

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

*Bernard T. Delaney*

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**April 16, 2018**

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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.

04/16/2018  
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 to 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 an 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, October 2, October 9, October 17, November 1, November 15, November 29, and December 13, 2017, and January 8, January 12, January 30, February 14, February 23, March 8, and March 22, 2018.

On March 22-23, 2018, 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.

## **2.0 Indoor Air Monitoring – March 22-23, 2018**

### **2.1 Instrumentation**

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**

On March 22-23, 2018, First Environment collected four indoor air samples at the four interior rooms of 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 required 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.

As reported in the January 8, 2018 SSDS Progress Report, First Environment sealed the void spaces in the block wall between the sump and the Maintenance Room on December 29, 2017. On January 15, 2018, the sump adjacent to the Maintenance Room was decommissioned. On January 18, 2018, First Environment installed two SSDS extraction points in the block wall between the sump and the Maintenance Room and one SSDS extraction point in the block wall between the sump and the Training Room.

## **2.3 Results**

Table 1 presents the ambient and indoor air sampling results for all TO-15 analytes for the March 22-23, 2018 sampling event. Table 2 presents the results of TCE, cis-DCE, and VC in comparison to all previous rounds of sampling. A copy of the laboratory reports, including the chain-of-custody forms, is attached in Appendix A. As discussed in more detail below, all indoor air sampling results for TCE were below the MDEQ action level of 26  $\mu\text{g}/\text{m}^3$ .

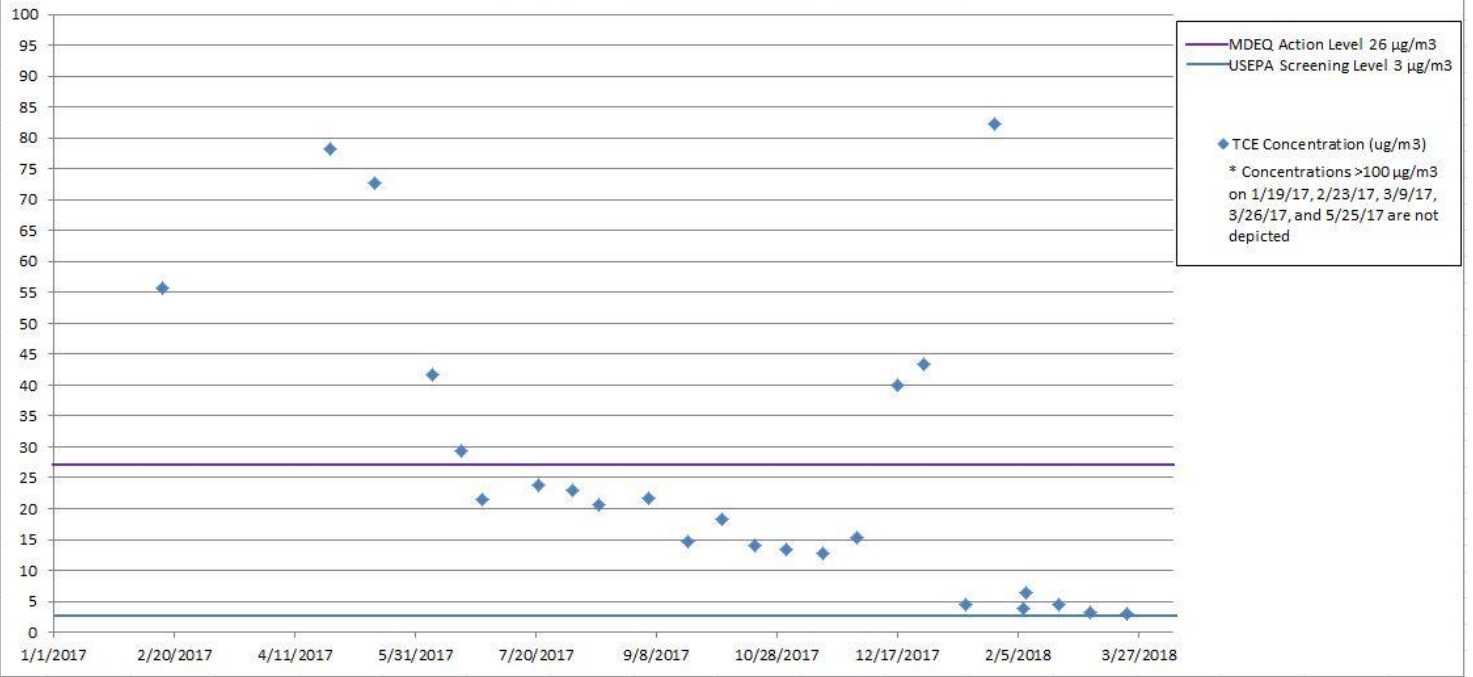
The sample results in the ATS Room, Cafeteria, and Maintenance Room were below USEPA’s Vapor Intrusion Screening Level (“VISL”) for TCE of 3  $\mu\text{g}/\text{m}^3$ . The sample results in the Training Room (5.26  $\mu\text{g}/\text{m}^3$ ) were above USEPA’s VISL but below the MDEQ action level of 26  $\mu\text{g}/\text{m}^3$ .

The following figures show the TCE concentration history in the interior rooms.

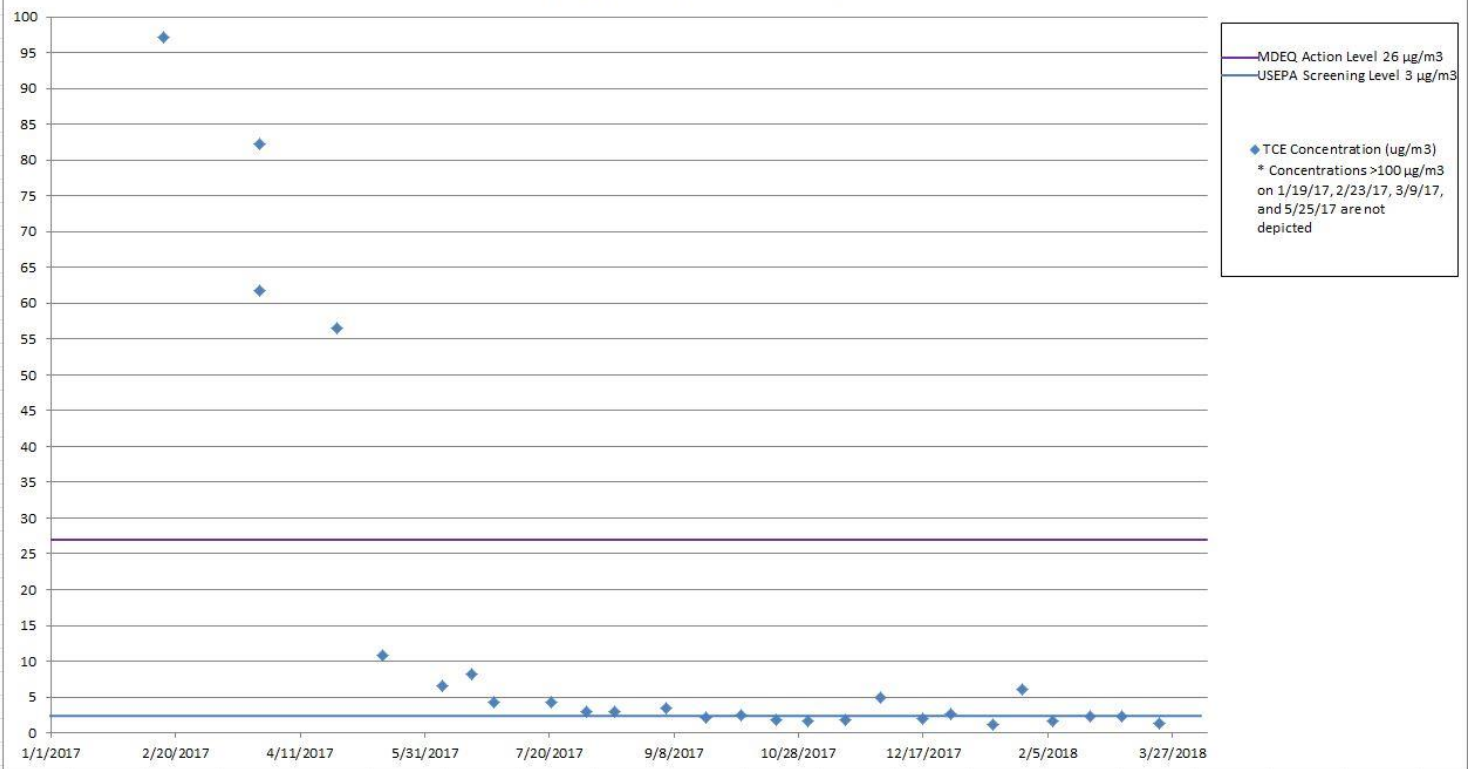
### **3.0 Summary of Indoor Air Sampling**

