0.02	~	< 0.02	~	156	--
	trans-1,2-Dichloroethene	< 0.051	< 0.051	~	< 0.051	~	156	--
	Vinyl chloride	< 0.012	< 0.012	~	< 0.012	~	389	1.33
EPA TO-15: Volatile Organic Compounds	1,1,1-Trichloroethane	< 0.043	< 0.043	~	< 0.043	~	19,500	--
	1,1,2,2-Tetrachloroethane	< 0.06	< 0.06	~	< 0.06	~	--	0.201
	1,1,2-Trichloroethane	< 0.047	< 0.047	~	< 0.047	~	0.779	0.730
	1,1-Dichloroethane	< 0.044	< 0.044	~	< 0.044	~	--	7.30
	1,1-Dichloroethene	< 0.53	< 0.53	~	< 0.53	~	779	--
	1,2,4-Trichlorobenzene	< 1.6	< 1.6	~	< 1.6	~	7.79	--
	1,2,4-Trimethylbenzene	< 0.058	< 0.058	~	< 0.058	~	234	--
	1,2-Dibromoethane (EDB)	< 0.17	< 0.17	~	< 0.17	~	35.0	0.0195
	1,2-Dichloroethane (EDC)	< 0.024	< 0.024	~	< 0.024	~	27.3	0.449
	1,2-Dichlorobenzene	0.065	0.069	0.004	0.069	0.004	779	--
	1,2-Dichloropropane	< 0.086	< 0.086	~	< 0.086	~	15.6	3.16
	1,3,5-Trimethylbenzene	< 0.35	< 0.35	~	< 0.35	~	234	--
	1,3-Butadiene	0.073	0.12	0.047	0.15	0.077	7.79	0.389
	1,3-Dichlorobenzene	< 0.22	< 0.22	~	< 0.22	~	--	--
	1,4-Dichlorobenzene	< 0.15	< 0.15	~	< 0.15	~	3,110	1.06
	1,4-Dioxane	< 0.061	< 0.061	~	< 0.061	~	117	2.34
	2,2,4-Trimethylpentane	< 0.66	< 0.66	~	< 0.66	~	--	--
	2-Butanone (MEK)	< 1.1	< 1.1	~	< 1.1	~	19,500	--
	2-Chlorotoluene	< 1.2	< 1.2	~	< 1.2	~	--	--
	2-Hexanone	< 2.3	< 2.3	~	< 2.3	~	117	--
	2-Propanol	< 0.33	< 0.33	~	< 0.33	~	--	--
	3-Chloropropene	< 0.66	< 0.66	~	< 0.66	~	--	--
	4-Ethyltoluene	< 1.8	< 1.8	~	< 1.8	~	--	--
	4-Methyl-2-pentanone	< 1.3	20	20	21	21	11,700	--
	Acetone	0.2 E	0.49 E	0.29 E	0.53 E	0.33 E	--	--
	Acrolein	< 0.032	< 0.032	~	< 0.032	~	0.0779	--
	Benzyl chloride	< 0.65	< 0.65	~	< 0.65	~	3.89	0.238
Bromodichloromethane	< 1.3	< 1.3	~	< 1.3	~	--	0.316	
Bromoform	< 0.48	< 0.48	~	< 0.48	~	--	10.6	
Bromomethane	< 0.96	< 0.96	~	< 0.96	~	19.5	--	
Butane	0.41	0.43	0.02	0.43	0.02	--	--	
Carbon disulfide	< 0.21	< 0.21	~	< 0.21	~	2,730	--	
Carbon tetrachloride	< 0.28	< 0.28	~	< 0.28	~	389	1.95	
CFC-113	2	1.9	0.1	2.2	0.2	19,500	--	

Table 5 - Summary of Indoor Air Analytical Results

Franciscan West - Huling (22-148)
Seattle, WA

Analytical Method	Sample Name	AMBIENT	IA-1		IA-2		MTCA Method B Indoor Air Screening Level: Commercial Worker	
	Date Collected	2/17/2024	2/17/2024	Adjusted	2/17/2024	Adjusted	Noncancer	Cancer
	Chlorobenzene	< 0.11	< 0.11	~	< 0.11	~	195	--
	Chloroethane	< 0.038	< 0.038	~	< 0.038	~	--	--
	Chloroform	0.16	11	10.84	8.4	8.24	382	0.508
	Chloromethane	< 0.072	< 0.072	~	< 0.072	~	350	--
	cis-1,3-Dichloropropene	< 0.15	< 0.15	~	< 0.15	~	--	--
	Cyclohexane	< 0.76	< 0.76	~	< 0.76	~	23,400	--
	Dibromochloromethane	< 0.076	< 0.076	~	< 0.076	~	--	--
	Dichlorodifluoromethane	< 0.064	0.76	0.76	0.6	0.6	389	--
	Ethanol	18 E	480 E	462 E	540 E	522 E	--	--
	Ethyl acetate	< 1.3	< 1.3	~	< 1.3	~	273	--
	F-114	< 0.32	< 0.32	~	< 0.32	~	--	--
	Heptane	< 0.6	< 0.6	~	< 0.6	~	1,560	--
	Hexachlorobutadiene	< 0.092	< 0.092	~	< 0.092	~	--	0.531
	Hexane	< 0.92	< 0.92	~	< 0.92	~	2,730	--
	Isopropylbenzene	13	1,200 E	1,200 E	1,700 E	1,700 E	1,560	--
	Methyl methacrylate	< 2	< 2	~	< 2	~	2,730	--
	Methyl t-butyl ether (MTBE)	< 2.2	< 2.2	~	< 2.2	~	11,700	44.9
	Methylene chloride	< 1.3	< 1.3	~	< 1.3	~	2,340	1,170
	Naphthalene	< 0.7	< 0.7	~	< 0.7	~	11.7	0.344
	Nonane	< 1.3	< 1.3	~	< 1.3	~	--	--
	Pentane	< 0.074	0.1	0.1	0.084	0.084	--	--
	Propene	< 0.76	< 0.76	~	< 0.76	~	--	--
	Propylbenzene	< 1.1	< 1.1	~	< 1.1	~	3,890	--
	Styrene	< 0.2	< 0.2	~	< 0.2	~	3,890	--
	t-Butyl alcohol (TBA)	< 0.92	< 0.92	~	< 0.92	~	--	--
	Tetrahydrofuran	< 0.28	< 0.28	~	< 0.28	~	7,790	--
	trans-1,3-Dichloropropene	< 0.15	< 0.15	~	< 0.15	~	--	--
	Trichlorofluoromethane	< 0.1	< 0.1	~	< 0.1	~	2,730	--
	Vinyl acetate	< 0.91	< 0.91	~	< 0.91	~	779	--
	Vinyl bromide	< 0.034	< 0.034	~	< 0.034	~	--	--

Notes:

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

< = Not detected at concentration greater than indicated laboratory method detection limit.

-- = MTCA Method B screening level has not been established for this constituent.

~ = Reported indoor air concentration equivalent to ambient air concentration.

E = Laboratory indicated the reported value exceeded the calibrated quantitation range of the instrument; reported value is an estimate.

* Reporting limit calculated as the sum of constituent reporting limits; total detected concentration includes 1/2 reporting limit of constituents.

Red Bold indicates the detected concentration exceeds one or more MTCA Method B screening levels.

Bold indicates the detected concentration is less than MTCA Method B screening levels.

Table 6 - Summary of NOW Indoor Air Samples
Franciscan West-Huling (22-148)
Seattle, WA

Sample Number	Exam Room No. 3								Storage Room						Back Office Pod			Front Office Pod	MTCA Method B Indoor Air Screening Level Commercial Worker	OSHA PEL (8-Hour TWA)	ACGIH TLVs (8-Hour TWA)		
	5/3/2018 (before SSD system online)	5/23/2018 (before SSD system online)	9/7/2018 (before SSD system online)	9/20/2018 (before SSD system online)	1/18/2019 (after SSD system online)	1/18/2019 (after SSD system online)	4/4/2019 (after SSD system online)	4/4/2019 (after SSD system online)	5/3/2018 (before SSD system online)	9/7/2018 (before SSD system online)	9/20/2018 (before SSD system online)	1/18/2019 (after SSD system online)	4/4/2019 (after SSD system online)	4/4/2019 (after SSD system online)	5/23/2018 (before SSD system online)	9/7/2018 (before SSD system online)	9/20/2018 (before SSD system online)	1/18/2019 (after SSD system online)				Noncancer	Cancer
Sample Duration	8 Hours	8 Hours	8 Hours	24 Hours	8 Hours	24 Hours	8 Hours	24 Hours	8 Hours	8 Hours	24 Hours	24 Hours	8 Hours	24 Hours	8 Hours	8 Hours	24 Hours	8 Hours					
Gasoline-Related Constituents																							
Gasoline-Range Organics ¹		26,300	1,100	22.9	6.16	41.5	42.0	16.4	73.2	32,400	114	74.1	74.4	60.3	70.7	1,020	122	87.4	55.9	390	--	--	--
Volatile Organic Compounds	Hexane	223	10.7	<1.41	<1.41	<1.41	<1.41	<1.41	<1.41	466	<1.41	<1.41	<1.41	<1.41	<1.41	11.0	<1.41	9.73	<1.41	2,730	--	500,000	50,000
	Benzene	0.902	0.628	0.114	0.973	0.543	0.637	<0.286	<0.286	0.974	0.353	0.527	0.458	<0.286	<0.286	0.516	0.368	1.62	0.820	117.0	1.5	10,000	500
	Toluene	9.32	3.14	<1.51	4.27	4.54	4.54	1.64	1.75	19.8	2.56	2.31	<1.51	1.79	1.96	1.59	1.76	10.7	1.97	19,500	--	200,000	20,000
	Ethylbenzene	4.24	<1.74	<1.74	<1.74	<1.74	<1.74	<1.74	<1.74	8.98	<1.74	<1.74	<1.74	<1.74	<1.74	<1.74	<1.74	<1.74	<1.74	3,890	--	100,000	20,000
	m,p-Xylene	15.1	<3.47	<3.47	<3.47	<3.47	<3.47	<3.47	<3.47	36.6	<3.47	3.54	<3.47	<3.47	<3.47	<3.47	<3.47	<3.47	<3.47	389	--	100,000	100,000
	o,p-Xylene	4.86	<1.74	<1.74	<1.74	<1.74	<1.74	<1.74	<1.74	16.5	<1.74	1.81	<1.74	<1.74	<1.74	<1.74	<1.74	<1.74	<1.74	389	--	100,000	100,000
Naphthalene	<0.524	<0.524	<0.524	<0.524	<0.524	<0.524	<0.524	<0.524	<0.524	<0.524	<0.524	<0.524	<0.524	<0.52	<0.524	<0.524	<0.524	<0.524	11.7	0.344	10,000	10,000	
Other Detected Volatile Organic Compounds																							
Selected Detected Volatile Organic Compounds	Dichlorodifluoromethane	3.24	<1.98	2.79	2.24	2.55	2.59	2.78	2.77	2.73	2.67	2.23	2.80	2.67	2.79	2.73	2.74	2.22	2.56	389	--	1,000	1,000
	Carbon tetrachloride	0.712	<0.413	0.738	0.423	0.419	0.431	0.482	0.480	0.572	0.468	0.417	0.721	0.477	0.484	0.572	0.684	<0.413	0.454	389	1.95	10	5
	Methyl ethyl ketone	5.80	924	<2.95	<2.95	<2.95	<2.95	<2.95	<2.95	7.94	<2.95	<2.95	<2.95	<2.95	<2.95	7.94	<2.95	<2.95	<2.95	19,500	--	200	200
	1,2,4-trimethylbenzene	4.31	<1.47	<1.47	<1.47	<1.47	<1.47	<1.47	<1.47	6.67	<1.47	<1.47	<1.47	<1.47	<1.47	<1.47	<1.47	<1.47	<1.47	234	--	--	--
	Trichloroethylene (TCE)	<0.349	<0.349	<0.349	2.23	<0.349	<0.349	<0.349	0.612	<0.349	<0.349	<0.349	<0.349	<0.349	<0.349	<0.349	<0.349	1.15	<0.349	7.5	2.85	100	50
Tetrachloroethylene (PCE)	<1.36	<1.36	<1.36	<1.36	1.62	<1.36	<1.36	<1.36	<1.36	<1.36	<1.36	<1.36	<1.36	<1.36	<1.36	<1.36	<1.36	<1.36	156	44.9	100	25	

Notes:

All values presented in micrograms per cubic meter (µg/m³)

< = Not detected above laboratory reporting limits

-- = Value not published.

fb = The analyte was detected in the method blank.

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

¹Gasoline-Range Organics were estimated using the sum of the results for APH EC5-8, APH EC9-12, and APH EC9-10

Red Bold indicates the detected concentration exceeds one or more regulatory levels

Bold indicates the detected concentration is below all regulatory levels

SSD = Sub-Slab Depressurization

OSHA PEL = U.S. Department of Labor, Occupational Safety and Health Administration Permissible Exposure Limit. Federal regulatory standard.

TWA = Time-Weighted Average.

NL = Not Listed; no values have been established for these constituents.

ACGIH TLVs = American Conference of Governmental Industrial Hygienists Threshold Limit Values. ACGIH® is a private, not-for-profit, nongovernmental corporation. It is not a standards setting body. ACGIH® is a scientific association that develops recommendations or guidelines to assist in the control of occupational health hazards. TLVs® are health-based values and are not intended to be used as legal standards. Threshold Limit Values (TLVs®) refer to airborne concentrations of chemical substances and represent conditions under which it is believed that nearly all workers may be repeatedly exposed, day after day, over a working lifetime, without adverse effects.

Table 7 - Summary of Soil Gas and Temporary Sub-Slab Vapor Analytical Results
Franciscan West - Huling (22-148)
Seattle, WA

Sample Number		SGV-1	SGV-2	SGV-3	SGV-4	SGV-5	SS-1	SS-2	SS-3	SS-4	SS-5	SS-6	SS-7	SS-8	MTCA Method B Sub-Slab Screening Level Commercial Worker	
Date Collected		7/26/2018	7/26/2018	7/26/2018	7/26/2018	7/26/2018	7/26/2018	7/26/2018	7/26/2018	7/26/2018	7/26/2018	7/26/2018	7/26/2018	7/26/2018	Noncancer	Cancer
Gasoline-Related Constituents																
APH - Air Phase Hydrocarbons	EC5-8 Aliphatics	1,300	3,800 ve	54,000 ve	1,600	210,000 ve	21,000	19,000	1,300	1,600	1,800	2,500	3,500 ve	590	--	--
	EC 9-12 Aliphatics	180	16,000 ve	45,000 ve	780	220,000 ve	67,000 ve	34,000 ve	1,600	1,300	1,500	2,200	3,600 ve	940	--	--
	EC 9-10 Aromatics	<82	910	<620	<82	<1,900	<1,200	<620	<82	<82	<82	<82	210	<82	--	--
	Total TPH	1,480	20,710 ve	99,000 ve	2,380	430,000 ve	88,000 ve	53,000 ve	2,900	2,900	3,300	4,700	7,310 ve	1,530	13,000	--
Volatile Organic Compounds	Hexane	27	67	2,100	86	730	<180	88	44	71	39	31	28	<12	91,000	--
	Benzene	6.5	10	38	7.9	27	<16	<8	6.9	12	4.9	6.5	3.6	<1.1	3,900	50.0
	Toluene	<0.04	23	37	15	36	<19	<9.4	11	17	24	14	9.5	4.1	650,000	--
	Ethylbenzene	2.0	9.5	32	4.5	<33	<22	<11	2	2.2	2.4	3.5	7.4	1.6	130,000	--
	m,p-Xylene	5.5	26	42	9.8	<65	<43	<22	8.6	10	9.7	11	20	8.3	13,000	--
	o,p-Xylene	2.4	20	26	5.3	<33	<22	12	3.6	2.9	3.1	3.9	14	3.8	13,000	--
	Naphthalene	1.90	4.0 fb	5.0 fb	4.5 fb	9.4 fb	6.0 fb	3.8 fb	1.3 fb	0.90 fb	0.97 fb	1.0 fb	1.4 fb	0.64 fb	390	11.0
Other Detected Volatile Organic Compounds																
Selected Detected Volatile Organic Compounds	Dichlorodifluoromethane	2.4	2.6	<12	2.7	<37	<25	<12	2.5	2.5	2.5	2.4	2.4	2.4	13,000	--
	Chloromethane	0.7	2.5	<5.2	1.8	<15	<10	<5.2	<0.68	<0.68	0.9	1	<0.68	<0.68	12,000	--
	Acetaldehyde	<30	<30	<220	1,000 ve	<680	<450	<230	<30	<30	<30	<30	<30	<30	1,200	180
	Vinyl Chloride	<0.84	<0.84	<6.4	<0.84	<19	<13	<6.4	<0.84	12	<0.84	11	<0.84	<0.84	13,000	44.0
	1,3-Butadiene	6.8	29	80	8.9	60	<1.1	<0.55	2.7	4	2	4.3	1.1	<0.0073	260	13.0
	Acetonitrile	<5.5	<5.5	<42	31	<130	<84	<4	<5.5	<5.5	<5.5	<5.5	<5.5	<5.5	7,800	--
	Acrolein	5.4	4.7	<23	19	<69	<46	<23	<3	<3	<3	<3	5.8	<3	2.60	--
	Carbon Disulfide	<21	32	<160	<21	<470	<310	<160	<21	<21	<21	<21	<21	<21	91,000	--
	Chloroform	0.53	1.4	<1.2	2.7	<3.7	<2.4	<1.2	12	1.1	0.71	0.29	0.24	4.7	13,000	17.0
	1,2-Dichloroethane	<0.13	0.15	<1.0	<0.13	<3	<2	<1	<0.13	<0.13	0.16	0.39	<0.13	<0.13	910	15.0
	1,1,2-Trichloroethane	<0.18	<0.18	<1.4	<0.18	<4.1	<2.7	3.4	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	26.0	24.0
	Trichloroethylene (TCE)	2.8	6.1	17	5.2	<20	<13	12 fb	5.5	5.1	39	5.4	2.0	3.5	250	95.0
	Tetrachloroethylene (PCE)	8.1	35	<17	29	<51	<34	<17	16	15	5.0	2.6	<2.2	<2.2	5,200	1,500
	Chlorobenzene	<1.5	<1.5	<12	<1.5	<35	<23	<12	<1.5	<1.5	<1.5	<1.5	6.1	<1.5	6,500	--
	1,1,2,2-Tetrachloroethane	<0.45	<0.45	<3.4	<0.45	<10	<6.9	<3.4	<0.45	<0.45	<0.45	<0.45	1.2	<0.45	--	6.70
Styrene	<2.8	<2.8	<21	<2.8	<64	<43	<21	<2.8	<2.8	<2.8	3.1	<2.8	6.4	130,000	--	
1,4-Dichlorobenzene	<0.79	<0.79	<6	<0.79	<18	<12	<6	<0.79	<0.79	<0.79	<0.79	3.3	<0.79	100,000	35.0	

Notes:

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

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

fb = The analyte was detected in the method blank.

< = Not detected above laboratory reporting limits

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

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

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

APPENDIX A

*Boring and Well Logs
Laboratory Datasheets*

PROJECT: *Franciscan West Seattle* JOB # *22-148* BORING # *SB-1* PAGE 1 of 1

Location: *4550 Fauntleroy 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
- Groundwater level at time of drilling or date of measurement

PROJECT: *Franciscan West Seattle* JOB # *22-148* BORING # *SB-2* PAGE 1 of 1
 Location: *4550 Fauntleroy 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

Groundwater level at time of drilling
 ATD or date of measurement

PROJECT: *Franciscan West Seattle* JOB # *22-148* BORING # *SB-3* PAGE 1 of 1
 Location: *4550 Fauntleroy 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

Groundwater level at time of drilling or date of measurement

PROJECT: *Franciscan West Seattle* JOB # *22-148* BORING # *SB-4* PAGE 1 of 1

Location: *4550 Fauntleroy 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, moist.	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
- Groundwater level at time of drilling or date of measurement

PROJECT: *Franciscan West Seattle* JOB # *22-148* BORING # *SB-5* PAGE 1 of 1
 Location: *4550 Fauntleroy 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
 - Groundwater level at time of drilling
ATD or date of measurement

PROJECT: *Franciscan West Seattle* JOB # *22-148* BORING # *SB-6* PAGE 1 of 1
 Location: *4550 Fauntleroy 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
 - Groundwater level at time of drilling or date of measurement

PROJECT: *Franciscan West Seattle* JOB # *22-148* BORING # *SB-7* PAGE 1 of 1
 Location: *4550 Fauntleroy Way SW* Approximate elevation:
 Subcontractor/Driller: *Cascade, Wes Kennedy* Drilling Method: *Limited-Access Rig - Hollow stem auger*
 Date: *February 2, 2024* Logged by: *Nathan Dickey*


Boring Depth (feet)	Soil Description	Unified Soil Symbol	Sample Type	Sample Recovery	Sample Number	Blows per 6"	PID Reading	Water	Comments
	12" Concrete and gravel substrate								Air knife to 5'
	Brown silty sand with pea gravel, FILL	SM-GP					0.0	moist	
5									
	Well-graded gravel, moist, pea gravel FILL	GP	SS	4/18		6-9-9	0.0	moist	
10									
	Brown-grey SILTY SAND, fine sand, non-plastic, med. dense, moist	SM	SS	10/18		12-11-14	0.0	moist	
15									
	at 16': grades bluish-grey to brown/tan	SM	SS	18/18		14-17-18	0.0	moist	
20									
	Brown-grey SILTY SAND, fine sand, non-plastic, dense, moist	SM	SS	18/18	SB-7-20	19-20-20	0.0	moist	
25									
	Brown SILTY SAND, fine-coarse sand, dense, moist	SM	SS	9/18	SB-7-25	17-19-21	0.0	moist	
30									
	Brown SILTY SAND, fine-coarse sand, dense, wet	SM	SS	18/18	SB-7-30	19-15-23	0.0	wet	 Temporary well set from 25-35 feet bgs
35									
	Brown SILTY SAND, fine-coarse sand, dense, wet	SM	SS	18/18		19-21-20	0.0	wet	

Total depth: 36.5 feet. Static groundwater encountered at 31 feet bgs


Explanation

 Groundwater level at time of drilling

PROJECT: *Franciscan West Seattle* JOB # *22-148* BORING # *SB-7* PAGE 1 of 1
 Location: *4550 Fauntleroy Way SW* Approximate elevation:
 Subcontractor/Driller: *Cascade, Wes Kennedy* Drilling Method: *Limited-Access Rig - Hollow stem auger*
 Date: *February 2, 2024* Logged by: *Nathan Dickey*

Boring Depth (feet)	Soil Description	Unified Soil Symbol	Sample Type	Sample Recovery	Sample Number	Blows per 6"	PID Reading	Water	Comments
	Brown silty sand, FILL	SM					0.0	moist	Hand-cleared to 5'
5	Dark brown well graded SAND with SILT, abundant roots	SW-SM	SS	18/18		8-7-8	0.0	moist	
10	brown well graded SAND with SILT, some roots at 10': blue-grey SILT, very stiff SILT not apparent past ~11' in auger cuttings	SW-SM ML SM	SS	18/18		17-20-21	0.0	moist	
15	Brown-tan SILTY SAND, fine-coarse sand, very dense	SM	SS	12/12		21-50/6"	0.0	moist	
20	brown-tan SILTY SAND, fine-coarse sand, very dense	SM	SS	6/6	SB-8-20	50/6"	0.0	moist	
25	Brown SILTY SAND, fine-coarse sand, dense	SM	SS	18/18	SB-8-25	15-16-19	0.0	wet	 Temporary well set from 20-30 feet bgs
30	Brown SILTY SAND with gravel, fine-coarse sand, fine-coarse subrounded gravel with cobbles up to 2", dense	SM	SS		SB-8-30	13-13-14	0.0	wet	
	Total Depth: 31.5 feet bgs. Groundwater encountered at 24.5 feet bgs								
35									

Explanation

 Groundwater level at time of drilling



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

Orion Environmental Services

Nelson Miles
34004 9th Ave S
Federal Way, WA 98003

RE: 4550 Fauntleroy Health Clinic
Work Order Number: 1805051

May 04, 2018

Attention Nelson Miles:

Fremont Analytical, Inc. received 2 sample(s) on 5/4/2018 for the analyses presented in the following report.

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,

A handwritten signature in black ink, appearing to read "Mike C. Ridgeway", written in a cursive style.

Mike Ridgeway
Laboratory Director



CLIENT: Orion Environmental Services
Project: 4550 Fauntleroy Health Clinic
Work Order: 1805051

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1805051-001	Exam Room #3	05/03/2018 11:19 AM	05/04/2018 8:00 AM
1805051-002	Storage Room	05/03/2018 11:20 AM	05/04/2018 8:00 AM



CLIENT: Orion Environmental Services
Project: 4550 Fautleroy Health Clinic

WorkOrder Narrative:

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).

Note: Gasoline reported in ug/m3 should be considered an estimate. The estimated molecular weight of gasoline used in the equation = 100

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 (<20%RSD, <20% Drift or minimum RRF)
- 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
- HEM - Hexane Extractable Material
- ICV - Initial Calibration Verification
- LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
- MB or MBLANK - Method Blank
- MDL - Method Detection Limit
- MS/MSD - Matrix Spike / Matrix Spike Duplicate
- PDS - Post Digestion Spike
- Ref Val - Reference Value
- RL - Reporting Limit
- RPD - Relative Percent Difference
- SD - Serial Dilution
- SGT - Silica Gel Treatment
- SPK - Spike
- Surr - Surrogate



Client: Orion Environmental Services

WorkOrder: 1805051

Project: 4550 Fauntleroy Health Clinic

Client Sample ID: Exam Room #3

Date Sampled: 5/3/2018

Lab ID: 1805051-001A

Date Received: 5/4/2018

Sample Type: Summa Canister

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst	
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)				
1,1,1-Trichloroethane	<0.400	<2.18	0.400	2.18		EPA-TO-15	05/04/2018	BT
1,1,2,2-Tetrachloroethane	<0.300	<2.06	0.300	2.06	I	EPA-TO-15	05/04/2018	BT
CFC-113	<0.400	<3.07	0.400	3.07	I	EPA-TO-15	05/04/2018	BT
1,1,2-Trichloroethane (TCA)	<0.500	<2.73	0.500	2.73	I	EPA-TO-15	05/04/2018	BT
1,1-Dichloroethane	<0.200	<0.810	0.200	0.810		EPA-TO-15	05/04/2018	BT
1,1-Dichloroethene (DCE)	<0.400	<1.59	0.400	1.59		EPA-TO-15	05/04/2018	BT
1,2,4-Trichlorobenzene	<0.300	<2.23	0.300	2.23	I	EPA-TO-15	05/04/2018	BT
1,2,4-Trimethylbenzene	0.876	4.31	0.300	1.47	I	EPA-TO-15	05/04/2018	BT
1,2-Dibromoethane (EDB)	<0.200	<1.54	0.200	1.54	I	EPA-TO-15	05/04/2018	BT
1,2-Dichlorobenzene	<0.400	<2.40	0.400	2.40	I	EPA-TO-15	05/04/2018	BT
1,2-Dichloroethane	<0.200	<0.809	0.200	0.809		EPA-TO-15	05/04/2018	BT
1,2-Dichloropropane	<0.500	<2.31	0.500	2.31	I	EPA-TO-15	05/04/2018	BT
1,3,5-Trimethylbenzene	2.24	11.0	0.300	1.47	I	EPA-TO-15	05/04/2018	BT
1,3-Butadiene	<0.500	<1.11	0.500	1.11		EPA-TO-15	05/04/2018	BT
1,3-Dichlorobenzene	<0.300	<1.80	0.300	1.80	I	EPA-TO-15	05/04/2018	BT
1,4-Dichlorobenzene	<0.300	<1.80	0.300	1.80	I	EPA-TO-15	05/04/2018	BT
1,4-Dioxane	<0.400	<1.44	0.400	1.44	I	EPA-TO-15	05/04/2018	BT
(MEK) 2-Butanone	1.97	5.80	1.00	2.95	*	EPA-TO-15	05/04/2018	BT
2-Hexanone	<1.00	<4.10	1.00	4.10	I	EPA-TO-15	05/04/2018	BT
Isopropyl Alcohol	97.9	241	10.0	24.6	*	EPA-TO-15	05/04/2018	BT
4-Methyl-2-pentanone (MIBK)	<1.00	<4.10	1.00	4.10	I	EPA-TO-15	05/04/2018	BT
Acetone	8.57	20.4	1.00	2.38		EPA-TO-15	05/04/2018	BT
Acrolein	<0.500	<1.15	0.500	1.15		EPA-TO-15	05/04/2018	BT
Benzene	0.282	0.902	0.0895	0.286		EPA-TO-15	05/04/2018	BT
Benzyl chloride	<0.500	<2.59	0.500	2.59	I	EPA-TO-15	05/04/2018	BT
Dichlorobromomethane	<0.300	<2.01	0.300	2.01	I	EPA-TO-15	05/04/2018	BT
Bromoform	<0.200	<2.07	0.200	2.07	I	EPA-TO-15	05/04/2018	BT
Bromomethane	<0.500	<1.94	0.500	1.94		EPA-TO-15	05/04/2018	BT
Carbon disulfide	<1.50	<4.67	1.50	4.67		EPA-TO-15	05/04/2018	BT
Carbon tetrachloride	0.113	0.712	0.0657	0.413		EPA-TO-15	05/04/2018	BT



Client: Orion Environmental Services

WorkOrder: 1805051

Project: 4550 Fauntleroy Health Clinic

Client Sample ID: Exam Room #3

Date Sampled: 5/3/2018

Lab ID: 1805051-001A

Date Received: 5/4/2018

Sample Type: Summa Canister

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst	
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)				
<u>Volatile Organic Compounds by EPA Method TO-15</u>								
Chlorobenzene	<0.200	<0.921	0.200	0.921	I	EPA-TO-15	05/04/2018	BT
Dibromochloromethane	<0.500	<4.26	0.500	4.26	I	EPA-TO-15	05/04/2018	BT
Chloroethane	<0.400	<1.06	0.400	1.06		EPA-TO-15	05/04/2018	BT
Chloroform	<0.200	<0.977	0.200	0.977		EPA-TO-15	05/04/2018	BT
Chloromethane	<0.500	<1.03	0.500	1.03		EPA-TO-15	05/04/2018	BT
cis-1,2-Dichloroethene	<0.200	<0.793	0.200	0.793		EPA-TO-15	05/04/2018	BT
cis-1,3-dichloropropene	<0.400	<1.82	0.400	1.82	I	EPA-TO-15	05/04/2018	BT
Cyclohexane	120	412	4.00	13.8	I	EPA-TO-15	05/04/2018	BT
Dichlorodifluoromethane (CFC-12)	0.655	3.24	0.400	1.98		EPA-TO-15	05/04/2018	BT
Dichlorotetrafluoroethane (CFC-114)	<0.400	<2.80	0.400	2.80		EPA-TO-15	05/04/2018	BT
Ethyl acetate	<1.00	<3.60	1.00	3.60		EPA-TO-15	05/04/2018	BT
Ethylbenzene	0.977	4.24	0.400	1.74	*I	EPA-TO-15	05/04/2018	BT
Gasoline Range Organics	6,430	26,300	10.0	40.9	*	EPA-TO-15	05/04/2018	BT
Heptane	143	574	4.00	16.1	I	EPA-TO-15	05/04/2018	BT
Hexachlorobutadiene	<1.00	<10.7	1.00	10.7	I	EPA-TO-15	05/04/2018	BT
m,p-Xylene	3.47	15.1	0.800	3.47	I	EPA-TO-15	05/04/2018	BT
Methyl methacrylate	<0.400	<1.64	0.400	1.64	I	EPA-TO-15	05/04/2018	BT
Methylene chloride	<2.00	<6.95	2.00	6.95		EPA-TO-15	05/04/2018	BT
Naphthalene	<0.100	<0.524	0.100	0.524	I	EPA-TO-15	05/04/2018	BT
n-Hexane	63.2	223	4.00	14.1		EPA-TO-15	05/04/2018	BT
o-Xylene	1.12	4.86	0.400	1.74	I	EPA-TO-15	05/04/2018	BT
4-Ethyltoluene	1.19	5.85	0.400	1.97	I	EPA-TO-15	05/04/2018	BT
Propylene	<0.400	<0.688	0.400	0.688		EPA-TO-15	05/04/2018	BT
Styrene	<0.400	<1.70	0.400	1.70	I	EPA-TO-15	05/04/2018	BT
Methyl tert-butyl ether (MTBE)	<0.400	<1.44	0.400	1.44		EPA-TO-15	05/04/2018	BT
Tetrachloroethene (PCE)	<0.200	<1.36	0.200	1.36	I	EPA-TO-15	05/04/2018	BT
Tetrahydrofuran	<0.400	<1.18	0.400	1.18		EPA-TO-15	05/04/2018	BT
Toluene	2.47	9.32	0.400	1.51	*I	EPA-TO-15	05/04/2018	BT
trans-1,2-Dichloroethene	<0.200	<0.793	0.200	0.793		EPA-TO-15	05/04/2018	BT
trans-1,3-dichloropropene	<0.500	<2.27	0.500	2.27	I	EPA-TO-15	05/04/2018	BT



Client: Orion Environmental Services

WorkOrder: 1805051

Project: 4550 Fauntleroy Health Clinic

Client Sample ID: Exam Room #3

Date Sampled: 5/3/2018

Lab ID: 1805051-001A

Date Received: 5/4/2018

Sample Type: Summa Canister

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst	
<u>Volatile Organic Compounds by EPA Method TO-15</u>								
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)				
Trichloroethene (TCE)	<0.0649	<0.349	0.0649	0.349	I	EPA-TO-15	05/04/2018	BT
Trichlorofluoromethane (CFC-11)	<0.400	<2.25	0.400	2.25		EPA-TO-15	05/04/2018	BT
Vinyl acetate	<1.00	<3.52	1.00	3.52		EPA-TO-15	05/04/2018	BT
Vinyl chloride	<0.107	<0.274	0.107	0.274		EPA-TO-15	05/04/2018	BT
Surr: 4-Bromofluorobenzene	185 %Rec	--	70-130	--	S	EPA-TO-15	05/04/2018	BT

NOTES:

I - Internal standards were outside of established acceptance criteria. Re-analysis yielded the same result indicating a possible matrix effect.

* - Flagged value is not within established control limits.

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



Client: Orion Environmental Services

WorkOrder: 1805051

Project: 4550 Fauntleroy Health Clinic

Client Sample ID: Storage Room

Date Sampled: 5/3/2018

Lab ID: 1805051-002A

Date Received 5/4/2018

Sample Type: Summa Canister

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst	
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)				
1,1,1-Trichloroethane	<0.400	<2.18	0.400	2.18		EPA-TO-15	05/04/2018	BT
1,1,2,2-Tetrachloroethane	<0.300	<2.06	0.300	2.06	I	EPA-TO-15	05/04/2018	BT
CFC-113	<0.400	<3.07	0.400	3.07	I	EPA-TO-15	05/04/2018	BT
1,1,2-Trichloroethane (TCA)	<0.500	<2.73	0.500	2.73	I	EPA-TO-15	05/04/2018	BT
1,1-Dichloroethane	<0.200	<0.810	0.200	0.810		EPA-TO-15	05/04/2018	BT
1,1-Dichloroethene (DCE)	<0.400	<1.59	0.400	1.59		EPA-TO-15	05/04/2018	BT
1,2,4-Trichlorobenzene	<0.300	<2.23	0.300	2.23	I	EPA-TO-15	05/04/2018	BT
1,2,4-Trimethylbenzene	1.36	6.67	0.300	1.47	I	EPA-TO-15	05/04/2018	BT
1,2-Dibromoethane (EDB)	<0.200	<1.54	0.200	1.54	I	EPA-TO-15	05/04/2018	BT
1,2-Dichlorobenzene	<0.400	<2.40	0.400	2.40	I	EPA-TO-15	05/04/2018	BT
1,2-Dichloroethane	<0.200	<0.809	0.200	0.809		EPA-TO-15	05/04/2018	BT
1,2-Dichloropropane	<0.500	<2.31	0.500	2.31	I	EPA-TO-15	05/04/2018	BT
1,3,5-Trimethylbenzene	2.25	11.0	0.300	1.47	I	EPA-TO-15	05/04/2018	BT
1,3-Butadiene	<0.500	<1.11	0.500	1.11		EPA-TO-15	05/04/2018	BT
1,3-Dichlorobenzene	<0.300	<1.80	0.300	1.80	I	EPA-TO-15	05/04/2018	BT
1,4-Dichlorobenzene	<0.300	<1.80	0.300	1.80	I	EPA-TO-15	05/04/2018	BT
1,4-Dioxane	<0.400	<1.44	0.400	1.44	I	EPA-TO-15	05/04/2018	BT
(MEK) 2-Butanone	2.69	7.94	1.00	2.95	*	EPA-TO-15	05/04/2018	BT
2-Hexanone	<1.00	<4.10	1.00	4.10	I	EPA-TO-15	05/04/2018	BT
Isopropyl Alcohol	137	336	10.0	24.6	*	EPA-TO-15	05/04/2018	BT
4-Methyl-2-pentanone (MIBK)	<1.00	<4.10	1.00	4.10	I	EPA-TO-15	05/04/2018	BT
Acetone	12.4	29.5	1.00	2.38		EPA-TO-15	05/04/2018	BT
Acrolein	<0.500	<1.15	0.500	1.15		EPA-TO-15	05/04/2018	BT
Benzene	0.305	0.974	0.0895	0.286		EPA-TO-15	05/04/2018	BT
Benzyl chloride	<0.500	<2.59	0.500	2.59	I	EPA-TO-15	05/04/2018	BT
Dichlorobromomethane	<0.300	<2.01	0.300	2.01	I	EPA-TO-15	05/04/2018	BT
Bromoform	<0.200	<2.07	0.200	2.07	I	EPA-TO-15	05/04/2018	BT
Bromomethane	<0.500	<1.94	0.500	1.94		EPA-TO-15	05/04/2018	BT
Carbon disulfide	<1.50	<4.67	1.50	4.67		EPA-TO-15	05/04/2018	BT
Carbon tetrachloride	0.0909	0.572	0.0657	0.413		EPA-TO-15	05/04/2018	BT



Client: Orion Environmental Services

WorkOrder: 1805051

Project: 4550 Fauntleroy Health Clinic

Client Sample ID: Storage Room

Date Sampled: 5/3/2018

Lab ID: 1805051-002A

Date Received: 5/4/2018

Sample Type: Summa Canister

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst	
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)				
<u>Volatile Organic Compounds by EPA Method TO-15</u>								
Chlorobenzene	<0.200	<0.921	0.200	0.921	I	EPA-TO-15	05/04/2018	BT
Dibromochloromethane	<0.500	<4.26	0.500	4.26	I	EPA-TO-15	05/04/2018	BT
Chloroethane	<0.400	<1.06	0.400	1.06		EPA-TO-15	05/04/2018	BT
Chloroform	<0.200	<0.977	0.200	0.977		EPA-TO-15	05/04/2018	BT
Chloromethane	<0.500	<1.03	0.500	1.03		EPA-TO-15	05/04/2018	BT
cis-1,2-Dichloroethene	<0.200	<0.793	0.200	0.793		EPA-TO-15	05/04/2018	BT
cis-1,3-dichloropropene	<0.400	<1.82	0.400	1.82	I	EPA-TO-15	05/04/2018	BT
Cyclohexane	305	1,050	4.00	13.8	I	EPA-TO-15	05/04/2018	BT
Dichlorodifluoromethane (CFC-12)	0.553	2.73	0.400	1.98		EPA-TO-15	05/04/2018	BT
Dichlorotetrafluoroethane (CFC-114)	<0.400	<2.80	0.400	2.80		EPA-TO-15	05/04/2018	BT
Ethyl acetate	<1.00	<3.60	1.00	3.60		EPA-TO-15	05/04/2018	BT
Ethylbenzene	2.07	8.98	0.400	1.74	*I	EPA-TO-15	05/04/2018	BT
Gasoline Range Organics	7,920	32,400	10.0	40.9	*	EPA-TO-15	05/04/2018	BT
Heptane	234	938	4.00	16.1	I	EPA-TO-15	05/04/2018	BT
Hexachlorobutadiene	<1.00	<10.7	1.00	10.7	I	EPA-TO-15	05/04/2018	BT
m,p-Xylene	8.42	36.6	0.800	3.47	I	EPA-TO-15	05/04/2018	BT
Methyl methacrylate	<0.400	<1.64	0.400	1.64	I	EPA-TO-15	05/04/2018	BT
Methylene chloride	<2.00	<6.95	2.00	6.95		EPA-TO-15	05/04/2018	BT
Naphthalene	<0.100	<0.524	0.100	0.524	I	EPA-TO-15	05/04/2018	BT
n-Hexane	132	466	4.00	14.1		EPA-TO-15	05/04/2018	BT
o-Xylene	3.80	16.5	0.400	1.74	I	EPA-TO-15	05/04/2018	BT
4-Ethyltoluene	1.29	6.36	0.400	1.97	I	EPA-TO-15	05/04/2018	BT
Propylene	<0.400	<0.688	0.400	0.688		EPA-TO-15	05/04/2018	BT
Styrene	<0.400	<1.70	0.400	1.70	I	EPA-TO-15	05/04/2018	BT
Methyl tert-butyl ether (MTBE)	<0.400	<1.44	0.400	1.44		EPA-TO-15	05/04/2018	BT
Tetrachloroethene (PCE)	<0.200	<1.36	0.200	1.36	I	EPA-TO-15	05/04/2018	BT
Tetrahydrofuran	<0.400	<1.18	0.400	1.18		EPA-TO-15	05/04/2018	BT
Toluene	5.25	19.8	0.400	1.51	*I	EPA-TO-15	05/04/2018	BT
trans-1,2-Dichloroethene	<0.200	<0.793	0.200	0.793		EPA-TO-15	05/04/2018	BT
trans-1,3-dichloropropene	<0.500	<2.27	0.500	2.27	I	EPA-TO-15	05/04/2018	BT



Client: Orion Environmental Services

WorkOrder: 1805051

Project: 4550 Fauntleroy Health Clinic

Client Sample ID: Storage Room

Date Sampled: 5/3/2018

Lab ID: 1805051-002A

Date Received: 5/4/2018

Sample Type: Summa Canister

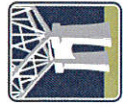
Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst	
<u>Volatile Organic Compounds by EPA Method TO-15</u>								
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)				
Trichloroethene (TCE)	<0.0649	<0.349	0.0649	0.349	I	EPA-TO-15	05/04/2018	BT
Trichlorofluoromethane (CFC-11)	<0.400	<2.25	0.400	2.25		EPA-TO-15	05/04/2018	BT
Vinyl acetate	<1.00	<3.52	1.00	3.52		EPA-TO-15	05/04/2018	BT
Vinyl chloride	<0.107	<0.274	0.107	0.274		EPA-TO-15	05/04/2018	BT
Surr: 4-Bromofluorobenzene	182 %Rec	--	70-130	--	S	EPA-TO-15	05/04/2018	BT

NOTES:

I - Internal standards were outside of established acceptance criteria. Re-analysis yielded the same result indicating a possible matrix effect.

* - Flagged value is not within established control limits.

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



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Date: 5/4/2018

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method TO-15

Work Order: 1805051
CLIENT: Orion Environmental Services
Project: 4550 Fauntleroy Health Clinic

Sample ID	VOC LCS-R43289	SampType: LCS	Batch ID: R43289	Units: ppbv	Prep Date: 5/3/2018	RunNo: 43289	Analysis Date: 5/3/2018	SeqNo: 836723	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual			
Gasoline Range Organics	96.9	1.00	72.00	0	135	70	130							S
Propylene	3.14	0.400	2.000	0	157	70	130							S
Dichlorodifluoromethane (CFC-12)	2.24	0.400	2.000	0	112	70	130							
Chloromethane	2.02	0.500	2.000	0	101	70	130							
Dichlorotetrafluoroethane (CFC-114)	2.10	0.400	2.000	0	105	70	130							
Vinyl chloride	1.69	0.107	2.000	0	84.5	70	130							
1,3-Butadiene	1.59	0.500	2.000	0	79.4	70	130							
Bromomethane	1.90	0.500	2.000	0	95.0	70	130							
Trichlorofluoromethane (CFC-11)	2.28	0.400	2.000	0	114	70	130							
Chloroethane	2.12	0.400	2.000	0	106	70	130							
Acrolein	2.27	0.500	2.000	0	113	70	130							
1,1-Dichloroethene (DCE)	2.26	0.400	2.000	0	113	70	130							
Acetone	2.41	1.00	2.000	0	121	70	130							
Isopropyl Alcohol	3.18	1.00	2.000	0	159	70	130							S
Methylene chloride	2.55	2.00	2.000	0	127	70	130							
Carbon disulfide	2.27	1.50	2.000	0	114	70	130							
trans-1,2-Dichloroethene	2.25	0.200	2.000	0	113	70	130							
Methyl tert-butyl ether (MTBE)	2.43	0.400	2.000	0	122	70	130							
n-Hexane	2.14	0.400	2.000	0	107	70	130							
1,1-Dichloroethane	2.23	0.200	2.000	0	111	70	130							
Vinyl acetate	2.32	1.00	2.000	0	116	70	130							
cis-1,2-Dichloroethene	2.38	0.200	2.000	0	119	70	130							
(MEK) 2-Butanone	3.49	1.00	2.000	0	175	70	130							S
Ethyl acetate	2.24	1.00	2.000	0	112	70	130							
Chloroform	2.24	0.200	2.000	0	112	70	130							
Tetrahydrofuran	2.21	0.400	2.000	0	111	70	130							
1,1,1-Trichloroethane	2.19	0.400	2.000	0	110	70	130							
Carbon tetrachloride	2.27	0.0657	2.000	0	114	70	130							
1,2-Dichloroethane	2.21	0.200	2.000	0	110	70	130							
Benzene	2.29	0.0895	2.000	0	115	70	130							
Cyclohexane	2.27	0.400	2.000	0	113	70	130							



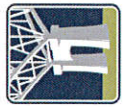
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Analytical

Date: 5/4/2018

Work Order: 1805051
CLIENT: Orion Environmental Services
Project: 4550 Fauntleroy Health Clinic

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method TO-15

Sample ID	VOC LCS-R43289	SampType: LCS	Units: ppbv	Prep Date: 5/3/2018	RunNo: 43289						
Client ID: LCSW	Batch ID: R43289	Result	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Analyte		Result	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Trichloroethene (TCE)		2.32	2.000	0	116	70	130				
1,2-Dichloropropane		2.33	2.000	0	117	70	130				
Methyl methacrylate		2.26	2.000	0	113	70	130				
Dichlorobromomethane		2.26	2.000	0	113	70	130				
1,4-Dioxane		2.27	2.000	0	114	70	130				
cis-1,3-dichloropropene		2.34	2.000	0	117	70	130				
Toluene		3.09	2.000	0	154	70	130				S
trans-1,3-dichloropropene		2.36	2.000	0	118	70	130				
1,1,2-Trichloroethane (TCA)		2.21	2.000	0	110	70	130				
Tetrachloroethene (PCE)		2.42	2.000	0	121	70	130				
Dibromochloromethane		2.38	2.000	0	119	70	130				
1,2-Dibromoethane (EDB)		2.34	2.000	0	117	70	130				
Chlorobenzene		2.46	2.000	0	123	70	130				
Ethylbenzene		2.63	2.000	0	131	70	130				S
m,p-Xylene		5.20	4.000	0	130	70	130				
o-Xylene		2.56	2.000	0	128	70	130				
Styrene		2.56	2.000	0	128	70	130				
Bromoform		2.50	2.000	0	125	70	130				
1,1,2,2-Tetrachloroethane		2.36	2.000	0	118	70	130				
1,3,5-Trimethylbenzene		2.52	2.000	0	126	70	130				
1,2,4-Trimethylbenzene		2.32	2.000	0	116	70	130				
Benzyl chloride		1.64	2.000	0	82.0	70	130				
4-Ethyltoluene		2.56	2.000	0	128	70	130				
1,3-Dichlorobenzene		2.36	2.000	0	118	70	130				
1,4-Dichlorobenzene		2.30	2.000	0	115	70	130				
1,2-Dichlorobenzene		2.33	2.000	0	116	70	130				
1,2,4-Trichlorobenzene		1.86	2.000	0	93.1	70	130				
Hexachlorobutadiene		2.20	2.000	0	110	70	130				
Naphthalene		1.76	2.000	0	87.8	70	130				
2-Hexanone		2.25	2.000	0	113	70	130				
4-Methyl-2-pentanone (MIBK)		2.39	2.000	0	120	70	130				



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Date: 5/4/2018

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method TO-15

Work Order: 1805051
CLIENT: Orion Environmental Services
Project: 4550 Fauntleroy Health Clinic

Sample ID: **VOC LCS-R43289** SampType: **LCS** Units: **ppbv** Prep Date: **5/3/2018** RunNo: **43289**
Client ID: **LCSW** Batch ID: **R43289** Analysis Date: **5/3/2018** SeqNo: **836723**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
CFC-113	2.36	0.400	2.000	0	118	70	130				
Heptane	2.50	0.400	2.000	0	125	70	130				
Surr: 4-Bromofluorobenzene	3.93		4.000		98.3	70	130				

NOTES:

S - Outlying spike recovery observed (high bias). Detections will be qualified with a *.

Sample ID: **MBLK-R43289** SampType: **MBLK** Units: **ppbv** Prep Date: **5/4/2018** RunNo: **43289**
Client ID: **MBLKW** Batch ID: **R43289** Analysis Date: **5/4/2018** SeqNo: **836724**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics	ND	1.00									
Propylene	ND	0.400									
Dichlorodifluoromethane (CFC-12)	ND	0.400									
Chloromethane	ND	0.500									
Dichlorotetrafluoroethane (CFC-114)	ND	0.400									
Vinyl chloride	ND	0.107									
1,3-Butadiene	ND	0.500									
Bromomethane	ND	0.500									
Trichlorofluoromethane (CFC-11)	ND	0.400									
Chloroethane	ND	0.400									
Acrolein	ND	0.500									
1,1-Dichloroethene (DCE)	ND	0.400									
Acetone	ND	1.00									
Isopropyl Alcohol	ND	1.00									
Methylene chloride	ND	2.00									
Carbon disulfide	ND	1.50									
trans-1,2-Dichloroethene	ND	0.200									
Methyl tert-butyl ether (MTBE)	ND	0.400									
n-Hexane	ND	0.400									
1,1-Dichloroethane	ND	0.200									
Vinyl acetate	ND	1.00									



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Date: 5/4/2018

Work Order: 1805051
CLIENT: Orion Environmental Services
Project: 4550 Fauntleroy Health Clinic

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method TO-15

Sample ID	MBLK-R43289	Sample Type: MBLK	Units: ppbv	Prep Date: 5/4/2018	RunNo: 43289						
Client ID:	MBLKW	Batch ID: R43289		Analysis Date: 5/4/2018	SeqNo: 836724						
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
cis-1,2-Dichloroethene (MEK) 2-Butanone	ND	0.200									
Ethyl acetate	ND	1.00									
Chloroform	ND	1.00									
Tetrahydrofuran	ND	0.200									
1,1,1-Trichloroethane	ND	0.400									
Carbon tetrachloride	ND	0.400									
1,2-Dichloroethane	ND	0.0657									
Benzene	ND	0.200									
Cyclohexane	ND	0.0895									
Trichloroethene (TCE)	ND	0.400									
1,2-Dichloropropane	ND	0.0649									
Methyl methacrylate	ND	0.500									
Dichlorobromomethane	ND	0.400									
1,4-Dioxane	ND	0.400									
cis-1,3-dichloropropene	ND	0.400									
Toluene	ND	0.400									
trans-1,3-dichloropropene	ND	0.500									
1,1,2-Trichloroethane (TCA)	ND	0.500									
Tetrachloroethene (PCE)	ND	0.200									
Dibromochloromethane	ND	0.500									
1,2-Dibromoethane (EDB)	ND	0.200									
Chlorobenzene	ND	0.200									
Ethylbenzene	ND	0.400									
m,p-Xylene	ND	0.800									
o-Xylene	ND	0.400									
Styrene	ND	0.400									
Bromoform	ND	0.200									
1,1,2,2-Tetrachloroethane	ND	0.300									
1,3,5-Trimethylbenzene	ND	0.300									
1,2,4-Trimethylbenzene	ND	0.300									



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Analytical

Date: 5/4/2018

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method TO-15

Work Order: 1805051
CLIENT: Orion Environmental Services
Project: 4550 Fauntleroy Health Clinic

Sample ID	MBLK-R43289	SampType:	MBLK	Units:	ppbv	Prep Date:	5/4/2018	RunNo:	43289		
Client ID:	MBLKW	Batch ID:	R43289			Analysis Date:	5/4/2018	SeqNo:	836724		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Benzyl chloride	ND	0.500									
4-Ethyltoluene	ND	0.400									
1,3-Dichlorobenzene	ND	0.300									
1,4-Dichlorobenzene	ND	0.300									
1,2-Dichlorobenzene	ND	0.400									
1,2,4-Trichlorobenzene	ND	0.300									
Hexachlorobutadiene	ND	1.00									
Naphthalene	ND	0.100									
2-Hexanone	ND	1.00									
4-Methyl-2-pentanone (MIBK)	ND	1.00									
CFC-113	ND	0.400									
Heptane	ND	0.400									
Surr: 4-Bromofluorobenzene	3.78		4.000		94.6	70	130				

Sample ID	1805051-001AREP	SampType:	REP	Units:	ppbv	Prep Date:	5/4/2018	RunNo:	43289		
Client ID:	Exam Room #3	Batch ID:	R43289			Analysis Date:	5/4/2018	SeqNo:	836726		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline Range Organics	2,690	1.00						2,655	1.18	30	E*
Propylene	ND	0.400						0		30	
Dichlorodifluoromethane (CFC-12)	0.573	0.400						0.6550	13.4	30	
Chloromethane	ND	0.500						0		30	
Dichlorotetrafluoroethane (CFC-114)	ND	0.400						0		30	
Vinyl chloride	ND	0.107						0		30	
1,3-Butadiene	ND	0.500						0		30	
Bromomethane	ND	0.500						0		30	
Trichlorofluoromethane (CFC-11)	ND	0.400						0		30	
Chloroethane	ND	0.400						0		30	
Acrolein	ND	0.500						0		30	
1,1-Dichloroethene (DCE)	ND	0.400						0		30	

Original



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Analytical

Date: 5/4/2018

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method TO-15

Work Order: 1805051
CLIENT: Orion Environmental Services
Project: 4550 Fauntleroy Health Clinic

Sample ID: 1805051-001AREP **SampType:** REP **Units:** ppbv **Prep Date:** 5/4/2018 **RunNo:** 43289
Client ID: Exam Room #3 **Batch ID:** R43289 **Analysis Date:** 5/4/2018 **SeqNo:** 836726

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acetone	7.40	1.00						8.571	14.7	30	
Isopropyl Alcohol	90.3	1.00						102.4	12.6	30	E*
Methylene chloride	ND	2.00						0		30	
Carbon disulfide	ND	1.50						0		30	
trans-1,2-Dichloroethene	ND	0.200						0		30	
Methyl tert-butyl ether (MTBE)	ND	0.400						0		30	
n-Hexane	63.9	0.400						74.64	15.5	30	E
1,1-Dichloroethane	ND	0.200						0		30	
Vinyl acetate	ND	1.00						0		30	
cis-1,2-Dichloroethene (MEK) 2-Butanone	ND	0.200						0		30	
Ethyl acetate	1.76	1.00						1.966	10.9	30	*
Chloroform	ND	1.00						0		30	
Tetrahydrofuran	ND	0.200						0		30	
1,1,1-Trichloroethane	ND	0.400						0		30	
Carbon tetrachloride	0.0982	0.0657						0.1131	14.1	30	
1,2-Dichloroethane	ND	0.200						0		30	
Benzene	0.250	0.0895						0.2825	12.3	30	
Cyclohexane	84.2	0.400						122.0	36.7	30	REI
Trichloroethene (TCE)	ND	0.0649						0		30	I
1,2-Dichloropropane	ND	0.500						0		30	I
Methyl methacrylate	ND	0.400						0		30	I
Dichlorobromomethane	ND	0.300						0		30	I
1,4-Dioxane	ND	0.400						0		30	I
cis-1,3-dichloropropene	ND	0.400						0		30	I
Toluene	1.83	0.400						2.474	29.8	30	*I
trans-1,3-dichloropropene	ND	0.500						0		30	I
1,1,2-Trichloroethane (TCA)	ND	0.500						0		30	I
Tetrachloroethene (PCE)	ND	0.200						0		30	I
Dibromochloromethane	ND	0.500						0		30	I
1,2-Dibromoethane (EDB)	ND	0.200						0		30	I



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Date: 5/4/2018

Work Order: 1805051

CLIENT: Orion Environmental Services

Project: 4550 Fautleroy Health Clinic

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method TO-15

Sample ID	1805051-001AREP	SampType: REP	Units: ppbv	Prep Date: 5/4/2018	RunNo: 43289		
Client ID:	Exam Room #3	Batch ID: R43289	%REC	Analysis Date: 5/4/2018	SeqNo: 836726		
Analyte	Result	RL	SPK value	SPK Ref Val	%RPD	RPDLimit	Qual
Chlorobenzene	ND	0.200		0		30	I
Ethylbenzene	1.06	0.400		0.9767	8.01	30	*I
m,p-Xylene	3.62	0.800		3.472	4.10	30	I
o-Xylene	1.17	0.400		1.118	4.75	30	I
Styrene	ND	0.400		0		30	I
Bromoform	ND	0.200		0		30	I
1,1,2,2-Tetrachloroethane	ND	0.300		0		30	I
1,3,5-Trimethylbenzene	2.24	0.300		2.239	0.0433	30	I
1,2,4-Trimethylbenzene	0.887	0.300		0.8758	1.27	30	I
Benzyl chloride	ND	0.500		0		30	I
4-Ethyltoluene	1.22	0.400		1.191	2.18	30	I
1,3-Dichlorobenzene	ND	0.300		0		30	I
1,4-Dichlorobenzene	ND	0.300		0		30	I
1,2-Dichlorobenzene	ND	0.400		0		30	I
1,2,4-Trichlorobenzene	ND	0.300		0		30	I
Hexachlorobutadiene	ND	1.00		0		30	I
Naphthalene	ND	0.100		0		30	I
2-Hexanone	ND	1.00		0		30	I
4-Methyl-2-pentanone (MIBK)	ND	1.00		0		30	I
CFC-113	ND	0.400		0		30	I
Heptane	114	0.400		112.4	1.35	30	EI
Surr: 4-Bromofluorobenzene	21.7		4.000		0		S

NOTES:

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

R - High RPD observed.

I - Internal standards were outside of established acceptance criteria. Re-analysis yielded the same result indicating a possible matrix effect.

E - Estimated value. The amount exceeds the linear working range of the instrument.

* - Flagged value is not within established control limits.



Sample Log-In Check List

Client Name: ORIONES	Work Order Number: 1805051
Logged by: Clare Griggs	Date Received: 5/4/2018 8:00:00 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
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 Required
6. Was an attempt made to cool the samples? Yes No NA
7. Were all items received at a temperature of >0°C to 10.0°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)

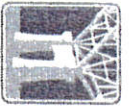
18. Was client notified of all discrepancies with this order? Yes No NA

Person Notified:	Nelson Miles	Date:	5/4/2018
By Whom:	Clare Griqqs	Via:	<input checked="" type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	Project name? Confirming analysis.		
Client Instructions:	Add Gasoline. See revised COC.		

19. Additional remarks:

Item Information

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



Fremont
 Analytical Services

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

Air Chain of Custody Record & Laboratory Services Agreement

Date: 5/14/18 Page: 1 of 1

Laboratory Project No (Internal): 1805051

Special Remarks:

Client: Orion Environmental

Project No:

Address: 3400 4th Ave S

Location:

City, State, Zip: Federal Way, WA

Collected by: Barry Brown

Telephone: 253-952-6717

Reports to (PM): Nelson Miles

Fax:

Email (PM): nmiles@comcast.net

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 Date & Time	Sample Type (Matrix) *	Container Type **	Fill Time / Flow Rate	Internal		Analysis							Comments	Internal Final Pressure (Hg)	
						Initial Evacuation Pressure (mtorr)	Field Initial Sample Pressure (”Hg)	Field Final Sample Pressure (”Hg)	VOCs TO15 SCAN	VOCs TO15 SCAN LL	VOCs TO15 SIM	Siloxanes TO15	Sulfur TO15	Sulfur Ext TO15			APH TO15
Exam Room #3	13963	05-03-18 11:19 AM		6L	8hr	10 mtorr		6/7									7 ”Hg
Storage Room	17648	05-03-18 11:20 AM		6L	8hr	10 mtorr		8/2									8 ”Hg
	FR8-25	05-03-18 2:00 PM															

* Matrix Codes: AA = Ambient Air IA = Indoor Air L = Landfill S = Subslab / Soil Gas

** 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

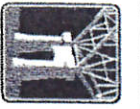
I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above, that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Relinquished Date/Time: 5/14/18 08:00
 Relinquished By: Michael McKee

Received Date/Time: 05/16/18
 Received By: [Signature]

Received Date/Time: 04/05/04/2016

Turn-Around Time:
 Standard
 3 Day
 2 Day
 Next Day
 ASAP
 Same Day (Specify)



Fremont
ANALYTICAL

3500 Fremont Ave. N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Air Chain of Custody Record & Laboratory Services Agreement

Client: Orion Environmental

Address: 3400 4th Ave S

City, State, Zip: Federal Way, WA

Telephone: (253) 952-6717

Fax:

Date: 5/4/18

Page: 1 of 1

Project Name: ~~1550~~ Faunherrey Health Clinic

Project No:

Location:

Collected by: Barry Brown

Reports to (PM): Nelson Miles

Email (PM): nmiles@conores.net

Laboratory Project No (Internal): 1805051

Special Remarks: edit per N.M. 5/4/18 cgy

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 Date & Time	Sample Type (Matrix) *	Container Type **	Fill Time / Flow Rate	Initial Evacuation Pressure (mtorr)	Field Initial Sample Pressure ("Hg)	Field Final Sample Pressure ("Hg)	Analysis						Comments	Final Pressure ("Hg)
									VOCs TO15 SCAN	VOCs TO15 SCAN LL	VOCs TO15 SIM	Siloxanes TO15	Sulfur TO15	Sulfur Ext. TO15		
Exam Room #3	13968	05-03-18 11:19 AM		6L	8hr	10 mtorr		6/7								7 "Hg
	FRE-09	05-03-18 7:19 PM				4/25/2018										
Storage Room	17648	05-03-18 11:20 AM		6L	8hr	10 mtorr		8/2								9 "Hg
	FRE-25	05-03-18 7:20 PM				4/25/2018										

Turn-Around Time:

- Standard
- 2 Day
- 3 Day
- Next Day
- Same Day

ASAP (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: Michael McKee
Date/Time: 5/4/18 08:00

Received: [Signature]
Date/Time: 04/05/04/2018



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

Orion Environmental Services
Donna McNeal
34004 9th Ave S
Federal Way, WA 98003

RE: 4550 Fauntleroy Health
Work Order Number: 1805338

May 29, 2018

Attention Donna McNeal:

Fremont Analytical, Inc. received 2 sample(s) on 5/24/2018 for the analyses presented in the following report.

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,

A handwritten signature in black ink, appearing to read "Mike C. Ridgeway".

Mike Ridgeway
Laboratory Director



Date: 05/29/2018

CLIENT: Orion Environmental Services
Project: 4550 Fauntleroy Health
Work Order: 1805338

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1805338-001	FR8-12 Exam Room 3	05/23/2018 9:35 AM	05/24/2018 12:46 PM
1805338-002	FR8-7 Back Office Pod	05/23/2018 9:40 AM	05/24/2018 12:46 PM



Case Narrative

WO#: 1805338

Date: 5/29/2018

CLIENT: Orion Environmental Services

Project: 4550 Fauntleroy Health

WorkOrder Narrative:

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).

Note: Gasoline reported in ug/m3 should be considered an estimate. The estimated molecular weight of gasoline used in the equation = 100

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 (<20%RSD, <20% Drift or minimum RRF)
- 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
- HEM - Hexane Extractable Material
- ICV - Initial Calibration Verification
- LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
- MB or MBLANK - Method Blank
- MDL - Method Detection Limit
- MS/MSD - Matrix Spike / Matrix Spike Duplicate
- PDS - Post Digestion Spike
- Ref Val - Reference Value
- RL - Reporting Limit
- RPD - Relative Percent Difference
- SD - Serial Dilution
- SGT - Silica Gel Treatment
- SPK - Spike
- Surr - Surrogate



Client: Orion Environmental Services

WorkOrder: 1805338

Project: 4550 Fautleroy Health

Client Sample ID: FR8-12 Exam Room 3

Date Sampled: 5/23/2018

Lab ID: 1805338-001A

Date Received: 5/24/2018

Sample Type: Summa Canister

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)			
1,1,1-Trichloroethane	<0.400	<2.18	0.400	2.18		EPA-TO-15	05/25/2018 BT
1,1,1,2-Tetrachloroethane	<0.300	<2.06	0.300	2.06		EPA-TO-15	05/25/2018 BT
CFC-113	<0.400	<3.07	0.400	3.07		EPA-TO-15	05/25/2018 BT
1,1,2-Trichloroethane (TCA)	<0.500	<2.73	0.500	2.73		EPA-TO-15	05/25/2018 BT
1,1-Dichloroethane	<0.200	<0.810	0.200	0.810		EPA-TO-15	05/25/2018 BT
1,1-Dichloroethene (DCE)	<0.400	<1.59	0.400	1.59		EPA-TO-15	05/25/2018 BT
1,2,4-Trichlorobenzene	<0.300	<2.23	0.300	2.23		EPA-TO-15	05/25/2018 BT
1,2,4-Trimethylbenzene	<0.300	<1.47	0.300	1.47		EPA-TO-15	05/25/2018 BT
1,2-Dibromoethane (EDB)	<0.200	<1.54	0.200	1.54		EPA-TO-15	05/25/2018 BT
1,2-Dichlorobenzene	<0.400	<2.40	0.400	2.40		EPA-TO-15	05/25/2018 BT
1,2-Dichloroethane	<0.200	<0.809	0.200	0.809		EPA-TO-15	05/25/2018 BT
1,2-Dichloropropane	<0.500	<2.31	0.500	2.31		EPA-TO-15	05/25/2018 BT
1,3,5-Trimethylbenzene	<0.300	<1.47	0.300	1.47		EPA-TO-15	05/25/2018 BT
1,3-Butadiene	<0.500	<1.11	0.500	1.11		EPA-TO-15	05/25/2018 BT
1,3-Dichlorobenzene	<0.300	<1.80	0.300	1.80		EPA-TO-15	05/25/2018 BT
1,4-Dichlorobenzene	<0.300	<1.80	0.300	1.80		EPA-TO-15	05/25/2018 BT
1,4-Dioxane	<0.400	<1.44	0.400	1.44		EPA-TO-15	05/25/2018 BT
(MEK) 2-Butanone	313	924	12.5	36.9		EPA-TO-15	05/25/2018 BT
2-Hexanone	<1.00	<4.10	1.00	4.10		EPA-TO-15	05/25/2018 BT
Isopropyl Alcohol	195	479	12.5	30.7	*	EPA-TO-15	05/25/2018 BT
4-Methyl-2-pentanone (MIBK)	<1.00	<4.10	1.00	4.10		EPA-TO-15	05/25/2018 BT
Acetone	175	416	12.5	29.7		EPA-TO-15	05/25/2018 BT
Acrolein	<0.500	<1.15	0.500	1.15		EPA-TO-15	05/25/2018 BT
Benzene	0.196	0.628	0.0895	0.286		EPA-TO-15	05/25/2018 BT
Benzyl chloride	<0.500	<2.59	0.500	2.59		EPA-TO-15	05/25/2018 BT
Dichlorobromomethane	<0.300	<2.01	0.300	2.01		EPA-TO-15	05/25/2018 BT
Bromoform	<0.200	<2.07	0.200	2.07		EPA-TO-15	05/25/2018 BT
Bromomethane	<0.500	<1.94	0.500	1.94		EPA-TO-15	05/25/2018 BT
Carbon disulfide	<1.50	<4.67	1.50	4.67		EPA-TO-15	05/25/2018 BT
Carbon tetrachloride	<0.0657	<0.413	0.0657	0.413		EPA-TO-15	05/25/2018 BT



Client: Orion Environmental Services

WorkOrder: 1805338

Project: 4550 Fauntleroy Health

Client Sample ID: FR8-12 Exam Room 3

Date Sampled: 5/23/2018

Lab ID: 1805338-001A

Date Received: 5/24/2018

Sample Type: Summa Canister

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst	
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)				
Chlorobenzene	<0.200	<0.921	0.200	0.921		EPA-TO-15	05/25/2018	BT
Dibromochloromethane	<0.500	<4.26	0.500	4.26		EPA-TO-15	05/25/2018	BT
Chloroethane	<0.400	<1.06	0.400	1.06		EPA-TO-15	05/25/2018	BT
Chloroform	<0.200	<0.977	0.200	0.977		EPA-TO-15	05/25/2018	BT
Chloromethane	<0.500	<1.03	0.500	1.03		EPA-TO-15	05/25/2018	BT
cis-1,2-Dichloroethene	<0.200	<0.793	0.200	0.793		EPA-TO-15	05/25/2018	BT
cis-1,3-dichloropropene	<0.400	<1.82	0.400	1.82		EPA-TO-15	05/25/2018	BT
Cyclohexane	2.56	8.81	0.400	1.38		EPA-TO-15	05/25/2018	BT
Dichlorodifluoromethane (CFC-12)	<0.400	<1.98	0.400	1.98		EPA-TO-15	05/25/2018	BT
Dichlorotetrafluoroethane (CFC-114)	<0.400	<2.80	0.400	2.80		EPA-TO-15	05/25/2018	BT
Ethyl acetate	<1.00	<3.60	1.00	3.60		EPA-TO-15	05/25/2018	BT
Ethylbenzene	<0.400	<1.74	0.400	1.74		EPA-TO-15	05/25/2018	BT
Gasoline Range Organics	268	1,100	12.5	51.1	B	EPA-TO-15	05/25/2018	BT
Heptane	2.78	11.2	0.400	1.61		EPA-TO-15	05/25/2018	BT
Hexachlorobutadiene	<1.00	<10.7	1.00	10.7		EPA-TO-15	05/25/2018	BT
m,p-Xylene	<0.800	<3.47	0.800	3.47		EPA-TO-15	05/25/2018	BT
Methyl methacrylate	<0.400	<1.64	0.400	1.64		EPA-TO-15	05/25/2018	BT
Methylene chloride	<2.00	<6.95	2.00	6.95		EPA-TO-15	05/25/2018	BT
Naphthalene	<0.100	<0.524	0.100	0.524		EPA-TO-15	05/25/2018	BT
n-Hexane	3.03	10.7	0.400	1.41		EPA-TO-15	05/25/2018	BT
o-Xylene	<0.400	<1.74	0.400	1.74		EPA-TO-15	05/25/2018	BT
4-Ethyltoluene	<0.400	<1.97	0.400	1.97		EPA-TO-15	05/25/2018	BT
Propylene	1.08	1.86	0.400	0.688		EPA-TO-15	05/25/2018	BT
Styrene	<0.400	<1.70	0.400	1.70		EPA-TO-15	05/25/2018	BT
Methyl tert-butyl ether (MTBE)	<0.400	<1.44	0.400	1.44		EPA-TO-15	05/25/2018	BT
Tetrachloroethene (PCE)	<0.200	<1.36	0.200	1.36		EPA-TO-15	05/25/2018	BT
Tetrahydrofuran	<0.400	<1.18	0.400	1.18		EPA-TO-15	05/25/2018	BT
Toluene	0.834	3.14	0.400	1.51		EPA-TO-15	05/25/2018	BT
trans-1,2-Dichloroethene	<0.200	<0.793	0.200	0.793		EPA-TO-15	05/25/2018	BT
trans-1,3-dichloropropene	<0.500	<2.27	0.500	2.27		EPA-TO-15	05/25/2018	BT



Fremont

Analytical

Client: Orion Environmental Services

WorkOrder: 1805338

Project: 4550 Fauntleroy Health

Client Sample ID: FR8-12 Exam Room 3

Date Sampled: 5/23/2018

Lab ID: 1805338-001A

Date Received: 5/24/2018

Sample Type: Summa Canister

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst
<u>Volatile Organic Compounds by EPA Method TO-15</u>							
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)			
Trichloroethene (TCE)	<0.0649	<0.349	0.0649	0.349		EPA-TO-15	05/25/2018 BT
Trichlorofluoromethane (CFC-11)	<0.400	<2.25	0.400	2.25		EPA-TO-15	05/25/2018 BT
Vinyl acetate	<1.00	<3.52	1.00	3.52		EPA-TO-15	05/25/2018 BT
Vinyl chloride	<0.107	<0.274	0.107	0.274		EPA-TO-15	05/25/2018 BT
Surr: 4-Bromofluorobenzene	118 %Rec	--	70-130	--		EPA-TO-15	05/25/2018 BT

NOTES:

* - Flagged value is not within established control limits.

