

Sub-Slab Depressurization System Progress Report for the Former Holley Automotive/ Coltec Industries Facility Water Valley, Mississippi



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CERTIFICATION STATEMENT

I, Bernard T. Delaney, Ph.D., P.E., BCEE, certify that I am currently a registered professional engineer in the State of Mississippi and had primary direct responsibility for the implementation of the subject interim remedial measure activities. I certify that this Sub-Slab Depressurization System Progress Report was completed in conformance with the laws and regulations of the State of Mississippi. I certify that all information and statements in this certification form are true.

11041

Mississippi Professional
Engineer No.

07/03/2017

Date



B. Tod Delaney, Ph.D., P.E., BCEE

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1.0 Introduction

This Sub-Slab Depressurization System (“SSDS”) Progress Report has been prepared by First Environment, Inc. (“First Environment”) on behalf of EnPro Industries, Inc. (“EnPro”) with respect to the former Holley Automotive/Coltec Industries Facility (hereinafter referred as the Plant”). The Plant is located at 600 State Highway 32 in Water Valley, Yalobusha County, Mississippi.

On June 19, 2017, First Environment submitted a VI Investigation and Mitigation Report (the “Initial SSDS Report”), which included a description of the SSDS and indoor air sampling data through June 7, 2017. On June 19-20, 2017, First Environment collected additional ambient and indoor air samples at the Plant. This report provides an update on the operation of the SSDS, since submission of the Initial SSDS Report, as well as the June 19-20, 2017 sampling results.

2.0 Operation of the SSDS

As proposed in the Initial SSDS Report, First Environment installed a third extraction point (EP#3) adjacent to the sump area on June 22, 2017. The location of EP#3 is depicted in Figure 1. The MDEQ was notified by phone prior to the installation of EP#3. First Environment will provide the details of this installation in a Supplemental SSDS Plan.

Subsequent to the installation of EP#3, the following air flow measurements were collected from each of the extraction points:

EP#1: 5.3 cfm

EP#2: 6.4 cfm

EP#3: 5.8 cfm

3.0 Indoor Air Monitoring – June 19-20, 2017

3.1 Instrumentation

On June 19-20, 2017, First Environment collected ambient and indoor air samples by placing laboratory provided 6-liter capacity 24-hour Summa® canisters, equipped with flow regulators calibrated to 24 hours.

3.2 Methodology

First Environment collected 13 indoor air samples at various locations within the Plant, including the Maintenance Room, the ATS Room, and the Training Room; and one ambient air sample outside the Plant. Standard chain of custody procedures were implemented for the sampling, including signing the sample lot in and out from the facility to the laboratory on a chain of custody sheet and dating the start and end dates/times of sample collection. First Environment also followed standard indoor air sampling techniques to collect the indoor air samples at the locations depicted in Figure 1. Wherever possible, First Environment mounted the Summa® canisters on columns or secured them in an area above the floor at or near the “breathing space”. The vacuum measurements in Summa® canisters were noted before and after sampling to ensure that the flow regulator at each canister was working properly.

The sampling requires the Summa® canisters to be left in place for 24 hours and they are monitored by Plant security for that period of time. First Environment personnel, Borg Warner representatives and Plant employees had access to the Summa® canisters during the 24-hour sampling period.

First Environment submitted the samples to ESC Lab Sciences for USEPA TO-15 SIM analysis. The laboratory was responsible for the decontamination of the Summa® canisters and for setting the internal vacuum and calibrating the regulators prior to sample collection.

3.3 Results

Table 1 presents the ambient and indoor air sampling results for all TO-15 analytes. Table 2 presents the results of TCE, cis-DCE, and VC in comparison of all previous rounds of sampling.

The samples in the ATS Room, Training Room and Cafeteria were above USEPA's Vapor Intrusion Screening Level (“VISL”) for TCE of $3 \mu\text{g}/\text{m}^3$, but below the MDEQ action level of $26 \mu\text{g}/\text{m}^3$. One sample (the Maintenance Room) was above the MDEQ action level at $29.4 \mu\text{g}/\text{m}^3$. The remaining samples were below USEPA's VISL. Overall, the results show a decreasing trend in comparison to previous samples.

A copy of the laboratory report, including the chain of custody forms, is attached in Appendix A. However, it should be noted that First Environment is currently conducting QA/QC and data validation on this report.

4.0 Summary

First Environment is continuing to assess the SSDS. Subsequent sampling results will be provided to the MDEQ on an ongoing basis.

TABLES

TABLE 1
INDOOR AIR SAMPLING RESULTS
JUNE 19, 2017
FORMER HOLLEY AUTOMOTIVE/COLTEC INDUSTRIES FACILITY
WATER VALLEY, MS

SAMPLE LOCATION:	IA-K8	IA-G4	IA-D5	IA-L16	IA-K13	IA-G13	IA-C16	AA-2	IA-B12	IA-17	IA-6	IA-2	IA-1	IA-SUMP
SAMPLING DATE:	06/19/2017	06/19/2017	06/19/2017	06/19/2017	06/19/2017	06/19/2017	06/19/2017	06/19/2017	06/19/2017	06/19/2017	06/19/2017	06/19/2017	06/19/2017	06/19/2017
LABORATORY ID:	L917924-01	L917924-02	L917924-03	L917924-04	L917924-05	L917924-06	L917924-07	L917924-08	L917924-09	L917924-10	L917924-11	L917924-12	L917924-13	L917924-14
Analyte	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³
ACETONE	567	540	584	217	270	251	293	4.28	406	371	326	310	321	345
ALLYL CHLORIDE	<0.626	<0.626	<0.626	<0.626	<0.626	<0.626	<0.626	<0.626	<0.626	<0.626	<0.626	<0.626	<0.626	<0.626
BENZENE	0.973	1.21	1.03	1.05	0.869	0.897	0.859	<0.639	<0.639	1.19	0.964	0.714	0.731	0.893
BENZYL CHLORIDE	<1.04	<1.04	<1.04	<1.04	<1.04	<1.04	<1.04	<1.04	<1.04	<1.04	<1.04	<1.04	<1.04	<1.04
BROMODICHLOROMETHANE	<1.34	<1.34	<1.34	<1.34	<1.34	<1.34	<1.34	<1.34	<1.34	<1.34	<1.34	<1.34	<1.34	<1.34
BROMOFORM	<6.21	<6.21	<6.21	<6.21	<6.21	<6.21	<6.21	<6.21	<6.21	<6.21	<6.21	<6.21	<6.21	<6.21
BROMOMETHANE	<0.776	<0.776	<0.776	<0.776	<0.776	<0.776	<0.776	<0.776	<0.776	<0.776	<0.776	<0.776	<0.776	<0.776
1,3-BUTADIENE	<4.43	6.46	6.57	<4.43	<4.43	<4.43	<4.43	<4.43	<4.43	<4.43	<4.43	<4.43	<4.43	<4.43
CARBON DISULFIDE	<0.622	<0.622	<0.622	<0.622	<0.622	<0.622	<0.622	<0.622	<0.622	<0.622	<0.622	<0.622	<0.622	<0.622
CARBON TETRACHLORIDE	<1.26	<1.26	<1.26	<1.26	<1.26	<1.26	<1.26	<1.26	<1.26	<1.26	<1.26	<1.26	<1.26	<1.26
CHLOROBENZENE	<0.924	<0.924	<0.924	<0.924	<0.924	<0.924	<0.924	<0.924	<0.924	<0.924	<0.924	<0.924	<0.924	<0.924
CHLOROETHANE	<0.528	<0.528	<0.528	<0.528	<0.528	<0.528	<0.528	<0.528	<0.528	<0.528	<0.528	<0.528	<0.528	<0.528
CHLOROFORM	<0.973	<0.973	<0.973	<0.973	<0.973	<0.973	<0.973	<0.973	<0.973	<0.973	<0.973	<0.973	<0.973	<0.973
CHLOROMETHANE	1.4	1.38	1.4	1.53	1.46	1.38	1.33	1.45	1.51	1.39	1.37	1.41	1.4	1.36
2-CHLOROTOLUENE	<1.03	<1.03	<1.03	<1.03	<1.03	<1.03	<1.03	<1.03	<1.03	<1.03	<1.03	<1.03	<1.03	<1.03
CYCLOHEXANE	<0.689	<0.689	<0.689	<0.689	<0.689	<0.689	<0.689	<0.689	<0.689	<0.689	<0.689	<0.689	<0.689	<0.689
CHLORODIBROMOMETHANE	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7
1,2-DIBROMOETHANE	<1.54	<1.54	<1.54	<1.54	<1.54	<1.54	<1.54	<1.54	<1.54	<1.54	<1.54	<1.54	<1.54	<1.54
1,2-DICHLOROBENZENE	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2
1,3-DICHLOROBENZENE	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2
1,4-DICHLOROBENZENE	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2
1,2-DICHLOROETHANE	<0.81	<0.81	<0.81	<0.81	<0.81	<0.81	<0.81	<0.81	<0.81	<0.81	<0.81	<0.81	<0.81	<0.81
1,1-DICHLOROETHANE	<0.802	<0.802	<0.802	<0.802	<0.802	<0.802	<0.802	<0.802	<0.802	<0.802	<0.802	<0.802	<0.802	<0.802

TABLE 1
INDOOR AIR SAMPLING RESULTS
JUNE 19, 2017
FORMER HOLLEY AUTOMOTIVE/COLTEC INDUSTRIES FACILITY
WATER VALLEY, MS

SAMPLE LOCATION: SAMPLING DATE: LABORATORY ID:	IA-K8 06/19/2017 L917924-01	IA-G4 06/19/2017 L917924-02	IA-D5 06/19/2017 L917924-03	IA-L16 06/19/2017 L917924-04	IA-K13 06/19/2017 L917924-05	IA-G13 06/19/2017 L917924-06	IA-C16 06/19/2017 L917924-07	AA-2 06/19/2017 L917924-08	IA-B12 06/19/2017 L917924-09	IA-17 06/19/2017 L917924-10	IA-6 06/19/2017 L917924-11	IA-2 06/19/2017 L917924-12	IA-1 06/19/2017 L917924-13	IA-SUMP 06/19/2017 L917924-14
Analyte	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³
1,1-DICHLOROETHENE	<0.793	<0.793	<0.793	<0.793	<0.793	<0.793	<0.793	<0.793	<0.793	<0.793	<0.793	<0.793	<0.793	<0.793
CIS-1,2-DICHLOROETHENE	<0.793	<0.793	<0.793	<0.793	<0.793	<0.793	<0.793	<0.793	<0.793	4.48	4.14	1.88	3.68	1.19
TRANS-1,2-DICHLOROETHENE	2.46	5.22	3.39	0.964	1.2	1.32	1.14	<0.793	1.86	1.39	1.23	1.6	1.2	1.24
1,2-DICHLOROPROPANE	<0.924	<0.924	<0.924	<0.924	<0.924	<0.924	<0.924	<0.924	<0.924	<0.924	<0.924	<0.924	<0.924	<0.924
CIS-1,3-DICHLOROPROPENE	<0.908	<0.908	<0.908	<0.908	<0.908	<0.908	<0.908	<0.908	<0.908	<0.908	<0.908	<0.908	<0.908	<0.908
TRANS-1,3-DICHLOROPROPENE	<0.908	<0.908	<0.908	<0.908	<0.908	<0.908	<0.908	<0.908	<0.908	<0.908	<0.908	<0.908	<0.908	<0.908
1,4-DIOXANE	<0.721	<0.721	<0.721	<0.721	<0.721	<0.721	<0.721	<0.721	<0.721	<0.721	<0.721	<0.721	<0.721	<0.721
ETHANOL	10800(E)	4670(E)	5960(E)	4430(E)	5020(E)	4660(E)	5090(E)	<1.19	7440(E)	7060(E)	5680(E)	9560(E)	6560(E)	6440(E)
ETHYLBENZENE	2.67	2.77	2.96	2.44	2.77	2.82	2.4	<0.867	2.81	2.11	1.82	2.37	2.44	2.74
4-ETHYLTOLUENE	1.3	3.3	2.46	1.16	1.59	1.76	1.46	<0.982	2.14	1.56	1.16	2	1.66	1.78
TRICHLOROFLUOROMETHANE	1.66	1.89	2.02	1.54	1.66	1.73	1.66	1.29	2	1.63	1.59	1.63	1.6	1.65
DICHLORODIFLUOROMETHANE	1.51	1.41	1.45	1.45	1.52	1.54	1.48	1.55	1.54	1.57	1.44	1.46	1.41	1.36
1,1,2-TRICHLOROTRIFLUOROETHANE	<1.53	<1.53	<1.53	<1.53	<1.53	<1.53	<1.53	<1.53	<1.53	<1.53	<1.53	<1.53	<1.53	<1.53
1,2-DICHLOROTETRAFLUROETHANE	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4
HEPTANE	21.2	25.1	21.1	10	15.1	17.5	15.5	<0.818	18.5	13.8	11.8	13.9	14.2	16.1
HEXACHLORO-1,3-BUTADIENE	<6.73	<6.73	<6.73	<6.73	<6.73	<6.73	<6.73	<6.73	<6.73	<6.73	<6.73	<6.73	<6.73	<6.73
N-HEXANE	0.916	0.965	<0.705	<0.705	0.964	0.917	0.846	<0.705	0.797	0.8	0.777	0.719	0.986	0.717
ISOPROPYLBENZENE	<0.983	<0.983	<0.983	<0.983	<0.983	<0.983	<0.983	<0.983	<0.983	<0.983	<0.983	<0.983	<0.983	<0.983
METHYLENE CHLORIDE	1.21(B)	<0.694	<0.694	0.831(B)	<0.694	<0.694	<0.694	1.25(B)	<0.694	0.911(B)	<0.694	<0.694	<0.694	<0.694
METHYL BUTYL KETONE	<5.11	<5.11	<5.11	<5.11	<5.11	<5.11	<5.11	<5.11	<5.11	<5.11	<5.11	<5.11	<5.11	<5.11
2-BUTANONE (MEK)	1090	615	698	365	401	395	446	<3.69	700	578	471	735	561	549
4-METHYL-2-PENTANONE (MIBK)	<5.12	<5.12	<5.12	<5.12	<5.12	<5.12	<5.12	<5.12	<5.12	<5.12	<5.12	<5.12	<5.12	<5.12
METHYL METHACRYLATE	<0.819	<0.819	<0.819	<0.819	<0.819	<0.819	<0.819	<0.819	<0.819	<0.819	<0.819	<0.819	<0.819	<0.819
METHYL TERT-BUTYL ETHER	<0.721	<0.721	<0.721	<0.721	<0.721	<0.721	<0.721	<0.721	<0.721	<0.721	<0.721	<0.721	<0.721	<0.721
NAPHTHALENE	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3
2-PROPANOL	8230(E)	7420(E)	8150(E)	1430(E)	5960(E)	5410(E)	5850(E)	<3.07	6680(E)	5410(E)	4650(E)	6420(E)	5920(E)	7950(E)

TABLE 1
INDOOR AIR SAMPLING RESULTS
JUNE 19, 2017
FORMER HOLLEY AUTOMOTIVE/COLTEC INDUSTRIES FACILITY
WATER VALLEY, MS

SAMPLE LOCATION:	IA-K8	IA-G4	IA-D5	IA-L16	IA-K13	IA-G13	IA-C16	AA-2	IA-B12	IA-17	IA-6	IA-2	IA-1	IA-SUMP
SAMPLING DATE:	06/19/2017	06/19/2017	06/19/2017	06/19/2017	06/19/2017	06/19/2017	06/19/2017	06/19/2017	06/19/2017	06/19/2017	06/19/2017	06/19/2017	06/19/2017	06/19/2017
LABORATORY ID:	L917924-01	L917924-02	L917924-03	L917924-04	L917924-05	L917924-06	L917924-07	L917924-08	L917924-09	L917924-10	L917924-11	L917924-12	L917924-13	L917924-14
Analyte	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³
PROPENE	<0.689	<0.689	<0.689	<0.689	<0.689	<0.689	<0.689	<0.689	<0.689	<0.689	<0.689	<0.689	<0.689	<0.689
STYRENE	<0.851	1.56	<0.851	<0.851	<0.851	<0.851	<0.851	<0.851	<0.851	1.37	1.1	<0.851	<0.851	<0.851
1,1,2,2-TETRACHLOROETHANE	<1.37	<1.37	<1.37	<1.37	<1.37	<1.37	<1.37	<1.37	<1.37	<1.37	<1.37	<1.37	<1.37	<1.37
TETRACHLOROETHENE	<1.36	<1.36	<1.36	1.38	<1.36	<1.36	<1.36	<1.36	<1.36	<1.36	<1.36	<1.36	<1.36	<1.36
TETRAHYDROFURAN	<0.59	<0.59	<0.59	<0.59	<0.59	<0.59	<0.59	<0.59	<0.59	<0.59	<0.59	3.99	4.43	<0.59
TOLUENE	6.01	4.67	4	6.67	4.62	4.17	3.74	0.929	3.89	3.47	2.91	2.76	11.6	4.05
1,2,4-TRICHLOROENZENE	<4.66	<4.66	<4.66	<4.66	<4.66	<4.66	<4.66	<4.66	<4.66	<4.66	<4.66	<4.66	<4.66	<4.66
1,1,1-TRICHLOROETHANE	<1.09	<1.09	<1.09	<1.09	<1.09	<1.09	<1.09	<1.09	<1.09	<1.09	<1.09	<1.09	<1.09	<1.09
1,1,2-TRICHLOROETHANE	<1.09	<1.09	<1.09	<1.09	<1.09	<1.09	<1.09	<1.09	<1.09	<1.09	<1.09	<1.09	<1.09	<1.09
TRICHLOROETHENE	1.31	1.35	1.66	2.81	2.2	2.46	2	<1.07	1.66	4.82	6.67	8.16	29.4	5.33
1,2,4-TRIMETHYLBENZENE	2.61	15.1	12.7	5.79	7.75	8.73	7.02	<0.982	10.5	7.96	6.4	10.6	8.24	8.44
1,3,5-TRIMETHYLBENZENE	1.37	5.07	4.15	1.8	2.43	2.77	2.15	<0.982	3.19	2.6	2.02	3.2	2.85	2.7
2,2,4-TRIMETHYLPENTANE	21.1	23.2	26	23.2	37.8	45.5	34.3	<0.934	26.3	21.6	20.4	21.8	31.2	43.7
VINYL CHLORIDE	<0.511	<0.511	<0.511	<0.511	<0.511	<0.511	<0.511	<0.511	<0.511	<0.511	<0.511	<0.511	<0.511	<0.511
VINYL BROMIDE	<0.875	<0.875	<0.875	<0.875	<0.875	<0.875	<0.875	<0.875	<0.875	<0.875	<0.875	<0.875	<0.875	<0.875
VINYL ACETATE	<0.704	<0.704	<0.704	<0.704	<0.704	<0.704	<0.704	<0.704	<0.704	<0.704	<0.704	<0.704	<0.704	<0.704
M&P-XYLENE	7.41	9.77	10.6	7.94	9.22	9.42	8.29	<1.73	9.59	7.18	6.05	8.39	8.13	9.23
O-XYLENE	2.51	3.79	3.84	2.95	3.47	3.76	3.54	<0.867	3.55	2.67	2.29	3.13	2.97	3.45

B: The same analyte is found in the associated blank.

