Year 1 Air Sampling Report

Former Harbour Pointe Dry Cleaners Lynnwood Site

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ACRONYMS AND ABBREVIATIONS

1,1-DCE	1,1-dichloroethene
cis-1,2-DCE	*cis*-1,2-dichloroethene
CVOC	chlorinated volatile organic compound
Ecology	Washington State Department of Ecology
EPA	U.S. Environmental Protection Agency
Eurofins	Eurofins Air Toxics analytical laboratory
HVAC	heating, ventilation, and air conditioning systems
Integral	Integral Consulting Inc.
MTCA	Model Toxics Control Act
NFA	no further action
PCE	tetrachloroethene
PID	photoionization detector
ppb	parts per billion
QA/QC	quality assurance and quality control
SAP	sampling and analysis plan
SIM	selected ion monitoring
Site	Former Harbour Pointe Dry Cleaners Site
SSDS	sub-slab depressurization system
TCE	trichloroethene
TO-15	Toxic Organics–15
trans-1,2-DCE	*trans*-1,2-dichloroethene
VOC	volatile organic compounds

1 INTRODUCTION

This report describes the Year 1 air sampling data collection and analytical results of the Former Harbour Pointe Dry Cleaners Site[1] located at 13619 Mukilteo Speedway, Lynnwood, Washington (Site; Figure 1). Integral Consulting Inc. (Integral) prepared this report on behalf of B33 Mukilteo to support compliance with the Year 1 monitoring requirements of the Site's environmental covenant with "No Further Action" (NFA) determination issued by the Washington State Department of Ecology (Ecology 2022a,b). The purpose of the Year 1 air sampling is to monitor and report the indoor air, outdoor air, and sub-slab soil vapor quality during the first winter the environmental covenant is in effect, in accordance with the operations and maintenance plan in the environmental covenant, which defines the Site as the Former Harbour Pointe Cleaners tenant space (Suite B6) and the adjacent-west tenant space (Suite B5) (Ecology 2022a; Figure 1).[2] Year 1 indoor (and outdoor) air quality results are compared to the 2018, 2019, and 2022 sampling results, and Model Toxics Control Act (MTCA) Method B and C indoor air cleanup levels, for reference. Integral conducted field activities in February 2023 according to the Sampling and Analysis Plan for Year 1 Air Sampling and Reporting (SAP; Integral 2023). The sampling was conducted in accordance with Ecology's Guidance for Evaluating Vapor Intrusion in Washington State, Investigation and Remedial Action (Ecology 2022c).

[1] Facility Site ID 41352598; Cleanup Site ID 12413

[2] The adjacent-east tenant space, Suite B7, is part of the property covered by the environmental covenant but is not defined as part of the Site in the context of the operations and maintenance plan.

2 BACKGROUND

The Mukilteo Speedway Center was constructed in 1992 as a retail shopping center. Harbour Pointe Cleaners occupied tenant space Suite B6 and operated as a dry-cleaning facility at the property since its opening in 1992. From 1992 to 2007, the facility used chlorinated volatile organic compounds (CVOCs) such as tetrachloroethene (PCE) in its operations. Environmental assessment activities at the Site began in June 2006. PCE was detected in shallow, unsaturated soil and in soil vapor above MTCA Method A soil cleanup levels for unrestricted land uses under Ecology MTCA Chapter 70A.305. Under the guidance of MTCA, Cardno ATC performed a feasibility study and, in collaboration with the former property owner and Ecology, selected natural attenuation with institutional controls as the cleanup approach, including a sub-slab depressurization system (SSDS) and an environmental covenant.

The SSDS was installed in 2017 and operated for 17 months. After the SSDS was shut down and the former dry-cleaning operation was vacated, two rounds of indoor air samples were collected from Suites B5 and B6 in 2018 and 2019 (ATC 2019). For all dry-cleaning related CVOCs, defined as dry cleaning-related PCE and its degradation byproducts—trichloroethene (TCE), 1,1-dichloroethene (1,1-DCE), *cis*-1,2-dichloroethene (*cis*-1,2-DCE), *trans*-1,2-dichloroethene (*trans*-1,2-DCE), and vinyl chloride—indoor air concentrations were below the relevant cleanup levels for indoor air quality, MTCA Method B (for an unrestricted land-use scenario), in both events. Ecology issued an NFA-likely opinion letter in May 2019, leaving the Site subject to an environmental covenant for PCE and TCE in soil that remains above the Method A soil cleanup levels for unrestricted land uses within the remedial action area. The environmental covenant was recorded on June 16, 2022 (Recording Number 20150805000202; Ecology 2022a). Ecology issued an NFA opinion letter on September 20, 2022 (Ecology 2022b). Additional indoor air, outdoor air, and sub-slab soil vapor quality samples were collected in March 2022 (Atlas 2022).

Year 1 winter air quality monitoring is one component of the environmental covenant and was conducted in the first winter after the environmental covenant was recorded.

2.1 SUITE OCCUPATION AND RELEVANT CHEMICAL PRODUCTS

Tenant space Suite B6 (Former Harbour Pointe Dry Cleaners) is currently unoccupied. Adjacent-west tenant space Suite B5 is occupied by Mustache Milk Tea.

During the Year 1 air sampling event, subcontractors to the property manager were painting Suite B7, and installing light fixtures in Suite B6. Suites B6 and B7 are separated by a demising wall, but air flows between the suites through a gap along the ceiling. The relevant chemical products are paint and paint thinners, which can affect concentrations of volatile organic

compounds (VOCs) in air, but are unlikely to contribute to dry-cleaning related CVOC concentrations

The tenant in tenant space B5, a bubble tea shop, stores and uses cleaning supplies, including bleach, Lysol, Simple Green, and also stores paint and varnish. These products may contribute to VOC concentrations in air when in use but are unlikely to contribute to concentrations of dry-cleaning related CVOCs.

2.2 HEATING AND VENTILATION CONDITIONS

Based on the annual inspection in December 2022, the Suite B6 heating, ventilation, and air conditioning system (HVAC) is not in operation because the suite is vacant (Integral 2022). Upon arrival to Suite B6 on the first day of sampling, samplers found the lights had already been turned on, presumably by the other contractors present in the suite that day. An outdoor air canister was placed on the roof near the Suite B6 HVAC system, which was observed to be off, as expected. Upon retrieval of the roof air canister, the sampler observed that the HVAC system appeared to turn on briefly and then turn off, based on the noise and smell of exhaust. Based on discussion with the property manager, John Taurinsky, it is possible that the HVAC was on intermittently due to the contractor turning on the power in the suite via the breaker box. Mr. Taurinsky confirmed that the HVAC is kept off when the suite is vacant.

3 AIR SAMPLING COLLECTION

Air quality samples were collected for chemical analysis from within the Site's Suites B5 and B6, the outdoor air surrounding the Site, and the sub-slab soil vapor was collected via sampling ports in Suite B6, all on February 22 and February 23, 2023. Weather conditions in Lynnwood were snowy and cloudy with temperatures in the 30s, with wind from the north on February 22 and from the east on February 23. Samples were collected with the same frequency as previous air sampling events, to maintain consistent data sets. Indoor air sampling locations were the same as previous sampling events; outdoor sampling locations were selected to have one upwind, one crosswind, and one rooftop sample to capture future HVAC use air quality. Sample collection, record keeping, sample handling, storage, shipping, and field quality control were conducted per the SAP (Integral 2023). This section summarizes the final sample locations selected and data collection procedures. Field documentation is provided in Appendix A (field notes and photograph log) and Appendix B (chain-of-custody form).

3.1 INDOOR AND OUTDOOR AIR SAMPLING

Two 8-hour indoor air samples were collected: IA-01 in Suite B5 and IA-02 in Suite B6 (Figure 2). The indoor air samples were collected with 6-L summa-type canisters with 8-hour flow regulators. The initial and final vacuum of each canister, sample identification, sample times, and serial numbers for the canister and regulator were recorded for sample tracking. Sampling was concluded with a vacuum of approximately 5 in. of mercury remaining in each canister. Following sample collection, each canister was shipped to Eurofins Air Toxics analytical laboratory (Eurofins) and analyzed for VOCs by U.S. Environmental Protection Agency (EPA) Method Air Toxic Organics - 15 (TO-15) Low Level Selected Ion Monitoring (SIM).

Three 8-hour outdoor air samples were collected: OA-01 (crosswind), OA-02 (on the roof near HVAC), and OA-03 (upwind) (Figure 3). The outdoor air samples were collected with 6-L summa-type canisters with 8-hour flow regulators. The collection procedures were the same as the indoor air samples. Each canister was shipped to Eurofins and analyzed for VOCs by EPA Method TO-15 Low Level SIM.

A photoionization detector (PID) was used to evaluate total VOCs present in Suites B5 and B6. PID readings at the beginning of the day on February 22 were 0 parts per billion (ppb), but increased throughout the day due to the active painting in Suite B7, to a maximum of 1,000 ppb in Suite B6 and 1,600 ppb in Suite B5. The PID readings on February 23 before painting began were 0 ppb in Suite B6 but rose to a maximum of 3,000 ppb during painting.

Pressure differentials were measured between the indoor and outdoor air, and between the sub-slab and indoor air at each sub-slab soil vapor point. The pressure differentials were 0 pounds per square inch for each location.

3.2 SUB-SLAB VAPOR SAMPLING

Five sub-slab soil vapor samples and one duplicate were collected from existing permanent soil vapor probes outfitted with silicone sleeve/vapor pin sampling ports: SV-1 through SV-5 (Figure 2). The sub-slab samples were collected with 6-L summa-type canisters with dedicated controllers over an approximately 30-minute period with flow rates no greater than 200 mL/min. Integral collected a vapor sample from each sub-slab point until the canister was approximately 4 to 5 in. of mercury. The initial and final vacuum for each canister, sample identification, and serial numbers for the canister and flow controller were recorded for sample tracking to the analytical laboratory. Following sample collection, each canister was shipped to Eurofins and analyzed for VOCs by EPA Method TO-15 Low Level SIM and for helium by ASTM International Method D-1946.

3.3 QUALITY ASSURANCE/QUALITY CONTROL DOCUMENTATION

This section describes the quality assurance and quality control (QA/QC) procedures followed for this sampling event.

3.3.1 Field QA/QC

Field QA/QC procedures were conducted and are documented here and/or in the field notes (Appendix A):

- One duplicate sub-slab soil vapor sample was collected at SV-1 and analyzed. The duplicate sample was collected simultaneously during the sub-slab soil vapor sample collection by using a split on the sampling equipment[3]. Collection of the duplicate followed identical collection procedures as the target sample, and it was treated in the same manner during sample shipment, storage, and analysis. The duplicate sample container was assigned a unique identification number in the field.
- The initial vacuum of each canister was verified to be at least 27 in. of mercury before sampling began with that canister.

[3] The helium measurements for both samples are shown across the two location ID rows in the Air Sampling Form (Appendix A).

- For the sub-slab samples, a shut-in test was performed at each location before sampling by holding a vacuum of greater than 10 in. of mercury for at least 1 minute in the tubing connecting the sampling port to the canister.
- After passing the shut-in test, greater than 30 percent by volume average of helium was applied as a tracer compound for leak testing using a shroud placed over the sub-slab point, sample canister, and tubing.
- At least three calculated tubing plus sub-slab point volumes were then purged prior to sampling. An aliquot of the purged air was tested with a helium detector to confirm helium was not detected at a concentration greater than or equal to 5 percent of the helium concentration in the shroud. This test indicates whether the integrity of the sub-slab point construction is jeopardized.
- Sample IDs, measurements, and equipment serial numbers were checked in the field notes and chain-of-custody forms.

3.3.2 Helium Testing

For the sub-slab samples, the helium percentage in the shroud was recorded every 2–3 minutes using a helium detector. The target helium concentration in the shroud was greater than 30 percent, on average. The Ecology guidance limit for helium in the resulting sample is <5 percent of the average shroud helium (Ecology 2022c). Helium was detected in Samples SV01 and DUP-01 at 14 percent, compared to the average shroud helium level of 61 percent, exceeding the Ecology guidance limit. This may be due to a compromised vapor probe assembly (Section 4.1). All other sub-slab samples had acceptable levels of helium.

3.3.3 Data Quality Indicators

As part of the quality assurance program, Integral independently reviewed analytical data from the field event. The project manager reviewed field notes, and the laboratory manager reviewed the field instrument data and laboratory analytical data, as necessary.

Review procedures were consistent with the standard EPA analytical method chosen:

- Analytical precision was evaluated through collection and analysis of one field duplicate. Duplicate results are similar to the original sample (Table 1).
- Accuracy was evaluated through instrument calibration, analytical data quality indicators for each analysis method, and evaluation of the laboratory quality assurance conformance/non-conformance summary for each laboratory package (Appendices C and D).
- Representativeness and comparability were evaluated through collocation of samples with historical samples (where applicable) for comparison with historical data and

general consistency of the sampling method. Field readings of initial and final vacuums of the canisters used for sampling were consistent with vacuum measurements collected by the laboratory prior to shipment and following delivery to the laboratory after sample collection.

- Overall completeness was determined to be acceptable: all planned samples were collected, all planned measurements were collected.
- Sensitivity was evaluated by comparing the reporting limits to the previous data reporting limits and the MTCA Method B and C sub-slab soil vapor and indoor air quality screening levels, as applicable (discussed in Section 4).

3.3.4 Data Validation

The samples received a Level II (Stage 2A) validation, which included a review of all laboratory summary forms of quality control and instrument performance data. The data validation was based upon criteria described in EPA functional guidelines for organic data review (USEPA 2008) and the referenced analytical methods.

In total, 747 results were reported. Of these, 13 results (1.7 percent) were restated as non-detect (*U*) based on laboratory blank contamination, and 160 results (33.8 percent) were estimated (*J*/*UJ*) based on potential low bias due to the possibility of ambient air being introduced into the system during sampling. No data were rejected for any reason. Completeness was 100 percent. Stage 2A data validation of the lab results showed that all results were acceptable for their intended use (Appendix D).

4 DATA RESULTS

The indoor and outdoor air quality and sub-slab air quality data are summarized in Tables 1 and 2. The laboratory provided the analytical data package, which is attached in Appendix C. The evaluation below focuses on the dry-cleaning related CVOC results because they are related to the former operations/release. Undetected contaminants were reported at their full method detection limit for the 2023 data set.

4.1 SUB-SLAB AIR SAMPLING RESULTS

The sub-slab sampling results at all five locations show that PCE and TCE concentrations are similar to the 2018, 2019, and 2022 results (Table 1). 1,1-DCE, *cis*-1,2-DCE, *trans*-1,2-DCE, and vinyl chloride were not detected in sub-slab samples, consistent with the previous sampling.

At one location, SV-1, results are estimated based on the helium concentration in the sample (discussed in Section 3.3.2). The estimated concentration of helium in the sample indicates that the vapor probe at this location may be compromised, so it is possible that the estimated results are diluted with indoor air. However, concurrent indoor air quality results in Suite B-6 show similar or decreasing CVOCs since past sampling events and are well below MTCA Method B and C cleanup levels (Section 4.2). To fix the SV-1 vapor probe, Integral recommends tightening or replacing parts of the assembly: the vapor pin and sleeve.

4.2 INDOOR AND OUTDOOR AIR SAMPLING RESULTS

The indoor air sampling results show that PCE was detected in IA-1 and IA-2 at concentrations lower than the previous sampling event, and below MTCA Method B and C cleanup levels (Table 2). Further, the remaining dry-cleaning related CVOCs in the sub-slab, 1,1-DCE, *cis*-1,2-DCE, *trans*-1,2-DCE, TCE, and vinyl chloride, were not detected in the indoor air samples, similar to past results (Table 2). The results indicate that sub-slab soil vapor is not causing indoor air quality to exceed relevant regulatory thresholds. The results indicate that the floor slab continues to effectively protect commercial property users from residual CVOCs in sub-slab soil vapor in accordance with the environmental covenant and NFA designation.

A product the painters were using, Rust-oleum Painter's Touch, contains acetone, liquified petroleum gas, petroleum distillates, and xylene. This product is likely the source of the detections of acetone, xylene, ethyl benzene, and 1,2,4-trimethylbenzene in indoor air. This product or the paint itself is likely a source of detections of benzene.

The chloroform concentration in Suite B-5 was similar to the March 2022 concentration and exceeds the MTCA Level C cleanup level. Sub-slab soil vapor results are non-detect for

chloroform. The elevated chloroform concentration is likely from indoor use of cleaning products, including bleach, as observed during the indoor air survey.

Other VOC detections in indoor air were either similar to previous indoor air quality results, or below the MTCA Method B and C cleanup levels, or both.

The outdoor air sampling results show that the majority of the dry-cleaning related CVOCs in the sub-slab—1,1-DCE, *cis*-1,2-DCE, *trans*-1,2-DCE, TCE, and vinyl chloride—were not detected in the outdoor air samples, similar to past results (Table 2). The CVOC *trans*-1,2-DCE was detected in OA-3 at an estimated concentration comparable to the non-detection limits of previous sampling events. PCE was estimated in OA-1, OA-2, and OA-3 at concentrations lower than the previous sampling event. Estimated PCE background concentrations in upwind and cross-wind outdoor air may contribute to PCE indoor air concentrations at the Site.

Other VOC detections in outdoor air were either similar to previous outdoor air quality results or below the MTCA Method B and C indoor air cleanup levels, or both.

4.3 ELECTRONIC DATA DELIVERABLE PREPARATION AND UPLOAD

A data upload to the Environmental Information Monitoring System will be submitted by Integral.

5 CONCLUSIONS AND RECOMMENDATIONS

The results indicate that sub-slab soil vapor is not causing indoor air quality to exceed regulatory thresholds relevant to this former dry-cleaning facility (i.e., CVOCs). Further, outdoor air contains background concentrations of PCE that may be contributing to PCE concentrations in indoor air. The concentrations of dry-cleaning related CVOCs associated with the former dry-cleaning operations are similar to previous results in indoor air, outdoor air, and sub-slab soil vapor.

Based on the results of the Year 1 air sampling, and the consistency with post-SSDS operation air/vapor samples, Integral recommends that the second round of sampling required by the environmental covenant be conducted and reported in Year 5. Integral also recommends tightening or replacing elements of the SV-1 vapor probe assembly. No contingency actions are needed.

6 REFERENCES

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Figures

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Figure 1.
Site Location
Former Harbour Pointe Dry Cleaners Site
13619 Mukilteo Speedway, Lynnwood, WA

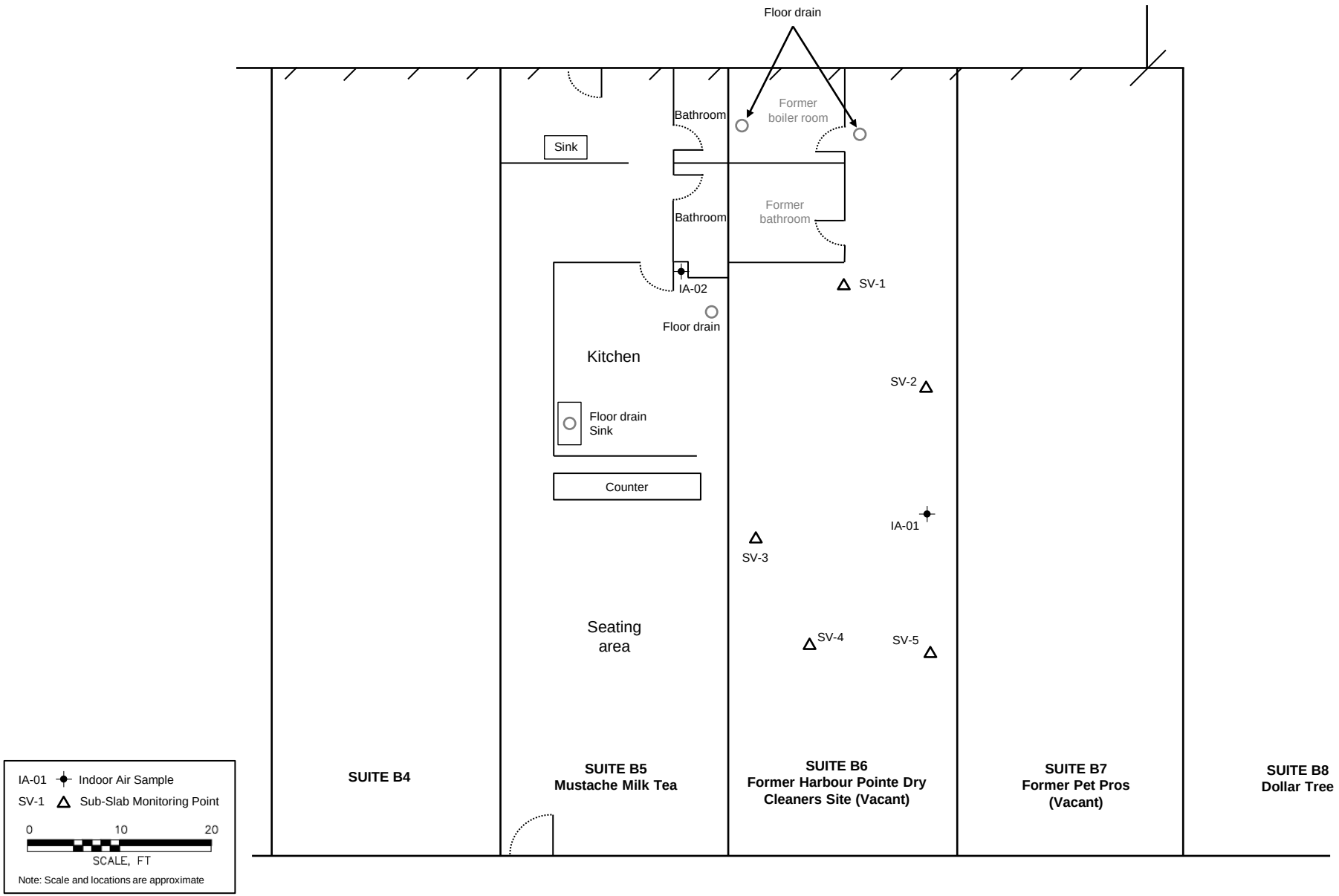

Figure 2.
Indoor Air and Sub-Slab Sample Locations
Former Harbour Pointe Dry Cleaners Site
13619 Mukilteo Speedway, Lynnwood, WA

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Figure 3.
Outdoor Air Sample Locations
Former Harbour Pointe Dry Cleaners Site
13619 Mukilteo Speedway, Lynnwood, WA

Tables

Table 1. Summary of Soil Vapor Sample Analytical Results - Chlorinated Volatile Organic Compounds

Sample ID	Sample Depth Interval (feet below ground surface)	Duplicate Sample ID (if applicable)	Sample Date	Select Chlorinated Volatile Organic Compounds (cVOCs)[a] in µg/m^3						Leak Detection Compounds	
				PCE	TCE	*cis* -DCE	*trans* -DCE	1,1-DCE	Vinyl Chloride	Helium in ppmv[b]	% Oxygen[c]
VE-1	0.5 (sub-slab)		1/29/2015	**10,000**	**66.10**	<0.793	<0.793	<0.793	<0.511	<254	7.41
VE-2	0.5 (sub-slab)		1/29/2015	**4,740**	8.42	<0.793	<0.793	<0.793	<0.511	57,600	8.00
VE-3	0.5 (sub-slab)		1/29/2015	**3,230**	5.12	<0.793	<0.793	<0.793	<0.511	<246	7.68
Slab-1	0.5 (sub-slab)		7/3/2015	**1,950**	7.73	<0.0793	<0.0238	<0.0357	<0.217	ND	--
Slab-2	0.5 (sub-slab)		7/3/2015	**632**	1.21	<0.0793	<0.0238	<0.0357	<0.217	ND	--
Slab-3	0.5 (sub-slab)		7/3/2015	**523**	0.907	<0.0793	<0.0238	<0.0357	<0.217	ND	--
Slab-4	0.5 (sub-slab)		7/3/2015	60.2	0.288	<0.0793	<0.0238	<0.0357	<0.217	ND	--
Slab-5	0.5 (sub-slab)		7/3/2015	48.1	<0.0914	<0.0793	<0.0238	<0.0357	<0.217	ND	--
SV-1	2" below slab		7/6/2018	**1,160**	8.48	<0.793	<0.793	<0.802	<0.511	ND	--
			1/10/2019	**769**	8.96	<0.793	<0.793	<0.793	<0.511	<0.100	--
		Dup-011019	1/10/2019	**1,100**	9.01	<0.793	<0.793	<0.793	<0.511	<0.100	--
			3/25/2022	**1,710**	**20.20**	0.951	<0.793	<0.793	<0.511	<0.100	--
			2/23/2023	**970 J**	10 J	0.55 UJ	0.33 UJ	0.79 UJ	0.35 UJ	140,000	--
		DUP-01	2/23/2023	**930 J**	**12 J**	0.55 UJ	0.32 UJ	0.78 UJ	0.35 UJ	140,000	--
SV-2	2" below slab		7/6/2018	108	<1.07	<0.793	<0.793	<0.802	<0.511	ND	--
			1/10/2019	99.5	<1.07	<0.793	<0.793	<0.793	<0.511	<0.100	--
			3/25/2022	232	<1.07	<0.793	<0.793	<0.793	<0.511	<0.100	--
			2/23/2023	110	0.32 U	0.17 U	0.1 U	0.24 U	0.11 U	740	--
SV-3	2" below slab		7/6/2018	100	**16.1**	<0.793	<0.793	<0.802	<0.511	ND	--
			1/10/2019	190	6.02	<0.793	<0.793	<0.793	<0.511	<0.100	--
			3/25/2022	290	1.96	<0.793	<0.793	<0.793	<0.511	<0.100	--
			2/23/2023	190	1.1	0.16 U	0.098 U	0.24 U	0.11 U	<720	--
SV-4	2" below slab		7/6/2018	17.1	1.65	<0.793	<0.793	<0.802	<0.511	ND	--
			1/10/2019	14.3	<1.07	<0.793	<0.793	<0.793	<0.511	<0.100	--
			3/25/2022	29.8	<1.07	<0.793	<0.793	<0.793	<0.511	<0.100	--
			2/23/2023	15	0.28 U	0.15 U	0.09 U	0.22 U	0.097 U	1,700	--
SV-5	2" below slab		7/6/2018	4.04	<1.07	<0.793	<0.793	<0.802	<0.511	ND	--
			1/10/2019	5.32	<1.07	<0.793	<0.793	<0.793	<0.511	<0.100	--
			3/25/2022	Not Collected - Summa Canister Malfunction						--	--
			2/23/2023	1.9	0.29 U	0.16 U	0.093 U	0.22 U	0.1 U	<680	--
2023 MTCA Method B Subslab Screening Level (unrestricted use)				**320**	**11.0**	**610**	**610**	**3,000**	**9.5**	**NA**	**NA**
2023 MTCA Method C Subslab Screening Level (commercial/industrial use)				**1,300**	**67.0**	**1,300**	**1,300**	**6,700**	**95.0**	**NA**	**NA**

Notes:
Bold denotes detected concentration above MTCA Method B Subslab Soil Gas Screening Level
Orange highlight denotes detected concentration above MTCA Method C Subslab Soil Gas Screening Level
Blue highlight denotes 2023 samples.
SSDS was shutdown on June 28, 2018. Sampling performed after that date was collected when the SSDS was not operating.
Undetected 2023 results are reported at the method detection limit.
2018-2022 data is summarized as a reference. Integral does not confirm the accuracy, validity, or the qualifiers of these data.

