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

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FIRST ENVIRONMENT

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	10/09/2017	
Mississippi Professional Engineer No.	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 July 3, 2017, First Environment submitted a SSDS Progress Report on the June 19-20, 2017 ambient and indoor air sampling results and the installation of extraction point ("EP") No. 3. First Environment submitted SSDS Progress Reports on subsequent rounds of ambient and indoor air sampling on July 17, August 7, August 21, September 11, and October 2, 2017 . On September 21-22, 2017, First Environment collected a round of ambient and indoor air samples from the four interior rooms at the Plant—the Training Room, ATS Room, Maintenance Room, and Cafeteria. As discussed in more detail below, all sampling results for TCE were below the MDEQ action level of 26 $\mu g/m^3$.

2.0 Indoor Air Monitoring – September 21-22, 2017

2.1 Instrumentation

On September 21-22, 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.

2.2 Methodology

First Environment collected four indoor air samples at the four interior rooms at the Plant; 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.

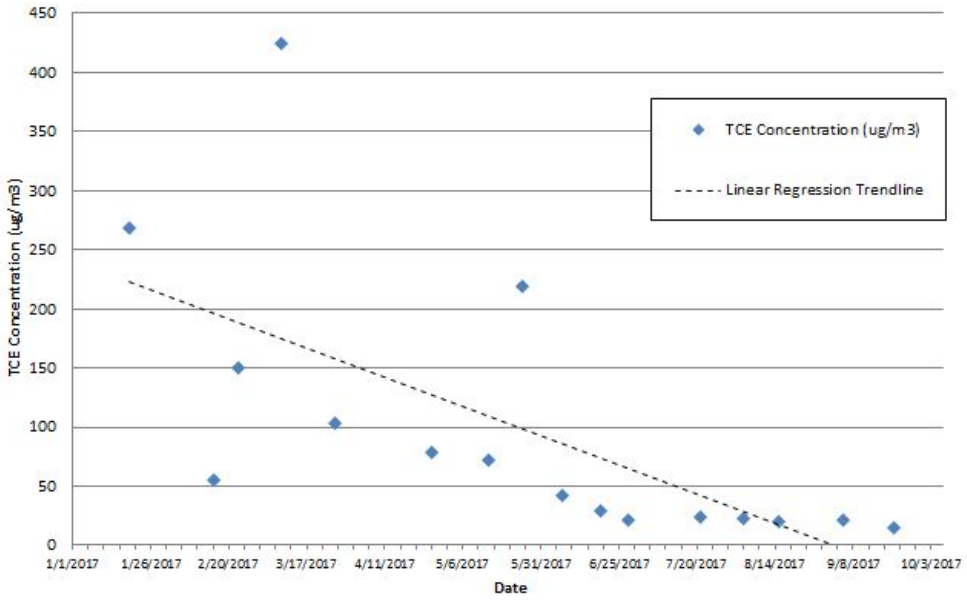
First Environment submitted the samples to ESC Lab Sciences for USEPA TO-15 SIM analysis. The laboratory was responsible for the decontamination of the Summa® canisters and for setting the internal vacuum and calibrating the regulators prior to sample collection.

2.3 Results

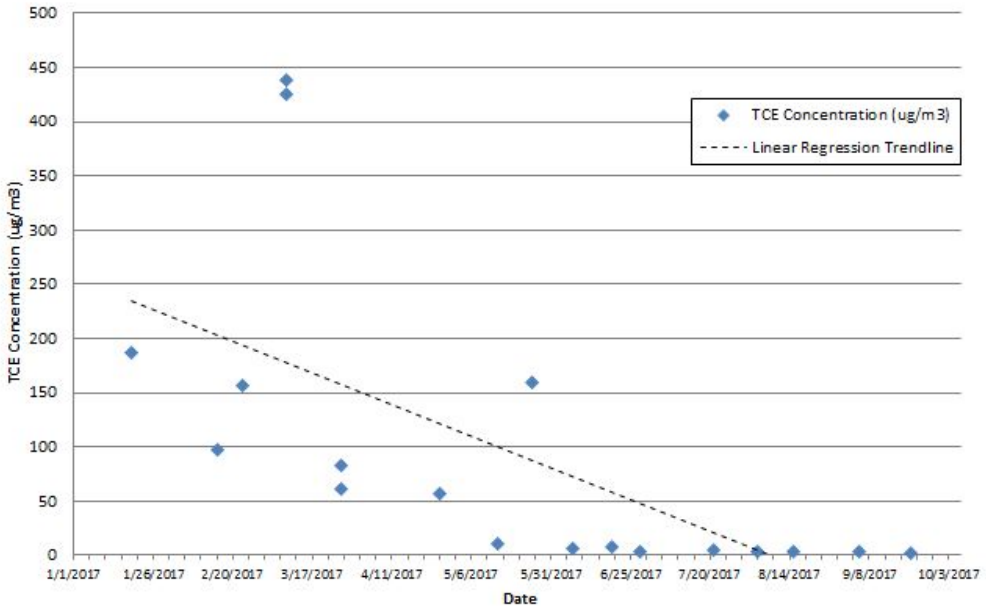
Table 1 presents the ambient and indoor air sampling results for all TO-15 analytes. Table 2 presents the results of TCE, cis-DCE, and VC in comparison of all previous rounds of sampling.

The sample results in the Training Room and Maintenance Room were above USEPA's Vapor Intrusion Screening Level ("VISL") for TCE of 3 $\mu g/m^3$ but below the MDEQ action level of 26 $\mu g/m^3$. The sample results in the ATS Room and Cafeteria were below USEPA's VISL. The following figures show the linear regression trendline for the interior rooms.

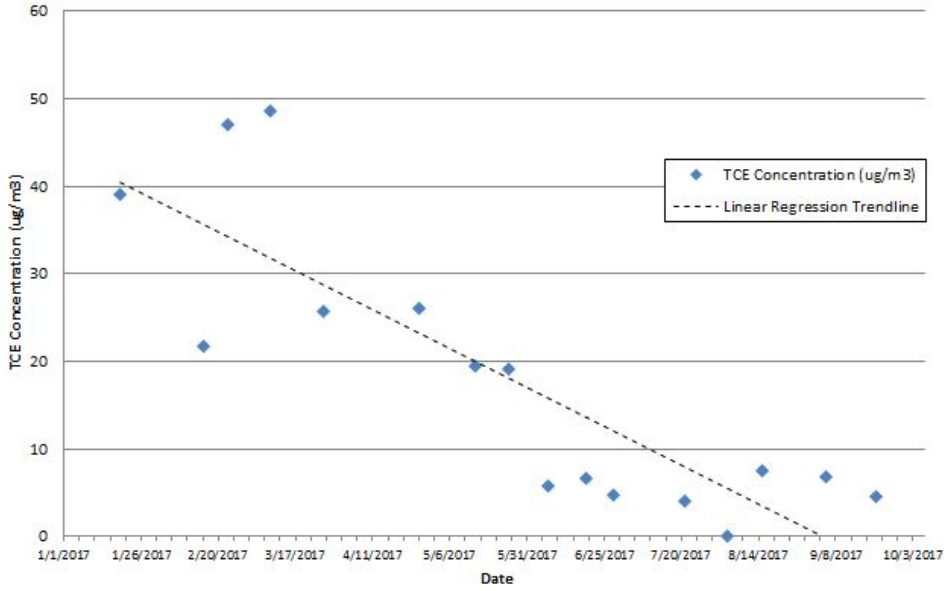
TCE Concentration History at IA-1 (Maintenance Room)



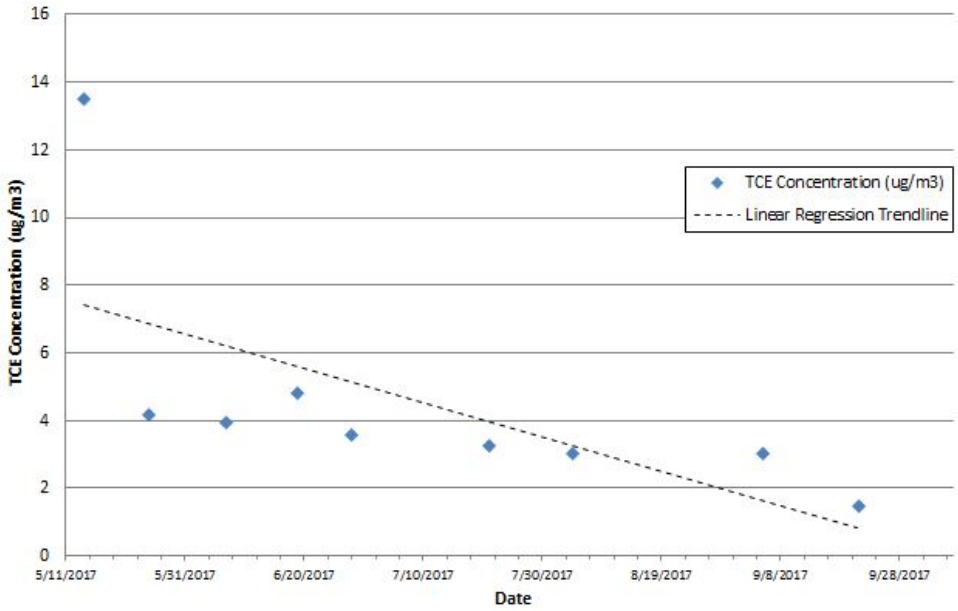
TCE Concentration History at IA-2 (ATS Room)



TCE Concentration History at IA-6 (Training Room)



TCE Concentration History at IA-17 (Cafeteria)



A copy of the laboratory report, including the chain-of-custody forms, is attached in Appendix A.

