

May 26, 2017

Mr. William McKercher
Mississippi Department of Environmental Quality
515 E. Amite Street
Jackson, MS 39201

Mr. Ben Lightsey
Mississippi Department of Environmental Quality
515 E. Amite Street
Jackson, MS 39201

Re: Sub-Slab Depressurization System ("SSD") – Indoor Air Sampling, Former Holley Automotive/Coltec Industries Facility, Water Valley, MS

Dear Messrs. McKercher and Lightsey:

On behalf of EnPro Industries, Inc., enclosed please find the laboratory report for indoor air samples taken on May 14, 2017 and received from the laboratory on May 17, 2017. First Environment, Inc. (First Environment) is currently reviewing the laboratory report through our data validation process. Figure 1 shows the sampling points and corresponding TCE concentrations. Analytical results from all sampling points were below USEPA's Action Level of 26 $\mu\text{g}/\text{m}^3$, with the exception of the maintenance room. First Environment is further assessing the efficacy of the SSD system in the maintenance room this week and will adjust the system, if needed, accordingly.

For subsequent rounds of indoor air sampling, the Mississippi Department of Environmental Quality has identified eight consolidated indoor air sample points inside the facility to be sampled on an ongoing basis, including the maintenance room, ATS room, and training room. We propose to sample indoor air at an additional five sample points (cafeteria, three locations on the east side of the facility, and an ambient air location). Figure 2 shows the 13 sample points.

At your earliest convenience, please confirm your approval of the proposed indoor air sampling locations. Should you have any questions, please do not hesitate to contact me.

Very truly yours,

FIRST ENVIRONMENT, INC.

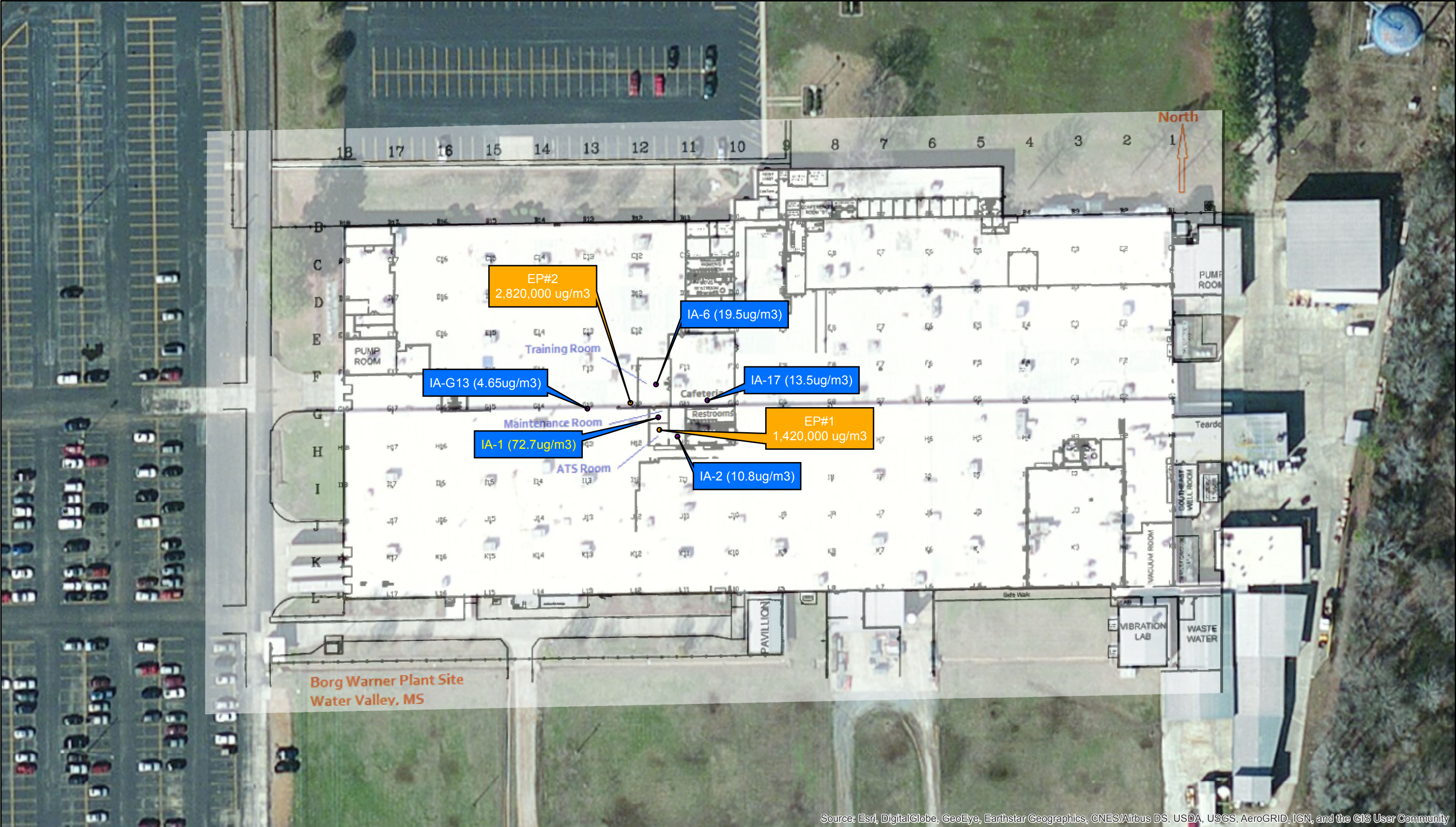


Bernard T. Delaney, Ph.D., P.E., BCEE
President
Mississippi P.E. No. 11041

cc: Trudy Fisher, Esq.
Benne Hutson, Esq.
Amanda Tollison, Esq.

