CONVERSE CONSULTANTS

2nd Quarter 2022 Remedial Action Operation and Monitoring Report

Dryclean US
Canyon Park Place Shopping Center
22833 Bothell Everett Highway
Bothell, Washington 98021

Converse Project No. 17-42-200-07
Cleanup Site ID No.: 1692
Facility Site ID No.: 51525580
August 25, 2022

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August 25, 2022

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Subject: **2nd Quarter 2022 REMEDIAL ACTION OPERATION AND MONITORING (O&M) REPORT**
Dryclean US - Canyon Park Place Shopping Center
22833 Bothell Everett Highway
Bothell, Washington 98021
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Mr. Avila:

Converse Consultants (Converse) is pleased to submit the attached Remedial Action Operation and Monitoring (O&M) Report that summarizes the operation and monitoring activities conducted at the Canyon Park Place Shopping Center (Site) for the current reporting period.

We appreciate the opportunity to be of service. Should you have any questions or comments regarding this report, please contact Michael Van Fleet at (909) 796-0544 or Norman Eke at (626) 930-1260.

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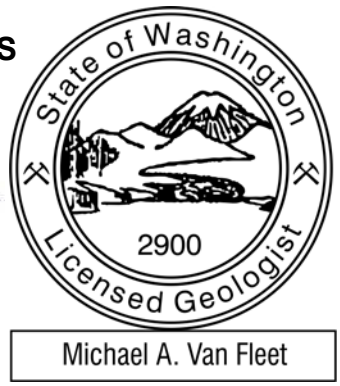

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1.0 INTRODUCTION

This *2nd Quarter 2022 Operation and Monitoring (O&M) Report* has been prepared by Converse Consultants (Converse), on behalf of DS Canyon Park, L.P. (Client), for the remedial activities conducted relative to the Dryclean US facility at 22833 Bothell Everett Highway, within the Canyon Park Place Shopping Center (Site). The location of the Site is shown on **Figure 1**, Site Vicinity. Details of the Site layout are shown on **Figure 2**, Site Plan.

In 2019 the Site was enrolled in the Washington State Department of Ecology (Ecology) Voluntary Cleanup Program (VCP). The Site is identified as Facility No. 5125580, and VCP Project No. NW3229. All cleanup activities discussed herein have been conducted under the general oversight of Ecology, and in accordance with the Remedial Action Workplan (RAW), prepared by Converse and dated April 20, 2020, which was approved by Ecology in a letter dated September 23, 2020.

1.1 BACKGROUND

A review of historic records showed that the Canyon Park Place Shopping Center was developed in 1992. The shopping center has several retail tenants including Dryclean-US, QFC grocery store, Bartell Drugs, Baskin Robbins, AT&T, and the Recology Store. Commercial development exists east, west, and north of the shopping center. A residential development exists to the south.

Dryclean-US has been utilized as a dry-cleaning facility since the shopping center was constructed in 1992. A tetrachloroethene (PCE) based cleaning machine is believed to have been used onsite from 1992 until sometime between 2011 and 2017. The Site is currently operating a Union HL840 machine that uses a hydrocarbon-based solvent (Green Earth).

Previous investigations at the Site have identified elevated concentrations of chlorinated volatile organic compounds (CVOCs) in shallow subsurface soil gas and groundwater in the vicinity of the dry cleaning facility that exceed Model Toxics Control Act (MTCA) Method B and A screening levels for soil vapor and groundwater, respectively.

Several environmental assessments have been conducted at the Site by various consultants beginning in 2005, and have included the collection and analysis of soil, soil vapor, groundwater, and indoor air samples. Remedial activities have also previously been completed at the Site. Locations of current and prior sample points and wells are presented on Figure 3, Well and Sample Locations.

Two (2) separate remedial excavation events have occurred at the Site (one inside the dry-cleaning facility and one behind the dry-cleaning facility) to remove PCE-impacted soil (October 2007 and September 2009). A total of 70 cubic yards of soil have been

excavated and disposed of at off-site facilities, but residual concentrations of PCE in soil samples in excess of the Ecology screening level of 50 micrograms per kilogram (ug/kg) were reported to have been left in place. Impacts on groundwater were attempted to be remediated through the application of peroxide (November 2009), but these efforts were determined to not have been effective. Ecology has not yet issued a No Further Action (NFA) letter for the Site relative to soil or groundwater contamination.

A total of three (3) monitoring wells (MW-1 through MW-3) have been constructed and currently exist at the site (see **Figure 3**), and grab samples of groundwater have been collected from various boring locations at different times. Groundwater has generally been encountered at depths of approximately 4 feet to 8 feet below ground surface (bgs), and it is understood to regionally flow towards the north. The initial water-bearing zone consists of silty sand with gravel that extends to an approximate depth of 12 feet bgs. At 12 feet bgs the lithology was reported to change to clayey silt that extended to at least 20 feet bgs, and these sediments are considered to be a non-water-bearing confining layer, that has likely prevented further downward migration of contaminants.

The analytical results of prior assessments have indicated that groundwater behind the dry cleaner facility is impacted with PCE at concentrations greater than the screening level of 5 micrograms per liter (ug/L) with a maximum reported concentration of 56 ug/L. Since 2005 no concentrations of PCE have been detected above the screening level in samples collected down-gradient (in front) of the dry cleaners. The extent of the groundwater impacted with PCE in excess of the screening level is therefore believed to be limited to an approximate radius of 100 to 200 feet centered on the location of the dry-cleaning machine.

Several assessments have been completed at the Site since the last remedial activities in 2009, including a remedial pilot study. The results of these assessments are discussed in detail in the Pilot Study Report prepared by Moore Twining Associates (MTA), dated July 5, 2017. Based on the results of these prior assessments, it appears that a potential risk to the health of Site occupants exists based on the potential for concentrations of VOCs beneath the Site to migrate up through the building slab and accumulate in the indoor air where they could be inhaled (vapor intrusion). Concentrations of PCE, trichloroethylene (TCE), chloroform, and dichlorodifluoromethane (Freon 12) have been reported at concentrations in excess of their respective MTCA Method B screening levels for sub-slab vapor and/or deep soil vapor.

Indoor air samples collected in 2011 from the cleaners and other nearby suites were analyzed for VOCs, and maximum reported concentrations of benzene, chloroform, PCE and TCE (1.388, 2.649, 1.162, and 0.271 ug/m^3, respectively) were in excess of their MTCA Method B screening levels at that time (0.32, 0.11, 0.42, and 0.1 ug/m^3, respectively). It was noted that the measured indoor air concentrations of each of these compounds were below the OSHA permissible exposure limits (PELs) for workers. Although the measured indoor air concentrations of all of these compounds were above their MTCA values, it was concluded that no adverse effects to workers were expected

since most of the concentrations were comparable to ambient air concentrations in urban areas. Converse notes that in 2015 the Method B screening levels for PCE and TCE were revised and that the maximum concentrations of these compounds reported in 2011 are less than the current screening levels of 9.6 and 0.33 ug/m^3, respectively.

A Feasibility Study, dated April 9, 2012, was prepared by EMR Incorporated (EMR). In the Feasibility Study, EMR concluded that soil vapor extraction and air sparging (SVE/AS) along with monitored natural attenuation appeared to be the most promising remedial alternative of the remedial options that were evaluated to address VOC impacts to the soil vapor and groundwater.

MTA prepared and implemented an SVE/AS Pilot Test Workplan, and the results of that test were presented in a Pilot Study Report dated July 5, 2017. The following information was presented in the Pilot Study Report:

- Two (2) SVE pilot study events were conducted at the Site. The June 2016 pilot study event was conducted to evaluate soil vapor extraction in native soil; the October 2016 pilot study event was conducted to evaluate vapor extraction from the sub-slab engineered fill below the dry-cleaning tenant suite and the adjacent tenant suites. During a portion of the June 2016 pilot study event, air sparging (AS) was also conducted to evaluate it as a possible option to remediate groundwater.

- Based on pilot study results, it appears that sub-slab vapor extraction successfully mobilized and captured vapor-phase PCE in sub-slab engineered fill below the building at the Site. Based on data collected and observations made during the pilot tests, sub-slab vapor extraction appears to be feasible for the mitigation and control of the observed elevated PCE concentrations in sub-slab and soil vapor at the Site.

- The horizontal sub-slab vapor radius of influence for the area below the dry cleaners and tenant suites west of the dry cleaners is estimated to be 65 feet. Shallow native soils (depths greater than 2 feet bgs) appear to limit the horizontal and vertical extent of vapor extraction. It is assumed that the vertical radius of influence using sub-slab vapor extraction points would be approximately 4 feet bgs.

- The horizontal radius of influence from extraction wells in native soil below the Site appears to have been less than 20 feet.

- A possible footing between the dry-cleaning tenant space and the QFC tenant space may act as a barrier between the sub-slab areas.

- It was recommended that remedial action be implemented at this Site utilizing SVE and AS technologies.

Converse reviewed available documents and determined that further assessment appeared warranted before proceeding with remedial activities. Converse prepared a Workplan dated May 2, 2019 with the objective of delineating the lateral extents of PCE impacts in sub-slab and deeper soil vapor so that the remedial system could be appropriately designed.

The results of this supplemental assessment results were presented in a Supplemental Assessment Report dated January 31, 2020. A summary of the results is provided below. The Washington State Department of Ecology MTCA Method B Cleanup Levels were used to evaluate the reported concentrations. Cumulative analytical results from all prior Site assessment activities for indoor/outdoor air, sub-slab soil vapor, soil vapor, and groundwater samples are summarized on **Tables 1, 2, 3** and **4**, respectively. Based on analytical results, the following conclusions were made:

- PCE and TCE were reported at concentrations above their respective Ecology screening levels in the air sample from Dryclean-US. Additionally, the indoor air sample from Recology was reported to have TCE at a concentration that exceeded the Method B screening level, but was less than the Method C (commercial / industrial) screening level. The presence of these compounds in these indoor air samples are suspected to potentially be related to the intrusion of subsurface vapors.

- Benzene and carbon-tetrachloride were reported at concentrations above their respective Ecology screening levels in all five (5) indoor/outdoor air samples. The presence of these analytes in both the indoor and outdoor samples at similar magnitude concentrations suggests that these analytes may be related to regional background levels rather than from vapor intrusion.

- Sub-Slab soil vapor concentration for TCE (12.3 ug/m3) and benzene (40.1 ug/m3) below the Dryclean-US tenant space (VMP-16) exceeded their respective Ecology screening levels of 12 ug/m3 and 11 ug/m3. Also, the sub-slab concentration of PCE (811 ug/m3) at Recology (VMP-15), and chloroform (4.69 ug/m3) at Bartell Drugs (VMP-13) also exceeded their respective Ecology screening levels of 320 and 3.6 ug/m3. All other reported VOC concentrations in sub-slab samples were below their respective Ecology screening levels.

- Deep soil vapor concentrations for TCE of 39.8 and 118 ug/m3 at Dryclean-US (VMP-23D) and Recology (VMP-25D), respectively, exceeded the Ecology screening level of 37 ug/m3. In addition, soil vapor concentrations for benzene of 52.3 and 77.2 ug/m3 at Recology (VMP-25D) and the exterior location VMP-24D, respectively, also exceeded the Ecology Cleanup level of 32 ug/m3. Vinyl chloride,

reported at 91.5 ug/m3 in sample VMP-25D from Recology, was the only other VOC detected in soil vapor samples at a concentration in excess of their Ecology screening levels (28 ug/m3 for vinyl chloride).

Based on the results of previous assessments conducted at the Site, Converse prepared a Remedial Action Workplan (RAW), dated April 20, 2020, for the implementation of soil vapor extraction (SVE) and air sparging (AS) remedial technologies to remediate concentrations of tetrachloroethene (PCE) and other chlorinated volatile organic compounds (CVOCs) in sub-slab and shallow soil vapors, and groundwater at the Site.

1.2 REMEDIATION OBJECTIVES

Data obtained during previous Site investigations indicated that VOCs are present in shallow subsurface soil gas and groundwater in the vicinity of the dry-cleaning facility at concentrations that exceed MTCA Method B or A screening levels. The objective of the remedial activities is to reduce concentrations of the chlorinated VOCs (CVOCs) beneath the Site that are potentially related to dry cleaning activities, and to ultimately receive unconditional case closure from Ecology.

To achieve this objective, SVE and AS technologies are proposed to be used. One (1) AS well will be employed to transport concentrations of VOCs in the groundwater to the shallow soil vapor. Impacted vapors will be extracted from a total of eight (8) SVE wells installed at the Site and treated using a granular activated carbon (GAC) system. The effectiveness of the remedial activities will be measured through monitoring and sampling of sub-slab and soil vapor monitoring probes and groundwater monitoring wells.

Cleanup at this Site will be implemented under the MTCA regulations, Chapter 173-340 Washington Administrative Code (WAC). MTCA cleanup levels are concentrations of hazardous substances in the environment that are considered sufficiently "protective of human health and the environment". Data obtained during previous investigations indicate that PCE and TCE are the VOCs of primary concern. Other CVOCs that have historically been detected in samples at concentrations in excess of their MTCA cleanup levels which may potentially be associated with releases from drycleaning activities include vinyl chloride and chloroform. Although benzene, and Freon 12 have previously been detected in a limited number of samples at concentrations in excess of Method B screening levels, they have all been less than Method C screening levels, and they are not considered to be chemicals of concern (COCs) related to onsite releases from drycleaning activities.

The MTCA cleanup levels will be used to evaluate the effectiveness of the remediation activities with regard to the identified COCs. For sub-slab and soil vapor samples the MTCA Method B screening levels will be used, and for groundwater the MTCA Method A screening levels be used (Method B level to be used for chloroform since there is not Method A value). The current Cleanup Goals (CGs) are presented in the table below.

COC	Sub-Slab Soil Vapor Cleanup Levels (ug/m^3)	Soil Vapor Cleanup Levels (ug/m^3)	Groundwater Cleanup Levels (ug/L)	
			Drinking Water	Vapor Intrusion
Tetrachloroethene (PCE)	320	960	5	24
Trichloroethene (TCE)	11	33	4	1.4
Vinyl Chloride	9.4	28	0.29	0.35
Chloroform	3.6	11	14	1.2
Benzene	11	32	5	2.4

All vapor concentrations in units of micrograms per cubic meter (ug/m^3), and water concentration in units of micrograms per liter (ug/L)

1.3 SVE EQUIPMENT AND PROCESS DESCRIPTION

Converse installed a total of four (4), horizontal soil vapor extraction (HSVE) wells to address sub-slab VOCs, and four (4) vertical SVE wells to address the VOCs in shallow soil vapor. The locations of the new HSVE and SVE wells are shown on **Figure 3**. It is noted that SVE wells previously installed by others (SVE-1 through SVE-3) are not currently being utilized.

Sub-Slab SVE Wells

Four (4) horizontal sub-slab wells, HSVE-1, HSVE-2, HSVE-3, and HSVE-4 were installed in the rear of the Dry-clean USA, Recology, Baskin Robins, and QFC suites. The horizontal wells were constructed in accordance with the methods outlined in the RAW. Each of the well casing extend approximately 2 feet beyond the rear wall of the suites, and are located approximately 6-inchs below the bottom of the floor slab.

All four (4) sub-slab horizontal wells were connected into a single above-ground manifold constructed of 2-inch diameter SCH 80 PVC pipe that was stubbed at the system compound.

Shallow Soil Vapor SVE Wells

Four (4) shallow soil vapor SVE wells were installed at the Site. These four (4) wells (SVE-4 through SVE-7) were installed vertically inside, or in front of, the Dryclean-US suite. The well casing at each location extends approximately 5 feet below the top of the floor, with the bottom 2-feet of the casing being perforated.

Soil-vapor extraction wells SVE-4, SVE-5, and SVE-6 were connected into a single 2-inch diameter pipe above ground within the cleaners. The manifold piping extended through a hole in a vent on the rear wall of the cleaners where it was then extended to the SVE equipment compound. Well SVE-7 was connected to the SVE equipment compound via

a single 2-inch diameter SCH 80 PVC pipe run above-ground from the well and over the roof of the Dryclean-USA suite.

Remediation System

An SVE system is being used to extract VOC-contaminated vapors from the subsurface. The extracted VOC-contaminated vapor stream is passed through two (2) sets of granular activated carbon (GAC) vessels where the VOCs are stripped from the vapor before being discharged to the atmosphere through a vent stack. The system operated with a maximum total flow rate of approximately 200 SCFM, and under a permit obtained from the Puget Sound Clean Air Agency (PSCAA).

An air compressor capable of producing up to 15 SCFM air flow at a pressure of 90 psi is being used to treat VOC-impacted groundwater. The air from the compressor is injected through Well AS-1.

All of the remedial system equipment is housed in a secure shipping container.

2.0 SCOPE OF SERVICE

The field activities completed consisted of quarterly monitoring for the 2nd Quarter 2022 period (March through May 2022). Routine O&M activities included evaluation of remedial system equipment, monitoring of flow rates and vacuum levels in extraction well lines, field reading of VOC concentrations using a PID from sample ports on extraction well and system process lines, collection of samples from select sub-slab and soil vapor probes and groundwater monitoring wells. Samples were also collected from the GAC treatment system to comply with the PSCAA permit requirements. All activities were completed in general accordance with the approved RAW dated April 20, 2020.

2.1 SYSTEM OPERATION AND MONITORING

The system is run on a continuous basis, 24-hours per day, and is inspected and monitored on at least a on a bi-weekly basis. System monitoring includes the evaluation of flow measurements, vacuum readings, and VOC concentrations (measured using a PID calibrated to Hexane) from designated locations on the extraction well and treatment system lines.

2.2 QUARTERLY SAMPLING AND ANALYSIS

During this quarter of operation, samples were collected from select monitoring probe and extraction wells and results were compared to baseline concentrations to evaluate the effectiveness of the systems in extracting VOCs from the Site. Additionally, influent and effluent vapor samples were collected from the GAC treatment system to evaluate the effectiveness of the systems in treating the waste emissions. The system sampling and analysis procedures are discussed below, and the analytical results are discussed in **Section 2.3**.