B - Detection in Method Blank less than 10 times raw value in the sample.



Client: Orion Environmental Services

WorkOrder: 1805338

Project: 4550 Fautleroy Health

Client Sample ID: FR8-7 Back Office Pod

Date Sampled: 5/23/2018

Lab ID: 1805338-002A

Date Received: 5/24/2018

Sample Type: Summa Canister

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst	
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)				
1,1,1-Trichloroethane	<0.400	<2.18	0.400	2.18		EPA-TO-15	05/25/2018	BT
1,1,2,2-Tetrachloroethane	<0.300	<2.06	0.300	2.06		EPA-TO-15	05/25/2018	BT
CFC-113	<0.400	<3.07	0.400	3.07		EPA-TO-15	05/25/2018	BT
1,1,2-Trichloroethane (TCA)	<0.500	<2.73	0.500	2.73		EPA-TO-15	05/25/2018	BT
1,1-Dichloroethane	<0.200	<0.810	0.200	0.810		EPA-TO-15	05/25/2018	BT
1,1-Dichloroethene (DCE)	<0.400	<1.59	0.400	1.59		EPA-TO-15	05/25/2018	BT
1,2,4-Trichlorobenzene	<0.300	<2.23	0.300	2.23		EPA-TO-15	05/25/2018	BT
1,2,4-Trimethylbenzene	<0.300	<1.47	0.300	1.47		EPA-TO-15	05/25/2018	BT
1,2-Dibromoethane (EDB)	<0.200	<1.54	0.200	1.54		EPA-TO-15	05/25/2018	BT
1,2-Dichlorobenzene	<0.400	<2.40	0.400	2.40		EPA-TO-15	05/25/2018	BT
1,2-Dichloroethane	<0.200	<0.809	0.200	0.809		EPA-TO-15	05/25/2018	BT
1,2-Dichloropropane	<0.500	<2.31	0.500	2.31		EPA-TO-15	05/25/2018	BT
1,3,5-Trimethylbenzene	<0.300	<1.47	0.300	1.47		EPA-TO-15	05/25/2018	BT
1,3-Butadiene	<0.500	<1.11	0.500	1.11		EPA-TO-15	05/25/2018	BT
1,3-Dichlorobenzene	<0.300	<1.80	0.300	1.80		EPA-TO-15	05/25/2018	BT
1,4-Dichlorobenzene	<0.300	<1.80	0.300	1.80		EPA-TO-15	05/25/2018	BT
1,4-Dioxane	<0.400	<1.44	0.400	1.44		EPA-TO-15	05/25/2018	BT
(MEK) 2-Butanone	139	409	12.5	36.9		EPA-TO-15	05/25/2018	BT
2-Hexanone	<1.00	<4.10	1.00	4.10		EPA-TO-15	05/25/2018	BT
Isopropyl Alcohol	140	345	12.5	30.7	*	EPA-TO-15	05/25/2018	BT
4-Methyl-2-pentanone (MIBK)	<1.00	<4.10	1.00	4.10		EPA-TO-15	05/25/2018	BT
Acetone	86.2	205	12.5	29.7		EPA-TO-15	05/25/2018	BT
Acrolein	<0.500	<1.15	0.500	1.15		EPA-TO-15	05/25/2018	BT
Benzene	0.162	0.516	0.0895	0.286		EPA-TO-15	05/25/2018	BT
Benzyl chloride	<0.500	<2.59	0.500	2.59		EPA-TO-15	05/25/2018	BT
Dichlorobromomethane	<0.300	<2.01	0.300	2.01		EPA-TO-15	05/25/2018	BT
Bromoform	<0.200	<2.07	0.200	2.07		EPA-TO-15	05/25/2018	BT
Bromomethane	<0.500	<1.94	0.500	1.94		EPA-TO-15	05/25/2018	BT
Carbon disulfide	<1.50	<4.67	1.50	4.67		EPA-TO-15	05/25/2018	BT
Carbon tetrachloride	<0.0657	<0.413	0.0657	0.413		EPA-TO-15	05/25/2018	BT



Client: Orion Environmental Services

WorkOrder: 1805338

Project: 4550 Fauntleroy Health

Client Sample ID: FR8-7 Back Office Pod

Date Sampled: 5/23/2018

Lab ID: 1805338-002A

Date Received: 5/24/2018

Sample Type: Summa Canister

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst	
<u>Volatile Organic Compounds by EPA Method TO-15</u>								
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)				
Chlorobenzene	<0.200	<0.921	0.200	0.921		EPA-TO-15	05/25/2018	BT
Dibromochloromethane	<0.500	<4.26	0.500	4.26		EPA-TO-15	05/25/2018	BT
Chloroethane	<0.400	<1.06	0.400	1.06		EPA-TO-15	05/25/2018	BT
Chloroform	<0.200	<0.977	0.200	0.977		EPA-TO-15	05/25/2018	BT
Chloromethane	<0.500	<1.03	0.500	1.03		EPA-TO-15	05/25/2018	BT
cis-1,2-Dichloroethene	<0.200	<0.793	0.200	0.793		EPA-TO-15	05/25/2018	BT
cis-1,3-dichloropropene	<0.400	<1.82	0.400	1.82		EPA-TO-15	05/25/2018	BT
Cyclohexane	2.60	8.94	0.400	1.38		EPA-TO-15	05/25/2018	BT
Dichlorodifluoromethane (CFC-12)	<0.400	<1.98	0.400	1.98		EPA-TO-15	05/25/2018	BT
Dichlorotetrafluoroethane (CFC-114)	<0.400	<2.80	0.400	2.80		EPA-TO-15	05/25/2018	BT
Ethyl acetate	<1.00	<3.60	1.00	3.60		EPA-TO-15	05/25/2018	BT
Ethylbenzene	<0.400	<1.74	0.400	1.74		EPA-TO-15	05/25/2018	BT
Gasoline Range Organics	249	1,020	12.5	51.1	B	EPA-TO-15	05/25/2018	BT
Heptane	3.27	13.1	0.400	1.61		EPA-TO-15	05/25/2018	BT
Hexachlorobutadiene	<1.00	<10.7	1.00	10.7		EPA-TO-15	05/25/2018	BT
m,p-Xylene	<0.800	<3.47	0.800	3.47		EPA-TO-15	05/25/2018	BT
Methyl methacrylate	<0.400	<1.64	0.400	1.64		EPA-TO-15	05/25/2018	BT
Methylene chloride	<2.00	<6.95	2.00	6.95		EPA-TO-15	05/25/2018	BT
Naphthalene	<0.100	<0.524	0.100	0.524		EPA-TO-15	05/25/2018	BT
n-Hexane	3.11	11.0	0.400	1.41		EPA-TO-15	05/25/2018	BT
o-Xylene	<0.400	<1.74	0.400	1.74		EPA-TO-15	05/25/2018	BT
4-Ethyltoluene	<0.400	<1.97	0.400	1.97		EPA-TO-15	05/25/2018	BT
Propylene	0.792	1.36	0.400	0.688		EPA-TO-15	05/25/2018	BT
Styrene	<0.400	<1.70	0.400	1.70		EPA-TO-15	05/25/2018	BT
Methyl tert-butyl ether (MTBE)	<0.400	<1.44	0.400	1.44		EPA-TO-15	05/25/2018	BT
Tetrachloroethene (PCE)	<0.200	<1.36	0.200	1.36		EPA-TO-15	05/25/2018	BT
Tetrahydrofuran	<0.400	<1.18	0.400	1.18		EPA-TO-15	05/25/2018	BT
Toluene	0.421	1.59	0.400	1.51		EPA-TO-15	05/25/2018	BT
trans-1,2-Dichloroethene	<0.200	<0.793	0.200	0.793		EPA-TO-15	05/25/2018	BT
trans-1,3-dichloropropene	<0.500	<2.27	0.500	2.27		EPA-TO-15	05/25/2018	BT



Fremont

Analytical

Client: Orion Environmental Services

WorkOrder: 1805338

Project: 4550 Fauntleroy Health

Client Sample ID: FR8-7 Back Office Pod

Date Sampled: 5/23/2018

Lab ID: 1805338-002A

Date Received: 5/24/2018

Sample Type: Summa Canister

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst
<u>Volatile Organic Compounds by EPA Method TO-15</u>							
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)			
Trichloroethene (TCE)	<0.0649	<0.349	0.0649	0.349		EPA-TO-15	05/25/2018 BT
Trichlorofluoromethane (CFC-11)	<0.400	<2.25	0.400	2.25		EPA-TO-15	05/25/2018 BT
Vinyl acetate	<1.00	<3.52	1.00	3.52		EPA-TO-15	05/25/2018 BT
Vinyl chloride	<0.107	<0.274	0.107	0.274		EPA-TO-15	05/25/2018 BT
Surr: 4-Bromofluorobenzene	116 %Rec	--	70-130	--		EPA-TO-15	05/25/2018 BT

NOTES:

* - Flagged value is not within established control limits.

B - Detection in Method Blank less than 10 times raw value in the sample.



Date: 5/29/2018

Work Order: 1805338

CLIENT: Orion Environmental Services

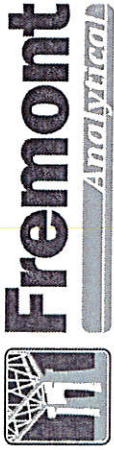
Project: 4550 Fauntleroy Health

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method TO-15

Sample ID	LCS	VOC-R43770	Samp Type: LCS	Batch ID: R43770	Result	RL	SPK value	SPK Ref Val	Units: ppbv	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics					89.7	1.00	72.00	0	0	125	70	130				
Propylene					1.80	0.400	2.000	0	0	90.1	70	130				
Dichlorodifluoromethane (CFC-12)					1.52	0.400	2.000	0	0	76.0	70	130				
Chloromethane					1.42	0.500	2.000	0	0	71.1	70	130				
Dichlorotetrafluoroethane (CFC-114)					1.48	0.400	2.000	0	0	74.1	70	130				
Vinyl chloride					1.42	0.107	2.000	0	0	71.1	70	130				
1,3-Butadiene					1.49	0.500	2.000	0	0	74.4	70	130				
Bromomethane					1.57	0.500	2.000	0	0	78.7	70	130				
Trichlorofluoromethane (CFC-11)					2.00	0.400	2.000	0	0	100	70	130				
Chloroethane					2.09	0.400	2.000	0	0	104	70	130				
Acrolein					2.23	0.500	2.000	0	0	111	70	130				
1,1-Dichloroethene (DCE)					2.10	0.400	2.000	0	0	105	70	130				
Acetone					2.21	1.00	2.000	0	0	110	70	130				S
Isopropyl Alcohol					2.67	1.00	2.000	0	0	134	70	130				S
Methylene chloride					3.14	2.00	2.000	0	0	157	70	130				
Carbon disulfide					2.13	1.50	2.000	0	0	107	70	130				
trans-1,2-Dichloroethene					2.08	0.200	2.000	0	0	104	70	130				
Methyl tert-butyl ether (MTBE)					2.08	0.400	2.000	0	0	104	70	130				
n-Hexane					2.21	0.400	2.000	0	0	111	70	130				
1,1-Dichloroethane					2.15	0.200	2.000	0	0	107	70	130				
Vinyl acetate					2.10	1.00	2.000	0	0	105	70	130				
cis-1,2-Dichloroethene (MEK) 2-Butanone					2.09	0.200	2.000	0	0	105	70	130				
Ethyl acetate					2.00	1.00	2.000	0	0	100	70	130				
Chloroform					2.20	1.00	2.000	0	0	110	70	130				
Tetrahydrofuran					2.11	0.200	2.000	0	0	105	70	130				
1,1,1-Trichloroethane					2.13	0.400	2.000	0	0	107	70	130				
Carbon tetrachloride					2.02	0.400	2.000	0	0	101	70	130				
1,2-Dichloroethane					1.97	0.0657	2.000	0	0	98.6	70	130				
Benzene					2.05	0.200	2.000	0	0	102	70	130				
Cyclohexane					2.14	0.0895	2.000	0	0	107	70	130				
					2.14	0.400	2.000	0	0	107	70	130				

Original



Date: 5/29/2018

Work Order: 1805338

CLIENT: Orion Environmental Services

Project: 4550 Fauntleroy Health

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method TO-15

Sample ID	LCS VOC-R43770	SampType: LCS	Batch ID: R43770	Result	RL	SPK value	SPK Ref Val	Units: ppbv	%REC	LowLimit	HighLimit	RPD Ref Val	RunNo: 43770		
													SeqNo: 847162		
Analyte													%RPD	RPDLimit	Qual
Trichloroethene (TCE)		2.07		0.0649	2.000	0	103	70	130						
1,2-Dichloropropane		2.15		0.500	2.000	0	107	70	130						
Methyl methacrylate		2.14		0.400	2.000	0	107	70	130						
Dichlorobromomethane		2.05		0.300	2.000	0	103	70	130						
1,4-Dioxane		2.32		0.400	2.000	0	116	70	130						
cis-1,3-dichloropropene		2.10		0.400	2.000	0	105	70	130						
Toluene		1.94		0.400	2.000	0	96.9	70	130						
trans-1,3-dichloropropene		2.08		0.500	2.000	0	104	70	130						
1,1,2-Trichloroethane (TCA)		2.09		0.500	2.000	0	105	70	130						
Tetrachloroethene (PCE)		1.95		0.200	2.000	0	97.7	70	130						
Dibromochloromethane		1.98		0.500	2.000	0	99.2	70	130						
1,2-Dibromoethane (EDB)		2.07		0.200	2.000	0	104	70	130						
Chlorobenzene		2.22		0.200	2.000	0	111	70	130						
Ethylbenzene		2.12		0.400	2.000	0	106	70	130						
m,p-Xylene		4.33		0.800	4.000	0	108	70	130						
o-Xylene		2.25		0.400	2.000	0	112	70	130						
Styrene		2.24		0.400	2.000	0	112	70	130						
Bromoform		2.11		0.200	2.000	0	106	70	130						
1,1,2,2-Tetrachloroethane		2.38		0.300	2.000	0	119	70	130						
1,3,5-Trimethylbenzene		2.36		0.300	2.000	0	118	70	130						
1,2,4-Trimethylbenzene		2.28		0.300	2.000	0	114	70	130						
Benzyl chloride		1.95		0.500	2.000	0	97.6	70	130						
4-Ethyltoluene		2.35		0.400	2.000	0	118	70	130						
1,3-Dichlorobenzene		2.25		0.300	2.000	0	113	70	130						
1,4-Dichlorobenzene		2.44		0.300	2.000	0	122	70	130						
1,2-Dichlorobenzene		2.20		0.400	2.000	0	110	70	130						
1,2,4-Trichlorobenzene		1.92		0.300	2.000	0	95.9	70	130						
Hexachlorobutadiene		2.15		1.00	2.000	0	107	70	130						
Naphthalene		2.30		0.100	2.000	0	115	70	130						
2-Hexanone		2.37		1.00	2.000	0	118	70	130						
4-Methyl-2-pentanone (MIBK)		2.34		1.00	2.000	0	117	70	130						

Original



Date: 5/29/2018

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method TO-15

Work Order: 1805338
 CLIENT: Orion Environmental Services
 Project: 4550 Fauntleroy Health

Sample ID	LCS VOC-R43770	SampType: LCS	Units: ppbv	Prep Date: 5/24/2018	RunNo: 43770						
Client ID:	LCSW	Batch ID: R43770		Analysis Date: 5/24/2018	SeqNo: 847162						
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
CFC-113	2.25	0.400	2.000	0	113	70	130				
Heptane	2.15	0.400	2.000	0	108	70	130				
Surr: 4-Bromofluorobenzene	4.06		4.000		101	70	130				

NOTES:
 S - Outlying spike recovery observed (high bias). Samples are non-detect for this analyte; no further action required.
 S - Outlying spike recovery observed (high bias). Detections will be qualified with a *.

Sample ID	MBLK-R43770	SampType: MBLK	Units: ppbv	Prep Date: 5/24/2018	RunNo: 43770						
Client ID:	MBLKW	Batch ID: R43770		Analysis Date: 5/24/2018	SeqNo: 847191						
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics	1.33	1.00									
Propylene	ND	0.400									
Dichlorodifluoromethane (CFC-12)	ND	0.400									
Chloromethane	ND	0.500									
Dichlorotetrafluoroethane (CFC-114)	ND	0.400									
Vinyl chloride	ND	0.107									
1,3-Butadiene	ND	0.500									
Bromomethane	ND	0.500									
Trichlorofluoromethane (CFC-11)	ND	0.400									
Chloroethane	ND	0.400									
Acrolein	ND	0.500									
1,1-Dichloroethene (DCE)	ND	0.400									
Acetone	ND	1.00									
Isopropyl Alcohol	ND	1.00									
Methylene chloride	2.80	2.00									
Carbon disulfide	ND	1.50									
trans-1,2-Dichloroethene	ND	0.200									
Methyl tert-butyl ether (MTBE)	ND	0.400									
n-Hexane	ND	0.400									
1,1-Dichloroethane	ND	0.200									



Date: 5/29/2018

Work Order: 1805338

CLIENT: Orion Environmental Services

Project: 4550 Fauntleroy Health

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method TO-15

Sample ID	MBLK-R43770	SampType:	MBLK	Units:	ppbv	Prep Date:	5/24/2018	RunNo:	43770	
Client ID:	MBLKW	Batch ID:	R43770	Analysis Date:	5/24/2018	SeqNo:	847191	%RPD	RPDLimit	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	RPDLimit	Qual

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	RPDLimit	Qual
Vinyl acetate	ND	1.00								
cis-1,2-Dichloroethene (MEK) 2-Butanone	ND	0.200								
Ethyl acetate	ND	1.00								
Chloroform	ND	1.00								
Tetrahydrofuran	ND	0.200								
1,1,1-Trichloroethane	ND	0.400								
Carbon tetrachloride	ND	0.400								
1,2-Dichloroethane	ND	0.0657								
Benzene	ND	0.200								
Cyclohexane	ND	0.0895								
Trichloroethene (TCE)	ND	0.400								
1,2-Dichloropropane	ND	0.0649								
Methyl methacrylate	ND	0.500								
Dichlorobromomethane	ND	0.400								
1,4-Dioxane	ND	0.300								
cis-1,3-dichloropropene	ND	0.400								
Toluene	ND	0.400								
trans-1,3-dichloropropene	ND	0.500								
1,1,2-Trichloroethane (TCA)	ND	0.500								
Tetrachloroethene (PCE)	ND	0.200								
Dibromochloromethane	ND	0.500								
1,2-Dibromoethane (EDB)	ND	0.200								
Chlorobenzene	ND	0.200								
Ethylbenzene	ND	0.400								
m,p-Xylene	ND	0.800								
o-Xylene	ND	0.400								
Styrene	ND	0.400								
Bromoform	ND	0.200								
1,1,2,2-Tetrachloroethane	ND	0.300								
1,3,5-Trimethylbenzene	ND	0.300								

Original



Date: 5/29/2018

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method TO-15

Work Order: 1805338
 CLIENT: Orion Environmental Services
 Project: 4550 Fauntleroy Health

Sample ID	MBLK-R43770	SampType: MBLK	Units: ppbv	Prep Date: 5/24/2018	RunNo: 43770						
Client ID:	MBLKW	Batch ID: R43770		Analysis Date: 5/24/2018	SeqNo: 847191						
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,4-Trimethylbenzene	ND	0.300									
Benzyl chloride	ND	0.500									
4-Ethyltoluene	ND	0.400									
1,3-Dichlorobenzene	ND	0.300									
1,4-Dichlorobenzene	ND	0.300									
1,2-Dichlorobenzene	ND	0.400									
1,2,4-Trichlorobenzene	ND	0.300									
Hexachlorobutadiene	ND	1.00									
Naphthalene	ND	0.100									
2-Hexanone	ND	1.00									
4-Methyl-2-pentanone (MIBK)	ND	1.00									
CFC-113	ND	0.400									
Heptane	ND	0.400									
Surr: 4-Bromofluorobenzene	4.08		4.000				102	70		130	

NOTES:
 * - Flagged value is not within established control limits.

Sample ID	1805338-001AREP	SampType: REP	Units: ppbv	Prep Date: 5/25/2018	RunNo: 43770						
Client ID:	FR8-12 Exam Room 3	Batch ID: R43770		Analysis Date: 5/25/2018	SeqNo: 847166						
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics	277	1.00						274.6	1.03	30	EB
Propylene	0.985	0.400						1.081	9.26	30	
Dichlorodifluoromethane (CFC-12)	ND	0.400						0		30	
Chloromethane	ND	0.500						0		30	
Dichlorotetrafluoroethane (CFC-114)	ND	0.400						0		30	
Vinyl chloride	ND	0.107						0		30	
1,3-Butadiene	ND	0.500						0		30	
Bromomethane	ND	0.500						0		30	
Trichlorofluoromethane (CFC-11)	ND	0.400						0		30	
Chloroethane	ND	0.400						0		30	



Date: 5/29/2018

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method TO-15

Work Order: 1805338
 CLIENT: Orion Environmental Services
 Project: 4550 Fauntleroy Health

Sample ID: 1805338-001AREP Prep Date: 5/25/2018 RunNo: 43770
 Client ID: FR8-12 Exam Room 3 Analysis Date: 5/25/2018 SeqNo: 847166
 Units: ppbv

Analyte	Result	RL	SPK value	SPK RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Acrolein	ND	0.500						0		30	
1,1-Dichloroethene (DCE)	ND	0.400						0		30	
Acetone	170	1.00						171.9	1.04	30	E
Isopropyl Alcohol	169	1.00						169.6	0.570	30	*E
Methylene chloride	ND	2.00						0		30	
Carbon disulfide	ND	1.50						0		30	
trans-1,2-Dichloroethene	ND	0.200						0		30	
Methyl tert-butyl ether (MTBE)	ND	0.400						0		30	
n-Hexane	2.96	0.400						3.029	2.21	30	
1,1-Dichloroethane	ND	0.200						0		30	
Vinyl acetate	ND	1.00						0		30	
cis-1,2-Dichloroethene	ND	0.200						0		30	
(MEK) 2-Butanone	292	1.00						297.2	1.71	30	E
Ethyl acetate	ND	1.00						0		30	
Chloroform	ND	0.200						0		30	
Tetrahydrofuran	ND	0.400						0		30	
1,1,1-Trichloroethane	ND	0.400						0		30	
Carbon tetrachloride	ND	0.0657						0		30	
1,2-Dichloroethane	ND	0.200						0		30	
Benzene	0.194	0.0895						0.1965	1.49	30	
Cyclohexane	2.57	0.400						2.560	0.252	30	
Trichloroethene (TCE)	ND	0.0649						0		30	
1,2-Dichloropropane	ND	0.500						0		30	
Methyl methacrylate	ND	0.400						0		30	
Dichlorobromomethane	ND	0.300						0		30	
1,4-Dioxane	ND	0.400						0		30	
cis-1,3-dichloropropene	ND	0.400						0		30	
Toluene	0.826	0.400						0.8336	0.940	30	
trans-1,3-dichloropropene	ND	0.500						0		30	
1,1,2-Trichloroethane (TCA)	ND	0.500						0		30	
Tetrachloroethene (PCE)	ND	0.200						0		30	



Date: 5/29/2018

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method TO-15

Work Order: 1805338
 CLIENT: Orion Environmental Services
 Project: 4550 Fauntleroy Health

Sample ID: 1805338-001AREP SampType: REP Units: ppbv Prep Date: 5/25/2018 RunNo: 43770
 Client ID: FR8-12 Exam Room 3 Batch ID: R43770 Analysis Date: 5/25/2018 SeqNo: 847166

Analyte	Result	RL	SPK value	SPK RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Dibromochloromethane	ND	0.500						0		30	
1,2-Dibromoethane (EDB)	ND	0.200						0		30	
Chlorobenzene	ND	0.200						0		30	
Ethylbenzene	ND	0.400						0		30	
m,p-Xylene	ND	0.800						0		30	
o-Xylene	ND	0.400						0		30	
Styrene	ND	0.400						0		30	
Bromoform	ND	0.200						0		30	
1,1,2,2-Tetrachloroethane	ND	0.300						0		30	
1,3,5-Trimethylbenzene	ND	0.300						0		30	
1,2,4-Trimethylbenzene	ND	0.300						0		30	
Benzyl chloride	ND	0.500						0		30	
4-Ethyltoluene	ND	0.400						0		30	
1,3-Dichlorobenzene	ND	0.300						0		30	
1,4-Dichlorobenzene	ND	0.300						0		30	
1,2-Dichlorobenzene	ND	0.400						0		30	
1,2,4-Trichlorobenzene	ND	0.300						0		30	
Hexachlorobutadiene	ND	1.00						0		30	
Naphthalene	ND	0.100						0		30	
2-Hexanone	ND	1.00						0		30	
4-Methyl-2-pentanone (MIBK)	ND	1.00						0		30	
CFC-113	ND	0.400						0		30	
Heptane	2.80	0.400						2.779	0.816	30	
Surr: 4-Bromofluorobenzene	4.71		4.000		118	70	130		0		

NOTES:
 B - Detection in Method Blank less than 10 times raw value in the sample.
 E - Estimated value. The amount exceeds the linear working range of the instrument.
 * - Flagged value is not within established control limits.



Client Name: ORIONES	Work Order Number: 1805338
Logged by: Brianna Barnes	Date Received: 5/24/2018 12:46:00 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 Required
6. Was an attempt made to cool the samples? Yes No NA
7. Were all items received at a temperature of >0°C to 10.0°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:	<u>Donna</u>	Date:	<u>5/24/2018</u>
By Whom:	<u>Brianna Barnes</u>	Via:	<input type="checkbox"/> eMail <input checked="" type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<u>Confirming analysis and TAT needed.</u>		
Client Instructions:	<u>Full list VOCs and Gx: Results on Tuesday, 5/29.</u>		

19. Additional remarks:

Item Information

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

August 16, 2018

Shawn Lombardini
Associated Environmental Group, Inc.
605 11th Ave. SE, Suite 201
Olympia, WA 98501

Dear Mr. Lombardini:

Please find enclosed the analytical data report for the Franciscan West Seattle Project in Seattle, Washington. Probe services were conducted on July 26, 2018. Soil vapor samples were analyzed for VOC's by Method TO15 & APH on August 9 – 10, 2018.

The results of the analyses are summarized in the attached table. All soil values are reported on a dry weight basis. Applicable detection limits and QA/QC data are included. An invoice for this work is also enclosed.

ESN Northwest appreciates the opportunity to have provided analytical services to Associated Environmental Group, Inc. 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,



Michael A. Korosec
President

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on July 31, 2018 by Friedman & Bruya, Inc. from the ESN NW Franciscan West Seattle 18-172, F&BI 807613 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>ESN NW</u>
807613 -01	SGV-1
807613 -02	SGV-2
807613 -03	SGV-3
807613 -04	SGV-4
807613 -05	SGV-5
807613 -06	SS-1
807613 -07	SS-2
807613 -08	SS-3
807613 -09	SS-4
807613 -10	SS-5
807613 -11	SS-6
807613 -12	SS-7
807613 -13	SS-8

Naphthalene was detected in the TO-15 method blank at a level within 10 times the concentration detected in the samples. The data were flagged accordingly.

Non-petroleum compounds were subtracted from the APH EC5-8 and EC9-12 aliphatic ranges prior to quantitation.

Several TO-15 and APH concentrations exceeded the calibration range established for the analyte. The data were qualified accordingly.

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	SGV-1	Client:	ESN NW
Date Received:	07/31/18	Project:	Franciscan West Seattle 18-172
Date Collected:	07/26/18	Lab ID:	807613-01 1/3.3
Date Analyzed:	08/09/18	Data File:	080911.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	MS

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	87	70	130

Compounds:	Concentration ug/m3
APH EC5-8 aliphatics	1,300
APH EC9-12 aliphatics	180
APH EC9-10 aromatics	<82

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	SGV-2	Client:	ESN NW
Date Received:	07/31/18	Project:	Franciscan West Seattle 18-172
Date Collected:	07/26/18	Lab ID:	807613-02 1/3.3
Date Analyzed:	08/09/18	Data File:	080912.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	MS

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	95	70	130

Compounds:	Concentration
	ug/m3
APH EC5-8 aliphatics	3,800 ve
APH EC9-12 aliphatics	16,000 ve
APH EC9-10 aromatics	910

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	SGV-3	Client:	ESN NW
Date Received:	07/31/18	Project:	Franciscan West Seattle 18-172
Date Collected:	07/26/18	Lab ID:	807613-03 1/25
Date Analyzed:	08/10/18	Data File:	080920.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	MS

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	112	70	130

Compounds:	Concentration
	ug/m3
APH EC5-8 aliphatics	54,000 ve
APH EC9-12 aliphatics	45,000 ve
APH EC9-10 aromatics	<620

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	SGV-4	Client:	ESN NW
Date Received:	07/31/18	Project:	Franciscan West Seattle 18-172
Date Collected:	07/26/18	Lab ID:	807613-04 1/3.3
Date Analyzed:	08/09/18	Data File:	080913.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	MS

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

Compounds:	Concentration
	ug/m3
APH EC5-8 aliphatics	1,600
APH EC9-12 aliphatics	780
APH EC9-10 aromatics	<82

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	SGV-5	Client:	ESN NW
Date Received:	07/31/18	Project:	Franciscan West Seattle 18-172
Date Collected:	07/26/18	Lab ID:	807613-05 1/75
Date Analyzed:	08/10/18	Data File:	080923.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	MS

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	123	70	130

Compounds:	Concentration
	ug/m3

APH EC5-8 aliphatics	210,000 ve
APH EC9-12 aliphatics	220,000 ve
APH EC9-10 aromatics	<1,900

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	SS-1	Client:	ESN NW
Date Received:	07/31/18	Project:	Franciscan West Seattle 18-172
Date Collected:	07/26/18	Lab ID:	807613-06 1/50
Date Analyzed:	08/10/18	Data File:	080922.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	MS

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	105	70	130

Compounds:	Concentration
	ug/m3
APH EC5-8 aliphatics	21,000
APH EC9-12 aliphatics	67,000 ve
APH EC9-10 aromatics	<1,200

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	SS-2	Client:	ESN NW
Date Received:	07/31/18	Project:	Franciscan West Seattle 18-172
Date Collected:	07/26/18	Lab ID:	807613-07 1/25
Date Analyzed:	08/10/18	Data File:	080921.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	MS

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	111	70	130

Compounds:	Concentration
	ug/m3
APH EC5-8 aliphatics	19,000
APH EC9-12 aliphatics	34,000 ve
APH EC9-10 aromatics	<620

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	SS-3	Client:	ESN NW
Date Received:	07/31/18	Project:	Franciscan West Seattle 18-172
Date Collected:	07/26/18	Lab ID:	807613-08 1/3.3
Date Analyzed:	08/09/18	Data File:	080914.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	MS

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

Compounds:	Concentration
	ug/m3
APH EC5-8 aliphatics	1,300
APH EC9-12 aliphatics	1,600
APH EC9-10 aromatics	<82

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	SS-4	Client:	ESN NW
Date Received:	07/31/18	Project:	Franciscan West Seattle 18-172
Date Collected:	07/26/18	Lab ID:	807613-09 1/3.3
Date Analyzed:	08/09/18	Data File:	080915.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	MS

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	88	70	130

Compounds:	Concentration
	ug/m3
APH EC5-8 aliphatics	1,600
APH EC9-12 aliphatics	1,300
APH EC9-10 aromatics	<82

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	SS-5	Client:	ESN NW
Date Received:	07/31/18	Project:	Franciscan West Seattle 18-172
Date Collected:	07/26/18	Lab ID:	807613-10 1/3.3
Date Analyzed:	08/09/18	Data File:	080916.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	MS

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

Compounds:	Concentration
	ug/m3
APH EC5-8 aliphatics	1,800
APH EC9-12 aliphatics	1,500
APH EC9-10 aromatics	<82

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	SS-6	Client:	ESN NW
Date Received:	07/31/18	Project:	Franciscan West Seattle 18-172
Date Collected:	07/26/18	Lab ID:	807613-11 1/3.3
Date Analyzed:	08/10/18	Data File:	080917.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	MS

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	98	70	130

Compounds:	Concentration
	ug/m3
APH EC5-8 aliphatics	2,500
APH EC9-12 aliphatics	2,200
APH EC9-10 aromatics	<82

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	SS-7	Client:	ESN NW
Date Received:	07/31/18	Project:	Franciscan West Seattle 18-172
Date Collected:	07/26/18	Lab ID:	807613-12 1/3.3
Date Analyzed:	08/10/18	Data File:	080918.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	MS

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	98	70	130

Compounds:	Concentration
	ug/m3
APH EC5-8 aliphatics	3,500 ve
APH EC9-12 aliphatics	3,600 ve
APH EC9-10 aromatics	210

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	SS-8	Client:	ESN NW
Date Received:	07/31/18	Project:	Franciscan West Seattle 18-172
Date Collected:	07/26/18	Lab ID:	807613-13 1/3.3
Date Analyzed:	08/10/18	Data File:	080919.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	MS

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	97	70	130

Compounds:	Concentration
	ug/m3
APH EC5-8 aliphatics	590
APH EC9-12 aliphatics	940
APH EC9-10 aromatics	<82

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	Method Blank	Client:	ESN NW
Date Received:	Not Applicable	Project:	Franciscan West Seattle 18-172
Date Collected:	Not Applicable	Lab ID:	08-1808 mb
Date Analyzed:	08/09/18	Data File:	080908.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	MS

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	88	70	130

Compounds:	Concentration
	ug/m3
APH EC5-8 aliphatics	<46
APH EC9-12 aliphatics	<35
APH EC9-10 aromatics	<25

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	SGV-1	Client:	ESN NW
Date Received:	07/31/18	Project:	Franciscan West Seattle 18-172
Date Collected:	07/26/18	Lab ID:	807613-01 1/3.3
Date Analyzed:	08/09/18	Data File:	080911.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	94	70	130

Compounds:	Concentration		Compounds:	Concentration	
	ug/m3	ppbv		ug/m3	ppbv
Chlorodifluoromethane	<1.2	<0.33	1-Butanol	27	8.8
Propene	79	46	Carbon tetrachloride	<2.1	<0.33
Dichlorodifluoromethane	2.4	0.49	Benzene	6.5	2.0
Chloromethane	0.70	0.34	Cyclohexane	<23	<6.6
F-114	<2.3	<0.33	3-Pentanone	<12	<3.3
Isobutene	39	17	2-Pentanone	<12	<3.3
Acetaldehyde	<30	<16	Pentanal	25	7.2
Vinyl chloride	<0.84	<0.33	1,2-Dichloropropane	<0.76	<0.16
1,3-Butadiene	6.8	3.1	1,4-Dioxane	<1.2	<0.33
Bromomethane	<5.1	<1.3	Bromodichloromethane	<0.22	<0.033
Chloroethane	<0.87	<0.33	Trichloroethene	2.8	0.51
Ethanol	<25	<13	cis-1,3-Dichloropropene	<1.5	<0.33
Acetonitrile	<5.5	<3.3	4-Methyl-2-pentanone	18	4.4
Acrolein	5.4	2.3	trans-1,3-Dichloropropene	<1.5	<0.33
Acrylonitrile	<0.72	<0.33	Toluene	8.1	2.2
Pentane	<9.7	<3.3	1,1,2-Trichloroethane	<0.18	<0.033
Trichlorofluoromethane	<1.9	<0.33	3-Hexanone	<14	<3.3
Acetone	170	70	2-Hexanone	<14	<3.3
2-Propanol	<28	<12	Hexanal	26	6.3
Isoprene	3.3	1.2	Tetrachloroethene	8.1	1.2
Iodomethane	<1.9	<0.33	Dibromochloromethane	<0.28	<0.033
1,1-Dichloroethene	<1.3	<0.33	1,2-Dibromoethane (EDB)	<0.25	<0.033
Methacrolein	<9.5	<3.3	Chlorobenzene	<1.5	<0.33
trans-1,2-Dichloroethene	<1.3	<0.33	Ethylbenzene	2.0	0.46
Cyclopentane	<0.95	<0.33	1,1,2,2-Tetrachloroethane	<0.45	<0.066
Methyl vinyl ketone	<9.5	<3.3	m,p-Xylene	5.5	1.3
Butanal	28	9.5	o-Xylene	2.4	0.56
Methylene chloride	340	99	Styrene	<2.8	<0.66
CFC-113	<2.5	<0.33	Bromoform	<6.8	<0.66
Carbon disulfide	<21	<6.6	Benzyl chloride	<0.17	<0.033
Methyl t-butyl ether (MTBE)	<5.9	<1.6	1,3,5-Trimethylbenzene	<8.1	<1.6
Vinyl acetate	<23	<6.6	1,2,4-Trimethylbenzene	<8.1	<1.6
1,1-Dichloroethane	<1.3	<0.33	1,3-Dichlorobenzene	<2	<0.33
cis-1,2-Dichloroethene	<1.3	<0.33	1,4-Dichlorobenzene	<0.79	<0.13
Hexane	27	7.6	1,2,3-Trimethylbenzene	<8.1	<1.6
Chloroform	0.53	0.11	1,2-Dichlorobenzene	<2	<0.33
2-Butanone (MEK)	43	15	1,2,4-Trichlorobenzene	<2.4	<0.33
1,2-Dichloroethane (EDC)	<0.13	<0.033	Naphthalene	1.9 fb	0.37 fb
1,1,1-Trichloroethane	<1.8	<0.33	Hexachlorobutadiene	<0.7	<0.066

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID: SGV-2	Client: ESN NW
Date Received: 07/31/18	Project: Franciscan West Seattle 18-172
Date Collected: 07/26/18	Lab ID: 807613-02 1/3.3
Date Analyzed: 08/09/18	Data File: 080912.D
Matrix: Air	Instrument: GCMS7
Units: ug/m3	Operator: MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	103	70	130

Compounds:	Concentration		Compounds:	Concentration	
	ug/m3	ppbv		ug/m3	ppbv
Chlorodifluoromethane	<1.2	<0.33	1-Butanol	<20	<6.6
Propene	200	120	Carbon tetrachloride	<2.1	<0.33
Dichlorodifluoromethane	2.6	0.53	Benzene	10	3.3
Chloromethane	2.5	1.2	Cyclohexane	36	10
F-114	<2.3	<0.33	2-Pentanone	<12	<3.3
Isobutene	110	48	3-Pentanone	<12	<3.3
Acetaldehyde	<30	<16	Pentanal	19	5.3
Vinyl chloride	<0.84	<0.33	1,2-Dichloropropane	<0.76	<0.16
1,3-Butadiene	29	13	1,4-Dioxane	<1.2	<0.33
Bromomethane	<5.1	<1.3	Bromodichloromethane	<0.22	<0.033
Chloroethane	<0.87	<0.33	Trichloroethene	6.1	1.1
Ethanol	<25	<13	cis-1,3-Dichloropropene	<1.5	<0.33
Acetonitrile	<5.5	<3.3	4-Methyl-2-pentanone	<14	<3.3
Acrolein	4.7	2.1	trans-1,3-Dichloropropene	<1.5	<0.33
Acrylonitrile	<0.72	<0.33	Toluene	23	6.0
Pentane	100	34	1,1,2-Trichloroethane	<0.18	<0.033
Trichlorofluoromethane	<1.9	<0.33	3-Hexanone	<14	<3.3
Acetone	280	120	2-Hexanone	<14	<3.3
2-Propanol	<28	<12	Hexanal	27	6.5
Isoprene	7.3	2.6	Tetrachloroethene	35	5.2
Iodomethane	<1.9	<0.33	Dibromochloromethane	<0.28	<0.033
1,1-Dichloroethene	<1.3	<0.33	1,2-Dibromoethane (EDB)	0.63	0.082
Methacrolein	<9.5	<3.3	Chlorobenzene	<1.5	<0.33
trans-1,2-Dichloroethene	<1.3	<0.33	Ethylbenzene	9.5	2.2
Cyclopentane	29	10	1,1,2,2-Tetrachloroethane	<0.45	<0.066
Methyl vinyl ketone	<9.5	<3.3	m,p-Xylene	26	6.0
Butanal	<9.7	<3.3	o-Xylene	20	4.7
Methylene chloride	<290	<82	Styrene	<2.8	<0.66
CFC-113	<2.5	<0.33	Bromoform	<6.8	<0.66
Carbon disulfide	32	10	Benzyl chloride	<0.17	<0.033
Methyl t-butyl ether (MTBE)	<5.9	<1.6	1,3,5-Trimethylbenzene	60	12
Vinyl acetate	<23	<6.6	1,2,4-Trimethylbenzene	76	15
1,1-Dichloroethane	<1.3	<0.33	1,3-Dichlorobenzene	<2	<0.33
cis-1,2-Dichloroethene	<1.3	<0.33	1,4-Dichlorobenzene	<0.79	<0.13
Hexane	67	19	1,2,3-Trimethylbenzene	89	18
Chloroform	1.4	0.28	1,2-Dichlorobenzene	<2	<0.33
2-Butanone (MEK)	140	46	1,2,4-Trichlorobenzene	<2.4	<0.33
1,2-Dichloroethane (EDC)	0.15	0.036	Naphthalene	4.0 fb	0.77 fb
1,1,1-Trichloroethane	<1.8	<0.33	Hexachlorobutadiene	<0.7	<0.066

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	SGV-3	Client:	ESN NW
Date Received:	07/31/18	Project:	Franciscan West Seattle 18-172
Date Collected:	07/26/18	Lab ID:	807613-03 1/25
Date Analyzed:	08/10/18	Data File:	080920.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	120	70	130

Compounds:	Concentration		Compounds:	Concentration	
	ug/m3	ppbv		ug/m3	ppbv
Chlorodifluoromethane	<8.8	<2.5	1-Butanol	<150	<50
Propene	860	500	Carbon tetrachloride	<16	<2.5
Dichlorodifluoromethane	<12	<2.5	Benzene	38	12
Chloromethane	<5.2	<2.5	Cyclohexane	460	130
F-114	<17	<2.5	3-Pentanone	<88	<25
Isobutene	460	200	2-Pentanone	<88	<25
Acetaldehyde	<220	<120	Pentanal	<88	<25
Vinyl chloride	<6.4	<2.5	1,2-Dichloropropane	<5.8	<1.2
1,3-Butadiene	80	36	1,4-Dioxane	<9	<2.5
Bromomethane	<39	<10	Bromodichloromethane	<1.7	<0.25
Chloroethane	<6.6	<2.5	Trichloroethene	17	3.2
Ethanol	590	320	cis-1,3-Dichloropropene	<11	<2.5
Acetonitrile	<42	<25	4-Methyl-2-pentanone	<100	<25
Acrolein	<23	<10	trans-1,3-Dichloropropene	<11	<2.5
Acrylonitrile	<5.4	<2.5	Toluene	37	9.8
Pentane	2,300	780	1,1,2-Trichloroethane	<1.4	<0.25
Trichlorofluoromethane	<14	<2.5	3-Hexanone	<100	<25
Acetone	760	320	2-Hexanone	<100	<25
2-Propanol	<220	<87	Hexanal	<100	<25
Isoprene	32	11	Tetrachloroethene	<17	<2.5
Iodomethane	<15	<2.5	Dibromochloromethane	<2.1	<0.25
1,1-Dichloroethene	<9.9	<2.5	1,2-Dibromoethane (EDB)	<1.9	<0.25
Methacrolein	<72	<25	Chlorobenzene	<12	<2.5
trans-1,2-Dichloroethene	<9.9	<2.5	Ethylbenzene	32	7.3
Cyclopentane	340	120	1,1,2,2-Tetrachloroethane	<3.4	<0.5
Methyl vinyl ketone	<72	<25	m,p-Xylene	42	9.7
Butanal	<74	<25	o-Xylene	26	5.9
Methylene chloride	<2,200	<620	Styrene	<21	<5
CFC-113	<19	<2.5	Bromoform	<52	<5
Carbon disulfide	<160	<50	Benzyl chloride	<1.3	<0.25
Methyl t-butyl ether (MTBE)	<45	<12	1,3,5-Trimethylbenzene	<61	<12
Vinyl acetate	<180	<50	1,2,4-Trimethylbenzene	<61	<12
1,1-Dichloroethane	<10	<2.5	1,3-Dichlorobenzene	<15	<2.5
cis-1,2-Dichloroethene	<9.9	<2.5	1,4-Dichlorobenzene	<6	<1
Hexane	2,100	600	1,2,3-Trimethylbenzene	<61	<12
Chloroform	<1.2	<0.25	1,2-Dichlorobenzene	<15	<2.5
2-Butanone (MEK)	<74	<25	1,2,4-Trichlorobenzene	<19	<2.5
1,2-Dichloroethane (EDC)	<1.0	<0.25	Naphthalene	5.0 fb	0.95 fb
1,1,1-Trichloroethane	<14	<2.5	Hexachlorobutadiene	<5.3	<0.5

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	SGV-4	Client:	ESN NW
Date Received:	07/31/18	Project:	Franciscan West Seattle 18-172
Date Collected:	07/26/18	Lab ID:	807613-04 1/3.3
Date Analyzed:	08/09/18	Data File:	080913.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	100	70	130

Compounds:	Concentration		Compounds:	Concentration	
	ug/m3	ppbv		ug/m3	ppbv
Chlorodifluoromethane	<1.2	<0.33	1-Butanol	25	8.3
Propene	88	51	Carbon tetrachloride	<2.1	<0.33
Dichlorodifluoromethane	2.7	0.54	Benzene	7.9	2.5
Chloromethane	1.8	0.89	Cyclohexane	<23	<6.6
F-114	<2.3	<0.33	3-Pentanone	<12	<3.3
Isobutene	51	22	2-Pentanone	34	9.7
Acetaldehyde	1,000 ve	560 ve	Pentanal	130	36
Vinyl chloride	<0.84	<0.33	1,2-Dichloropropane	<0.76	<0.16
1,3-Butadiene	8.9	4.0	1,4-Dioxane	<1.2	<0.33
Bromomethane	<5.1	<1.3	Bromodichloromethane	<0.22	<0.033
Chloroethane	<0.87	<0.33	Trichloroethene	5.2	0.96
Ethanol	97	52	cis-1,3-Dichloropropene	<1.5	<0.33
Acetonitrile	31	19	4-Methyl-2-pentanone	18	4.3
Acrolein	19	8.2	trans-1,3-Dichloropropene	<1.5	<0.33
Acrylonitrile	<0.72	<0.33	Toluene	15	3.9
Pentane	16	5.4	1,1,2-Trichloroethane	<0.18	<0.033
Trichlorofluoromethane	<1.9	<0.33	3-Hexanone	<14	<3.3
Acetone	620 ve	260 ve	2-Hexanone	19	4.5
2-Propanol	<28	<12	Hexanal	210	51
Isoprene	3.7	1.3	Tetrachloroethene	29	4.3
Iodomethane	<1.9	<0.33	Dibromochloromethane	<0.28	<0.033
1,1-Dichloroethene	<1.3	<0.33	1,2-Dibromoethane (EDB)	<0.25	<0.033
Methacrolein	<9.5	<3.3	Chlorobenzene	<1.5	<0.33
trans-1,2-Dichloroethene	<1.3	<0.33	Ethylbenzene	4.5	1.0
Cyclopentane	<0.95	<0.33	1,1,2,2-Tetrachloroethane	<0.45	<0.066
Methyl vinyl ketone	<9.5	<3.3	m,p-Xylene	9.8	2.3
Butanal	74	25	o-Xylene	5.3	1.2
Methylene chloride	1,100 ve	330 ve	Styrene	<2.8	<0.66
CFC-113	<2.5	<0.33	Bromoform	<6.8	<0.66
Carbon disulfide	<21	<6.6	Benzyl chloride	<0.17	<0.033
Methyl t-butyl ether (MTBE)	<5.9	<1.6	1,3,5-Trimethylbenzene	<8.1	<1.6
Vinyl acetate	<23	<6.6	1,2,4-Trimethylbenzene	<8.1	<1.6
1,1-Dichloroethane	<1.3	<0.33	1,3-Dichlorobenzene	<2	<0.33
cis-1,2-Dichloroethene	<1.3	<0.33	1,4-Dichlorobenzene	<0.79	<0.13
Hexane	86	24	1,2,3-Trimethylbenzene	<8.1	<1.6
Chloroform	2.7	0.55	1,2-Dichlorobenzene	<2	<0.33
2-Butanone (MEK)	120	40	1,2,4-Trichlorobenzene	<2.4	<0.33
1,2-Dichloroethane (EDC)	<0.13	<0.033	Naphthalene	4.5 fb	0.85 fb
1,1,1-Trichloroethane	<1.8	<0.33	Hexachlorobutadiene	<0.7	<0.066

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID: SGV-5	Client: ESN NW
Date Received: 07/31/18	Project: Franciscan West Seattle 18-172
Date Collected: 07/26/18	Lab ID: 807613-05 1/75
Date Analyzed: 08/10/18	Data File: 080923.D
Matrix: Air	Instrument: GCMS7
Units: ug/m3	Operator: MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	133 ip	70	130

Compounds:	Concentration		Compounds:	Concentration	
	ug/m3	ppbv		ug/m3	ppbv
Chlorodifluoromethane	<27	<7.5	1-Butanol	<450	<150
Propene	490	290	Carbon tetrachloride	<47	<7.5
Dichlorodifluoromethane	<37	<7.5	Benzene	27	8.4
Chloromethane	<15	<7.5	Cyclohexane	<520	<150
F-114	<52	<7.5	3-Pentanone	<260	<75
Isobutene	230	100	2-Pentanone	<260	<75
Acetaldehyde	<680	<370	Pentanal	<260	<75
Vinyl chloride	<19	<7.5	1,2-Dichloropropane	<17	<3.7
1,3-Butadiene	60	27	1,4-Dioxane	<27	<7.5
Bromomethane	<120	<30	Bromodichloromethane	<5	<0.75
Chloroethane	<20	<7.5	Trichloroethene	<20	<3.7
Ethanol	<570	<300	cis-1,3-Dichloropropene	<34	<7.5
Acetonitrile	<130	<75	4-Methyl-2-pentanone	<310	<75
Acrolein	<69	<30	trans-1,3-Dichloropropene	<34	<7.5
Acrylonitrile	<16	<7.5	Toluene	36	9.4
Pentane	750	260	1,1,2-Trichloroethane	<4.1	<0.75
Trichlorofluoromethane	<42	<7.5	3-Hexanone	<310	<75
Acetone	<360	<150	2-Hexanone	<310	<75
2-Propanol	<650	<260	Hexanal	<310	<75
Isoprene	21	7.5	Tetrachloroethene	<51	<7.5
Iodomethane	<44	<7.5	Dibromochloromethane	<6.4	<0.75
1,1-Dichloroethene	<30	<7.5	1,2-Dibromoethane (EDB)	<5.8	<0.75
Methacrolein	<210	<75	Chlorobenzene	<35	<7.5
trans-1,2-Dichloroethene	<30	<7.5	Ethylbenzene	<33	<7.5
Cyclopentane	<22	<7.5	1,1,2,2-Tetrachloroethane	<10	<1.5
Methyl vinyl ketone	<210	<75	m,p-Xylene	<65	<15
Butanal	<220	<75	o-Xylene	<33	<7.5
Methylene chloride	<6,500	<1,900	Styrene	<64	<15
CFC-113	<57	<7.5	Bromoform	<160	<15
Carbon disulfide	<470	<150	Benzyl chloride	<3.9	<0.75
Methyl t-butyl ether (MTBE)	<140	<37	1,3,5-Trimethylbenzene	<180	<37
Vinyl acetate	<530	<150	1,2,4-Trimethylbenzene	<180	<37
1,1-Dichloroethane	<30	<7.5	1,3-Dichlorobenzene	<45	<7.5
cis-1,2-Dichloroethene	<30	<7.5	1,4-Dichlorobenzene	<18	<3
Hexane	730	210	1,2,3-Trimethylbenzene	<180	<37
Chloroform	<3.7	<0.75	1,2-Dichlorobenzene	<45	<7.5
2-Butanone (MEK)	<220	<75	1,2,4-Trichlorobenzene	<56	<7.5
1,2-Dichloroethane (EDC)	<3	<0.75	Naphthalene	9.4 fb	1.8 fb
1,1,1-Trichloroethane	<41	<7.5	Hexachlorobutadiene	<16	<1.5

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID: SS-1	Client: ESN NW
Date Received: 07/31/18	Project: Franciscan West Seattle 18-172
Date Collected: 07/26/18	Lab ID: 807613-06 1/50
Date Analyzed: 08/10/18	Data File: 080922.D
Matrix: Air	Instrument: GCMS7
Units: ug/m3	Operator: MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	113	70	130

Compounds:	Concentration		Compounds:	Concentration	
	ug/m3	ppbv		ug/m3	ppbv
Chlorodifluoromethane	<18	<5	1-Butanol	900	300
Propene	<34	<20	Carbon tetrachloride	<31	<5
Dichlorodifluoromethane	<25	<5	Benzene	<16	<5
Chloromethane	<10	<5	Cyclohexane	<340	<100
F-114	<35	<5	3-Pentanone	<180	<50
Isobutene	<46	<20	2-Pentanone	<180	<50
Acetaldehyde	<450	<250	Pentanal	<180	<50
Vinyl chloride	<13	<5	1,2-Dichloropropane	<12	<2.5
1,3-Butadiene	<1.1	<0.5	1,4-Dioxane	<18	<5
Bromomethane	<78	<20	Bromodichloromethane	<3.4	<0.5
Chloroethane	<13	<5	Trichloroethene	<13	<2.5
Ethanol	1,500	790	cis-1,3-Dichloropropene	<23	<5
Acetonitrile	<84	<50	4-Methyl-2-pentanone	<200	<50
Acrolein	<46	<20	trans-1,3-Dichloropropene	<23	<5
Acrylonitrile	<11	<5	Toluene	<19	<5
Pentane	<150	<50	1,1,2-Trichloroethane	<2.7	<0.5
Trichlorofluoromethane	<28	<5	3-Hexanone	<200	<50
Acetone	610	260	2-Hexanone	<200	<50
2-Propanol	<430	<170	Hexanal	<200	<50
Isoprene	<14	<5	Tetrachloroethene	<34	<5
Iodomethane	<29	<5	Dibromochloromethane	<4.3	<0.5
1,1-Dichloroethene	<20	<5	1,2-Dibromoethane (EDB)	<3.8	<0.5
Methacrolein	<140	<50	Chlorobenzene	<23	<5
trans-1,2-Dichloroethene	<20	<5	Ethylbenzene	<22	<5
Cyclopentane	<14	<5	1,1,2,2-Tetrachloroethane	<6.9	<1
Methyl vinyl ketone	<140	<50	m,p-Xylene	<43	<10
Butanal	<150	<50	o-Xylene	<22	<5
Methylene chloride	<4,300	<1,200	Styrene	<43	<10
CFC-113	<38	<5	Bromoform	<100	<10
Carbon disulfide	<310	<100	Benzyl chloride	<2.6	<0.5
Methyl t-butyl ether (MTBE)	<90	<25	1,3,5-Trimethylbenzene	<120	<25
Vinyl acetate	<350	<100	1,2,4-Trimethylbenzene	<120	<25
1,1-Dichloroethane	<20	<5	1,3-Dichlorobenzene	<30	<5
cis-1,2-Dichloroethene	<20	<5	1,4-Dichlorobenzene	<12	<2
Hexane	<180	<50	1,2,3-Trimethylbenzene	<120	<25
Chloroform	<2.4	<0.5	1,2-Dichlorobenzene	<30	<5
2-Butanone (MEK)	<150	<50	1,2,4-Trichlorobenzene	<37	<5
1,2-Dichloroethane (EDC)	<2	<0.5	Naphthalene	6.0 fb	1.1 fb
1,1,1-Trichloroethane	<27	<5	Hexachlorobutadiene	<11	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	SS-2	Client:	ESN NW
Date Received:	07/31/18	Project:	Franciscan West Seattle 18-172
Date Collected:	07/26/18	Lab ID:	807613-07 1/25
Date Analyzed:	08/10/18	Data File:	080921.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	120	70	130

Compounds:	Concentration		Compounds:	Concentration	
	ug/m3	ppbv		ug/m3	ppbv
Chlorodifluoromethane	<8.8	<2.5	1-Butanol	1,100	350
Propene	24	14	Carbon tetrachloride	<16	<2.5
Dichlorodifluoromethane	<12	<2.5	Benzene	<8	<2.5
Chloromethane	<5.2	<2.5	Cyclohexane	<170	<50
F-114	<17	<2.5	3-Pentanone	<88	<25
Isobutene	<23	<10	2-Pentanone	<88	<25
Acetaldehyde	<230	<120	Pentanal	<88	<25
Vinyl chloride	<6.4	<2.5	1,2-Dichloropropane	<5.8	<1.2
1,3-Butadiene	<0.55	<0.25	1,4-Dioxane	<9	<2.5
Bromomethane	<39	<10	Bromodichloromethane	<1.7	<0.25
Chloroethane	<6.6	<2.5	Trichloroethene	12 fb	2.2 fb
Ethanol	2,300	1,200	cis-1,3-Dichloropropene	<11	<2.5
Acetonitrile	<42	<25	4-Methyl-2-pentanone	<100	<25
Acrolein	<23	<10	trans-1,3-Dichloropropene	<11	<2.5
Acrylonitrile	<5.4	<2.5	Toluene	<9.4	<2.5
Pentane	<74	<25	1,1,2-Trichloroethane	3.4	0.62
Trichlorofluoromethane	<14	<2.5	3-Hexanone	<100	<25
Acetone	1,200	520	2-Hexanone	<100	<25
2-Propanol	<220	<87	Hexanal	<100	<25
Isoprene	<7	<2.5	Tetrachloroethene	<17	<2.5
Iodomethane	<15	<2.5	Dibromochloromethane	<2.1	<0.25
1,1-Dichloroethene	<9.9	<2.5	1,2-Dibromoethane (EDB)	<1.9	<0.25
Methacrolein	<72	<25	Chlorobenzene	<12	<2.5
trans-1,2-Dichloroethene	<9.9	<2.5	Ethylbenzene	<11	<2.5
Cyclopentane	<7.3	<2.5	1,1,2,2-Tetrachloroethane	<3.4	<0.5
Methyl vinyl ketone	<72	<25	m,p-Xylene	<22	<5
Butanal	<74	<25	o-Xylene	12	2.7
Methylene chloride	<2,200	<620	Styrene	<21	<5
CFC-113	<19	<2.5	Bromoform	<52	<5
Carbon disulfide	<160	<50	Benzyl chloride	<1.3	<0.25
Methyl t-butyl ether (MTBE)	<45	<12	1,3,5-Trimethylbenzene	<61	<12
Vinyl acetate	<180	<50	1,2,4-Trimethylbenzene	<61	<12
1,1-Dichloroethane	<10	<2.5	1,3-Dichlorobenzene	<15	<2.5
cis-1,2-Dichloroethene	<9.9	<2.5	1,4-Dichlorobenzene	<6	<1
Hexane	88	25	1,2,3-Trimethylbenzene	<61	<12
Chloroform	<1.2	<0.25	1,2-Dichlorobenzene	<15	<2.5
2-Butanone (MEK)	<74	<25	1,2,4-Trichlorobenzene	<19	<2.5
1,2-Dichloroethane (EDC)	<1	<0.25	Naphthalene	3.8 fb	0.72 fb
1,1,1-Trichloroethane	<14	<2.5	Hexachlorobutadiene	<5.3	<0.5

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID: SS-3	Client: ESN NW
Date Received: 07/31/18	Project: Franciscan West Seattle 18-172
Date Collected: 07/26/18	Lab ID: 807613-08 1/3.3
Date Analyzed: 08/09/18	Data File: 080914.D
Matrix: Air	Instrument: GCMS7
Units: ug/m3	Operator: MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	99	70	130

Compounds:	Concentration		Compounds:	Concentration	
	ug/m3	ppbv		ug/m3	ppbv
Chlorodifluoromethane	<1.2	<0.33	1-Butanol	850 ve	280 ve
Propene	<2.3	<1.3	Carbon tetrachloride	<2.1	<0.33
Dichlorodifluoromethane	2.5	0.50	Benzene	6.9	2.2
Chloromethane	<0.68	<0.33	Cyclohexane	<23	<6.6
F-114	<2.3	<0.33	3-Pentanone	<12	<3.3
Isobutene	17	7.6	2-Pentanone	<12	<3.3
Acetaldehyde	<30	<16	Pentanal	<12	<3.3
Vinyl chloride	<0.84	<0.33	1,2-Dichloropropane	<0.76	<0.16
1,3-Butadiene	2.7	1.2	1,4-Dioxane	<1.2	<0.33
Bromomethane	<5.1	<1.3	Bromodichloromethane	<0.22	<0.033
Chloroethane	<0.87	<0.33	Trichloroethene	5.5	1.0
Ethanol	2,800 ve	1,500 ve	cis-1,3-Dichloropropene	<1.5	<0.33
Acetonitrile	<5.5	<3.3	4-Methyl-2-pentanone	50	12
Acrolein	<3	<1.3	trans-1,3-Dichloropropene	<1.5	<0.33
Acrylonitrile	<0.72	<0.33	Toluene	11	2.9
Pentane	55	19	1,1,2-Trichloroethane	<0.18	<0.033
Trichlorofluoromethane	<1.9	<0.33	3-Hexanone	<14	<3.3
Acetone	1,300 ve	540 ve	2-Hexanone	<14	<3.3
2-Propanol	300	120	Hexanal	<14	<3.3
Isoprene	1.8	0.65	Tetrachloroethene	16	2.4
Iodomethane	<1.9	<0.33	Dibromochloromethane	<0.28	<0.033
1,1-Dichloroethene	<1.3	<0.33	1,2-Dibromoethane (EDB)	<0.25	<0.033
Methacrolein	<9.5	<3.3	Chlorobenzene	<1.5	<0.33
trans-1,2-Dichloroethene	<1.3	<0.33	Ethylbenzene	2.0	0.47
Cyclopentane	<0.95	<0.33	1,1,2,2-Tetrachloroethane	<0.45	<0.066
Methyl vinyl ketone	<9.5	<3.3	m,p-Xylene	8.6	2.0
Butanal	16	5.3	o-Xylene	3.6	0.83
Methylene chloride	<290	<82	Styrene	<2.8	<0.66
CFC-113	<2.5	<0.33	Bromoform	<6.8	<0.66
Carbon disulfide	<21	<6.6	Benzyl chloride	<0.17	<0.033
Methyl t-butyl ether (MTBE)	<5.9	<1.6	1,3,5-Trimethylbenzene	<8.1	<1.6
Vinyl acetate	<23	<6.6	1,2,4-Trimethylbenzene	<8.1	<1.6
1,1-Dichloroethane	<1.3	<0.33	1,3-Dichlorobenzene	<2	<0.33
cis-1,2-Dichloroethene	<1.3	<0.33	1,4-Dichlorobenzene	<0.79	<0.13
Hexane	44	12	1,2,3-Trimethylbenzene	<8.1	<1.6
Chloroform	12	2.5	1,2-Dichlorobenzene	<2	<0.33
2-Butanone (MEK)	65	22	1,2,4-Trichlorobenzene	<2.4	<0.33
1,2-Dichloroethane (EDC)	<0.13	<0.033	Naphthalene	1.3 fb	0.25 fb
1,1,1-Trichloroethane	<1.8	<0.33	Hexachlorobutadiene	<0.7	<0.066

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID: SS-4	Client: ESN NW
Date Received: 07/31/18	Project: Franciscan West Seattle 18-172
Date Collected: 07/26/18	Lab ID: 807613-09 1/3.3
Date Analyzed: 08/09/18	Data File: 080915.D
Matrix: Air	Instrument: GCMS7
Units: ug/m3	Operator: MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	95	70	130

Compounds:	Concentration		Compounds:	Concentration	
	ug/m3	ppbv		ug/m3	ppbv
Chlorodifluoromethane	<1.2	<0.33	1-Butanol	300	100
Propene	<2.3	<1.3	Carbon tetrachloride	<2.1	<0.33
Dichlorodifluoromethane	2.5	0.50	Benzene	12	3.7
Chloromethane	<0.68	<0.33	Cyclohexane	28	8.1
F-114	<2.3	<0.33	3-Pentanone	<12	<3.3
Isobutene	20	8.8	2-Pentanone	<12	<3.3
Acetaldehyde	<30	<16	Pentanal	<12	<3.3
Vinyl chloride	12	4.6	1,2-Dichloropropane	<0.76	<0.16
1,3-Butadiene	4.0	1.8	1,4-Dioxane	<1.2	<0.33
Bromomethane	<5.1	<1.3	Bromodichloromethane	<0.22	<0.033
Chloroethane	1.4	0.52	Trichloroethene	5.1	0.95
Ethanol	1,600 ve	840 ve	cis-1,3-Dichloropropene	<1.5	<0.33
Acetonitrile	<5.5	<3.3	4-Methyl-2-pentanone	37	9.1
Acrolein	<3	<1.3	trans-1,3-Dichloropropene	<1.5	<0.33
Acrylonitrile	<0.72	<0.33	Toluene	17	4.6
Pentane	95	32	1,1,2-Trichloroethane	<0.18	<0.033
Trichlorofluoromethane	<1.9	<0.33	3-Hexanone	<14	<3.3
Acetone	1,100 ve	440 ve	2-Hexanone	<14	<3.3
2-Propanol	210	86	Hexanal	<14	<3.3
Isoprene	1.1	0.39	Tetrachloroethene	15	2.2
Iodomethane	<1.9	<0.33	Dibromochloromethane	<0.28	<0.033
1,1-Dichloroethene	<1.3	<0.33	1,2-Dibromoethane (EDB)	<0.25	<0.033
Methacrolein	<9.5	<3.3	Chlorobenzene	<1.5	<0.33
trans-1,2-Dichloroethene	<1.3	<0.33	Ethylbenzene	2.2	0.50
Cyclopentane	11	4.0	1,1,2,2-Tetrachloroethane	<0.45	<0.066
Methyl vinyl ketone	<9.5	<3.3	m,p-Xylene	10	2.3
Butanal	<9.7	<3.3	o-Xylene	2.9	0.66
Methylene chloride	570	160	Styrene	<2.8	<0.66
CFC-113	<2.5	<0.33	Bromoform	<6.8	<0.66
Carbon disulfide	<21	<6.6	Benzyl chloride	<0.17	<0.033
Methyl t-butyl ether (MTBE)	<5.9	<1.6	1,3,5-Trimethylbenzene	<8.1	<1.6
Vinyl acetate	<23	<6.6	1,2,4-Trimethylbenzene	<8.1	<1.6
1,1-Dichloroethane	<1.3	<0.33	1,3-Dichlorobenzene	<2	<0.33
cis-1,2-Dichloroethene	<1.3	<0.33	1,4-Dichlorobenzene	<0.79	<0.13
Hexane	71	20	1,2,3-Trimethylbenzene	<8.1	<1.6
Chloroform	1.1	0.23	1,2-Dichlorobenzene	<2	<0.33
2-Butanone (MEK)	44	15	1,2,4-Trichlorobenzene	<2.4	<0.33
1,2-Dichloroethane (EDC)	<0.13	<0.033	Naphthalene	0.90 fb	0.17 fb
1,1,1-Trichloroethane	<1.8	<0.33	Hexachlorobutadiene	<0.7	<0.066