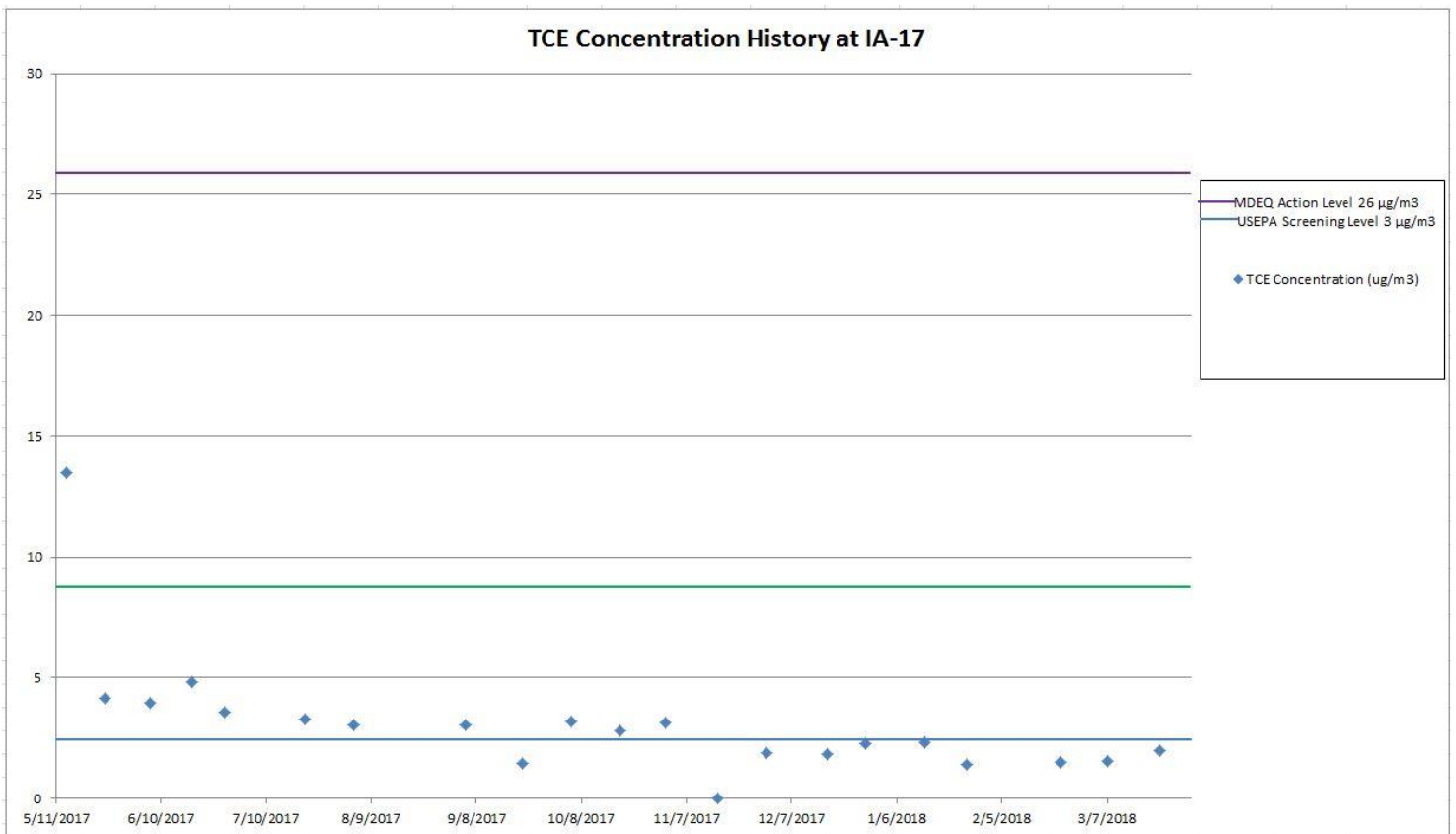
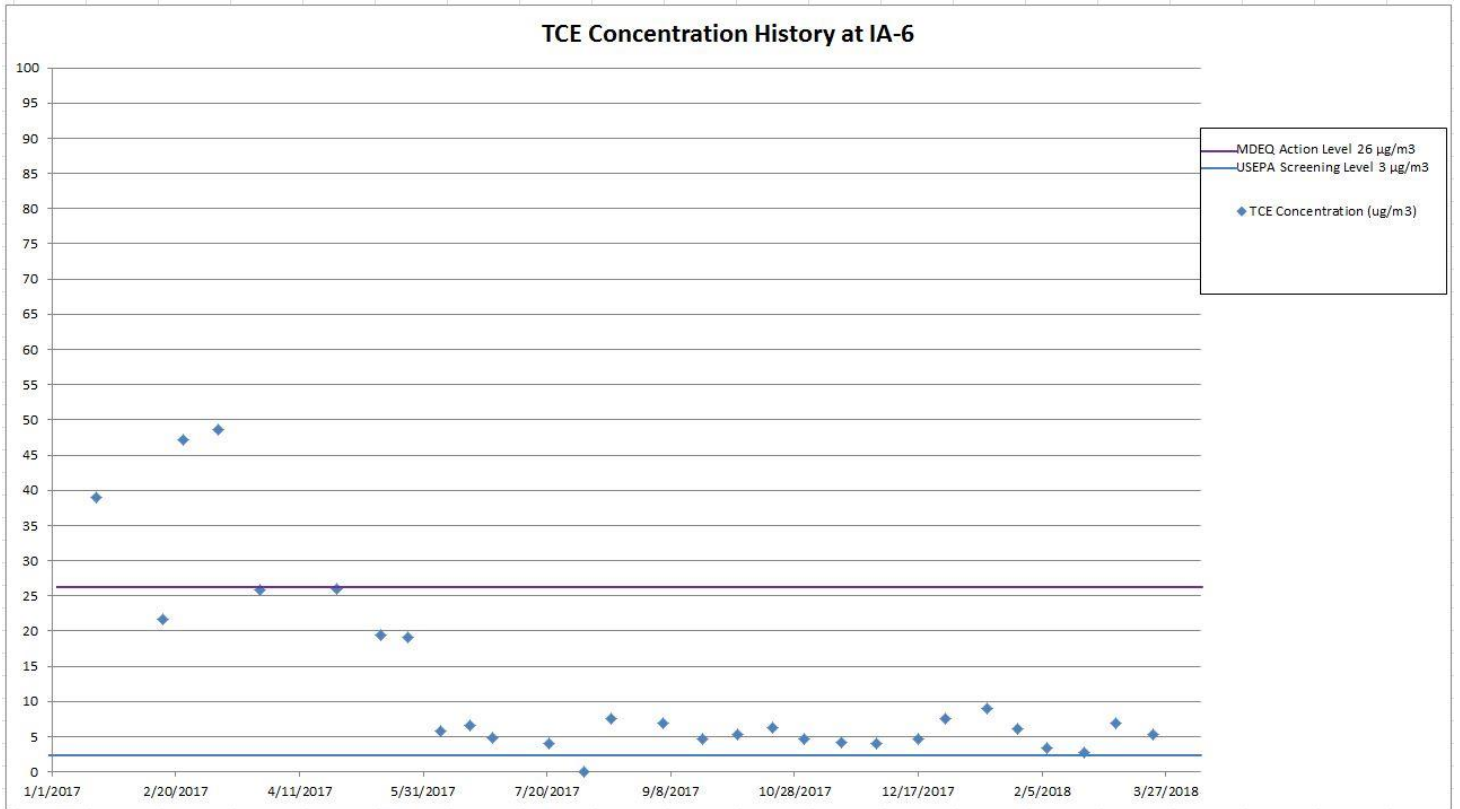
Since June 2017, the sample results in the ATS Room (IA-2), Training Room (IA-6), and Cafeteria (IA-17) have been below the MDEQ action level of 26  $\mu\text{g}/\text{m}^3$  for TCE. Since February 2018, sample results for the Maintenance Room were also below the MDEQ action level of 26  $\mu\text{g}/\text{m}^3$ . Further, during the March 22-23, 2018 sampling event, TCE was below 3  $\mu\text{g}/\text{m}^3$  in the ATS Room, Cafeteria, and Maintenance Room.

### TCE Concentration History at IA-1



### TCE Concentration History at IA-2







**TABLE 1**  
**INDOOR AIR SAMPLING RESULTS**  
**MARCH 23, 2018**  
**FORMER HOLLEY AUTOMOTIVE/COLTEC INDUSTRIES FACILITY**  
**WATER VALLEY, MS**

<b>SAMPLE LOCATION:</b>	IA-1	IA-2	IA-6	IA-17	AA-2
<b>SAMPING DATE:</b>	03/23/2018	03/23/2018	03/23/2018	03/23/2018	03/23/2018
<b>LABORATORY ID:</b>	L980227-01	L980227-02	L980227-03	L980227-04	L980227-05
<b>Analyte</b>	$\mu\text{g}/\text{m}^3$	$\mu\text{g}/\text{m}^3$	$\mu\text{g}/\text{m}^3$	$\mu\text{g}/\text{m}^3$	$\mu\text{g}/\text{m}^3$
ACETONE	451	326	333	453	8.22
ALLYL CHLORIDE	<0.626	<0.626	<0.626	<0.626	<0.626
BENZENE	1.33	1.43	1.33	1.29	<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	1.01	1.13	1.2	1.23	0.986
2-CHLOROTOLUENE	<1.03	<1.03	<1.03	<1.03	<1.03
CYCLOHEXANE	<0.689	<0.689	<0.689	3.07	<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

**TABLE 1**  
**INDOOR AIR SAMPLING RESULTS**  
**MARCH 23, 2018**  
**FORMER HOLLEY AUTOMOTIVE/COLTEC INDUSTRIES FACILITY**  
**WATER VALLEY, MS**

<b>SAMPLE LOCATION:</b>	IA-1	IA-2	IA-6	IA-17	AA-2
<b>SAMPING DATE:</b>	03/23/2018	03/23/2018	03/23/2018	03/23/2018	03/23/2018
<b>LABORATORY ID:</b>	L980227-01	L980227-02	L980227-03	L980227-04	L980227-05
<b>Analyte</b>	$\mu\text{g}/\text{m}^3$	$\mu\text{g}/\text{m}^3$	$\mu\text{g}/\text{m}^3$	$\mu\text{g}/\text{m}^3$	$\mu\text{g}/\text{m}^3$
1,1-DICHLOROETHENE	<0.793	<0.793	<0.793	<0.793	<0.793
CIS-1,2-DICHLOROETHENE	<0.793	<0.793	2.02	1.7	<0.793
TRANS-1,2-DICHLOROETHENE	<0.793	<0.793	<0.793	<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	5,490 (E)	4,770 (E)	4,670 (E)	7,270 (E)	22.9
ETHYLBENZENE	2.02	1.81	1.7	1.9	<0.867
4-ETHYLTOLUENE	<0.982	<0.982	<0.982	<0.982	<0.982
TRICHLOROFUOROMETHANE	1.5	1.5	1.53	1.52	1.36
DICHLORODIFLUOROMETHANE	1.9	1.9	2.09	1.95	1.87
1,1,2-TRICHLOROTRIFLUOROETHANE	<1.53	<1.53	<1.53	<1.53	<1.53
1,2-DICHLOROTETRAFLUROETHANE	<1.4	<1.4	<1.4	<1.4	<1.4
HEPTANE	44.6	39.1	40.9	42.1	<0.818
HEXACHLORO-1,3-BUTADIENE	<6.73	<6.73	<6.73	<6.73	<6.73
N-HEXANE	1.65	1.42	1.43	1.49	<0.705
ISOPROPYLBENZENE	<0.983	<0.983	<0.983	<0.983	<0.983
METHYLENE CHLORIDE	<0.694	3.21	3.36	1.41	<0.694
METHYL BUTYL KETONE	<5.11	<5.11	<5.11	<5.11	<5.11
2-BUTANONE (MEK)	818	742	691	1150	<3.69
4-METHYL-2-PENTANONE (MIBK)	<5.12	<5.12	<5.12	<5.12	<5.12
METHYL METHACRYLATE	<0.819	2.06	<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	5,760 (E)	5,210 (E)	4,970 (E)	6,830 (E)	10.5

**TABLE 1**  
**INDOOR AIR SAMPLING RESULTS**  
**MARCH 23, 2018**  
**FORMER HOLLEY AUTOMOTIVE/COLTEC INDUSTRIES FACILITY**  
**WATER VALLEY, MS**