3.0 Summary

Since June 2017, the sample results in the Maintenance Room (IA-1), ATS Room (IA-2), Training Room (IA-6), and Cafeteria (IA-17) have been below the MDEQ action level of 26 $\mu g/m^3$. The sample results in the Training Room and Maintenance Room for this round exceed the USEPA's VISL for TCE of 3 $\mu g/m^3$ requiring continued monitoring, which is being done on a bi-weekly basis.

On September 20, 2017, First Environment, on behalf of EnPro, submitted a letter request to MDEQ for modification to the indoor air sampling program pursuant to Section 3.A. of the Agreed Order. The revised indoor air sampling schedule provides for bi-weekly sampling for the four interior room indoor air sampling locations (IA-1, IA-2, IA-6, & IA-17) and semi-annual sampling of three locations at the west, center, and east areas of the Plant (IA-C16, IA-K13, and IA-G4). On September 28, 2017, the MDEQ approved the sampling schedule with a request that IA-C16, IA-K13, and IA-G4 are sampled on a quarterly basis. Subsequent sampling results under the approved sampling schedule will be provided to the MDEQ on an ongoing basis.

TABLES

TABLE 1
INDOOR AIR SAMPLING RESULTS
SEPTEMBER 21, 2017
FORMER HOLLEY AUTOMOTIVE/COLTEC INDUSTRIES FACILITY
WATER VALLEY, MS

SAMPLE LOCATION:	IA-1	IA-2	IA-6	IA-17	AA-2
SAMPING DATE:	09/21/2017	09/21/2017	09/21/2017	09/21/2017	09/21/2017
LABORATORY ID:	L938896-01	L938896-02	L938896-03	L938896-04	L938896-05
Analyte	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³
ACETONE	268	358	285	178	12.8
ALLYL CHLORIDE	<0.626	<0.626	<0.626	<0.626	<0.626
BENZENE	1.08	0.995	1.37	0.792	<0.639
BENZYL CHLORIDE	<1.04	<1.04	<1.04	<1.04	<1.04
BROMODICHLOROMETHANE	<1.34	<1.34	<1.34	<1.34	<1.34
BROMOFORM	<6.21	<6.21	<6.21	<6.21	<6.21
BROMOMETHANE	<0.776	<0.776	<0.776	<0.776	<0.776
1,3-BUTADIENE	<4.43	<4.43	<4.43	<4.43	<4.43
CARBON DISULFIDE	<0.622	<0.622	<0.622	<0.622	<0.622
CARBON TETRACHLORIDE	<1.26	<1.26	<1.26	<1.26	<1.26
CHLOROBENZENE	<0.924	<0.924	<0.924	<0.924	<0.924
CHLOROETHANE	<0.528	<0.528	<0.528	<0.528	<0.528
CHLOROFORM	<0.973	<0.973	<0.973	<0.973	<0.973
CHLOROMETHANE	1	1.07	1.09	0.915	0.786
2-CHLOROTOLUENE	<1.03	<1.03	<1.03	<1.03	<1.03
CYCLOHEXANE	3.41	3.88	2.59	1.77	<0.689
CHLORODIBROMOMETHANE	<1.7	<1.7	<1.7	<1.7	<1.7
1,2-DIBROMOETHANE	<1.54	<1.54	<1.54	<1.54	<1.54
1,2-DICHLOROBENZENE	<1.2	<1.2	<1.2	<1.2	<1.2
1,3-DICHLOROBENZENE	<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-DICHLOROETHANE	<0.81	<0.81	<0.81	<0.81	<0.81
1,1-DICHLOROETHANE	<0.802	<0.802	<0.802	<0.802	<0.802
1,1-DICHLOROETHENE	<0.793	<0.793	<0.793	<0.793	<0.793
CIS-1,2-DICHLOROETHENE	<0.793	<0.793	<0.793	<0.793	<0.793
TRANS-1,2-DICHLOROETHENE	0.839	1.03	1.09	<0.793	<0.793
1,2-DICHLOROPROPANE	<0.924	<0.924	<0.924	<0.924	<0.924
CIS-1,3-DICHLOROPROPENE	<0.908	<0.908	<0.908	<0.908	<0.908
TRANS-1,3-DICHLOROPROPENE	<0.908	<0.908	<0.908	<0.908	<0.908
1,4-DIOXANE	<0.721	<0.721	<0.721	<0.721	<0.721
ETHANOL	2,620 (E)	4,340 (E)	3,200 (E)	2340	21.2
ETHYLBENZENE	2.23	2.55	2.7	1.34	<0.867
4-ETHYLTOLUENE	1.69	1.82	3.76	1.2	<0.982
TRICHLOROFLUOROMETHANE	1.48	1.49	1.47	1.43	1.29
DICHLORODIFLUOROMETHANE	1.47	1.53	1.5	1.49	1.56

TABLE 1
INDOOR AIR SAMPLING RESULTS
SEPTEMBER 21, 2017
FORMER HOLLEY AUTOMOTIVE/COLTEC INDUSTRIES FACILITY
WATER VALLEY, MS

SAMPLE LOCATION:	IA-1	IA-2	IA-6	IA-17	AA-2
SAMPING DATE:	09/21/2017	09/21/2017	09/21/2017	09/21/2017	09/21/2017
LABORATORY ID:	L938896-01	L938896-02	L938896-03	L938896-04	L938896-05
Analyte	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³
1,1,2-TRICHLOROTRIFLUOROETHANE	<1.53	<1.53	<1.53	<1.53	<1.53
1,2-DICHLOROTETRAFLUOROETHANE	<1.4	<1.4	<1.4	<1.4	<1.4
HEPTANE	32.8	38.8	25.9	15.2	0.962
HEXACHLORO-1,3-BUTADIENE	<6.73	<6.73	<6.73	<6.73	<6.73
N-HEXANE	0.996	0.759	1.81	1.06	1.63
ISOPROPYLBENZENE	<0.983	<0.983	<0.983	<0.983	<0.983
METHYLENE CHLORIDE	1.27	<0.694	<0.694	6.47	30.1
METHYL BUTYL KETONE	<5.11	<5.11	<5.11	<5.11	<5.11
2-BUTANONE (MEK)	418	606	528	282	<3.69
4-METHYL-2-PENTANONE (MIBK)	<5.12	<5.12	<5.12	<5.12	<5.12
METHYL METHACRYLATE	<0.819	<0.819	<0.819	<0.819	<0.819
METHYL TERT-BUTYL ETHER	<0.721	<0.721	<0.721	<0.721	<0.721
NAPHTHALENE	<3.3	<3.3	<3.3	<3.3	<3.3
2-PROPANOL	3,610 (E)	5,740 (E)	4,010 (E)	2390	7.17
PROPENE	<0.689	<0.689	<0.689	<0.689	<0.689
STYRENE	1.11	1.07	1.2	0.874	<0.851
1,1,2,2-TETRACHLOROETHANE	<1.37	<1.37	<1.37	<1.37	<1.37
TETRACHLOROETHENE	<1.36	<1.36	<1.36	<1.36	<1.36
TETRAHYDROFURAN	<0.59	<0.59	<0.59	<0.59	<0.59
TOLUENE	9.35	7	9.34	4.58	2
1,2,4-TRICHLOROBENZENE	<4.66	<4.66	<4.66	<4.66	<4.66
1,1,1-TRICHLOROETHANE	<1.09	<1.09	<1.09	<1.09	<1.09
1,1,2-TRICHLOROETHANE	<1.09	<1.09	<1.09	<1.09	<1.09
TRICHLOROETHENE	14.7	2.22	4.65	1.46	<1.07
1,2,4-TRIMETHYLBENZENE	2.99	3.32	5.49	2.01	<0.982
1,3,5-TRIMETHYLBENZENE	<0.982	1.04	1.77	<0.982	<0.982
2,2,4-TRIMETHYLPENTANE	12.3	14.9	12.8	5.87	<0.934
VINYL CHLORIDE	<0.511	<0.511	<0.511	<0.511	<0.511
VINYL BROMIDE	<0.875	<0.875	<0.875	<0.875	<0.875
VINYL ACETATE	<0.704	<0.704	<0.704	<0.704	<0.704
M&P-XYLENE	7.6	8.95	11.5	4.4	<1.73
O-XYLENE	2.64	2.98	4.19	1.54	<0.867
1,4-BROMOFLUOROBENZENE	128 98.8	141 96.4	120 133	99.2 116	99.8