E: The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).

TABLE 2
INDOOR AIR SAMPLING RESULTS COMPARISON
JANUARY THROUGH JUNE 2017
FORMER HOLLEY AUTOMOTIVE/COLTEC INDUSTRIES FACILITY
WATER VALLEY, MS

SAMPLE ID	SAMPLING DATE	LABORATORY ID	CoC Concentrations (µg/m³)			
			Trichloroethene	cis-1,2-Dichloroethene	Vinyl chloride	
USEPA Vapor Intrusion Screening Level (VISL):			3	NA	2.8	
IA-1	19-Jan-17	L1702183-01	268(D)	63.8	<0.051	
	15-Feb-17	L890396-01	55.8	<0.793	2.51	
	23-Feb-17	L892423-01	150	82.1	1.68	
	9-Mar-17	L895061-01	425	97.9	2.47	
	26-Mar-17	L898762-01	103	11.4	0.604	
	26-Apr-17	L905292-01	78.3	<0.793	0.712	
	14-May-17	L909544-01	72.7	14	<0.511	
	25-May-17	L912423-03	219	<0.793	0.526	
	7-Jun-17	L914832-13	41.7	<0.793	<0.511	
19-Jun-17	L917924-13	29.4	3.68	<0.511		
IA-2	19-Jan-17	L1702183-02	187	43.2	<0.051	
	15-Feb-17	L890396-02	97.1	<0.793	2.27	
	23-Feb-17	L892423-02	157	79.4	1.57	
	9-Mar-17	L895061-02	426	86.7	1.18	
	9-Mar-17	L895061-04	438	88.7	1.68	
	26-Mar-17	L898762-02	61.8	<0.793	<0.511	
	IA-2 (2ND CANISTER)	26-Mar-17	L898762-04	82.3	<0.793	<0.511
		26-Apr-17	L905292-02	56.6	10.8	<0.511
		14-May-17	L909544-02	10.8	<0.793	<0.511
IA-2 (DUPLICATE)	25-May-17	L912423-08	160	<0.793	<0.511	
	7-Jun-17	L914832-12	6.58	<0.793	<0.511	
	19-Jun-17	L917924-12	8.16	1.88	<0.511	
	19-Jan-17	L1702183-06	39	12.8	0.585	
	15-Feb-17	L890396-03	21.7	<0.793	0.57	
	23-Feb-17	L892423-03	47.1	14.2	<0.511	
	9-Mar-17	L895061-03	48.6	12.3	0.511	
	26-Mar-17	L898762-03	25.8	<0.793	<0.511	
	26-Apr-17	L905292-03	26	9.12	<0.511	
14-May-17	L909544-03	19.5	<0.793	<0.511		
25-May-17	L912423-01	19.1	<0.793	<0.511		
7-Jun-17	L914832-11	5.75	<0.793	<0.511		
19-Jun-17	L917924-11	6.67	4.14	<0.511		
IA-14	19-Jan-17	L1702183-14	3.07	0.928	<0.051	
	23-Feb-17	L892423-04	3.32	<0.793	<0.511	
IA-17	14-May-17	L909544-05	13.5	<0.793	<0.511	
	25-May-17	L912423-02	4.15	<0.793	<0.511	
	7-Jun-17	L914832-10	3.96	<0.793	<0.511	
	19-Jun-17	L917924-10	4.82	4.48	<0.511	
IA-B12	26-Apr-17	L905292-04	6.54	1.77	<0.511	
	25-May-17	L912423-05	3.08	<0.793	<0.511	
	7-Jun-17	L914832-07	1.64	<0.793	<0.511	
	19-Jun-17	L917924-09	1.66	<0.793	<0.511	
IA-C16	26-Apr-17	L905292-05	6.48	1.82	<0.511	
	25-May-17	L912423-06	3.88	<0.793	<0.511	
	7-Jun-17	L914832-08	1.55	<0.793	<0.511	
	19-Jun-17	L917924-07	2	<0.793	<0.511	
IA-D5	25-May-17	L912423-12	<1.07	<0.793	<0.511	
	7-Jun-17	L914832-03	1.47	<0.793	<0.511	
	19-Jun-17	L917924-03	1.66	<0.793	<0.511	
IA-G4	25-May-17	L912423-11	<1.07	<0.793	<0.511	
	7-Jun-17	L914832-02	3.31	<0.793	<0.511	
	19-Jun-17	L917924-02	1.35	<0.793	<0.511	
IA-G13	26-Apr-17	L905292-06	8.98	<0.793	<0.511	
	14-May-17	L909544-04	4.65	<0.793	<0.511	
	25-May-17	L912423-06	3.88	<0.793	<0.511	
	7-Jun-17	L914832-06	2.54	<0.793	<0.511	
	19-Jun-17	L917924-06	2.46	<0.793	<0.511	
IA-K8	25-May-17	L912423-10	1.47	<0.793	<0.511	
	7-Jun-17	L914832-01	7.86	<0.793	<0.511	
	19-Jun-17	L917924-01	1.31	<0.793	<0.511	
IA-K13	26-Apr-17	L905292-07	6.53	<0.793	<0.511	
	25-May-17	L912423-04	5.28	<0.793	<0.511	
	7-Jun-17	L914832-05	1.59	<0.793	<0.511	
	19-Jun-17	L917924-05	2.2	<0.793	<0.511	
IA-L16	26-Apr-17	L905292-08	5.77	1.75	<0.511	
	7-Jun-17	L914832-04	2.09	<0.793	<0.511	
	25-May-17	L912423-09	1.36	<0.793	<0.511	
	19-Jun-17	L917924-04	2.81	<0.793	<0.511	
EP-1	14-May-17	L909544-06	1420000	361000	46300	
EP-2	14-May-17	L909544-07	2820000	560000	13200	
IA-SUMP-DUP	25-May-17	L912423-15	83.1	<0.793	<0.511	
IA-SUMP	19-Jun-17	L917924-14	5.33	1.19	<0.511	
AA-1	19-Jan-17	L1702183-17	<0.107	<0.079	<0.051	
AA-2	19-Jan-17	L1702183-18	0.129	<0.079	<0.051	
	26-Apr-17	L905292-09	<0.107	<0.793	<0.051	
	25-May-17	L912423-13	<1.07	<0.793	<0.511	
	7-Jun-17	L914832-09	<1.07	<0.793	<0.511	
	19-Jun-17	L917924-08	<1.07	<0.793	<0.511	

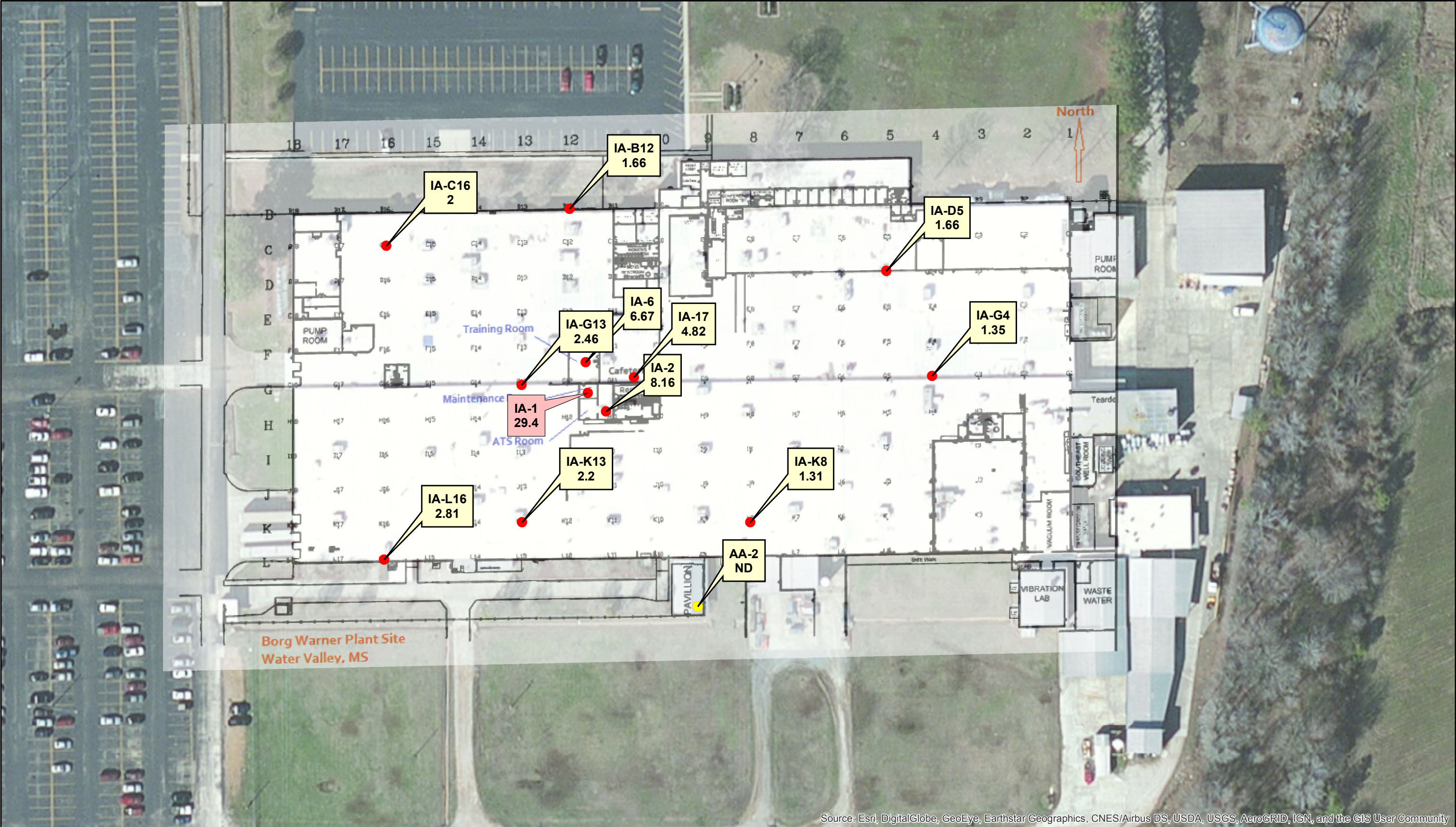
D: Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte

VISL: Calculated based on USEPA's OSWER Vapor Intrusion Assessment VISL Calculator Version 3.4, November 2015 RSLs for Target Indoor Air Concentration @ TCR=1E-6 or THQ=1

TCR: Target Carcinogen Risk

THQ: Target Hazard Quotient for Non-Carcinogens

FIGURE



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Legend

●

IA-1: Indoor Air Concentrations in ug/m3

●

AA-1: Ambient Air Concentrations in ug/m3

ND Concentration not detected above laboratory reported limits

USEPA Screening Level for TCE: 3 ug/m3

MDEQ Action Level for TCE: 26 ug/m3

TCE Level Exceeding the MDEQ Action Level

0204080 Feet

1 inch = 80 feet

N

W

E

S

FIRST

ENVIRONMENT

91 Fulton Street

Boonton, New Jersey 07005

BORG WARNER FACILITY

600 Highway 32E, Water Valley, MS

FIGURE 1

INDOOR AIR SAMPLING RESULTS

JUNE 19 2017

Revised

LS

Drawn

NMT

Checked

NMT

Approved

NMT

Date

6/30/17

APPENDIX A

First Environment, Inc.

Sample Delivery Group: L917924
Samples Received: 06/22/2017
Project Number: ENPRO 002D
Description: EnPro 002B
Site: OXFORD, MS
Report To: Michael T. Slack
91 Fulton Street
Boonton, NJ 07005

Entire Report Reviewed By:



John Hawkins

Technical Service Representative

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.



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IA-D5 L917924-03	10
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IA-K13 L917924-05	14
IA-G13 L917924-06	16
IA-C16 L917924-07	18
AA-2 L917924-08	20
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SAMPLE SUMMARY

ONE LAB. NATIONWIDE.



IA-K8 L917924-01 Air

			Collected by Michael T. Slack	Collected date/time 06/19/17 17:45	Received date/time 06/22/17 08:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG992351	1	06/23/17 16:31	06/23/17 16:31	DWR
Volatile Organic Compounds (MS) by Method TO-15	WG992604	40	06/24/17 15:37	06/24/17 15:37	DWR

¹ Cp

² Tc

³ Ss

IA-G4 L917924-02 Air

			Collected by Michael T. Slack	Collected date/time 06/19/17 17:50	Received date/time 06/22/17 08:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG992351	1	06/23/17 17:28	06/23/17 17:28	DWR
Volatile Organic Compounds (MS) by Method TO-15	WG992604	40	06/24/17 16:20	06/24/17 16:20	DWR

⁴ Cn

⁵ Sr

⁶ Qc

IA-D5 L917924-03 Air

			Collected by Michael T. Slack	Collected date/time 06/19/17 17:55	Received date/time 06/22/17 08:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG992351	1	06/23/17 18:21	06/23/17 18:21	DWR
Volatile Organic Compounds (MS) by Method TO-15	WG992604	40	06/24/17 17:02	06/24/17 17:02	DWR

⁷ Gl

⁸ Al

⁹ Sc

IA-L16 L917924-04 Air

			Collected by Michael T. Slack	Collected date/time 06/19/17 18:05	Received date/time 06/22/17 08:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG992351	1	06/23/17 19:11	06/23/17 19:11	DWR
Volatile Organic Compounds (MS) by Method TO-15	WG992604	25	06/24/17 17:46	06/24/17 17:46	DWR

IA-K13 L917924-05 Air

			Collected by Michael T. Slack	Collected date/time 06/19/17 18:10	Received date/time 06/22/17 08:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG992351	1	06/23/17 20:03	06/23/17 20:03	DWR
Volatile Organic Compounds (MS) by Method TO-15	WG992604	25	06/24/17 18:28	06/24/17 18:28	DWR

IA-G13 L917924-06 Air

			Collected by Michael T. Slack	Collected date/time 06/19/17 19:00	Received date/time 06/22/17 08:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG992351	1	06/23/17 20:55	06/23/17 20:55	DWR
Volatile Organic Compounds (MS) by Method TO-15	WG992604	25	06/24/17 19:11	06/24/17 19:11	DWR

IA-C16 L917924-07 Air

			Collected by Michael T. Slack	Collected date/time 06/19/17 19:05	Received date/time 06/22/17 08:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG992351	1	06/23/17 21:46	06/23/17 21:46	DWR
Volatile Organic Compounds (MS) by Method TO-15	WG992604	25	06/24/17 19:54	06/24/17 19:54	DWR

SAMPLE SUMMARY

ONE LAB. NATIONWIDE.