Analyte	SAMPLE LOCATION:	IA-1	IA-2	IA-6	IA-17	AA-2
	SAMPING DATE:	03/23/2018	03/23/2018	03/23/2018	03/23/2018	03/23/2018
	LABORATORY ID:	L980227-01	L980227-02	L980227-03	L980227-04	L980227-05
		µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>
PROPENE		<0.689	<0.689	<0.689	<0.689	<0.689
STYRENE		<0.851	<0.851	<0.851	1.19	<0.851
1,1,2,2-TETRACHLOROETHANE		<1.37	<1.37	<1.37	<1.37	<1.37
TETRACHLOROETHENE		17.9	12.1	11.4	11.5	<1.36
TETRAHYDROFURAN		<0.59	<0.59	<0.59	<0.59	<0.59
TOLUENE		12.6	10.5	11.1	11.4	0.772
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		2.93	1.39	5.26	1.98	<1.07
1,2,4-TRIMETHYLBENZENE		3.71	3.28	3.12	3.95	<0.982
1,3,5-TRIMETHYLBENZENE		1.11	0.99	<0.982	1.18	<0.982
2,2,4-TRIMETHYLPENTANE		<0.934	<0.934	<0.934	<0.934	<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		6.99	6.14	5.78	6.59	<1.73
O-XYLENE		2.27	1.96	1.89	2.15	<0.867
1,4-BROMOFLUOROBENZENE		119 96.5	130 95.7	118 95.5	122 97.0	99.6

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 2017 THROUGH MARCH 2018  
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
<b>USEPA Vapor Intrusion Screening Level (VISL):</b>			<b>3</b>	<b>NA</b>	<b>2.8</b>
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
	5-Oct-17	L942068-01	18.2	<0.793	<0.511
	19-Oct-17	L945503-01	14.1	<0.793	<0.511
	1-Nov-17	L948263-01	13.5	1.83	<0.511
	16-Nov-17	L952200-01	12.7	<0.793	<0.511
	30-Nov-17	L954578-01	15.3	<0.793	<0.511
	17-Dec-17	L958416-01	40	<0.793	<0.511
	28-Dec-17	L960558-01	43.4	4.77	<0.511
14-Jan-18	L963421-01	4.5	<0.793	<0.511	
25-Jan-18	L966088-01	82.3	<0.793	<0.511	
(Door Open)	7-Feb-18	L969021-01	3.89	<0.793	<0.511
(Door Closed)	8-Feb-18	L969370-01	6.39	1.26	<0.511
	22-Feb-18	L972729-01	4.47	1.35	<0.511
	7-Mar-18	L976176-01	3.23	<0.793	<0.511
	23-Mar-18	L980227-01	2.93	<0.793	<0.511
IA-2  IA-2 (2ND CANISTER)  IA-2 (DUPLICATE)	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
	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
	5-Oct-17	L942068-02	2.46	<0.793	<0.511
	19-Oct-17	L945503-02	1.87	<0.793	<0.511
	1-Nov-17	L948263-02	1.7	<0.793	<0.511
	16-Nov-17	L952200-02	1.82	<0.793	<0.511
	30-Nov-17	L954578-02	5.01	<0.793	<0.511
17-Dec-17	L958416-02	1.98	<0.793	<0.511	
28-Dec-17	L960558-02	2.58	0.823	<0.511	
14-Jan-18	L963421-02	1.21	<0.793	<0.511	
25-Jan-18	L966088-02	6.09	<0.793	<0.511	
7-Feb-18	L969030-01	1.6	<0.793	<0.511	
22-Feb-18	L972729-02	2.31	<0.793	<0.511	
7-Mar-18	L976176-02	2.35	<0.793	<0.511	
23-Mar-18	L980227-02	1.39	<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
	5-Oct-17	L942068-03	5.37	<0.793	<0.511
	19-Oct-17	L945503-03	6.31	<0.793	<0.511
	1-Nov-17	L948263-03	4.67	2.89	<0.511
	16-Nov-17	L952200-03	4.19	<0.793	<0.511
	30-Nov-17	L954578-03	4.06	3	<0.511
	17-Dec-17	L958416-03	4.69	<0.793	<0.511
	28-Dec-17	L960558-03	7.53	4.41	<0.511
14-Jan-18	L963421-03	8.95	<0.793	<0.511	
25-Jan-18	L966088-03	6.12	<0.793	<0.511	
7-Feb-18	L969030-02	3.45	2.18	<0.511	

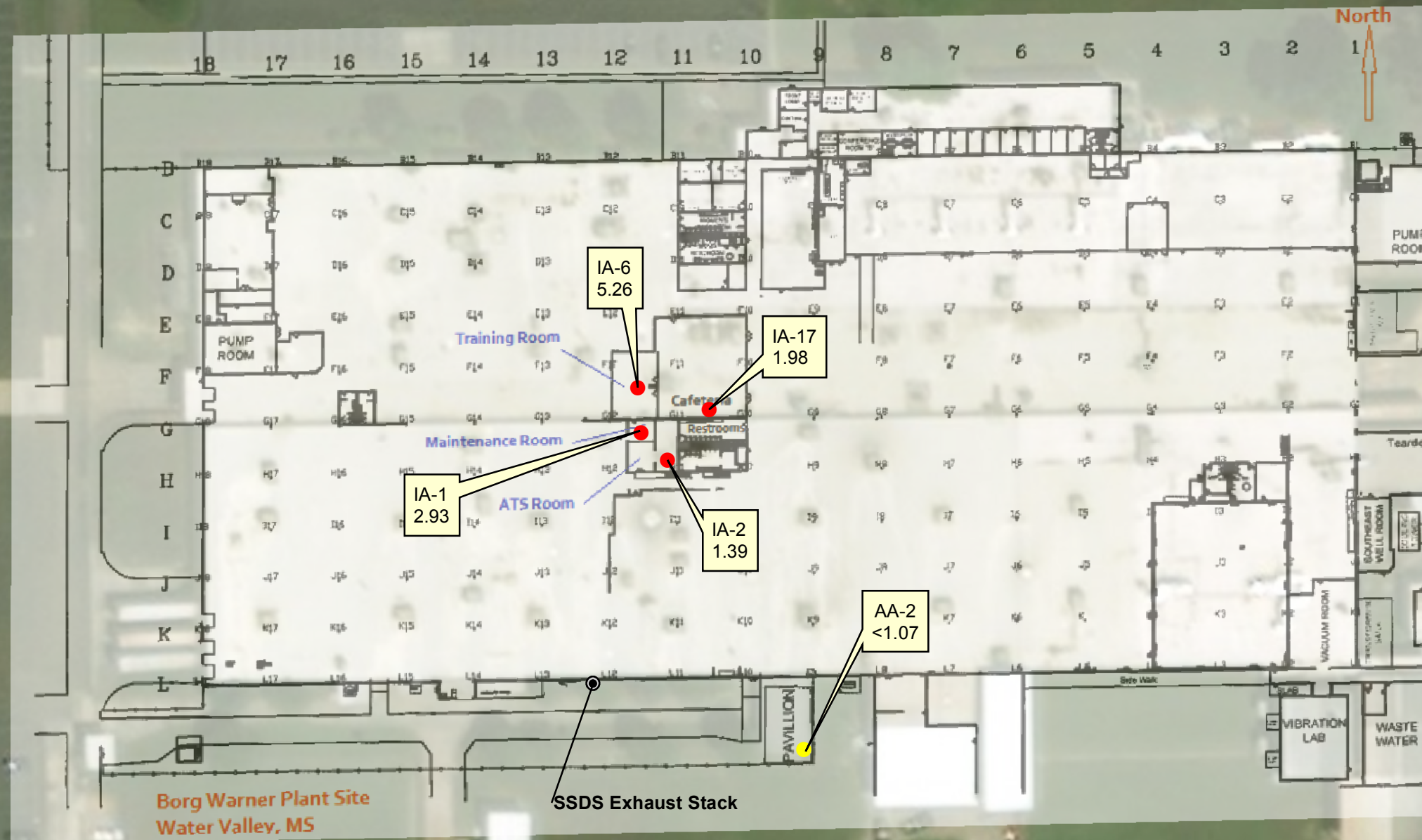
**TABLE 2  
INDOOR AIR SAMPLING RESULTS COMPARISON  
JANUARY 2017 THROUGH MARCH 2018  
FORMER HOLLEY AUTOMOTIVE/COLTEC INDUSTRIES FACILITY  
WATER VALLEY, MS**

SAMPLE ID	SAMPLING DATE	LABORATORY ID	CoC Concentrations (µg/m³)		
			Trichloroethene	cis-1,2-Dichloroethene	Vinyl chloride
<b>USEPA Vapor Intrusion Screening Level (VISL):</b>			<b>3</b>	<b>NA</b>	<b>2.8</b>
IA-14	22-Feb-18	L972729-03	2.76	1.69	<0.511
	7-Mar-18	L976176-03	6.95	2.74	<0.511
	23-Mar-18	L980227-03	5.26	2.02	<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
	5-Oct-17	L942068-04	3.2	<0.793	<0.511
	19-Oct-17	L945503-04	2.79	<0.793	<0.511
	1-Nov-17	L948263-04	3.15	2.33	<0.511
	16-Nov-17	L952200-04	<1.07	<0.793	<0.511
	30-Nov-17	L954578-04	1.89	<0.793	<0.511
	17-Dec-17	L958416-04	1.86	<0.793	<0.511
	28-Dec-17	L960558-04	2.28	2.57	<0.511
	14-Jan-18	L963421-04	2.34	<0.793	<0.511
	25-Jan-18	L966088-04	1.42	<0.793	<0.511
	7-Feb-18	L969030-03	<4.29	<3.17	<2.04
	22-Feb-18	L972729-04	1.5	1.68	<0.511
7-Mar-18	L976176-04	1.57	<0.793	<0.511	
23-Mar-18	L980227-04	1.98	1.7	<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	
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
	30-Nov-17	L954578-05	<1.07	<0.793	<0.511
7-Mar-18	L976176-06	<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
	30-Nov-17	L954578-07	<1.07	<0.793	<0.511
7-Mar-18	L976176-08	<1.07	<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	