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 SEPTEMBER 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
	28-Jun-17	L920054-12	21.4	<0.793	<0.511
	21-Jul-17	L924410-01	23.8	<0.793	<0.511
	4-Aug-17	L927407-01	22.9	2.85	<0.511
	15-Aug-17	L930026-01	20.6	<0.793	<0.511
	5-Sep-17	L934535-01	21.8	3.17	<0.511
	21-Sep-17	L938896-01	14.7	<0.793	<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
IA-2 (2ND CANISTER)	9-Mar-17	L895061-04	438	88.7	1.68
	26-Mar-17	L898762-02	61.8	<0.793	<0.511
IA-2 (DUPLICATE)	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
	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
	28-Jun-17	L920054-13	4.21	<0.793	<0.511
	21-Jul-17	L924410-02	4.3	<0.793	<0.511
	4-Aug-17	L927407-02	2.94	<0.793	<0.511
	15-Aug-17	L930026-02	2.91	<0.793	<0.511
	5-Sep-17	L934535-02	3.52	0.967	<0.511
	21-Sep-17	L938896-02	2.22	<0.793	<0.511
IA-6	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
	28-Jun-17	L920054-11	4.84	<0.793	<0.511
	21-Jul-17	L924410-03	4	<0.793	<0.511
	4-Aug-17	L927407-03	<1.07	<0.793	<0.511
	15-Aug-17	L930026-03	7.61	<0.793	<0.511
	5-Sep-17	L934535-03	6.85	5.17	<0.511
	21-Sep-17	L938896-03	4.65	<0.793	<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
	28-Jun-17	L920054-10	3.56	<0.793	<0.511
	21-Jul-17	L924410-04	3.27	<0.793	<0.511
	4-Aug-17	L927407-04	3.02	<0.793	<0.511
	15-Aug-17	L930026-04	<5.36	<3.96	<2.56
	5-Sep-17	L934535-04	3.04	5.6	<0.511
	21-Sep-17	L938896-04	1.46	<0.793	<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
	28-Jun-17	L920054-08	<1.07	<0.793	<0.511
	21-Jul-17	L924410-05	1.08	<0.793	<0.511
	4-Aug-17	L927407-05	<1.07	<0.793	<0.511
	15-Aug-17	L930026-05	<1.07	<0.793	<0.511
	5-Sep-17	L934535-05	<1.07	<0.793	<0.511

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

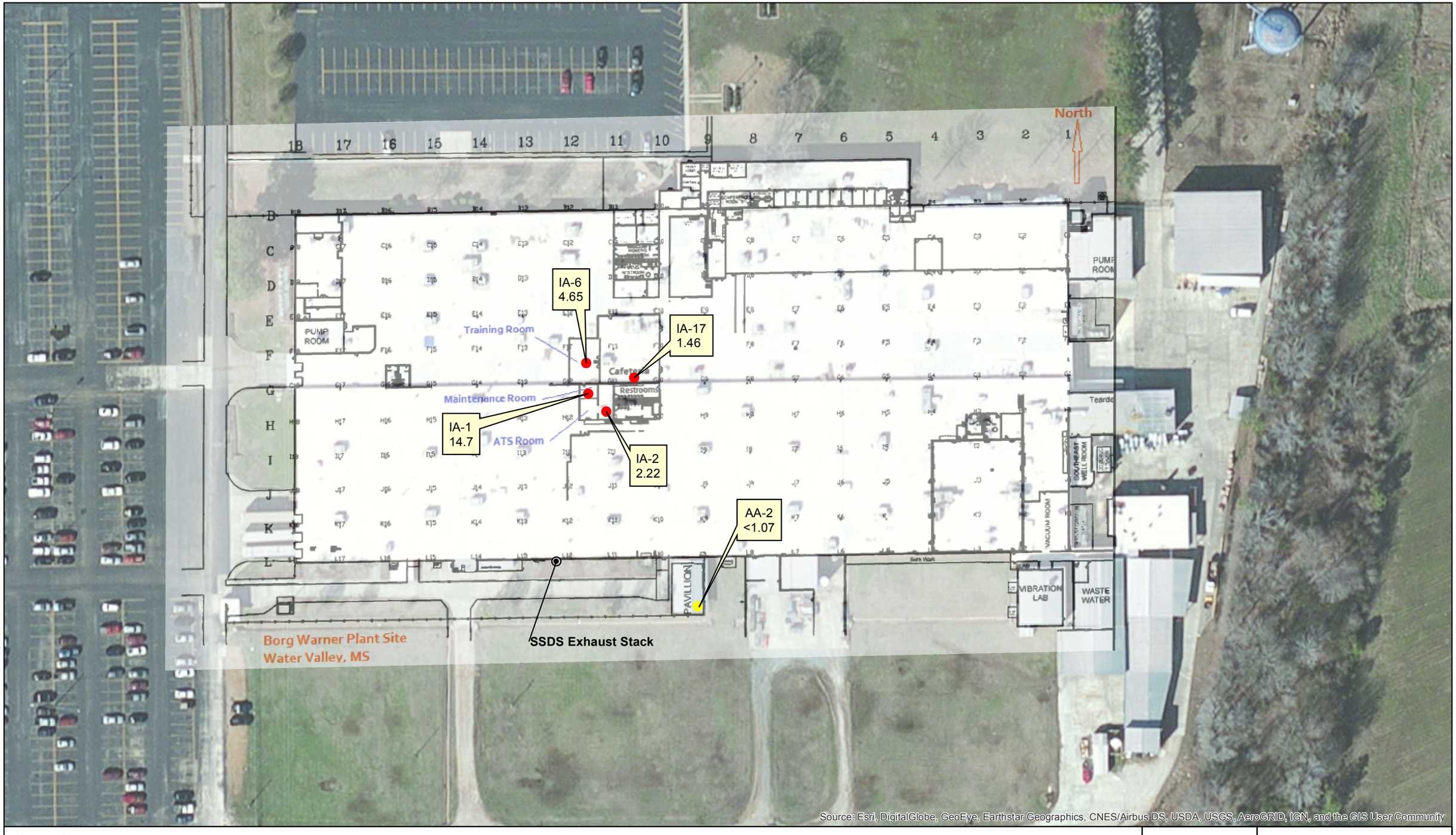
SAMPLE ID	SAMPLING DATE	LABORATORY ID	CoC Concentrations (µg/m³)		
			Trichloroethene	cis-1,2-Dichloroethene	Vinyl chloride
USEPA Vapor Intrusion Screening Level (VISL):			**3**	NA	**2.8**
IA-C16	26-Apr-17	L905292-05	6.48	1.82	<0.511
	25-May-17	L912423-06	3.88	<0.793	<0.511
	7-Jun-17	L914832-08	1.55	<0.793	<0.511
	19-Jun-17	L917924-07	2	<0.793	<0.511
	28-Jun-17	L920054-07	1.22	<0.793	<0.511
	21-Jul-17	L924410-06	1.08	<0.793	<0.511
	4-Aug-17	L927407-06	1.25	<0.793	<0.511
	15-Aug-17	L930026-06	<1.07	<0.793	<0.511
	5-Sep-17	L934535-06	<1.07	<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
	28-Jun-17	L920054-03	<1.07	<0.793	<0.511
	21-Jul-17	L924410-08	<1.07	<0.793	<0.511
	4-Aug-17	L927407-10	<1.07	<0.793	<0.511
	15-Aug-17	L930026-10	<1.07	<0.793	<0.511
	5-Sep-17	L934535-10	1.3	<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
	28-Jun-17	L920054-02	<1.07	<0.793	<0.511
	21-Jul-17	L924410-09	<1.07	<0.793	<0.511
	4-Aug-17	L927407-11	<1.07	<0.793	<0.511
	15-Aug-17	L930026-11	<1.07	<0.793	<0.511
	5-Sep-17	L934535-11	1.17	<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
	28-Jun-17	L920054-06	1.41	<0.793	<0.511
	21-Jul-17	L924410-07	1.6	<0.793	<0.511
	4-Aug-17	L927407-07	1.76	<0.793	<0.511
	15-Aug-17	L930026-07	1.25	<0.793	<0.511
	5-Sep-17	L934535-07	1.78	<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
	28-Jun-17	L920054-01	<1.07	<0.793	<0.511
	21-Jul-17	L924410-10	<1.07	<0.793	<0.511
	4-Aug-17	L927407-12	<1.07	<0.793	<0.511
	15-Aug-17	L930026-12	<1.07	<0.793	<0.511
	5-Sep-17	L934535-12	<1.07	<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
	28-Jun-17	L920054-05	1.33	<0.793	<0.511
	21-Jul-17	L924410-12	1.34	<0.793	<0.511
	4-Aug-17	L927407-08	<1.07	<0.793	<0.511
	15-Aug-17	L930026-08	<1.07	<0.793	<0.511
	5-Sep-17	L934535-08	1.67	<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
	28-Jun-17	L920054-04	1.32	<0.793	<0.511
	21-Jul-17	L924410-11	1.18	<0.793	<0.511
	4-Aug-17	L927407-09	<1.07	<0.793	<0.511
	15-Aug-17	L930026-09	1.13	<0.793	<0.511
	5-Sep-17	L934535-09	1.14	<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
	28-Jun-17	L920054-14	3.75	<0.793	<0.511
AA-1	19-Jan-17	L1702183-17	<0.107	<0.079	<0.051

TABLE 2
INDOOR AIR SAMPLING RESULTS COMPARISON
JANUARY THROUGH SEPTEMBER 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**
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
	28-Jun-17	L920054-09	16.7	<0.793	<0.511
	21-Jul-17	L924410-13	<1.07	<0.793	<0.511
	4-Aug-17	L927407-13	<1.07	<0.793	<0.511
	15-Aug-17	L930026-13	<1.07	<0.793	<0.511
	5-Sep-17	L934535-13	<1.07	<0.793	<0.511
	21-Sep-17	L938896-05	<1.07	<0.793	<0.511
IA-ATS-2ND F	15-Aug-17	L930026-14	1.86	<0.793	<0.511
IA-OFFICE 2ND F	15-Aug-17	L930026-15	<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=
TCR: Target Carcinogen Risk
THQ: Target Hazard Quotient for Non-Carcinogens

FIGURE



Legend

- IA-1: Indoor Air Concentrations in ug/m3 selection
- AA-1: Ambient Air Concentrations in ug/m3
- SSDS Exhaust Stack

USEPA Screening Level for TCE: 3 ug/m3
MDEQ Action Level for TCE: 26 ug/m3

TCE Level Exceeding the MDEQ Action Level

ND Concentration not detected above laboratory reported limits

0 20 40 80 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
SEPTEMBER 21 2017

Revised	Drawn	Checked	Approved	Date
LS	NMT	NMT	NMT	10/4/17

APPENDIX A

ANALYTICAL REPORT

September 29, 2017

First Environment, Inc.

