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COLD WEATHER SAMPLING EVENT REPORT

January 2019

Former Harbour Point Cleaners
Suite B6, Mukilteo Speedway Center
13619 Mukilteo Speedway
Lynnwood, Washington 98087
Washington State Department of Ecology Facility ID: 41352598
Washington State Department of Ecology Voluntary Cleanup Program No. NW2902
ATC PROJECT NO. 282 EM 0017 / NPWRI 18001

Submitted to:
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1.0 INTRODUCTION AND REMEDIATION HISTORY

ATC Group Services LLC (ATC) has prepared this report on behalf of Weingarten Realty Investors (WRI) to document the results of cold weather ambient air and sub-slab vapor sampling at the former Harbour Point Dry Cleaners tenant space within the Mukilteo Speedway Center at 13619 Mukilteo Speedway, Lynnwood, Washington (**Figure 1**). The sampling was conducted to further evaluate the effectiveness of the former sub-slab depressurization (SSD) system which operated from January 2017 through June of 2018, and the remediation of the interior of the space which took place in June 2018. The SSD system was installed in order to reduce risk to human health and the environment, and to further comply with the Model Toxics Control Act (MTCA) and its implementing regulations, Chapter 70.105D of the Revised Code of Washington (RCW) and Chapter 173- 340 of the Washington Administrative Code (WAC). The SSD system mitigated vapor intrusion from underlying soil previously identified as impacted with volatile organic compounds (VOCs), including tetrachloroethene (PCE [tetrachloroethylene, perchloroethylene]), which was formally used at the tenant space as a dry cleaning solvent, through the concrete floor slab into the building.

A cold weather sampling event was conducted on January 10, 2019. The event included the collection of an 8-hour indoor ambient air sample from within the former Harbour Point dry cleaning facility (ambient air sample IA-1-011019), and an 8-hour indoor ambient air sample from within the west-adjacent tenant space (ambient air sample IA-2-011019), the collection of five sub-slab soil-vapor samples (SV-1 through SV-5), and three outdoor air samples (OA-1-011019, OA-2-011019, and OA-3-011019). The recorded temperature in Mukilteo, Washington on January 10, 2019 ranged from 48 to 50 degrees Fahrenheit.

Laboratory analysis was performed by PACE Analytical, an Ecology accredited analytical laboratory; each sample was analyzed for select volatile organic compounds (VOCs) by United States Environmental Protection Agency (EPA) Method TO-15. The air sample analysis included those VOCs associated with PCE, which includes degradation compounds, produced through the de-chlorination of PCE: trichloroethene (trichloroethylene [TCE]), cis-1,2-dichloroethene (cis-1,2-

dichloroethylene [cis-DCE]), trans-1,2-dichloroethene (trans1,2-dichloroethylene [trans-DCE]), 1,1-dichloroethene (1,1-dichloroethylene [1,1-DCE]), and vinyl chloride.

Results from the cold weather sampling event indicated that the ambient air sample collected from inside the former Harbour Point Cleaners tenant space (air sample IA-1-011019) and from the adjacent west tenant space (air sample IA-2-011019) indicates ambient concentrations of TCE below the MTCA Method B Indoor Air Screening Level for TCE of 0.37 µg/m^3 and concentrations of PCE below laboratory reporting limits.

Results of the sampling of sub-slab soil vapor probes SV-1 through SV-5 indicated that PCE was detected in SV-1 at a concentration in excess of the MTCA Method B Sub-slab Soil Gas Screening Level (321 µg/m3), but below the MTCA Method C Sub-slab Soil Gas Screening Level (1,333 µg/m3). No other PCE-related compounds were detected in any sub-slab vapor samples at a concentration in excess of the MTCA Method B Sub-slab Soil Gas Screening Level.

Historical system pilot testing, installation, and performance data, as well as indoor air cleanup and post system sampling data collected prior to January 2019 is summarized in the following reports:

- ATC, *Sub-Slab Depressurization Pilot Test Report Harbour Point Cleaners at Mukilteo Speedway Center 13619 Mukilteo Speedway Lynnwood, Washington 98037*, December 7, 2016.
- ATC, *Initial Operations and Maintenance Report Harbour Point Cleaners at Mukilteo Speedway Center 13619 Mukilteo Speedway Lynnwood, Washington 98037*, May 2, 2017.
- ATC, *Cleanup Action Report, Former Harbour Point Cleaners, Suite B6, Mukilteo Speedway Center 13619 Mukilteo Speedway, Lynnwood, Washington 98037*, October 15, 2018.

2.0 COLD WEATHER VISIT SUMMARY

ATC performed a cold weather sampling event on January 10, 2019. Weather conditions in Mukilteo, Washington included recorded temperatures of 48 to 50 degrees Fahrenheit, and barometric pressure of 29.4 inches. The sampling event included the following activities:

- Collected 8-hour indoor ambient air samples from within the former Harbour Point tenant space (location IA-1) and the adjacent-west tenant space (location IA-2). The two air samples were collected within 6-liter (L) laboratory certified Summa canisters equipped with flow regulators that allowed the canisters to remain open for sample collection over an approximate 8-hour period. Each sample was analyzed by PACE for VOCs by EPA Method TO-15.
- Collected three outdoor ambient air samples (locations OA-1 through OA-3) in order to assess exterior sources of VOCs in ambient air within the dry cleaning tenant space. The three air samples were collected within 6-L laboratory certified Summa canisters equipped with flow regulators that allowed the canisters to remain open for sample collection over an approximate 8-hour period. Each sample was analyzed by PACE for VOCs by EPA Method TO-15.
- Collected samples from sub-slab vapor points SV-1 through SV-5 within 6-L laboratory certified Summa canisters equipped with flow regulators that allowed the canisters to remain open for sample collection over an approximate 20-minute period. Prior to collection of each sample, sampling trains were purged using a dedicated purge suma canister connected via a manifold. The purge suma valve was opened and allowed to draw vacuum from the sampling train for approximately two minutes to ensure that all stagnant or ambient air from the sample train was evacuated. Following purging, the purge suma valve was closed prior to sample collection. Each sub-slab vapor point sample was analyzed by PACE for VOCs by EPA Method TO-15SIM.

Field notes from the cold weather sampling event are included with this report in **Appendix A**.

3.0 DATA SUMMARY AND EVALUATION

INDOOR AIR EVALUATION: ATC assessed indoor ambient air quality by collecting 8-hour ambient air samples quarterly from within the former Harbour Point tenant space (location IA-1) and the adjacent-west tenant space (location IA-2). This was the second sampling event to take place since the SSD system operations ceased in June 2018.

The MTCA regulations at WAC 173-340-750 provide Method B (unrestricted or residential) indoor air cleanup levels and Method C (industrial) air cleanup levels. Method B levels are typically utilized as default values for determining acceptable indoor air concentrations in an unrestricted land-use scenario (e.g., residential). The methodology utilized to derive Method B cleanup levels assumes typical residential exposure parameters and includes both child and adult exposures. Conversely, the methodology utilized to determine Method C cleanup levels utilizes typical commercial/industrial exposure parameters, only considers adult exposures, and uses a less conservative lifetime cancer risk threshold. In consideration of these differences and the commercial nature of the current and anticipated future land use associated with the site, the Method C cleanup levels are considered to be more appropriate than the Method B cleanup levels. Method B and C indoor air cleanup levels for select VOCs provide a relevant basis for comparing the indoor air sampling results to applicable health-based screening levels. Provided below are additional details regarding the measured concentrations of PCE and TCE in indoor and ambient air and comparison to Method B and Method C screening levels.

Former Harbour Point Cleaners Tenant Space (IA-1)

PCE was not detected in the indoor air sample collected during the cold weather sampling event. PCE has not been detected in indoor air samples since the building interior was cleaned in June 2018.

TCE was detected in the indoor air sample below the Method B Screening Level (0.37 µg/m^3) at a concentration of 0.296 µg/m^3. TCE has not been detected in indoor air samples in excess of the Screening Level since the building interior was cleaned in June 2018.

With the exception of chloroform, 1,4-dichlorobenzene, and 1,2-dichoroethane both indoor air samples, no VOCs were detected in indoor air at concentrations in excess of MTCA Method B Indoor Air Screening Levels. These compounds were not detected in any sub-slab vapor samples. Therefore, the presence of these constituents in indoor air do not appear to be related to a vapor intrusion source.

Indoor air sample results are summarized on **Table 1**, and the laboratory report is included in **Appendix B**.

Adjacent Tenant Space B5 (IA-2)

PCE was not detected in the indoor air sample collected from the adjacent tenant space during the cold weather sampling event. PCE has not been detected in indoor air samples since the former Harbour Point Cleaners building interior was cleaned in June 2018.

TCE was detected in the indoor air sample below the Method B Screening Level (0.37 µg/m^3) at a concentration of 0.154 µg/m^3. TCE has not been detected in indoor air samples in excess of the Screening Level since the building interior was cleaned in June 2018. Indoor air sample results are summarized on **Table 1**, and the laboratory report is included in **Appendix B**.

Sub-Slab Vapor SV-1 through SV-5)

PCE was detected in 1 of 5 sub-slab vapor probes (SV-1 at 769 µg/m^3) at a concentration in excess of the MTCA Method B Sub-slab Soil Gas Screening Level (321 µg/m^3). PCE was not detected in any sub-slab vapor samples at a concentration in excess of the MTCA Method C Sub-slab Soil Gas Screening Level (1,333 µg/m3). A duplicate sample (DUP-011019) was also collected at SV-1. PCE was detected in the duplicate sample (1,100 µg/m^3) at a concentration in excess of the MTCA Method B Sub-slab Soil Gas Screening Level.

No other PCE-related compounds were detected in the 5 sub-slab vapor probes at concentrations in excess of the MTCA Method B Sub-slab Soil Gas Screening Levels. Sub-slab soil gas sample results are summarized on **Table 2**, and the laboratory report is included in **Appendix B.**

OUTDOOR AIR EVALUATION:

ATC assessed outdoor ambient air quality by collecting 8-hour ambient air samples from outside of the former Harbour Point tenant space (locations OA-1, OA-2, and OA-3). Sample locations are shown on **Figure 2**. This was the second sampling event to take place since the SSD system operations ceased in June 2018. Outdoor air sample results are summarized on **Table 1**, and the laboratory report is included in **Appendix B**.

4.0 RECOMMENDATIONS

Based on data presented in previous reports and confirmed in this cold weather sampling report, numerous site investigation activities and successful remedial activities have been performed at the site. Operation of the SSD remediation system resulted in reductions in both the mass and concentrations of PCE that may remain in the subsurface. The results of this second round of post-remediation sub-slab and indoor air sampling demonstrate that the current site conditions meet MTCA Method B and/or Method C screening levels for both sub-slab soil vapor and indoor air. In consideration of the factors presented above, there are no other potentially complete exposure pathways at the site that warrant further consideration or mitigation.

TABLES

Table 1
Former Harbour Point Cleaners
13619 Mukilteo Speedway
Indoor and Outdoor Air and SSDS Effluent Sampling Results
Samples obtained on July 6, 2018 and January 10, 2019
Concentrations in micrograms per cubic meter (ug/m^3)

				Indoor Results				Outdoor Results					
Analyte	**CAS #**	**MTCA Method B Screening Level[1]**	**MTCA Method C Screening Level[2]**	**IA-1 07/06/18**	**IA-1 01/10/19**	**IA-2 07/06/18**	**IA-2 01/10/19**	**OA-1 07/06/18**	**OA-1 01/10/19**	**OA-2 07/06/18**	**OA-2 01/10/19**	**OA-3 07/06/18**	**OA-3 01/10/19**
Average Temperature (°F)				**76**	**49**	**76**	**49**	**76**	**49**	**76**	**49**	**76**	**49**
Acetone	67-64-1	14,171	31,000	47.8	NA	39.4	NA	5.21	NA	6.36	NA	4.66	NA
Allyl Chloride	107-05-1			ND	NA	ND	NA	ND	NA	ND	NA	ND	NA
Benzene	71-43-2	13.7	30	<0.639	0.547	3.62	0.509	<0.639	0.577	<0.639	0.869	<0.639	0.462
Benzyl Chloride	100-44-7			ND	NA	ND	NA	ND	NA	ND	NA	ND	NA
Bromodichloromethane	75-27-4			ND	NA	ND	NA	ND	NA	ND	NA	ND	NA
Bromoform	75-25-2			ND	NA	ND	NA	ND	NA	ND	NA	ND	NA
Bromomethane	74-83-9			ND	NA	ND	NA	ND	NA	ND	NA	ND	NA
1,3-Butadiene	106-99-0			ND	NA	ND	NA	ND	NA	ND	NA	ND	NA
Carbon Disulfide	75-15-0			ND	NA	ND	NA	ND	NA	ND	NA	ND	NA
Carbon Tetrachloride	56-23-5	0.417	4.17	<1.26	0.409	<1.26	0.380	<1.26	**0.461**	<1.26	**0.438**	<1.26	**0.469**
Chlorobenzene	108-90-7			ND	NA	ND	NA	ND	NA	ND	NA	ND	NA
Chloroethane	75-00-3			ND	<0.106	ND	<0.106	ND	<0.106	ND	<0.106	ND	<0.106
Chloroform	67-66-3	0.109	1.09	<0.973	**0.303**	<0.973	**0.232**	<0.973	<0.0973	<0.973	<0.0973	<0.973	<0.0973
Chloromethane	74-87-3	41.1	90	0.981	0.928	1.08	0.860	0.946	1.01	0.89	0.962	0.883	1.04
2-Chlorotoluene	95-49-8			ND	NA	ND	NA	ND	NA	ND	NA	ND	NA
Cyclohexane	110-82-7			ND	NA	3.53	NA	ND	NA	ND	NA	ND	NA
Dibromochloromethane	124-48-1			ND	NA	ND	NA	ND	NA	ND	NA	ND	NA
1,2-Dibromoethane	106-93-4			ND	<0.154	ND	<0.154	ND	<0.154	ND	<0.154	ND	<0.154
1,2-Dichlorobenzene	95-50-1			ND	NA	ND	NA	ND	NA	ND	NA	ND	NA
1,3-Dichlorobenzene	541-73-1			ND	NA	ND	NA	ND	NA	ND	NA	ND	NA
1,4-Dichlorobenzene	106-46-7	0.227	2.27	**2.87**	**1.07**	**1.43**	**1.66**	<1.20	<0.120	<1.20	<0.120	<1.20	<0.120
1,2-Dichloroethane	107-06-2	0.0962	0.962	**0.988**	**0.260**	<0.810	**0.137**	<0.810	0.0882	<0.810	0.0902	<0.810	0.0859
1,1-Dichloroethane	75-34-3			ND	<0.0802	ND	<0.0802	ND	<0.0802	ND	<0.0802	ND	<0.0802
1,1-Dichloroethene	75-35-4			ND	<0.0793	ND	<0.0793	ND	<0.0793	ND	<0.0793	ND	<0.0793
cis-1,2-Dichloroethene	156-59-2			ND	<0.0793	ND	<0.0793	ND	<0.0793	ND	<0.0793	ND	<0.0793
trans-1,2-Dichloroethene	156-60-5			ND	<0.0793	ND	<0.0793	ND	0.117	ND	<0.0793	ND	<0.0793
1,2-Dichloropropane	78-87-5			ND	<0.139	ND	<0.139	ND	<0.139	ND	<0.139	ND	<0.139
cis-1,3-Dichloropropene	10061-01-5			ND	<0.0908	ND	<0.0908	ND	<0.0908	ND	<0.0908	ND	<0.0908
trans-1,3-Dichloropropene	10061-02-6			ND	<0.136	ND	<0.136	ND	<0.136	ND	<0.136	ND	<0.136
1,4-Dioxane	123-91-1			ND	NA	ND	NA	ND	NA	ND	NA	ND	NA
Ethanol	64-17-5			194 E	NA	232 E	NA	4.83	NA	11.5	NA	7.77	NA
Ethylbenzene	100-41-4	457	1,000	1.48	0.546	5.38	0.300	ND	0.297	ND	0.385	ND	0.208
4-Ethyltoluene	622-96-8			ND	NA	4.93	NA	ND	NA	ND	NA	ND	NA
Trichlorofluoromethane	75-69-4	320	700	26.6	NA	28.6	NA	1.31	NA	1.25	NA	1.32	NA
Dichlorodifluoromethane	75-71-8	45.7	100	2.65	NA	2.81	NA	1.83	NA	1.59	NA	1.75	NA
1,1,2-Trichlorotrifluoroethane	76-13-1			ND	NA	ND	NA	ND	NA	ND	NA	ND	NA
1,2-Dichlorotetrafluoroethane	76-14-2			ND	NA	ND	NA	ND	NA	ND	NA	ND	NA
Heptane	142-82-5			ND	NA	4.62	NA	ND	NA	ND	NA	ND	NA
Hexachloro-1,3-butadiene	87-68-3			ND	NA	ND	NA	ND	NA	ND	NA	ND	NA
n-Hexane	110-54-3	320	700	1.73	NA	7.63	NA	ND	NA	ND	NA	0.832	NA
Isopropylbenzene	98-82-8			ND	NA	ND	NA	ND	NA	ND	NA	ND	NA
Methylene Chloride	75-09-2	250	600	1.85	NA	ND	NA	0.948	NA	ND	NA	1.49	NA
Methyl Butyl Ketone	591-78-6			ND	NA	ND	NA	ND	NA	ND	NA	ND	NA
2-Butanone (MEK)	78-93-3			ND	NA	ND	NA	ND	NA	9.05	NA	ND	NA
4-Methyl-2-pentanone (MIBK)	108-10-1			ND	NA	ND	NA	ND	NA	ND	NA	ND	NA
Methyl Methacrylate	80-62-6			ND	NA	ND	NA	ND	NA	ND	NA	ND	NA
MTBE	1634-04-4			ND	NA	ND	NA	ND	NA	ND	NA	ND	NA
Naphthalene	91-20-3			ND	NA	ND	NA	ND	NA	ND	NA	ND	NA
2-Propanol	67-63-0			46.9	NA	22.6	NA	ND	NA	11.8	NA	ND	NA
Propene	115-07-1			ND	NA	ND	NA	ND	NA	ND	NA	ND	NA
Styrene	100-42-5			1.25	NA	0.99	NA	ND	NA	ND	NA	ND	NA
1,1,2,2-Tetrachloroethane	79-34-5	0.0431	0.431	ND	<0.137	ND	<0.137	ND	<0.137	ND	<0.137	ND	<0.137
Tetrachloroethylene	127-18-4	9.62	40	<1.36	<0.136	<1.36	<0.136	<1.36	<0.136	<1.36	<0.136	<1.36	<0.136
Tetrahydrofuran	109-99-9			ND	NA	ND	NA	ND	NA	ND	NA	ND	NA
Toluene	108-88-3	2,289	5,000	9.33	NA	35.5	NA	3.36	NA	1.35	NA	2.53	NA
1,2,4-Trichlorobenzene	120-82-1			ND	NA	ND	NA	ND	NA	ND	NA	ND	NA
1,1,1-Trichloroethane	71-55-6	2,290	5,000	ND	<0.109	ND	<0.109	ND	<0.109	ND	<0.109	ND	<0.109
1,1,2-Trichloroethane	79-00-5			ND	<0.163	ND	<0.163	ND	<0.163	ND	<0.163	ND	<0.163
Trichloroethylene	79-01-6	0.37	2.0	<1.07	0.296	<1.07	0.154	<1.07	<0.107	<1.07	<0.107	<1.07	**1.59**
1,2,4-Trimethylbenzene	95-63-6	3.2	7.0	ND	NA	**5.49**	NA	ND	NA	ND	NA	ND	NA
1,3,5-Trimethylbenzene	108-67-8			ND	NA	1.49	NA	ND	NA	ND	NA	ND	NA
2,2,4-Trimethylpentane	540-84-1			ND	NA	ND	NA	ND	NA	ND	NA	ND	NA
Vinyl Chloride	75-01-4	0.28	2.8	ND	<0.0511	ND	<0.0511	ND	<0.0511	ND	<0.0511	ND	<0.0511
Vinyl Bromide	593-60-2			ND	NA	ND	NA	ND	NA	ND	NA	ND	NA
Vinyl Acetate	108-05-4	91.4	100	ND	0.367	ND	0.103	ND	<0.0704	ND	<0.0704	ND	0.0830
m&p-Xylene	1330-20-7			ND	NA	20.4	NA	ND	NA	ND	NA	ND	NA
o-Xylene	95-47-6			ND	NA	6.84	NA	ND	NA	ND	NA	ND	NA