-- = not collected
< = below reporting detection limit
µg/m^3 = micrograms per cubic meter
1,1-DCE = 1,1-dichloroethene (1,1-dichloroethylene)
cis -DCE = *cis* -1,2-dichloroethene (*cis* -1,2-dichloroethylene)
cVOC = chlorinated volatile organic compound
MTCA - Washington State Department of Ecology Model Toxics Control Act
NA = not applicable
U = Not detected (reported at the full method detection limit)
J = Estimated
PCE = tetrachloroethene (tetrachloroethylene, perchloroethylene)
ppmv = parts per million by volume
TCE = trichloroethene (trichloroethylene)
trans -DCE = *trans* -1,2-dichloroethene (*trans* -1,2-dichloroethylene)

[a] Analytical results by EPA Method TO-15
[b] Analytical results by ASTM Method D-1946 or EPA Method 3C
[c] Analytical resutls by gas chromatography/thermal conductivity detector

Table 2. Indoor and Outdoor Air Sampling Results 2018-2023

	Analyte	CAS #	MTCA Method B Cleanup Level[a]	MTCA Method C Cleanup Level[b]	Indoor Results (µg/m^3)							
					IA-1 07/06/18	IA-1 01/10/19	IA-1 3/25/22	IA-1 2/22/23	IA-2 07/06/18	IA-2 01/10/19	IA-2 3/25/22	IA-2 2/22/23
	Average Temperature (°F)				76	49	49	34	76	49	49	34
Select CVOCs	1,1-Dichloroethene	75-35-4	91	200	ND	<0.0793	<0.0793	0.13 U	ND	<0.0793	<0.0793	0.055 U
	cis-1,2-Dichloroethene	156-59-2	18	40	ND	<0.0793	<0.0793	0.11 U	ND	<0.0793	<0.0793	0.046 U
	trans-1,2-Dichloroethene	156-60-5	18	40	ND	<0.0793	<0.0793	0.081 U	ND	<0.0793	<0.0793	0.033 U
	Trichloroethene	79-01-6	0.33	2	<1.07	0.296	<0.107	0.064 U	<1.07	0.154	<0.107	0.026 U
	Tetrachloroethene	127-18-4	9.6	40	<1.36	<0.136	0.229	0.05 J	<1.36	<0.136	0.348	0.16 J
	Vinyl Chloride	75-01-4	0.28	2.8	ND	<0.0511	<0.0511	0.12 U	ND	<0.0511	<0.0511	0.05 U
	Acetone	67-64-1			47.8	--	--	2300 J	39.4	--	--	1600 J
	Allyl Chloride	107-05-1	0.42	1	ND	--	--	2.3 U	ND	--	--	0.93 U
	Benzene	71-43-2	0.32	3.2	<0.639	**0.547**	**1.16**	**1.2**	**3.62**	**0.509**	**1.07**	**1.1**
	Benzyl Chloride	100-44-7	0.051	0.51	ND	--	--	1.8 U	ND	--	--	0.74 U
	Bromodichloromethane	75-27-4	0.068	0.68	ND	--	--	0.96 U	ND	--	--	0.39 U
	Bromoform	75-25-2	2.3	23	ND	--	--	1.6 U	ND	--	--	0.64 U
	Bromomethane	74-83-9	2.3	5	ND	--	--	10 U	ND	--	--	4.1 U
	1,3-Butadiene	106-99-0	0.083	0.83	ND	--	--	0.61 U	ND	--	--	0.25 U
	Carbon Disulfide	75-15-0	320	700	ND	--	--	2.1 U	ND	--	--	0.96 U
	Carbon Tetrachloride	56-23-5	0.42	4.2	<1.26	0.409	**0.62**	0.36 J	<1.26	0.380	**0.718**	**0.45**
	Chlorobenzene	108-90-7	23	50	ND	--	--	0.88 U	ND	--	--	0.36 U
	Chloroethane	75-00-3	4600	10000	ND	<0.106	<0.106	0.54 U	ND	<0.106	<0.106	0.22 U
	Chloroform	67-66-3	0.11	1.1	<0.973	**0.303**	**0.934**	**0.41** J	<0.973	**0.232**	**9.49**	**12**
	Chloromethane	74-87-3	41	90	0.981	0.928	1.61	0.83 J	1.08	0.860	1.7	0.98 J
	2-Chlorotoluene	95-49-8			ND	--	--	--	ND	--	--	--
	Cyclohexane	110-82-7	2700	6000	ND	--	--	1.2 U	3.53	--	--	0.49 U
	Dibromochloromethane	124-48-1			ND	--	--	1.2 U	ND	--	--	0.47 U
	1,2-Dibromoethane	106-93-4	0.0042	0.042	ND	<0.154	<0.154	0.23 U	ND	<0.154	<0.154	0.093 U
	1,2-Dichlorobenzene	95-50-1	91	200	ND	--	--	0.87 U	ND	--	--	0.35 U
	1,3-Dichlorobenzene	541-73-1			ND	--	--	0.84 U	ND	--	--	0.34 U
	1,4-Dichlorobenzene	106-46-7	0.23	2.3	**2.87**	**1.07**	**2.12**	0.44 U	**1.43**	**1.66**	**0.385**	0.18 U
	1,2-Dichloroethane	107-06-2	0.096	0.96	**0.988**	**0.260**	<0.081	0.1 U	<0.810	**0.137**	<0.081	0.067 J
	1,1-Dichloroethane	75-34-3	1.6	16	ND	<0.0802	<0.0802	0.067 U	ND	<0.0802	<0.0802	0.027 U
	1,2-Dichloropropane	78-87-5	0.68	4	ND	<0.139	<0.139	1.1 U	ND	<0.139	<0.139	0.44 U
	cis-1,3-Dichloropropene	10061-01-5			ND	<0.0908	<0.0908	0.93 U	ND	<0.0908	<0.0908	0.38 U
	trans-1,3-Dichloropropene	10061-02-6			ND	<0.136	<0.136	0.81 U	ND	<0.136	<0.136	0.33 U
	1,4-Dioxane	123-91-1	0.5	5	ND	--	--	1.3 U	ND	--	--	0.54 U
	Ethanol	64-17-5			194 E	--	--	30	232 E	--	--	820 J
	Ethylbenzene	100-41-4	460	1000	1.48	0.546	1.78	94	5.38	0.300	0.897	60
	4-Ethyltoluene	622-96-8			ND	--	--	0.78 U	4.93	--	--	0.55 J
	Trichlorofluoromethane	75-69-4	320	700	26.6	--	--	1.7 J	28.6	--	--	2.1
	Dichlorodifluoromethane	75-71-8	46	100	2.65	--	--	2.1	2.81	--	--	2.5
	Trichlorotrifluoroethane	76-13-1	2300	5000	ND	--	--	0.64 U	ND	--	--	0.52 J
	1,2-Dichloro-1,1,2,2-tetrafluoroethane	76-14-2			ND	--	--	0.13 U	ND	--	--	0.099 J
	Heptane	142-82-5	180	400	ND	--	--	2.8 U	4.62	--	--	1.1 U
	Hexachlorobutadiene	87-68-3	0.11	1.1	ND	--	--	3 U	ND	--	--	1.2 U
	Hexane	110-54-3	320	700	1.73	--	--	2 U	7.63	--	--	0.8 U
	Isopropylbenzene	98-82-8	180	400	ND	--	--	1.5 J	ND	--	--	0.96 J
	Methylene Chloride	75-09-2	66	600	1.85	--	--	1.8 U	ND	--	--	0.71 U
	2-Hexanone	591-78-6	14	30	ND	--	--	2.8 U	ND	--	--	1.1 U
	2-Butanone	78-93-3	2300	5000	ND	--	--	2.2 U	ND	--	--	1.8 J
	4-Methyl-2-pentanone	108-10-1	1400	3000	ND	--	--	0.58 U	ND	--	--	0.23 U
	Methyl Methacrylate	80-62-6	320	700	ND	--	--	--	ND	--	--	--
	Methyl tert-butyl ether	1634-04-4	9.6	96	ND	--	--	0.09 U	ND	--	--	0.036 U

Table 2. Indoor and Outdoor Air Sampling Results 2018-2023

Analyte	CAS #	MTCA Method B Cleanup Level[a]	MTCA Method C Cleanup Level[b]	Indoor Results (µg/m^3)							
				IA-1 07/06/18	IA-1 01/10/19	IA-1 3/25/22	IA-1 2/22/23	IA-2 07/06/18	IA-2 01/10/19	IA-2 3/25/22	IA-2 2/22/23
Average Temperature (°F)				**76**	**49**	**49**	**34**	**76**	**49**	**49**	**34**
Naphthalene	91-20-3	0.074	0.74	ND	--	--	0.33 U	ND	--	--	0.13 U
Isopropyl alcohol	67-63-0	91	200	46.9	--	--	2.1 J	22.6	--	--	2.8 J
1-Propene	115-07-1			ND	--	--	--	ND	--	--	--
n-Propylbenzene	103-65-1	460	1000	--	--	--	1.2 U	--	--	--	0.49 U
Styrene	100-42-5	460	1000	1.25	--	--	0.53 U	0.99	--	--	5.6
1,1,2,2-Tetrachloroethane	79-34-5	0.043	0.43	ND	<0.137	<0.137	0.15 U	ND	<0.137	<0.137	0.063 U
Tetrahydrofuran	109-99-9	910	2000	ND	--	--	6.3 U	ND	--	--	2.6 U
Toluene	108-88-3	2300	5000	9.33	--	--	2.4	35.5	--	--	4.4
1,2,4-Trichlorobenzene	120-82-1	0.91	2	ND	--	--	3.3 U	ND	--	--	1.3 U
1,1,1-Trichloroethane	71-55-6	2300	5000	ND	<0.109	<0.109	0.099 U	ND	<0.109	<0.109	0.04 U
1,1,2-Trichloroethane	79-00-5	0.091	0.2	ND	<0.163	<0.163	0.15 U	ND	<0.163	<0.163	0.059 U
1,2,4-Trimethylbenzene	95-63-6	27	60	ND	--	--	0.79 U	5.49	--	--	0.36 J
1,3,5-Trimethylbenzene	108-67-8	27	60	ND	--	--	1 U	1.49	--	--	0.41 U
2,2,4-Trimethylpentane	540-84-1			ND	--	--	2.2 U	ND	--	--	0.9 U
Vinyl bromide	593-60-2	0.17	1.7	ND	--	--	--	ND	--	--	--
Vinyl acetate	108-05-4	91	200	ND	0.367	<0.0704	--	ND	0.103	<0.0704	--
m-Xylene & p-Xylene	108-38-3/106-42-3			ND	--	--	360	20.4	--	--	220
o-Xylene	95-47-6	46	100	ND	--	--	**100**	6.84	--	--	**66**

Notes:

Samples analyzed for VOCs via EPA Method TO-15.

Bold denotes detected concentration above either MTCA Method B Indoor Air Cleanup Levels.

Orange highlight denotes detected concentration above either MTCA Method C Indoor Air Cleanup Levels.

Blue highlight denotes 2023 samples.

-- = not analyzed

< = below reporting detection limit

U = Not detected (reported at the full method detection limit)

J = Estimated

µg/m^3 = micrograms per cubic meter

MTCA = Washington State Department of Ecology Model Toxics Control Act

ND = Not detected at or above laboratory reporting limit

2018-2022 data is summarized as a reference. Integral does not confirm the accuracy, validity, or the qualifiers of these data.

[a] MTCA Method B Indoor Air Screening Level (unrestricted use)

[b] MTCA Method C Indoor Air Screening Level (commercial/industrial use)

Table 2. Indoor and Outdoor Air Sampling Results 2018-2023

Analyte	CAS #	MTCA Method B Cleanup Level[a]	MTCA Method C Cleanup Level[b]	Outdoor Results (µg/m^3)											
				OA-1 07/06/18	OA-1 01/10/19	OA-1 03/25/22	OA-1 2/22/23	OA-2 07/06/18	OA-2 01/10/19	OA-2 03/25/22	OA-2 2/22/23	OA-3 07/06/18	OA-3 01/10/19	OA-3 03/25/22	OA-3 2/22/23
Average Temperature (°F)				**76**	**49**	**49**	**34**	**76**	**49**	**49**	**34**	**76**	**49**	**49**	**34**
1,1-Dichloroethene	75-35-4	91	200	<0.793	<0.0793	<0.0793	0.026 U	<0.793	<0.0793	<0.0793	0.027 U	<0.793	<0.0793	<0.0793	0.025 U
cis-1,2-Dichloroethene	156-59-2	18	40	<0.793	<0.0793	<0.0793	0.022 U	<0.793	<0.0793	<0.0793	0.023 U	<0.793	<0.0793	<0.0793	0.021 U
trans-1,2-Dichloroethene	156-60-5	18	40	<0.793	0.117	<0.0793	0.016 U	<0.793	<0.0793	<0.0793	0.016 U	<0.793	<0.0793	<0.0793	0.054 J
Trichloroethene	79-01-6	0.33	2	<1.07	<0.107	<0.107	0.012 U	<1.07	<0.107	<0.107	0.013 U	<1.07	**1.59**	<0.107	0.012 U
Tetrachloroethene	127-18-4	9.6	40	<1.36	<0.136	0.146	0.02 J	<1.36	<0.136	0.196	0.022 J	<1.36	<0.136	0.136	0.021 J
Vinyl Chloride	75-01-4	0.28	2.8	<0.511	<0.0511	<0.0511	0.024 U	<0.511	<0.0511	<0.0511	0.025 U	<0.511	<0.0511	<0.0511	0.023 U
Acetone	67-64-1			5.21	--	--	11	6.36	--	--	67	4.66	--	--	6.7
Allyl Chloride	107-05-1	0.42	1	<0.626	--	--	0.44 U	<0.626	--	--	0.46 U	<0.626	--	--	0.43 U
Benzene	71-43-2	0.32	3.2	<0.639	**0.577**	**0.99**	**0.34**	<0.639	**0.869**	**0.904**	**0.35**	<0.639	**0.462**	**1.05**	**0.34**
Benzyl Chloride	100-44-7	0.051	0.51	<1.04	--	--	0.35 U	<1.04	--	--	0.36 U	<1.04	--	--	0.34 U
Bromodichloromethane	75-27-4	0.068	0.68	<1.34	--	--	0.18 U	<1.34	--	--	0.19 U	<1.34	--	--	0.18 U
Bromoform	75-25-2	2.3	23	<6.21	--	--	0.3 U	<6.21	--	--	0.32 U	<6.21	--	--	0.3 U
Bromomethane	74-83-9	2.3	5	<0.776	--	--	1.9 U	<0.776	--	--	2 U	<0.776	--	--	1.9 U
1,3-Butadiene	106-99-0	0.083	0.83	<4.43	--	--	0.12 U	<4.43	--	--	0.12 U	<4.43	--	--	0.11 U
Carbon Disulfide	75-15-0	320	700	<0.622	--	--	0.46 U	<0.622	--	--	0.49 U	<0.622	--	--	0.41 U
Carbon Tetrachloride	56-23-5	0.42	4.2	<1.26	**0.461**	**0.6**	0.36	<1.26	**0.438**	**0.577**	0.38	<1.26	**0.469**	**0.59**	0.37
Chlorobenzene	108-90-7	23	50	<0.924	--	--	0.17 U	<0.924			0.18 U	<0.924	--	--	0.16 U
Chloroethane	75-00-3	4600	10000	<0.528	<0.106	<0.106	0.1 U	<0.528	<0.106	<0.106	0.11 U	<0.528	<0.106	<0.106	0.1 U
Chloroform	67-66-3	0.11	1.1	<0.973	<0.0973	<0.0973	0.061 J	<0.973	<0.0973	<0.0973	**0.33**	<0.973	<0.0973	<0.0973	0.062 J
Chloromethane	74-87-3	41	90	0.946	1.01	1.51	0.13 U	0.89	0.962	1.43	0.14 U	0.883	1.04	1.51	0.13 U
2-Chlorotoluene	95-49-8			<1.03	--	--	--	<1.03	--	--	--	<1.03	--	--	--
Cyclohexane	110-82-7	2700	6000	<0.689	--	--	0.23 U	<0.689	--	--	0.24 U	<0.689	--	--	0.23 U
Dibromochloromethane	124-48-1			<1.70	--	--	0.22 U	<1.70	--	--	0.23 U	<1.70	--	--	0.22 U
1,2-Dibromoethane	106-93-4	0.0042	0.042	<1.54	<0.154	<0.154	0.044 U	<1.54	<0.154	<0.154	0.046 U	<1.54	<0.154	<0.154	0.043 U
1,2-Dichlorobenzene	95-50-1	91	200	<1.20	--	--	0.17 U	<1.20	--	--	0.17 U	<1.20	--	--	0.16 U
1,3-Dichlorobenzene	541-73-1			<1.20	--	--	0.16 U	<1.20	--	--	0.17 U	<1.20	--	--	0.16 U
1,4-Dichlorobenzene	106-46-7	0.23	2.3	<1.20	<0.120	<0.120	0.085 U	<1.20	<0.120	**0.31**	0.088 U	<1.20	<0.120	<0.120	0.083 U
1,2-Dichloroethane	107-06-2	0.096	0.96	<0.810	0.0882	<0.0810	0.052 J	<0.810	0.0902	<0.0810	0.053 J	<0.810	0.0859	<0.0810	0.051 J
1,1-Dichloroethane	75-34-3	1.6	16	<0.802	<0.0802	<0.0802	0.013 U	<0.802	<0.0802	<0.0802	0.013 U	<0.802	<0.0802	<0.0802	0.013 U
1,2-Dichloropropane	78-87-5	0.68	4	<0.924	<0.139	<0.0139	0.21 U	<0.924	<0.139	<0.0139	0.22 U	<0.924	<0.139	<0.0139	0.2 U
cis-1,3-Dichloropropene	10061-01-5			<0.908	<0.0908	<0.0908	0.18 U	<0.908	<0.0908	<0.0908	0.18 U	<0.908	<0.0908	<0.0908	0.17 U
trans-1,3-Dichloropropene	10061-02-6			<0.908	<0.136	<0.136	0.16 U	<0.908	<0.136	<0.136	0.16 U	<0.908	<0.136	<0.136	0.15 U
1,4-Dioxane	123-91-1	0.5	5	<0.721	--	--	0.25 U	<0.721	--	--	0.26 U	<0.721	--	--	0.25 U
Ethanol	64-17-5			4.83	--	--	6.1	11.5	--	--	18	7.77	--	--	1.3 U
Ethylbenzene	100-41-4	460	1000	<0.867	0.297	0.585	0.1 U	<0.867	0.385	0.668	2.2	<0.867	0.208	0.559	0.049 U
4-Ethyltoluene	622-96-8			<0.982	--	--	0.15 U	<0.982	--	--	0.16 U	<0.982	--	--	0.15 U
Trichlorofluoromethane	75-69-4	320	700	1.31	--	--	1	1.25	--	--	1.1	1.32	--	--	1.1
Dichlorodifluoromethane	75-71-8	46	100	1.83	--	--	2.2	1.59	--	--	2	1.75	--	--	2
Trichlorotrifluoroethane	76-13-1	2300	5000	<1.53	--	--	0.42 J	<1.53	--	--	0.46 J	<1.53	--	--	0.43 J
1,2-Dichloro-1,1,2,2-tetrafluoroethane	76-14-2			<1.40	--	--	0.16 J	<1.40	--	--	0.13 J	<1.40	--	--	0.13 J
Heptane	142-82-5	180	400	<0.818	--	--	0.53 U	<0.818	--	--	0.56 U	<0.818	--	--	0.52 U
Hexachlorobutadiene	87-68-3	0.11	1.1	<6.73	--	--	0.58 U	<6.73	--	--	0.6 U	<6.73	--	--	0.56 U
Hexane	110-54-3	320	700	<0.705	--	--	0.38 U	<0.705	--	--	0.39 U	0.832	--	--	0.37 U
Isopropylbenzene	98-82-8	180	400	<0.983	--	--	0.095 U	<0.983	--	--	0.099 U	<0.983	--	--	0.093 U
Methylene Chloride	75-09-2	66	600	0.948	--	--	0.34 U	0.948	--	--	0.35 U	1.49	--	--	0.33 U
2-Hexanone	591-78-6	14	30	<5.11	--	--	0.54 U	<5.11	--	--	0.56 U	<5.11	--	--	0.52 U
2-Butanone	78-93-3	2300	5000	<3.69	--	--	1.1 J	9.05	--	--	0.5 J	<3.69	--	--	0.46 J
4-Methyl-2-pentanone	108-10-1	1400	3000	<512	--	--	0.11 U	<512	--	--	0.12 U	<512	--	--	0.11 U
Methyl Methacrylate	80-62-6	320	700	<0.819	--	--	--	<0.819	--	--	--	<0.819	--	--	--
Methyl tert-butyl ether	1634-04-4	9.6	96	<0.721	--	--	0.017 U	<0.721	--	--	0.018 U	<0.721	--	--	0.017 U

Table 2. Indoor and Outdoor Air Sampling Results 2018-2023

Analyte	CAS #	MTCA Method B Cleanup Level[a]	MTCA Method C Cleanup Level[b]	Outdoor Results (µg/m^3)											
				OA-1 07/06/18	OA-1 01/10/19	OA-1 03/25/22	OA-1 2/22/23	OA-2 07/06/18	OA-2 01/10/19	OA-2 03/25/22	OA-2 2/22/23	OA-3 07/06/18	OA-3 01/10/19	OA-3 03/25/22	OA-3 2/22/23
Average Temperature (°F)				76	49	49	34	76	49	49	34	76	49	49	34
Naphthalene	91-20-3	0.074	0.74	<3.30	--	--	0.063 U	<3.30	--	--	0.066 U	<3.30	--	--	0.062 U
Isopropyl alcohol	67-63-0	91	200	<3.07	--	--	0.35 J	11.8	--	--	0.38 J	<3.07	--	--	0.33 U
1-Propene	115-07-1			<0.689	--	--	--	<0.689	--	--	--	<0.689	--	--	--
n-Propylbenzene	103-65-1	460	1000	--	--	--	0.23 U	--	--	--	0.24 U	--	--	--	0.23 U
Styrene	100-42-5	460	1000	<0.851	--	--	0.1 U	<0.851	--	--	0.11 U	<0.851	--	--	0.1 U
1,1,2,2-Tetrachloroethane	79-34-5	0.043	0.43	<1.37	<0.137	<0.137	0.03 U	<1.37	<0.137	<0.137	0.031 U	<1.37	<0.137	<0.137	0.029 U
Tetrahydrofuran	109-99-9	910	2000	<0.590	--	--	1.2 U	<0.590	--	--	1.3 U	<0.590	--	--	1.2 U
Toluene	108-88-3	2300	5000	3.36	--	--	0.64	1.35	--	--	0.51	2.53	--	--	0.35
1,2,4-Trichlorobenzene	120-82-1	0.91	2	<4.66	--	--	0.63 U	<4.66	--	--	0.66 U	<4.66	--	--	0.62 U
1,1,1-Trichloroethane	71-55-6	2300	5000	<1.09	<0.109	<0.109	0.019 U	<1.09	<0.109	<0.109	0.02 U	<1.09	<0.109	<0.109	0.019 U
1,1,2-Trichloroethane	79-00-5	0.091	0.2	<1.09	<0.163	<0.163	0.028 U	<1.09	<0.163	<0.163	0.029 U	<1.09	<0.163	<0.163	0.028 U
1,2,4-Trimethylbenzene	95-63-6	27	60	<0.982	--	--	0.15 U	<0.982	--	--	0.16 U	<0.982	--	--	0.15 U
1,3,5-Trimethylbenzene	108-67-8	27	60	<0.982	--	--	0.2 U	<0.982	--	--	0.2 U	<0.982	--	--	0.19 U
2,2,4-Trimethylpentane	540-84-1			<0.934	--	--	0.43 U	<0.934	--	--	0.44 U	<0.934	--	--	0.42 U
Vinyl bromide	593-60-2	0.17	1.7	<0.875	--	--	--	<0.875	--	--	--	<0.875	--	--	--
Vinyl acetate	108-05-4	91	200	<0.704	<0.0704	<0.0704	--	<0.704	<0.0704	<0.0704	--	<0.704	0.0830	<0.0704	--
m-Xylene & p-Xylene	108-38-3/106-42-3			<1.73	--	--	0.32	<1.73	--	--	8.2	<1.73	--	--	0.14 J
o-Xylene	95-47-6	46	100	<0.867	--	--	0.12	<0.867	--	--	2.4	<0.867	--	--	0.052 J

Notes:

Samples analyzed for VOCs via EPA Method TO-15.

Bold denotes detected concentration above either MTCA Method B Indoor Air Cleanup Levels.

Orange highlight denotes detected concentration above either MTCA Method C Indoor Air Cleanup Levels.

Blue highlight denotes 2023 samples.

-- = not analyzed

< = below reporting detection limit

U = Not detected (reported at the full method detection limit)

J = Estimated

µg/m^3 = micrograms per cubic meter

MTCA = Washington State Department of Ecology Model Toxics Control Act

ND = Not detected at or above laboratory reporting limit

2018-2022 data is summarized as a reference. Integral does not confirm the accuracy, validity, or the qualifiers of these data.

[a] MTCA Method B Indoor Air Screening Level (unrestricted use)

[b] MTCA Method C Indoor Air Screening Level (commercial/industrial use)

Appendix A

Field Notes

integral consulting inc.

Daily Field Record

Project and Task Number: C3163.0401	**Date:** 2/22/23
Project Name: Mukilteo	**Field Activity:** Air sampling (Indoor/Outdoor)
Location: Lynnwood WA	**Weather:** Snowy/cold

Personnel: Name	Company	Time In	Time Out
Stephen Sherman	Integral	0900	2000
Kelsey Kirkland	" "	0900	2000
Olivia Hargrove	" "	0900	2000
	JHB Painters (B6 & B7)	<0900	1700

Calibrate PID:

Samples Collected / Notes

Time	Sample ID	Description	PID (ppmv)
0900 Tailgate	safety meeting and lab equipment inventory		
1000 Scope out	outdoor locations: North, west and on roof near HVAC sys vent		
1100 Deploy outdoor	ambient sampling locations. Wait for Mustache Tea to open.		
1130 Set up indoor	air sampling, photo, survey of Moustache Milk Tea		
1200 Set up all other	indoor, outdoor ambient air samplers (see spreadsheet)		
1240 B6 PID zero	beginning of day. 1400-1500 ppb after fresh painting (Painting actively in B7 & B6)		
Indoor samples:	IA02 & IA01 Outdoor samples: OA01, OA02, OA03		
1906 PID ~ 1000	ppb in Suite B-6; PID ~ 1600 ppb in Moustache Milk Tea (Suite B5)		
2000 setup SV-04	and stop at shutin test. Leave site		

integral consulting inc.

January 2018

FIELD SAFETY TAILGATE BRIEFING FORM

Corporate Health and Safety Manager:
Matthew Behum
(410) 573-1982 ext. 512

Date: 2/22/23 Project name: Mukilteo Speedway Project number: C3163.040

Meeting conductor: S. Sherman Site safety officer: S. Sherman Project manager: E. Guyer

Items discussed (check all that apply):

- [x] HSP review and location
- [ ] Lines of authority
- [ ] Chemical hazards and exposure routes
- [ ] Flammable hazards
- [ ] Lifting techniques
- [ ] Buddy system
- [ ] Self and coworker monitoring
- [ ] Biological/plant/animal hazards
- [x] Slips, trips, and falls
- [x] Heat and cold stress
- [ ] Overhead hazards
- [ ] Vessel safety protocols
- [x] Proper use of PPE
- [ ] Safety equipment location
- [ ] Proper safety equipment use
- [ ] Fire extinguisher location
- [ ] Eye wash station location
- [ ] Emergency procedures and evacuation route
- [x] Directions to hospital
- [ ] Emergency decontamination procedures
- [x] Site communication
- [x] Work zones
- [x] Vehicle safety and driving/road conditions
- [ ] Other:

Daily work scope: Indoor & Outdoor sampling and indoor survey. Two indoor, 2 outdoor

Site-specific hazards: vehicle traffic in parking lot, ladder to roof

Weather conditions: Snowing, cold

Field staff health and safety concerns: Slips trips falls ergonomics for air sampling

Attendees

Printed Name	Signature
Stephen Sherman	
Kelsey Kirkland	
Olivia Hargrave	

integral consulting inc.

Daily Field Record

Project and Task Number: C3163	**Date:** 2/23/23
Project Name: Mukilteo Speedway	**Field Activity:** Subslab sampling
Location: Lynnwood WA	**Weather:** Cold (30s)

Personnel: Name	Company	Time In	Time Out
Stephen Shannon	Integral	0720	1930
Kelsey Kirkland	" "	" "	1930
Olivia Hargrave	" "	" "	1930
	JHB Painters (06 & 07)	0800	1700

Calibrate PID:

Samples Collected / Notes

Time	Sample ID	Description	PID (ppmv)
0730	Tailgate safety meeting. Build sampling trains and setup on subslab point SV-04.		
	PID = 0 ppb in Suite B-6		
	Pressure differential between outdoor / indoor air = 0 psi		
	SV04 758 / 839	9:51	
	SV05 912 / 951		
	SV03 1016 / 1051		
	SV02 1st canister vacuum was less than the required -27 inHg		
1140	Ran out of He; suspect He detector insensitive biasing low on He concentration and more He was escaping canister/used than indicated. Kelron 3 in 1 purge He detector.		
1557	SV02 1557/1630		
	SV01 1715 / 1827		
	DUP01 1715 / 1827		
	Parent sample for DUP-01 is SV01		
	Temp in the 50's inside		
	Temp in the 30s outside + cloudy.		

integral consulting inc.

January 2018

FIELD SAFETY TAILGATE BRIEFING FORM

Corporate Health and Safety Manager:
Matthew Behum
(410) 573-1982 ext. 512

Date: 2/23/23 Project name: Muckilteo Speeding WA Project number: C3163

Meeting conductor: S. Sherman Site safety officer: S. Sherman Project manager: Emily Geyer

Items discussed (check all that apply):

- ☐ HSP review and location
- ☐ Lines of authority
- ☐ Chemical hazards and exposure routes
- ☐ Flammable hazards
- ☐ Lifting techniques
- ☐ Buddy system
- ☐ Self and coworker monitoring
- ☐ Biological/plant/animal hazards
- ☐ Slips, trips, and falls
- ☒ Heat and cold stress
- ☐ Overhead hazards
- ☐ Vessel safety protocols
- ☐ Proper use of PPE
- ☐ Safety equipment location
- ☐ Proper safety equipment use
- ☐ Fire extinguisher location
- ☐ Eye wash station location
- ☐ Emergency procedures and evacuation route
- ☐ Directions to hospital
- ☐ Emergency decontamination procedures
- ☐ Site communication
- ☐ Work zones
- ☒ Vehicle safety and driving/road conditions
- ☐ Other:

Daily work scope: Sub slab sampling SV01 through SV04

Site-specific hazards: Ergonomics while sampling

Weather conditions: cold

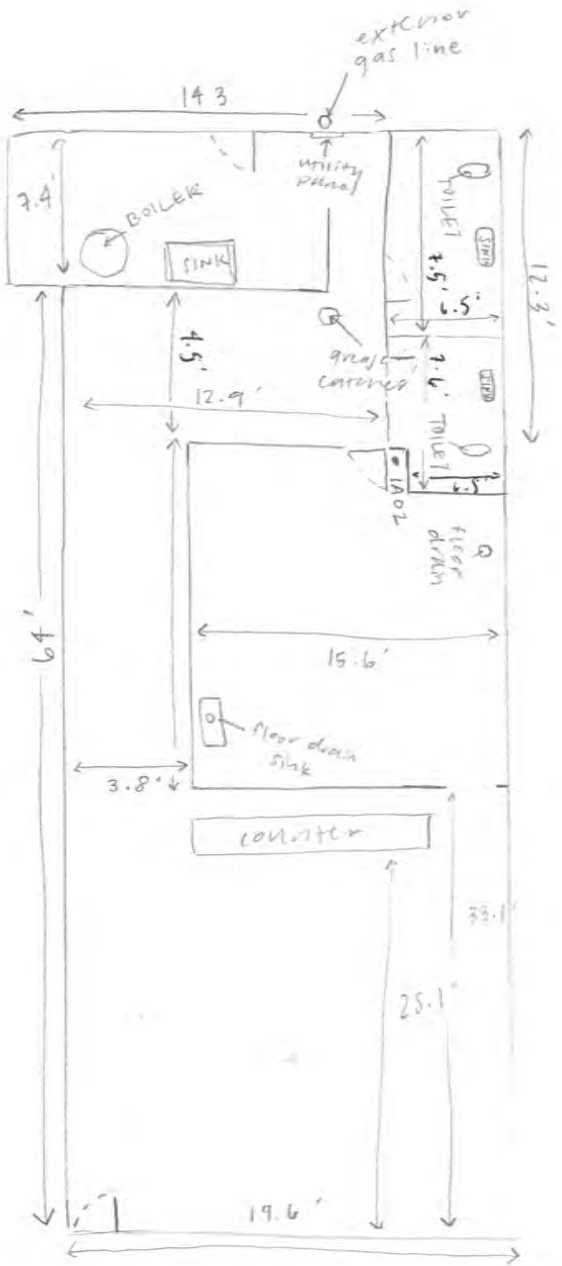
Field staff health and safety concerns: vehicle safety (driving) icy roads

Attendees

Printed Name	Signature
Stephen Sherman	
Kelsey Kirkland	
Olivia Hargrave	

PID

500 - 675 ppb



Mustache

(85)

800 ppb

dup
65 + length of tee
65 +

8 inHg / 12 m = 0.67 inHg / min

15 in Hg / x min = 0.67 in Hg / 1 min

integral consulting inc.