Sample Delivery Group:	L938896
Samples Received:	09/23/2017
Project Number:	ENPRO 002D - VM
Description:	EnPro Water Vallet, MS - Site
Site:	BORG WARNER PLANT SITE
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.

TABLE OF CONTENTS

IA-1 L938896-01 Air

Collected by: Michael Slack
Collected date/time: 09/21/17 13:00
Received date/time: 09/23/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG1024296	1	09/25/17 22:40	09/25/17 22:40	MBF
Volatile Organic Compounds (MS) by Method TO-15	WG1024799	25	09/27/17 00:05	09/27/17 00:05	AMC

IA-2 L938896-02 Air

Collected by: Michael Slack
Collected date/time: 09/21/17 13:02
Received date/time: 09/23/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG1024296	1	09/25/17 23:35	09/25/17 23:35	MBF
Volatile Organic Compounds (MS) by Method TO-15	WG1024799	25	09/27/17 00:45	09/27/17 00:45	AMC

IA-6 L938896-03 Air

Collected by: Michael Slack
Collected date/time: 09/21/17 12:50
Received date/time: 09/23/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG1024296	1	09/26/17 00:27	09/26/17 00:27	MBF
Volatile Organic Compounds (MS) by Method TO-15	WG1024799	25	09/27/17 01:23	09/27/17 01:23	AMC

IA-17 L938896-04 Air

Collected by: Michael Slack
Collected date/time: 09/21/17 13:51
Received date/time: 09/23/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG1024296	1	09/26/17 01:21	09/26/17 01:21	MBF
Volatile Organic Compounds (MS) by Method TO-15	WG1024799	25	09/27/17 02:03	09/27/17 02:03	AMC

AA-2 L938896-05 Air

Collected by: Michael Slack
Collected date/time: 09/21/17 13:04
Received date/time: 09/23/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG1024296	1	09/26/17 02:09	09/26/17 02:09	MBF

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 radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client. 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

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	268		25	WG1024799
Allyl chloride	107-05-1	76.53	0.200	0.626	ND	ND		1	WG1024296
Benzene	71-43-2	78.10	0.200	0.639	0.338	1.08		1	WG1024296
Benzyl Chloride	100-44-7	127	0.200	1.04	ND	ND		1	WG1024296
Bromodichloromethane	75-27-4	164	0.200	1.34	ND	ND		1	WG1024296
Bromoform	75-25-2	253	0.600	6.21	ND	ND		1	WG1024296
Bromomethane	74-83-9	94.90	0.200	0.776	ND	ND		1	WG1024296
1,3-Butadiene	106-99-0	54.10	2.00	4.43	ND	ND		1	WG1024296
Carbon disulfide	75-15-0	76.10	0.200	0.622	ND	ND		1	WG1024296
Carbon tetrachloride	56-23-5	154	0.200	1.26	ND	ND		1	WG1024296
Chlorobenzene	108-90-7	113	0.200	0.924	ND	ND		1	WG1024296
Chloroethane	75-00-3	64.50	0.200	0.528	ND	ND		1	WG1024296
Chloroform	67-66-3	119	0.200	0.973	ND	ND		1	WG1024296
Chloromethane	74-87-3	50.50	0.200	0.413	0.485	1.00		1	WG1024296
2-Chlorotoluene	95-49-8	126	0.200	1.03	ND	ND		1	WG1024296
Cyclohexane	110-82-7	84.20	0.200	0.689	0.991	3.41		1	WG1024296
Dibromochloromethane	124-48-1	208	0.200	1.70	ND	ND		1	WG1024296
1,2-Dibromoethane	106-93-4	188	0.200	1.54	ND	ND		1	WG1024296
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	ND	ND		1	WG1024296
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	ND	ND		1	WG1024296
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	ND	ND		1	WG1024296
1,2-Dichloroethane	107-06-2	99	0.200	0.810	ND	ND		1	WG1024296
1,1-Dichloroethane	75-34-3	98	0.200	0.802	ND	ND		1	WG1024296
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	WG1024296
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	ND	ND		1	WG1024296
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	0.212	0.839		1	WG1024296
1,2-Dichloropropane	78-87-5	113	0.200	0.924	ND	ND		1	WG1024296
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.908	ND	ND		1	WG1024296
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.908	ND	ND		1	WG1024296
1,4-Dioxane	123-91-1	88.10	0.200	0.721	ND	ND		1	WG1024296
Ethanol	64-17-5	46.10	15.8	29.8	1390	2620	E	25	WG1024799
Ethylbenzene	100-41-4	106	0.200	0.867	0.514	2.23		1	WG1024296
4-Ethyltoluene	622-96-8	120	0.200	0.982	0.344	1.69		1	WG1024296
Trichlorofluoromethane	75-69-4	137.40	0.200	1.12	0.263	1.48		1	WG1024296
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.989	0.297	1.47		1	WG1024296
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.200	1.53	ND	ND		1	WG1024296
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	ND	ND		1	WG1024296
Heptane	142-82-5	100	0.200	0.818	8.03	32.8		1	WG1024296
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.73	ND	ND		1	WG1024296
n-Hexane	110-54-3	86.20	0.200	0.705	0.282	0.996		1	WG1024296
Isopropylbenzene	98-82-8	120.20	0.200	0.983	ND	ND		1	WG1024296
Methylene Chloride	75-09-2	84.90	0.200	0.694	0.365	1.27		1	WG1024296
Methyl Butyl Ketone	591-78-6	100	1.25	5.11	ND	ND		1	WG1024296
2-Butanone (MEK)	78-93-3	72.10	31.2	92.0	142	418		25	WG1024799
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	1.25	5.12	ND	ND		1	WG1024296
Methyl methacrylate	80-62-6	100.12	0.200	0.819	ND	ND		1	WG1024296
MTBE	1634-04-4	88.10	0.200	0.721	ND	ND		1	WG1024296
Naphthalene	91-20-3	128	0.630	3.30	ND	ND		1	WG1024296
2-Propanol	67-63-0	60.10	31.2	76.7	1470	3610	E	25	WG1024799
Propene	115-07-1	42.10	0.400	0.689	ND	ND		1	WG1024296
Styrene	100-42-5	104	0.200	0.851	0.262	1.11		1	WG1024296
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.37	ND	ND		1	WG1024296
Tetrachloroethylene	127-18-4	166	0.200	1.36	ND	ND		1	WG1024296
Tetrahydrofuran	109-99-9	72.10	0.200	0.590	ND	ND		1	WG1024296
Toluene	108-88-3	92.10	0.200	0.753	2.48	9.35		1	WG1024296
1,2,4-Trichlorobenzene	120-82-1	181	0.630	4.66	ND	ND		1	WG1024296

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	WG1024296
1,1,2-Trichloroethane	79-00-5	133	0.200	1.09	ND	ND		1	WG1024296
Trichloroethylene	79-01-6	131	0.200	1.07	2.74	14.7		1	WG1024296
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	0.609	2.99		1	WG1024296
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.982	ND	ND		1	WG1024296
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.934	2.63	12.3		1	WG1024296
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	WG1024296
Vinyl Bromide	593-60-2	106.95	0.200	0.875	ND	ND		1	WG1024296
Vinyl acetate	108-05-4	86.10	0.200	0.704	ND	ND		1	WG1024296
m&p-Xylene	1330-20-7	106	0.400	1.73	1.75	7.60		1	WG1024296
o-Xylene	95-47-6	106	0.200	0.867	0.610	2.64		1	WG1024296
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*98.8*				WG1024799
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*128*				WG1024296