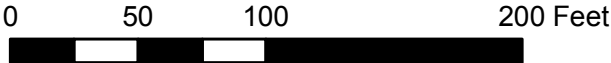


FIGURES



Legend

- 24-hr Indoor Air Sample Location and TCE Analytical Result - May 14-15, 2017
TCE Concentration Exceeding EPA Action Level of 26 ug/m3
- SSD System Extraction Point (EP) and TCE Analytical Result - May 15, 2017

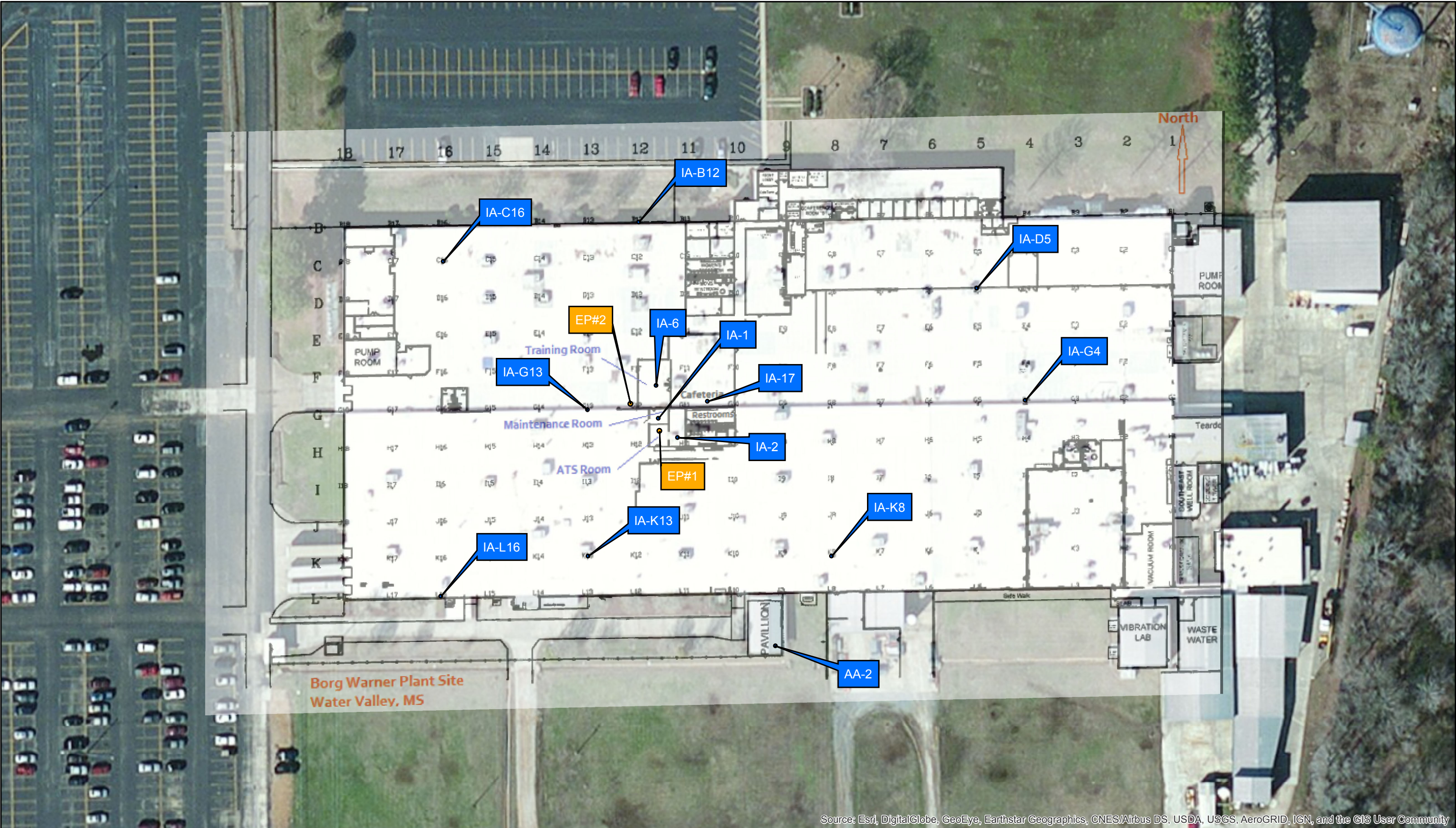


FIRST ENVIRONMENT

91 Fulton Street
Boonton, New Jersey 07005

Indoor Air Sample Locations and
TCE Analytical Results
May14-15, 2017
Borg Warner Facility
Water Valley, MS
Figure 1

Revised	Drawn	Checked	Approved	Date
	LS	IC	IC	05/24/17



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

Legend

- Proposed 24-hr Indoor Air Monitoring Locations
- SSD System Extraction Point (EP)



Proposed Indoor Air Sample Locations

Borg Warner Facility
Water Valley, MS

Figure 2

91 Fulton Street Boonton, New Jersey 07005	Revised	Drawn LS	Checked IC	Approved IC	Date 05/24/17
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ATTACHMENT
Analytical Data

First Environment, Inc.