2.2.1 SVE System Sampling and Analysis

On March 22, 2022 and May 12, 2022, samples were collected from the influent and/or effluent of the GAC treatment system for laboratory analysis to evaluate the effectiveness of the SVE system in extracting and treating VOCs. The system samples were collected in 1-liter summa canisters at a flow rate of approximately 200 milliliters per minute. Sample collection and analysis was conducted in accordance with the PSCAA permit sampling guidelines. All samples were submitted to Eurofins-Air Toxics for analysis of VOCs in accordance with EPA Method TO-15.

2.2.2 Air Sparge System

A replacement compressor unit for the air sparge system was installed and began operation on March 18, 2022. The system is set to continuously supply air into air

sparge well AS-1. The rate of air being injected was measured to be approximately 3 SCFM.

2.2.3 Soil Vapor Sampling and Analysis

Quarterly sampling was conducted on May 12, 2022. In total, 11 vapor samples were collected into 1-liter summa canisters at a flow rate of approximately 200 milliliters per minute. All samples were analyzed for CVOCs in accordance with EPA Method TO-15.

All sampled probes were purged and sampled in general accordance with Ecology's *Guidance for Evaluating Soil Vapor Intrusion in Washington State: Investigation and Remediation* (February 2016).

Prior to purging the probes, a leak check of the fittings was completed by conducting a shut-in test. The shut-in test consists of closing the valve to the probe and then creating a vacuum of approximately 100-inches of water using a pump or syringe. The line was then sealed at the pump end and the vacuum gauge was monitored for approximately 1 minute. A decrease in the vacuum during this period indicates that there is a leak in the line and fittings should be tightened.

Each probe was purged of approximately 3 sample train volumes (approximately 0.1 liters for sub-slab probes, and 0.3 to 0.9 liters for soil vapor probes) prior to sampling. Purging and sampling were generally conducted at a rate of approximately 200 mL/min, although flow rates from some soil vapor probes may have been lower due to tight soil conditions. Leak tests were conducted during the purging and sampling of each probe by placing a liquid (isopropyl alcohol) near the tubing at ground surface, and then analyzing the sample for those tracer compounds. After probes were purged, vapor samples were collected.

2.3 ANALYTICAL RESULTS

2.3.1 SVE System Vapor Analytical Results

Five (5) VOCs were reported in one or more of the GAC influent samples this reporting period; Acetone, freon 12, ethanol, tetrahydrofuran, and 2-propanol. It is noted that PCE and TCE were not reported above the laboratory reporting limits in any of the samples.

Copies of the SVE sample analytical reports are attached in **Appendix A**, and the findings are summarized in **Table 5**.

2.3.2 Sub-Slab Vapor Analytical Results

Four (4) CVOCs; PCE, TCE, cis-1,2-DCE, and 2-propanol (tracer) were reported in one or more of the analyzed sub-slab vapor samples collected this reporting period. The sub-slab vapor sample results from all sampling events, along with the CGs, are summarized in **Table 2**.

- PCE was reported in 5 of the 8 sub-slab probe samples at concentrations ranging between 7.3 µg/m^3 and 330 µg/m^3. PCE was reported at concentrations above the CG of 320 µg/^{3} in only one (1) of the sampled sub-slab probes (VMP-5).

- TCE was reported in 3 of the 8 samples at concentrations ranging between 14 and 29 ug/m^3. TCE was reported at concentrations above the CG of 11 µg/^{3} in three (3) of the sampled sub-slab probes (VMPs-1, -3, and -19).

- Cis-1,2-DCE was reported in samples from only one (1) location (VMP-3) at a concentration of 61 µg/^{3}. Currently there is no CG for cis-1,2-DCE.

PCE and TCE concentrations in sub-slab vapor samples are presented on **Figure 4A**.

2.3.3 Soil Vapor Analytical Results

Five (5) CVOCs were reported in one or more of the three (3) soil vapors samples collected this reporting period; PCE, TCE, cis-1,2-DCE, trans-1,2-DCE and 2-propanol (tracer). The analytical data for soil vapor probes, along with the CGs, are summarized in **Table 3**.

- PCE was reported in each of the three (3) probes sampled at a maxim concentration of 320 µg/m^3. All reported PCE concentrations are less than the CG of 960 µg/^{3}.

- TCE was reported in each of the three (3) soil vapor probes sampled at concentration ranging from 54 to 59 µg/m^3. All of the reported concentrations are greater than the CG of 33 µg/m^3.

- Cis-1,2-DCE, trans-1,2-DCE, and 2-propanol were reported at maximum concentrations of 27, 22, and 630 µg/m^3, respectively. Currently there are no CGs for these compounds.

Reported PCE and TCE concentrations in soil vapor samples are presented on **Figure 4B**.

2.3.4 Groundwater Analytical Results

No CVOCs were reported in either of the groundwater samples collected from down-gradient monitoring wells MW-1 and MW-2.

PCE was the only CVOC detected in the sample from groundwater monitoring well MW-1, which is located behind the cleaners building. This sample was collected approximately 2 months after beginning continuous operation of the air sparge system. The reported PCE concentration of 1.7 micrograms per liter (ug/L) is a reduction from the previous level of 17 ug/L, and is also less than the CG for drinking water of 5 ug/L. The analytical data for groundwater samples, along with the CGs, are summarized in **Table 4**.

3.0 DISCUSSION OF FINDINGS

3.1 CHEMICAL PARAMETERS

3.1.1 SVE Systems Vapor Analytical Results

At all times during this reporting period the SVE/GAC system have met the conditions of PSCAA permit, as the total flow rate of 150 SCFM is less than 200 SCFM.

Five (5) VOCs were reported in the GAC system influent and/or effluent air samples collected this reporting period. PCE and TEC were not detected in any of the samples. In general, the concentrations of the VOCs that were detected were roughly the same in both the influent and effluent samples, or near to the laboratory reporting limits for these compounds. The analytical results of the GAC samples are presented on **Table 5**. Evaluation of the GAC sample results relative to PSCAA permit conditions is presented on **Table 6**.

Based on the current influent sample results, the SVE system was extracting total VOCs at a combined concentration of 0.0567 ppm and at a rate of 0.001656 lb/day. Due to the low levels of VOCs entering the system, the GAC was ineffective at further reducing VOC concentrations. However, the effluent concentration and emissions rate of 0.0621 ppmv and 0.001860 lb/day, respectively, are well below the permit conditions of 10 ppmv and 2.74 lb/day.

In accordance with Condition 10 of the PSCAA permit it appears that the system can now be operated without control devices based on analytical data of inlet samples from this sampling event, as well as the previous samples from the startup and 1st quarter. The maximum pre-control emissions rate for total VOCs of 0.001656 lb/day is significantly less than the permissible limit of 2.74 lb/day. Additionally, the total VOC concentration in the effluent of 0.0621 ppmv is well below the permissible level of 10 ppm. It is noted that PCE, DCE (cis-1,2-DCE), ethylbenzene and vinyl chloride were not detected in any of the samples collected from the GAC system this reporting period.

Although use of control devices are no longer required, Converse plans to continue running the extracted vapors through the GAC system. Parameters of the system will continue to be monitored in the field, but further laboratory analysis of samples does not appear to be necessary unless conditions should significantly change. Records of the field monitored parameters will be maintained, but findings will not be discussed in future O&M reports.

3.1.2 Monitoring Probe Analytical Results

Prior to beginning remedial activities concentrations of three (3) CVOCs (PCE, TEC, and chloroform) were reported in excess of CGs in 10 of the 16 sub-slab monitoring probes. In the 8 sub-slab vapor probes sampled at the end of the 2nd quarter of operation (May 12, 2022), only PCE and TCE were reported at concentrations in excess of CGs.

- PCE concentrations have been reduced from a baseline maximum of 7,000 ug/m^3 at VMP-3 down to 330 ug/m^3 at VMP-5. VMP-5 was the only sample to exceed the CG of 320 ug/m^3.
- TCE concentrations have been reduced from a baseline maximum of 690 ug/m^3 at VMP-3 down to 29 ug/m^3, also at VMP-3. Only three (3)TCE concentrations are currently in excess of the CG of 11 ug/m^3.

Prior to beginning remedial activities concentrations of four (4) CVOCs (PCE, TCE, vinyl chloride, and chloroform) were reported in excess of CGs in three (3) soil vapor monitoring probes (VMP-7, VMP-23D, and VMP-25D). Two (2) of these three (3) soil vapor probes were sampled during this monitoring event, and both were reported to have significantly reduced concentrations of each of these compounds.

- PCE was reduced form a baseline maximum of 3,100 ug/m^3 down to 320 ug/m^3, which is less than the CG of 960 ug/m^3.
- TCE was reduced form a baseline maximum of 210 ug/m^3 down to 59 ug/m^3, which slightly exceeds the CG of 33 ug/m^3.
- Chloroform was reduced from a baseline maximum of 38 ug/m^3 down to non-detectable levels.
- Vinyl chloride was reduced from a baseline maximum of 170 ug/m^3 down to non-detectable levels.

3.2 PHYSICAL PARAMETERS

Routine monitoring of the SVE system has found that it is generally operating as designed. The total combined flow rate from all extraction wells, as measured prior to the blower, has ranged from 150 to 200 SCFM with a vacuum level of approximately 10 inches of water. The temperature of vapors extracted from the well were typically measured to be around 60 degrees Fahrenheit, prior to entering the carbon units had been heated by the blower to approximately 145 degrees Fahrenheit.

The air sparge compressor is set to continuously supply air into air sparge well AS-1. The rate of air being injected was measured to be approximately 3 SCFM.

4.0 CONCLUSIONS AND RECOMMENDATION

Based on the data gathered during this quarter of SVE remedial system operations at the Site (2022, Q2), Converse presents the following conclusions:

- All above and below grade components of the SVE/AS system appears to be functioning as planned.
- Analytical results of quarterly vapor samples indicate that the SVE system has significantly reduced concentrations of CVOCs in the subsurface, and only a limited number of samples are reported to have concentrations in excess of the CGs.
- Both field and laboratory readings of VOC concentrations in the carbon system influent and effluent indicate that vapors are being sufficiently treated, and that emissions are in compliance with PSCAA permit requirements. It is noted that per Condition 10 of the PSCAA permit the system can now be operated without control devices based on analytical data of inlet samples from the startup, and 1st and 2nd quarters.

Based on the results of SVE baseline and startup testing activities performed to date at the Site, the SVE/AS system appears to be operating as designed. Therefore, it is recommended that the SVE/AS system continue to be operated and monitored as outlined in the RAW. Converse also recommends that PSCAA review the information presented in this report, and if appropriate, provide a formal notice that the system no longer requires control devices to operate, and/or that the monitoring frequency for control devices may be reduced.

5.0 RELIANCE

This report is for the sole benefit and exclusive use of DS Canyon Park, L.P. in accordance with the terms and conditions of the mutually agreed upon contract. Its preparation has been in accordance with generally accepted environmental practices. No other warranty, either expressed or implied is made. The Scope of Services associated with the report was designed solely in accordance with the objectives, schedule, budget, and risk-management preferences of DS Canyon Park, L.P.

This report should not be regarded as a guarantee that no further contamination, beyond that which could be detected within the scope of this assessment, is present at the Site. Converse makes no warranties or guarantees as to the accuracy or completeness of information provided or complied by others. It is possible to absolutely confirm that no hazardous materials and/or substances exist at the Site. If none are identified as part of a limited scope of work, such a conclusion should not be construed as a guaranteed absence of such materials, but merely the results of the evaluation of the property at the time of the assessment. Also, events may occur after the site visit, which was not found or available to Converse at the time of report preparation, may result in a modification of the conclusions and recommendations presented.

6.0 REFERENCES

Washington State Department of Ecology (Ecology) Model Toxic Control Act (MTCA) 2013, Model Toxics Control Act Cleanup Regulation, Chapter 174-340 WAC, Publication No. 94-06, November 2007, revised 2013.

Ecology Guidance for Evaluating Soil Vapor Intrusion in Washington State: Investigation and Remediation, dated February 2016.

Ecology, Opinion Pursuant to WAC 173-340-515(5) on Remedial Action For Dry Clean US, 22833 Bothell Way SE, Suite 114, Bothell, WA 98201, Facility/Site No. 5125580, Cleanup Site ID 1629, VCP No.: NW3229, September 23, 2020.

EMR Incorporated (EMR 2012), Feasibility Study, Dryclean-US, 22833 Bothell-Everett Highway, Bothell, Washington, April 9, 2012

Converse Consultants, Remedial Action Workplan, Dryclean-US, Canyon Park Place Shopping Center, 22833 Bothell Everett Highway, Bothell, Washington 98201

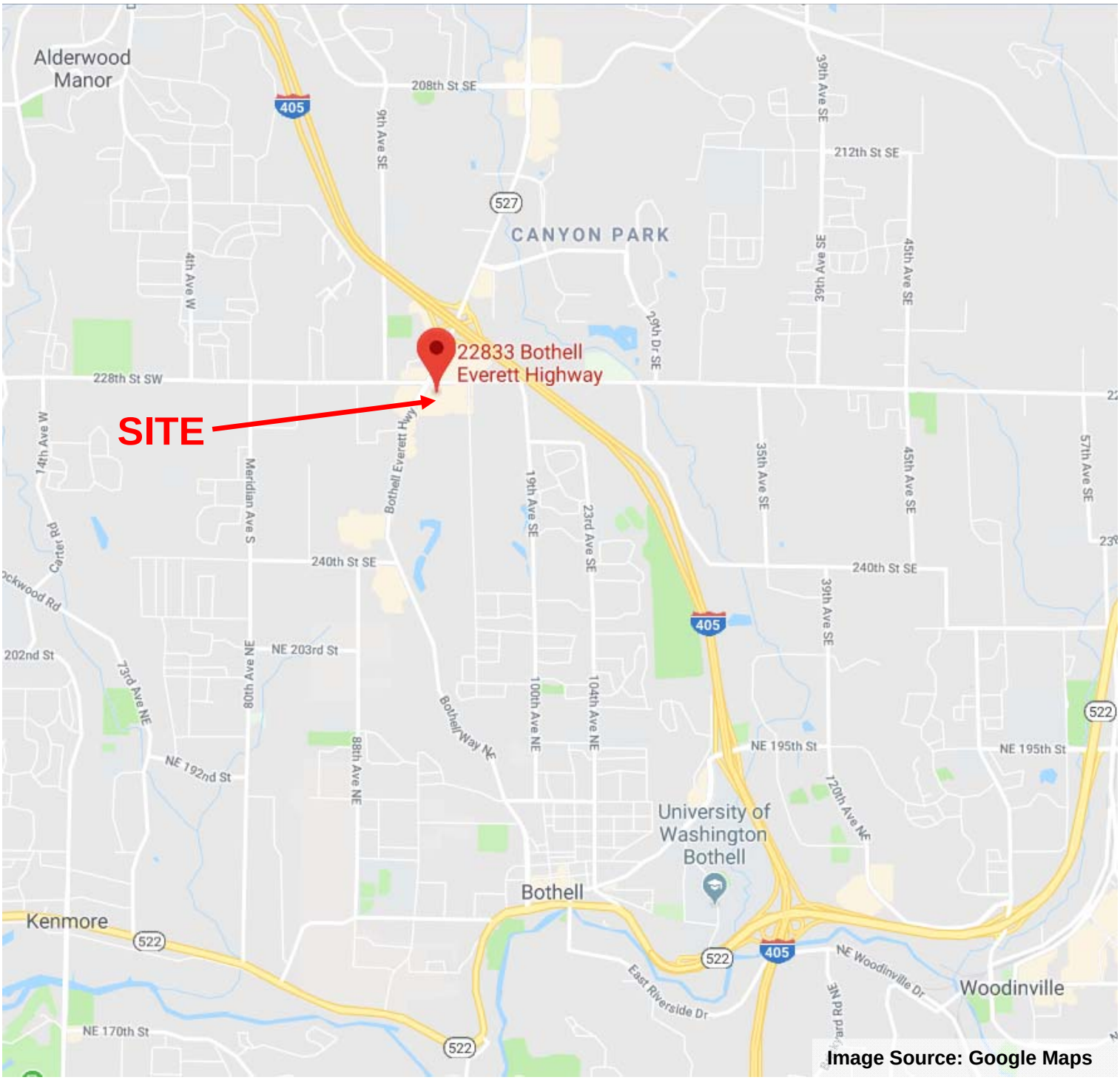
Converse Consultants, Workplan – Soil Vapor and Sub-Slab Vapor Sampling, Dryclean-US – Canon Park Place Shopping Center, May 2, 2019.

Converse Consultants, Workplan – Supplemental Assessment Report, Dryclean-US – Canon Park Place Shopping Center, January 31, 2020.

Moore Twining Associates, Inc., Pilot Study Report, 22833 Bothell-Everett Highway, Bothell, Washington, July 5, 2017.