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	151	358		25	WG1024799
Allyl chloride	107-05-1	76.53	0.200	0.626	ND	ND		1	WG1024296
Benzene	71-43-2	78.10	0.200	0.639	0.311	0.995		1	WG1024296
Benzyl Chloride	100-44-7	127	0.200	1.04	ND	ND		1	WG1024296
Bromodichloromethane	75-27-4	164	0.200	1.34	ND	ND		1	WG1024296
Bromoform	75-25-2	253	0.600	6.21	ND	ND		1	WG1024296
Bromomethane	74-83-9	94.90	0.200	0.776	ND	ND		1	WG1024296
1,3-Butadiene	106-99-0	54.10	2.00	4.43	ND	ND		1	WG1024296
Carbon disulfide	75-15-0	76.10	0.200	0.622	ND	ND		1	WG1024296
Carbon tetrachloride	56-23-5	154	0.200	1.26	ND	ND		1	WG1024296
Chlorobenzene	108-90-7	113	0.200	0.924	ND	ND		1	WG1024296
Chloroethane	75-00-3	64.50	0.200	0.528	ND	ND		1	WG1024296
Chloroform	67-66-3	119	0.200	0.973	ND	ND		1	WG1024296
Chloromethane	74-87-3	50.50	0.200	0.413	0.517	1.07		1	WG1024296
2-Chlorotoluene	95-49-8	126	0.200	1.03	ND	ND		1	WG1024296
Cyclohexane	110-82-7	84.20	0.200	0.689	1.13	3.88		1	WG1024296
Dibromochloromethane	124-48-1	208	0.200	1.70	ND	ND		1	WG1024296
1,2-Dibromoethane	106-93-4	188	0.200	1.54	ND	ND		1	WG1024296
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	ND	ND		1	WG1024296
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	ND	ND		1	WG1024296
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	ND	ND		1	WG1024296
1,2-Dichloroethane	107-06-2	99	0.200	0.810	ND	ND		1	WG1024296
1,1-Dichloroethane	75-34-3	98	0.200	0.802	ND	ND		1	WG1024296
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	WG1024296
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	ND	ND		1	WG1024296
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	0.261	1.03		1	WG1024296
1,2-Dichloropropane	78-87-5	113	0.200	0.924	ND	ND		1	WG1024296
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.908	ND	ND		1	WG1024296
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.908	ND	ND		1	WG1024296
1,4-Dioxane	123-91-1	88.10	0.200	0.721	ND	ND		1	WG1024296
Ethanol	64-17-5	46.10	15.8	29.8	2300	4340	E	25	WG1024799
Ethylbenzene	100-41-4	106	0.200	0.867	0.589	2.55		1	WG1024296
4-Ethyltoluene	622-96-8	120	0.200	0.982	0.372	1.82		1	WG1024296
Trichlorofluoromethane	75-69-4	137.40	0.200	1.12	0.266	1.49		1	WG1024296
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.989	0.310	1.53		1	WG1024296
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.200	1.53	ND	ND		1	WG1024296
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	ND	ND		1	WG1024296
Heptane	142-82-5	100	0.200	0.818	9.49	38.8		1	WG1024296
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.73	ND	ND		1	WG1024296
n-Hexane	110-54-3	86.20	0.200	0.705	0.215	0.759		1	WG1024296
Isopropylbenzene	98-82-8	120.20	0.200	0.983	ND	ND		1	WG1024296
Methylene Chloride	75-09-2	84.90	0.200	0.694	ND	ND		1	WG1024296
Methyl Butyl Ketone	591-78-6	100	1.25	5.11	ND	ND		1	WG1024296
2-Butanone (MEK)	78-93-3	72.10	31.2	92.0	206	606		25	WG1024799
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	1.25	5.12	ND	ND		1	WG1024296
Methyl methacrylate	80-62-6	100.12	0.200	0.819	ND	ND		1	WG1024296
MTBE	1634-04-4	88.10	0.200	0.721	ND	ND		1	WG1024296
Naphthalene	91-20-3	128	0.630	3.30	ND	ND		1	WG1024296
2-Propanol	67-63-0	60.10	31.2	76.7	2330	5740	E	25	WG1024799
Propene	115-07-1	42.10	0.400	0.689	ND	ND		1	WG1024296
Styrene	100-42-5	104	0.200	0.851	0.252	1.07		1	WG1024296
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.37	ND	ND		1	WG1024296
Tetrachloroethylene	127-18-4	166	0.200	1.36	ND	ND		1	WG1024296
Tetrahydrofuran	109-99-9	72.10	0.200	0.590	ND	ND		1	WG1024296
Toluene	108-88-3	92.10	0.200	0.753	1.86	7.00		1	WG1024296
1,2,4-Trichlorobenzene	120-82-1	181	0.630	4.66	ND	ND		1	WG1024296

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	WG1024296
1,1,2-Trichloroethane	79-00-5	133	0.200	1.09	ND	ND		1	WG1024296
Trichloroethylene	79-01-6	131	0.200	1.07	0.415	2.22		1	WG1024296
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	0.676	3.32		1	WG1024296
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.982	0.211	1.04		1	WG1024296
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.934	3.20	14.9		1	WG1024296
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	WG1024296
Vinyl Bromide	593-60-2	106.95	0.200	0.875	ND	ND		1	WG1024296
Vinyl acetate	108-05-4	86.10	0.200	0.704	ND	ND		1	WG1024296
m&p-Xylene	1330-20-7	106	0.400	1.73	2.07	8.95		1	WG1024296
o-Xylene	95-47-6	106	0.200	0.867	0.688	2.98		1	WG1024296
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*96.4*				WG1024799
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*141*		J1		WG1024296

Sample Narrative:

L938896-02 WG1024296: Surrogate failure due to matrix interference.

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	120	285		25	WG1024799
Allyl chloride	107-05-1	76.53	0.200	0.626	ND	ND		1	WG1024296
Benzene	71-43-2	78.10	0.200	0.639	0.430	1.37		1	WG1024296
Benzyl Chloride	100-44-7	127	0.200	1.04	ND	ND		1	WG1024296
Bromodichloromethane	75-27-4	164	0.200	1.34	ND	ND		1	WG1024296
Bromoform	75-25-2	253	0.600	6.21	ND	ND		1	WG1024296
Bromomethane	74-83-9	94.90	0.200	0.776	ND	ND		1	WG1024296
1,3-Butadiene	106-99-0	54.10	2.00	4.43	ND	ND		1	WG1024296
Carbon disulfide	75-15-0	76.10	0.200	0.622	ND	ND		1	WG1024296
Carbon tetrachloride	56-23-5	154	0.200	1.26	ND	ND		1	WG1024296
Chlorobenzene	108-90-7	113	0.200	0.924	ND	ND		1	WG1024296
Chloroethane	75-00-3	64.50	0.200	0.528	ND	ND		1	WG1024296
Chloroform	67-66-3	119	0.200	0.973	ND	ND		1	WG1024296
Chloromethane	74-87-3	50.50	0.200	0.413	0.530	1.09		1	WG1024296
2-Chlorotoluene	95-49-8	126	0.200	1.03	ND	ND		1	WG1024296
Cyclohexane	110-82-7	84.20	0.200	0.689	0.752	2.59		1	WG1024296
Dibromochloromethane	124-48-1	208	0.200	1.70	ND	ND		1	WG1024296
1,2-Dibromoethane	106-93-4	188	0.200	1.54	ND	ND		1	WG1024296
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	ND	ND		1	WG1024296
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	ND	ND		1	WG1024296
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	ND	ND		1	WG1024296
1,2-Dichloroethane	107-06-2	99	0.200	0.810	ND	ND		1	WG1024296
1,1-Dichloroethane	75-34-3	98	0.200	0.802	ND	ND		1	WG1024296
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	WG1024296
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	ND	ND		1	WG1024296
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	0.275	1.09		1	WG1024296
1,2-Dichloropropane	78-87-5	113	0.200	0.924	ND	ND		1	WG1024296
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.908	ND	ND		1	WG1024296
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.908	ND	ND		1	WG1024296
1,4-Dioxane	123-91-1	88.10	0.200	0.721	ND	ND		1	WG1024296
Ethanol	64-17-5	46.10	15.8	29.8	1700	3200	E	25	WG1024799
Ethylbenzene	100-41-4	106	0.200	0.867	0.623	2.70		1	WG1024296
4-Ethyltoluene	622-96-8	120	0.200	0.982	0.765	3.76		1	WG1024296
Trichlorofluoromethane	75-69-4	137.40	0.200	1.12	0.262	1.47		1	WG1024296
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.989	0.304	1.50		1	WG1024296
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.200	1.53	ND	ND		1	WG1024296
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	ND	ND		1	WG1024296
Heptane	142-82-5	100	0.200	0.818	6.34	25.9		1	WG1024296
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.73	ND	ND		1	WG1024296
n-Hexane	110-54-3	86.20	0.200	0.705	0.515	1.81		1	WG1024296
Isopropylbenzene	98-82-8	120.20	0.200	0.983	ND	ND		1	WG1024296
Methylene Chloride	75-09-2	84.90	0.200	0.694	ND	ND		1	WG1024296
Methyl Butyl Ketone	591-78-6	100	1.25	5.11	ND	ND		1	WG1024296
2-Butanone (MEK)	78-93-3	72.10	31.2	92.0	179	528		25	WG1024799
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	1.25	5.12	ND	ND		1	WG1024296
Methyl methacrylate	80-62-6	100.12	0.200	0.819	ND	ND		1	WG1024296
MTBE	1634-04-4	88.10	0.200	0.721	ND	ND		1	WG1024296
Naphthalene	91-20-3	128	0.630	3.30	ND	ND		1	WG1024296
2-Propanol	67-63-0	60.10	31.2	76.7	1630	4010	E	25	WG1024799
Propene	115-07-1	42.10	0.400	0.689	ND	ND		1	WG1024296
Styrene	100-42-5	104	0.200	0.851	0.282	1.20		1	WG1024296
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.37	ND	ND		1	WG1024296
Tetrachloroethylene	127-18-4	166	0.200	1.36	ND	ND		1	WG1024296
Tetrahydrofuran	109-99-9	72.10	0.200	0.590	ND	ND		1	WG1024296
Toluene	108-88-3	92.10	0.200	0.753	2.48	9.34		1	WG1024296
1,2,4-Trichlorobenzene	120-82-1	181	0.630	4.66	ND	ND		1	WG1024296