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID: SS-5	Client: ESN NW
Date Received: 07/31/18	Project: Franciscan West Seattle 18-172
Date Collected: 07/26/18	Lab ID: 807613-10 1/3.3
Date Analyzed: 08/09/18	Data File: 080916.D
Matrix: Air	Instrument: GCMS7
Units: ug/m3	Operator: MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	96	70	130

Compounds:	Concentration		Compounds:	Concentration	
	ug/m3	ppbv		ug/m3	ppbv
Chlorodifluoromethane	<1.2	<0.33	1-Butanol	290	97
Propene	<2.3	<1.3	Carbon tetrachloride	<2.1	<0.33
Dichlorodifluoromethane	2.5	0.50	Benzene	4.9	1.5
Chloromethane	0.85	0.41	Cyclohexane	<23	<6.6
F-114	<2.3	<0.33	3-Pentanone	<12	<3.3
Isobutene	7.6	3.3	2-Pentanone	<12	<3.3
Acetaldehyde	<30	<16	Pentanal	<12	<3.3
Vinyl chloride	<0.84	<0.33	1,2-Dichloropropane	<0.76	<0.16
1,3-Butadiene	2.0	0.90	1,4-Dioxane	<1.2	<0.33
Bromomethane	<5.1	<1.3	Bromodichloromethane	<0.22	<0.033
Chloroethane	<0.87	<0.33	Trichloroethene	39	7.3
Ethanol	2,300 ve	1,200 ve	cis-1,3-Dichloropropene	<1.5	<0.33
Acetonitrile	<5.5	<3.3	4-Methyl-2-pentanone	29	7.2
Acrolein	<3	<1.3	trans-1,3-Dichloropropene	<1.5	<0.33
Acrylonitrile	<0.72	<0.33	Toluene	24	6.4
Pentane	53	18	1,1,2-Trichloroethane	<0.18	<0.033
Trichlorofluoromethane	<1.9	<0.33	3-Hexanone	<14	<3.3
Acetone	1,200 ve	510 ve	2-Hexanone	<14	<3.3
2-Propanol	200	80	Hexanal	<14	<3.3
Isoprene	1.5	0.53	Tetrachloroethene	5.0	0.73
Iodomethane	<1.9	<0.33	Dibromochloromethane	<0.28	<0.033
1,1-Dichloroethene	1.7	0.42	1,2-Dibromoethane (EDB)	<0.25	<0.033
Methacrolein	<9.5	<3.3	Chlorobenzene	<1.5	<0.33
trans-1,2-Dichloroethene	<1.3	<0.33	Ethylbenzene	2.4	0.55
Cyclopentane	<0.95	<0.33	1,1,2,2-Tetrachloroethane	<0.45	<0.066
Methyl vinyl ketone	<9.5	<3.3	m,p-Xylene	9.7	2.2
Butanal	15	5.1	o-Xylene	3.1	0.72
Methylene chloride	<290	<82	Styrene	<2.8	<0.66
CFC-113	<2.5	<0.33	Bromoform	<6.8	<0.66
Carbon disulfide	<21	<6.6	Benzyl chloride	<0.17	<0.033
Methyl t-butyl ether (MTBE)	<5.9	<1.6	1,3,5-Trimethylbenzene	<8.1	<1.6
Vinyl acetate	<23	<6.6	1,2,4-Trimethylbenzene	<8.1	<1.6
1,1-Dichloroethane	<1.3	<0.33	1,3-Dichlorobenzene	<2	<0.33
cis-1,2-Dichloroethene	<1.3	<0.33	1,4-Dichlorobenzene	<0.79	<0.13
Hexane	39	11	1,2,3-Trimethylbenzene	<8.1	<1.6
Chloroform	0.71	0.15	1,2-Dichlorobenzene	<2	<0.33
2-Butanone (MEK)	48	16	1,2,4-Trichlorobenzene	<2.4	<0.33
1,2-Dichloroethane (EDC)	0.16	0.04	Naphthalene	0.97 fb	0.18 fb
1,1,1-Trichloroethane	<1.8	<0.33	Hexachlorobutadiene	<0.7	<0.066

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	SS-6	Client:	ESN NW
Date Received:	07/31/18	Project:	Franciscan West Seattle 18-172
Date Collected:	07/26/18	Lab ID:	807613-11 1/3.3
Date Analyzed:	08/10/18	Data File:	080917.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	105	70	130

Compounds:	Concentration		Compounds:	Concentration	
	ug/m3	ppbv		ug/m3	ppbv
Chlorodifluoromethane	<1.2	<0.33	1-Butanol	82	27
Propene	<2.3	<1.3	Carbon tetrachloride	<2.1	<0.33
Dichlorodifluoromethane	2.4	0.48	Benzene	6.5	2.0
Chloromethane	1.0	0.50	Cyclohexane	<23	<6.6
F-114	<2.3	<0.33	3-Pentanone	<12	<3.3
Isobutene	12	5.1	2-Pentanone	<12	<3.3
Acetaldehyde	<30	<16	Pentanal	<12	<3.3
Vinyl chloride	11	4.2	1,2-Dichloropropane	<0.76	<0.16
1,3-Butadiene	4.3	1.9	1,4-Dioxane	<1.2	<0.33
Bromomethane	<5.1	<1.3	Bromodichloromethane	<0.22	<0.033
Chloroethane	1.8	0.70	Trichloroethene	5.4	1.0
Ethanol	1,400 ve	740 ve	cis-1,3-Dichloropropene	<1.5	<0.33
Acetonitrile	<5.5	<3.3	4-Methyl-2-pentanone	70	17
Acrolein	<3	<1.3	trans-1,3-Dichloropropene	<1.5	<0.33
Acrylonitrile	<0.72	<0.33	Toluene	14	3.8
Pentane	19	6.3	1,1,2-Trichloroethane	<0.18	<0.033
Trichlorofluoromethane	<1.9	<0.33	3-Hexanone	<14	<3.3
Acetone	620 ve	260 ve	2-Hexanone	<14	<3.3
2-Propanol	230	95	Hexanal	<14	<3.3
Isoprene	1.4	0.49	Tetrachloroethene	2.6	0.38
Iodomethane	<1.9	<0.33	Dibromochloromethane	<0.28	<0.033
1,1-Dichloroethene	<1.3	<0.33	1,2-Dibromoethane (EDB)	<0.25	<0.033
Methacrolein	<9.5	<3.3	Chlorobenzene	<1.5	<0.33
trans-1,2-Dichloroethene	<1.3	<0.33	Ethylbenzene	3.5	0.80
Cyclopentane	<0.95	<0.33	1,1,2,2-Tetrachloroethane	<0.46	<0.066
Methyl vinyl ketone	<9.5	<3.3	m,p-Xylene	11	2.4
Butanal	<9.7	<3.3	o-Xylene	3.9	0.89
Methylene chloride	<290	<82	Styrene	3.1	0.73
CFC-113	<2.5	<0.33	Bromoform	<6.8	<0.66
Carbon disulfide	<21	<6.6	Benzyl chloride	0.32	0.063
Methyl t-butyl ether (MTBE)	<5.9	<1.6	1,3,5-Trimethylbenzene	<8.1	<1.6
Vinyl acetate	<23	<6.6	1,2,4-Trimethylbenzene	<8.1	<1.6
1,1-Dichloroethane	<1.3	<0.33	1,3-Dichlorobenzene	<2	<0.33
cis-1,2-Dichloroethene	<1.3	<0.33	1,4-Dichlorobenzene	<0.79	<0.13
Hexane	31	8.9	1,2,3-Trimethylbenzene	<8.1	<1.6
Chloroform	0.29 fb	0.059 fb	1,2-Dichlorobenzene	<2	<0.33
2-Butanone (MEK)	74	25	1,2,4-Trichlorobenzene	<2.4	<0.33
1,2-Dichloroethane (EDC)	0.39	0.096	Naphthalene	1.0 fb	0.19 fb
1,1,1-Trichloroethane	<1.8	<0.33	Hexachlorobutadiene	<0.7	<0.066

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID: SS-7	Client: ESN NW
Date Received: 07/31/18	Project: Franciscan West Seattle 18-172
Date Collected: 07/26/18	Lab ID: 807613-12 1/3.3
Date Analyzed: 08/10/18	Data File: 080918.D
Matrix: Air	Instrument: GCMS7
Units: ug/m3	Operator: MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	106	70	130

Compounds:	Concentration		Compounds:	Concentration	
	ug/m3	ppbv		ug/m3	ppbv
Chlorodifluoromethane	<1.2	<0.33	1-Butanol	1,800 ve	590 ve
Propene	<2.3	<1.3	Carbon tetrachloride	<2.1	<0.33
Dichlorodifluoromethane	2.4	0.48	Benzene	3.6	1.1
Chloromethane	<0.68	<0.33	Cyclohexane	<23	<6.6
F-114	<2.3	<0.33	3-Pentanone	<12	<3.3
Isobutene	12	5.2	2-Pentanone	<12	<3.3
Acetaldehyde	<30	<16	Pentanal	51	14
Vinyl chloride	<0.84	<0.33	1,2-Dichloropropane	<0.76	<0.16
1,3-Butadiene	1.1	0.50	1,4-Dioxane	13	3.6
Bromomethane	<5.1	<1.3	Bromodichloromethane	<0.22	<0.033
Chloroethane	<0.87	<0.33	Trichloroethene	2.0	0.36
Ethanol	1,900 ve	1,000 ve	cis-1,3-Dichloropropene	<1.5	<0.33
Acetonitrile	<5.5	<3.3	4-Methyl-2-pentanone	25	6.1
Acrolein	5.8	2.5	trans-1,3-Dichloropropene	<1.5	<0.33
Acrylonitrile	<0.72	<0.33	Toluene	9.5	2.5
Pentane	19	6.4	1,1,2-Trichloroethane	<0.18	<0.033
Trichlorofluoromethane	<1.9	<0.33	3-Hexanone	<14	<3.3
Acetone	1,000 ve	430 ve	2-Hexanone	<14	<3.3
2-Propanol	130	52	Hexanal	<14	<3.3
Isoprene	<0.92	<0.33	Tetrachloroethene	<2.2	<0.33
Iodomethane	<1.9	<0.33	Dibromochloromethane	<0.28	<0.033
1,1-Dichloroethene	<1.3	<0.33	1,2-Dibromoethane (EDB)	<0.25	<0.033
Methacrolein	<9.5	<3.3	Chlorobenzene	6.1	1.3
trans-1,2-Dichloroethene	<1.3	<0.33	Ethylbenzene	7.4	1.7
Cyclopentane	6.4	2.2	1,1,2,2-Tetrachloroethane	1.2	0.17
Methyl vinyl ketone	<9.5	<3.3	m,p-Xylene	20	4.7
Butanal	73	25	o-Xylene	14	3.3
Methylene chloride	<290	<82	Styrene	<2.8	<0.66
CFC-113	<2.5	<0.33	Bromoform	<6.8	<0.66
Carbon disulfide	<21	<6.6	Benzyl chloride	<0.17	<0.033
Methyl t-butyl ether (MTBE)	<5.9	<1.6	1,3,5-Trimethylbenzene	15	3.1
Vinyl acetate	<23	<6.6	1,2,4-Trimethylbenzene	38	7.8
1,1-Dichloroethane	<1.3	<0.33	1,3-Dichlorobenzene	<2	<0.33
cis-1,2-Dichloroethene	<1.3	<0.33	1,4-Dichlorobenzene	3.3	0.55
Hexane	28	8.0	1,2,3-Trimethylbenzene	9.5	1.9
Chloroform	0.24 fb	0.049 fb	1,2-Dichlorobenzene	<2	<0.33
2-Butanone (MEK)	65	22	1,2,4-Trichlorobenzene	<2.4	<0.33
1,2-Dichloroethane (EDC)	<0.13	<0.033	Naphthalene	1.4 fb	0.27 fb
1,1,1-Trichloroethane	<1.8	<0.33	Hexachlorobutadiene	<0.7	<0.066

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID: SS-8	Client: ESN NW
Date Received: 07/31/18	Project: Franciscan West Seattle 18-172
Date Collected: 07/26/18	Lab ID: 807613-13 1/3.3
Date Analyzed: 08/10/18	Data File: 080919.D
Matrix: Air	Instrument: GCMS7
Units: ug/m3	Operator: MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	104	70	130

Compounds:	Concentration		Compounds:	Concentration	
	ug/m3	ppbv		ug/m3	ppbv
Chlorodifluoromethane	<1.2	<0.33	1-Butanol	60	20
Propene	<2.3	<1.3	Carbon tetrachloride	<2.1	<0.33
Dichlorodifluoromethane	2.4	0.48	Benzene	<1.1	<0.33
Chloromethane	<0.68	<0.33	Cyclohexane	<23	<6.6
F-114	<2.3	<0.33	3-Pentanone	<12	<3.3
Isobutene	<3	<1.3	2-Pentanone	<12	<3.3
Acetaldehyde	<30	<16	Pentanal	<12	<3.3
Vinyl chloride	<0.84	<0.33	1,2-Dichloropropane	<0.76	<0.16
1,3-Butadiene	<0.073	<0.033	1,4-Dioxane	<1.2	<0.33
Bromomethane	<5.1	<1.3	Bromodichloromethane	<0.22	<0.033
Chloroethane	<0.87	<0.33	Trichloroethene	3.5	0.64
Ethanol	50	26	cis-1,3-Dichloropropene	<1.5	<0.33
Acetonitrile	<5.5	<3.3	4-Methyl-2-pentanone	<14	<3.3
Acrolein	<3	<1.3	trans-1,3-Dichloropropene	<1.5	<0.33
Acrylonitrile	<0.72	<0.33	Toluene	4.1	1.1
Pentane	<9.7	<3.3	1,1,2-Trichloroethane	<0.18	<0.033
Trichlorofluoromethane	<1.9	<0.33	3-Hexanone	<14	<3.3
Acetone	63	27	2-Hexanone	<14	<3.3
2-Propanol	<28	<12	Hexanal	<14	<3.3
Isoprene	<0.92	<0.33	Tetrachloroethene	<2.2	<0.33
Iodomethane	<1.9	<0.33	Dibromochloromethane	<0.28	<0.033
1,1-Dichloroethene	<1.3	<0.33	1,2-Dibromoethane (EDB)	<0.25	<0.033
Methacrolein	<9.5	<3.3	Chlorobenzene	<1.5	<0.33
trans-1,2-Dichloroethene	<1.3	<0.33	Ethylbenzene	1.6	0.38
Cyclopentane	<0.95	<0.33	1,1,2,2-Tetrachloroethane	<0.45	<0.066
Methyl vinyl ketone	<9.5	<3.3	m,p-Xylene	8.3	1.9
Butanal	<9.7	<3.3	o-Xylene	3.8	0.86
Methylene chloride	<290	<82	Styrene	6.4	1.5
CFC-113	<2.5	<0.33	Bromoform	<6.8	<0.66
Carbon disulfide	<21	<6.6	Benzyl chloride	<0.17	<0.033
Methyl t-butyl ether (MTBE)	<5.9	<1.6	1,3,5-Trimethylbenzene	<8.1	<1.6
Vinyl acetate	<23	<6.6	1,2,4-Trimethylbenzene	<8.1	<1.6
1,1-Dichloroethane	<1.3	<0.33	1,3-Dichlorobenzene	<2	<0.33
cis-1,2-Dichloroethene	<1.3	<0.33	1,4-Dichlorobenzene	<0.79	<0.13
Hexane	<12	<3.3	1,2,3-Trimethylbenzene	<8.1	<1.6
Chloroform	4.7	0.96	1,2-Dichlorobenzene	<2	<0.33
2-Butanone (MEK)	29	9.7	1,2,4-Trichlorobenzene	<2.4	<0.33
1,2-Dichloroethane (EDC)	<0.13	<0.033	Naphthalene	0.64 fb	0.12 fb
1,1,1-Trichloroethane	<1.8	<0.33	Hexachlorobutadiene	<0.7	<0.066

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	Method Blank	Client:	ESN NW
Date Received:	Not Applicable	Project:	Franciscan West Seattle 18-172
Date Collected:	Not Applicable	Lab ID:	08-1808 mb
Date Analyzed:	08/09/18	Data File:	080908.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	94	70	130

Compounds:	Concentration		Compounds:	Concentration	
	ug/m3	ppbv		ug/m3	ppbv
Chlorodifluoromethane	<0.35	<0.1	1-Butanol	<6.1	<2
Propene	<0.69	<0.4	Carbon tetrachloride	<0.63	<0.1
Dichlorodifluoromethane	<0.49	<0.1	Benzene	<0.32	<0.1
Chloromethane	<0.21	<0.1	Cyclohexane	<6.9	<2
F-114	<0.7	<0.1	3-Pentanone	<3.5	<1
Isobutene	<0.92	<0.4	2-Pentanone	<3.5	<1
Acetaldehyde	<9	<5	Pentanal	<3.5	<1
Vinyl chloride	<0.26	<0.1	1,2-Dichloropropane	<0.23	<0.05
1,3-Butadiene	<0.022	<0.01	1,4-Dioxane	<0.36	<0.1
Bromomethane	<1.6	<0.4	Bromodichloromethane	<0.067	<0.01
Chloroethane	<0.26	<0.1	Trichloroethene	<0.27	<0.05
Ethanol	<7.5	<4	cis-1,3-Dichloropropene	<0.45	<0.1
Acetonitrile	<1.7	<1	4-Methyl-2-pentanone	<4.1	<1
Acrolein	<0.92	<0.4	trans-1,3-Dichloropropene	<0.45	<0.1
Acrylonitrile	<0.22	<0.1	Toluene	<0.38	<0.1
Pentane	<3	<1	1,1,2-Trichloroethane	<0.055	<0.01
Trichlorofluoromethane	<0.56	<0.1	3-Hexanone	<4.1	<1
Acetone	<4.8	<2	2-Hexanone	<4.1	<1
2-Propanol	<8.6	<3.5	Hexanal	<4.1	<1
Isoprene	<0.28	<0.1	Tetrachloroethene	<0.68	<0.1
Iodomethane	<0.58	<0.1	Dibromochloromethane	<0.085	<0.01
1,1-Dichloroethene	<0.4	<0.1	1,2-Dibromoethane (EDB)	<0.077	<0.01
Methacrolein	<2.9	<1	Chlorobenzene	<0.46	<0.1
trans-1,2-Dichloroethene	<0.4	<0.1	Ethylbenzene	<0.43	<0.1
Cyclopentane	<0.29	<0.1	1,1,2,2-Tetrachloroethane	<0.14	<0.02
Methyl vinyl ketone	<2.9	<1	m,p-Xylene	<0.87	<0.2
Butanal	<2.9	<1	o-Xylene	<0.43	<0.1
Methylene chloride	<87	<25	Styrene	<0.85	<0.2
CFC-113	<0.77	<0.1	Bromoform	<2.1	<0.2
Carbon disulfide	<6.2	<2	Benzyl chloride	<0.052	<0.01
Methyl t-butyl ether (MTBE)	<1.8	<0.5	1,3,5-Trimethylbenzene	<2.5	<0.5
Vinyl acetate	<7	<2	1,2,4-Trimethylbenzene	<2.5	<0.5
1,1-Dichloroethane	<0.4	<0.1	1,3-Dichlorobenzene	<0.6	<0.1
cis-1,2-Dichloroethene	<0.4	<0.1	1,4-Dichlorobenzene	<0.24	<0.04
Hexane	<3.5	<1	1,2,3-Trimethylbenzene	<2.5	<0.5
Chloroform	<0.049	<0.01	1,2-Dichlorobenzene	<0.6	<0.1
2-Butanone (MEK)	<2.9	<1	1,2,4-Trichlorobenzene	<0.74	<0.1
1,2-Dichloroethane (EDC)	<0.04	<0.01	Naphthalene	0.14	0.027
1,1,1-Trichloroethane	<0.55	<0.1	Hexachlorobutadiene	<0.21	<0.02

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 08/16/18

Date Received: 07/31/18

Project: Franciscan West Seattle 18-172, F&BI 807613

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF AIR SAMPLES
FOR VOLATILES BY METHOD APH**

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
APH EC5-8 aliphatics	ug/m3	45	86	70-130
APH EC9-12 aliphatics	ug/m3	45	119	70-130
APH EC9-10 aromatics	ug/m3	45	97	70-130

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 08/16/18

Date Received: 07/31/18

Project: Franciscan West Seattle 18-172, F&BI 807613

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

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Chlorodifluoromethane	ppbv	5	95	70-130
Propene	ppbv	5	85	70-130
Dichlorodifluoromethane	ppbv	5	88	70-130
Chloromethane	ppbv	5	88	70-130
F-114	ppbv	5	90	70-130
Isobutene	ppbv	5	86	70-130
Acetaldehyde	ppbv	5	108	70-130
Vinyl chloride	ppbv	5	89	70-130
1,3-Butadiene	ppbv	5	95	70-130
Bromomethane	ppbv	5	136 vo	70-130
Chloroethane	ppbv	5	87	70-130
Ethanol	ppbv	5	86	70-130
Acetonitrile	ppbv	5	88	70-130
Acrolein	ppbv	5	98	70-130
Acrylonitrile	ppbv	5	110	70-130
Pentane	ppbv	5	95	70-130
Trichlorofluoromethane	ppbv	5	92	70-130
Acetone	ppbv	5	92	70-130
2-Propanol	ppbv	5	102	70-130
Isoprene	ppbv	5	96	70-130
Iodomethane	ppbv	5	93	70-130
1,1-Dichloroethene	ppbv	5	92	70-130
Methacrolein	ppbv	5	93	70-130
trans-1,2-Dichloroethene	ppbv	5	95	70-130
Cyclopentane	ppbv	5	95	70-130
Methyl vinyl ketone	ppbv	5	105	70-130
Butanal	ppbv	5	98	70-130
Methylene chloride	ppbv	5	84	70-130
CFC-113	ppbv	5	92	70-130
Carbon disulfide	ppbv	5	89	70-130
Methyl t-butyl ether (MTBE)	ppbv	5	102	70-130
Vinyl acetate	ppbv	5	89	70-130
1,1-Dichloroethane	ppbv	5	96	70-130
cis-1,2-Dichloroethene	ppbv	5	97	70-130
Hexane	ppbv	5	98	70-130
Chloroform	ppbv	5	97	70-130
2-Butanone (MEK)	ppbv	5	103	70-130
1,2-Dichloroethane (EDC)	ppbv	5	99	70-130
1,1,1-Trichloroethane	ppbv	5	98	70-130

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 08/16/18

Date Received: 07/31/18

Project: Franciscan West Seattle 18-172, F&BI 807613

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

Laboratory Code: Laboratory Control Sample (continued)

Analyte	Reporting Units	Spike Level	Percent	Acceptance Criteria
			Recovery LCS	
1-Butanol	ppbv	5	98	70-130
Carbon tetrachloride	ppbv	5	93	70-130
Benzene	ppbv	5	99	70-130
Cyclohexane	ppbv	5	98	70-130
2-Pentanone	ppbv	5	102	70-130
3-Pentanone	ppbv	5	108	70-130
Pentanal	ppbv	5	95	70-130
1,2-Dichloropropane	ppbv	5	96	70-130
1,4-Dioxane	ppbv	5	97	70-130
Bromodichloromethane	ppbv	5	101	70-130
Trichloroethene	ppbv	5	92	70-130
cis-1,3-Dichloropropene	ppbv	5	97	70-130
4-Methyl-2-pentanone	ppbv	5	92	70-130
trans-1,3-Dichloropropene	ppbv	5	99	70-130
Toluene	ppbv	5	94	70-130
1,1,2-Trichloroethane	ppbv	5	97	70-130
3-Hexanone	ppbv	5	97	70-130
2-Hexanone	ppbv	5	96	70-130
Hexanal	ppbv	5	89	70-130
Tetrachloroethene	ppbv	5	93	70-130
Dibromochloromethane	ppbv	5	105	70-130
1,2-Dibromoethane (EDB)	ppbv	5	102	70-130
Chlorobenzene	ppbv	5	96	70-130
Ethylbenzene	ppbv	5	99	70-130
1,1,2,2,-Tetrachloroethane	ppbv	5	103	70-130
m,p-Xylene	ppbv	10	101	70-130
o-Xylene	ppbv	5	105	70-130
Styrene	ppbv	5	98	70-130
Bromoform	ppbv	5	98	70-130
Benzyl chloride	ppbv	5	112	70-130
1,3,5-Trimethylbenzene	ppbv	5	101	70-130
1,2,4-Trimethylbenzene	ppbv	5	99	70-130
1,3-Dichlorobenzene	ppbv	5	99	70-130
1,4-Dichlorobenzene	ppbv	5	107	70-130
1,2,3-Trimethylbenzene	ppbv	5	101	70-130
1,2-Dichlorobenzene	ppbv	5	104	70-130
1,2,4-Trichlorobenzene	ppbv	5	94	70-130
Naphthalene	ppbv	5	95	70-130
Hexachloro-1,3-butadiene	ppbv	5	98	70-130

Data Qualifiers & Definitions

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

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

ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.

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

cf - The sample was centrifuged prior to analysis.

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

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

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

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

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

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

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

ip - Recovery fell outside of control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.

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

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

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

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

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

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

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

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

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

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

SAMPLE CHAIN OF CUSTODY

Report To EST SHAWN / JENNIFER
 Company ARB/ESN
 Address 605 11th AVE SE STE 201
 City, State, ZIP OLYMPIA WA
 Phone 360 352 9835 Email SLOMBARDINI@ARB.COM

SAMPLERS (signature)	
PROJECT NAME FRANCISCAN WEST SEATTLE	PO # 18-172
REPORTING LEVEL <input type="checkbox"/> Indoor Air <input type="checkbox"/> Deep Soil Gas <input type="checkbox"/> Sub Slab/Soil Gas <input type="checkbox"/> SVE/Grab	INVOICE TO

Page # _____ of _____

TURNAROUND TIME
 Standard
 RUSH
 Rush charges authorized by: _____

SAMPLE DISPOSAL
 Dispose after 30 days
 Archive Samples
 Other

Sample Name	Lab ID	Canister ID	Flow Contr. ID	Date Sampled	Field Initial Press. (Hg)	Field Initial Time	Field Final Press. (Hg)	Field Final Time	ANALYSIS REQUESTED				Notes
									TO-15 Full Scan	TO-15 BTEXN	TO-15 cVOCs	TO-15/APH	
SGV-1		3259		7.26.18	~30	20:25	5	2032				X	
SGV-2		2302			~30	21:00	5	2110				X	
SGV-3		3256			~30	21:37	6	2148				X	
SGV-4		2305			~30	22:14	5	2219				X	
SGV-5		3252			~29	2242	5	2248				X	
SS-1		3387			~30	2357	5	002				X	
SS-2		3250			~28	0014	3	020				X	
SS-3		3476			~28	0027	5	033				X	

Friedman & Bruya, Inc.
 3012 16th Avenue West
 Seattle, WA 98119-2029
 Ph. (206) 285-8282
 Fax (206) 283-5044

SIGNATURE		PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		SHAWN LOMBARDINI	ARB	7.26.18	
Received by:					
Relinquished by:					
Received by:					

SAMPLE CHAIN OF CUSTODY

Report To SHAWN / JENNIFER
 Company AEG/ESN
 Address 605 11th AVE SE
 City, State, ZIP OLY WA
 Phone 360-352-9835 Email SLOMBARDI@AEGWA.COM

SAMPLERS (signature)	
PROJECT NAME FRANCISCAN WEST SEATTLE	PO # 19-172
REPORTING LEVEL <input type="checkbox"/> Indoor Air <input type="checkbox"/> Deep Soil Gas <input type="checkbox"/> Sub Slab/Soil Gas <input type="checkbox"/> SVE/Grab	INVOICE TO

Page # _____ of _____

TURNAROUND TIME

Standard
 RUSH

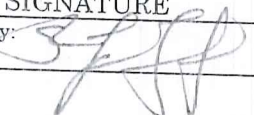
Rush charges authorized by: _____

SAMPLE DISPOSAL

Dispose after 30 days
 Archive Samples
 Other

Sample Name	Lab ID	Canister ID	Flow Contr. ID	Date Sampled	Field Initial Press. (Hg)	Field Initial Time	Field Final Press. (Hg)	Field Final Time	ANALYSIS REQUESTED				Notes
									TO-15 Full Scan	TO-15 BTEXN	TO-15 cVOCs	TO-15 VOCs	
SS-4		3344		7.26.18	~29	040	~3	046				X	
SS-5		3483		↓	~30	051	~6	059				X	
SS-6		2296		↓	~30	102	~6	109				X	
SS-7		2488		↓	~29	114	~6	121				X	
SS-8		3668		↓	~32	126	~3	135				X	

Friedman & Bruya, Inc.
 3012 16th Avenue West
 Seattle, WA 98119-2029
 Ph. (206) 285-8282
 Fax (206) 283-5044

SIGNATURE		PRINT NAME		COMPANY		DATE	TIME
Relinquished by:		SHAWN LOMBARDI	AEG			7/26/18	
Received by:							
Relinquished by:							
Received by:							



Libby Environmental, Inc.

4139 Libby Road NE • Olympia, WA 98506-2518

January 17, 2019

Charlie Swift
Associated Environmental Group, LLC
605 11th Avenue SE, Suite 201
Olympia, WA 98501

Dear Mr. Swift:

Please find enclosed the analytical data report for the West Seattle Franciscan 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 in 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.

Libby Environmental, Inc.

WEST SEATTLE FRANCISCAN PROJECT
AEG, LLC
Seattle, Washington
Libby Project # L190116-2
Client Project # 18-172

4139 Libby Road NE
Olympia, WA 98506
Phone: (360) 352-2110
FAX: (360) 352-4154
Email: libbyenv@gmail.com

Analyses of Gasoline (NWTPH-Gx) & BTEX (EPA Method 8260C) in Vapor

Sample Number	Date Analyzed	Benzene ($\mu\text{g}/\text{m}^3$)	Toluene ($\mu\text{g}/\text{m}^3$)	Ethylbenzene ($\mu\text{g}/\text{m}^3$)	Xylenes ($\mu\text{g}/\text{m}^3$)	Gasoline ($\mu\text{g}/\text{m}^3$)	Surrogate Recovery (%)
Method Blank	1/16/19	nd	nd	nd	nd	nd	79
LCS	1/16/19	106%	109%				83
SSD-SR	1/16/19	nd	nd	nd	nd	nd	87
SSD-SR Dup	1/16/19	nd	nd	nd	nd	nd	90
SSD-BR	1/16/19	nd	nd	nd	nd	nd	90
SSD-ER3	1/16/19	nd	nd	nd	nd	nd	78
Practical Quantitation Limit		100	200	100	300	10000	

"nd" Indicates not detected at the listed detection limits.

"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (Toluene-d8): 65% TO 135%

ANALYSES PERFORMED BY: Paul Burke

Libby Environmental, Inc.

4139 Libby Road NE

Olympia, WA 98506

Phone: (360) 352-2110

FAX: (360) 352-4154

Email: libbyenv@gmail.com

WEST SEATTLE FRANCISCAN PROJECT

AEG, LLC

Libby Project # L190116-2

Date Received 1/16/2019

Time Received 9:16 AM

Received By RZ

Sample Receipt Checklist

Chain of Custody

1. Is the Chain of Custody is 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) N/A °C
8. Temperature of sample(s) (0°C to 8°C recommended) N/A °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: _____

Date: _____

By Whom: _____

Via: _____

Regarding: _____

19. Comments.

Libby Environmental, Inc.

Chain of Custody Record

www.LibbyEnvironmental.com

4139 Libby Road NE
Olympia, WA 98506

Ph: 360-352-2110
Fax: 360-352-4154

Date: 01/15/19 Page: 1 of 1

Client: Associated Environmental Group, LLC

Project Manager: Charles Swift

Address: 605 11th Ave SE, Suite 201

Project Name: West Seattle Franciscan

City: Olympia State: WA Zip: 98501

Location: West Seattle City, State: WA

Phone: 360-352-9835 Fax:

Collector: C. Swift Date of Collection: 01/15/19

Client Project # 18-172

Email: cswift@segregroup.com



Sample Number	Depth	Time	Sample Type	Container Type	Analytes										Field Notes											
					VOC 8260	NWTPH-Gx	BTEX 8021	NWTPH-HCID	NWTPH-Dx	c-PAH 8270	PAH 8270	Semi Vol 8270	PCB 8082	MTCA 5 Metals		RCRA 8 Metals										
1	SSD-SR	1	10:45	Air	Tedlar	X	X																			
2																										
3	SSD-BR		11:05	Air	Tedlar	X	X																			
4																										
5	SSD-ER3		11:15	Air	Tedlar	X	X																			
6																										
7																										
8																										
9																										
10																										
11																										
12																										
13																										
14																										
15																										
16																										
17																										

Relinquished by: [Signature] Date / Time: 1/15/19 / 9:36

Received by: [Signature] Date / Time: 01/16/19 @ 0916

Sample Receipt

Good Condition? Y N
Temp. °C
Seals Intact? Y N N/A

Remarks: RUSH

Relinquished by:

Received by:

Total Number of Containers

TAT: 24HR 48HR 5-DAY

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

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

April 23, 2019



Charlie Swift, Project Manager
AEG
605 11th Ave SE
Suite 201
Tacoma, WA 98501

Dear Mr. Swift:

Included are the results from the testing of material submitted on April 5, 2019 from the Franciscan West Seattle, F&BI 904131 project. There are 13 pages included in this report.

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

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
AEG0423R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on April 5, 2019 by Friedman & Bruya, Inc. from the AEG Franciscan West Seattle, F&BI 904131 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>AEG</u>
904131 -01	SR
904131 -02	E3
904131 -03	BR

Methylene chloride in the TO-15 laboratory control sample failed the acceptance criteria. In addition, benzene was detected in the TO-15 method blank at a level greater than one tenth the concentration detected in sample SR. The data were flagged accordingly.

All other quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	SR	Client:	AEG
Date Received:	04/05/19	Project:	Franciscan West Seattle, F&BI 904131
Date Collected:	04/05/19	Lab ID:	904131-01 1/1.5
Date Analyzed:	04/19/19	Data File:	041826.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat/MS

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	107	70	130

Compounds:	Concentration
	ug/m3
APH EC5-8 aliphatics	330
APH EC9-12 aliphatics	180
APH EC9-10 aromatics	<37

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	E3	Client:	AEG
Date Received:	04/05/19	Project:	Franciscan West Seattle, F&BI 904131
Date Collected:	04/05/19	Lab ID:	904131-02 1/1.6
Date Analyzed:	04/19/19	Data File:	041827.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat/MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	101	70	130

Compounds:	Concentration ug/m3
APH EC5-8 aliphatics	210
APH EC9-12 aliphatics	120
APH EC9-10 aromatics	<40

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	BR	Client:	AEG
Date Received:	04/05/19	Project:	Franciscan West Seattle, F&BI 904131
Date Collected:	04/05/19	Lab ID:	904131-03 1/1.6
Date Analyzed:	04/19/19	Data File:	041828.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat/MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	107	70	130

Compounds:	Concentration ug/m3
APH EC5-8 aliphatics	110
APH EC9-12 aliphatics	91
APH EC9-10 aromatics	<40

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	Method Blank	Client:	AEG
Date Received:	Not Applicable	Project:	Franciscan West Seattle, F&BI 904131
Date Collected:	Not Applicable	Lab ID:	09-0784 mb
Date Analyzed:	04/18/19	Data File:	041820.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat/MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	111	70	130

Compounds:	Concentration ug/m3
APH EC5-8 aliphatics	<46
APH EC9-12 aliphatics	<35
APH EC9-10 aromatics	<25

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	SR	Client:	AEG
Date Received:	04/05/19	Project:	Franciscan West Seattle, F&BI 904131
Date Collected:	04/05/19	Lab ID:	904131-01 1/1.5
Date Analyzed:	04/19/19	Data File:	041826.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat/MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:		
4-Bromofluorobenzene	101	70	130		

Compounds:	Concentration ug/m3	ppbv	Compounds:	Concentration ug/m3	ppbv
Propene	<1	<0.6	1,2-Dichloropropane	<0.35	<0.075
Dichlorodifluoromethane	2.1	0.43	1,4-Dioxane	<0.54	<0.15
Chloromethane	<3.1	<1.5	2,2,4-Trimethylpentane	<7	<1.5
F-114	<1	<0.15	Methyl methacrylate	<6.1	<1.5
Vinyl chloride	<0.38	<0.15	Heptane	<6.1	<1.5
1,3-Butadiene	<0.033	<0.015	Bromodichloromethane	<0.1	<0.015
Butane	9.4	4.0	Trichloroethene	<0.4	<0.075
Bromomethane	<2.3	<0.6	cis-1,3-Dichloropropene	<0.68	<0.15
Chloroethane	<4	<1.5	4-Methyl-2-pentanone	<6.1	<1.5
Vinyl bromide	<0.66	<0.15	trans-1,3-Dichloropropene	<0.68	<0.15
Ethanol	190 ve	100 ve	Toluene	17	4.5
Acrolein	<1.4	<0.6	1,1,2-Trichloroethane	<0.16	<0.03
Pentane	9.2	3.1	2-Hexanone	<6.1	<1.5
Trichlorofluoromethane	<3.4	<0.6	Tetrachloroethene	<10	<1.5
Acetone	60	25	Dibromochloromethane	<0.13	<0.015
2-Propanol	55	22	1,2-Dibromoethane (EDB)	<0.12	<0.015
1,1-Dichloroethene	<0.59	<0.15	Chlorobenzene	<0.69	<0.15
trans-1,2-Dichloroethene	<0.59	<0.15	Ethylbenzene	4.4	1.0
Methylene chloride	<130 jl	<37 jl	1,1,2,2-Tetrachloroethane	<0.21	<0.03
t-Butyl alcohol (TBA)	<18	<6	Nonane	<7.9	<1.5
3-Chloropropene	<1.9	<0.6	Isopropylbenzene	<3.7	<0.75
CFC-113	<1.1	<0.15	2-Chlorotoluene	<7.8	<1.5
Carbon disulfide	<9.3	<3	Propylbenzene	<3.7	<0.75
Methyl t-butyl ether (MTBE)	<2.7	<0.75	4-Ethyltoluene	<3.7	<0.75
Vinyl acetate	<11	<3	m,p-Xylene	9.4	2.2
1,1-Dichloroethane	<0.61	<0.15	o-Xylene	4.0	0.91
cis-1,2-Dichloroethene	<0.59	<0.15	Styrene	6.2	1.4
Hexane	7.9	2.2	Bromoform	<3.1	<0.3
Chloroform	0.25	0.051	Benzyl chloride	<0.078	<0.015
Ethyl acetate	<11	<3	1,3,5-Trimethylbenzene	<3.7	<0.75
Tetrahydrofuran	29	9.7	1,2,4-Trimethylbenzene	<3.7	<0.75
2-Butanone (MEK)	6.5	2.2	1,3-Dichlorobenzene	<0.9	<0.15
1,2-Dichloroethane (EDC)	0.77	0.19	1,4-Dichlorobenzene	<0.36	<0.06
1,1,1-Trichloroethane	<0.82	<0.15	1,2-Dichlorobenzene	<0.9	<0.15
Carbon tetrachloride	<0.94	<0.15	1,2,4-Trichlorobenzene	<1.1	<0.15
Benzene	0.82 fb	0.26 fb	Naphthalene	<0.39	<0.075
Cyclohexane	39	11	Hexachlorobutadiene	<0.32	<0.03

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	E3	Client:	AEG
Date Received:	04/05/19	Project:	Franciscan West Seattle, F&BI 904131
Date Collected:	04/05/19	Lab ID:	904131-02 1/1.6
Date Analyzed:	04/19/19	Data File:	041827.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat/MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:		
4-Bromofluorobenzene	95	70	130		

Compounds:	Concentration		Compounds:	Concentration	
	ug/m3	ppbv		ug/m3	ppbv
Propene	<1.1	<0.64	1,2-Dichloropropane	<0.37	<0.08
Dichlorodifluoromethane	2.4	0.48	1,4-Dioxane	<0.58	<0.16
Chloromethane	<3.3	<1.6	2,2,4-Trimethylpentane	<7.5	<1.6
F-114	<1.1	<0.16	Methyl methacrylate	<6.6	<1.6
Vinyl chloride	<0.41	<0.16	Heptane	<6.6	<1.6
1,3-Butadiene	<0.035	<0.016	Bromodichloromethane	<0.11	<0.016
Butane	<3.8	<1.6	Trichloroethene	4.1	0.76
Bromomethane	<2.5	<0.64	cis-1,3-Dichloropropene	<0.73	<0.16
Chloroethane	<4.2	<1.6	4-Methyl-2-pentanone	<6.6	<1.6
Vinyl bromide	<0.7	<0.16	trans-1,3-Dichloropropene	<0.73	<0.16
Ethanol	1,100 ve	610 ve	Toluene	6.8	1.8
Acrolein	<1.5	<0.64	1,1,2-Trichloroethane	<0.17	<0.032
Pentane	<4.7	<1.6	2-Hexanone	<6.6	<1.6
Trichlorofluoromethane	<3.6	<0.64	Tetrachloroethene	<11	<1.6
Acetone	52	22	Dibromochloromethane	<0.14	<0.016
2-Propanol	420 ve	170 ve	1,2-Dibromoethane (EDB)	<0.12	<0.016
1,1-Dichloroethene	0.88	0.22	Chlorobenzene	<0.74	<0.16
trans-1,2-Dichloroethene	<0.63	<0.16	Ethylbenzene	0.89	0.20
Methylene chloride	<140 jl	<40 jl	1,1,2,2-Tetrachloroethane	<0.22	<0.032
t-Butyl alcohol (TBA)	<19	<6.4	Nonane	<8.4	<1.6
3-Chloropropene	<2	<0.64	Isopropylbenzene	<3.9	<0.8
CFC-113	1.4	0.18	2-Chlorotoluene	<8.3	<1.6
Carbon disulfide	<10	<3.2	Propylbenzene	<3.9	<0.8
Methyl t-butyl ether (MTBE)	<2.9	<0.8	4-Ethyltoluene	<3.9	<0.8
Vinyl acetate	<11	<3.2	m,p-Xylene	2.3	0.54
1,1-Dichloroethane	<0.65	<0.16	o-Xylene	1.0	0.24
cis-1,2-Dichloroethene	<0.63	<0.16	Styrene	<1.4	<0.32
Hexane	<5.6	<1.6	Bromoform	<3.3	<0.32
Chloroform	2.2	0.46	Benzyl chloride	<0.083	<0.016
Ethyl acetate	<12	<3.2	1,3,5-Trimethylbenzene	<3.9	<0.8
Tetrahydrofuran	1.9	0.65	1,2,4-Trimethylbenzene	<3.9	<0.8
2-Butanone (MEK)	7.0	2.4	1,3-Dichlorobenzene	<0.96	<0.16
1,2-Dichloroethane (EDC)	0.097	0.024	1,4-Dichlorobenzene	<0.38	<0.064
1,1,1-Trichloroethane	<0.87	<0.16	1,2-Dichlorobenzene	<0.96	<0.16
Carbon tetrachloride	<1	<0.16	1,2,4-Trichlorobenzene	<1.2	<0.16
Benzene	<0.51	<0.16	Naphthalene	<0.42	<0.08
Cyclohexane	<11	<3.2	Hexachlorobutadiene	<0.34	<0.032

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	BR	Client:	AEG
Date Received:	04/05/19	Project:	Franciscan West Seattle, F&BI 904131
Date Collected:	04/05/19	Lab ID:	904131-03 1/1.6
Date Analyzed:	04/19/19	Data File:	041828.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat/MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:		
4-Bromofluorobenzene	101	70	130		
Compounds:	Concentration ug/m3	Concentration ppbv	Compounds:	Concentration ug/m3	Concentration ppbv
Propene	1.2	0.70	1,2-Dichloropropane	<0.37	<0.08
Dichlorodifluoromethane	2.4	0.48	1,4-Dioxane	<0.58	<0.16
Chloromethane	<3.3	<1.6	2,2,4-Trimethylpentane	<7.5	<1.6
F-114	<1.1	<0.16	Methyl methacrylate	<6.6	<1.6
Vinyl chloride	<0.41	<0.16	Heptane	<6.6	<1.6
1,3-Butadiene	<0.035	<0.016	Bromodichloromethane	<0.11	<0.016
Butane	<3.8	<1.6	Trichloroethene	13	2.5
Bromomethane	<2.5	<0.64	cis-1,3-Dichloropropene	<0.73	<0.16
Chloroethane	<4.2	<1.6	4-Methyl-2-pentanone	<6.6	<1.6
Vinyl bromide	<0.7	<0.16	trans-1,3-Dichloropropene	<0.73	<0.16
Ethanol	180 ve	96 ve	Toluene	3.1	0.81
Acrolein	<1.5	<0.64	1,1,2-Trichloroethane	<0.17	<0.032
Pentane	<4.7	<1.6	2-Hexanone	<6.6	<1.6
Trichlorofluoromethane	<3.6	<0.64	Tetrachloroethene	43	6.4
Acetone	37	16	Dibromochloromethane	<0.14	<0.016
2-Propanol	95	39	1,2-Dibromoethane (EDB)	<0.12	<0.016
1,1-Dichloroethene	3.6	0.90	Chlorobenzene	<0.74	<0.16
trans-1,2-Dichloroethene	<0.63	<0.16	Ethylbenzene	0.97	0.22
Methylene chloride	<140 jl	<40 jl	1,1,2,2-Tetrachloroethane	<0.22	<0.032
t-Butyl alcohol (TBA)	<19	<6.4	Nonane	<8.4	<1.6
3-Chloropropene	<2	<0.64	Isopropylbenzene	<3.9	<0.8
CFC-113	5.5	0.71	2-Chlorotoluene	<8.3	<1.6
Carbon disulfide	<10	<3.2	Propylbenzene	<3.9	<0.8
Methyl t-butyl ether (MTBE)	<2.9	<0.8	4-Ethyltoluene	<3.9	<0.8
Vinyl acetate	<11	<3.2	m,p-Xylene	2.5	0.58
1,1-Dichloroethane	0.78	0.19	o-Xylene	0.99	0.23
cis-1,2-Dichloroethene	<0.63	<0.16	Styrene	<1.4	<0.32
Hexane	<5.6	<1.6	Bromoform	<3.3	<0.32
Chloroform	0.38	0.078	Benzyl chloride	<0.083	<0.016
Ethyl acetate	<12	<3.2	1,3,5-Trimethylbenzene	<3.9	<0.8
Tetrahydrofuran	2.9	0.97	1,2,4-Trimethylbenzene	<3.9	<0.8
2-Butanone (MEK)	15	5.0	1,3-Dichlorobenzene	<0.96	<0.16
1,2-Dichloroethane (EDC)	0.078	0.019	1,4-Dichlorobenzene	<0.38	<0.064
1,1,1-Trichloroethane	3.4	0.62	1,2-Dichlorobenzene	<0.96	<0.16
Carbon tetrachloride	<1	<0.16	1,2,4-Trichlorobenzene	<1.2	<0.16
Benzene	<0.51	<0.16	Naphthalene	<0.42	<0.08
Cyclohexane	<11	<3.2	Hexachlorobutadiene	<0.34	<0.032

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	Method Blank	Client:	AEG
Date Received:	Not Applicable	Project:	Franciscan West Seattle, F&BI 904131
Date Collected:	Not Applicable	Lab ID:	09-0784 mb
Date Analyzed:	04/18/19	Data File:	041820.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat/MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:		
4-Bromofluorobenzene	105	70	130		
Compounds:	Concentration ug/m3	ppbv	Compounds:	Concentration ug/m3	ppbv
Propene	<0.69	<0.4	1,2-Dichloropropane	<0.23	<0.05
Dichlorodifluoromethane	<0.49	<0.1	1,4-Dioxane	<0.36	<0.1
Chloromethane	<2.1	<1	2,2,4-Trimethylpentane	<4.7	<1
F-114	<0.7	<0.1	Methyl methacrylate	<4.1	<1
Vinyl chloride	<0.26	<0.1	Heptane	<4.1	<1
1,3-Butadiene	<0.022	<0.01	Bromodichloromethane	<0.067	<0.01
Butane	<2.4	<1	Trichloroethene	<0.27	<0.05
Bromomethane	<1.6	<0.4	cis-1,3-Dichloropropene	<0.45	<0.1
Chloroethane	<2.6	<1	4-Methyl-2-pentanone	<4.1	<1
Vinyl bromide	<0.44	<0.1	trans-1,3-Dichloropropene	<0.45	<0.1
Ethanol	<7.5	<4	Toluene	<0.38	<0.1
Acrolein	<0.92	<0.4	1,1,2-Trichloroethane	<0.11	<0.02
Pentane	<3	<1	2-Hexanone	<4.1	<1
Trichlorofluoromethane	<2.2	<0.4	Tetrachloroethene	<6.8	<1
Acetone	<4.8	<2	Dibromochloromethane	<0.085	<0.01
2-Propanol	<8.6	<3.5	1,2-Dibromoethane (EDB)	<0.077	<0.01
1,1-Dichloroethene	<0.4	<0.1	Chlorobenzene	<0.46	<0.1
trans-1,2-Dichloroethene	<0.4	<0.1	Ethylbenzene	<0.43	<0.1
Methylene chloride	<87 jl	<25 jl	1,1,2,2-Tetrachloroethane	<0.14	<0.02
t-Butyl alcohol (TBA)	<12	<4	Nonane	<5.2	<1
3-Chloropropene	<1.3	<0.4	Isopropylbenzene	<2.5	<0.5
CFC-113	<0.77	<0.1	2-Chlorotoluene	<5.2	<1
Carbon disulfide	<6.2	<2	Propylbenzene	<2.5	<0.5
Methyl t-butyl ether (MTBE)	<1.8	<0.5	4-Ethyltoluene	<2.5	<0.5
Vinyl acetate	<7	<2	m,p-Xylene	<0.87	<0.2
1,1-Dichloroethane	<0.4	<0.1	o-Xylene	<0.43	<0.1
cis-1,2-Dichloroethene	<0.4	<0.1	Styrene	<0.85	<0.2
Hexane	<3.5	<1	Bromoform	<2.1	<0.2
Chloroform	<0.049	<0.01	Benzyl chloride	<0.052	<0.01
Ethyl acetate	<7.2	<2	1,3,5-Trimethylbenzene	<2.5	<0.5
Tetrahydrofuran	<0.29	<0.1	1,2,4-Trimethylbenzene	<2.5	<0.5
2-Butanone (MEK)	<2.9	<1	1,3-Dichlorobenzene	<0.6	<0.1
1,2-Dichloroethane (EDC)	<0.04	<0.01	1,4-Dichlorobenzene	<0.24	<0.04
1,1,1-Trichloroethane	<0.55	<0.1	1,2-Dichlorobenzene	<0.6	<0.1
Carbon tetrachloride	<0.63	<0.1	1,2,4-Trichlorobenzene	<0.74	<0.1
Benzene	<0.32	<0.1	Naphthalene	<0.26	<0.05
Cyclohexane	<6.9	<2	Hexachlorobutadiene	<0.21	<0.02

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 04/23/19

Date Received: 04/05/19

Project: Franciscan West Seattle, F&BI 904131

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF AIR SAMPLES
FOR VOLATILES BY METHOD MA-APH**

Laboratory Code: 904133-03 1/1.6 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 30)
APH EC5-8 aliphatics	ug/m3	140	140	0
APH EC9-12 aliphatics	ug/m3	190	190	0
APH EC9-10 aromatics	ug/m3	<40	<40	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
APH EC5-8 aliphatics	ug/m3	45	83	70-130
APH EC9-12 aliphatics	ug/m3	45	104	70-130
APH EC9-10 aromatics	ug/m3	45	83	70-130

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 04/23/19

Date Received: 04/05/19

Project: Franciscan West Seattle, F&BI 904131

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

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent	Acceptance Criteria
			Recovery LCS	
Propene	ppbv	5	110	70-130
Dichlorodifluoromethane	ppbv	5	106	70-130
Chloromethane	ppbv	5	112	70-130
F-114	ppbv	5	108	70-130
Vinyl chloride	ppbv	5	110	70-130
1,3-Butadiene	ppbv	5	107	70-130
Butane	ppbv	5	106	70-130
Bromomethane	ppbv	5	93	70-130
Chloroethane	ppbv	5	107	70-130
Ethanol	ppbv	5	95	70-130
Acrolein	ppbv	5	93	70-130
Pentane	ppbv	5	106	70-130
Trichlorofluoromethane	ppbv	5	105	70-130
Acetone	ppbv	5	96	70-130
2-Propanol	ppbv	5	101	70-130
1,1-Dichloroethene	ppbv	5	106	70-130
trans-1,2-Dichloroethene	ppbv	5	106	70-130
Methylene chloride	ppbv	5	65 vo	70-130
t-Butyl alcohol (TBA)	ppbv	5	107	70-130
3-Chloropropene	ppbv	5	104	70-130
CFC-113	ppbv	5	107	70-130
Carbon disulfide	ppbv	5	104	70-130
Methyl t-butyl ether (MTBE)	ppbv	5	100	70-130
Vinyl acetate	ppbv	5	102	70-130
1,1-Dichloroethane	ppbv	5	106	70-130
cis-1,2-Dichloroethene	ppbv	5	105	70-130
Hexane	ppbv	5	101	70-130
Chloroform	ppbv	5	106	70-130
Ethyl acetate	ppbv	5	99	70-130
Tetrahydrofuran	ppbv	5	100	70-130
2-Butanone (MEK)	ppbv	5	104	70-130
1,2-Dichloroethane (EDC)	ppbv	5	107	70-130
1,1,1-Trichloroethane	ppbv	5	108	70-130
Carbon tetrachloride	ppbv	5	106	70-130
Benzene	ppbv	5	99	70-130
Cyclohexane	ppbv	5	104	70-130
1,2-Dichloropropane	ppbv	5	106	70-130
1,4-Dioxane	ppbv	5	97	70-130
2,2,4-Trimethylpentane	ppbv	5	101	70-130
Methyl methacrylate	ppbv	5	106	70-130
Heptane	ppbv	5	105	70-130

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 04/23/19

Date Received: 04/05/19

Project: Franciscan West Seattle, F&BI 904131

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

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent	Acceptance Criteria
			Recovery LCS	
Bromodichloromethane	ppbv	5	106	70-130
Trichloroethene	ppbv	5	102	70-130
cis-1,3-Dichloropropene	ppbv	5	102	70-130
4-Methyl-2-pentanone	ppbv	5	103	70-130
trans-1,3-Dichloropropene	ppbv	5	102	70-130
Toluene	ppbv	5	105	70-130
1,1,2-Trichloroethane	ppbv	5	109	70-130
2-Hexanone	ppbv	5	103	70-130
Tetrachloroethene	ppbv	5	105	70-130
Dibromochloromethane	ppbv	5	107	70-130
1,2-Dibromoethane (EDB)	ppbv	5	106	70-130
Chlorobenzene	ppbv	5	105	70-130
Ethylbenzene	ppbv	5	100	70-130
1,1,2,2-Tetrachloroethane	ppbv	5	99	70-130
Nonane	ppbv	5	89	70-130
Isopropylbenzene	ppbv	5	100	70-130
2-Chlorotoluene	ppbv	5	102	70-130
Propylbenzene	ppbv	5	99	70-130
4-Ethyltoluene	ppbv	5	102	70-130
m,p-Xylene	ppbv	10	99	70-130
o-Xylene	ppbv	5	99	70-130
Styrene	ppbv	5	102	70-130
Bromoform	ppbv	5	103	70-130
Benzyl chloride	ppbv	5	104	70-130
1,3,5-Trimethylbenzene	ppbv	5	101	70-130
1,2,4-Trimethylbenzene	ppbv	5	101	70-130
1,3-Dichlorobenzene	ppbv	5	101	70-130
1,4-Dichlorobenzene	ppbv	5	99	70-130
1,2-Dichlorobenzene	ppbv	5	102	70-130
1,2,4-Trichlorobenzene	ppbv	5	103	70-130
Naphthalene	ppbv	5	91	70-130
Hexachlorobutadiene	ppbv	5	105	70-130

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

- a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.
- ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.
- c - The presence of the analyte may be due to carryover from previous sample injections.
- cf - The sample was centrifuged prior to analysis.
- d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.
- dv - Insufficient sample volume was available to achieve normal reporting limits.
- f - The sample was laboratory filtered prior to analysis.
- fb - The analyte was detected in the method blank.
- fc - The analyte is a common laboratory and field contaminant.
- hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.
- hs - Headspace was present in the container used for analysis.
- ht - The analysis was performed outside the method or client-specified holding time requirement.
- ip - Recovery fell outside of control limits due to sample matrix effects.
- j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.
- J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.
- jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.
- js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- lc - The presence of the analyte is likely due to laboratory contamination.
- L - The reported concentration was generated from a library search.
- nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.
- pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.
- ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.
- vo - The value reported fell outside the control limits established for this analyte.
- x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

904131

SAMPLE CHAIN OF CUSTODY

ME 04/05/19

Page # of

TURNAROUND TIME

Standard
 RUSH
 Rush charges authorized by: _____

SAMPLE DISPOSAL
 Archive Samples
 Other _____

PROJECT NAME: FRANKS AND WEST GARDEN

PO # _____

INVOICE TO: ABC

NOTES: _____

Report To: ALDO CHARLIE

Company: ABC

Address: 605 11th AVE SE #207

City, State, ZIP: OLYMPIA, WA 98501

Phone: 3603527855 Email: JOMBAS@ABC.COM

CSWEEF@ABC.COM

SAMPLE INFORMATION		ANALYSIS REQUESTED												
Sample Name	Lab ID	Canister ID	Flow Cont. ID	Reporting Level: IA=Indoor Air SG=Soil Gas (Circle One)	Date Sampled	Initial Vac. (°Hg)	Field Initial Time	Final Vac. (°Hg)	Field Final Time	TO16 Full Scan	TO16 BTEXN	TO16 VOCs	APH	Helium
SR	01	3250		IA / SG	4.5.19	20	1058	3	1042	X			X	
ES	02	3389		IA / SG	4.5.19	27	1102	3	1107	X			X	
BL	03	2418		IA / SG	4.5.19	28	1050	3	1056	X			X	
		2430		IA / SG										*TPH GX
				IA / SG										
				IA / SG										
				IA / SG										
				IA / SG										Samples received at 20°C

SIGNATURE: [Signature]

PRINT NAME: JANNA COMBARONA

COMPANY: ABC

DATE: 4.5.19

TIME: 11:50

Relinquished by: [Signature]

Relinquished by: JIN 64

Received by: _____

Received by: _____

Friedman & Bruya, Inc.
 3012 16th Avenue West
 Seattle, WA 98119-2029
 Ph. (206) 285-8282
 Fax (206) 283-5044



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

NOW Environmental
Donna McNeal
34004 9th Ave S
Federal Way, WA 98003

RE: Fautleroy Clinic
Work Order Number: 1911062

November 13, 2019

Attention Donna McNeal:

Fremont Analytical, Inc. received 10 sample(s) on 11/6/2019 for the analyses presented in the following report.

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,

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

Brianna Barnes
Project Manager

DoD/ELAP Certification #L17-135, ISO/IEC 17025:2005
ORELAP Certification: WA 100009-007 (NELAP Recognized)



Date: 11/13/2019

CLIENT: NOW Environmental
Project: Fautleroy Clinic
Work Order: 1911062

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1911062-001	Supply Room	11/05/2019 9:58 AM	11/06/2019 10:23 AM
1911062-002	Break Room	11/05/2019 10:06 AM	11/06/2019 10:23 AM
1911062-003	Main Hall Across Main Desk	11/05/2019 10:06 AM	11/06/2019 10:23 AM
1911062-004	Exam Room #3	11/05/2019 10:13 AM	11/06/2019 10:23 AM
1911062-005	Dr. Hoangs Office 14	11/05/2019 9:52 AM	11/06/2019 10:23 AM
1911062-006	Dr. Hoangs Office 14	11/05/2019 10:16 AM	11/06/2019 10:23 AM
1911062-007	Supply Closet	11/05/2019 10:18 AM	11/06/2019 10:23 AM
1911062-008	Break Room	11/05/2019 10:21 AM	11/06/2019 10:23 AM
1911062-009	Main Hall Across Main Desk	11/05/2019 10:25 AM	11/06/2019 10:23 AM
1911062-010	Exam Room 3	11/05/2019 10:29 AM	11/06/2019 10:23 AM



Case Narrative

WO#: 1911062

Date: 11/13/2019

CLIENT: NOW Environmental
Project: Fauntleroy Clinic

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).

Note: Gasoline Range Organics reported in ug/m³ should be considered an estimate. The estimated molecular weight of gasoline used in the equation = 100

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 (<20%RSD, <20% Drift or minimum RRF)
- 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
- HEM - Hexane Extractable Material
- ICV - Initial Calibration Verification
- LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
- MB or MBLANK - Method Blank
- MDL - Method Detection Limit
- MS/MSD - Matrix Spike / Matrix Spike Duplicate
- PDS - Post Digestion Spike
- Ref Val - Reference Value
- RL - Reporting Limit
- RPD - Relative Percent Difference
- SD - Serial Dilution
- SGT - Silica Gel Treatment
- SPK - Spike
- Surr - Surrogate



Client: NOW Environmental

WorkOrder: 1911062

Project: Fautleroy Clinic

Client Sample ID: Supply Room

Date Sampled: 11/5/2019

Lab ID: 1911062-001A

Date Received: 11/6/2019

Sample Type: Summa Canister

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)			
<u>Volatile Organic Compounds by EPA Method TO-15</u>							
1,1,1-Trichloroethane	<0.400	<2.18	0.400	2.18		EPA-TO-15	11/09/2019 AD
1,1,2,2-Tetrachloroethane	<0.300	<2.06	0.300	2.06		EPA-TO-15	11/09/2019 AD
CFC-113	<0.400	<3.07	0.400	3.07		EPA-TO-15	11/09/2019 AD
1,1,2-Trichloroethane (TCA)	<0.500	<2.73	0.500	2.73		EPA-TO-15	11/09/2019 AD
1,1-Dichloroethane	<0.200	<0.810	0.200	0.810		EPA-TO-15	11/09/2019 AD
1,1-Dichloroethene (DCE)	<0.400	<1.59	0.400	1.59		EPA-TO-15	11/09/2019 AD
1,2,4-Trichlorobenzene	<0.300	<2.23	0.300	2.23		EPA-TO-15	11/09/2019 AD
1,2,4-Trimethylbenzene	0.336	1.65	0.300	1.47		EPA-TO-15	11/09/2019 AD
1,2-Dibromoethane (EDB)	<0.200	<1.54	0.200	1.54		EPA-TO-15	11/09/2019 AD
1,2-Dichlorobenzene	<0.400	<2.40	0.400	2.40		EPA-TO-15	11/09/2019 AD
1,2-Dichloroethane	<0.200	<0.809	0.200	0.809		EPA-TO-15	11/09/2019 AD
1,2-Dichloropropane	<0.500	<2.31	0.500	2.31		EPA-TO-15	11/09/2019 AD
1,3,5-Trimethylbenzene	<0.300	<1.47	0.300	1.47		EPA-TO-15	11/09/2019 AD
1,3-Butadiene	<0.500	<1.11	0.500	1.11		EPA-TO-15	11/09/2019 AD
1,3-Dichlorobenzene	<0.300	<1.80	0.300	1.80		EPA-TO-15	11/09/2019 AD
1,4-Dichlorobenzene	<0.300	<1.80	0.300	1.80		EPA-TO-15	11/09/2019 AD
1,4-Dioxane	<0.400	<1.44	0.400	1.44		EPA-TO-15	11/09/2019 AD
(MEK) 2-Butanone	<1.00	<2.95	1.00	2.95		EPA-TO-15	11/09/2019 AD
2-Hexanone	<1.00	<4.10	1.00	4.10		EPA-TO-15	11/09/2019 AD
Isopropyl Alcohol	91.9	226	1.00	2.46	E	EPA-TO-15	11/09/2019 AD
4-Methyl-2-pentanone (MIBK)	<1.00	<4.10	1.00	4.10		EPA-TO-15	11/09/2019 AD
Acetone	15.8	37.5	1.00	2.38		EPA-TO-15	11/09/2019 AD
Acrolein	<0.500	<1.15	0.500	1.15		EPA-TO-15	11/09/2019 AD
Benzene	0.494	1.58	0.0895	0.286		EPA-TO-15	11/09/2019 AD
Benzyl chloride	<0.500	<2.59	0.500	2.59		EPA-TO-15	11/09/2019 AD
Dichlorobromomethane	<0.300	<2.01	0.300	2.01		EPA-TO-15	11/09/2019 AD
Bromoform	<0.200	<2.07	0.200	2.07		EPA-TO-15	11/09/2019 AD
Bromomethane	<0.500	<1.94	0.500	1.94		EPA-TO-15	11/09/2019 AD
Carbon disulfide	<1.50	<4.67	1.50	4.67		EPA-TO-15	11/09/2019 AD
Carbon tetrachloride	0.0658	0.414	0.0657	0.413		EPA-TO-15	11/09/2019 AD



Client: NOW Environmental

WorkOrder: 1911062

Project: Fautleroy Clinic

Client Sample ID: Supply Room

Date Sampled: 11/5/2019

Lab ID: 1911062-001A

Date Received: 11/6/2019

Sample Type: Summa Canister

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)			
<u>Volatiles Organic Compounds by EPA Method TO-15</u>							
Chlorobenzene	<0.200	<0.921	0.200	0.921		EPA-TO-15	11/09/2019 AD
Dibromochloromethane	<0.500	<4.26	0.500	4.26		EPA-TO-15	11/09/2019 AD
Chloroethane	<0.400	<1.06	0.400	1.06		EPA-TO-15	11/09/2019 AD
Chloroform	<0.200	<0.977	0.200	0.977		EPA-TO-15	11/09/2019 AD
Chloromethane	0.544	1.12	0.500	1.03		EPA-TO-15	11/09/2019 AD
cis-1,2-Dichloroethene	<0.200	<0.793	0.200	0.793		EPA-TO-15	11/09/2019 AD
cis-1,3-dichloropropene	<0.400	<1.82	0.400	1.82		EPA-TO-15	11/09/2019 AD
Cyclohexane	<0.400	<1.38	0.400	1.38		EPA-TO-15	11/09/2019 AD
Dichlorodifluoromethane (CFC-12)	0.537	2.66	0.400	1.98		EPA-TO-15	11/09/2019 AD
Dichlorotetrafluoroethane (CFC-114)	<0.400	<2.80	0.400	2.80		EPA-TO-15	11/09/2019 AD
Ethyl acetate	<1.00	<3.60	1.00	3.60		EPA-TO-15	11/09/2019 AD
Ethylbenzene	<0.400	<1.74	0.400	1.74		EPA-TO-15	11/09/2019 AD
Gasoline Range Organics	38.8	159	1.00	4.09		EPA-TO-15	11/09/2019 AD
Heptane	<0.400	<1.61	0.400	1.61		EPA-TO-15	11/09/2019 AD
Hexachlorobutadiene	<1.00	<10.7	1.00	10.7		EPA-TO-15	11/09/2019 AD
m,p-Xylene	<0.800	<3.47	0.800	3.47		EPA-TO-15	11/09/2019 AD
Methyl methacrylate	<0.400	<1.64	0.400	1.64		EPA-TO-15	11/09/2019 AD
Methylene chloride	<2.00	<6.95	2.00	6.95		EPA-TO-15	11/09/2019 AD
Naphthalene	0.132	0.694	0.100	0.524		EPA-TO-15	11/09/2019 AD
n-Hexane	<0.400	<1.41	0.400	1.41		EPA-TO-15	11/09/2019 AD
o-Xylene	0.440	1.91	0.400	1.74		EPA-TO-15	11/09/2019 AD
4-Ethyltoluene	<0.400	<1.97	0.400	1.97		EPA-TO-15	11/09/2019 AD
Propylene	3.26	5.62	0.400	0.688		EPA-TO-15	11/09/2019 AD
Styrene	<0.400	<1.70	0.400	1.70		EPA-TO-15	11/09/2019 AD
Methyl tert-butyl ether (MTBE)	<0.400	<1.44	0.400	1.44		EPA-TO-15	11/09/2019 AD
Tetrachloroethene (PCE)	<0.200	<1.36	0.200	1.36		EPA-TO-15	11/09/2019 AD
Tetrahydrofuran	<0.400	<1.18	0.400	1.18		EPA-TO-15	11/09/2019 AD
Toluene	0.996	3.75	0.400	1.51		EPA-TO-15	11/09/2019 AD
trans-1,2-Dichloroethene	<0.200	<0.793	0.200	0.793		EPA-TO-15	11/09/2019 AD
trans-1,3-dichloropropene	<0.500	<2.27	0.500	2.27		EPA-TO-15	11/09/2019 AD



Client: NOW Environmental
WorkOrder: 1911062
Project: Fautleroy Clinic

Client Sample ID: Supply Room
Lab ID: 1911062-001A
Sample Type: Summa Canister

Date Sampled: 11/5/2019
Date Received: 11/6/2019

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst
<u>Volatile Organic Compounds by EPA Method TO-15</u>							
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)			
Trichloroethene (TCE)	<0.0649	<0.349	0.0649	0.349		EPA-TO-15	11/09/2019 AD
Trichlorofluoromethane (CFC-11)	<0.400	<2.25	0.400	2.25		EPA-TO-15	11/09/2019 AD
Vinyl acetate	<1.00	<3.52	1.00	3.52		EPA-TO-15	11/09/2019 AD
Vinyl chloride	<0.107	<0.274	0.107	0.274		EPA-TO-15	11/09/2019 AD
Surr: 4-Bromofluorobenzene	89.5 %Rec	--	70-130	--		EPA-TO-15	11/09/2019 AD

NOTES:
 E - Estimated value. The amount exceeds the linear working range of the instrument.