Sample Delivery Group: L909544
Samples Received: 05/16/2017
Project Number: ENPRO002D
Description: EnPro 002B
Site: ENPRO 002B
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.



Cp: Cover Page	1
Tc: Table of Contents	2
Ss: Sample Summary	3
Cn: Case Narrative	4
Sr: Sample Results	5
IA-1 (SSD)-MAINT L909544-01	5
IA-2 (SSD)-ATS ROOM L909544-02	7
IA-6 (SSD)-TRAINING ROOM L909544-03	9
IA-G13 (SSD) L909544-04	11
IA-17 (SSD)-CAFETERIA L909544-05	13
EP-1 L909544-06	15
EP-2 L909544-07	17
Qc: Quality Control Summary	19
Volatile Organic Compounds (MS) by Method TO-15	19
Gl: Glossary of Terms	25
Al: Accreditations & Locations	26
Sc: Chain of Custody	27





IA-1 (SSD)-MAINT L909544-01 Air

			Collected by M. Slack	Collected date/time 05/14/17 09:40	Received date/time 05/16/17 08:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG980090	1	05/17/17 11:35	05/17/17 11:35	MBF
Volatile Organic Compounds (MS) by Method TO-15	WG980539	25	05/17/17 22:47	05/17/17 22:47	MBF

¹ Cp

² Tc

³ Ss

IA-2 (SSD)-ATS ROOM L909544-02 Air

			Collected by M. Slack	Collected date/time 05/14/17 09:45	Received date/time 05/16/17 08:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG980090	1	05/17/17 12:22	05/17/17 12:22	MBF
Volatile Organic Compounds (MS) by Method TO-15	WG980539	25	05/17/17 23:28	05/17/17 23:28	MBF

⁴ Cn

⁵ Sr

⁶ Qc

IA-6 (SSD)-TRAINING ROOM L909544-03 Air

			Collected by M. Slack	Collected date/time 05/14/17 09:00	Received date/time 05/16/17 08:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG980090	1	05/17/17 13:09	05/17/17 13:09	MBF
Volatile Organic Compounds (MS) by Method TO-15	WG980539	25	05/18/17 00:09	05/18/17 00:09	MBF

⁷ Gl

⁸ Al

⁹ Sc

IA-G13 (SSD) L909544-04 Air

			Collected by M. Slack	Collected date/time 05/14/17 10:10	Received date/time 05/16/17 08:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG980090	1	05/17/17 14:01	05/17/17 14:01	MBF
Volatile Organic Compounds (MS) by Method TO-15	WG980539	25	05/18/17 00:51	05/18/17 00:51	MBF

IA-17 (SSD)-CAFETERIA L909544-05 Air

			Collected by M. Slack	Collected date/time 05/14/17 09:30	Received date/time 05/16/17 08:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG980090	1	05/17/17 14:50	05/17/17 14:50	MBF
Volatile Organic Compounds (MS) by Method TO-15	WG980539	25	05/18/17 01:32	05/18/17 01:32	MBF

EP-1 L909544-06 Air

			Collected by M. Slack	Collected date/time 05/14/17 13:55	Received date/time 05/16/17 08:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG980090	2000	05/17/17 15:33	05/17/17 15:33	MBF
Volatile Organic Compounds (MS) by Method TO-15	WG980842	20000	05/18/17 10:45	05/18/17 10:45	MBF

EP-2 L909544-07 Air

			Collected by M. Slack	Collected date/time 05/14/17 14:00	Received date/time 05/16/17 08:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG980090	4000	05/17/17 16:15	05/17/17 16:15	MBF
Volatile Organic Compounds (MS) by Method TO-15	WG980842	40000	05/18/17 11:31	05/18/17 11:31	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 Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