Notes:

Samples analyzed for VOCs via EPA Method TO-15

ug/m^3 = micrograms per cubic meter

MTCA - Washington State Department of Ecology Model Toxics Control Act

[1] = MTCA 2015 Method B Indoor Air Screening Level

[2] = MTCA 2015 Method C Indoor Air Screening Level

Bold denotes concentration at or above either 2015 MTCA Method B or Method C Indoor Air Screening Levels

ND = Not detected at or above laboratory reporting limit

NA = Not Analyzed

Table 2
Summary of Soil Vapor Sample Analytical Results - Chlorinated Volatile Organic Compounds
Former Harbour Point Cleaners
13619 Mukilteo Speedway
Lynnwood, Washington

Sample ID	Sample Depth Interval (feet below ground surface)	Sample Date	Select Chlorinated Volatile Organic Compounds (cVOCs)[1] in ug/m^3						Leak Detection Compounds	
			PCE	TCE	cis-DCE	trans-DCE	1,1-DCE	Vinyl Chloride	Helium in ppmv[2]	% Oxygen[3]
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	--
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	--
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	--
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	--
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	--
2015 MTCA Method B Subslab Screening Level			**321**	**12.3**	**NA**	**NA**	**3,050**	**9.3**	**NA**	**NA**
2015 MTCA Method C Subslab Screening Level			**1,330**	**66.7**	**NA**	**NA**	**6,670**	**93.3**	**NA**	**NA**

Notes:

ug/m^3 = micrograms per cubic meter

ppmv = parts per million by volume

PCE = Tetrachloroethene (Tetrachloroethylene, perchloroethylene)

TCE = Trichloroethene (Trichloroethylene)

cis-DCE = cis-1,2-Dichloroethene (cis-1,2-Dichloroethylene)

trans-DCE = trans-1,2-Dichloroethene (trans-1,2-Dichloroethylene)

1,1-DCE = 1,1-Dichloroethene (1,1-Dichloroethylene)

MTCA - Washington State Department of Ecology Model Toxics Control Act

Bold denotes concentration at or above MTCA Method B Subslab Soil Gas Screening Level

1 = Analytical results by EPA Method TO-15

2 = Analytical results by EPA Method 3C

3 = Analytical resutls by gas chromatography/thermal conductivity detector

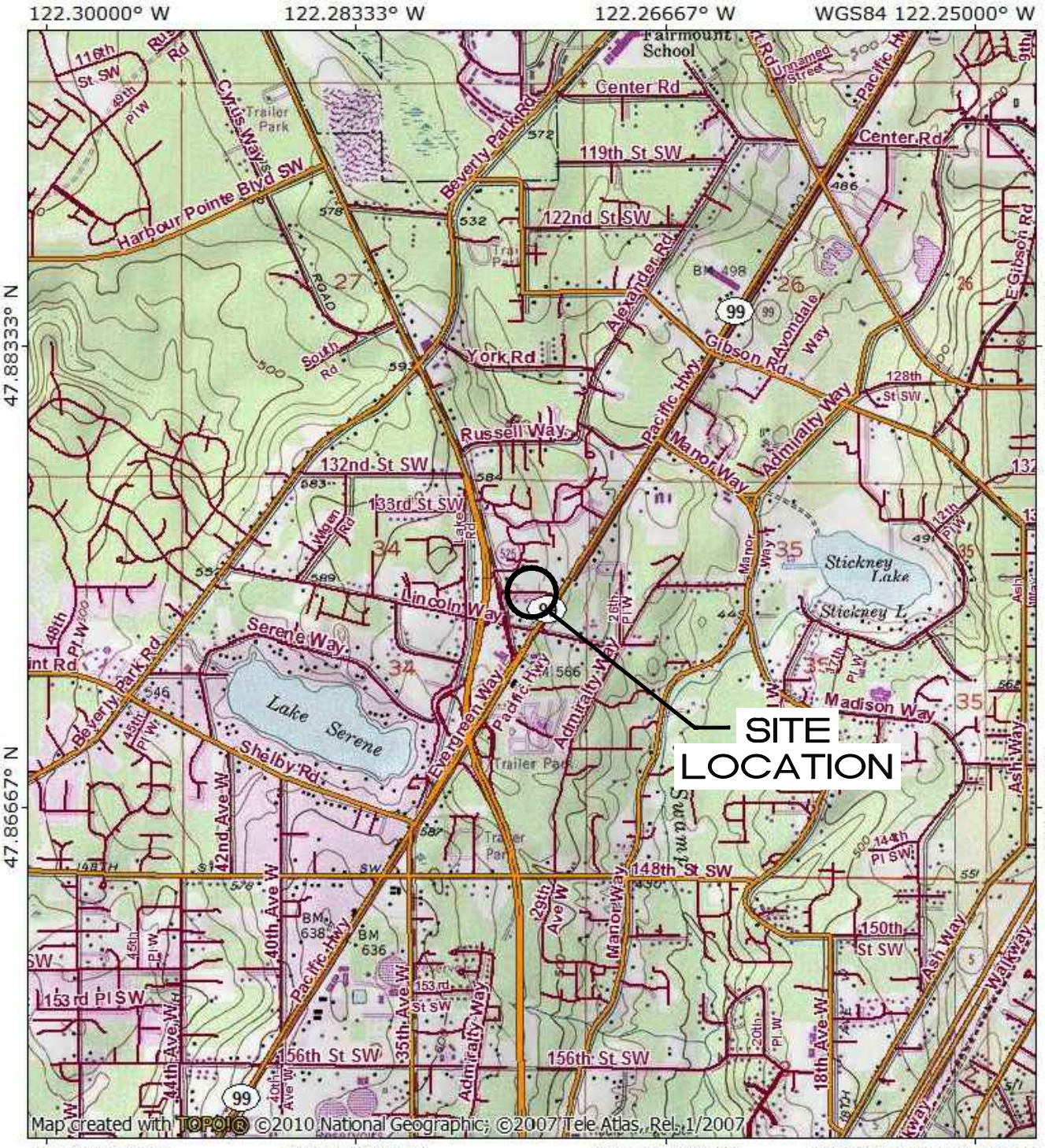
All analytical results reported in micrograms per cubic meter (µg/m^3)

A complete list of VOC data is provided in Appendix B.

NA = No applicable data

SSDS was shutdown on June 28, 2018, and sampling performed on July 6, 2018 and January 10, 2019 was while the SSDS was NOT operating

FIGURES



SOURCE: USGS TOPO MAP, EDMONDS EAST, WA, 1981

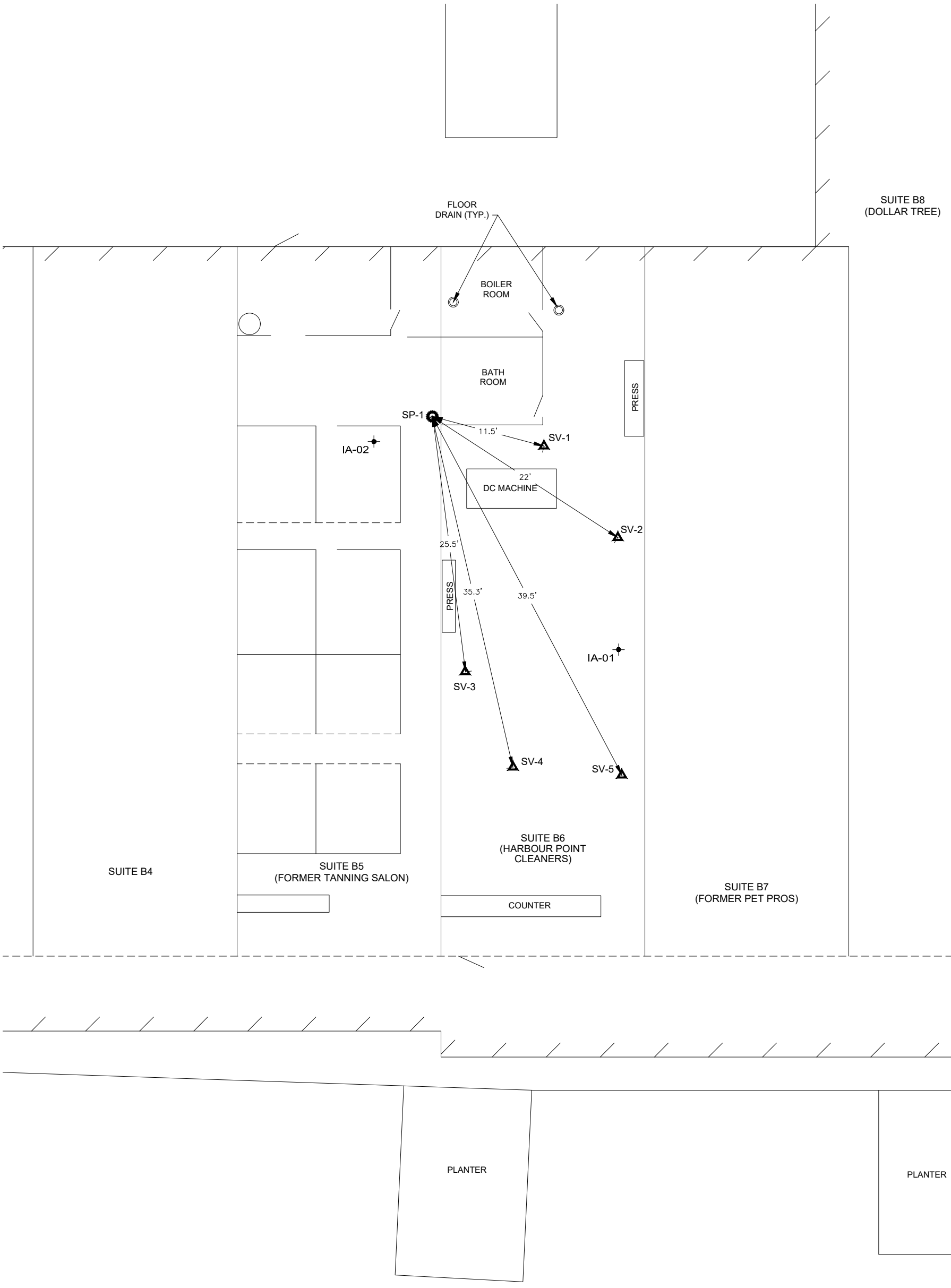
SITE LOCATION MAP

SPEEDWAY SHOPPING CENTER
13632 HIGHWAY 99
LYNWOOD, WA

PROJECT NUMBER: 282EM00166		DATE: 11/10/16	FIGURE 1
APPROVED BY: SP		DRAWN BY: BK	

ATC
6347 Seaview Avenue NW
Seattle, Washington 98107
Ph: (206) 781-1449 *** Fax: (206) 781-1543