AIR SAMPLING FORM

Project Name: Bridge 33 Mukilteo
Location: Lynnwood, WA
Field Staff: S. Sherman, C. Hargrave, K. Kirkland

Project #: C3163
Event Date(s): 2/22/23 - (SV-03, 04, 05) (SV-01, 02)
Detectors: Kelron 3 in 1 Helium Detector, Dielectric MGD-2002

Location ID and Type (sub-slab, well, ambient)	Depth or Height Above Ground (ft)	Dia. (inch)	Leak Test Information: Shut-in Test: Vac. Held (inHg)	Hold Time (min)	Purge Volume* (mL)	Shroud: Shroud He (%)	Purge He (%)	Equipment: Canister Size (1L/6L)	Canister Serial#	Flow Controller Serial#	Sample Information: Initial: Time	Canister Vacuum (inHg)	Final: Time	Canister Vacuum (inHg)	Sample ID	Sample Date
Indoor IA02	0	\						6L	6L 2381	25598	1144	-30	1922	-5	IA02	2/22/23
Indoor IA01	3	\						6L	6L 2593	26059	11:51	-28.5	1931	-5	IA01	2/22/23
Outdoor OA01	0	\						6L	6L 3410	25946	11:57	-28.5	1919	-5	OA01	2/22/23
Outdoor OA03	0	\						6L	6L 1801	26022	11:59	-29.0	1922	-5	OA03	2/22/23
Outdoor OA02	17.9	\						6L	6L 3740	22294	12:02	-29.0	19:05	-5	OA02	2/22/23
SV-04	0	0.025	10.5	2	65	34%	0%	6L	6L 2261	24255	758	-28	839	-5	SV04	2/23/23
SV-05	0	0.025	10.25	2	65	34%	0.1%	6L	6L 2947	24886	912	-27.5	951	-5	SV05	2/23/23
SV03	0	0.025	10.75	2	65	57	0	6L	6L 3067	24917	1016	-27	1051	-5	SV03	2/23/23
SV02	0	0.025	-10	2	65	36	0	6L			~~1144~~				SV02	2/23/23
SV02	0	0.025	-10	2	See above			6L								
SV02	0	.025	-10													

Margin notes: SV-04: pressure differential = 0 psi; SV-05: 0 psi; SV03: 0 psi; SV02: not enough vacuum in 1st canister, not enough vacuum in 2nd canister

Shroud Helium Percentage During Sample Collection

Location	Row									
SV-04	Time:	758	800	802	804	806	808	810	812	814
	He (%):	35	35	35	36	35	35	35	35	35
	Time:	816	818	820	822	824	826	828	830	832
	He (%):	35	35	35	35	35	35	35	35	34
SV-05	Time:	9:12	9:15	9:18	9:21	9:24	9:27	9:30	9:33	9:36
	He (%):	32	38	39	38	36	35	35	35	36
	Time:	36	36	35	35	40				
	He (%):	9:39	9:42	9:45	9:48	9:51	9:54	9:57	10:00	10:03
SV03	Time:	1019	1022	1025	1028	1031	1034	1037	1040	1043
	He (%):	61	61	60	59	59	57	56	55	55
	Time:	1046	1049							
	He (%):	54	53							

SV-04 (margin): 834 / 34; 838 / 34; 836 / 34
SV-05 (margin): switch

Notes:

*Soil Vapor Well Purge Volume = 3 x {[Pi x boring radius² x (height of sand pack + height dry bentonite) x 0.3] + [Pi x tubing radius² x height of tubing including sampling train]}
Assumed sand pack and bentonite porosity of 0.3

*Existing Sub-slab Point Purge Volume = 3 x [Pi x tubing radius² x height of tubing including sampling train]}

*New Sub-slab Point Purge Volume =
3 x {[Pi x hole radius² x thickness of slab beyond VaporPin] + [Pi x VaporPin inner radius² x VaporPin length] + [Pi x tubing radius² x length of tubing including sampling train]}

1 cubic inch = 16.387064 mL, 1/4 tubing ID = 0.19in, VaporPin ID = 0.19in, VaporPin length = 3.25in, VaporPin hole dia. = 0.625in

TU15

	Loc	height	Dia	Shut in test: Vac Held	Shut in test: Time	Purge Vol	Shroud: Shroud He %	Shroud: Purge He %	Size	Can Serial	Flow cont Serial	Initial: Time	Initial: Vac	Final: Time	Final: Vac	Sample ID	Sample date	Shroud He % During Sample collection
pressure diff. = 0 psi	SV02	0	0.025	-10	2 hr	65	X	X	6L	6L 2444	23558	15 ~~3~~57	-27	1630	-6.5	SV02	2/23/23	see below (1200 hour clock)
	SV01	0	0.025	-10	2	85	X	X	6L	6L 1046	24271	1715	-27	1827	-6.5	SV01	2/23/23	see below (1200 hour clock)
parent of DUP-01 is SV01	~~SV01-DUP~~ DUP-01	0	0.025	-10	2	85	X	X	6L	6L 0281	24271	1715	-27	1827	-6.5	DUP-01	2/23/23	– see above and below –

Shroud He % During Sample collection:

Time	357	400	403	406	409	412	415	418	421	1200 hour clock
He %	30	60	60	30	43	26	43	69	70	
Time	424	427	430							
He %	38	50	60							
Time	515	518	521	524	527	530	533	536	539	1200 hour clock
He %	30	61	30	68	40	60	80	79	70	
Time	542	545	548	551	554	557	600	603	606	
He %	64	30	40	70	76	60	62	76	62	
Time	609	612	615	618	621	624	627			1200 hour clock
He	64	73	70	68	59	71	68			
Time										
He										

Existing subslab point purge volume **SV-04**

height tubing : 3.9 ft = 46.8 in

tubing radius = $\frac{0.19 \text{ in}}{2}$ = 0.095 in

$V = \pi \cdot 0.095^2 \cdot 46.8 \; (in^3) = 1.327 \; in^3$

$3V = 3.98 \; in^3 = 65.23 \; mL$

Dup

height tubing = ~~65~~ 46.8 + 14 in

3V = 85 mL

eurofins | Air Toxics

Analysis Request /Canister Chain of Custody

For Laboratory Use Only

PID: _____ Workorder #: _____

180 Blue Ravine Rd. Suite B, Folsom, CA 95630
Phone (800) 985-5955; Fax (916) 351-8279

Client: Integral Consulting
Project Name: 833 Mukilteo
Project Manager: Emily Guyer Project # 3163-0401
Sampler: K. Kirkland
Site Name: 833 Mukilteo Speedway Property

Special Instructions/Notes:
Any questions please call K. Kirkland @ 206-390-0191 (Kelsey)

Turnaround Time (Rush surcharges may apply)
Standard X Rush _____ (specify)

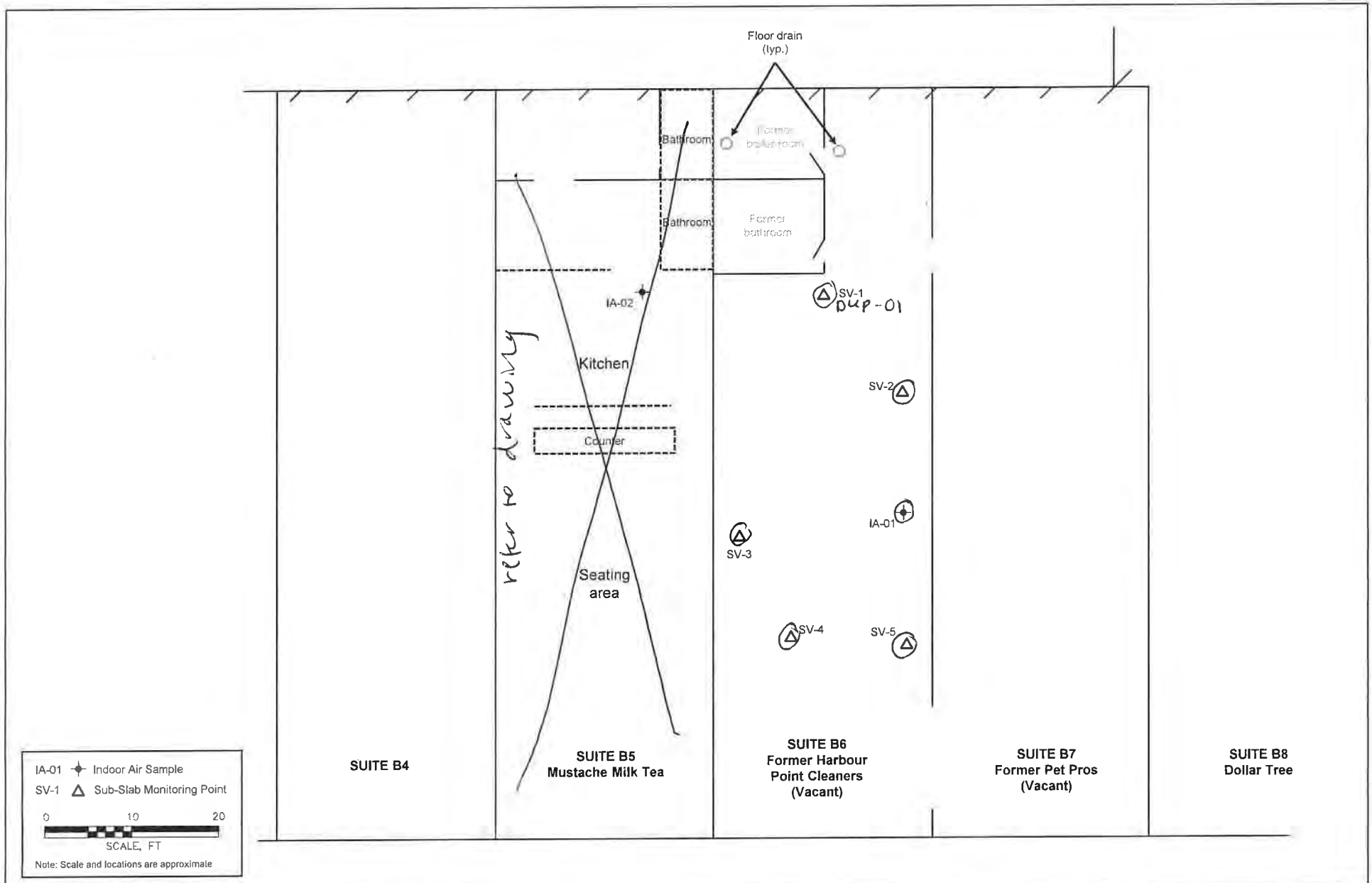
Lab ID	Field Sample Identification(Location)	Can #	Flow Controller #	Start Sampling Information		Stop Sampling Information		Canister Vacuum/Pressure		Lab Use Only		Requested Analyses			
				Date	Time	Date	Time	Initial (in Hg)	Final (in Hg)	Receipt	Final (psig) Gas: N_2 / He	TO-15 LL SIM	Helium		
	IA 01	6L2593	26059	2/22/23	11:51	2/23/23	19:31	-28.5	-5			X			
	IA 02	6L2381	25598	2/22/23	11:44	2/23/23	19:22	-30	-5			X			
	OA 01	6L3410	25946	2/22/23	11:57	2/23/23	19:19	-28.5	-5			X			
	OA 02	6L3740	22294	2/22/23	12:02	2/23/23	19:05	-29	-5			X			
	OA 03	6L1801	26022	2/22/23	11:59	2/23/23	19:22	-29	-5			X			
	SV 01	6L1046	24271	2/23/23	17:15	2/23/23	18:27	-27	-6.5			X	X		
	SV 02	6L2444	23558	2/23/23	15:57	2/23/23	16:30	-27	-6.5			X	X		
	SV 03	6L3067	24917	2/23/23	10:16	2/23/23	10:51	-27	-5			X	X		
	SV 04	6L2261	24255	2/23/23	7:58	2/23/23	8:39	-28	-5			X	X		
	SV 05	6L2947	24586	2/23/23	9:12	2/23/23	9:51	-27.5	-5			X	X		
	[redacted] SS 02/24/23														
	DUP-01	6L0281	—	2/23/23	—	2/23/23	—	—	—			X	X		

Relinquished by: (Signature/Affiliation)	Date	Time	Received by: (Signature/Affiliation)	Date	Time
Stephen Sherman, Integral Consulting	2/24/23	1230	[signature]	2/24/23	1330
Relinquished by: (Signature/Affiliation)	Date	Time	Received by: (Signature/Affiliation)	Date	Time
Relinquished by: (Signature/Affiliation)	Date	Time	Received by: (Signature/Affiliation)	Date	Time

Lab Use Only

Shipper Name: Stephen Sherman | Custody Seals Intact? | Yes | No | None

Sample Transportation Notice: Relinquishing signature on this document indicates that samples are shipped in compliance with all applicable local, State, Federal, and international laws, regulations, and ordinances of any kind. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Eurofins Air Toxics against any claim, demand, or action, of any kind, related to the collection, handling, of shipping of samples. D.O.T Hotline (800) 467-4922



integral

Attachment 2 - Indoor Air and Sub-Slab Sample Locations
Former Harbour Dry Cleaners Site
13619 Mukilteo Speedway
Lynwood, WA

integral

Attachment 3 - Outdoor Air Sample Locations
Former Harbour Point Cleaners Site
13619 Mukilteo Speedway Property
Lynnwood, WA

Airgas
an Air Liquide company

DELIVERY ORDER

FOR LOCATION NEAREST YOU
VISIT **WWW.AIRGAS.COM**

SHIPPER:
AIRGAS USA, LLC
14221 NE 190TH ST
WOODINVILLE, WA 98072-4439
425-487-3688

SOLD BY:
AIRGAS USA, LLC
14221 NE 190TH ST
WOODINVILLE, WA 98072-4439
425-487-3688

DELIVERY ORDER # 8130052496
PAGE 1 OF 1
ORDER DATE: 02/24/2023
SCH SHIP DATE: 02/24/2023
PRINTED: 14:21 02/24/2023
SALES ORDER: 1118338058

SHIP TO: 3457414
AIR TOXICS LTD TAXABLE
180 BLUE RAVINE RD STE B
FOLSOM, CA 95630-4703
916-985-1000

SOLD TO: 3435555
AIR TOXICS LTD TAXABLE
180 BLUE RAVINE RD STE B
FOLSOM, CA 95630-4703

CUST PO # NO PO REQ
RELEASE #
ORD BY STEVEN SHERMAN
408-710-6809
ENT BY JAIMFLORES

Order Type	Payment Terms	Incoterm	Route	Sales Office	Plant	Sales Org	Total Containers Ship	Return
Acct Front Counter	NET 30	Customer Pick up Airgas	Customer Pick Up	W226	W226	WE00		

Qty Ship	UOM Type	HM	Description & Hazard Class	Qty Order	Containers Ship	Containers Ret	Vol /Wt
		X	UN1046 HELIUM, COMPRESSED 2.2				
0			**LIne# 10 Material# CY-HE 40 Stor. Loc. R001**	0	0	1	

EMERGENCY CONTACT:1-866-734-3438

PURCHASER AGREES TO OBTAIN SAFETY DATA SHEETS (SDS) FROM ONE OF THE FOLLOWING SOURCES ; POINT OF PURCHASE, Airgas WEB SITE AT <WWW.AIRGAS.COM> OR BY CALLING THE ABOVE LISTED EMERGENCY CONTACT PHONE NUMBER AND SELECTING OPTION #3

THIS IS TO CERTIFY THAT THE ABOVE NAMED MATERIALS ARE PROPERLY CLASSIFIED, DESCRIBED, PACKAGED, MARKED AND LABELED AND ARE IN PROPER CONDITION FOR TRANSPORTATION ACCORDING TO THE APPLICABLE REGULATIONS OF THE DEPARTMENT OF TRANSPORTATION

PLACARDS OFFERED
☐ ACCEPT ☐ REJECT
CUSTOMER MUST INITIAL CHOICE

THIS AGREEMENT IS SUBJECT TO Airgas' STANDARD TERMS AND CONDITIONS. SEE REVERSE SIDE FOR IMPORTANT SAFETY INFORMATION.

ACCEPTED FOR THE ABOVE CUSTOMER X _____

NAME PLEASE PRINT Stephen Sherman

Airgas PERSONNEL DATE T.O.D.

INTERNAL USE ONLY

Filled By	Staging Area	Total PKGS	Tracking / Pro Number	Freight Charges	Total Weight*
					0

*Total weight for materials with weight displayed only

Delivery # 8130052496

FIELD ENVIRONMENTAL INSTRUMENTS, INC.
www.fieldenvironmental.com

301 Brushton Ave
Suite A
Pittsburgh, PA 15221
Toll Free (800) 393-4009
Local (412) 436-2600
Fax (412) 436-2616

Helium Detector Calibration Certificate

	Lot #	Expiration
Helium Gas	19-7110	2/5/2025

Cal Standard	**Reading**	**Acceptable Range**
5,000 ppm	4750	(4,500 - 5,500)

Model	Dielectric
S/N	42314
Barcode	U87289X
Order #	510568

Calibrated By: Matthew Rice

Date of Calibration: 02/23/23

All calibrations performed by FEI conform to manufacturer's specifications. Please report any issues within 24 hours of receiving equipment.
All calibration gas used is traceable to NIST. Additional documentation is available upon request.

FIELD ENVIRONMENTAL INSTRUMENTS, INC.

11710 AIRPORT RD
Suite A300
EVERETT, WA 98204
425-595-4910 855-398-5600

www.fieldenvironmental.com

PACKING SLIP

ORDER NUMBER: 510568
Printed:23-Feb-23 12:40

Rep: Gary Yamron
Taken By: mhouser

ORDER DATE: 2/23/2023
SHIPMENT DATE: 2/23/2023

Steve Sherman
FEI
11710 AIRPORT RD, STE 300
EVERETT, WA, 98204-8793
Phone: 4087106809

Ship Method: BWA - Customer Pick-Up
Ship Acct: N/A
Insure Value: N/A

Qty	Class	Scan Out	Unit ID	Unit S/N	Scan In	Unit ID	Unit S/N	Notes
1	Dielectric Helium - Leak Detector MGD-2002 - Rental	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX
	--> Dielectric Helium - Handle Assembly #83174	02/23/2023	53092	na			na	
	--> Dielectric Helium - Leak Detector MGD-2002 - Rental	02/23/2023	87289	042314			042314	
	--> Dielectric Helium - Drying Adapter #84972	02/23/2023	87297	na			na	
	--> Dielectric Helium - Needle Probe - Rental	02/23/2023	87296	na			na	
	--> Dielectric Helium - DC Adapter #163-0005-01	02/23/2023	90506	na			na	
	--> Dielectric Helium - AC Power Cord	02/23/2023	100806	na			na	
	--> Dielectric Helium - Ground Probe #90664	02/23/2023	92159	na			na	
	--> Dielectric Helium - AC Charger #93642A - Rental	02/23/2023	92163	na			na	
	--> Dielectric Helium - Manual	02/23/2023	100710	na			na	
	--> Dielectric Helium - Moisture Filter #83220 - Rental	02/23/2023	100608	na			na	

Rental Period: 2/23/2023 to 2/23/2023

CalibrationData:

Special Instructions:

Pittsburgh, PA (HQ) 800-393-4009
Atlanta, GA 866-620-6762
Exton, PA 866-648-8607
Houston, TX 866-323-4006
Kansas City, KS 866-580-5499
Los Angeles, CA 866-278-2382
Minneapolis, MN 866-580-5512
Seattle, WA 855-398-5600

FIELD ENVIRONMENTAL INSTRUMENTS, INC.

11710 AIRPORT RD
Suite A300
EVERETT, WA 98204
425-595-4910 855-398-5600

www.fieldenvironmental.com
info@fieldenvironmental.com

Box Markings:

QA/QC Check Stamp
Fulfilled Whse Mgmt
Sales Rep Boxed
Shipped

ORDER SHEET

ORDER NUMBER: 510568
Sage Customer ID: N/A

Rep: Gary Yamron
Taken By: mhouser

Rental Order

ORDER DATE: 2/23/23
SHIPMENT DATE: 2/23/23
EXPECTED DELIVERY DATE: 2/23/23

Bill To: Steve Sherman ID#: 114301
Integral Consulting, Inc.+$$
115 Sansome St, Ste 200
San Francisco, CA 94104
Phone: 415-393-4750 X851
Cell: 408-710-6809
E-mail: ssherman@integral-corp.com

Ship To: Steve Sherman
FEI
11710 AIRPORT RD, STE 300
EVERETT, WA 98204-8793
Phone: 4087106809

Email Inv: N/A

Payment Type:

Cust. PO: C3163

Outgoing Ship Method: BWA - Customer Pick-Up

Outgoing Ship Acct: N/A

Fed Ex Acct: N/A **UPS Acct:** N/A
FS Option: N/A **Return Shipping:** N/A

RENTAL PERIOD: Thursday, 2/23/23 through Thursday, 2/23/23

ORDER ITEMS:

#	Qty	ID:	Class	Rental Terms: Monthly	Monthly Daily	Weekly	Weekly Daily	Daily	Sale Price	Item Total	Unit#	Return
1	1	5510	Dielectric Helium - Leak Detector MGD-2002 - Rental	$1,500.00	$75.00	$525.00	$105.00	$225.00		$0.00	87289	

Item Notes:
Ship From Office: *WA*

Sale Item Total: $0.00

The order amount is exclusive of any applicable state and local sales tax

CUSTOMER SIGNATURE: _____ **DATE:** _____

Terms and Conditions Available at www.FieldEnvironmental.com

14 Convenient, Full-Service Branches. Scan the code to find the nearest FEI office.

Printed:23-Feb-23 12:40

integral consulting inc.

AIR SAMPLING FORM

Project Name: Bridge 33 Mukilteo
Location: Lynnwood, WA
Field Staff: S. Sherman, O. Hargrave, K. Kirkland

Project #: C3163
Event Date(s): 2/22/23–2/23/23
Detectors: Kelron 3-in-1 Helium Detector (SV-03, SV-04, SV-05), Dielectric MGD-2002 (SV-01, SV-02)

Location ID and Type (sub-slab, well, ambient)	Depth or Height Above Ground (ft)	Dia. (inch)	Leak Test Information					Equipment			Sample Information						Shroud Helium Percentage during Sample Collection									
			Shut-in Test		Purge Volume* (mL)	Shroud		Canister Size (1L/6L)	Canister Serial#	Flow Controller Serial#	Initial		Final		Sample ID	Sample Date										
			Vac. Held (inHg)	Hold Time (min)		Shroud He (%)	Purge He (%)				Time	Canister Vacuum (inHg)	Time	Canister Vacuum (inHg)												
Indoor IA02	0	--						6L	6L2381	25598	1144	-30	1922	-5	IA02	2/22/2023	Time:									
																	He (%):									
																	Time:									
																	He (%):									
Indoor IA01	3	--						6L	6L2593	26059	1151	-28.5	1931	-5	IA01	2/22/2023	Time:									
																	He (%):									
																	Time:									
																	He (%):									
Outdoor OA01	0	--						6L	6L3410	25946	1157	-28.5	1919	-5	OA01	2/22/2023	Time:									
																	He (%):									
																	Time:									
																	He (%):									
Outdoor OA03	0	--						6L	6L1801	26022	1159	-29	1922	-5	OA03	2/22/2023	Time:									
																	He (%):									
																	Time:									
																	He (%):									
Outdoor OA02	17.9	--						6L	6L3740	22294	1202	-29	1905	-5	OA02	2/22/2023	Time:									
																	He (%):									
																	Time:									
																	He (%):									
Sub-slab SV04	0	0.025	-10.5	2	65	34	0	6L	6L2261	24255	758	-28	839	-5	SV04	2/23/2023	Time:	758	800	802	804	806	808	810	812	814
																	He (%):	35	35	35	36	35	35	35	35	35
																	Time:	816	818	820	822	824	826	828	830	832
																	He (%):	35	35	35	35	35	35	35	35	34
																	Time:	834	836	838						
																	He (%):	34	34	34						
Sub-slab SV05	0	0.025	-10.25	2	65	34	0	6L	6L2947	24886	912	-27.5	951	-5	SV05	2/23/2023	Time:	912	915	918	921	924	927	930	933	936
																	He (%):	32	38	39	38	36	35	35	35	36
																	Time:	939	942	945	948	951				
																	He (%):	36	36	35	35	40				
Sub-slab SV03	0	0.025	-10.75	2	65	57	0	6L	6L3667	24917	1016	-27	1051	-5	SV03	2/23/2023	Time:	1019	1022	1025	1028	1031	1034	1037	1040	1043
																	He (%):	61	61	60	59	58	57	56	55	55
																	Time:	1046	1049							
																	He (%):	54	53							
Sub-slab SV02	0	0.025	-10	120	65	--	--	6L	6L2444	23558	1557	-27	1630	-6.5	SV02	2/23/2023	Time:	1557	1600	1603	1606	1609	1612	1615	1618	1621
																	He (%):	30	60	60	30	43	26	43	69	70
																	Time:	1624	1627	1630						
																	He (%):	38	50	60						
Sub-slab SV01	0	0.025	-10	2	85	--	--	6L	6L1046	24271	1715	-27	1827	-6.5	SV01	2/23/2023	Time:	1715	1718	1721	1724	1727	1730	1733	1736	1739
																	He (%):	30	61	30	68	40	60	80	79	70
																	Time:	1742	1745	1748	1751	1754	1757	1800	1803	1806
																	He (%):	64	30	40	70	70	60	62	76	62
Sub-slab DUP-01	0	0.025	-10	2	85	--	--	6L	6L0281	24271	1715	-27	1827	-6.5	DUP01	2/23/2023	Time:	1809	1812	1815	1818	1821	1824	1827		
																	He (%):	64	73	70	68	59	71	68		
																	Time:									
																	He (%):									

Notes:

*Soil Vapor Well Purge Volume = 3 x {[Pi x boring radius² x (height of sand pack + height dry bentonite) x 0.3] + [Pi x tubing radius² x height of tubing including sampling train]}
Assumed sand pack and bentonite porosity of 0.3
*Existing Sub-slab Point Purge Volume = 3 x [Pi x tubing radius² x height of tubing including sampling train]}
*New Sub-slab Point Purge Volume =
3 x {[Pi x hole radius² x thickness of slab beyond VaporPin] + [Pi x VaporPin inner radius² x VaporPin length] + [Pi x tubing radius² x length of tubing including sampling train]}
1 cubic inch = 16.387064 mL, 1/4 tubing ID = 0.19 in., VaporPin ID = 0.19 in., VaporPin length = 3.25 in., VaporPin hole dia. = 0.625 in.

Appendix B

Photograph Log

Former Harbour Pointe Dry Cleaners Lynnwood Site
Year 1 Air Sampling Report
Site Photographs from February 2023

Photograph 1. Suite B-6 Site Conditions during Sampling, Including Property Contractor's Equipment (February 22, 2023)

Photograph 2. Outdoor Air Sample OA-02 Placed on Building Roof, near Suite B-6 HVAC (February 22, 2023)

Former Harbour Pointe Dry Cleaners Lynnwood Site
Year 1 Air Sampling Report
Site Photographs from February 2023

Photograph 3. Indoor Air Sample IA-02 Placed in Suite B-5 (Mustache Milk Tea), near the Back Door of the Kitchen (February 22, 2023)

Photograph 4. Sub-slab Sample SV-04 Collection (February 23, 2023)

Former Harbour Pointe Dry Cleaners Lynnwood Site
Year 1 Air Sampling Report
Site Photographs from February 2023

Photograph 5. Sub-slab Sample SV-01 and DUP-01 Set-Up (February 23, 2023)

Appendix C

Laboratory Data Report

eurofins | Air Toxics

3/10/2023
Ms. Emily Guyer
Integral Consulting
719 2nd Avenue, Suite 700

Seattle WA 98104

Project Name: B33 Mukilteo
Project #: 3163-0401
Workorder #: 2302662A

Dear Ms. Emily Guyer

The following report includes the data for the above referenced project for sample(s) received on 2/25/2023 at Eurofins Air Toxics LLC.

The data and associated QC analyzed by Modified 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: Monica Tran at 916-985-1000 if you have any questions regarding the data in this report.