John Hawkins
Technical Service Representative

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



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	70.9	168		25	WG980539
Allyl chloride	107-05-1	76.53	0.200	0.626	ND	ND		1	WG980090
Benzene	71-43-2	78.10	0.200	0.639	0.224	0.717		1	WG980090
Benzyl Chloride	100-44-7	127	0.200	1.04	ND	ND		1	WG980090
Bromodichloromethane	75-27-4	164	0.200	1.34	ND	ND		1	WG980090
Bromoform	75-25-2	253	0.600	6.21	ND	ND		1	WG980090
Bromomethane	74-83-9	94.90	0.200	0.776	ND	ND		1	WG980090
1,3-Butadiene	106-99-0	54.10	2.00	4.43	ND	ND		1	WG980090
Carbon disulfide	75-15-0	76.10	0.200	0.622	ND	ND		1	WG980090
Carbon tetrachloride	56-23-5	154	0.200	1.26	ND	ND		1	WG980090
Chlorobenzene	108-90-7	113	0.200	0.924	ND	ND		1	WG980090
Chloroethane	75-00-3	64.50	0.200	0.528	ND	ND		1	WG980090
Chloroform	67-66-3	119	0.200	0.973	ND	ND		1	WG980090
Chloromethane	74-87-3	50.50	0.200	0.413	0.603	1.24		1	WG980090
2-Chlorotoluene	95-49-8	126	0.200	1.03	ND	ND		1	WG980090
Cyclohexane	110-82-7	84.20	0.200	0.689	ND	ND		1	WG980090
Dibromochloromethane	124-48-1	208	0.200	1.70	ND	ND		1	WG980090
1,2-Dibromoethane	106-93-4	188	0.200	1.54	ND	ND		1	WG980090
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	ND	ND		1	WG980090
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	ND	ND		1	WG980090
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	ND	ND		1	WG980090
1,2-Dichloroethane	107-06-2	99	0.200	0.810	ND	ND		1	WG980090
1,1-Dichloroethane	75-34-3	98	0.200	0.802	ND	ND		1	WG980090
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	WG980090
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	3.52	14.0		1	WG980090
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	0.344	1.36		1	WG980090
1,2-Dichloropropane	78-87-5	113	0.200	0.924	ND	ND		1	WG980090
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.908	ND	ND		1	WG980090
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.908	ND	ND		1	WG980090
1,4-Dioxane	123-91-1	88.10	0.200	0.721	ND	ND		1	WG980090
Ethanol	64-17-5	46.10	15.8	29.8	2530	4770	E	25	WG980539
Ethylbenzene	100-41-4	106	0.200	0.867	0.506	2.19		1	WG980090
4-Ethyltoluene	622-96-8	120	0.200	0.982	0.261	1.28		1	WG980090
Trichlorofluoromethane	75-69-4	137.40	0.200	1.12	0.287	1.61		1	WG980090
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.989	0.319	1.58		1	WG980090
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.200	1.53	ND	ND		1	WG980090
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	ND	ND		1	WG980090
Heptane	142-82-5	100	0.200	0.818	8.97	36.7		1	WG980090
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.73	ND	ND		1	WG980090
n-Hexane	110-54-3	86.20	0.200	0.705	0.762	2.69		1	WG980090
Isopropylbenzene	98-82-8	120.20	0.200	0.983	ND	ND		1	WG980090
Methylene Chloride	75-09-2	84.90	0.200	0.694	0.233	0.809	B	1	WG980090
Methyl Butyl Ketone	591-78-6	100	1.25	5.11	ND	ND		1	WG980090
2-Butanone (MEK)	78-93-3	72.10	31.2	92.0	231	681		25	WG980539
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	1.25	5.12	ND	ND		1	WG980090
Methyl methacrylate	80-62-6	100.12	0.200	0.819	ND	ND		1	WG980090
MTBE	1634-04-4	88.10	0.200	0.721	ND	ND		1	WG980090
Naphthalene	91-20-3	128	0.630	3.30	1.01	5.27		1	WG980090
2-Propanol	67-63-0	60.10	31.2	76.7	768	1890		25	WG980539
Propene	115-07-1	42.10	0.400	0.689	ND	ND		1	WG980090
Styrene	100-42-5	104	0.200	0.851	0.334	1.42		1	WG980090
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.37	ND	ND		1	WG980090
Tetrachloroethylene	127-18-4	166	0.200	1.36	0.204	1.38		1	WG980090
Tetrahydrofuran	109-99-9	72.10	0.200	0.590	ND	ND		1	WG980090
Toluene	108-88-3	92.10	0.200	0.753	5.00	18.8		1	WG980090
1,2,4-Trichlorobenzene	120-82-1	181	0.630	4.66	ND	ND		1	WG980090

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
1,1,1-Trichloroethane	71-55-6	133	0.200	1.09	ND	ND		1	WG980090
1,1,2-Trichloroethane	79-00-5	133	0.200	1.09	ND	ND		1	WG980090
Trichloroethylene	79-01-6	131	0.200	1.07	13.6	72.7		1	WG980090
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	1.26	6.20		1	WG980090
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.982	0.409	2.00		1	WG980090
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.934	ND	ND		1	WG980090
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	WG980090
Vinyl Bromide	593-60-2	106.95	0.200	0.875	ND	ND		1	WG980090
Vinyl acetate	108-05-4	86.10	0.200	0.704	ND	ND		1	WG980090
m&p-Xylene	1330-20-7	106	0.400	1.73	1.68	7.29		1	WG980090
o-Xylene	95-47-6	106	0.200	0.867	0.598	2.59		1	WG980090
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		102				WG980539
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		108				WG980090