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	WG1024296
1,1,2-Trichloroethane	79-00-5	133	0.200	1.09	ND	ND		1	WG1024296
Trichloroethylene	79-01-6	131	0.200	1.07	0.867	4.65		1	WG1024296
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	1.12	5.49		1	WG1024296
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.982	0.361	1.77		1	WG1024296
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.934	2.75	12.8		1	WG1024296
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	WG1024296
Vinyl Bromide	593-60-2	106.95	0.200	0.875	ND	ND		1	WG1024296
Vinyl acetate	108-05-4	86.10	0.200	0.704	ND	ND		1	WG1024296
m&p-Xylene	1330-20-7	106	0.400	1.73	2.65	11.5		1	WG1024296
o-Xylene	95-47-6	106	0.200	0.867	0.967	4.19		1	WG1024296
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*120*				WG1024296
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*133*				WG1024799

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	74.9	178		25	WG1024799
Allyl chloride	107-05-1	76.53	0.200	0.626	ND	ND		1	WG1024296
Benzene	71-43-2	78.10	0.200	0.639	0.248	0.792		1	WG1024296
Benzyl Chloride	100-44-7	127	0.200	1.04	ND	ND		1	WG1024296
Bromodichloromethane	75-27-4	164	0.200	1.34	ND	ND		1	WG1024296
Bromoform	75-25-2	253	0.600	6.21	ND	ND		1	WG1024296
Bromomethane	74-83-9	94.90	0.200	0.776	ND	ND		1	WG1024296
1,3-Butadiene	106-99-0	54.10	2.00	4.43	ND	ND		1	WG1024296
Carbon disulfide	75-15-0	76.10	0.200	0.622	ND	ND		1	WG1024296
Carbon tetrachloride	56-23-5	154	0.200	1.26	ND	ND		1	WG1024296
Chlorobenzene	108-90-7	113	0.200	0.924	ND	ND		1	WG1024296
Chloroethane	75-00-3	64.50	0.200	0.528	ND	ND		1	WG1024296
Chloroform	67-66-3	119	0.200	0.973	ND	ND		1	WG1024296
Chloromethane	74-87-3	50.50	0.200	0.413	0.443	0.915		1	WG1024296
2-Chlorotoluene	95-49-8	126	0.200	1.03	ND	ND		1	WG1024296
Cyclohexane	110-82-7	84.20	0.200	0.689	0.515	1.77		1	WG1024296
Dibromochloromethane	124-48-1	208	0.200	1.70	ND	ND		1	WG1024296
1,2-Dibromoethane	106-93-4	188	0.200	1.54	ND	ND		1	WG1024296
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	ND	ND		1	WG1024296
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	ND	ND		1	WG1024296
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	ND	ND		1	WG1024296
1,2-Dichloroethane	107-06-2	99	0.200	0.810	ND	ND		1	WG1024296
1,1-Dichloroethane	75-34-3	98	0.200	0.802	ND	ND		1	WG1024296
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	WG1024296
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	ND	ND		1	WG1024296
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	ND	ND		1	WG1024296
1,2-Dichloropropane	78-87-5	113	0.200	0.924	ND	ND		1	WG1024296
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.908	ND	ND		1	WG1024296
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.908	ND	ND		1	WG1024296
1,4-Dioxane	123-91-1	88.10	0.200	0.721	ND	ND		1	WG1024296
Ethanol	64-17-5	46.10	15.8	29.8	1240	2340		25	WG1024799
Ethylbenzene	100-41-4	106	0.200	0.867	0.308	1.34		1	WG1024296
4-Ethyltoluene	622-96-8	120	0.200	0.982	0.244	1.20		1	WG1024296
Trichlorofluoromethane	75-69-4	137.40	0.200	1.12	0.254	1.43		1	WG1024296
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.989	0.302	1.49		1	WG1024296
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.200	1.53	ND	ND		1	WG1024296
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	ND	ND		1	WG1024296
Heptane	142-82-5	100	0.200	0.818	3.71	15.2		1	WG1024296
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.73	ND	ND		1	WG1024296
n-Hexane	110-54-3	86.20	0.200	0.705	0.300	1.06		1	WG1024296
Isopropylbenzene	98-82-8	120.20	0.200	0.983	ND	ND		1	WG1024296
Methylene Chloride	75-09-2	84.90	0.200	0.694	1.86	6.47		1	WG1024296
Methyl Butyl Ketone	591-78-6	100	1.25	5.11	ND	ND		1	WG1024296
2-Butanone (MEK)	78-93-3	72.10	31.2	92.0	95.5	282		25	WG1024799
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	1.25	5.12	ND	ND		1	WG1024296
Methyl methacrylate	80-62-6	100.12	0.200	0.819	ND	ND		1	WG1024296
MTBE	1634-04-4	88.10	0.200	0.721	ND	ND		1	WG1024296
Naphthalene	91-20-3	128	0.630	3.30	ND	ND		1	WG1024296
2-Propanol	67-63-0	60.10	31.2	76.7	971	2390		25	WG1024799
Propene	115-07-1	42.10	0.400	0.689	ND	ND		1	WG1024296
Styrene	100-42-5	104	0.200	0.851	0.206	0.874		1	WG1024296
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.37	ND	ND		1	WG1024296
Tetrachloroethylene	127-18-4	166	0.200	1.36	ND	ND		1	WG1024296
Tetrahydrofuran	109-99-9	72.10	0.200	0.590	ND	ND		1	WG1024296
Toluene	108-88-3	92.10	0.200	0.753	1.22	4.58		1	WG1024296
1,2,4-Trichlorobenzene	120-82-1	181	0.630	4.66	ND	ND		1	WG1024296

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	WG1024296
1,1,2-Trichloroethane	79-00-5	133	0.200	1.09	ND	ND		1	WG1024296
Trichloroethylene	79-01-6	131	0.200	1.07	0.273	1.46		1	WG1024296
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	0.409	2.01		1	WG1024296
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.982	ND	ND		1	WG1024296
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.934	1.26	5.87		1	WG1024296
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	WG1024296
Vinyl Bromide	593-60-2	106.95	0.200	0.875	ND	ND		1	WG1024296
Vinyl acetate	108-05-4	86.10	0.200	0.704	ND	ND		1	WG1024296
m&p-Xylene	1330-20-7	106	0.400	1.73	1.02	4.40		1	WG1024296
o-Xylene	95-47-6	106	0.200	0.867	0.356	1.54		1	WG1024296
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*116*				WG1024296
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*99.2*				WG1024799

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	5.37	12.8		1	WG1024296
Allyl chloride	107-05-1	76.53	0.200	0.626	ND	ND		1	WG1024296
Benzene	71-43-2	78.10	0.200	0.639	ND	ND		1	WG1024296
Benzyl Chloride	100-44-7	127	0.200	1.04	ND	ND		1	WG1024296
Bromodichloromethane	75-27-4	164	0.200	1.34	ND	ND		1	WG1024296
Bromoform	75-25-2	253	0.600	6.21	ND	ND		1	WG1024296
Bromomethane	74-83-9	94.90	0.200	0.776	ND	ND		1	WG1024296
1,3-Butadiene	106-99-0	54.10	2.00	4.43	ND	ND		1	WG1024296
Carbon disulfide	75-15-0	76.10	0.200	0.622	ND	ND		1	WG1024296
Carbon tetrachloride	56-23-5	154	0.200	1.26	ND	ND		1	WG1024296
Chlorobenzene	108-90-7	113	0.200	0.924	ND	ND		1	WG1024296
Chloroethane	75-00-3	64.50	0.200	0.528	ND	ND		1	WG1024296
Chloroform	67-66-3	119	0.200	0.973	ND	ND		1	WG1024296
Chloromethane	74-87-3	50.50	0.200	0.413	0.381	0.786		1	WG1024296
2-Chlorotoluene	95-49-8	126	0.200	1.03	ND	ND		1	WG1024296
Cyclohexane	110-82-7	84.20	0.200	0.689	ND	ND		1	WG1024296
Dibromochloromethane	124-48-1	208	0.200	1.70	ND	ND		1	WG1024296
1,2-Dibromoethane	106-93-4	188	0.200	1.54	ND	ND		1	WG1024296
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	ND	ND		1	WG1024296
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	ND	ND		1	WG1024296
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	ND	ND		1	WG1024296
1,2-Dichloroethane	107-06-2	99	0.200	0.810	ND	ND		1	WG1024296
1,1-Dichloroethane	75-34-3	98	0.200	0.802	ND	ND		1	WG1024296
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	WG1024296
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	ND	ND		1	WG1024296
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	ND	ND		1	WG1024296
1,2-Dichloropropane	78-87-5	113	0.200	0.924	ND	ND		1	WG1024296
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.908	ND	ND		1	WG1024296
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.908	ND	ND		1	WG1024296
1,4-Dioxane	123-91-1	88.10	0.200	0.721	ND	ND		1	WG1024296
Ethanol	64-17-5	46.10	0.630	1.19	11.3	21.2		1	WG1024296
Ethylbenzene	100-41-4	106	0.200	0.867	ND	ND		1	WG1024296
4-Ethyltoluene	622-96-8	120	0.200	0.982	ND	ND		1	WG1024296
Trichlorofluoromethane	75-69-4	137.40	0.200	1.12	0.230	1.29		1	WG1024296
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.989	0.316	1.56		1	WG1024296
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.200	1.53	ND	ND		1	WG1024296
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	ND	ND		1	WG1024296
Heptane	142-82-5	100	0.200	0.818	0.235	0.962		1	WG1024296
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.73	ND	ND		1	WG1024296
n-Hexane	110-54-3	86.20	0.200	0.705	0.461	1.63		1	WG1024296
Isopropylbenzene	98-82-8	120.20	0.200	0.983	ND	ND		1	WG1024296
Methylene Chloride	75-09-2	84.90	0.200	0.694	8.67	30.1		1	WG1024296
Methyl Butyl Ketone	591-78-6	100	1.25	5.11	ND	ND		1	WG1024296
2-Butanone (MEK)	78-93-3	72.10	1.25	3.69	ND	ND		1	WG1024296
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	1.25	5.12	ND	ND		1	WG1024296
Methyl methacrylate	80-62-6	100.12	0.200	0.819	ND	ND		1	WG1024296
MTBE	1634-04-4	88.10	0.200	0.721	ND	ND		1	WG1024296
Naphthalene	91-20-3	128	0.630	3.30	ND	ND		1	WG1024296
2-Propanol	67-63-0	60.10	1.25	3.07	2.92	7.17		1	WG1024296
Propene	115-07-1	42.10	0.400	0.689	ND	ND		1	WG1024296
Styrene	100-42-5	104	0.200	0.851	ND	ND		1	WG1024296
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.37	ND	ND		1	WG1024296
Tetrachloroethylene	127-18-4	166	0.200	1.36	ND	ND		1	WG1024296
Tetrahydrofuran	109-99-9	72.10	0.200	0.590	ND	ND		1	WG1024296
Toluene	108-88-3	92.10	0.200	0.753	0.531	2.00		1	WG1024296
1,2,4-Trichlorobenzene	120-82-1	181	0.630	4.66	ND	ND		1	WG1024296