AA-2 L917924-08 Air

			Collected by Michael T. Slack	Collected date/time 06/19/17 18:50	Received date/time 06/22/17 08:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG992351	1	06/23/17 22:37	06/23/17 22:37	DWR

IA-B12 L917924-09 Air

			Collected by Michael T. Slack	Collected date/time 06/19/17 19:10	Received date/time 06/22/17 08:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG992351	1	06/23/17 23:29	06/23/17 23:29	DWR
Volatile Organic Compounds (MS) by Method TO-15	WG992604	25	06/24/17 20:36	06/24/17 20:36	DWR

IA-17 L917924-10 Air

			Collected by Michael T. Slack	Collected date/time 06/19/17 19:15	Received date/time 06/22/17 08:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG992351	1	06/24/17 00:20	06/24/17 00:20	DWR
Volatile Organic Compounds (MS) by Method TO-15	WG992604	25	06/24/17 21:18	06/24/17 21:18	DWR

IA-6 L917924-11 Air

			Collected by Michael T. Slack	Collected date/time 06/19/17 20:35	Received date/time 06/22/17 08:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG992351	1	06/24/17 01:10	06/24/17 01:10	DWR
Volatile Organic Compounds (MS) by Method TO-15	WG992604	25	06/24/17 22:01	06/24/17 22:01	DWR

IA-2 L917924-12 Air

			Collected by Michael T. Slack	Collected date/time 06/19/17 20:38	Received date/time 06/22/17 08:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG992351	1	06/24/17 02:03	06/24/17 02:03	DWR
Volatile Organic Compounds (MS) by Method TO-15	WG992604	25	06/24/17 22:44	06/24/17 22:44	DWR

IA-1 L917924-13 Air

			Collected by Michael T. Slack	Collected date/time 06/19/17 20:40	Received date/time 06/22/17 08:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG992351	1	06/24/17 02:56	06/24/17 02:56	DWR
Volatile Organic Compounds (MS) by Method TO-15	WG992604	25	06/24/17 23:26	06/24/17 23:26	DWR

IA-SUMP L917924-14 Air

			Collected by Michael T. Slack	Collected date/time 06/19/17 20:45	Received date/time 06/22/17 08:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG992351	1	06/24/17 03:47	06/24/17 03:47	DWR
Volatile Organic Compounds (MS) by Method TO-15	WG992604	25	06/25/17 00:08	06/25/17 00:08	DWR

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. 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.

John Hawkins
Technical Service Representative

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Collected date/time: 06/19/17 17:45

L917924

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	50.0	119	239	567		40	WG992604
Allyl chloride	107-05-1	76.53	0.200	0.626	ND	ND		1	WG992351
Benzene	71-43-2	78.10	0.200	0.639	0.304	0.973		1	WG992351
Benzyl Chloride	100-44-7	127	0.200	1.04	ND	ND		1	WG992351
Bromodichloromethane	75-27-4	164	0.200	1.34	ND	ND		1	WG992351
Bromoform	75-25-2	253	0.600	6.21	ND	ND		1	WG992351
Bromomethane	74-83-9	94.90	0.200	0.776	ND	ND		1	WG992351
1,3-Butadiene	106-99-0	54.10	2.00	4.43	ND	ND		1	WG992351
Carbon disulfide	75-15-0	76.10	0.200	0.622	ND	ND		1	WG992351
Carbon tetrachloride	56-23-5	154	0.200	1.26	ND	ND		1	WG992351
Chlorobenzene	108-90-7	113	0.200	0.924	ND	ND		1	WG992351
Chloroethane	75-00-3	64.50	0.200	0.528	ND	ND		1	WG992351
Chloroform	67-66-3	119	0.200	0.973	ND	ND		1	WG992351
Chloromethane	74-87-3	50.50	0.200	0.413	0.680	1.40		1	WG992351
2-Chlorotoluene	95-49-8	126	0.200	1.03	ND	ND		1	WG992351
Cyclohexane	110-82-7	84.20	0.200	0.689	ND	ND		1	WG992351
Dibromochloromethane	124-48-1	208	0.200	1.70	ND	ND		1	WG992351
1,2-Dibromoethane	106-93-4	188	0.200	1.54	ND	ND		1	WG992351
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	ND	ND		1	WG992351
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	ND	ND		1	WG992351
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	ND	ND		1	WG992351
1,2-Dichloroethane	107-06-2	99	0.200	0.810	ND	ND		1	WG992351
1,1-Dichloroethane	75-34-3	98	0.200	0.802	ND	ND		1	WG992351
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	WG992351
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	ND	ND		1	WG992351
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	0.619	2.46		1	WG992351
1,2-Dichloropropane	78-87-5	113	0.200	0.924	ND	ND		1	WG992351
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.908	ND	ND		1	WG992351
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.908	ND	ND		1	WG992351
1,4-Dioxane	123-91-1	88.10	0.200	0.721	ND	ND		1	WG992351
Ethanol	64-17-5	46.10	25.2	47.5	5740	10800	E	40	WG992604
Ethylbenzene	100-41-4	106	0.200	0.867	0.616	2.67		1	WG992351
4-Ethyltoluene	622-96-8	120	0.200	0.982	0.264	1.30		1	WG992351
Trichlorofluoromethane	75-69-4	137.40	0.200	1.12	0.295	1.66		1	WG992351
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.989	0.305	1.51		1	WG992351
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.200	1.53	ND	ND		1	WG992351
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	ND	ND		1	WG992351
Heptane	142-82-5	100	0.200	0.818	5.20	21.2		1	WG992351
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.73	ND	ND		1	WG992351
n-Hexane	110-54-3	86.20	0.200	0.705	0.260	0.916		1	WG992351
Isopropylbenzene	98-82-8	120.20	0.200	0.983	ND	ND		1	WG992351
Methylene Chloride	75-09-2	84.90	0.200	0.694	0.348	1.21	B	1	WG992351
Methyl Butyl Ketone	591-78-6	100	1.25	5.11	ND	ND		1	WG992351
2-Butanone (MEK)	78-93-3	72.10	50.0	147	371	1090		40	WG992604
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	1.25	5.12	ND	ND		1	WG992351
Methyl methacrylate	80-62-6	100.12	0.200	0.819	ND	ND		1	WG992351
MTBE	1634-04-4	88.10	0.200	0.721	ND	ND		1	WG992351
Naphthalene	91-20-3	128	0.630	3.30	ND	ND		1	WG992351
2-Propanol	67-63-0	60.10	50.0	123	3350	8230	E	40	WG992604
Propene	115-07-1	42.10	0.400	0.689	ND	ND		1	WG992351
Styrene	100-42-5	104	0.200	0.851	ND	ND		1	WG992351
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.37	ND	ND		1	WG992351
Tetrachloroethylene	127-18-4	166	0.200	1.36	ND	ND		1	WG992351
Tetrahydrofuran	109-99-9	72.10	0.200	0.590	ND	ND		1	WG992351
Toluene	108-88-3	92.10	0.200	0.753	1.59	6.01		1	WG992351
1,2,4-Trichlorobenzene	120-82-1	181	0.630	4.66	ND	ND		1	WG992351

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 06/19/17 17:45

L917924

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
1,1,1-Trichloroethane	71-55-6	133	0.200	1.09	ND	ND		1	WG992351
1,1,2-Trichloroethane	79-00-5	133	0.200	1.09	ND	ND		1	WG992351
Trichloroethylene	79-01-6	131	0.200	1.07	0.244	1.31		1	WG992351
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	0.532	2.61		1	WG992351
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.982	0.279	1.37		1	WG992351
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.934	4.52	21.1		1	WG992351
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	WG992351
Vinyl Bromide	593-60-2	106.95	0.200	0.875	ND	ND		1	WG992351
Vinyl acetate	108-05-4	86.10	0.200	0.704	ND	ND		1	WG992351
m&p-Xylene	1330-20-7	106	0.400	1.73	1.71	7.41		1	WG992351
o-Xylene	95-47-6	106	0.200	0.867	0.580	2.51		1	WG992351
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		105				WG992604
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		91.6				WG992351

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

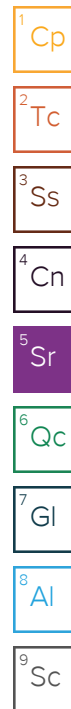


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L917924

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	50.0	119	227	540		40	WG992604
Allyl chloride	107-05-1	76.53	0.200	0.626	ND	ND		1	WG992351
Benzene	71-43-2	78.10	0.200	0.639	0.379	1.21		1	WG992351
Benzyl Chloride	100-44-7	127	0.200	1.04	ND	ND		1	WG992351
Bromodichloromethane	75-27-4	164	0.200	1.34	ND	ND		1	WG992351
Bromoform	75-25-2	253	0.600	6.21	ND	ND		1	WG992351
Bromomethane	74-83-9	94.90	0.200	0.776	ND	ND		1	WG992351
1,3-Butadiene	106-99-0	54.10	2.00	4.43	2.92	6.46		1	WG992351
Carbon disulfide	75-15-0	76.10	0.200	0.622	ND	ND		1	WG992351
Carbon tetrachloride	56-23-5	154	0.200	1.26	ND	ND		1	WG992351
Chlorobenzene	108-90-7	113	0.200	0.924	ND	ND		1	WG992351
Chloroethane	75-00-3	64.50	0.200	0.528	ND	ND		1	WG992351
Chloroform	67-66-3	119	0.200	0.973	ND	ND		1	WG992351
Chloromethane	74-87-3	50.50	0.200	0.413	0.670	1.38		1	WG992351
2-Chlorotoluene	95-49-8	126	0.200	1.03	ND	ND		1	WG992351
Cyclohexane	110-82-7	84.20	0.200	0.689	ND	ND		1	WG992351
Dibromochloromethane	124-48-1	208	0.200	1.70	ND	ND		1	WG992351
1,2-Dibromoethane	106-93-4	188	0.200	1.54	ND	ND		1	WG992351
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	ND	ND		1	WG992351
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	ND	ND		1	WG992351
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	ND	ND		1	WG992351
1,2-Dichloroethane	107-06-2	99	0.200	0.810	ND	ND		1	WG992351
1,1-Dichloroethane	75-34-3	98	0.200	0.802	ND	ND		1	WG992351
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	WG992351
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	ND	ND		1	WG992351
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	1.32	5.22		1	WG992351
1,2-Dichloropropane	78-87-5	113	0.200	0.924	ND	ND		1	WG992351
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.908	ND	ND		1	WG992351
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.908	ND	ND		1	WG992351
1,4-Dioxane	123-91-1	88.10	0.200	0.721	ND	ND		1	WG992351
Ethanol	64-17-5	46.10	25.2	47.5	2470	4670	E	40	WG992604
Ethylbenzene	100-41-4	106	0.200	0.867	0.639	2.77		1	WG992351
4-Ethyltoluene	622-96-8	120	0.200	0.982	0.673	3.30		1	WG992351
Trichlorofluoromethane	75-69-4	137.40	0.200	1.12	0.336	1.89		1	WG992351
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.989	0.284	1.41		1	WG992351
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.200	1.53	ND	ND		1	WG992351
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	ND	ND		1	WG992351
Heptane	142-82-5	100	0.200	0.818	6.14	25.1		1	WG992351
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.73	ND	ND		1	WG992351
n-Hexane	110-54-3	86.20	0.200	0.705	0.274	0.965		1	WG992351
Isopropylbenzene	98-82-8	120.20	0.200	0.983	ND	ND		1	WG992351
Methylene Chloride	75-09-2	84.90	0.200	0.694	ND	ND		1	WG992351
Methyl Butyl Ketone	591-78-6	100	1.25	5.11	ND	ND		1	WG992351
2-Butanone (MEK)	78-93-3	72.10	50.0	147	209	615		40	WG992604
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	1.25	5.12	ND	ND		1	WG992351
Methyl methacrylate	80-62-6	100.12	0.200	0.819	ND	ND		1	WG992351
MTBE	1634-04-4	88.10	0.200	0.721	ND	ND		1	WG992351
Naphthalene	91-20-3	128	0.630	3.30	ND	ND		1	WG992351
2-Propanol	67-63-0	60.10	50.0	123	3020	7420	E	40	WG992604
Propene	115-07-1	42.10	0.400	0.689	ND	ND		1	WG992351
Styrene	100-42-5	104	0.200	0.851	0.367	1.56		1	WG992351
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.37	ND	ND		1	WG992351
Tetrachloroethylene	127-18-4	166	0.200	1.36	ND	ND		1	WG992351
Tetrahydrofuran	109-99-9	72.10	0.200	0.590	ND	ND		1	WG992351
Toluene	108-88-3	92.10	0.200	0.753	1.24	4.67		1	WG992351
1,2,4-Trichlorobenzene	120-82-1	181	0.630	4.66	ND	ND		1	WG992351





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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
1,1,1-Trichloroethane	71-55-6	133	0.200	1.09	ND	ND		1	WG992351
1,1,2-Trichloroethane	79-00-5	133	0.200	1.09	ND	ND		1	WG992351
Trichloroethylene	79-01-6	131	0.200	1.07	0.251	1.35		1	WG992351
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	3.08	15.1		1	WG992351
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.982	1.03	5.07		1	WG992351
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.934	4.96	23.2		1	WG992351
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	WG992351
Vinyl Bromide	593-60-2	106.95	0.200	0.875	ND	ND		1	WG992351
Vinyl acetate	108-05-4	86.10	0.200	0.704	ND	ND		1	WG992351
m&p-Xylene	1330-20-7	106	0.400	1.73	2.25	9.77		1	WG992351
o-Xylene	95-47-6	106	0.200	0.867	0.875	3.79		1	WG992351
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		99.4				WG992604
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		96.3				WG992351

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



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	50.0	119	246	584		40	WG992604
Allyl chloride	107-05-1	76.53	0.200	0.626	ND	ND		1	WG992351
Benzene	71-43-2	78.10	0.200	0.639	0.324	1.03		1	WG992351
Benzyl Chloride	100-44-7	127	0.200	1.04	ND	ND		1	WG992351
Bromodichloromethane	75-27-4	164	0.200	1.34	ND	ND		1	WG992351
Bromoform	75-25-2	253	0.600	6.21	ND	ND		1	WG992351
Bromomethane	74-83-9	94.90	0.200	0.776	ND	ND		1	WG992351
1,3-Butadiene	106-99-0	54.10	2.00	4.43	2.97	6.57		1	WG992351
Carbon disulfide	75-15-0	76.10	0.200	0.622	ND	ND		1	WG992351
Carbon tetrachloride	56-23-5	154	0.200	1.26	ND	ND		1	WG992351
Chlorobenzene	108-90-7	113	0.200	0.924	ND	ND		1	WG992351
Chloroethane	75-00-3	64.50	0.200	0.528	ND	ND		1	WG992351
Chloroform	67-66-3	119	0.200	0.973	ND	ND		1	WG992351
Chloromethane	74-87-3	50.50	0.200	0.413	0.678	1.40		1	WG992351
2-Chlorotoluene	95-49-8	126	0.200	1.03	ND	ND		1	WG992351
Cyclohexane	110-82-7	84.20	0.200	0.689	ND	ND		1	WG992351
Dibromochloromethane	124-48-1	208	0.200	1.70	ND	ND		1	WG992351
1,2-Dibromoethane	106-93-4	188	0.200	1.54	ND	ND		1	WG992351
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	ND	ND		1	WG992351
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	ND	ND		1	WG992351
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	ND	ND		1	WG992351
1,2-Dichloroethane	107-06-2	99	0.200	0.810	ND	ND		1	WG992351
1,1-Dichloroethane	75-34-3	98	0.200	0.802	ND	ND		1	WG992351
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	WG992351
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	ND	ND		1	WG992351
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	0.856	3.39		1	WG992351
1,2-Dichloropropane	78-87-5	113	0.200	0.924	ND	ND		1	WG992351
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.908	ND	ND		1	WG992351
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.908	ND	ND		1	WG992351
1,4-Dioxane	123-91-1	88.10	0.200	0.721	ND	ND		1	WG992351
Ethanol	64-17-5	46.10	25.2	47.5	3160	5960	E	40	WG992604
Ethylbenzene	100-41-4	106	0.200	0.867	0.683	2.96		1	WG992351
4-Ethyltoluene	622-96-8	120	0.200	0.982	0.500	2.46		1	WG992351
Trichlorofluoromethane	75-69-4	137.40	0.200	1.12	0.359	2.02		1	WG992351
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.989	0.294	1.45		1	WG992351
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.200	1.53	ND	ND		1	WG992351
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	ND	ND		1	WG992351
Heptane	142-82-5	100	0.200	0.818	5.17	21.1		1	WG992351
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.73	ND	ND		1	WG992351
n-Hexane	110-54-3	86.20	0.200	0.705	ND	ND		1	WG992351
Isopropylbenzene	98-82-8	120.20	0.200	0.983	ND	ND		1	WG992351
Methylene Chloride	75-09-2	84.90	0.200	0.694	ND	ND		1	WG992351
Methyl Butyl Ketone	591-78-6	100	1.25	5.11	ND	ND		1	WG992351
2-Butanone (MEK)	78-93-3	72.10	50.0	147	237	698		40	WG992604
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	1.25	5.12	ND	ND		1	WG992351
Methyl methacrylate	80-62-6	100.12	0.200	0.819	ND	ND		1	WG992351
MTBE	1634-04-4	88.10	0.200	0.721	ND	ND		1	WG992351
Naphthalene	91-20-3	128	0.630	3.30	ND	ND		1	WG992351
2-Propanol	67-63-0	60.10	50.0	123	3320	8150	E	40	WG992604
Propene	115-07-1	42.10	0.400	0.689	ND	ND		1	WG992351
Styrene	100-42-5	104	0.200	0.851	ND	ND		1	WG992351
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.37	ND	ND		1	WG992351
Tetrachloroethylene	127-18-4	166	0.200	1.36	ND	ND		1	WG992351
Tetrahydrofuran	109-99-9	72.10	0.200	0.590	ND	ND		1	WG992351
Toluene	108-88-3	92.10	0.200	0.753	1.06	4.00		1	WG992351
1,2,4-Trichlorobenzene	120-82-1	181	0.630	4.66	ND	ND		1	WG992351