Client: NOW Environmental

WorkOrder: 1911062

Project: Fautleroy Clinic

Client Sample ID: Break Room

Date Sampled: 11/5/2019

Lab ID: 1911062-002A

Date Received: 11/6/2019

Sample Type: Summa Canister

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)			
<u>Volatile Organic Compounds by EPA Method TO-15</u>							
1,1,1-Trichloroethane	<0.400	<2.18	0.400	2.18		EPA-TO-15	11/09/2019 AD
1,1,2,2-Tetrachloroethane	<0.300	<2.06	0.300	2.06		EPA-TO-15	11/09/2019 AD
CFC-113	<0.400	<3.07	0.400	3.07		EPA-TO-15	11/09/2019 AD
1,1,2-Trichloroethane (TCA)	<0.500	<2.73	0.500	2.73		EPA-TO-15	11/09/2019 AD
1,1-Dichloroethane	<0.200	<0.810	0.200	0.810		EPA-TO-15	11/09/2019 AD
1,1-Dichloroethene (DCE)	<0.400	<1.59	0.400	1.59		EPA-TO-15	11/09/2019 AD
1,2,4-Trichlorobenzene	<0.300	<2.23	0.300	2.23		EPA-TO-15	11/09/2019 AD
1,2,4-Trimethylbenzene	<0.300	<1.47	0.300	1.47		EPA-TO-15	11/09/2019 AD
1,2-Dibromoethane (EDB)	<0.200	<1.54	0.200	1.54		EPA-TO-15	11/09/2019 AD
1,2-Dichlorobenzene	<0.400	<2.40	0.400	2.40		EPA-TO-15	11/09/2019 AD
1,2-Dichloroethane	<0.200	<0.809	0.200	0.809		EPA-TO-15	11/09/2019 AD
1,2-Dichloropropane	<0.500	<2.31	0.500	2.31		EPA-TO-15	11/09/2019 AD
1,3,5-Trimethylbenzene	<0.300	<1.47	0.300	1.47		EPA-TO-15	11/09/2019 AD
1,3-Butadiene	<0.500	<1.11	0.500	1.11		EPA-TO-15	11/09/2019 AD
1,3-Dichlorobenzene	<0.300	<1.80	0.300	1.80		EPA-TO-15	11/09/2019 AD
1,4-Dichlorobenzene	<0.300	<1.80	0.300	1.80		EPA-TO-15	11/09/2019 AD
1,4-Dioxane	<0.400	<1.44	0.400	1.44		EPA-TO-15	11/09/2019 AD
(MEK) 2-Butanone	<1.00	<2.95	1.00	2.95		EPA-TO-15	11/09/2019 AD
2-Hexanone	<1.00	<4.10	1.00	4.10		EPA-TO-15	11/09/2019 AD
Isopropyl Alcohol	37.6	92.4	1.00	2.46	E	EPA-TO-15	11/09/2019 AD
4-Methyl-2-pentanone (MIBK)	<1.00	<4.10	1.00	4.10		EPA-TO-15	11/09/2019 AD
Acetone	5.11	12.1	1.00	2.38		EPA-TO-15	11/09/2019 AD
Acrolein	<0.500	<1.15	0.500	1.15		EPA-TO-15	11/09/2019 AD
Benzene	0.209	0.667	0.0895	0.286		EPA-TO-15	11/09/2019 AD
Benzyl chloride	<0.500	<2.59	0.500	2.59		EPA-TO-15	11/09/2019 AD
Dichlorobromomethane	<0.300	<2.01	0.300	2.01		EPA-TO-15	11/09/2019 AD
Bromoform	<0.200	<2.07	0.200	2.07		EPA-TO-15	11/09/2019 AD
Bromomethane	<0.500	<1.94	0.500	1.94		EPA-TO-15	11/09/2019 AD
Carbon disulfide	<1.50	<4.67	1.50	4.67		EPA-TO-15	11/09/2019 AD
Carbon tetrachloride	<0.0657	<0.413	0.0657	0.413		EPA-TO-15	11/09/2019 AD



Client: NOW Environmental
 WorkOrder: 1911062
 Project: Fautleroy Clinic

Client Sample ID: Break Room
 Lab ID: 1911062-002A
 Sample Type: Summa Canister

Date Sampled: 11/5/2019
 Date Received: 11/6/2019

Analyte	Concentration	Reporting Limit	Qual	Method	Date/Analyst
<u>Volatile Organic Compounds by EPA Method TO-15</u>					
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)	
Chlorobenzene	<0.200	<0.921	0.200	0.921	EPA-TO-15 11/09/2019 AD
Dibromochloromethane	<0.500	<4.26	0.500	4.26	EPA-TO-15 11/09/2019 AD
Chloroethane	<0.400	<1.06	0.400	1.06	EPA-TO-15 11/09/2019 AD
Chloroform	<0.200	<0.977	0.200	0.977	EPA-TO-15 11/09/2019 AD
Chloromethane	<0.500	<1.03	0.500	1.03	EPA-TO-15 11/09/2019 AD
cis-1,2-Dichloroethene	<0.200	<0.793	0.200	0.793	EPA-TO-15 11/09/2019 AD
cis-1,3-dichloropropene	<0.400	<1.82	0.400	1.82	EPA-TO-15 11/09/2019 AD
Cyclohexane	<0.400	<1.38	0.400	1.38	EPA-TO-15 11/09/2019 AD
Dichlorodifluoromethane (CFC-12)	0.521	2.58	0.400	1.98	EPA-TO-15 11/09/2019 AD
Dichlorotetrafluoroethane (CFC-114)	<0.400	<2.80	0.400	2.80	EPA-TO-15 11/09/2019 AD
Ethyl acetate	<1.00	<3.60	1.00	3.60	EPA-TO-15 11/09/2019 AD
Ethylbenzene	<0.400	<1.74	0.400	1.74	EPA-TO-15 11/09/2019 AD
Gasoline Range Organics	15.2	62.4	1.00	4.09	EPA-TO-15 11/09/2019 AD
Heptane	<0.400	<1.61	0.400	1.61	EPA-TO-15 11/09/2019 AD
Hexachlorobutadiene	<1.00	<10.7	1.00	10.7	EPA-TO-15 11/09/2019 AD
m,p-Xylene	<0.800	<3.47	0.800	3.47	EPA-TO-15 11/09/2019 AD
Methyl methacrylate	<0.400	<1.64	0.400	1.64	EPA-TO-15 11/09/2019 AD
Methylene chloride	<2.00	<6.95	2.00	6.95	EPA-TO-15 11/09/2019 AD
Naphthalene	<0.100	<0.524	0.100	0.524	EPA-TO-15 11/09/2019 AD
n-Hexane	<0.400	<1.41	0.400	1.41	EPA-TO-15 11/09/2019 AD
o-Xylene	<0.400	<1.74	0.400	1.74	EPA-TO-15 11/09/2019 AD
4-Ethyltoluene	<0.400	<1.97	0.400	1.97	EPA-TO-15 11/09/2019 AD
Propylene	1.80	3.10	0.400	0.688	EPA-TO-15 11/09/2019 AD
Styrene	<0.400	<1.70	0.400	1.70	EPA-TO-15 11/09/2019 AD
Methyl tert-butyl ether (MTBE)	<0.400	<1.44	0.400	1.44	EPA-TO-15 11/09/2019 AD
Tetrachloroethene (PCE)	<0.200	<1.36	0.200	1.36	EPA-TO-15 11/09/2019 AD
Tetrahydrofuran	<0.400	<1.18	0.400	1.18	EPA-TO-15 11/09/2019 AD
Toluene	0.505	1.90	0.400	1.51	EPA-TO-15 11/09/2019 AD
trans-1,2-Dichloroethene	<0.200	<0.793	0.200	0.793	EPA-TO-15 11/09/2019 AD
trans-1,3-dichloropropene	<0.500	<2.27	0.500	2.27	EPA-TO-15 11/09/2019 AD



Client: NOW Environmental
WorkOrder: 1911062
Project: Fautleroy Clinic

Client Sample ID: Break Room
Lab ID: 1911062-002A
Sample Type: Summa Canister

Date Sampled: 11/5/2019
Date Received: 11/6/2019

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst
<u>Volatile Organic Compounds by EPA Method TO-15</u>							
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)			
Trichloroethene (TCE)	<0.0649	<0.349	0.0649	0.349		EPA-TO-15	11/09/2019 AD
Trichlorofluoromethane (CFC-11)	<0.400	<2.25	0.400	2.25		EPA-TO-15	11/09/2019 AD
Vinyl acetate	<1.00	<3.52	1.00	3.52		EPA-TO-15	11/09/2019 AD
Vinyl chloride	<0.107	<0.274	0.107	0.274		EPA-TO-15	11/09/2019 AD
Surr: 4-Bromofluorobenzene	92.9 %Rec	--	70-130	--		EPA-TO-15	11/09/2019 AD

NOTES:

E - Estimated value. The amount exceeds the linear working range of the instrument.



Client: NOW Environmental

WorkOrder: 1911062

Project: Fautleroy Clinic

Client Sample ID: Main Hall Across Main Desk

Date Sampled: 11/5/2019

Lab ID: 1911062-003A

Date Received: 11/6/2019

Sample Type: Summa Canister

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)			
<u>Volatile Organic Compounds by EPA Method TO-15</u>							
1,1,1-Trichloroethane	<0.400	<2.18	0.400	2.18		EPA-TO-15	11/09/2019 AD
1,1,2,2-Tetrachloroethane	<0.300	<2.06	0.300	2.06		EPA-TO-15	11/09/2019 AD
CFC-113	<0.400	<3.07	0.400	3.07		EPA-TO-15	11/09/2019 AD
1,1,2-Trichloroethane (TCA)	<0.500	<2.73	0.500	2.73		EPA-TO-15	11/09/2019 AD
1,1-Dichloroethane	<0.200	<0.810	0.200	0.810		EPA-TO-15	11/09/2019 AD
1,1-Dichloroethene (DCE)	<0.400	<1.59	0.400	1.59		EPA-TO-15	11/09/2019 AD
1,2,4-Trichlorobenzene	<0.300	<2.23	0.300	2.23		EPA-TO-15	11/09/2019 AD
1,2,4-Trimethylbenzene	<0.300	<1.47	0.300	1.47		EPA-TO-15	11/09/2019 AD
1,2-Dibromoethane (EDB)	<0.200	<1.54	0.200	1.54		EPA-TO-15	11/09/2019 AD
1,2-Dichlorobenzene	<0.400	<2.40	0.400	2.40		EPA-TO-15	11/09/2019 AD
1,2-Dichloroethane	<0.200	<0.809	0.200	0.809		EPA-TO-15	11/09/2019 AD
1,2-Dichloropropane	<0.500	<2.31	0.500	2.31		EPA-TO-15	11/09/2019 AD
1,3,5-Trimethylbenzene	<0.300	<1.47	0.300	1.47		EPA-TO-15	11/09/2019 AD
1,3-Butadiene	<0.500	<1.11	0.500	1.11		EPA-TO-15	11/09/2019 AD
1,3-Dichlorobenzene	<0.300	<1.80	0.300	1.80		EPA-TO-15	11/09/2019 AD
1,4-Dichlorobenzene	<0.300	<1.80	0.300	1.80		EPA-TO-15	11/09/2019 AD
1,4-Dioxane	<0.400	<1.44	0.400	1.44		EPA-TO-15	11/09/2019 AD
(MEK) 2-Butanone	<1.00	<2.95	1.00	2.95		EPA-TO-15	11/09/2019 AD
2-Hexanone	<1.00	<4.10	1.00	4.10		EPA-TO-15	11/09/2019 AD
Isopropyl Alcohol	99.2	244	1.00	2.46	E	EPA-TO-15	11/09/2019 AD
4-Methyl-2-pentanone (MIBK)	<1.00	<4.10	1.00	4.10		EPA-TO-15	11/09/2019 AD
Acetone	11.7	27.9	1.00	2.38		EPA-TO-15	11/09/2019 AD
Acrolein	<0.500	<1.15	0.500	1.15		EPA-TO-15	11/09/2019 AD
Benzene	0.392	1.25	0.0895	0.286		EPA-TO-15	11/09/2019 AD
Benzyl chloride	<0.500	<2.59	0.500	2.59		EPA-TO-15	11/09/2019 AD
Dichlorobromomethane	<0.300	<2.01	0.300	2.01		EPA-TO-15	11/09/2019 AD
Bromoform	<0.200	<2.07	0.200	2.07		EPA-TO-15	11/09/2019 AD
Bromomethane	<0.500	<1.94	0.500	1.94		EPA-TO-15	11/09/2019 AD
Carbon disulfide	<1.50	<4.67	1.50	4.67		EPA-TO-15	11/09/2019 AD
Carbon tetrachloride	<0.0657	<0.413	0.0657	0.413		EPA-TO-15	11/09/2019 AD



Client: NOW Environmental
WorkOrder: 1911062
Project: Fautleroy Clinic

Client Sample ID: Main Hall Across Main Desk
Lab ID: 1911062-003A
Sample Type: Summa Canister

Date Sampled: 11/5/2019
Date Received: 11/6/2019

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst
<u>Volatile Organic Compounds by EPA Method TO-15</u>							
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)			
Chlorobenzene	<0.200	<0.921	0.200	0.921		EPA-TO-15	11/09/2019 AD
Dibromochloromethane	<0.500	<4.26	0.500	4.26		EPA-TO-15	11/09/2019 AD
Chloroethane	<0.400	<1.06	0.400	1.06		EPA-TO-15	11/09/2019 AD
Chloroform	<0.200	<0.977	0.200	0.977		EPA-TO-15	11/09/2019 AD
Chloromethane	<0.500	<1.03	0.500	1.03		EPA-TO-15	11/09/2019 AD
cis-1,2-Dichloroethene	<0.200	<0.793	0.200	0.793		EPA-TO-15	11/09/2019 AD
cis-1,3-dichloropropene	<0.400	<1.82	0.400	1.82		EPA-TO-15	11/09/2019 AD
Cyclohexane	<0.400	<1.38	0.400	1.38		EPA-TO-15	11/09/2019 AD
Dichlorodifluoromethane (CFC-12)	0.515	2.55	0.400	1.98		EPA-TO-15	11/09/2019 AD
Dichlorotetrafluoroethane (CFC-114)	<0.400	<2.80	0.400	2.80		EPA-TO-15	11/09/2019 AD
Ethyl acetate	<1.00	<3.60	1.00	3.60		EPA-TO-15	11/09/2019 AD
Ethylbenzene	0.567	2.46	0.400	1.74		EPA-TO-15	11/09/2019 AD
Gasoline Range Organics	32.1	131	1.00	4.09		EPA-TO-15	11/09/2019 AD
Heptane	<0.400	<1.61	0.400	1.61		EPA-TO-15	11/09/2019 AD
Hexachlorobutadiene	<1.00	<10.7	1.00	10.7		EPA-TO-15	11/09/2019 AD
m,p-Xylene	1.67	7.24	0.800	3.47		EPA-TO-15	11/09/2019 AD
Methyl methacrylate	<0.400	<1.64	0.400	1.64		EPA-TO-15	11/09/2019 AD
Methylene chloride	<2.00	<6.95	2.00	6.95		EPA-TO-15	11/09/2019 AD
Naphthalene	<0.100	<0.524	0.100	0.524		EPA-TO-15	11/09/2019 AD
n-Hexane	<0.400	<1.41	0.400	1.41		EPA-TO-15	11/09/2019 AD
o-Xylene	0.515	2.24	0.400	1.74		EPA-TO-15	11/09/2019 AD
4-Ethyltoluene	<0.400	<1.97	0.400	1.97		EPA-TO-15	11/09/2019 AD
Propylene	6.66	11.5	0.400	0.688		EPA-TO-15	11/09/2019 AD
Styrene	<0.400	<1.70	0.400	1.70		EPA-TO-15	11/09/2019 AD
Methyl tert-butyl ether (MTBE)	<0.400	<1.44	0.400	1.44		EPA-TO-15	11/09/2019 AD
Tetrachloroethene (PCE)	0.330	2.24	0.200	1.36		EPA-TO-15	11/09/2019 AD
Tetrahydrofuran	<0.400	<1.18	0.400	1.18		EPA-TO-15	11/09/2019 AD
Toluene	12.5	47.0	0.400	1.51		EPA-TO-15	11/09/2019 AD
trans-1,2-Dichloroethene	<0.200	<0.793	0.200	0.793		EPA-TO-15	11/09/2019 AD
trans-1,3-dichloropropene	<0.500	<2.27	0.500	2.27		EPA-TO-15	11/09/2019 AD



Client: NOW Environmental
WorkOrder: 1911062
Project: Fautleroy Clinic

Client Sample ID: Main Hall Across Main Desk
Lab ID: 1911062-003A
Sample Type: Summa Canister

Date Sampled: 11/5/2019
Date Received: 11/6/2019

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst
<u>Volatile Organic Compounds by EPA Method TO-15</u>							
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)			
Trichloroethene (TCE)	0.212	1.14	0.0649	0.349		EPA-TO-15	11/09/2019 AD
Trichlorofluoromethane (CFC-11)	<0.400	<2.25	0.400	2.25		EPA-TO-15	11/09/2019 AD
Vinyl acetate	<1.00	<3.52	1.00	3.52		EPA-TO-15	11/09/2019 AD
Vinyl chloride	<0.107	<0.274	0.107	0.274		EPA-TO-15	11/09/2019 AD
Surr: 4-Bromofluorobenzene	99.2 %Rec	--	70-130	--		EPA-TO-15	11/09/2019 AD

NOTES:

E - Estimated value. The amount exceeds the linear working range of the instrument.



Client: NOW Environmental

WorkOrder: 1911062

Project: Fautleroy Clinic

Client Sample ID: Exam Room #3

Date Sampled: 11/5/2019

Lab ID: 1911062-004A

Date Received: 11/6/2019

Sample Type: Summa Canister

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst	
<u>Volatile Organic Compounds by EPA Method TO-15</u>								
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)				
1,1,1-Trichloroethane	<0.400	<2.18	0.400	2.18		EPA-TO-15	11/09/2019	AD
1,1,1,2-Tetrachloroethane	<0.300	<2.06	0.300	2.06		EPA-TO-15	11/09/2019	AD
CFC-113	<0.400	<3.07	0.400	3.07		EPA-TO-15	11/09/2019	AD
1,1,2-Trichloroethane (TCA)	<0.500	<2.73	0.500	2.73		EPA-TO-15	11/09/2019	AD
1,1-Dichloroethane	<0.200	<0.810	0.200	0.810		EPA-TO-15	11/09/2019	AD
1,1-Dichloroethene (DCE)	<0.400	<1.59	0.400	1.59		EPA-TO-15	11/09/2019	AD
1,2,4-Trichlorobenzene	<0.300	<2.23	0.300	2.23		EPA-TO-15	11/09/2019	AD
1,2,4-Trimethylbenzene	<0.300	<1.47	0.300	1.47		EPA-TO-15	11/09/2019	AD
1,2-Dibromoethane (EDB)	<0.200	<1.54	0.200	1.54		EPA-TO-15	11/09/2019	AD
1,2-Dichlorobenzene	<0.400	<2.40	0.400	2.40		EPA-TO-15	11/09/2019	AD
1,2-Dichloroethane	<0.200	<0.809	0.200	0.809		EPA-TO-15	11/09/2019	AD
1,2-Dichloropropane	<0.500	<2.31	0.500	2.31		EPA-TO-15	11/09/2019	AD
1,3,5-Trimethylbenzene	<0.300	<1.47	0.300	1.47		EPA-TO-15	11/09/2019	AD
1,3-Butadiene	<0.500	<1.11	0.500	1.11		EPA-TO-15	11/09/2019	AD
1,3-Dichlorobenzene	<0.300	<1.80	0.300	1.80		EPA-TO-15	11/09/2019	AD
1,4-Dichlorobenzene	<0.300	<1.80	0.300	1.80		EPA-TO-15	11/09/2019	AD
1,4-Dioxane	<0.400	<1.44	0.400	1.44		EPA-TO-15	11/09/2019	AD
(MEK) 2-Butanone	<1.00	<2.95	1.00	2.95		EPA-TO-15	11/09/2019	AD
2-Hexanone	<1.00	<4.10	1.00	4.10		EPA-TO-15	11/09/2019	AD
Isopropyl Alcohol	110	271	1.00	2.46	E	EPA-TO-15	11/09/2019	AD
4-Methyl-2-pentanone (MIBK)	<1.00	<4.10	1.00	4.10		EPA-TO-15	11/09/2019	AD
Acetone	8.57	20.4	1.00	2.38		EPA-TO-15	11/09/2019	AD
Acrolein	<0.500	<1.15	0.500	1.15		EPA-TO-15	11/09/2019	AD
Benzene	0.211	0.675	0.0895	0.286		EPA-TO-15	11/09/2019	AD
Benzyl chloride	<0.500	<2.59	0.500	2.59		EPA-TO-15	11/09/2019	AD
Dichlorobromomethane	<0.300	<2.01	0.300	2.01		EPA-TO-15	11/09/2019	AD
Bromoform	<0.200	<2.07	0.200	2.07		EPA-TO-15	11/09/2019	AD
Bromomethane	<0.500	<1.94	0.500	1.94		EPA-TO-15	11/09/2019	AD
Carbon disulfide	<1.50	<4.67	1.50	4.67		EPA-TO-15	11/09/2019	AD
Carbon tetrachloride	0.0673	0.423	0.0657	0.413		EPA-TO-15	11/09/2019	AD



Client: NOW Environmental
WorkOrder: 1911062
Project: Fauntleroy Clinic

Client Sample ID: Exam Room #3
Lab ID: 1911062-004A
Sample Type: Summa Canister

Date Sampled: 11/5/2019
Date Received: 11/6/2019

Analyte	Concentration	Reporting Limit	Qual	Method	Date/Analyst
<u>Volatile Organic Compounds by EPA Method TO-15</u>					
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)	
Chlorobenzene	<0.200	<0.921	0.200	0.921	EPA-TO-15 11/09/2019 AD
Dibromochloromethane	<0.500	<4.26	0.500	4.26	EPA-TO-15 11/09/2019 AD
Chloroethane	<0.400	<1.06	0.400	1.06	EPA-TO-15 11/09/2019 AD
Chloroform	<0.200	<0.977	0.200	0.977	EPA-TO-15 11/09/2019 AD
Chloromethane	0.516	1.06	0.500	1.03	EPA-TO-15 11/09/2019 AD
cis-1,2-Dichloroethene	<0.200	<0.793	0.200	0.793	EPA-TO-15 11/09/2019 AD
cis-1,3-dichloropropene	<0.400	<1.82	0.400	1.82	EPA-TO-15 11/09/2019 AD
Cyclohexane	<0.400	<1.38	0.400	1.38	EPA-TO-15 11/09/2019 AD
Dichlorodifluoromethane (CFC-12)	0.514	2.54	0.400	1.98	EPA-TO-15 11/09/2019 AD
Dichlorotetrafluoroethane (CFC-114)	<0.400	<2.80	0.400	2.80	EPA-TO-15 11/09/2019 AD
Ethyl acetate	<1.00	<3.60	1.00	3.60	EPA-TO-15 11/09/2019 AD
Ethylbenzene	<0.400	<1.74	0.400	1.74	EPA-TO-15 11/09/2019 AD
Gasoline Range Organics	17.4	71.2	1.00	4.09	EPA-TO-15 11/09/2019 AD
Heptane	<0.400	<1.61	0.400	1.61	EPA-TO-15 11/09/2019 AD
Hexachlorobutadiene	<1.00	<10.7	1.00	10.7	EPA-TO-15 11/09/2019 AD
m,p-Xylene	<0.800	<3.47	0.800	3.47	EPA-TO-15 11/09/2019 AD
Methyl methacrylate	<0.400	<1.64	0.400	1.64	EPA-TO-15 11/09/2019 AD
Methylene chloride	<2.00	<6.95	2.00	6.95	EPA-TO-15 11/09/2019 AD
Naphthalene	<0.100	<0.524	0.100	0.524	EPA-TO-15 11/09/2019 AD
n-Hexane	<0.400	<1.41	0.400	1.41	EPA-TO-15 11/09/2019 AD
o-Xylene	<0.400	<1.74	0.400	1.74	EPA-TO-15 11/09/2019 AD
4-Ethyltoluene	<0.400	<1.97	0.400	1.97	EPA-TO-15 11/09/2019 AD
Propylene	1.89	3.25	0.400	0.688	EPA-TO-15 11/09/2019 AD
Styrene	<0.400	<1.70	0.400	1.70	EPA-TO-15 11/09/2019 AD
Methyl tert-butyl ether (MTBE)	<0.400	<1.44	0.400	1.44	EPA-TO-15 11/09/2019 AD
Tetrachloroethene (PCE)	<0.200	<1.36	0.200	1.36	EPA-TO-15 11/09/2019 AD
Tetrahydrofuran	<0.400	<1.18	0.400	1.18	EPA-TO-15 11/09/2019 AD
Toluene	0.526	1.98	0.400	1.51	EPA-TO-15 11/09/2019 AD
trans-1,2-Dichloroethene	<0.200	<0.793	0.200	0.793	EPA-TO-15 11/09/2019 AD
trans-1,3-dichloropropene	<0.500	<2.27	0.500	2.27	EPA-TO-15 11/09/2019 AD



Client: NOW Environmental

WorkOrder: 1911062

Project: Fautleroy Clinic

Client Sample ID: Exam Room #3

Date Sampled: 11/5/2019

Lab ID: 1911062-004A

Date Received: 11/6/2019

Sample Type: Summa Canister

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst
<u>Volatile Organic Compounds by EPA Method TO-15</u>							
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)			
Trichloroethene (TCE)	<0.0649	<0.349	0.0649	0.349		EPA-TO-15	11/09/2019 AD
Trichlorofluoromethane (CFC-11)	<0.400	<2.25	0.400	2.25		EPA-TO-15	11/09/2019 AD
Vinyl acetate	<1.00	<3.52	1.00	3.52		EPA-TO-15	11/09/2019 AD
Vinyl chloride	<0.107	<0.274	0.107	0.274		EPA-TO-15	11/09/2019 AD
Surr: 4-Bromofluorobenzene	93.2 %Rec	--	70-130	--		EPA-TO-15	11/09/2019 AD

NOTES:

E - Estimated value. The amount exceeds the linear working range of the instrument.



Client: NOW Environmental

WorkOrder: 1911062

Project: Fautleroy Clinic

Client Sample ID: Dr. Hoangs Office 14

Date Sampled: 11/5/2019

Lab ID: 1911062-005A

Date Received: 11/6/2019

Sample Type: Summa Canister

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)			
<u>Volatile Organic Compounds by EPA Method TO-15</u>							
1,1,1-Trichloroethane	<0.400	<2.18	0.400	2.18		EPA-TO-15	11/09/2019 AD
1,1,1,2-Tetrachloroethane	<0.300	<2.06	0.300	2.06		EPA-TO-15	11/09/2019 AD
CFC-113	<0.400	<3.07	0.400	3.07		EPA-TO-15	11/09/2019 AD
1,1,2-Trichloroethane (TCA)	<0.500	<2.73	0.500	2.73		EPA-TO-15	11/09/2019 AD
1,1-Dichloroethane	<0.200	<0.810	0.200	0.810		EPA-TO-15	11/09/2019 AD
1,1-Dichloroethene (DCE)	<0.400	<1.59	0.400	1.59		EPA-TO-15	11/09/2019 AD
1,2,4-Trichlorobenzene	<0.300	<2.23	0.300	2.23		EPA-TO-15	11/09/2019 AD
1,2,4-Trimethylbenzene	<0.300	<1.47	0.300	1.47		EPA-TO-15	11/09/2019 AD
1,2-Dibromoethane (EDB)	<0.200	<1.54	0.200	1.54		EPA-TO-15	11/09/2019 AD
1,2-Dichlorobenzene	<0.400	<2.40	0.400	2.40		EPA-TO-15	11/09/2019 AD
1,2-Dichloroethane	<0.200	<0.809	0.200	0.809		EPA-TO-15	11/09/2019 AD
1,2-Dichloropropane	<0.500	<2.31	0.500	2.31		EPA-TO-15	11/09/2019 AD
1,3,5-Trimethylbenzene	<0.300	<1.47	0.300	1.47		EPA-TO-15	11/09/2019 AD
1,3-Butadiene	0.643	1.42	0.500	1.11		EPA-TO-15	11/09/2019 AD
1,3-Dichlorobenzene	0.992	5.97	0.300	1.80		EPA-TO-15	11/09/2019 AD
1,4-Dichlorobenzene	0.972	5.85	0.300	1.80		EPA-TO-15	11/09/2019 AD
1,4-Dioxane	<0.400	<1.44	0.400	1.44		EPA-TO-15	11/09/2019 AD
(MEK) 2-Butanone	<1.00	<2.95	1.00	2.95		EPA-TO-15	11/09/2019 AD
2-Hexanone	<1.00	<4.10	1.00	4.10		EPA-TO-15	11/09/2019 AD
Isopropyl Alcohol	97.6	240	1.00	2.46	E	EPA-TO-15	11/09/2019 AD
4-Methyl-2-pentanone (MIBK)	<1.00	<4.10	1.00	4.10		EPA-TO-15	11/09/2019 AD
Acetone	11.6	27.6	1.00	2.38		EPA-TO-15	11/09/2019 AD
Acrolein	<0.500	<1.15	0.500	1.15		EPA-TO-15	11/09/2019 AD
Benzene	0.240	0.768	0.0895	0.286		EPA-TO-15	11/09/2019 AD
Benzyl chloride	<0.500	<2.59	0.500	2.59		EPA-TO-15	11/09/2019 AD
Dichlorobromomethane	<0.300	<2.01	0.300	2.01		EPA-TO-15	11/09/2019 AD
Bromoform	<0.200	<2.07	0.200	2.07		EPA-TO-15	11/09/2019 AD
Bromomethane	<0.500	<1.94	0.500	1.94		EPA-TO-15	11/09/2019 AD
Carbon disulfide	<1.50	<4.67	1.50	4.67		EPA-TO-15	11/09/2019 AD
Carbon tetrachloride	0.0658	0.414	0.0657	0.413		EPA-TO-15	11/09/2019 AD



Client: NOW Environmental

WorkOrder: 1911062

Project: Fautleroy Clinic

Client Sample ID: Dr. Hoangs Office 14

Date Sampled: 11/5/2019

Lab ID: 1911062-005A

Date Received: 11/6/2019

Sample Type: Summa Canister

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst
<u>Volatile Organic Compounds by EPA Method TO-15</u>							
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)			
Chlorobenzene	<0.200	<0.921	0.200	0.921		EPA-TO-15	11/09/2019 AD
Dibromochloromethane	<0.500	<4.26	0.500	4.26		EPA-TO-15	11/09/2019 AD
Chloroethane	<0.400	<1.06	0.400	1.06		EPA-TO-15	11/09/2019 AD
Chloroform	<0.200	<0.977	0.200	0.977		EPA-TO-15	11/09/2019 AD
Chloromethane	0.551	1.14	0.500	1.03		EPA-TO-15	11/09/2019 AD
cis-1,2-Dichloroethene	<0.200	<0.793	0.200	0.793		EPA-TO-15	11/09/2019 AD
cis-1,3-dichloropropene	<0.400	<1.82	0.400	1.82		EPA-TO-15	11/09/2019 AD
Cyclohexane	<0.400	<1.38	0.400	1.38		EPA-TO-15	11/09/2019 AD
Dichlorodifluoromethane (CFC-12)	0.505	2.50	0.400	1.98		EPA-TO-15	11/09/2019 AD
Dichlorotetrafluoroethane (CFC-114)	<0.400	<2.80	0.400	2.80		EPA-TO-15	11/09/2019 AD
Ethyl acetate	<1.00	<3.60	1.00	3.60		EPA-TO-15	11/09/2019 AD
Ethylbenzene	<0.400	<1.74	0.400	1.74		EPA-TO-15	11/09/2019 AD
Gasoline Range Organics	24.6	100	1.00	4.09		EPA-TO-15	11/09/2019 AD
Heptane	<0.400	<1.61	0.400	1.61		EPA-TO-15	11/09/2019 AD
Hexachlorobutadiene	<1.00	<10.7	1.00	10.7		EPA-TO-15	11/09/2019 AD
m,p-Xylene	<0.800	<3.47	0.800	3.47		EPA-TO-15	11/09/2019 AD
Methyl methacrylate	<0.400	<1.64	0.400	1.64		EPA-TO-15	11/09/2019 AD
Methylene chloride	<2.00	<6.95	2.00	6.95		EPA-TO-15	11/09/2019 AD
Naphthalene	0.117	0.614	0.100	0.524		EPA-TO-15	11/09/2019 AD
n-Hexane	<0.400	<1.41	0.400	1.41		EPA-TO-15	11/09/2019 AD
o-Xylene	<0.400	<1.74	0.400	1.74		EPA-TO-15	11/09/2019 AD
4-Ethyltoluene	<0.400	<1.97	0.400	1.97		EPA-TO-15	11/09/2019 AD
Propylene	5.91	10.2	0.400	0.688		EPA-TO-15	11/09/2019 AD
Styrene	<0.400	<1.70	0.400	1.70		EPA-TO-15	11/09/2019 AD
Methyl tert-butyl ether (MTBE)	<0.400	<1.44	0.400	1.44		EPA-TO-15	11/09/2019 AD
Tetrachloroethene (PCE)	<0.200	<1.36	0.200	1.36		EPA-TO-15	11/09/2019 AD
Tetrahydrofuran	1.54	4.54	0.400	1.18		EPA-TO-15	11/09/2019 AD
Toluene	0.557	2.10	0.400	1.51		EPA-TO-15	11/09/2019 AD
trans-1,2-Dichloroethene	<0.200	<0.793	0.200	0.793		EPA-TO-15	11/09/2019 AD
trans-1,3-dichloropropene	<0.500	<2.27	0.500	2.27		EPA-TO-15	11/09/2019 AD



Client: NOW Environmental

WorkOrder: 1911062

Project: Fautleroy Clinic

Client Sample ID: Dr. Hoangs Office 14

Date Sampled: 11/5/2019

Lab ID: 1911062-005A

Date Received: 11/6/2019

Sample Type: Summa Canister

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)			
Trichloroethene (TCE)	<0.0649	<0.349	0.0649	0.349		EPA-TO-15	11/09/2019 AD
Trichlorofluoromethane (CFC-11)	<0.400	<2.25	0.400	2.25		EPA-TO-15	11/09/2019 AD
Vinyl acetate	<1.00	<3.52	1.00	3.52		EPA-TO-15	11/09/2019 AD
Vinyl chloride	<0.107	<0.274	0.107	0.274		EPA-TO-15	11/09/2019 AD
Surr: 4-Bromofluorobenzene	105 %Rec	--	70-130	--		EPA-TO-15	11/09/2019 AD

NOTES:

E - Estimated value. The amount exceeds the linear working range of the instrument.



Client: NOW Environmental

WorkOrder: 1911062

Project: Fautleroy Clinic

Client Sample ID: Dr. Hoangs Office 14

Date Sampled: 11/5/2019

Lab ID: 1911062-006A

Date Received: 11/6/2019

Sample Type: Summa Canister

Analyte	Concentration	Reporting Limit	Qual	Method	Date/Analyst
<u>Volatile Organic Compounds by EPA Method TO-15</u>					
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)	
1,1,1-Trichloroethane	<0.400	<2.18	0.400	2.18	EPA-TO-15 11/09/2019 AD
1,1,1,2-Tetrachloroethane	<0.300	<2.06	0.300	2.06	EPA-TO-15 11/09/2019 AD
CFC-113	<0.400	<3.07	0.400	3.07	EPA-TO-15 11/09/2019 AD
1,1,2-Trichloroethane (TCA)	<0.500	<2.73	0.500	2.73	EPA-TO-15 11/09/2019 AD
1,1-Dichloroethane	<0.200	<0.810	0.200	0.810	EPA-TO-15 11/09/2019 AD
1,1-Dichloroethene (DCE)	<0.400	<1.59	0.400	1.59	EPA-TO-15 11/09/2019 AD
1,2,4-Trichlorobenzene	<0.300	<2.23	0.300	2.23	EPA-TO-15 11/09/2019 AD
1,2,4-Trimethylbenzene	<0.300	<1.47	0.300	1.47	EPA-TO-15 11/09/2019 AD
1,2-Dibromoethane (EDB)	<0.200	<1.54	0.200	1.54	EPA-TO-15 11/09/2019 AD
1,2-Dichlorobenzene	<0.400	<2.40	0.400	2.40	EPA-TO-15 11/09/2019 AD
1,2-Dichloroethane	<0.200	<0.809	0.200	0.809	EPA-TO-15 11/09/2019 AD
1,2-Dichloropropane	<0.500	<2.31	0.500	2.31	EPA-TO-15 11/09/2019 AD
1,3,5-Trimethylbenzene	<0.300	<1.47	0.300	1.47	EPA-TO-15 11/09/2019 AD
1,3-Butadiene	<0.500	<1.11	0.500	1.11	EPA-TO-15 11/09/2019 AD
1,3-Dichlorobenzene	<0.300	<1.80	0.300	1.80	EPA-TO-15 11/09/2019 AD
1,4-Dichlorobenzene	<0.300	<1.80	0.300	1.80	EPA-TO-15 11/09/2019 AD
1,4-Dioxane	<0.400	<1.44	0.400	1.44	EPA-TO-15 11/09/2019 AD
(MEK) 2-Butanone	<1.00	<2.95	1.00	2.95	EPA-TO-15 11/09/2019 AD
2-Hexanone	<1.00	<4.10	1.00	4.10	EPA-TO-15 11/09/2019 AD
Isopropyl Alcohol	76.0	187	1.00	2.46	E EPA-TO-15 11/09/2019 AD
4-Methyl-2-pentanone (MIBK)	<1.00	<4.10	1.00	4.10	EPA-TO-15 11/09/2019 AD
Acetone	12.0	28.6	1.00	2.38	EPA-TO-15 11/09/2019 AD
Acrolein	<0.500	<1.15	0.500	1.15	EPA-TO-15 11/09/2019 AD
Benzene	0.194	0.621	0.0895	0.286	EPA-TO-15 11/09/2019 AD
Benzyl chloride	<0.500	<2.59	0.500	2.59	EPA-TO-15 11/09/2019 AD
Dichlorobromomethane	<0.300	<2.01	0.300	2.01	EPA-TO-15 11/09/2019 AD
Bromoform	<0.200	<2.07	0.200	2.07	EPA-TO-15 11/09/2019 AD
Bromomethane	<0.500	<1.94	0.500	1.94	EPA-TO-15 11/09/2019 AD
Carbon disulfide	<1.50	<4.67	1.50	4.67	EPA-TO-15 11/09/2019 AD
Carbon tetrachloride	<0.0657	<0.413	0.0657	0.413	EPA-TO-15 11/09/2019 AD



Client: NOW Environmental

WorkOrder: 1911062

Project: Fautleroy Clinic

Client Sample ID: Dr. Hoangs Office 14

Date Sampled: 11/5/2019

Lab ID: 1911062-006A

Date Received: 11/6/2019

Sample Type: Summa Canister

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst
<u>Volatile Organic Compounds by EPA Method TO-15</u>							
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)			
Chlorobenzene	<0.200	<0.921	0.200	0.921		EPA-TO-15	11/09/2019 AD
Dibromochloromethane	<0.500	<4.26	0.500	4.26		EPA-TO-15	11/09/2019 AD
Chloroethane	<0.400	<1.06	0.400	1.06		EPA-TO-15	11/09/2019 AD
Chloroform	<0.200	<0.977	0.200	0.977		EPA-TO-15	11/09/2019 AD
Chloromethane	0.511	1.05	0.500	1.03		EPA-TO-15	11/09/2019 AD
cis-1,2-Dichloroethene	<0.200	<0.793	0.200	0.793		EPA-TO-15	11/09/2019 AD
cis-1,3-dichloropropene	<0.400	<1.82	0.400	1.82		EPA-TO-15	11/09/2019 AD
Cyclohexane	<0.400	<1.38	0.400	1.38		EPA-TO-15	11/09/2019 AD
Dichlorodifluoromethane (CFC-12)	0.523	2.59	0.400	1.98		EPA-TO-15	11/09/2019 AD
Dichlorotetrafluoroethane (CFC-114)	<0.400	<2.80	0.400	2.80		EPA-TO-15	11/09/2019 AD
Ethyl acetate	<1.00	<3.60	1.00	3.60		EPA-TO-15	11/09/2019 AD
Ethylbenzene	<0.400	<1.74	0.400	1.74		EPA-TO-15	11/09/2019 AD
Gasoline Range Organics	20.0	81.7	1.00	4.09		EPA-TO-15	11/09/2019 AD
Heptane	<0.400	<1.61	0.400	1.61		EPA-TO-15	11/09/2019 AD
Hexachlorobutadiene	<1.00	<10.7	1.00	10.7		EPA-TO-15	11/09/2019 AD
m,p-Xylene	<0.800	<3.47	0.800	3.47		EPA-TO-15	11/09/2019 AD
Methyl methacrylate	<0.400	<1.64	0.400	1.64		EPA-TO-15	11/09/2019 AD
Methylene chloride	<2.00	<6.95	2.00	6.95		EPA-TO-15	11/09/2019 AD
Naphthalene	<0.100	<0.524	0.100	0.524		EPA-TO-15	11/09/2019 AD
n-Hexane	<0.400	<1.41	0.400	1.41		EPA-TO-15	11/09/2019 AD
o-Xylene	<0.400	<1.74	0.400	1.74		EPA-TO-15	11/09/2019 AD
4-Ethyltoluene	<0.400	<1.97	0.400	1.97		EPA-TO-15	11/09/2019 AD
Propylene	2.56	4.41	0.400	0.688		EPA-TO-15	11/09/2019 AD
Styrene	<0.400	<1.70	0.400	1.70		EPA-TO-15	11/09/2019 AD
Methyl tert-butyl ether (MTBE)	<0.400	<1.44	0.400	1.44		EPA-TO-15	11/09/2019 AD
Tetrachloroethene (PCE)	<0.200	<1.36	0.200	1.36		EPA-TO-15	11/09/2019 AD
Tetrahydrofuran	<0.400	<1.18	0.400	1.18		EPA-TO-15	11/09/2019 AD
Toluene	0.450	1.69	0.400	1.51		EPA-TO-15	11/09/2019 AD
trans-1,2-Dichloroethene	<0.200	<0.793	0.200	0.793		EPA-TO-15	11/09/2019 AD
trans-1,3-dichloropropene	<0.500	<2.27	0.500	2.27		EPA-TO-15	11/09/2019 AD



Client: NOW Environmental

WorkOrder: 1911062

Project: Fautleroy Clinic

Client Sample ID: Dr. Hoangs Office 14

Date Sampled: 11/5/2019

Lab ID: 1911062-006A

Date Received: 11/6/2019

Sample Type: Summa Canister

Analyte	Concentration	Reporting Limit	Qual	Method	Date/Analyst
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Volatile Organic Compounds by EPA Method TO-15

	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)			
Trichloroethene (TCE)	<0.0649	<0.349	0.0649	0.349	EPA-TO-15	11/09/2019	AD
Trichlorofluoromethane (CFC-11)	<0.400	<2.25	0.400	2.25	EPA-TO-15	11/09/2019	AD
Vinyl acetate	<1.00	<3.52	1.00	3.52	EPA-TO-15	11/09/2019	AD
Vinyl chloride	<0.107	<0.274	0.107	0.274	EPA-TO-15	11/09/2019	AD
Surr: 4-Bromofluorobenzene	100 %Rec	--	70-130	--	EPA-TO-15	11/09/2019	AD

NOTES:

E - Estimated value. The amount exceeds the linear working range of the instrument.



Client: NOW Environmental

WorkOrder: 1911062

Project: Fautleroy Clinic

Client Sample ID: Supply Closet

Date Sampled: 11/5/2019

Lab ID: 1911062-007A

Date Received: 11/6/2019

Sample Type: Summa Canister

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)			
1,1,1-Trichloroethane	<0.400	<2.18	0.400	2.18		EPA-TO-15	11/09/2019 AD
1,1,1,2-Tetrachloroethane	<0.300	<2.06	0.300	2.06		EPA-TO-15	11/09/2019 AD
CFC-113	<0.400	<3.07	0.400	3.07		EPA-TO-15	11/09/2019 AD
1,1,2-Trichloroethane (TCA)	<0.500	<2.73	0.500	2.73		EPA-TO-15	11/09/2019 AD
1,1-Dichloroethane	<0.200	<0.810	0.200	0.810		EPA-TO-15	11/09/2019 AD
1,1-Dichloroethene (DCE)	<0.400	<1.59	0.400	1.59		EPA-TO-15	11/09/2019 AD
1,2,4-Trichlorobenzene	<0.300	<2.23	0.300	2.23		EPA-TO-15	11/09/2019 AD
1,2,4-Trimethylbenzene	<0.300	<1.47	0.300	1.47		EPA-TO-15	11/09/2019 AD
1,2-Dibromoethane (EDB)	<0.200	<1.54	0.200	1.54		EPA-TO-15	11/09/2019 AD
1,2-Dichlorobenzene	<0.400	<2.40	0.400	2.40		EPA-TO-15	11/09/2019 AD
1,2-Dichloroethane	<0.200	<0.809	0.200	0.809		EPA-TO-15	11/09/2019 AD
1,2-Dichloropropane	<0.500	<2.31	0.500	2.31		EPA-TO-15	11/09/2019 AD
1,3,5-Trimethylbenzene	<0.300	<1.47	0.300	1.47		EPA-TO-15	11/09/2019 AD
1,3-Butadiene	<0.500	<1.11	0.500	1.11		EPA-TO-15	11/09/2019 AD
1,3-Dichlorobenzene	<0.300	<1.80	0.300	1.80		EPA-TO-15	11/09/2019 AD
1,4-Dichlorobenzene	<0.300	<1.80	0.300	1.80		EPA-TO-15	11/09/2019 AD
1,4-Dioxane	<0.400	<1.44	0.400	1.44		EPA-TO-15	11/09/2019 AD
(MEK) 2-Butanone	<1.00	<2.95	1.00	2.95		EPA-TO-15	11/09/2019 AD
2-Hexanone	<1.00	<4.10	1.00	4.10		EPA-TO-15	11/09/2019 AD
Isopropyl Alcohol	71.9	177	1.00	2.46	E	EPA-TO-15	11/09/2019 AD
4-Methyl-2-pentanone (MIBK)	<1.00	<4.10	1.00	4.10		EPA-TO-15	11/09/2019 AD
Acetone	10.3	24.4	1.00	2.38		EPA-TO-15	11/09/2019 AD
Acrolein	<0.500	<1.15	0.500	1.15		EPA-TO-15	11/09/2019 AD
Benzene	0.226	0.722	0.0895	0.286		EPA-TO-15	11/09/2019 AD
Benzyl chloride	<0.500	<2.59	0.500	2.59		EPA-TO-15	11/09/2019 AD
Dichlorobromomethane	<0.300	<2.01	0.300	2.01		EPA-TO-15	11/09/2019 AD
Bromoform	<0.200	<2.07	0.200	2.07		EPA-TO-15	11/09/2019 AD
Bromomethane	<0.500	<1.94	0.500	1.94		EPA-TO-15	11/09/2019 AD
Carbon disulfide	<1.50	<4.67	1.50	4.67		EPA-TO-15	11/09/2019 AD
Carbon tetrachloride	0.0692	0.435	0.0657	0.413		EPA-TO-15	11/09/2019 AD



Client: NOW Environmental
WorkOrder: 1911062
Project: Fautleroy Clinic

Client Sample ID: Supply Closet
Lab ID: 1911062-007A
Sample Type: Summa Canister

Date Sampled: 11/5/2019
Date Received: 11/6/2019

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst
<u>Volatile Organic Compounds by EPA Method TO-15</u>							
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)			
Chlorobenzene	<0.200	<0.921	0.200	0.921		EPA-TO-15	11/09/2019 AD
Dibromochloromethane	<0.500	<4.26	0.500	4.26		EPA-TO-15	11/09/2019 AD
Chloroethane	<0.400	<1.06	0.400	1.06		EPA-TO-15	11/09/2019 AD
Chloroform	<0.200	<0.977	0.200	0.977		EPA-TO-15	11/09/2019 AD
Chloromethane	<0.500	<1.03	0.500	1.03		EPA-TO-15	11/09/2019 AD
cis-1,2-Dichloroethene	<0.200	<0.793	0.200	0.793		EPA-TO-15	11/09/2019 AD
cis-1,3-dichloropropene	<0.400	<1.82	0.400	1.82		EPA-TO-15	11/09/2019 AD
Cyclohexane	<0.400	<1.38	0.400	1.38		EPA-TO-15	11/09/2019 AD
Dichlorodifluoromethane (CFC-12)	0.510	2.52	0.400	1.98		EPA-TO-15	11/09/2019 AD
Dichlorotetrafluoroethane (CFC-114)	<0.400	<2.80	0.400	2.80		EPA-TO-15	11/09/2019 AD
Ethyl acetate	<1.00	<3.60	1.00	3.60		EPA-TO-15	11/09/2019 AD
Ethylbenzene	<0.400	<1.74	0.400	1.74		EPA-TO-15	11/09/2019 AD
Gasoline Range Organics	25.8	106	1.00	4.09		EPA-TO-15	11/09/2019 AD
Heptane	<0.400	<1.61	0.400	1.61		EPA-TO-15	11/09/2019 AD
Hexachlorobutadiene	<1.00	<10.7	1.00	10.7		EPA-TO-15	11/09/2019 AD
m,p-Xylene	<0.800	<3.47	0.800	3.47		EPA-TO-15	11/09/2019 AD
Methyl methacrylate	<0.400	<1.64	0.400	1.64		EPA-TO-15	11/09/2019 AD
Methylene chloride	<2.00	<6.95	2.00	6.95		EPA-TO-15	11/09/2019 AD
Naphthalene	<0.100	<0.524	0.100	0.524		EPA-TO-15	11/09/2019 AD
n-Hexane	<0.400	<1.41	0.400	1.41		EPA-TO-15	11/09/2019 AD
o-Xylene	<0.400	<1.74	0.400	1.74		EPA-TO-15	11/09/2019 AD
4-Ethyltoluene	<0.400	<1.97	0.400	1.97		EPA-TO-15	11/09/2019 AD
Propylene	2.48	4.26	0.400	0.688		EPA-TO-15	11/09/2019 AD
Styrene	<0.400	<1.70	0.400	1.70		EPA-TO-15	11/09/2019 AD
Methyl tert-butyl ether (MTBE)	<0.400	<1.44	0.400	1.44		EPA-TO-15	11/09/2019 AD
Tetrachloroethene (PCE)	<0.200	<1.36	0.200	1.36		EPA-TO-15	11/09/2019 AD
Tetrahydrofuran	<0.400	<1.18	0.400	1.18		EPA-TO-15	11/09/2019 AD
Toluene	0.508	1.91	0.400	1.51		EPA-TO-15	11/09/2019 AD
trans-1,2-Dichloroethene	<0.200	<0.793	0.200	0.793		EPA-TO-15	11/09/2019 AD
trans-1,3-dichloropropene	<0.500	<2.27	0.500	2.27		EPA-TO-15	11/09/2019 AD



Client: NOW Environmental

WorkOrder: 1911062

Project: Fautleroy Clinic

Client Sample ID: Supply Closet

Date Sampled: 11/5/2019

Lab ID: 1911062-007A

Date Received: 11/6/2019

Sample Type: Summa Canister

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst
<u>Volatile Organic Compounds by EPA Method TO-15</u>							
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)			
Trichloroethene (TCE)	<0.0649	<0.349	0.0649	0.349		EPA-TO-15	11/09/2019 AD
Trichlorofluoromethane (CFC-11)	<0.400	<2.25	0.400	2.25		EPA-TO-15	11/09/2019 AD
Vinyl acetate	<1.00	<3.52	1.00	3.52		EPA-TO-15	11/09/2019 AD
Vinyl chloride	<0.107	<0.274	0.107	0.274		EPA-TO-15	11/09/2019 AD
Surr: 4-Bromofluorobenzene	108 %Rec	--	70-130	--		EPA-TO-15	11/09/2019 AD

NOTES:

E - Estimated value. The amount exceeds the linear working range of the instrument.



Client: NOW Environmental

WorkOrder: 1911062

Project: Fautleroy Clinic

Client Sample ID: Break Room

Date Sampled: 11/5/2019

Lab ID: 1911062-008A

Date Received: 11/6/2019

Sample Type: Summa Canister

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst	
<u>Volatile Organic Compounds by EPA Method TO-15</u>								
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)				
1,1,1-Trichloroethane	<0.400	<2.18	0.400	2.18		EPA-TO-15	11/09/2019	AD
1,1,1,2,2-Tetrachloroethane	<0.300	<2.06	0.300	2.06		EPA-TO-15	11/09/2019	AD
CFC-113	<0.400	<3.07	0.400	3.07		EPA-TO-15	11/09/2019	AD
1,1,2-Trichloroethane (TCA)	<0.500	<2.73	0.500	2.73		EPA-TO-15	11/09/2019	AD
1,1-Dichloroethane	<0.200	<0.810	0.200	0.810		EPA-TO-15	11/09/2019	AD
1,1-Dichloroethene (DCE)	<0.400	<1.59	0.400	1.59		EPA-TO-15	11/09/2019	AD
1,2,4-Trichlorobenzene	<0.300	<2.23	0.300	2.23		EPA-TO-15	11/09/2019	AD
1,2,4-Trimethylbenzene	<0.300	<1.47	0.300	1.47		EPA-TO-15	11/09/2019	AD
1,2-Dibromoethane (EDB)	<0.200	<1.54	0.200	1.54		EPA-TO-15	11/09/2019	AD
1,2-Dichlorobenzene	<0.400	<2.40	0.400	2.40		EPA-TO-15	11/09/2019	AD
1,2-Dichloroethane	<0.200	<0.809	0.200	0.809		EPA-TO-15	11/09/2019	AD
1,2-Dichloropropane	<0.500	<2.31	0.500	2.31		EPA-TO-15	11/09/2019	AD
1,3,5-Trimethylbenzene	<0.300	<1.47	0.300	1.47		EPA-TO-15	11/09/2019	AD
1,3-Butadiene	<0.500	<1.11	0.500	1.11		EPA-TO-15	11/09/2019	AD
1,3-Dichlorobenzene	<0.300	<1.80	0.300	1.80		EPA-TO-15	11/09/2019	AD
1,4-Dichlorobenzene	<0.300	<1.80	0.300	1.80		EPA-TO-15	11/09/2019	AD
1,4-Dioxane	<0.400	<1.44	0.400	1.44		EPA-TO-15	11/09/2019	AD
(MEK) 2-Butanone	3.35	9.89	1.00	2.95		EPA-TO-15	11/09/2019	AD
2-Hexanone	<1.00	<4.10	1.00	4.10		EPA-TO-15	11/09/2019	AD
Isopropyl Alcohol	39.8	97.9	1.00	2.46	E	EPA-TO-15	11/09/2019	AD
4-Methyl-2-pentanone (MIBK)	<1.00	<4.10	1.00	4.10		EPA-TO-15	11/09/2019	AD
Acetone	7.01	16.6	1.00	2.38		EPA-TO-15	11/09/2019	AD
Acrolein	<0.500	<1.15	0.500	1.15		EPA-TO-15	11/09/2019	AD
Benzene	0.224	0.716	0.0895	0.286		EPA-TO-15	11/09/2019	AD
Benzyl chloride	<0.500	<2.59	0.500	2.59		EPA-TO-15	11/09/2019	AD
Dichlorobromomethane	<0.300	<2.01	0.300	2.01		EPA-TO-15	11/09/2019	AD
Bromoform	<0.200	<2.07	0.200	2.07		EPA-TO-15	11/09/2019	AD
Bromomethane	<0.500	<1.94	0.500	1.94		EPA-TO-15	11/09/2019	AD
Carbon disulfide	<1.50	<4.67	1.50	4.67		EPA-TO-15	11/09/2019	AD
Carbon tetrachloride	0.0673	0.423	0.0657	0.413		EPA-TO-15	11/09/2019	AD



Client: NOW Environmental
WorkOrder: 1911062
Project: Fautleroy Clinic

Client Sample ID: Break Room
Lab ID: 1911062-008A
Sample Type: Summa Canister

Date Sampled: 11/5/2019
Date Received: 11/6/2019

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst
<u>Volatile Organic Compounds by EPA Method TO-15</u>							
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)			
Chlorobenzene	<0.200	<0.921	0.200	0.921		EPA-TO-15	11/09/2019 AD
Dibromochloromethane	<0.500	<4.26	0.500	4.26		EPA-TO-15	11/09/2019 AD
Chloroethane	<0.400	<1.06	0.400	1.06		EPA-TO-15	11/09/2019 AD
Chloroform	<0.200	<0.977	0.200	0.977		EPA-TO-15	11/09/2019 AD
Chloromethane	<0.500	<1.03	0.500	1.03		EPA-TO-15	11/09/2019 AD
cis-1,2-Dichloroethene	<0.200	<0.793	0.200	0.793		EPA-TO-15	11/09/2019 AD
cis-1,3-dichloropropene	<0.400	<1.82	0.400	1.82		EPA-TO-15	11/09/2019 AD
Cyclohexane	<0.400	<1.38	0.400	1.38		EPA-TO-15	11/09/2019 AD
Dichlorodifluoromethane (CFC-12)	0.511	2.53	0.400	1.98		EPA-TO-15	11/09/2019 AD
Dichlorotetrafluoroethane (CFC-114)	<0.400	<2.80	0.400	2.80		EPA-TO-15	11/09/2019 AD
Ethyl acetate	<1.00	<3.60	1.00	3.60		EPA-TO-15	11/09/2019 AD
Ethylbenzene	<0.400	<1.74	0.400	1.74		EPA-TO-15	11/09/2019 AD
Gasoline Range Organics	72.1	295	1.00	4.09		EPA-TO-15	11/09/2019 AD
Heptane	<0.400	<1.61	0.400	1.61		EPA-TO-15	11/09/2019 AD
Hexachlorobutadiene	<1.00	<10.7	1.00	10.7		EPA-TO-15	11/09/2019 AD
m,p-Xylene	<0.800	<3.47	0.800	3.47		EPA-TO-15	11/09/2019 AD
Methyl methacrylate	<0.400	<1.64	0.400	1.64		EPA-TO-15	11/09/2019 AD
Methylene chloride	<2.00	<6.95	2.00	6.95		EPA-TO-15	11/09/2019 AD
Naphthalene	<0.100	<0.524	0.100	0.524		EPA-TO-15	11/09/2019 AD
n-Hexane	<0.400	<1.41	0.400	1.41		EPA-TO-15	11/09/2019 AD
o-Xylene	<0.400	<1.74	0.400	1.74		EPA-TO-15	11/09/2019 AD
4-Ethyltoluene	<0.400	<1.97	0.400	1.97		EPA-TO-15	11/09/2019 AD
Propylene	1.29	2.22	0.400	0.688		EPA-TO-15	11/09/2019 AD
Styrene	<0.400	<1.70	0.400	1.70		EPA-TO-15	11/09/2019 AD
Methyl tert-butyl ether (MTBE)	<0.400	<1.44	0.400	1.44		EPA-TO-15	11/09/2019 AD
Tetrachloroethene (PCE)	4.93	33.4	0.200	1.36		EPA-TO-15	11/09/2019 AD
Tetrahydrofuran	<0.400	<1.18	0.400	1.18		EPA-TO-15	11/09/2019 AD
Toluene	1.08	4.07	0.400	1.51		EPA-TO-15	11/09/2019 AD
trans-1,2-Dichloroethene	<0.200	<0.793	0.200	0.793		EPA-TO-15	11/09/2019 AD
trans-1,3-dichloropropene	<0.500	<2.27	0.500	2.27		EPA-TO-15	11/09/2019 AD



Client: NOW Environmental

WorkOrder: 1911062

Project: Fautleroy Clinic

Client Sample ID: Break Room

Date Sampled: 11/5/2019

Lab ID: 1911062-008A

Date Received: 11/6/2019

Sample Type: Summa Canister

Analyte	Concentration	Reporting Limit	Qual	Method	Date/Analyst
<u>Volatile Organic Compounds by EPA Method TO-15</u>					
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)	
Trichloroethene (TCE)	0.162	0.870	0.0649	0.349	EPA-TO-15 11/09/2019 AD
Trichlorofluoromethane (CFC-11)	<0.400	<2.25	0.400	2.25	EPA-TO-15 11/09/2019 AD
Vinyl acetate	<1.00	<3.52	1.00	3.52	EPA-TO-15 11/09/2019 AD
Vinyl chloride	<0.107	<0.274	0.107	0.274	EPA-TO-15 11/09/2019 AD
Surr: 4-Bromofluorobenzene	87.9 %Rec	--	70-130	--	EPA-TO-15 11/09/2019 AD

NOTES:

E - Estimated value. The amount exceeds the linear working range of the instrument.



Client: NOW Environmental

WorkOrder: 1911062

Project: Fautleroy Clinic

Client Sample ID: Main Hall Across Main Desk

Date Sampled: 11/5/2019

Lab ID: 1911062-009A

Date Received: 11/6/2019

Sample Type: Summa Canister

Analyte	Concentration	Reporting Limit	Qual	Method	Date/Analyst
<u>Volatile Organic Compounds by EPA Method TO-15</u>					
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)	
1,1,1-Trichloroethane	<0.400	<2.18	0.400	2.18	EPA-TO-15 11/09/2019 AD
1,1,1,2,2-Tetrachloroethane	<0.300	<2.06	0.300	2.06	EPA-TO-15 11/09/2019 AD
CFC-113	<0.400	<3.07	0.400	3.07	EPA-TO-15 11/09/2019 AD
1,1,2-Trichloroethane (TCA)	<0.500	<2.73	0.500	2.73	EPA-TO-15 11/09/2019 AD
1,1-Dichloroethane	<0.200	<0.810	0.200	0.810	EPA-TO-15 11/09/2019 AD
1,1-Dichloroethene (DCE)	<0.400	<1.59	0.400	1.59	EPA-TO-15 11/09/2019 AD
1,2,4-Trichlorobenzene	0.305	2.26	0.300	2.23	EPA-TO-15 11/09/2019 AD
1,2,4-Trimethylbenzene	0.316	1.55	0.300	1.47	EPA-TO-15 11/09/2019 AD
1,2-Dibromoethane (EDB)	<0.200	<1.54	0.200	1.54	EPA-TO-15 11/09/2019 AD
1,2-Dichlorobenzene	<0.400	<2.40	0.400	2.40	EPA-TO-15 11/09/2019 AD
1,2-Dichloroethane	<0.200	<0.809	0.200	0.809	EPA-TO-15 11/09/2019 AD
1,2-Dichloropropane	<0.500	<2.31	0.500	2.31	EPA-TO-15 11/09/2019 AD
1,3,5-Trimethylbenzene	<0.300	<1.47	0.300	1.47	EPA-TO-15 11/09/2019 AD
1,3-Butadiene	<0.500	<1.11	0.500	1.11	EPA-TO-15 11/09/2019 AD
1,3-Dichlorobenzene	<0.300	<1.80	0.300	1.80	EPA-TO-15 11/09/2019 AD
1,4-Dichlorobenzene	<0.300	<1.80	0.300	1.80	EPA-TO-15 11/09/2019 AD
1,4-Dioxane	<0.400	<1.44	0.400	1.44	EPA-TO-15 11/09/2019 AD
(MEK) 2-Butanone	<1.00	<2.95	1.00	2.95	EPA-TO-15 11/09/2019 AD
2-Hexanone	<1.00	<4.10	1.00	4.10	EPA-TO-15 11/09/2019 AD
Isopropyl Alcohol	70.3	173	1.00	2.46	E EPA-TO-15 11/09/2019 AD
4-Methyl-2-pentanone (MIBK)	<1.00	<4.10	1.00	4.10	EPA-TO-15 11/09/2019 AD
Acetone	10.8	25.6	1.00	2.38	EPA-TO-15 11/09/2019 AD
Acrolein	<0.500	<1.15	0.500	1.15	EPA-TO-15 11/09/2019 AD
Benzene	0.201	0.643	0.0895	0.286	EPA-TO-15 11/09/2019 AD
Benzyl chloride	<0.500	<2.59	0.500	2.59	EPA-TO-15 11/09/2019 AD
Dichlorobromomethane	<0.300	<2.01	0.300	2.01	EPA-TO-15 11/09/2019 AD
Bromoform	<0.200	<2.07	0.200	2.07	EPA-TO-15 11/09/2019 AD
Bromomethane	<0.500	<1.94	0.500	1.94	EPA-TO-15 11/09/2019 AD
Carbon disulfide	<1.50	<4.67	1.50	4.67	EPA-TO-15 11/09/2019 AD
Carbon tetrachloride	0.0690	0.434	0.0657	0.413	EPA-TO-15 11/09/2019 AD



Client: NOW Environmental

WorkOrder: 1911062

Project: Fautleroy Clinic

Client Sample ID: Main Hall Across Main Desk

Date Sampled: 11/5/2019

Lab ID: 1911062-009A

Date Received: 11/6/2019

Sample Type: Summa Canister

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst
<u>Volatile Organic Compounds by EPA Method TO-15</u>							
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)			
Chlorobenzene	<0.200	<0.921	0.200	0.921		EPA-TO-15	11/09/2019 AD
Dibromochloromethane	<0.500	<4.26	0.500	4.26		EPA-TO-15	11/09/2019 AD
Chloroethane	<0.400	<1.06	0.400	1.06		EPA-TO-15	11/09/2019 AD
Chloroform	<0.200	<0.977	0.200	0.977		EPA-TO-15	11/09/2019 AD
Chloromethane	0.502	1.04	0.500	1.03		EPA-TO-15	11/09/2019 AD
cis-1,2-Dichloroethene	<0.200	<0.793	0.200	0.793		EPA-TO-15	11/09/2019 AD
cis-1,3-dichloropropene	<0.400	<1.82	0.400	1.82		EPA-TO-15	11/09/2019 AD
Cyclohexane	<0.400	<1.38	0.400	1.38		EPA-TO-15	11/09/2019 AD
Dichlorodifluoromethane (CFC-12)	0.521	2.58	0.400	1.98		EPA-TO-15	11/09/2019 AD
Dichlorotetrafluoroethane (CFC-114)	<0.400	<2.80	0.400	2.80		EPA-TO-15	11/09/2019 AD
Ethyl acetate	<1.00	<3.60	1.00	3.60		EPA-TO-15	11/09/2019 AD
Ethylbenzene	<0.400	<1.74	0.400	1.74		EPA-TO-15	11/09/2019 AD
Gasoline Range Organics	30.8	126	1.00	4.09		EPA-TO-15	11/09/2019 AD
Heptane	<0.400	<1.61	0.400	1.61		EPA-TO-15	11/09/2019 AD
Hexachlorobutadiene	<1.00	<10.7	1.00	10.7		EPA-TO-15	11/09/2019 AD
m,p-Xylene	<0.800	<3.47	0.800	3.47		EPA-TO-15	11/09/2019 AD
Methyl methacrylate	<0.400	<1.64	0.400	1.64		EPA-TO-15	11/09/2019 AD
Methylene chloride	<2.00	<6.95	2.00	6.95		EPA-TO-15	11/09/2019 AD
Naphthalene	0.556	2.92	0.100	0.524		EPA-TO-15	11/09/2019 AD
n-Hexane	<0.400	<1.41	0.400	1.41		EPA-TO-15	11/09/2019 AD
o-Xylene	<0.400	<1.74	0.400	1.74		EPA-TO-15	11/09/2019 AD
4-Ethyltoluene	<0.400	<1.97	0.400	1.97		EPA-TO-15	11/09/2019 AD
Propylene	3.13	5.39	0.400	0.688		EPA-TO-15	11/09/2019 AD
Styrene	<0.400	<1.70	0.400	1.70		EPA-TO-15	11/09/2019 AD
Methyl tert-butyl ether (MTBE)	<0.400	<1.44	0.400	1.44		EPA-TO-15	11/09/2019 AD
Tetrachloroethene (PCE)	2.63	17.8	0.200	1.36		EPA-TO-15	11/09/2019 AD
Tetrahydrofuran	<0.400	<1.18	0.400	1.18		EPA-TO-15	11/09/2019 AD
Toluene	0.448	1.69	0.400	1.51		EPA-TO-15	11/09/2019 AD
trans-1,2-Dichloroethene	<0.200	<0.793	0.200	0.793		EPA-TO-15	11/09/2019 AD
trans-1,3-dichloropropene	<0.500	<2.27	0.500	2.27		EPA-TO-15	11/09/2019 AD



Fremont

Analytical

Client: NOW Environmental

WorkOrder: 1911062

Project: Fautleroy Clinic

Client Sample ID: Main Hall Across Main Desk

Date Sampled: 11/5/2019

Lab ID: 1911062-009A

Date Received: 11/6/2019

Sample Type: Summa Canister

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst
<u>Volatile Organic Compounds by EPA Method TO-15</u>							
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)			
Trichloroethene (TCE)	0.242	1.30	0.0649	0.349		EPA-TO-15	11/09/2019 AD
Trichlorofluoromethane (CFC-11)	<0.400	<2.25	0.400	2.25		EPA-TO-15	11/09/2019 AD
Vinyl acetate	<1.00	<3.52	1.00	3.52		EPA-TO-15	11/09/2019 AD
Vinyl chloride	<0.107	<0.274	0.107	0.274		EPA-TO-15	11/09/2019 AD
Surr: 4-Bromofluorobenzene	99.5 %Rec	--	70-130	--		EPA-TO-15	11/09/2019 AD

NOTES:

E - Estimated value. The amount exceeds the linear working range of the instrument.