Figures

Figures



SITE VICINITY

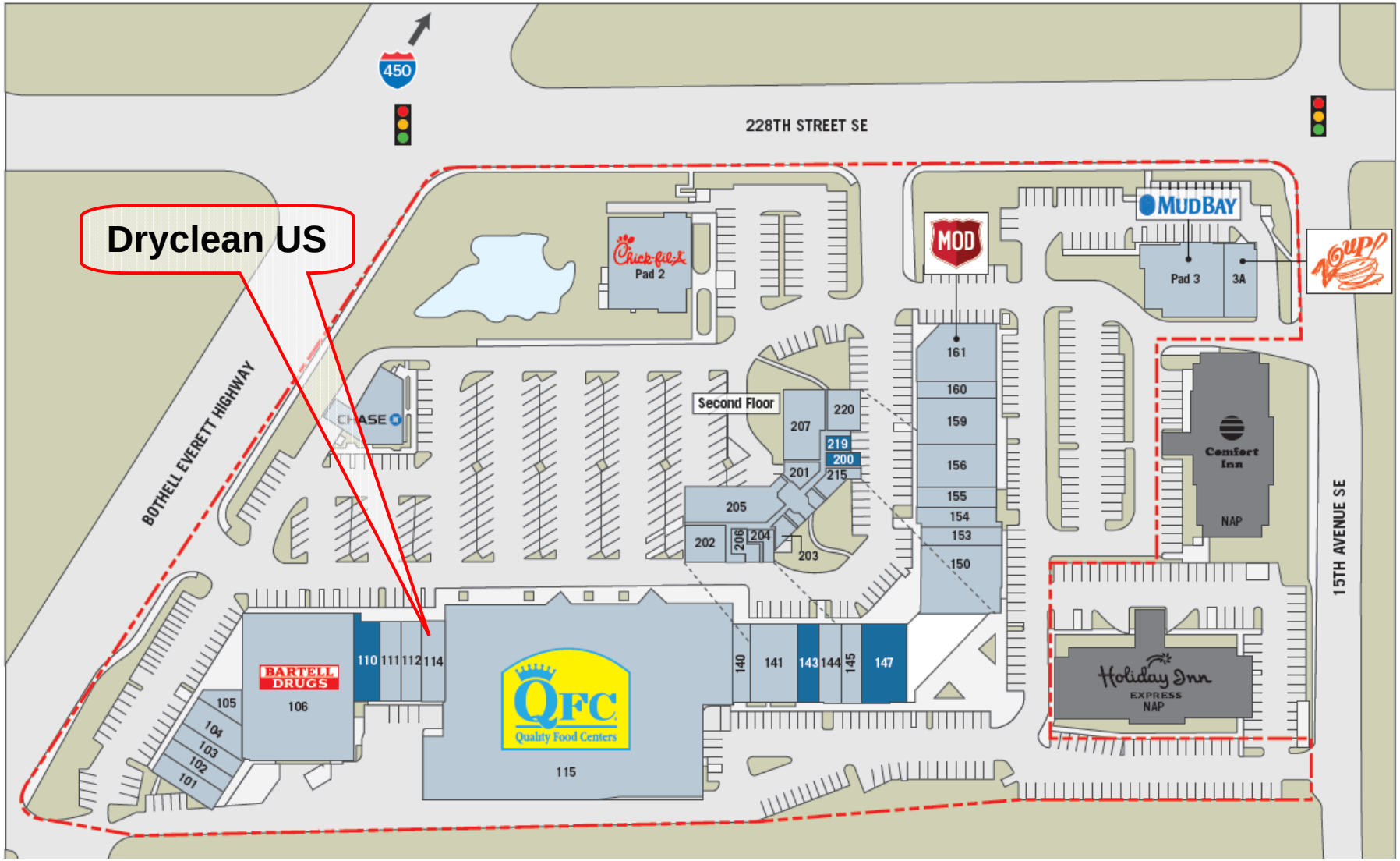
DS Canyon Park, L.P.
Dryclean US - Canyon Park Place Shopping Center
22833 Bothell Everett Highway
Bothell, Washington 98021

Project No:

17-42-200-07

Converse Consultants

FIGURE **1**



SITE PLAN

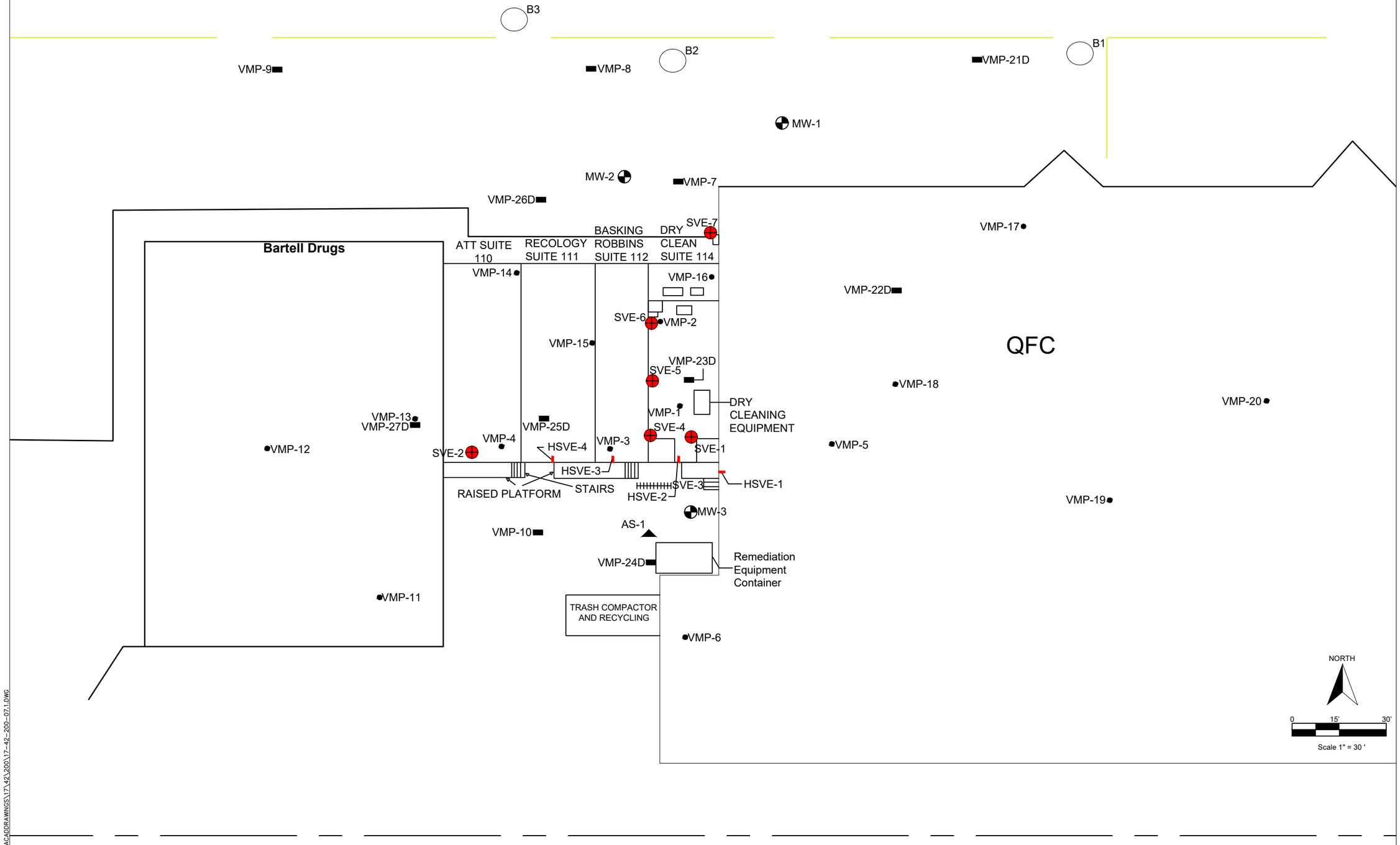
DS Canyon Park, L.P.
Dryclean US - Canyon Park Place Shopping Center
22833 Bothell Everett Highway
Bothell, Washington 98021

Project No:

17-42-200-07

Converse Consultants

FIGURE **2**



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- Vertical SVE Well
- Horizontal SVE Well
- Sub-Slab Vapor Monitoring Probe
- Air Sparge Well
- Soil Vapor Monitoring Probe
- Horizontal SVE Well
- Group Groundwater and Soil Sample Location
- Approximate Location of Sewer Line

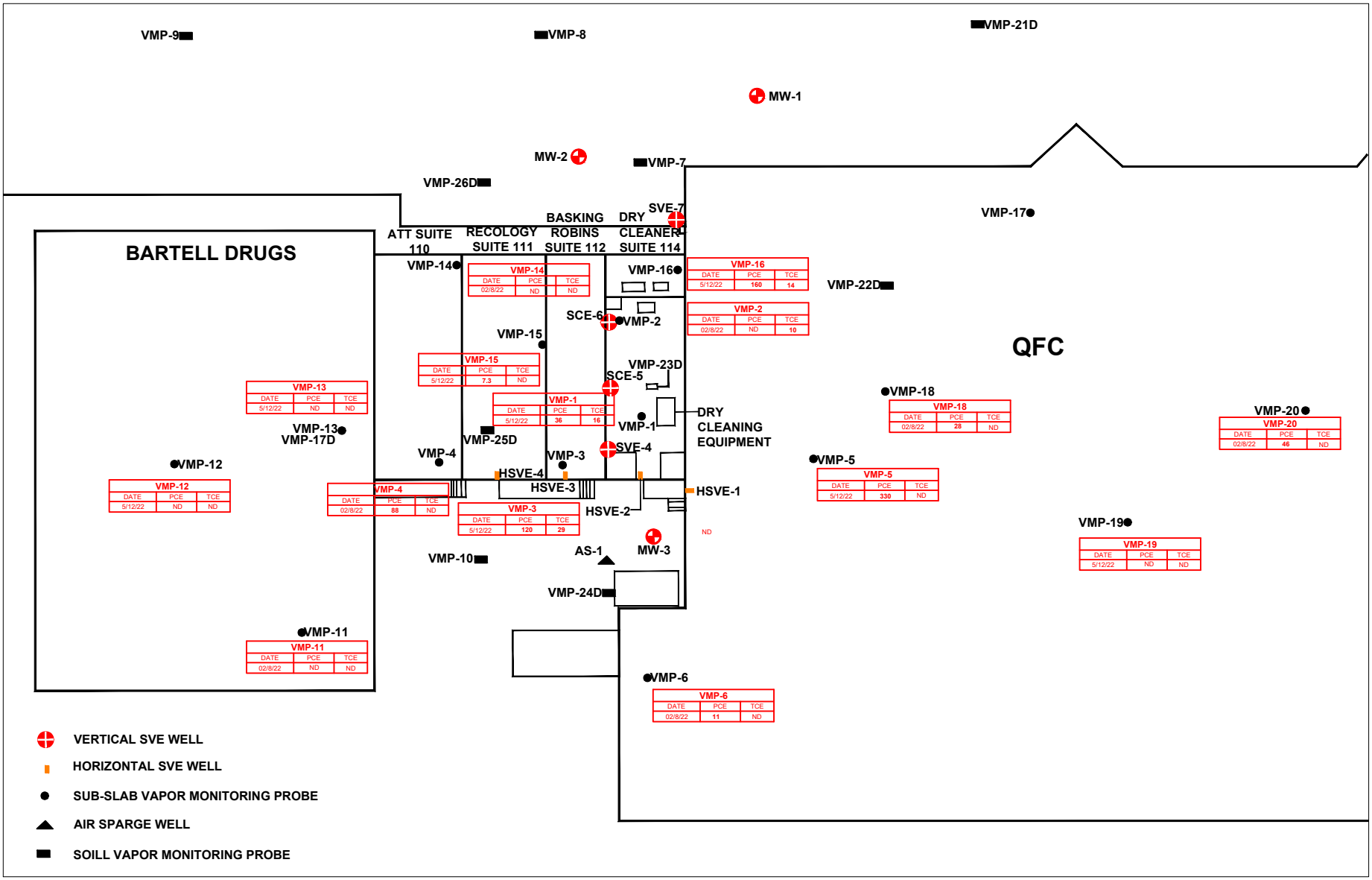
Well and Sample Locations

Converse Consultants

CANYON PARK PLACE
22833 BOTHELL WAY SE
BOTHELL, WASHINGTON

PROJECT NO. 17-42-200-07

FIGURE NO. 3



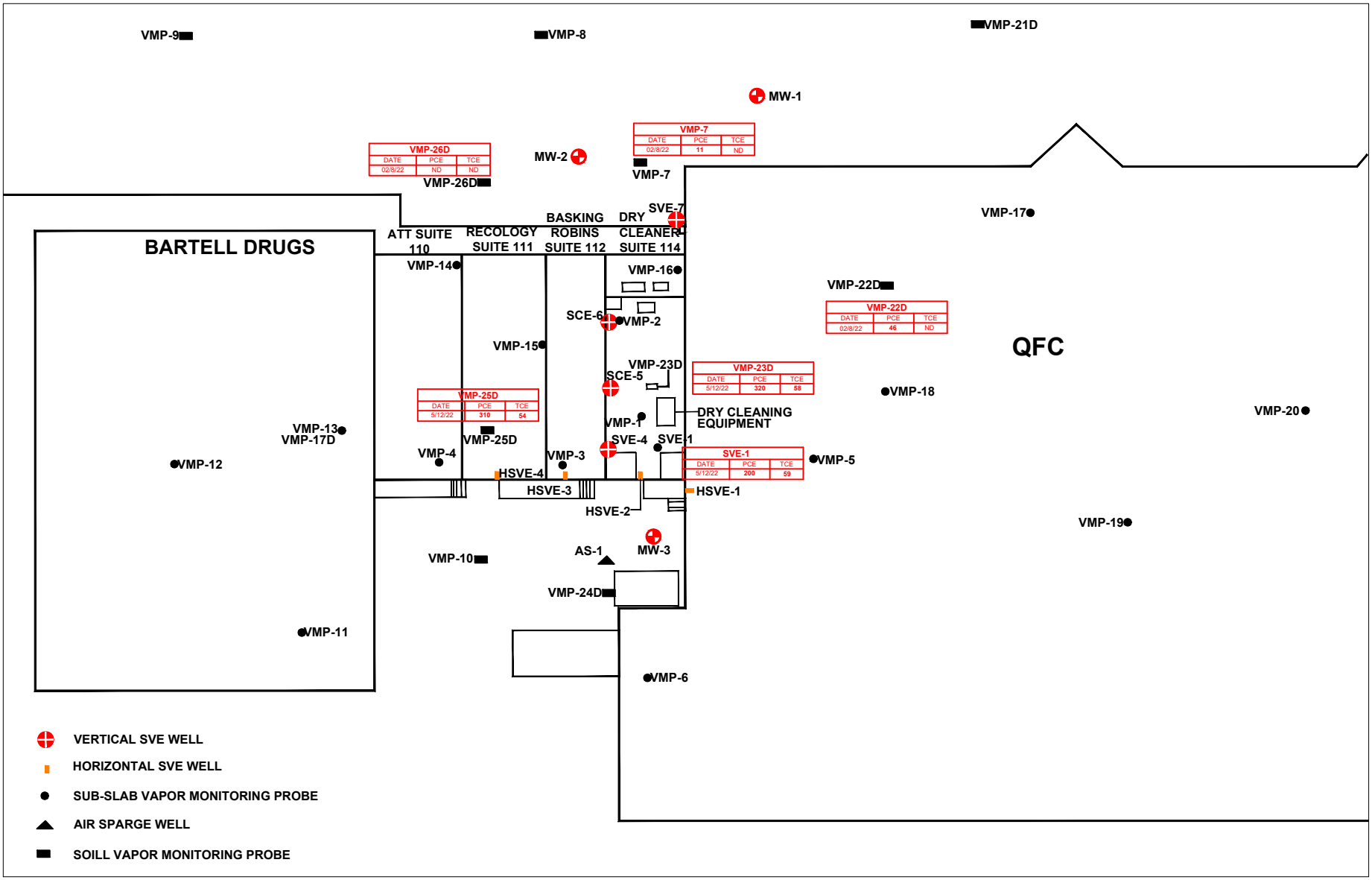
PCE and TCE Concentrations in Sub-Slab Vapor Samples

Converse Consultants

CANYON PARK PLACE
22833 BOTHELL WAY SE
BOTHELL, WASHINGTON

Project No. 17-42-200-07

Figure No. 4A



PCE and TCE Concentrations in Soil Vapor Samples

Converse Consultants

CANYON PARK PLACE
22833 BOTHELL WAY SE
BOTHELL, WASHINGTON

Project No. 17-42-200-07

Figure No. 4B

Tables

Tables

TABLE 1

INDOOR/OUTDOOR AIR ANALYTICAL SUMMARY

CANYON PARK PLACE

BOTHEL WA

Suite Samples	Location	Sample Date	TETRACHLOROETHENE (PCE)	TRICHLOROETHENE (TCE)	BENZENE	CARBON TETRACHLORIDE	CHLOROFORM	CHLOROMETHANE	CIS-1,2-DICHLOROETHENE (DCE)	TRANS-1,2-DICHLOROETHENE (DCE)	ETHYLBENZENE	VINYL ACETATE	All OTHER VOCs
			ug/m3										
Outdoor / Ambient	Front of Suites	9/7/2011	**0.172**	**0.186**	**1.286**	--	ND<0.097	--	ND<0.080	ND<0.051	**3.27**	ND<0.052	ND
	Rear of Suites	9/7/2011	ND<0.32	ND<0.256	0.238	--	ND<0.230	--	ND<0.189	ND<0.121	**0.86**	ND<0.123	ND
		09/05/2019	**0.189**	ND<0.107	**0.345**	**0.431**	ND<0.0973	**0.871**	ND<0.0793	**0.0850**	**0.206**	ND<0.0704	ND
#114 - Dryclean-US	Front of Suite	9/7/2011	**0.175**	**0.116**	**1.271**	--	ND<0.087	--	ND<0.071	ND<0.045	ND<2.03	ND<0.046	ND
	Rear of Suite	9/7/2011	**0.356**	**0.202**	**1.209**	--	**0.101**	--	ND<0.075	ND<0.048	**1.97**	**0.049**	ND
		09/05/2019	**15.5**	**18.3**	**0.561**	**0.441**	ND<0.0973	**1.32**	ND<0.0793	**0.0999**	**0.321**	ND<0.0704	ND
#115 - QFC	East Side	9/7/2011	**0.173**	**0.271**	**1.186**	--	**2.649**	--	ND<0.073	ND<0.047	ND<1.67	ND<0.048	ND
	West Side	9/7/2011	**0.142**	**0.22**	**1.323**	--	**1.935**	--	ND<0.011	ND<0.046	**2.061**	ND<0.047	ND
		09/05/2019	**4.00**	**0.143**	**1.02**	**0.693**	ND<0.0973	**1.54**	ND<0.0793	**0.130**	**1.19**	**1.47**	ND
#112 - Baskin Robins	Rear of Suite	9/7/2011	**1.162**	**0.258**	**1.388**	--	**1.144**	--	ND<0.074	ND<0.048	ND<1.70	**0.048**	ND
		09/05/2019	**0.517**	**0.136**	**0.521**	**0.433**	ND<0.0973	**0.942**	**0.175**	**0.0941**	**2.05**	**0.132**	ND
#111 - Recology	Rear of Suite	09/05/2019	**1.77**	**0.643**	**1.98**	**0.932**	**4.67**	**1.05**	ND<0.0793	**0.113**	**0.668**	**0.0870**	ND
DOE MTCA Method B - Indoor Air Screening Levels			9.6	0.33	0.32	0.42	0.11	41	NA	NA	460	91	--