¹ Cp
² Tc
³ Ss
⁴ Cn
⁵ Sr
⁶ Qc
⁷ Gl
⁸ Al
⁹ Sc



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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
1,1,1-Trichloroethane	71-55-6	133	0.200	1.09	ND	ND		1	WG992351
1,1,2-Trichloroethane	79-00-5	133	0.200	1.09	ND	ND		1	WG992351
Trichloroethylene	79-01-6	131	0.200	1.07	0.309	1.66		1	WG992351
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	2.59	12.7		1	WG992351
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.982	0.846	4.15		1	WG992351
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.934	5.56	26.0		1	WG992351
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	WG992351
Vinyl Bromide	593-60-2	106.95	0.200	0.875	ND	ND		1	WG992351
Vinyl acetate	108-05-4	86.10	0.200	0.704	ND	ND		1	WG992351
m&p-Xylene	1330-20-7	106	0.400	1.73	2.44	10.6		1	WG992351
o-Xylene	95-47-6	106	0.200	0.867	0.887	3.84		1	WG992351
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		98.7				WG992604
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		99.3				WG992351

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc



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	31.2	74.1	91.1	217		25	WG992604
Allyl chloride	107-05-1	76.53	0.200	0.626	ND	ND		1	WG992351
Benzene	71-43-2	78.10	0.200	0.639	0.329	1.05		1	WG992351
Benzyl Chloride	100-44-7	127	0.200	1.04	ND	ND		1	WG992351
Bromodichloromethane	75-27-4	164	0.200	1.34	ND	ND		1	WG992351
Bromoform	75-25-2	253	0.600	6.21	ND	ND		1	WG992351
Bromomethane	74-83-9	94.90	0.200	0.776	ND	ND		1	WG992351
1,3-Butadiene	106-99-0	54.10	2.00	4.43	ND	ND		1	WG992351
Carbon disulfide	75-15-0	76.10	0.200	0.622	ND	ND		1	WG992351
Carbon tetrachloride	56-23-5	154	0.200	1.26	ND	ND		1	WG992351
Chlorobenzene	108-90-7	113	0.200	0.924	ND	ND		1	WG992351
Chloroethane	75-00-3	64.50	0.200	0.528	ND	ND		1	WG992351
Chloroform	67-66-3	119	0.200	0.973	ND	ND		1	WG992351
Chloromethane	74-87-3	50.50	0.200	0.413	0.743	1.53		1	WG992351
2-Chlorotoluene	95-49-8	126	0.200	1.03	ND	ND		1	WG992351
Cyclohexane	110-82-7	84.20	0.200	0.689	ND	ND		1	WG992351
Dibromochloromethane	124-48-1	208	0.200	1.70	ND	ND		1	WG992351
1,2-Dibromoethane	106-93-4	188	0.200	1.54	ND	ND		1	WG992351
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	ND	ND		1	WG992351
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	ND	ND		1	WG992351
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	ND	ND		1	WG992351
1,2-Dichloroethane	107-06-2	99	0.200	0.810	ND	ND		1	WG992351
1,1-Dichloroethane	75-34-3	98	0.200	0.802	ND	ND		1	WG992351
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	WG992351
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	ND	ND		1	WG992351
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	0.243	0.964		1	WG992351
1,2-Dichloropropane	78-87-5	113	0.200	0.924	ND	ND		1	WG992351
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.908	ND	ND		1	WG992351
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.908	ND	ND		1	WG992351
1,4-Dioxane	123-91-1	88.10	0.200	0.721	ND	ND		1	WG992351
Ethanol	64-17-5	46.10	15.8	29.8	2350	4430	E	25	WG992604
Ethylbenzene	100-41-4	106	0.200	0.867	0.564	2.44		1	WG992351
4-Ethyltoluene	622-96-8	120	0.200	0.982	0.236	1.16		1	WG992351
Trichlorofluoromethane	75-69-4	137.40	0.200	1.12	0.273	1.54		1	WG992351
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.989	0.294	1.45		1	WG992351
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.200	1.53	ND	ND		1	WG992351
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	ND	ND		1	WG992351
Heptane	142-82-5	100	0.200	0.818	2.45	10.0		1	WG992351
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.73	ND	ND		1	WG992351
n-Hexane	110-54-3	86.20	0.200	0.705	ND	ND		1	WG992351
Isopropylbenzene	98-82-8	120.20	0.200	0.983	ND	ND		1	WG992351
Methylene Chloride	75-09-2	84.90	0.200	0.694	0.239	0.831	B	1	WG992351
Methyl Butyl Ketone	591-78-6	100	1.25	5.11	ND	ND		1	WG992351
2-Butanone (MEK)	78-93-3	72.10	31.2	92.0	124	365		25	WG992604
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	1.25	5.12	ND	ND		1	WG992351
Methyl methacrylate	80-62-6	100.12	0.200	0.819	ND	ND		1	WG992351
MTBE	1634-04-4	88.10	0.200	0.721	ND	ND		1	WG992351
Naphthalene	91-20-3	128	0.630	3.30	ND	ND		1	WG992351
2-Propanol	67-63-0	60.10	1.25	3.07	583	1430	E	1	WG992351
Propene	115-07-1	42.10	0.400	0.689	ND	ND		1	WG992351
Styrene	100-42-5	104	0.200	0.851	ND	ND		1	WG992351
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.37	ND	ND		1	WG992351
Tetrachloroethylene	127-18-4	166	0.200	1.36	0.203	1.38		1	WG992351
Tetrahydrofuran	109-99-9	72.10	0.200	0.590	ND	ND		1	WG992351
Toluene	108-88-3	92.10	0.200	0.753	1.77	6.67		1	WG992351
1,2,4-Trichlorobenzene	120-82-1	181	0.630	4.66	ND	ND		1	WG992351

¹ Cp
² Tc
³ Ss
⁴ Cn
⁵ Sr
⁶ Qc
⁷ Gl
⁸ Al
⁹ Sc



Collected date/time: 06/19/17 18:05

L917924

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
1,1,1-Trichloroethane	71-55-6	133	0.200	1.09	ND	ND		1	WG992351
1,1,2-Trichloroethane	79-00-5	133	0.200	1.09	ND	ND		1	WG992351
Trichloroethylene	79-01-6	131	0.200	1.07	0.525	2.81		1	WG992351
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	1.18	5.79		1	WG992351
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.982	0.366	1.80		1	WG992351
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.934	4.98	23.2		1	WG992351
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	WG992351
Vinyl Bromide	593-60-2	106.95	0.200	0.875	ND	ND		1	WG992351
Vinyl acetate	108-05-4	86.10	0.200	0.704	ND	ND		1	WG992351
m&p-Xylene	1330-20-7	106	0.400	1.73	1.83	7.94		1	WG992351
o-Xylene	95-47-6	106	0.200	0.867	0.681	2.95		1	WG992351
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		98.8				WG992604
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		96.8				WG992351

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

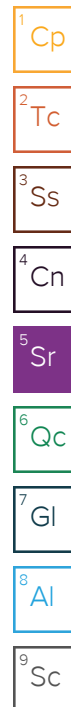


Collected date/time: 06/19/17 18:10

L917924

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	31.2	74.1	113	270		25	WG992604
Allyl chloride	107-05-1	76.53	0.200	0.626	ND	ND		1	WG992351
Benzene	71-43-2	78.10	0.200	0.639	0.272	0.869		1	WG992351
Benzyl Chloride	100-44-7	127	0.200	1.04	ND	ND		1	WG992351
Bromodichloromethane	75-27-4	164	0.200	1.34	ND	ND		1	WG992351
Bromoform	75-25-2	253	0.600	6.21	ND	ND		1	WG992351
Bromomethane	74-83-9	94.90	0.200	0.776	ND	ND		1	WG992351
1,3-Butadiene	106-99-0	54.10	2.00	4.43	ND	ND		1	WG992351
Carbon disulfide	75-15-0	76.10	0.200	0.622	ND	ND		1	WG992351
Carbon tetrachloride	56-23-5	154	0.200	1.26	ND	ND		1	WG992351
Chlorobenzene	108-90-7	113	0.200	0.924	ND	ND		1	WG992351
Chloroethane	75-00-3	64.50	0.200	0.528	ND	ND		1	WG992351
Chloroform	67-66-3	119	0.200	0.973	ND	ND		1	WG992351
Chloromethane	74-87-3	50.50	0.200	0.413	0.705	1.46		1	WG992351
2-Chlorotoluene	95-49-8	126	0.200	1.03	ND	ND		1	WG992351
Cyclohexane	110-82-7	84.20	0.200	0.689	ND	ND		1	WG992351
Dibromochloromethane	124-48-1	208	0.200	1.70	ND	ND		1	WG992351
1,2-Dibromoethane	106-93-4	188	0.200	1.54	ND	ND		1	WG992351
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	ND	ND		1	WG992351
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	ND	ND		1	WG992351
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	ND	ND		1	WG992351
1,2-Dichloroethane	107-06-2	99	0.200	0.810	ND	ND		1	WG992351
1,1-Dichloroethane	75-34-3	98	0.200	0.802	ND	ND		1	WG992351
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	WG992351
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	ND	ND		1	WG992351
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	0.303	1.20		1	WG992351
1,2-Dichloropropane	78-87-5	113	0.200	0.924	ND	ND		1	WG992351
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.908	ND	ND		1	WG992351
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.908	ND	ND		1	WG992351
1,4-Dioxane	123-91-1	88.10	0.200	0.721	ND	ND		1	WG992351
Ethanol	64-17-5	46.10	15.8	29.8	2660	5020	E	25	WG992604
Ethylbenzene	100-41-4	106	0.200	0.867	0.638	2.77		1	WG992351
4-Ethyltoluene	622-96-8	120	0.200	0.982	0.324	1.59		1	WG992351
Trichlorofluoromethane	75-69-4	137.40	0.200	1.12	0.296	1.66		1	WG992351
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.989	0.307	1.52		1	WG992351
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.200	1.53	ND	ND		1	WG992351
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	ND	ND		1	WG992351
Heptane	142-82-5	100	0.200	0.818	3.69	15.1		1	WG992351
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.73	ND	ND		1	WG992351
n-Hexane	110-54-3	86.20	0.200	0.705	0.274	0.964		1	WG992351
Isopropylbenzene	98-82-8	120.20	0.200	0.983	ND	ND		1	WG992351
Methylene Chloride	75-09-2	84.90	0.200	0.694	ND	ND		1	WG992351
Methyl Butyl Ketone	591-78-6	100	1.25	5.11	ND	ND		1	WG992351
2-Butanone (MEK)	78-93-3	72.10	31.2	92.0	136	401		25	WG992604
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	1.25	5.12	ND	ND		1	WG992351
Methyl methacrylate	80-62-6	100.12	0.200	0.819	ND	ND		1	WG992351
MTBE	1634-04-4	88.10	0.200	0.721	ND	ND		1	WG992351
Naphthalene	91-20-3	128	0.630	3.30	ND	ND		1	WG992351
2-Propanol	67-63-0	60.10	31.2	76.7	2420	5960	E	25	WG992604
Propene	115-07-1	42.10	0.400	0.689	ND	ND		1	WG992351
Styrene	100-42-5	104	0.200	0.851	ND	ND		1	WG992351
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.37	ND	ND		1	WG992351
Tetrachloroethylene	127-18-4	166	0.200	1.36	ND	ND		1	WG992351
Tetrahydrofuran	109-99-9	72.10	0.200	0.590	ND	ND		1	WG992351
Toluene	108-88-3	92.10	0.200	0.753	1.23	4.62		1	WG992351
1,2,4-Trichlorobenzene	120-82-1	181	0.630	4.66	ND	ND		1	WG992351





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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
1,1,1-Trichloroethane	71-55-6	133	0.200	1.09	ND	ND		1	WG992351
1,1,2-Trichloroethane	79-00-5	133	0.200	1.09	ND	ND		1	WG992351
Trichloroethylene	79-01-6	131	0.200	1.07	0.411	2.20		1	WG992351
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	1.58	7.75		1	WG992351
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.982	0.496	2.43		1	WG992351
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.934	8.09	37.8		1	WG992351
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	WG992351
Vinyl Bromide	593-60-2	106.95	0.200	0.875	ND	ND		1	WG992351
Vinyl acetate	108-05-4	86.10	0.200	0.704	ND	ND		1	WG992351
m&p-Xylene	1330-20-7	106	0.400	1.73	2.13	9.22		1	WG992351
o-Xylene	95-47-6	106	0.200	0.867	0.799	3.47		1	WG992351
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		99.8				WG992351
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		98.3				WG992604

1
Cp2
Tc3
Ss4
Cn5
Sr6
Qc7
Gl8
Al9
Sc



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	31.2	74.1	106	251		25	WG992604
Allyl chloride	107-05-1	76.53	0.200	0.626	ND	ND		1	WG992351
Benzene	71-43-2	78.10	0.200	0.639	0.281	0.897		1	WG992351
Benzyl Chloride	100-44-7	127	0.200	1.04	ND	ND		1	WG992351
Bromodichloromethane	75-27-4	164	0.200	1.34	ND	ND		1	WG992351
Bromoform	75-25-2	253	0.600	6.21	ND	ND		1	WG992351
Bromomethane	74-83-9	94.90	0.200	0.776	ND	ND		1	WG992351
1,3-Butadiene	106-99-0	54.10	2.00	4.43	ND	ND		1	WG992351
Carbon disulfide	75-15-0	76.10	0.200	0.622	ND	ND		1	WG992351
Carbon tetrachloride	56-23-5	154	0.200	1.26	ND	ND		1	WG992351
Chlorobenzene	108-90-7	113	0.200	0.924	ND	ND		1	WG992351
Chloroethane	75-00-3	64.50	0.200	0.528	ND	ND		1	WG992351
Chloroform	67-66-3	119	0.200	0.973	ND	ND		1	WG992351
Chloromethane	74-87-3	50.50	0.200	0.413	0.668	1.38		1	WG992351
2-Chlorotoluene	95-49-8	126	0.200	1.03	ND	ND		1	WG992351
Cyclohexane	110-82-7	84.20	0.200	0.689	ND	ND		1	WG992351
Dibromochloromethane	124-48-1	208	0.200	1.70	ND	ND		1	WG992351
1,2-Dibromoethane	106-93-4	188	0.200	1.54	ND	ND		1	WG992351
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	ND	ND		1	WG992351
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	ND	ND		1	WG992351
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	ND	ND		1	WG992351
1,2-Dichloroethane	107-06-2	99	0.200	0.810	ND	ND		1	WG992351
1,1-Dichloroethane	75-34-3	98	0.200	0.802	ND	ND		1	WG992351
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	WG992351
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	ND	ND		1	WG992351
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	0.333	1.32		1	WG992351
1,2-Dichloropropane	78-87-5	113	0.200	0.924	ND	ND		1	WG992351
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.908	ND	ND		1	WG992351
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.908	ND	ND		1	WG992351
1,4-Dioxane	123-91-1	88.10	0.200	0.721	ND	ND		1	WG992351
Ethanol	64-17-5	46.10	15.8	29.8	2470	4660	E	25	WG992604
Ethylbenzene	100-41-4	106	0.200	0.867	0.651	2.82		1	WG992351
4-Ethyltoluene	622-96-8	120	0.200	0.982	0.358	1.76		1	WG992351
Trichlorofluoromethane	75-69-4	137.40	0.200	1.12	0.308	1.73		1	WG992351
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.989	0.311	1.54		1	WG992351
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.200	1.53	ND	ND		1	WG992351
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	ND	ND		1	WG992351
Heptane	142-82-5	100	0.200	0.818	4.27	17.5		1	WG992351
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.73	ND	ND		1	WG992351
n-Hexane	110-54-3	86.20	0.200	0.705	0.260	0.917		1	WG992351
Isopropylbenzene	98-82-8	120.20	0.200	0.983	ND	ND		1	WG992351
Methylene Chloride	75-09-2	84.90	0.200	0.694	ND	ND		1	WG992351
Methyl Butyl Ketone	591-78-6	100	1.25	5.11	ND	ND		1	WG992351
2-Butanone (MEK)	78-93-3	72.10	31.2	92.0	134	395		25	WG992604
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	1.25	5.12	ND	ND		1	WG992351
Methyl methacrylate	80-62-6	100.12	0.200	0.819	ND	ND		1	WG992351
MTBE	1634-04-4	88.10	0.200	0.721	ND	ND		1	WG992351
Naphthalene	91-20-3	128	0.630	3.30	ND	ND		1	WG992351
2-Propanol	67-63-0	60.10	31.2	76.7	2090	5140	E	25	WG992604
Propene	115-07-1	42.10	0.400	0.689	ND	ND		1	WG992351
Styrene	100-42-5	104	0.200	0.851	ND	ND		1	WG992351
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.37	ND	ND		1	WG992351
Tetrachloroethylene	127-18-4	166	0.200	1.36	ND	ND		1	WG992351
Tetrahydrofuran	109-99-9	72.10	0.200	0.590	ND	ND		1	WG992351
Toluene	108-88-3	92.10	0.200	0.753	1.11	4.17		1	WG992351
1,2,4-Trichlorobenzene	120-82-1	181	0.630	4.66	ND	ND		1	WG992351