**TABLE 2**  
**INDOOR AIR SAMPLING RESULTS COMPARISON**  
**JANUARY 2017 THROUGH MARCH 2018**  
**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
<b>USEPA Vapor Intrusion Screening Level (VISL):</b>			<b>3</b>	<b>NA</b>	<b>2.8</b>
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
	30-Nov-17	L954578-06	<1.07	<0.793	<0.511
7-Mar-18	L976176-07	<1.07	<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	3610000
EP-2	14-May-17	L909544-07	2820000	5600000	132000
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
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
	5-Oct-17	L942068-05	<1.07	<0.793	<0.511
	19-Oct-17	L945503-05	<1.07	<0.793	<0.511
	1-Nov-17	L948263-05	<1.07	<0.793	<0.511
	16-Nov-17	L952200-05	<1.07	<0.793	<0.511
	30-Nov-17	L954578-10	2.46	<0.793	<0.511
	17-Dec-17	L958416-05	<1.07	<0.793	<0.511
	28-Dec-17	L960558-05	<1.07	<0.793	<0.511
	14-Jan-18	L963421-05	<1.07	<0.793	<0.511
	25-Jan-18	L966088-05	<1.07	<0.793	<0.511
	7-Feb-18	L969030-04	<1.07	<0.793	<0.511
	22-Feb-18	L972729-05	<1.07	<0.793	<0.511
	7-Mar-18	L976176-05	<1.07	<0.793	<0.511
23-Mar-18	L980227-05	<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=1E-6 or THQ=1  
TCR: Target Carcinogen Risk  
THQ: Target Hazard Quotient for Non-Carcinogens



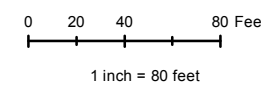
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

**Legend**

- IA-1: Indoor Air Concentrations in ug/m3
- AA-1: Ambient Air Concentrations in ug/m3
- 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



BORG WARNER FACILITY  
600 Highway 32E, Water Valley, MS  
FIGURE 1  
INDOOR AIR SAMPLING RESULTS  
MARCH 23, 2018

91 Fulton Street  
Boonton, New Jersey 07005

Revised	Drawn	Checked	Approved	Date
LS	NMT	NMT	NMT	4/3/2018

March 30, 2018

## First Environment, Inc.

Sample Delivery Group: L980227  
Samples Received: 03/24/2018  
Project Number: ENPRO002D-VM  
Description: EnPro: Bi-Weekly 24-hr Indoor Air Sampling  
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.





<b>Cp: Cover Page</b>	<b>1</b>	<b><sup>1</sup>Cp</b>
<b>Tc: Table of Contents</b>	<b>2</b>	<b><sup>2</sup>Tc</b>
<b>Ss: Sample Summary</b>	<b>3</b>	<b><sup>3</sup>Ss</b>
<b>Cn: Case Narrative</b>	<b>4</b>	<b><sup>4</sup>Cn</b>
<b>Sr: Sample Results</b>	<b>5</b>	<b><sup>5</sup>Sr</b>
<b>IA-1 L980227-01</b>	<b>5</b>	
<b>IA-2 L980227-02</b>	<b>7</b>	
<b>IA-6 L980227-03</b>	<b>9</b>	
<b>IA-17 L980227-04</b>	<b>11</b>	
<b>AA-2 L980227-05</b>	<b>13</b>	<b><sup>6</sup>Qc</b>
<b>Qc: Quality Control Summary</b>	<b>15</b>	<b><sup>7</sup>Gl</b>
<b>Volatile Organic Compounds (MS) by Method TO-15</b>	<b>15</b>	
<b>Gl: Glossary of Terms</b>	<b>20</b>	<b><sup>8</sup>Al</b>
<b>Al: Accreditations &amp; Locations</b>	<b>21</b>	
<b>Sc: Sample Chain of Custody</b>	<b>22</b>	<b><sup>9</sup>Sc</b>

# SAMPLE SUMMARY



## IA-1 L980227-01 Air

Collected by  
Micheal T. Slack  
Collected date/time  
03/23/18 10:00  
Received date/time  
03/24/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG1089552	1	03/26/18 19:11	03/26/18 19:11	AMC
Volatile Organic Compounds (MS) by Method TO-15	WG1089833	25	03/27/18 13:22	03/27/18 13:22	AMC

1  
Cp

2  
Tc

3  
Ss

4  
Cn

5  
Sr

6  
Qc

7  
Gl

8  
Al

9  
Sc

## IA-2 L980227-02 Air

Collected by  
Micheal T. Slack  
Collected date/time  
03/23/18 10:31  
Received date/time  
03/24/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG1089552	1	03/26/18 20:03	03/26/18 20:03	AMC
Volatile Organic Compounds (MS) by Method TO-15	WG1089833	25	03/27/18 14:05	03/27/18 14:05	AMC

## IA-6 L980227-03 Air

Collected by  
Micheal T. Slack  
Collected date/time  
03/23/18 10:23  
Received date/time  
03/24/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG1089552	1	03/26/18 20:58	03/26/18 20:58	AMC
Volatile Organic Compounds (MS) by Method TO-15	WG1089833	25	03/27/18 14:47	03/27/18 14:47	AMC

## IA-17 L980227-04 Air

Collected by  
Micheal T. Slack  
Collected date/time  
03/23/18 10:28  
Received date/time  
03/24/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG1089552	1	03/26/18 21:46	03/26/18 21:46	AMC
Volatile Organic Compounds (MS) by Method TO-15	WG1089833	25	03/27/18 15:30	03/27/18 15:30	AMC

## AA-2 L980227-05 Air

Collected by  
Micheal T. Slack  
Collected date/time  
03/23/18 10:40  
Received date/time  
03/24/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG1089552	1	03/26/18 22:33	03/26/18 22:33	AMC



All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All 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

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Collected date/time: 03/23/18 10:00

L980227

## 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	190	451		25	WG1089833
Allyl chloride	107-05-1	76.53	0.200	0.626	ND	ND		1	WG1089552
Benzene	71-43-2	78.10	0.200	0.639	0.417	1.33		1	WG1089552
Benzyl Chloride	100-44-7	127	0.200	1.04	ND	ND		1	WG1089552
Bromodichloromethane	75-27-4	164	0.200	1.34	ND	ND		1	WG1089552
Bromoform	75-25-2	253	0.600	6.21	ND	ND		1	WG1089552
Bromomethane	74-83-9	94.90	0.200	0.776	ND	ND		1	WG1089552
1,3-Butadiene	106-99-0	54.10	2.00	4.43	ND	ND		1	WG1089552
Carbon disulfide	75-15-0	76.10	0.200	0.622	ND	ND		1	WG1089552
Carbon tetrachloride	56-23-5	154	0.200	1.26	ND	ND		1	WG1089552
Chlorobenzene	108-90-7	113	0.200	0.924	ND	ND		1	WG1089552
Chloroethane	75-00-3	64.50	0.200	0.528	ND	ND		1	WG1089552
Chloroform	67-66-3	119	0.200	0.973	ND	ND		1	WG1089552
Chloromethane	74-87-3	50.50	0.200	0.413	0.490	1.01		1	WG1089552
2-Chlorotoluene	95-49-8	126	0.200	1.03	ND	ND		1	WG1089552
Cyclohexane	110-82-7	84.20	0.200	0.689	ND	ND		1	WG1089552
Dibromochloromethane	124-48-1	208	0.200	1.70	ND	ND		1	WG1089552
1,2-Dibromoethane	106-93-4	188	0.200	1.54	ND	ND		1	WG1089552
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	ND	ND		1	WG1089552
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	ND	ND		1	WG1089552
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	ND	ND		1	WG1089552
1,2-Dichloroethane	107-06-2	99	0.200	0.810	ND	ND		1	WG1089552
1,1-Dichloroethane	75-34-3	98	0.200	0.802	ND	ND		1	WG1089552
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	WG1089552
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	ND	ND		1	WG1089552
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	ND	ND		1	WG1089552
1,2-Dichloropropane	78-87-5	113	0.200	0.924	ND	ND		1	WG1089552
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.908	ND	ND		1	WG1089552
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.908	ND	ND		1	WG1089552
1,4-Dioxane	123-91-1	88.10	0.200	0.721	ND	ND		1	WG1089552
Ethanol	64-17-5	46.10	15.8	29.8	2910	5490	E	25	WG1089833
Ethylbenzene	100-41-4	106	0.200	0.867	0.466	2.02		1	WG1089552
4-Ethyltoluene	622-96-8	120	0.200	0.982	ND	ND		1	WG1089552
Trichlorofluoromethane	75-69-4	137.40	0.200	1.12	0.266	1.50		1	WG1089552
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.989	0.385	1.90		1	WG1089552
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.200	1.53	ND	ND		1	WG1089552
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	ND	ND		1	WG1089552
Heptane	142-82-5	100	0.200	0.818	10.9	44.6		1	WG1089552
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.73	ND	ND		1	WG1089552
n-Hexane	110-54-3	86.20	0.200	0.705	0.469	1.65		1	WG1089552
Isopropylbenzene	98-82-8	120.20	0.200	0.983	ND	ND		1	WG1089552
Methylene Chloride	75-09-2	84.90	0.200	0.694	ND	ND		1	WG1089552
Methyl Butyl Ketone	591-78-6	100	1.25	5.11	ND	ND		1	WG1089552
2-Butanone (MEK)	78-93-3	72.10	31.2	92.0	278	818		25	WG1089833
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	1.25	5.12	ND	ND		1	WG1089552
Methyl methacrylate	80-62-6	100.12	0.200	0.819	ND	ND		1	WG1089552
MTBE	1634-04-4	88.10	0.200	0.721	ND	ND		1	WG1089552
Naphthalene	91-20-3	128	0.630	3.30	ND	ND		1	WG1089552
2-Propanol	67-63-0	60.10	31.2	76.7	2340	5760	E	25	WG1089833
Propene	115-07-1	42.10	0.400	0.689	ND	ND		1	WG1089552
Styrene	100-42-5	104	0.200	0.851	ND	ND		1	WG1089552
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.37	ND	ND		1	WG1089552
Tetrachloroethylene	127-18-4	166	0.200	1.36	2.64	17.9		1	WG1089552
Tetrahydrofuran	109-99-9	72.10	0.200	0.590	ND	ND		1	WG1089552
Toluene	108-88-3	92.10	0.200	0.753	3.34	12.6		1	WG1089552
1,2,4-Trichlorobenzene	120-82-1	181	0.630	4.66	ND	ND		1	WG1089552