Regards,

Monica Tran

Project Manager

eurofins | Air Toxics

WORK ORDER #: 2302662A

Work Order Summary

CLIENT:	Ms. Emily Guyer Integral Consulting 719 2nd Avenue, Suite 700 Seattle, WA 98104	**BILL TO:**	Accounts Payable Integral Consulting 285 Century Place Suite 190 Louisville, CO 80027
PHONE:	206-230-9600	**P.O. #**	C3163 / task 0401
FAX:	206-230-9601	**PROJECT #**	3163-0401 B33 Mukilteo
DATE RECEIVED:	02/25/2023	**CONTACT:**	Monica Tran
DATE COMPLETED:	03/10/2023		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	IA01	Modified TO-15	4.5 "Hg	2 psi
01B	IA01	Modified TO-15	4.5 "Hg	2 psi
02A	IA02	Modified TO-15	5.0 "Hg	2 psi
02B	IA02	Modified TO-15	5.0 "Hg	2 psi
03A	OA01	Modified TO-15	3.5 "Hg	2 psi
03B	OA01	Modified TO-15	3.5 "Hg	2 psi
04A	OA02	Modified TO-15	4.0 "Hg	2.4 psi
04B	OA02	Modified TO-15	4.0 "Hg	2.4 psi
05A	OA03	Modified TO-15	3.0 "Hg	2 psi
05B	OA03	Modified TO-15	3.0 "Hg	2 psi
06A	Lab Blank	Modified TO-15	NA	NA
06B	Lab Blank	Modified TO-15	NA	NA
07A	CCV	Modified TO-15	NA	NA
07B	CCV	Modified TO-15	NA	NA
08A	LCS	Modified TO-15	NA	NA
08AA	LCSD	Modified TO-15	NA	NA
08B	LCS	Modified TO-15	NA	NA
08BB	LCSD	Modified TO-15	NA	NA

CERTIFIED BY: Heidi Hayes DATE: 03/10/23

Technical Director

Certification numbers: AZ Licensure AZ0775, FL NELAP – E87680, LA NELAP – 02089, NH NELAP – 209222, NJ NELAP - CA016, NY NELAP - 11291, TX NELAP – T104704434-22-18, UT NELAP – CA009332022-14, VA NELAP - 12240, WA NELAP - C935
Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
Accreditation number: CA300005-017, Effective date: 10/18/2022, Expiration date: 10/17/2023.
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
Modified TO-15 Full Scan/SIM
Integral Consulting
Workorder# 2302662A

Five 6 Liter Summa Canister (100% SIM Ambient) samples were received on February 25, 2023. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the Full Scan and SIM acquisition modes. The method involves concentrating up to 1.0 liters of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the EATL modifications.

Requirement	***TO-15***	***ATL Modifications***
ICAL %RSD acceptance criteria	</=30% RSD with 2 compounds allowed out to < 40% RSD	For Full Scan: 30% RSD with 4 compounds allowed out to < 40% RSD For SIM: Project specific; default criteria is </=30% RSD with 10% of compounds allowed out to < 40% RSD
Daily Calibration	+- 30% Difference	For Full Scan: </= 30% Difference with four allowed out up to </=40%.; flag and narrate outliers For SIM: Project specific; default criteria is </= 30% Difference with 10% of compounds allowed out up to </=40%.; flag and narrate outliers
Blank and standards	Zero air	Nitrogen
Method Detection Limit	Follow 40CFR Pt.136 App. B	The MDL met all relevant requirements in Method TO-15 (statistical MDL less than the LOQ). The concentration of the spiked replicate may have exceeded 10X the calculated MDL in some cases

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

The results for each sample in this report were acquired from two separate data files originating from the same analytical run. The two data files have the same base file name and are differentiated with a "sim" extension on the SIM data file.

As per client project requirements, the laboratory has reported estimated values for target compound hits that are below the Reporting Limit but greater than the Method Detection Limit. Concentrations that are below the level at which the canister was certified may be false positives.

Dilution was performed on samples IA01 and IA02 due to the presence of high level target species.

Definition of Data Qualifying Flags

Nine 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.

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

N - The identification is based on presumptive evidence.

CN - See case narrative explanation

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

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN
B33 Mukilteo

Client ID:	IA01		
Lab ID:	2302662A-01A	**Date/Time Analyzed:**	3/9/23 05:51 PM
Date/Time Collected:	2/22/23 07:31 PM	**Dilution Factor:**	6.70
Media:	6 Liter Summa Canister (100% SIM Ambier	**Instrument/Filename:**	msdv.i / v030914

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,2,4-Trichlorobenzene	120-82-1	3.3	15	25	Not Detected
1,2,4-Trimethylbenzene	95-63-6	0.79	2.6	3.3	Not Detected
1,2-Dichlorobenzene	95-50-1	0.87	3.2	4.0	Not Detected
1,2-Dichloropropane	78-87-5	1.1	2.5	3.1	Not Detected
1,3,5-Trimethylbenzene	108-67-8	1.0	2.6	3.3	Not Detected
1,3-Butadiene	106-99-0	0.61	1.2	1.5	Not Detected
1,3-Dichlorobenzene	541-73-1	0.84	3.2	4.0	Not Detected
1,4-Dioxane	123-91-1	1.3	1.9	2.4	Not Detected
2,2,4-Trimethylpentane	540-84-1	2.2	9.4	16	Not Detected
2-Butanone (Methyl Ethyl Ketone)	78-93-3	2.2	5.9	9.9	Not Detected
2-Hexanone	591-78-6	2.8	8.2	14	Not Detected
2-Propanol	67-63-0	1.8	4.9	33	2.1 J
3-Chloropropene	107-05-1	2.3	6.3	10	Not Detected
4-Ethyltoluene	622-96-8	0.78	2.6	3.3	Not Detected
4-Methyl-2-pentanone	108-10-1	0.58	2.2	2.7	Not Detected
Acetone	67-64-1	4.5	4.8	32	2300 E
alpha-Chlorotoluene	100-44-7	1.8	2.8	3.5	Not Detected
Bromodichloromethane	75-27-4	0.96	3.6	4.5	Not Detected
Bromoform	75-25-2	1.6	5.5	6.9	Not Detected
Bromomethane	74-83-9	10	21	130	Not Detected
Carbon Disulfide	75-15-0	1.4	6.2	10	2.1 J
Chlorobenzene	108-90-7	0.88	2.5	3.1	Not Detected
cis-1,3-Dichloropropene	10061-01-5	0.93	2.4	3.0	Not Detected
Cumene	98-82-8	0.50	2.6	3.3	1.5 J

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN
B33 Mukilteo

Client ID:	IA01		
Lab ID:	2302662A-01A	**Date/Time Analyzed:**	3/9/23 05:51 PM
Date/Time Collected:	2/22/23 07:31 PM	**Dilution Factor:**	6.70
Media:	6 Liter Summa Canister (100% SIM Ambier	**Instrument/Filename:**	msdv.i / v030914

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Cyclohexane	110-82-7	1.2	6.9	12	Not Detected
Dibromochloromethane	124-48-1	1.2	4.6	5.7	Not Detected
Ethanol	64-17-5	6.8	15	25	30
Freon 11	75-69-4	0.58	3.0	3.8	1.7 J
Freon 113	76-13-1	0.64	4.1	5.1	Not Detected
Heptane	142-82-5	2.8	8.2	14	Not Detected
Hexachlorobutadiene	87-68-3	3.0	21	36	Not Detected
Hexane	110-54-3	2.0	7.1	12	Not Detected
Methylene Chloride	75-09-2	1.8	1.9	4.6	Not Detected
Propylbenzene	103-65-1	1.2	2.6	3.3	Not Detected
Styrene	100-42-5	0.53	2.3	2.8	Not Detected
Tetrahydrofuran	109-99-9	6.3	16	9.9	Not Detected
trans-1,3-Dichloropropene	10061-02-6	0.81	2.4	3.0	Not Detected

J = Estimated value.
E = Exceeds instrument calibration range.
D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	104
4-Bromofluorobenzene	460-00-4	70-130	87
Toluene-d8	2037-26-5	70-130	108

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN
B33 Mukilteo

Client ID:	IA01		
Lab ID:	2302662A-01B	**Date/Time Analyzed:**	3/9/23 05:51 PM
Date/Time Collected:	2/22/23 07:31 PM	**Dilution Factor:**	6.70
Media:	6 Liter Summa Canister (100% SIM Ambier	**Instrument/Filename:**	msdv.i / v030914sim

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,1-Trichloroethane	71-55-6	0.099	0.33	0.73	Not Detected
1,1,2,2-Tetrachloroethane	79-34-5	0.15	0.41	0.92	Not Detected
1,1,2-Trichloroethane	79-00-5	0.15	0.33	0.73	Not Detected
1,1-Dichloroethane	75-34-3	0.067	0.24	0.54	Not Detected
1,1-Dichloroethene	75-35-4	0.13	0.24	0.26	Not Detected
1,2-Dibromoethane (EDB)	106-93-4	0.23	0.46	1.0	Not Detected
1,2-Dichloroethane	107-06-2	0.10	0.24	0.54	Not Detected
1,4-Dichlorobenzene	106-46-7	0.44	0.60	0.80	Not Detected
Benzene	71-43-2	0.21	0.32	1.1	1.2
Carbon Tetrachloride	56-23-5	0.16	0.38	0.84	0.36 J
Chloroethane	75-00-3	0.54	0.71	0.88	Not Detected
Chloroform	67-66-3	0.10	0.29	0.65	0.41 J
Chloromethane	74-87-3	0.68	1.1	6.9	0.83 J
cis-1,2-Dichloroethene	156-59-2	0.11	0.24	0.53	Not Detected
Ethyl Benzene	100-41-4	0.041	0.26	0.58	94
Freon 114	76-14-2	0.13	0.42	0.94	Not Detected
Freon 12	75-71-8	0.095	0.30	1.6	2.1
m,p-Xylene	108-38-3	0.084	0.26	1.2	360
Methyl tert-butyl ether	1634-04-4	0.090	0.22	2.4	Not Detected
Naphthalene	91-20-3	0.33	1.0	1.8	Not Detected
o-Xylene	95-47-6	0.071	0.26	0.58	100
Tetrachloroethene	127-18-4	0.035	0.41	0.91	0.050 J
Toluene	108-88-3	0.084	0.23	1.3	2.4
trans-1,2-Dichloroethene	156-60-5	0.081	0.24	2.6	Not Detected

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN
B33 Mukilteo

Client ID:	IA01		
Lab ID:	2302662A-01B	**Date/Time Analyzed:**	3/9/23 05:51 PM
Date/Time Collected:	2/22/23 07:31 PM	**Dilution Factor:**	6.70
Media:	6 Liter Summa Canister (100% SIM Ambier	**Instrument/Filename:**	msdv.i / v030914sim

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Trichloroethene	79-01-6	0.064	0.32	0.72	Not Detected
Vinyl Chloride	75-01-4	0.12	0.15	0.17	Not Detected

J = Estimated value.
D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	100
4-Bromofluorobenzene	460-00-4	70-130	86
Toluene-d8	2037-26-5	70-130	108

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN
B33 Mukilteo

Client ID:	IA02		
Lab ID:	2302662A-02A	**Date/Time Analyzed:**	3/9/23 04:13 PM
Date/Time Collected:	2/22/23 07:22 PM	**Dilution Factor:**	2.72
Media:	6 Liter Summa Canister (100% SIM Ambier	**Instrument/Filename:**	msdv.i / v030912

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,2,4-Trichlorobenzene	120-82-1	1.3	6.0	10	Not Detected
1,2,4-Trimethylbenzene	95-63-6	0.32	1.1	1.3	0.36 J
1,2-Dichlorobenzene	95-50-1	0.35	1.3	1.6	Not Detected
1,2-Dichloropropane	78-87-5	0.44	1.0	1.2	Not Detected
1,3,5-Trimethylbenzene	108-67-8	0.41	1.1	1.3	Not Detected
1,3-Butadiene	106-99-0	0.25	0.48	0.60	Not Detected
1,3-Dichlorobenzene	541-73-1	0.34	1.3	1.6	Not Detected
1,4-Dioxane	123-91-1	0.54	0.78	0.98	Not Detected
2,2,4-Trimethylpentane	540-84-1	0.90	3.8	6.4	Not Detected
2-Butanone (Methyl Ethyl Ketone)	78-93-3	0.90	2.4	4.0	1.8 J
2-Hexanone	591-78-6	1.1	3.3	5.6	Not Detected
2-Propanol	67-63-0	0.72	2.0	13	2.8 J
3-Chloropropene	107-05-1	0.93	2.6	4.2	Not Detected
4-Ethyltoluene	622-96-8	0.32	1.1	1.3	0.55 J
4-Methyl-2-pentanone	108-10-1	0.23	0.89	1.1	Not Detected
Acetone	67-64-1	1.8	1.9	13	1600 E
alpha-Chlorotoluene	100-44-7	0.74	1.1	1.4	Not Detected
Bromodichloromethane	75-27-4	0.39	1.4	1.8	Not Detected
Bromoform	75-25-2	0.64	2.2	2.8	Not Detected
Bromomethane	74-83-9	4.1	8.4	53	Not Detected
Carbon Disulfide	75-15-0	0.56	2.5	4.2	0.96 J
Chlorobenzene	108-90-7	0.36	1.0	1.2	Not Detected
cis-1,3-Dichloropropene	10061-01-5	0.38	0.99	1.2	Not Detected
Cumene	98-82-8	0.20	1.1	1.3	0.96 J

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN
B33 Mukilteo

Client ID:	IA02		
Lab ID:	2302662A-02A	**Date/Time Analyzed:**	3/9/23 04:13 PM
Date/Time Collected:	2/22/23 07:22 PM	**Dilution Factor:**	2.72
Media:	6 Liter Summa Canister (100% SIM Ambier	**Instrument/Filename:**	msdv.i / v030912

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Cyclohexane	110-82-7	0.49	2.8	4.7	Not Detected
Dibromochloromethane	124-48-1	0.47	1.8	2.3	Not Detected
Ethanol	64-17-5	2.7	6.2	10	820 E
Freon 11	75-69-4	0.23	1.2	1.5	2.1
Freon 113	76-13-1	0.26	1.7	2.1	0.52 J
Heptane	142-82-5	1.1	3.3	5.6	Not Detected
Hexachlorobutadiene	87-68-3	1.2	8.7	14	Not Detected
Hexane	110-54-3	0.80	2.9	4.8	Not Detected
Methylene Chloride	75-09-2	0.71	0.76	1.9	Not Detected
Propylbenzene	103-65-1	0.49	1.1	1.3	Not Detected
Styrene	100-42-5	0.22	0.93	1.2	5.6
Tetrahydrofuran	109-99-9	2.6	6.4	4.0	Not Detected
trans-1,3-Dichloropropene	10061-02-6	0.33	0.99	1.2	Not Detected

E = Exceeds instrument calibration range.
J = Estimated value.
D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	107
4-Bromofluorobenzene	460-00-4	70-130	88
Toluene-d8	2037-26-5	70-130	108

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN
B33 Mukilteo

Client ID:	IA02		
Lab ID:	2302662A-02B	**Date/Time Analyzed:**	3/9/23 04:13 PM
Date/Time Collected:	2/22/23 07:22 PM	**Dilution Factor:**	2.72
Media:	6 Liter Summa Canister (100% SIM Ambier	**Instrument/Filename:**	msdv.i / v030912sim

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,1-Trichloroethane	71-55-6	0.040	0.13	0.30	Not Detected
1,1,2,2-Tetrachloroethane	79-34-5	0.063	0.17	0.37	Not Detected
1,1,2-Trichloroethane	79-00-5	0.059	0.13	0.30	Not Detected
1,1-Dichloroethane	75-34-3	0.027	0.099	0.22	Not Detected
1,1-Dichloroethene	75-35-4	0.055	0.097	0.11	Not Detected
1,2-Dibromoethane (EDB)	106-93-4	0.093	0.19	0.42	Not Detected
1,2-Dichloroethane	107-06-2	0.043	0.099	0.22	0.067 J
1,4-Dichlorobenzene	106-46-7	0.18	0.24	0.33	Not Detected
Benzene	71-43-2	0.084	0.13	0.43	1.1
Carbon Tetrachloride	56-23-5	0.064	0.15	0.34	0.45
Chloroethane	75-00-3	0.22	0.29	0.36	Not Detected
Chloroform	67-66-3	0.042	0.12	0.26	12
Chloromethane	74-87-3	0.28	0.45	2.8	0.98 J
cis-1,2-Dichloroethene	156-59-2	0.046	0.097	0.22	Not Detected
Ethyl Benzene	100-41-4	0.017	0.11	0.24	60
Freon 114	76-14-2	0.054	0.17	0.38	0.099 J
Freon 12	75-71-8	0.039	0.12	0.67	2.5
m,p-Xylene	108-38-3	0.034	0.11	0.47	220
Methyl tert-butyl ether	1634-04-4	0.036	0.088	0.98	Not Detected
Naphthalene	91-20-3	0.13	0.43	0.71	Not Detected
o-Xylene	95-47-6	0.029	0.11	0.24	66
Tetrachloroethene	127-18-4	0.014	0.17	0.37	0.16 J
Toluene	108-88-3	0.034	0.092	0.51	4.4
trans-1,2-Dichloroethene	156-60-5	0.033	0.097	1.1	Not Detected

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN
B33 Mukilteo

Client ID:	IA02		
Lab ID:	2302662A-02B	**Date/Time Analyzed:**	3/9/23 04:13 PM
Date/Time Collected:	2/22/23 07:22 PM	**Dilution Factor:**	2.72
Media:	6 Liter Summa Canister (100% SIM Ambier	**Instrument/Filename:**	msdv.i / v030912sim

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Trichloroethene	79-01-6	0.026	0.13	0.29	Not Detected
Vinyl Chloride	75-01-4	0.050	0.062	0.070	Not Detected

J = Estimated value.
D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	102
4-Bromofluorobenzene	460-00-4	70-130	84
Toluene-d8	2037-26-5	70-130	108

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN
B33 Mukilteo

Client ID:	OA01		
Lab ID:	2302662A-03A	**Date/Time Analyzed:**	3/9/23 07:11 PM
Date/Time Collected:	2/22/23 07:19 PM	**Dilution Factor:**	1.29
Media:	6 Liter Summa Canister (100% SIM Ambier	**Instrument/Filename:**	msdv.i / v030916

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,2,4-Trichlorobenzene	120-82-1	0.63	2.9	4.8	Not Detected
1,2,4-Trimethylbenzene	95-63-6	0.15	0.51	0.63	Not Detected
1,2-Dichlorobenzene	95-50-1	0.17	0.62	0.78	Not Detected
1,2-Dichloropropane	78-87-5	0.21	0.48	0.60	Not Detected
1,3,5-Trimethylbenzene	108-67-8	0.20	0.51	0.63	Not Detected
1,3-Butadiene	106-99-0	0.12	0.23	0.28	Not Detected
1,3-Dichlorobenzene	541-73-1	0.16	0.62	0.78	Not Detected
1,4-Dioxane	123-91-1	0.25	0.37	0.46	Not Detected
2,2,4-Trimethylpentane	540-84-1	0.43	1.8	3.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	78-93-3	0.43	1.1	1.9	1.1 J
2-Hexanone	591-78-6	0.54	1.6	2.6	Not Detected
2-Propanol	67-63-0	0.34	0.95	6.3	0.35 J
3-Chloropropene	107-05-1	0.44	1.2	2.0	Not Detected
4-Ethyltoluene	622-96-8	0.15	0.51	0.63	Not Detected
4-Methyl-2-pentanone	108-10-1	0.11	0.42	0.53	Not Detected
Acetone	67-64-1	0.87	0.92	6.1	11
alpha-Chlorotoluene	100-44-7	0.35	0.53	0.67	Not Detected
Bromodichloromethane	75-27-4	0.18	0.69	0.86	Not Detected
Bromoform	75-25-2	0.30	1.1	1.3	Not Detected
Bromomethane	74-83-9	1.9	4.0	25	Not Detected
Carbon Disulfide	75-15-0	0.26	1.2	2.0	0.46 J
Chlorobenzene	108-90-7	0.17	0.48	0.59	Not Detected
cis-1,3-Dichloropropene	10061-01-5	0.18	0.47	0.58	Not Detected
Cumene	98-82-8	0.095	0.51	0.63	Not Detected

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN
B33 Mukilteo

Client ID:	OA01		
Lab ID:	2302662A-03A	**Date/Time Analyzed:**	3/9/23 07:11 PM
Date/Time Collected:	2/22/23 07:19 PM	**Dilution Factor:**	1.29
Media:	6 Liter Summa Canister (100% SIM Ambier	**Instrument/Filename:**	msdv.i / v030916

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Cyclohexane	110-82-7	0.23	1.3	2.2	Not Detected
Dibromochloromethane	124-48-1	0.22	0.88	1.1	Not Detected
Ethanol	64-17-5	1.3	2.9	4.9	6.1
Freon 11	75-69-4	0.11	0.58	0.72	1.0
Freon 113	76-13-1	0.12	0.79	0.99	0.42 J
Heptane	142-82-5	0.53	1.6	2.6	Not Detected
Hexachlorobutadiene	87-68-3	0.58	4.1	6.9	Not Detected
Hexane	110-54-3	0.38	1.4	2.3	Not Detected
Methylene Chloride	75-09-2	0.34	0.36	0.90	Not Detected
Propylbenzene	103-65-1	0.23	0.51	0.63	Not Detected
Styrene	100-42-5	0.10	0.44	0.55	Not Detected
Tetrahydrofuran	109-99-9	1.2	3.0	1.9	Not Detected
trans-1,3-Dichloropropene	10061-02-6	0.16	0.47	0.58	Not Detected

J = Estimated value.
D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	105
4-Bromofluorobenzene	460-00-4	70-130	84
Toluene-d8	2037-26-5	70-130	99

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN
B33 Mukilteo

Client ID:	OA01		
Lab ID:	2302662A-03B	**Date/Time Analyzed:**	3/9/23 07:11 PM
Date/Time Collected:	2/22/23 07:19 PM	**Dilution Factor:**	1.29
Media:	6 Liter Summa Canister (100% SIM Ambier	**Instrument/Filename:**	msdv.i / v030916sim

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,1-Trichloroethane	71-55-6	0.019	0.063	0.14	Not Detected
1,1,2,2-Tetrachloroethane	79-34-5	0.030	0.080	0.18	Not Detected
1,1,2-Trichloroethane	79-00-5	0.028	0.063	0.14	Not Detected
1,1-Dichloroethane	75-34-3	0.013	0.047	0.10	Not Detected
1,1-Dichloroethene	75-35-4	0.026	0.046	0.051	Not Detected
1,2-Dibromoethane (EDB)	106-93-4	0.044	0.089	0.20	Not Detected
1,2-Dichloroethane	107-06-2	0.020	0.047	0.10	0.052 J
1,4-Dichlorobenzene	106-46-7	0.085	0.12	0.16	Not Detected
Benzene	71-43-2	0.040	0.062	0.21	0.34
Carbon Tetrachloride	56-23-5	0.030	0.073	0.16	0.36
Chloroethane	75-00-3	0.10	0.14	0.17	Not Detected
Chloroform	67-66-3	0.020	0.057	0.12	0.061 J
Chloromethane	74-87-3	0.13	0.21	1.3	Not Detected
cis-1,2-Dichloroethene	156-59-2	0.022	0.046	0.10	Not Detected
Ethyl Benzene	100-41-4	0.0080	0.050	0.11	0.10 J
Freon 114	76-14-2	0.026	0.081	0.18	0.16 J
Freon 12	75-71-8	0.018	0.057	0.32	2.2
m,p-Xylene	108-38-3	0.016	0.050	0.22	0.32
Methyl tert-butyl ether	1634-04-4	0.017	0.042	0.46	Not Detected
Naphthalene	91-20-3	0.063	0.20	0.34	Not Detected
o-Xylene	95-47-6	0.014	0.050	0.11	0.12
Tetrachloroethene	127-18-4	0.0067	0.079	0.18	0.020 J
Toluene	108-88-3	0.016	0.044	0.24	0.64
trans-1,2-Dichloroethene	156-60-5	0.016	0.046	0.51	Not Detected

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN
B33 Mukilteo

Client ID:	OA01		
Lab ID:	2302662A-03B	**Date/Time Analyzed:**	3/9/23 07:11 PM
Date/Time Collected:	2/22/23 07:19 PM	**Dilution Factor:**	1.29
Media:	6 Liter Summa Canister (100% SIM Ambier	**Instrument/Filename:**	msdv.i / v030916sim

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Trichloroethene	79-01-6	0.012	0.062	0.14	Not Detected
Vinyl Chloride	75-01-4	0.024	0.030	0.033	Not Detected

J = Estimated value.
D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	106
4-Bromofluorobenzene	460-00-4	70-130	84
Toluene-d8	2037-26-5	70-130	101

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN
B33 Mukilteo

Client ID:	OA02		
Lab ID:	2302662A-04A	**Date/Time Analyzed:**	3/9/23 07:55 PM
Date/Time Collected:	2/22/23 07:05 PM	**Dilution Factor:**	1.34
Media:	6 Liter Summa Canister (100% SIM Ambier	**Instrument/Filename:**	msdv.i / v030917

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,2,4-Trichlorobenzene	120-82-1	0.66	3.0	5.0	Not Detected
1,2,4-Trimethylbenzene	95-63-6	0.16	0.53	0.66	Not Detected
1,2-Dichlorobenzene	95-50-1	0.17	0.64	0.80	Not Detected
1,2-Dichloropropane	78-87-5	0.22	0.50	0.62	Not Detected
1,3,5-Trimethylbenzene	108-67-8	0.20	0.53	0.66	Not Detected
1,3-Butadiene	106-99-0	0.12	0.24	0.30	Not Detected
1,3-Dichlorobenzene	541-73-1	0.17	0.64	0.80	Not Detected
1,4-Dioxane	123-91-1	0.26	0.39	0.48	Not Detected
2,2,4-Trimethylpentane	540-84-1	0.44	1.9	3.1	Not Detected
2-Butanone (Methyl Ethyl Ketone)	78-93-3	0.44	1.2	2.0	0.50 J
2-Hexanone	591-78-6	0.56	1.6	2.7	Not Detected
2-Propanol	67-63-0	0.35	0.99	6.6	0.38 J
3-Chloropropene	107-05-1	0.46	1.2	2.1	Not Detected
4-Ethyltoluene	622-96-8	0.16	0.53	0.66	Not Detected
4-Methyl-2-pentanone	108-10-1	0.12	0.44	0.55	Not Detected
Acetone	67-64-1	0.90	0.95	6.4	67
alpha-Chlorotoluene	100-44-7	0.36	0.55	0.69	Not Detected
Bromodichloromethane	75-27-4	0.19	0.72	0.90	Not Detected
Bromoform	75-25-2	0.32	1.1	1.4	Not Detected
Bromomethane	74-83-9	2.0	4.2	26	Not Detected
Carbon Disulfide	75-15-0	0.27	1.2	2.1	0.49 J
Chlorobenzene	108-90-7	0.18	0.49	0.62	Not Detected
cis-1,3-Dichloropropene	10061-01-5	0.18	0.49	0.61	Not Detected
Cumene	98-82-8	0.099	0.53	0.66	Not Detected

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN
B33 Mukilteo

Client ID:	OA02		
Lab ID:	2302662A-04A	**Date/Time Analyzed:**	3/9/23 07:55 PM
Date/Time Collected:	2/22/23 07:05 PM	**Dilution Factor:**	1.34
Media:	6 Liter Summa Canister (100% SIM Ambier	**Instrument/Filename:**	msdv.i / v030917

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Cyclohexane	110-82-7	0.24	1.4	2.3	Not Detected
Dibromochloromethane	124-48-1	0.23	0.91	1.1	Not Detected
Ethanol	64-17-5	1.4	3.0	5.0	18
Freon 11	75-69-4	0.12	0.60	0.75	1.1
Freon 113	76-13-1	0.13	0.82	1.0	0.46 J
Heptane	142-82-5	0.56	1.6	2.7	Not Detected
Hexachlorobutadiene	87-68-3	0.60	4.3	7.1	Not Detected
Hexane	110-54-3	0.39	1.4	2.4	Not Detected
Methylene Chloride	75-09-2	0.35	0.37	0.93	Not Detected
Propylbenzene	103-65-1	0.24	0.53	0.66	Not Detected
Styrene	100-42-5	0.11	0.46	0.57	Not Detected
Tetrahydrofuran	109-99-9	1.3	3.2	2.0	Not Detected
trans-1,3-Dichloropropene	10061-02-6	0.16	0.49	0.61	Not Detected

J = Estimated value.
D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	107
4-Bromofluorobenzene	460-00-4	70-130	91
Toluene-d8	2037-26-5	70-130	102

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN
B33 Mukilteo

Client ID:	OA02		
Lab ID:	2302662A-04B	**Date/Time Analyzed:**	3/9/23 07:55 PM
Date/Time Collected:	2/22/23 07:05 PM	**Dilution Factor:**	1.34
Media:	6 Liter Summa Canister (100% SIM Ambier	**Instrument/Filename:**	msdv.i / v030917sim

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,1-Trichloroethane	71-55-6	0.020	0.066	0.15	Not Detected
1,1,2,2-Tetrachloroethane	79-34-5	0.031	0.083	0.18	Not Detected
1,1,2-Trichloroethane	79-00-5	0.029	0.066	0.15	Not Detected
1,1-Dichloroethane	75-34-3	0.013	0.049	0.11	Not Detected
1,1-Dichloroethene	75-35-4	0.027	0.048	0.053	Not Detected
1,2-Dibromoethane (EDB)	106-93-4	0.046	0.093	0.20	Not Detected
1,2-Dichloroethane	107-06-2	0.021	0.049	0.11	0.053 J
1,4-Dichlorobenzene	106-46-7	0.088	0.12	0.16	Not Detected
Benzene	71-43-2	0.041	0.064	0.21	0.35
Carbon Tetrachloride	56-23-5	0.031	0.076	0.17	0.38
Chloroethane	75-00-3	0.11	0.14	0.18	Not Detected
Chloroform	67-66-3	0.021	0.059	0.13	0.33
Chloromethane	74-87-3	0.14	0.22	1.4	Not Detected
cis-1,2-Dichloroethene	156-59-2	0.023	0.048	0.11	Not Detected
Ethyl Benzene	100-41-4	0.0083	0.052	0.12	2.2
Freon 114	76-14-2	0.026	0.084	0.19	0.13 J
Freon 12	75-71-8	0.019	0.060	0.33	2.0
m,p-Xylene	108-38-3	0.017	0.052	0.23	8.2
Methyl tert-butyl ether	1634-04-4	0.018	0.043	0.48	Not Detected
Naphthalene	91-20-3	0.066	0.21	0.35	Not Detected
o-Xylene	95-47-6	0.014	0.052	0.12	2.4
Tetrachloroethene	127-18-4	0.0070	0.082	0.18	0.022 J
Toluene	108-88-3	0.017	0.045	0.25	0.51
trans-1,2-Dichloroethene	156-60-5	0.016	0.048	0.53	Not Detected