Client: NOW Environmental

WorkOrder: 1911062

Project: Fautleroy Clinic

Client Sample ID: Exam Room 3

Date Sampled: 11/5/2019

Lab ID: 1911062-010A

Date Received: 11/6/2019

Sample Type: Summa Canister

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst
<u>Volatile Organic Compounds by EPA Method TO-15</u>							
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)			
1,1,1-Trichloroethane	<0.400	<2.18	0.400	2.18		EPA-TO-15	11/09/2019 AD
1,1,1,2-Tetrachloroethane	<0.300	<2.06	0.300	2.06		EPA-TO-15	11/09/2019 AD
CFC-113	<0.400	<3.07	0.400	3.07		EPA-TO-15	11/09/2019 AD
1,1,2-Trichloroethane (TCA)	<0.500	<2.73	0.500	2.73		EPA-TO-15	11/09/2019 AD
1,1-Dichloroethane	<0.200	<0.810	0.200	0.810		EPA-TO-15	11/09/2019 AD
1,1-Dichloroethene (DCE)	<0.400	<1.59	0.400	1.59		EPA-TO-15	11/09/2019 AD
1,2,4-Trichlorobenzene	<0.300	<2.23	0.300	2.23		EPA-TO-15	11/09/2019 AD
1,2,4-Trimethylbenzene	<0.300	<1.47	0.300	1.47		EPA-TO-15	11/09/2019 AD
1,2-Dibromoethane (EDB)	<0.200	<1.54	0.200	1.54		EPA-TO-15	11/09/2019 AD
1,2-Dichlorobenzene	<0.400	<2.40	0.400	2.40		EPA-TO-15	11/09/2019 AD
1,2-Dichloroethane	<0.200	<0.809	0.200	0.809		EPA-TO-15	11/09/2019 AD
1,2-Dichloropropane	<0.500	<2.31	0.500	2.31		EPA-TO-15	11/09/2019 AD
1,3,5-Trimethylbenzene	<0.300	<1.47	0.300	1.47		EPA-TO-15	11/09/2019 AD
1,3-Butadiene	<0.500	<1.11	0.500	1.11		EPA-TO-15	11/09/2019 AD
1,3-Dichlorobenzene	<0.300	<1.80	0.300	1.80		EPA-TO-15	11/09/2019 AD
1,4-Dichlorobenzene	<0.300	<1.80	0.300	1.80		EPA-TO-15	11/09/2019 AD
1,4-Dioxane	<0.400	<1.44	0.400	1.44		EPA-TO-15	11/09/2019 AD
(MEK) 2-Butanone	<1.00	<2.95	1.00	2.95		EPA-TO-15	11/09/2019 AD
2-Hexanone	<1.00	<4.10	1.00	4.10		EPA-TO-15	11/09/2019 AD
Isopropyl Alcohol	71.8	177	1.00	2.46	E	EPA-TO-15	11/09/2019 AD
4-Methyl-2-pentanone (MIBK)	<1.00	<4.10	1.00	4.10		EPA-TO-15	11/09/2019 AD
Acetone	9.24	21.9	1.00	2.38		EPA-TO-15	11/09/2019 AD
Acrolein	<0.500	<1.15	0.500	1.15		EPA-TO-15	11/09/2019 AD
Benzene	0.183	0.585	0.0895	0.286		EPA-TO-15	11/09/2019 AD
Benzyl chloride	<0.500	<2.59	0.500	2.59		EPA-TO-15	11/09/2019 AD
Dichlorobromomethane	<0.300	<2.01	0.300	2.01		EPA-TO-15	11/09/2019 AD
Bromoform	<0.200	<2.07	0.200	2.07		EPA-TO-15	11/09/2019 AD
Bromomethane	<0.500	<1.94	0.500	1.94		EPA-TO-15	11/09/2019 AD
Carbon disulfide	<1.50	<4.67	1.50	4.67		EPA-TO-15	11/09/2019 AD
Carbon tetrachloride	0.0670	0.421	0.0657	0.413		EPA-TO-15	11/09/2019 AD



Client: NOW Environmental

WorkOrder: 1911062

Project: Fautleroy Clinic

Client Sample ID: Exam Room 3

Date Sampled: 11/5/2019

Lab ID: 1911062-010A

Date Received: 11/6/2019

Sample Type: Summa Canister

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst
<u>Volatile Organic Compounds by EPA Method TO-15</u>							
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)			
Chlorobenzene	<0.200	<0.921	0.200	0.921		EPA-TO-15	11/09/2019 AD
Dibromochloromethane	<0.500	<4.26	0.500	4.26		EPA-TO-15	11/09/2019 AD
Chloroethane	<0.400	<1.06	0.400	1.06		EPA-TO-15	11/09/2019 AD
Chloroform	<0.200	<0.977	0.200	0.977		EPA-TO-15	11/09/2019 AD
Chloromethane	<0.500	<1.03	0.500	1.03		EPA-TO-15	11/09/2019 AD
cis-1,2-Dichloroethene	<0.200	<0.793	0.200	0.793		EPA-TO-15	11/09/2019 AD
cis-1,3-dichloropropene	<0.400	<1.82	0.400	1.82		EPA-TO-15	11/09/2019 AD
Cyclohexane	<0.400	<1.38	0.400	1.38		EPA-TO-15	11/09/2019 AD
Dichlorodifluoromethane (CFC-12)	0.516	2.55	0.400	1.98		EPA-TO-15	11/09/2019 AD
Dichlorotetrafluoroethane (CFC-114)	<0.400	<2.80	0.400	2.80		EPA-TO-15	11/09/2019 AD
Ethyl acetate	<1.00	<3.60	1.00	3.60		EPA-TO-15	11/09/2019 AD
Ethylbenzene	<0.400	<1.74	0.400	1.74		EPA-TO-15	11/09/2019 AD
Gasoline Range Organics	18.3	74.7	1.00	4.09		EPA-TO-15	11/09/2019 AD
Heptane	<0.400	<1.61	0.400	1.61		EPA-TO-15	11/09/2019 AD
Hexachlorobutadiene	<1.00	<10.7	1.00	10.7		EPA-TO-15	11/09/2019 AD
m,p-Xylene	<0.800	<3.47	0.800	3.47		EPA-TO-15	11/09/2019 AD
Methyl methacrylate	<0.400	<1.64	0.400	1.64		EPA-TO-15	11/09/2019 AD
Methylene chloride	<2.00	<6.95	2.00	6.95		EPA-TO-15	11/09/2019 AD
Naphthalene	<0.100	<0.524	0.100	0.524		EPA-TO-15	11/09/2019 AD
n-Hexane	<0.400	<1.41	0.400	1.41		EPA-TO-15	11/09/2019 AD
o-Xylene	<0.400	<1.74	0.400	1.74		EPA-TO-15	11/09/2019 AD
4-Ethyltoluene	<0.400	<1.97	0.400	1.97		EPA-TO-15	11/09/2019 AD
Propylene	1.46	2.51	0.400	0.688		EPA-TO-15	11/09/2019 AD
Styrene	<0.400	<1.70	0.400	1.70		EPA-TO-15	11/09/2019 AD
Methyl tert-butyl ether (MTBE)	<0.400	<1.44	0.400	1.44		EPA-TO-15	11/09/2019 AD
Tetrachloroethene (PCE)	<0.200	<1.36	0.200	1.36		EPA-TO-15	11/09/2019 AD
Tetrahydrofuran	<0.400	<1.18	0.400	1.18		EPA-TO-15	11/09/2019 AD
Toluene	0.523	1.97	0.400	1.51		EPA-TO-15	11/09/2019 AD
trans-1,2-Dichloroethene	<0.200	<0.793	0.200	0.793		EPA-TO-15	11/09/2019 AD
trans-1,3-dichloropropene	<0.500	<2.27	0.500	2.27		EPA-TO-15	11/09/2019 AD



Client: NOW Environmental
WorkOrder: 1911062
Project: Fauntleroy Clinic

Client Sample ID: Exam Room 3
Lab ID: 1911062-010A
Sample Type: Summa Canister

Date Sampled: 11/5/2019
Date Received: 11/6/2019

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst	
<u>Volatile Organic Compounds by EPA Method TO-15</u>								
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)				
Trichloroethene (TCE)	<0.0649	<0.349	0.0649	0.349		EPA-TO-15	11/09/2019	AD
Trichlorofluoromethane (CFC-11)	<0.400	<2.25	0.400	2.25		EPA-TO-15	11/09/2019	AD
Vinyl acetate	<1.00	<3.52	1.00	3.52		EPA-TO-15	11/09/2019	AD
Vinyl chloride	<0.107	<0.274	0.107	0.274		EPA-TO-15	11/09/2019	AD
Surr: 4-Bromofluorobenzene	101 %Rec	--	70-130	--		EPA-TO-15	11/09/2019	AD

NOTES:

E - Estimated value. The amount exceeds the linear working range of the instrument.



Date: 11/13/2019

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method TO-15

Work Order: 1911062
CLIENT: NOW Environmental
Project: Fauntleroy Clinic

Sample ID:	LCS-R55202	SampType:	LCS	Batch ID:	R55202	Units:	ppbv	Prep Date:	11/9/2019	RunNo:	55202
Client ID:	LCSW					Analysis Date:	11/9/2019	SeqNo:	1097203		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics	69.2	1.00	72.00	0	96.1	70	130				
Propylene	1.67	0.400	2.000	0	83.5	70	130				
Dichlorodifluoromethane (CFC-12)	1.93	0.400	2.000	0	96.7	70	130				
Chloromethane	2.03	0.500	2.000	0	101	70	130				
Dichlorotetrafluoroethane (CFC-114)	1.93	0.400	2.000	0	96.4	70	130				
Vinyl chloride	1.68	0.107	2.000	0	83.8	70	130				
1,3-Butadiene	1.49	0.500	2.000	0	74.3	70	130				
Bromomethane	1.85	0.500	2.000	0	92.3	70	130				
Trichlorofluoromethane (CFC-11)	1.96	0.400	2.000	0	97.8	70	130				
Chloroethane	1.74	0.400	2.000	0	86.9	70	130				
Acrolein	1.49	0.500	2.000	0	74.4	70	130				
1,1-Dichloroethene (DCE)	1.71	0.400	2.000	0	85.7	70	130				
Acetone	1.99	1.00	2.000	0	99.3	70	130				
Isopropyl Alcohol	1.53	1.00	2.000	0	76.7	70	130				
Methylene chloride	2.10	2.00	2.000	0	105	70	130				
Carbon disulfide	1.91	1.50	2.000	0	95.5	70	130				
trans-1,2-Dichloroethene	1.70	0.200	2.000	0	84.8	70	130				
Methyl tert-butyl ether (MTBE)	1.51	0.400	2.000	0	75.3	70	130				
n-Hexane	1.41	0.400	2.000	0	70.6	70	130				
1,1-Dichloroethane	1.73	0.200	2.000	0	86.3	70	130				
Vinyl acetate	1.64	1.00	2.000	0	81.8	70	130				
cis-1,2-Dichloroethene (MEK) 2-Butanone	1.61	0.200	2.000	0	80.5	70	130				
Ethyl acetate	1.46	1.00	2.000	0	72.9	70	130				
Chloroform	1.45	1.00	2.000	0	72.7	70	130				
Tetrahydrofuran	1.86	0.200	2.000	0	93.0	70	130				
1,1,1-Trichloroethane	1.52	0.400	2.000	0	76.1	70	130				
Carbon tetrachloride	1.67	0.400	2.000	0	83.4	70	130				
1,2-Dichloroethane	1.76	0.0657	2.000	0	88.2	70	130				
Benzene	1.73	0.200	2.000	0	86.7	70	130				
Cyclohexane	1.71	0.0895	2.000	0	85.7	70	130				
	1.45	0.400	2.000	0	72.3	70	130				



QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method TO-15

Work Order: 1911062

CLIENT: NOW Environmental

Project: Fauntleroy Clinic

Sample ID: LCS-R55202	SampType: LCS	RunNo: 55202
Client ID: LCSW	Batch ID: R55202	SeqNo: 1097203
Analyte	Result	Units: ppbv
		Prep Date: 11/19/2019
		Analysis Date: 11/19/2019
		LowLimit HighLimit RPD Ref Val
		%REC
		SPK value SPK Ref Val
		RPDLimit
		RPDLimit
		Qual

Analyte	Result	RL	SPK value	SPK Ref Val	Units: ppbv	%REC	LowLimit	HighLimit	RPD Ref Val	RPDLimit	RPDLimit	Qual
Trichloroethene (TCE)	1.82	0.0649	2.000	0	0	90.9	70	130		130		
1,2-Dichloropropane	1.81	0.500	2.000	0	0	90.6	70	130		130		
Methyl methacrylate	1.84	0.400	2.000	0	0	91.8	70	130		130		
Dichlorobromomethane	1.82	0.300	2.000	0	0	90.8	70	130		130		
1,4-Dioxane	1.77	0.400	2.000	0	0	88.3	70	130		130		
cis-1,3-dichloropropene	1.53	0.400	2.000	0	0	76.3	70	130		130		
Toluene	1.46	0.400	2.000	0	0	72.9	70	130		130		
trans-1,3-dichloropropene	1.48	0.500	2.000	0	0	74.1	70	130		130		
1,1,2-Trichloroethane (TCA)	1.80	0.500	2.000	0	0	89.8	70	130		130		
1,1,2,2-Tetrachloroethane (PCE)	1.79	0.200	2.000	0	0	89.7	70	130		130		
Tetrachloroethane	1.70	0.500	2.000	0	0	85.0	70	130		130		
Dibromochloromethane	1.70	0.200	2.000	0	0	84.9	70	130		130		
1,2-Dibromoethane (EDB)	1.70	0.200	2.000	0	0	87.8	70	130		130		
Chlorobenzene	1.76	0.200	2.000	0	0	89.1	70	130		130		
Ethylbenzene	1.78	0.400	2.000	0	0	85.9	70	130		130		
m,p-Xylene	3.43	0.800	4.000	0	0	88.6	70	130		130		
o-Xylene	1.77	0.400	2.000	0	0	82.2	70	130		130		
Styrene	1.64	0.400	2.000	0	0	92.1	70	130		130		
Bromoform	1.84	0.200	2.000	0	0	96.1	70	130		130		
1,1,2,2-Tetrachloroethane	1.92	0.300	2.000	0	0	84.3	70	130		130		
1,3,5-Trimethylbenzene	1.69	0.300	2.000	0	0	82.8	70	130		130		
1,2,4-Trimethylbenzene	1.66	0.300	2.000	0	0	82.2	70	130		130		
Benzyl chloride	1.64	0.500	2.000	0	0	85.8	70	130		130		
4-Ethyltoluene	1.72	0.400	2.000	0	0	80.7	70	130		130		
1,3-Dichlorobenzene	1.61	0.300	2.000	0	0	76.5	70	130		130		
1,4-Dichlorobenzene	1.53	0.300	2.000	0	0	76.7	70	130		130		
1,2-Dichlorobenzene	1.53	0.400	2.000	0	0	89.6	70	130		130		
1,2,4-Trichlorobenzene	1.79	0.300	2.000	0	0	89.6	70	130		130		
Hexachlorobutadiene	1.79	1.00	2.000	0	0	101	70	130		130		
Naphthalene	2.02	0.100	2.000	0	0	89.4	70	130		130		
2-Hexanone	1.79	1.00	2.000	0	0	89.0	70	130		130		
4-Methyl-2-pentanone (MIBK)	1.78	1.00	2.000	0	0							



QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method TO-15

Work Order: 1911062
CLIENT: NOW Environmental
Project: Fauntleroy Clinic

Sample ID:	LCS-R55202	SampType:	LCS	Units:	ppbv	Prep Date:	11/9/2019	RunNo:	55202		
Client ID:	LCSW	Batch ID:	R55202	SPK value	SPK Ref Val	Analysis Date:	11/9/2019	SeqNo:	1097203		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
CFC-113	2.28	0.400	2.000	0	114	70	130				
Heptane	1.77	0.400	2.000	0	88.4	70	130				
Surr: 4-Bromofluorobenzene	3.94		4.000		98.6	70	130				

Sample ID:	MB-R55202	SampType:	MBLK	Units:	ppbv	Prep Date:	11/9/2019	RunNo:	55202		
Client ID:	MBLKW	Batch ID:	R55202	RL	SPK value	SPK Ref Val	Analysis Date:	11/9/2019	SeqNo:	1097204	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics	ND	1.00									
Propylene	ND	0.400									
Dichlorodifluoromethane (CFC-12)	ND	0.400									
Chloromethane	ND	0.500									
Dichlorotetrafluoroethane (CFC-114)	ND	0.400									
Vinyl chloride	ND	0.107									
1,3-Butadiene	ND	0.500									
Bromomethane	ND	0.500									
Trichlorofluoromethane (CFC-11)	ND	0.400									
Chloroethane	ND	0.400									
Acrolein	ND	0.500									
1,1-Dichloroethene (DCE)	ND	0.400									
Acetone	ND	1.00									
Isopropyl Alcohol	ND	1.00									
Methylene chloride	ND	2.00									
Carbon disulfide	ND	1.50									
trans-1,2-Dichloroethene	ND	0.200									
Methyl tert-butyl ether (MTBE)	ND	0.400									
n-Hexane	ND	0.400									
1,1-Dichloroethane	ND	0.200									
Vinyl acetate	ND	1.00									
cis-1,2-Dichloroethene	ND	0.200									

Date: 11/13/2019



QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method TO-15

Work Order: 1911062
 CLIENT: NOW Environmental
 Project: Fauntleroy Clinic

Sample ID: MB-R55202 SampType: MBLK Units: ppbv RunNo: 55202
 Client ID: MBLKW Batch ID: R55202 Prep Date: 11/9/2019 SeqNo: 1097204
 Analyte Result RL SPK value SPK Ref Val %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
(MEK) 2-Butanone	ND	1.00									
Ethyl acetate	ND	1.00									
Chloroform	ND	0.200									
Tetrahydrofuran	ND	0.400									
1,1,1-Trichloroethane	ND	0.400									
Carbon tetrachloride	ND	0.0657									
1,2-Dichloroethane	ND	0.200									
Benzene	ND	0.0895									
Cyclohexane	ND	0.400									
Trichloroethene (TCE)	ND	0.0649									
1,2-Dichloropropane	ND	0.500									
Methyl methacrylate	ND	0.400									
Dichlorobromomethane	ND	0.300									
1,4-Dioxane	ND	0.400									
cis-1,3-dichloropropene	ND	0.400									
Toluene	ND	0.400									
trans-1,3-dichloropropene	ND	0.500									
1,1,2-Trichloroethane (TCA)	ND	0.500									
Tetrachloroethene (PCE)	ND	0.200									
Dibromochloromethane	ND	0.500									
1,2-Dibromoethane (EDB)	ND	0.200									
Chlorobenzene	ND	0.200									
Ethylbenzene	ND	0.400									
m,p-Xylene	ND	0.800									
o-Xylene	ND	0.400									
Styrene	ND	0.400									
Bromoform	ND	0.200									
1,1,2,2-Tetrachloroethane	ND	0.300									
1,3,5-Trimethylbenzene	ND	0.300									
1,2,4-Trimethylbenzene	ND	0.300									
Benzyl chloride	ND	0.500									



Date: 11/13/2019

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method TO-15

Work Order: 1911062
CLIENT: NOW Environmental
Project: Faunteroy Clinic

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
4-Ethyltoluene	ND	0.400									
1,3-Dichlorobenzene	ND	0.300									
1,4-Dichlorobenzene	ND	0.300									
1,2-Dichlorobenzene	ND	0.400									
1,2,4-Trichlorobenzene	ND	0.300									
Hexachlorobutadiene	ND	1.00									
Naphthalene	ND	0.100									
2-Hexanone	ND	1.00									
4-Methyl-2-pentanone (MIBK)	ND	1.00									
CFC-113	ND	0.400									
Heptane	ND	0.400									
Surr: 4-Bromofluorobenzene	3.35		4.000		83.7	70	130				

RunNo: 55202
 SeqNo: 1097204

Prep Date: 11/9/2019
 Analysis Date: 11/9/2019

Units: ppbv

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics	70.2	1.00						70.39	0.316	30	
Propylene	29.8	0.400						29.29	1.86	30	E
Dichlorodifluoromethane (CFC-12)	0.520	0.400						0.5151	0.866	30	
Chloromethane	0.877	0.500						0.8620	1.71	30	
Dichlorotetrafluoroethane (CFC-114)	ND	0.400						0		30	
Vinyl chloride	ND	0.107						0		30	
1,3-Butadiene	ND	0.500						0		30	
Bromomethane	ND	0.500						0		30	
Trichlorofluoromethane (CFC-11)	ND	0.400						0		30	
Chloroethane	ND	0.400						0		30	
Acrolein	ND	0.500						0		30	
1,1-Dichloroethene (DCE)	ND	0.400						0		30	
Acetone	6.19	1.00						5.989	3.36	30	

RunNo: 55202
 SeqNo: 1097206

Prep Date: 11/9/2019
 Analysis Date: 11/9/2019

Units: ppbv

Date: 11/13/2019



QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method TO-15

Work Order: 1911062
 CLIENT: NOW Environmental
 Project: Fauntleroy Clinic

Sample ID: 1911060-001AREP SampType: REP RunNo: 55202
 Client ID: BATCH Batch ID: R55202 SeqNo: 1097206
 Units: ppbv Prep Date: 11/9/2019 %REC LowLimit HighLimit RPD Ref Val RPD Limit Qual

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	RPD Limit	Qual
Isopropyl Alcohol	1.46	1.00						1.258	15.1	30
Methylene chloride	4.29	2.00						4.396	2.46	30
Carbon disulfide	ND	1.50						0		30
trans-1,2-Dichloroethene	ND	0.200						0		30
Methyl tert-butyl ether (MTBE)	ND	0.400						1.781	8.71	30
n-Hexane	1.94	0.400						0		30
1,1-Dichloroethane	ND	0.200						0		30
Vinyl acetate	ND	1.00						0		30
cis-1,2-Dichloroethene	ND	0.200						0		30
(MEK) 2-Butanone	ND	1.00						0		30
Ethyl acetate	ND	1.00						0		30
Chloroform	ND	0.200						0		30
Tetrahydrofuran	ND	0.400						0		30
1,1,1-Trichloroethane	ND	0.400						0.07140	1.21	30
Carbon tetrachloride	0.0705	0.0657						0		30
1,2-Dichloroethane	ND	0.200						0.9523	3.83	30
Benzene	0.989	0.0895						1.165	4.37	30
Cyclohexane	1.22	0.400						0		30
Trichloroethene (TCE)	ND	0.0649						0		30
1,2-Dichloropropane	ND	0.500						0		30
Methyl methacrylate	ND	0.400						0		30
Dichlorobromomethane	ND	0.300						0		30
1,4-Dioxane	ND	0.400						0		30
cis-1,3-dichloropropene	ND	0.400						6.511	0.967	30
Toluene	6.57	0.400						0		30
trans-1,3-dichloropropene	ND	0.500						0		30
1,1,2-Trichloroethane (TCA)	ND	0.500						0		30
Tetrachloroethene (PCE)	0.372	0.200						0.3732	0.371	30
Dibromochloromethane	ND	0.500						0		30
1,2-Dibromoethane (EDB)	ND	0.200						0		30
Chlorobenzene	ND	0.200						0		30



Date: 11/13/2019

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method TO-15

Work Order: 1911062
CLIENT: NOW Environmental
Project: Fauntleroy Clinic

Sample ID: 1911060-001AREP **SampType:** REP **RunNo:** 55202
Client ID: BATCH **Batch ID:** R55202 **SeqNo:** 1097206
Units: ppbv **Prep Date:** 11/9/2019 **RPDLimit:** 30
Analysis Date: 11/9/2019 **%REC:** 103 **LowLimit:** 70 **HighLimit:** 130

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ethylbenzene	1.10	0.400						1.058	3.79	30	
m,p-Xylene	5.37	0.800						5.210	3.01	30	
o-Xylene	2.19	0.400						2.112	3.75	30	
Styrene	ND	0.400						0		30	
Bromoforn	ND	0.200						0		30	
1,1,2,2-Tetrachloroethane	ND	0.300						0		30	
1,3,5-Trimethylbenzene	0.599	0.300						0.5801	3.12	30	
1,2,4-Trimethylbenzene	2.12	0.300						2.024	4.83	30	
Benzyl chloride	ND	0.500						0		30	
4-Ethyltoluene	ND	0.400						0		30	
1,3-Dichlorobenzene	ND	0.300						0		30	
1,4-Dichlorobenzene	ND	0.300						0		30	
1,2-Dichlorobenzene	ND	0.400						0		30	
1,2,4-Trichlorobenzene	ND	0.300						0		30	
Hexachlorobutadiene	ND	1.00						0		30	
Naphthalene	0.422	0.100						0.4198	0.452	30	
2-Hexanone	ND	1.00						0		30	
4-Methyl-2-pentanone (MIBK)	ND	1.00						0		30	
CFC-113	ND	0.400						0		30	
Heptane	1.26	0.400						1.241	1.87	30	
Surr: 4-Bromofluorobenzene	4.11		4.000		103	70	130		0		

NOTES:
E - Estimated value. The amount exceeds the linear working range of the instrument.



Client Name: NOW	Work Order Number: 1911062
Logged by: Clare Griggs	Date Received: 11/6/2019 10:23:00 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 Required
6. Was an attempt made to cool the samples? Yes No NA
7. Were all items received at a temperature of >0°C to 10.0°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:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> 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

Laboratory Project No (Internal): **1911062**

Special Remarks:

Date: _____ of _____ Page: _____ of _____

Project Name: **Fantelroy Clinic.**

Project No: **N19-0534**

Location: _____

Collected by: **Rosael Jean-Baptiste**

Reports to (PM): _____

Email (PM): _____

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 Date & Time	Sample Type (Matrix) *	Container Type **	Fill Time / Flow Rate	Initial Evacuation Pressure (mtorr)	Field Initial Sample Pressure ("Hg)	Field Final Sample Pressure ("Hg)	Analysis								Comments	Final Pressure ("Hg)	
									VOCs T015 SCAN LL	VOCs T015 SCAN LL	VOCs T015 SIM	Stoxenes T015	Sulfur T015	Sulfur Ext T015	Helium	Major Gases 3C			
1. Supply room	17638 FR8-24	11/5/19 9:58A		6L	8 HR	10mtorr 10/25/2019	35	60	X									2	GASOLINE AS WELL
2. Break room	17640 FV1	11/5/19 10:06A		6L	8 HR	10mtorr 10/24/2019	30	11	X									12	
3. Main Mail Room Desk	15900 FR8-33	11/5/19 10:06A		6L	8 HR	10mtorr 10/25/2019	30	11	X									12	
4. Exam Room #3	17237 FR8-09	11/5/19 10:13A		6L	8 HR	10mtorr 10/25/2019	30	11	X									11	
5. DR. Hoangs Office #19	10863 FR8-30	11/5/19 9:52A		6L	8 HR	10mtorr 10/25/2019	30	12	X									10	

* Matrix Codes: AA = Ambient Air IA = Indoor Air L = Landfill S = Subslab / Soil Gas

** 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

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 Date/Time: **11/6/19 10:23**

Relinquished Date/Time: **11/6/19 10:23**

Relinquished Date/Time: **11/6/19 10:23**

Relinquished Date/Time: **11/6/19 10:23**

Turn-Around Time: Standard 3 Day 2 Day Next Day Same Day (specify)



Fremont
Analytical

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

Air Chain of Custody Record & Laboratory Services Agreement

Laboratory Project No (Internal): 19110702

Date: _____ of: _____ Page: _____ of 44

Special Remarks:

Project Name: Tawotatloy Clinic

Project No: N19-0534

Location: _____

Collected by: Pascal Jean-Baptiste

Reports to (PM): _____

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 Date & Time	Sample Type (Matrix) *	Container Type **	Fill Time / Flow Rate	Initial Evacuation Pressure (mtorr)	Field Initial Sample Pressure (in Hg)	Field Final Sample Pressure (in Hg)	Analysis							Final Pressure (in Hg)	
									VOCs T015 SCAN	VOCs T015 SIM	Siloxanes T015	Sulfur T015	Sulfur Ext. T015	Helium	Major Gases 3C		Internal
1 DR. Hoang's Office (14)	15425	11/5/19		6L	24 HR	10mtorr	30	13	X								12
	FR8-14	10/16A				10/28/2019	11/5/19	11/6/19									
2 Supply Closet	15894	11/5/19		6L	24 HR	10mtorr	34	11	X								10
	FR8-25	10/18A				10/7/2019	11/5/19	11/6/19									
3 Break Room	13967	11/5/19		6L	24 HR	10mtorr	34	15	X								14
	FR8-01	10/21A				10/25/2019	11/5/19	11/6/19									
4 Main Hall across main Desk	13968	10/25A		6L	24 HR	10mtorr	20	9	X								11
	FR8-02	11/5/19				10/7/2019	11/5/19	11/6/19									
5 EXAM Room 3	10867	11/5/19		6L	24 HR	10mtorr	35	14	X								12
	FR8-29	10/29A				10/25/2019	11/5/19	11/6/19									

Matrix Codes: AA = Ambient Air L = Landfill S = Sublab / Soil Gas

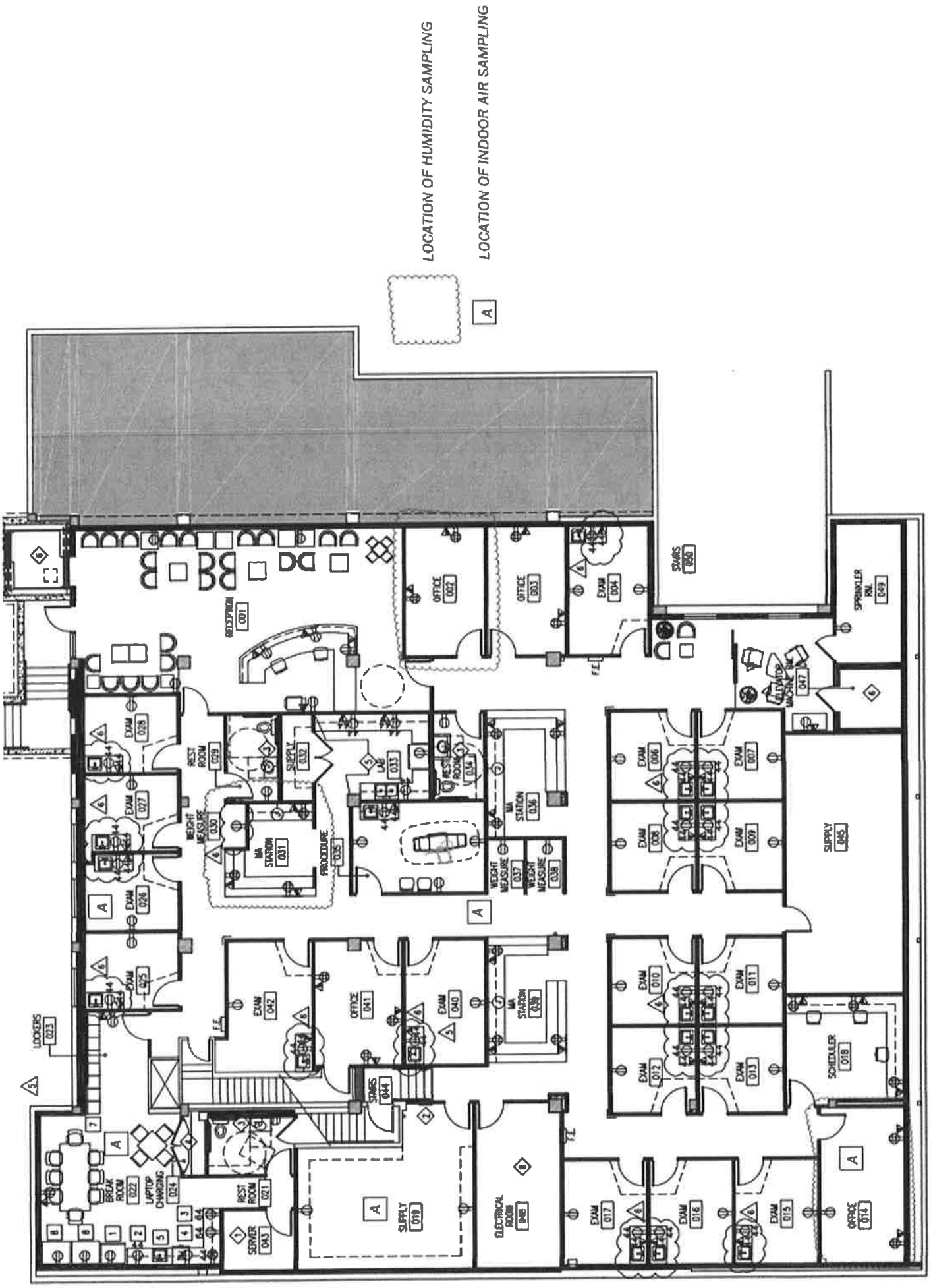
Container Codes: BV = 1 Liter Bottle Vac 6L = 6L Canister 1L = 1L Canister CVL = High Pressure Cylinder F = Filter S = Sorbent Tube TB = Tedlar Bag

Turn-Around Time: Standard 3 Day 2 Day Next Day Same 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: Pascal Jean-Baptiste 11/6/19 10:13
Date/Time

Received: [Signature] 11/10/19 10:23
Date/Time



LOCATION OF HUMIDITY SAMPLING

LOCATION OF INDOOR AIR SAMPLING

A



WEST SEATTLE MEDICAL CLINIC

PROPOSED SAMPLING LOCATIONS MAP



Libby Environmental, Inc.

3322 South Bay Road NE • Olympia, WA 98506-2957

November 21, 2019

Becky Dilba
Associated Environmental Group, LLC
2633 Parkmont Lane SW, Suite A
Olympia, WA 98502

Dear Ms. Dilba:

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 in 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.



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: Franciscan West Seattle
Work Order Number: 1911061

November 21, 2019

Attention Sherry Chilcutt:

Fremont Analytical, Inc. received 3 sample(s) on 11/5/2019 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,

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

Brianna Barnes
Project Manager

DoD/ELAP Certification #L17-135, ISO/IEC 17025:2005
ORELAP Certification: WA 100009-007 (NELAP Recognized)

CLIENT: Libby Environmental
Project: Franciscan West Seattle
Work Order: 1911061

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1911061-001	SSD-BR	11/05/2019 10:51 AM	11/05/2019 3:25 PM
1911061-002	SSD-SR	11/05/2019 10:26 AM	11/05/2019 3:25 PM
1911061-003	SSD-E3	11/05/2019 11:22 AM	11/05/2019 3:25 PM

CLIENT: Libby Environmental
Project: Franciscan West Seattle

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).

11/21/19: Revision 1 includes APH data.

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 (<20%RSD, <20% Drift or minimum RRF)
- 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
- HEM - Hexane Extractable Material
- ICV - Initial Calibration Verification
- LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
- MB or MBLANK - Method Blank
- MDL - Method Detection Limit
- MS/MSD - Matrix Spike / Matrix Spike Duplicate
- PDS - Post Digestion Spike
- Ref Val - Reference Value
- RL - Reporting Limit
- RPD - Relative Percent Difference
- SD - Serial Dilution
- SGT - Silica Gel Treatment
- SPK - Spike
- Surr - Surrogate



Client: Libby Environmental
WorkOrder: 1911061
Project: Franciscan West Seattle

Client Sample ID: SSD-BR
Lab ID: 1911061-001A
Sample Type: Summa Canister

Date Sampled: 11/5/2019
Date Received: 11/5/2019

Analyte	Concentration	Reporting Limit	Qual	Method	Date/Analyst
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Petroleum Fractionation by EPA Method TO-15

	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)			
Aliphatic Hydrocarbon (EC5-8)	178	676	75.0	285	EPA-TO-15	11/21/2019	AD
Aliphatic Hydrocarbon (EC9-12)	629	3,700	75.0	442	EPA-TO-15	11/21/2019	AD
Aromatic Hydrocarbon (EC9-10)	<6.25	<31.4	6.25	31.4	EPA-TO-15	11/19/2019	AD
Surr: 4-Bromofluorobenzene	103 %Rec	--	70-130	--	EPA-TO-15	11/19/2019	AD

Volatile Organic Compounds by EPA Method TO-15

	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)			
1,1,1-Trichloroethane	<0.400	<2.18	0.400	2.18	EPA-TO-15	11/09/2019	AD
1,1,2,2-Tetrachloroethane	<0.300	<2.06	0.300	2.06	EPA-TO-15	11/09/2019	AD
CFC-113	<0.400	<3.07	0.400	3.07	EPA-TO-15	11/09/2019	AD
1,1,2-Trichloroethane (TCA)	<0.500	<2.73	0.500	2.73	EPA-TO-15	11/09/2019	AD
1,1-Dichloroethane	<0.200	<0.810	0.200	0.810	EPA-TO-15	11/09/2019	AD
1,1-Dichloroethene (DCE)	<0.400	<1.59	0.400	1.59	EPA-TO-15	11/09/2019	AD
1,2,4-Trichlorobenzene	<0.300	<2.23	0.300	2.23	EPA-TO-15	11/09/2019	AD
1,2,4-Trimethylbenzene	0.505	2.48	0.300	1.47	EPA-TO-15	11/09/2019	AD
1,2-Dibromoethane (EDB)	<0.200	<1.54	0.200	1.54	EPA-TO-15	11/09/2019	AD
1,2-Dichlorobenzene	<0.400	<2.40	0.400	2.40	EPA-TO-15	11/09/2019	AD
1,2-Dichloroethane	<0.200	<0.809	0.200	0.809	EPA-TO-15	11/09/2019	AD
1,2-Dichloropropane	<0.500	<2.31	0.500	2.31	EPA-TO-15	11/09/2019	AD
1,3,5-Trimethylbenzene	<0.300	<1.47	0.300	1.47	EPA-TO-15	11/09/2019	AD
1,3-Butadiene	<0.500	<1.11	0.500	1.11	EPA-TO-15	11/09/2019	AD
1,3-Dichlorobenzene	1.35	8.09	0.300	1.80	EPA-TO-15	11/09/2019	AD
1,4-Dichlorobenzene	<0.300	<1.80	0.300	1.80	EPA-TO-15	11/09/2019	AD
1,4-Dioxane	<0.400	<1.44	0.400	1.44	EPA-TO-15	11/09/2019	AD
(MEK) 2-Butanone	<1.00	<2.95	1.00	2.95	EPA-TO-15	11/09/2019	AD
2-Hexanone	<1.00	<4.10	1.00	4.10	EPA-TO-15	11/09/2019	AD
Isopropyl Alcohol	22.3	54.8	1.00	2.46	EPA-TO-15	11/09/2019	AD
4-Methyl-2-pentanone (MIBK)	<1.00	<4.10	1.00	4.10	EPA-TO-15	11/09/2019	AD
Acetone	18.4	43.7	1.00	2.38	EPA-TO-15	11/09/2019	AD
Acrolein	<0.500	<1.15	0.500	1.15	EPA-TO-15	11/09/2019	AD
Benzene	0.226	0.722	0.0895	0.286	EPA-TO-15	11/09/2019	AD



Client: Libby Environmental
WorkOrder: 1911061
Project: Franciscan West Seattle

Client Sample ID: SSD-BR
Lab ID: 1911061-001A
Sample Type: Summa Canister

Date Sampled: 11/5/2019
Date Received: 11/5/2019

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)			
<u>Volatile Organic Compounds by EPA Method TO-15</u>							
Benzyl chloride	<0.500	<2.59	0.500	2.59		EPA-TO-15	11/09/2019 AD
Dichlorobromomethane	<0.300	<2.01	0.300	2.01		EPA-TO-15	11/09/2019 AD
Bromoform	<0.200	<2.07	0.200	2.07		EPA-TO-15	11/09/2019 AD
Bromomethane	<0.500	<1.94	0.500	1.94		EPA-TO-15	11/09/2019 AD
Carbon disulfide	3.81	11.9	1.50	4.67		EPA-TO-15	11/09/2019 AD
Carbon tetrachloride	<0.0657	<0.413	0.0657	0.413		EPA-TO-15	11/09/2019 AD
Chlorobenzene	<0.200	<0.921	0.200	0.921		EPA-TO-15	11/09/2019 AD
Dibromochloromethane	<0.500	<4.26	0.500	4.26		EPA-TO-15	11/09/2019 AD
Chloroethane	<0.400	<1.06	0.400	1.06		EPA-TO-15	11/09/2019 AD
Chloroform	<0.200	<0.977	0.200	0.977		EPA-TO-15	11/09/2019 AD
Chloromethane	<0.500	<1.03	0.500	1.03		EPA-TO-15	11/09/2019 AD
cis-1,2-Dichloroethene	<0.200	<0.793	0.200	0.793		EPA-TO-15	11/09/2019 AD
cis-1,3-dichloropropene	<0.400	<1.82	0.400	1.82		EPA-TO-15	11/09/2019 AD
Cyclohexane	<0.400	<1.38	0.400	1.38		EPA-TO-15	11/09/2019 AD
Dichlorodifluoromethane (CFC-12)	0.518	2.56	0.400	1.98		EPA-TO-15	11/09/2019 AD
Dichlorotetrafluoroethane (CFC-114)	<0.400	<2.80	0.400	2.80		EPA-TO-15	11/09/2019 AD
Ethyl acetate	<1.00	<3.60	1.00	3.60		EPA-TO-15	11/09/2019 AD
Ethylbenzene	<0.400	<1.74	0.400	1.74		EPA-TO-15	11/09/2019 AD
Heptane	<0.400	<1.61	0.400	1.61		EPA-TO-15	11/09/2019 AD
Hexachlorobutadiene	<1.00	<10.7	1.00	10.7		EPA-TO-15	11/09/2019 AD
m,p-Xylene	<0.800	<3.47	0.800	3.47		EPA-TO-15	11/09/2019 AD
Methyl methacrylate	<0.400	<1.64	0.400	1.64		EPA-TO-15	11/09/2019 AD
Methylene chloride	<2.00	<6.95	2.00	6.95		EPA-TO-15	11/09/2019 AD
Naphthalene	0.963	5.05	0.100	0.524		EPA-TO-15	11/09/2019 AD
n-Hexane	<0.400	<1.41	0.400	1.41		EPA-TO-15	11/09/2019 AD
o-Xylene	<0.400	<1.74	0.400	1.74		EPA-TO-15	11/09/2019 AD
4-Ethyltoluene	<0.400	<1.97	0.400	1.97		EPA-TO-15	11/09/2019 AD
Propylene	1.59	2.74	0.400	0.688		EPA-TO-15	11/09/2019 AD
Styrene	<0.400	<1.70	0.400	1.70		EPA-TO-15	11/09/2019 AD
Methyl tert-butyl ether (MTBE)	<0.400	<1.44	0.400	1.44		EPA-TO-15	11/09/2019 AD



Client: Libby Environmental
WorkOrder: 1911061
Project: Franciscan West Seattle

Client Sample ID: SSD-BR
Lab ID: 1911061-001A
Sample Type: Summa Canister

Date Sampled: 11/5/2019
Date Received: 11/5/2019

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst
<u>Volatile Organic Compounds by EPA Method TO-15</u>							
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)			
Tetrachloroethene (PCE)	<0.200	<1.36	0.200	1.36		EPA-TO-15	11/09/2019 AD
Tetrahydrofuran	<0.400	<1.18	0.400	1.18		EPA-TO-15	11/09/2019 AD
Toluene	0.686	2.58	0.400	1.51		EPA-TO-15	11/09/2019 AD
trans-1,2-Dichloroethene	<0.200	<0.793	0.200	0.793		EPA-TO-15	11/09/2019 AD
trans-1,3-dichloropropene	<0.500	<2.27	0.500	2.27		EPA-TO-15	11/09/2019 AD
Trichloroethene (TCE)	<0.0649	<0.349	0.0649	0.349		EPA-TO-15	11/09/2019 AD
Trichlorofluoromethane (CFC-11)	<0.400	<2.25	0.400	2.25		EPA-TO-15	11/09/2019 AD
Vinyl acetate	<1.00	<3.52	1.00	3.52		EPA-TO-15	11/09/2019 AD
Vinyl chloride	<0.107	<0.274	0.107	0.274		EPA-TO-15	11/09/2019 AD
Surr: 4-Bromofluorobenzene	107 %Rec	--	70-130	--		EPA-TO-15	11/09/2019 AD



Client: Libby Environmental
WorkOrder: 1911061
Project: Franciscan West Seattle

Client Sample ID: SSD-SR
Lab ID: 1911061-002A
Sample Type: Summa Canister

Date Sampled: 11/5/2019
Date Received: 11/5/2019

Analyte	Concentration	Reporting Limit	Qual	Method	Date/Analyst
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Petroleum Fractionation by EPA Method TO-15

	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)			
Aliphatic Hydrocarbon (EC5-8)	237	903	75.0	285	EPA-TO-15	11/21/2019	AD
Aliphatic Hydrocarbon (EC9-12)	637	3,750	75.0	442	EPA-TO-15	11/21/2019	AD
Aromatic Hydrocarbon (EC9-10)	<6.25	<31.4	6.25	31.4	EPA-TO-15	11/19/2019	AD
Surr: 4-Bromofluorobenzene	101 %Rec	--	70-130	--	EPA-TO-15	11/19/2019	AD

Volatile Organic Compounds by EPA Method TO-15

	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)				
1,1,1-Trichloroethane	<0.400	<2.18	0.400	2.18	EPA-TO-15	11/09/2019	AD	
1,1,2,2-Tetrachloroethane	<0.300	<2.06	0.300	2.06	EPA-TO-15	11/09/2019	AD	
CFC-113	<0.400	<3.07	0.400	3.07	EPA-TO-15	11/09/2019	AD	
1,1,2-Trichloroethane (TCA)	<0.500	<2.73	0.500	2.73	EPA-TO-15	11/09/2019	AD	
1,1-Dichloroethane	<0.200	<0.810	0.200	0.810	EPA-TO-15	11/09/2019	AD	
1,1-Dichloroethene (DCE)	<0.400	<1.59	0.400	1.59	EPA-TO-15	11/09/2019	AD	
1,2,4-Trichlorobenzene	<0.300	<2.23	0.300	2.23	EPA-TO-15	11/09/2019	AD	
1,2,4-Trimethylbenzene	0.556	2.73	0.300	1.47	EPA-TO-15	11/09/2019	AD	
1,2-Dibromoethane (EDB)	<0.200	<1.54	0.200	1.54	EPA-TO-15	11/09/2019	AD	
1,2-Dichlorobenzene	<0.400	<2.40	0.400	2.40	EPA-TO-15	11/09/2019	AD	
1,2-Dichloroethane	<0.200	<0.809	0.200	0.809	EPA-TO-15	11/09/2019	AD	
1,2-Dichloropropane	<0.500	<2.31	0.500	2.31	EPA-TO-15	11/09/2019	AD	
1,3,5-Trimethylbenzene	<0.300	<1.47	0.300	1.47	EPA-TO-15	11/09/2019	AD	
1,3-Butadiene	<0.500	<1.11	0.500	1.11	EPA-TO-15	11/09/2019	AD	
1,3-Dichlorobenzene	1.95	11.8	0.300	1.80	EPA-TO-15	11/09/2019	AD	
1,4-Dichlorobenzene	<0.300	<1.80	0.300	1.80	EPA-TO-15	11/09/2019	AD	
1,4-Dioxane	<0.400	<1.44	0.400	1.44	EPA-TO-15	11/09/2019	AD	
(MEK) 2-Butanone	<1.00	<2.95	1.00	2.95	EPA-TO-15	11/09/2019	AD	
2-Hexanone	<1.00	<4.10	1.00	4.10	EPA-TO-15	11/09/2019	AD	
Isopropyl Alcohol	21.1	51.9	1.00	2.46	E	EPA-TO-15	11/09/2019	AD
4-Methyl-2-pentanone (MIBK)	<1.00	<4.10	1.00	4.10	EPA-TO-15	11/09/2019	AD	
Acetone	5.69	13.5	1.00	2.38	EPA-TO-15	11/09/2019	AD	
Acrolein	<0.500	<1.15	0.500	1.15	EPA-TO-15	11/09/2019	AD	
Benzene	0.124	0.395	0.0895	0.286	EPA-TO-15	11/09/2019	AD	



Client: Libby Environmental
WorkOrder: 1911061
Project: Franciscan West Seattle

Client Sample ID: SSD-SR
Lab ID: 1911061-002A
Sample Type: Summa Canister

Date Sampled: 11/5/2019
Date Received: 11/5/2019

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)			
<u>Volatile Organic Compounds by EPA Method TO-15</u>							
Benzyl chloride	<0.500	<2.59	0.500	2.59		EPA-TO-15	11/09/2019 AD
Dichlorobromomethane	<0.300	<2.01	0.300	2.01		EPA-TO-15	11/09/2019 AD
Bromoform	<0.200	<2.07	0.200	2.07		EPA-TO-15	11/09/2019 AD
Bromomethane	<0.500	<1.94	0.500	1.94		EPA-TO-15	11/09/2019 AD
Carbon disulfide	<1.50	<4.67	1.50	4.67		EPA-TO-15	11/09/2019 AD
Carbon tetrachloride	<0.0657	<0.413	0.0657	0.413		EPA-TO-15	11/09/2019 AD
Chlorobenzene	<0.200	<0.921	0.200	0.921		EPA-TO-15	11/09/2019 AD
Dibromochloromethane	<0.500	<4.26	0.500	4.26		EPA-TO-15	11/09/2019 AD
Chloroethane	<0.400	<1.06	0.400	1.06		EPA-TO-15	11/09/2019 AD
Chloroform	<0.200	<0.977	0.200	0.977		EPA-TO-15	11/09/2019 AD
Chloromethane	<0.500	<1.03	0.500	1.03		EPA-TO-15	11/09/2019 AD
cis-1,2-Dichloroethene	<0.200	<0.793	0.200	0.793		EPA-TO-15	11/09/2019 AD
cis-1,3-dichloropropene	<0.400	<1.82	0.400	1.82		EPA-TO-15	11/09/2019 AD
Cyclohexane	<0.400	<1.38	0.400	1.38		EPA-TO-15	11/09/2019 AD
Dichlorodifluoromethane (CFC-12)	0.523	2.59	0.400	1.98		EPA-TO-15	11/09/2019 AD
Dichlorotetrafluoroethane (CFC-114)	<0.400	<2.80	0.400	2.80		EPA-TO-15	11/09/2019 AD
Ethyl acetate	<1.00	<3.60	1.00	3.60		EPA-TO-15	11/09/2019 AD
Ethylbenzene	<0.400	<1.74	0.400	1.74		EPA-TO-15	11/09/2019 AD
Heptane	<0.400	<1.61	0.400	1.61		EPA-TO-15	11/09/2019 AD
Hexachlorobutadiene	<1.00	<10.7	1.00	10.7		EPA-TO-15	11/09/2019 AD
m,p-Xylene	<0.800	<3.47	0.800	3.47		EPA-TO-15	11/09/2019 AD
Methyl methacrylate	<0.400	<1.64	0.400	1.64		EPA-TO-15	11/09/2019 AD
Methylene chloride	<2.00	<6.95	2.00	6.95		EPA-TO-15	11/09/2019 AD
Naphthalene	0.306	1.60	0.100	0.524		EPA-TO-15	11/09/2019 AD
n-Hexane	<0.400	<1.41	0.400	1.41		EPA-TO-15	11/09/2019 AD
o-Xylene	<0.400	<1.74	0.400	1.74		EPA-TO-15	11/09/2019 AD
4-Ethyltoluene	<0.400	<1.97	0.400	1.97		EPA-TO-15	11/09/2019 AD
Propylene	1.00	1.72	0.400	0.688		EPA-TO-15	11/09/2019 AD
Styrene	<0.400	<1.70	0.400	1.70		EPA-TO-15	11/09/2019 AD
Methyl tert-butyl ether (MTBE)	<0.400	<1.44	0.400	1.44		EPA-TO-15	11/09/2019 AD



Client: Libby Environmental
WorkOrder: 1911061
Project: Franciscan West Seattle

Client Sample ID: SSD-SR
Lab ID: 1911061-002A
Sample Type: Summa Canister

Date Sampled: 11/5/2019
Date Received: 11/5/2019

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)			
<u>Volatile Organic Compounds by EPA Method TO-15</u>							
Tetrachloroethene (PCE)	<0.200	<1.36	0.200	1.36		EPA-TO-15	11/09/2019 AD
Tetrahydrofuran	<0.400	<1.18	0.400	1.18		EPA-TO-15	11/09/2019 AD
Toluene	0.560	2.11	0.400	1.51		EPA-TO-15	11/09/2019 AD
trans-1,2-Dichloroethene	<0.200	<0.793	0.200	0.793		EPA-TO-15	11/09/2019 AD
trans-1,3-dichloropropene	<0.500	<2.27	0.500	2.27		EPA-TO-15	11/09/2019 AD
Trichloroethene (TCE)	<0.0649	<0.349	0.0649	0.349		EPA-TO-15	11/09/2019 AD
Trichlorofluoromethane (CFC-11)	<0.400	<2.25	0.400	2.25		EPA-TO-15	11/09/2019 AD
Vinyl acetate	<1.00	<3.52	1.00	3.52		EPA-TO-15	11/09/2019 AD
Vinyl chloride	<0.107	<0.274	0.107	0.274		EPA-TO-15	11/09/2019 AD
Surr: 4-Bromofluorobenzene	104 %Rec	--	70-130	--		EPA-TO-15	11/09/2019 AD

NOTES:

E - Estimated value. The amount exceeds the linear working range of the instrument.



Client: Libby Environmental
WorkOrder: 1911061
Project: Franciscan West Seattle

Client Sample ID: SSD-E3
Lab ID: 1911061-003A
Sample Type: Summa Canister

Date Sampled: 11/5/2019
Date Received: 11/5/2019

Analyte	Concentration	Reporting Limit	Qual	Method	Date/Analyst
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Petroleum Fractionation by EPA Method TO-15

	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)			
Aliphatic Hydrocarbon (EC5-8)	99.4	378	75.0	285	EPA-TO-15	11/21/2019	AD
Aliphatic Hydrocarbon (EC9-12)	79.2	467	75.0	442	EPA-TO-15	11/21/2019	AD
Aromatic Hydrocarbon (EC9-10)	<6.25	<31.4	6.25	31.4	EPA-TO-15	11/20/2019	AD
Surr: 4-Bromofluorobenzene	98.0 %Rec	--	70-130	--	EPA-TO-15	11/20/2019	AD

Volatile Organic Compounds by EPA Method TO-15

	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)				
1,1,1-Trichloroethane	<0.400	<2.18	0.400	2.18	EPA-TO-15	11/09/2019	AD	
1,1,2,2-Tetrachloroethane	<0.300	<2.06	0.300	2.06	EPA-TO-15	11/09/2019	AD	
CFC-113	<0.400	<3.07	0.400	3.07	EPA-TO-15	11/09/2019	AD	
1,1,2-Trichloroethane (TCA)	<0.500	<2.73	0.500	2.73	EPA-TO-15	11/09/2019	AD	
1,1-Dichloroethane	<0.200	<0.810	0.200	0.810	EPA-TO-15	11/09/2019	AD	
1,1-Dichloroethene (DCE)	<0.400	<1.59	0.400	1.59	EPA-TO-15	11/09/2019	AD	
1,2,4-Trichlorobenzene	<0.300	<2.23	0.300	2.23	EPA-TO-15	11/09/2019	AD	
1,2,4-Trimethylbenzene	<0.300	<1.47	0.300	1.47	EPA-TO-15	11/09/2019	AD	
1,2-Dibromoethane (EDB)	<0.200	<1.54	0.200	1.54	EPA-TO-15	11/09/2019	AD	
1,2-Dichlorobenzene	<0.400	<2.40	0.400	2.40	EPA-TO-15	11/09/2019	AD	
1,2-Dichloroethane	<0.200	<0.809	0.200	0.809	EPA-TO-15	11/09/2019	AD	
1,2-Dichloropropane	<0.500	<2.31	0.500	2.31	EPA-TO-15	11/09/2019	AD	
1,3,5-Trimethylbenzene	<0.300	<1.47	0.300	1.47	EPA-TO-15	11/09/2019	AD	
1,3-Butadiene	<0.500	<1.11	0.500	1.11	EPA-TO-15	11/09/2019	AD	
1,3-Dichlorobenzene	1.23	7.38	0.300	1.80	EPA-TO-15	11/09/2019	AD	
1,4-Dichlorobenzene	<0.300	<1.80	0.300	1.80	EPA-TO-15	11/09/2019	AD	
1,4-Dioxane	<0.400	<1.44	0.400	1.44	EPA-TO-15	11/09/2019	AD	
(MEK) 2-Butanone	<1.00	<2.95	1.00	2.95	EPA-TO-15	11/09/2019	AD	
2-Hexanone	<1.00	<4.10	1.00	4.10	EPA-TO-15	11/09/2019	AD	
Isopropyl Alcohol	24.7	60.8	1.00	2.46	E	EPA-TO-15	11/09/2019	AD
4-Methyl-2-pentanone (MIBK)	<1.00	<4.10	1.00	4.10	EPA-TO-15	11/09/2019	AD	
Acetone	10.1	23.9	1.00	2.38	EPA-TO-15	11/09/2019	AD	
Acrolein	<0.500	<1.15	0.500	1.15	EPA-TO-15	11/09/2019	AD	
Benzene	0.137	0.439	0.0895	0.286	EPA-TO-15	11/09/2019	AD	



Client: Libby Environmental
WorkOrder: 1911061
Project: Franciscan West Seattle

Client Sample ID: SSD-E3
Lab ID: 1911061-003A
Sample Type: Summa Canister

Date Sampled: 11/5/2019
Date Received: 11/5/2019

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)			
<u>Volatile Organic Compounds by EPA Method TO-15</u>							
Benzyl chloride	<0.500	<2.59	0.500	2.59		EPA-TO-15	11/09/2019 AD
Dichlorobromomethane	<0.300	<2.01	0.300	2.01		EPA-TO-15	11/09/2019 AD
Bromoform	<0.200	<2.07	0.200	2.07		EPA-TO-15	11/09/2019 AD
Bromomethane	<0.500	<1.94	0.500	1.94		EPA-TO-15	11/09/2019 AD
Carbon disulfide	<1.50	<4.67	1.50	4.67		EPA-TO-15	11/09/2019 AD
Carbon tetrachloride	<0.0657	<0.413	0.0657	0.413		EPA-TO-15	11/09/2019 AD
Chlorobenzene	<0.200	<0.921	0.200	0.921		EPA-TO-15	11/09/2019 AD
Dibromochloromethane	<0.500	<4.26	0.500	4.26		EPA-TO-15	11/09/2019 AD
Chloroethane	<0.400	<1.06	0.400	1.06		EPA-TO-15	11/09/2019 AD
Chloroform	0.961	4.69	0.200	0.977		EPA-TO-15	11/09/2019 AD
Chloromethane	<0.500	<1.03	0.500	1.03		EPA-TO-15	11/09/2019 AD
cis-1,2-Dichloroethene	<0.200	<0.793	0.200	0.793		EPA-TO-15	11/09/2019 AD
cis-1,3-dichloropropene	<0.400	<1.82	0.400	1.82		EPA-TO-15	11/09/2019 AD
Cyclohexane	<0.400	<1.38	0.400	1.38		EPA-TO-15	11/09/2019 AD
Dichlorodifluoromethane (CFC-12)	0.522	2.58	0.400	1.98		EPA-TO-15	11/09/2019 AD
Dichlorotetrafluoroethane (CFC-114)	<0.400	<2.80	0.400	2.80		EPA-TO-15	11/09/2019 AD
Ethyl acetate	<1.00	<3.60	1.00	3.60		EPA-TO-15	11/09/2019 AD
Ethylbenzene	<0.400	<1.74	0.400	1.74		EPA-TO-15	11/09/2019 AD
Heptane	<0.400	<1.61	0.400	1.61		EPA-TO-15	11/09/2019 AD
Hexachlorobutadiene	<1.00	<10.7	1.00	10.7		EPA-TO-15	11/09/2019 AD
m,p-Xylene	<0.800	<3.47	0.800	3.47		EPA-TO-15	11/09/2019 AD
Methyl methacrylate	<0.400	<1.64	0.400	1.64		EPA-TO-15	11/09/2019 AD
Methylene chloride	13.0	45.0	2.00	6.95		EPA-TO-15	11/09/2019 AD
Naphthalene	0.228	1.20	0.100	0.524		EPA-TO-15	11/09/2019 AD
n-Hexane	<0.400	<1.41	0.400	1.41		EPA-TO-15	11/09/2019 AD
o-Xylene	<0.400	<1.74	0.400	1.74		EPA-TO-15	11/09/2019 AD
4-Ethyltoluene	<0.400	<1.97	0.400	1.97		EPA-TO-15	11/09/2019 AD
Propylene	0.962	1.66	0.400	0.688		EPA-TO-15	11/09/2019 AD
Styrene	<0.400	<1.70	0.400	1.70		EPA-TO-15	11/09/2019 AD
Methyl tert-butyl ether (MTBE)	<0.400	<1.44	0.400	1.44		EPA-TO-15	11/09/2019 AD



Client: Libby Environmental
WorkOrder: 1911061
Project: Franciscan West Seattle

Client Sample ID: SSD-E3
Lab ID: 1911061-003A
Sample Type: Summa Canister

Date Sampled: 11/5/2019
Date Received: 11/5/2019

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)			
<u>Volatile Organic Compounds by EPA Method TO-15</u>							
Tetrachloroethene (PCE)	0.721	4.89	0.200	1.36		EPA-TO-15	11/09/2019 AD
Tetrahydrofuran	<0.400	<1.18	0.400	1.18		EPA-TO-15	11/09/2019 AD
Toluene	<0.400	<1.51	0.400	1.51		EPA-TO-15	11/09/2019 AD
trans-1,2-Dichloroethene	<0.200	<0.793	0.200	0.793		EPA-TO-15	11/09/2019 AD
trans-1,3-dichloropropene	<0.500	<2.27	0.500	2.27		EPA-TO-15	11/09/2019 AD
Trichloroethene (TCE)	<0.0649	<0.349	0.0649	0.349		EPA-TO-15	11/09/2019 AD
Trichlorofluoromethane (CFC-11)	<0.400	<2.25	0.400	2.25		EPA-TO-15	11/09/2019 AD
Vinyl acetate	<1.00	<3.52	1.00	3.52		EPA-TO-15	11/09/2019 AD
Vinyl chloride	<0.107	<0.274	0.107	0.274		EPA-TO-15	11/09/2019 AD
Surr: 4-Bromofluorobenzene	99.2 %Rec	--	70-130	--		EPA-TO-15	11/09/2019 AD

NOTES:

E - Estimated value. The amount exceeds the linear working range of the instrument.

Work Order: 1911061
CLIENT: Libby Environmental
Project: Franciscan West Seattle

QC SUMMARY REPORT
Petroleum Fractionation by EPA Method TO-15

Sample ID: LCS-R55481	SampType: LCS	Units: ppbv			Prep Date: 11/19/2019	RunNo: 55481					
Client ID: LCSW	Batch ID: R55481				Analysis Date: 11/19/2019	SeqNo: 1103996					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Aromatic Hydrocarbon (EC9-10)	9.39	6.25	10.00	0	93.9	70	130				
Surr: 4-Bromofluorobenzene	4.14		4.000		103	70	130				

Sample ID: MB-R55481	SampType: MBLK	Units: ppbv			Prep Date: 11/19/2019	RunNo: 55481					
Client ID: MBLKW	Batch ID: R55481				Analysis Date: 11/19/2019	SeqNo: 1103997					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Aromatic Hydrocarbon (EC9-10)	ND	6.25									
Surr: 4-Bromofluorobenzene	3.64		4.000		91.1	70	130				

Sample ID: 1911061-003AREP	SampType: REP	Units: ppbv			Prep Date: 11/20/2019	RunNo: 55481					
Client ID: SSD-E3	Batch ID: R55481				Analysis Date: 11/20/2019	SeqNo: 1104001					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Aromatic Hydrocarbon (EC9-10)	ND	6.25						0		30	
Surr: 4-Bromofluorobenzene	3.72		4.000		93.1	70	130		0		

Sample ID: LCS-R55482	SampType: LCS	Units: ppbv			Prep Date: 11/21/2019	RunNo: 55482					
Client ID: LCSW	Batch ID: R55482				Analysis Date: 11/21/2019	SeqNo: 1104013					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Aliphatic Hydrocarbon (EC5-8)	12.0	7.50	12.00	0	100	70	130				
Aliphatic Hydrocarbon (EC9-12)	12.7	7.50	12.00	0	106	70	130				
Surr: 4-Bromofluorobenzene	3.98		4.000		99.4	70	130				

Work Order: 1911061
CLIENT: Libby Environmental
Project: Franciscan West Seattle

QC SUMMARY REPORT
Petroleum Fractionation by EPA Method TO-15

Sample ID: 1911061-003AREP	SampType: REP	Units: ppbv	Prep Date: 11/21/2019	RunNo: 55482							
Client ID: SSD-E3	Batch ID: R55482		Analysis Date: 11/21/2019	SeqNo: 1104017							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Aliphatic Hydrocarbon (EC5-8)	79.1	75.0						99.40	22.8	30	
Aliphatic Hydrocarbon (EC9-12)	59.8	75.0						79.24	28.0	30	
Surr: 4-Bromofluorobenzene	35.1		40.00		87.8	70	130		0		

Sample ID: MB-R55482	SampType: MBLK	Units: ppbv	Prep Date: 11/21/2019	RunNo: 55482							
Client ID: MBLKW	Batch ID: R55482		Analysis Date: 11/21/2019	SeqNo: 1104018							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Aliphatic Hydrocarbon (EC5-8)	ND	1.88									
Aliphatic Hydrocarbon (EC9-12)	ND	1.88									I
Surr: 4-Bromofluorobenzene	0.966		1.000		96.6	70	130				

NOTES:

I - Indicates an analyte with an internal standard that does not meet established acceptance criteria. Biased high.