Notes:

DOE MTCA = Washington State Department of Ecology, Model Toxics Control Act

Bold results are above laboratory detection limits

Shaded results indicate concentrations above regulatory limits

-- = not analyzed or data not available

ND = Nod detected above indicated laboratory detection limit

TABLE 2
SUB-SLAB VAPOR ANALYTICAL SUMMARY
CANYON PARK PLACE
BOTHEL, WA

			TETRACHLOROETHENE (PCE)	TRICHLOROETHENE (TCE)	CIS-1,2-DICHLOROETHENE (Cis-1,2-DCE)	TRANS-1,2-DICHLOROETHENE (Trans-1,2-DCE)	VINYL CHLORIDE	CARBON TETRACHLORIDE	CHLOROFORM	2-PROPANOL (Isopropyl Alcohol - tracer)	ALL OTHER VOCs
Sample Location	**Sample Date**	**Note**	**ug/m3**								
VMP-1	4/27/2016	PS Baseline	**8,300**	**140**	<17	<17	<11	-	<21	-	ND
	6/23/2016	Pre - PS	**5,200**	**83**	<12	<12	<7.6	-	<14	-	ND
	6/24/2016	Post - PS	**4,900**	**88**	<11	<11	<7.2	-	<14	-	ND
	10/25/2016	Pre - PS	**10,000**	**180**	<21	<21	<14	-	<26	-	ND
	10/27/2016	Post - PS	**4,800**	**90**	<9.1	<9.1	<5.9	-	<11	-	ND
	10/18/2021	Rem. Baseline	**6,800**	**100**	<29	<29	<18	<46	<35	**2,000**	ND
	11/16/2021	Week 2	**59**	**10**	<3.7	<3.7	<2.4	<5.9	<4.6	**5,800**	ND
	2/8/2022	O&M 2022 Q1	**80**	**14**	<3.8	<3.8	<2.5	<6.1	<4.7	**150**	ND
	5/12/2022	**O&M 2022 Q2**	**36**	**16**	<3.9	<3.9	<2.5	<6.2	<4.8	**440**	ND
VMP-2	4/28/2016	PS Baseline	**1,300**	**24**	<9.4	<9.4	<6.0	-	<12	-	ND
	6/23/2016	Pre - PS	**1,000**	**11**	<3.0	<3.0	<1.9	-	<3.6	-	ND
	6/24/2016	Post - PS	**930**	**12**	<3.1	<3.1	<2.0	-	<3.8	-	ND
	10/25/2016	Pre - PS	**1,200**	**19**	<8.8	<8.0	<5.6	-	<11	-	ND
	10/27/2016	Post - PS	**750**	**14**	<2.1	<2.1	<1.4	-	<2.6	-	ND
	10/18/2021	Rem. Baseline	**480**	<45	<34	<34	<21	<53	<41	**21,000**	ND
	11/16/2021	Week 2	**87**	**13**	<3.7	<3.7	<2.4	<5.9	<4.6	**5,400**	ND
	2/8/2022	O&M 2022 Q1	<45	**10**	<3.7	<3.7	<2.4	<5.9	<4.6	**15**	ND
VMP-3	4/28/2016	PS Baseline	**18,000**	**1,200**	**330**	<46	<30	-	<57	-	ND
	6/23/2016	Pre - PS	**19,000**	**1,200**	**300**	<36	<23	-	<44	-	ND
	6/24/2016	Post - PS	**18,000**	**1,100**	**270**	<38	<24	-	<46	-	ND
	10/25/2016	Pre - PS	**18,000**	**1,100**	**210**	<37	<24	-	<46	-	ND
	10/27/2016	Post - PS	**14,000**	**1,000**	**350**	<24	<15	-	<29	-	ND
	10/18/2021	Rem. Baseline	**7,000**	**690**	**480**	<28	<18	<45	<35	**250**	ND
	11/16/2021	Week 2	**280**	**120**	**380**	**7.5**	<2.3	<5.8	**7.5**	**1,000**	ND
	2/8/2022	O&M 2022 Q1	**170**	**39**	**73**	<3.7	<2.4	<5.9	<4.6	**1500**	ND
	5/12/2022	**O&M 2022 Q2**	**120**	**29**	**61**	<3.8	<2.5	<6.1	<4.7	**24**	ND
VMP-4/4R	4/28/2016	PS Baseline	<1,100	<880	<650	<650	<420	-	<800	-	ND
	6/21/2016	PS Baseline	**3,600**	**60**	<9.5	<9.5	<6.1	-	<12	-	ND
	6/23/2016	Pre - PS	**3,700**	**63**	<9.0	<9.0	<5.8	-	<11	-	ND
	6/24/2016	Post - PS	**3,500**	**58**	<9.5	<9.5	<6.1	-	<12	-	ND
	10/25/2016	Pre - PS	**2,800**	**40**	<8.5	<8.5	<5.5	-	<10	-	ND
	10/27/2016	Post - PS	***1,500***	**26**	<4.7	<4.7	<3.0	-	<5.8	-	ND
	2/8/2022	O&M 2022 Q1	***88***	<4.7	<3.4	<3.4	<2.2	<5.5	<4.2	**500**	ND
VMP-5	4/28/2016	PS Baseline	**1,400**	*<3.9*	<2.9	<2.9	<1.8	-	<3.5	-	ND
	6/24/2016	Post-PS	**1,100**	**2.8**	<2.1	<2.1	<1.4	-	<2.6	-	ND
	10/18/2021	Rem. Baseline	**850**	<96	<71	<71	<71	<110	<88	**8,900**	ND
	11/16/2021	Week 2	<6.1	<4.8	<3.6	<3.6	<2.3	<5.7	<4.4	**640**	ND
	2/8/2022	O&M 2022 Q1	**390**	<5.2	<3.8	<3.8	<2.4	<6.0	<4.7	**27**	ND
	5/12/2022	**O&M 2022 Q2**	**330**	<5.4	<4.0	<4.0	<2.6	<6.4	<4.9	**510**	ND

TABLE 2
SUB-SLAB VAPOR ANALYTICAL SUMMARY
CANYON PARK PLACE
BOTHEL, WA

Sample Location	Sample Date	Note	TETRACHLOROETHENE (PCE)	TRICHLOROETHENE (TCE)	CIS-1,2-DICHLOROETHENE (Cis-1,2-DCE)	TRANS-1,2-DICHLOROETHENE (Trans-1,2-DCE)	VINYL CHLORIDE	CARBON TETRACHLORIDE	CHLOROFORM	2-PROPANOL (Isopropyl Alcohol - tracer)	ALL OTHER VOCs
			ug/m3								
VMP-6	4/28/2016	PS Baseline	**23**	*<6.0*	<2.8	<4.4	<2.8	-	**5.2**	-	ND
	10/19/2021	Rem. Baseline	<120	*<94*	<70	<70	<70	<110	<86	**37,000**	ND
	2/8/2022	O&M 2022 Q1	**11**	*<5.1*	<3.8	<3.8	<2.4	<6.0	<4.6	<9.3	ND
VMP-10	4/28/2016	Assessment	**2.8**	<1.1	<0.84	<0.84	<0.54	-	**9.3**	-	ND
VMP-11 (BRT)	9/6/2019	Assessment	<1.36	**6.33**	<0.793	<0.793	<0.511	<1.26	<0.973	-	ND
	2/8/2022	O&M 2022 Q1	<5.8	<4.6	<3.4	<3.4	<2.2	<5.4	<4.2	**490**	ND
VMP-12 (BRT)	9/6/2019	Assessment	<1.36	**1.52**	<0.793	<0.793	<0.511	<1.26	<0.973	-	ND
	5/12/2022	**O&M 2022 Q2**	<6.1	<4.8	<3.6	<3.6	<2.3	<5.7	<4.4	**25**	ND
VMP-13 (BRT)	9/6/2019	Assessment	**1.78**	**1.95**	<0.793	<0.793	<0.511	<1.26	**4.69**	-	ND
	10/18/2021	Rem. Baseline	**71**	<9.6	<7.0	<7.0	<4.6	<11	<8.7	**2,100**	ND
	5/12/2022	**O&M 2022 Q2**	<6.8	<5.4	<4.0	<4.0	<2.6	<6.3	<4.9	**32**	ND
VMP-14 (AT&T)	9/5/2019	Assessment	**2.63**	<1.07	<0.793	<0.793	<0.511	<1.26	<0.973	-	ND
	10/18/2021	Rem. Baseline	<63	<50	<37	<37	<24	<59	<46	**6,400**	ND
	2/8/2022	O&M 2022 Q1	<6.2	<4.9	<3.6	<3.6	<2.3	<5.8	<4.5	**220**	ND
VMP-15 (Recology)	9/11/2019	Assessment	**811**	**1.08**	**3.65**	**0.795**	<0.511	<1.26	<0.973	-	ND
	10/18/2021	Rem. Baseline	**460**	<19	<14	<14	<9.1	<22	<17	**5,200**	ND
	5/12/2022	**O&M 2022 Q2**	**7.3**	<5.0	<3.7	<3.7	<2.4	<5.9	<4.6	**480**	ND
VMP-16 (Cleaners)	9/9/2019	Assessment	**274**	**12.3**	<0.793	<0.793	**0.532**	<1.26	<0.973	-	ND
	10/18/2021	Rem. Baseline	<2,600	<2,000	<1,500	<1,500	<980	<2,400	<1,900	**930,000**	ND
	2/8/2022	O&M 2022 Q1	**110**	**14**	<3.8	<3.8	<2.4	<6.0	<4.7	**360**	ND
	5/12/2022	**O&M 2022 Q2**	**160**	**14**	<4.2	<4.2	<2.7	<6.7	<5.2	**420**	ND
VMP-17 (QFC)	9/9/2019	Assessment	<1.36	<1.07	<0.793	<0.793	<0.511	<1.26	<0.973	-	ND
VMP-18 (QFC-W)	9/6/2019	Assessment	**19.2**	<1.07	<0.793	<0.793	<0.511	<1.26	<0.973	-	ND
	10/18/2021	Rem. Baseline	<130	<100	<74	<74	<74	<120	<91	**23,000**	ND
	2/8/2022	O&M 2022 Q1	**28**	<5.1	<3.8	<3.8	<2.4	<6.0	<4.6	**14**	ND
VMP-19 (QFC)	9/6/2019	Assessment	<1.36	<1.07	<0.793	<0.793	<0.511	1.56	<0.973	-	ND
	5/12/2022	**O&M 2022 Q2**	<7.1	<5.6	<4.1	<4.1	<2.7	<6.6	<5.1	**27**	ND
VMP-20 (QFC-E)	9/6/2019	Assessment	**6.49**	<1.07	<0.793	<0.793	<0.511	<1.26	<0.973	-	ND
	2/8/2022	O&M 2022 Q1	<6.2	<4.9	<3.6	<3.6	<2.3	<5.7	<4.4	<8.9	ND
Manifold - Horizontal SVE Wells (HSVE-1, -2, -3, -4)	11/16/2021	O&M - Week 2	**20**	<4.7	<3.4	<3.4	<2.2	<5.5	<4.2	**59**	ND
DOE MTCA Method B - Sub-Slab Soil Gas Screening Levels			320	11	NA	NA	9.4	1,500	3.6	-	--

Notes:

DOE MTCA = Washington State Department of Ecology, Model Toxics Control Act

-- = not analyzed or data not available

ND = Not detected above laboratory detection limits

Bold results are above laboratory detection limits

Shaded results indicate concentrations above regulatory limits

PS = Pilot Study

ug/m^3 = micrograms per cubic meter

TABLE 3
SOIL VAPOR ANALYTICAL SUMMARY
CANYON PARK PLACE
BOTHELL WA

Sample Location	Depth (feet bgs)	Sample Date	Note	TETRACHLOROETHENE (PCE)	TRICHLOROETHENE (TCE)	CIS-1,2-DICHLOROETHENE (cis 1,2-DCE)	TRANS-1,2-DICHLOROETHENE (trans 1,2-DCE)	1,1-DICHLOROETHENE (1,1-DCE)	VINYL CHLORIDE	CHLOROFORM	2-PROPANOL (Isopropyl Alcohol - tracer)	ALL OTHER VOCs
				(µg/m³)								
VMP-7	6	4/27/2016	PS Baseline	**6,000**	**40**	<9.6	<9.6	--	<6.2	**18**	--	ND
		6/23/2016	Pre-PS	**11,000**	**80**	**31**	<22	--	<14	**32**	--	ND
		6/24/2016	Post-PS	**11,000**	**88**	**36**	<22	--	<14	**29**	--	ND
		10/18/2021	Rem. Baseline	**3,100**	**29**	**47**	<15	<15	<9.6	**38**	**400**	ND
		11/16/2021	Week 2	**970**	**5.8**	<3.6	<3.6	<3.6	<2.3	<4.4	**4,400**	ND
		2/8/2022	O&M 2022 Q1	**11**	<4.9	<3.6	<3.6	<3.6	<2.3	<4.4	**500**	ND
VMP-8	6	4/27/2016	PS Baseline	<1.6	**1.6**	**0.99**	<0.91	--	<0.59	**4.6**	--	ND
VMP-9	6	4/27/2016	PS Baseline	**5.2**	**1.8**	<0.97	<0.97	--	<0.62	**20**	--	ND
VMP-21D	5	9/9/2019	Assessment	<1.36	<1.07	<0.793	<0.793	<0.793	<0.511	<0.973	--	ND
VMP-22D	5	9/9/2019	Assessment	**10.5**	<1.07	<0.793	<0.793	<0.793	<0.511	<0.973	--	ND
		10/18/2021	Rem. Baseline	<59,000	<47,000	<34,000	<34,000	<34,000	<22,000	<42,000	**20,000,000**	ND
		2/8/2022	O&M 2022 Q1	**46**	<4.9	<3.6	<3.6	<3.6	<2.3	<4.4	**90**	ND
VMP-23D	5	9/9/2019	Assessment	**459**	**39.8**	**125**	**1.58**	<0.793	**0.931**	**2.93**	--	ND
		10/18/2021	Rem. Baseline	**520**	**118**	**300**	**15**	<7.5	**14**	<9.2	**1,800**	ND
		11/16/2021	Week 2	**660**	**49**	**30**	<3.6	<3.6	<2.3	<4.4	**4,200**	ND
		2/8/2022	O&M 2022 Q1	**290**	**35**	**16**	<3.9	<3.9	<2.5	<4.8	**360**	ND
		5/12/2022	**O&M 2022 Q2**	**320**	**58**	**27**	<3.8	<3.9	<2.5	<4.7	**630**	ND
VMP-24D	3	9/9/2019	Assessment	**241**	**2.03**	<0.793	<0.793	<0.793	**1.09**	<0.973	--	ND
VMP-25D	5	9/11/2019	Assessment	**306**	**118**	**3,560**	**1,370**	**23.8**	**91.5**	<0.973	--	ND
		10/18/2021	Rem. Baseline	**190**	**210**	**3,300**	**840**	<39	**170**	<48	**33,000**	ND
		5/12/2022	**O&M 2022 Q2**	**310**	**54**	**27**	**22**	<3.9	<2.4	<4.7	**350**	ND
VMP-26D	5	9/9/2019	Assessment	<1.36	<1.07	<0.793	<0.793	<0.793	<0.511	<0.973	--	ND
		10/18/2021	Rem. Baseline	<6.2	<4.9	<3.6	<3.6	<3.6	<2.3	<4.5	**740**	ND
		2/8/2022	O&M 2022 Q1	<6.5	<5.2	<3.8	<3.8	<3.8	<2.4	<4.7	**13**	ND
VMP-27D	5	9/9/2019	Assessment	**2.94**	<1.07	<0.793	<0.793	<0.793	<0.511	<0.973	--	ND
SVE-1	3-8	10/18/2021	Rem. Baseline	<61,000	<48,000	<36,000	<36,000	<36,000	<23,000	<44,000	**7,500,000**	ND
		5/12/2022	**O&M 2022 Q2**	**200**	**59**	**13**	<3.7	<3.7	<2.4	<4.5	**150**	ND
Manifold - Vertical SVE Wells (SVE-4, -5, -6, -7)	3-5	11/16/2021	O&M - Week 2	**110**	**12**	**26**	<3.3	<3.3	<2.1	<4.1	**11**	ND
DOE MTCA Method B - Deep Soil Gas Screening Levels				960	33	NA	NA	9,100	28	11	NA	--

Notes:
DOE MTCA = Washington State Department of Ecology, Model Toxics Control Act
bgs = below ground surface
Bold results are above laboratory detection limits
Shaded results indicate concentrations above regulatory limits
-- = not analyzed or data not available
ND = Not detected above laboratory detection limits
ug/m^3 = micrograms per cubic meter