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN
B33 Mukilteo

Client ID:	OA02		
Lab ID:	2302662A-04B	**Date/Time Analyzed:**	3/9/23 07:55 PM
Date/Time Collected:	2/22/23 07:05 PM	**Dilution Factor:**	1.34
Media:	6 Liter Summa Canister (100% SIM Ambier	**Instrument/Filename:**	msdv.i / v030917sim

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Trichloroethene	79-01-6	0.013	0.065	0.14	Not Detected
Vinyl Chloride	75-01-4	0.025	0.031	0.034	Not Detected

J = Estimated value.
D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	105
4-Bromofluorobenzene	460-00-4	70-130	88
Toluene-d8	2037-26-5	70-130	102

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN
B33 Mukilteo

Client ID:	OA03		
Lab ID:	2302662A-05A	**Date/Time Analyzed:**	3/9/23 08:35 PM
Date/Time Collected:	2/22/23 07:22 PM	**Dilution Factor:**	1.26
Media:	6 Liter Summa Canister (100% SIM Ambier	**Instrument/Filename:**	msdv.i / v030918

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,2,4-Trichlorobenzene	120-82-1	0.62	2.8	4.7	Not Detected
1,2,4-Trimethylbenzene	95-63-6	0.15	0.50	0.62	Not Detected
1,2-Dichlorobenzene	95-50-1	0.16	0.61	0.76	Not Detected
1,2-Dichloropropane	78-87-5	0.20	0.46	0.58	Not Detected
1,3,5-Trimethylbenzene	108-67-8	0.19	0.50	0.62	Not Detected
1,3-Butadiene	106-99-0	0.11	0.22	0.28	Not Detected
1,3-Dichlorobenzene	541-73-1	0.16	0.61	0.76	Not Detected
1,4-Dioxane	123-91-1	0.25	0.36	0.45	Not Detected
2,2,4-Trimethylpentane	540-84-1	0.42	1.8	2.9	Not Detected
2-Butanone (Methyl Ethyl Ketone)	78-93-3	0.42	1.1	1.8	0.46 J
2-Hexanone	591-78-6	0.52	1.5	2.6	Not Detected
2-Propanol	67-63-0	0.33	0.93	6.2	Not Detected
3-Chloropropene	107-05-1	0.43	1.2	2.0	Not Detected
4-Ethyltoluene	622-96-8	0.15	0.50	0.62	Not Detected
4-Methyl-2-pentanone	108-10-1	0.11	0.41	0.52	Not Detected
Acetone	67-64-1	0.85	0.90	6.0	6.7
alpha-Chlorotoluene	100-44-7	0.34	0.52	0.65	Not Detected
Bromodichloromethane	75-27-4	0.18	0.68	0.84	Not Detected
Bromoform	75-25-2	0.30	1.0	1.3	Not Detected
Bromomethane	74-83-9	1.9	3.9	24	Not Detected
Carbon Disulfide	75-15-0	0.26	1.2	2.0	0.41 J
Chlorobenzene	108-90-7	0.16	0.46	0.58	Not Detected
cis-1,3-Dichloropropene	10061-01-5	0.17	0.46	0.57	Not Detected
Cumene	98-82-8	0.093	0.50	0.62	Not Detected

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN
B33 Mukilteo

Client ID:	OA03		
Lab ID:	2302662A-05A	**Date/Time Analyzed:**	3/9/23 08:35 PM
Date/Time Collected:	2/22/23 07:22 PM	**Dilution Factor:**	1.26
Media:	6 Liter Summa Canister (100% SIM Ambier	**Instrument/Filename:**	msdv.i / v030918

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Cyclohexane	110-82-7	0.23	1.3	2.2	Not Detected
Dibromochloromethane	124-48-1	0.22	0.86	1.1	Not Detected
Ethanol	64-17-5	1.3	2.8	4.7	Not Detected
Freon 11	75-69-4	0.11	0.57	0.71	1.1
Freon 113	76-13-1	0.12	0.77	0.96	0.43 J
Heptane	142-82-5	0.52	1.5	2.6	Not Detected
Hexachlorobutadiene	87-68-3	0.56	4.0	6.7	Not Detected
Hexane	110-54-3	0.37	1.3	2.2	Not Detected
Methylene Chloride	75-09-2	0.33	0.35	0.88	Not Detected
Propylbenzene	103-65-1	0.23	0.50	0.62	Not Detected
Styrene	100-42-5	0.10	0.43	0.54	Not Detected
Tetrahydrofuran	109-99-9	1.2	3.0	1.8	Not Detected
trans-1,3-Dichloropropene	10061-02-6	0.15	0.46	0.57	Not Detected

J = Estimated value.
D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	108
4-Bromofluorobenzene	460-00-4	70-130	86
Toluene-d8	2037-26-5	70-130	101

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN
B33 Mukilteo

Client ID:	OA03		
Lab ID:	2302662A-05B	**Date/Time Analyzed:**	3/9/23 08:35 PM
Date/Time Collected:	2/22/23 07:22 PM	**Dilution Factor:**	1.26
Media:	6 Liter Summa Canister (100% SIM Ambier	**Instrument/Filename:**	msdv.i / v030918sim

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,1-Trichloroethane	71-55-6	0.019	0.062	0.14	Not Detected
1,1,2,2-Tetrachloroethane	79-34-5	0.029	0.078	0.17	Not Detected
1,1,2-Trichloroethane	79-00-5	0.028	0.062	0.14	Not Detected
1,1-Dichloroethane	75-34-3	0.013	0.046	0.10	Not Detected
1,1-Dichloroethene	75-35-4	0.025	0.045	0.050	Not Detected
1,2-Dibromoethane (EDB)	106-93-4	0.043	0.087	0.19	Not Detected
1,2-Dichloroethane	107-06-2	0.020	0.046	0.10	0.051 J
1,4-Dichlorobenzene	106-46-7	0.083	0.11	0.15	Not Detected
Benzene	71-43-2	0.039	0.060	0.20	0.34
Carbon Tetrachloride	56-23-5	0.029	0.071	0.16	0.37
Chloroethane	75-00-3	0.10	0.13	0.17	Not Detected
Chloroform	67-66-3	0.020	0.055	0.12	0.062 J
Chloromethane	74-87-3	0.13	0.21	1.3	Not Detected
cis-1,2-Dichloroethene	156-59-2	0.021	0.045	0.10	Not Detected
Ethyl Benzene	100-41-4	0.0078	0.049	0.11	0.049 J
Freon 114	76-14-2	0.025	0.079	0.18	0.13 J
Freon 12	75-71-8	0.018	0.056	0.31	2.0
m,p-Xylene	108-38-3	0.016	0.049	0.22	0.14 J
Methyl tert-butyl ether	1634-04-4	0.017	0.041	0.45	Not Detected
Naphthalene	91-20-3	0.062	0.20	0.33	Not Detected
o-Xylene	95-47-6	0.013	0.049	0.11	0.052 J
Tetrachloroethene	127-18-4	0.0066	0.077	0.17	0.021 J
Toluene	108-88-3	0.016	0.043	0.24	0.35
trans-1,2-Dichloroethene	156-60-5	0.015	0.045	0.50	0.054 J

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN
B33 Mukilteo

Client ID:	OA03		
Lab ID:	2302662A-05B	**Date/Time Analyzed:**	3/9/23 08:35 PM
Date/Time Collected:	2/22/23 07:22 PM	**Dilution Factor:**	1.26
Media:	6 Liter Summa Canister (100% SIM Ambier	**Instrument/Filename:**	msdv.i / v030918sim

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Trichloroethene	79-01-6	0.012	0.061	0.14	Not Detected
Vinyl Chloride	75-01-4	0.023	0.029	0.032	Not Detected

J = Estimated value.
D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	106
4-Bromofluorobenzene	460-00-4	70-130	85
Toluene-d8	2037-26-5	70-130	101

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN
B33 Mukilteo

Client ID:	Lab Blank		
Lab ID:	2302662A-06A	**Date/Time Analyzed:**	3/9/23 11:10 AM
Date/Time Collected:	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msdv.i / v030906a

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,2,4-Trichlorobenzene	120-82-1	0.49	2.2	3.7	Not Detected
1,2,4-Trimethylbenzene	95-63-6	0.12	0.39	0.49	Not Detected
1,2-Dichlorobenzene	95-50-1	0.13	0.48	0.60	Not Detected
1,2-Dichloropropane	78-87-5	0.16	0.37	0.46	Not Detected
1,3,5-Trimethylbenzene	108-67-8	0.15	0.39	0.49	Not Detected
1,3-Butadiene	106-99-0	0.091	0.18	0.22	Not Detected
1,3-Dichlorobenzene	541-73-1	0.12	0.48	0.60	Not Detected
1,4-Dioxane	123-91-1	0.20	0.29	0.36	Not Detected
2,2,4-Trimethylpentane	540-84-1	0.33	1.4	2.3	Not Detected
2-Butanone (Methyl Ethyl Ketone)	78-93-3	0.33	0.88	1.5	Not Detected
2-Hexanone	591-78-6	0.42	1.2	2.0	Not Detected
2-Propanol	67-63-0	0.26	0.74	4.9	Not Detected
3-Chloropropene	107-05-1	0.34	0.94	1.6	Not Detected
4-Ethyltoluene	622-96-8	0.12	0.39	0.49	Not Detected
4-Methyl-2-pentanone	108-10-1	0.086	0.33	0.41	Not Detected
Acetone	67-64-1	0.67	0.71	4.8	Not Detected
alpha-Chlorotoluene	100-44-7	0.27	0.41	0.52	Not Detected
Bromodichloromethane	75-27-4	0.14	0.54	0.67	Not Detected
Bromoform	75-25-2	0.24	0.83	1.0	Not Detected
Bromomethane	74-83-9	1.5	3.1	19	Not Detected
Carbon Disulfide	75-15-0	0.20	0.93	1.6	0.47 J
Chlorobenzene	108-90-7	0.13	0.37	0.46	Not Detected
cis-1,3-Dichloropropene	10061-01-5	0.14	0.36	0.45	Not Detected
Cumene	98-82-8	0.074	0.39	0.49	Not Detected

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN
B33 Mukilteo

Client ID:	Lab Blank		
Lab ID:	2302662A-06A	**Date/Time Analyzed:**	3/9/23 11:10 AM
Date/Time Collected:	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msdv.i / v030906a

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Cyclohexane	110-82-7	0.18	1.0	1.7	Not Detected
Dibromochloromethane	124-48-1	0.17	0.68	0.85	Not Detected
Ethanol	64-17-5	1.0	2.3	3.8	Not Detected
Freon 11	75-69-4	0.086	0.45	0.56	Not Detected
Freon 113	76-13-1	0.096	0.61	0.77	Not Detected
Heptane	142-82-5	0.41	1.2	2.0	Not Detected
Hexachlorobutadiene	87-68-3	0.45	3.2	5.3	Not Detected
Hexane	110-54-3	0.29	1.0	1.8	Not Detected
Methylene Chloride	75-09-2	0.26	0.28	0.69	Not Detected
Propylbenzene	103-65-1	0.18	0.39	0.49	Not Detected
Styrene	100-42-5	0.079	0.34	0.42	Not Detected
Tetrahydrofuran	109-99-9	0.94	2.4	1.5	Not Detected
trans-1,3-Dichloropropene	10061-02-6	0.12	0.36	0.45	Not Detected

J = Estimated value.
D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	110
4-Bromofluorobenzene	460-00-4	70-130	86
Toluene-d8	2037-26-5	70-130	98

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN
B33 Mukilteo

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Client ID:	Lab Blank		
Lab ID:	2302662A-06B	**Date/Time Analyzed:**	3/9/23 11:10 AM
Date/Time Collected:	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msdv.i / v030906sima

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,1-Trichloroethane	71-55-6	0.015	0.049	0.11	Not Detected
1,1,2,2-Tetrachloroethane	79-34-5	0.023	0.062	0.14	0.024 J
1,1,2-Trichloroethane	79-00-5	0.022	0.049	0.11	Not Detected
1,1-Dichloroethane	75-34-3	0.010	0.036	0.081	Not Detected
1,1-Dichloroethene	75-35-4	0.020	0.036	0.040	Not Detected
1,2-Dibromoethane (EDB)	106-93-4	0.034	0.069	0.15	Not Detected
1,2-Dichloroethane	107-06-2	0.016	0.036	0.081	Not Detected
1,4-Dichlorobenzene	106-46-7	0.066	0.090	0.12	Not Detected
Benzene	71-43-2	0.031	0.048	0.16	Not Detected
Carbon Tetrachloride	56-23-5	0.023	0.057	0.12	Not Detected
Chloroethane	75-00-3	0.080	0.10	0.13	Not Detected
Chloroform	67-66-3	0.015	0.044	0.098	Not Detected
Chloromethane	74-87-3	0.10	0.16	1.0	Not Detected
cis-1,2-Dichloroethene	156-59-2	0.017	0.036	0.079	Not Detected
Ethyl Benzene	100-41-4	0.0062	0.039	0.087	0.0065 J
Freon 114	76-14-2	0.020	0.063	0.14	Not Detected
Freon 12	75-71-8	0.014	0.044	0.25	Not Detected
m,p-Xylene	108-38-3	0.012	0.039	0.17	Not Detected
Methyl tert-butyl ether	1634-04-4	0.013	0.032	0.36	Not Detected
Naphthalene	91-20-3	0.049	0.16	0.26	Not Detected
o-Xylene	95-47-6	0.010	0.039	0.087	Not Detected
Tetrachloroethene	127-18-4	0.0052	0.061	0.14	Not Detected
Toluene	108-88-3	0.012	0.034	0.19	Not Detected
trans-1,2-Dichloroethene	156-60-5	0.012	0.036	0.40	Not Detected

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN
B33 Mukilteo

Client ID:	Lab Blank		
Lab ID:	2302662A-06B	**Date/Time Analyzed:**	3/9/23 11:10 AM
Date/Time Collected:	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msdv.i / v030906sima

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Trichloroethene	79-01-6	0.0096	0.048	0.11	Not Detected
Vinyl Chloride	75-01-4	0.018	0.023	0.026	Not Detected

J = Estimated value.
D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	107
4-Bromofluorobenzene	460-00-4	70-130	87
Toluene-d8	2037-26-5	70-130	100

Client ID:	CCV		
Lab ID:	2302662A-07A	**Date/Time Analyzed:**	3/9/23 08:06 AM
Date/Time Collected:	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msdv.i / v030902

Compound	CAS#	%Recovery
1,2,4-Trichlorobenzene	120-82-1	104
1,2,4-Trimethylbenzene	95-63-6	117
1,2-Dichlorobenzene	95-50-1	102
1,2-Dichloropropane	78-87-5	101
1,3,5-Trimethylbenzene	108-67-8	112
1,3-Butadiene	106-99-0	103
1,3-Dichlorobenzene	541-73-1	102
1,4-Dioxane	123-91-1	102
2,2,4-Trimethylpentane	540-84-1	102
2-Butanone (Methyl Ethyl Ketone)	78-93-3	109
2-Hexanone	591-78-6	110
2-Propanol	67-63-0	101
3-Chloropropene	107-05-1	110
4-Ethyltoluene	622-96-8	109
4-Methyl-2-pentanone	108-10-1	102
Acetone	67-64-1	96
alpha-Chlorotoluene	100-44-7	107
Bromodichloromethane	75-27-4	106
Bromoform	75-25-2	108
Bromomethane	74-83-9	103
Carbon Disulfide	75-15-0	104
Chlorobenzene	108-90-7	104
cis-1,3-Dichloropropene	10061-01-5	98
Cumene	98-82-8	103

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN
B33 Mukilteo

Client ID:	CCV		
Lab ID:	2302662A-07A	**Date/Time Analyzed:**	3/9/23 08:06 AM
Date/Time Collected:	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msdv.i / v030902

Compound	CAS#	%Recovery
Cyclohexane	110-82-7	108
Dibromochloromethane	124-48-1	107
Ethanol	64-17-5	88
Freon 11	75-69-4	114
Freon 113	76-13-1	104
Heptane	142-82-5	101
Hexachlorobutadiene	87-68-3	104
Hexane	110-54-3	108
Methylene Chloride	75-09-2	104
Propylbenzene	103-65-1	108
Styrene	100-42-5	107
Tetrahydrofuran	109-99-9	99
trans-1,3-Dichloropropene	10061-02-6	106

D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	100
4-Bromofluorobenzene	460-00-4	70-130	91
Toluene-d8	2037-26-5	70-130	104

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN
B33 Mukilteo

Client ID:	CCV		
Lab ID:	2302662A-07B	**Date/Time Analyzed:**	3/9/23 08:06 AM
Date/Time Collected:	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msdv.i / v030902sim

Compound	CAS#	%Recovery
1,1,1-Trichloroethane	71-55-6	101
1,1,2,2-Tetrachloroethane	79-34-5	98
1,1,2-Trichloroethane	79-00-5	102
1,1-Dichloroethane	75-34-3	104
1,1-Dichloroethene	75-35-4	98
1,2-Dibromoethane (EDB)	106-93-4	100
1,2-Dichloroethane	107-06-2	91
1,4-Dichlorobenzene	106-46-7	94
Benzene	71-43-2	91
Carbon Tetrachloride	56-23-5	109
Chloroethane	75-00-3	106
Chloroform	67-66-3	98
Chloromethane	74-87-3	98
cis-1,2-Dichloroethene	156-59-2	103
Ethyl Benzene	100-41-4	101
Freon 114	76-14-2	101
Freon 12	75-71-8	100
m,p-Xylene	108-38-3	97
Methyl tert-butyl ether	1634-04-4	111
Naphthalene	91-20-3	103
o-Xylene	95-47-6	98
Tetrachloroethene	127-18-4	100
Toluene	108-88-3	94
trans-1,2-Dichloroethene	156-60-5	101

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN
B33 Mukilteo

Client ID:	CCV		
Lab ID:	2302662A-07B	**Date/Time Analyzed:**	3/9/23 08:06 AM
Date/Time Collected:	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msdv.i / v030902sim

Compound	CAS#	%Recovery
Trichloroethene	79-01-6	93
Vinyl Chloride	75-01-4	104

D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	99
4-Bromofluorobenzene	460-00-4	70-130	89
Toluene-d8	2037-26-5	70-130	106

Client ID:	LCS		
Lab ID:	2302662A-08A	**Date/Time Analyzed:**	3/9/23 08:53 AM
Date/Time Collected:	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msdv.i / v030903

Compound	CAS#	%Recovery
1,2,4-Trichlorobenzene	120-82-1	101
1,2,4-Trimethylbenzene	95-63-6	104
1,2-Dichlorobenzene	95-50-1	96
1,2-Dichloropropane	78-87-5	92
1,3,5-Trimethylbenzene	108-67-8	105
1,3-Butadiene	106-99-0	96
1,3-Dichlorobenzene	541-73-1	95
1,4-Dioxane	123-91-1	85
2,2,4-Trimethylpentane	540-84-1	94
2-Butanone (Methyl Ethyl Ketone)	78-93-3	100
2-Hexanone	591-78-6	94
2-Propanol	67-63-0	94
3-Chloropropene	107-05-1	98
4-Ethyltoluene	622-96-8	101
4-Methyl-2-pentanone	108-10-1	91
Acetone	67-64-1	90
alpha-Chlorotoluene	100-44-7	99
Bromodichloromethane	75-27-4	97
Bromoform	75-25-2	98
Bromomethane	74-83-9	97
Carbon Disulfide	75-15-0	97
Chlorobenzene	108-90-7	96
cis-1,3-Dichloropropene	10061-01-5	92
Cumene	98-82-8	95

* % Recovery is calculated using unrounded analytical results.

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN
B33 Mukilteo

Client ID:	LCS		
Lab ID:	2302662A-08A	**Date/Time Analyzed:**	3/9/23 08:53 AM
Date/Time Collected:	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msdv.i / v030903

Compound	CAS#	%Recovery
Cyclohexane	110-82-7	102
Dibromochloromethane	124-48-1	97
Ethanol	64-17-5	96
Freon 11	75-69-4	104
Freon 113	76-13-1	93
Heptane	142-82-5	95
Hexachlorobutadiene	87-68-3	100
Hexane	110-54-3	99
Methylene Chloride	75-09-2	93
Propylbenzene	103-65-1	102
Styrene	100-42-5	99
Tetrahydrofuran	109-99-9	96
trans-1,3-Dichloropropene	10061-02-6	98

D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	97
4-Bromofluorobenzene	460-00-4	70-130	91
Toluene-d8	2037-26-5	70-130	106

* % Recovery is calculated using unrounded analytical results.

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN
B33 Mukilteo

Client ID:	LCSD		
Lab ID:	2302662A-08AA	**Date/Time Analyzed:**	3/9/23 09:39 AM
Date/Time Collected:	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msdv.i / v030904

Compound	CAS#	%Recovery
1,2,4-Trichlorobenzene	120-82-1	95
1,2,4-Trimethylbenzene	95-63-6	100
1,2-Dichlorobenzene	95-50-1	93
1,2-Dichloropropane	78-87-5	89
1,3,5-Trimethylbenzene	108-67-8	101
1,3-Butadiene	106-99-0	94
1,3-Dichlorobenzene	541-73-1	93
1,4-Dioxane	123-91-1	83
2,2,4-Trimethylpentane	540-84-1	94
2-Butanone (Methyl Ethyl Ketone)	78-93-3	97
2-Hexanone	591-78-6	89
2-Propanol	67-63-0	95
3-Chloropropene	107-05-1	98
4-Ethyltoluene	622-96-8	99
4-Methyl-2-pentanone	108-10-1	88
Acetone	67-64-1	84
alpha-Chlorotoluene	100-44-7	98
Bromodichloromethane	75-27-4	93
Bromoform	75-25-2	94
Bromomethane	74-83-9	95
Carbon Disulfide	75-15-0	96
Chlorobenzene	108-90-7	93
cis-1,3-Dichloropropene	10061-01-5	90
Cumene	98-82-8	95

* % Recovery is calculated using unrounded analytical results.

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN
B33 Mukilteo

Client ID:	LCSD		
Lab ID:	2302662A-08AA	**Date/Time Analyzed:**	3/9/23 09:39 AM
Date/Time Collected:	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msdv.i / v030904

Compound	CAS#	%Recovery
Cyclohexane	110-82-7	100
Dibromochloromethane	124-48-1	93
Ethanol	64-17-5	95
Freon 11	75-69-4	102
Freon 113	76-13-1	92
Heptane	142-82-5	93
Hexachlorobutadiene	87-68-3	95
Hexane	110-54-3	99
Methylene Chloride	75-09-2	92
Propylbenzene	103-65-1	101
Styrene	100-42-5	98
Tetrahydrofuran	109-99-9	96
trans-1,3-Dichloropropene	10061-02-6	94

D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	98
4-Bromofluorobenzene	460-00-4	70-130	90
Toluene-d8	2037-26-5	70-130	103

* % Recovery is calculated using unrounded analytical results.

Client ID:	LCS		
Lab ID:	2302662A-08B	**Date/Time Analyzed:**	3/9/23 08:53 AM
Date/Time Collected:	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msdv.i / v030903sim

Compound	CAS#	%Recovery
1,1,1-Trichloroethane	71-55-6	95
1,1,2,2-Tetrachloroethane	79-34-5	93
1,1,2-Trichloroethane	79-00-5	95
1,1-Dichloroethane	75-34-3	97
1,1-Dichloroethene	75-35-4	89
1,2-Dibromoethane (EDB)	106-93-4	94
1,2-Dichloroethane	107-06-2	85
1,4-Dichlorobenzene	106-46-7	89
Benzene	71-43-2	84
Carbon Tetrachloride	56-23-5	90
Chloroethane	75-00-3	99
Chloroform	67-66-3	90
Chloromethane	74-87-3	93
cis-1,2-Dichloroethene	156-59-2	96
Ethyl Benzene	100-41-4	95
Freon 114	76-14-2	94
Freon 12	75-71-8	93
m,p-Xylene	108-38-3	90
Methyl tert-butyl ether	1634-04-4	104
Naphthalene	91-20-3	108
o-Xylene	95-47-6	92
Tetrachloroethene	127-18-4	94
Toluene	108-88-3	85
trans-1,2-Dichloroethene	156-60-5	94

* % Recovery is calculated using unrounded analytical results.

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN
B33 Mukilteo

Client ID:	LCS		
Lab ID:	2302662A-08B	**Date/Time Analyzed:**	3/9/23 08:53 AM
Date/Time Collected:	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msdv.i / v030903sim

Compound	CAS#	%Recovery
Trichloroethene	79-01-6	86
Vinyl Chloride	75-01-4	98

D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	99
4-Bromofluorobenzene	460-00-4	70-130	88
Toluene-d8	2037-26-5	70-130	105

* % Recovery is calculated using unrounded analytical results.

Client ID:	LCSD		
Lab ID:	2302662A-08BB	**Date/Time Analyzed:**	3/9/23 09:39 AM
Date/Time Collected:	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msdv.i / v030904sim

Compound	CAS#	%Recovery
1,1,1-Trichloroethane	71-55-6	95
1,1,2,2-Tetrachloroethane	79-34-5	90
1,1,2-Trichloroethane	79-00-5	91
1,1-Dichloroethane	75-34-3	96
1,1-Dichloroethene	75-35-4	88
1,2-Dibromoethane (EDB)	106-93-4	90
1,2-Dichloroethane	107-06-2	83
1,4-Dichlorobenzene	106-46-7	86
Benzene	71-43-2	82
Carbon Tetrachloride	56-23-5	89
Chloroethane	75-00-3	99
Chloroform	67-66-3	89
Chloromethane	74-87-3	94
cis-1,2-Dichloroethene	156-59-2	94
Ethyl Benzene	100-41-4	93
Freon 114	76-14-2	93
Freon 12	75-71-8	93
m,p-Xylene	108-38-3	89
Methyl tert-butyl ether	1634-04-4	103
Naphthalene	91-20-3	98
o-Xylene	95-47-6	92
Tetrachloroethene	127-18-4	90
Toluene	108-88-3	84
trans-1,2-Dichloroethene	156-60-5	92

* % Recovery is calculated using unrounded analytical results.

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN
B33 Mukilteo

Client ID:	LCSD		
Lab ID:	2302662A-08BB	**Date/Time Analyzed:**	3/9/23 09:39 AM
Date/Time Collected:	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msdv.i / v030904sim

Compound	CAS#	%Recovery
Trichloroethene	79-01-6	85
Vinyl Chloride	75-01-4	98

D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	100
4-Bromofluorobenzene	460-00-4	70-130	90
Toluene-d8	2037-26-5	70-130	106

* % Recovery is calculated using unrounded analytical results.

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Analysis Request /Canister Chain of Custody

For Laboratory Use Only
PID: _____ Workorder #: 2302602

180 Blue Ravine Rd. Suite B, Folsom, CA 95630
Phone (800) 985-5955; Fax (916) 351-8279

Client: Integral Consulting
Project Name: B33 Mukilteo
Project Manager: Emily Guyer
Project #: 3163-0401
Sampler: K. Kirkland
Site Name: B33 Mukilteo Speedway Property

Special Instructions/Notes:
Any questions please call K. Kirkland @ 206.390.0191 (Kelsey)

Turnaround Time (Rush surcharges may apply)
Standard X Rush _____(specify)

Lab ID	Field Sample Identification(Location)	Can #	Flow Controller #	Start Sampling Information		Stop Sampling Information		Canister Vacuum/Pressure		Lab Use Only		Requested Analyses			
				Date	Time	Date	Time	Initial (in Hg)	Final (in Hg)	Receipt	Final (psig) Gas: N_2 / He	TO-15 LL SIM	Helium		
01A	IA 01	6L2593	26059	2/22/23	11:51	2/22/23	19:31	-28.5	-5			X			
02A	IA 02	6L2381	25598	2/22/23	11:44	2/22/23	19:22	-30	-5			X			
03A	OA 01	6L3410	25946	2/22/23	11:57	2/22/23	19:19	-28.5	-5			X			
04A	OA 02	6L3740	22294	2/22/23	12:02	2/22/23	19:05	-29	-5			X			
05A	OA 03	6L1801	26022	2/22/23	11:59	2/22/23	19:22	-29	-5			X			
06A	SV 01	6L1046	24271	2/23/23	17:15	2/23/23	18:27	-27	-6.5			X	X		
07A	SV 02	6L2444	23558	2/23/23	15:57	2/23/23	16:30	-27	-6.5			X	X		
08A	SV 03	6L3067	24917	2/23/23	10:16	2/23/23	10:51	-27	-5			X	X		
09A	SV 04	6L2261	24255	2/23/23	7:58	2/23/23	8:39	-28	-5			X	X		
10A	SV 05	6L2947	24886	2/23/23	9:12	2/23/23	9:51	-27.5	-5			X	X		
	[redacted]														
11A	DUP-01	6L0281	-	2/23/23	-	2/23/23	-	-	-			X	X		

Relinquished by: (Signature/Affiliation)	Date	Time	Received by: (Signature/Affiliation)	Date	Time
Stephen Sherman Integral Consulting	2/24/23	1330		2/22/23	1330
Relinquished by: (Signature/Affiliation)	Date	Time	Received by: (Signature/Affiliation)	Date	Time
				2/25/23	1108
Relinquished by: (Signature/Affiliation)	Date	Time	Received by: (Signature/Affiliation)	Date	Time

Fed Ex

Lab Use Only

Shipper Name: Stephen Sherman | Custody Seals Intact? | Yes | No | None

Sample Transportation Notice: Relinquishing signature on this document indicates that samples are shipped in compliance with all applicable local, State, Federal, and international laws, regulations, and ordinances of any kind. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Eurofins Air Toxics against any claim, demand, or action, of any kind, related to the collection, handling, of shipping of samples. D.O.T Hotline (800) 467-4922

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3/10/2023
Ms. Emily Guyer
Integral Consulting
719 2nd Avenue, Suite 700

Seattle WA 98104

Project Name: B33 Mukilteo
Project #: 3163-0401
Workorder #: 2302662B

Dear Ms. Emily Guyer

The following report includes the data for the above referenced project for sample(s) received on 2/25/2023 at Eurofins Air Toxics LLC.

The data and associated QC analyzed by Modified 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: Monica Tran at 916-985-1000 if you have any questions regarding the data in this report.