S:\Projects-BST\WEINGARTEN\HARBOR POINT CLEANERS 282EM00018\1_SITELOC.dwg



LEGEND

IA-01 INDOOR AIR □UALITY SAMPLE

SV-1 SUB-SLAB MONITORING POINT

SP-1 SUB-SLAB DEPRESSURI□ATION SYSTEM RISER PIPE

0 10 20

SCALE, FT

NOTE: SCALE AND LOCATIONS ARE APPROXIMATE

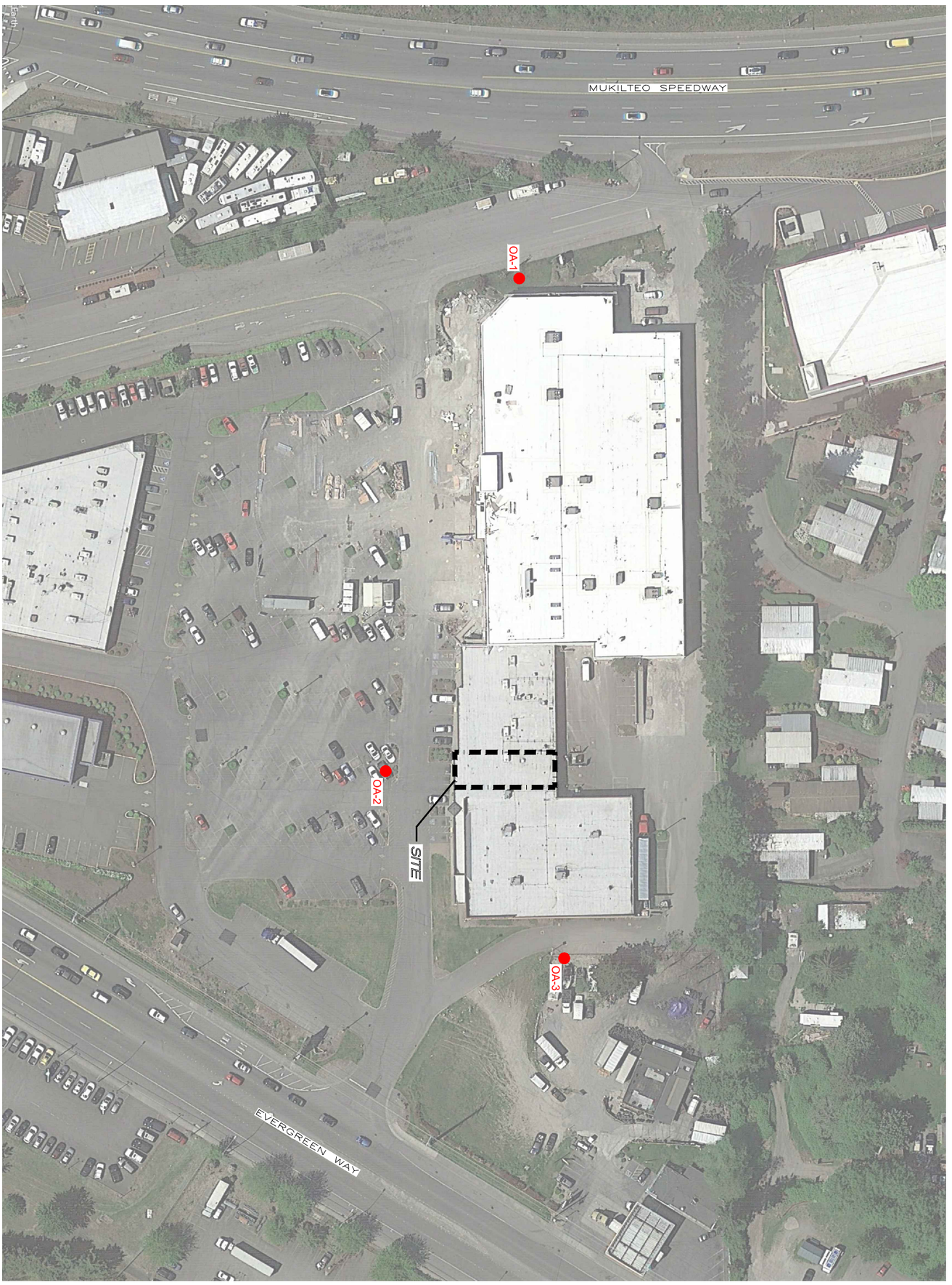
INDOOR AIR AND SUB-SLAB SAMPLE LOCATIONS

FORMER HARBOUR POINT CLEANERS
13619 MUKILTEO SPEEDWAY
LYNNWOOD, WA

PROJECT NUMBER: NPWRI18001		DATE: 3/1/19	FIGURE 2
APPROVED BY: ES		DRAWN BY: BK	

ATC
6347 Seaview Avenue NW
Seattle, Washington 98107
Ph: (206) 781-1449 *** Fax: (206) 781-1543

S:\Projects-BST\WEINGARTEN\HARBOUR POINT CLEANERS NPWRI18001\2_INDAIR_SMPLOC.dwg



LEGEND

OA-1 ● OUTDOOR AIR SAMPLE

0 100 200

APPROX. SCALE, FT

SOURCE: GOOGLE EARTH PRO, 5/13/18
NOTE: SCALE AND LOCATIONS ARE APPROXIMATE

OUTDOOR AIR SAMPLE LOCATIONS

FORMER HARBOUR POINT CLEANERS
13619 MUKILTEO SPEEDWAY
LYNNWOOD, WA

PROJECT NUMBER: NPWRI18001		DATE: 3/1/19	FIGURE
APPROVED BY: ES		DRAWN BY: BK	3

ATC
6347 Seaview Avenue NW
Seattle, Washington 98107
Ph: (206) 781-1449 *** Fax: (206) 781-1543

APPENDIX A
Field Notes

Field Report

FLD-100
Revision 1.0
6/1/2016

ATC Branch: Seattle - 10282	Date: 1/10/2019	Page 1 of
ATC Representative(s): L. Brown	Project: Harbor Point	
Role: Field Geologist	Location:	
Contact Information: (206) 781-1449	Project No:	Task No: --
Scope of Work: X Monitoring ___ Assessment ___ Remediation ___ Closure	Weather: Cloudy	Temperature: ~50°F
	Contractor:	

Time:	Comments:
0712	ATC (L. Brown) arrived at site and began Pres for vapor sampling activities.
0719	Completed JHA and began setting up outdoor air summas.
	> Sample OA-1: Summa # 7346 / Regulator # 006396 Lock # 1664, Initial P = 29" Hg. Start time = 0746
	> Sample OA-2: Summa # 5116 / Regulator # 006985 Lock # 4346 Initial P = 28" Start time = 0805
	> Sample OA-3: Summa # 6569 / Regulator # 005935 Lock # 4164 Initial P = 29" Hg. Start time = 0820
0755	Property Mgr. (Rich) arrived at site and unlocked former dry cleaner + Spa tanning salon spaces
0812	Rich Demoted
	> Sample IA-1: Summa # 6785 / Regulator # 008426 Initial P = 29" Hg Start time = 0828
	> Sample IA-2: Summa # 5834 / Regulator # 008664 Initial P = 30" Hg Start time = 0833
0849	Began round of Vac checks on 8 Hr summas. (cont'd pg 2)

Equipment Used:		
Contractor Hours (per Person):	Staff / Technician Hours:	Mileage:
Copies To:	Project Manager:	
	Reviewed By:	

ATC	Field Report	FLD-100 Revision 1.0 6/1/2016

ATC Branch: Seattle	Date: 1/10/2019	Page 2 of 5
ATC Representative(s): L. Brown.	Project: Harbor Point	
Role:	Location:	
Contact Information: (206) 781-1449	Project No:	Task No:
Scope of Work:	Weather:	Temperature:
___ Monitoring ___ Assessment ___ Remediation ___ Closure	Contractor: N/A	

Time:	Comments:
0851	OA-1 : 25" Hg.
0855	OA-2 : 26" Hg.
0856	OA-3 : 27" Hg.
0859	IA-1 : 27" Hg
0900	IA-2 : 29" Hg
0930	Setting up to collect SV samples (sub slab) in Cleaner Space.
0950	@ SV-5. Pin Vac = 0" H_2O Summa can # 5059 Regulator # 9114 Initial P : 29.5" Hg leak check = Good (No loss over 3 min) Purge Can # = 5123 Purge Reg # = 009104 Initial P = 26" Hg
1017	Purge SV-5 lines -2" Hg in Purge Summa.
1020	Fill shroud w/ He.
1023	Start sample.
1055	End Sample. Final P = 5" Hg
1100	Checking 8-Hr Summa.
1101	IA-1 18" Hg.
1103	IA-2 19" Hg.
1105	OA-3 = 20" Hg
1107	OA-2 = 19.5" Hg
1109	OA-1 = 15" Hg.

Equipment Used:

Contractor Hours (per Person):	Staff / Technician Hours:	Mileage:
Copies To:	Project Manager:	
	Reviewed By:	

ATC	Field Report	FLD-100 Revision 1.0 6/1/2016

ATC Branch:	Date:	Page 3 of 5
ATC Representative(s):	Project:	
Role:	Location:	
Contact Information: (206) 781-1449	Project No:	Task No:
Scope of Work: ___ Monitoring ___ Assessment ___ Remediation ___ Closure	Weather:	Temperature:
	Contractor: N/A	

Time:	Comments:
1112	Setting up to sample SV-4.
	SV-4 Summa # 8567 / Regulator #009077
	Initial P = 30" Hg No leaks.
	Vapor pt. Vac = 0.0" WC
1120	Purged SV-4 lines. -2" Hg in Resp Summa
1123	Filled shroud w/ He
1134	Start sample SV-4 Initial Hg = 30" Hg
1205	End SV-4 sample Final Vac = 5" Hg.
1210	Performing Round of Vac checks on 8-Hr Samples
1211	TA-1 = 13" Hg
1212	TA-2 = 13" Hg
1215	OA-1 = 10" Hg.
1217	OA-2 = 16" Hg.
1218	OA-3 16" Hg
1220	Setting up at SV-3 to collect sample.
	Vapor pt. Vac = 0.0" H_2O.
	Summa can # = 7680 / Regulator # = 009081
1228	Began purging SV-3 lines (2" Hg purged)
1231	Filled shroud w/ He.
1236	Start sampling SV-3 Initial P = 29" Hg.
1312	End sampling SV-3 Final Vac = 5" Hg.

Equipment Used:

Contractor Hours (per Person):	Staff / Technician Hours:	Mileage:
Copies To:	Project Manager:	
	Reviewed By:	

ATC GROUP SERVICES LLC

Field Report

FLD-100
Revision 0.0
Jul-08

Cardno ATC Branch: Seattle (10282)	Date: 1/10/19	Page 4 of 5
Cardno ATC Representative(s): L. Boorom	Project: Harbour Point	
Role:	Location:	
Contact Information: 206-781-1449	Project No:	Phase:
Scope of Work:	Weather:	Temperature:
X Monitoring ___ Assessment ___ Remediation ___ Closure	Contractor:	

Time:	Comments:
1317	Commenced round of Vac checks on ~~OA~~ 8 Hr. samples
1317	IA-1 = 9" Hg.
1320	OA-1 = 6" Hg. (will end at 4-5" Hg sample draw)
1322	OA-2 = 13" Hg.
1323	OA-3 13" Hg
1325	IA-2 9" Hg.
1328	Setting up to sample SV-2. Vapor pin Vac = 0.0" H2O. Summa Can # = 9353 / Regulator # = 009100 Leak Tst of Reg. = good.
1340	Began purging lines (SV-3 train)
1347	End purge (2" Hg in purge can) + Began filling Summa can w/ He. Started SV-2 sample collection. Initial Vac = 30" Hg.
1350	Stopped sample OA-1. Final Vac = 4" Hg.
1416	End Sample SV-2. Final Vac = 5" Hg.
1433	End Sample IA-1 Final Vac = 4.5" Hg
1435	End Sample IA-2 Final Vac = 5.0" Hg.
1442	Checked remaining 8 Hr summas.
1443	OA-2 = 9" Hg / 1444 OA-3 = 7" Hg.

Equipment Used:

Contractor Hours (per Person):	Staff / Technician Hours:	Mileage:
Copies To:	Project Manager:	
	Reviewed By:	

ATC GROUP SERVICES LLC

Field Report

FLD-100
Revision 0.0
Jul-08

Cardno ATC Branch: Seattle (10282)	Date: 1/10/19	Page 5 of 5
Cardno ATC Representative(s): L. Brown	Project: Harbour Pt.	
Role:	Location:	
Contact Information: 206-781-1449	Project No:	Phase:
Scope of Work:	Weather:	Temperature:
X Monitoring ___ Assessment ___ Remediation ___ Closure	Contractor:	

Time:	Comments:
1452	Setup to sample SV-1 and collect Dup of SV-1.
	SV-1: Summa # 5744 Regulator # 009112
	Dup: Summa # 7695 Regulator # 009075
1506	Began purging lines (SV-1 / Dup)
	End line purge. (4" Hg into Purge Summa)
1511	Began filling Shroud w/ He
	+ Started Samples SV-1 / Dup (simultaneously)
	SV-1 Initial Vac = 28"
	Dup Initial Vac = 30" * Dup time 1200
1527	SV-1 @ 14" Hg / Dup @ 16" Hg.
1540	End samples SV-1 and Dup.
	SV-1: Final Vac = 4" Hg / Dup = 6" Hg.
1542	End sample OA-3 / Final Vac = 4.5" Hg.
1613	End sample OA-2 Final Vac = 5.5" Hg.
1645	Packing up site + Placed property keys in secure box
1648	ATC Demobed.

LDB

Equipment Used:

Contractor Hours (per Person):	Staff / Technician Hours:	Mileage:
Copies To:	Project Manager:	
	Reviewed By:	

HEALTH AND SAFETY PLAN (HASP)
Tailgate Safety Meeting Form

Site Name & Number: Harbour Point

ATC Project Number:

Work Being Performed: Vapor Sampling

Date & Time of Meeting: 1/10/2018 0713

Name of Presenter: Larry Brown

NOTE: On the initial day of the project, the Project Manager or designee should conduct a visual inspection of the project site prior to the Tailgate Safety Meeting. This inspection should include a review of project site equipment, hazards, specific job tasks, activities or operations to be performed for that day. These specific items must be covered during the Tailgate Safety Meeting. For subsequent days, any changes to the site or operations must be covered in the Tailgate Safety Meeting. In addition, "Task-Specific" Job Safety Analysis (JSA) for the tasks/activities at the project site must be integrated into the HASP and Tailgate discussions. Tailgate Meetings should be performed each day. Employees, client representatives and subcontractors must review the Tailgate Safety Meeting, be briefed on the topics and acknowledge the HSE topics by signing this form. Individuals not fluent in the English language must have the site's health safety and environmental requirements translated to them.

Itemize the Specific Topics Discussed (if more space is needed use the back of this page):

☒ Emergency Evacuation area(s) ☒ Eye Wash / First Aid Kit / Fire Extinguisher ☒ HASP Location ☒ Hospital Route

5 KEY SAFETY CONCEPTS -

☒ **How is everyone feeling?** (Get a response) **Is everyone Rested & Mentally alert?** FOCUS IS KEY to staying injury free.

☐ **Watch out for & Coach your Coworkers** (COMMUNICATE HAZARDS when recognized).

☒ **No Improvising** – Use the proper tool for the job (Stop and Discuss ANY variance with ATC)

☒ **No Willful Unsafe Acts** – Enjoy the day, but no horseplay or anything unsafe.

☒ **Everyone has STOP WORK authority** – USE IT whenever people aren't focused, for all near-misses and hazards.

☒ PPE is required at all times within Exclusion zone (Set the example, call out non-compliance/stop work). ☐ Proper PPE? (check)

☒ 50 lbs. or awkward, get lifting help. ☒ Eating, Drinking and use of Cell Phones in Designated Area Only. Level D.

☒ Spotters Needed for Backing Equipment. ☐ We will follow the Safe Work Plan for the work and initial each page. Major changes will need official approvals through Mark Wallinga and Jenn Williams. ☐ Use 3 part communication as we work today

☒ Caution crossing street (Use crosswalks - HAZARDS ARE HIGH). ☒ Today's Weather Cloudy/Rain, Drink Fluids!

☒ Caution dealing with public (Irate/unstable pedestrians, customers, locals. Be aware, be courteous, don't antagonize).

☒ Keep Emotions in check. Communicate, Take Breaks when stressed, pushed, tired, not focused! (5 minute break or job shut down?)

☒ Maintain Housekeeping ☒ No FOBKs **(What else? Are there other items we haven't considered?)**

☐ **Subcontractor** – Discuss scope of work, JSA, Daily Tasks (What are we doing? What are the Hazards? What could go wrong?)

☒ JSA Reviewed? ☐ Changes to task? Get approval first. Use the GO-CARD. Contact supervisor if solutions are clear.

☒ Headcount? 1 (First time employees onsite [Sign HASP, PPE check, discuss site specifics and client expectations]).

☐ Any Shared Learning? (Site's SIRs/Hazards) ☐ Equipment Inspections ☐ Communication & Focus is Key.

☒ Everyone needs to sign the following documents: HASP, JSA and Tailgate Safety Meeting Form. ☐ Recognition to employees –if you see something, say something!

☐ **Client Requirements** - By checking the box to the left, the presenter of the Tailgate Meeting acknowledges that all client-specific requirements have been completed for both ATC and Subcontractor employees.

By signing this Tailgate Safety Meeting form, you are acknowledging that you have read, reviewed and understand the health and safety topics discussed on this form.