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	WG1024296
1,1,2-Trichloroethane	79-00-5	133	0.200	1.09	ND	ND		1	WG1024296
Trichloroethylene	79-01-6	131	0.200	1.07	ND	ND		1	WG1024296
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	ND	ND		1	WG1024296
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.982	ND	ND		1	WG1024296
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.934	ND	ND		1	WG1024296
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	WG1024296
Vinyl Bromide	593-60-2	106.95	0.200	0.875	ND	ND		1	WG1024296
Vinyl acetate	108-05-4	86.10	0.200	0.704	ND	ND		1	WG1024296
m&p-Xylene	1330-20-7	106	0.400	1.73	ND	ND		1	WG1024296
o-Xylene	95-47-6	106	0.200	0.867	ND	ND		1	WG1024296
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*99.8*				WG1024296

Method Blank (MB)

(MB) R3252419-3 09/25/17 09:59

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

Method Blank (MB)

(MB) R3252419-3 09/25/17 09:59

Analyte	MB Result ppbv	MB Qualifier	MB MDL ppbv	MB RDL ppbv
Methylene Chloride	U		0.0465	0.200
Methyl Butyl Ketone	U		0.0682	1.25
2-Butanone (MEK)	U		0.0493	1.25
4-Methyl-2-pentanone (MIBK)	U		0.0650	1.25
Methyl Methacrylate	U		0.0773	0.200
MTBE	U		0.0505	0.200
Naphthalene	U		0.154	0.630
2-Propanol	U		0.0882	1.25
Propene	U		0.0932	0.400
Styrene	U		0.0465	0.200
1,1,2,2-Tetrachloroethane	U		0.0576	0.200
Tetrachloroethylene	U		0.0497	0.200
Tetrahydrofuran	U		0.0508	0.200
Toluene	U		0.0499	0.200
1,2,4-Trichlorobenzene	U		0.148	0.630
1,1,1-Trichloroethane	U		0.0665	0.200
1,1,2-Trichloroethane	U		0.0287	0.200
Trichloroethylene	U		0.0545	0.200
1,2,4-Trimethylbenzene	U		0.0483	0.200
1,3,5-Trimethylbenzene	U		0.0631	0.200
2,2,4-Trimethylpentane	U		0.0456	0.200
Vinyl chloride	U		0.0457	0.200
Vinyl Bromide	U		0.0727	0.200
Vinyl acetate	U		0.0639	0.200
m&p-Xylene	U		0.0946	0.400
o-Xylene	U		0.0633	0.200
Ethanol	U		0.0832	0.630
(S) 1,4-Bromofluorobenzene	*96.8*			*60.0-140*

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

(LCS) R3252419-1 09/25/17 08:24 • (LCSD) R3252419-2 09/25/17 09:11

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	3.42	3.43	91.2	91.4	52.0-158			0.220	25
Propene	3.75	3.56	3.49	94.8	93.1	54.0-155			1.85	25
Dichlorodifluoromethane	3.75	3.41	3.31	91.0	88.4	69.0-143			2.94	25
1,2-Dichlorotetrafluoroethane	3.75	3.88	3.85	103	103	70.0-130			0.730	25
Chloromethane	3.75	3.22	3.13	86.0	83.5	70.0-130			2.93	25

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

(LCS) R3252419-1 09/25/17 08:24 • (LCSD) R3252419-2 09/25/17 09:11

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	3.56	3.52	95.0	93.9	70.0-130			1.20	25
1,3-Butadiene	3.75	3.70	3.68	98.5	98.1	70.0-130			0.460	25
Bromomethane	3.75	3.96	3.96	105	105	70.0-130			0.0100	25
Chloroethane	3.75	3.77	3.72	101	99.3	70.0-130			1.32	25
Trichlorofluoromethane	3.75	3.59	4.07	95.7	108	70.0-130			12.5	25
1,1,2-Trichlorotrifluoroethane	3.75	3.88	3.87	103	103	70.0-130			0.220	25
1,1-Dichloroethene	3.75	3.84	3.83	102	102	70.0-130			0.300	25
1,1-Dichloroethane	3.75	3.73	3.73	99.4	99.5	70.0-130			0.110	25
Acetone	3.75	3.74	3.71	99.7	99.0	70.0-130			0.690	25
2-Propanol	3.75	3.79	3.81	101	102	66.0-150			0.410	25
Carbon disulfide	3.75	3.78	3.77	101	101	70.0-130			0.0100	25
Methylene Chloride	3.75	3.62	3.62	96.4	96.5	70.0-130			0.130	25
MTBE	3.75	3.96	3.95	105	105	70.0-130			0.0500	25
trans-1,2-Dichloroethene	3.75	3.78	3.77	101	101	70.0-130			0.200	25
n-Hexane	3.75	3.75	3.70	100	98.8	70.0-130			1.20	25
Vinyl acetate	3.75	3.97	3.92	106	104	70.0-130			1.28	25
Methyl Ethyl Ketone	3.75	3.83	3.85	102	103	70.0-130			0.680	25
cis-1,2-Dichloroethene	3.75	3.79	3.80	101	101	70.0-130			0.240	25
Chloroform	3.75	3.86	3.87	103	103	70.0-130			0.160	25
Cyclohexane	3.75	3.90	3.90	104	104	70.0-130			0.210	25
1,1,1-Trichloroethane	3.75	3.96	3.97	106	106	70.0-130			0.230	25
Carbon tetrachloride	3.75	4.05	4.05	108	108	70.0-130			0.0600	25
Benzene	3.75	3.82	3.82	102	102	70.0-130			0.160	25
1,2-Dichloroethane	3.75	3.90	3.88	104	103	70.0-130			0.500	25
Heptane	3.75	3.77	3.71	101	98.9	70.0-130			1.71	25
Trichloroethylene	3.75	3.95	3.92	105	104	70.0-130			0.810	25
1,2-Dichloropropane	3.75	3.73	3.73	99.5	99.5	70.0-130			0.0100	25
1,4-Dioxane	3.75	4.11	4.04	109	108	70.0-152			1.56	25
Bromodichloromethane	3.75	3.96	3.95	106	105	70.0-130			0.340	25
cis-1,3-Dichloropropene	3.75	4.00	3.98	107	106	70.0-130			0.400	25
4-Methyl-2-pentanone (MIBK)	3.75	4.02	4.01	107	107	70.0-142			0.410	25
Toluene	3.75	3.96	3.96	106	106	70.0-130			0.0600	25
trans-1,3-Dichloropropene	3.75	4.00	3.99	107	106	70.0-130			0.210	25
1,1,2-Trichloroethane	3.75	3.94	3.92	105	104	70.0-130			0.500	25
Tetrachloroethylene	3.75	4.17	4.16	111	111	70.0-130			0.250	25
Methyl Butyl Ketone	3.75	4.24	4.22	113	113	70.0-150			0.470	25
Dibromochloromethane	3.75	4.28	4.25	114	113	70.0-130			0.610	25
1,2-Dibromoethane	3.75	4.15	4.14	111	110	70.0-130			0.240	25
Chlorobenzene	3.75	4.13	4.11	110	110	70.0-130			0.440	25
Ethylbenzene	3.75	4.13	4.13	110	110	70.0-130			0.0400	25