Regards,

Monica Tran

Project Manager

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WORK ORDER #: 2302662B

Work Order Summary

CLIENT:	Ms. Emily Guyer Integral Consulting 719 2nd Avenue, Suite 700 Seattle, WA 98104	**BILL TO:**	Accounts Payable Integral Consulting 285 Century Place Suite 190 Louisville, CO 80027
PHONE:	206-230-9600	**P.O. #**	C3163 / task 0401
FAX:	206-230-9601	**PROJECT #**	3163-0401 B33 Mukilteo
DATE RECEIVED:	02/25/2023	**CONTACT:**	Monica Tran
DATE COMPLETED:	03/10/2023		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
06A	SV01	Modified TO-15	6.5 "Hg	1.9 psi
07A	SV02	Modified TO-15	7.1 "Hg	1.8 psi
08A	SV03	Modified TO-15	6.3 "Hg	2 psi
09A	SV04	Modified TO-15	4.3 "Hg	1.9 psi
10A	SV05	Modified TO-15	5.1 "Hg	1.9 psi
11A	DUP-01	Modified TO-15	6.3 "Hg	1.9 psi
12A	Lab Blank	Modified TO-15	NA	NA
13A	CCV	Modified TO-15	NA	NA
14A	LCS	Modified TO-15	NA	NA
14AA	LCSD	Modified TO-15	NA	NA

CERTIFIED BY: Heidi Hayes

Technical Director

DATE: 03/10/23

Certification numbers: AZ Licensure AZ0775, FL NELAP – E87680, LA NELAP – 02089, NH NELAP – 209222, NJ NELAP - CA016, NY NELAP - 11291, TX NELAP – T104704434-22-18, UT NELAP – CA009332022-14, VA NELAP - 12240, WA NELAP - C935
Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
Accreditation number: CA300005-017, Effective date: 10/18/2022, Expiration date: 10/17/2023.
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
Modified TO-15
Integral Consulting
Workorder# 2302662B

Four 6 Liter Summa Canister (100% Certified) and two 6 Liter Summa Canister (100% SIM Ambient) samples were received on February 25, 2023. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the full scan mode.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the EATL modifications.

Requirement	***TO-15***	***ATL Modifications***
Initial Calibration	</=30% RSD with 2 compounds allowed out to < 40% RSD	</=30% RSD with 4 compounds allowed out to < 40% RSD
Blank and standards	Zero Air	UHP Nitrogen provides a higher purity gas matrix than zero air

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

As per client project requirements, the laboratory has reported estimated values for target compound hits that are below the Reporting Limit but greater than the Method Detection Limit. Concentrations that are below the level at which the canister was certified may be false positives.

Dilution was performed on samples SV01 and DUP-01 due to the presence of high level target species.

Definition of Data Qualifying Flags

Eight 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.

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

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN
B33 Mukilteo

Client ID:	SV01		
Lab ID:	2302662B-06A	**Date/Time Analyzed:**	3/9/23 09:15 PM
Date/Time Collected:	2/23/23 06:27 PM	**Dilution Factor:**	4.80
Media:	6 Liter Summa Canister (100% Certified)	**Instrument/Filename:**	msdv.i / v030919

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,1-Trichloroethane	71-55-6	0.58	2.1	2.6	Not Detected
1,1,2,2-Tetrachloroethane	79-34-5	1.1	2.6	3.3	Not Detected
1,1,2-Trichloroethane	79-00-5	0.63	2.1	2.6	Not Detected
1,1-Dichloroethane	75-34-3	0.54	1.6	1.9	Not Detected
1,1-Dichloroethene	75-35-4	0.79	1.5	1.9	Not Detected
1,2,4-Trichlorobenzene	120-82-1	2.4	11	18	Not Detected
1,2,4-Trimethylbenzene	95-63-6	0.57	1.9	2.4	Not Detected
1,2-Dibromoethane (EDB)	106-93-4	1.0	3.0	3.7	Not Detected
1,2-Dichlorobenzene	95-50-1	0.63	2.3	2.9	Not Detected
1,2-Dichloroethane	107-06-2	0.42	1.6	1.9	Not Detected
1,2-Dichloropropane	78-87-5	0.78	1.8	2.2	Not Detected
1,3,5-Trimethylbenzene	108-67-8	0.73	1.9	2.4	Not Detected
1,3-Butadiene	106-99-0	0.44	0.85	1.1	Not Detected
1,3-Dichlorobenzene	541-73-1	0.60	2.3	2.9	Not Detected
1,4-Dichlorobenzene	106-46-7	0.46	2.3	2.9	Not Detected
1,4-Dioxane	123-91-1	0.95	1.4	8.6	Not Detected
2,2,4-Trimethylpentane	540-84-1	1.6	6.7	11	Not Detected
2-Butanone (Methyl Ethyl Ketone)	78-93-3	1.6	4.2	28	Not Detected
2-Hexanone	591-78-6	2.0	5.9	9.8	Not Detected
2-Propanol	67-63-0	1.3	3.5	24	Not Detected
3-Chloropropene	107-05-1	1.6	4.5	7.5	Not Detected
4-Ethyltoluene	622-96-8	0.56	1.9	2.4	Not Detected
4-Methyl-2-pentanone	108-10-1	0.41	1.6	2.0	0.86 J
Acetone	67-64-1	3.2	3.4	23	26

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN
B33 Mukilteo

Client ID:	SV01		
Lab ID:	2302662B-06A	**Date/Time Analyzed:**	3/9/23 09:15 PM
Date/Time Collected:	2/23/23 06:27 PM	**Dilution Factor:**	4.80
Media:	6 Liter Summa Canister (100% Certified)	**Instrument/Filename:**	msdv.i / v030919

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
alpha-Chlorotoluene	100-44-7	1.3	2.0	2.5	Not Detected
Benzene	71-43-2	0.28	1.2	1.5	Not Detected
Bromodichloromethane	75-27-4	0.68	2.6	3.2	Not Detected
Bromoform	75-25-2	1.1	4.0	5.0	Not Detected
Bromomethane	74-83-9	7.2	15	93	Not Detected
Carbon Disulfide	75-15-0	0.98	4.5	75	1.6 J
Carbon Tetrachloride	56-23-5	0.38	2.4	3.0	Not Detected
Chlorobenzene	108-90-7	0.63	1.8	2.2	Not Detected
Chloroethane	75-00-3	1.6	3.8	6.3	Not Detected
Chloroform	67-66-3	0.46	1.9	2.3	Not Detected
Chloromethane	74-87-3	0.70	3.0	5.0	Not Detected
cis-1,2-Dichloroethene	156-59-2	0.55	1.5	1.9	Not Detected
cis-1,3-Dichloropropene	10061-01-5	0.66	1.7	2.2	Not Detected
Cumene	98-82-8	0.36	1.9	2.4	Not Detected
Cyclohexane	110-82-7	0.86	5.0	8.3	Not Detected
Dibromochloromethane	124-48-1	0.83	3.3	4.1	Not Detected
Ethanol	64-17-5	4.8	11	18	24
Ethyl Benzene	100-41-4	0.65	1.7	2.1	16
Freon 11	75-69-4	0.41	2.2	2.7	2.9
Freon 113	76-13-1	0.46	2.9	3.7	Not Detected
Freon 114	76-14-2	0.98	2.7	3.4	Not Detected
Freon 12	75-71-8	1.6	7.1	12	19
Heptane	142-82-5	2.0	5.9	9.8	Not Detected
Hexachlorobutadiene	87-68-3	2.1	15	26	Not Detected

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN
B33 Mukilteo

Client ID:	SV01		
Lab ID:	2302662B-06A	**Date/Time Analyzed:**	3/9/23 09:15 PM
Date/Time Collected:	2/23/23 06:27 PM	**Dilution Factor:**	4.80
Media:	6 Liter Summa Canister (100% Certified)	**Instrument/Filename:**	msdv.i / v030919

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Hexane	110-54-3	1.4	5.1	8.4	Not Detected
m,p-Xylene	108-38-3	0.61	1.7	2.1	74
Methyl tert-butyl ether	1634-04-4	0.36	1.4	1.7	Not Detected
Methylene Chloride	75-09-2	1.2	1.3	8.3	Not Detected
Naphthalene	91-20-3	0.43	0.75	5.0	Not Detected
o-Xylene	95-47-6	0.68	1.7	2.1	22
Propylbenzene	103-65-1	0.86	1.9	2.4	Not Detected
Styrene	100-42-5	0.38	1.6	2.0	Not Detected
Tetrachloroethene	127-18-4	1.2	2.6	3.2	970
Tetrahydrofuran	109-99-9	4.5	11	7.1	Not Detected
Toluene	108-88-3	0.54	1.4	18	Not Detected
trans-1,2-Dichloroethene	156-60-5	0.33	1.5	1.9	Not Detected
trans-1,3-Dichloropropene	10061-02-6	0.58	1.7	2.2	Not Detected
Trichloroethene	79-01-6	1.0	2.1	2.6	10
Vinyl Chloride	75-01-4	0.35	0.98	1.2	Not Detected

J = Estimated value.
D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	105
4-Bromofluorobenzene	460-00-4	70-130	98
Toluene-d8	2037-26-5	70-130	102

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN
B33 Mukilteo

Client ID:	SV02		
Lab ID:	2302662B-07A	**Date/Time Analyzed:**	3/9/23 11:14 PM
Date/Time Collected:	2/23/23 04:30 PM	**Dilution Factor:**	1.47
Media:	6 Liter Summa Canister (100% SIM Ambier	**Instrument/Filename:**	msdv.i / v030922

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,1-Trichloroethane	71-55-6	0.18	0.64	0.80	2.7
1,1,2,2-Tetrachloroethane	79-34-5	0.33	0.81	1.0	Not Detected
1,1,2-Trichloroethane	79-00-5	0.19	0.64	0.80	Not Detected
1,1-Dichloroethane	75-34-3	0.17	0.48	0.60	Not Detected
1,1-Dichloroethene	75-35-4	0.24	0.47	0.58	Not Detected
1,2,4-Trichlorobenzene	120-82-1	0.72	3.3	5.4	Not Detected
1,2,4-Trimethylbenzene	95-63-6	0.17	0.58	0.72	0.24 J
1,2-Dibromoethane (EDB)	106-93-4	0.31	0.90	1.1	Not Detected
1,2-Dichlorobenzene	95-50-1	0.19	0.71	0.88	Not Detected
1,2-Dichloroethane	107-06-2	0.13	0.48	0.59	Not Detected
1,2-Dichloropropane	78-87-5	0.24	0.54	0.68	Not Detected
1,3,5-Trimethylbenzene	108-67-8	0.22	0.58	0.72	Not Detected
1,3-Butadiene	106-99-0	0.13	0.26	0.32	Not Detected
1,3-Dichlorobenzene	541-73-1	0.18	0.71	0.88	Not Detected
1,4-Dichlorobenzene	106-46-7	0.14	0.71	0.88	Not Detected
1,4-Dioxane	123-91-1	0.29	0.42	2.6	Not Detected
2,2,4-Trimethylpentane	540-84-1	0.49	2.1	3.4	Not Detected
2-Butanone (Methyl Ethyl Ketone)	78-93-3	0.49	1.3	8.7	Not Detected
2-Hexanone	591-78-6	0.61	1.8	3.0	Not Detected
2-Propanol	67-63-0	0.39	1.1	7.2	0.67 J
3-Chloropropene	107-05-1	0.50	1.4	2.3	Not Detected
4-Ethyltoluene	622-96-8	0.17	0.58	0.72	0.42 J
4-Methyl-2-pentanone	108-10-1	0.13	0.48	0.60	0.72
Acetone	67-64-1	0.99	1.0	7.0	30

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN
B33 Mukilteo

Client ID:	SV02		
Lab ID:	2302662B-07A	**Date/Time Analyzed:**	3/9/23 11:14 PM
Date/Time Collected:	2/23/23 04:30 PM	**Dilution Factor:**	1.47
Media:	6 Liter Summa Canister (100% SIM Ambier	**Instrument/Filename:**	msdv.i / v030922

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
alpha-Chlorotoluene	100-44-7	0.40	0.61	0.76	Not Detected
Benzene	71-43-2	0.087	0.38	0.47	0.11 J
Bromodichloromethane	75-27-4	0.21	0.79	0.98	Not Detected
Bromoform	75-25-2	0.34	1.2	1.5	Not Detected
Bromomethane	74-83-9	2.2	4.6	28	Not Detected
Carbon Disulfide	75-15-0	0.30	1.4	23	0.45 J
Carbon Tetrachloride	56-23-5	0.12	0.74	0.92	Not Detected
Chlorobenzene	108-90-7	0.19	0.54	0.68	Not Detected
Chloroethane	75-00-3	0.49	1.2	1.9	Not Detected
Chloroform	67-66-3	0.14	0.57	0.72	Not Detected
Chloromethane	74-87-3	0.21	0.91	1.5	Not Detected
cis-1,2-Dichloroethene	156-59-2	0.17	0.47	0.58	Not Detected
cis-1,3-Dichloropropene	10061-01-5	0.20	0.53	0.67	Not Detected
Cumene	98-82-8	0.11	0.58	0.72	0.32 J
Cyclohexane	110-82-7	0.26	1.5	2.5	Not Detected
Dibromochloromethane	124-48-1	0.25	1.0	1.2	Not Detected
Ethanol	64-17-5	1.5	3.3	5.5	17
Ethyl Benzene	100-41-4	0.20	0.51	0.64	17
Freon 11	75-69-4	0.13	0.66	0.82	4.7
Freon 113	76-13-1	0.14	0.90	1.1	0.42 J
Freon 114	76-14-2	0.30	0.82	1.0	Not Detected
Freon 12	75-71-8	0.48	2.2	3.6	32
Heptane	142-82-5	0.61	1.8	3.0	Not Detected
Hexachlorobutadiene	87-68-3	0.66	4.7	7.8	Not Detected

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN
B33 Mukilteo

Client ID:	SV02		
Lab ID:	2302662B-07A	**Date/Time Analyzed:**	3/9/23 11:14 PM
Date/Time Collected:	2/23/23 04:30 PM	**Dilution Factor:**	1.47
Media:	6 Liter Summa Canister (100% SIM Ambier	**Instrument/Filename:**	msdv.i / v030922

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Hexane	110-54-3	0.43	1.6	2.6	Not Detected
m,p-Xylene	108-38-3	0.19	0.51	0.64	78
Methyl tert-butyl ether	1634-04-4	0.11	0.42	0.53	Not Detected
Methylene Chloride	75-09-2	0.38	0.41	2.6	Not Detected
Naphthalene	91-20-3	0.13	0.23	1.5	Not Detected
o-Xylene	95-47-6	0.21	0.51	0.64	22
Propylbenzene	103-65-1	0.26	0.58	0.72	Not Detected
Styrene	100-42-5	0.12	0.50	0.63	Not Detected
Tetrachloroethene	127-18-4	0.37	0.80	1.0	110
Tetrahydrofuran	109-99-9	1.4	3.5	2.2	Not Detected
Toluene	108-88-3	0.16	0.44	5.5	0.36 J
trans-1,2-Dichloroethene	156-60-5	0.10	0.47	0.58	Not Detected
trans-1,3-Dichloropropene	10061-02-6	0.18	0.53	0.67	Not Detected
Trichloroethene	79-01-6	0.32	0.63	0.79	Not Detected
Vinyl Chloride	75-01-4	0.11	0.30	0.38	Not Detected

J = Estimated value.
D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	114
4-Bromofluorobenzene	460-00-4	70-130	92
Toluene-d8	2037-26-5	70-130	103

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN
B33 Mukilteo

Client ID:	SV03		
Lab ID:	2302662B-08A	**Date/Time Analyzed:**	3/9/23 09:54 PM
Date/Time Collected:	2/23/23 10:51 AM	**Dilution Factor:**	1.44
Media:	6 Liter Summa Canister (100% SIM Ambier	**Instrument/Filename:**	msdv.i / v030920

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,1-Trichloroethane	71-55-6	0.17	0.63	0.78	0.26 J
1,1,2,2-Tetrachloroethane	79-34-5	0.32	0.79	0.99	Not Detected
1,1,2-Trichloroethane	79-00-5	0.19	0.63	0.78	Not Detected
1,1-Dichloroethane	75-34-3	0.16	0.47	0.58	Not Detected
1,1-Dichloroethene	75-35-4	0.24	0.46	0.57	Not Detected
1,2,4-Trichlorobenzene	120-82-1	0.70	3.2	5.3	Not Detected
1,2,4-Trimethylbenzene	95-63-6	0.17	0.57	0.71	0.30 J
1,2-Dibromoethane (EDB)	106-93-4	0.30	0.88	1.1	Not Detected
1,2-Dichlorobenzene	95-50-1	0.19	0.69	0.86	Not Detected
1,2-Dichloroethane	107-06-2	0.13	0.47	0.58	Not Detected
1,2-Dichloropropane	78-87-5	0.23	0.53	0.66	Not Detected
1,3,5-Trimethylbenzene	108-67-8	0.22	0.57	0.71	Not Detected
1,3-Butadiene	106-99-0	0.13	0.25	0.32	Not Detected
1,3-Dichlorobenzene	541-73-1	0.18	0.69	0.86	Not Detected
1,4-Dichlorobenzene	106-46-7	0.14	0.69	0.86	Not Detected
1,4-Dioxane	123-91-1	0.28	0.42	2.6	Not Detected
2,2,4-Trimethylpentane	540-84-1	0.48	2.0	3.4	Not Detected
2-Butanone (Methyl Ethyl Ketone)	78-93-3	0.48	1.3	8.5	Not Detected
2-Hexanone	591-78-6	0.60	1.8	2.9	Not Detected
2-Propanol	67-63-0	0.38	1.1	7.1	0.49 J
3-Chloropropene	107-05-1	0.49	1.4	2.2	Not Detected
4-Ethyltoluene	622-96-8	0.17	0.57	0.71	Not Detected
4-Methyl-2-pentanone	108-10-1	0.12	0.47	0.59	0.24 J
Acetone	67-64-1	0.97	1.0	6.8	34

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN
B33 Mukilteo

Client ID:	SV03		
Lab ID:	2302662B-08A	**Date/Time Analyzed:**	3/9/23 09:54 PM
Date/Time Collected:	2/23/23 10:51 AM	**Dilution Factor:**	1.44
Media:	6 Liter Summa Canister (100% SIM Ambier	**Instrument/Filename:**	msdv.i / v030920

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
alpha-Chlorotoluene	100-44-7	0.39	0.60	0.74	Not Detected
Benzene	71-43-2	0.085	0.37	0.46	0.15 J
Bromodichloromethane	75-27-4	0.20	0.77	0.96	Not Detected
Bromoform	75-25-2	0.34	1.2	1.5	Not Detected
Bromomethane	74-83-9	2.2	4.5	28	Not Detected
Carbon Disulfide	75-15-0	0.29	1.3	22	0.50 J
Carbon Tetrachloride	56-23-5	0.12	0.72	0.91	0.13 J
Chlorobenzene	108-90-7	0.19	0.53	0.66	Not Detected
Chloroethane	75-00-3	0.48	1.1	1.9	Not Detected
Chloroform	67-66-3	0.14	0.56	0.70	Not Detected
Chloromethane	74-87-3	0.21	0.89	1.5	Not Detected
cis-1,2-Dichloroethene	156-59-2	0.16	0.46	0.57	Not Detected
cis-1,3-Dichloropropene	10061-01-5	0.20	0.52	0.65	Not Detected
Cumene	98-82-8	0.11	0.57	0.71	0.25 J
Cyclohexane	110-82-7	0.26	1.5	2.5	Not Detected
Dibromochloromethane	124-48-1	0.25	0.98	1.2	Not Detected
Ethanol	64-17-5	1.4	3.2	5.4	5.6
Ethyl Benzene	100-41-4	0.19	0.50	0.62	15
Freon 11	75-69-4	0.12	0.65	0.81	3.2
Freon 113	76-13-1	0.14	0.88	1.1	0.40 J
Freon 114	76-14-2	0.30	0.80	1.0	Not Detected
Freon 12	75-71-8	0.47	2.1	3.6	7.9
Heptane	142-82-5	0.60	1.8	3.0	Not Detected
Hexachlorobutadiene	87-68-3	0.64	4.6	7.7	Not Detected

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN
B33 Mukilteo

Client ID:	SV03		
Lab ID:	2302662B-08A	**Date/Time Analyzed:**	3/9/23 09:54 PM
Date/Time Collected:	2/23/23 10:51 AM	**Dilution Factor:**	1.44
Media:	6 Liter Summa Canister (100% SIM Ambier	**Instrument/Filename:**	msdv.i / v030920

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Hexane	110-54-3	0.42	1.5	2.5	Not Detected
m,p-Xylene	108-38-3	0.18	0.50	0.62	73
Methyl tert-butyl ether	1634-04-4	0.11	0.42	0.52	Not Detected
Methylene Chloride	75-09-2	0.38	0.40	2.5	Not Detected
Naphthalene	91-20-3	0.13	0.23	1.5	0.18 J
o-Xylene	95-47-6	0.20	0.50	0.62	18
Propylbenzene	103-65-1	0.26	0.57	0.71	Not Detected
Styrene	100-42-5	0.11	0.49	0.61	Not Detected
Tetrachloroethene	127-18-4	0.36	0.78	0.98	190
Tetrahydrofuran	109-99-9	1.4	3.4	2.1	Not Detected
Toluene	108-88-3	0.16	0.43	5.4	0.34 J
trans-1,2-Dichloroethene	156-60-5	0.098	0.46	0.57	Not Detected
trans-1,3-Dichloropropene	10061-02-6	0.17	0.52	0.65	Not Detected
Trichloroethene	79-01-6	0.31	0.62	0.77	1.1
Vinyl Chloride	75-01-4	0.11	0.29	0.37	Not Detected

J = Estimated value.
D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	111
4-Bromofluorobenzene	460-00-4	70-130	90
Toluene-d8	2037-26-5	70-130	103

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN
B33 Mukilteo

Client ID:	SV04		
Lab ID:	2302662B-09A	**Date/Time Analyzed:**	3/9/23 10:34 PM
Date/Time Collected:	2/23/23 08:39 AM	**Dilution Factor:**	1.32
Media:	6 Liter Summa Canister (100% Certified)	**Instrument/Filename:**	msdv.i / v030921

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,1-Trichloroethane	71-55-6	0.16	0.58	0.72	0.52 J
1,1,2,2-Tetrachloroethane	79-34-5	0.30	0.72	0.91	Not Detected
1,1,2-Trichloroethane	79-00-5	0.17	0.58	0.72	Not Detected
1,1-Dichloroethane	75-34-3	0.15	0.43	0.53	Not Detected
1,1-Dichloroethene	75-35-4	0.22	0.42	0.52	Not Detected
1,2,4-Trichlorobenzene	120-82-1	0.65	2.9	4.9	Not Detected
1,2,4-Trimethylbenzene	95-63-6	0.16	0.52	0.65	0.26 J
1,2-Dibromoethane (EDB)	106-93-4	0.28	0.81	1.0	Not Detected
1,2-Dichlorobenzene	95-50-1	0.17	0.63	0.79	Not Detected
1,2-Dichloroethane	107-06-2	0.12	0.43	0.53	Not Detected
1,2-Dichloropropane	78-87-5	0.21	0.49	0.61	Not Detected
1,3,5-Trimethylbenzene	108-67-8	0.20	0.52	0.65	Not Detected
1,3-Butadiene	106-99-0	0.12	0.23	0.29	Not Detected
1,3-Dichlorobenzene	541-73-1	0.16	0.63	0.79	Not Detected
1,4-Dichlorobenzene	106-46-7	0.13	0.63	0.79	Not Detected
1,4-Dioxane	123-91-1	0.26	0.38	2.4	Not Detected
2,2,4-Trimethylpentane	540-84-1	0.44	1.8	3.1	Not Detected
2-Butanone (Methyl Ethyl Ketone)	78-93-3	0.44	1.2	7.8	0.45 J
2-Hexanone	591-78-6	0.55	1.6	2.7	Not Detected
2-Propanol	67-63-0	0.35	0.97	6.5	0.58 J
3-Chloropropene	107-05-1	0.45	1.2	2.1	Not Detected
4-Ethyltoluene	622-96-8	0.15	0.52	0.65	0.29 J
4-Methyl-2-pentanone	108-10-1	0.11	0.43	0.54	0.23 J
Acetone	67-64-1	0.89	0.94	6.3	37

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN
B33 Mukilteo

Client ID:	SV04		
Lab ID:	2302662B-09A	**Date/Time Analyzed:**	3/9/23 10:34 PM
Date/Time Collected:	2/23/23 08:39 AM	**Dilution Factor:**	1.32
Media:	6 Liter Summa Canister (100% Certified)	**Instrument/Filename:**	msdv.i / v030921

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
alpha-Chlorotoluene	100-44-7	0.36	0.55	0.68	Not Detected
Benzene	71-43-2	0.078	0.34	0.42	0.10 J
Bromodichloromethane	75-27-4	0.19	0.71	0.88	Not Detected
Bromoform	75-25-2	0.31	1.1	1.4	Not Detected
Bromomethane	74-83-9	2.0	4.1	26	Not Detected
Carbon Disulfide	75-15-0	0.27	1.2	20	0.40 J
Carbon Tetrachloride	56-23-5	0.10	0.66	0.83	0.16 J
Chlorobenzene	108-90-7	0.17	0.49	0.61	Not Detected
Chloroethane	75-00-3	0.44	1.0	1.7	Not Detected
Chloroform	67-66-3	0.12	0.52	0.64	Not Detected
Chloromethane	74-87-3	0.19	0.82	1.4	Not Detected
cis-1,2-Dichloroethene	156-59-2	0.15	0.42	0.52	Not Detected
cis-1,3-Dichloropropene	10061-01-5	0.18	0.48	0.60	Not Detected
Cumene	98-82-8	0.098	0.52	0.65	0.22 J
Cyclohexane	110-82-7	0.24	1.4	2.3	Not Detected
Dibromochloromethane	124-48-1	0.23	0.90	1.1	Not Detected
Ethanol	64-17-5	1.3	3.0	5.0	7.2
Ethyl Benzene	100-41-4	0.18	0.46	0.57	5.4
Freon 11	75-69-4	0.11	0.59	0.74	3.0
Freon 113	76-13-1	0.13	0.81	1.0	0.44 J
Freon 114	76-14-2	0.27	0.74	0.92	Not Detected
Freon 12	75-71-8	0.43	2.0	3.3	9.0
Heptane	142-82-5	0.55	1.6	2.7	Not Detected
Hexachlorobutadiene	87-68-3	0.59	4.2	7.0	Not Detected

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN
B33 Mukilteo

Client ID:	SV04		
Lab ID:	2302662B-09A	**Date/Time Analyzed:**	3/9/23 10:34 PM
Date/Time Collected:	2/23/23 08:39 AM	**Dilution Factor:**	1.32
Media:	6 Liter Summa Canister (100% Certified)	**Instrument/Filename:**	msdv.i / v030921

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Hexane	110-54-3	0.39	1.4	2.3	Not Detected
m,p-Xylene	108-38-3	0.17	0.46	0.57	25
Methyl tert-butyl ether	1634-04-4	0.099	0.38	0.48	Not Detected
Methylene Chloride	75-09-2	0.34	0.37	2.3	Not Detected
Naphthalene	91-20-3	0.12	0.21	1.4	0.18 J
o-Xylene	95-47-6	0.18	0.46	0.57	9.8
Propylbenzene	103-65-1	0.24	0.52	0.65	Not Detected
Styrene	100-42-5	0.10	0.45	0.56	0.85
Tetrachloroethene	127-18-4	0.33	0.72	0.90	15
Tetrahydrofuran	109-99-9	1.2	3.1	1.9	Not Detected
Toluene	108-88-3	0.15	0.40	5.0	0.34 J
trans-1,2-Dichloroethene	156-60-5	0.090	0.42	0.52	Not Detected
trans-1,3-Dichloropropene	10061-02-6	0.16	0.48	0.60	Not Detected
Trichloroethene	79-01-6	0.28	0.57	0.71	Not Detected
Vinyl Chloride	75-01-4	0.097	0.27	0.34	Not Detected

J = Estimated value.
D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	108
4-Bromofluorobenzene	460-00-4	70-130	94
Toluene-d8	2037-26-5	70-130	102

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN
B33 Mukilteo

Client ID:	SV05		
Lab ID:	2302662B-10A	**Date/Time Analyzed:**	3/10/23 05:42 AM
Date/Time Collected:	2/23/23 09:51 AM	**Dilution Factor:**	1.36
Media:	6 Liter Summa Canister (100% Certified)	**Instrument/Filename:**	msdv.i / v030923

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,1-Trichloroethane	71-55-6	0.16	0.59	0.74	3.0
1,1,2,2-Tetrachloroethane	79-34-5	0.31	0.75	0.93	Not Detected
1,1,2-Trichloroethane	79-00-5	0.18	0.59	0.74	Not Detected
1,1-Dichloroethane	75-34-3	0.15	0.44	0.55	Not Detected
1,1-Dichloroethene	75-35-4	0.22	0.43	0.54	Not Detected
1,2,4-Trichlorobenzene	120-82-1	0.67	3.0	5.0	Not Detected
1,2,4-Trimethylbenzene	95-63-6	0.16	0.53	0.67	0.26 J
1,2-Dibromoethane (EDB)	106-93-4	0.29	0.84	1.0	Not Detected
1,2-Dichlorobenzene	95-50-1	0.18	0.65	0.82	Not Detected
1,2-Dichloroethane	107-06-2	0.12	0.44	0.55	Not Detected
1,2-Dichloropropane	78-87-5	0.22	0.50	0.63	Not Detected
1,3,5-Trimethylbenzene	108-67-8	0.21	0.53	0.67	Not Detected
1,3-Butadiene	106-99-0	0.12	0.24	0.30	Not Detected
1,3-Dichlorobenzene	541-73-1	0.17	0.65	0.82	Not Detected
1,4-Dichlorobenzene	106-46-7	0.13	0.65	0.82	Not Detected
1,4-Dioxane	123-91-1	0.27	0.39	2.4	Not Detected
2,2,4-Trimethylpentane	540-84-1	0.45	1.9	3.2	Not Detected
2-Butanone (Methyl Ethyl Ketone)	78-93-3	0.45	1.2	8.0	0.63 J
2-Hexanone	591-78-6	0.56	1.7	2.8	Not Detected
2-Propanol	67-63-0	0.36	1.0	6.7	0.71 J
3-Chloropropene	107-05-1	0.46	1.3	2.1	Not Detected
4-Ethyltoluene	622-96-8	0.16	0.53	0.67	Not Detected
4-Methyl-2-pentanone	108-10-1	0.12	0.44	0.56	0.72
Acetone	67-64-1	0.91	0.97	6.5	28