***List the JSAs reviewed below. *Was the Go Card used? *What extra hazards are present on *this site* on *this day*?**

JSA:			

Daily Safety Tailgate Meeting Participants (Use the back of this form if needed)

Print Name	Signature	Company	Date
Larry Brown		ATC	1/10/18

Tailgate Safety Meeting Form (Pg2)

JSAs Reviewed and Modification Documentation (If modification not required please note):

0720 checked in w/E Silver via text (arrival to site)

1632 checked out w/E Silver via text (departure from site).

- **Sign below that all information above was covered with all personnel on site.**

Print Name	Signature	Company	Date
Henry Brown		ATC	1/10/2019

FIELD ENVIRONMENTAL INSTRUMENTS, INC.

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

www.fieldenvironmental.com
info@fieldenvironmental.com

QA/QC Check Stamp

Fulfilled _____ Whse Mgmt _____

Sales Rep _____ Boxed _____

Shipped _____

ORDER SHEET

Rental Order

Box Markings: R

ORDER NUMBER: 387112

Rep: Matt Houser
Taken By: mhouser

ORDER DATE: 1/4/19
DELIVERY DATE: 1/7/19

Bill To: Larry Brown
ATC Group Services, LLC
6347 Seaview Ave NW
Seattle, WA 98107
Phone: 206-781-1449 X215
Cell: 206-503-1767
E-mail: Laurence.Brown@atcgs.com

Ship To: Larry Brown
ATC Group Services, LLC
6347 Seaview Ave NW
Seattle, WA 98107
Phone: 206-781-1449

Email Inv: N/A

Payment Type: NET 30 **Outgoing Ship Method:** BWA - FEI Delivery

Tax %: 10.100% **Tax: Code:** WA1726 **Outgoing Ship Acct:** N/A

Cust. PO: NPWRI18001 – Harbour Point

RENTAL PERIOD: Tuesday, 1/8/19 through Tuesday, 1/8/19 **Fed Ex Acct:** **UPS Acct:**

FS Option: **Return Shipping:**

ORDER ITEMS:

#	Qty	ID:	Class	Rental Terms Months	Weeks	Days	Sale Price	Item Total	Unit#	Return
1	1	5510	Dielectric Helium Leak Detector MGD-2002 - Rental	$1,500.00	$525.00	$225.00		$0.00	71324	
	Item Notes:									
2	1	451	Regulator Male (58/103L) - Rental	$21.25	$8.50	$5.00		$0.00	89061	
	Item Notes:									
3	1	10709	Gas - ST Helium Air 103L 99.95% #103-40-1 IDGH #24				$185.00	$0.00		
	Item Notes:									
4	1	620	Shipping & Handling Charges					$0.00		
	Item Notes:		*Free Local Delivery and Pick up*							

Printed: 07-Jan-19 11:08

"Rely on FEI!"

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

www.fieldenvironmental.com
info@fieldenvironmental.com

QA/QC Check Stamp

Fulfilled _____ Whse Mgmt _____

Sales Rep _____ Boxed _____

Shipped _____

ORDER SHEET

Rental Order

Box Markings: R

Sub-Total: $0.00
Tax: Code: WA1726
Tax: $0.00
Order Total: $0.00

CUSTOMER SIGNATURE: _____ DATE: _____

Terms and Conditions Available at www.FieldEnvironmental.com

Printed: 07-Jan-19 11:08

"Rely on FEI!"

Field Environmental Instruments, Inc.

Environmental Equipment & Field Supplies
◦ Rental ◦ Sales ◦ Service ◦ Supplies

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

www.fieldenvironmental.com

PACKING SLIP

ORDER NUMBER: 387112
Printed: 07-Jan-19 11:07

Rep: Matt Houser
Taken By: mhouser

ORDER DATE: 1/7/2019
DELIVERY DATE: 1/7/2019

Larry Brown
ATC Group Services, LLC

Seattle, WA, 98107
Phone: 206-781-1449

Ship Method: BWA - FEI Delivery
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 MG	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX
	--> Dielectric Helium Leak Detecto	01/07/2019	71324	41751			41751	
	--> Dielectric Helium Handle Asse	01/07/2019	58380	na			na	
	--> Dielectric Helium Ground Prob	01/07/2019	57710	na			na	
	--> Dielectric Helium Drying Adapt	01/07/2019	71332	na			na	
	--> Dielectric Helium Moisture Filt	01/07/2019	79888	na			na	
	--> Dielectric Helium Needle Prob	01/07/2019	71340	na			na	
	--> Dielectric Helium Manual	01/07/2019	71337	na			na	
	--> Dielectric Helium AC Charger	01/07/2019	87247	na			na	
	--> Dielectric Helium AC Power C	01/07/2019	87248	na			na	
	--> Dielectric Helium DC Adapter	01/07/2019	71331	na			na	
1	Regulator Male (58/103L) - Rental	01/07/2019	89061	na			na	
1	Gas - ST Helium Air 103L 99.95% #	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX
1	FEI Shipping & Handling Charge	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX

Rental Period: 1/8/2019 to 1/8/2019

CalibrationData:

Special Instructions:

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	16-5566	2/1/2019

Cal Standard	Reading	Acceptable Range
5,000 ppm	5325	(4,500 - 5,500)

Model	GasCheck
S/N	41751
Barcode	U71324X
Order #	387112

Calibrated By: Roderick Keels

Date of Calibration: 01/07/19

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.

Company Name/Address:
ATC Group Services
6347 Seaview Ave NW
Seattle, WA 98107

Billing Information:
Accounts Payable
6347 Seaview Ave NW
Seattle, WA 98107

Report to: Elisabeth Silver

Email To: elisabeth.silver@atcgs.com

Project Description: Harbor Point

City/State Collected: Lynnwood, WA

Phone: 206-781-1449
Fax:

Client Project # ~~NPWRL1001~~ NPWRL1001

Lab Project #

Collected by (print): Larry Brown

Site/Facility ID #

P.O. #

Collected by (signature):

Rush? (Lab MUST Be Notified)
___ Same Day 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Date Results Needed: Standard TAT

Email? ___No ___Yes
FAX? ___No ___Yes

Canister Pressure/Vacuum (Inches Hg)

Analysis: Helium Summa | TO-15 Summa | TO-15 STM Summa

Chain of Custody Page 1 of 2

Pace Analytical®
National Center for Testing & Innovation
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L #

Table #

Acctnum:
Template: T144515
Prelogin:
TSR:
PB:

Shipped Via:

Sample ID	Sample Description	Can #	Date	Time	Initial	Final	Helium Summa	TO-15 Summa	TO-15 STM Summa		Rem./Contaminant	Sample # (lab only)
OAH-011019	Outdoor Air, 1	7346	1/10/2019	0746	29	4.5			X			
OA2-011019	Outdoor Air, 2	5118		0805	28	5.5			X			
OA-3-011019	Outdoor Air, 3	8569		0820	29	4.5			X			
IA-1-011019	Indoor Air, 1	8785		0828	29	4.5			X			
IA-2-011019	Indoor Air, 2	5834		0833	30	5			X			
SV-1-011019	Sub Slab, 1	5744		1511	28	5	X	X				
SV-2-011019	Sub Slab, 2	9353		1347	30	5	X	X				
SV-3-011019	Sub Slab, 3	7680		1236	29	5	X	X				
SV-4-011019	Sub Slab, 4	8567		1134	30	5	X	X				
SV-5-011019	Sub Slab, 5	5059		1023	29.5	5	X	X				

4x boxes in shipment

Remarks:

Hold #

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Samples returned via: ☐ UPS ☒ FedEx ☐ Courier ☐ _____	Condition: (lab use only)
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:	COC Seal Intact: ____Y ____N ____NA
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:	pH Checked: NCF:

1/11/2019 0920

Company Name/Address:
ATC Group Services
6347 Seaview Ave NW
Seattle, WA 98107

Billing Information:
Accounts Payable
6347 Seaview Ave NW
Seattle, WA 98107

Report to: Elisabeth Silver

Email To: Elisabeth.Silver@atcgs.com

Project Description: Harbor Point

City/State Collected: Lynnwood, WA

Phone: 206 781 1449
Fax:

Client Project # WPWR218001

Lab Project #

Collected by (print): Larry Brown

Site/Facility ID #

P.O. #

Collected by (signature):

Rush? (Lab MUST Be Notified)
___ Same Day 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Date Results Needed: Standard TAT

Email? ___No X Yes
FAX? ___No ___Yes

Canister Pressure/Vacuum (Inches Hg)

Analysis: Helium Summa; TO-15 Summa

Chain of Custody Page 2 of 2

Pace Analytical®
National Center for Testing & Innovation

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L #

Table #

Acctnum:
Template: T144515
Prelogin:
TSR:
PB:

Shipped Via:

Sample ID	Sample Description	Can #	Date	Time	Initial	Final	Helium Summa	TO-15 Summa			Rem./Contaminant	Sample # (lab only)
Dup-011019	Duplicate Sample	7695	1/10/2019	1200	30	6	X	X				

Remarks: Summa Can #5123 used for purging lines. Summa Can #5076 was not used.

Hold #

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Samples returned via: ☐ UPS ☒ FedEx ☐ Courier ☐ _____	Condition: (lab use only)
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:	COC Seal Intact: ___Y ___N ___NA
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:	pH Checked: NCF:

1/11/2019 0920

APPENDIX B
Laboratory Analytical Report

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

January 18, 2019

ATC Group Services LLC - Seattle, WA

Sample Delivery Group:	L1060599
Samples Received:	01/12/2019
Project Number:	NPWRL1001
Description:	Harbor Point

Report To: Elisabeth Silver
6347 Seaview Avenue NW
Seattle, WA 98107

Entire Report Reviewed By: Brian Ford

Brian Ford
Project Manager

OA-1-011019 L1060599-01 Air

Collected by: Larry Brown | Collected date/time: 01/10/19 07:46 | Received date/time: 01/12/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG1224156	1	01/17/19 12:30	01/17/19 12:30	AMC

OA-2-011019 L1060599-02 Air

Collected by: Larry Brown | Collected date/time: 01/10/19 08:05 | Received date/time: 01/12/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG1224156	1	01/17/19 13:15	01/17/19 13:15	AMC

OA-3-011019 L1060599-03 Air

Collected by: Larry Brown | Collected date/time: 01/10/19 08:20 | Received date/time: 01/12/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG1224156	1	01/17/19 13:59	01/17/19 13:59	AMC

IA-1-011019 L1060599-04 Air

Collected by: Larry Brown | Collected date/time: 01/10/19 08:28 | Received date/time: 01/12/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG1224156	1	01/17/19 14:44	01/17/19 14:44	AMC

IA-2-011019 L1060599-05 Air

Collected by: Larry Brown | Collected date/time: 01/10/19 08:33 | Received date/time: 01/12/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG1224156	1	01/17/19 15:28	01/17/19 15:28	AMC

SV-1-011019 L1060599-06 Air

Collected by: Larry Brown | Collected date/time: 01/10/19 15:11 | Received date/time: 01/12/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method ASTM 1946	WG1223416	1	01/15/19 13:59	01/15/19 13:59	AMC
Volatile Organic Compounds (MS) by Method TO-15	WG1223185	1	01/14/19 13:48	01/14/19 13:48	AMC
Volatile Organic Compounds (MS) by Method TO-15	WG1223524	25	01/15/19 13:20	01/15/19 13:20	AMC

SV-2-011019 L1060599-07 Air

Collected by: Larry Brown | Collected date/time: 01/10/19 13:47 | Received date/time: 01/12/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method ASTM 1946	WG1223416	1	01/15/19 14:05	01/15/19 14:05	AMC
Volatile Organic Compounds (MS) by Method TO-15	WG1223185	1	01/14/19 14:35	01/14/19 14:35	AMC

SV-3-011019 L1060599-08 Air

Collected by: Larry Brown | Collected date/time: 01/10/19 12:36 | Received date/time: 01/12/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method ASTM 1946	WG1223416	1	01/15/19 14:14	01/15/19 14:14	AMC
Volatile Organic Compounds (MS) by Method TO-15	WG1223185	1	01/14/19 15:25	01/14/19 15:25	AMC

SV-4-011019 L1060599-09 Air

Collected by	Collected date/time	Received date/time
Larry Brown	01/10/19 11:34	01/12/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method ASTM 1946	WG1223416	1	01/15/19 14:21	01/15/19 14:21	AMC
Volatile Organic Compounds (MS) by Method TO-15	WG1223185	1	01/14/19 16:11	01/14/19 16:11	AMC

SV-5-011019 L1060599-10 Air

Collected by	Collected date/time	Received date/time
Larry Brown	01/10/19 10:23	01/12/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method ASTM 1946	WG1223416	1	01/15/19 14:23	01/15/19 14:23	AMC
Volatile Organic Compounds (MS) by Method TO-15	WG1223185	1	01/14/19 17:00	01/14/19 17:00	AMC

DUP-011019 L1060599-11 Air

Collected by	Collected date/time	Received date/time
Larry Brown	01/10/19 12:00	01/12/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method ASTM 1946	WG1223416	1	01/15/19 14:47	01/15/19 14:47	AMC
Volatile Organic Compounds (MS) by Method TO-15	WG1223185	1	01/14/19 17:48	01/14/19 17:48	AMC
Volatile Organic Compounds (MS) by Method TO-15	WG1223524	25	01/15/19 14:01	01/15/19 14:01	AMC

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Brian Ford
Project Manager

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Benzene	71-43-2	78.10	0.0200	0.0639	0.181	0.577		1	WG1224156
Carbon tetrachloride	56-23-5	154	0.0200	0.126	0.0731	0.461		1	WG1224156
Chloroethane	75-00-3	64.50	0.0400	0.106	ND	ND		1	WG1224156
Chloroform	67-66-3	119	0.0200	0.0973	ND	ND		1	WG1224156
Chloromethane	74-87-3	50.50	0.0300	0.0620	0.487	1.01		1	WG1224156
1,2-Dibromoethane	106-93-4	188	0.0200	0.154	ND	ND		1	WG1224156
1,4-Dichlorobenzene	106-46-7	147	0.0200	0.120	ND	ND		1	WG1224156
1,1-Dichloroethane	75-34-3	98	0.0200	0.0802	ND	ND		1	WG1224156
1,2-Dichloroethane	107-06-2	99	0.0200	0.0810	0.0218	0.0882		1	WG1224156
1,1-Dichloroethene	75-35-4	96.90	0.0200	0.0793	ND	ND		1	WG1224156
cis-1,2-Dichloroethene	156-59-2	96.90	0.0200	0.0793	ND	ND		1	WG1224156
trans-1,2-Dichloroethene	156-60-5	96.90	0.0200	0.0793	0.0296	0.117		1	WG1224156
1,2-Dichloropropane	78-87-5	113	0.0300	0.139	ND	ND		1	WG1224156
cis-1,3-Dichloropropene	10061-01-5	111	0.0200	0.0908	ND	ND		1	WG1224156
trans-1,3-Dichloropropene	10061-02-6	111	0.0300	0.136	ND	ND		1	WG1224156
Ethylbenzene	100-41-4	106	0.0300	0.130	0.0686	0.297		1	WG1224156
1,1,2,2-Tetrachloroethane	79-34-5	168	0.0200	0.137	ND	ND		1	WG1224156
Tetrachloroethylene	127-18-4	166	0.0200	0.136	ND	ND		1	WG1224156
1,1,1-Trichloroethane	71-55-6	133	0.0200	0.109	ND	ND		1	WG1224156
1,1,2-Trichloroethane	79-00-5	133	0.0300	0.163	ND	ND		1	WG1224156
Trichloroethylene	79-01-6	131	0.0200	0.107	ND	ND		1	WG1224156
Vinyl chloride	75-01-4	62.50	0.0200	0.0511	ND	ND		1	WG1224156
Vinyl acetate	108-05-4	86.10	0.0200	0.0704	ND	ND		1	WG1224156
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*99.2*				WG1224156