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 03/23/18 10:00

L980227

## 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	<a href="#">WG1089552</a>
1,1,2-Trichloroethane	79-00-5	133	0.200	1.09	ND	ND		1	<a href="#">WG1089552</a>
Trichloroethylene	79-01-6	131	0.200	1.07	0.547	2.93		1	<a href="#">WG1089552</a>
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	0.755	3.71		1	<a href="#">WG1089552</a>
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.982	0.225	1.11		1	<a href="#">WG1089552</a>
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.934	ND	ND		1	<a href="#">WG1089552</a>
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	<a href="#">WG1089552</a>
Vinyl Bromide	593-60-2	106.95	0.200	0.875	ND	ND		1	<a href="#">WG1089552</a>
Vinyl acetate	108-05-4	86.10	0.200	0.704	ND	ND		1	<a href="#">WG1089552</a>
m&p-Xylene	1330-20-7	106	0.400	1.73	1.61	6.99		1	<a href="#">WG1089552</a>
o-Xylene	95-47-6	106	0.200	0.867	0.523	2.27		1	<a href="#">WG1089552</a>
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		119				<a href="#">WG1089552</a>
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		96.5				<a href="#">WG1089833</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 03/23/18 10:31

L980227

## 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	WG1089833
Allyl chloride	107-05-1	76.53	0.200	0.626	ND	ND		1	WG1089552
Benzene	71-43-2	78.10	0.200	0.639	0.447	1.43		1	WG1089552
Benzyl Chloride	100-44-7	127	0.200	1.04	ND	ND		1	WG1089552
Bromodichloromethane	75-27-4	164	0.200	1.34	ND	ND		1	WG1089552
Bromoform	75-25-2	253	0.600	6.21	ND	ND		1	WG1089552
Bromomethane	74-83-9	94.90	0.200	0.776	ND	ND		1	WG1089552
1,3-Butadiene	106-99-0	54.10	2.00	4.43	ND	ND		1	WG1089552
Carbon disulfide	75-15-0	76.10	0.200	0.622	ND	ND		1	WG1089552
Carbon tetrachloride	56-23-5	154	0.200	1.26	ND	ND		1	WG1089552
Chlorobenzene	108-90-7	113	0.200	0.924	ND	ND		1	WG1089552
Chloroethane	75-00-3	64.50	0.200	0.528	ND	ND		1	WG1089552
Chloroform	67-66-3	119	0.200	0.973	ND	ND		1	WG1089552
Chloromethane	74-87-3	50.50	0.200	0.413	0.548	1.13		1	WG1089552
2-Chlorotoluene	95-49-8	126	0.200	1.03	ND	ND		1	WG1089552
Cyclohexane	110-82-7	84.20	0.200	0.689	ND	ND		1	WG1089552
Dibromochloromethane	124-48-1	208	0.200	1.70	ND	ND		1	WG1089552
1,2-Dibromoethane	106-93-4	188	0.200	1.54	ND	ND		1	WG1089552
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	ND	ND		1	WG1089552
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	ND	ND		1	WG1089552
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	ND	ND		1	WG1089552
1,2-Dichloroethane	107-06-2	99	0.200	0.810	ND	ND		1	WG1089552
1,1-Dichloroethane	75-34-3	98	0.200	0.802	ND	ND		1	WG1089552
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	WG1089552
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	ND	ND		1	WG1089552
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	ND	ND		1	WG1089552
1,2-Dichloropropane	78-87-5	113	0.200	0.924	ND	ND		1	WG1089552
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.908	ND	ND		1	WG1089552
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.908	ND	ND		1	WG1089552
1,4-Dioxane	123-91-1	88.10	0.200	0.721	ND	ND		1	WG1089552
Ethanol	64-17-5	46.10	15.8	29.8	2530	4770	E	25	WG1089833
Ethylbenzene	100-41-4	106	0.200	0.867	0.418	1.81		1	WG1089552
4-Ethyltoluene	622-96-8	120	0.200	0.982	ND	ND		1	WG1089552
Trichlorofluoromethane	75-69-4	137.40	0.200	1.12	0.267	1.50		1	WG1089552
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.989	0.385	1.90		1	WG1089552
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.200	1.53	ND	ND		1	WG1089552
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	ND	ND		1	WG1089552
Heptane	142-82-5	100	0.200	0.818	9.55	39.1		1	WG1089552
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.73	ND	ND		1	WG1089552
n-Hexane	110-54-3	86.20	0.200	0.705	0.404	1.42		1	WG1089552
Isopropylbenzene	98-82-8	120.20	0.200	0.983	ND	ND		1	WG1089552
Methylene Chloride	75-09-2	84.90	0.200	0.694	0.924	3.21		1	WG1089552
Methyl Butyl Ketone	591-78-6	100	1.25	5.11	ND	ND		1	WG1089552
2-Butanone (MEK)	78-93-3	72.10	31.2	92.0	251	742		25	WG1089833
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	1.25	5.12	ND	ND		1	WG1089552
Methyl methacrylate	80-62-6	100.12	0.200	0.819	0.502	2.06		1	WG1089552
MTBE	1634-04-4	88.10	0.200	0.721	ND	ND		1	WG1089552
Naphthalene	91-20-3	128	0.630	3.30	ND	ND		1	WG1089552
2-Propanol	67-63-0	60.10	31.2	76.7	2120	5210	E	25	WG1089833
Propene	115-07-1	42.10	0.400	0.689	ND	ND		1	WG1089552
Styrene	100-42-5	104	0.200	0.851	ND	ND		1	WG1089552
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.37	ND	ND		1	WG1089552
Tetrachloroethylene	127-18-4	166	0.200	1.36	1.78	12.1		1	WG1089552
Tetrahydrofuran	109-99-9	72.10	0.200	0.590	ND	ND		1	WG1089552
Toluene	108-88-3	92.10	0.200	0.753	2.80	10.5		1	WG1089552
1,2,4-Trichlorobenzene	120-82-1	181	0.630	4.66	ND	ND		1	WG1089552

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 03/23/18 10:31

L980227

## 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	<a href="#">WG1089552</a>
1,1,2-Trichloroethane	79-00-5	133	0.200	1.09	ND	ND		1	<a href="#">WG1089552</a>
Trichloroethylene	79-01-6	131	0.200	1.07	0.259	1.39		1	<a href="#">WG1089552</a>
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	0.668	3.28		1	<a href="#">WG1089552</a>
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.982	0.202	0.990		1	<a href="#">WG1089552</a>
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.934	ND	ND		1	<a href="#">WG1089552</a>
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	<a href="#">WG1089552</a>
Vinyl Bromide	593-60-2	106.95	0.200	0.875	ND	ND		1	<a href="#">WG1089552</a>
Vinyl acetate	108-05-4	86.10	0.200	0.704	ND	ND		1	<a href="#">WG1089552</a>
m&p-Xylene	1330-20-7	106	0.400	1.73	1.42	6.14		1	<a href="#">WG1089552</a>
o-Xylene	95-47-6	106	0.200	0.867	0.451	1.96		1	<a href="#">WG1089552</a>
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		130				<a href="#">WG1089552</a>
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		95.7				<a href="#">WG1089833</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 03/23/18 10:23

L980227

## 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	140	333		25	WG1089833
Allyl chloride	107-05-1	76.53	0.200	0.626	ND	ND		1	WG1089552
Benzene	71-43-2	78.10	0.200	0.639	0.417	1.33		1	WG1089552
Benzyl Chloride	100-44-7	127	0.200	1.04	ND	ND		1	WG1089552
Bromodichloromethane	75-27-4	164	0.200	1.34	ND	ND		1	WG1089552
Bromoform	75-25-2	253	0.600	6.21	ND	ND		1	WG1089552
Bromomethane	74-83-9	94.90	0.200	0.776	ND	ND		1	WG1089552
1,3-Butadiene	106-99-0	54.10	2.00	4.43	ND	ND		1	WG1089552
Carbon disulfide	75-15-0	76.10	0.200	0.622	ND	ND		1	WG1089552
Carbon tetrachloride	56-23-5	154	0.200	1.26	ND	ND		1	WG1089552
Chlorobenzene	108-90-7	113	0.200	0.924	ND	ND		1	WG1089552
Chloroethane	75-00-3	64.50	0.200	0.528	ND	ND		1	WG1089552
Chloroform	67-66-3	119	0.200	0.973	ND	ND		1	WG1089552
Chloromethane	74-87-3	50.50	0.200	0.413	0.583	1.20		1	WG1089552
2-Chlorotoluene	95-49-8	126	0.200	1.03	ND	ND		1	WG1089552
Cyclohexane	110-82-7	84.20	0.200	0.689	ND	ND		1	WG1089552
Dibromochloromethane	124-48-1	208	0.200	1.70	ND	ND		1	WG1089552
1,2-Dibromoethane	106-93-4	188	0.200	1.54	ND	ND		1	WG1089552
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	ND	ND		1	WG1089552
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	ND	ND		1	WG1089552
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	ND	ND		1	WG1089552
1,2-Dichloroethane	107-06-2	99	0.200	0.810	ND	ND		1	WG1089552
1,1-Dichloroethane	75-34-3	98	0.200	0.802	ND	ND		1	WG1089552
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	WG1089552
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	0.509	2.02		1	WG1089552
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	ND	ND		1	WG1089552
1,2-Dichloropropane	78-87-5	113	0.200	0.924	ND	ND		1	WG1089552
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.908	ND	ND		1	WG1089552
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.908	ND	ND		1	WG1089552
1,4-Dioxane	123-91-1	88.10	0.200	0.721	ND	ND		1	WG1089552
Ethanol	64-17-5	46.10	15.8	29.8	2470	4670	E	25	WG1089833
Ethylbenzene	100-41-4	106	0.200	0.867	0.391	1.70		1	WG1089552
4-Ethyltoluene	622-96-8	120	0.200	0.982	ND	ND		1	WG1089552
Trichlorofluoromethane	75-69-4	137.40	0.200	1.12	0.273	1.53		1	WG1089552
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.989	0.422	2.09		1	WG1089552
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.200	1.53	ND	ND		1	WG1089552
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	ND	ND		1	WG1089552
Heptane	142-82-5	100	0.200	0.818	9.99	40.9		1	WG1089552
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.73	ND	ND		1	WG1089552
n-Hexane	110-54-3	86.20	0.200	0.705	0.404	1.43		1	WG1089552
Isopropylbenzene	98-82-8	120.20	0.200	0.983	ND	ND		1	WG1089552
Methylene Chloride	75-09-2	84.90	0.200	0.694	0.967	3.36		1	WG1089552
Methyl Butyl Ketone	591-78-6	100	1.25	5.11	ND	ND		1	WG1089552
2-Butanone (MEK)	78-93-3	72.10	31.2	92.0	234	691		25	WG1089833
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	1.25	5.12	ND	ND		1	WG1089552
Methyl methacrylate	80-62-6	100.12	0.200	0.819	ND	ND		1	WG1089552
MTBE	1634-04-4	88.10	0.200	0.721	ND	ND		1	WG1089552
Naphthalene	91-20-3	128	0.630	3.30	ND	ND		1	WG1089552
2-Propanol	67-63-0	60.10	31.2	76.7	2020	4970	E	25	WG1089833
Propene	115-07-1	42.10	0.400	0.689	ND	ND		1	WG1089552
Styrene	100-42-5	104	0.200	0.851	ND	ND		1	WG1089552
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.37	ND	ND		1	WG1089552
Tetrachloroethylene	127-18-4	166	0.200	1.36	1.68	11.4		1	WG1089552
Tetrahydrofuran	109-99-9	72.10	0.200	0.590	ND	ND		1	WG1089552
Toluene	108-88-3	92.10	0.200	0.753	2.94	11.1		1	WG1089552
1,2,4-Trichlorobenzene	120-82-1	181	0.630	4.66	ND	ND		1	WG1089552

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

ACCOUNT:

First Environment, Inc.