TABLE 4
GROUNDWATER ANALYTICAL SUMMARY
CANYON PARK PLACE
BOTHEL WA

		PCE	TCE	VINYL CHLORIDE	CHLOROFORM	BENZENE	ALL OTHER VOCs
Sample Location	**Sample Date**	**ug/L**					
MW-1	8/6/2007	<0.2	<0.2	<0.2	**0.63**	<0.2	ND
	12/28/2007	<0.2	<0.2	<0.2	**3.57**	<0.2	ND
	3/19/2008	<0.2	<0.2	<0.2	<0.2	-	ND
	6/26/2008	<0.2	<0.2	<0.2	<0.2	-	ND
	3/23/2012	<1.0	<1.0	<0.2	<1.0	<1.0	ND
	2/8/2016	<1.0	<1.0	<0.2	<1.0	<1.0	ND
	9/23/2016	<1.0	<1.0	<0.2	<1.0	-	ND
	5/18/2017	<1.0	<1.0	<0.2	<1.0	-	ND
	10/19/2021	<1	<0.5	<0.02	-	-	ND
	5/13/2022	<1	<1	<0.2	<1	<0.35	ND
MW-2	8/6/2007	<0.2	<0.2	<0.2	**0.85**	<0.2	ND
	12/28/2007	<0.2	<0.2	<0.2	<0.2	<0.2	ND
	3/19/2008	<0.2	<0.2	<0.2	<0.2	-	ND
	6/26/2008	<0.2	<0.2	<0.2	<0.2	-	ND
	3/23/2012	<0.1	<0.1	<0.2	<1.0	<1.0	ND
	2/8/2016	<0.1	<0.1	<0.2	<1.0	<1.0	ND
	6/21/2016	<1.0	<1.0	<0.2	<1.0	-	ND
	6/27/2016	<1.0	<1.0	<0.2	<1.0	-	ND
	9/23/2016	<1.0	<1.0	<0.2	<1.0	-	ND
	5/18/2017	<1.0	<1.0	<0.2	<1.0	-	ND
	10/19/2021	<1	<0.5	<0.02	-	-	ND
	5/13/2022	<1	<1	<0.2	<1	<0.35	ND

TABLE 4
GROUNDWATER ANALYTICAL SUMMARY
CANYON PARK PLACE
BOTHEL WA

		PCE	TCE	VINYL CHLORIDE	CHLOROFORM	BENZENE	ALL OTHER VOCs
Sample Location	**Sample Date**	**ug/L**					
MW-3	8/6/2007	**5**	<0.2	<0.2	**0.22**	<0.2	ND
	12/28/2007	**15.5**	**0.24**	<0.2	<0.2	<0.2	ND
	3/19/2008	**18**	**0.20**	<0.2	<0.2	-	ND
	6/26/2008	**6.4**	<0.2	<0.2	**1.60**	-	ND
	7/18/2008	**0.62**	<0.2	<0.2	<0.2	-	ND
	10/22/2008	**4.7**	<0.2	<0.2	<0.2	-	ND
	1/6/2009	**34**	<0.2	<0.2	<0.2	-	ND
	10/23/2009	**39**	**0.39**	<0.2	<0.2	-	ND
	1/18/2010	**29**	**0.33**	<0.2	**0.32**	-	ND
	3/31/2010	**19**	<0.2	<0.2	**0.59**	-	ND
	6/24/2010	**35**	**0.36**	<0.2	<0.2	-	ND
	8/18/2020	**22**	<0.2	<0.2	<0.2	-	ND
	3/23/2012	**56**	<1.0	<0.2	<1.0	<1.0	ND
	2/8/2016	**43**	<1.0	<0.2	<1.0	<1.0	ND
	6/21/2016	**33**	<1.0	<0.2	<1.0	-	ND
	6/27/2016	**9.3**	<1.0	<0.2	<1.0	-	ND
	9/23/2016	**19**	<1.0	<0.2	<1.0	-	ND
	5/18/2017	**21**	<1.0	<0.2	<1.0	-	ND
	10/19/2021	**17**	<0.5	<0.02	-	-	ND
	5/13/2022	**1.7**	<1	<0.2	<1	<0.35	ND
DOE MTCA Method A Cleanup Levels - For Drinking Water		5	4	0.29	14	5	--
DOE MTCA Method A Cleanup Levels - For Vapor Intrusion		24	1.4	0.35	1.2	2.4	--

Notes:

DOE MTCA = Washington State Department of Ecology, Model Toxics Control Act

-- = not analyzed or data not available

ND = Not detected above laboratory detection limits

Bold results are above laboratory detection limits

Shaded results indicate concentrations above regulatory limits

* = Value is MTCA level B

** = Maximum contaminant level

TABLE 5
CARBON SYSTEM ANALYTICAL SUMMARY
CANYON PARK PLACE
BOTHEL, WA

			TETRACHLOROETHENE (PCE)	TRICHLOROETHENE (TCE)	CIS-1,2-DICHLOROETHENE (Cis-1,2-DCE)	ACETONE	BENZENE	2-BUTANONE (Methyl Ethyl Ketone)	DICHLORODIFLUOROMETHANE (FREON 12)	ETHANOL	TETRAHYDROFURAN	2-PROPANOL (Isopropyl Alcohol - tracer)	ALL OTHER VOCs
Sample Location	**Sample Date**	**Note**	**ug/m3**										
Carbon Influent	11/4/2021	O&M - Day 1	**210**	**7.0**	**15**	**50**	**3.0**	**49**	**250**	**30**	**1,500**	**27**	ND
	11/16/2021	O&M - Week 2	**38**	**8.1**	**7.5**	**25**	<2.9	<11	**19**	**78**	**8.4**	**53**	ND
	2/8/2022	O&M 2022 Q1	<7.0	<5.5	<4.1	**31**	<3.3	<12	<5.1	**130**	<3.0	<10	ND
	3/22/2022	**O&M 2022 Q2**	<6.5	<5.1	<3.8	-	-	-	-	-	-	-	ND
	5/12/2022	**O&M 2022 Q2**	<6.2	<4.9	<3.6	<22	<2.9	<11	**13**	**82**	<2.7	**26**	ND
Carbon Effluent	11/4/2021	O&M - Day 1	<6.3	<5.0	<3.7	<22	<3.0	<11	<4.6	<18	**36**	**24**	ND
	11/16/2021	O&M - Week 2	<5.7	<4.5	<3.3	<20	<2.7	<9.9	**16**	**71**	<2.5	ND	ND
	5/12/2022	**O&M 2022 Q2**	<6.6	<5.2	<3.9	**24**	<3.1	<11	**10**	**72**	**2.9**	**28**	ND

Notes:
ND = Not detected above laboratory detection limits
ug/m^3 = micrograms per cubic meter

TABLE 6
CARBON SYSTEM EMISSIONS EVALUATION
CANYON PARK PLACE
BOTHEL, WA

Sample Date: 5/12/2022

Influent

Compound	Con. (ppm)	flow (SCFM)	Mol Wt.	Extraction Rate (lb/day)
PCE		150	165.85	0.00000
TCE		150	131.4	0.00000
Cis-1,2-DCE		150	96.94	0.00000
Chloroform		150	119.38	0.00000
Freon 12	0.0027	150	120.91	0.00018
Freon 113		150	187.39	0.00000
Acetone		150	58.08	0.00000
1,1,1-TCA		150	133.42	0.00000
1,1-DCE		150	96.95	0.00000
2-Propanol	0.0100	150	60.096	0.00034
MEK (2-butanone)		150	72.107	0.00000
Tetrahydrofuran		150	72.107	0.00000
Benzene		150	78.114	0.00000
Ethanol	0.0440	150	46.07	0.00114
Total	**0.0567**			**0.001656**

Effluent

Compound	Con. (ppm)	flow (SCFM)	Mol Wt.	Emission Rate (lb/day)	**Control Efficiency**
PCE		150	165.85	0.00000	
TCE		150	131.4	0.00000	
Cis-1,2-DCE		150	96.94	0.00000	
Chloroform		150	119.38	0.00000	
Freon 12	0.0021	150	120.91	0.00014	22.22%
Freon 113		150	187.39	0.00000	
Acetone	0.01	150	58.08	0.00033	
1,1,1-TCA		150	133.42	0.00000	
1,1-DCE		150	96.95	0.00000	
2-Propanol	0.011	150	60.096	0.00037	-10.00%
MEK (2-butanone)		150	72.107	0.00000	
Tetrahydrof	0.001	150	72.107	0.00004	
Benzene		150	78.114	0.00000	
Ethanol	0.038	150	46.07	0.00098	13.64%
Total	**0.0621**			**0.001860**	**-12.32%**

ppm = parts per million
SCFM = standard cubic feet per minute
Mol. Wt. = molecular weight
lb/day = pounds per day

Laboratory Analytical Reports

Appendix A

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3/30/2022
Mr. Michael Van Fleet
Converse Consultants
717 South Myrtle Ave

Monrovia CA 91016

Project Name: Canyon Park
Project #:
Workorder #: 2203679

Dear Mr. Michael Van Fleet

The following report includes the data for the above referenced project for sample(s) received on 3/23/2022 at Eurofins Air Toxics LLC.

The data and associated QC analyzed by TO-15 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics LLC. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Kathleen Kaneko at 916-985-1000 if you have any questions regarding the data in this report.

Regards,

Kathleen Kaneko

Project Manager

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WORK ORDER #: 2203679

Work Order Summary

CLIENT:	Mr. Michael Van Fleet Converse Consultants 717 South Myrtle Ave Monrovia, CA 91016	**BILL TO:**	Mr. Michael Van Fleet Converse Consultants 717 South Myrtle Ave Monrovia, CA 91016
PHONE:	626-930-1267	**P.O. #**	17-42-207-07
FAX:	626-930-1212	**PROJECT #**	Canyon Park
DATE RECEIVED:	03/23/2022	**CONTACT:**	Kathleen Kaneko
DATE COMPLETED:	03/30/2022		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	INF- 3/22/22	TO-15	3.5 "Hg	10.1 psi
02A	Lab Blank	TO-15	NA	NA
03A	CCV	TO-15	NA	NA
04A	LCS	TO-15	NA	NA
04AA	LCSD	TO-15	NA	NA

CERTIFIED BY:  DATE: 03/30/22

Technical Director

Certification numbers: AZ Licensure AZ0775, FL NELAP – E87680, LA NELAP – 02089, NH NELAP - 209221, NJ NELAP - CA016, NY NELAP - 11291, TX NELAP - T104704434-21-17, UT NELAP – CA009332021-13, VA NELAP - 10615, WA NELAP - C935
Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
Accreditation number: CA300005-015, Effective date: 10/18/2021, Expiration date: 10/17/2022.
Eurofins Air Toxics, LLC certifies that the test results contained in this report meet all requirements of the NELAC standards

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 . (800) 985-5955 . FAX (916) 351-8279

LABORATORY NARRATIVE
EPA Method TO-15
Converse Consultants
Workorder# 2203679

One 1 Liter Summa Canister sample was received on March 23, 2022. The laboratory performed analysis via EPA Method TO-15 using GC/MS in the full scan mode.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

There were no analytical discrepancies.

Definition of Data Qualifying Flags

Ten qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit, LOD, or MDL value. See data page for project specific U-flag definition.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

M - Reported value may be biased due to apparent matrix interferences.

CN - See Case Narrative.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

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Summary of Detected Compounds
EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: INF- 3/22/22

Lab ID#: 2203679-01A

No Detections Were Found.

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Client Sample ID: INF- 3/22/22

Lab ID#: 2203679-01A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**3032722**	**Date of Collection:**	**3/22/22 11:46:00 AM**
Dil. Factor:	**1.91**	**Date of Analysis:**	**3/28/22 12:21 AM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.96	Not Detected	2.4	Not Detected
1,1-Dichloroethene	0.96	Not Detected	3.8	Not Detected
2-Propanol	3.8	Not Detected	9.4	Not Detected
trans-1,2-Dichloroethene	0.96	Not Detected	3.8	Not Detected
1,1-Dichloroethane	0.96	Not Detected	3.9	Not Detected
cis-1,2-Dichloroethene	0.96	Not Detected	3.8	Not Detected
1,2-Dichloroethane	0.96	Not Detected	3.9	Not Detected
Trichloroethene	0.96	Not Detected	5.1	Not Detected
Tetrachloroethene	0.96	Not Detected	6.5	Not Detected
Carbon Tetrachloride	0.96	Not Detected	6.0	Not Detected
Chloroform	0.96	Not Detected	4.7	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	107	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	109	70-130

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Client Sample ID: Lab Blank

Lab ID#: 2203679-02A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**3032706f**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 3/27/22 01:27 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
2-Propanol	2.0	Not Detected	4.9	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.1	Not Detected
Chloroform	0.50	Not Detected	2.4	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	105	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	108	70-130

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Client Sample ID: CCV

Lab ID#: 2203679-03A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**3032702**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 3/27/22 09:41 AM**	

Compound	%Recovery
Vinyl Chloride	84
1,1-Dichloroethene	81
2-Propanol	98
trans-1,2-Dichloroethene	81
1,1-Dichloroethane	90
cis-1,2-Dichloroethene	81
1,2-Dichloroethane	119
Trichloroethene	99
Tetrachloroethene	113
Carbon Tetrachloride	119
Chloroform	96

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	113	70-130

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Client Sample ID: LCS

Lab ID#: 2203679-04A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**3032703**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 3/27/22 10:07 AM**	

Compound	%Recovery	Method Limits
Vinyl Chloride	76	70-130
1,1-Dichloroethene	73	70-130
2-Propanol	100	70-130
trans-1,2-Dichloroethene	77	70-130
1,1-Dichloroethane	84	70-130
cis-1,2-Dichloroethene	76	70-130
1,2-Dichloroethane	117	70-130
Trichloroethene	97	70-130
Tetrachloroethene	111	70-130
Carbon Tetrachloride	113	70-130
Chloroform	87	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	105	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	113	70-130

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Client Sample ID: LCSD

Lab ID#: 2203679-04AA

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**3032704**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 3/27/22 10:33 AM**	

Compound	%Recovery	Method Limits
Vinyl Chloride	73	70-130
1,1-Dichloroethene	78	70-130
2-Propanol	108	70-130
trans-1,2-Dichloroethene	81	70-130
1,1-Dichloroethane	89	70-130
cis-1,2-Dichloroethene	81	70-130
1,2-Dichloroethane	119	70-130
Trichloroethene	98	70-130
Tetrachloroethene	109	70-130
Carbon Tetrachloride	116	70-130
Chloroform	92	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	110	70-130

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5/23/2022
Mr. Michael Van Fleet
Converse Consultants
717 South Myrtle Ave

Monrovia CA 91016

Project Name: CANYON PARK
Project #:
Workorder #: 2205379A

Dear Mr. Michael Van Fleet

The following report includes the data for the above referenced project for sample(s) received on 5/13/2022 at Eurofins Air Toxics LLC.

The data and associated QC analyzed by TO-15 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics LLC. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Kathleen Kaneko at 916-985-1000 if you have any questions regarding the data in this report.

Regards,

Kathleen Kaneko

Project Manager

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WORK ORDER #: 2205379A

Work Order Summary

CLIENT:	Mr. Michael Van Fleet Converse Consultants 717 South Myrtle Ave Monrovia, CA 91016	**BILL TO:**	Mr. Michael Van Fleet Converse Consultants 717 South Myrtle Ave Monrovia, CA 91016
PHONE:	626-930-1267	**P.O. #**	17-42-207-07
FAX:	626-930-1212	**PROJECT #**	CANYON PARK
DATE RECEIVED:	05/13/2022	**CONTACT:**	Kathleen Kaneko
DATE COMPLETED:	05/23/2022		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	VMP-16	TO-15	6.3 "Hg	9.9 psi
02A	VMP-25D	TO-15	3.7 "Hg	9.9 psi
03A	VMP-5	TO-15	5.1 "Hg	10 psi
04A	VMP-19	TO-15	6.1 "Hg	9.8 psi
05A	VMP-15	TO-15	3.1 "Hg	10 psi
06A	VMP-3	TO-15	4.1 "Hg	9.9 psi
07A	VMP-1	TO-15	4.7 "Hg	9.8 psi
08A	VMP-23D	TO-15	4.3 "Hg	9.8 psi
09A	VPM-12	TO-15	1.8 "Hg	10.2 psi
10A	VPM-13	TO-15	5.1 "Hg	9.8 psi
11A	Carbon - Influent	TO-15	2.8 "Hg	9.9 psi
12A	Carbon - Effluent	TO-15	4.1 "Hg	10 psi
13A	SVE-1	TO-15	2.8 "Hg	10 psi
14A	Lab Blank	TO-15	NA	NA
14B	Lab Blank	TO-15	NA	NA
15A	CCV	TO-15	NA	NA
15B	CCV	TO-15	NA	NA
16A	LCS	TO-15	NA	NA
16AA	LCSD	TO-15	NA	NA
16B	LCS	TO-15	NA	NA
16BB	LCSD	TO-15	NA	NA

CERTIFIED BY:  DATE: 05/23/22

Technical Director

Certification numbers: AZ Licensure AZ0775, FL NELAP – E87680, LA NELAP – 02089, NH NELAP - 209221, NJ NELAP - CA016, NY NELAP - 11291, TX NELAP - T104704434-21-17, UT NELAP – CA009332021-13, VA NELAP - 10615, WA NELAP - C935
Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
Accreditation number: CA300005-015, Effective date: 10/18/2021, Expiration date: 10/17/2022.
Eurofins Air Toxics, LLC certifies that the test results contained in this report meet all requirements of the NELAC standards

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 . (800) 985-5955 . FAX (916) 351-8279

LABORATORY NARRATIVE
EPA Method TO-15
Converse Consultants
Workorder# 2205379A

Thirteen 1 Liter Summa Canister samples were received on May 13, 2022. The laboratory performed analysis via EPA Method TO-15 using GC/MS in the full scan mode.

Receiving Notes

The Chain of Custody (COC) information for sample 1ST STAGE INFLUENT did not match the entry on the sample tag with regard to sample identification. The information on the COC was used to process and report the sample.

The Chain of Custody was missing method information. EATL proceeded with the analysis as per the original contract or verbal agreement.