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Benzene	71-43-2	78.10	0.0200	0.0639	0.272	0.869		1	WG1224156
Carbon tetrachloride	56-23-5	154	0.0200	0.126	0.0696	0.438		1	WG1224156
Chloroethane	75-00-3	64.50	0.0400	0.106	ND	ND		1	WG1224156
Chloroform	67-66-3	119	0.0200	0.0973	ND	ND		1	WG1224156
Chloromethane	74-87-3	50.50	0.0300	0.0620	0.466	0.962		1	WG1224156
1,2-Dibromoethane	106-93-4	188	0.0200	0.154	ND	ND		1	WG1224156
1,4-Dichlorobenzene	106-46-7	147	0.0200	0.120	ND	ND		1	WG1224156
1,1-Dichloroethane	75-34-3	98	0.0200	0.0802	ND	ND		1	WG1224156
1,2-Dichloroethane	107-06-2	99	0.0200	0.0810	0.0223	0.0902		1	WG1224156
1,1-Dichloroethene	75-35-4	96.90	0.0200	0.0793	ND	ND		1	WG1224156
cis-1,2-Dichloroethene	156-59-2	96.90	0.0200	0.0793	ND	ND		1	WG1224156
trans-1,2-Dichloroethene	156-60-5	96.90	0.0200	0.0793	ND	ND		1	WG1224156
1,2-Dichloropropane	78-87-5	113	0.0300	0.139	ND	ND		1	WG1224156
cis-1,3-Dichloropropene	10061-01-5	111	0.0200	0.0908	ND	ND		1	WG1224156
trans-1,3-Dichloropropene	10061-02-6	111	0.0300	0.136	ND	ND		1	WG1224156
Ethylbenzene	100-41-4	106	0.0300	0.130	0.0887	0.385		1	WG1224156
1,1,2,2-Tetrachloroethane	79-34-5	168	0.0200	0.137	ND	ND		1	WG1224156
Tetrachloroethylene	127-18-4	166	0.0200	0.136	ND	ND		1	WG1224156
1,1,1-Trichloroethane	71-55-6	133	0.0200	0.109	ND	ND		1	WG1224156
1,1,2-Trichloroethane	79-00-5	133	0.0300	0.163	ND	ND		1	WG1224156
Trichloroethylene	79-01-6	131	0.0200	0.107	ND	ND		1	WG1224156
Vinyl chloride	75-01-4	62.50	0.0200	0.0511	ND	ND		1	WG1224156
Vinyl acetate	108-05-4	86.10	0.0200	0.0704	ND	ND		1	WG1224156
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*100*				WG1224156

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Benzene	71-43-2	78.10	0.0200	0.0639	0.145	0.462		1	WG1224156
Carbon tetrachloride	56-23-5	154	0.0200	0.126	0.0744	0.469		1	WG1224156
Chloroethane	75-00-3	64.50	0.0400	0.106	ND	ND		1	WG1224156
Chloroform	67-66-3	119	0.0200	0.0973	ND	ND		1	WG1224156
Chloromethane	74-87-3	50.50	0.0300	0.0620	0.502	1.04		1	WG1224156
1,2-Dibromoethane	106-93-4	188	0.0200	0.154	ND	ND		1	WG1224156
1,4-Dichlorobenzene	106-46-7	147	0.0200	0.120	ND	ND		1	WG1224156
1,1-Dichloroethane	75-34-3	98	0.0200	0.0802	ND	ND		1	WG1224156
1,2-Dichloroethane	107-06-2	99	0.0200	0.0810	0.0212	0.0859		1	WG1224156
1,1-Dichloroethene	75-35-4	96.90	0.0200	0.0793	ND	ND		1	WG1224156
cis-1,2-Dichloroethene	156-59-2	96.90	0.0200	0.0793	ND	ND		1	WG1224156
trans-1,2-Dichloroethene	156-60-5	96.90	0.0200	0.0793	ND	ND		1	WG1224156
1,2-Dichloropropane	78-87-5	113	0.0300	0.139	ND	ND		1	WG1224156
cis-1,3-Dichloropropene	10061-01-5	111	0.0200	0.0908	ND	ND		1	WG1224156
trans-1,3-Dichloropropene	10061-02-6	111	0.0300	0.136	ND	ND		1	WG1224156
Ethylbenzene	100-41-4	106	0.0300	0.130	0.0480	0.208		1	WG1224156
1,1,2,2-Tetrachloroethane	79-34-5	168	0.0200	0.137	ND	ND		1	WG1224156
Tetrachloroethylene	127-18-4	166	0.0200	0.136	ND	ND		1	WG1224156
1,1,1-Trichloroethane	71-55-6	133	0.0200	0.109	ND	ND		1	WG1224156
1,1,2-Trichloroethane	79-00-5	133	0.0300	0.163	ND	ND		1	WG1224156
Trichloroethylene	79-01-6	131	0.0200	0.107	0.296	1.59		1	WG1224156
Vinyl chloride	75-01-4	62.50	0.0200	0.0511	ND	ND		1	WG1224156
Vinyl acetate	108-05-4	86.10	0.0200	0.0704	0.0236	0.0830		1	WG1224156
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*99.2*				WG1224156

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Benzene	71-43-2	78.10	0.0200	0.0639	0.171	0.547		1	WG1224156
Carbon tetrachloride	56-23-5	154	0.0200	0.126	0.0650	0.409		1	WG1224156
Chloroethane	75-00-3	64.50	0.0400	0.106	ND	ND		1	WG1224156
Chloroform	67-66-3	119	0.0200	0.0973	0.0623	0.303		1	WG1224156
Chloromethane	74-87-3	50.50	0.0300	0.0620	0.449	0.928		1	WG1224156
1,2-Dibromoethane	106-93-4	188	0.0200	0.154	ND	ND		1	WG1224156
1,4-Dichlorobenzene	106-46-7	147	0.0200	0.120	0.177	1.07		1	WG1224156
1,1-Dichloroethane	75-34-3	98	0.0200	0.0802	ND	ND		1	WG1224156
1,2-Dichloroethane	107-06-2	99	0.0200	0.0810	0.0643	0.260		1	WG1224156
1,1-Dichloroethene	75-35-4	96.90	0.0200	0.0793	ND	ND		1	WG1224156
cis-1,2-Dichloroethene	156-59-2	96.90	0.0200	0.0793	ND	ND		1	WG1224156
trans-1,2-Dichloroethene	156-60-5	96.90	0.0200	0.0793	ND	ND		1	WG1224156
1,2-Dichloropropane	78-87-5	113	0.0300	0.139	ND	ND		1	WG1224156
cis-1,3-Dichloropropene	10061-01-5	111	0.0200	0.0908	ND	ND		1	WG1224156
trans-1,3-Dichloropropene	10061-02-6	111	0.0300	0.136	ND	ND		1	WG1224156
Ethylbenzene	100-41-4	106	0.0300	0.130	0.126	0.546		1	WG1224156
1,1,2,2-Tetrachloroethane	79-34-5	168	0.0200	0.137	ND	ND		1	WG1224156
Tetrachloroethylene	127-18-4	166	0.0200	0.136	ND	ND		1	WG1224156
1,1,1-Trichloroethane	71-55-6	133	0.0200	0.109	ND	ND		1	WG1224156
1,1,2-Trichloroethane	79-00-5	133	0.0300	0.163	ND	ND		1	WG1224156
Trichloroethylene	79-01-6	131	0.0200	0.107	0.0553	0.296		1	WG1224156
Vinyl chloride	75-01-4	62.50	0.0200	0.0511	ND	ND		1	WG1224156
Vinyl acetate	108-05-4	86.10	0.0200	0.0704	0.104	0.367		1	WG1224156
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*104*				WG1224156

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Benzene	71-43-2	78.10	0.0200	0.0639	0.159	0.509		1	WG1224156
Carbon tetrachloride	56-23-5	154	0.0200	0.126	0.0604	0.380		1	WG1224156
Chloroethane	75-00-3	64.50	0.0400	0.106	ND	ND		1	WG1224156
Chloroform	67-66-3	119	0.0200	0.0973	0.0477	0.232		1	WG1224156
Chloromethane	74-87-3	50.50	0.0300	0.0620	0.416	0.860		1	WG1224156
1,2-Dibromoethane	106-93-4	188	0.0200	0.154	ND	ND		1	WG1224156
1,4-Dichlorobenzene	106-46-7	147	0.0200	0.120	0.276	1.66		1	WG1224156
1,1-Dichloroethane	75-34-3	98	0.0200	0.0802	ND	ND		1	WG1224156
1,2-Dichloroethane	107-06-2	99	0.0200	0.0810	0.0339	0.137		1	WG1224156
1,1-Dichloroethene	75-35-4	96.90	0.0200	0.0793	ND	ND		1	WG1224156
cis-1,2-Dichloroethene	156-59-2	96.90	0.0200	0.0793	ND	ND		1	WG1224156
trans-1,2-Dichloroethene	156-60-5	96.90	0.0200	0.0793	ND	ND		1	WG1224156
1,2-Dichloropropane	78-87-5	113	0.0300	0.139	ND	ND		1	WG1224156
cis-1,3-Dichloropropene	10061-01-5	111	0.0200	0.0908	ND	ND		1	WG1224156
trans-1,3-Dichloropropene	10061-02-6	111	0.0300	0.136	ND	ND		1	WG1224156
Ethylbenzene	100-41-4	106	0.0300	0.130	0.0691	0.300		1	WG1224156
1,1,2,2-Tetrachloroethane	79-34-5	168	0.0200	0.137	ND	ND		1	WG1224156
Tetrachloroethylene	127-18-4	166	0.0200	0.136	ND	ND		1	WG1224156
1,1,1-Trichloroethane	71-55-6	133	0.0200	0.109	ND	ND		1	WG1224156
1,1,2-Trichloroethane	79-00-5	133	0.0300	0.163	ND	ND		1	WG1224156
Trichloroethylene	79-01-6	131	0.0200	0.107	0.0287	0.154		1	WG1224156
Vinyl chloride	75-01-4	62.50	0.0200	0.0511	ND	ND		1	WG1224156
Vinyl acetate	108-05-4	86.10	0.0200	0.0704	0.0291	0.103		1	WG1224156
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*102*				WG1224156

Volatile Organic Compounds (GC) by Method ASTM 1946

Analyte	CAS #	Mol. Wt.	RDL %	Result %	Qualifier	Dilution	Batch
Helium	7440-59-7		0.100	ND		1	WG1223416

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	1.25	2.97	ND	ND		1	WG1223185
Allyl chloride	107-05-1	76.53	0.200	0.626	ND	ND		1	WG1223185
Benzene	71-43-2	78.10	0.200	0.639	ND	ND		1	WG1223185
Benzyl Chloride	100-44-7	127	0.200	1.04	ND	ND		1	WG1223185
Bromodichloromethane	75-27-4	164	0.200	1.34	ND	ND		1	WG1223185
Bromoform	75-25-2	253	0.600	6.21	ND	ND		1	WG1223185
Bromomethane	74-83-9	94.90	0.200	0.776	ND	ND		1	WG1223185
1,3-Butadiene	106-99-0	54.10	2.00	4.43	ND	ND		1	WG1223185
Carbon disulfide	75-15-0	76.10	0.200	0.622	ND	ND		1	WG1223185
Carbon tetrachloride	56-23-5	154	0.200	1.26	ND	ND		1	WG1223185
Chlorobenzene	108-90-7	113	0.200	0.924	ND	ND		1	WG1223185
Chloroethane	75-00-3	64.50	0.200	0.528	ND	ND		1	WG1223185
Chloroform	67-66-3	119	0.200	0.973	ND	ND		1	WG1223185
Chloromethane	74-87-3	50.50	0.200	0.413	ND	ND	J4	1	WG1223185
2-Chlorotoluene	95-49-8	126	0.200	1.03	ND	ND		1	WG1223185
Cyclohexane	110-82-7	84.20	0.200	0.689	ND	ND		1	WG1223185
Dibromochloromethane	124-48-1	208	0.200	1.70	ND	ND		1	WG1223185
1,2-Dibromoethane	106-93-4	188	0.200	1.54	ND	ND		1	WG1223185
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	ND	ND		1	WG1223185
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	ND	ND		1	WG1223185
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	ND	ND		1	WG1223185
1,2-Dichloroethane	107-06-2	99	0.200	0.810	ND	ND		1	WG1223185
1,1-Dichloroethane	75-34-3	98	0.200	0.802	ND	ND		1	WG1223185
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	WG1223185
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	ND	ND		1	WG1223185
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	ND	ND		1	WG1223185
1,2-Dichloropropane	78-87-5	113	0.200	0.924	ND	ND		1	WG1223185
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.908	ND	ND		1	WG1223185
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.908	ND	ND		1	WG1223185
1,4-Dioxane	123-91-1	88.10	0.200	0.721	ND	ND		1	WG1223185
Ethanol	64-17-5	46.10	0.630	1.19	1.88	3.54		1	WG1223185
Ethylbenzene	100-41-4	106	0.200	0.867	ND	ND		1	WG1223185
4-Ethyltoluene	622-96-8	120	0.200	0.982	ND	ND		1	WG1223185
Trichlorofluoromethane	75-69-4	137.40	0.200	1.12	1.02	5.73		1	WG1223185
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.989	5.79	28.6		1	WG1223185
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.200	1.53	ND	ND		1	WG1223185
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	ND	ND		1	WG1223185
Heptane	142-82-5	100	0.200	0.818	ND	ND		1	WG1223185
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.73	ND	ND		1	WG1223185
n-Hexane	110-54-3	86.20	0.200	0.705	ND	ND		1	WG1223185
Isopropylbenzene	98-82-8	120.20	0.200	0.983	ND	ND		1	WG1223185
Methylene Chloride	75-09-2	84.90	0.200	0.694	ND	ND		1	WG1223185
Methyl Butyl Ketone	591-78-6	100	1.25	5.11	ND	ND		1	WG1223185
2-Butanone (MEK)	78-93-3	72.10	1.25	3.69	ND	ND		1	WG1223185
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	1.25	5.12	ND	ND		1	WG1223185
Methyl methacrylate	80-62-6	100.12	0.200	0.819	ND	ND		1	WG1223185
MTBE	1634-04-4	88.10	0.200	0.721	ND	ND		1	WG1223185
Naphthalene	91-20-3	128	0.630	3.30	ND	ND		1	WG1223185
2-Propanol	67-63-0	60.10	1.25	3.07	ND	ND		1	WG1223185
Propene	115-07-1	42.10	0.400	0.689	ND	ND		1	WG1223185

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Styrene	100-42-5	104	0.200	0.851	ND	ND		1	WG1223185
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.37	ND	ND		1	WG1223185
Tetrachloroethylene	127-18-4	166	5.00	33.9	113	769		25	WG1223524
Tetrahydrofuran	109-99-9	72.10	0.200	0.590	ND	ND		1	WG1223185
Toluene	108-88-3	92.10	0.200	0.753	ND	ND		1	WG1223185
1,2,4-Trichlorobenzene	120-82-1	181	0.630	4.66	ND	ND		1	WG1223185
1,1,1-Trichloroethane	71-55-6	133	0.200	1.09	ND	ND		1	WG1223185
1,1,2-Trichloroethane	79-00-5	133	0.200	1.09	ND	ND		1	WG1223185
Trichloroethylene	79-01-6	131	0.200	1.07	1.67	8.96		1	WG1223185
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	ND	ND		1	WG1223185
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.982	ND	ND		1	WG1223185
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.934	ND	ND		1	WG1223185
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND	J4	1	WG1223185
Vinyl Bromide	593-60-2	106.95	0.200	0.875	ND	ND		1	WG1223185
Vinyl acetate	108-05-4	86.10	0.200	0.704	ND	ND		1	WG1223185
m&p-Xylene	1330-20-7	106	0.400	1.73	ND	ND		1	WG1223185
o-Xylene	95-47-6	106	0.200	0.867	ND	ND		1	WG1223185
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*96.0*				WG1223185
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*89.9*				WG1223524

Volatile Organic Compounds (GC) by Method ASTM 1946

Analyte	CAS #	Mol. Wt.	RDL %	Result %	Qualifier	Dilution	Batch
Helium	7440-59-7		0.100	ND		1	WG1223416