Work Order: 1911061
CLIENT: Libby Environmental
Project: Franciscan West Seattle

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method TO-15

Sample ID: LCS-R55202	SampType: LCS	Units: ppbv	Prep Date: 11/9/2019	RunNo: 55202
Client ID: LCSW	Batch ID: R55202		Analysis Date: 11/9/2019	SeqNo: 1097203

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics	69.2	1.00	72.00	0	96.1	70	130				
Propylene	1.67	0.400	2.000	0	83.5	70	130				
Dichlorodifluoromethane (CFC-12)	1.93	0.400	2.000	0	96.7	70	130				
Chloromethane	2.03	0.500	2.000	0	101	70	130				
Dichlorotetrafluoroethane (CFC-114)	1.93	0.400	2.000	0	96.4	70	130				
Vinyl chloride	1.68	0.107	2.000	0	83.8	70	130				
1,3-Butadiene	1.49	0.500	2.000	0	74.3	70	130				
Bromomethane	1.85	0.500	2.000	0	92.3	70	130				
Trichlorofluoromethane (CFC-11)	1.96	0.400	2.000	0	97.8	70	130				
Chloroethane	1.74	0.400	2.000	0	86.9	70	130				
Acrolein	1.49	0.500	2.000	0	74.4	70	130				
1,1-Dichloroethene (DCE)	1.71	0.400	2.000	0	85.7	70	130				
Acetone	1.99	1.00	2.000	0	99.3	70	130				
Isopropyl Alcohol	1.53	1.00	2.000	0	76.7	70	130				
Methylene chloride	2.10	2.00	2.000	0	105	70	130				
Carbon disulfide	1.91	1.50	2.000	0	95.5	70	130				
trans-1,2-Dichloroethene	1.70	0.200	2.000	0	84.8	70	130				
Methyl tert-butyl ether (MTBE)	1.51	0.400	2.000	0	75.3	70	130				
n-Hexane	1.41	0.400	2.000	0	70.6	70	130				
1,1-Dichloroethane	1.73	0.200	2.000	0	86.3	70	130				
Vinyl acetate	1.64	1.00	2.000	0	81.8	70	130				
cis-1,2-Dichloroethene	1.61	0.200	2.000	0	80.5	70	130				
(MEK) 2-Butanone	1.46	1.00	2.000	0	72.9	70	130				
Ethyl acetate	1.45	1.00	2.000	0	72.7	70	130				
Chloroform	1.86	0.200	2.000	0	93.0	70	130				
Tetrahydrofuran	1.52	0.400	2.000	0	76.1	70	130				
1,1,1-Trichloroethane	1.67	0.400	2.000	0	83.4	70	130				
Carbon tetrachloride	1.76	0.0657	2.000	0	88.2	70	130				
1,2-Dichloroethane	1.73	0.200	2.000	0	86.7	70	130				
Benzene	1.71	0.0895	2.000	0	85.7	70	130				
Cyclohexane	1.45	0.400	2.000	0	72.3	70	130				

Work Order: 1911061
 CLIENT: Libby Environmental
 Project: Franciscan West Seattle

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method TO-15

Sample ID: LCS-R55202	SampType: LCS	Units: ppbv			Prep Date: 11/9/2019	RunNo: 55202					
Client ID: LCSW	Batch ID: R55202				Analysis Date: 11/9/2019	SeqNo: 1097203					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Trichloroethene (TCE)	1.82	0.0649	2.000	0	90.9	70	130				
1,2-Dichloropropane	1.81	0.500	2.000	0	90.6	70	130				
Methyl methacrylate	1.84	0.400	2.000	0	91.8	70	130				
Dichlorobromomethane	1.82	0.300	2.000	0	90.8	70	130				
1,4-Dioxane	1.77	0.400	2.000	0	88.3	70	130				
cis-1,3-dichloropropene	1.53	0.400	2.000	0	76.3	70	130				
Toluene	1.46	0.400	2.000	0	72.9	70	130				
trans-1,3-dichloropropene	1.48	0.500	2.000	0	74.1	70	130				
1,1,2-Trichloroethane (TCA)	1.80	0.500	2.000	0	89.8	70	130				
Tetrachloroethene (PCE)	1.79	0.200	2.000	0	89.7	70	130				
Dibromochloromethane	1.70	0.500	2.000	0	85.0	70	130				
1,2-Dibromoethane (EDB)	1.70	0.200	2.000	0	84.9	70	130				
Chlorobenzene	1.76	0.200	2.000	0	87.8	70	130				
Ethylbenzene	1.78	0.400	2.000	0	89.1	70	130				
m,p-Xylene	3.43	0.800	4.000	0	85.9	70	130				
o-Xylene	1.77	0.400	2.000	0	88.6	70	130				
Styrene	1.64	0.400	2.000	0	82.2	70	130				
Bromoform	1.84	0.200	2.000	0	92.1	70	130				
1,1,1,2-Tetrachloroethane	1.92	0.300	2.000	0	96.1	70	130				
1,3,5-Trimethylbenzene	1.69	0.300	2.000	0	84.3	70	130				
1,2,4-Trimethylbenzene	1.66	0.300	2.000	0	82.8	70	130				
Benzyl chloride	1.64	0.500	2.000	0	82.2	70	130				
4-Ethyltoluene	1.72	0.400	2.000	0	85.8	70	130				
1,3-Dichlorobenzene	1.61	0.300	2.000	0	80.7	70	130				
1,4-Dichlorobenzene	1.53	0.300	2.000	0	76.5	70	130				
1,2-Dichlorobenzene	1.53	0.400	2.000	0	76.7	70	130				
1,2,4-Trichlorobenzene	1.79	0.300	2.000	0	89.6	70	130				
Hexachlorobutadiene	1.79	1.00	2.000	0	89.6	70	130				
Naphthalene	2.02	0.100	2.000	0	101	70	130				
2-Hexanone	1.79	1.00	2.000	0	89.4	70	130				
4-Methyl-2-pentanone (MIBK)	1.78	1.00	2.000	0	89.0	70	130				

Work Order: 1911061
CLIENT: Libby Environmental
Project: Franciscan West Seattle

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method TO-15

Sample ID: LCS-R55202	SampType: LCS	Units: ppbv	Prep Date: 11/9/2019	RunNo: 55202							
Client ID: LCSW	Batch ID: R55202		Analysis Date: 11/9/2019	SeqNo: 1097203							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

CFC-113	2.28	0.400	2.000	0	114	70	130				
Heptane	1.77	0.400	2.000	0	88.4	70	130				
Surr: 4-Bromofluorobenzene	3.94		4.000		98.6	70	130				

Sample ID: MB-R55202	SampType: MBLK	Units: ppbv	Prep Date: 11/9/2019	RunNo: 55202							
Client ID: MBLKW	Batch ID: R55202		Analysis Date: 11/9/2019	SeqNo: 1097204							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline Range Organics	ND	1.00									
Propylene	ND	0.400									
Dichlorodifluoromethane (CFC-12)	ND	0.400									
Chloromethane	ND	0.500									
Dichlorotetrafluoroethane (CFC-114)	ND	0.400									
Vinyl chloride	ND	0.107									
1,3-Butadiene	ND	0.500									
Bromomethane	ND	0.500									
Trichlorofluoromethane (CFC-11)	ND	0.400									
Chloroethane	ND	0.400									
Acrolein	ND	0.500									
1,1-Dichloroethene (DCE)	ND	0.400									
Acetone	ND	1.00									
Isopropyl Alcohol	ND	1.00									
Methylene chloride	ND	2.00									
Carbon disulfide	ND	1.50									
trans-1,2-Dichloroethene	ND	0.200									
Methyl tert-butyl ether (MTBE)	ND	0.400									
n-Hexane	ND	0.400									
1,1-Dichloroethane	ND	0.200									
Vinyl acetate	ND	1.00									
cis-1,2-Dichloroethene	ND	0.200									

Work Order: 1911061
CLIENT: Libby Environmental
Project: Franciscan West Seattle

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method TO-15

Sample ID: MB-R55202	SampType: MBLK	Units: ppbv	Prep Date: 11/9/2019	RunNo: 55202							
Client ID: MBLKW	Batch ID: R55202		Analysis Date: 11/9/2019	SeqNo: 1097204							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

(MEK) 2-Butanone	ND	1.00									
Ethyl acetate	ND	1.00									
Chloroform	ND	0.200									
Tetrahydrofuran	ND	0.400									
1,1,1-Trichloroethane	ND	0.400									
Carbon tetrachloride	ND	0.0657									
1,2-Dichloroethane	ND	0.200									
Benzene	ND	0.0895									
Cyclohexane	ND	0.400									
Trichloroethene (TCE)	ND	0.0649									
1,2-Dichloropropane	ND	0.500									
Methyl methacrylate	ND	0.400									
Dichlorobromomethane	ND	0.300									
1,4-Dioxane	ND	0.400									
cis-1,3-dichloropropene	ND	0.400									
Toluene	ND	0.400									
trans-1,3-dichloropropene	ND	0.500									
1,1,2-Trichloroethane (TCA)	ND	0.500									
Tetrachloroethene (PCE)	ND	0.200									
Dibromochloromethane	ND	0.500									
1,2-Dibromoethane (EDB)	ND	0.200									
Chlorobenzene	ND	0.200									
Ethylbenzene	ND	0.400									
m,p-Xylene	ND	0.800									
o-Xylene	ND	0.400									
Styrene	ND	0.400									
Bromoform	ND	0.200									
1,1,2,2-Tetrachloroethane	ND	0.300									
1,3,5-Trimethylbenzene	ND	0.300									
1,2,4-Trimethylbenzene	ND	0.300									
Benzyl chloride	ND	0.500									

Work Order: 1911061
CLIENT: Libby Environmental
Project: Franciscan West Seattle

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method TO-15

Sample ID: MB-R55202	SampType: MBLK	Units: ppbv	Prep Date: 11/9/2019	RunNo: 55202							
Client ID: MBLKW	Batch ID: R55202		Analysis Date: 11/9/2019	SeqNo: 1097204							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

4-Ethyltoluene	ND	0.400									
1,3-Dichlorobenzene	ND	0.300									
1,4-Dichlorobenzene	ND	0.300									
1,2-Dichlorobenzene	ND	0.400									
1,2,4-Trichlorobenzene	ND	0.300									
Hexachlorobutadiene	ND	1.00									
Naphthalene	ND	0.100									
2-Hexanone	ND	1.00									
4-Methyl-2-pentanone (MIBK)	ND	1.00									
CFC-113	ND	0.400									
Heptane	ND	0.400									
Surr: 4-Bromofluorobenzene	3.35		4.000		83.7	70	130				

Sample ID: 1911060-001AREP	SampType: REP	Units: ppbv	Prep Date: 11/9/2019	RunNo: 55202							
Client ID: BATCH	Batch ID: R55202		Analysis Date: 11/9/2019	SeqNo: 1097206							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline Range Organics	70.2	1.00						70.39	0.316	30	
Propylene	29.8	0.400						29.29	1.86	30	E
Dichlorodifluoromethane (CFC-12)	0.520	0.400						0.5151	0.866	30	
Chloromethane	0.877	0.500						0.8620	1.71	30	
Dichlorotetrafluoroethane (CFC-114)	ND	0.400						0		30	
Vinyl chloride	ND	0.107						0		30	
1,3-Butadiene	ND	0.500						0		30	
Bromomethane	ND	0.500						0		30	
Trichlorofluoromethane (CFC-11)	ND	0.400						0		30	
Chloroethane	ND	0.400						0		30	
Acrolein	ND	0.500						0		30	
1,1-Dichloroethene (DCE)	ND	0.400						0		30	
Acetone	6.19	1.00						5.989	3.36	30	

Work Order: 1911061
CLIENT: Libby Environmental
Project: Franciscan West Seattle

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method TO-15

Sample ID: 1911060-001AREP	SampType: REP	Units: ppbv	Prep Date: 11/9/2019	RunNo: 55202
Client ID: BATCH	Batch ID: R55202		Analysis Date: 11/9/2019	SeqNo: 1097206

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Isopropyl Alcohol	1.46	1.00						1.258	15.1	30	
Methylene chloride	4.29	2.00						4.396	2.46	30	
Carbon disulfide	ND	1.50						0		30	
trans-1,2-Dichloroethene	ND	0.200						0		30	
Methyl tert-butyl ether (MTBE)	ND	0.400						0		30	
n-Hexane	1.94	0.400						1.781	8.71	30	
1,1-Dichloroethane	ND	0.200						0		30	
Vinyl acetate	ND	1.00						0		30	
cis-1,2-Dichloroethene	ND	0.200						0		30	
(MEK) 2-Butanone	ND	1.00						0		30	
Ethyl acetate	ND	1.00						0		30	
Chloroform	ND	0.200						0		30	
Tetrahydrofuran	ND	0.400						0		30	
1,1,1-Trichloroethane	ND	0.400						0		30	
Carbon tetrachloride	0.0705	0.0657						0.07140	1.21	30	
1,2-Dichloroethane	ND	0.200						0		30	
Benzene	0.989	0.0895						0.9523	3.83	30	
Cyclohexane	1.22	0.400						1.165	4.37	30	
Trichloroethene (TCE)	ND	0.0649						0		30	
1,2-Dichloropropane	ND	0.500						0		30	
Methyl methacrylate	ND	0.400						0		30	
Dichlorobromomethane	ND	0.300						0		30	
1,4-Dioxane	ND	0.400						0		30	
cis-1,3-dichloropropene	ND	0.400						0		30	
Toluene	6.57	0.400						6.511	0.967	30	
trans-1,3-dichloropropene	ND	0.500						0		30	
1,1,2-Trichloroethane (TCA)	ND	0.500						0		30	
Tetrachloroethene (PCE)	0.372	0.200						0.3732	0.371	30	
Dibromochloromethane	ND	0.500						0		30	
1,2-Dibromoethane (EDB)	ND	0.200						0		30	
Chlorobenzene	ND	0.200						0		30	

Work Order: 1911061
 CLIENT: Libby Environmental
 Project: Franciscan West Seattle

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method TO-15

Sample ID: 1911060-001AREP	SampType: REP	Units: ppbv	Prep Date: 11/9/2019	RunNo: 55202
Client ID: BATCH	Batch ID: R55202		Analysis Date: 11/9/2019	SeqNo: 1097206

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ethylbenzene	1.10	0.400						1.058	3.79	30	
m,p-Xylene	5.37	0.800						5.210	3.01	30	
o-Xylene	2.19	0.400						2.112	3.75	30	
Styrene	ND	0.400						0		30	
Bromoform	ND	0.200						0		30	
1,1,2,2-Tetrachloroethane	ND	0.300						0		30	
1,3,5-Trimethylbenzene	0.599	0.300						0.5801	3.12	30	
1,2,4-Trimethylbenzene	2.12	0.300						2.024	4.83	30	
Benzyl chloride	ND	0.500						0		30	
4-Ethyltoluene	ND	0.400						0		30	
1,3-Dichlorobenzene	ND	0.300						0		30	
1,4-Dichlorobenzene	ND	0.300						0		30	
1,2-Dichlorobenzene	ND	0.400						0		30	
1,2,4-Trichlorobenzene	ND	0.300						0		30	
Hexachlorobutadiene	ND	1.00						0		30	
Naphthalene	0.422	0.100						0.4198	0.452	30	
2-Hexanone	ND	1.00						0		30	
4-Methyl-2-pentanone (MIBK)	ND	1.00						0		30	
CFC-113	ND	0.400						0		30	
Heptane	1.26	0.400						1.241	1.87	30	
Surr: 4-Bromofluorobenzene	4.11		4.000		103	70	130		0		

NOTES:

E - Estimated value. The amount exceeds the linear working range of the instrument.

Client Name: **LIBBY**
 Logged by: **Clare Griggs**

Work Order Number: **1911061**
 Date Received: **11/5/2019 3:25:00 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 Required
 6. Was an attempt made to cool the samples? Yes No NA
 7. Were all items received at a temperature of >0°C to 10.0°C * Yes No NA
 8. Sample(s) in proper container(s)? Yes No
 9. Sufficient sample volume for indicated test(s)? Yes No
 10. Are samples properly preserved? Yes No
 11. Was preservative added to bottles? Yes No NA
 12. Is there headspace in the VOA vials? Yes No NA
 13. Did all samples containers arrive in good condition(unbroken)? Yes No
 14. Does paperwork match bottle labels? Yes No
 15. Are matrices correctly identified on Chain of Custody? Yes No
 16. Is it clear what analyses were requested? Yes No
 17. Were all holding times able to be met? Yes No

Special Handling (if applicable)

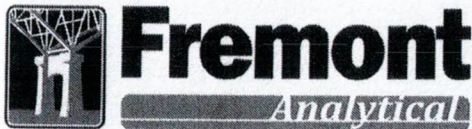
18. Was client notified of all discrepancies with this order? Yes No NA

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

19. Additional remarks:

Item Information

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



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

Air Chain of Custody Record & Laboratory Services Agreement

Date: 11/5/19 Page: of:

Project Name: **Franciscan West Seattle**

Client: **Libby Environmental**

Project No:

Address:

Location:

City, State, Zip:

Collected by:

Telephone:

Reports to (PM):

Fax:

Email (PM): libby@gmail.com

Laboratory Project No (Internal): 1911061

Special Remarks: Ⓞ Add-analysis per SC 11/4/19 pmj

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 Date & Time	Sample Type (Matrix) *	Container Type **	Fill Time / Flow Rate	Interim		Analysis										Comments	Internal Final Pressure ("Hg)		
						Initial Evacuation Pressure (mtorr)	Field Initial Sample Pressure (" Hg)	Field Final Sample Pressure (" Hg)	VOCs TO15 SCAN	VOCs TO15 SCAN LL	VOCs TO15 SIM	Siloxanes TO15	Sulfur TO15	Sulfur Ext. TO15	APH TO15	Helium	Major Gases 3C				
SSD-BR	4691 <small>Canister</small>	11/5/19 <small>Date</small>	S	1L	10min	10mtorr <small>Pressure</small>	-30 <small>Pressure</small>	-4 <small>Pressure</small>													
	CO#2 <small>Flow Reg</small>	1051 <small>Time</small>				10/22/2019 <small>Date</small>	11/5/19 <small>Date</small>	11/5/19 <small>Date</small>													
SSD-SR	5021 <small>Canister</small>	11/5/19 <small>Date</small>	S	1L	10min	10mtorr <small>Pressure</small>	-30 <small>Pressure</small>	-4 <small>Pressure</small>													
	CO#2 <small>Flow Reg</small>	1026 <small>Time</small>				10/22/2019 <small>Date</small>	11/5/19 <small>Date</small>	11/5/19 <small>Date</small>													
SSD-E3	4902 <small>Canister</small>	11/5/19 <small>Date</small>	S	1L	10min	10mtorr <small>Pressure</small>	-30 <small>Pressure</small>	-2 <small>Pressure</small>													
	CO#2 <small>Flow Reg</small>	1122 <small>Time</small>				10/22/2019 <small>Date</small>	11/5/19 <small>Date</small>	11/5/19 <small>Date</small>													

* Matrix Codes: AA = Ambient Air IA = Indoor Air L = Landfill S = Subslab / Soil Gas

** 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

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	Date/Time	Received	Date/Time
x <u>RA</u>	<u>11/5/19 1525</u>	x <u>h h w</u>	<u>11/5/19 1525</u>
Relinquished	Date/Time	Received	Date/Time
x		x	

Turn-Around Time:

Standard

3 Day

2 Day

Next Day

Same Day _____ (specify)

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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

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

December 7, 2021

Scott Rose, Project Manager
AEG
2633 Parkmont Lane SW, Suite A
Olympia, WA 98502

Dear Mr Rose:

Included are the results from the testing of material submitted on December 2, 2021 from the Franciscan West Seattle, F&BI 112021 project. There are 7 pages included in this report.

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

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
c: AEG A/P
AEG1207R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on December 2, 2021 by Friedman & Bruya, Inc. from the AEG Franciscan West Seattle, F&BI 112021 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>AEG</u>
112021 -01	FWS-IA-113021-01
112021 -02	FWS-IA-113021-02
112021 -03	FWS-SG-113021-03

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	FWS-IA-113021-01	Client:	AEG
Date Received:	12/02/21	Project:	Franciscan West Seattle, F&BI 112021
Date Collected:	11/30/21	Lab ID:	112021-01
Date Analyzed:	12/02/21	Data File:	120216.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	87	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Vinyl chloride	<0.26	<0.1
Chloroethane	<2.6	<1
1,1-Dichloroethene	<0.4	<0.1
trans-1,2-Dichloroethene	<0.4	<0.1
1,1-Dichloroethane	<0.4	<0.1
cis-1,2-Dichloroethene	<0.4	<0.1
1,2-Dichloroethane (EDC)	0.061	0.015
1,1,1-Trichloroethane	<0.55	<0.1
Trichloroethene	<0.11	<0.02
1,1,2-Trichloroethane	<0.055	<0.01
Tetrachloroethene	<6.8	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	FWS-IA-113021-02	Client:	AEG
Date Received:	12/02/21	Project:	Franciscan West Seattle, F&BI 112021
Date Collected:	11/30/21	Lab ID:	112021-02
Date Analyzed:	12/02/21	Data File:	120217.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	87	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Vinyl chloride	<0.26	<0.1
Chloroethane	<2.6	<1
1,1-Dichloroethene	<0.4	<0.1
trans-1,2-Dichloroethene	<0.4	<0.1
1,1-Dichloroethane	<0.4	<0.1
cis-1,2-Dichloroethene	<0.4	<0.1
1,2-Dichloroethane (EDC)	0.065	0.016
1,1,1-Trichloroethane	<0.55	<0.1
Trichloroethene	<0.11	<0.02
1,1,2-Trichloroethane	<0.055	<0.01
Tetrachloroethene	<6.8	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	FWS-SG-113021-03	Client:	AEG
Date Received:	12/02/21	Project:	Franciscan West Seattle, F&BI 112021
Date Collected:	11/30/21	Lab ID:	112021-03 1/6.6
Date Analyzed:	12/02/21	Data File:	120218.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	85	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Vinyl chloride	<1.7	<0.66
Chloroethane	<17	<6.6
1,1-Dichloroethene	<2.6	<0.66
trans-1,2-Dichloroethene	<2.6	<0.66
1,1-Dichloroethane	<2.7	<0.66
cis-1,2-Dichloroethene	<2.6	<0.66
1,2-Dichloroethane (EDC)	<0.27	<0.066
1,1,1-Trichloroethane	<3.6	<0.66
Trichloroethene	<0.71	<0.13
1,1,2-Trichloroethane	<0.36	<0.066
Tetrachloroethene	<45	<6.6

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	Method Blank	Client:	AEG
Date Received:	Not Applicable	Project:	Franciscan West Seattle, F&BI 112021
Date Collected:	Not Applicable	Lab ID:	01-2764 MB
Date Analyzed:	12/02/21	Data File:	120210.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	85	70	130

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/07/21

Date Received: 12/02/21

Project: Franciscan West Seattle, F&BI 112021

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

Laboratory Code: 112021-03 1/6.6 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 30)
Vinyl chloride	ug/m3	<1.7	<1.7	nm
Chloroethane	ug/m3	<17	<17	nm
1,1-Dichloroethene	ug/m3	<2.6	<2.6	nm
trans-1,2-Dichloroethene	ug/m3	<2.6	<2.6	nm
1,1-Dichloroethane	ug/m3	<2.7	<2.7	nm
cis-1,2-Dichloroethene	ug/m3	<2.6	<2.6	nm
1,2-Dichloroethane (EDC)	ug/m3	<0.27	<0.27	nm
1,1,1-Trichloroethane	ug/m3	<3.6	<3.6	nm
Trichloroethene	ug/m3	<0.71	<0.71	nm
1,1,2-Trichloroethane	ug/m3	<0.36	<0.36	nm
Tetrachloroethene	ug/m3	<45	<45	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent	Acceptance
			Recovery LCS	Criteria
Vinyl chloride	ug/m3	35	96	70-130
Chloroethane	ug/m3	36	95	70-130
1,1-Dichloroethene	ug/m3	54	100	70-130
trans-1,2-Dichloroethene	ug/m3	54	96	70-130
1,1-Dichloroethane	ug/m3	55	96	70-130
cis-1,2-Dichloroethene	ug/m3	54	98	70-130
1,2-Dichloroethane (EDC)	ug/m3	55	95	70-130
1,1,1-Trichloroethane	ug/m3	74	101	70-130
Trichloroethene	ug/m3	73	103	70-130
1,1,2-Trichloroethane	ug/m3	74	107	70-130
Tetrachloroethene	ug/m3	92	116	70-130

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

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

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

ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.

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

cf - The sample was centrifuged prior to analysis.

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

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

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

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

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

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

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

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

j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.

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

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

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

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

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

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

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

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

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

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

SAMPLE CHAIN OF CUSTODY

12-02-21

112021

Report To Scott Rose

Company AEG, LLC

Address 2633 Parkmont Lane, SW, Suite A

City, State, ZIP Olympia, WA 98502

Phone 360-352-9825 Email SROSE@AEGWA.COM

SAMPLERS (signature) <u>[Signature]</u>	
PROJECT NAME & ADDRESS <u>FRANCISCAN - WEST SEATTLE</u> <u>4550 FAUNTEROY WAY SW</u> <u>SEATTLE, WA</u>	PO # <u>check w/mike or cohl</u>
NOTES:	INVOICE TO <u>AEG</u>

Page # _____ of _____

TURNAROUND TIME

Standard
 RUSH
 Rush charges authorized by: _____

SAMPLE DISPOSAL

Default: Clean after 3 days
 Archive (Fee may apply)

SAMPLE INFORMATION											ANALYSIS REQUESTED				
Sample Name	Lab ID	Canister ID	Flow Cont. ID	Reporting Level: IA=Indoor Air SG=Soil Gas (Circle One)	Date Sampled	Initial Vac. ("Hg)	Field Initial Time	Final Vac. ("Hg)	Field Final Time	TO15 Full Scan	TO15 BTEXN	TO15 cVOCs	APH	Helium	Notes
FWS-IA-113021-01	01	40712	^{8-WZ} 05353	(IA) / SG	113021	30 ⁺	0845	9"	1645			X			
FWS-IA-113021-02	02	37214	^{8-WZ} 07852	(IA) / SG	113021	30 ⁺	0850	6"	1650			X			
FWS-SG-113021-03	03	3674	105	IA / (SG)	113021	30 ⁺	0948	8"	0958			X			
				IA / SG											
				IA / SG											
				IA / SG											
				IA / SG											

Friedman & Bruya, Inc.
 3012 16th Avenue West
 Seattle, WA 98119-2029
 Ph. (206) 285-8282
 Fax (206) 283-5044

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: <u>[Signature]</u>	TONY BANNICK	OHE/AEG		
Received by: <u>[Signature]</u>	Ann Bruya	FRB	12/2	1050
Relinquished by:				
Received by:		Samples received at <u>11</u> °C		



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,

A handwritten signature in black ink, appearing to read "Sherry L. Chilcutt".

Sherry L. Chilcutt
Senior Chemist
Libby Environmental, Inc.

Libby Environmental, Inc.

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

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

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

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

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

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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	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	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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ANALYSES PERFORMED BY: Sherry Chilcutt

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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

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ANALYSES PERFORMED BY: Sherry Chilcutt

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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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ANALYSES PERFORMED BY: Sherry Chilcutt

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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
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	

ANALYSES PERFORMED BY: Sherry Chilcutt

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Volatile Organic Compounds by EPA Method 8260D in Soil

Sample Description	Method	SB-1-20	SB-1-25	SB-1-30	SB-2-20	SB-2-25
	Blank					
Date Sampled	N/A	10/18/2022	10/18/2022	10/18/2022	10/18/2022	10/18/2022
Date Analyzed	PQL	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)
Vinyl Chloride (VC)	0.02	nd	nd	nd	nd	nd
1,1-Dichloroethene	0.05	nd	nd	nd	nd	nd
trans-1,2-Dichloroethene	0.03	nd	nd	nd	nd	nd
cis-1,2-Dichloroethene	0.03	nd	nd	nd	nd	nd
Trichloroethene (TCE)	0.02	nd	nd	nd	nd	nd
Tetrachloroethene (PCE)	0.03	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

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ANALYSES PERFORMED BY: Sherry Chilcutt

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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	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	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

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ANALYSES PERFORMED BY: Sherry Chilcutt

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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	10/21/2022	10/21/2022	10/21/2022
	(mg/kg)	(mg/kg)	(mg/kg)	(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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ANALYSES PERFORMED BY: Sherry Chilcutt

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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	
<i>trans</i> -1,2-Dichloroethene	0.25	0.24	0.23	97	91	6.0	38-175	
<i>cis</i> -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	
<i>trans</i> -1,2-Dichloroethene	0.25	0.27	107	53-156	
<i>cis</i> -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	

ANALYSES PERFORMED BY: Sherry Chilcutt

Libby Environmental, Inc.

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

Sample Description	Method	SB-1-W	SB-3-W	SB-4-W	SB-5-W	SB-6-W	
	Blank						
Date Sampled	N/A	10/18/2022	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	
	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	
Benzene	1.0	nd	nd	nd	nd	nd	
Toluene	2.0	nd	nd	nd	nd	nd	
Ethylbenzene	1.0	nd	nd	nd	nd	nd	
Total Xylenes	2.0	nd	nd	nd	nd	nd	
Gasoline	100	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.

ANALYSES PERFORMED BY: Sherry Chilcutt

Libby Environmental, Inc.

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

Sample Description	B6-W Dup	
Date Sampled	10/20/2022	
Date Analyzed	PQL	10/21/2022
	(µg/L)	(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

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ANALYSES PERFORMED BY: Sherry Chilcutt

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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
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	

ANALYSES PERFORMED BY: Sherry Chilcutt

Libby Environmental, Inc.

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

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

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.

"int" Indicates that interference prevents determination.

ANALYSES PERFORMED BY: Sherry Chilcutt

Libby Environmental, Inc.

FRANCISCAN WEST SEATTLE PROJECT
AEG an Atlas Geosciences NW Company
Seattle, Washington
Libby Project # L22J085
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Olympia, WA 98506
Phone: (360) 352-2110
FAX: (360) 352-4154
Email: libbyenv@gmail.com

Volatile Organic Compounds by EPA Method 8260D in Water

Sample Description	B6-W Dup	
Date Sampled	10/20/2022	
Date Analyzed	PQL	10/21/2022
	(µg/L)	(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

"nd" Indicates not detected at listed detection limit.

"S" Spike compound recovery is outside acceptance limits.

"int" Indicates that interference prevents determination.

ANALYSES PERFORMED BY: Sherry Chilcutt

Libby Environmental, Inc.

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

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

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	
<i>trans</i> -1,2-Dichloroethene	5.0	4.8	5.0	97	99	2.4	54-165	
<i>cis</i> -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	
<i>trans</i> -1,2-Dichloroethene	10.0	11.4	114	53-156	
<i>cis</i> -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 ($\mu\text{g/L}$)	Oil ($\mu\text{g/L}$)
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

Ph: 360-352-2110

Olympia, WA 98506

Fax: 360-352-4154

Date: 10/18/22-10/20/22

Page: 2 of 3

Client: AEG

Project Manager: Scott Rose

Address: 2633 Parkmut 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	Analytes											Field Notes				
					VOC 8260	PCE & Daughter Prod.	NWTPH-Gx	BTEX (8260) / (8021)	NWTPH-HCID	NWTPH-Dx / Dx	PCB 8082	MTCA 5 Metals	RCRA 8 Metals	PAH 8270	Semi Vol 8270					
1 SB-3-30	30	0910	Soil	4oz jar x 1 2oz jar x 2	X	X	X	X												
2 SB-4-5	5	1100																		
3 SB-4-10	10	1108																		
4 SB-4-15	15	1118																		
5 SB-4-20	20	1125			X	X	X	X												
6 SB-4-25	25	1135			X	X	X	X												
7 SB-4-30	30	1139			X	X	X	X												
8 SB-5-5	5	1405																		
9 SB-5-10	10	1410																		
10 SB-5-15	15	1415																		
11 SB-5-20	20	1425			X	X	X	X												
12 SB-5-25	25	1432			X	X	X	X												
13 SB-5-30	30	1438			X	X	X	X												
14 SB-6-5	5	0811																		
15 SB-6-10	10	0816																		
16 SB-6-15	15	0821																		
17 SB-6-20	20	0825			X	X	X	X												

Relinquished by: Paul Hitch	Date / Time 10/20/22 (1215)	Received by: <i>[Signature]</i>	Date / Time 10/20/22 1218	Sample Receipt Good Condition? <input checked="" type="radio"/> Y <input type="radio"/> N Cooler Temp. °C Sample Temp. °C Total Number of Containers	Remarks: 10-20-22 Analyze samples marked X, hold all others per Paul via email. TAT: 24HR 48HR 5-DAY
Relinquished by:	Date / Time	Received by:	Date / Time		
Relinquished by:	Date / Time	Received by:	Date / Time		

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 - Original

Libby Environmental, Inc.

Chain of Custody Record

3322 South Bay Road NE
Olympia, WA 98506

Ph: 360-352-2110
Fax: 360-352-4154

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: ~~360-890-1890~~ **360-352-9835** Fax: **360-352-8164**

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

Client Project # ~~18-172~~ **22-148**

Email: **SROSE@AEGWA.COM**

Sample Number	Depth	Time	Sample Type	Container Type	Analytes											Field Notes						
					VOC 8260	PCE & Daughter Prod.	NWTPH-Gx	BTEX (8260) / (8021)	NWTPH-HCID	NWTPH-Dx / Dx	PCB 8082	MTCA 5 Metals	RCRA 8 Metals	PAH 8270	Semi Vol 8270							
1 SB-1-5	5	1005	Soil	4oz jar x1 20ml VOA K2	X	X	X	X														
2 SB-1-10	10	1033																				
3 SB-1-15	15	1037																				
4 SB-1-20	20	1042			X	X	X	X														
5 SB-1-25	25	1052			X	X	X	X														
6 SB-1-30	30	1100			X	X	X	X														
7 SB-2-5	5	1301																				
8 SB-2-10	10	1305																				
9 SB-2-15	15	1315																				
10 SB-2-20	20	1321			X	X	X	X														
11 SB-2-25	25	1332			X	X	X	X														
12 SB-2-30	30	1336			X	X	X	X														
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			X	X	X	X														
17 SB-3-25	25	0903			X	X	X	X														

Relinquished by: Paul Hitch	Date / Time 10/20/22 (12:15)	Received by: <i>[Signature]</i>	Date / Time 10/20/22 12:18	Sample Receipt Good Condition? <input checked="" type="radio"/> Y <input type="radio"/> N Cooler Temp. °C Sample Temp. °C Total Number of Containers	Remarks: 10-20-22 Analyze samples marked X, hold all others per Paul via email. TAT: 24HR 48HR 5-DAY
Relinquished by:	Date / Time	Received by:	Date / Time		
Relinquished by:	Date / Time	Received by:	Date / Time		

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: **2633 Parkmont Lane SW, Ste A**

Project Name: **Franciscan West Seattle**

City: **Olympia** State: **WA** Zip: **98502**

Location: **4550 Fawcett 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@AEG-WA.COM**

Sample Number	Depth	Time	Sample Type	Container Type	Analytical Parameters										Field Notes					
					VOC 8260	PCE & Daughter Prod.	NWTPH-Gx	BTEX (8260) / (8021)	NWTPH-HCID	NWTPH-Dx / Dx	PCB 8082	MTCA 5 Metals	RCRA 8 Metals	PAH 8270		Semi Vol 8270				
1 SB-6-2S	25	0831	Soil	4oz jar x1 20ml VOA X2	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																				

Relinquished by: Paul Hitch <i>PH</i>	Date / Time 10/20/22 (12:15)	Received by: <i>[Signature]</i>	Date / Time 10/20/22 12:18	Sample Receipt Good Condition? <input checked="" type="radio"/> Y <input type="radio"/> 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
Relinquished by:	Date / Time	Received by:	Date / Time		
Relinquished by:	Date / Time	Received by:	Date / Time		

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 98506-2957

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.



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

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

Revision v1

www.fremontanalytical.com



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

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

Date Sampled: 10/19/2022

Lab ID: 2210319-001A

Date Received: 10/20/2022

Sample Type: Summa Canister

Analyte	Concentration	Reporting Limit	Qual	Method	Date/Analyst
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Petroleum Fractionation by EPA Method TO-15

	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)			
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/m ³)	(ppbv)	(ug/m ³)				
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

Date Sampled: 10/19/2022

Lab ID: 2210319-001A

Date Received: 10/20/2022

Sample Type: Summa Canister

Analyte	Concentration	Reporting Limit	Qual	Method	Date/Analyst
<u>Volatile Organic Compounds by EPA Method TO-15</u>					
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)	
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

Date Sampled: 10/19/2022

Lab ID: 2210319-001A

Date Received: 10/20/2022

Sample Type: Summa Canister

Analyte	Concentration	Reporting Limit	Qual	Method	Date/Analyst
<u>Volatile Organic Compounds by EPA Method TO-15</u>					
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)	
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

Date Sampled: 10/19/2022

Lab ID: 2210319-002A

Date Received: 10/20/2022

Sample Type: Summa Canister

Analyte	Concentration	Reporting Limit	Qual	Method	Date/Analyst
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Petroleum Fractionation by EPA Method TO-15

	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)			
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/m ³)	(ppbv)	(ug/m ³)				
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

Date Sampled: 10/19/2022

Lab ID: 2210319-002A

Date Received: 10/20/2022

Sample Type: Summa Canister

Analyte	Concentration	Reporting Limit	Qual	Method	Date/Analyst
<u>Volatile Organic Compounds by EPA Method TO-15</u>					
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)	
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

Date Sampled: 10/19/2022

Lab ID: 2210319-002A

Date Received: 10/20/2022

Sample Type: Summa Canister

Analyte	Concentration	Reporting Limit	Qual	Method	Date/Analyst
<u>Volatile Organic Compounds by EPA Method TO-15</u>					
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)	
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

Date Sampled: 10/19/2022

Lab ID: 2210319-003A

Date Received: 10/20/2022

Sample Type: Summa Canister

Analyte	Concentration	Reporting Limit	Qual	Method	Date/Analyst
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Petroleum Fractionation by EPA Method TO-15

	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)			
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/m ³)	(ppbv)	(ug/m ³)				
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

Date Sampled: 10/19/2022

Lab ID: 2210319-003A

Date Received: 10/20/2022

Sample Type: Summa Canister

Analyte	Concentration	Reporting Limit	Qual	Method	Date/Analyst
<u>Volatile Organic Compounds by EPA Method TO-15</u>					
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)	
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

Date Sampled: 10/19/2022

Lab ID: 2210319-003A

Date Received: 10/20/2022

Sample Type: Summa Canister

Analyte	Concentration	Reporting Limit	Qual	Method	Date/Analyst
<u>Volatile Organic Compounds by EPA Method TO-15</u>					
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)	
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

Date Sampled: 10/19/2022

Lab ID: 2210319-004A

Date Received: 10/20/2022

Sample Type: Summa Canister

Analyte	Concentration	Reporting Limit	Qual	Method	Date/Analyst
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Petroleum Fractionation by EPA Method TO-15

	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)			
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/m ³)	(ppbv)	(ug/m ³)				
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

Date Sampled: 10/19/2022

Lab ID: 2210319-004A

Date Received: 10/20/2022

Sample Type: Summa Canister

Analyte	Concentration	Reporting Limit	Qual	Method	Date/Analyst
<u>Volatile Organic Compounds by EPA Method TO-15</u>					
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)	
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

Date Sampled: 10/19/2022

Lab ID: 2210319-004A

Date Received: 10/20/2022

Sample Type: Summa Canister

Analyte	Concentration	Reporting Limit	Qual	Method	Date/Analyst
<u>Volatile Organic Compounds by EPA Method TO-15</u>					
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)	
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

Date Sampled: 10/19/2022

Lab ID: 2210319-005A

Date Received: 10/20/2022

Sample Type: Summa Canister

Analyte	Concentration	Reporting Limit	Qual	Method	Date/Analyst
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Petroleum Fractionation by EPA Method TO-15

	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)			
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/m ³)	(ppbv)	(ug/m ³)				
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

Date Sampled: 10/19/2022

Lab ID: 2210319-005A

Date Received: 10/20/2022

Sample Type: Summa Canister

Analyte	Concentration	Reporting Limit	Qual	Method	Date/Analyst
<u>Volatile Organic Compounds by EPA Method TO-15</u>					
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)	
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

Date Sampled: 10/19/2022

Lab ID: 2210319-005A

Date Received: 10/20/2022

Sample Type: Summa Canister

Analyte	Concentration	Reporting Limit	Qual	Method	Date/Analyst
<u>Volatile Organic Compounds by EPA Method TO-15</u>					
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)	
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									
1,1,1,2-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.

Client Name: LIBBY
 Logged by: Clare Griggs

Work Order Number: 2210319
 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:	<input type="text" value="Scott Rose"/>	Date:	<input type="text" value="10/20/2022"/>
By Whom:	<input type="text" value="Clare Griggs"/>	Via:	<input checked="" type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text" value="Confirming COC."/>		
Client Instructions:	<input type="text" value="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



Fremont
Analytical

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

Air Chain of Custody Record & Laboratory Services Agreement

Laboratory Project No (Internal): **2210319**

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

Special Remarks:

Client: **AEG**

Project Name: **Seattle West - Huling**

Address: **2633 Parkmont Lane SW, Suite A**

Project No: **22-148**

City, State, Zip: **Olympia, WA 98502**

Location: **4550 Fauntleroy Way SW**

Telephone: **360-352-9835**

Collected by: **Paul Hitch**

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

Reports to (PM): **Scott Rose**

Fax:

Email (PM): **SROSE@AEGWA.COM**

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										Internal				
									Full list VOCs TO15	Select VOCs TO15 ***	APH TO15	Siloxanes TO15	Sulfur TO15	Major Gases 3C	Helium 3C Mod	VOCs 8280	GX/BTEX 8280	Low level Hydrocarbons		Comments	Final Pressure ("Hg)		
1 SS-1	48903	S	BV	5.5 min	10/19/22	28	10/19/22	6															
	FC-1				1759		1803			X						X		X					
2 SS-2	48904	S	BV	3.42 min	10/19/22	30	10/19/22	6															
	FC-5				1812		1819			X					X		X						
3 SS-3	48905	S	BV	5.6 min	10/19/22	24	10/19/22	6															
	FC-12				1823		1828			X					X		X						
4 SS-4	48906	S	BV	4.42 min	10/19/22	28	10/19/22	6															
	FC-13				1833		1838			X					X		X						
5 SS-5	48907	S	BV	4.51 min	10/19/22	24	10/19/22	6															
	FC-18				1848		1852			X					X		X						

Turn-Around Time:

- Standard
- Next Day
- 3 Day
- Same Day
- 2 Day
- _____ specify _____

* 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

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
<i>[Signature]</i>	Paul Hitch	10/20/22 (10:50)	<i>[Signature]</i>	Steven S...	10/20/22 10:55
Relinquished (Signature)	Print Name	Date/Time	Received (Signature)	Print Name	Date/Time

Page 29 of 30



Fremont
Analytical

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

Air Chain of Custody Record & Laboratory Services Agreement

Laboratory Project No (Internal): **2210319**

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

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

Client: ~~AEG~~ **Libby Environmental**

Project Name: **Seattle West - Huling**

Address: **2633 Parkmont Lane SW, Suite A**

Project No: **22-148**

City, State, Zip: **Olympia, WA 98502**

Location: **4550 Fauntleroy Way SW**

Telephone: **360-352-9835**

Collected by: **Paul Hitch**

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

Reports to (PM): **Scott Rose**

Fax:

Email (PM): **SROSE@AEGWA.COM**

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										Internal		
									Full list VOCs TO15	Select VOCs TO15 ***	APH TO15	Siloxanes TO15	Sulfur TO15	Major Gases 3C	Helium 3C Mod	VOCs 8280	GX/BTEX 8280	Low level Hydrocarbons		Comments	Final Pressure ("Hg)
1 SS-1	48903	S	BV	5.5 ^l / _{min}	10/19/22	28	10/19/22	6	X	X											
	FC-1				1759	1803															
2 SS-2	48904	S	BV	3.42 ^l / _{min}	10/19/22	30	10/19/22	6	X	X											
	FC-5				1812	1819															
3 SS-3	48905	S	BV	5.6 ^l / _{min}	10/19/22	24	10/19/22	6	X	X											
	FC-12				1823	1828															
4 SS-4	48906	S	BV	4.4 ^l / _{min}	10/19/22	28	10/19/22	6	X	X											
	FC-13				1833	1838															
5 SS-5	48907	S	BV	4.5 ^l / _{min}	10/19/22	24	10/19/22	6	X	X											
	FC-18				1848	1852															

* 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) x	Print Name Paul Hitch	Date/Time 10/20/22 (10:50)	Received (Signature) x	Print Name Steven S...	Date/Time 10/20/22 10:55
Relinquished (Signature) x	Print Name	Date/Time	Received (Signature) x	Print Name	Date/Time

Page 30 of 30



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,

A handwritten signature in black ink, appearing to read "Sherry L. Chilcutt".

Sherry L. Chilcutt
Senior Chemist
Libby Environmental, Inc.



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



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

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
<u>Petroleum Fractionation by EPA Method TO-15</u>					
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)	
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
<u>Volatile Organic Compounds by EPA Method TO-15</u>					
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)	
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

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)			
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

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst	
<u>Volatile Organic Compounds by EPA Method TO-15</u>								
	(ppbv)	(ug/m³)	(ppbv)	(ug/m³)				
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
<u>Petroleum Fractionation by EPA Method TO-15</u>					
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)	
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
<u>Volatile Organic Compounds by EPA Method TO-15</u>					
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)	
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

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)			
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

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst	
<u>Volatile Organic Compounds by EPA Method TO-15</u>								
	(ppbv)	(ug/m³)	(ppbv)	(ug/m³)				
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
<u>Petroleum Fractionation by EPA Method TO-15</u>					
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)	
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
<u>Volatile Organic Compounds by EPA Method TO-15</u>					
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)	
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

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)			
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

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst	
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)				
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
<u>Petroleum Fractionation by EPA Method TO-15</u>					
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)	
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
<u>Volatile Organic Compounds by EPA Method TO-15</u>					
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)	
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

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)			
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

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst	
<u>Volatile Organic Compounds by EPA Method TO-15</u>								
	(ppbv)	(ug/m³)	(ppbv)	(ug/m³)				
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
<u>Petroleum Fractionation by EPA Method TO-15</u>					
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)	
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
<u>Volatile Organic Compounds by EPA Method TO-15</u>					
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)	
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

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)			
<u>Volatile Organic Compounds by EPA Method TO-15</u>							
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

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst	
<u>Volatile Organic Compounds by EPA Method TO-15</u>								
	(ppbv)	(ug/m³)	(ppbv)	(ug/m³)				
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

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									
1,1,1,2,2-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.

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

19. Additional remarks:

Item Information

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



Fremont
Analytical

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

Air Chain of Custody Record & Laboratory Services Agreement

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

Laboratory Project No (Internal): 2212398

Client: Libby

Project Name: Franciscan Seattle - Huling

Special Remarks:

Address:

Project No: 22-148
Location: 4550 Fauntleroy Way SW, Seattle

City, State, Zip:

Collected by: Paul Hitch

Telephone:

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)

Fax:

Email (PM): STOSE@AFGWA.COM

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										Comments	Final Pressure ("Hg)		
									Full list VOCs TO15	Select VOCs TO15 ***	APH TO15	Siloxanes TO15	Sulfur TO15	Major Gases 3C	Helium 3C Mod	VOCs 8260	GX/BTEX 8260					
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) x Paul Hitch
 Print Name Paul Hitch
 Date/Time 12/14/22 (1955)

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



Fremont
Analytical

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

Air Chain of Custody Record & Laboratory Services Agreement

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

Laboratory Project No (Internal): 2212398

Client: Libby

Project Name: Franciscan Seattle - Huling

Special Remarks:

Address:

Project No: 22-148

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

City, State, Zip:

Location: 4550 Fauntleroy Way SW, Seattle

Collected by: Paul Hitch

Telephone:

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)

Fax:

Email (PM): STOSE@AEGWA.COM

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										Comments	Final Pressure ("Hg)	
									Full list VOCs TO15	Select VOCs TO15 ***	APH TO15	Siloxanes TO15	Sulfur TO15	Major Gases 3C	Helium 3C Mod	VOCs 8260	GX/BTEX 8260	Internal			
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) x Paul Hitch
 Print Name Paul Hitch
 Date/Time 12/14/22 (1955)

Received (Signature) x Clare O'Connor
 Print Name Clare O'Connor
 Date/Time 12/14/22

Relinquished (Signature) x
 Print Name
 Date/Time

Received (Signature) x
 Print Name
 Date/Time 13:57

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

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

February 13, 2024

Scott Rose, Project Manager
AEG
2633 Parkmont Lane SW, Suite A
Olympia, WA 98502

Dear Mr Rose:

Included are the results from the testing of material submitted on February 5, 2024 from the Franciscan West Hulins 22-148, F&BI 402045 project. There are 15 pages included in this report.

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

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures

c: AEG A/P, Nathan Dickey, phitch@aegwa.com, emelegh@aegwa.com,
jloughlin@AEGWA.com
AEG0213R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on February 5, 2024 by Friedman & Bruya, Inc. from the AEG Franciscan West Hulins 22-148, F&BI 402045 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>AEG</u>
402045 -01	SSD-BR
402045 -02	SSD-SR
402045 -03	SSD-E3

Non-petroleum compounds identified in the air phase hydrocarbon (APH) ranges were subtracted per the MA-APH method.

The TO-15 calibration standard for several compounds exceeded the acceptance criteria. The compounds were not detected, therefore this did not represent an out of control condition, and were qualified with a "k" qualifier.

The TO-15 calibration standard did not meet the acceptance criteria for vinyl acetate. The data were flagged accordingly.

The ethanol concentration in sample SSD-SR exceeded the calibration range of the instrument. The data were flagged accordingly.

All other quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	SSD-BR	Client:	AEG
Date Received:	02/05/24	Project:	Franciscan West Hulins 22-148
Date Collected:	02/05/24	Lab ID:	402045-01 1/5.5
Date Analyzed:	02/07/24	Data File:	020626.D
Matrix:	Air	Instrument:	GCMS8
Units:	ug/m3	Operator:	bat

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	96	70	130

Compounds:	Concentration
	ug/m3
APH EC5-8 aliphatics	<410
APH EC9-12 aliphatics	<140
APH EC9-10 aromatics	<140

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	SSD-SR	Client:	AEG
Date Received:	02/05/24	Project:	Franciscan West Hulins 22-148
Date Collected:	02/05/24	Lab ID:	402045-02 1/5.4
Date Analyzed:	02/07/24	Data File:	020627.D
Matrix:	Air	Instrument:	GCMS8
Units:	ug/m3	Operator:	bat

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

Compounds:	Concentration
	ug/m3
APH EC5-8 aliphatics	<400
APH EC9-12 aliphatics	<130
APH EC9-10 aromatics	<130

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	SSD-E3	Client:	AEG
Date Received:	02/05/24	Project:	Franciscan West Hulins 22-148
Date Collected:	02/05/24	Lab ID:	402045-03 1/5.5
Date Analyzed:	02/07/24	Data File:	020628.D
Matrix:	Air	Instrument:	GCMS8
Units:	ug/m3	Operator:	bat

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	91	70	130

Compounds:	Concentration
	ug/m3
APH EC5-8 aliphatics	<410
APH EC9-12 aliphatics	<140
APH EC9-10 aromatics	<140

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	Method Blank	Client:	AEG
Date Received:	Not Applicable	Project:	Franciscan West Hulins 22-148
Date Collected:	Not Applicable	Lab ID:	04-0245 mb
Date Analyzed:	02/06/24	Data File:	020612.D
Matrix:	Air	Instrument:	GCMS8
Units:	ug/m3	Operator:	bat

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	96	70	130

Compounds:	Concentration
	ug/m3
APH EC5-8 aliphatics	<75
APH EC9-12 aliphatics	<25
APH EC9-10 aromatics	<25

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	SSD-BR	Client:	AEG
Date Received:	02/05/24	Project:	Franciscan West Hulins 22-148
Date Collected:	02/05/24	Lab ID:	402045-01 1/5.5
Date Analyzed:	02/07/24	Data File:	020626.D
Matrix:	Air	Instrument:	GCMS8
Units:	ug/m3	Operator:	bat

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	93	70	130

Compounds:	Concentration ug/m3	ppbv	Compounds:	Concentration ug/m3	ppbv
Propene	<6.6 k	<3.8 k	1,2-Dichloropropane	<1.3	<0.28
Dichlorodifluoromethane	<5.4	<1.1	1,4-Dioxane	<2	<0.55
Chloromethane	<20	<9.9	2,2,4-Trimethylpentane	<26	<5.5
F-114	<12	<1.6	Methyl methacrylate	<23	<5.5
Vinyl chloride	<1.4	<0.55	Heptane	<23	<5.5
1,3-Butadiene	<0.24	<0.11	Bromodichloromethane	0.52	0.077
Butane	<26	<11	Trichloroethene	<0.59	<0.11
Bromomethane	<21	<5.5	cis-1,3-Dichloropropene	<5	<1.1
Chloroethane	<15	<5.5	4-Methyl-2-pentanone	<45	<11
Vinyl bromide	<2.4	<0.55	trans-1,3-Dichloropropene	<2.5	<0.55
Ethanol	61	32	Toluene	<41	<11
Acrolein	<0.63	<0.28	1,1,2-Trichloroethane	<0.3	<0.055
Pentane	<32	<11	2-Hexanone	<23	<5.5
Trichlorofluoromethane	<12	<2.2	Tetrachloroethene	<37	<5.5
Acetone	<26	<11	Dibromochloromethane	<0.47 k	<0.055 k
2-Propanol	100	41	1,2-Dibromoethane (EDB)	<0.42	<0.055
1,1-Dichloroethene	<2.2	<0.55	Chlorobenzene	<2.5	<0.55
trans-1,2-Dichloroethene	<2.2	<0.55	Ethylbenzene	<2.4	<0.55
Methylene chloride	<190	<55	1,1,2,2-Tetrachloroethane	<0.76	<0.11
t-Butyl alcohol (TBA)	<67	<22	Nonane	<29	<5.5
3-Chloropropene	<17	<5.5	Isopropylbenzene	<54	<11
CFC-113	<8.4	<1.1	2-Chlorotoluene	<28	<5.5
Carbon disulfide	<34	<11	Propylbenzene	<27	<5.5
Methyl t-butyl ether (MTBE)	<40	<11	4-Ethyltoluene	<27	<5.5
Vinyl acetate	<39 ca	<11 ca	m,p-Xylene	<4.8	<1.1
1,1-Dichloroethane	<2.2	<0.55	o-Xylene	<2.4	<0.55
cis-1,2-Dichloroethene	<2.2	<0.55	Styrene	<4.7	<1.1
Hexane	<19	<5.5	Bromoform	<11 k	<1.1 k
Chloroform	11	2.2	Benzyl chloride	<0.28	<0.055
Ethyl acetate	<40 k	<11 k	1,3,5-Trimethylbenzene	<27	<5.5
Tetrahydrofuran	<3.2	<1.1	1,2,4-Trimethylbenzene	<27	<5.5
2-Butanone (MEK)	<32	<11	1,3-Dichlorobenzene	<3.3	<0.55
1,2-Dichloroethane (EDC)	<0.22	<0.055	1,4-Dichlorobenzene	<1.3	<0.21
1,1,1-Trichloroethane	<3	<0.55	1,2-Dichlorobenzene	<3.3	<0.55
Carbon tetrachloride	<1.7	<0.28	1,2,4-Trichlorobenzene	<4.1	<0.55
Benzene	<1.8	<0.55	Naphthalene	<1.4	<0.28
Cyclohexane	<38	<11	Hexachlorobutadiene	<1.2	<0.11

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	SSD-SR	Client:	AEG
Date Received:	02/05/24	Project:	Franciscan West Hulins 22-148
Date Collected:	02/05/24	Lab ID:	402045-02 1/5.4
Date Analyzed:	02/07/24	Data File:	020627.D
Matrix:	Air	Instrument:	GCMS8
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	90	70	130

Compounds:	Concentration ug/m3	Concentration ppbv	Compounds:	Concentration ug/m3	Concentration ppbv
Propene	<6.5 k	<3.8 k	1,2-Dichloropropane	<1.2	<0.27
Dichlorodifluoromethane	<5.3	<1.1	1,4-Dioxane	<1.9	<0.54
Chloromethane	<20	<9.7	2,2,4-Trimethylpentane	<25	<5.4
F-114	<11	<1.6	Methyl methacrylate	<22	<5.4
Vinyl chloride	<1.4	<0.54	Heptane	<22	<5.4
1,3-Butadiene	<0.24	<0.11	Bromodichloromethane	<0.36	<0.054
Butane	<26	<11	Trichloroethene	<0.58	<0.11
Bromomethane	<21	<5.4	cis-1,3-Dichloropropene	<4.9	<1.1
Chloroethane	<14	<5.4	4-Methyl-2-pentanone	<44	<11
Vinyl bromide	<2.4	<0.54	trans-1,3-Dichloropropene	<2.5	<0.54
Ethanol	240 ve	130 ve	Toluene	<41	<11
Acrolein	<0.62	<0.27	1,1,2-Trichloroethane	<0.29	<0.054
Pentane	<32	<11	2-Hexanone	<22	<5.4
Trichlorofluoromethane	<12	<2.2	Tetrachloroethene	<37	<5.4
Acetone	<26	<11	Dibromochloromethane	<0.46 k	<0.054 k
2-Propanol	460 ve	190 ve	1,2-Dibromoethane (EDB)	<0.41	<0.054
1,1-Dichloroethene	<2.1	<0.54	Chlorobenzene	<2.5	<0.54
trans-1,2-Dichloroethene	<2.1	<0.54	Ethylbenzene	<2.3	<0.54
Methylene chloride	<190	<54	1,1,2,2-Tetrachloroethane	<0.74	<0.11
t-Butyl alcohol (TBA)	<65	<22	Nonane	<28	<5.4
3-Chloropropene	<17	<5.4	Isopropylbenzene	<53	<11
CFC-113	<8.3	<1.1	2-Chlorotoluene	<28	<5.4
Carbon disulfide	<34	<11	Propylbenzene	<27	<5.4
Methyl t-butyl ether (MTBE)	<39	<11	4-Ethyltoluene	<27	<5.4
Vinyl acetate	<38 ca	<11 ca	m,p-Xylene	<4.7	<1.1
1,1-Dichloroethane	<2.2	<0.54	o-Xylene	<2.3	<0.54
cis-1,2-Dichloroethene	<2.1	<0.54	Styrene	<4.6	<1.1
Hexane	<19	<5.4	Bromoform	<11 k	<1.1 k
Chloroform	5.6	1.2	Benzyl chloride	<0.28	<0.054
Ethyl acetate	<39 k	<11 k	1,3,5-Trimethylbenzene	<27	<5.4
Tetrahydrofuran	<3.2	<1.1	1,2,4-Trimethylbenzene	<27	<5.4
2-Butanone (MEK)	<32	<11	1,3-Dichlorobenzene	<3.2	<0.54
1,2-Dichloroethane (EDC)	<0.22	<0.054	1,4-Dichlorobenzene	<1.2	<0.21
1,1,1-Trichloroethane	<2.9	<0.54	1,2-Dichlorobenzene	<3.2	<0.54
Carbon tetrachloride	<1.7	<0.27	1,2,4-Trichlorobenzene	<4	<0.54
Benzene	<1.7	<0.54	Naphthalene	<1.4	<0.27
Cyclohexane	<37	<11	Hexachlorobutadiene	<1.2	<0.11

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	SSD-E3	Client:	AEG
Date Received:	02/05/24	Project:	Franciscan West Hulins 22-148
Date Collected:	02/05/24	Lab ID:	402045-03 1/5.5
Date Analyzed:	02/07/24	Data File:	020628.D
Matrix:	Air	Instrument:	GCMS8
Units:	ug/m3	Operator:	bat

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	88	70	130

Compounds:	Concentration ug/m3	ppbv	Compounds:	Concentration ug/m3	ppbv
Propene	<6.6 k	<3.8 k	1,2-Dichloropropane	<1.3	<0.28
Dichlorodifluoromethane	<5.4	<1.1	1,4-Dioxane	<2	<0.55
Chloromethane	<20	<9.9	2,2,4-Trimethylpentane	<26	<5.5
F-114	<12	<1.6	Methyl methacrylate	<23	<5.5
Vinyl chloride	<1.4	<0.55	Heptane	<23	<5.5
1,3-Butadiene	<0.24	<0.11	Bromodichloromethane	0.55	0.082
Butane	<26	<11	Trichloroethene	<0.59	<0.11
Bromomethane	<21	<5.5	cis-1,3-Dichloropropene	<5	<1.1
Chloroethane	<15	<5.5	4-Methyl-2-pentanone	<45	<11
Vinyl bromide	<2.4	<0.55	trans-1,3-Dichloropropene	<2.5	<0.55
Ethanol	96	51	Toluene	<41	<11
Acrolein	<0.63	<0.28	1,1,2-Trichloroethane	<0.3	<0.055
Pentane	<32	<11	2-Hexanone	<23	<5.5
Trichlorofluoromethane	<12	<2.2	Tetrachloroethene	<37	<5.5
Acetone	<26	<11	Dibromochloromethane	<0.47 k	<0.055 k
2-Propanol	160	67	1,2-Dibromoethane (EDB)	<0.42	<0.055
1,1-Dichloroethene	<2.2	<0.55	Chlorobenzene	<2.5	<0.55
trans-1,2-Dichloroethene	<2.2	<0.55	Ethylbenzene	<2.4	<0.55
Methylene chloride	<190	<55	1,1,2,2-Tetrachloroethane	<0.76	<0.11
t-Butyl alcohol (TBA)	<67	<22	Nonane	<29	<5.5
3-Chloropropene	<17	<5.5	Isopropylbenzene	<54	<11
CFC-113	<8.4	<1.1	2-Chlorotoluene	<28	<5.5
Carbon disulfide	<34	<11	Propylbenzene	<27	<5.5
Methyl t-butyl ether (MTBE)	<40	<11	4-Ethyltoluene	<27	<5.5
Vinyl acetate	<39 ca	<11 ca	m,p-Xylene	<4.8	<1.1
1,1-Dichloroethane	<2.2	<0.55	o-Xylene	<2.4	<0.55
cis-1,2-Dichloroethene	<2.2	<0.55	Styrene	<4.7	<1.1
Hexane	<19	<5.5	Bromoform	<11 k	<1.1 k
Chloroform	23	4.8	Benzyl chloride	<0.28	<0.055
Ethyl acetate	<40 k	<11 k	1,3,5-Trimethylbenzene	<27	<5.5
Tetrahydrofuran	<3.2	<1.1	1,2,4-Trimethylbenzene	<27	<5.5
2-Butanone (MEK)	<32	<11	1,3-Dichlorobenzene	<3.3	<0.55
1,2-Dichloroethane (EDC)	<0.22	<0.055	1,4-Dichlorobenzene	<1.3	<0.21
1,1,1-Trichloroethane	<3	<0.55	1,2-Dichlorobenzene	<3.3	<0.55
Carbon tetrachloride	<1.7	<0.28	1,2,4-Trichlorobenzene	<4.1	<0.55
Benzene	<1.8	<0.55	Naphthalene	<1.4	<0.28
Cyclohexane	<38	<11	Hexachlorobutadiene	<1.2	<0.11

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	Method Blank	Client:	AEG
Date Received:	Not Applicable	Project:	Franciscan West Hulins 22-148
Date Collected:	Not Applicable	Lab ID:	04-0245 mb
Date Analyzed:	02/06/24	Data File:	020612.D
Matrix:	Air	Instrument:	GCMS8
Units:	ug/m3	Operator:	bat

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	93	70	130

Compounds:	Concentration ug/m3	ppbv	Compounds:	Concentration ug/m3	ppbv
Propene	<1.2 k	<0.7 k	1,2-Dichloropropane	<0.23	<0.05
Dichlorodifluoromethane	<0.99	<0.2	1,4-Dioxane	<0.36	<0.1
Chloromethane	<3.7	<1.8	2,2,4-Trimethylpentane	<4.7	<1
F-114	<2.1	<0.3	Methyl methacrylate	<4.1	<1
Vinyl chloride	<0.26	<0.1	Heptane	<4.1	<1
1,3-Butadiene	<0.044	<0.02	Bromodichloromethane	<0.067	<0.01
Butane	<4.8	<2	Trichloroethene	<0.11	<0.02
Bromomethane	<3.9	<1	cis-1,3-Dichloropropene	<0.91	<0.2
Chloroethane	<2.6	<1	4-Methyl-2-pentanone	<8.2	<2
Vinyl bromide	<0.44	<0.1	trans-1,3-Dichloropropene	<0.45	<0.1
Ethanol	<7.5	<4	Toluene	<7.5	<2
Acrolein	<0.11	<0.05	1,1,2-Trichloroethane	<0.055	<0.01
Pentane	<5.9	<2	2-Hexanone	<4.1	<1
Trichlorofluoromethane	<2.2	<0.4	Tetrachloroethene	<6.8	<1
Acetone	<4.8	<2	Dibromochloromethane	<0.085 k	<0.01 k
2-Propanol	<8.6	<3.5	1,2-Dibromoethane (EDB)	<0.077	<0.01
1,1-Dichloroethene	<0.4	<0.1	Chlorobenzene	<0.46	<0.1
trans-1,2-Dichloroethene	<0.4	<0.1	Ethylbenzene	<0.43	<0.1
Methylene chloride	<35	<10	1,1,2,2-Tetrachloroethane	<0.14	<0.02
t-Butyl alcohol (TBA)	<12	<4	Nonane	<5.2	<1
3-Chloropropene	<3.1	<1	Isopropylbenzene	<9.8	<2
CFC-113	<1.5	<0.2	2-Chlorotoluene	<5.2	<1
Carbon disulfide	<6.2	<2	Propylbenzene	<4.9	<1
Methyl t-butyl ether (MTBE)	<7.2	<2	4-Ethyltoluene	<4.9	<1
Vinyl acetate	<7 ca	<2 ca	m,p-Xylene	<0.87	<0.2
1,1-Dichloroethane	<0.4	<0.1	o-Xylene	<0.43	<0.1
cis-1,2-Dichloroethene	<0.4	<0.1	Styrene	<0.85	<0.2
Hexane	<3.5	<1	Bromoform	<2.1 k	<0.2 k
Chloroform	<0.049	<0.01	Benzyl chloride	<0.052	<0.01
Ethyl acetate	<7.2 k	<2 k	1,3,5-Trimethylbenzene	<4.9	<1
Tetrahydrofuran	<0.59	<0.2	1,2,4-Trimethylbenzene	<4.9	<1
2-Butanone (MEK)	<5.9	<2	1,3-Dichlorobenzene	<0.6	<0.1
1,2-Dichloroethane (EDC)	<0.04	<0.01	1,4-Dichlorobenzene	<0.23	<0.038
1,1,1-Trichloroethane	<0.55	<0.1	1,2-Dichlorobenzene	<0.6	<0.1
Carbon tetrachloride	<0.31	<0.05	1,2,4-Trichlorobenzene	<0.74	<0.1
Benzene	<0.32	<0.1	Naphthalene	<0.26	<0.05
Cyclohexane	<6.9	<2	Hexachlorobutadiene	<0.21	<0.02

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 02/13/24

Date Received: 02/05/24

Project: Franciscan West Hulins 22-148, F&BI 402045

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF AIR SAMPLES
FOR VOLATILES BY METHOD MA-APH**

Laboratory Code: 402045-01 1/5.5 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 30)
APH EC5-8 aliphatics	ug/m3	<410	<410	nm
APH EC9-12 aliphatics	ug/m3	<140	<140	nm
APH EC9-10 aromatics	ug/m3	<140	<140	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
APH EC5-8 aliphatics	ug/m3	67	75	70-130
APH EC9-12 aliphatics	ug/m3	67	89	70-130
APH EC9-10 aromatics	ug/m3	67	80	70-130

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 02/13/24

Date Received: 02/05/24

Project: Franciscan West Hulins 22-148, F&BI 402045

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

Laboratory Code: 402045-01 1/5.5 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 30)
Propene	ug/m3	<6.6	<6.6	nm
Dichlorodifluoromethane	ug/m3	<5.4	<5.4	nm
Chloromethane	ug/m3	<20	<20	nm
F-114	ug/m3	<12	<12	nm
Vinyl chloride	ug/m3	<1.4	<1.4	nm
1,3-Butadiene	ug/m3	<0.24	<0.24	nm
Butane	ug/m3	<26	<26	nm
Bromomethane	ug/m3	<21	<21	nm
Chloroethane	ug/m3	<15	<15	nm
Vinyl bromide	ug/m3	<2.4	<2.4	nm
Ethanol	ug/m3	61	63	3
Acrolein	ug/m3	<0.63	<0.63	nm
Pentane	ug/m3	<32	<32	nm
Trichlorofluoromethane	ug/m3	<12	<12	nm
Acetone	ug/m3	<26	<26	nm
2-Propanol	ug/m3	100	100	0
1,1-Dichloroethene	ug/m3	<2.2	<2.2	nm
trans-1,2-Dichloroethene	ug/m3	<2.2	<2.2	nm
Methylene chloride	ug/m3	<190	<190	nm
t-Butyl alcohol (TBA)	ug/m3	<67	<67	nm
3-Chloropropene	ug/m3	<17	<17	nm
CFC-113	ug/m3	<8.4	<8.4	nm
Carbon disulfide	ug/m3	<34	<34	nm
Methyl t-butyl ether (MTBE)	ug/m3	<40	<40	nm
Vinyl acetate	ug/m3	<39	<39	nm
1,1-Dichloroethane	ug/m3	<2.2	<2.2	nm
cis-1,2-Dichloroethene	ug/m3	<2.2	<2.2	nm
Hexane	ug/m3	<19	<19	nm
Chloroform	ug/m3	11	11	0
Ethyl acetate	ug/m3	<40	<40	nm
Tetrahydrofuran	ug/m3	<3.2	<3.2	nm
2-Butanone (MEK)	ug/m3	<32	<32	nm
1,2-Dichloroethane (EDC)	ug/m3	<0.22	<0.22	nm
1,1,1-Trichloroethane	ug/m3	<3	<3	nm
Carbon tetrachloride	ug/m3	<1.7	<1.7	nm
Benzene	ug/m3	<1.8	<1.8	nm
Cyclohexane	ug/m3	<38	<38	nm
1,2-Dichloropropane	ug/m3	<1.3	<1.3	nm
1,4-Dioxane	ug/m3	<2	<2	nm
2,2,4-Trimethylpentane	ug/m3	<26	<26	nm

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 02/13/24

Date Received: 02/05/24

Project: Franciscan West Hulins 22-148, F&BI 402045

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

Laboratory Code: 402045-01 1/5.5 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 30)
Methyl methacrylate	ug/m3	<23	<23	nm
Heptane	ug/m3	<23	<23	nm
Bromodichloromethane	ug/m3	0.52	0.59	13
Trichloroethene	ug/m3	<0.59	<0.59	nm
cis-1,3-Dichloropropene	ug/m3	<5	<5	nm
4-Methyl-2-pentanone	ug/m3	<45	<45	nm
trans-1,3-Dichloropropene	ug/m3	<2.5	<2.5	nm
Toluene	ug/m3	<41	<41	nm
1,1,2-Trichloroethane	ug/m3	<0.3	<0.3	nm
2-Hexanone	ug/m3	<23	<23	nm
Tetrachloroethene	ug/m3	<37	<37	nm
Dibromochloromethane	ug/m3	<0.47	<0.47	nm
1,2-Dibromoethane (EDB)	ug/m3	<0.42	<0.42	nm
Chlorobenzene	ug/m3	<2.5	<2.5	nm
Ethylbenzene	ug/m3	<2.4	<2.4	nm
1,1,2,2-Tetrachloroethane	ug/m3	<0.76	<0.76	nm
Nonane	ug/m3	<29	<29	nm
Isopropylbenzene	ug/m3	<54	<54	nm
2-Chlorotoluene	ug/m3	<28	<28	nm
Propylbenzene	ug/m3	<27	<27	nm
4-Ethyltoluene	ug/m3	<27	<27	nm
m,p-Xylene	ug/m3	<4.8	<4.8	nm
o-Xylene	ug/m3	<2.4	<2.4	nm
Styrene	ug/m3	<4.7	<4.7	nm
Bromoform	ug/m3	<11	<11	nm
Benzyl chloride	ug/m3	<0.28	<0.28	nm
1,3,5-Trimethylbenzene	ug/m3	<27	<27	nm
1,2,4-Trimethylbenzene	ug/m3	<27	<27	nm
1,3-Dichlorobenzene	ug/m3	<3.3	<3.3	nm
1,4-Dichlorobenzene	ug/m3	<1.3	<1.3	nm
1,2-Dichlorobenzene	ug/m3	<3.3	<3.3	nm
1,2,4-Trichlorobenzene	ug/m3	<4.1	<4.1	nm
Naphthalene	ug/m3	<1.4	<1.4	nm
Hexachlorobutadiene	ug/m3	<1.2	<1.2	nm

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 02/13/24

Date Received: 02/05/24

Project: Franciscan West Hulins 22-148, F&BI 402045

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

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Propene	ug/m3	23	136 vo	70-130
Dichlorodifluoromethane	ug/m3	67	88	70-130
Chloromethane	ug/m3	28	101	70-130
F-114	ug/m3	94	80	70-130
Vinyl chloride	ug/m3	35	84	70-130
1,3-Butadiene	ug/m3	30	81	70-130
Butane	ug/m3	32	88	70-130
Bromomethane	ug/m3	52	97	70-130
Chloroethane	ug/m3	36	120	70-130
Vinyl bromide	ug/m3	59	98	70-130
Ethanol	ug/m3	25	95	70-130
Acrolein	ug/m3	31	85	70-130
Pentane	ug/m3	40	96	70-130
Trichlorofluoromethane	ug/m3	76	87	70-130
Acetone	ug/m3	32	97	70-130
2-Propanol	ug/m3	33	91	70-130
1,1-Dichloroethene	ug/m3	54	89	70-130
trans-1,2-Dichloroethene	ug/m3	54	92	70-130
Methylene chloride	ug/m3	94	89	70-130
t-Butyl alcohol (TBA)	ug/m3	41	90	70-130
3-Chloropropene	ug/m3	42	100	70-130
CFC-113	ug/m3	100	97	70-130
Carbon disulfide	ug/m3	42	89	70-130
Methyl t-butyl ether (MTBE)	ug/m3	49	74	70-130
Vinyl acetate	ug/m3	48	63 vo	70-130
1,1-Dichloroethane	ug/m3	55	94	70-130
cis-1,2-Dichloroethene	ug/m3	54	84	70-130
Hexane	ug/m3	48	76	70-130
Chloroform	ug/m3	66	90	70-130
Ethyl acetate	ug/m3	49	134 vo	70-130
Tetrahydrofuran	ug/m3	40	81	70-130
2-Butanone (MEK)	ug/m3	40	84	70-130
1,2-Dichloroethane (EDC)	ug/m3	55	87	70-130
1,1,1-Trichloroethane	ug/m3	74	104	70-130
Carbon tetrachloride	ug/m3	85	116	70-130
Benzene	ug/m3	43	85	70-130
Cyclohexane	ug/m3	46	73	70-130
1,2-Dichloropropane	ug/m3	62	101	70-130
1,4-Dioxane	ug/m3	49	89	70-130
2,2,4-Trimethylpentane	ug/m3	63	91	70-130

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 02/13/24

Date Received: 02/05/24

Project: Franciscan West Hulins 22-148, F&BI 402045

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

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent	Acceptance Criteria
			Recovery LCS	
Methyl methacrylate	ug/m3	55	105	70-130
Heptane	ug/m3	55	89	70-130
Bromodichloromethane	ug/m3	90	121	70-130
Trichloroethene	ug/m3	73	97	70-130
cis-1,3-Dichloropropene	ug/m3	61	104	70-130
4-Methyl-2-pentanone	ug/m3	55	107	70-130
trans-1,3-Dichloropropene	ug/m3	61	113	70-130
Toluene	ug/m3	51	94	70-130
1,1,2-Trichloroethane	ug/m3	74	107	70-130
2-Hexanone	ug/m3	55	93	70-130
Tetrachloroethene	ug/m3	92	107	70-130
Dibromochloromethane	ug/m3	120	138 vo	70-130
1,2-Dibromoethane (EDB)	ug/m3	100	103	70-130
Chlorobenzene	ug/m3	62	96	70-130
Ethylbenzene	ug/m3	59	82	70-130
1,1,2,2-Tetrachloroethane	ug/m3	93	104	70-130
Nonane	ug/m3	71	87	70-130
Isopropylbenzene	ug/m3	66	87	70-130
2-Chlorotoluene	ug/m3	70	94	70-130
Propylbenzene	ug/m3	66	90	70-130
4-Ethyltoluene	ug/m3	66	84	70-130
m,p-Xylene	ug/m3	120	83	70-130
o-Xylene	ug/m3	59	86	70-130
Styrene	ug/m3	58	87	70-130
Bromoform	ug/m3	140	158 vo	70-130
Benzyl chloride	ug/m3	70	128	70-130
1,3,5-Trimethylbenzene	ug/m3	66	93	70-130
1,2,4-Trimethylbenzene	ug/m3	66	83	70-130
1,3-Dichlorobenzene	ug/m3	81	104	70-130
1,4-Dichlorobenzene	ug/m3	81	99	70-130
1,2-Dichlorobenzene	ug/m3	81	100	70-130
1,2,4-Trichlorobenzene	ug/m3	100	102	70-130
Naphthalene	ug/m3	71	87	70-130
Hexachlorobutadiene	ug/m3	140	111	70-130

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

- a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.
- ca - The calibration results for the analyte were outside of acceptance criteria, biased low; or, the calibration results for the analyte were outside of acceptance criteria, biased high, with a detection for the analyte in the sample. The value reported is an estimate.
- c - The presence of the analyte may be due to carryover from previous sample injections.
- cf - The sample was centrifuged prior to analysis.
- d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.
- dv - Insufficient sample volume was available to achieve normal reporting limits.
- f - The sample was laboratory filtered prior to analysis.
- fb - The analyte was detected in the method blank.
- fc - The analyte is a common laboratory and field contaminant.
- hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.
- hs - Headspace was present in the container used for analysis.
- ht - The analysis was performed outside the method or client-specified holding time requirement.
- ip - Recovery fell outside of control limits due to sample matrix effects.
- j - The analyte concentration is reported below the standard reporting limit. The value reported is an estimate.
- J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.
- jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.
- js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- k - The calibration results for the analyte were outside of acceptance criteria, biased high, and the analyte was not detected in the sample.
- lc - The presence of the analyte is likely due to laboratory contamination.
- L - The reported concentration was generated from a library search.
- nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.
- pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.
- ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.
- vo - The value reported fell outside the control limits established for this analyte.
- x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

SAMPLE CHAIN OF CUSTODY 02/05/24

402045

Report To Scott Rose

Company AEC

Address _____

City, State, ZIP Olympt

Phone _____ Email srose@aegwa.com

SAMPLERS (signature) 

PROJECT NAME & ADDRESS West Hillms

Francis

PO # 22-14e

NOTES:
ndikey@aegwa.com
plitch@aegwa.com
emelsh@aegwa.com

INVOICE TO Joshlin@aegwa.com

Page # 1 of 1

TURNAROUND TIME

Standard RUSH

Rush charges authorized by: _____

SAMPLE DISPOSAL

Default: Clean following final report delivery Hold (Fee may apply): _____

SAMPLE INFORMATION

Sample Name	Lab ID	Canister ID	Flow Cont. ID	Reporting Level: IA=Indoor Air SG=Soil Gas (Circle One)	Date Sampled	Initial Vac. ("Hg)	Field Initial Time	Final Vac. ("Hg)	Field Final Time	TO15 Full Scan	TO15 BTEXN	TO15 cVOCs	APH	Helium	Notes
SSD - BR BR	01	8533	101	IA <u>SG</u>	2/5	24	1000	5	1005	X			X		
SSD - SR	02	3677	07	IA <u>SG</u>		28	1010	5	1015	X			X		
SSD - E3	03	9567	109	IA / SG		29	1020	5	1025	X			X		
				IA / SG											
				IA / SG											
				IA / SG											
				IA / SG											
				IA / SG											

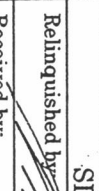
Samples received at 18 °C

Friedman & Bruya, Inc.
5500 4th Avenue South
Seattle, WA 98108

Ph. (206) 285-8282

Fax (206) 283-5044

FORMS\COG\COCTO-15.DOC

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
	<u>Nathaniel Dickson</u>	<u>AEC</u>	<u>2/5</u>	<u>1057</u>
<u>AW</u>	<u>ANHPHAN</u>	<u>ESB</u>	<u>02/05/24</u>	<u>10:57</u>
Received by:				
Relinquished by:				
Received by:				



Libby Environmental, Inc.