PROJECT:

ENPRO002D-VM

SDG:

L980227

DATE/TIME:

03/30/18 08:24

PAGE:

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Collected date/time: 03/23/18 10:23

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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	<a href="#">WG1089552</a>
1,1,2-Trichloroethane	79-00-5	133	0.200	1.09	ND	ND		1	<a href="#">WG1089552</a>
Trichloroethylene	79-01-6	131	0.200	1.07	0.981	5.26		1	<a href="#">WG1089552</a>
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	0.635	3.12		1	<a href="#">WG1089552</a>
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.982	ND	ND		1	<a href="#">WG1089552</a>
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.934	ND	ND		1	<a href="#">WG1089552</a>
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	<a href="#">WG1089552</a>
Vinyl Bromide	593-60-2	106.95	0.200	0.875	ND	ND		1	<a href="#">WG1089552</a>
Vinyl acetate	108-05-4	86.10	0.200	0.704	ND	ND		1	<a href="#">WG1089552</a>
m&p-Xylene	1330-20-7	106	0.400	1.73	1.33	5.78		1	<a href="#">WG1089552</a>
o-Xylene	95-47-6	106	0.200	0.867	0.436	1.89		1	<a href="#">WG1089552</a>
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		118				<a href="#">WG1089552</a>
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		95.5				<a href="#">WG1089833</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 03/23/18 10:28

L980227

## 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	191	453		25	WG1089833
Allyl chloride	107-05-1	76.53	0.200	0.626	ND	ND		1	WG1089552
Benzene	71-43-2	78.10	0.200	0.639	0.403	1.29		1	WG1089552
Benzyl Chloride	100-44-7	127	0.200	1.04	ND	ND		1	WG1089552
Bromodichloromethane	75-27-4	164	0.200	1.34	ND	ND		1	WG1089552
Bromoform	75-25-2	253	0.600	6.21	ND	ND		1	WG1089552
Bromomethane	74-83-9	94.90	0.200	0.776	ND	ND		1	WG1089552
1,3-Butadiene	106-99-0	54.10	2.00	4.43	ND	ND		1	WG1089552
Carbon disulfide	75-15-0	76.10	0.200	0.622	ND	ND		1	WG1089552
Carbon tetrachloride	56-23-5	154	0.200	1.26	ND	ND		1	WG1089552
Chlorobenzene	108-90-7	113	0.200	0.924	ND	ND		1	WG1089552
Chloroethane	75-00-3	64.50	0.200	0.528	ND	ND		1	WG1089552
Chloroform	67-66-3	119	0.200	0.973	ND	ND		1	WG1089552
Chloromethane	74-87-3	50.50	0.200	0.413	0.596	1.23		1	WG1089552
2-Chlorotoluene	95-49-8	126	0.200	1.03	ND	ND		1	WG1089552
Cyclohexane	110-82-7	84.20	0.200	0.689	0.893	3.07		1	WG1089552
Dibromochloromethane	124-48-1	208	0.200	1.70	ND	ND		1	WG1089552
1,2-Dibromoethane	106-93-4	188	0.200	1.54	ND	ND		1	WG1089552
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	ND	ND		1	WG1089552
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	ND	ND		1	WG1089552
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	ND	ND		1	WG1089552
1,2-Dichloroethane	107-06-2	99	0.200	0.810	ND	ND		1	WG1089552
1,1-Dichloroethane	75-34-3	98	0.200	0.802	ND	ND		1	WG1089552
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	WG1089552
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	0.429	1.70		1	WG1089552
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	ND	ND		1	WG1089552
1,2-Dichloropropane	78-87-5	113	0.200	0.924	ND	ND		1	WG1089552
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.908	ND	ND		1	WG1089552
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.908	ND	ND		1	WG1089552
1,4-Dioxane	123-91-1	88.10	0.200	0.721	ND	ND		1	WG1089552
Ethanol	64-17-5	46.10	15.8	29.8	3850	7270	E	25	WG1089833
Ethylbenzene	100-41-4	106	0.200	0.867	0.439	1.90		1	WG1089552
4-Ethyltoluene	622-96-8	120	0.200	0.982	ND	ND		1	WG1089552
Trichlorofluoromethane	75-69-4	137.40	0.200	1.12	0.271	1.52		1	WG1089552
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.989	0.394	1.95		1	WG1089552
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.200	1.53	ND	ND		1	WG1089552
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	ND	ND		1	WG1089552
Heptane	142-82-5	100	0.200	0.818	10.3	42.1		1	WG1089552
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.73	ND	ND		1	WG1089552
n-Hexane	110-54-3	86.20	0.200	0.705	0.422	1.49		1	WG1089552
Isopropylbenzene	98-82-8	120.20	0.200	0.983	ND	ND		1	WG1089552
Methylene Chloride	75-09-2	84.90	0.200	0.694	0.406	1.41		1	WG1089552
Methyl Butyl Ketone	591-78-6	100	1.25	5.11	ND	ND		1	WG1089552
2-Butanone (MEK)	78-93-3	72.10	31.2	92.0	391	1150		25	WG1089833
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	1.25	5.12	ND	ND		1	WG1089552
Methyl methacrylate	80-62-6	100.12	0.200	0.819	ND	ND		1	WG1089552
MTBE	1634-04-4	88.10	0.200	0.721	ND	ND		1	WG1089552
Naphthalene	91-20-3	128	0.630	3.30	ND	ND		1	WG1089552
2-Propanol	67-63-0	60.10	31.2	76.7	2780	6830	E	25	WG1089833
Propene	115-07-1	42.10	0.400	0.689	ND	ND		1	WG1089552
Styrene	100-42-5	104	0.200	0.851	0.280	1.19		1	WG1089552
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.37	ND	ND		1	WG1089552
Tetrachloroethylene	127-18-4	166	0.200	1.36	1.69	11.5		1	WG1089552
Tetrahydrofuran	109-99-9	72.10	0.200	0.590	ND	ND		1	WG1089552
Toluene	108-88-3	92.10	0.200	0.753	3.02	11.4		1	WG1089552
1,2,4-Trichlorobenzene	120-82-1	181	0.630	4.66	ND	ND		1	WG1089552

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

ACCOUNT:

First Environment, Inc.

PROJECT:

ENPRO002D-VM

SDG:

L980227

DATE/TIME:

03/30/18 08:24

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Collected date/time: 03/23/18 10:28

L980227

## 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	<a href="#">WG1089552</a>
1,1,2-Trichloroethane	79-00-5	133	0.200	1.09	ND	ND		1	<a href="#">WG1089552</a>
Trichloroethylene	79-01-6	131	0.200	1.07	0.369	1.98		1	<a href="#">WG1089552</a>
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	0.804	3.95		1	<a href="#">WG1089552</a>
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.982	0.240	1.18		1	<a href="#">WG1089552</a>
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.934	ND	ND		1	<a href="#">WG1089552</a>
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	<a href="#">WG1089552</a>
Vinyl Bromide	593-60-2	106.95	0.200	0.875	ND	ND		1	<a href="#">WG1089552</a>
Vinyl acetate	108-05-4	86.10	0.200	0.704	ND	ND		1	<a href="#">WG1089552</a>
m&p-Xylene	1330-20-7	106	0.400	1.73	1.52	6.59		1	<a href="#">WG1089552</a>
o-Xylene	95-47-6	106	0.200	0.867	0.497	2.15		1	<a href="#">WG1089552</a>
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		122				<a href="#">WG1089552</a>
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		97.0				<a href="#">WG1089833</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 03/23/18 10:40