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	1.25	2.97	2.29	5.44		1	WG1223185
Allyl chloride	107-05-1	76.53	0.200	0.626	ND	ND		1	WG1223185
Benzene	71-43-2	78.10	0.200	0.639	ND	ND		1	WG1223185
Benzyl Chloride	100-44-7	127	0.200	1.04	ND	ND		1	WG1223185
Bromodichloromethane	75-27-4	164	0.200	1.34	ND	ND		1	WG1223185
Bromoform	75-25-2	253	0.600	6.21	ND	ND		1	WG1223185
Bromomethane	74-83-9	94.90	0.200	0.776	ND	ND		1	WG1223185
1,3-Butadiene	106-99-0	54.10	2.00	4.43	ND	ND		1	WG1223185
Carbon disulfide	75-15-0	76.10	0.200	0.622	ND	ND		1	WG1223185
Carbon tetrachloride	56-23-5	154	0.200	1.26	ND	ND		1	WG1223185
Chlorobenzene	108-90-7	113	0.200	0.924	ND	ND		1	WG1223185
Chloroethane	75-00-3	64.50	0.200	0.528	ND	ND		1	WG1223185
Chloroform	67-66-3	119	0.200	0.973	ND	ND		1	WG1223185
Chloromethane	74-87-3	50.50	0.200	0.413	ND	ND	J4	1	WG1223185
2-Chlorotoluene	95-49-8	126	0.200	1.03	ND	ND		1	WG1223185
Cyclohexane	110-82-7	84.20	0.200	0.689	ND	ND		1	WG1223185
Dibromochloromethane	124-48-1	208	0.200	1.70	ND	ND		1	WG1223185
1,2-Dibromoethane	106-93-4	188	0.200	1.54	ND	ND		1	WG1223185
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	ND	ND		1	WG1223185
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	ND	ND		1	WG1223185
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	ND	ND		1	WG1223185
1,2-Dichloroethane	107-06-2	99	0.200	0.810	ND	ND		1	WG1223185
1,1-Dichloroethane	75-34-3	98	0.200	0.802	ND	ND		1	WG1223185
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	WG1223185
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	ND	ND		1	WG1223185
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	ND	ND		1	WG1223185
1,2-Dichloropropane	78-87-5	113	0.200	0.924	ND	ND		1	WG1223185
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.908	ND	ND		1	WG1223185
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.908	ND	ND		1	WG1223185
1,4-Dioxane	123-91-1	88.10	0.200	0.721	ND	ND		1	WG1223185
Ethanol	64-17-5	46.10	0.630	1.19	4.91	9.26		1	WG1223185
Ethylbenzene	100-41-4	106	0.200	0.867	ND	ND		1	WG1223185
4-Ethyltoluene	622-96-8	120	0.200	0.982	ND	ND		1	WG1223185
Trichlorofluoromethane	75-69-4	137.40	0.200	1.12	1.02	5.73		1	WG1223185
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.989	7.37	36.5		1	WG1223185
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.200	1.53	ND	ND		1	WG1223185
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	ND	ND		1	WG1223185
Heptane	142-82-5	100	0.200	0.818	ND	ND		1	WG1223185
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.73	ND	ND		1	WG1223185
n-Hexane	110-54-3	86.20	0.200	0.705	0.937	3.30		1	WG1223185
Isopropylbenzene	98-82-8	120.20	0.200	0.983	ND	ND		1	WG1223185
Methylene Chloride	75-09-2	84.90	0.200	0.694	1.60	5.57		1	WG1223185
Methyl Butyl Ketone	591-78-6	100	1.25	5.11	ND	ND		1	WG1223185
2-Butanone (MEK)	78-93-3	72.10	1.25	3.69	ND	ND		1	WG1223185
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	1.25	5.12	ND	ND		1	WG1223185
Methyl methacrylate	80-62-6	100.12	0.200	0.819	ND	ND		1	WG1223185
MTBE	1634-04-4	88.10	0.200	0.721	ND	ND		1	WG1223185
Naphthalene	91-20-3	128	0.630	3.30	ND	ND		1	WG1223185
2-Propanol	67-63-0	60.10	1.25	3.07	1.41	3.46		1	WG1223185
Propene	115-07-1	42.10	0.400	0.689	ND	ND		1	WG1223185

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Styrene	100-42-5	104	0.200	0.851	0.231	0.981		1	WG1223185
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.37	ND	ND		1	WG1223185
Tetrachloroethylene	127-18-4	166	0.200	1.36	14.7	99.5		1	WG1223185
Tetrahydrofuran	109-99-9	72.10	0.200	0.590	ND	ND		1	WG1223185
Toluene	108-88-3	92.10	0.200	0.753	0.275	1.03		1	WG1223185
1,2,4-Trichlorobenzene	120-82-1	181	0.630	4.66	ND	ND		1	WG1223185
1,1,1-Trichloroethane	71-55-6	133	0.200	1.09	0.493	2.68		1	WG1223185
1,1,2-Trichloroethane	79-00-5	133	0.200	1.09	ND	ND		1	WG1223185
Trichloroethylene	79-01-6	131	0.200	1.07	ND	ND		1	WG1223185
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	ND	ND		1	WG1223185
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.982	ND	ND		1	WG1223185
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.934	ND	ND		1	WG1223185
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND	J4	1	WG1223185
Vinyl Bromide	593-60-2	106.95	0.200	0.875	ND	ND		1	WG1223185
Vinyl acetate	108-05-4	86.10	0.200	0.704	ND	ND		1	WG1223185
m&p-Xylene	1330-20-7	106	0.400	1.73	ND	ND		1	WG1223185
o-Xylene	95-47-6	106	0.200	0.867	ND	ND		1	WG1223185
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*95.3*				WG1223185

Volatile Organic Compounds (GC) by Method ASTM 1946

Analyte	CAS #	Mol. Wt.	RDL %	Result %	Qualifier	Dilution	Batch
Helium	7440-59-7		0.100	ND		1	WG1223416

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	1.25	2.97	ND	ND		1	WG1223185
Allyl chloride	107-05-1	76.53	0.200	0.626	ND	ND		1	WG1223185
Benzene	71-43-2	78.10	0.200	0.639	ND	ND		1	WG1223185
Benzyl Chloride	100-44-7	127	0.200	1.04	ND	ND		1	WG1223185
Bromodichloromethane	75-27-4	164	0.200	1.34	ND	ND		1	WG1223185
Bromoform	75-25-2	253	0.600	6.21	ND	ND		1	WG1223185
Bromomethane	74-83-9	94.90	0.200	0.776	ND	ND		1	WG1223185
1,3-Butadiene	106-99-0	54.10	2.00	4.43	ND	ND		1	WG1223185
Carbon disulfide	75-15-0	76.10	0.200	0.622	ND	ND		1	WG1223185
Carbon tetrachloride	56-23-5	154	0.200	1.26	ND	ND		1	WG1223185
Chlorobenzene	108-90-7	113	0.200	0.924	ND	ND		1	WG1223185
Chloroethane	75-00-3	64.50	0.200	0.528	ND	ND		1	WG1223185
Chloroform	67-66-3	119	0.200	0.973	ND	ND		1	WG1223185
Chloromethane	74-87-3	50.50	0.200	0.413	ND	ND	J4	1	WG1223185
2-Chlorotoluene	95-49-8	126	0.200	1.03	ND	ND		1	WG1223185
Cyclohexane	110-82-7	84.20	0.200	0.689	ND	ND		1	WG1223185
Dibromochloromethane	124-48-1	208	0.200	1.70	ND	ND		1	WG1223185
1,2-Dibromoethane	106-93-4	188	0.200	1.54	ND	ND		1	WG1223185
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	ND	ND		1	WG1223185
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	ND	ND		1	WG1223185
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	ND	ND		1	WG1223185
1,2-Dichloroethane	107-06-2	99	0.200	0.810	ND	ND		1	WG1223185
1,1-Dichloroethane	75-34-3	98	0.200	0.802	ND	ND		1	WG1223185
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	WG1223185
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	ND	ND		1	WG1223185
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	ND	ND		1	WG1223185
1,2-Dichloropropane	78-87-5	113	0.200	0.924	ND	ND		1	WG1223185
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.908	ND	ND		1	WG1223185
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.908	ND	ND		1	WG1223185
1,4-Dioxane	123-91-1	88.10	0.200	0.721	ND	ND		1	WG1223185
Ethanol	64-17-5	46.10	0.630	1.19	1.21	2.28		1	WG1223185
Ethylbenzene	100-41-4	106	0.200	0.867	ND	ND		1	WG1223185
4-Ethyltoluene	622-96-8	120	0.200	0.982	ND	ND		1	WG1223185
Trichlorofluoromethane	75-69-4	137.40	0.200	1.12	0.777	4.36		1	WG1223185
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.989	3.70	18.3		1	WG1223185
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.200	1.53	ND	ND		1	WG1223185
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	ND	ND		1	WG1223185
Heptane	142-82-5	100	0.200	0.818	ND	ND		1	WG1223185
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.73	ND	ND		1	WG1223185
n-Hexane	110-54-3	86.20	0.200	0.705	ND	ND		1	WG1223185
Isopropylbenzene	98-82-8	120.20	0.200	0.983	ND	ND		1	WG1223185
Methylene Chloride	75-09-2	84.90	0.200	0.694	ND	ND		1	WG1223185
Methyl Butyl Ketone	591-78-6	100	1.25	5.11	ND	ND		1	WG1223185
2-Butanone (MEK)	78-93-3	72.10	1.25	3.69	ND	ND		1	WG1223185
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	1.25	5.12	ND	ND		1	WG1223185
Methyl methacrylate	80-62-6	100.12	0.200	0.819	ND	ND		1	WG1223185
MTBE	1634-04-4	88.10	0.200	0.721	ND	ND		1	WG1223185
Naphthalene	91-20-3	128	0.630	3.30	ND	ND		1	WG1223185
2-Propanol	67-63-0	60.10	1.25	3.07	ND	ND		1	WG1223185
Propene	115-07-1	42.10	0.400	0.689	ND	ND		1	WG1223185

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Styrene	100-42-5	104	0.200	0.851	ND	ND		1	WG1223185
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.37	ND	ND		1	WG1223185
Tetrachloroethylene	127-18-4	166	0.200	1.36	28.0	190		1	WG1223185
Tetrahydrofuran	109-99-9	72.10	0.200	0.590	ND	ND		1	WG1223185
Toluene	108-88-3	92.10	0.200	0.753	ND	ND		1	WG1223185
1,2,4-Trichlorobenzene	120-82-1	181	0.630	4.66	ND	ND		1	WG1223185
1,1,1-Trichloroethane	71-55-6	133	0.200	1.09	ND	ND		1	WG1223185
1,1,2-Trichloroethane	79-00-5	133	0.200	1.09	ND	ND		1	WG1223185
Trichloroethylene	79-01-6	131	0.200	1.07	1.12	6.02		1	WG1223185
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	ND	ND		1	WG1223185
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.982	ND	ND		1	WG1223185
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.934	ND	ND		1	WG1223185
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND	J4	1	WG1223185
Vinyl Bromide	593-60-2	106.95	0.200	0.875	ND	ND		1	WG1223185
Vinyl acetate	108-05-4	86.10	0.200	0.704	ND	ND		1	WG1223185
m&p-Xylene	1330-20-7	106	0.400	1.73	ND	ND		1	WG1223185
o-Xylene	95-47-6	106	0.200	0.867	ND	ND		1	WG1223185
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*95.2*				WG1223185

Volatile Organic Compounds (GC) by Method ASTM 1946

Analyte	CAS #	Mol. Wt.	RDL %	Result %	Qualifier	Dilution	Batch
Helium	7440-59-7		0.100	ND		1	WG1223416

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	1.25	2.97	2.17	5.15		1	WG1223185
Allyl chloride	107-05-1	76.53	0.200	0.626	ND	ND		1	WG1223185
Benzene	71-43-2	78.10	0.200	0.639	ND	ND		1	WG1223185
Benzyl Chloride	100-44-7	127	0.200	1.04	ND	ND		1	WG1223185
Bromodichloromethane	75-27-4	164	0.200	1.34	ND	ND		1	WG1223185
Bromoform	75-25-2	253	0.600	6.21	ND	ND		1	WG1223185
Bromomethane	74-83-9	94.90	0.200	0.776	ND	ND		1	WG1223185
1,3-Butadiene	106-99-0	54.10	2.00	4.43	ND	ND		1	WG1223185
Carbon disulfide	75-15-0	76.10	0.200	0.622	ND	ND		1	WG1223185
Carbon tetrachloride	56-23-5	154	0.200	1.26	ND	ND		1	WG1223185
Chlorobenzene	108-90-7	113	0.200	0.924	ND	ND		1	WG1223185
Chloroethane	75-00-3	64.50	0.200	0.528	ND	ND		1	WG1223185
Chloroform	67-66-3	119	0.200	0.973	ND	ND		1	WG1223185
Chloromethane	74-87-3	50.50	0.200	0.413	ND	ND	J4	1	WG1223185
2-Chlorotoluene	95-49-8	126	0.200	1.03	ND	ND		1	WG1223185
Cyclohexane	110-82-7	84.20	0.200	0.689	ND	ND		1	WG1223185
Dibromochloromethane	124-48-1	208	0.200	1.70	ND	ND		1	WG1223185
1,2-Dibromoethane	106-93-4	188	0.200	1.54	ND	ND		1	WG1223185
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	ND	ND		1	WG1223185
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	ND	ND		1	WG1223185
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	ND	ND		1	WG1223185
1,2-Dichloroethane	107-06-2	99	0.200	0.810	ND	ND		1	WG1223185
1,1-Dichloroethane	75-34-3	98	0.200	0.802	ND	ND		1	WG1223185
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	WG1223185
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	ND	ND		1	WG1223185
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	ND	ND		1	WG1223185
1,2-Dichloropropane	78-87-5	113	0.200	0.924	ND	ND		1	WG1223185
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.908	ND	ND		1	WG1223185
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.908	ND	ND		1	WG1223185
1,4-Dioxane	123-91-1	88.10	0.200	0.721	ND	ND		1	WG1223185
Ethanol	64-17-5	46.10	0.630	1.19	3.97	7.49		1	WG1223185
Ethylbenzene	100-41-4	106	0.200	0.867	ND	ND		1	WG1223185
4-Ethyltoluene	622-96-8	120	0.200	0.982	ND	ND		1	WG1223185
Trichlorofluoromethane	75-69-4	137.40	0.200	1.12	0.464	2.61		1	WG1223185
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.989	2.41	11.9		1	WG1223185
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.200	1.53	ND	ND		1	WG1223185
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	ND	ND		1	WG1223185
Heptane	142-82-5	100	0.200	0.818	ND	ND		1	WG1223185
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.73	ND	ND		1	WG1223185
n-Hexane	110-54-3	86.20	0.200	0.705	1.50	5.29		1	WG1223185
Isopropylbenzene	98-82-8	120.20	0.200	0.983	ND	ND		1	WG1223185
Methylene Chloride	75-09-2	84.90	0.200	0.694	1.56	5.42		1	WG1223185
Methyl Butyl Ketone	591-78-6	100	1.25	5.11	ND	ND		1	WG1223185
2-Butanone (MEK)	78-93-3	72.10	1.25	3.69	ND	ND		1	WG1223185
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	1.25	5.12	ND	ND		1	WG1223185
Methyl methacrylate	80-62-6	100.12	0.200	0.819	ND	ND		1	WG1223185
MTBE	1634-04-4	88.10	0.200	0.721	ND	ND		1	WG1223185
Naphthalene	91-20-3	128	0.630	3.30	ND	ND		1	WG1223185
2-Propanol	67-63-0	60.10	1.25	3.07	1.40	3.45		1	WG1223185
Propene	115-07-1	42.10	0.400	0.689	ND	ND		1	WG1223185

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Styrene	100-42-5	104	0.200	0.851	ND	ND		1	WG1223185
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.37	ND	ND		1	WG1223185
Tetrachloroethylene	127-18-4	166	0.200	1.36	2.11	14.3		1	WG1223185
Tetrahydrofuran	109-99-9	72.10	0.200	0.590	ND	ND		1	WG1223185
Toluene	108-88-3	92.10	0.200	0.753	0.241	0.907		1	WG1223185
1,2,4-Trichlorobenzene	120-82-1	181	0.630	4.66	ND	ND		1	WG1223185
1,1,1-Trichloroethane	71-55-6	133	0.200	1.09	ND	ND		1	WG1223185
1,1,2-Trichloroethane	79-00-5	133	0.200	1.09	ND	ND		1	WG1223185
Trichloroethylene	79-01-6	131	0.200	1.07	ND	ND		1	WG1223185
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	ND	ND		1	WG1223185
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.982	ND	ND		1	WG1223185
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.934	ND	ND		1	WG1223185
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND	J4	1	WG1223185
Vinyl Bromide	593-60-2	106.95	0.200	0.875	ND	ND		1	WG1223185
Vinyl acetate	108-05-4	86.10	0.200	0.704	ND	ND		1	WG1223185
m&p-Xylene	1330-20-7	106	0.400	1.73	ND	ND		1	WG1223185
o-Xylene	95-47-6	106	0.200	0.867	ND	ND		1	WG1223185
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*94.9*				WG1223185