3322 South Bay Road NE • Olympia, WA 98506-2957

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

February 13, 2024

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

RE: Franciscan-West Hauling
Work Order Number: L24B015

Enclosed are the results of analyses for samples received by our laboratory on 2/6/2024.

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 feel free to contact us. It was a pleasure working with you on this project, and we are looking forward to the next opportunity to work together.

Sincerely,

Sherry Chilcutt
Senior Chemist

Libby Environmental, Inc.

Chain of Custody Record

www.LibbyEnvironmental.com

3322 South Bay Road NE

Ph: 360-352-2110

Olympia, WA 98506

Fax: 360-352-4154

Date: 2/2/24

Page: 1 of 1

Client: AEG Atlas

Project Manager: Scott Rose

Address:

Project Name: Franciscan - West Huling

City: Olympia

State: WA Zip:

Location: 4550 Fauntleroy SW

City, State: Seattle, WA

Phone:

Fax:

Collector: Nathan Ditzel


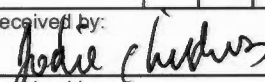
Date of Collection: 2/2/24

Client Project # 22-148

Email: AEG list

Page 2 of 19

Sample Number	Depth	Time	Sample Type	Container Type	Analytes											Field Notes						
					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					
1 SB-7-5	5	0910	S	2 Vol, 1 jar																		H = Mold
2 SB-7-10	10	0915																				H
3 SB-7-15	15	0922																				H
4 SB-7-20	20	0930				X	X	X		X												
5 SB-7-25	25	0941				X	X	X		X												
6 SB-7-30	30	0950				X	X	X		X												
7 SB-8-10	10	1231																				H
8 SB-8-15	15	1242																				H
9 SB-8-20	20	1255																				H
10 SB-8-25	25	1302				X	X	X		X												
11 SB-8-30	30	1311				X	X	X		X												
12 SB-8-35	35	1320				X	X	X		X												
13 SB-7-W	-	1040	W	4 Vol, 2 bottle		X	X	X		X												
14 SB-8-W	-	1355	W	5 Vol, 2 b. 4g		X	X	X		X												
15																						
16																						
17																						

Relinquished by: 	Date / Time: 2/5/22 1140	Received by: 	Date / Time: 2/6/22 1140	Sample Receipt		Remarks:
Relinquished by:	Date / Time:	Received by:	Date / Time:	Good Condition?	Y N	
				Cooler Temp.	°C	
				Sample Temp.	°C	
Relinquished by:	Date / Time:	Received by:	Date / Time:	Total Number of Containers		TAT: 1-Day 2-Day 3-DAY



Libby Environmental, Inc.

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

Project: Franciscan-West Hauling
Project Number: 22-148
Project Manager: Scott Rose

City/State: Seattle, WA
Work Order: L24B015
Reported: 02/13/2024 17:05

Notes and Definitions

Item	Definition
RL	Reporting Limit
ND	Analyte NOT DETECTED at or above the reporting limit
DET	Analyte DETECTED at or above the reporting limit
Qual	Qualifier

All results reported on an "as received" basis unless indicated by "Dry"

Work Order Sample Summary

Lab ID	Sample	Matrix	Date Sampled	Date Received
L24B015-01	SB-7-5	Soil	02/02/2024	02/06/2024
L24B015-02	SB-7-10	Soil	02/02/2024	02/06/2024
L24B015-03	SB-7-15	Soil	02/02/2024	02/06/2024
L24B015-04	SB-7-20	Soil	02/02/2024	02/06/2024
L24B015-05	SB-7-25	Soil	02/02/2024	02/06/2024
L24B015-06	SB-7-30	Soil	02/02/2024	02/06/2024
L24B015-07	SB-8-10	Soil	02/02/2024	02/06/2024
L24B015-08	SB-8-15	Soil	02/02/2024	02/06/2024
L24B015-09	SB-8-20	Soil	02/02/2024	02/06/2024
L24B015-10	SB-8-25	Soil	02/02/2024	02/06/2024
L24B015-11	SB-8-30	Soil	02/02/2024	02/06/2024
L24B015-12	SB-8-35	Soil	02/02/2024	02/06/2024
L24B015-13	SB-7-W	Water	02/02/2024	02/06/2024
L24B015-14	SB-8-W	Water	02/02/2024	02/06/2024



Libby Environmental, Inc.

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

Project: Franciscan-West Hauling
Project Number: 22-148
Project Manager: Scott Rose

City/State: Seattle, WA
Work Order: L24B015
Reported: 02/13/2024 17:05

Libby Environmental Sample Detection Summary

Analyte	Result	Qual	Units	RL	Method
Sample: SB-8-W				Lab#: L24B015-14	
Diesel	240		ug/L	160	NWTPH-Dx/Dx

Note: If no entry is made, then no target compounds were detected.



Libby Environmental, Inc.

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

Project: Franciscan-West Hauling
Project Number: 22-148
Project Manager: Scott Rose

City/State: Seattle, WA
Work Order: L24B015
Reported: 02/13/2024 17:05

Sample Results

Client Sample ID: SB-7-20

Lab ID: L24B015-04 (Soil)

Analyte	Result	Qual	RL	Units	Date Analyzed	Analyst Initials
<u>Volatile Organic Compounds by EPA Method 8260D</u>						
Benzene	ND		0.012	mg/kg dry	02/07/2024	SC
Toluene	ND		0.060	mg/kg dry	02/07/2024	SC
Ethylbenzene	ND		0.030	mg/kg dry	02/07/2024	SC
Total Xylenes	ND		0.089	mg/kg dry	02/07/2024	SC
Vinyl Chloride (SIM)	ND		0.012	mg/kg dry	02/07/2024	SC
1,1-Dichloroethene	ND		0.030	mg/kg dry	02/07/2024	SC
trans-1,2-Dichloroethene	ND		0.018	mg/kg dry	02/07/2024	SC
cis-1,2-Dichloroethene	ND		0.018	mg/kg dry	02/07/2024	SC
Trichloroethene (SIM)	ND		0.012	mg/kg dry	02/07/2024	SC
Tetrachloroethene (SIM)	ND		0.012	mg/kg dry	02/07/2024	SC
<i>Surrogate: Dibromofluoromethane</i>	<i>116%</i>		<i>22.9-220</i>		<i>02/07/2024</i>	<i>SC</i>
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>121%</i>		<i>32.2-196</i>		<i>02/07/2024</i>	<i>SC</i>
<i>Surrogate: Toluene-d8</i>	<i>89.4%</i>		<i>47.3-146</i>		<i>02/07/2024</i>	<i>SC</i>
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>81.4%</i>		<i>38.4-136</i>		<i>02/07/2024</i>	<i>SC</i>
<u>Gasoline by Method NWTPH-Gx</u>						
Gasoline	ND		6.0	mg/kg dry	02/07/2024	SC
<i>Surrogate: Toluene-d8</i>	<i>89.4%</i>		<i>47.3-146</i>		<i>02/07/2024</i>	<i>SC</i>
<u>Diesel and Oil by NWTPH-Dx/Dx</u>						
Diesel	ND		57	mg/kg dry	02/07/2024	CA
Oil	ND		290	mg/kg dry	02/07/2024	CA
<i>Surrogate: 2-FBP</i>	<i>128%</i>		<i>43.6-129</i>		<i>02/07/2024</i>	<i>CA</i>
<u>Moisture by ASTM D2216-19</u>						
Moisture	13		0.50	%	02/07/2024	JC



Libby Environmental, Inc.

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

Project: Franciscan-West Hauling
Project Number: 22-148
Project Manager: Scott Rose

City/State: Seattle, WA
Work Order: L24B015
Reported: 02/13/2024 17:05

Sample Results (Continued)

Client Sample ID: SB-7-25

Lab ID: L24B015-05 (Soil)

Analyte	Result	Qual	RL	Units	Date Analyzed	Analyst Initials
<u>Volatile Organic Compounds by EPA Method 8260D</u>						
Benzene	ND		0.018	mg/kg dry	02/07/2024	SC
Toluene	ND		0.090	mg/kg dry	02/07/2024	SC
Ethylbenzene	ND		0.045	mg/kg dry	02/07/2024	SC
Total Xylenes	ND		0.14	mg/kg dry	02/07/2024	SC
Vinyl Chloride (SIM)	ND		0.018	mg/kg dry	02/07/2024	SC
1,1-Dichloroethene	ND		0.045	mg/kg dry	02/07/2024	SC
trans-1,2-Dichloroethene	ND		0.027	mg/kg dry	02/07/2024	SC
cis-1,2-Dichloroethene	ND		0.027	mg/kg dry	02/07/2024	SC
Trichloroethene (SIM)	ND		0.018	mg/kg dry	02/07/2024	SC
Tetrachloroethene (SIM)	ND		0.018	mg/kg dry	02/07/2024	SC
<i>Surrogate: Dibromofluoromethane</i>	<i>123%</i>		<i>22.9-220</i>		<i>02/07/2024</i>	<i>SC</i>
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>131%</i>		<i>32.2-196</i>		<i>02/07/2024</i>	<i>SC</i>
<i>Surrogate: Toluene-d8</i>	<i>84.4%</i>		<i>47.3-146</i>		<i>02/07/2024</i>	<i>SC</i>
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>82.7%</i>		<i>38.4-136</i>		<i>02/07/2024</i>	<i>SC</i>
<u>Gasoline by Method NWTPH-Gx</u>						
Gasoline	ND		9.0	mg/kg dry	02/07/2024	SC
<i>Surrogate: Toluene-d8</i>	<i>84.4%</i>		<i>47.3-146</i>		<i>02/07/2024</i>	<i>SC</i>
<u>Diesel and Oil by NWTPH-Dx/Dx</u>						
Diesel	ND		62	mg/kg dry	02/07/2024	CA
Oil	ND		310	mg/kg dry	02/07/2024	CA
<i>Surrogate: 2-FBP</i>	<i>108%</i>		<i>43.6-129</i>		<i>02/07/2024</i>	<i>CA</i>
<u>Moisture by ASTM D2216-19</u>						
Moisture	19		0.50	%	02/07/2024	JC



Libby Environmental, Inc.

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

Project: Franciscan-West Hauling
Project Number: 22-148
Project Manager: Scott Rose

City/State: Seattle, WA
Work Order: L24B015
Reported: 02/13/2024 17:05

Sample Results (Continued)

Client Sample ID: SB-7-30

Lab ID: L24B015-06 (Soil)

Analyte	Result	Qual	RL	Units	Date Analyzed	Analyst Initials
<u>Volatile Organic Compounds by EPA Method 8260D</u>						
Benzene	ND		0.015	mg/kg dry	02/07/2024	SC
Toluene	ND		0.077	mg/kg dry	02/07/2024	SC
Ethylbenzene	ND		0.038	mg/kg dry	02/07/2024	SC
Total Xylenes	ND		0.12	mg/kg dry	02/07/2024	SC
Vinyl Chloride (SIM)	ND		0.015	mg/kg dry	02/07/2024	SC
1,1-Dichloroethene	ND		0.038	mg/kg dry	02/07/2024	SC
trans-1,2-Dichloroethene	ND		0.023	mg/kg dry	02/07/2024	SC
cis-1,2-Dichloroethene	ND		0.023	mg/kg dry	02/07/2024	SC
Trichloroethene (SIM)	ND		0.015	mg/kg dry	02/07/2024	SC
Tetrachloroethene (SIM)	ND		0.015	mg/kg dry	02/07/2024	SC
<i>Surrogate: Dibromofluoromethane</i>	<i>122%</i>		<i>22.9-220</i>		<i>02/07/2024</i>	<i>SC</i>
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>132%</i>		<i>32.2-196</i>		<i>02/07/2024</i>	<i>SC</i>
<i>Surrogate: Toluene-d8</i>	<i>88.8%</i>		<i>47.3-146</i>		<i>02/07/2024</i>	<i>SC</i>
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>81.4%</i>		<i>38.4-136</i>		<i>02/07/2024</i>	<i>SC</i>
<u>Gasoline by Method NWTPH-Gx</u>						
Gasoline	ND		7.7	mg/kg dry	02/07/2024	SC
<i>Surrogate: Toluene-d8</i>	<i>88.8%</i>		<i>47.3-146</i>		<i>02/07/2024</i>	<i>SC</i>
<u>Diesel and Oil by NWTPH-Dx/Dx</u>						
Diesel	ND		65	mg/kg dry	02/07/2024	CA
Oil	ND		320	mg/kg dry	02/07/2024	CA
<i>Surrogate: 2-FBP</i>	<i>115%</i>		<i>43.6-129</i>		<i>02/07/2024</i>	<i>CA</i>
<u>Moisture by ASTM D2216-19</u>						
Moisture	23		0.50	%	02/07/2024	JC



Libby Environmental, Inc.

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

Project: Franciscan-West Hauling
Project Number: 22-148
Project Manager: Scott Rose

City/State: Seattle, WA
Work Order: L24B015
Reported: 02/13/2024 17:05

Sample Results (Continued)

Client Sample ID: SB-8-25

Lab ID: L24B015-10 (Soil)

Analyte	Result	Qual	RL	Units	Date Analyzed	Analyst Initials
<u>Volatile Organic Compounds by EPA Method 8260D</u>						
Benzene	ND		0.014	mg/kg dry	02/07/2024	SC
Toluene	ND		0.072	mg/kg dry	02/07/2024	SC
Ethylbenzene	ND		0.036	mg/kg dry	02/07/2024	SC
Total Xylenes	ND		0.11	mg/kg dry	02/07/2024	SC
Vinyl Chloride (SIM)	ND		0.014	mg/kg dry	02/07/2024	SC
1,1-Dichloroethene	ND		0.036	mg/kg dry	02/07/2024	SC
trans-1,2-Dichloroethene	ND		0.022	mg/kg dry	02/07/2024	SC
cis-1,2-Dichloroethene	ND		0.022	mg/kg dry	02/07/2024	SC
Trichloroethene (SIM)	ND		0.014	mg/kg dry	02/07/2024	SC
Tetrachloroethene (SIM)	ND		0.014	mg/kg dry	02/07/2024	SC
<i>Surrogate: Dibromofluoromethane</i>	<i>126%</i>		<i>22.9-220</i>		<i>02/07/2024</i>	<i>SC</i>
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>130%</i>		<i>32.2-196</i>		<i>02/07/2024</i>	<i>SC</i>
<i>Surrogate: Toluene-d8</i>	<i>86.2%</i>		<i>47.3-146</i>		<i>02/07/2024</i>	<i>SC</i>
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>80.4%</i>		<i>38.4-136</i>		<i>02/07/2024</i>	<i>SC</i>
<u>Gasoline by Method NWTPH-Gx</u>						
Gasoline	ND		7.2	mg/kg dry	02/07/2024	SC
<i>Surrogate: Toluene-d8</i>	<i>86.2%</i>		<i>47.3-146</i>		<i>02/07/2024</i>	<i>SC</i>
<u>Diesel and Oil by NWTPH-Dx/Dx</u>						
Diesel	ND		62	mg/kg dry	02/07/2024	CA
Oil	ND		310	mg/kg dry	02/07/2024	CA
<i>Surrogate: 2-FBP</i>	<i>106%</i>		<i>43.6-129</i>		<i>02/07/2024</i>	<i>CA</i>
<u>Moisture by ASTM D2216-19</u>						
Moisture	19		0.50	%	02/07/2024	JC



Libby Environmental, Inc.

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

Project: Franciscan-West Hauling
Project Number: 22-148
Project Manager: Scott Rose

City/State: Seattle, WA
Work Order: L24B015
Reported: 02/13/2024 17:05

Sample Results (Continued)

Client Sample ID: SB-8-30

Lab ID: L24B015-11 (Soil)

Analyte	Result	Qual	RL	Units	Date Analyzed	Analyst Initials
<u>Volatile Organic Compounds by EPA Method 8260D</u>						
Benzene	ND		0.012	mg/kg dry	02/07/2024	SC
Toluene	ND		0.059	mg/kg dry	02/07/2024	SC
Ethylbenzene	ND		0.029	mg/kg dry	02/07/2024	SC
Total Xylenes	ND		0.088	mg/kg dry	02/07/2024	SC
Vinyl Chloride (SIM)	ND		0.012	mg/kg dry	02/07/2024	SC
1,1-Dichloroethene	ND		0.029	mg/kg dry	02/07/2024	SC
trans-1,2-Dichloroethene	ND		0.018	mg/kg dry	02/07/2024	SC
cis-1,2-Dichloroethene	ND		0.018	mg/kg dry	02/07/2024	SC
Trichloroethene (SIM)	ND		0.012	mg/kg dry	02/07/2024	SC
Tetrachloroethene (SIM)	ND		0.012	mg/kg dry	02/07/2024	SC
<i>Surrogate: Dibromofluoromethane</i>	<i>123%</i>		<i>22.9-220</i>		<i>02/07/2024</i>	<i>SC</i>
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>125%</i>		<i>32.2-196</i>		<i>02/07/2024</i>	<i>SC</i>
<i>Surrogate: Toluene-d8</i>	<i>84.5%</i>		<i>47.3-146</i>		<i>02/07/2024</i>	<i>SC</i>
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>82.2%</i>		<i>38.4-136</i>		<i>02/07/2024</i>	<i>SC</i>
<u>Gasoline by Method NWTPH-Gx</u>						
Gasoline	ND		5.9	mg/kg dry	02/07/2024	SC
<i>Surrogate: Toluene-d8</i>	<i>84.5%</i>		<i>47.3-146</i>		<i>02/07/2024</i>	<i>SC</i>
<u>Diesel and Oil by NWTPH-Dx/Dx</u>						
Diesel	ND		60	mg/kg dry	02/07/2024	CA
Oil	ND		300	mg/kg dry	02/07/2024	CA
<i>Surrogate: 2-FBP</i>	<i>114%</i>		<i>43.6-129</i>		<i>02/07/2024</i>	<i>CA</i>
<u>Moisture by ASTM D2216-19</u>						
Moisture	16		0.50	%	02/07/2024	JC



Libby Environmental, Inc.

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

Project: Franciscan-West Hauling
Project Number: 22-148
Project Manager: Scott Rose

City/State: Seattle, WA
Work Order: L24B015
Reported: 02/13/2024 17:05

Sample Results (Continued)

Client Sample ID: SB-8-35

Lab ID: L24B015-12 (Soil)

Analyte	Result	Qual	RL	Units	Date Analyzed	Analyst Initials
<u>Volatile Organic Compounds by EPA Method 8260D</u>						
Benzene	ND		0.014	mg/kg dry	02/07/2024	SC
Toluene	ND		0.068	mg/kg dry	02/07/2024	SC
Ethylbenzene	ND		0.034	mg/kg dry	02/07/2024	SC
Total Xylenes	ND		0.10	mg/kg dry	02/07/2024	SC
Vinyl Chloride (SIM)	ND		0.014	mg/kg dry	02/07/2024	SC
1,1-Dichloroethene	ND		0.034	mg/kg dry	02/07/2024	SC
trans-1,2-Dichloroethene	ND		0.020	mg/kg dry	02/07/2024	SC
cis-1,2-Dichloroethene	ND		0.020	mg/kg dry	02/07/2024	SC
Trichloroethene (SIM)	ND		0.014	mg/kg dry	02/07/2024	SC
Tetrachloroethene (SIM)	ND		0.014	mg/kg dry	02/07/2024	SC
<i>Surrogate: Dibromofluoromethane</i>	<i>125%</i>		<i>22.9-220</i>		<i>02/07/2024</i>	<i>SC</i>
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>124%</i>		<i>32.2-196</i>		<i>02/07/2024</i>	<i>SC</i>
<i>Surrogate: Toluene-d8</i>	<i>81.2%</i>		<i>47.3-146</i>		<i>02/07/2024</i>	<i>SC</i>
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>79.6%</i>		<i>38.4-136</i>		<i>02/07/2024</i>	<i>SC</i>
<u>Gasoline by Method NWTPH-Gx</u>						
Gasoline	ND		6.8	mg/kg dry	02/07/2024	SC
<i>Surrogate: Toluene-d8</i>	<i>81.2%</i>		<i>47.3-146</i>		<i>02/07/2024</i>	<i>SC</i>
<u>Diesel and Oil by NWTPH-Dx/Dx</u>						
Diesel	ND		65	mg/kg dry	02/07/2024	CA
Oil	ND		320	mg/kg dry	02/07/2024	CA
<i>Surrogate: 2-FBP</i>	<i>106%</i>		<i>43.6-129</i>		<i>02/07/2024</i>	<i>CA</i>
<u>Moisture by ASTM D2216-19</u>						
Moisture	23		0.50	%	02/07/2024	JC



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Project: Franciscan-West Hauling
Project Number: 22-148
Project Manager: Scott Rose

City/State: Seattle, WA
Work Order: L24B015
Reported: 02/13/2024 17:05

Sample Results (Continued)

Client Sample ID: SB-7-W

Lab ID: L24B015-13 (Water)

Analyte	Result	Qual	RL	Units	Date Analyzed	Analyst Initials
<u>Volatile Organic Compounds by EPA Method 8260D</u>						
Benzene	ND		1.0	ug/L	02/07/2024	SC
Toluene	ND		2.0	ug/L	02/07/2024	SC
Ethylbenzene	ND		1.0	ug/L	02/07/2024	SC
Total Xylenes	ND		2.0	ug/L	02/07/2024	SC
Vinyl Chloride (SIM)	ND		0.20	ug/L	02/07/2024	SC
1,1-Dichloroethene	ND		0.50	ug/L	02/07/2024	SC
trans-1,2-Dichloroethene	ND		1.0	ug/L	02/07/2024	SC
cis-1,2-Dichloroethene	ND		1.0	ug/L	02/07/2024	SC
Trichloroethene (SIM)	ND		0.40	ug/L	02/07/2024	SC
Tetrachloroethene (SIM)	ND		1.0	ug/L	02/07/2024	SC
<i>Surrogate: Dibromofluoromethane</i>	<i>118%</i>		<i>22.9-220</i>		<i>02/07/2024</i>	<i>SC</i>
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>126%</i>		<i>32.2-196</i>		<i>02/07/2024</i>	<i>SC</i>
<i>Surrogate: Toluene-d8</i>	<i>87.4%</i>		<i>47.3-146</i>		<i>02/07/2024</i>	<i>SC</i>
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>89.0%</i>		<i>38.4-136</i>		<i>02/07/2024</i>	<i>SC</i>
<u>Gasoline by Method NWTPH-Gx</u>						
Gasoline	ND		100	ug/L	02/07/2024	SC
<i>Surrogate: Toluene-d8</i>	<i>87.4%</i>		<i>47.3-146</i>		<i>02/07/2024</i>	<i>SC</i>
<u>Diesel and Oil by NWTPH-Dx/Dx</u>						
Diesel	ND		160	ug/L	02/07/2024	KLI
Oil	ND		330	ug/L	02/07/2024	KLI
<i>Surrogate: 2-FBP</i>	<i>65.2%</i>		<i>56.7-134</i>		<i>02/07/2024</i>	<i>KLI</i>



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 Olympia, WA 98502

Project: Franciscan-West Hauling
Project Number: 22-148
Project Manager: Scott Rose

City/State: Seattle, WA
Work Order: L24B015
Reported: 02/13/2024 17:05

Sample Results (Continued)

Client Sample ID: SB-8-W

Lab ID: L24B015-14 (Water)

Analyte	Result	Qual	RL	Units	Date Analyzed	Analyst Initials
<u>Volatile Organic Compounds by EPA Method 8260D</u>						
Benzene	ND		1.0	ug/L	02/07/2024	SC
Toluene	ND		2.0	ug/L	02/07/2024	SC
Ethylbenzene	ND		1.0	ug/L	02/07/2024	SC
Total Xylenes	ND		2.0	ug/L	02/07/2024	SC
Vinyl Chloride (SIM)	ND		0.20	ug/L	02/07/2024	SC
1,1-Dichloroethene	ND		0.50	ug/L	02/07/2024	SC
trans-1,2-Dichloroethene	ND		1.0	ug/L	02/07/2024	SC
cis-1,2-Dichloroethene	ND		1.0	ug/L	02/07/2024	SC
Trichloroethene (SIM)	ND		0.40	ug/L	02/07/2024	SC
Tetrachloroethene (SIM)	ND		1.0	ug/L	02/07/2024	SC
<i>Surrogate: Dibromofluoromethane</i>	<i>116%</i>		<i>22.9-220</i>		<i>02/07/2024</i>	<i>SC</i>
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>127%</i>		<i>32.2-196</i>		<i>02/07/2024</i>	<i>SC</i>
<i>Surrogate: Toluene-d8</i>	<i>83.8%</i>		<i>47.3-146</i>		<i>02/07/2024</i>	<i>SC</i>
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>87.6%</i>		<i>38.4-136</i>		<i>02/07/2024</i>	<i>SC</i>
<u>Gasoline by Method NWTPH-Gx</u>						
Gasoline	ND		100	ug/L	02/07/2024	SC
<i>Surrogate: Toluene-d8</i>	<i>83.8%</i>		<i>47.3-146</i>		<i>02/07/2024</i>	<i>SC</i>
<u>Diesel and Oil by NWTPH-Dx/Dx</u>						
Diesel	240		160	ug/L	02/07/2024	KLI
Oil	ND		320	ug/L	02/07/2024	KLI
<i>Surrogate: 2-FBP</i>	<i>79.8%</i>		<i>56.7-134</i>		<i>02/07/2024</i>	<i>KLI</i>



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Project: Franciscan-West Hauling
Project Number: 22-148
Project Manager: Scott Rose

City/State: Seattle, WA
Work Order: L24B015
Reported: 02/13/2024 17:05

Quality Control

Volatile Organic Compounds by EPA Method 8260D

Analyte	Result	Qual	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch: BYB0033 - VOA

Blank (BYB0033-BLK1)

Prepared & Analyzed: 2/7/2024

Vinyl Chloride (SIM)	ND		0.020	mg/kg wet						
1,1-Dichloroethene	ND		0.050	mg/kg wet						
trans-1,2-Dichloroethene	ND		0.030	mg/kg wet						
cis-1,2-Dichloroethene	ND		0.030	mg/kg wet						
Benzene	ND		0.020	mg/kg wet						
Trichloroethene (SIM)	ND		0.020	mg/kg wet						
Toluene	ND		0.10	mg/kg wet						
Tetrachloroethene (SIM)	ND		0.020	mg/kg wet						
Ethylbenzene	ND		0.050	mg/kg wet						
Total Xylenes	ND		0.15	mg/kg wet						

LCS (BYB0033-BS1)

Prepared & Analyzed: 2/7/2024

Vinyl Chloride (SIM)	0.203		0.020	mg/kg wet	0.250		81.1	44.2-183		
1,1-Dichloroethene	0.263		0.050	mg/kg wet	0.250		105	39.6-181		
trans-1,2-Dichloroethene	0.241		0.030	mg/kg wet	0.250		96.5	39.6-177		
cis-1,2-Dichloroethene	0.247		0.030	mg/kg wet	0.250		98.9	29.5-182		
Benzene	0.236		0.020	mg/kg wet	0.250		94.5	56.1-138		
Trichloroethene (SIM)	0.202		0.020	mg/kg wet	0.250		80.6	28.8-130		
Toluene	0.235		0.10	mg/kg wet	0.250		93.9	54-132		
Tetrachloroethene (SIM)	0.219		0.020	mg/kg wet	0.250		87.5	30.4-159		
Ethylbenzene	0.197		0.050	mg/kg wet	0.250		79.0	53.8-127		
Total Xylenes	0.535		0.15	mg/kg wet	0.750		71.3	37.5-127		
Surrogate: Dibromofluoromethane			23.3	ug/L	20.0		117	22.9-220		
Surrogate: 1,2-Dichloroethane-d4			21.3	ug/L	20.0		107	32.2-196		
Surrogate: Toluene-d8			20.7	ug/L	20.0		104	47.3-146		
Surrogate: 4-Bromofluorobenzene			18.7	ug/L	20.0		93.7	38.4-136		

Duplicate (BYB0033-DUP1)

Parent: L24B015-12

Prepared & Analyzed: 2/7/2024

Vinyl Chloride (SIM)	ND		0.015	mg/kg dry		ND				35
1,1-Dichloroethene	ND		0.037	mg/kg dry		ND				35
trans-1,2-Dichloroethene	ND		0.022	mg/kg dry		ND				35
cis-1,2-Dichloroethene	ND		0.022	mg/kg dry		ND				35
Benzene	ND		0.015	mg/kg dry		ND				35
Trichloroethene (SIM)	ND		0.015	mg/kg dry		ND				35
Toluene	ND		0.074	mg/kg dry		ND				35
Tetrachloroethene (SIM)	ND		0.015	mg/kg dry		ND				35
Ethylbenzene	ND		0.037	mg/kg dry		ND				35
Total Xylenes	ND		0.11	mg/kg dry		ND				35
Surrogate: Dibromofluoromethane			25.0	ug/L	20.0		125	22.9-220		
Surrogate: 1,2-Dichloroethane-d4			26.4	ug/L	20.0		132	32.2-196		
Surrogate: Toluene-d8			16.1	ug/L	20.0		80.6	47.3-146		
Surrogate: 4-Bromofluorobenzene			15.8	ug/L	20.0		79.2	38.4-136		



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 2633 Parkmont Lane SW, Suite A
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Project: Franciscan-West Hauling
Project Number: 22-148
Project Manager: Scott Rose

City/State: Seattle, WA
Work Order: L24B015
Reported: 02/13/2024 17:05

Quality Control (Continued)

Volatile Organic Compounds by EPA Method 8260D (Continued)

Analyte	Result	Qual	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Matrix Spike (BYB0033-MS1)		Parent: L24B015-12			Prepared & Analyzed: 2/7/2024					
Vinyl Chloride (SIM)	0.151		0.014	mg/kg dry	0.171	ND	88.3	30.4-218		
1,1-Dichloroethene	0.179		0.034	mg/kg dry	0.171	ND	105	44.2-190		
trans-1,2-Dichloroethene	0.162		0.020	mg/kg dry	0.171	ND	94.9	35.2-199		
cis-1,2-Dichloroethene	0.167		0.020	mg/kg dry	0.171	ND	97.4	36.9-180		
Benzene	0.158		0.014	mg/kg dry	0.171	ND	92.5	45.8-150		
Trichloroethene (SIM)	0.136		0.014	mg/kg dry	0.171	ND	79.3	43-151		
Toluene	0.258		0.068	mg/kg dry	0.171	ND	151	19.5-171		
Tetrachloroethene (SIM)	0.159		0.014	mg/kg dry	0.171	ND	93.1	48-141		
Ethylbenzene	0.179		0.034	mg/kg dry	0.171	ND	104	11.2-170		
Total Xylenes	0.630		0.10	mg/kg dry	0.514	ND	123	10-163		
<i>Surrogate: Dibromofluoromethane</i>			22.5	ug/L	20.0		113	22.9-220		
<i>Surrogate: 1,2-Dichloroethane-d4</i>			21.5	ug/L	20.0		108	32.2-196		
<i>Surrogate: Toluene-d8</i>			15.9	ug/L	20.0		79.4	47.3-146		
<i>Surrogate: 4-Bromofluorobenzene</i>			18.9	ug/L	20.0		94.7	38.4-136		

Batch: BYB0028 - VOA

Blank (BYB0028-BLK1)

Prepared & Analyzed: 2/7/2024

Vinyl Chloride (SIM)	ND		0.20	ug/L						
1,1-Dichloroethene	ND		0.50	ug/L						
trans-1,2-Dichloroethene	ND		1.0	ug/L						
cis-1,2-Dichloroethene	ND		1.0	ug/L						
Benzene	ND		1.0	ug/L						
Trichloroethene (SIM)	ND		0.40	ug/L						
Toluene	ND		2.0	ug/L						
Tetrachloroethene (SIM)	ND		1.0	ug/L						
Ethylbenzene	ND		1.0	ug/L						
Total Xylenes	ND		2.0	ug/L						
<i>Surrogate: Dibromofluoromethane</i>			23.5	ug/L	20.0		117	22.9-220		
<i>Surrogate: 1,2-Dichloroethane-d4</i>			25.1	ug/L	20.0		125	32.2-196		
<i>Surrogate: Toluene-d8</i>			17.6	ug/L	20.0		87.8	47.3-146		
<i>Surrogate: 4-Bromofluorobenzene</i>			16.7	ug/L	20.0		83.4	38.4-136		

LCS (BYB0028-BS1)

Prepared & Analyzed: 2/7/2024

Vinyl Chloride (SIM)	4.06		0.20	ug/L	5.00		81.1	44.2-183		
1,1-Dichloroethene	5.26		0.50	ug/L	5.00		105	39.6-181		
trans-1,2-Dichloroethene	4.82		1.0	ug/L	5.00		96.5	39.6-177		
cis-1,2-Dichloroethene	4.94		1.0	ug/L	5.00		98.9	29.5-182		
Benzene	4.72		1.0	ug/L	5.00		94.5	56.1-138		
Trichloroethene (SIM)	4.03		0.40	ug/L	5.00		80.6	28.8-130		
Toluene	4.70		2.0	ug/L	5.00		93.9	54-132		
Tetrachloroethene (SIM)	4.37		1.0	ug/L	5.00		87.5	30.4-159		
Ethylbenzene	3.95		1.0	ug/L	5.00		79.0	53.8-127		
Total Xylenes	10.7		2.0	ug/L	15.0		71.3	37.5-127		
<i>Surrogate: Dibromofluoromethane</i>			23.3	ug/L	20.0		117	22.9-220		
<i>Surrogate: 1,2-Dichloroethane-d4</i>			21.3	ug/L	20.0		107	32.2-196		
<i>Surrogate: Toluene-d8</i>			20.7	ug/L	20.0		104	47.3-146		
<i>Surrogate: 4-Bromofluorobenzene</i>			18.7	ug/L	20.0		93.7	38.4-136		



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Project: Franciscan-West Hauling
Project Number: 22-148
Project Manager: Scott Rose

City/State: Seattle, WA
Work Order: L24B015
Reported: 02/13/2024 17:05

Quality Control (Continued)

Volatile Organic Compounds by EPA Method 8260D (Continued)

Analyte	Result	Qual	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Duplicate (BYB0028-DUP1)		Parent: L24B015-14			Prepared & Analyzed: 2/7/2024					
Vinyl Chloride (SIM)	ND		0.20	ug/L		ND				35
1,1-Dichloroethene	ND		0.50	ug/L		ND				35
trans-1,2-Dichloroethene	ND		1.0	ug/L		ND				35
cis-1,2-Dichloroethene	ND		1.0	ug/L		ND				35
Benzene	ND		1.0	ug/L		ND				35
Trichloroethene (SIM)	ND		0.40	ug/L		ND				35
Toluene	ND		2.0	ug/L		ND				35
Tetrachloroethene (SIM)	ND		1.0	ug/L		ND				35
Ethylbenzene	ND		1.0	ug/L		ND				35
Total Xylenes	ND		2.0	ug/L		ND				35
Surrogate: Dibromofluoromethane			24.3	ug/L	20.0		121	22.9-220		
Surrogate: 1,2-Dichloroethane-d4			26.0	ug/L	20.0		130	32.2-196		
Surrogate: Toluene-d8			16.9	ug/L	20.0		84.7	47.3-146		
Surrogate: 4-Bromofluorobenzene			17.7	ug/L	20.0		88.6	38.4-136		
Matrix Spike (BYB0028-MS1)		Parent: L24B015-14			Prepared & Analyzed: 2/7/2024					
Vinyl Chloride (SIM)	3.68		0.20	ug/L	5.00	ND	73.7	10.7-223		
1,1-Dichloroethene	4.16		0.50	ug/L	5.00	ND	83.2	21.7-199		
trans-1,2-Dichloroethene	4.22		1.0	ug/L	5.00	ND	84.4	10-216		
cis-1,2-Dichloroethene	4.21		1.0	ug/L	5.00	ND	84.1	10-246		
Benzene	4.23		1.0	ug/L	5.00	ND	84.6	10-188		
Trichloroethene (SIM)	3.64		0.40	ug/L	5.00	ND	72.9	25.2-172		
Toluene	3.74		2.0	ug/L	5.00	ND	74.8	10-251		
Tetrachloroethene (SIM)	4.13		1.0	ug/L	5.00	ND	82.6	43.2-139		
Ethylbenzene	3.53		1.0	ug/L	5.00	ND	70.5	10-267		
Total Xylenes	9.31		2.0	ug/L	15.0	ND	62.1	10-184		
Surrogate: Dibromofluoromethane			23.2	ug/L	20.0		116	22.9-220		
Surrogate: 1,2-Dichloroethane-d4			24.8	ug/L	20.0		124	32.2-196		
Surrogate: Toluene-d8			17.6	ug/L	20.0		88.1	47.3-146		
Surrogate: 4-Bromofluorobenzene			19.3	ug/L	20.0		96.5	38.4-136		
Matrix Spike Dup (BYB0028-MSD1)		Parent: L24B015-14			Prepared & Analyzed: 2/7/2024					
Vinyl Chloride (SIM)	4.59		0.20	ug/L	5.00	ND	91.8	10.7-223	21.9	35
1,1-Dichloroethene	5.72		0.50	ug/L	5.00	ND	114	21.7-199	31.5	35
trans-1,2-Dichloroethene	5.12		1.0	ug/L	5.00	ND	102	10-216	19.2	35
cis-1,2-Dichloroethene	5.07		1.0	ug/L	5.00	ND	101	10-246	18.6	35
Benzene	4.95		1.0	ug/L	5.00	ND	99.0	10-188	15.7	35
Trichloroethene (SIM)	4.91		0.40	ug/L	5.00	ND	98.3	25.2-172	29.7	35
Toluene	4.54		2.0	ug/L	5.00	ND	90.8	10-251	19.3	35
Tetrachloroethene (SIM)	4.69		1.0	ug/L	5.00	ND	93.7	43.2-139	12.6	35
Ethylbenzene	3.95		1.0	ug/L	5.00	ND	79.0	10-267	11.3	35
Total Xylenes	10.6		2.0	ug/L	15.0	ND	70.9	10-184	13.3	35
Surrogate: Dibromofluoromethane			24.8	ug/L	20.0		124	22.9-220		
Surrogate: 1,2-Dichloroethane-d4			23.7	ug/L	20.0		118	32.2-196		
Surrogate: Toluene-d8			18.0	ug/L	20.0		90.1	47.3-146		
Surrogate: 4-Bromofluorobenzene			19.1	ug/L	20.0		95.6	38.4-136		



Libby Environmental, Inc.

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

Project: Franciscan-West Hauling
Project Number: 22-148
Project Manager: Scott Rose

City/State: Seattle, WA
Work Order: L24B015
Reported: 02/13/2024 17:05

Quality Control (Continued)

Gasoline by Method NWTPH-Gx

Analyte	Result	Qual	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BYB0033 - VOA										
Blank (BYB0033-BLK1)										
Gasoline	ND		10	mg/kg wet						
Surrogate: Toluene-d8			17.6	ug/L	20.0		87.8	47.3-146		
Prepared & Analyzed: 2/7/2024										
Duplicate (BYB0033-DUP1)										
Gasoline	ND		7.4	mg/kg dry		ND				35
Surrogate: Toluene-d8			16.1	ug/L	20.0		80.6	47.3-146		
Parent: L24B015-12										
Prepared & Analyzed: 2/7/2024										
Batch: BYB0028 - VOA										
Blank (BYB0028-BLK1)										
Gasoline	ND		100	ug/L						
Surrogate: Toluene-d8			17.6	ug/L	20.0		87.8	47.3-146		
Prepared & Analyzed: 2/7/2024										
Duplicate (BYB0028-DUP1)										
Gasoline	ND		100	ug/L		ND				35
Surrogate: Toluene-d8			16.9	ug/L	20.0		84.7	47.3-146		
Parent: L24B015-14										
Prepared & Analyzed: 2/7/2024										



Libby Environmental, Inc.

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

Project: Franciscan-West Hauling
Project Number: 22-148
Project Manager: Scott Rose

City/State: Seattle, WA
Work Order: L24B015
Reported: 02/13/2024 17:05

Quality Control (Continued)

Diesel and Oil by NWTPH-Dx/Dx

Analyte	Result	Qual	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch: BYB0027 - Extraction

Blank (BYB0027-BLK1)

Prepared & Analyzed: 2/7/2024

Diesel	ND		50	mg/kg wet						
Oil	ND		250	mg/kg wet						
<i>Surrogate: 2-FBP</i>			20.2	ug/mL	20.0		101	43.6-129		

LCS (BYB0027-BS1)

Prepared & Analyzed: 2/7/2024

Diesel	109		50	mg/kg wet	100		109	72.6-130		
<i>Surrogate: 2-FBP</i>			24.7	ug/mL	20.0		124	43.6-129		

Duplicate (BYB0027-DUP1)

Parent: L24B015-04

Prepared & Analyzed: 2/7/2024

Diesel	ND		57	mg/kg dry		ND				35
Oil	ND		290	mg/kg dry		48.7				35
<i>Surrogate: 2-FBP</i>			21.4	ug/mL	20.0		107	43.6-129		

Batch: BYB0025 - Extraction

Blank (BYB0025-BLK1)

Prepared & Analyzed: 2/7/2024

Diesel	ND		200	ug/L						
Oil	ND		400	ug/L						
<i>Surrogate: 2-FBP</i>			15.6	ug/mL	20.0		78.1	56.7-134		

LCS (BYB0025-BS1)

Prepared & Analyzed: 2/7/2024

Diesel	881		200	ug/L	1000		88.1	50.2-155		
<i>Surrogate: 2-FBP</i>			15.7	ug/mL	20.0		78.6	56.7-134		

Duplicate (BYB0025-DUP1)

Parent: L24B015-13

Prepared & Analyzed: 2/7/2024

Diesel	203		160	ug/L		143			34.4	35
Oil	ND		330	ug/L		ND				35
<i>Surrogate: 2-FBP</i>			15.8	ug/mL	20.0		79.2	56.7-134		



Libby Environmental, Inc.

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

Project: Franciscan-West Hauling
Project Number: 22-148
Project Manager: Scott Rose

City/State: Seattle, WA
Work Order: L24B015
Reported: 02/13/2024 17:05

Quality Control (Continued)

Moisture by ASTM D2216-19

Analyte	Result	Qual	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch: BYB0024 - Gen Chem

LCS (BYB0024-BS1)

Prepared & Analyzed: 2/7/2024

Moisture	16			%	17.0		96.4	90-115		
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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 Hauling Project
AEG an Atlas Geosciences NW Company
Libby Work Order # L24B015

Date Received 2/6/2024

Time Received 11:40 AM

Received By JC

Sample Receipt Checklist

Chain of Custody

1. Is the Chain of Custody is 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) -0.1 °C
8. Temperature of sample(s) (0°C to 8°C recommended) 2.0 °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: _____

Date: _____

By Whom: _____

Via: _____

Regarding: _____

19. Comments. _____

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

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

February 27, 2024

Scott Rose, Project Manager
AEG
2633 Parkmont Lane SW, Suite A
Olympia, WA 98502

Dear Mr Rose:

Included are the results from the testing of material submitted on February 19, 2024 from the Franciscan-West Huling 22-148, F&BI 402259 project. There are 25 pages included in this report.

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

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures

c: AEG A/P, Nathan Dickey, phitch@aegwa.com, emelegh@aegwa.com,
jloughlin@AEGWA.com
AEG0227R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on February 19, 2024 by Friedman & Bruya, Inc. from the AEG Franciscan-West Huling 22-148, F&BI 402259 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>AEG</u>
402259 -01	SS-1
402259 -02	SS-2
402259 -03	SS-3
402259 -04	SS-4
402259 -05	SS-5
402259 -06	IA-1
402259 -07	IA-2
402259 -08	Ambient

Non-petroleum compounds identified in the air phase hydrocarbon (APH) ranges were subtracted per the MA-APH method.

The TO-15 calibration standard for several compounds did not meet the acceptance criteria. The data were flagged accordingly.

The concentration of the several analytes exceeded the calibration range of the instrument. The data were flagged accordingly.

All other quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	SS-1	Client:	AEG
Date Received:	02/19/24	Project:	Franciscan-West Huling 22-148
Date Collected:	02/17/22	Lab ID:	402259-01 1/8.0
Date Analyzed:	02/20/24	Data File:	021929.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

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

Compounds:	Concentration
	ug/m3
APH EC5-8 aliphatics	850
APH EC9-12 aliphatics	<200
APH EC9-10 aromatics	<200

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	SS-2	Client:	AEG
Date Received:	02/19/24	Project:	Franciscan-West Huling 22-148
Date Collected:	02/17/22	Lab ID:	402259-02 1/7.9
Date Analyzed:	02/20/24	Data File:	021927.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	88	70	130

Compounds:	Concentration
	ug/m3
APH EC5-8 aliphatics	910
APH EC9-12 aliphatics	260
APH EC9-10 aromatics	<200

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	SS-3	Client:	AEG
Date Received:	02/19/24	Project:	Franciscan-West Huling 22-148
Date Collected:	02/17/22	Lab ID:	402259-03 1/7.8
Date Analyzed:	02/20/24	Data File:	021926.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	87	70	130

Compounds:	Concentration
	ug/m3
APH EC5-8 aliphatics	1,100
APH EC9-12 aliphatics	520
APH EC9-10 aromatics	<190

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	SS-4	Client:	AEG
Date Received:	02/19/24	Project:	Franciscan-West Huling 22-148
Date Collected:	02/17/22	Lab ID:	402259-04 1/8.5
Date Analyzed:	02/20/24	Data File:	021925.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	86	70	130

Compounds:	Concentration
	ug/m3
APH EC5-8 aliphatics	1,100
APH EC9-12 aliphatics	<210
APH EC9-10 aromatics	<210

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	SS-5	Client:	AEG
Date Received:	02/19/24	Project:	Franciscan-West Huling 22-148
Date Collected:	02/17/22	Lab ID:	402259-05 1/8.4
Date Analyzed:	02/20/24	Data File:	021924.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

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

Compounds:	Concentration
	ug/m3
APH EC5-8 aliphatics	900
APH EC9-12 aliphatics	<210
APH EC9-10 aromatics	<210

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	IA-1	Client:	AEG
Date Received:	02/19/24	Project:	Franciscan-West Huling 22-148
Date Collected:	02/17/22	Lab ID:	402259-06
Date Analyzed:	02/20/24	Data File:	021923.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	84	70	130

Compounds:	Concentration
	ug/m3
APH EC5-8 aliphatics	<75
APH EC9-12 aliphatics	<25
APH EC9-10 aromatics	<25

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	IA-2	Client:	AEG
Date Received:	02/19/24	Project:	Franciscan-West Huling 22-148
Date Collected:	02/17/22	Lab ID:	402259-07
Date Analyzed:	02/20/24	Data File:	021922.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	86	70	130

Compounds:	Concentration
	ug/m3
APH EC5-8 aliphatics	<75
APH EC9-12 aliphatics	<25
APH EC9-10 aromatics	<25

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	Ambient	Client:	AEG
Date Received:	02/19/24	Project:	Franciscan-West Huling 22-148
Date Collected:	02/17/22	Lab ID:	402259-08
Date Analyzed:	02/19/24	Data File:	021921.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	84	70	130

Compounds:	Concentration
	ug/m3
APH EC5-8 aliphatics	<75
APH EC9-12 aliphatics	<25
APH EC9-10 aromatics	<25

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	Method Blank	Client:	AEG
Date Received:	Not Applicable	Project:	Franciscan-West Huling 22-148
Date Collected:	Not Applicable	Lab ID:	04-0444 MB
Date Analyzed:	02/19/24	Data File:	021912.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	85	70	130

Compounds:	Concentration
	ug/m3
APH EC5-8 aliphatics	<75
APH EC9-12 aliphatics	<25
APH EC9-10 aromatics	<25

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	SS-1	Client:	AEG
Date Received:	02/19/24	Project:	Franciscan-West Huling 22-148
Date Collected:	02/17/24	Lab ID:	402259-01 1/8.0
Date Analyzed:	02/20/24	Data File:	021929.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	93	70	130

Compounds:	Concentration ug/m3	Concentration ppbv	Compounds:	Concentration ug/m3	Concentration ppbv
Propene	<9.6	<5.6	1,2-Dichloropropane	<1.8	<0.4
Dichlorodifluoromethane	<7.9	<1.6	1,4-Dioxane	<2.9	<0.8
Chloromethane	<30	<14	2,2,4-Trimethylpentane	<37	<8
F-114	<17	<2.4	Methyl methacrylate	<33	<8
Vinyl chloride	<2	<0.8	Heptane	<33	<8
1,3-Butadiene	<0.35	<0.16	Bromodichloromethane	0.59	0.088
Butane	<38	<16	Trichloroethene	<0.86	<0.16
Bromomethane	<31	<8	cis-1,3-Dichloropropene	<7.3	<1.6
Chloroethane	<21	<8	4-Methyl-2-pentanone	<66	<16
Vinyl bromide	<3.5	<0.8	trans-1,3-Dichloropropene	<3.6	<0.8
Ethanol	83 ca	44 ca	Toluene	<60	<16
Acrolein	<0.92 ca	<0.4 ca	1,1,2-Trichloroethane	<0.44	<0.08
Pentane	<47	<16	2-Hexanone	<33	<8
Trichlorofluoromethane	<18	<3.2	Tetrachloroethene	<54	<8
Acetone	51	21	Dibromochloromethane	<0.68	<0.08
2-Propanol	<69	<28	1,2-Dibromoethane (EDB)	<0.61	<0.08
1,1-Dichloroethene	<3.2	<0.8	Chlorobenzene	<3.7	<0.8
trans-1,2-Dichloroethene	<3.2	<0.8	Ethylbenzene	<3.5	<0.8
Methylene chloride	<280	<80	1,1,2,2-Tetrachloroethane	<1.1	<0.16
t-Butyl alcohol (TBA)	<97	<32	Nonane	<42	<8
3-Chloropropene	<25	<8	Isopropylbenzene	<79	<16
CFC-113	<12	<1.6	2-Chlorotoluene	<41	<8
Carbon disulfide	<50	<16	Propylbenzene	<39	<8
Methyl t-butyl ether (MTBE)	<58	<16	4-Ethyltoluene	<39	<8
Vinyl acetate	<56 k	<16 k	m,p-Xylene	<6.9	<1.6
1,1-Dichloroethane	<3.2	<0.8	o-Xylene	<3.5	<0.8
cis-1,2-Dichloroethene	<3.2	<0.8	Styrene	<6.8	<1.6
Hexane	<28	<8	Bromoform	<17	<1.6
Chloroform	20	4.2	Benzyl chloride	<0.41 k	<0.08 k
Ethyl acetate	<58	<16	1,3,5-Trimethylbenzene	<39	<8
Tetrahydrofuran	<4.7	<1.6	1,2,4-Trimethylbenzene	<39	<8
2-Butanone (MEK)	<47	<16	1,3-Dichlorobenzene	<4.8	<0.8
1,2-Dichloroethane (EDC)	<0.32	<0.08	1,4-Dichlorobenzene	<1.8	<0.3
1,1,1-Trichloroethane	<4.4	<0.8	1,2-Dichlorobenzene	<4.8	<0.8
Carbon tetrachloride	<2.5	<0.4	1,2,4-Trichlorobenzene	<5.9	<0.8
Benzene	<2.6	<0.8	Naphthalene	<2.1	<0.4
Cyclohexane	<55	<16	Hexachlorobutadiene	<1.7	<0.16

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID: SS-2	Client: AEG	
Date Received: 02/19/24	Project: Franciscan-West Huling 22-148	
Date Collected: 02/17/24	Lab ID: 402259-02 1/7.9	
Date Analyzed: 02/20/24	Data File: 021927.D	
Matrix: Air	Instrument: GCMS7	
Units: ug/m3	Operator: bat	

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

Compounds:	Concentration ug/m3	Concentration ppbv	Compounds:	Concentration ug/m3	Concentration ppbv
Propene	<9.5	<5.5	1,2-Dichloropropane	<1.8	<0.39
Dichlorodifluoromethane	<7.8	<1.6	1,4-Dioxane	<2.8	<0.79
Chloromethane	<29	<14	2,2,4-Trimethylpentane	<37	<7.9
F-114	<17	<2.4	Methyl methacrylate	<32	<7.9
Vinyl chloride	<2	<0.79	Heptane	<32	<7.9
1,3-Butadiene	<0.35	<0.16	Bromodichloromethane	<0.53	<0.079
Butane	<38	<16	Trichloroethene	<0.85	<0.16
Bromomethane	<31	<7.9	cis-1,3-Dichloropropene	<7.2	<1.6
Chloroethane	<21	<7.9	4-Methyl-2-pentanone	<65	<16
Vinyl bromide	<3.5	<0.79	trans-1,3-Dichloropropene	<3.6	<0.79
Ethanol	390 ve ca	200 ve ca	Toluene	<60	<16
Acrolein	<0.91 ca	<0.39 ca	1,1,2-Trichloroethane	<0.43	<0.079
Pentane	<47	<16	2-Hexanone	<32	<7.9
Trichlorofluoromethane	<18	<3.2	Tetrachloroethene	<54	<7.9
Acetone	450 ve	190 ve	Dibromochloromethane	<0.67	<0.079
2-Propanol	190	78	1,2-Dibromoethane (EDB)	<0.61	<0.079
1,1-Dichloroethene	<3.1	<0.79	Chlorobenzene	<3.6	<0.79
trans-1,2-Dichloroethene	<3.1	<0.79	Ethylbenzene	<3.4	<0.79
Methylene chloride	<270	<79	1,1,2,2-Tetrachloroethane	<1.1	<0.16
t-Butyl alcohol (TBA)	<96	<32	Nonane	<41	<7.9
3-Chloropropene	<25	<7.9	Isopropylbenzene	<78	<16
CFC-113	<12	<1.6	2-Chlorotoluene	<41	<7.9
Carbon disulfide	<49	<16	Propylbenzene	<39	<7.9
Methyl t-butyl ether (MTBE)	<57	<16	4-Ethyltoluene	<39	<7.9
Vinyl acetate	<56 k	<16 k	m,p-Xylene	<6.9	<1.6
1,1-Dichloroethane	<3.2	<0.79	o-Xylene	<3.4	<0.79
cis-1,2-Dichloroethene	<3.1	<0.79	Styrene	<6.7	<1.6
Hexane	<28	<7.9	Bromoform	<16	<1.6
Chloroform	16	3.2	Benzyl chloride	<0.41 k	<0.079 k
Ethyl acetate	<57	<16	1,3,5-Trimethylbenzene	<39	<7.9
Tetrahydrofuran	<4.7	<1.6	1,2,4-Trimethylbenzene	<39	<7.9
2-Butanone (MEK)	<47	<16	1,3-Dichlorobenzene	<4.7	<0.79
1,2-Dichloroethane (EDC)	<0.32	<0.079	1,4-Dichlorobenzene	<1.8	<0.3
1,1,1-Trichloroethane	<4.3	<0.79	1,2-Dichlorobenzene	<4.7	<0.79
Carbon tetrachloride	<2.5	<0.39	1,2,4-Trichlorobenzene	<5.9	<0.79
Benzene	<2.5	<0.79	Naphthalene	<2.1	<0.39
Cyclohexane	<54	<16	Hexachlorobutadiene	<1.7	<0.16

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	SS-3	Client:	AEG
Date Received:	02/19/24	Project:	Franciscan-West Huling 22-148
Date Collected:	02/17/24	Lab ID:	402259-03 1/7.8
Date Analyzed:	02/20/24	Data File:	021926.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	90	70	130

Compounds:	Concentration ug/m3	ppbv	Compounds:	Concentration ug/m3	ppbv
Propene	<9.4	<5.5	1,2-Dichloropropane	<1.8	<0.39
Dichlorodifluoromethane	<7.7	<1.6	1,4-Dioxane	<2.8	<0.78
Chloromethane	<29	<14	2,2,4-Trimethylpentane	<36	<7.8
F-114	<16	<2.3	Methyl methacrylate	<32	<7.8
Vinyl chloride	<2	<0.78	Heptane	<32	<7.8
1,3-Butadiene	<0.35	<0.16	Bromodichloromethane	0.63	0.094
Butane	<37	<16	Trichloroethene	<0.84	<0.16
Bromomethane	<30	<7.8	cis-1,3-Dichloropropene	<7.1	<1.6
Chloroethane	<21	<7.8	4-Methyl-2-pentanone	<64	<16
Vinyl bromide	<3.4	<0.78	trans-1,3-Dichloropropene	<3.5	<0.78
Ethanol	780 ve ca	410 ve ca	Toluene	<59	<16
Acrolein	<0.89 ca	<0.39 ca	1,1,2-Trichloroethane	<0.43	<0.078
Pentane	<46	<16	2-Hexanone	<32	<7.8
Trichlorofluoromethane	<18	<3.1	Tetrachloroethene	<53	<7.8
Acetone	370 ve	160 ve	Dibromochloromethane	<0.66	<0.078
2-Propanol	1,000 ve	420 ve	1,2-Dibromoethane (EDB)	<0.6	<0.078
1,1-Dichloroethene	<3.1	<0.78	Chlorobenzene	<3.6	<0.78
trans-1,2-Dichloroethene	<3.1	<0.78	Ethylbenzene	<3.4	<0.78
Methylene chloride	<270	<78	1,1,2,2-Tetrachloroethane	<1.1	<0.16
t-Butyl alcohol (TBA)	<95	<31	Nonane	<41	<7.8
3-Chloropropene	<24	<7.8	Isopropylbenzene	<77	<16
CFC-113	<12	<1.6	2-Chlorotoluene	<40	<7.8
Carbon disulfide	<49	<16	Propylbenzene	<38	<7.8
Methyl t-butyl ether (MTBE)	<56	<16	4-Ethyltoluene	<38	<7.8
Vinyl acetate	<55 k	<16 k	m,p-Xylene	<6.8	<1.6
1,1-Dichloroethane	<3.2	<0.78	o-Xylene	<3.4	<0.78
cis-1,2-Dichloroethene	<3.1	<0.78	Styrene	<6.6	<1.6
Hexane	<27	<7.8	Bromoform	<16	<1.6
Chloroform	7.7	1.6	Benzyl chloride	<0.4 k	<0.078 k
Ethyl acetate	<56	<16	1,3,5-Trimethylbenzene	<38	<7.8
Tetrahydrofuran	<4.6	<1.6	1,2,4-Trimethylbenzene	<38	<7.8
2-Butanone (MEK)	<46	<16	1,3-Dichlorobenzene	<4.7	<0.78
1,2-Dichloroethane (EDC)	<0.32	<0.078	1,4-Dichlorobenzene	<1.8	<0.3
1,1,1-Trichloroethane	<4.3	<0.78	1,2-Dichlorobenzene	<4.7	<0.78
Carbon tetrachloride	<2.5	<0.39	1,2,4-Trichlorobenzene	<5.8	<0.78
Benzene	<2.5	<0.78	Naphthalene	<2	<0.39
Cyclohexane	<54	<16	Hexachlorobutadiene	<1.7	<0.16

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	SS-4	Client:	AEG
Date Received:	02/19/24	Project:	Franciscan-West Huling 22-148
Date Collected:	02/17/24	Lab ID:	402259-04 1/8.5
Date Analyzed:	02/20/24	Data File:	021925.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

	% Recovery:	Lower Limit:	Upper Limit:
Surrogates:			
4-Bromofluorobenzene	90	70	130