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc



Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	31.2	74.1	65.1	155		25	WG980539
Allyl chloride	107-05-1	76.53	0.200	0.626	ND	ND		1	WG980090
Benzene	71-43-2	78.10	0.200	0.639	0.212	0.678		1	WG980090
Benzyl Chloride	100-44-7	127	0.200	1.04	ND	ND		1	WG980090
Bromodichloromethane	75-27-4	164	0.200	1.34	ND	ND		1	WG980090
Bromoform	75-25-2	253	0.600	6.21	ND	ND		1	WG980090
Bromomethane	74-83-9	94.90	0.200	0.776	ND	ND		1	WG980090
1,3-Butadiene	106-99-0	54.10	2.00	4.43	ND	ND		1	WG980090
Carbon disulfide	75-15-0	76.10	0.200	0.622	ND	ND		1	WG980090
Carbon tetrachloride	56-23-5	154	0.200	1.26	ND	ND		1	WG980090
Chlorobenzene	108-90-7	113	0.200	0.924	ND	ND		1	WG980090
Chloroethane	75-00-3	64.50	0.200	0.528	ND	ND		1	WG980090
Chloroform	67-66-3	119	0.200	0.973	ND	ND		1	WG980090
Chloromethane	74-87-3	50.50	0.200	0.413	0.511	1.06		1	WG980090
2-Chlorotoluene	95-49-8	126	0.200	1.03	ND	ND		1	WG980090
Cyclohexane	110-82-7	84.20	0.200	0.689	ND	ND		1	WG980090
Dibromochloromethane	124-48-1	208	0.200	1.70	ND	ND		1	WG980090
1,2-Dibromoethane	106-93-4	188	0.200	1.54	ND	ND		1	WG980090
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	ND	ND		1	WG980090
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	ND	ND		1	WG980090
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	ND	ND		1	WG980090
1,2-Dichloroethane	107-06-2	99	0.200	0.810	ND	ND		1	WG980090
1,1-Dichloroethane	75-34-3	98	0.200	0.802	ND	ND		1	WG980090
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	WG980090
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	ND	ND		1	WG980090
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	0.515	2.04		1	WG980090
1,2-Dichloropropane	78-87-5	113	0.200	0.924	ND	ND		1	WG980090
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.908	ND	ND		1	WG980090
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.908	ND	ND		1	WG980090
1,4-Dioxane	123-91-1	88.10	0.200	0.721	ND	ND		1	WG980090
Ethanol	64-17-5	46.10	15.8	29.8	3870	7300	E	25	WG980539
Ethylbenzene	100-41-4	106	0.200	0.867	0.555	2.41		1	WG980090
4-Ethyltoluene	622-96-8	120	0.200	0.982	0.299	1.47		1	WG980090
Trichlorofluoromethane	75-69-4	137.40	0.200	1.12	0.558	3.13		1	WG980090
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.989	0.305	1.51		1	WG980090
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.200	1.53	ND	ND		1	WG980090
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	ND	ND		1	WG980090
Heptane	142-82-5	100	0.200	0.818	16.8	68.8		1	WG980090
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.73	ND	ND		1	WG980090
n-Hexane	110-54-3	86.20	0.200	0.705	0.200	ND		1	WG980090
Isopropylbenzene	98-82-8	120.20	0.200	0.983	ND	ND		1	WG980090
Methylene Chloride	75-09-2	84.90	0.200	0.694	0.265	0.921	B	1	WG980090
Methyl Butyl Ketone	591-78-6	100	1.25	5.11	ND	ND		1	WG980090
2-Butanone (MEK)	78-93-3	72.10	31.2	92.0	298	879		25	WG980539
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	1.25	5.12	ND	ND		1	WG980090
Methyl methacrylate	80-62-6	100.12	0.200	0.819	ND	ND		1	WG980090
MTBE	1634-04-4	88.10	0.200	0.721	ND	ND		1	WG980090
Naphthalene	91-20-3	128	0.630	3.30	ND	ND		1	WG980090
2-Propanol	67-63-0	60.10	31.2	76.7	829	2040		25	WG980539
Propene	115-07-1	42.10	0.400	0.689	4.45	7.66		1	WG980090
Styrene	100-42-5	104	0.200	0.851	0.277	1.18		1	WG980090
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.37	ND	ND		1	WG980090
Tetrachloroethylene	127-18-4	166	0.200	1.36	ND	ND		1	WG980090
Tetrahydrofuran	109-99-9	72.10	0.200	0.590	ND	ND		1	WG980090
Toluene	108-88-3	92.10	0.200	0.753	1.77	6.68		1	WG980090
1,2,4-Trichlorobenzene	120-82-1	181	0.630	4.66	ND	ND		1	WG980090

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
1,1,1-Trichloroethane	71-55-6	133	0.200	1.09	ND	ND		1	WG980090
1,1,2-Trichloroethane	79-00-5	133	0.200	1.09	ND	ND		1	WG980090
Trichloroethylene	79-01-6	131	0.200	1.07	2.02	10.8		1	WG980090
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	1.47	7.20		1	WG980090
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.982	0.484	2.38		1	WG980090
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.934	ND	ND		1	WG980090
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	WG980090
Vinyl Bromide	593-60-2	106.95	0.200	0.875	ND	ND		1	WG980090
Vinyl acetate	108-05-4	86.10	0.200	0.704	ND	ND		1	WG980090
m&p-Xylene	1330-20-7	106	0.400	1.73	1.99	8.64		1	WG980090
o-Xylene	95-47-6	106	0.200	0.867	0.698	3.02		1	WG980090
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		103				WG980539
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		106				WG980090