Sample identification was revised from 1ST STAGE INFLUENT and POLISHED FINAL EFFLUENT to Carbon - Influent and Carbon - Effluent per client request provided via E-mail on 05/18/2022.

Analytical Notes

All Quality Control Limit exceedances and affected sample results are noted by flags. Each flag is defined at the bottom of this Case Narrative and on each Sample Result Summary page.

Definition of Data Qualifying Flags

Ten qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit, LOD, or MDL value. See data page for project specific U-flag definition.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

M - Reported value may be biased due to apparent matrix interferences.

CN - See Case Narrative.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

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Summary of Detected Compounds
EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: VMP-16

Lab ID#: 2205379A-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
2-Propanol	4.2	170	10	420
Trichloroethene	1.1	2.6	5.7	14
Tetrachloroethene	1.1	24	7.2	160

Client Sample ID: VMP-25D

Lab ID#: 2205379A-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
2-Propanol	3.8	140	9.4	350
trans-1,2-Dichloroethene	0.96	5.4	3.8	22
cis-1,2-Dichloroethene	0.96	6.9	3.8	27
Trichloroethene	0.96	10	5.1	54
Tetrachloroethene	0.96	45	6.5	310

Client Sample ID: VMP-5

Lab ID#: 2205379A-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
2-Propanol	4.0	210	9.9	510
Tetrachloroethene	1.0	49	6.8	330

Client Sample ID: VMP-19

Lab ID#: 2205379A-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
2-Propanol	4.2	11	10	27

Client Sample ID: VMP-15

Lab ID#: 2205379A-05A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
2-Propanol	3.7	200	9.2	480

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Summary of Detected Compounds
EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: VMP-15

Lab ID#: 2205379A-05A

Tetrachloroethene	0.94	1.1	6.3	7.3

Client Sample ID: VMP-3

Lab ID#: 2205379A-06A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
2-Propanol	3.9	9.8	9.5	24
cis-1,2-Dichloroethene	0.97	15	3.8	61
Trichloroethene	0.97	5.4	5.2	29
Tetrachloroethene	0.97	18	6.6	120

Client Sample ID: VMP-1

Lab ID#: 2205379A-07A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
2-Propanol	4.0	180	9.7	440
Trichloroethene	0.99	3.0	5.3	16
Tetrachloroethene	0.99	5.3	6.7	36

Client Sample ID: VMP-23D

Lab ID#: 2205379A-08A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
2-Propanol	3.9	260	9.5	630
cis-1,2-Dichloroethene	0.97	6.9	3.8	27
Trichloroethene	0.97	11	5.2	58
Tetrachloroethene	0.97	47	6.6	320

Client Sample ID: VPM-12

Lab ID#: 2205379A-09A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
2-Propanol	3.6	10	8.8	25

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Summary of Detected Compounds
EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: VPM-13

Lab ID#: 2205379A-10A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
2-Propanol	4.0	13	9.9	32

Client Sample ID: Carbon - Influent

Lab ID#: 2205379A-11A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.92	2.7	4.5	13
Ethanol	9.2	44	17	82
2-Propanol	3.7	10	9.0	26

Client Sample ID: Carbon - Effluent

Lab ID#: 2205379A-12A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.98	2.1	4.8	10
Ethanol	9.8	38	18	72
Acetone	9.8	10	23	24
2-Propanol	3.9	11	9.6	28
Tetrahydrofuran	0.98	1.0	2.9	2.9

Client Sample ID: SVE-1

Lab ID#: 2205379A-13A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
2-Propanol	3.7	60	9.1	150
cis-1,2-Dichloroethene	0.92	3.4	3.7	13
Trichloroethene	0.92	11	5.0	59
Tetrachloroethene	0.92	30	6.3	200

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Client Sample ID: VMP-16

Lab ID#: 2205379A-01A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**j052011**	**Date of Collection:**	**5/12/22 11:40:00 AM**
Dil. Factor:	**2.12**	**Date of Analysis:**	**5/20/22 06:49 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	1.1	Not Detected	2.7	Not Detected
1,1-Dichloroethene	1.1	Not Detected	4.2	Not Detected
2-Propanol	4.2	170	10	420
trans-1,2-Dichloroethene	1.1	Not Detected	4.2	Not Detected
1,1-Dichloroethane	1.1	Not Detected	4.3	Not Detected
cis-1,2-Dichloroethene	1.1	Not Detected	4.2	Not Detected
1,2-Dichloroethane	1.1	Not Detected	4.3	Not Detected
Trichloroethene	1.1	2.6	5.7	14
Tetrachloroethene	1.1	24	7.2	160
Carbon Tetrachloride	1.1	Not Detected	6.7	Not Detected
Chloroform	1.1	Not Detected	5.2	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	102	70-130

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Client Sample ID: VMP-25D

Lab ID#: 2205379A-02A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**j052012**	**Date of Collection: 5/12/22 10:43:00 AM**	
Dil. Factor:	**1.91**	**Date of Analysis: 5/20/22 07:23 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.96	Not Detected	2.4	Not Detected
1,1-Dichloroethene	0.96	Not Detected	3.8	Not Detected
2-Propanol	3.8	140	9.4	350
trans-1,2-Dichloroethene	0.96	5.4	3.8	22
1,1-Dichloroethane	0.96	Not Detected	3.9	Not Detected
cis-1,2-Dichloroethene	0.96	6.9	3.8	27
1,2-Dichloroethane	0.96	Not Detected	3.9	Not Detected
Trichloroethene	0.96	10	5.1	54
Tetrachloroethene	0.96	45	6.5	310
Carbon Tetrachloride	0.96	Not Detected	6.0	Not Detected
Chloroform	0.96	Not Detected	4.7	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	111	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	97	70-130

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Client Sample ID: VMP-5

Lab ID#: 2205379A-03A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**j052013**	**Date of Collection:**	**5/12/22 10:20:00 AM**
Dil. Factor:	**2.02**	**Date of Analysis:**	**5/20/22 07:56 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	1.0	Not Detected	2.6	Not Detected
1,1-Dichloroethene	1.0	Not Detected	4.0	Not Detected
2-Propanol	4.0	210	9.9	510
trans-1,2-Dichloroethene	1.0	Not Detected	4.0	Not Detected
1,1-Dichloroethane	1.0	Not Detected	4.1	Not Detected
cis-1,2-Dichloroethene	1.0	Not Detected	4.0	Not Detected
1,2-Dichloroethane	1.0	Not Detected	4.1	Not Detected
Trichloroethene	1.0	Not Detected	5.4	Not Detected
Tetrachloroethene	1.0	49	6.8	330
Carbon Tetrachloride	1.0	Not Detected	6.4	Not Detected
Chloroform	1.0	Not Detected	4.9	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	111	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	95	70-130

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Client Sample ID: VMP-19

Lab ID#: 2205379A-04A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**j052014**	**Date of Collection:**	**5/12/22 10:37:00 AM**
Dil. Factor:	**2.09**	**Date of Analysis:**	**5/20/22 08:30 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	1.0	Not Detected	2.7	Not Detected
1,1-Dichloroethene	1.0	Not Detected	4.1	Not Detected
2-Propanol	4.2	11	10	27
trans-1,2-Dichloroethene	1.0	Not Detected	4.1	Not Detected
1,1-Dichloroethane	1.0	Not Detected	4.2	Not Detected
cis-1,2-Dichloroethene	1.0	Not Detected	4.1	Not Detected
1,2-Dichloroethane	1.0	Not Detected	4.2	Not Detected
Trichloroethene	1.0	Not Detected	5.6	Not Detected
Tetrachloroethene	1.0	Not Detected	7.1	Not Detected
Carbon Tetrachloride	1.0	Not Detected	6.6	Not Detected
Chloroform	1.0	Not Detected	5.1	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	119	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	96	70-130

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Client Sample ID: VMP-15

Lab ID#: 2205379A-05A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**j052021**	**Date of Collection: 5/12/22 11:11:00 AM**	
Dil. Factor:	**1.87**	**Date of Analysis: 5/21/22 01:38 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.94	Not Detected	2.4	Not Detected
1,1-Dichloroethene	0.94	Not Detected	3.7	Not Detected
2-Propanol	3.7	200	9.2	480
trans-1,2-Dichloroethene	0.94	Not Detected	3.7	Not Detected
1,1-Dichloroethane	0.94	Not Detected	3.8	Not Detected
cis-1,2-Dichloroethene	0.94	Not Detected	3.7	Not Detected
1,2-Dichloroethane	0.94	Not Detected	3.8	Not Detected
Trichloroethene	0.94	Not Detected	5.0	Not Detected
Tetrachloroethene	0.94	1.1	6.3	7.3
Carbon Tetrachloride	0.94	Not Detected	5.9	Not Detected
Chloroform	0.94	Not Detected	4.6	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	113	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	100	70-130

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Client Sample ID: VMP-3

Lab ID#: 2205379A-06A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**j052022**	**Date of Collection: 5/12/22 11:40:00 AM**	
Dil. Factor:	**1.94**	**Date of Analysis: 5/21/22 02:11 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.97	Not Detected	2.5	Not Detected
1,1-Dichloroethene	0.97	Not Detected	3.8	Not Detected
2-Propanol	3.9	9.8	9.5	24
trans-1,2-Dichloroethene	0.97	Not Detected	3.8	Not Detected
1,1-Dichloroethane	0.97	Not Detected	3.9	Not Detected
cis-1,2-Dichloroethene	0.97	15	3.8	61
1,2-Dichloroethane	0.97	Not Detected	3.9	Not Detected
Trichloroethene	0.97	5.4	5.2	29
Tetrachloroethene	0.97	18	6.6	120
Carbon Tetrachloride	0.97	Not Detected	6.1	Not Detected
Chloroform	0.97	Not Detected	4.7	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	107	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	96	70-130

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Client Sample ID: VMP-1

Lab ID#: 2205379A-07A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**j052023**	**Date of Collection:**	**5/12/22 11:00:00 AM**
Dil. Factor:	**1.98**	**Date of Analysis:**	**5/21/22 02:45 AM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.99	Not Detected	2.5	Not Detected
1,1-Dichloroethene	0.99	Not Detected	3.9	Not Detected
2-Propanol	4.0	180	9.7	440
trans-1,2-Dichloroethene	0.99	Not Detected	3.9	Not Detected
1,1-Dichloroethane	0.99	Not Detected	4.0	Not Detected
cis-1,2-Dichloroethene	0.99	Not Detected	3.9	Not Detected
1,2-Dichloroethane	0.99	Not Detected	4.0	Not Detected
Trichloroethene	0.99	3.0	5.3	16
Tetrachloroethene	0.99	5.3	6.7	36
Carbon Tetrachloride	0.99	Not Detected	6.2	Not Detected
Chloroform	0.99	Not Detected	4.8	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	107	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	92	70-130

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Client Sample ID: VMP-23D

Lab ID#: 2205379A-08A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**p052114**	**Date of Collection: 5/12/22 11:21:00 AM**	
Dil. Factor:	**1.94**	**Date of Analysis: 5/21/22 05:46 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.97	Not Detected	2.5	Not Detected
1,1-Dichloroethene	0.97	Not Detected	3.8	Not Detected
2-Propanol	3.9	260	9.5	630
trans-1,2-Dichloroethene	0.97	Not Detected	3.8	Not Detected
1,1-Dichloroethane	0.97	Not Detected	3.9	Not Detected
cis-1,2-Dichloroethene	0.97	6.9	3.8	27
1,2-Dichloroethane	0.97	Not Detected	3.9	Not Detected
Trichloroethene	0.97	11	5.2	58
Tetrachloroethene	0.97	47	6.6	320
Carbon Tetrachloride	0.97	Not Detected	6.1	Not Detected
Chloroform	0.97	Not Detected	4.7	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	98	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	98	70-130

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Client Sample ID: VPM-12

Lab ID#: 2205379A-09A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**p052115**	**Date of Collection: 5/12/22 12:12:00 PM**	
Dil. Factor:	**1.80**	**Date of Analysis: 5/21/22 06:15 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.90	Not Detected	2.3	Not Detected
1,1-Dichloroethene	0.90	Not Detected	3.6	Not Detected
2-Propanol	3.6	10	8.8	25
trans-1,2-Dichloroethene	0.90	Not Detected	3.6	Not Detected
1,1-Dichloroethane	0.90	Not Detected	3.6	Not Detected
cis-1,2-Dichloroethene	0.90	Not Detected	3.6	Not Detected
1,2-Dichloroethane	0.90	Not Detected	3.6	Not Detected
Trichloroethene	0.90	Not Detected	4.8	Not Detected
Tetrachloroethene	0.90	Not Detected	6.1	Not Detected
Carbon Tetrachloride	0.90	Not Detected	5.7	Not Detected
Chloroform	0.90	Not Detected	4.4	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	98	70-130

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Client Sample ID: VPM-13

Lab ID#: 2205379A-10A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**j052024**	**Date of Collection:**	**5/12/22 12:10:00 PM**
Dil. Factor:	**2.01**	**Date of Analysis:**	**5/21/22 03:18 AM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	1.0	Not Detected	2.6	Not Detected
1,1-Dichloroethene	1.0	Not Detected	4.0	Not Detected
2-Propanol	4.0	13	9.9	32
trans-1,2-Dichloroethene	1.0	Not Detected	4.0	Not Detected
1,1-Dichloroethane	1.0	Not Detected	4.1	Not Detected
cis-1,2-Dichloroethene	1.0	Not Detected	4.0	Not Detected
1,2-Dichloroethane	1.0	Not Detected	4.1	Not Detected
Trichloroethene	1.0	Not Detected	5.4	Not Detected
Tetrachloroethene	1.0	Not Detected	6.8	Not Detected
Carbon Tetrachloride	1.0	Not Detected	6.3	Not Detected
Chloroform	1.0	Not Detected	4.9	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	110	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	96	70-130

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Client Sample ID: Carbon - Influent

Lab ID#: 2205379A-11A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**j052025**	**Date of Collection:**	**5/12/22 2:25:00 PM**
Dil. Factor:	**1.84**	**Date of Analysis:**	**5/21/22 03:52 AM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.92	2.7	4.5	13
Freon 114	0.92	Not Detected	6.4	Not Detected
Chloromethane	9.2	Not Detected	19	Not Detected
Vinyl Chloride	0.92	Not Detected	2.4	Not Detected
1,3-Butadiene	0.92	Not Detected	2.0	Not Detected
Bromomethane	9.2	Not Detected	36	Not Detected
Chloroethane	3.7	Not Detected	9.7	Not Detected
Freon 11	0.92	Not Detected	5.2	Not Detected
Ethanol	9.2	44	17	82
Freon 113	0.92	Not Detected	7.0	Not Detected
1,1-Dichloroethene	0.92	Not Detected	3.6	Not Detected
Acetone	9.2	Not Detected	22	Not Detected
2-Propanol	3.7	10	9.0	26
Carbon Disulfide	3.7	Not Detected	11	Not Detected
3-Chloropropene	3.7	Not Detected	12	Not Detected
Methylene Chloride	9.2	Not Detected	32	Not Detected
Methyl tert-butyl ether	3.7	Not Detected	13	Not Detected
trans-1,2-Dichloroethene	0.92	Not Detected	3.6	Not Detected
Hexane	0.92	Not Detected	3.2	Not Detected
1,1-Dichloroethane	0.92	Not Detected	3.7	Not Detected
2-Butanone (Methyl Ethyl Ketone)	3.7	Not Detected	11	Not Detected
cis-1,2-Dichloroethene	0.92	Not Detected	3.6	Not Detected
Tetrahydrofuran	0.92	Not Detected	2.7	Not Detected
Chloroform	0.92	Not Detected	4.5	Not Detected
1,1,1-Trichloroethane	0.92	Not Detected	5.0	Not Detected
Cyclohexane	0.92	Not Detected	3.2	Not Detected
Carbon Tetrachloride	0.92	Not Detected	5.8	Not Detected
2,2,4-Trimethylpentane	0.92	Not Detected	4.3	Not Detected
Benzene	0.92	Not Detected	2.9	Not Detected
1,2-Dichloroethane	0.92	Not Detected	3.7	Not Detected
Heptane	0.92	Not Detected	3.8	Not Detected
Trichloroethene	0.92	Not Detected	4.9	Not Detected
1,2-Dichloropropane	0.92	Not Detected	4.2	Not Detected
1,4-Dioxane	3.7	Not Detected	13	Not Detected
Bromodichloromethane	0.92	Not Detected	6.2	Not Detected
cis-1,3-Dichloropropene	0.92	Not Detected	4.2	Not Detected
4-Methyl-2-pentanone	0.92	Not Detected	3.8	Not Detected
Toluene	0.92	Not Detected	3.5	Not Detected
trans-1,3-Dichloropropene	0.92	Not Detected	4.2	Not Detected
1,1,2-Trichloroethane	0.92	Not Detected	5.0	Not Detected
Tetrachloroethene	0.92	Not Detected	6.2	Not Detected
2-Hexanone	3.7	Not Detected	15	Not Detected

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Client Sample ID: Carbon - Influent

Lab ID#: 2205379A-11A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**j052025**	**Date of Collection:**	**5/12/22 2:25:00 PM**
Dil. Factor:	**1.84**	**Date of Analysis:**	**5/21/22 03:52 AM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.92	Not Detected	7.8	Not Detected
1,2-Dibromoethane (EDB)	0.92	Not Detected	7.1	Not Detected
Chlorobenzene	0.92	Not Detected	4.2	Not Detected
Ethyl Benzene	0.92	Not Detected	4.0	Not Detected
m,p-Xylene	0.92	Not Detected	4.0	Not Detected
o-Xylene	0.92	Not Detected	4.0	Not Detected
Styrene	0.92	Not Detected	3.9	Not Detected
Bromoform	0.92	Not Detected	9.5	Not Detected
Cumene	0.92	Not Detected	4.5	Not Detected
1,1,2,2-Tetrachloroethane	0.92	Not Detected	6.3	Not Detected
Propylbenzene	0.92	Not Detected	4.5	Not Detected
4-Ethyltoluene	0.92	Not Detected	4.5	Not Detected
1,3,5-Trimethylbenzene	0.92	Not Detected	4.5	Not Detected
1,2,4-Trimethylbenzene	0.92	Not Detected	4.5	Not Detected
1,3-Dichlorobenzene	0.92	Not Detected	5.5	Not Detected
1,4-Dichlorobenzene	0.92	Not Detected	5.5	Not Detected
alpha-Chlorotoluene	0.92	Not Detected	4.8	Not Detected
1,2-Dichlorobenzene	0.92	Not Detected	5.5	Not Detected
1,2,4-Trichlorobenzene	3.7	Not Detected	27	Not Detected
Hexachlorobutadiene	3.7	Not Detected	39	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	103	70-130
4-Bromofluorobenzene	95	70-130