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 06/19/17 19:00

L917924

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
1,1,1-Trichloroethane	71-55-6	133	0.200	1.09	ND	ND		1	WG992351
1,1,2-Trichloroethane	79-00-5	133	0.200	1.09	ND	ND		1	WG992351
Trichloroethylene	79-01-6	131	0.200	1.07	0.459	2.46		1	WG992351
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	1.78	8.73		1	WG992351
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.982	0.563	2.77		1	WG992351
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.934	9.74	45.5		1	WG992351
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	WG992351
Vinyl Bromide	593-60-2	106.95	0.200	0.875	ND	ND		1	WG992351
Vinyl acetate	108-05-4	86.10	0.200	0.704	ND	ND		1	WG992351
m&p-Xylene	1330-20-7	106	0.400	1.73	2.17	9.42		1	WG992351
o-Xylene	95-47-6	106	0.200	0.867	0.868	3.76		1	WG992351
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		97.9				WG992604
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		101				WG992351

1
Cp2
Tc3
Ss4
Cn5
Sr6
Qc7
Gl8
Al9
Sc



Collected date/time: 06/19/17 19:05

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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	31.2	74.1	123	293		25	WG992604
Allyl chloride	107-05-1	76.53	0.200	0.626	ND	ND		1	WG992351
Benzene	71-43-2	78.10	0.200	0.639	0.269	0.859		1	WG992351
Benzyl Chloride	100-44-7	127	0.200	1.04	ND	ND		1	WG992351
Bromodichloromethane	75-27-4	164	0.200	1.34	ND	ND		1	WG992351
Bromoform	75-25-2	253	0.600	6.21	ND	ND		1	WG992351
Bromomethane	74-83-9	94.90	0.200	0.776	ND	ND		1	WG992351
1,3-Butadiene	106-99-0	54.10	2.00	4.43	ND	ND		1	WG992351
Carbon disulfide	75-15-0	76.10	0.200	0.622	ND	ND		1	WG992351
Carbon tetrachloride	56-23-5	154	0.200	1.26	ND	ND		1	WG992351
Chlorobenzene	108-90-7	113	0.200	0.924	ND	ND		1	WG992351
Chloroethane	75-00-3	64.50	0.200	0.528	ND	ND		1	WG992351
Chloroform	67-66-3	119	0.200	0.973	ND	ND		1	WG992351
Chloromethane	74-87-3	50.50	0.200	0.413	0.642	1.33		1	WG992351
2-Chlorotoluene	95-49-8	126	0.200	1.03	ND	ND		1	WG992351
Cyclohexane	110-82-7	84.20	0.200	0.689	ND	ND		1	WG992351
Dibromochloromethane	124-48-1	208	0.200	1.70	ND	ND		1	WG992351
1,2-Dibromoethane	106-93-4	188	0.200	1.54	ND	ND		1	WG992351
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	ND	ND		1	WG992351
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	ND	ND		1	WG992351
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	ND	ND		1	WG992351
1,2-Dichloroethane	107-06-2	99	0.200	0.810	ND	ND		1	WG992351
1,1-Dichloroethane	75-34-3	98	0.200	0.802	ND	ND		1	WG992351
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	WG992351
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	ND	ND		1	WG992351
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	0.288	1.14		1	WG992351
1,2-Dichloropropane	78-87-5	113	0.200	0.924	ND	ND		1	WG992351
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.908	ND	ND		1	WG992351
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.908	ND	ND		1	WG992351
1,4-Dioxane	123-91-1	88.10	0.200	0.721	ND	ND		1	WG992351
Ethanol	64-17-5	46.10	15.8	29.8	2700	5090	E	25	WG992604
Ethylbenzene	100-41-4	106	0.200	0.867	0.554	2.40		1	WG992351
4-Ethyltoluene	622-96-8	120	0.200	0.982	0.297	1.46		1	WG992351
Trichlorofluoromethane	75-69-4	137.40	0.200	1.12	0.295	1.66		1	WG992351
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.989	0.300	1.48		1	WG992351
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.200	1.53	ND	ND		1	WG992351
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	ND	ND		1	WG992351
Heptane	142-82-5	100	0.200	0.818	3.78	15.5		1	WG992351
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.73	ND	ND		1	WG992351
n-Hexane	110-54-3	86.20	0.200	0.705	0.240	0.846		1	WG992351
Isopropylbenzene	98-82-8	120.20	0.200	0.983	ND	ND		1	WG992351
Methylene Chloride	75-09-2	84.90	0.200	0.694	ND	ND		1	WG992351
Methyl Butyl Ketone	591-78-6	100	1.25	5.11	ND	ND		1	WG992351
2-Butanone (MEK)	78-93-3	72.10	31.2	92.0	151	446		25	WG992604
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	1.25	5.12	ND	ND		1	WG992351
Methyl methacrylate	80-62-6	100.12	0.200	0.819	ND	ND		1	WG992351
MTBE	1634-04-4	88.10	0.200	0.721	ND	ND		1	WG992351
Naphthalene	91-20-3	128	0.630	3.30	ND	ND		1	WG992351
2-Propanol	67-63-0	60.10	31.2	76.7	2380	5850	E	25	WG992604
Propene	115-07-1	42.10	0.400	0.689	ND	ND		1	WG992351
Styrene	100-42-5	104	0.200	0.851	ND	ND		1	WG992351
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.37	ND	ND		1	WG992351
Tetrachloroethylene	127-18-4	166	0.200	1.36	ND	ND		1	WG992351
Tetrahydrofuran	109-99-9	72.10	0.200	0.590	ND	ND		1	WG992351
Toluene	108-88-3	92.10	0.200	0.753	0.992	3.74		1	WG992351
1,2,4-Trichlorobenzene	120-82-1	181	0.630	4.66	ND	ND		1	WG992351

¹ Cp
² Tc
³ Ss
⁴ Cn
⁵ Sr
⁶ Qc
⁷ Gl
⁸ Al
⁹ Sc



Collected date/time: 06/19/17 19:05

L917924

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
1,1,1-Trichloroethane	71-55-6	133	0.200	1.09	ND	ND		1	WG992351
1,1,2-Trichloroethane	79-00-5	133	0.200	1.09	ND	ND		1	WG992351
Trichloroethylene	79-01-6	131	0.200	1.07	0.373	2.00		1	WG992351
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	1.43	7.02		1	WG992351
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.982	0.439	2.15		1	WG992351
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.934	7.35	34.3		1	WG992351
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	WG992351
Vinyl Bromide	593-60-2	106.95	0.200	0.875	ND	ND		1	WG992351
Vinyl acetate	108-05-4	86.10	0.200	0.704	ND	ND		1	WG992351
m&p-Xylene	1330-20-7	106	0.400	1.73	1.91	8.29		1	WG992351
o-Xylene	95-47-6	106	0.200	0.867	0.816	3.54		1	WG992351
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		98.4				WG992604
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		99.4				WG992351

1
Cp2
Tc3
Ss4
Cn5
Sr6
Qc7
Gl8
Al9
Sc



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	1.80	4.28		1	WG992351
Allyl chloride	107-05-1	76.53	0.200	0.626	ND	ND		1	WG992351
Benzene	71-43-2	78.10	0.200	0.639	ND	ND		1	WG992351
Benzyl Chloride	100-44-7	127	0.200	1.04	ND	ND		1	WG992351
Bromodichloromethane	75-27-4	164	0.200	1.34	ND	ND		1	WG992351
Bromoform	75-25-2	253	0.600	6.21	ND	ND		1	WG992351
Bromomethane	74-83-9	94.90	0.200	0.776	ND	ND		1	WG992351
1,3-Butadiene	106-99-0	54.10	2.00	4.43	ND	ND		1	WG992351
Carbon disulfide	75-15-0	76.10	0.200	0.622	ND	ND		1	WG992351
Carbon tetrachloride	56-23-5	154	0.200	1.26	ND	ND		1	WG992351
Chlorobenzene	108-90-7	113	0.200	0.924	ND	ND		1	WG992351
Chloroethane	75-00-3	64.50	0.200	0.528	ND	ND		1	WG992351
Chloroform	67-66-3	119	0.200	0.973	ND	ND		1	WG992351
Chloromethane	74-87-3	50.50	0.200	0.413	0.700	1.45		1	WG992351
2-Chlorotoluene	95-49-8	126	0.200	1.03	ND	ND		1	WG992351
Cyclohexane	110-82-7	84.20	0.200	0.689	ND	ND		1	WG992351
Dibromochloromethane	124-48-1	208	0.200	1.70	ND	ND		1	WG992351
1,2-Dibromoethane	106-93-4	188	0.200	1.54	ND	ND		1	WG992351
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	ND	ND		1	WG992351
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	ND	ND		1	WG992351
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	ND	ND		1	WG992351
1,2-Dichloroethane	107-06-2	99	0.200	0.810	ND	ND		1	WG992351
1,1-Dichloroethane	75-34-3	98	0.200	0.802	ND	ND		1	WG992351
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	WG992351
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	ND	ND		1	WG992351
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	ND	ND		1	WG992351
1,2-Dichloropropane	78-87-5	113	0.200	0.924	ND	ND		1	WG992351
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.908	ND	ND		1	WG992351
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.908	ND	ND		1	WG992351
1,4-Dioxane	123-91-1	88.10	0.200	0.721	ND	ND		1	WG992351
Ethanol	64-17-5	46.10	0.630	1.19	ND	ND		1	WG992351
Ethylbenzene	100-41-4	106	0.200	0.867	ND	ND		1	WG992351
4-Ethyltoluene	622-96-8	120	0.200	0.982	ND	ND		1	WG992351
Trichlorofluoromethane	75-69-4	137.40	0.200	1.12	0.230	1.29		1	WG992351
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.989	0.314	1.55		1	WG992351
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.200	1.53	ND	ND		1	WG992351
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	ND	ND		1	WG992351
Heptane	142-82-5	100	0.200	0.818	ND	ND		1	WG992351
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.73	ND	ND		1	WG992351
n-Hexane	110-54-3	86.20	0.200	0.705	ND	ND		1	WG992351
Isopropylbenzene	98-82-8	120.20	0.200	0.983	ND	ND		1	WG992351
Methylene Chloride	75-09-2	84.90	0.200	0.694	0.359	1.25	B	1	WG992351
Methyl Butyl Ketone	591-78-6	100	1.25	5.11	ND	ND		1	WG992351
2-Butanone (MEK)	78-93-3	72.10	1.25	3.69	ND	ND		1	WG992351
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	1.25	5.12	ND	ND		1	WG992351
Methyl methacrylate	80-62-6	100.12	0.200	0.819	ND	ND		1	WG992351
MTBE	1634-04-4	88.10	0.200	0.721	ND	ND		1	WG992351
Naphthalene	91-20-3	128	0.630	3.30	ND	ND		1	WG992351
2-Propanol	67-63-0	60.10	1.25	3.07	ND	ND		1	WG992351
Propene	115-07-1	42.10	0.400	0.689	ND	ND		1	WG992351
Styrene	100-42-5	104	0.200	0.851	ND	ND		1	WG992351
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.37	ND	ND		1	WG992351
Tetrachloroethylene	127-18-4	166	0.200	1.36	ND	ND		1	WG992351
Tetrahydrofuran	109-99-9	72.10	0.200	0.590	ND	ND		1	WG992351
Toluene	108-88-3	92.10	0.200	0.753	0.247	0.929		1	WG992351
1,2,4-Trichlorobenzene	120-82-1	181	0.630	4.66	ND	ND		1	WG992351

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 06/19/17 18:50

L917924

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
1,1,1-Trichloroethane	71-55-6	133	0.200	1.09	ND	ND		1	WG992351
1,1,2-Trichloroethane	79-00-5	133	0.200	1.09	ND	ND		1	WG992351
Trichloroethylene	79-01-6	131	0.200	1.07	ND	ND		1	WG992351
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	ND	ND		1	WG992351
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.982	ND	ND		1	WG992351
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.934	ND	ND		1	WG992351
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	WG992351
Vinyl Bromide	593-60-2	106.95	0.200	0.875	ND	ND		1	WG992351
Vinyl acetate	108-05-4	86.10	0.200	0.704	ND	ND		1	WG992351
m&p-Xylene	1330-20-7	106	0.400	1.73	ND	ND		1	WG992351
o-Xylene	95-47-6	106	0.200	0.867	ND	ND		1	WG992351
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		93.2				WG992351

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

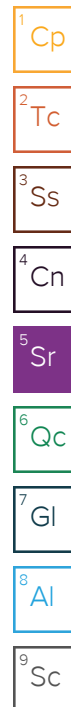


Collected date/time: 06/19/17 19:10

L917924

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	31.2	74.1	171	406		25	WG992604
Allyl chloride	107-05-1	76.53	0.200	0.626	ND	ND		1	WG992351
Benzene	71-43-2	78.10	0.200	0.639	ND	ND		1	WG992351
Benzyl Chloride	100-44-7	127	0.200	1.04	ND	ND		1	WG992351
Bromodichloromethane	75-27-4	164	0.200	1.34	ND	ND		1	WG992351
Bromoform	75-25-2	253	0.600	6.21	ND	ND		1	WG992351
Bromomethane	74-83-9	94.90	0.200	0.776	ND	ND		1	WG992351
1,3-Butadiene	106-99-0	54.10	2.00	4.43	ND	ND		1	WG992351
Carbon disulfide	75-15-0	76.10	0.200	0.622	ND	ND		1	WG992351
Carbon tetrachloride	56-23-5	154	0.200	1.26	ND	ND		1	WG992351
Chlorobenzene	108-90-7	113	0.200	0.924	ND	ND		1	WG992351
Chloroethane	75-00-3	64.50	0.200	0.528	ND	ND		1	WG992351
Chloroform	67-66-3	119	0.200	0.973	ND	ND		1	WG992351
Chloromethane	74-87-3	50.50	0.200	0.413	0.733	1.51		1	WG992351
2-Chlorotoluene	95-49-8	126	0.200	1.03	ND	ND		1	WG992351
Cyclohexane	110-82-7	84.20	0.200	0.689	ND	ND		1	WG992351
Dibromochloromethane	124-48-1	208	0.200	1.70	ND	ND		1	WG992351
1,2-Dibromoethane	106-93-4	188	0.200	1.54	ND	ND		1	WG992351
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	ND	ND		1	WG992351
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	ND	ND		1	WG992351
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	ND	ND		1	WG992351
1,2-Dichloroethane	107-06-2	99	0.200	0.810	ND	ND		1	WG992351
1,1-Dichloroethane	75-34-3	98	0.200	0.802	ND	ND		1	WG992351
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	WG992351
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	ND	ND		1	WG992351
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	0.468	1.86		1	WG992351
1,2-Dichloropropane	78-87-5	113	0.200	0.924	ND	ND		1	WG992351
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.908	ND	ND		1	WG992351
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.908	ND	ND		1	WG992351
1,4-Dioxane	123-91-1	88.10	0.200	0.721	ND	ND		1	WG992351
Ethanol	64-17-5	46.10	15.8	29.8	3950	7440	E	25	WG992604
Ethylbenzene	100-41-4	106	0.200	0.867	0.648	2.81		1	WG992351
4-Ethyltoluene	622-96-8	120	0.200	0.982	0.437	2.14		1	WG992351
Trichlorofluoromethane	75-69-4	137.40	0.200	1.12	0.357	2.00		1	WG992351
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.989	0.312	1.54		1	WG992351
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.200	1.53	ND	ND		1	WG992351
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	ND	ND		1	WG992351
Heptane	142-82-5	100	0.200	0.818	4.52	18.5		1	WG992351
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.73	ND	ND		1	WG992351
n-Hexane	110-54-3	86.20	0.200	0.705	0.226	0.797		1	WG992351
Isopropylbenzene	98-82-8	120.20	0.200	0.983	ND	ND		1	WG992351
Methylene Chloride	75-09-2	84.90	0.200	0.694	ND	ND		1	WG992351
Methyl Butyl Ketone	591-78-6	100	1.25	5.11	ND	ND		1	WG992351
2-Butanone (MEK)	78-93-3	72.10	31.2	92.0	237	700		25	WG992604
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	1.25	5.12	ND	ND		1	WG992351
Methyl methacrylate	80-62-6	100.12	0.200	0.819	ND	ND		1	WG992351
MTBE	1634-04-4	88.10	0.200	0.721	ND	ND		1	WG992351
Naphthalene	91-20-3	128	0.630	3.30	ND	ND		1	WG992351
2-Propanol	67-63-0	60.10	31.2	76.7	2720	6680	E	25	WG992604
Propene	115-07-1	42.10	0.400	0.689	ND	ND		1	WG992351
Styrene	100-42-5	104	0.200	0.851	ND	ND		1	WG992351
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.37	ND	ND		1	WG992351
Tetrachloroethylene	127-18-4	166	0.200	1.36	ND	ND		1	WG992351
Tetrahydrofuran	109-99-9	72.10	0.200	0.590	ND	ND		1	WG992351
Toluene	108-88-3	92.10	0.200	0.753	1.03	3.89		1	WG992351
1,2,4-Trichlorobenzene	120-82-1	181	0.630	4.66	ND	ND		1	WG992351