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN
B33 Mukilteo

Client ID:	SV05		
Lab ID:	2302662B-10A	**Date/Time Analyzed:**	3/10/23 05:42 AM
Date/Time Collected:	2/23/23 09:51 AM	**Dilution Factor:**	1.36
Media:	6 Liter Summa Canister (100% Certified)	**Instrument/Filename:**	msdv.i / v030923

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
alpha-Chlorotoluene	100-44-7	0.37	0.56	0.70	Not Detected
Benzene	71-43-2	0.080	0.35	0.43	0.18 J
Bromodichloromethane	75-27-4	0.19	0.73	0.91	Not Detected
Bromoform	75-25-2	0.32	1.1	1.4	Not Detected
Bromomethane	74-83-9	2.0	4.2	26	Not Detected
Carbon Disulfide	75-15-0	0.28	1.3	21	0.72 J
Carbon Tetrachloride	56-23-5	0.11	0.68	0.86	Not Detected
Chlorobenzene	108-90-7	0.18	0.50	0.63	Not Detected
Chloroethane	75-00-3	0.45	1.1	1.8	Not Detected
Chloroform	67-66-3	0.13	0.53	0.66	Not Detected
Chloromethane	74-87-3	0.20	0.84	1.4	Not Detected
cis-1,2-Dichloroethene	156-59-2	0.16	0.43	0.54	Not Detected
cis-1,3-Dichloropropene	10061-01-5	0.19	0.49	0.62	Not Detected
Cumene	98-82-8	0.10	0.53	0.67	0.23 J
Cyclohexane	110-82-7	0.24	1.4	2.3	Not Detected
Dibromochloromethane	124-48-1	0.24	0.93	1.2	Not Detected
Ethanol	64-17-5	1.4	3.1	5.1	48
Ethyl Benzene	100-41-4	0.18	0.47	0.59	7.7
Freon 11	75-69-4	0.12	0.61	0.76	3.6
Freon 113	76-13-1	0.13	0.83	1.0	0.38 J
Freon 114	76-14-2	0.28	0.76	0.95	Not Detected
Freon 12	75-71-8	0.44	2.0	3.4	9.3
Heptane	142-82-5	0.56	1.7	2.8	Not Detected
Hexachlorobutadiene	87-68-3	0.61	4.4	7.2	Not Detected

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN
B33 Mukilteo

Client ID:	SV05		
Lab ID:	2302662B-10A	**Date/Time Analyzed:**	3/10/23 05:42 AM
Date/Time Collected:	2/23/23 09:51 AM	**Dilution Factor:**	1.36
Media:	6 Liter Summa Canister (100% Certified)	**Instrument/Filename:**	msdv.i / v030923

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Hexane	110-54-3	0.40	1.4	2.4	Not Detected
m,p-Xylene	108-38-3	0.17	0.47	0.59	34
Methyl tert-butyl ether	1634-04-4	0.10	0.39	0.49	Not Detected
Methylene Chloride	75-09-2	0.36	0.38	2.4	Not Detected
Naphthalene	91-20-3	0.12	0.21	1.4	Not Detected
o-Xylene	95-47-6	0.19	0.47	0.59	12
Propylbenzene	103-65-1	0.24	0.53	0.67	Not Detected
Styrene	100-42-5	0.11	0.46	0.58	Not Detected
Tetrachloroethene	127-18-4	0.34	0.74	0.92	1.9
Tetrahydrofuran	109-99-9	1.3	3.2	2.0	4.7
Toluene	108-88-3	0.15	0.41	5.1	0.43 J
trans-1,2-Dichloroethene	156-60-5	0.093	0.43	0.54	Not Detected
trans-1,3-Dichloropropene	10061-02-6	0.16	0.49	0.62	Not Detected
Trichloroethene	79-01-6	0.29	0.58	0.73	Not Detected
Vinyl Chloride	75-01-4	0.10	0.28	0.35	Not Detected

J = Estimated value.
D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	111
4-Bromofluorobenzene	460-00-4	70-130	98
Toluene-d8	2037-26-5	70-130	102

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN
B33 Mukilteo

Client ID:	DUP-01		
Lab ID:	2302662B-11A	**Date/Time Analyzed:**	3/10/23 06:22 AM
Date/Time Collected:	2/23/23 12:00 AM	**Dilution Factor:**	4.76
Media:	6 Liter Summa Canister (100% Certified)	**Instrument/Filename:**	msdv.i / v030924

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,1-Trichloroethane	71-55-6	0.58	2.1	2.6	Not Detected
1,1,2,2-Tetrachloroethane	79-34-5	1.1	2.6	3.3	Not Detected
1,1,2-Trichloroethane	79-00-5	0.63	2.1	2.6	Not Detected
1,1-Dichloroethane	75-34-3	0.54	1.5	1.9	Not Detected
1,1-Dichloroethene	75-35-4	0.78	1.5	1.9	Not Detected
1,2,4-Trichlorobenzene	120-82-1	2.3	10	18	Not Detected
1,2,4-Trimethylbenzene	95-63-6	0.56	1.9	2.3	Not Detected
1,2-Dibromoethane (EDB)	106-93-4	1.0	2.9	3.6	Not Detected
1,2-Dichlorobenzene	95-50-1	0.62	2.3	2.9	Not Detected
1,2-Dichloroethane	107-06-2	0.42	1.5	1.9	Not Detected
1,2-Dichloropropane	78-87-5	0.77	1.8	2.2	Not Detected
1,3,5-Trimethylbenzene	108-67-8	0.72	1.9	2.3	Not Detected
1,3-Butadiene	106-99-0	0.43	0.84	1.0	Not Detected
1,3-Dichlorobenzene	541-73-1	0.60	2.3	2.9	Not Detected
1,4-Dichlorobenzene	106-46-7	0.46	2.3	2.9	Not Detected
1,4-Dioxane	123-91-1	0.94	1.4	8.6	Not Detected
2,2,4-Trimethylpentane	540-84-1	1.6	6.7	11	Not Detected
2-Butanone (Methyl Ethyl Ketone)	78-93-3	1.6	4.2	28	Not Detected
2-Hexanone	591-78-6	2.0	5.8	9.7	Not Detected
2-Propanol	67-63-0	1.2	3.5	23	Not Detected
3-Chloropropene	107-05-1	1.6	4.5	7.4	Not Detected
4-Ethyltoluene	622-96-8	0.56	1.9	2.3	Not Detected
4-Methyl-2-pentanone	108-10-1	0.41	1.6	1.9	0.88 J
Acetone	67-64-1	3.2	3.4	23	30

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN
B33 Mukilteo

Client ID:	DUP-01		
Lab ID:	2302662B-11A	**Date/Time Analyzed:**	3/10/23 06:22 AM
Date/Time Collected:	2/23/23 12:00 AM	**Dilution Factor:**	4.76
Media:	6 Liter Summa Canister (100% Certified)	**Instrument/Filename:**	msdv.i / v030924

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
alpha-Chlorotoluene	100-44-7	1.3	2.0	2.5	Not Detected
Benzene	71-43-2	0.28	1.2	1.5	Not Detected
Bromodichloromethane	75-27-4	0.68	2.6	3.2	Not Detected
Bromoform	75-25-2	1.1	3.9	4.9	Not Detected
Bromomethane	74-83-9	7.2	15	92	Not Detected
Carbon Disulfide	75-15-0	0.97	4.4	74	2.1 J
Carbon Tetrachloride	56-23-5	0.38	2.4	3.0	Not Detected
Chlorobenzene	108-90-7	0.62	1.8	2.2	Not Detected
Chloroethane	75-00-3	1.6	3.8	6.3	Not Detected
Chloroform	67-66-3	0.45	1.8	2.3	Not Detected
Chloromethane	74-87-3	0.69	2.9	4.9	Not Detected
cis-1,2-Dichloroethene	156-59-2	0.55	1.5	1.9	Not Detected
cis-1,3-Dichloropropene	10061-01-5	0.66	1.7	2.2	Not Detected
Cumene	98-82-8	0.35	1.9	2.3	Not Detected
Cyclohexane	110-82-7	0.86	4.9	8.2	Not Detected
Dibromochloromethane	124-48-1	0.82	3.2	4.0	Not Detected
Ethanol	64-17-5	4.8	11	18	26
Ethyl Benzene	100-41-4	0.64	1.6	2.1	16
Freon 11	75-69-4	0.41	2.1	2.7	3.0
Freon 113	76-13-1	0.46	2.9	3.6	Not Detected
Freon 114	76-14-2	0.98	2.7	3.3	Not Detected
Freon 12	75-71-8	1.5	7.1	12	20
Heptane	142-82-5	2.0	5.8	9.8	Not Detected
Hexachlorobutadiene	87-68-3	2.1	15	25	Not Detected

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN
B33 Mukilteo

Client ID:	DUP-01		
Lab ID:	2302662B-11A	**Date/Time Analyzed:**	3/10/23 06:22 AM
Date/Time Collected:	2/23/23 12:00 AM	**Dilution Factor:**	4.76
Media:	6 Liter Summa Canister (100% Certified)	**Instrument/Filename:**	msdv.i / v030924

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Hexane	110-54-3	1.4	5.0	8.4	Not Detected
m,p-Xylene	108-38-3	0.61	1.6	2.1	72
Methyl tert-butyl ether	1634-04-4	0.36	1.4	1.7	Not Detected
Methylene Chloride	75-09-2	1.2	1.3	8.3	Not Detected
Naphthalene	91-20-3	0.43	0.75	5.0	Not Detected
o-Xylene	95-47-6	0.67	1.6	2.1	22
Propylbenzene	103-65-1	0.86	1.9	2.3	Not Detected
Styrene	100-42-5	0.38	1.6	2.0	Not Detected
Tetrachloroethene	127-18-4	1.2	2.6	3.2	930
Tetrahydrofuran	109-99-9	4.5	11	7.0	Not Detected
Toluene	108-88-3	0.53	1.4	18	Not Detected
trans-1,2-Dichloroethene	156-60-5	0.32	1.5	1.9	Not Detected
trans-1,3-Dichloropropene	10061-02-6	0.58	1.7	2.2	Not Detected
Trichloroethene	79-01-6	1.0	2.0	2.6	12
Vinyl Chloride	75-01-4	0.35	0.97	1.2	Not Detected

J = Estimated value.
D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	108
4-Bromofluorobenzene	460-00-4	70-130	102
Toluene-d8	2037-26-5	70-130	103

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN
B33 Mukilteo

Client ID:	Lab Blank		
Lab ID:	2302662B-12A	**Date/Time Analyzed:**	3/9/23 11:10 AM
Date/Time Collected:	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msdv.i / v030906a

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,1-Trichloroethane	71-55-6	0.12	0.44	0.54	Not Detected
1,1,2,2-Tetrachloroethane	79-34-5	0.22	0.55	0.69	Not Detected
1,1,2-Trichloroethane	79-00-5	0.13	0.44	0.54	Not Detected
1,1-Dichloroethane	75-34-3	0.11	0.32	0.40	Not Detected
1,1-Dichloroethene	75-35-4	0.16	0.32	0.40	Not Detected
1,2,4-Trichlorobenzene	120-82-1	0.49	2.2	3.7	Not Detected
1,2,4-Trimethylbenzene	95-63-6	0.12	0.39	0.49	Not Detected
1,2-Dibromoethane (EDB)	106-93-4	0.21	0.61	0.77	Not Detected
1,2-Dichlorobenzene	95-50-1	0.13	0.48	0.60	Not Detected
1,2-Dichloroethane	107-06-2	0.088	0.32	0.40	Not Detected
1,2-Dichloropropane	78-87-5	0.16	0.37	0.46	Not Detected
1,3,5-Trimethylbenzene	108-67-8	0.15	0.39	0.49	Not Detected
1,3-Butadiene	106-99-0	0.091	0.18	0.22	Not Detected
1,3-Dichlorobenzene	541-73-1	0.12	0.48	0.60	Not Detected
1,4-Dichlorobenzene	106-46-7	0.096	0.48	0.60	Not Detected
1,4-Dioxane	123-91-1	0.20	0.29	1.8	Not Detected
2,2,4-Trimethylpentane	540-84-1	0.33	1.4	2.3	Not Detected
2-Butanone (Methyl Ethyl Ketone)	78-93-3	0.33	0.88	5.9	Not Detected
2-Hexanone	591-78-6	0.42	1.2	2.0	Not Detected
2-Propanol	67-63-0	0.26	0.74	4.9	Not Detected
3-Chloropropene	107-05-1	0.34	0.94	1.6	Not Detected
4-Ethyltoluene	622-96-8	0.12	0.39	0.49	Not Detected
4-Methyl-2-pentanone	108-10-1	0.086	0.33	0.41	Not Detected
Acetone	67-64-1	0.67	0.71	4.8	Not Detected

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN
B33 Mukilteo

Client ID:	Lab Blank		
Lab ID:	2302662B-12A	**Date/Time Analyzed:**	3/9/23 11:10 AM
Date/Time Collected:	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msdv.i / v030906a

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
alpha-Chlorotoluene	100-44-7	0.27	0.41	0.52	Not Detected
Benzene	71-43-2	0.059	0.26	0.32	Not Detected
Bromodichloromethane	75-27-4	0.14	0.54	0.67	Not Detected
Bromoform	75-25-2	0.24	0.83	1.0	Not Detected
Bromomethane	74-83-9	1.5	3.1	19	Not Detected
Carbon Disulfide	75-15-0	0.20	0.93	16	0.47 J
Carbon Tetrachloride	56-23-5	0.080	0.50	0.63	Not Detected
Chlorobenzene	108-90-7	0.13	0.37	0.46	Not Detected
Chloroethane	75-00-3	0.33	0.79	1.3	Not Detected
Chloroform	67-66-3	0.095	0.39	0.49	Not Detected
Chloromethane	74-87-3	0.14	0.62	1.0	Not Detected
cis-1,2-Dichloroethene	156-59-2	0.11	0.32	0.40	Not Detected
cis-1,3-Dichloropropene	10061-01-5	0.14	0.36	0.45	Not Detected
Cumene	98-82-8	0.074	0.39	0.49	Not Detected
Cyclohexane	110-82-7	0.18	1.0	1.7	Not Detected
Dibromochloromethane	124-48-1	0.17	0.68	0.85	Not Detected
Ethanol	64-17-5	1.0	2.3	3.8	Not Detected
Ethyl Benzene	100-41-4	0.14	0.35	0.43	Not Detected
Freon 11	75-69-4	0.086	0.45	0.56	Not Detected
Freon 113	76-13-1	0.096	0.61	0.77	Not Detected
Freon 114	76-14-2	0.20	0.56	0.70	Not Detected
Freon 12	75-71-8	0.32	1.5	2.5	Not Detected
Heptane	142-82-5	0.41	1.2	2.0	Not Detected
Hexachlorobutadiene	87-68-3	0.45	3.2	5.3	Not Detected

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN
B33 Mukilteo

Client ID:	Lab Blank		
Lab ID:	2302662B-12A	**Date/Time Analyzed:**	3/9/23 11:10 AM
Date/Time Collected:	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msdv.i / v030906a

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Hexane	110-54-3	0.29	1.0	1.8	Not Detected
m,p-Xylene	108-38-3	0.13	0.35	0.43	Not Detected
Methyl tert-butyl ether	1634-04-4	0.075	0.29	0.36	Not Detected
Methylene Chloride	75-09-2	0.26	0.28	1.7	Not Detected
Naphthalene	91-20-3	0.090	0.16	1.0	Not Detected
o-Xylene	95-47-6	0.14	0.35	0.43	Not Detected
Propylbenzene	103-65-1	0.18	0.39	0.49	Not Detected
Styrene	100-42-5	0.079	0.34	0.42	Not Detected
Tetrachloroethene	127-18-4	0.25	0.54	0.68	Not Detected
Tetrahydrofuran	109-99-9	0.94	2.4	1.5	Not Detected
Toluene	108-88-3	0.11	0.30	3.8	Not Detected
trans-1,2-Dichloroethene	156-60-5	0.068	0.32	0.40	Not Detected
trans-1,3-Dichloropropene	10061-02-6	0.12	0.36	0.45	Not Detected
Trichloroethene	79-01-6	0.22	0.43	0.54	Not Detected
Vinyl Chloride	75-01-4	0.074	0.20	0.26	Not Detected

J = Estimated value.
D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	110
4-Bromofluorobenzene	460-00-4	70-130	86
Toluene-d8	2037-26-5	70-130	98

Client ID:	CCV		
Lab ID:	2302662B-13A	**Date/Time Analyzed:**	3/9/23 08:06 AM
Date/Time Collected:	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msdv.i / v030902

Compound	CAS#	%Recovery
1,1,1-Trichloroethane	71-55-6	103
1,1,2,2-Tetrachloroethane	79-34-5	104
1,1,2-Trichloroethane	79-00-5	103
1,1-Dichloroethane	75-34-3	104
1,1-Dichloroethene	75-35-4	103
1,2,4-Trichlorobenzene	120-82-1	104
1,2,4-Trimethylbenzene	95-63-6	117
1,2-Dibromoethane (EDB)	106-93-4	104
1,2-Dichlorobenzene	95-50-1	102
1,2-Dichloroethane	107-06-2	95
1,2-Dichloropropane	78-87-5	101
1,3,5-Trimethylbenzene	108-67-8	112
1,3-Butadiene	106-99-0	103
1,3-Dichlorobenzene	541-73-1	102
1,4-Dichlorobenzene	106-46-7	102
1,4-Dioxane	123-91-1	102
2,2,4-Trimethylpentane	540-84-1	102
2-Butanone (Methyl Ethyl Ketone)	78-93-3	109
2-Hexanone	591-78-6	110
2-Propanol	67-63-0	101
3-Chloropropene	107-05-1	110
4-Ethyltoluene	622-96-8	109
4-Methyl-2-pentanone	108-10-1	102
Acetone	67-64-1	96

Client ID:	CCV		
Lab ID:	2302662B-13A	**Date/Time Analyzed:**	3/9/23 08:06 AM
Date/Time Collected:	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msdv.i / v030902

Compound	CAS#	%Recovery
alpha-Chlorotoluene	100-44-7	107
Benzene	71-43-2	99
Bromodichloromethane	75-27-4	106
Bromoform	75-25-2	108
Bromomethane	74-83-9	103
Carbon Disulfide	75-15-0	104
Carbon Tetrachloride	56-23-5	104
Chlorobenzene	108-90-7	104
Chloroethane	75-00-3	105
Chloroform	67-66-3	102
Chloromethane	74-87-3	100
cis-1,2-Dichloroethene	156-59-2	104
cis-1,3-Dichloropropene	10061-01-5	98
Cumene	98-82-8	103
Cyclohexane	110-82-7	108
Dibromochloromethane	124-48-1	107
Ethanol	64-17-5	88
Ethyl Benzene	100-41-4	104
Freon 11	75-69-4	114
Freon 113	76-13-1	104
Freon 114	76-14-2	102
Freon 12	75-71-8	102
Heptane	142-82-5	101
Hexachlorobutadiene	87-68-3	104

Client ID:	CCV		
Lab ID:	2302662B-13A	**Date/Time Analyzed:**	3/9/23 08:06 AM
Date/Time Collected:	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msdv.i / v030902

Compound	CAS#	%Recovery
Hexane	110-54-3	108
m,p-Xylene	108-38-3	103
Methyl tert-butyl ether	1634-04-4	109
Methylene Chloride	75-09-2	104
Naphthalene	91-20-3	101
o-Xylene	95-47-6	104
Propylbenzene	103-65-1	108
Styrene	100-42-5	107
Tetrachloroethene	127-18-4	105
Tetrahydrofuran	109-99-9	99
Toluene	108-88-3	101
trans-1,2-Dichloroethene	156-60-5	105
trans-1,3-Dichloropropene	10061-02-6	106
Trichloroethene	79-01-6	98
Vinyl Chloride	75-01-4	103

D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	100
4-Bromofluorobenzene	460-00-4	70-130	91
Toluene-d8	2037-26-5	70-130	104

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN
B33 Mukilteo

Client ID:	LCS		
Lab ID:	2302662B-14A	**Date/Time Analyzed:**	3/9/23 08:53 AM
Date/Time Collected:	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msdv.i / v030903

Compound	CAS#	%Recovery
1,1,1-Trichloroethane	71-55-6	96
1,1,2,2-Tetrachloroethane	79-34-5	98
1,1,2-Trichloroethane	79-00-5	96
1,1-Dichloroethane	75-34-3	97
1,1-Dichloroethene	75-35-4	92
1,2,4-Trichlorobenzene	120-82-1	101
1,2,4-Trimethylbenzene	95-63-6	104
1,2-Dibromoethane (EDB)	106-93-4	97
1,2-Dichlorobenzene	95-50-1	96
1,2-Dichloroethane	107-06-2	88
1,2-Dichloropropane	78-87-5	92
1,3,5-Trimethylbenzene	108-67-8	105
1,3-Butadiene	106-99-0	96
1,3-Dichlorobenzene	541-73-1	95
1,4-Dichlorobenzene	106-46-7	94
1,4-Dioxane	123-91-1	85
2,2,4-Trimethylpentane	540-84-1	94
2-Butanone (Methyl Ethyl Ketone)	78-93-3	100
2-Hexanone	591-78-6	94
2-Propanol	67-63-0	94
3-Chloropropene	107-05-1	98
4-Ethyltoluene	622-96-8	101
4-Methyl-2-pentanone	108-10-1	91
Acetone	67-64-1	90

* % Recovery is calculated using unrounded analytical results.

Client ID:	LCS		
Lab ID:	2302662B-14A	**Date/Time Analyzed:**	3/9/23 08:53 AM
Date/Time Collected:	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msdv.i / v030903

Compound	CAS#	%Recovery
alpha-Chlorotoluene	100-44-7	99
Benzene	71-43-2	92
Bromodichloromethane	75-27-4	97
Bromoform	75-25-2	98
Bromomethane	74-83-9	97
Carbon Disulfide	75-15-0	97
Carbon Tetrachloride	56-23-5	86
Chlorobenzene	108-90-7	96
Chloroethane	75-00-3	96
Chloroform	67-66-3	93
Chloromethane	74-87-3	94
cis-1,2-Dichloroethene	156-59-2	97
cis-1,3-Dichloropropene	10061-01-5	92
Cumene	98-82-8	95
Cyclohexane	110-82-7	102
Dibromochloromethane	124-48-1	97
Ethanol	64-17-5	96
Ethyl Benzene	100-41-4	97
Freon 11	75-69-4	104
Freon 113	76-13-1	93
Freon 114	76-14-2	94
Freon 12	75-71-8	95
Heptane	142-82-5	95
Hexachlorobutadiene	87-68-3	100

* % Recovery is calculated using unrounded analytical results.

Client ID:	LCS		
Lab ID:	2302662B-14A	**Date/Time Analyzed:**	3/9/23 08:53 AM
Date/Time Collected:	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msdv.i / v030903

Compound	CAS#	%Recovery
Hexane	110-54-3	99
m,p-Xylene	108-38-3	95
Methyl tert-butyl ether	1634-04-4	101
Methylene Chloride	75-09-2	93
Naphthalene	91-20-3	104
o-Xylene	95-47-6	98
Propylbenzene	103-65-1	102
Styrene	100-42-5	99
Tetrachloroethene	127-18-4	97
Tetrahydrofuran	109-99-9	96
Toluene	108-88-3	91
trans-1,2-Dichloroethene	156-60-5	95
trans-1,3-Dichloropropene	10061-02-6	98
Trichloroethene	79-01-6	91
Vinyl Chloride	75-01-4	96

D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	97
4-Bromofluorobenzene	460-00-4	70-130	91
Toluene-d8	2037-26-5	70-130	106

* % Recovery is calculated using unrounded analytical results.

Client ID:	LCSD		
Lab ID:	2302662B-14AA	**Date/Time Analyzed:**	3/9/23 09:39 AM
Date/Time Collected:	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msdv.i / v030904

Compound	CAS#	%Recovery
1,1,1-Trichloroethane	71-55-6	95
1,1,2,2-Tetrachloroethane	79-34-5	95
1,1,2-Trichloroethane	79-00-5	92
1,1-Dichloroethane	75-34-3	96
1,1-Dichloroethene	75-35-4	91
1,2,4-Trichlorobenzene	120-82-1	95
1,2,4-Trimethylbenzene	95-63-6	100
1,2-Dibromoethane (EDB)	106-93-4	93
1,2-Dichlorobenzene	95-50-1	93
1,2-Dichloroethane	107-06-2	85
1,2-Dichloropropane	78-87-5	89
1,3,5-Trimethylbenzene	108-67-8	101
1,3-Butadiene	106-99-0	94
1,3-Dichlorobenzene	541-73-1	93
1,4-Dichlorobenzene	106-46-7	92
1,4-Dioxane	123-91-1	83
2,2,4-Trimethylpentane	540-84-1	94
2-Butanone (Methyl Ethyl Ketone)	78-93-3	97
2-Hexanone	591-78-6	89
2-Propanol	67-63-0	95
3-Chloropropene	107-05-1	98
4-Ethyltoluene	622-96-8	99
4-Methyl-2-pentanone	108-10-1	88
Acetone	67-64-1	84

* % Recovery is calculated using unrounded analytical results.

Client ID:	LCSD		
Lab ID:	2302662B-14AA	**Date/Time Analyzed:**	3/9/23 09:39 AM
Date/Time Collected:	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msdv.i / v030904

Compound	CAS#	%Recovery
alpha-Chlorotoluene	100-44-7	98
Benzene	71-43-2	89
Bromodichloromethane	75-27-4	93
Bromoform	75-25-2	94
Bromomethane	74-83-9	95
Carbon Disulfide	75-15-0	96
Carbon Tetrachloride	56-23-5	84
Chlorobenzene	108-90-7	93
Chloroethane	75-00-3	97
Chloroform	67-66-3	92
Chloromethane	74-87-3	94
cis-1,2-Dichloroethene	156-59-2	95
cis-1,3-Dichloropropene	10061-01-5	90
Cumene	98-82-8	95
Cyclohexane	110-82-7	100
Dibromochloromethane	124-48-1	93
Ethanol	64-17-5	95
Ethyl Benzene	100-41-4	95
Freon 11	75-69-4	102
Freon 113	76-13-1	92
Freon 114	76-14-2	92
Freon 12	75-71-8	95
Heptane	142-82-5	93
Hexachlorobutadiene	87-68-3	95

* % Recovery is calculated using unrounded analytical results.

Client ID:	LCSD		
Lab ID:	2302662B-14AA	**Date/Time Analyzed:**	3/9/23 09:39 AM
Date/Time Collected:	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msdv.i / v030904

Compound	CAS#	%Recovery
Hexane	110-54-3	99
m,p-Xylene	108-38-3	94
Methyl tert-butyl ether	1634-04-4	100
Methylene Chloride	75-09-2	92
Naphthalene	91-20-3	93
o-Xylene	95-47-6	96
Propylbenzene	103-65-1	101
Styrene	100-42-5	98
Tetrachloroethene	127-18-4	93
Tetrahydrofuran	109-99-9	96
Toluene	108-88-3	89
trans-1,2-Dichloroethene	156-60-5	94
trans-1,3-Dichloropropene	10061-02-6	94
Trichloroethene	79-01-6	87
Vinyl Chloride	75-01-4	96

D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	98
4-Bromofluorobenzene	460-00-4	70-130	90
Toluene-d8	2037-26-5	70-130	103

* % Recovery is calculated using unrounded analytical results.

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3/10/2023
Ms. Emily Guyer
Integral Consulting
719 2nd Avenue, Suite 700

Seattle WA 98104

Project Name: B33 Mukilteo
Project #: 3163-0401
Workorder #: 2302662C

Dear Ms. Emily Guyer

The following report includes the data for the above referenced project for sample(s) received on 2/25/2023 at Eurofins Air Toxics LLC.

The data and associated QC analyzed by Modified ASTM D-1946 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: Monica Tran at 916-985-1000 if you have any questions regarding the data in this report.

Regards,

Monica Tran

Project Manager

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WORK ORDER #: 2302662C

Work Order Summary

CLIENT:	Ms. Emily Guyer Integral Consulting 719 2nd Avenue, Suite 700 Seattle, WA 98104	**BILL TO:**	Accounts Payable Integral Consulting 285 Century Place Suite 190 Louisville, CO 80027
PHONE:	206-230-9600	**P.O. #**	C3163 / task 0401
FAX:	206-230-9601	**PROJECT #**	3163-0401 B33 Mukilteo
DATE RECEIVED:	02/25/2023	**CONTACT:**	Monica Tran
DATE COMPLETED:	03/10/2023		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
06A	SV01	Modified ASTM D-1946	6.5 "Hg	1.9 psi
07A	SV02	Modified ASTM D-1946	7.1 "Hg	1.8 psi
08A	SV03	Modified ASTM D-1946	6.3 "Hg	2 psi
09A	SV04	Modified ASTM D-1946	4.3 "Hg	1.9 psi
10A	SV05	Modified ASTM D-1946	5.1 "Hg	1.9 psi
11A	DUP-01	Modified ASTM D-1946	6.3 "Hg	1.9 psi
12A	Lab Blank	Modified ASTM D-1946	NA	NA
13A	CCV	Modified ASTM D-1946	NA	NA
14A	LCS	Modified ASTM D-1946	NA	NA
14AA	LCSD	Modified ASTM D-1946	NA	NA

CERTIFIED BY: Heidi Hayes DATE: 03/10/23

Technical Director

Certification numbers: AZ Licensure AZ0775, FL NELAP – E87680, LA NELAP – 02089, NH NELAP – 209222, NJ NELAP - CA016, NY NELAP - 11291, TX NELAP – T104704434-22-18, UT NELAP – CA009332022-14, VA NELAP - 12240, WA NELAP - C935
Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
Accreditation number: CA300005-017, Effective date: 10/18/2022, Expiration date: 10/17/2023.
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
Modified ASTM D-1946
Integral Consulting
Workorder# 2302662C

Four 6 Liter Summa Canister (100% Certified) and two 6 Liter Summa Canister (100% SIM Ambient) samples were received on February 25, 2023. The laboratory performed analysis via Modified ASTM Method D-1946 for Helium in air using GC/TCD. The method involves direct injection of 1.0 mL of sample.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the EATL modifications.