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Client Sample ID: Carbon - Effluent

Lab ID#: 2205379A-12A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**j052026**	**Date of Collection:**	**5/12/22 2:45:00 PM**
Dil. Factor:	**1.95**	**Date of Analysis:**	**5/21/22 04:25 AM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.98	2.1	4.8	10
Freon 114	0.98	Not Detected	6.8	Not Detected
Chloromethane	9.8	Not Detected	20	Not Detected
Vinyl Chloride	0.98	Not Detected	2.5	Not Detected
1,3-Butadiene	0.98	Not Detected	2.2	Not Detected
Bromomethane	9.8	Not Detected	38	Not Detected
Chloroethane	3.9	Not Detected	10	Not Detected
Freon 11	0.98	Not Detected	5.5	Not Detected
Ethanol	9.8	38	18	72
Freon 113	0.98	Not Detected	7.5	Not Detected
1,1-Dichloroethene	0.98	Not Detected	3.9	Not Detected
Acetone	9.8	10	23	24
2-Propanol	3.9	11	9.6	28
Carbon Disulfide	3.9	Not Detected	12	Not Detected
3-Chloropropene	3.9	Not Detected	12	Not Detected
Methylene Chloride	9.8	Not Detected	34	Not Detected
Methyl tert-butyl ether	3.9	Not Detected	14	Not Detected
trans-1,2-Dichloroethene	0.98	Not Detected	3.9	Not Detected
Hexane	0.98	Not Detected	3.4	Not Detected
1,1-Dichloroethane	0.98	Not Detected	3.9	Not Detected
2-Butanone (Methyl Ethyl Ketone)	3.9	Not Detected	12	Not Detected
cis-1,2-Dichloroethene	0.98	Not Detected	3.9	Not Detected
Tetrahydrofuran	0.98	1.0	2.9	2.9
Chloroform	0.98	Not Detected	4.8	Not Detected
1,1,1-Trichloroethane	0.98	Not Detected	5.3	Not Detected
Cyclohexane	0.98	Not Detected	3.4	Not Detected
Carbon Tetrachloride	0.98	Not Detected	6.1	Not Detected
2,2,4-Trimethylpentane	0.98	Not Detected	4.6	Not Detected
Benzene	0.98	Not Detected	3.1	Not Detected
1,2-Dichloroethane	0.98	Not Detected	3.9	Not Detected
Heptane	0.98	Not Detected	4.0	Not Detected
Trichloroethene	0.98	Not Detected	5.2	Not Detected
1,2-Dichloropropane	0.98	Not Detected	4.5	Not Detected
1,4-Dioxane	3.9	Not Detected	14	Not Detected
Bromodichloromethane	0.98	Not Detected	6.5	Not Detected
cis-1,3-Dichloropropene	0.98	Not Detected	4.4	Not Detected
4-Methyl-2-pentanone	0.98	Not Detected	4.0	Not Detected
Toluene	0.98	Not Detected	3.7	Not Detected
trans-1,3-Dichloropropene	0.98	Not Detected	4.4	Not Detected
1,1,2-Trichloroethane	0.98	Not Detected	5.3	Not Detected
Tetrachloroethene	0.98	Not Detected	6.6	Not Detected
2-Hexanone	3.9	Not Detected	16	Not Detected

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Client Sample ID: Carbon - Effluent

Lab ID#: 2205379A-12A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**j052026**	**Date of Collection:**	**5/12/22 2:45:00 PM**
Dil. Factor:	**1.95**	**Date of Analysis:**	**5/21/22 04:25 AM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.98	Not Detected	8.3	Not Detected
1,2-Dibromoethane (EDB)	0.98	Not Detected	7.5	Not Detected
Chlorobenzene	0.98	Not Detected	4.5	Not Detected
Ethyl Benzene	0.98	Not Detected	4.2	Not Detected
m,p-Xylene	0.98	Not Detected	4.2	Not Detected
o-Xylene	0.98	Not Detected	4.2	Not Detected
Styrene	0.98	Not Detected	4.2	Not Detected
Bromoform	0.98	Not Detected	10	Not Detected
Cumene	0.98	Not Detected	4.8	Not Detected
1,1,2,2-Tetrachloroethane	0.98	Not Detected	6.7	Not Detected
Propylbenzene	0.98	Not Detected	4.8	Not Detected
4-Ethyltoluene	0.98	Not Detected	4.8	Not Detected
1,3,5-Trimethylbenzene	0.98	Not Detected	4.8	Not Detected
1,2,4-Trimethylbenzene	0.98	Not Detected	4.8	Not Detected
1,3-Dichlorobenzene	0.98	Not Detected	5.9	Not Detected
1,4-Dichlorobenzene	0.98	Not Detected	5.9	Not Detected
alpha-Chlorotoluene	0.98	Not Detected	5.0	Not Detected
1,2-Dichlorobenzene	0.98	Not Detected	5.9	Not Detected
1,2,4-Trichlorobenzene	3.9	Not Detected	29	Not Detected
Hexachlorobutadiene	3.9	Not Detected	42	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	101	70-130
1,2-Dichloroethane-d4	105	70-130
4-Bromofluorobenzene	95	70-130

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Client Sample ID: SVE-1

Lab ID#: 2205379A-13A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**j052027**	**Date of Collection: 5/12/22 4:21:00 PM**	
Dil. Factor:	**1.85**	**Date of Analysis: 5/21/22 04:59 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.92	Not Detected	2.4	Not Detected
1,1-Dichloroethene	0.92	Not Detected	3.7	Not Detected
2-Propanol	3.7	60	9.1	150
trans-1,2-Dichloroethene	0.92	Not Detected	3.7	Not Detected
1,1-Dichloroethane	0.92	Not Detected	3.7	Not Detected
cis-1,2-Dichloroethene	0.92	3.4	3.7	13
1,2-Dichloroethane	0.92	Not Detected	3.7	Not Detected
Trichloroethene	0.92	11	5.0	59
Tetrachloroethene	0.92	30	6.3	200
Carbon Tetrachloride	0.92	Not Detected	5.8	Not Detected
Chloroform	0.92	Not Detected	4.5	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	102	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	97	70-130

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Client Sample ID: Lab Blank

Lab ID#: 2205379A-14A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**j052009**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 5/20/22 05:13 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.50	Not Detected	2.5	Not Detected
Freon 114	0.50	Not Detected	3.5	Not Detected
Chloromethane	5.0	Not Detected	10	Not Detected
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
1,3-Butadiene	0.50	Not Detected	1.1	Not Detected
Bromomethane	5.0	Not Detected	19	Not Detected
Chloroethane	2.0	Not Detected	5.3	Not Detected
Freon 11	0.50	Not Detected	2.8	Not Detected
Ethanol	5.0	Not Detected	9.4	Not Detected
Freon 113	0.50	Not Detected	3.8	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Acetone	5.0	Not Detected	12	Not Detected
2-Propanol	2.0	Not Detected	4.9	Not Detected
Carbon Disulfide	2.0	Not Detected	6.2	Not Detected
3-Chloropropene	2.0	Not Detected	6.3	Not Detected
Methylene Chloride	5.0	Not Detected	17	Not Detected
Methyl tert-butyl ether	2.0	Not Detected	7.2	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Hexane	0.50	Not Detected	1.8	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.0	Not Detected	5.9	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Tetrahydrofuran	0.50	Not Detected	1.5	Not Detected
Chloroform	0.50	Not Detected	2.4	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Cyclohexane	0.50	Not Detected	1.7	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.1	Not Detected
2,2,4-Trimethylpentane	0.50	Not Detected	2.3	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Heptane	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
1,2-Dichloropropane	0.50	Not Detected	2.3	Not Detected
1,4-Dioxane	2.0	Not Detected	7.2	Not Detected
Bromodichloromethane	0.50	Not Detected	3.4	Not Detected
cis-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
4-Methyl-2-pentanone	0.50	Not Detected	2.0	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
trans-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
1,1,2-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
2-Hexanone	2.0	Not Detected	8.2	Not Detected

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Client Sample ID: Lab Blank

Lab ID#: 2205379A-14A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**j052009**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 5/20/22 05:13 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.50	Not Detected	4.2	Not Detected
1,2-Dibromoethane (EDB)	0.50	Not Detected	3.8	Not Detected
Chlorobenzene	0.50	Not Detected	2.3	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
m,p-Xylene	0.50	Not Detected	2.2	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
Styrene	0.50	Not Detected	2.1	Not Detected
Bromoform	0.50	Not Detected	5.2	Not Detected
Cumene	0.50	Not Detected	2.4	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected	3.4	Not Detected
Propylbenzene	0.50	Not Detected	2.4	Not Detected
4-Ethyltoluene	0.50	Not Detected	2.4	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,3-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
alpha-Chlorotoluene	0.50	Not Detected	2.6	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,2,4-Trichlorobenzene	2.0	Not Detected	15	Not Detected
Hexachlorobutadiene	2.0	Not Detected	21	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	97	70-130
1,2-Dichloroethane-d4	109	70-130
4-Bromofluorobenzene	94	70-130

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Client Sample ID: Lab Blank

Lab ID#: 2205379A-14B

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**p052105d**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 5/21/22 12:14 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
2-Propanol	2.0	Not Detected	4.9	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.1	Not Detected
Chloroform	0.50	Not Detected	2.4	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	101	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	96	70-130

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Client Sample ID: CCV

Lab ID#: 2205379A-15A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**j052006**	**Date of Collection: NA**
Dil. Factor:	**1.00**	**Date of Analysis: 5/20/22 03:38 PM**

Compound	%Recovery
Freon 12	105
Freon 114	96
Chloromethane	100
Vinyl Chloride	99
1,3-Butadiene	101
Bromomethane	100
Chloroethane	95
Freon 11	104
Ethanol	98
Freon 113	102
1,1-Dichloroethene	103
Acetone	97
2-Propanol	104
Carbon Disulfide	97
3-Chloropropene	106
Methylene Chloride	102
Methyl tert-butyl ether	111
trans-1,2-Dichloroethene	106
Hexane	110
1,1-Dichloroethane	103
2-Butanone (Methyl Ethyl Ketone)	105
cis-1,2-Dichloroethene	105
Tetrahydrofuran	108
Chloroform	102
1,1,1-Trichloroethane	104
Cyclohexane	114
Carbon Tetrachloride	105
2,2,4-Trimethylpentane	110
Benzene	99
1,2-Dichloroethane	107
Heptane	118
Trichloroethene	104
1,2-Dichloropropane	100
1,4-Dioxane	107
Bromodichloromethane	101
cis-1,3-Dichloropropene	111
4-Methyl-2-pentanone	113
Toluene	102
trans-1,3-Dichloropropene	114
1,1,2-Trichloroethane	105
Tetrachloroethene	108
2-Hexanone	112

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Client Sample ID: CCV

Lab ID#: 2205379A-15A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**j052006**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 5/20/22 03:38 PM**	

Compound	%Recovery
Dibromochloromethane	109
1,2-Dibromoethane (EDB)	110
Chlorobenzene	102
Ethyl Benzene	117
m,p-Xylene	122
o-Xylene	124
Styrene	129
Bromoform	113
Cumene	129
1,1,2,2-Tetrachloroethane	106
Propylbenzene	121
4-Ethyltoluene	125
1,3,5-Trimethylbenzene	122
1,2,4-Trimethylbenzene	124
1,3-Dichlorobenzene	121
1,4-Dichlorobenzene	122
alpha-Chlorotoluene	118
1,2-Dichlorobenzene	121
1,2,4-Trichlorobenzene	114
Hexachlorobutadiene	114

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	106	70-130
4-Bromofluorobenzene	99	70-130

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Client Sample ID: CCV

Lab ID#: 2205379A-15B

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**p052102**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 5/21/22 10:39 AM**	

Compound	%Recovery
Vinyl Chloride	92
1,1-Dichloroethene	99
2-Propanol	93
trans-1,2-Dichloroethene	100
1,1-Dichloroethane	100
cis-1,2-Dichloroethene	104
1,2-Dichloroethane	93
Trichloroethene	93
Tetrachloroethene	100
Carbon Tetrachloride	100
Chloroform	93

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	97	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	101	70-130

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Client Sample ID: LCS

Lab ID#: 2205379A-16A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**j052007**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 5/20/22 04:08 PM**	

Compound	%Recovery	Method Limits
Freon 12	111	70-130
Freon 114	103	70-130
Chloromethane	112	70-130
Vinyl Chloride	99	70-130
1,3-Butadiene	98	70-130
Bromomethane	96	70-130
Chloroethane	92	70-130
Freon 11	105	70-130
Ethanol	110	70-130
Freon 113	103	70-130
1,1-Dichloroethene	104	70-130
Acetone	97	70-130
2-Propanol	118	70-130
Carbon Disulfide	101	70-130
3-Chloropropene	108	70-130
Methylene Chloride	99	70-130
Methyl tert-butyl ether	114	70-130
trans-1,2-Dichloroethene	111	70-130
Hexane	113	70-130
1,1-Dichloroethane	103	70-130
2-Butanone (Methyl Ethyl Ketone)	107	70-130
cis-1,2-Dichloroethene	104	70-130
Tetrahydrofuran	111	70-130
Chloroform	100	70-130
1,1,1-Trichloroethane	107	70-130
Cyclohexane	119	70-130
Carbon Tetrachloride	104	70-130
2,2,4-Trimethylpentane	110	70-130
Benzene	101	70-130
1,2-Dichloroethane	105	70-130
Heptane	121	70-130
Trichloroethene	106	70-130
1,2-Dichloropropane	100	70-130
1,4-Dioxane	113	70-130
Bromodichloromethane	101	70-130
cis-1,3-Dichloropropene	114	70-130
4-Methyl-2-pentanone	118	70-130
Toluene	103	70-130
trans-1,3-Dichloropropene	118	70-130
1,1,2-Trichloroethane	112	70-130
Tetrachloroethene	109	70-130
2-Hexanone	121	70-130

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Client Sample ID: LCS

Lab ID#: 2205379A-16A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**j052007**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 5/20/22 04:08 PM**	

Compound	%Recovery	Method Limits
Dibromochloromethane	112	70-130
1,2-Dibromoethane (EDB)	112	70-130
Chlorobenzene	104	70-130
Ethyl Benzene	120	70-130
m,p-Xylene	123	70-130
o-Xylene	124	70-130
Styrene	131 Q	70-130
Bromoform	115	70-130
Cumene	129	70-130
1,1,2,2-Tetrachloroethane	112	70-130
Propylbenzene	122	70-130
4-Ethyltoluene	127	70-130
1,3,5-Trimethylbenzene	122	70-130
1,2,4-Trimethylbenzene	124	70-130
1,3-Dichlorobenzene	120	70-130
1,4-Dichlorobenzene	120	70-130
alpha-Chlorotoluene	129	70-130
1,2-Dichlorobenzene	120	70-130
1,2,4-Trichlorobenzene	133 Q	70-130
Hexachlorobutadiene	124	70-130

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	98	70-130
1,2-Dichloroethane-d4	102	70-130
4-Bromofluorobenzene	96	70-130

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Client Sample ID: LCSD

Lab ID#: 2205379A-16AA

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**j052008**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 5/20/22 04:39 PM**	

Compound	%Recovery	Method Limits
Freon 12	110	70-130
Freon 114	103	70-130
Chloromethane	128	70-130
Vinyl Chloride	125	70-130
1,3-Butadiene	124	70-130
Bromomethane	118	70-130
Chloroethane	108	70-130
Freon 11	104	70-130
Ethanol	114	70-130
Freon 113	104	70-130
1,1-Dichloroethene	108	70-130
Acetone	97	70-130
2-Propanol	119	70-130
Carbon Disulfide	103	70-130
3-Chloropropene	114	70-130
Methylene Chloride	101	70-130
Methyl tert-butyl ether	117	70-130
trans-1,2-Dichloroethene	110	70-130
Hexane	117	70-130
1,1-Dichloroethane	104	70-130
2-Butanone (Methyl Ethyl Ketone)	110	70-130
cis-1,2-Dichloroethene	106	70-130
Tetrahydrofuran	111	70-130
Chloroform	100	70-130
1,1,1-Trichloroethane	106	70-130
Cyclohexane	120	70-130
Carbon Tetrachloride	104	70-130
2,2,4-Trimethylpentane	114	70-130
Benzene	101	70-130
1,2-Dichloroethane	103	70-130
Heptane	120	70-130
Trichloroethene	104	70-130
1,2-Dichloropropane	100	70-130
1,4-Dioxane	112	70-130
Bromodichloromethane	99	70-130
cis-1,3-Dichloropropene	114	70-130
4-Methyl-2-pentanone	117	70-130
Toluene	101	70-130
trans-1,3-Dichloropropene	120	70-130
1,1,2-Trichloroethane	112	70-130
Tetrachloroethene	110	70-130
2-Hexanone	122	70-130

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Client Sample ID: LCSD

Lab ID#: 2205379A-16AA

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**j052008**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 5/20/22 04:39 PM**	