Collected date/time: 06/19/17 19:10

L917924

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
1,1,1-Trichloroethane	71-55-6	133	0.200	1.09	ND	ND		1	WG992351
1,1,2-Trichloroethane	79-00-5	133	0.200	1.09	ND	ND		1	WG992351
Trichloroethylene	79-01-6	131	0.200	1.07	0.309	1.66		1	WG992351
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	2.14	10.5		1	WG992351
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.982	0.649	3.19		1	WG992351
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.934	5.64	26.3		1	WG992351
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	WG992351
Vinyl Bromide	593-60-2	106.95	0.200	0.875	ND	ND		1	WG992351
Vinyl acetate	108-05-4	86.10	0.200	0.704	ND	ND		1	WG992351
m&p-Xylene	1330-20-7	106	0.400	1.73	2.21	9.59		1	WG992351
o-Xylene	95-47-6	106	0.200	0.867	0.819	3.55		1	WG992351
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		98.3				WG992351
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		98.1				WG992604

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc



Collected date/time: 06/19/17 19:15

L917924

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	31.2	74.1	156	371		25	WG992604
Allyl chloride	107-05-1	76.53	0.200	0.626	ND	ND		1	WG992351
Benzene	71-43-2	78.10	0.200	0.639	0.372	1.19		1	WG992351
Benzyl Chloride	100-44-7	127	0.200	1.04	ND	ND		1	WG992351
Bromodichloromethane	75-27-4	164	0.200	1.34	ND	ND		1	WG992351
Bromoform	75-25-2	253	0.600	6.21	ND	ND		1	WG992351
Bromomethane	74-83-9	94.90	0.200	0.776	ND	ND		1	WG992351
1,3-Butadiene	106-99-0	54.10	2.00	4.43	ND	ND		1	WG992351
Carbon disulfide	75-15-0	76.10	0.200	0.622	ND	ND		1	WG992351
Carbon tetrachloride	56-23-5	154	0.200	1.26	ND	ND		1	WG992351
Chlorobenzene	108-90-7	113	0.200	0.924	ND	ND		1	WG992351
Chloroethane	75-00-3	64.50	0.200	0.528	ND	ND		1	WG992351
Chloroform	67-66-3	119	0.200	0.973	ND	ND		1	WG992351
Chloromethane	74-87-3	50.50	0.200	0.413	0.672	1.39		1	WG992351
2-Chlorotoluene	95-49-8	126	0.200	1.03	ND	ND		1	WG992351
Cyclohexane	110-82-7	84.20	0.200	0.689	ND	ND		1	WG992351
Dibromochloromethane	124-48-1	208	0.200	1.70	ND	ND		1	WG992351
1,2-Dibromoethane	106-93-4	188	0.200	1.54	ND	ND		1	WG992351
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	ND	ND		1	WG992351
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	ND	ND		1	WG992351
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	ND	ND		1	WG992351
1,2-Dichloroethane	107-06-2	99	0.200	0.810	ND	ND		1	WG992351
1,1-Dichloroethane	75-34-3	98	0.200	0.802	ND	ND		1	WG992351
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	WG992351
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	1.13	4.48		1	WG992351
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	0.351	1.39		1	WG992351
1,2-Dichloropropane	78-87-5	113	0.200	0.924	ND	ND		1	WG992351
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.908	ND	ND		1	WG992351
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.908	ND	ND		1	WG992351
1,4-Dioxane	123-91-1	88.10	0.200	0.721	ND	ND		1	WG992351
Ethanol	64-17-5	46.10	15.8	29.8	3740	7060	E	25	WG992604
Ethylbenzene	100-41-4	106	0.200	0.867	0.486	2.11		1	WG992351
4-Ethyltoluene	622-96-8	120	0.200	0.982	0.318	1.56		1	WG992351
Trichlorofluoromethane	75-69-4	137.40	0.200	1.12	0.290	1.63		1	WG992351
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.989	0.317	1.57		1	WG992351
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.200	1.53	ND	ND		1	WG992351
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	ND	ND		1	WG992351
Heptane	142-82-5	100	0.200	0.818	3.37	13.8		1	WG992351
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.73	ND	ND		1	WG992351
n-Hexane	110-54-3	86.20	0.200	0.705	0.227	0.800		1	WG992351
Isopropylbenzene	98-82-8	120.20	0.200	0.983	ND	ND		1	WG992351
Methylene Chloride	75-09-2	84.90	0.200	0.694	0.262	0.911	B	1	WG992351
Methyl Butyl Ketone	591-78-6	100	1.25	5.11	ND	ND		1	WG992351
2-Butanone (MEK)	78-93-3	72.10	31.2	92.0	196	578		25	WG992604
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	1.25	5.12	ND	ND		1	WG992351
Methyl methacrylate	80-62-6	100.12	0.200	0.819	ND	ND		1	WG992351
MTBE	1634-04-4	88.10	0.200	0.721	ND	ND		1	WG992351
Naphthalene	91-20-3	128	0.630	3.30	ND	ND		1	WG992351
2-Propanol	67-63-0	60.10	31.2	76.7	2200	5410	E	25	WG992604
Propene	115-07-1	42.10	0.400	0.689	ND	ND		1	WG992351
Styrene	100-42-5	104	0.200	0.851	0.323	1.37		1	WG992351
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.37	ND	ND		1	WG992351
Tetrachloroethylene	127-18-4	166	0.200	1.36	ND	ND		1	WG992351
Tetrahydrofuran	109-99-9	72.10	0.200	0.590	ND	ND		1	WG992351
Toluene	108-88-3	92.10	0.200	0.753	0.920	3.47		1	WG992351
1,2,4-Trichlorobenzene	120-82-1	181	0.630	4.66	ND	ND		1	WG992351

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



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L917924

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
1,1,1-Trichloroethane	71-55-6	133	0.200	1.09	ND	ND		1	WG992351
1,1,2-Trichloroethane	79-00-5	133	0.200	1.09	ND	ND		1	WG992351
Trichloroethylene	79-01-6	131	0.200	1.07	0.899	4.82		1	WG992351
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	1.62	7.96		1	WG992351
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.982	0.531	2.60		1	WG992351
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.934	4.62	21.6		1	WG992351
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	WG992351
Vinyl Bromide	593-60-2	106.95	0.200	0.875	ND	ND		1	WG992351
Vinyl acetate	108-05-4	86.10	0.200	0.704	ND	ND		1	WG992351
m&p-Xylene	1330-20-7	106	0.400	1.73	1.66	7.18		1	WG992351
o-Xylene	95-47-6	106	0.200	0.867	0.616	2.67		1	WG992351
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		98.8				WG992351
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		97.8				WG992604

1
Cp2
Tc3
Ss4
Cn5
Sr6
Qc7
Gl8
Al9
Sc



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L917924

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	31.2	74.1	137	326		25	WG992604
Allyl chloride	107-05-1	76.53	0.200	0.626	ND	ND		1	WG992351
Benzene	71-43-2	78.10	0.200	0.639	0.302	0.964		1	WG992351
Benzyl Chloride	100-44-7	127	0.200	1.04	ND	ND		1	WG992351
Bromodichloromethane	75-27-4	164	0.200	1.34	ND	ND		1	WG992351
Bromoform	75-25-2	253	0.600	6.21	ND	ND		1	WG992351
Bromomethane	74-83-9	94.90	0.200	0.776	ND	ND		1	WG992351
1,3-Butadiene	106-99-0	54.10	2.00	4.43	ND	ND		1	WG992351
Carbon disulfide	75-15-0	76.10	0.200	0.622	ND	ND		1	WG992351
Carbon tetrachloride	56-23-5	154	0.200	1.26	ND	ND		1	WG992351
Chlorobenzene	108-90-7	113	0.200	0.924	ND	ND		1	WG992351
Chloroethane	75-00-3	64.50	0.200	0.528	ND	ND		1	WG992351
Chloroform	67-66-3	119	0.200	0.973	ND	ND		1	WG992351
Chloromethane	74-87-3	50.50	0.200	0.413	0.662	1.37		1	WG992351
2-Chlorotoluene	95-49-8	126	0.200	1.03	ND	ND		1	WG992351
Cyclohexane	110-82-7	84.20	0.200	0.689	ND	ND		1	WG992351
Dibromochloromethane	124-48-1	208	0.200	1.70	ND	ND		1	WG992351
1,2-Dibromoethane	106-93-4	188	0.200	1.54	ND	ND		1	WG992351
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	ND	ND		1	WG992351
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	ND	ND		1	WG992351
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	ND	ND		1	WG992351
1,2-Dichloroethane	107-06-2	99	0.200	0.810	ND	ND		1	WG992351
1,1-Dichloroethane	75-34-3	98	0.200	0.802	ND	ND		1	WG992351
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	WG992351
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	1.05	4.14		1	WG992351
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	0.310	1.23		1	WG992351
1,2-Dichloropropane	78-87-5	113	0.200	0.924	ND	ND		1	WG992351
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.908	ND	ND		1	WG992351
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.908	ND	ND		1	WG992351
1,4-Dioxane	123-91-1	88.10	0.200	0.721	ND	ND		1	WG992351
Ethanol	64-17-5	46.10	15.8	29.8	3010	5680	E	25	WG992604
Ethylbenzene	100-41-4	106	0.200	0.867	0.419	1.82		1	WG992351
4-Ethyltoluene	622-96-8	120	0.200	0.982	0.237	1.16		1	WG992351
Trichlorofluoromethane	75-69-4	137.40	0.200	1.12	0.283	1.59		1	WG992351
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.989	0.291	1.44		1	WG992351
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.200	1.53	ND	ND		1	WG992351
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	ND	ND		1	WG992351
Heptane	142-82-5	100	0.200	0.818	2.89	11.8		1	WG992351
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.73	ND	ND		1	WG992351
n-Hexane	110-54-3	86.20	0.200	0.705	0.220	0.777		1	WG992351
Isopropylbenzene	98-82-8	120.20	0.200	0.983	ND	ND		1	WG992351
Methylene Chloride	75-09-2	84.90	0.200	0.694	ND	ND		1	WG992351
Methyl Butyl Ketone	591-78-6	100	1.25	5.11	ND	ND		1	WG992351
2-Butanone (MEK)	78-93-3	72.10	31.2	92.0	160	471		25	WG992604
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	1.25	5.12	ND	ND		1	WG992351
Methyl methacrylate	80-62-6	100.12	0.200	0.819	ND	ND		1	WG992351
MTBE	1634-04-4	88.10	0.200	0.721	ND	ND		1	WG992351
Naphthalene	91-20-3	128	0.630	3.30	ND	ND		1	WG992351
2-Propanol	67-63-0	60.10	31.2	76.7	1890	4650	E	25	WG992604
Propene	115-07-1	42.10	0.400	0.689	ND	ND		1	WG992351
Styrene	100-42-5	104	0.200	0.851	0.260	1.10		1	WG992351
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.37	ND	ND		1	WG992351
Tetrachloroethylene	127-18-4	166	0.200	1.36	ND	ND		1	WG992351
Tetrahydrofuran	109-99-9	72.10	0.200	0.590	ND	ND		1	WG992351
Toluene	108-88-3	92.10	0.200	0.753	0.772	2.91		1	WG992351
1,2,4-Trichlorobenzene	120-82-1	181	0.630	4.66	ND	ND		1	WG992351

¹ Cp
² Tc
³ Ss
⁴ Cn
⁵ Sr
⁶ Qc
⁷ Gl
⁸ Al
⁹ Sc



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L917924

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
1,1,1-Trichloroethane	71-55-6	133	0.200	1.09	ND	ND		1	WG992351
1,1,2-Trichloroethane	79-00-5	133	0.200	1.09	ND	ND		1	WG992351
Trichloroethylene	79-01-6	131	0.200	1.07	1.25	6.67		1	WG992351
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	1.30	6.40		1	WG992351
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.982	0.412	2.02		1	WG992351
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.934	4.37	20.4		1	WG992351
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	WG992351
Vinyl Bromide	593-60-2	106.95	0.200	0.875	ND	ND		1	WG992351
Vinyl acetate	108-05-4	86.10	0.200	0.704	ND	ND		1	WG992351
m&p-Xylene	1330-20-7	106	0.400	1.73	1.40	6.05		1	WG992351
o-Xylene	95-47-6	106	0.200	0.867	0.529	2.29		1	WG992351
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		98.6				WG992604
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		99.0				WG992351

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



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L917924

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	31.2	74.1	130	310		25	WG992604
Allyl chloride	107-05-1	76.53	0.200	0.626	ND	ND		1	WG992351
Benzene	71-43-2	78.10	0.200	0.639	0.223	0.714		1	WG992351
Benzyl Chloride	100-44-7	127	0.200	1.04	ND	ND		1	WG992351
Bromodichloromethane	75-27-4	164	0.200	1.34	ND	ND		1	WG992351
Bromoform	75-25-2	253	0.600	6.21	ND	ND		1	WG992351
Bromomethane	74-83-9	94.90	0.200	0.776	ND	ND		1	WG992351
1,3-Butadiene	106-99-0	54.10	2.00	4.43	ND	ND		1	WG992351
Carbon disulfide	75-15-0	76.10	0.200	0.622	ND	ND		1	WG992351
Carbon tetrachloride	56-23-5	154	0.200	1.26	ND	ND		1	WG992351
Chlorobenzene	108-90-7	113	0.200	0.924	ND	ND		1	WG992351
Chloroethane	75-00-3	64.50	0.200	0.528	ND	ND		1	WG992351
Chloroform	67-66-3	119	0.200	0.973	ND	ND		1	WG992351
Chloromethane	74-87-3	50.50	0.200	0.413	0.681	1.41		1	WG992351
2-Chlorotoluene	95-49-8	126	0.200	1.03	ND	ND		1	WG992351
Cyclohexane	110-82-7	84.20	0.200	0.689	ND	ND		1	WG992351
Dibromochloromethane	124-48-1	208	0.200	1.70	ND	ND		1	WG992351
1,2-Dibromoethane	106-93-4	188	0.200	1.54	ND	ND		1	WG992351
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	ND	ND		1	WG992351
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	ND	ND		1	WG992351
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	ND	ND		1	WG992351
1,2-Dichloroethane	107-06-2	99	0.200	0.810	ND	ND		1	WG992351
1,1-Dichloroethane	75-34-3	98	0.200	0.802	ND	ND		1	WG992351
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	WG992351
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	0.474	1.88		1	WG992351
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	0.404	1.60		1	WG992351
1,2-Dichloropropane	78-87-5	113	0.200	0.924	ND	ND		1	WG992351
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.908	ND	ND		1	WG992351
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.908	ND	ND		1	WG992351
1,4-Dioxane	123-91-1	88.10	0.200	0.721	ND	ND		1	WG992351
Ethanol	64-17-5	46.10	15.8	29.8	5070	9560	E	25	WG992604
Ethylbenzene	100-41-4	106	0.200	0.867	0.546	2.37		1	WG992351
4-Ethyltoluene	622-96-8	120	0.200	0.982	0.407	2.00		1	WG992351
Trichlorofluoromethane	75-69-4	137.40	0.200	1.12	0.289	1.63		1	WG992351
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.989	0.295	1.46		1	WG992351
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.200	1.53	ND	ND		1	WG992351
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	ND	ND		1	WG992351
Heptane	142-82-5	100	0.200	0.818	3.41	13.9		1	WG992351
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.73	ND	ND		1	WG992351
n-Hexane	110-54-3	86.20	0.200	0.705	0.204	0.719		1	WG992351
Isopropylbenzene	98-82-8	120.20	0.200	0.983	ND	ND		1	WG992351
Methylene Chloride	75-09-2	84.90	0.200	0.694	ND	ND		1	WG992351
Methyl Butyl Ketone	591-78-6	100	1.25	5.11	ND	ND		1	WG992351
2-Butanone (MEK)	78-93-3	72.10	31.2	92.0	249	735		25	WG992604
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	1.25	5.12	ND	ND		1	WG992351
Methyl methacrylate	80-62-6	100.12	0.200	0.819	ND	ND		1	WG992351
MTBE	1634-04-4	88.10	0.200	0.721	ND	ND		1	WG992351
Naphthalene	91-20-3	128	0.630	3.30	ND	ND		1	WG992351
2-Propanol	67-63-0	60.10	31.2	76.7	2610	6420	E	25	WG992604
Propene	115-07-1	42.10	0.400	0.689	ND	ND		1	WG992351
Styrene	100-42-5	104	0.200	0.851	ND	ND		1	WG992351
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.37	ND	ND		1	WG992351
Tetrachloroethylene	127-18-4	166	0.200	1.36	ND	ND		1	WG992351
Tetrahydrofuran	109-99-9	72.10	0.200	0.590	1.35	3.99		1	WG992351
Toluene	108-88-3	92.10	0.200	0.753	0.734	2.76		1	WG992351
1,2,4-Trichlorobenzene	120-82-1	181	0.630	4.66	ND	ND		1	WG992351