Requirement	***ASTM D-1946***	***ATL Modifications***
Calibration	A single point calibration is performed using a reference standard closely matching the composition of the unknown.	A minimum of 5-point calibration curve is performed. Quantitation is based on average Response Factor.
Reference Standard	The composition of any reference standard must be known to within 0.01 mol % for any component.	The standards used by ATL are blended to a >/= 95% accuracy.
Sample Injection Volume	Components whose concentrations are in excess of 5 % should not be analyzed by using sample volumes greater than 0.5 mL.	The sample container is connected directly to a fixed volume sample loop of 1.0 mL on the GC. Linear range is defined by the calibration curve. Bags are loaded by vacuum.
Normalization	Normalize the mole percent values by multiplying each value by 100 and dividing by the sum of the original values. The sum of the original values should not differ from 100% by more than 1.0%.	Results are not normalized. The sum of the reported values can differ from 100% by as much as 15%, either due to analytical variability or an unusual sample matrix.
Precision	Precision requirements established at each concentration level.	Duplicates should agree within 25% RPD for detections > 5 X's the RL.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

There were no analytical discrepancies.

Definition of Data Qualifying Flags

Seven qualifiers may have been used on the data analysis sheets and indicate as follows:
B - Compound present in laboratory blank greater than reporting limit.
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 detection limit.
M - Reported value may be biased due to apparent matrix interferences.
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
NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

Client Sample ID: SV01

Lab ID#: 2302662C-06A

Compound	Rpt. Limit (%)	Amount (%)
Helium	0.072	14

Client Sample ID: SV02

Lab ID#: 2302662C-07A

Compound	Rpt. Limit (%)	Amount (%)
Helium	0.074	0.074

Client Sample ID: SV03

Lab ID#: 2302662C-08A

No Detections Were Found.

Client Sample ID: SV04

Lab ID#: 2302662C-09A

Compound	Rpt. Limit (%)	Amount (%)
Helium	0.066	0.17

Client Sample ID: SV05

Lab ID#: 2302662C-10A

No Detections Were Found.

Client Sample ID: DUP-01

Lab ID#: 2302662C-11A

Compound	Rpt. Limit (%)	Amount (%)
Helium	0.072	14

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Client Sample ID: SV01

Lab ID#: 2302662C-06A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**11030917c**	**Date of Collection: 2/23/23 6:27:00 PM**	
Dil. Factor:	**1.44**	**Date of Analysis: 3/9/23 02:56 PM**	

Compound	Rpt. Limit (%)	Amount (%)
Helium	0.072	14

Container Type: 6 Liter Summa Canister (100% Certified)

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Client Sample ID: SV02

Lab ID#: 2302662C-07A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**11030918c**	**Date of Collection: 2/23/23 4:30:00 PM**	
Dil. Factor:	**1.47**	**Date of Analysis: 3/9/23 03:22 PM**	

Compound	Rpt. Limit (%)	Amount (%)
Helium	0.074	0.074

Container Type: 6 Liter Summa Canister (100% SIM Ambient)

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Client Sample ID: SV03

Lab ID#: 2302662C-08A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**11030919c**	**Date of Collection: 2/23/23 10:51:00 AM**	
Dil. Factor:	**1.44**	**Date of Analysis: 3/9/23 03:53 PM**	

Compound	**Rpt. Limit (%)**	**Amount (%)**
Helium	0.072	Not Detected

Container Type: 6 Liter Summa Canister (100% SIM Ambient)

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Client Sample ID: SV04

Lab ID#: 2302662C-09A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**11030921c**	**Date of Collection: 2/23/23 8:39:00 AM**	
Dil. Factor:	**1.32**	**Date of Analysis: 3/9/23 05:04 PM**	

Compound	Rpt. Limit (%)	Amount (%)
Helium	0.066	0.17

Container Type: 6 Liter Summa Canister (100% Certified)

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Client Sample ID: SV05

Lab ID#: 2302662C-10A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**11030923c**	**Date of Collection: 2/23/23 9:51:00 AM**	
Dil. Factor:	**1.36**	**Date of Analysis: 3/9/23 06:15 PM**	

Compound	**Rpt. Limit (%)**	**Amount (%)**
Helium	0.068	Not Detected

Container Type: 6 Liter Summa Canister (100% Certified)

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Client Sample ID: DUP-01

Lab ID#: 2302662C-11A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**11030924c**	**Date of Collection: 2/23/23**	
Dil. Factor:	**1.43**	**Date of Analysis: 3/9/23 06:39 PM**	

Compound	Rpt. Limit (%)	Amount (%)
Helium	0.072	14

Container Type: 6 Liter Summa Canister (100% Certified)

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Client Sample ID: Lab Blank

Lab ID#: 2302662C-12A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**11030910c**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 3/9/23 11:08 AM**	

Compound	**Rpt. Limit (%)**	**Amount (%)**
Helium	0.050	Not Detected

Container Type: NA - Not Applicable

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Client Sample ID: CCV

Lab ID#: 2302662C-13A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**11030901c**	**Date of Collection: NA**
Dil. Factor:	**1.00**	**Date of Analysis: 3/9/23 05:59 AM**

Compound	%Recovery
Helium	95

Container Type: NA - Not Applicable

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Client Sample ID: LCS

Lab ID#: 2302662C-14A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**11030902c**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 3/9/23 06:30 AM**	

Compound	%Recovery	Method Limits
Helium	110	85-115

Container Type: NA - Not Applicable

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Client Sample ID: LCSD

Lab ID#: 2302662C-14AA

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**11030903c**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 3/9/23 07:02 AM**	

Compound	%Recovery	Method Limits
Helium	110	85-115

Container Type: NA - Not Applicable

Appendix D

Data Validation Report

DATA VALIDATION REPORT

Year 1—Air Sampling
Former Harbour Pointe Dry Cleaners Site
13619 Mukilteo Speedway, Lynnwood, Washington

Prepared for
B33 Mukilteo, LLC
1109 1st Ave Suite 205
Seattle, WA 98101

Prepared by

719 2nd Ave, Suite 1450
Seattle, WA 98104

March 17, 2023

CONTENTS

LIST OF TABLES

ACRONYMS AND ABBREVIATIONS

EPA	U.S. Environmental Protection Agency
MDL	method detection limit
MRL	method reporting limit
QA/QC	quality assurance and quality control
RPD	relative percent difference
SDG	sample delivery group

1 INTRODUCTION

This report presents the findings of the data validation of indoor air, outdoor/ambient air, and sub-slab soil vapor samples and associated quality control samples analyzed for volatile organic compounds by Eurofins Air Toxics of Folsom, California. The sample delivery groups (SDGs) reviewed are summarized in Table 1-1. The parameters and analytical methods performed are listed in Table 1-2.

The samples received a Level II (Stage 2A) validation, which included a review of all laboratory summary forms of quality control and instrument performance data. The data validation was based upon criteria described in U.S. Environmental Protection Agency's (EPA) functional guidelines for organic data review (USEPA 2008) and the referenced analytical methods.

The quality assurance and quality control (QA/QC) parameters reviewed are discussed in Section 2. All electronic data deliverables were compared to the hardcopy data packages, and 100 percent of the field sample results and 10 percent of the laboratory quality control sample results were verified. Qualifiers resulting from the validation process were entered into the project database. A reason code indicating the reason for qualification was also entered into the database. The definitions of the data qualifiers used are provided in Table 1-3 and descriptions of the reason codes used are provided in Table 1-4. For example, if a data point was estimated due to laboratory blank contamination, the qualifier "U" and the reason code "LB" would be entered into the database, indicated as U – LB in the discussion of findings in Section 2.

2 FINDINGS

2.1 PARAMETERS REVIEWED

The QA/QC parameters reviewed for each analytical parameter are discussed below and are listed in Table 2-1.

2.2 SAMPLE RECEIPT AND HOLDING TIMES

Samples were received with complete chain-of-custody forms and in good condition. All analyses were conducted within the holding times in the referenced methods.

2.3 BLANKS

All results from the laboratory method blanks were reported as less than the method reporting limit (MRL), with the exceptions noted below.

SDG 2302662A: Concentrations of carbon disulfide, ethylbenzene, and 1,1,2,2-tetrachloroethane in the lab blank were detected above the method detection limit (MDL), but below the MRL. Detected sample results for these compounds that were less than the MRL were qualified as non-detect (U-LB).

SDG 2302662B: Carbon disulfide was detected in the lab blank above the MDL, but below the MRL. Detected concentrations of carbon disulfide that were less than the MRL were qualified as non-detect (U-LB).

2.4 SURROGATE COMPOUNDS

Surrogates were added to all samples, and all percent recoveries were within the laboratory control limits.

2.5 LABORATORY CONTROL SAMPLES

The percent recoveries and relative percent differences (RPDs) of all laboratory control samples and laboratory control sample duplicates were within the laboratory control limits.

2.6 REPLICATES

One set of field replicates was submitted: samples SV01 and DUP-01. EPA has not established control limits for field replicates. For this project, the target control limit for field replicates is an RPD less than 35 percent for values greater than 5 times the MRL. For values less than 5 times the MRL, the absolute difference should be less than the MRL. These control limits were met for all analytes.

2.7 METHOD REPORTING LIMITS AND METHODOLOGY

There are no project-specific MRLs specified for this project. The reported MRLs are consistent with the methodologies used and the intended uses of the data.

Several samples required dilution due to the presence of high levels of target analytes or matrix interference, and MRLs were elevated accordingly.

2.8 LEAK TEST ANALYSIS

Soil vapor samples were analyzed for helium by ASTM Method D-1946 to confirm the results of sub-slab sampling probe leak testing. Helium was detected in samples SV01 and DUP-01 at 14 percent; exceeding the Ecology guidance limit of <5 percent (Ecology 2022). Results for SV01 and DUP-01 were qualified as estimated (J/UJ-Other).

3 OVERALL ASSESSMENT

3.1 DATA QUALIFICATION

A total of 747 results were reported. Of these, 13 results (1.7 percent) were restated as non-detect (U-LB) based on laboratory blank contamination, and 160 results (33.8 percent) were estimated (J/UJ) based on potential low bias due to the possibility of ambient air being introduced into the system during sampling. No data were rejected for any reason. Completeness was 100 percent. A summary of all qualified results is presented in Table 3-1.

3.2 DATA USABILITY

The data meet the criteria set forth in the referenced quality assurance documents, with the exceptions noted above. All results are acceptable for their intended use.

4 REFERENCES

ASTM. 1990. Standard Practice for Analysis of Reformed Gas by Gas Chromatography. American Society for Testing and Materials. March 30.

Ecology. 2022. Guidance for Evaluating Vapor Intrusion in Washington State. Investigation and Remedial Action. Publication No. 09-09-047. Final Revision. Toxics Cleanup Program, Washington State Department of Ecology, Olympia, WA. March.

USEPA. 1999. Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air. Second Edition. EPA/625/R-96/010b. U.S. Environmental Protection Agency, Center for Environmental Research Information, Office of Research and Development, Cincinnati, OH. January.

USEPA. 2008. USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Data Review. USEPA-540-R-08-01. U.S. Environmental Protection Agency, Office of Superfund Remediation and Technology Innovation, Washington, DC. June.

Tables

Table 1-1. SDGs Reviewed and Number of Samples

SDG	Number of Samples
2302662A	2 Indoor Air, 3 Outdoor/Ambient Air Samples
2302662B	5 Sub-Slab Soil Vapor Sample & 1 Field Duplicate
2302662C	5 Sub-Slab Soil Vapor Sample & 1 Field Duplicate

Notes:
SDG = sample delivery group

Table 1-2. Analytical Parameters and Methods

Analytical Parameter	Analytical Method	Reference
Volatile organic compounds	Modified TO-15	USEPA (1999)
Helium	Modified ASTM D-1946	ASTM (1990)

Table 1-3. Definition of Data Qualifiers

Data Qualifier	Definition
J	The associated numerical value is an estimated quantity.
U	The material was analyzed for, but was not detected.
UJ	The material was analyzed for, but was not detected. The sample quantitation limit is an estimated quantity.

Table 1-4. Definition of Data Validation Reason Codes

Reason Code	Definition
LB	Laboratory blank contamination
Other	Other, described in data validation report

Table 2-1. QA/QC Parameters Reviewed

QA/QC Parameter	Analytical Parameter	
	VOCs Modified TO-15	Helium Modified ASTM D-1946
Sample Receipt and Holding Times	+	+
Blanks	Q	+
Surrogate Compounds	+	NA
LCS	+	+
Replicates	+	+
MRL & Methodology	D	+

Notes:
LCS = laboratory control sample
MRL = method reporting limit
QA/QC = quality assurance and quality control
VOC = volatile organic compound

Parameters:
+ = All QA/QC criteria met
D = Data are discussed in the report. QA/QC criteria were not met; however no data were qualified.
NA = Not applicable
Q = Data were qualified and are discussed in the report.

Table 3-1. Summary of Qualified Data

SDG	Sample	Analyte	Result	Method Detection Limit	Method Reporting Limit	Lab Qualifier	DV Qualifier	DV Qualifier Reason	Units
2302662A	IA01	Carbon Disulfide	2.1	1.4	10	J	U	LB	µg/m^3
2302662A	IA02	Carbon Disulfide	0.96	0.56	4.2	J	U	LB	µg/m^3
2302662A	OA01	Carbon Disulfide	0.46	0.26	2.0	J	U	LB	µg/m^3
2302662A	OA01	Ethyl Benzene	0.10	0.008	0.11	J	U	LB	µg/m^3
2302662A	OA02	Carbon Disulfide	0.49	0.27	2.1	J	U	LB	µg/m^3
2302662A	OA03	Carbon Disulfide	0.41	0.26	2.0	J	U	LB	µg/m^3
2302662A	OA03	Ethyl Benzene	0.049	0.0078	0.11	J	U	LB	µg/m^3
2302662B	SV01	1,1,1-Trichloroethane	0.58	0.58	2.6	U	UJ	Other	µg/m^3
2302662B	SV01	1,1,2,2-Tetrachloroethane	1.1	1.1	3.3	U	UJ	Other	µg/m^3
2302662B	SV01	1,1,2-Trichloroethane	0.63	0.63	2.6	U	UJ	Other	µg/m^3
2302662B	SV01	1,1-Dichloroethane	0.54	0.54	1.9	U	UJ	Other	µg/m^3
2302662B	SV01	1,1-Dichloroethene	0.79	0.79	1.9	U	UJ	Other	µg/m^3
2302662B	SV01	1,2,4-Trichlorobenzene	2.4	2.4	18	U	UJ	Other	µg/m^3
2302662B	SV01	1,2,4-Trimethylbenzene	0.57	0.57	2.4	U	UJ	Other	µg/m^3
2302662B	SV01	1,2-Dibromoethane (EDB)	1	1	3.7	U	UJ	Other	µg/m^3
2302662B	SV01	1,2-Dichlorobenzene	0.63	0.63	2.9	U	UJ	Other	µg/m^3
2302662B	SV01	1,2-Dichloroethane	0.42	0.42	1.9	U	UJ	Other	µg/m^3
2302662B	SV01	1,2-Dichloropropane	0.78	0.78	2.2	U	UJ	Other	µg/m^3
2302662B	SV01	1,3,5-Trimethylbenzene	0.73	0.73	2.4	U	UJ	Other	µg/m^3
2302662B	SV01	1,3-Butadiene	0.44	0.44	1.1	U	UJ	Other	µg/m^3
2302662B	SV01	1,3-Dichlorobenzene	0.6	0.6	2.9	U	UJ	Other	µg/m^3
2302662B	SV01	1,4-Dichlorobenzene	0.46	0.46	2.9	U	UJ	Other	µg/m^3
2302662B	SV01	1,4-Dioxane	0.95	0.95	8.6	U	UJ	Other	µg/m^3
2302662B	SV01	2,2,4-Trimethylpentane	1.6	1.6	11	U	UJ	Other	µg/m^3
2302662B	SV01	2-Butanone (Methyl Ethyl Ketone)	1.6	1.6	28	U	UJ	Other	µg/m^3
2302662B	SV01	2-Hexanone	2	2	9.8	U	UJ	Other	µg/m^3
2302662B	SV01	2-Propanol	1.3	1.3	24	U	UJ	Other	µg/m^3
2302662B	SV01	3-Chloropropene	1.6	1.6	7.5	U	UJ	Other	µg/m^3
2302662B	SV01	4-Ethyltoluene	0.56	0.56	2.4	U	UJ	Other	µg/m^3
2302662B	SV01	4-Methyl-2-pentanone	0.86	0.41	2.0	J	J	Other	µg/m^3

Table 3-1. Summary of Qualified Data

SDG	Sample	Analyte	Result	Method Detection Limit	Method Reporting Limit	Lab Qualifier	DV Qualifier	DV Qualifier Reason	Units
2302662B	SV01	Acetone	26	3.2	23		J	Other	µg/m^3
2302662B	SV01	alpha-Chlorotoluene	1.3	1.3	2.5	U	UJ	Other	µg/m^3
2302662B	SV01	Benzene	0.28	0.28	1.5	U	UJ	Other	µg/m^3
2302662B	SV01	Bromodichloromethane	0.68	0.68	3.2	U	UJ	Other	µg/m^3
2302662B	SV01	Bromoform	1.1	1.1	5.0	U	UJ	Other	µg/m^3
2302662B	SV01	Bromomethane	7.2	7.2	93	U	UJ	Other	µg/m^3
2302662B	SV01	Carbon Disulfide	1.6	0.98	75	J	U	LB,Other	µg/m^3
2302662B	SV01	Carbon Tetrachloride	0.38	0.38	3.0	U	UJ	Other	µg/m^3
2302662B	SV01	Chlorobenzene	0.63	0.63	2.2	U	UJ	Other	µg/m^3
2302662B	SV01	Chloroethane	1.6	1.6	6.3	U	UJ	Other	µg/m^3
2302662B	SV01	Chloroform	0.46	0.46	2.3	U	UJ	Other	µg/m^3
2302662B	SV01	Chloromethane	0.7	0.7	5.0	U	UJ	Other	µg/m^3
2302662B	SV01	cis-1,2-Dichloroethene	0.55	0.55	1.9	U	UJ	Other	µg/m^3
2302662B	SV01	cis-1,3-Dichloropropene	0.66	0.66	2.2	U	UJ	Other	µg/m^3
2302662B	SV01	Cumene	0.36	0.36	2.4	U	UJ	Other	µg/m^3
2302662B	SV01	Cyclohexane	0.86	0.86	8.3	U	UJ	Other	µg/m^3
2302662B	SV01	Dibromochloromethane	0.83	0.83	4.1	U	UJ	Other	µg/m^3
2302662B	SV01	Ethanol	24	4.8	18		J	Other	µg/m^3
2302662B	SV01	Ethyl Benzene	16	0.65	2.1		J	Other	µg/m^3
2302662B	SV01	Freon 11	2.9	0.41	2.7		J	Other	µg/m^3
2302662B	SV01	Freon 113	0.46	0.46	3.7	U	UJ	Other	µg/m^3
2302662B	SV01	Freon 114	0.98	0.98	3.4	U	UJ	Other	µg/m^3
2302662B	SV01	Freon 12	19	1.6	12		J	Other	µg/m^3
2302662B	SV01	Heptane	2	2	9.8	U	UJ	Other	µg/m^3
2302662B	SV01	Hexachlorobutadiene	2.1	2.1	26	U	UJ	Other	µg/m^3
2302662B	SV01	Hexane	1.4	1.4	8.4	U	UJ	Other	µg/m^3
2302662B	SV01	m,p-Xylene	74	0.61	2.1		J	Other	µg/m^3
2302662B	SV01	Methyl tert-butyl ether	0.36	0.36	1.7	U	UJ	Other	µg/m^3
2302662B	SV01	Methylene Chloride	1.2	1.2	8.3	U	UJ	Other	µg/m^3
2302662B	SV01	Naphthalene	0.43	0.43	5.0	U	UJ	Other	µg/m^3

Table 3-1. Summary of Qualified Data

SDG	Sample	Analyte	Result	Method Detection Limit	Method Reporting Limit	Lab Qualifier	DV Qualifier	DV Qualifier Reason	Units
2302662B	SV01	o-Xylene	22	0.68	2.1		J	Other	µg/m^3
2302662B	SV01	Propylbenzene	0.86	0.86	2.4	U	UJ	Other	µg/m^3
2302662B	SV01	Styrene	0.38	0.38	2.0	U	UJ	Other	µg/m^3
2302662B	SV01	Tetrachloroethene	970	1.2	3.2		J	Other	µg/m^3
2302662B	SV01	Tetrahydrofuran	4.5	4.5	7.1	U	UJ	Other	µg/m^3
2302662B	SV01	Toluene	0.54	0.54	18	U	UJ	Other	µg/m^3
2302662B	SV01	trans-1,2-Dichloroethene	0.33	0.33	1.9	U	UJ	Other	µg/m^3
2302662B	SV01	trans-1,3-Dichloropropene	0.58	0.58	2.2	U	UJ	Other	µg/m^3
2302662B	SV01	Trichloroethene	10	1	2.6		J	Other	µg/m^3
2302662B	SV01	Vinyl Chloride	0.35	0.35	1.2	U	UJ	Other	µg/m^3
2302662B	SV02	Carbon Disulfide	0.45	0.3	23	J	U	LB	µg/m^3
2302662B	SV03	Carbon Disulfide	0.50	0.29	22	J	U	LB	µg/m^3
2302662B	SV04	Carbon Disulfide	0.40	0.27	20	J	U	LB	µg/m^3
2302662B	SV05	Carbon Disulfide	0.72	0.28	21	J	U	LB	µg/m^3
2302662B	DUP-01	1,1,1-Trichloroethane	0.58	0.58	2.6	U	UJ	Other	µg/m^3
2302662B	DUP-01	1,1,2,2-Tetrachloroethane	1.1	1.1	3.3	U	UJ	Other	µg/m^3
2302662B	DUP-01	1,1,2-Trichloroethane	0.63	0.63	2.6	U	UJ	Other	µg/m^3
2302662B	DUP-01	1,1-Dichloroethane	0.54	0.54	1.9	U	UJ	Other	µg/m^3
2302662B	DUP-01	1,1-Dichloroethene	0.78	0.78	1.9	U	UJ	Other	µg/m^3
2302662B	DUP-01	1,2,4-Trichlorobenzene	2.3	2.3	18	U	UJ	Other	µg/m^3
2302662B	DUP-01	1,2,4-Trimethylbenzene	0.56	0.56	2.3	U	UJ	Other	µg/m^3
2302662B	DUP-01	1,2-Dibromoethane (EDB)	1	1	3.6	U	UJ	Other	µg/m^3
2302662B	DUP-01	1,2-Dichlorobenzene	0.62	0.62	2.9	U	UJ	Other	µg/m^3
2302662B	DUP-01	1,2-Dichloroethane	0.42	0.42	1.9	U	UJ	Other	µg/m^3
2302662B	DUP-01	1,2-Dichloropropane	0.77	0.77	2.2	U	UJ	Other	µg/m^3
2302662B	DUP-01	1,3,5-Trimethylbenzene	0.72	0.72	2.3	U	UJ	Other	µg/m^3
2302662B	DUP-01	1,3-Butadiene	0.43	0.43	1.0	U	UJ	Other	µg/m^3
2302662B	DUP-01	1,3-Dichlorobenzene	0.6	0.6	2.9	U	UJ	Other	µg/m^3
2302662B	DUP-01	1,4-Dichlorobenzene	0.46	0.46	2.9	U	UJ	Other	µg/m^3
2302662B	DUP-01	1,4-Dioxane	0.94	0.94	8.6	U	UJ	Other	µg/m^3

Table 3-1. Summary of Qualified Data

SDG	Sample	Analyte	Result	Method Detection Limit	Method Reporting Limit	Lab Qualifier	DV Qualifier	DV Qualifier Reason	Units
2302662B	DUP-01	2,2,4-Trimethylpentane	1.6	1.6	11	U	UJ	Other	µg/m^3
2302662B	DUP-01	2-Butanone (Methyl Ethyl Ketone)	1.6	1.6	28	U	UJ	Other	µg/m^3
2302662B	DUP-01	2-Hexanone	2	2	9.7	U	UJ	Other	µg/m^3
2302662B	DUP-01	2-Propanol	1.2	1.2	23	U	UJ	Other	µg/m^3
2302662B	DUP-01	3-Chloropropene	1.6	1.6	7.4	U	UJ	Other	µg/m^3
2302662B	DUP-01	4-Ethyltoluene	0.56	0.56	2.3	U	UJ	Other	µg/m^3
2302662B	DUP-01	4-Methyl-2-pentanone	0.88	0.41	1.9	J	J	Other	µg/m^3
2302662B	DUP-01	Acetone	30	3.2	23		J	Other	µg/m^3
2302662B	DUP-01	alpha-Chlorotoluene	1.3	1.3	2.5	U	UJ	Other	µg/m^3
2302662B	DUP-01	Benzene	0.28	0.28	1.5	U	UJ	Other	µg/m^3
2302662B	DUP-01	Bromodichloromethane	0.68	0.68	3.2	U	UJ	Other	µg/m^3
2302662B	DUP-01	Bromoform	1.1	1.1	4.9	U	UJ	Other	µg/m^3
2302662B	DUP-01	Bromomethane	7.2	7.2	92	U	UJ	Other	µg/m^3
2302662B	DUP-01	Carbon Disulfide	2.1	0.97	74	J	U	LB,Other	µg/m^3
2302662B	DUP-01	Carbon Tetrachloride	0.38	0.38	3.0	U	UJ	Other	µg/m^3
2302662B	DUP-01	Chlorobenzene	0.62	0.62	2.2	U	UJ	Other	µg/m^3
2302662B	DUP-01	Chloroethane	1.6	1.6	6.3	U	UJ	Other	µg/m^3
2302662B	DUP-01	Chloroform	0.45	0.45	2.3	U	UJ	Other	µg/m^3
2302662B	DUP-01	Chloromethane	0.69	0.69	4.9	U	UJ	Other	µg/m^3
2302662B	DUP-01	cis-1,2-Dichloroethene	0.55	0.55	1.9	U	UJ	Other	µg/m^3
2302662B	DUP-01	cis-1,3-Dichloropropene	0.66	0.66	2.2	U	UJ	Other	µg/m^3
2302662B	DUP-01	Cumene	0.35	0.35	2.3	U	UJ	Other	µg/m^3
2302662B	DUP-01	Cyclohexane	0.86	0.86	8.2	U	UJ	Other	µg/m^3
2302662B	DUP-01	Dibromochloromethane	0.82	0.82	4.0	U	UJ	Other	µg/m^3
2302662B	DUP-01	Ethanol	26	4.8	18		J	Other	µg/m^3
2302662B	DUP-01	Ethyl Benzene	16	0.64	2.1		J	Other	µg/m^3
2302662B	DUP-01	Freon 11	3.0	0.4	2.7		J	Other	µg/m^3
2302662B	DUP-01	Freon 113	0.46	0.46	3.6	U	UJ	Other	µg/m^3
2302662B	DUP-01	Freon 114	0.98	0.98	3.3	U	UJ	Other	µg/m^3
2302662B	DUP-01	Freon 12	20	1.5	12		J	Other	µg/m^3

Table 3-1. Summary of Qualified Data

SDG	Sample	Analyte	Result	Method Detection Limit	Method Reporting Limit	Lab Qualifier	DV Qualifier	DV Qualifier Reason	Units
2302662B	DUP-01	Heptane	2	2	9.8	U	UJ	Other	µg/m^3
2302662B	DUP-01	Hexachlorobutadiene	2.1	2.1	25	U	UJ	Other	µg/m^3
2302662B	DUP-01	Hexane	1.4	1.4	8.4	U	UJ	Other	µg/m^3
2302662B	DUP-01	m,p-Xylene	72	0.61	2.1		J	Other	µg/m^3
2302662B	DUP-01	Methyl tert-butyl ether	0.36	0.36	1.7	U	UJ	Other	µg/m^3
2302662B	DUP-01	Methylene Chloride	1.2	1.2	8.3	U	UJ	Other	µg/m^3
2302662B	DUP-01	Naphthalene	0.43	0.43	5.0	U	UJ	Other	µg/m^3
2302662B	DUP-01	o-Xylene	22	0.67	2.1		J	Other	µg/m^3
2302662B	DUP-01	Propylbenzene	0.86	0.86	2.3	U	UJ	Other	µg/m^3
2302662B	DUP-01	Styrene	0.38	0.38	2.0	U	UJ	Other	µg/m^3
2302662B	DUP-01	Tetrachloroethene	930	1.2	3.2		J	Other	µg/m^3
2302662B	DUP-01	Tetrahydrofuran	4.5	4.5	7.0	U	UJ	Other	µg/m^3
2302662B	DUP-01	Toluene	0.53	0.53	18	U	UJ	Other	µg/m^3
2302662B	DUP-01	trans-1,2-Dichloroethene	0.32	0.32	1.9	U	UJ	Other	µg/m^3
2302662B	DUP-01	trans-1,3-Dichloropropene	0.58	0.58	2.2	U	UJ	Other	µg/m^3
2302662B	DUP-01	Trichloroethene	12	1	2.6		J	Other	µg/m^3
2302662B	DUP-01	Vinyl Chloride	0.35	0.35	1.2	U	UJ	Other	µg/m^3

Notes:

LB = laboratory blank contamination

DV= data validation

J = The associated numerical value is an estimated quantity.

U = The material was analyzed for, but was not detected.

UJ = The material was analyzed for, but was not detected. The sample quantitation limit is an estimated quantity.