Volatile Organic Compounds (GC) by Method ASTM 1946

Analyte	CAS #	Mol. Wt.	RDL %	Result %	Qualifier	Dilution	Batch
Helium	7440-59-7		0.100	ND		1	WG1223416

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	1.25	2.97	4.11	9.77		1	WG1223185
Allyl chloride	107-05-1	76.53	0.200	0.626	ND	ND		1	WG1223185
Benzene	71-43-2	78.10	0.200	0.639	ND	ND		1	WG1223185
Benzyl Chloride	100-44-7	127	0.200	1.04	ND	ND		1	WG1223185
Bromodichloromethane	75-27-4	164	0.200	1.34	ND	ND		1	WG1223185
Bromoform	75-25-2	253	0.600	6.21	ND	ND		1	WG1223185
Bromomethane	74-83-9	94.90	0.200	0.776	ND	ND		1	WG1223185
1,3-Butadiene	106-99-0	54.10	2.00	4.43	ND	ND		1	WG1223185
Carbon disulfide	75-15-0	76.10	0.200	0.622	ND	ND		1	WG1223185
Carbon tetrachloride	56-23-5	154	0.200	1.26	ND	ND		1	WG1223185
Chlorobenzene	108-90-7	113	0.200	0.924	ND	ND		1	WG1223185
Chloroethane	75-00-3	64.50	0.200	0.528	ND	ND		1	WG1223185
Chloroform	67-66-3	119	0.200	0.973	ND	ND		1	WG1223185
Chloromethane	74-87-3	50.50	0.200	0.413	ND	ND	J4	1	WG1223185
2-Chlorotoluene	95-49-8	126	0.200	1.03	ND	ND		1	WG1223185
Cyclohexane	110-82-7	84.20	0.200	0.689	ND	ND		1	WG1223185
Dibromochloromethane	124-48-1	208	0.200	1.70	ND	ND		1	WG1223185
1,2-Dibromoethane	106-93-4	188	0.200	1.54	ND	ND		1	WG1223185
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	ND	ND		1	WG1223185
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	ND	ND		1	WG1223185
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	ND	ND		1	WG1223185
1,2-Dichloroethane	107-06-2	99	0.200	0.810	ND	ND		1	WG1223185
1,1-Dichloroethane	75-34-3	98	0.200	0.802	ND	ND		1	WG1223185
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	WG1223185
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	ND	ND		1	WG1223185
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	ND	ND		1	WG1223185
1,2-Dichloropropane	78-87-5	113	0.200	0.924	ND	ND		1	WG1223185
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.908	ND	ND		1	WG1223185
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.908	ND	ND		1	WG1223185
1,4-Dioxane	123-91-1	88.10	0.200	0.721	ND	ND		1	WG1223185
Ethanol	64-17-5	46.10	0.630	1.19	3.50	6.61		1	WG1223185
Ethylbenzene	100-41-4	106	0.200	0.867	ND	ND		1	WG1223185
4-Ethyltoluene	622-96-8	120	0.200	0.982	ND	ND		1	WG1223185
Trichlorofluoromethane	75-69-4	137.40	0.200	1.12	0.896	5.04		1	WG1223185
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.989	3.95	19.5		1	WG1223185
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.200	1.53	ND	ND		1	WG1223185
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	ND	ND		1	WG1223185
Heptane	142-82-5	100	0.200	0.818	ND	ND		1	WG1223185
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.73	ND	ND		1	WG1223185
n-Hexane	110-54-3	86.20	0.200	0.705	0.340	1.20		1	WG1223185
Isopropylbenzene	98-82-8	120.20	0.200	0.983	ND	ND		1	WG1223185
Methylene Chloride	75-09-2	84.90	0.200	0.694	0.317	1.10		1	WG1223185
Methyl Butyl Ketone	591-78-6	100	1.25	5.11	ND	ND		1	WG1223185
2-Butanone (MEK)	78-93-3	72.10	1.25	3.69	ND	ND		1	WG1223185
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	1.25	5.12	ND	ND		1	WG1223185
Methyl methacrylate	80-62-6	100.12	0.200	0.819	ND	ND		1	WG1223185
MTBE	1634-04-4	88.10	0.200	0.721	ND	ND		1	WG1223185
Naphthalene	91-20-3	128	0.630	3.30	ND	ND		1	WG1223185
2-Propanol	67-63-0	60.10	1.25	3.07	ND	ND		1	WG1223185
Propene	115-07-1	42.10	0.400	0.689	ND	ND		1	WG1223185

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Styrene	100-42-5	104	0.200	0.851	0.614	2.61		1	WG1223185
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.37	ND	ND		1	WG1223185
Tetrachloroethylene	127-18-4	166	0.200	1.36	0.783	5.32		1	WG1223185
Tetrahydrofuran	109-99-9	72.10	0.200	0.590	ND	ND		1	WG1223185
Toluene	108-88-3	92.10	0.200	0.753	0.549	2.07		1	WG1223185
1,2,4-Trichlorobenzene	120-82-1	181	0.630	4.66	ND	ND		1	WG1223185
1,1,1-Trichloroethane	71-55-6	133	0.200	1.09	0.820	4.46		1	WG1223185
1,1,2-Trichloroethane	79-00-5	133	0.200	1.09	ND	ND		1	WG1223185
Trichloroethylene	79-01-6	131	0.200	1.07	ND	ND		1	WG1223185
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	ND	ND		1	WG1223185
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.982	ND	ND		1	WG1223185
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.934	ND	ND		1	WG1223185
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND	J4	1	WG1223185
Vinyl Bromide	593-60-2	106.95	0.200	0.875	ND	ND		1	WG1223185
Vinyl acetate	108-05-4	86.10	0.200	0.704	ND	ND		1	WG1223185
m&p-Xylene	1330-20-7	106	0.400	1.73	ND	ND		1	WG1223185
o-Xylene	95-47-6	106	0.200	0.867	ND	ND		1	WG1223185
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*94.8*				WG1223185

Volatile Organic Compounds (GC) by Method ASTM 1946

Analyte	CAS #	Mol. Wt.	RDL %	Result %	Qualifier	Dilution	Batch
Helium	7440-59-7		0.100	0.165		1	WG1223416

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	1.25	2.97	1.33	3.17		1	WG1223185
Allyl chloride	107-05-1	76.53	0.200	0.626	ND	ND		1	WG1223185
Benzene	71-43-2	78.10	0.200	0.639	ND	ND		1	WG1223185
Benzyl Chloride	100-44-7	127	0.200	1.04	ND	ND		1	WG1223185
Bromodichloromethane	75-27-4	164	0.200	1.34	ND	ND		1	WG1223185
Bromoform	75-25-2	253	0.600	6.21	ND	ND		1	WG1223185
Bromomethane	74-83-9	94.90	0.200	0.776	ND	ND		1	WG1223185
1,3-Butadiene	106-99-0	54.10	2.00	4.43	ND	ND		1	WG1223185
Carbon disulfide	75-15-0	76.10	0.200	0.622	ND	ND		1	WG1223185
Carbon tetrachloride	56-23-5	154	0.200	1.26	ND	ND		1	WG1223185
Chlorobenzene	108-90-7	113	0.200	0.924	ND	ND		1	WG1223185
Chloroethane	75-00-3	64.50	0.200	0.528	ND	ND		1	WG1223185
Chloroform	67-66-3	119	0.200	0.973	ND	ND		1	WG1223185
Chloromethane	74-87-3	50.50	0.200	0.413	ND	ND	J4	1	WG1223185
2-Chlorotoluene	95-49-8	126	0.200	1.03	ND	ND		1	WG1223185
Cyclohexane	110-82-7	84.20	0.200	0.689	ND	ND		1	WG1223185
Dibromochloromethane	124-48-1	208	0.200	1.70	ND	ND		1	WG1223185
1,2-Dibromoethane	106-93-4	188	0.200	1.54	ND	ND		1	WG1223185
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	ND	ND		1	WG1223185
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	ND	ND		1	WG1223185
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	ND	ND		1	WG1223185
1,2-Dichloroethane	107-06-2	99	0.200	0.810	ND	ND		1	WG1223185
1,1-Dichloroethane	75-34-3	98	0.200	0.802	ND	ND		1	WG1223185
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	WG1223185
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	ND	ND		1	WG1223185
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	ND	ND		1	WG1223185
1,2-Dichloropropane	78-87-5	113	0.200	0.924	ND	ND		1	WG1223185
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.908	ND	ND		1	WG1223185
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.908	ND	ND		1	WG1223185
1,4-Dioxane	123-91-1	88.10	0.200	0.721	ND	ND		1	WG1223185
Ethanol	64-17-5	46.10	0.630	1.19	1.29	2.43		1	WG1223185
Ethylbenzene	100-41-4	106	0.200	0.867	ND	ND		1	WG1223185
4-Ethyltoluene	622-96-8	120	0.200	0.982	ND	ND		1	WG1223185
Trichlorofluoromethane	75-69-4	137.40	0.200	1.12	0.926	5.20		1	WG1223185
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.989	5.43	26.8		1	WG1223185
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.200	1.53	ND	ND		1	WG1223185
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	ND	ND		1	WG1223185
Heptane	142-82-5	100	0.200	0.818	ND	ND		1	WG1223185
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.73	ND	ND		1	WG1223185
n-Hexane	110-54-3	86.20	0.200	0.705	ND	ND		1	WG1223185
Isopropylbenzene	98-82-8	120.20	0.200	0.983	ND	ND		1	WG1223185
Methylene Chloride	75-09-2	84.90	0.200	0.694	ND	ND		1	WG1223185
Methyl Butyl Ketone	591-78-6	100	1.25	5.11	ND	ND		1	WG1223185
2-Butanone (MEK)	78-93-3	72.10	1.25	3.69	ND	ND		1	WG1223185
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	1.25	5.12	ND	ND		1	WG1223185
Methyl methacrylate	80-62-6	100.12	0.200	0.819	ND	ND		1	WG1223185
MTBE	1634-04-4	88.10	0.200	0.721	ND	ND		1	WG1223185
Naphthalene	91-20-3	128	0.630	3.30	ND	ND		1	WG1223185
2-Propanol	67-63-0	60.10	1.25	3.07	ND	ND		1	WG1223185
Propene	115-07-1	42.10	0.400	0.689	ND	ND		1	WG1223185

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Styrene	100-42-5	104	0.200	0.851	ND	ND		1	WG1223185
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.37	ND	ND		1	WG1223185
Tetrachloroethylene	127-18-4	166	5.00	33.9	162	1100		25	WG1223524
Tetrahydrofuran	109-99-9	72.10	0.200	0.590	ND	ND		1	WG1223185
Toluene	108-88-3	92.10	0.200	0.753	0.220	0.828		1	WG1223185
1,2,4-Trichlorobenzene	120-82-1	181	0.630	4.66	ND	ND		1	WG1223185
1,1,1-Trichloroethane	71-55-6	133	0.200	1.09	ND	ND		1	WG1223185
1,1,2-Trichloroethane	79-00-5	133	0.200	1.09	ND	ND		1	WG1223185
Trichloroethylene	79-01-6	131	0.200	1.07	1.68	9.01		1	WG1223185
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	ND	ND		1	WG1223185
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.982	ND	ND		1	WG1223185
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.934	ND	ND		1	WG1223185
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND	J4	1	WG1223185
Vinyl Bromide	593-60-2	106.95	0.200	0.875	ND	ND		1	WG1223185
Vinyl acetate	108-05-4	86.10	0.200	0.704	ND	ND		1	WG1223185
m&p-Xylene	1330-20-7	106	0.400	1.73	ND	ND		1	WG1223185
o-Xylene	95-47-6	106	0.200	0.867	ND	ND		1	WG1223185
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*94.9*				WG1223185
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*87.0*				WG1223524

Method Blank (MB)

(MB) R3375941-3 01/15/19 13:01

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Helium	U		0.0259	0.100

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3375941-1 01/15/19 12:51 • (LCSD) R3375941-2 01/15/19 12:57

Analyte	Spike Amount %	LCS Result %	LCSD Result %	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Helium	2.50	2.69	2.60	108	104	70.0-130			3.33	25

Method Blank (MB)

(MB) R3375805-2 01/14/19 10:31

Analyte	MB Result ppbv	MB Qualifier	MB MDL ppbv	MB RDL ppbv
Acetone	0.0704	J	0.0569	1.25
Allyl Chloride	U		0.0546	0.200
Benzene	U		0.0460	0.200
Benzyl Chloride	U		0.0598	0.200
Bromodichloromethane	U		0.0436	0.200
Bromoform	U		0.0786	0.600
Bromomethane	U		0.0609	0.200
1,3-Butadiene	U		0.0563	2.00
Carbon disulfide	U		0.0544	0.200
Carbon tetrachloride	U		0.0585	0.200
Chlorobenzene	U		0.0601	0.200
Chloroethane	U		0.0489	0.200
Chloroform	U		0.0574	0.200
Chloromethane	U		0.0544	0.200
2-Chlorotoluene	U		0.0605	0.200
Cyclohexane	U		0.0534	0.200
Dibromochloromethane	U		0.0494	0.200
1,2-Dibromoethane	U		0.0185	0.200
1,2-Dichlorobenzene	U		0.0603	0.200
1,3-Dichlorobenzene	U		0.0597	0.200
1,4-Dichlorobenzene	U		0.0557	0.200
1,2-Dichloroethane	U		0.0616	0.200
1,1-Dichloroethane	U		0.0514	0.200
1,1-Dichloroethene	U		0.0490	0.200
cis-1,2-Dichloroethene	U		0.0389	0.200
trans-1,2-Dichloroethene	U		0.0464	0.200
1,2-Dichloropropane	U		0.0599	0.200
cis-1,3-Dichloropropene	U		0.0588	0.200
trans-1,3-Dichloropropene	U		0.0435	0.200
1,4-Dioxane	U		0.0554	0.200
Ethylbenzene	U		0.0506	0.200
4-Ethyltoluene	U		0.0666	0.200
Trichlorofluoromethane	U		0.0673	0.200
Dichlorodifluoromethane	U		0.0601	0.200
1,1,2-Trichlorotrifluoroethane	U		0.0687	0.200
1,2-Dichlorotetrafluoroethane	U		0.0458	0.200
Heptane	U		0.0626	0.200
Hexachloro-1,3-butadiene	U		0.0656	0.630
n-Hexane	U		0.0457	0.200
Isopropylbenzene	U		0.0563	0.200

Method Blank (MB)

(MB) R3375805-2 01/14/19 10:31

Analyte	MB Result ppbv	MB Qualifier	MB MDL ppbv	MB RDL ppbv
Methylene Chloride	U		0.0465	0.200
Methyl Butyl Ketone	U		0.0682	1.25
2-Butanone (MEK)	U		0.0493	1.25
4-Methyl-2-pentanone (MIBK)	U		0.0650	1.25
Methyl Methacrylate	U		0.0773	0.200
MTBE	U		0.0505	0.200
Naphthalene	U		0.154	0.630
2-Propanol	U		0.0882	1.25
Propene	U		0.0932	0.400
Styrene	U		0.0465	0.200
1,1,2,2-Tetrachloroethane	U		0.0576	0.200
Tetrachloroethylene	U		0.0497	0.200
Tetrahydrofuran	U		0.0508	0.200
Toluene	U		0.0499	0.200
1,2,4-Trichlorobenzene	U		0.148	0.630
1,1,1-Trichloroethane	U		0.0665	0.200
1,1,2-Trichloroethane	U		0.0287	0.200
Trichloroethylene	U		0.0545	0.200
1,2,4-Trimethylbenzene	U		0.0483	0.200
1,3,5-Trimethylbenzene	U		0.0631	0.200
2,2,4-Trimethylpentane	U		0.0456	0.200
Vinyl chloride	U		0.0457	0.200
Vinyl Bromide	U		0.0727	0.200
Vinyl acetate	U		0.0639	0.200
m&p-Xylene	U		0.0946	0.400
o-Xylene	U		0.0633	0.200
Ethanol	U		0.0832	0.630
(S) 1,4-Bromofluorobenzene	*95.6*			*60.0-140*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3375805-1 01/14/19 09:45 • (LCSD) R3375805-3 01/14/19 12:31