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc



Collected date/time: 05/14/17 09:00

L909544

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	35.6	84.5		1	WG980090
Allyl chloride	107-05-1	76.53	0.200	0.626	ND	ND		1	WG980090
Benzene	71-43-2	78.10	0.200	0.639	ND	ND		1	WG980090
Benzyl Chloride	100-44-7	127	0.200	1.04	ND	ND		1	WG980090
Bromodichloromethane	75-27-4	164	0.200	1.34	ND	ND		1	WG980090
Bromoform	75-25-2	253	0.600	6.21	ND	ND		1	WG980090
Bromomethane	74-83-9	94.90	0.200	0.776	ND	ND		1	WG980090
1,3-Butadiene	106-99-0	54.10	2.00	4.43	ND	ND		1	WG980090
Carbon disulfide	75-15-0	76.10	0.200	0.622	ND	ND		1	WG980090
Carbon tetrachloride	56-23-5	154	0.200	1.26	ND	ND		1	WG980090
Chlorobenzene	108-90-7	113	0.200	0.924	ND	ND		1	WG980090
Chloroethane	75-00-3	64.50	0.200	0.528	ND	ND		1	WG980090
Chloroform	67-66-3	119	0.200	0.973	ND	ND		1	WG980090
Chloromethane	74-87-3	50.50	0.200	0.413	0.503	1.04		1	WG980090
2-Chlorotoluene	95-49-8	126	0.200	1.03	ND	ND		1	WG980090
Cyclohexane	110-82-7	84.20	0.200	0.689	ND	ND		1	WG980090
Dibromochloromethane	124-48-1	208	0.200	1.70	ND	ND		1	WG980090
1,2-Dibromoethane	106-93-4	188	0.200	1.54	ND	ND		1	WG980090
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	ND	ND		1	WG980090
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	ND	ND		1	WG980090
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	ND	ND		1	WG980090
1,2-Dichloroethane	107-06-2	99	0.200	0.810	ND	ND		1	WG980090
1,1-Dichloroethane	75-34-3	98	0.200	0.802	ND	ND		1	WG980090
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	WG980090
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	ND	ND		1	WG980090
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	0.274	1.09		1	WG980090
1,2-Dichloropropane	78-87-5	113	0.200	0.924	ND	ND		1	WG980090
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.908	ND	ND		1	WG980090
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.908	ND	ND		1	WG980090
1,4-Dioxane	123-91-1	88.10	0.200	0.721	ND	ND		1	WG980090
Ethanol	64-17-5	46.10	15.8	29.8	1600	3010	E	25	WG980539
Ethylbenzene	100-41-4	106	0.200	0.867	0.353	1.53		1	WG980090
4-Ethyltoluene	622-96-8	120	0.200	0.982	ND	ND		1	WG980090
Trichlorofluoromethane	75-69-4	137.40	0.200	1.12	0.439	2.47		1	WG980090
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.989	0.309	1.53		1	WG980090
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.200	1.53	ND	ND		1	WG980090
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	ND	ND		1	WG980090
Heptane	142-82-5	100	0.200	0.818	4.68	19.2		1	WG980090
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.73	ND	ND		1	WG980090
n-Hexane	110-54-3	86.20	0.200	0.705	ND	ND		1	WG980090
Isopropylbenzene	98-82-8	120.20	0.200	0.983	ND	ND		1	WG980090
Methylene Chloride	75-09-2	84.90	0.200	0.694	0.273	0.947	B	1	WG980090
Methyl Butyl Ketone	591-78-6	100	1.25	5.11	ND	ND		1	WG980090
2-Butanone (MEK)	78-93-3	72.10	31.2	92.0	143	422		25	WG980539
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	1.25	5.12	ND	ND		1	WG980090
Methyl methacrylate	80-62-6	100.12	0.200	0.819	ND	ND		1	WG980090
MTBE	1634-04-4	88.10	0.200	0.721	ND	ND		1	WG980090
Naphthalene	91-20-3	128	0.630	3.30	ND	ND		1	WG980090
2-Propanol	67-63-0	60.10	31.2	76.7	442	1090		25	WG980539
Propene	115-07-1	42.10	0.400	0.689	ND	ND		1	WG980090
Styrene	100-42-5	104	0.200	0.851	0.268	1.14		1	WG980090
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.37	ND	ND		1	WG980090
Tetrachloroethylene	127-18-4	166	0.200	1.36	ND	ND		1	WG980090
Tetrahydrofuran	109-99-9	72.10	0.200	0.590	ND	ND		1	WG980090
Toluene	108-88-3	92.10	0.200	0.753	1.15	4.33		1	WG980090
1,2,4-Trichlorobenzene	120-82-1	181	0.630	4.66	ND	ND		1	WG980090

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
1,1,1-Trichloroethane	71-55-6	133	0.200	1.09	ND	ND		1	WG980090
1,1,2-Trichloroethane	79-00-5	133	0.200	1.09	ND	ND		1	WG980090
Trichloroethylene	79-01-6	131	0.200	1.07	3.63	19.5		1	WG980090
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	0.807	3.96		1	WG980090
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.982	0.248	1.22		1	WG980090
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.934	ND	ND		1	WG980090
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	WG980090
Vinyl Bromide	593-60-2	106.95	0.200	0.875	ND	ND		1	WG980090
Vinyl acetate	108-05-4	86.10	0.200	0.704	ND	ND		1	WG980090
m&p-Xylene	1330-20-7	106	0.400	1.73	1.23	5.34		1	WG980090
o-Xylene	95-47-6	106	0.200	0.867	0.396	1.72		1	WG980090
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		101				WG980539
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		105				WG980090