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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	1.25	2.97	3.46	8.22		1	<a href="#">WG1089552</a>
Allyl chloride	107-05-1	76.53	0.200	0.626	ND	ND		1	<a href="#">WG1089552</a>
Benzene	71-43-2	78.10	0.200	0.639	ND	ND		1	<a href="#">WG1089552</a>
Benzyl Chloride	100-44-7	127	0.200	1.04	ND	ND		1	<a href="#">WG1089552</a>
Bromodichloromethane	75-27-4	164	0.200	1.34	ND	ND		1	<a href="#">WG1089552</a>
Bromoform	75-25-2	253	0.600	6.21	ND	ND		1	<a href="#">WG1089552</a>
Bromomethane	74-83-9	94.90	0.200	0.776	ND	ND		1	<a href="#">WG1089552</a>
1,3-Butadiene	106-99-0	54.10	2.00	4.43	ND	ND		1	<a href="#">WG1089552</a>
Carbon disulfide	75-15-0	76.10	0.200	0.622	ND	ND		1	<a href="#">WG1089552</a>
Carbon tetrachloride	56-23-5	154	0.200	1.26	ND	ND		1	<a href="#">WG1089552</a>
Chlorobenzene	108-90-7	113	0.200	0.924	ND	ND		1	<a href="#">WG1089552</a>
Chloroethane	75-00-3	64.50	0.200	0.528	ND	ND		1	<a href="#">WG1089552</a>
Chloroform	67-66-3	119	0.200	0.973	ND	ND		1	<a href="#">WG1089552</a>
Chloromethane	74-87-3	50.50	0.200	0.413	0.477	0.986		1	<a href="#">WG1089552</a>
2-Chlorotoluene	95-49-8	126	0.200	1.03	ND	ND		1	<a href="#">WG1089552</a>
Cyclohexane	110-82-7	84.20	0.200	0.689	ND	ND		1	<a href="#">WG1089552</a>
Dibromochloromethane	124-48-1	208	0.200	1.70	ND	ND		1	<a href="#">WG1089552</a>
1,2-Dibromoethane	106-93-4	188	0.200	1.54	ND	ND		1	<a href="#">WG1089552</a>
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	ND	ND		1	<a href="#">WG1089552</a>
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	ND	ND		1	<a href="#">WG1089552</a>
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	ND	ND		1	<a href="#">WG1089552</a>
1,2-Dichloroethane	107-06-2	99	0.200	0.810	ND	ND		1	<a href="#">WG1089552</a>
1,1-Dichloroethane	75-34-3	98	0.200	0.802	ND	ND		1	<a href="#">WG1089552</a>
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	<a href="#">WG1089552</a>
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	ND	ND		1	<a href="#">WG1089552</a>
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	ND	ND		1	<a href="#">WG1089552</a>
1,2-Dichloropropane	78-87-5	113	0.200	0.924	ND	ND		1	<a href="#">WG1089552</a>
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.908	ND	ND		1	<a href="#">WG1089552</a>
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.908	ND	ND		1	<a href="#">WG1089552</a>
1,4-Dioxane	123-91-1	88.10	0.200	0.721	ND	ND		1	<a href="#">WG1089552</a>
Ethanol	64-17-5	46.10	0.630	1.19	12.1	22.9		1	<a href="#">WG1089552</a>
Ethylbenzene	100-41-4	106	0.200	0.867	ND	ND		1	<a href="#">WG1089552</a>
4-Ethyltoluene	622-96-8	120	0.200	0.982	ND	ND		1	<a href="#">WG1089552</a>
Trichlorofluoromethane	75-69-4	137.40	0.200	1.12	0.243	1.36		1	<a href="#">WG1089552</a>
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.989	0.378	1.87		1	<a href="#">WG1089552</a>
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.200	1.53	ND	ND		1	<a href="#">WG1089552</a>
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	ND	ND		1	<a href="#">WG1089552</a>
Heptane	142-82-5	100	0.200	0.818	ND	ND		1	<a href="#">WG1089552</a>
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.73	ND	ND		1	<a href="#">WG1089552</a>
n-Hexane	110-54-3	86.20	0.200	0.705	ND	ND		1	<a href="#">WG1089552</a>
Isopropylbenzene	98-82-8	120.20	0.200	0.983	ND	ND		1	<a href="#">WG1089552</a>
Methylene Chloride	75-09-2	84.90	0.200	0.694	ND	ND		1	<a href="#">WG1089552</a>
Methyl Butyl Ketone	591-78-6	100	1.25	5.11	ND	ND		1	<a href="#">WG1089552</a>
2-Butanone (MEK)	78-93-3	72.10	1.25	3.69	ND	ND		1	<a href="#">WG1089552</a>
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	1.25	5.12	ND	ND		1	<a href="#">WG1089552</a>
Methyl methacrylate	80-62-6	100.12	0.200	0.819	ND	ND		1	<a href="#">WG1089552</a>
MTBE	1634-04-4	88.10	0.200	0.721	ND	ND		1	<a href="#">WG1089552</a>
Naphthalene	91-20-3	128	0.630	3.30	ND	ND		1	<a href="#">WG1089552</a>
2-Propanol	67-63-0	60.10	1.25	3.07	4.28	10.5		1	<a href="#">WG1089552</a>
Propene	115-07-1	42.10	0.400	0.689	ND	ND		1	<a href="#">WG1089552</a>
Styrene	100-42-5	104	0.200	0.851	ND	ND		1	<a href="#">WG1089552</a>
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.37	ND	ND		1	<a href="#">WG1089552</a>
Tetrachloroethylene	127-18-4	166	0.200	1.36	ND	ND		1	<a href="#">WG1089552</a>
Tetrahydrofuran	109-99-9	72.10	0.200	0.590	ND	ND		1	<a href="#">WG1089552</a>
Toluene	108-88-3	92.10	0.200	0.753	0.205	0.772		1	<a href="#">WG1089552</a>
1,2,4-Trichlorobenzene	120-82-1	181	0.630	4.66	ND	ND		1	<a href="#">WG1089552</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

ACCOUNT:

First Environment, Inc.

PROJECT:

ENPRO002D-VM

SDG:

L980227

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Collected date/time: 03/23/18 10:40

L980227

## 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	<a href="#">WG1089552</a>
1,1,2-Trichloroethane	79-00-5	133	0.200	1.09	ND	ND		1	<a href="#">WG1089552</a>
Trichloroethylene	79-01-6	131	0.200	1.07	ND	ND		1	<a href="#">WG1089552</a>
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	ND	ND		1	<a href="#">WG1089552</a>
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.982	ND	ND		1	<a href="#">WG1089552</a>
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.934	ND	ND		1	<a href="#">WG1089552</a>
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	<a href="#">WG1089552</a>
Vinyl Bromide	593-60-2	106.95	0.200	0.875	ND	ND		1	<a href="#">WG1089552</a>
Vinyl acetate	108-05-4	86.10	0.200	0.704	ND	ND		1	<a href="#">WG1089552</a>
m&p-Xylene	1330-20-7	106	0.400	1.73	ND	ND		1	<a href="#">WG1089552</a>
o-Xylene	95-47-6	106	0.200	0.867	ND	ND		1	<a href="#">WG1089552</a>
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		99.6				<a href="#">WG1089552</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3296437-3 03/26/18 10:15

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

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Method Blank (MB)

(MB) R3296437-3 03/26/18 10:15

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ppbv		ppbv	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	96.6			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) R3296437-1 03/26/18 08:44 • (LCSD) R3296437-2 03/26/18 09:29

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	3.92	3.90	105	104	52.0-158			0.538	25
Propene	3.75	4.05	3.99	108	106	54.0-155			1.63	25
Dichlorodifluoromethane	3.75	4.40	4.34	117	116	69.0-143			1.28	25
1,2-Dichlorotetrafluoroethane	3.75	4.14	4.11	110	110	70.0-130			0.814	25
Chloromethane	3.75	3.94	4.02	105	107	70.0-130			2.11	25



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

(LCS) R3296437-1 03/26/18 08:44 • (LCSD) R3296437-2 03/26/18 09:29

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Vinyl chloride	3.75	4.07	4.08	109	109	70.0-130			0.220	25
1,3-Butadiene	3.75	3.92	3.82	105	102	70.0-130			2.73	25
Bromomethane	3.75	4.36	3.95	116	105	70.0-130			9.87	25
Chloroethane	3.75	4.07	4.02	108	107	70.0-130			1.18	25
Trichlorofluoromethane	3.75	4.13	4.12	110	110	70.0-130			0.468	25
1,1,2-Trichlorotrifluoroethane	3.75	4.17	4.16	111	111	70.0-130			0.444	25
1,1-Dichloroethene	3.75	4.01	4.00	107	107	70.0-130			0.332	25
1,1-Dichloroethane	3.75	4.03	3.98	107	106	70.0-130			1.29	25
Acetone	3.75	3.95	3.93	105	105	70.0-130			0.545	25
2-Propanol	3.75	4.08	3.99	109	107	66.0-150			2.01	25
Carbon disulfide	3.75	4.02	3.96	107	106	70.0-130			1.43	25
Methylene Chloride	3.75	3.86	3.80	103	101	70.0-130			1.51	25
MTBE	3.75	4.05	4.02	108	107	70.0-130			0.928	25
trans-1,2-Dichloroethene	3.75	4.02	3.98	107	106	70.0-130			1.02	25
n-Hexane	3.75	3.96	3.89	106	104	70.0-130			1.91	25
Vinyl acetate	3.75	4.19	4.13	112	110	70.0-130			1.36	25
Methyl Ethyl Ketone	3.75	4.20	4.14	112	110	70.0-130			1.48	25
cis-1,2-Dichloroethene	3.75	4.05	4.00	108	107	70.0-130			1.32	25
Chloroform	3.75	4.04	4.01	108	107	70.0-130			0.824	25
Cyclohexane	3.75	4.13	4.11	110	110	70.0-130			0.374	25
1,1,1-Trichloroethane	3.75	4.07	4.04	109	108	70.0-130			0.853	25
Carbon tetrachloride	3.75	4.10	4.06	109	108	70.0-130			0.914	25
Benzene	3.75	4.05	4.01	108	107	70.0-130			0.844	25
1,2-Dichloroethane	3.75	4.07	4.03	108	107	70.0-130			0.866	25
Heptane	3.75	4.06	4.01	108	107	70.0-130			1.15	25
Trichloroethylene	3.75	4.06	4.06	108	108	70.0-130			0.0891	25
1,2-Dichloropropane	3.75	4.01	3.98	107	106	70.0-130			0.788	25
1,4-Dioxane	3.75	4.42	4.25	118	113	70.0-152			4.02	25
Bromodichloromethane	3.75	4.10	4.07	109	108	70.0-130			0.941	25
cis-1,3-Dichloropropene	3.75	4.20	4.16	112	111	70.0-130			1.17	25
4-Methyl-2-pentanone (MIBK)	3.75	4.15	4.04	111	108	70.0-142			2.63	25
Toluene	3.75	4.17	4.13	111	110	70.0-130			0.893	25
trans-1,3-Dichloropropene	3.75	4.21	4.25	112	113	70.0-130			0.804	25
1,1,2-Trichloroethane	3.75	4.07	4.05	109	108	70.0-130			0.470	25
Tetrachloroethylene	3.75	4.22	4.20	113	112	70.0-130			0.543	25
Methyl Butyl Ketone	3.75	4.43	4.39	118	117	70.0-150			0.999	25
Dibromochloromethane	3.75	4.29	4.24	114	113	70.0-130			1.04	25
1,2-Dibromoethane	3.75	4.24	4.21	113	112	70.0-130			0.669	25
Chlorobenzene	3.75	4.23	4.20	113	112	70.0-130			0.769	25
Ethylbenzene	3.75	4.25	4.24	113	113	70.0-130			0.173	25

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc





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

(LCS) R3296437-1 03/26/18 08:44 • (LCSD) R3296437-2 03/26/18 09:29

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
m&p-Xylene	7.50	8.50	8.48	113	113	70.0-130			0.238	25
o-Xylene	3.75	4.26	4.25	114	113	70.0-130			0.238	25
Styrene	3.75	4.48	4.49	119	120	70.0-130			0.292	25
Bromoform	3.75	4.44	4.46	118	119	70.0-130			0.267	25
1,1,2,2-Tetrachloroethane	3.75	4.24	4.20	113	112	70.0-130			0.880	25
4-Ethyltoluene	3.75	4.44	4.41	119	118	70.0-130			0.674	25
1,3,5-Trimethylbenzene	3.75	4.42	4.41	118	118	70.0-130			0.120	25
1,2,4-Trimethylbenzene	3.75	4.44	4.41	119	118	70.0-130			0.827	25
1,3-Dichlorobenzene	3.75	4.55	4.53	121	121	70.0-130			0.239	25
1,4-Dichlorobenzene	3.75	4.64	4.63	124	123	70.0-130			0.381	25
Benzyl Chloride	3.75	4.73	4.67	126	124	70.0-144			1.35	25
1,2-Dichlorobenzene	3.75	4.45	4.45	119	119	70.0-130			0.0531	25
1,2,4-Trichlorobenzene	3.75	4.44	4.42	118	118	70.0-155			0.447	25
Hexachloro-1,3-butadiene	3.75	4.52	4.53	121	121	70.0-145			0.156	25
Naphthalene	3.75	4.39	4.38	117	117	70.0-155			0.183	25
Allyl Chloride	3.75	4.01	3.94	107	105	70.0-130			1.74	25
2-Chlorotoluene	3.75	4.34	4.33	116	116	70.0-130			0.182	25
Methyl Methacrylate	3.75	4.09	4.05	109	108	70.0-130			1.01	25
Tetrahydrofuran	3.75	4.01	3.94	107	105	70.0-140			1.79	25
2,2,4-Trimethylpentane	3.75	4.04	4.00	108	107	70.0-130			0.968	25
Vinyl Bromide	3.75	4.10	4.09	109	109	70.0-130			0.0919	25
Isopropylbenzene	3.75	4.30	4.28	115	114	70.0-130			0.410	25
<i>(S) 1,4-Bromofluorobenzene</i>				101	102	60.0-140				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3296787-3 03/27/18 10:15