¹ Cp
² Tc
³ Ss
⁴ Cn
⁵ Sr
⁶ Qc
⁷ Gl
⁸ Al
⁹ Sc



Collected date/time: 06/19/17 20:38

L917924

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
1,1,1-Trichloroethane	71-55-6	133	0.200	1.09	ND	ND		1	WG992351
1,1,2-Trichloroethane	79-00-5	133	0.200	1.09	ND	ND		1	WG992351
Trichloroethylene	79-01-6	131	0.200	1.07	1.52	8.16		1	WG992351
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	2.17	10.6		1	WG992351
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.982	0.651	3.20		1	WG992351
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.934	4.67	21.8		1	WG992351
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	WG992351
Vinyl Bromide	593-60-2	106.95	0.200	0.875	ND	ND		1	WG992351
Vinyl acetate	108-05-4	86.10	0.200	0.704	ND	ND		1	WG992351
m&p-Xylene	1330-20-7	106	0.400	1.73	1.93	8.39		1	WG992351
o-Xylene	95-47-6	106	0.200	0.867	0.723	3.13		1	WG992351
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		98.1				WG992351
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		98.8				WG992604

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

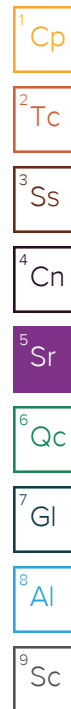


Collected date/time: 06/19/17 20:40

L917924

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	31.2	74.1	135	321		25	WG992604
Allyl chloride	107-05-1	76.53	0.200	0.626	ND	ND		1	WG992351
Benzene	71-43-2	78.10	0.200	0.639	0.229	0.731		1	WG992351
Benzyl Chloride	100-44-7	127	0.200	1.04	ND	ND		1	WG992351
Bromodichloromethane	75-27-4	164	0.200	1.34	ND	ND		1	WG992351
Bromoform	75-25-2	253	0.600	6.21	ND	ND		1	WG992351
Bromomethane	74-83-9	94.90	0.200	0.776	ND	ND		1	WG992351
1,3-Butadiene	106-99-0	54.10	2.00	4.43	ND	ND		1	WG992351
Carbon disulfide	75-15-0	76.10	0.200	0.622	ND	ND		1	WG992351
Carbon tetrachloride	56-23-5	154	0.200	1.26	ND	ND		1	WG992351
Chlorobenzene	108-90-7	113	0.200	0.924	ND	ND		1	WG992351
Chloroethane	75-00-3	64.50	0.200	0.528	ND	ND		1	WG992351
Chloroform	67-66-3	119	0.200	0.973	ND	ND		1	WG992351
Chloromethane	74-87-3	50.50	0.200	0.413	0.680	1.40		1	WG992351
2-Chlorotoluene	95-49-8	126	0.200	1.03	ND	ND		1	WG992351
Cyclohexane	110-82-7	84.20	0.200	0.689	ND	ND		1	WG992351
Dibromochloromethane	124-48-1	208	0.200	1.70	ND	ND		1	WG992351
1,2-Dibromoethane	106-93-4	188	0.200	1.54	ND	ND		1	WG992351
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	ND	ND		1	WG992351
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	ND	ND		1	WG992351
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	ND	ND		1	WG992351
1,2-Dichloroethane	107-06-2	99	0.200	0.810	ND	ND		1	WG992351
1,1-Dichloroethane	75-34-3	98	0.200	0.802	ND	ND		1	WG992351
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	WG992351
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	0.929	3.68		1	WG992351
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	0.303	1.20		1	WG992351
1,2-Dichloropropane	78-87-5	113	0.200	0.924	ND	ND		1	WG992351
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.908	ND	ND		1	WG992351
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.908	ND	ND		1	WG992351
1,4-Dioxane	123-91-1	88.10	0.200	0.721	ND	ND		1	WG992351
Ethanol	64-17-5	46.10	15.8	29.8	3480	6560	E	25	WG992604
Ethylbenzene	100-41-4	106	0.200	0.867	0.563	2.44		1	WG992351
4-Ethyltoluene	622-96-8	120	0.200	0.982	0.339	1.66		1	WG992351
Trichlorofluoromethane	75-69-4	137.40	0.200	1.12	0.286	1.60		1	WG992351
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.989	0.285	1.41		1	WG992351
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.200	1.53	ND	ND		1	WG992351
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	ND	ND		1	WG992351
Heptane	142-82-5	100	0.200	0.818	3.46	14.2		1	WG992351
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.73	ND	ND		1	WG992351
n-Hexane	110-54-3	86.20	0.200	0.705	0.280	0.986		1	WG992351
Isopropylbenzene	98-82-8	120.20	0.200	0.983	ND	ND		1	WG992351
Methylene Chloride	75-09-2	84.90	0.200	0.694	ND	ND		1	WG992351
Methyl Butyl Ketone	591-78-6	100	1.25	5.11	ND	ND		1	WG992351
2-Butanone (MEK)	78-93-3	72.10	31.2	92.0	190	561		25	WG992604
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	1.25	5.12	ND	ND		1	WG992351
Methyl methacrylate	80-62-6	100.12	0.200	0.819	ND	ND		1	WG992351
MTBE	1634-04-4	88.10	0.200	0.721	ND	ND		1	WG992351
Naphthalene	91-20-3	128	0.630	3.30	ND	ND		1	WG992351
2-Propanol	67-63-0	60.10	31.2	76.7	2410	5920	E	25	WG992604
Propene	115-07-1	42.10	0.400	0.689	ND	ND		1	WG992351
Styrene	100-42-5	104	0.200	0.851	ND	ND		1	WG992351
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.37	ND	ND		1	WG992351
Tetrachloroethylene	127-18-4	166	0.200	1.36	ND	ND		1	WG992351
Tetrahydrofuran	109-99-9	72.10	0.200	0.590	1.50	4.43		1	WG992351
Toluene	108-88-3	92.10	0.200	0.753	3.09	11.6		1	WG992351
1,2,4-Trichlorobenzene	120-82-1	181	0.630	4.66	ND	ND		1	WG992351





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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
1,1,1-Trichloroethane	71-55-6	133	0.200	1.09	ND	ND		1	WG992351
1,1,2-Trichloroethane	79-00-5	133	0.200	1.09	ND	ND		1	WG992351
Trichloroethylene	79-01-6	131	0.200	1.07	5.49	29.4		1	WG992351
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	1.68	8.24		1	WG992351
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.982	0.581	2.85		1	WG992351
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.934	6.67	31.2		1	WG992351
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	WG992351
Vinyl Bromide	593-60-2	106.95	0.200	0.875	ND	ND		1	WG992351
Vinyl acetate	108-05-4	86.10	0.200	0.704	ND	ND		1	WG992351
m&p-Xylene	1330-20-7	106	0.400	1.73	1.87	8.13		1	WG992351
o-Xylene	95-47-6	106	0.200	0.867	0.686	2.97		1	WG992351
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		99.0				WG992604
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		97.8				WG992351

1
Cp2
Tc3
Ss4
Cn5
Sr6
Qc7
Gl8
Al9
Sc



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	31.2	74.1	145	345		25	WG992604
Allyl chloride	107-05-1	76.53	0.200	0.626	ND	ND		1	WG992351
Benzene	71-43-2	78.10	0.200	0.639	0.279	0.893		1	WG992351
Benzyl Chloride	100-44-7	127	0.200	1.04	ND	ND		1	WG992351
Bromodichloromethane	75-27-4	164	0.200	1.34	ND	ND		1	WG992351
Bromoform	75-25-2	253	0.600	6.21	ND	ND		1	WG992351
Bromomethane	74-83-9	94.90	0.200	0.776	ND	ND		1	WG992351
1,3-Butadiene	106-99-0	54.10	2.00	4.43	ND	ND		1	WG992351
Carbon disulfide	75-15-0	76.10	0.200	0.622	ND	ND		1	WG992351
Carbon tetrachloride	56-23-5	154	0.200	1.26	ND	ND		1	WG992351
Chlorobenzene	108-90-7	113	0.200	0.924	ND	ND		1	WG992351
Chloroethane	75-00-3	64.50	0.200	0.528	ND	ND		1	WG992351
Chloroform	67-66-3	119	0.200	0.973	ND	ND		1	WG992351
Chloromethane	74-87-3	50.50	0.200	0.413	0.660	1.36		1	WG992351
2-Chlorotoluene	95-49-8	126	0.200	1.03	ND	ND		1	WG992351
Cyclohexane	110-82-7	84.20	0.200	0.689	ND	ND		1	WG992351
Dibromochloromethane	124-48-1	208	0.200	1.70	ND	ND		1	WG992351
1,2-Dibromoethane	106-93-4	188	0.200	1.54	ND	ND		1	WG992351
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	ND	ND		1	WG992351
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	ND	ND		1	WG992351
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	ND	ND		1	WG992351
1,2-Dichloroethane	107-06-2	99	0.200	0.810	ND	ND		1	WG992351
1,1-Dichloroethane	75-34-3	98	0.200	0.802	ND	ND		1	WG992351
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	WG992351
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	0.301	1.19		1	WG992351
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	0.313	1.24		1	WG992351
1,2-Dichloropropane	78-87-5	113	0.200	0.924	ND	ND		1	WG992351
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.908	ND	ND		1	WG992351
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.908	ND	ND		1	WG992351
1,4-Dioxane	123-91-1	88.10	0.200	0.721	ND	ND		1	WG992351
Ethanol	64-17-5	46.10	15.8	29.8	3420	6440	E	25	WG992604
Ethylbenzene	100-41-4	106	0.200	0.867	0.633	2.74		1	WG992351
4-Ethyltoluene	622-96-8	120	0.200	0.982	0.363	1.78		1	WG992351
Trichlorofluoromethane	75-69-4	137.40	0.200	1.12	0.293	1.65		1	WG992351
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.989	0.274	1.36		1	WG992351
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.200	1.53	ND	ND		1	WG992351
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	ND	ND		1	WG992351
Heptane	142-82-5	100	0.200	0.818	3.94	16.1		1	WG992351
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.73	ND	ND		1	WG992351
n-Hexane	110-54-3	86.20	0.200	0.705	0.203	0.717		1	WG992351
Isopropylbenzene	98-82-8	120.20	0.200	0.983	ND	ND		1	WG992351
Methylene Chloride	75-09-2	84.90	0.200	0.694	ND	ND		1	WG992351
Methyl Butyl Ketone	591-78-6	100	1.25	5.11	ND	ND		1	WG992351
2-Butanone (MEK)	78-93-3	72.10	31.2	92.0	186	549		25	WG992604
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	1.25	5.12	ND	ND		1	WG992351
Methyl methacrylate	80-62-6	100.12	0.200	0.819	ND	ND		1	WG992351
MTBE	1634-04-4	88.10	0.200	0.721	ND	ND		1	WG992351
Naphthalene	91-20-3	128	0.630	3.30	ND	ND		1	WG992351
2-Propanol	67-63-0	60.10	31.2	76.7	3230	7950	E	25	WG992604
Propene	115-07-1	42.10	0.400	0.689	ND	ND		1	WG992351
Styrene	100-42-5	104	0.200	0.851	ND	ND		1	WG992351
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.37	ND	ND		1	WG992351
Tetrachloroethylene	127-18-4	166	0.200	1.36	ND	ND		1	WG992351
Tetrahydrofuran	109-99-9	72.10	0.200	0.590	ND	ND		1	WG992351
Toluene	108-88-3	92.10	0.200	0.753	1.08	4.05		1	WG992351
1,2,4-Trichlorobenzene	120-82-1	181	0.630	4.66	ND	ND		1	WG992351

¹ Cp
² Tc
³ Ss
⁴ Cn
⁵ Sr
⁶ Qc
⁷ Gl
⁸ Al
⁹ Sc



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
1,1,1-Trichloroethane	71-55-6	133	0.200	1.09	ND	ND		1	WG992351
1,1,2-Trichloroethane	79-00-5	133	0.200	1.09	ND	ND		1	WG992351
Trichloroethylene	79-01-6	131	0.200	1.07	0.994	5.33		1	WG992351
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	1.72	8.44		1	WG992351
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.982	0.550	2.70		1	WG992351
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.934	9.36	43.7		1	WG992351
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	WG992351
Vinyl Bromide	593-60-2	106.95	0.200	0.875	ND	ND		1	WG992351
Vinyl acetate	108-05-4	86.10	0.200	0.704	ND	ND		1	WG992351
m&p-Xylene	1330-20-7	106	0.400	1.73	2.13	9.23		1	WG992351
o-Xylene	95-47-6	106	0.200	0.867	0.796	3.45		1	WG992351
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		99.0				WG992604
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		100				WG992351

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

[L917924-01,02,03,04,05,06,07,08,09,10,11,12,13,14](#)

Method Blank (MB)

(MB) R3228424-3 06/23/17 10:47

Analyte	MB Result ppbv	MB Qualifier	MB MDL ppbv	MB RDL ppbv
Acetone	U		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

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

[L917924-01,02,03,04,05,06,07,08,09,10,11,12,13,14](#)

Method Blank (MB)

(MB) R3228424-3 06/23/17 10:47

Analyte	MB Result ppbv	MB Qualifier	MB MDL ppbv	MB RDL ppbv
Methylene Chloride	0.0718	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	0.285	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	85.7		60.0-140	

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc

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

(LCS) R3228424-1 06/23/17 09:10 • (LCSD) R3228424-2 06/23/17 09:57

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	3.14	3.29	83.8	87.6	52.0-158			4.46	25
Propene	3.75	3.60	3.65	95.9	97.4	54.0-155			1.53	25
Dichlorodifluoromethane	3.75	3.83	3.87	102	103	69.0-143			1.24	25
1,2-Dichlorotetrafluoroethane	3.75	3.96	3.98	106	106	70.0-130			0.660	25
Chloromethane	3.75	3.70	3.74	98.8	99.6	70.0-130			0.860	25