Compound	%Recovery	Method Limits
Dibromochloromethane	111	70-130
1,2-Dibromoethane (EDB)	113	70-130
Chlorobenzene	103	70-130
Ethyl Benzene	119	70-130
m,p-Xylene	123	70-130
o-Xylene	124	70-130
Styrene	131 Q	70-130
Bromoform	113	70-130
Cumene	129	70-130
1,1,2,2-Tetrachloroethane	111	70-130
Propylbenzene	120	70-130
4-Ethyltoluene	125	70-130
1,3,5-Trimethylbenzene	119	70-130
1,2,4-Trimethylbenzene	129	70-130
1,3-Dichlorobenzene	118	70-130
1,4-Dichlorobenzene	118	70-130
alpha-Chlorotoluene	127	70-130
1,2-Dichlorobenzene	119	70-130
1,2,4-Trichlorobenzene	133 Q	70-130
Hexachlorobutadiene	125	70-130

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	97	70-130
1,2-Dichloroethane-d4	103	70-130
4-Bromofluorobenzene	95	70-130

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Client Sample ID: LCS

Lab ID#: 2205379A-16B

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**p052103**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 5/21/22 11:07 AM**	

Compound	%Recovery	Method Limits
Vinyl Chloride	93	70-130
1,1-Dichloroethene	96	70-130
2-Propanol	100	70-130
trans-1,2-Dichloroethene	102	70-130
1,1-Dichloroethane	101	70-130
cis-1,2-Dichloroethene	105	70-130
1,2-Dichloroethane	95	70-130
Trichloroethene	95	70-130
Tetrachloroethene	101	70-130
Carbon Tetrachloride	102	70-130
Chloroform	90	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	98	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	101	70-130

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Client Sample ID: LCSD

Lab ID#: 2205379A-16BB

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**p052104**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 5/21/22 11:35 AM**	

Compound	%Recovery	Method Limits
Vinyl Chloride	94	70-130
1,1-Dichloroethene	98	70-130
2-Propanol	100	70-130
trans-1,2-Dichloroethene	102	70-130
1,1-Dichloroethane	102	70-130
cis-1,2-Dichloroethene	103	70-130
1,2-Dichloroethane	93	70-130
Trichloroethene	94	70-130
Tetrachloroethene	104	70-130
Carbon Tetrachloride	102	70-130
Chloroform	91	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	98	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	102	70-130

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
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June 2, 2022

Dan Whitman, Project Manager
Whitman Environmental Sciences
6812 16th Ave NE
Seattle, WA 98115

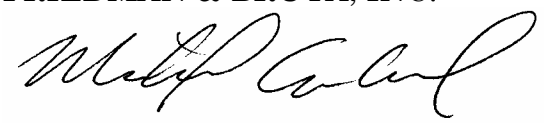
Dear Mr Whitman:

Included are the results from the testing of material submitted on May 13, 2022 from the Canyon Park WES-1683A, F&BI 205242 project. There are 7 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days, or as directed by the Chain of Custody document. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
WES0602R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on May 13, 2022 by Friedman & Bruya, Inc. from the Whitman Environmental Sciences Canyon Park WES-1683A, F&BI 205242 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Whitman Environmental Sciences
205242 -01	MW-1-GW
205242 -02	MW-2-GW
205242 -03	MW-3-GW

The 8260D calibration standard failed the acceptance criteria for several analytes. The data were flagged accordingly.

The 8260D laboratory control sample and laboratory control sample duplicate failed the relative percent difference for cis-1,3-dichloropropene. The analyte was not detected therefore the data were acceptable.

All other quality control requirements were acceptable.

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	MW-1-GW	Client:	Whitman Environmental Sciences
Date Received:	05/13/22	Project:	Canyon Park WES-1683A
Date Extracted:	05/23/22	Lab ID:	205242-01
Date Analyzed:	05/27/22	Data File:	052716.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	RF

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	96	86	113
Toluene-d8	101	88	114
4-Bromofluorobenzene	93	88	112

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10 ca	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<5	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<50 ca	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Hexane	<5	o-Xylene	<1
Methylene chloride	<5	Styrene	<1
Methyl t-butyl ether (MTBE)	<1	Isopropylbenzene	<1
trans-1,2-Dichloroethene	<1	Bromoform	<5
1,1-Dichloroethane	<1	n-Propylbenzene	<1
2,2-Dichloropropane	<1	Bromobenzene	<1
cis-1,2-Dichloroethene	<1	1,3,5-Trimethylbenzene	<1
Chloroform	<1	1,1,2,2-Tetrachloroethane	<1
2-Butanone (MEK)	<20	1,2,3-Trichloropropane	<1
1,2-Dichloroethane (EDC)	<1 ca	2-Chlorotoluene	<1
1,1,1-Trichloroethane	<1	4-Chlorotoluene	<1
1,1-Dichloropropene	<1	tert-Butylbenzene	<1
Carbon tetrachloride	<1	1,2,4-Trimethylbenzene	<1
Benzene	<0.35	sec-Butylbenzene	<1
Trichloroethene	<1	p-Isopropyltoluene	<1
1,2-Dichloropropane	<1	1,3-Dichlorobenzene	<1
Bromodichloromethane	<1	1,4-Dichlorobenzene	<1
Dibromomethane	<1	1,2-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dibromo-3-chloropropane	<10
cis-1,3-Dichloropropene	<1	1,2,4-Trichlorobenzene	<1
Toluene	<1	Hexachlorobutadiene	<1
trans-1,3-Dichloropropene	<1	Naphthalene	<1
1,1,2-Trichloroethane	<1	1,2,3-Trichlorobenzene	<1
2-Hexanone	<10		

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	MW-2-GW	Client:	Whitman Environmental Sciences
Date Received:	05/13/22	Project:	Canyon Park WES-1683A
Date Extracted:	05/23/22	Lab ID:	205242-02
Date Analyzed:	05/27/22	Data File:	052717.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	RF

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	86	113
Toluene-d8	102	88	114
4-Bromofluorobenzene	93	88	112

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10 ca	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<5	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<50 ca	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Hexane	<5	o-Xylene	<1
Methylene chloride	<5	Styrene	<1
Methyl t-butyl ether (MTBE)	<1	Isopropylbenzene	<1
trans-1,2-Dichloroethene	<1	Bromoform	<5
1,1-Dichloroethane	<1	n-Propylbenzene	<1
2,2-Dichloropropane	<1	Bromobenzene	<1
cis-1,2-Dichloroethene	<1	1,3,5-Trimethylbenzene	<1
Chloroform	<1	1,1,2,2-Tetrachloroethane	<1
2-Butanone (MEK)	<20	1,2,3-Trichloropropane	<1
1,2-Dichloroethane (EDC)	<1 ca	2-Chlorotoluene	<1
1,1,1-Trichloroethane	<1	4-Chlorotoluene	<1
1,1-Dichloropropene	<1	tert-Butylbenzene	<1
Carbon tetrachloride	<1	1,2,4-Trimethylbenzene	<1
Benzene	<0.35	sec-Butylbenzene	<1
Trichloroethene	<1	p-Isopropyltoluene	<1
1,2-Dichloropropane	<1	1,3-Dichlorobenzene	<1
Bromodichloromethane	<1	1,4-Dichlorobenzene	<1
Dibromomethane	<1	1,2-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dibromo-3-chloropropane	<10
cis-1,3-Dichloropropene	<1	1,2,4-Trichlorobenzene	<1
Toluene	<1	Hexachlorobutadiene	<1
trans-1,3-Dichloropropene	<1	Naphthalene	<1
1,1,2-Trichloroethane	<1	1,2,3-Trichlorobenzene	<1
2-Hexanone	<10		

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	MW-3-GW	Client:	Whitman Environmental Sciences
Date Received:	05/13/22	Project:	Canyon Park WES-1683A
Date Extracted:	05/23/22	Lab ID:	205242-03
Date Analyzed:	05/27/22	Data File:	052718.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	RF

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	86	113
Toluene-d8	103	88	114
4-Bromofluorobenzene	94	88	112

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10 ca	Tetrachloroethene	1.7
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<5	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<50 ca	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Hexane	<5	o-Xylene	<1
Methylene chloride	<5	Styrene	<1
Methyl t-butyl ether (MTBE)	<1	Isopropylbenzene	<1
trans-1,2-Dichloroethene	<1	Bromoform	<5
1,1-Dichloroethane	<1	n-Propylbenzene	<1
2,2-Dichloropropane	<1	Bromobenzene	<1
cis-1,2-Dichloroethene	<1	1,3,5-Trimethylbenzene	<1
Chloroform	<1	1,1,2,2-Tetrachloroethane	<1
2-Butanone (MEK)	<20	1,2,3-Trichloropropane	<1
1,2-Dichloroethane (EDC)	<1 ca	2-Chlorotoluene	<1
1,1,1-Trichloroethane	<1	4-Chlorotoluene	<1
1,1-Dichloropropene	<1	tert-Butylbenzene	<1
Carbon tetrachloride	<1	1,2,4-Trimethylbenzene	<1
Benzene	<0.35	sec-Butylbenzene	<1
Trichloroethene	<1	p-Isopropyltoluene	<1
1,2-Dichloropropane	<1	1,3-Dichlorobenzene	<1
Bromodichloromethane	<1	1,4-Dichlorobenzene	<1
Dibromomethane	<1	1,2-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dibromo-3-chloropropane	<10
cis-1,3-Dichloropropene	<1	1,2,4-Trichlorobenzene	<1
Toluene	<1	Hexachlorobutadiene	<1
trans-1,3-Dichloropropene	<1	Naphthalene	<1
1,1,2-Trichloroethane	<1	1,2,3-Trichlorobenzene	<1
2-Hexanone	<10		

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	Method Blank	Client:	Whitman Environmental Sciences
Date Received:	Not Applicable	Project:	Canyon Park WES-1683A
Date Extracted:	05/23/22	Lab ID:	02-1219 mb
Date Analyzed:	05/23/22	Data File:	052312.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	RF

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	94	78	126
Toluene-d8	96	84	115
4-Bromofluorobenzene	102	72	130

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.02	Dibromochloromethane	<0.5
Bromomethane	<5	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<50	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Hexane	<5	o-Xylene	<1
Methylene chloride	<5	Styrene	<1
Methyl t-butyl ether (MTBE)	<1	Isopropylbenzene	<1
trans-1,2-Dichloroethene	<1	Bromoform	<5
1,1-Dichloroethane	<1	n-Propylbenzene	<1
2,2-Dichloropropane	<1	Bromobenzene	<1
cis-1,2-Dichloroethene	<1	1,3,5-Trimethylbenzene	<1
Chloroform	<1	1,1,2,2-Tetrachloroethane	<0.2
2-Butanone (MEK)	<20	1,2,3-Trichloropropane	<1
1,2-Dichloroethane (EDC)	<0.2	2-Chlorotoluene	<1
1,1,1-Trichloroethane	<1	4-Chlorotoluene	<1
1,1-Dichloropropene	<1	tert-Butylbenzene	<1
Carbon tetrachloride	<0.5	1,2,4-Trimethylbenzene	<1
Benzene	<0.35	sec-Butylbenzene	<1
Trichloroethene	<0.5	p-Isopropyltoluene	<1
1,2-Dichloropropane	<1	1,3-Dichlorobenzene	<1
Bromodichloromethane	<0.5	1,4-Dichlorobenzene	<1
Dibromomethane	<1	1,2-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dibromo-3-chloropropane	<10
cis-1,3-Dichloropropene	<0.4	1,2,4-Trichlorobenzene	<1
Toluene	<1	Hexachlorobutadiene	<0.5
trans-1,3-Dichloropropene	<0.4	Naphthalene	<1
1,1,2-Trichloroethane	<0.5	1,2,3-Trichlorobenzene	<1
2-Hexanone	<10		

Date of Report: 06/02/22
Date Received: 05/13/22
Project: Canyon Park WES-1683A, F&BI 205242

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

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Dichlorodifluoromethane	ug/L (ppb)	10	94	101	46-206	7
Chloromethane	ug/L (ppb)	10	100	102	70-142	2
Vinyl chloride	ug/L (ppb)	10	107	105	70-130	2
Bromomethane	ug/L (ppb)	10	106	109	56-197	3
Chloroethane	ug/L (ppb)	10	115	112	70-130	3
Trichlorofluoromethane	ug/L (ppb)	10	108	105	70-130	3
Acetone	ug/L (ppb)	50	112	98	10-140	13
1,1-Dichloroethene	ug/L (ppb)	10	113	105	70-130	7
Hexane	ug/L (ppb)	10	85	91	54-136	7
Methylene chloride	ug/L (ppb)	10	112	99	43-134	12
Methyl t-butyl ether (MTBE)	ug/L (ppb)	10	108	108	70-130	0
trans-1,2-Dichloroethene	ug/L (ppb)	10	105	102	70-130	3
1,1-Dichloroethane	ug/L (ppb)	10	104	106	70-130	2
2,2-Dichloropropane	ug/L (ppb)	10	119	115	70-130	3
cis-1,2-Dichloroethene	ug/L (ppb)	10	101	107	70-130	6
Chloroform	ug/L (ppb)	10	98	100	70-130	2
2-Butanone (MEK)	ug/L (ppb)	50	105	86	17-154	20
1,2-Dichloroethane (EDC)	ug/L (ppb)	10	101	97	70-130	4
1,1,1-Trichloroethane	ug/L (ppb)	10	113	111	70-130	2
1,1-Dichloropropene	ug/L (ppb)	10	93	96	70-130	3
Carbon tetrachloride	ug/L (ppb)	10	116	110	70-130	5
Benzene	ug/L (ppb)	10	101	97	70-130	4
Trichloroethene	ug/L (ppb)	10	97	91	70-130	6
1,2-Dichloropropane	ug/L (ppb)	10	101	95	70-130	6
Bromodichloromethane	ug/L (ppb)	10	108	100	70-130	8
Dibromomethane	ug/L (ppb)	10	110	104	70-130	6
4-Methyl-2-pentanone	ug/L (ppb)	50	105	103	68-130	2
cis-1,3-Dichloropropene	ug/L (ppb)	10	126	94	69-131	29 vo
Toluene	ug/L (ppb)	10	89	89	70-130	0
trans-1,3-Dichloropropene	ug/L (ppb)	10	94	95	70-130	1
1,1,2-Trichloroethane	ug/L (ppb)	10	104	100	70-130	4
2-Hexanone	ug/L (ppb)	50	138	120	45-138	14
1,3-Dichloropropane	ug/L (ppb)	10	112	95	70-130	16
Tetrachloroethene	ug/L (ppb)	10	102	89	70-130	14
Dibromochloromethane	ug/L (ppb)	10	109	110	60-148	1
1,2-Dibromoethane (EDB)	ug/L (ppb)	10	98	100	70-130	2
Chlorobenzene	ug/L (ppb)	10	96	93	70-130	3
Ethylbenzene	ug/L (ppb)	10	97	94	70-130	3
1,1,1,2-Tetrachloroethane	ug/L (ppb)	10	110	104	70-130	6
m,p-Xylene	ug/L (ppb)	20	99	95	70-130	4
o-Xylene	ug/L (ppb)	10	97	95	70-130	2
Styrene	ug/L (ppb)	10	93	90	70-130	3
Isopropylbenzene	ug/L (ppb)	10	99	97	70-130	2
Bromoform	ug/L (ppb)	10	120	111	69-138	8
n-Propylbenzene	ug/L (ppb)	10	96	94	70-130	2
Bromobenzene	ug/L (ppb)	10	98	95	70-130	3
1,3,5-Trimethylbenzene	ug/L (ppb)	10	101	96	70-130	5
1,1,2,2-Tetrachloroethane	ug/L (ppb)	10	104	105	70-130	1
1,2,3-Trichloropropane	ug/L (ppb)	10	100	97	70-130	3
2-Chlorotoluene	ug/L (ppb)	10	101	94	70-130	7
4-Chlorotoluene	ug/L (ppb)	10	96	93	70-130	3
tert-Butylbenzene	ug/L (ppb)	10	110	94	70-130	16
1,2,4-Trimethylbenzene	ug/L (ppb)	10	100	92	70-130	8
sec-Butylbenzene	ug/L (ppb)	10	105	96	70-130	9
p-Isopropyltoluene	ug/L (ppb)	10	101	95	70-130	6
1,3-Dichlorobenzene	ug/L (ppb)	10	95	93	70-130	2
1,4-Dichlorobenzene	ug/L (ppb)	10	94	93	70-130	1
1,2-Dichlorobenzene	ug/L (ppb)	10	101	99	70-130	2
1,2-Dibromo-3-chloropropane	ug/L (ppb)	10	112	111	70-130	1
1,2,4-Trichlorobenzene	ug/L (ppb)	10	97	89	70-130	9
Hexachlorobutadiene	ug/L (ppb)	10	96	88	70-130	9
Naphthalene	ug/L (ppb)	10	106	100	70-130	6
1,2,3-Trichlorobenzene	ug/L (ppb)	10	97	96	70-130	1

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.

205242

SAMPLE CHAIN OF CUSTODY 05-13-22

VW1

Report To Dan Whitman

Company Whitman Env. Services

Address 6812 16th Ave NE

City, State, ZIP Seattle, WA 98115

Phone _____ Email whitmanenv@yahoo.com

SAMPLERS (*signature*)

PROJECT NAME: Canyon Park

PO #: AES-1683A

REMARKS: Project specific RLs? - Yes / No

INVOICE TO

Page # _____ of _____

TURNAROUND TIME
- [x] Standard turnaround
- [ ] RUSH _____
- Rush charges authorized by: _____

SAMPLE DISPOSAL
- [ ] Archive samples
- [ ] Other _____
- Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082					Notes
MW-1-GW	01 A-D	5/13/22	10:20	WATER	4					X							
MW-2-GW	02 1	"	10:15	"	4					X							
MW-3-GW	03 A-C	"	11:05	"	3					X							

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		AES	5/13/22	12:33
Received by:		FRB	5/13/22	1283
Relinquished by:				
Received by:		Samples received at 12°C		

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