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Ethanol	3.75	3.64	4.26	97.1	113	55.0-148			15.5	25
Propene	3.75	3.93	4.82	105	128	64.0-144			20.4	25
Dichlorodifluoromethane	3.75	4.38	5.12	117	136	64.0-139			15.6	25
1,2-Dichlorotetrafluoroethane	3.75	4.02	4.88	107	130	70.0-130			19.3	25
Chloromethane	3.75	4.10	5.06	109	135	70.0-130		J4	20.9	25

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3375805-1 01/14/19 09:45 • (LCSD) R3375805-3 01/14/19 12:31

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Vinyl chloride	3.75	4.01	4.98	107	133	70.0-130		J4	21.4	25
1,3-Butadiene	3.75	4.03	4.76	108	127	70.0-130			16.6	25
Bromomethane	3.75	4.05	3.62	108	96.7	70.0-130			11.2	25
Chloroethane	3.75	3.86	3.97	103	106	70.0-130			2.98	25
Trichlorofluoromethane	3.75	3.87	4.49	103	120	70.0-130			14.8	25
1,1,2-Trichlorotrifluoroethane	3.75	4.52	4.60	121	123	70.0-130			1.71	25
1,1-Dichloroethene	3.75	4.47	4.56	119	122	70.0-130			2.07	25
1,1-Dichloroethane	3.75	4.41	4.51	118	120	70.0-130			2.16	25
Acetone	3.75	4.42	4.56	118	122	70.0-130			3.16	25
2-Propanol	3.75	4.54	4.62	121	123	70.0-139			1.67	25
Carbon disulfide	3.75	4.48	4.58	120	122	70.0-130			2.12	25
Methylene Chloride	3.75	4.13	4.25	110	113	70.0-130			2.67	25
MTBE	3.75	4.44	4.48	118	120	70.0-130			1.05	25
trans-1,2-Dichloroethene	3.75	4.45	4.52	119	121	70.0-130			1.58	25
n-Hexane	3.75	4.44	4.52	118	120	70.0-130			1.75	25
Vinyl acetate	3.75	4.54	4.67	121	125	70.0-130			2.87	25
Methyl Ethyl Ketone	3.75	4.61	4.67	123	125	70.0-130			1.35	25
cis-1,2-Dichloroethene	3.75	4.44	4.51	119	120	70.0-130			1.44	25
Chloroform	3.75	4.38	4.46	117	119	70.0-130			1.68	25
Cyclohexane	3.75	4.47	4.51	119	120	70.0-130			0.899	25
1,1,1-Trichloroethane	3.75	4.39	4.45	117	119	70.0-130			1.45	25
Carbon tetrachloride	3.75	4.35	4.42	116	118	70.0-130			1.56	25
Benzene	3.75	4.40	4.49	117	120	70.0-130			2.13	25
1,2-Dichloroethane	3.75	4.34	4.48	116	120	70.0-130			3.22	25
Heptane	3.75	4.39	4.50	117	120	70.0-130			2.50	25
Trichloroethylene	3.75	4.38	4.42	117	118	70.0-130			0.999	25
1,2-Dichloropropane	3.75	4.37	4.45	117	119	70.0-130			1.86	25
1,4-Dioxane	3.75	4.46	4.59	119	122	70.0-140			2.82	25
Bromodichloromethane	3.75	4.39	4.48	117	119	70.0-130			1.94	25
cis-1,3-Dichloropropene	3.75	4.55	4.60	121	123	70.0-130			1.22	25
4-Methyl-2-pentanone (MIBK)	3.75	4.54	4.63	121	123	70.0-139			1.95	25
Toluene	3.75	4.49	4.54	120	121	70.0-130			1.12	25
trans-1,3-Dichloropropene	3.75	4.59	4.69	122	125	70.0-130			2.15	25
1,1,2-Trichloroethane	3.75	4.38	4.48	117	120	70.0-130			2.29	25
Tetrachloroethylene	3.75	4.47	4.54	119	121	70.0-130			1.41	25
Methyl Butyl Ketone	3.75	4.74	4.89	126	130	70.0-149			3.01	25
Dibromochloromethane	3.75	4.52	4.61	120	123	70.0-130			2.09	25
1,2-Dibromoethane	3.75	4.55	4.63	121	123	70.0-130			1.70	25
Chlorobenzene	3.75	4.53	4.59	121	122	70.0-130			1.29	25
Ethylbenzene	3.75	4.44	4.48	118	119	70.0-130			0.901	25

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3375805-1 01/14/19 09:45 • (LCSD) R3375805-3 01/14/19 12:31

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
m&p-Xylene	7.50	8.88	8.91	118	119	70.0-130			0.298	25
o-Xylene	3.75	4.43	4.44	118	118	70.0-130			0.254	25
Styrene	3.75	4.61	4.67	123	124	70.0-130			1.15	25
Bromoform	3.75	4.52	4.58	120	122	70.0-130			1.39	25
1,1,2,2-Tetrachloroethane	3.75	4.43	4.44	118	118	70.0-130			0.258	25
4-Ethyltoluene	3.75	4.56	4.60	121	123	70.0-130			0.893	25
1,3,5-Trimethylbenzene	3.75	4.54	4.56	121	122	70.0-130			0.495	25
1,2,4-Trimethylbenzene	3.75	4.62	4.62	123	123	70.0-130			0.180	25
1,3-Dichlorobenzene	3.75	4.62	4.68	123	125	70.0-130			1.25	25
1,4-Dichlorobenzene	3.75	4.72	4.78	126	127	70.0-130			1.23	25
Benzyl Chloride	3.75	4.86	4.92	130	131	70.0-152			1.21	25
1,2-Dichlorobenzene	3.75	4.60	4.65	123	124	70.0-130			1.01	25
1,2,4-Trichlorobenzene	3.75	4.48	4.23	119	113	70.0-160			5.68	25
Hexachloro-1,3-butadiene	3.75	4.54	4.31	121	115	70.0-151			5.31	25
Naphthalene	3.75	4.49	4.13	120	110	70.0-159			8.36	25
Allyl Chloride	3.75	4.43	4.55	118	121	70.0-130			2.65	25
2-Chlorotoluene	3.75	4.54	4.56	121	121	70.0-130			0.461	25
Methyl Methacrylate	3.75	4.42	4.52	118	121	70.0-130			2.37	25
Tetrahydrofuran	3.75	4.40	4.45	117	119	70.0-137			0.980	25
2,2,4-Trimethylpentane	3.75	4.43	4.46	118	119	70.0-130			0.500	25
Vinyl Bromide	3.75	3.89	4.54	104	121	70.0-130			15.5	25
Isopropylbenzene	3.75	4.49	4.50	120	120	70.0-130			0.170	25
(S) 1,4-Bromofluorobenzene				*98.8*	*97.7*	*60.0-140*				

Method Blank (MB)

(MB) R3376083-3 01/15/19 10:32

Analyte	MB Result ppbv	MB Qualifier	MB MDL ppbv	MB RDL ppbv
Tetrachloroethylene	U		0.0497	0.200
(S) 1,4-Bromofluorobenzene	*93.4*			*60.0-140*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3376083-1 01/15/19 09:03 • (LCSD) R3376083-2 01/15/19 09:48

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Tetrachloroethylene	3.75	3.81	3.85	102	103	70.0-130			1.13	25
(S) 1,4-Bromofluorobenzene				*104*	*103*	*60.0-140*				

Method Blank (MB)

(MB) R3376430-3 01/17/19 04:14

Analyte	MB Result ppbv	MB Qualifier	MB MDL ppbv	MB RDL ppbv
Carbon tetrachloride	U		0.00575	0.0200
1,1-Dichloroethene	U		0.00521	0.0200
cis-1,2-Dichloroethene	U		0.00770	0.0200
trans-1,2-Dichloroethene	U		0.00499	0.0200
Tetrachloroethylene	U		0.00457	0.0200
Trichloroethylene	U		0.00736	0.0200
Vinyl chloride	U		0.00765	0.0200
(S) 1,4-Bromofluorobenzene	*98.7*			*60.0-140*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3376430-1 01/17/19 02:50 • (LCSD) R3376430-2 01/17/19 03:32

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Carbon tetrachloride	0.500	0.539	0.534	108	107	70.0-130			1.00	25
1,1-Dichloroethene	0.500	0.526	0.527	105	105	70.0-130			0.0618	25
cis-1,2-Dichloroethene	0.500	0.523	0.524	105	105	70.0-130			0.192	25
trans-1,2-Dichloroethene	0.500	0.525	0.524	105	105	70.0-130			0.231	25
Tetrachloroethylene	0.500	0.485	0.508	97.0	102	70.0-130			4.63	25
Trichloroethylene	0.500	0.461	0.479	92.1	95.8	70.0-130			3.95	25
Vinyl chloride	0.500	0.531	0.539	106	108	70.0-130			1.42	25
(S) 1,4-Bromofluorobenzene				*101*	*100*	*60.0-140*				

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.
J4	The associated batch QC was outside the established quality control range for accuracy.

Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.
* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T 104704245-17-14
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

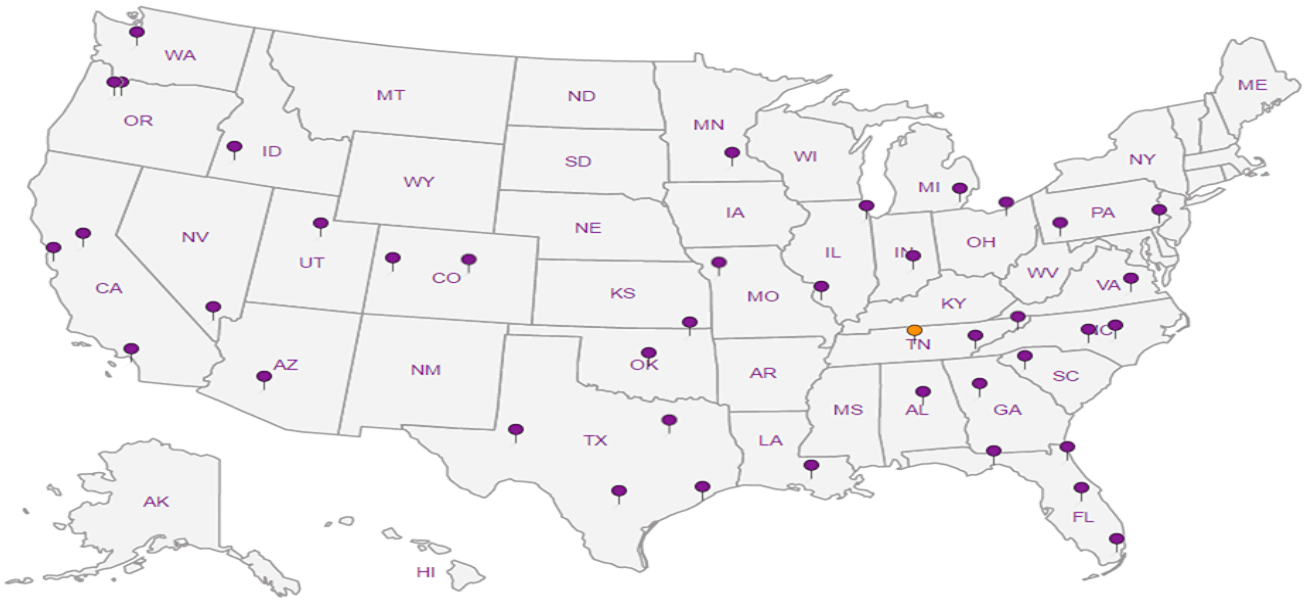
Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.



Company Name/Address:
ATC Group Services
6347 Seaview Ave NW
Seattle, WA 98107

Billing Information:
Accounts Payable
6347 Seaview Ave NW
Seattle, WA 98107

Analysis: Helium Summa | TO-15 Summa | TO-15 STM Summa

Chain of Custody Page 1 of 2

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L # L1060599
M113

Report to: Elisabeth Silver

Email To: Elisabeth.Silver@atcgs.com

Project Description: Harbor Point

City/State Collected: Lynnwood, WA

Phone: 206-781-1449
Fax:

Client Project # ~~NPWRL18001~~ NPWRL2001

Lab Project #

Collected by (print): Larry Brown

Site/Facility ID #

P.O. #

Collected by (signature):

Rush? (Lab MUST Be Notified)
___ Same Day 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Date Results Needed: Standard TAT

Email? ___No X Yes
FAX? ___No ___Yes

Canister Pressure/Vacuum (Inches Hg)

Acctnum:
Template: T744515
Prelogin:
TSR:
PB:
Shipped Via:

Sample ID	Sample Description	Can #	Date	Time	Initial	Final	Helium Summa	TO-15 Summa	TO-15 STM Summa	Rem./Contaminant	Sample # (lab only)
~~OAH~~-011019	Outdoor Air, 1	7346	1/10/2019	0746	29	4.5			X		-01
OAR-011019	Outdoor Air, 2	5118		0805	28	5.5			X		-02
OA-3-011019	Outdoor Air, 3	8569		0820	29	4.5			X		-03
IA-1-011019	Indoor Air, 1	8785		0828	29	4.5			X		-04
IA-2-011019	Indoor Air, 2	5834		0833	30	5			X		-05
SV-1-011019	Sub Slab, 1	5744		1511	28	5	X	X			-06
SV-2-011019	Sub Slab, 2	9353		1347	30	5	X	X			-07
SV-3-011019	Sub Slab, 3	7680		1236	29	5	X	X			-08
SV-4-011019	Sub Slab, 4	8567		1134	30	5	X	X			-09
SV-5-011019	Sub Slab, 5	5059		1023	29.5	5	X	X			-10

4x boxes in shipment

Remarks: 4794 8825 5989; 6003; 5990; 6019

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	1/11/2019	0920	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Samples returned via: ☐ UPS ☒ FedEx ☐ Courier ☐ ____

Temp: Amb °C Bottles Received: 11

Date: 1/12/19 Time: 0830

Hold #

Condition: (lab use only) OK

COC Seal Intact: ___Y ___N ✓ ___NA

pH Checked: NCF:

Company Name/Address:
ATC Group Services
6347 Seaview Ave NW
Seattle, WA 98107

Billing Information:
Accounts Payable
6347 Seaview Ave NW
Seattle, WA 98107

Report to: Elisabeth Silver

Email To: Elisabeth.Silver@atcgs.com

Project Description: Harbor Point

City/State Collected: Lynnwood, WA

Phone: 206 781 1449
Fax:

Client Project # NPWP218001

Lab Project #

Collected by (print): Larry Brown

Site/Facility ID #

P.O. #

Collected by (signature):

Rush? (Lab MUST Be Notified)
___ Same Day 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Date Results Needed: Standard TAT

Email? ___No X Yes
FAX? ___No ___Yes

Canister Pressure/Vacuum (Inches Hg)

Sample ID	Sample Description	Can #	Date	Time	Initial	Final
DUP-011019	Duplicate Sample	7695	1/10/2019	1200	30	6

Analysis: Helium Summa, TO-15 Summa

Chain of Custody Page 2 of 2

Pace Analytical®
National Center for Testing & Innovation

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# L1060599

Table #

Acctnum:

Template: T144515

Prelogin:

TSR:

PB:

Shipped Via:

Rem./Contaminant	Sample # (lab only)
	-1

Remarks: Summa Can #5123 used for purging lines.
Summa Can #5076 was not used.

Hold #

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	1/11/2019	0920	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Samples returned via: ☐ UPS ☒ FedEx ☐ Courier ☐ ____

Temp: Amb °C Bottles Received: 11

Date: 1/12/19 Time: 0830

Condition: (lab use only) OK

COC Seal Intact: ___Y ___N / NA

pH Checked: NCF:

Pace Analytical National Center for Testing & Innovation
Cooler Receipt Form

Client: ATCSWA	SDG#	L1060899
Cooler Received/Opened On: 1/12/19	Temperature:	Amb
Received By: Eric Struck		
Signature:		

Receipt Check List	NP	Yes	No
COC Seal Present / Intact?	✓		
COC Signed / Accurate?		✓	
Bottles arrive intact?		✓	
Correct bottles used?		✓	
Sufficient volume sent?		✓	
If Applicable			
VOA Zero headspace?			
Preservation Correct / Checked?			