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	96.2			60.0-140

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

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

(LCS) R3296787-1 03/27/18 08:45 • (LCSD) R3296787-2 03/27/18 09:29

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	3.94	3.81	105	102	52.0-158			3.36	25
Acetone	3.75	3.92	3.82	105	102	70.0-130			2.51	25
2-Propanol	3.75	4.03	3.93	107	105	66.0-150			2.48	25
Methyl Ethyl Ketone	3.75	4.24	4.18	113	111	70.0-130			1.46	25
(S) 1,4-Bromofluorobenzene				100	100	60.0-140				

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



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.

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

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



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.  
 \* Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences.

## State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey-NELAP	TN002
California	2932	New Mexico <sup>1</sup>	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina <sup>1</sup>	DW21704
Georgia	NELAP	North Carolina <sup>3</sup>	41
Georgia <sup>1</sup>	923	North Dakota	R-140
Idaho	TN00003	Ohio-VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky <sup>1,6</sup>	90010	South Carolina	84004
Kentucky <sup>2</sup>	16	South Dakota	n/a
Louisiana	AI30792	Tennessee <sup>1,4</sup>	2006
Louisiana <sup>1</sup>	LA180010	Texas	T 104704245-17-14
Maine	TN0002	Texas <sup>5</sup>	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

1  
Cp

2  
Tc

3  
Ss

4  
Cn

5  
Sr

6  
Qc

7  
Gl

8  
Al

9  
Sc

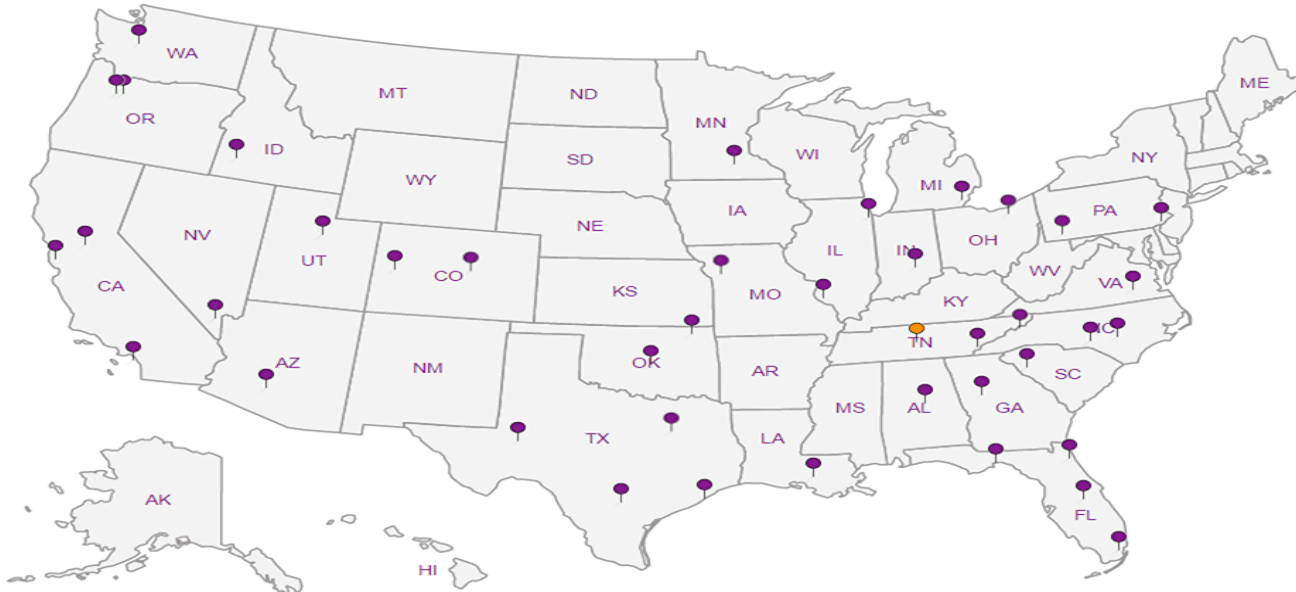
## Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 <sup>5</sup>	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA-Crypto	TN00003		

<sup>1</sup> Drinking Water   <sup>2</sup> Underground Storage Tanks   <sup>3</sup> Aquatic Toxicity   <sup>4</sup> Chemical/Microbiological   <sup>5</sup> Mold   <sup>6</sup> Wastewater   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, Inc.**  
 91 Fulton St.  
 Boonton, NJ 07005

Billing Information:  
**First Environment, Inc.**  
 91 Fulton St.  
 Boonton NJ 07005  
 Attn: Justin Picolo  
 JPicolo@firstenvironment.com

Report to:  
**Michael T. Slack - First Environment**

Email To:  
**MSlack@firstenvironment.com**

Project Description:  
**EnPro: Bi-Weekly 24-hr Indoor Air Sampling**

City/State Collected:  
**Water Valley, MS (Borg Warner Plant Site)**

Chain of Custody Page \_\_\_ of \_\_\_



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



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


Client Project #  
**EnPro002D-VM**

Lab Project #  
**FIREN VBNJ-OxfordMS**

Collected by (print):  
**Michael T. 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


Sample ID	Sample Description	Can #	Date	Time	Initial	Final	Analysis	TO-15 Summa	Rem./Contaminant	Sample # (lab only)
IA-1	Maintenance Room	8917	3/22/18	10:32	29	2		X		-01
IA-2	ATS Room	7241	3/22/18	10:31	30	14		X		02
IA-6	Training Room	6943	3/22/18	10:22	30	15		X		03
IA-17	Cafeteria	7604	3/22/18	10:28	30	7		X		04
AA-2	Ambient Air - Pavilion	7205	3/22/18	10:35	30	4		X		05

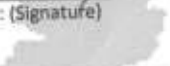
L# **L98027**

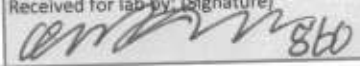
T **M207**

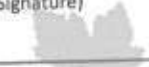
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 Template:  
 Prelogin:  
 TSR:  
 PB:  
 Shipped Via:

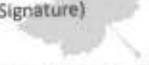
Remarks: **Additional Information is depicted in Sample Collection Table; Dates and Times depicted on COC are "start" times**

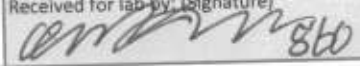
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Relinquished by: (Signature)  Date: \_\_\_\_\_ Time: \_\_\_\_\_

Relinquished by: (Signature)  Date: **3/24/18** Time: **9:00**

Received by: (Signature)  Date: \_\_\_\_\_ Time: \_\_\_\_\_

Received by: (Signature)  Date: \_\_\_\_\_ Time: \_\_\_\_\_

Received for lab by: (Signature)  Date: **3/24/18** Time: **9:00**

Samples returned via:  UPS  FedEx  Courier  \_\_\_\_\_

Temp: **Amb** °C Bottles Received: **2**

Condition: (lab use only) **OK**

COC Seal Intact:  Y  N  NA

pH Checked: \_\_\_\_\_ NCF: \_\_\_\_\_

4276 0138 5501/5497

L980727

Indoor Air Monitoring (Bi-Weekly Sampling)  
 Borg Warner Facility  
 Water Valley, Yalobusha Co., MS  
 March 22-23, 2018  
 Indoor Air (IA) and Ambient Air (AA) - Sampling Event

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	8376	8917	6	3/22/18 10:32	29	3/23/18 10:00	2	M. Slack
IA-2	ATS Room	6049	7241	6	3/22/18 10:31	30	3/23/18 10:31	14	M. Slack
IA-6	Training Room	7798	6943	6	3/22/18 10:22	30	3/23/18 10:23	15	M. Slack
IA-17	Cafeteria	6046	7604	6	3/22/18 10:28	30	3/23/18 10:28	7	M. Slack
IA-C16	I-Beam C16	NS							M. Slack
IA-K13	I-Beam K13	NS							M. Slack
IA-G4	I-Beam G4	NS							M. Slack
AA-2	Pavilion	6357	7205	6	3/22/18 10:35	30	3/23/18 10:40	4	M. Slack

Invo: FIRENVBNJ-OKFOR Date : 29Jan18  
 Customer : P636983 Weight : 10 LBS  
 Phone : (615)758-5858 COD :  
 SAT Del : Y DV :  
 Shipping : 0.00  
 Special : 0.00  
 Handling : 0.00  
 Total : 0.00  
 Svc: PRIORITY OVERNIGHT  
 TRCK: 4276 0138 5497

Invo: FIRENVBNJ-OKFOR Date : 29Jan18  
 Customer : P636983 Weight : 10 LBS  
 Phone : (615)758-5858 COD :  
 SAT Del : Y DV :  
 Shipping : 0.00  
 Special : 0.00  
 Handling : 0.00  
 Total : 0.00  
 Svc: PRIORITY OVERNIGHT  
 TRCK: 4276 0138 5501

Weather Conditions (@ time of canister placement):

COOL-SUNNY - MID 30s - WIND - CALM

Weather Conditions during 24-hr sampling period:

CLEAR - MID 40s - 50s F - WINDS CALM

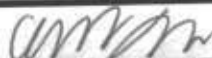
NS - Not Sampled

MORNING: WINDS FROM SOUTH - 3 TO 5 mph

Michael T. Slack (First Environment)

M.T.S. 3/23/18

**ESC LAB SCIENCES  
Cooler Receipt Form**

Client:	F2RENVBNS	SDG#	L980227
Cooler Received/Opened On: 3/14/18		Temperature:	AMB
Received By: Christian Kacar			
Signature: 			

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