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

(LCS) R3228424-1 06/23/17 09:10 • (LCSD) R3228424-2 06/23/17 09:57

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	3.77	3.88	101	103	70.0-130			2.76	25
1,3-Butadiene	3.75	3.12	3.53	83.1	94.1	70.0-130			12.4	25
Bromomethane	3.75	4.63	4.61	124	123	70.0-130			0.510	25
Chloroethane	3.75	4.08	4.19	109	112	70.0-130			2.74	25
Trichlorofluoromethane	3.75	4.11	4.12	110	110	70.0-130			0.300	25
1,1,2-Trichlorotrifluoroethane	3.75	4.17	4.18	111	112	70.0-130			0.280	25
1,1-Dichloroethene	3.75	3.94	3.93	105	105	70.0-130			0.210	25
1,1-Dichloroethane	3.75	3.98	3.96	106	105	70.0-130			0.710	25
Acetone	3.75	3.79	3.80	101	101	70.0-130			0.150	25
2-Propanol	3.75	3.97	3.92	106	105	66.0-150			1.20	25
Carbon disulfide	3.75	4.07	4.05	109	108	70.0-130			0.530	25
Methylene Chloride	3.75	3.55	3.52	94.6	93.9	70.0-130			0.690	25
MTBE	3.75	4.08	4.11	109	110	70.0-130			0.830	25
trans-1,2-Dichloroethene	3.75	4.15	4.18	111	111	70.0-130			0.660	25
n-Hexane	3.75	3.97	3.95	106	105	70.0-130			0.670	25
Vinyl acetate	3.75	3.93	3.97	105	106	70.0-130			0.880	25
Methyl Ethyl Ketone	3.75	4.05	4.08	108	109	70.0-130			0.560	25
cis-1,2-Dichloroethene	3.75	3.97	3.97	106	106	70.0-130			0.0700	25
Chloroform	3.75	4.02	4.03	107	108	70.0-130			0.200	25
Cyclohexane	3.75	4.14	4.13	110	110	70.0-130			0.270	25
1,1,1-Trichloroethane	3.75	4.02	4.02	107	107	70.0-130			0.0300	25
Carbon tetrachloride	3.75	4.08	4.10	109	109	70.0-130			0.500	25
Benzene	3.75	4.10	4.05	109	108	70.0-130			1.14	25
1,2-Dichloroethane	3.75	3.87	3.82	103	102	70.0-130			1.22	25
Heptane	3.75	3.84	3.80	102	101	70.0-130			1.03	25
Trichloroethylene	3.75	4.12	4.07	110	109	70.0-130			1.14	25
1,2-Dichloropropane	3.75	3.98	3.99	106	107	70.0-130			0.440	25
1,4-Dioxane	3.75	4.14	4.16	110	111	70.0-152			0.630	25
Bromodichloromethane	3.75	4.10	4.05	109	108	70.0-130			1.17	25
cis-1,3-Dichloropropene	3.75	4.11	4.10	110	109	70.0-130			0.0500	25
4-Methyl-2-pentanone (MIBK)	3.75	4.03	4.02	108	107	70.0-142			0.230	25
Toluene	3.75	4.16	4.11	111	110	70.0-130			1.11	25
trans-1,3-Dichloropropene	3.75	4.09	4.05	109	108	70.0-130			1.03	25
1,1,2-Trichloroethane	3.75	4.11	4.07	110	109	70.0-130			0.960	25
Tetrachloroethylene	3.75	4.23	4.14	113	110	70.0-130			2.31	25
Methyl Butyl Ketone	3.75	4.04	4.00	108	107	70.0-150			1.00	25
Dibromochloromethane	3.75	4.21	4.16	112	111	70.0-130			1.23	25
1,2-Dibromoethane	3.75	4.20	4.15	112	111	70.0-130			1.08	25
Chlorobenzene	3.75	4.04	3.96	108	106	70.0-130			2.01	25
Ethylbenzene	3.75	4.19	4.08	112	109	70.0-130			2.59	25

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



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

(LCS) R3228424-1 06/23/17 09:10 • (LCSD) R3228424-2 06/23/17 09:57

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	8.01	7.86	107	105	70.0-130			1.92	25
o-Xylene	3.75	4.04	3.93	108	105	70.0-130			2.66	25
Styrene	3.75	4.15	4.14	111	110	70.0-130			0.290	25
Bromoform	3.75	4.27	4.14	114	110	70.0-130			3.20	25
1,1,2,2-Tetrachloroethane	3.75	3.89	3.83	104	102	70.0-130			1.55	25
4-Ethyltoluene	3.75	3.85	3.75	103	99.9	70.0-130			2.73	25
1,3,5-Trimethylbenzene	3.75	3.83	3.77	102	101	70.0-130			1.58	25
1,2,4-Trimethylbenzene	3.75	3.78	3.70	101	98.6	70.0-130			2.25	25
1,3-Dichlorobenzene	3.75	3.81	3.73	102	99.4	70.0-130			2.11	25
1,4-Dichlorobenzene	3.75	3.75	3.61	99.9	96.2	70.0-130			3.82	25
Benzyl Chloride	3.75	4.07	4.03	109	107	70.0-144			1.20	25
1,2-Dichlorobenzene	3.75	3.54	3.51	94.4	93.6	70.0-130			0.820	25
1,2,4-Trichlorobenzene	3.75	4.71	4.68	125	125	70.0-155			0.560	25
Hexachloro-1,3-butadiene	3.75	3.68	3.65	98.0	97.2	70.0-145			0.830	25
Naphthalene	3.75	5.09	5.19	136	138	70.0-155			1.85	25
Allyl Chloride	3.75	3.84	3.84	102	102	70.0-130			0.000	25
2-Chlorotoluene	3.75	3.52	3.40	93.8	90.8	70.0-130			3.32	25
Methyl Methacrylate	3.75	4.29	4.19	114	112	70.0-130			2.46	25
Tetrahydrofuran	3.75	3.78	3.81	101	101	70.0-140			0.570	25
2,2,4-Trimethylpentane	3.75	3.97	3.96	106	106	70.0-130			0.360	25
Vinyl Bromide	3.75	4.35	4.32	116	115	70.0-130			0.590	25
Isopropylbenzene	3.75	3.89	3.79	104	101	70.0-130			2.75	25
(S) 1,4-Bromofluorobenzene				94.5	94.7	60.0-140				

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc



Method Blank (MB)

(MB) R3228505-3 06/24/17 10:24

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ppbv		ppbv	ppbv
Acetone	U		0.0569	1.25
2-Butanone (MEK)	U		0.0493	1.25
2-Propanol	U		0.0882	1.25
Ethanol	U		0.0832	0.630
(S) 1,4-Bromofluorobenzene	97.5			60.0-140

1Cp

2Tc

3Ss

4Cn

5Sr

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

(LCS) R3228505-1 06/24/17 08:51 • (LCSD) R3228505-2 06/24/17 09:36

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ppbv	ppbv	ppbv	%	%	%			%	%
Ethanol	3.75	3.74	3.85	99.9	103	52.0-158			2.76	25
Acetone	3.75	4.11	4.17	110	111	70.0-130			1.41	25
2-Propanol	3.75	3.97	4.01	106	107	66.0-150			1.12	25
Methyl Ethyl Ketone	3.75	4.04	4.10	108	109	70.0-130			1.41	25
(S) 1,4-Bromofluorobenzene				102	102	60.0-140				

6Qc

7Gl

8Al

9Sc



Abbreviations and Definitions

SDG	Sample Delivery Group.
MDL	Method Detection Limit.
RDL	Reported Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
U	Not detected at the Reporting Limit (or MDL where applicable).
RPD	Relative Percent Difference.
(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.
Rec.	Recovery.

Qualifier Description

B	The same analyte is found in the associated blank.
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
J	The identification of the analyte is acceptable; the reported value is an estimate.

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

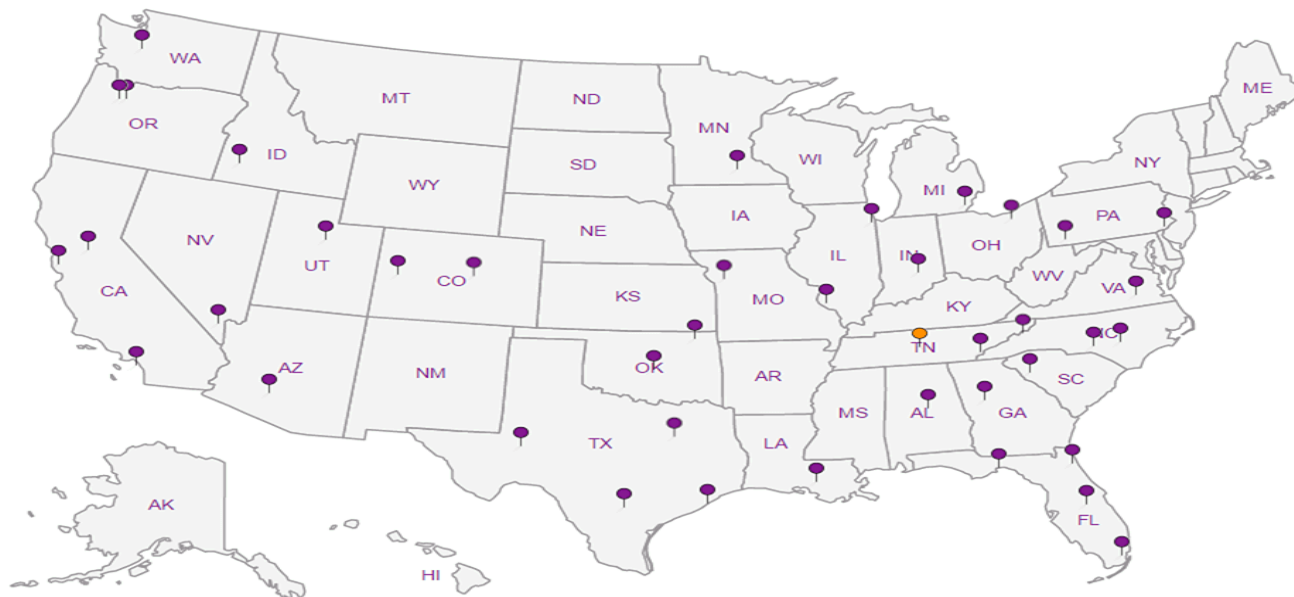
* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

Alabama	40660	Nevada	TN-03-2002-34
Alaska	UST-080	New Hampshire	2975
Arizona	AZ0612	New Jersey–NELAP	TN002
Arkansas	88-0469	New Mexico	TN00003
California	01157CA	New York	11742
Colorado	TN00003	North Carolina	Env375
Conneticut	PH-0197	North Carolina ¹	DW21704
Florida	E87487	North Carolina ²	41
Georgia	NELAP	North Dakota	R-140
Georgia ¹	923	Ohio–VAP	CL0069
Idaho	TN00003	Oklahoma	9915
Illinois	200008	Oregon	TN200002
Indiana	C-TN-01	Pennsylvania	68-02979
Iowa	364	Rhode Island	221
Kansas	E-10277	South Carolina	84004
Kentucky ¹	90010	South Dakota	n/a
Kentucky ²	16	Tennessee ¹⁴	2006
Louisiana	AI30792	Texas	T 104704245-07-TX
Maine	TN0002	Texas ⁵	LAB0152
Maryland	324	Utah	6157585858
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	109
Minnesota	047-999-395	Washington	C1915
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA
Nebraska	NE-OS-15-05		

A2LA – ISO 17025	1461.01	AIHA-LAP, LLC	100789
A2LA – ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	S-67674
EPA–Crypto	TN00003		

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ^{n/a} Accreditation not applicable

ES&C Lab Sciences 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. **ES&C Lab Sciences performs all testing at our central laboratory.**



First Environment, Inc.

91 Fulton Street
Boonton, NJ 07005

Report to:
Michael T. Slack - FE

Project:
Description: Butler Snow LLP

Phone: 973-334-0003
Fax: 973-334-0928

Collected by (print):
MICHAEL T. SLACK

Collected by (signature):
Mit. Slack

Immediately
Packed on Ice N ☒ Y ☐

Billing Information:

Project: EnPro-001-002D

91 Fulton Street

Boonton, NJ 07005

ATTN: JUSTIN PICCOLO
JPICCOLO@FIRSTENVIRONMENT.COM

Email To: mslack@firstenvironment.com

City/State: WATER VALLEY, MS
Collected: BORG WARNER PLANT SITE

Lab Project #
FIRENVBNJ-OXFORDMS

P.O. #

Quote #

Rush? (Lab MUST Be Notified)

Same Day ☒ Five Day ☐
Next Day ☐ 5 Day (Rad Only) ☐
Two Day ☐ 10 Day (Rad Only) ☐
Three Day ☐

Date Results Needed

No.
of
Cntrs

TO-15 Summa

Sample ID	Comp/Grab	Matrix *	Depth	Date START	Time START	No. of Cntrs
IA-K8	COMP	Air	—	6/19/17	17:45	1
IA-G4	"	Air	—	6/19/17	17:50	1
IA-DS	"	Air	—	6/19/17	17:55	1
IA-L16	"	Air	—	6/19/17	18:05	1
IA-K13	"	Air	—	6/19/17	18:10	1
IA-G13	"	Air	—	6/19/17	19:00	1
IA-C16	"	Air	—	6/19/17	19:05	1
AA-2	"	Air	—	6/19/17	18:50	1
IA-B12	"	Air	—	6/19/17	19:10	1
IA-17	"	Air	—	6/19/17	19:15	1

* Matrix:
SS - Soil ☒ AIR - Air ☐ F - Filter
GW - Groundwater ☐ B - Bioassay
WW - Waste Water
DW - Drinking Water
OT - Other

Remarks: 16 6l cans, 16 24 hour flow controllers, 16 4 feet sections of teflon tubing with swagelok fittings, SEE FIELD SAMPLE COLLECTION TABLE FOR TIMES & VACUUM READINGS - M. SLACK

Samples returned via:
☐ UPS ☐ FedEx ☐ Courier

Tracking #

Relinquished by: (Signature)

Date:
6/21/17

Time:
10:10

Received by: (Signature)

Trip Blank Received: Yes / No
HCL / MeOH
TBR

Relinquished by: (Signature)

Date:

Time:

Received by: (Signature)

Temp: °C
Bottles Received: 14

Relinquished by: (Signature)

Date:

Time:

Received for lab by: (Signature)

Date: 6-22-17
Time: 8:45

Hold:

Condition:
NCF / OR

Analysis / Container / Preservative

Pres
Chk

Chain of Custody Page ___ of ___



YOUR LAB OF CHOICE

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



L #

6917924
M145

Account: FIRENVBNJ

Template: T120396

Prelogin: P606064

TSR: 341 - John Hawkins

PB: 11/13

Shipped Via: FedEx Ground

Remarks Sample # (lab only)

K8	-01
G4	-02
DS	-03
L16	-04
K13	-05
G13	-06
C16	-07
PAVILLION	-08
B12	-09
CAFETERIA	-10

Sample Receipt Checklist

COC Seal Present/Intact: ☒ Y ☐ N
COC Signed/Accurate: ☒ Y ☐ N
Bottles arrive intact: ☒ Y ☐ N
Correct bottles used: ☒ Y ☐ N
Sufficient volume sent: ☒ Y ☐ N
If Applicable
VOA Zero Headspace: ☒ Y ☐ N
Preservation Correct/Checked: ☒ Y ☐ N

If preservation required by Login: Date/Time

Vapor Intrusion Investigation
Borg Warner Facility
Water Valley, Yalobusha Co., MS
Week of June 18th, 2017
Indoor Air (IA) and Ambient Air (AA) Sampling Event

L917924

Sample ID	Sample Location	Flow Controller ID	Canister ID	Canister Size (liters)	Initial ¹ Hg Vacuum Date/time	Final ¹ Hg Vacuum Date/time	Sampler MTA
IA-1	Maintenance Room	7830	6274	6	6/19/17 19:35 29"	6/20/17 20:40 5"	M. Slack
IA-2	ATS Room	7790	8004	6	6/19/17 19:25 30"	6/20/17 20:38 0"	M. Slack
IA-6	Training Room	7432	8002	6	6/19/17 19:20 30"	6/20/17 20:35 2"	M. Slack
IA-17	Cafeteria	7101	7356	6	6/19/17 19:15 29"	6/20/17 20:30 4"	M. Slack
IA-B12	I-Beam B12	6697	7968	6	6/19/17 19:10 31"	6/20/17 20:20 7"	M. Slack
IA-C16	I-Beam C16	7261	7959	6	6/19/17 19:05 28"	6/20/17 20:15 3"	M. Slack
IA-G13	I-Beam G13	7102	7910 7102 MTA 6/19	6	6/19/17 19:00 29"	6/20/17 20:10 6"	M. Slack
IA-K13	I-Beam K13	5283	6630	6	6/19/17 18:10 30"	6/20/17 20:05 0"	M. Slack
IA-L16	I-Beam L16	7104	5829	6	6/19/17 18:05 25"	6/20/17 20:00 0"	M. Slack
IA-D5	I-Beam D5	7833	5148	6	6/19/17 17:55 28"	6/20/17 19:45 3"	M. Slack
IA-G4	I-Beam G4	7773 7833 MTA 6/19	5847	6	6/19/17 17:50 29"	6/20/17 19:42 2"	M. Slack
IA-K8	I-Beam K8	7427	7664	6	6/19/17 17:45 27"	6/20/17 19:40 0"	M. Slack
AA-2	Pavilion	7430	6191	6	6/19/17 18:50 29"	6/20/17 20:25 3"	M. Slack
IA-Sump	Sump	5295	7307	6	6/19/17 19:40 29"	6/20/17 20:45 2"	M. Slack