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc



Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	31.2	74.1	68.4	163		25	WG980539
Allyl chloride	107-05-1	76.53	0.200	0.626	ND	ND		1	WG980090
Benzene	71-43-2	78.10	0.200	0.639	ND	ND		1	WG980090
Benzyl Chloride	100-44-7	127	0.200	1.04	ND	ND		1	WG980090
Bromodichloromethane	75-27-4	164	0.200	1.34	ND	ND		1	WG980090
Bromoform	75-25-2	253	0.600	6.21	ND	ND		1	WG980090
Bromomethane	74-83-9	94.90	0.200	0.776	ND	ND		1	WG980090
1,3-Butadiene	106-99-0	54.10	2.00	4.43	ND	ND		1	WG980090
Carbon disulfide	75-15-0	76.10	0.200	0.622	ND	ND		1	WG980090
Carbon tetrachloride	56-23-5	154	0.200	1.26	ND	ND		1	WG980090
Chlorobenzene	108-90-7	113	0.200	0.924	ND	ND		1	WG980090
Chloroethane	75-00-3	64.50	0.200	0.528	ND	ND		1	WG980090
Chloroform	67-66-3	119	0.200	0.973	ND	ND		1	WG980090
Chloromethane	74-87-3	50.50	0.200	0.413	0.479	0.989		1	WG980090
2-Chlorotoluene	95-49-8	126	0.200	1.03	ND	ND		1	WG980090
Cyclohexane	110-82-7	84.20	0.200	0.689	ND	ND		1	WG980090
Dibromochloromethane	124-48-1	208	0.200	1.70	ND	ND		1	WG980090
1,2-Dibromoethane	106-93-4	188	0.200	1.54	ND	ND		1	WG980090
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	ND	ND		1	WG980090
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	ND	ND		1	WG980090
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	ND	ND		1	WG980090
1,2-Dichloroethane	107-06-2	99	0.200	0.810	ND	ND		1	WG980090
1,1-Dichloroethane	75-34-3	98	0.200	0.802	ND	ND		1	WG980090
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	WG980090
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	ND	ND		1	WG980090
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	0.413	1.64		1	WG980090
1,2-Dichloropropane	78-87-5	113	0.200	0.924	ND	ND		1	WG980090
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.908	ND	ND		1	WG980090
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.908	ND	ND		1	WG980090
1,4-Dioxane	123-91-1	88.10	0.200	0.721	ND	ND		1	WG980090
Ethanol	64-17-5	46.10	15.8	29.8	3590	6760	E	25	WG980539
Ethylbenzene	100-41-4	106	0.200	0.867	0.565	2.45		1	WG980090
4-Ethyltoluene	622-96-8	120	0.200	0.982	0.291	1.43		1	WG980090
Trichlorofluoromethane	75-69-4	137.40	0.200	1.12	0.341	1.92		1	WG980090
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.989	0.310	1.53		1	WG980090
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.200	1.53	ND	ND		1	WG980090
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	ND	ND		1	WG980090
Heptane	142-82-5	100	0.200	0.818	23.1	94.6		1	WG980090
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.73	ND	ND		1	WG980090
n-Hexane	110-54-3	86.20	0.200	0.705	ND	ND		1	WG980090
Isopropylbenzene	98-82-8	120.20	0.200	0.983	ND	ND		1	WG980090
Methylene Chloride	75-09-2	84.90	0.200	0.694	ND	ND		1	WG980090
Methyl Butyl Ketone	591-78-6	100	1.25	5.11	ND	ND		1	WG980090
2-Butanone (MEK)	78-93-3	72.10	31.2	92.0	308	908		25	WG980539
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	1.25	5.12	ND	ND		1	WG980090
Methyl methacrylate	80-62-6	100.12	0.200	0.819	ND	ND		1	WG980090
MTBE	1634-04-4	88.10	0.200	0.721	ND	ND		1	WG980090
Naphthalene	91-20-3	128	0.630	3.30	ND	ND		1	WG980090
2-Propanol	67-63-0	60.10	31.2	76.7	1010	2490		25	WG980539
Propene	115-07-1	42.10	0.400	0.689	ND	ND		1	WG980090
Styrene	100-42-5	104	0.200	0.851	0.226	0.961		1	WG980090
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.37	ND	ND		1	WG980090
Tetrachloroethylene	127-18-4	166	0.200	1.36	2.03	13.8		1	WG980090
Tetrahydrofuran	109-99-9	72.10	0.200	0.590	ND	ND		1	WG980090
Toluene	108-88-3	92.10	0.200	0.753	0.961	3.62		1	WG980090
1,2,4-Trichlorobenzene	120-82-1	181	0.630	4.66	ND	ND		1	WG980090

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
1,1,1-Trichloroethane	71-55-6	133	0.200	1.09	ND	ND		1	WG980090
1,1,2-Trichloroethane	79-00-5	133	0.200	1.09	ND	ND		1	WG980090
Trichloroethylene	79-01-6	131	0.200	1.07	0.867	4.65		1	WG980090
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	1.45	7.11		1	WG980090
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.982	0.451	2.22		1	WG980090
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.934	ND	ND		1	WG980090
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	WG980090
Vinyl Bromide	593-60-2	106.95	0.200	0.875	ND	ND		1	WG980090
Vinyl acetate	108-05-4	86.10	0.200	0.704	ND	ND		1	WG980090
m&p-Xylene	1330-20-7	106	0.400	1.73	2.11	9.14		1	WG980090
o-Xylene	95-47-6	106	0.200	0.867	0.730	3.16		1	WG980090
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		98.2				WG980539
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		111				WG980090