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

(LCS) R3252419-1 09/25/17 08:24 • (LCSD) R3252419-2 09/25/17 09:11

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	8.34	8.31	111	111	70.0-130			0.310	25
o-Xylene	3.75	4.25	4.23	113	113	70.0-130			0.580	25
Styrene	3.75	4.45	4.42	119	118	70.0-130			0.610	25
Bromoform	3.75	4.58	4.54	122	121	70.0-130			0.680	25
1,1,2,2-Tetrachloroethane	3.75	4.03	4.01	107	107	70.0-130			0.380	25
4-Ethyltoluene	3.75	4.31	4.32	115	115	70.0-130			0.150	25
1,3,5-Trimethylbenzene	3.75	4.30	3.43	115	91.6	70.0-130			22.3	25
1,2,4-Trimethylbenzene	3.75	4.32	4.31	115	115	70.0-130			0.220	25
1,3-Dichlorobenzene	3.75	4.48	4.44	119	118	70.0-130			0.890	25
1,4-Dichlorobenzene	3.75	4.66	4.65	124	124	70.0-130			0.300	25
Benzyl Chloride	3.75	4.81	4.77	128	127	70.0-144			0.820	25
1,2-Dichlorobenzene	3.75	4.40	4.37	117	117	70.0-130			0.670	25
1,2,4-Trichlorobenzene	3.75	4.97	5.04	133	134	70.0-155			1.40	25
Hexachloro-1,3-butadiene	3.75	4.36	4.43	116	118	70.0-145			1.48	25
Naphthalene	3.75	4.71	4.62	126	123	70.0-155			2.03	25
Allyl Chloride	3.75	3.66	3.66	97.7	97.7	70.0-130			0.0100	25
2-Chlorotoluene	3.75	4.21	4.19	112	112	70.0-130			0.380	25
Methyl Methacrylate	3.75	3.90	3.86	104	103	70.0-130			0.910	25
Tetrahydrofuran	3.75	3.69	3.68	98.5	98.2	70.0-140			0.250	25
2,2,4-Trimethylpentane	3.75	3.81	3.83	102	102	70.0-130			0.360	25
Vinyl Bromide	3.75	3.43	4.19	91.6	112	70.0-130			19.7	25
Isopropylbenzene	3.75	4.28	4.27	114	114	70.0-130			0.240	25
(S) 1,4-Bromofluorobenzene				*101*	*101*	*60.0-140*				

Method Blank (MB)

(MB) R3252603-3 09/26/17 18:55

Analyte	MB Result ppbv	MB Qualifier	MB MDL ppbv	MB RDL 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	*101*			*60.0-140*

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

(LCS) R3252603-1 09/26/17 17:25 • (LCSD) R3252603-2 09/26/17 18:11

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	3.79	3.92	101	104	52.0-158			3.35	25
Acetone	3.75	3.65	3.72	97.3	99.3	70.0-130			1.95	25
2-Propanol	3.75	3.90	4.03	104	108	66.0-150			3.43	25
Methyl Ethyl Ketone	3.75	3.61	3.70	96.4	98.8	70.0-130			2.47	25
(S) 1,4-Bromofluorobenzene				*104*	*104*	*60.0-140*				

Guide to Reading and Understanding Your Laboratory Report

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

Abbreviations and Definitions

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

Qualifier	Description
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
J1	Surrogate recovery limits have been exceeded; values are outside upper control limits.

ACCREDITATIONS & LOCATIONS

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

State Accreditations

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 [1 4]	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		

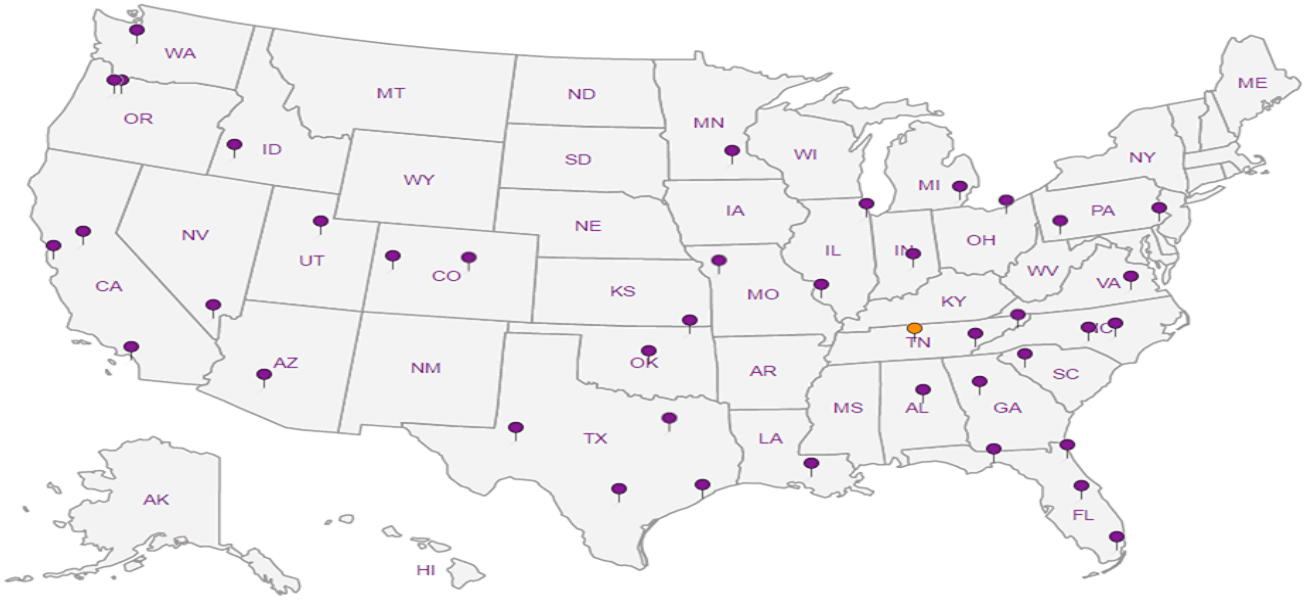
Third Party & Federal Accreditations

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

Our Locations

ESC 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. **ESC Lab Sciences performs all testing at our central laboratory.**



Company Name/Address:
FIRST ENVIRONMENT
91 FULTON STREET
BOONTON, NJ 07005

Billing Information:
PROJECT: ENPRO002D VM
91 FULTON STREET
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JPICCOLO@FIRSTENVIRONMENT.COM

Report to: MICHAEL SLACK & INGA CALDWELL

Email To: ICALDWELL@FIRSTENVIRONMENT.COM
MSLACK@FIRSTENVIRONMENT.COM

Project Description: ENPRO — WATER VALLEY, MS - SITE

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

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

Client Project #: ENPRO002D - VM

Lab Project #: FIRENVBNJ-OXFORDMS

Collected by (print): MICHAEL SLACK

Site/Facility ID #: BORG WARNER PLANT SITE

P.O. #: —

Collected by (signature):

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

Date Results Needed: STANDARD TURNAROUND

Email? ___No ✓Yes
FAX? ___No ___Yes

Canister Pressure/Vacuum

Analysis: TO-15 SUMMA

Chain of Custody Page ___ of ___

ESC LAB SCIENCES
a subsidiary of Pace Analytical

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

L# L938896
M214

Acctnum: FIRENVBNJ
Template: T120396
Prelogin: P618238
TSR: John Hawkins
PB: JG 9-11-17
Shipped Via:

Sample ID	Sample Description	Can #	Date INITIAL	Time INITIAL	Initial	Final	Rem./Contaminant	Sample # (lab only)
IA-1	MAINTENANCE ROOM	5268	9/21/17	13:00	30	6		-01
IA-2	ATS ROOM	5577	9/21/17	13:02	30	10		-02
IA-6	TRAINING ROOM	6151	9/21/17	12:50	30	5		-03
IA-17	CAFETERIA	5552	9/21/17	13:51	26	11		-04
AA-2	AMBIENT AIR - PAVILLION	B002	9/21/17	13:04	30	4		-05

Remarks:
- STANDARD - TURNAROUND (5-DAY)
- SEE SAMPLE TABLE FOR ADDITIONAL INFO.

Track: 7466 1468 6819
7466 1468 6808

Hold #

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Samples returned via: ☐ UPS ☐ FedEx ☐ Courier ☐ ____	Condition: (lab use only)
	9/22/17	16:15			OK
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: AMB °C Bottles Received: 5	COC Seal Intact: ___Y ___N ___NA
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 9/23/17 Time: 0845	pH Checked: NCF:

Vapor Intrusion Investigation
Borg Warner Facility
Water Valley, Yalobusha Co., MS
September 21-22, 2017
Indoor Air (IA) and Ambient Air (AA) Sampling Event

L938896

Sample ID	Sample Location	Flow Controller ID	Canister ID	Canister Size (liters)	Initial Date/time	Initial Vacuum ("Hg)	Final Date/time	Final Vacuum ("Hg)	Sampler
IA-1	Maintenance Room	006002	5268	6	9/21/17 13:00	30	9/22/17 13:00	6	M. Slack
IA-2	ATS Room	005313	5577	6	9/21/17 13:02	30	9/22/17 13:02	10	M. Slack
IA-6	Training Room	007092	6151	6	9/21/17 12:50	30	9/22/17 12:50	5	M. Slack
IA-17	Cafeteria	007064	5552	6	9/21/17 13:51	26	9/22/17 13:51	11	M. Slack
AA-2	Pavilion	005283	8002	6	9/21/17 13:04	30	9/22/17 13:04	4	M. Slack

Weather Conditions (@ time of canister placement): HOT - HUMID - SUNNY 88°F
WINDS FROM SW - 5 mph

Michael T. Slack (First Environment)

9/22/17 - FRI.

ESC LAB SCIENCES
Cooler Receipt Form

Client: FIRENVBNJ	SDG#	L938896
Cooler Received/Opened On: 9/23/17	Temperature: AMB	
Received by: Chris Ward		
Signature: Chris Ward		

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