Compounds:	Concentration ug/m3	Concentration ppbv	Compounds:	Concentration ug/m3	Concentration ppbv
Propene	<10	<5.9	1,2-Dichloropropane	<2	<0.42
Dichlorodifluoromethane	<8.4	<1.7	1,4-Dioxane	<3.1	<0.85
Chloromethane	<32	<15	2,2,4-Trimethylpentane	<40	<8.5
F-114	<18	<2.5	Methyl methacrylate	<35	<8.5
Vinyl chloride	<2.2	<0.85	Heptane	<35	<8.5
1,3-Butadiene	<0.38	<0.17	Bromodichloromethane	<0.57	<0.085
Butane	<40	<17	Trichloroethene	<0.91	<0.17
Bromomethane	<33	<8.5	cis-1,3-Dichloropropene	<7.7	<1.7
Chloroethane	<22	<8.5	4-Methyl-2-pentanone	<70	<17
Vinyl bromide	<3.7	<0.85	trans-1,3-Dichloropropene	<3.9	<0.85
Ethanol	680 ve ca	360 ve ca	Toluene	<64	<17
Acrolein	<0.97 ca	<0.42 ca	1,1,2-Trichloroethane	<0.46	<0.085
Pentane	<50	<17	2-Hexanone	<35	<8.5
Trichlorofluoromethane	<19	<3.4	Tetrachloroethene	<58	<8.5
Acetone	1,300 ve	560 ve	Dibromochloromethane	<0.72	<0.085
2-Propanol	470 ve	190 ve	1,2-Dibromoethane (EDB)	<0.65	<0.085
1,1-Dichloroethene	<3.4	<0.85	Chlorobenzene	<3.9	<0.85
trans-1,2-Dichloroethene	<3.4	<0.85	Ethylbenzene	<3.7	<0.85
Methylene chloride	<300	<85	1,1,2,2-Tetrachloroethane	<1.2	<0.17
t-Butyl alcohol (TBA)	<100	<34	Nonane	<45	<8.5
3-Chloropropene	<27	<8.5	Isopropylbenzene	<84	<17
CFC-113	<13	<1.7	2-Chlorotoluene	<44	<8.5
Carbon disulfide	<53	<17	Propylbenzene	<42	<8.5
Methyl t-butyl ether (MTBE)	<61	<17	4-Ethyltoluene	<42	<8.5
Vinyl acetate	<60 k	<17 k	m,p-Xylene	<7.4	<1.7
1,1-Dichloroethane	<3.4	<0.85	o-Xylene	<3.7	<0.85
cis-1,2-Dichloroethene	<3.4	<0.85	Styrene	<7.2	<1.7
Hexane	<30	<8.5	Bromoform	<18	<1.7
Chloroform	11	2.2	Benzyl chloride	<0.44 k	<0.085 k
Ethyl acetate	<61	<17	1,3,5-Trimethylbenzene	<42	<8.5
Tetrahydrofuran	<5	<1.7	1,2,4-Trimethylbenzene	<42	<8.5
2-Butanone (MEK)	<50	<17	1,3-Dichlorobenzene	<5.1	<0.85
1,2-Dichloroethane (EDC)	<0.34	<0.085	1,4-Dichlorobenzene	<1.9	<0.32
1,1,1-Trichloroethane	<4.6	<0.85	1,2-Dichlorobenzene	<5.1	<0.85
Carbon tetrachloride	<2.7	<0.42	1,2,4-Trichlorobenzene	<6.3	<0.85
Benzene	<2.7	<0.85	Naphthalene	<2.2	<0.42
Cyclohexane	<59	<17	Hexachlorobutadiene	<1.8	<0.17

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	SS-5	Client:	AEG
Date Received:	02/19/24	Project:	Franciscan-West Huling 22-148
Date Collected:	02/17/24	Lab ID:	402259-05 1/8.4
Date Analyzed:	02/20/24	Data File:	021924.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	93	70	130

Compounds:	Concentration ug/m3	ppbv	Compounds:	Concentration ug/m3	ppbv
Propene	<10	<5.9	1,2-Dichloropropane	<1.9	<0.42
Dichlorodifluoromethane	<8.3	<1.7	1,4-Dioxane	<3	<0.84
Chloromethane	<31	<15	2,2,4-Trimethylpentane	<39	<8.4
F-114	<18	<2.5	Methyl methacrylate	<34	<8.4
Vinyl chloride	<2.1	<0.84	Heptane	<34	<8.4
1,3-Butadiene	<0.37	<0.17	Bromodichloromethane	4.8	0.72
Butane	<40	<17	Trichloroethene	<0.9	<0.17
Bromomethane	<33	<8.4	cis-1,3-Dichloropropene	<7.6	<1.7
Chloroethane	<22	<8.4	4-Methyl-2-pentanone	<69	<17
Vinyl bromide	<3.7	<0.84	trans-1,3-Dichloropropene	<3.8	<0.84
Ethanol	460 ve ca	240 ve ca	Toluene	<63	<17
Acrolein	<0.96 ca	<0.42 ca	1,1,2-Trichloroethane	<0.46	<0.084
Pentane	<50	<17	2-Hexanone	<34	<8.4
Trichlorofluoromethane	<19	<3.4	Tetrachloroethene	<57	<8.4
Acetone	930 ve	390 ve	Dibromochloromethane	<0.72	<0.084
2-Propanol	210	84	1,2-Dibromoethane (EDB)	<0.65	<0.084
1,1-Dichloroethene	<3.3	<0.84	Chlorobenzene	<3.9	<0.84
trans-1,2-Dichloroethene	<3.3	<0.84	Ethylbenzene	<3.6	<0.84
Methylene chloride	<290	<84	1,1,2,2-Tetrachloroethane	<1.2	<0.17
t-Butyl alcohol (TBA)	<100	<34	Nonane	<44	<8.4
3-Chloropropene	<26	<8.4	Isopropylbenzene	<83	<17
CFC-113	<13	<1.7	2-Chlorotoluene	<43	<8.4
Carbon disulfide	<52	<17	Propylbenzene	<41	<8.4
Methyl t-butyl ether (MTBE)	<61	<17	4-Ethyltoluene	<41	<8.4
Vinyl acetate	<59 k	<17 k	m,p-Xylene	<7.3	<1.7
1,1-Dichloroethane	<3.4	<0.84	o-Xylene	<3.6	<0.84
cis-1,2-Dichloroethene	<3.3	<0.84	Styrene	<7.2	<1.7
Hexane	<30	<8.4	Bromoform	<17	<1.7
Chloroform	150	30	Benzyl chloride	<0.43 k	<0.084 k
Ethyl acetate	<61	<17	1,3,5-Trimethylbenzene	<41	<8.4
Tetrahydrofuran	<5	<1.7	1,2,4-Trimethylbenzene	<41	<8.4
2-Butanone (MEK)	<50	<17	1,3-Dichlorobenzene	<5.1	<0.84
1,2-Dichloroethane (EDC)	<0.34	<0.084	1,4-Dichlorobenzene	<1.9	<0.32
1,1,1-Trichloroethane	<4.6	<0.84	1,2-Dichlorobenzene	<5.1	<0.84
Carbon tetrachloride	<2.6	<0.42	1,2,4-Trichlorobenzene	<6.2	<0.84
Benzene	<2.7	<0.84	Naphthalene	<2.2	<0.42
Cyclohexane	<58	<17	Hexachlorobutadiene	<1.8	<0.17

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	IA-1	Client:	AEG
Date Received:	02/19/24	Project:	Franciscan-West Huling 22-148
Date Collected:	02/17/24	Lab ID:	402259-06
Date Analyzed:	02/20/24	Data File:	021923.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	87	70	130

Compounds:	Concentration ug/m3	ppbv	Compounds:	Concentration ug/m3	ppbv
Propene	<1.2	<0.7	1,2-Dichloropropane	<0.23	<0.05
Dichlorodifluoromethane	1.9	0.39	1,4-Dioxane	<0.36	<0.1
Chloromethane	<3.7	<1.8	2,2,4-Trimethylpentane	<4.7	<1
F-114	<2.1	<0.3	Methyl methacrylate	<4.1	<1
Vinyl chloride	<0.26	<0.1	Heptane	<4.1	<1
1,3-Butadiene	0.12	0.054	Bromodichloromethane	0.76	0.11
Butane	<4.8	<2	Trichloroethene	<0.11	<0.02
Bromomethane	<3.9	<1	cis-1,3-Dichloropropene	<0.91	<0.2
Chloroethane	<2.6	<1	4-Methyl-2-pentanone	<8.2	<2
Vinyl bromide	<0.44	<0.1	trans-1,3-Dichloropropene	<0.45	<0.1
Ethanol	480 ve ca	260 ve ca	Toluene	<7.5	<2
Acrolein	0.49 ca	0.21 ca	1,1,2-Trichloroethane	<0.055	<0.01
Pentane	<5.9	<2	2-Hexanone	<4.1	<1
Trichlorofluoromethane	<2.2	<0.4	Tetrachloroethene	<6.8	<1
Acetone	20	8.3	Dibromochloromethane	<0.085	<0.01
2-Propanol	1,200 ve	500 ve	1,2-Dibromoethane (EDB)	<0.077	<0.01
1,1-Dichloroethene	<0.4	<0.1	Chlorobenzene	<0.46	<0.1
trans-1,2-Dichloroethene	<0.4	<0.1	Ethylbenzene	<0.43	<0.1
Methylene chloride	<35	<10	1,1,2,2-Tetrachloroethane	<0.14	<0.02
t-Butyl alcohol (TBA)	<12	<4	Nonane	<5.2	<1
3-Chloropropene	<3.1	<1	Isopropylbenzene	<9.8	<2
CFC-113	<1.5	<0.2	2-Chlorotoluene	<5.2	<1
Carbon disulfide	<6.2	<2	Propylbenzene	<4.9	<1
Methyl t-butyl ether (MTBE)	<7.2	<2	4-Ethyltoluene	<4.9	<1
Vinyl acetate	<7 k	<2 k	m,p-Xylene	<0.87	<0.2
1,1-Dichloroethane	<0.4	<0.1	o-Xylene	<0.43	<0.1
cis-1,2-Dichloroethene	<0.4	<0.1	Styrene	<0.85	<0.2
Hexane	<3.5	<1	Bromoform	<2.1	<0.2
Chloroform	11	2.2	Benzyl chloride	<0.052 k	<0.01 k
Ethyl acetate	<7.2	<2	1,3,5-Trimethylbenzene	<4.9	<1
Tetrahydrofuran	<0.59	<0.2	1,2,4-Trimethylbenzene	<4.9	<1
2-Butanone (MEK)	<5.9	<2	1,3-Dichlorobenzene	<0.6	<0.1
1,2-Dichloroethane (EDC)	0.069	0.017	1,4-Dichlorobenzene	<0.23	<0.038
1,1,1-Trichloroethane	<0.55	<0.1	1,2-Dichlorobenzene	<0.6	<0.1
Carbon tetrachloride	0.43	0.068	1,2,4-Trichlorobenzene	<0.74	<0.1
Benzene	0.37	0.11	Naphthalene	0.10 j	0.019 j
Cyclohexane	<6.9	<2	Hexachlorobutadiene	<0.21	<0.02

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	IA-2	Client:	AEG
Date Received:	02/19/24	Project:	Franciscan-West Huling 22-148
Date Collected:	02/17/24	Lab ID:	402259-07
Date Analyzed:	02/20/24	Data File:	021922.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

	% Recovery:	Lower Limit:	Upper Limit:
Surrogates:			
4-Bromofluorobenzene	90	70	130

Compounds:	Concentration ug/m3	Concentration ppbv	Compounds:	Concentration ug/m3	Concentration ppbv
Propene	<1.2	<0.7	1,2-Dichloropropane	<0.23	<0.05
Dichlorodifluoromethane	2.2	0.44	1,4-Dioxane	<0.36	<0.1
Chloromethane	<3.7	<1.8	2,2,4-Trimethylpentane	<4.7	<1
F-114	<2.1	<0.3	Methyl methacrylate	<4.1	<1
Vinyl chloride	<0.26	<0.1	Heptane	<4.1	<1
1,3-Butadiene	0.15	0.067	Bromodichloromethane	0.60	0.090
Butane	<4.8	<2	Trichloroethene	<0.11	<0.02
Bromomethane	<3.9	<1	cis-1,3-Dichloropropene	<0.91	<0.2
Chloroethane	<2.6	<1	4-Methyl-2-pentanone	<8.2	<2
Vinyl bromide	<0.44	<0.1	trans-1,3-Dichloropropene	<0.45	<0.1
Ethanol	540 ve ca	290 ve ca	Toluene	<7.5	<2
Acrolein	0.53 ca	0.23 ca	1,1,2-Trichloroethane	<0.055	<0.01
Pentane	<5.9	<2	2-Hexanone	<4.1	<1
Trichlorofluoromethane	<2.2	<0.4	Tetrachloroethene	<6.8	<1
Acetone	21	9.0	Dibromochloromethane	<0.085	<0.01
2-Propanol	1,700 ve	710 ve	1,2-Dibromoethane (EDB)	<0.077	<0.01
1,1-Dichloroethene	<0.4	<0.1	Chlorobenzene	<0.46	<0.1
trans-1,2-Dichloroethene	<0.4	<0.1	Ethylbenzene	<0.43	<0.1
Methylene chloride	<35	<10	1,1,2,2-Tetrachloroethane	<0.14	<0.02
t-Butyl alcohol (TBA)	<12	<4	Nonane	<5.2	<1
3-Chloropropene	<3.1	<1	Isopropylbenzene	<9.8	<2
CFC-113	<1.5	<0.2	2-Chlorotoluene	<5.2	<1
Carbon disulfide	<6.2	<2	Propylbenzene	<4.9	<1
Methyl t-butyl ether (MTBE)	<7.2	<2	4-Ethyltoluene	<4.9	<1
Vinyl acetate	<7 k	<2 k	m,p-Xylene	<0.87	<0.2
1,1-Dichloroethane	<0.4	<0.1	o-Xylene	<0.43	<0.1
cis-1,2-Dichloroethene	<0.4	<0.1	Styrene	<0.85	<0.2
Hexane	<3.5	<1	Bromoform	<2.1	<0.2
Chloroform	8.4	1.7	Benzyl chloride	<0.052 k	<0.01 k
Ethyl acetate	<7.2	<2	1,3,5-Trimethylbenzene	<4.9	<1
Tetrahydrofuran	<0.59	<0.2	1,2,4-Trimethylbenzene	<4.9	<1
2-Butanone (MEK)	<5.9	<2	1,3-Dichlorobenzene	<0.6	<0.1
1,2-Dichloroethane (EDC)	0.069	0.017	1,4-Dichlorobenzene	<0.23	<0.038
1,1,1-Trichloroethane	<0.55	<0.1	1,2-Dichlorobenzene	<0.6	<0.1
Carbon tetrachloride	0.43	0.068	1,2,4-Trichlorobenzene	<0.74	<0.1
Benzene	0.43	0.13	Naphthalene	0.084 j	0.016 j
Cyclohexane	<6.9	<2	Hexachlorobutadiene	<0.21	<0.02

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	Ambient	Client:	AEG
Date Received:	02/19/24	Project:	Franciscan-West Huling 22-148
Date Collected:	02/17/24	Lab ID:	402259-08
Date Analyzed:	02/19/24	Data File:	021921.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	88	70	130

Compounds:	Concentration ug/m3	ppbv	Compounds:	Concentration ug/m3	ppbv
Propene	<1.2	<0.7	1,2-Dichloropropane	<0.23	<0.05
Dichlorodifluoromethane	2	0.41	1,4-Dioxane	<0.36	<0.1
Chloromethane	<3.7	<1.8	2,2,4-Trimethylpentane	<4.7	<1
F-114	<2.1	<0.3	Methyl methacrylate	<4.1	<1
Vinyl chloride	<0.26	<0.1	Heptane	<4.1	<1
1,3-Butadiene	0.073	0.033	Bromodichloromethane	<0.067	<0.01
Butane	<4.8	<2	Trichloroethene	<0.11	<0.02
Bromomethane	<3.9	<1	cis-1,3-Dichloropropene	<0.91	<0.2
Chloroethane	<2.6	<1	4-Methyl-2-pentanone	<8.2	<2
Vinyl bromide	<0.44	<0.1	trans-1,3-Dichloropropene	<0.45	<0.1
Ethanol	18 ca	9.4 ca	Toluene	<7.5	<2
Acrolein	0.2 ca	0.086 ca	1,1,2-Trichloroethane	<0.055	<0.01
Pentane	<5.9	<2	2-Hexanone	<4.1	<1
Trichlorofluoromethane	<2.2	<0.4	Tetrachloroethene	<6.8	<1
Acetone	<4.8	<2	Dibromochloromethane	<0.085	<0.01
2-Propanol	13	5.1	1,2-Dibromoethane (EDB)	<0.077	<0.01
1,1-Dichloroethene	<0.4	<0.1	Chlorobenzene	<0.46	<0.1
trans-1,2-Dichloroethene	<0.4	<0.1	Ethylbenzene	<0.43	<0.1
Methylene chloride	<35	<10	1,1,2,2-Tetrachloroethane	<0.14	<0.02
t-Butyl alcohol (TBA)	<12	<4	Nonane	<5.2	<1
3-Chloropropene	<3.1	<1	Isopropylbenzene	<9.8	<2
CFC-113	<1.5	<0.2	2-Chlorotoluene	<5.2	<1
Carbon disulfide	<6.2	<2	Propylbenzene	<4.9	<1
Methyl t-butyl ether (MTBE)	<7.2	<2	4-Ethyltoluene	<4.9	<1
Vinyl acetate	<7 k	<2 k	m,p-Xylene	<0.87	<0.2
1,1-Dichloroethane	<0.4	<0.1	o-Xylene	<0.43	<0.1
cis-1,2-Dichloroethene	<0.4	<0.1	Styrene	<0.85	<0.2
Hexane	<3.5	<1	Bromoform	<2.1	<0.2
Chloroform	0.16	0.032	Benzyl chloride	<0.052 k	<0.01 k
Ethyl acetate	<7.2	<2	1,3,5-Trimethylbenzene	<4.9	<1
Tetrahydrofuran	<0.59	<0.2	1,2,4-Trimethylbenzene	<4.9	<1
2-Butanone (MEK)	<5.9	<2	1,3-Dichlorobenzene	<0.6	<0.1
1,2-Dichloroethane (EDC)	0.065	0.016	1,4-Dichlorobenzene	<0.23	<0.038
1,1,1-Trichloroethane	<0.55	<0.1	1,2-Dichlorobenzene	<0.6	<0.1
Carbon tetrachloride	0.41	0.065	1,2,4-Trichlorobenzene	<0.74	<0.1
Benzene	0.38	0.12	Naphthalene	<0.074 j	<0.014 j
Cyclohexane	<6.9	<2	Hexachlorobutadiene	<0.21	<0.02

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	Method Blank	Client:	AEG
Date Received:	Not Applicable	Project:	Franciscan-West Huling 22-148
Date Collected:	Not Applicable	Lab ID:	04-0444 MB
Date Analyzed:	02/19/24	Data File:	021912.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

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

Compounds:	Concentration ug/m3	ppbv	Compounds:	Concentration ug/m3	ppbv
Propene	<1.2	<0.7	1,2-Dichloropropane	<0.23	<0.05
Dichlorodifluoromethane	<0.99	<0.2	1,4-Dioxane	<0.36	<0.1
Chloromethane	<3.7	<1.8	2,2,4-Trimethylpentane	<4.7	<1
F-114	<2.1	<0.3	Methyl methacrylate	<4.1	<1
Vinyl chloride	<0.26	<0.1	Heptane	<4.1	<1
1,3-Butadiene	<0.044	<0.02	Bromodichloromethane	<0.067	<0.01
Butane	<4.8	<2	Trichloroethene	<0.11	<0.02
Bromomethane	<3.9	<1	cis-1,3-Dichloropropene	<0.91	<0.2
Chloroethane	<2.6	<1	4-Methyl-2-pentanone	<8.2	<2
Vinyl bromide	<0.44	<0.1	trans-1,3-Dichloropropene	<0.45	<0.1
Ethanol	<7.5 k	<4 k	Toluene	<7.5	<2
Acrolein	<0.11 ca	<0.05 ca	1,1,2-Trichloroethane	<0.055	<0.01
Pentane	<5.9	<2	2-Hexanone	<4.1	<1
Trichlorofluoromethane	<2.2	<0.4	Tetrachloroethene	<6.8	<1
Acetone	<4.8	<2	Dibromochloromethane	<0.085	<0.01
2-Propanol	<8.6	<3.5	1,2-Dibromoethane (EDB)	<0.077	<0.01
1,1-Dichloroethene	<0.4	<0.1	Chlorobenzene	<0.46	<0.1
trans-1,2-Dichloroethene	<0.4	<0.1	Ethylbenzene	<0.43	<0.1
Methylene chloride	<35	<10	1,1,2,2-Tetrachloroethane	<0.14	<0.02
t-Butyl alcohol (TBA)	<12	<4	Nonane	<5.2	<1
3-Chloropropene	<3.1	<1	Isopropylbenzene	<9.8	<2
CFC-113	<1.5	<0.2	2-Chlorotoluene	<5.2	<1
Carbon disulfide	<6.2	<2	Propylbenzene	<4.9	<1
Methyl t-butyl ether (MTBE)	<7.2	<2	4-Ethyltoluene	<4.9	<1
Vinyl acetate	<7 k	<2 k	m,p-Xylene	<0.87	<0.2
1,1-Dichloroethane	<0.4	<0.1	o-Xylene	<0.43	<0.1
cis-1,2-Dichloroethene	<0.4	<0.1	Styrene	<0.85	<0.2
Hexane	<3.5	<1	Bromoform	<2.1	<0.2
Chloroform	<0.049	<0.01	Benzyl chloride	<0.052 k	<0.01 k
Ethyl acetate	<7.2	<2	1,3,5-Trimethylbenzene	<4.9	<1
Tetrahydrofuran	<0.59	<0.2	1,2,4-Trimethylbenzene	<4.9	<1
2-Butanone (MEK)	<5.9	<2	1,3-Dichlorobenzene	<0.6	<0.1
1,2-Dichloroethane (EDC)	<0.04	<0.01	1,4-Dichlorobenzene	<0.23	<0.038
1,1,1-Trichloroethane	<0.55	<0.1	1,2-Dichlorobenzene	<0.6	<0.1
Carbon tetrachloride	<0.31	<0.05	1,2,4-Trichlorobenzene	<0.74	<0.1
Benzene	<0.32	<0.1	Naphthalene	<0.074 j	<0.014 j
Cyclohexane	<6.9	<2	Hexachlorobutadiene	<0.21	<0.02

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 02/27/24

Date Received: 02/19/24

Project: Franciscan-West Huling 22-148, F&BI 402259

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF AIR SAMPLES
FOR VOLATILES BY METHOD MA-APH**

Laboratory Code: 402259-01 1/8.0 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 30)
APH EC5-8 aliphatics	ug/m3	850	760	11
APH EC9-12 aliphatics	ug/m3	<200	<200	nm
APH EC9-10 aromatics	ug/m3	<200	<200	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
APH EC5-8 aliphatics	ug/m3	67	81	70-130
APH EC9-12 aliphatics	ug/m3	67	112	70-130
APH EC9-10 aromatics	ug/m3	67	94	70-130

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 02/27/24

Date Received: 02/19/24

Project: Franciscan-West Huling 22-148, F&BI 402259

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

Laboratory Code: 402259-01 1/8.0 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 30)
Propene	ug/m3	<9.6	<9.6	nm
Dichlorodifluoromethane	ug/m3	<7.9	<7.9	nm
Chloromethane	ug/m3	<30	<30	nm
F-114	ug/m3	<17	<17	nm
Vinyl chloride	ug/m3	<2	<2	nm
1,3-Butadiene	ug/m3	<0.35	<0.35	nm
Butane	ug/m3	<38	<38	nm
Bromomethane	ug/m3	<31	<31	nm
Chloroethane	ug/m3	<21	<21	nm
Vinyl bromide	ug/m3	<3.5	<3.5	nm
Ethanol	ug/m3	83	100	19
Acrolein	ug/m3	<0.92	<0.92	nm
Pentane	ug/m3	<47	<47	nm
Trichlorofluoromethane	ug/m3	<18	<18	nm
Acetone	ug/m3	51	50	2
2-Propanol	ug/m3	<69	<69	nm
1,1-Dichloroethene	ug/m3	<3.2	<3.2	nm
trans-1,2-Dichloroethene	ug/m3	<3.2	<3.2	nm
Methylene chloride	ug/m3	<280	<280	nm
t-Butyl alcohol (TBA)	ug/m3	<97	<97	nm
3-Chloropropene	ug/m3	<25	<25	nm
CFC-113	ug/m3	<12	<12	nm
Carbon disulfide	ug/m3	<50	<50	nm
Methyl t-butyl ether (MTBE)	ug/m3	<58	<58	nm
Vinyl acetate	ug/m3	<56	<56	nm
1,1-Dichloroethane	ug/m3	<3.2	<3.2	nm
cis-1,2-Dichloroethene	ug/m3	<3.2	<3.2	nm
Hexane	ug/m3	<28	<28	nm
Chloroform	ug/m3	20	20	0
Ethyl acetate	ug/m3	<58	<58	nm
Tetrahydrofuran	ug/m3	<4.7	<4.7	nm
2-Butanone (MEK)	ug/m3	<47	<47	nm
1,2-Dichloroethane (EDC)	ug/m3	<0.32	<0.32	nm
1,1,1-Trichloroethane	ug/m3	<4.4	<4.4	nm
Carbon tetrachloride	ug/m3	<2.5	<2.5	nm
Benzene	ug/m3	<2.6	<2.6	nm
Cyclohexane	ug/m3	<55	<55	nm
1,2-Dichloropropane	ug/m3	<1.8	<1.8	nm
1,4-Dioxane	ug/m3	<2.9	<2.9	nm
2,2,4-Trimethylpentane	ug/m3	<37	<37	nm

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 02/27/24

Date Received: 02/19/24

Project: Franciscan-West Huling 22-148, F&BI 402259

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

Laboratory Code: 402259-01 1/8.0 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 30)
Methyl methacrylate	ug/m3	<33	<33	nm
Heptane	ug/m3	<33	<33	nm
Bromodichloromethane	ug/m3	0.59	0.59	0
Trichloroethene	ug/m3	<0.86	<0.86	nm
cis-1,3-Dichloropropene	ug/m3	<7.3	<7.3	nm
4-Methyl-2-pentanone	ug/m3	<66	<66	nm
trans-1,3-Dichloropropene	ug/m3	<3.6	<3.6	nm
Toluene	ug/m3	<60	<60	nm
1,1,2-Trichloroethane	ug/m3	<0.44	<0.44	nm
2-Hexanone	ug/m3	<33	<33	nm
Tetrachloroethene	ug/m3	<54	<54	nm
Dibromochloromethane	ug/m3	<0.68	<0.68	nm
1,2-Dibromoethane (EDB)	ug/m3	<0.61	<0.61	nm
Chlorobenzene	ug/m3	<3.7	<3.7	nm
Ethylbenzene	ug/m3	<3.5	<3.5	nm
1,1,2,2-Tetrachloroethane	ug/m3	<1.1	<1.1	nm
Nonane	ug/m3	<42	<42	nm
Isopropylbenzene	ug/m3	<79	<79	nm
2-Chlorotoluene	ug/m3	<41	<41	nm
Propylbenzene	ug/m3	<39	<39	nm
4-Ethyltoluene	ug/m3	<39	<39	nm
m,p-Xylene	ug/m3	<6.9	<6.9	nm
o-Xylene	ug/m3	<3.5	<3.5	nm
Styrene	ug/m3	<6.8	<6.8	nm
Bromoform	ug/m3	<17	<17	nm
Benzyl chloride	ug/m3	<0.41	<0.41	nm
1,3,5-Trimethylbenzene	ug/m3	<39	<39	nm
1,2,4-Trimethylbenzene	ug/m3	<39	<39	nm
1,3-Dichlorobenzene	ug/m3	<4.8	<4.8	nm
1,4-Dichlorobenzene	ug/m3	<1.8	<1.8	nm
1,2-Dichlorobenzene	ug/m3	<4.8	<4.8	nm
1,2,4-Trichlorobenzene	ug/m3	<5.9	<5.9	nm
Naphthalene	ug/m3	<2.1	<2.1	nm
Hexachlorobutadiene	ug/m3	<1.7	<1.7	nm

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 02/27/24

Date Received: 02/19/24

Project: Franciscan-West Huling 22-148, F&BI 402259

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

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent	Acceptance
			Recovery LCS	Criteria
Propene	ug/m3	23	84	70-130
Dichlorodifluoromethane	ug/m3	67	97	70-130
Chloromethane	ug/m3	28	100	70-130
F-114	ug/m3	94	108	70-130
Vinyl chloride	ug/m3	35	96	70-130
1,3-Butadiene	ug/m3	30	81	70-130
Butane	ug/m3	32	85	70-130
Bromomethane	ug/m3	52	109	70-130
Chloroethane	ug/m3	36	99	70-130
Vinyl bromide	ug/m3	59	103	70-130
Ethanol	ug/m3	25	96	70-130
Acrolein	ug/m3	31	69 vo	70-130
Pentane	ug/m3	40	78	70-130
Trichlorofluoromethane	ug/m3	76	109	70-130
Acetone	ug/m3	32	104	70-130
2-Propanol	ug/m3	33	87	70-130
1,1-Dichloroethene	ug/m3	54	96	70-130
trans-1,2-Dichloroethene	ug/m3	54	90	70-130
Methylene chloride	ug/m3	94	95	70-130
t-Butyl alcohol (TBA)	ug/m3	41	88	70-130
3-Chloropropene	ug/m3	42	81	70-130
CFC-113	ug/m3	100	99	70-130
Carbon disulfide	ug/m3	42	98	70-130
Methyl t-butyl ether (MTBE)	ug/m3	49	82	70-130
Vinyl acetate	ug/m3	48	82	70-130
1,1-Dichloroethane	ug/m3	55	95	70-130
cis-1,2-Dichloroethene	ug/m3	54	89	70-130
Hexane	ug/m3	48	78	70-130
Chloroform	ug/m3	66	98	70-130
Ethyl acetate	ug/m3	49	87	70-130
Tetrahydrofuran	ug/m3	40	83	70-130
2-Butanone (MEK)	ug/m3	40	88	70-130
1,2-Dichloroethane (EDC)	ug/m3	55	97	70-130
1,1,1-Trichloroethane	ug/m3	74	99	70-130
Carbon tetrachloride	ug/m3	85	101	70-130
Benzene	ug/m3	43	85	70-130
Cyclohexane	ug/m3	46	79	70-130
1,2-Dichloropropane	ug/m3	62	101	70-130
1,4-Dioxane	ug/m3	49	89	70-130
2,2,4-Trimethylpentane	ug/m3	63	87	70-130

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 02/27/24

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Project: Franciscan-West Huling 22-148, F&BI 402259

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

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent	Acceptance
			Recovery LCS	Criteria
Methyl methacrylate	ug/m3	55	94	70-130
Heptane	ug/m3	55	85	70-130
Bromodichloromethane	ug/m3	90	107	70-130
Trichloroethene	ug/m3	73	104	70-130
cis-1,3-Dichloropropene	ug/m3	61	96	70-130
4-Methyl-2-pentanone	ug/m3	55	105	70-130
trans-1,3-Dichloropropene	ug/m3	61	97	70-130
Toluene	ug/m3	51	91	70-130
1,1,2-Trichloroethane	ug/m3	74	111	70-130
2-Hexanone	ug/m3	55	86	70-130
Tetrachloroethene	ug/m3	92	111	70-130
Dibromochloromethane	ug/m3	120	109	70-130
1,2-Dibromoethane (EDB)	ug/m3	100	103	70-130
Chlorobenzene	ug/m3	62	100	70-130
Ethylbenzene	ug/m3	59	85	70-130
1,1,2,2-Tetrachloroethane	ug/m3	93	104	70-130
Nonane	ug/m3	71	89	70-130
Isopropylbenzene	ug/m3	66	95	70-130
2-Chlorotoluene	ug/m3	70	100	70-130
Propylbenzene	ug/m3	66	93	70-130
4-Ethyltoluene	ug/m3	66	91	70-130
m,p-Xylene	ug/m3	120	89	70-130
o-Xylene	ug/m3	59	92	70-130
Styrene	ug/m3	58	88	70-130
Bromoform	ug/m3	140	101	70-130
Benzyl chloride	ug/m3	70	110	70-130
1,3,5-Trimethylbenzene	ug/m3	66	95	70-130
1,2,4-Trimethylbenzene	ug/m3	66	87	70-130
1,3-Dichlorobenzene	ug/m3	81	108	70-130
1,4-Dichlorobenzene	ug/m3	81	106	70-130
1,2-Dichlorobenzene	ug/m3	81	108	70-130
1,2,4-Trichlorobenzene	ug/m3	100	96	70-130
Naphthalene	ug/m3	71	85	70-130
Hexachlorobutadiene	ug/m3	140	112	70-130

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

- a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.
- ca - The calibration results for the analyte were outside of acceptance criteria, biased low; or, the calibration results for the analyte were outside of acceptance criteria, biased high, with a detection for the analyte in the sample. The value reported is an estimate.
- c - The presence of the analyte may be due to carryover from previous sample injections.
- cf - The sample was centrifuged prior to analysis.
- d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.
- dv - Insufficient sample volume was available to achieve normal reporting limits.
- f - The sample was laboratory filtered prior to analysis.
- fb - The analyte was detected in the method blank.
- fc - The analyte is a common laboratory and field contaminant.
- hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.
- hs - Headspace was present in the container used for analysis.
- ht - The analysis was performed outside the method or client-specified holding time requirement.
- ip - Recovery fell outside of control limits due to sample matrix effects.
- j - The analyte concentration is reported below the standard reporting limit. The value reported is an estimate.
- J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.
- jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.
- js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- k - The calibration results for the analyte were outside of acceptance criteria, biased high, and the analyte was not detected in the sample.
- lc - The presence of the analyte is likely due to laboratory contamination.
- L - The reported concentration was generated from a library search.
- nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.
- pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.
- ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.
- vo - The value reported fell outside the control limits established for this analyte.
- x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

402259

SAMPLE CHAIN OF CUSTODY

02/19/24

Report To Scott Rose

Company AEL

Address Olympia

City, State, ZIP _____

Phone _____ Email scrose@ael.com

SAMPLES (signature)

PROJECT NAME & ADDRESS

Franziska - West Hiding

PO #

22-128

NOTES: cc: AEL email list

INVOICE TO

Page # 1 of 1

TURNAROUND TIME

Standard
RTSH

Rush charges authorized by: _____

SAMPLE DISPOSAL

Default: Clean following final report delivery Hold (Fee may apply): _____

SAMPLE INFORMATION

Sample Name	Lab ID	Canister ID	Flow Cont. ID	Reporting Level: IA=Indoor Air SG=Soil Gas (Circle One)	Date Sampled	Initial Vac. (Hg)	Field Initial Time	Final Vac. (Hg)	Field Final Time	ANALYSIS REQUESTED				Notes	
										TO15 Full Scan	TO15 BTEXN	TO15 cVOCs	APH		Helium
SS-1	01	3252	242	IA / <u>SG</u>	2/17	BQ	11:14	S	10:20	X					
SS-2	02	3255	80	IA / <u>SG</u>	1	30	10:29	S	10:34	X					
SS-3	03	3669	256	IA / <u>SG</u>		30	10:03	S	10:08	X					
SS-4	04	3260	64	IA / <u>SG</u>		20	10:51	S	10:56	X					
SS-5	05	3412	251	IA / <u>SG</u>		30	10:40	S	10:45	X					
IA-1	06	37228	15217	<u>IA</u> / SG		29	09:44	S	17:31	X					
IA-2	07	21453	53077	<u>IA</u> / SG		30	09:45	S	17:32	X					
AMBIENT	08	18567	14502	<u>IA</u> / SG		30	09:43	S	17:30	X					

Friedman & Bruya, Inc.
5500 4th Avenue South
Seattle, WA 98108

Ph. (206) 285-8282

Fax (206) 283-5044

FORMS\CCG\CCCTO-15.DOC

SIGNATURE

Relinquished by: [Signature]

PRINT NAME

Nathan Dekey

COMPANY

AEL

DATE

2/19/24

TIME

10:02

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ANH PHAN

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02/19/24

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Received by:

Received at 20 PC

APPENDIX B

Supporting Documents:

Terrestrial Ecological Evaluation Form

WA DOH Environmental Health Disparities Map

EPA EJ Screen Community Report

FEMA National Flood Hazard Layer FIRMette

Table C1 – Summary of Projected Climate



Voluntary Cleanup Program

Washington State Department of Ecology Toxics Cleanup Program

TERRESTRIAL ECOLOGICAL EVALUATION FORM

Under the Model Toxics Control Act (MTCA), a terrestrial ecological evaluation is necessary if hazardous substances are released into the soils at a Site. In the event of such a release, you must take one of the following three actions as part of your investigation and cleanup of the Site:

1. Document an exclusion from further evaluation using the criteria in WAC 173-340-7491.
2. Conduct a simplified evaluation as set forth in WAC 173-340-7492.
3. Conduct a site-specific evaluation as set forth in WAC 173-340-7493.

When requesting a written opinion under the Voluntary Cleanup Program (VCP), you must complete this form and submit it to the Department of Ecology (Ecology). The form documents the type and results of your evaluation.

Completion of this form is not sufficient to document your evaluation. You still need to document your analysis and the basis for your conclusion in your cleanup plan or report.

If you have questions about how to conduct a terrestrial ecological evaluation, please contact the Ecology site manager assigned to your Site. For additional guidance, please refer to <https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Terrestrial-ecological-evaluation>.

Step 1: IDENTIFY HAZARDOUS WASTE SITE

Please identify below the hazardous waste site for which you are documenting an evaluation.

Facility/Site Name: Franciscan Medical Clinic

Facility/Site Address: 4550 Fauntleroy Way SW, Seattle, King County, Washington 98126

Facility/Site No: 97678

VCP Project No.:

Step 2: IDENTIFY EVALUATOR

Please identify below the person who conducted the evaluation and their contact information.

Name: Scott Rose

Title: Director of Technical Services

Organization: AEG Atlas, LLC

Mailing address: 2633 Parkmont Lane SW, Suite A

City: Olympia

State: WA

Zip code: 98502-5751

Phone: 360-352-9835

Fax:

E-mail: srose@aegwa.com

Step 3: DOCUMENT EVALUATION TYPE AND RESULTS

A. Exclusion from further evaluation.

1. Does the Site qualify for an exclusion from further evaluation?

- Yes *If you answered "YES," then answer **Question 2**.*
- No or Unknown *If you answered "NO" or "UNKNOWN," then skip to **Step 3B** of this form.*

2. What is the basis for the exclusion? Check all that apply. Then skip to **Step 4** of this form.

Point of Compliance: WAC 173-340-7491(1)(a)

- All soil contamination is, or will be,* at least 15 feet below the surface.
- All soil contamination is, or will be,* at least 6 feet below the surface (or alternative depth if approved by Ecology), and institutional controls are used to manage remaining contamination.

Barriers to Exposure: WAC 173-340-7491(1)(b)

- All contaminated soil, is or will be,* covered by physical barriers (such as buildings or paved roads) that prevent exposure to plants and wildlife, and institutional controls are used to manage remaining contamination.

Undeveloped Land: WAC 173-340-7491(1)(c)

- There is less than 0.25 acres of contiguous[#] undeveloped[±] land on or within 500 feet of any area of the Site and any of the following chemicals is present: chlorinated dioxins or furans, PCB mixtures, DDT, DDE, DDD, aldrin, chlordane, dieldrin, endosulfan, endrin, heptachlor, heptachlor epoxide, benzene hexachloride, toxaphene, hexachlorobenzene, pentachlorophenol, or pentachlorobenzene.
- For sites not containing any of the chemicals mentioned above, there is less than 1.5 acres of contiguous[#] undeveloped[±] land on or within 500 feet of any area of the Site.

Background Concentrations: WAC 173-340-7491(1)(d)

- Concentrations of hazardous substances in soil do not exceed natural background levels as described in WAC 173-340-200 and 173-340-709.

* An exclusion based on future land use must have a completion date for future development that is acceptable to Ecology.

± "Undeveloped land" is land that is not covered by building, roads, paved areas, or other barriers that would prevent wildlife from feeding on plants, earthworms, insects, or other food in or on the soil.

"Contiguous" undeveloped land is an area of undeveloped land that is not divided into smaller areas of highways, extensive paving, or similar structures that are likely to reduce the potential use of the overall area by wildlife.

B. Simplified evaluation.

1. Does the Site qualify for a simplified evaluation?

- Yes *If you answered "YES," then answer **Question 2** below.*
- No or Unknown *If you answered "NO" or "UNKNOWN," then skip to **Step 3C** of this form.*

2. Did you conduct a simplified evaluation?

- Yes *If you answered "YES," then answer **Question 3** below.*
- No *If you answered "NO," then skip to **Step 3C** of this form.*

3. Was further evaluation necessary?

- Yes *If you answered "YES," then answer **Question 4** below.*
- No *If you answered "NO," then answer **Question 5** below.*

4. If further evaluation was necessary, what did you do?

- Used the concentrations listed in Table 749-2 as cleanup levels. *If so, then skip to **Step 4** of this form.*
- Conducted a site-specific evaluation. *If so, then skip to **Step 3C** of this form.*

5. If no further evaluation was necessary, what was the reason? Check all that apply. Then skip to **Step 4 of this form.**

Exposure Analysis: WAC 173-340-7492(2)(a)

- Area of soil contamination at the Site is not more than 350 square feet.
- Current or planned land use makes wildlife exposure unlikely. Used Table 749-1.

Pathway Analysis: WAC 173-340-7492(2)(b)

- No potential exposure pathways from soil contamination to ecological receptors.

Contaminant Analysis: WAC 173-340-7492(2)(c)

- No contaminant listed in Table 749-2 is, or will be, present in the upper 15 feet at concentrations that exceed the values listed in Table 749-2.
- No contaminant listed in Table 749-2 is, or will be, present in the upper 6 feet (or alternative depth if approved by Ecology) at concentrations that exceed the values listed in Table 749-2, and institutional controls are used to manage remaining contamination.
- No contaminant listed in Table 749-2 is, or will be, present in the upper 15 feet at concentrations likely to be toxic or have the potential to bioaccumulate as determined using Ecology-approved bioassays.
- No contaminant listed in Table 749-2 is, or will be, present in the upper 6 feet (or alternative depth if approved by Ecology) at concentrations likely to be toxic or have the potential to bioaccumulate as determined using Ecology-approved bioassays, and institutional controls are used to manage remaining contamination.

C. Site-specific evaluation. A site-specific evaluation process consists of two parts: (1) formulating the problem, and (2) selecting the methods for addressing the identified problem. Both steps require consultation with and approval by Ecology. See WAC 173-340-7493(1)(c).

1. Was there a problem? See WAC 173-340-7493(2).

- Yes *If you answered "YES," then answer **Question 2** below.*
- No *If you answered "NO," then identify the reason here and then skip to **Question 5** below:*
- No issues were identified during the problem formulation step.
 - While issues were identified, those issues were addressed by the cleanup actions for protecting human health.

2. What did you do to resolve the problem? See WAC 173-340-7493(3).

- Used the concentrations listed in Table 749-3 as cleanup levels. *If so, then skip to **Question 5** below.*
- Used one or more of the methods listed in WAC 173-340-7493(3) to evaluate and address the identified problem. *If so, then answer **Questions 3 and 4** below.*

3. If you conducted further site-specific evaluations, what methods did you use?

Check all that apply. See WAC 173-340-7493(3).

- Literature surveys.
- Soil bioassays.
- Wildlife exposure model.
- Biomarkers.
- Site-specific field studies.
- Weight of evidence.
- Other methods approved by Ecology. If so, please specify:

4. What was the result of those evaluations?

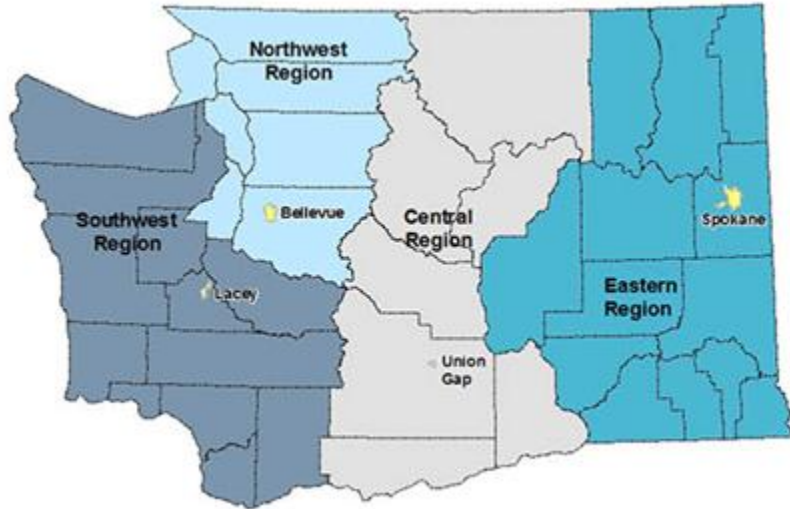
- Confirmed there was no problem.
- Confirmed there was a problem and established site-specific cleanup levels.

5. Have you already obtained Ecology's approval of both your problem formulation and problem resolution steps?

- Yes If so, please identify the Ecology staff who approved those steps:
- No

Step 4: SUBMITTAL

Please mail your completed form to the Ecology site manager assigned to your Site. If a site manager has not yet been assigned, please mail your completed form to the Ecology regional office for the County in which your Site is located.



Northwest Region: Attn: VCP Coordinator 3190 160 th Ave. SE Bellevue, WA 98008-5452	Central Region: Attn: VCP Coordinator 1250 West Alder St. Union Gap, WA 98903-0009
Southwest Region: Attn: VCP Coordinator P.O. Box 47775 Olympia, WA 98504-7775	Eastern Region: Attn: VCP Coordinator N. 4601 Monroe Spokane WA 99205-1295

If you need this publication in an alternate format, please call the Toxics Cleanup Program at 360-407-7170. People with hearing loss can call 711 for Washington Relay Service. People with a speech disability can call 877-833-6341.

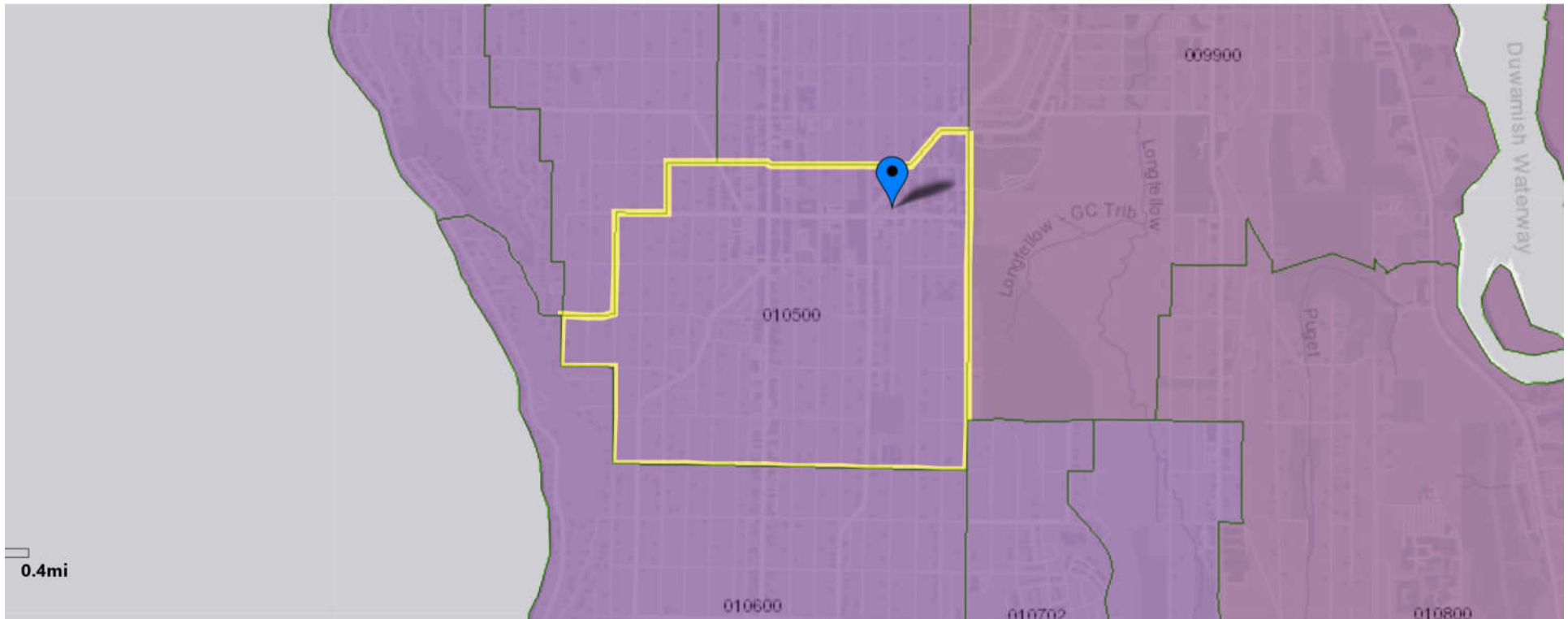


Selection: Environmental Health Disparities V 2.0 -> Environmental Exposures



Date: 07/16/2024 at 8:23








Diesel Exhaust PM2.5 Emissions, Ozone Concentration, PM2.5 Concentration, Proximity to Heavy Traffic Roadways, To Releases from Facilities (RSEI Model)

Legend: (High) [10] [9] [8] [7] [6] [5] [4] [3] [2] [1] **(Low)**



Legend

-  Airport Runways
-  Care Facilities - Adult Family Homes
-  Care Facilities - Nursing Homes
-  City Limits
-  Climate Projections ~2050
-  County Boundaries
-  DCYF Licensed Childcare Centers
-  Dry Cleaners (Current and Former)
-  Electric Utilities - Investor
-  Electric Utilities - Public
-  Farmworkers Housing
-  Former Orchard Lands
-  Hazardous Waste Sites (EPA)
-  Historical Redlining (HOLC)
HOLC (A)
B
C
D
-  Hospitals
-  Legislative Districts
-  Mortgage Discrimination
-  National Flood Hazard Layer

-  Toxic Release Inventory Sites (EPA)
-  Tribal Boundaries
-  Tribal Health Services
-  WA Ecology Cleanup Sites
 - Awaiting cleanup
 - Cleanup started
 - Monitoring cleanup progress
 - Cleanup complete
-  Wastewater Dischargers (EPA)
-  Watershed Boundaries
-  Wildfire Smoke Cumulative Score (2016-2022)

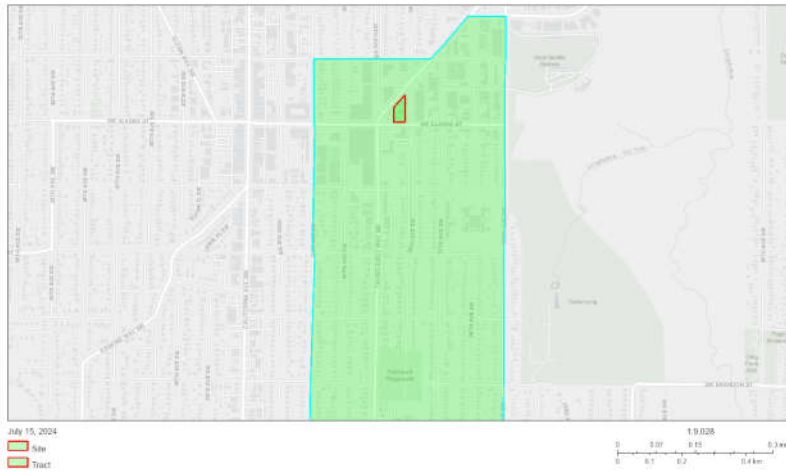


EJScreen Community Report

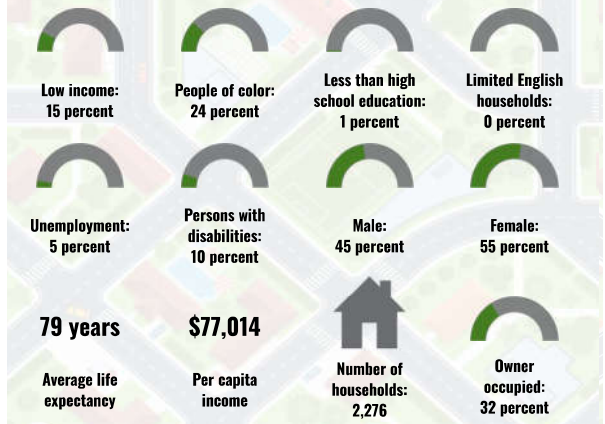
This report provides environmental and socioeconomic information for user-defined areas, and combines that data into environmental justice and supplemental indexes.

Seattle, WA

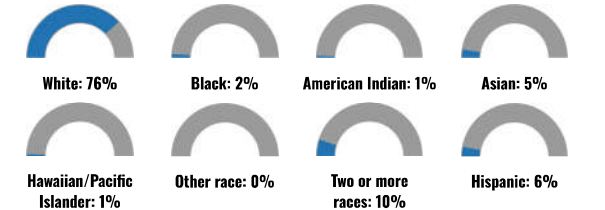
Tract: 53033010501
 Population: 4,500
 Area in square miles: 0.29



COMMUNITY INFORMATION



BREAKDOWN BY RACE



BREAKDOWN BY AGE



LIMITED ENGLISH SPEAKING BREAKDOWN



LANGUAGES SPOKEN AT HOME

LANGUAGE	PERCENT
English	85%
Spanish	4%
French, Haitian, or Cajun	1%
German or other West Germanic	3%
Russian, Polish, or Other Slavic	1%
Other Indo-European	2%
Chinese (including Mandarin, Cantonese)	1%
Other Asian and Pacific Island	1%
Other and Unspecified	1%
Total Non-English	15%

Notes: Numbers may not sum to totals due to rounding. Hispanic population can be of any race. Source: U.S. Census Bureau, American Community Survey (ACS) 2018-2022. Life expectancy data comes from the Centers for Disease Control.

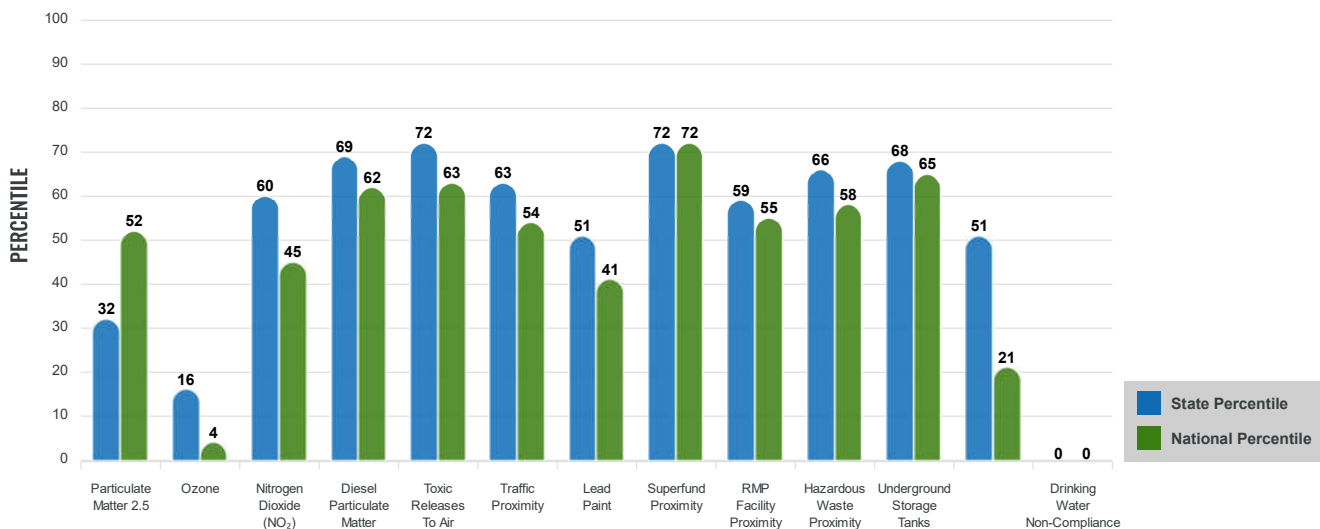
Environmental Justice & Supplemental Indexes

The environmental justice and supplemental indexes are a combination of environmental and socioeconomic information. There are thirteen EJ indexes and supplemental indexes in EJScreen reflecting the 13 environmental indicators. The indexes for a selected area are compared to those for all other locations in the state or nation. For more information and calculation details on the EJ and supplemental indexes, please visit the [EJScreen website](#).

EJ INDEXES

The EJ indexes help users screen for potential EJ concerns. To do this, the EJ index combines data on low income and people of color populations with a single environmental indicator.

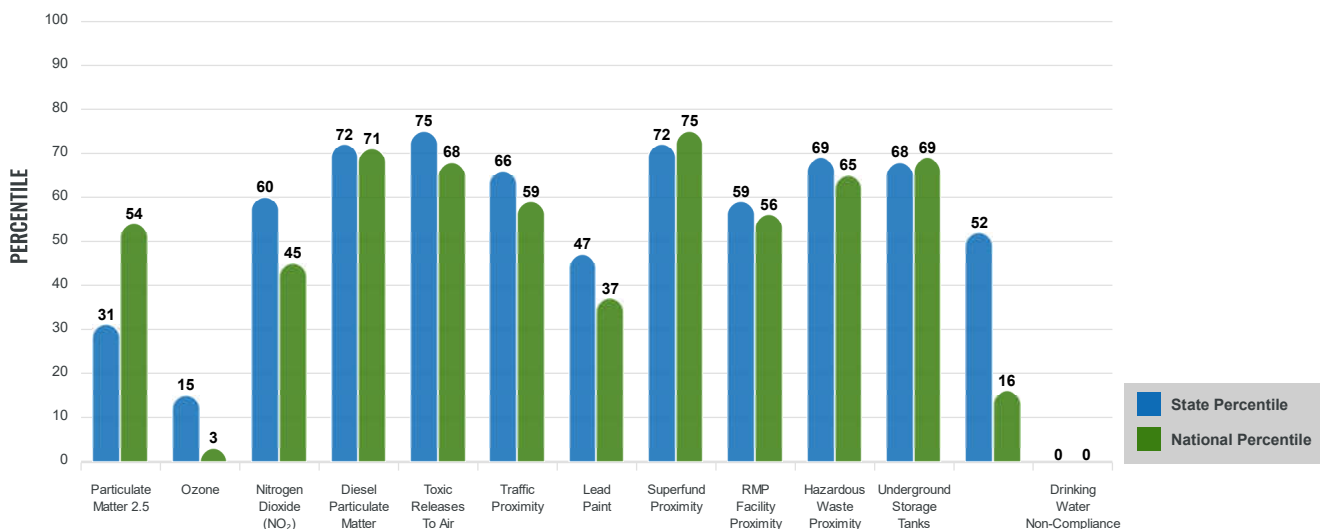
EJ INDEXES FOR THE SELECTED LOCATION



SUPPLEMENTAL INDEXES

The supplemental indexes offer a different perspective on community-level vulnerability. They combine data on percent low-income, percent linguistically isolated, percent less than high school education, percent unemployed, and low life expectancy with a single environmental indicator.

SUPPLEMENTAL INDEXES FOR THE SELECTED LOCATION



These percentiles provide perspective on how the selected block group or buffer area compares to the entire state or nation.

Report for Tract: 53033010501

EJScreen Environmental and Socioeconomic Indicators Data

SELECTED VARIABLES	VALUE	STATE AVERAGE	PERCENTILE IN STATE	USA AVERAGE	PERCENTILE IN USA
ENVIRONMENTAL BURDEN INDICATORS					
Particulate Matter 2.5 (µg/m ³)	8.85	9.51	33	8.45	71
Ozone (ppb)	30.3	32.7	15	41	4
Nitrogen Dioxide (NO ₂) (ppbv)	8.1	6.3	78	7.8	56
Diesel Particulate Matter (µg/m ³)	0.594	0.256	96	0.191	97
Toxic Releases to Air (toxicity-weighted concentration)	11,000	1,800	97	4,600	93
Traffic Proximity (daily traffic count/distance to road)	2,400,000	1,200,000	86	1,700,000	76
Lead Paint (% Pre-1960 Housing)	0.23	0.23	63	0.3	52
Superfund Proximity (site count/km distance)	11	0.53	99	0.39	99
RMP Facility Proximity (facility count/km distance)	0.75	0.51	76	0.57	74
Hazardous Waste Proximity (facility count/km distance)	7.9	2.9	91	3.5	87
Underground Storage Tanks (count/km ²)	37	6.1	96	3.6	99
Wastewater Discharge (toxicity-weighted concentration/m distance)	0.94	300	61	700000	21
Drinking Water Non-Compliance (points)	0	1	0	2.2	0
SOCIOECONOMIC INDICATORS					
Demographic Index USA	0.73	N/A	N/A	1.34	28
Supplemental Demographic Index USA	1.07	N/A	N/A	1.64	20
Demographic Index State	1	1.47	32	N/A	N/A
Supplemental Demographic Index State	0.92	1.37	25	N/A	N/A
People of Color	24%	33%	40	40%	41
Low Income	15%	23%	37	30%	27
Unemployment Rate	6%	5%	66	6%	63
Limited English Speaking Households	0%	4%	0	5%	0
Less Than High School Education	1%	8%	20	11%	15
Under Age 5	7%	5%	72	5%	73
Over Age 64	11%	17%	30	18%	28

*Diesel particulate matter index is from the EPA's Air Toxics Data Update, which is the Agency's ongoing, comprehensive evaluation of air toxics in the United States. This effort aims to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that the air toxics data presented here provide broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. More information on the Air Toxics Data Update can be found at: <https://www.epa.gov/haps/air-toxics-data-update>.

Sites reporting to EPA within defined area:

Superfund	3
Hazardous Waste, Treatment, Storage, and Disposal Facilities	0
Water Dischargers	1
Air Pollution	0
Brownfields	0
Toxic Release Inventory	0

Other community features within defined area:

Schools	1
Hospitals	1
Places of Worship	2

Other environmental data:

Air Non-attainment	No
Impaired Waters	No

Selected location contains American Indian Reservation Lands*	No
Selected location contains a "Justice40 (CEJST)" disadvantaged community	No
Selected location contains an EPA IRA disadvantaged community	No

Report for Tract: 53033010501

EJScreen Environmental and Socioeconomic Indicators Data

HEALTH INDICATORS

INDICATOR	VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Low Life Expectancy	19%	18%	58	20%	44
Heart Disease	3.8	4.8	24	5.8	13
Asthma	9.9	10.9	14	10.3	40
Cancer	7.5	6.5	74	6.4	73
Persons with Disabilities	9.5%	13.4%	26	13.7%	26

CLIMATE INDICATORS

INDICATOR	VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Flood Risk	2%	11%	32	12%	25
Wildfire Risk	0%	12%	0	14%	0

CRITICAL SERVICE GAPS

INDICATOR	VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Broadband Internet	8%	8%	61	13%	44
Lack of Health Insurance	2%	6%	9	9%	10
Housing Burden	No	N/A	N/A	N/A	N/A
Transportation Access Burden	No	N/A	N/A	N/A	N/A
Food Desert	No	N/A	N/A	N/A	N/A

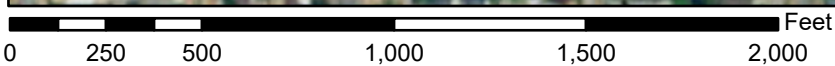
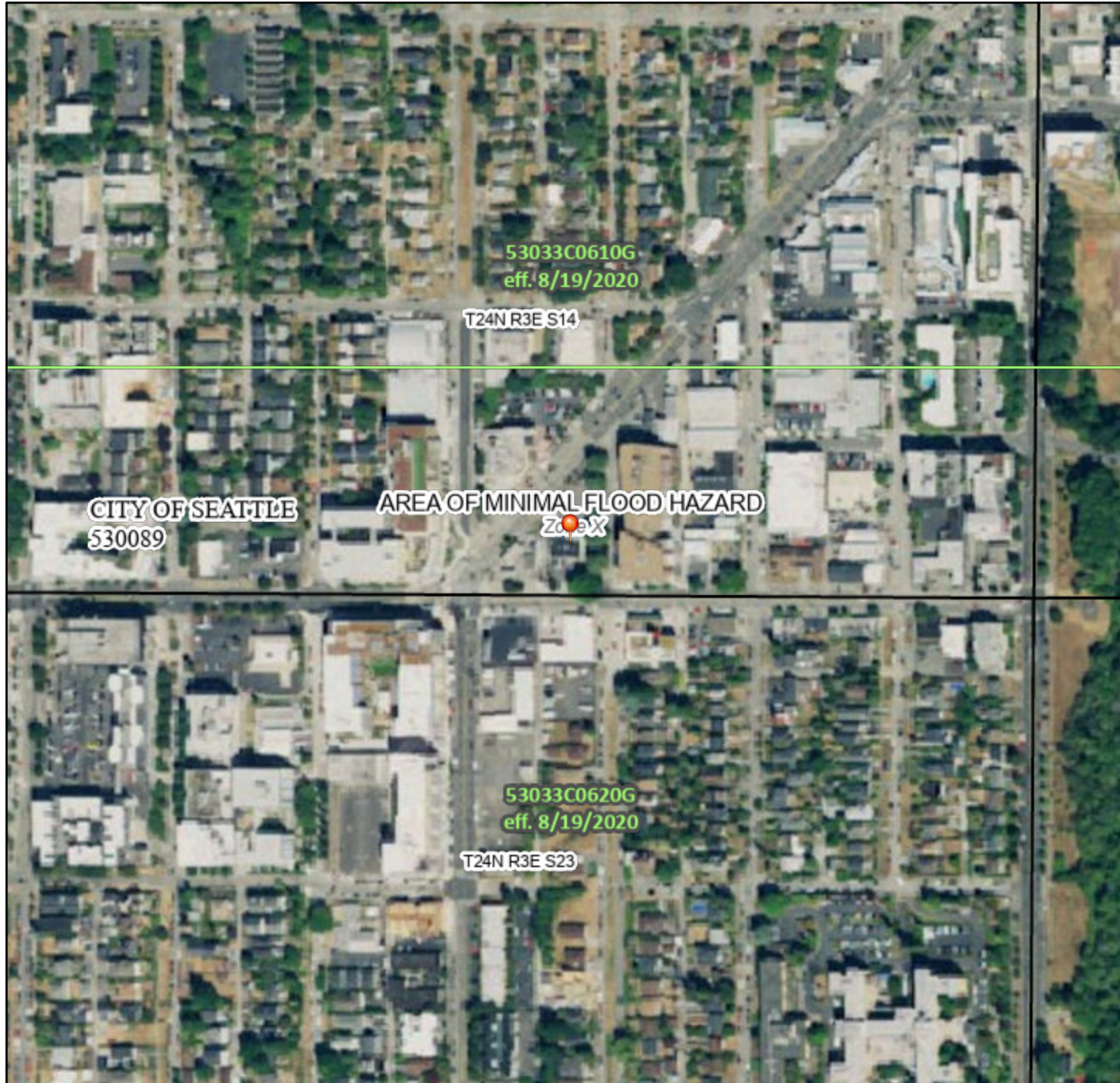
Report for Tract: 53033010501

Report produced July 15, 2024 using EJScreen Version 2.3

National Flood Hazard Layer FIRMette



122°23'9"W 47°33'53"N

























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122°22'31"W 47°33'29"N

Basemap Imagery Source: USGS National Map 2023

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) <i>Zone A, V, A99</i>
		With BFE or Depth <i>Zone AE, AO, AH, VE, AR</i> Regulatory Floodway
OTHER AREAS OF FLOOD HAZARD		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile <i>Zone X</i>
		Future Conditions 1% Annual Chance Flood Hazard <i>Zone X</i>
		Area with Reduced Flood Risk due to Levee. See Notes. <i>Zone X</i>
		Area with Flood Risk due to Levee <i>Zone D</i>
OTHER AREAS		NO SCREEN Area of Minimal Flood Hazard <i>Zone X</i>
		Effective LOMRs
GENERAL STRUCTURES		Area of Undetermined Flood Hazard <i>Zone D</i>
		Channel, Culvert, or Storm Sewer
OTHER FEATURES		Levee, Dike, or Floodwall
		Cross Sections with 1% Annual Chance Water Surface Elevation
MAP PANELS		Coastal Transect
		Base Flood Elevation Line (BFE)
		Limit of Study
		Jurisdiction Boundary
		Coastal Transect Baseline
		Profile Baseline
MAP PANELS		Digital Data Available
		No Digital Data Available
		Unmapped
	The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.	

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 7/16/2024 at 12:01 AM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

Table C1 - Summary of Projected Climate (2036 to 2065)
 Franciscan West Huling (22-148)
 Seattle, Washington

Climate Parameter	Value	WA EHD Map Rank
Change in Annual Cooling Degree Days	422	8
Change in Annual Heating Degree Days	1,254	7
Annual Days Over 99th Percentile Historical Temperature	27	5
Change in Annual Precipitation	0.04897481	8

Notes:

Values provided by the Washington State Department of Health:

<https://doh.wa.gov/data-and-statistical-reports/washington-tracking-network-wtn/climate-projections>