1
Cp2
Tc3
Ss4
Cn5
Sr6
Qc7
Gl8
Al9
Sc



Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	1.25	2.97	45.1	107		1	WG980090
Allyl chloride	107-05-1	76.53	0.200	0.626	ND	ND		1	WG980090
Benzene	71-43-2	78.10	0.200	0.639	0.227	0.725		1	WG980090
Benzyl Chloride	100-44-7	127	0.200	1.04	ND	ND		1	WG980090
Bromodichloromethane	75-27-4	164	0.200	1.34	ND	ND		1	WG980090
Bromoform	75-25-2	253	0.600	6.21	ND	ND		1	WG980090
Bromomethane	74-83-9	94.90	0.200	0.776	ND	ND		1	WG980090
1,3-Butadiene	106-99-0	54.10	2.00	4.43	ND	ND		1	WG980090
Carbon disulfide	75-15-0	76.10	0.200	0.622	ND	ND		1	WG980090
Carbon tetrachloride	56-23-5	154	0.200	1.26	ND	ND		1	WG980090
Chlorobenzene	108-90-7	113	0.200	0.924	ND	ND		1	WG980090
Chloroethane	75-00-3	64.50	0.200	0.528	ND	ND		1	WG980090
Chloroform	67-66-3	119	0.200	0.973	ND	ND		1	WG980090
Chloromethane	74-87-3	50.50	0.200	0.413	0.513	1.06		1	WG980090
2-Chlorotoluene	95-49-8	126	0.200	1.03	ND	ND		1	WG980090
Cyclohexane	110-82-7	84.20	0.200	0.689	ND	ND		1	WG980090
Dibromochloromethane	124-48-1	208	0.200	1.70	ND	ND		1	WG980090
1,2-Dibromoethane	106-93-4	188	0.200	1.54	ND	ND		1	WG980090
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	ND	ND		1	WG980090
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	ND	ND		1	WG980090
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	ND	ND		1	WG980090
1,2-Dichloroethane	107-06-2	99	0.200	0.810	ND	ND		1	WG980090
1,1-Dichloroethane	75-34-3	98	0.200	0.802	ND	ND		1	WG980090
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	WG980090
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	ND	ND		1	WG980090
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	0.319	1.26		1	WG980090
1,2-Dichloropropane	78-87-5	113	0.200	0.924	ND	ND		1	WG980090
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.908	ND	ND		1	WG980090
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.908	ND	ND		1	WG980090
1,4-Dioxane	123-91-1	88.10	0.200	0.721	ND	ND		1	WG980090
Ethanol	64-17-5	46.10	15.8	29.8	2410	4540	E	25	WG980539
Ethylbenzene	100-41-4	106	0.200	0.867	0.338	1.47		1	WG980090
4-Ethyltoluene	622-96-8	120	0.200	0.982	ND	ND		1	WG980090
Trichlorofluoromethane	75-69-4	137.40	0.200	1.12	0.416	2.34		1	WG980090
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.989	0.303	1.50		1	WG980090
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.200	1.53	ND	ND		1	WG980090
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	ND	ND		1	WG980090
Heptane	142-82-5	100	0.200	0.818	5.85	23.9		1	WG980090
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.73	ND	ND		1	WG980090
n-Hexane	110-54-3	86.20	0.200	0.705	ND	ND		1	WG980090
Isopropylbenzene	98-82-8	120.20	0.200	0.983	ND	ND		1	WG980090
Methylene Chloride	75-09-2	84.90	0.200	0.694	ND	ND		1	WG980090
Methyl Butyl Ketone	591-78-6	100	1.25	5.11	ND	ND		1	WG980090
2-Butanone (MEK)	78-93-3	72.10	31.2	92.0	215	634		25	WG980539
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	1.25	5.12	ND	ND		1	WG980090
Methyl methacrylate	80-62-6	100.12	0.200	0.819	ND	ND		1	WG980090
MTBE	1634-04-4	88.10	0.200	0.721	ND	ND		1	WG980090
Naphthalene	91-20-3	128	0.630	3.30	ND	ND		1	WG980090
2-Propanol	67-63-0	60.10	31.2	76.7	767	1880		25	WG980539
Propene	115-07-1	42.10	0.400	0.689	ND	ND		1	WG980090
Styrene	100-42-5	104	0.200	0.851	ND	ND		1	WG980090
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.37	ND	ND		1	WG980090
Tetrachloroethylene	127-18-4	166	0.200	1.36	ND	ND		1	WG980090
Tetrahydrofuran	109-99-9	72.10	0.200	0.590	ND	ND		1	WG980090
Toluene	108-88-3	92.10	0.200	0.753	0.648	2.44		1	WG980090
1,2,4-Trichlorobenzene	120-82-1	181	0.630	4.66	ND	ND		1	WG980090

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
1,1,1-Trichloroethane	71-55-6	133	0.200	1.09	ND	ND		1	WG980090
1,1,2-Trichloroethane	79-00-5	133	0.200	1.09	ND	ND		1	WG980090
Trichloroethylene	79-01-6	131	0.200	1.07	2.53	13.5		1	WG980090
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	1.01	4.98		1	WG980090
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.982	0.334	1.64		1	WG980090
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.934	ND	ND		1	WG980090
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	WG980090
Vinyl Bromide	593-60-2	106.95	0.200	0.875	ND	ND		1	WG980090
Vinyl acetate	108-05-4	86.10	0.200	0.704	ND	ND		1	WG980090
m&p-Xylene	1330-20-7	106	0.400	1.73	1.23	5.34		1	WG980090
o-Xylene	95-47-6	106	0.200	0.867	0.415	1.80		1	WG980090
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		101				WG980539
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		116				WG980090

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

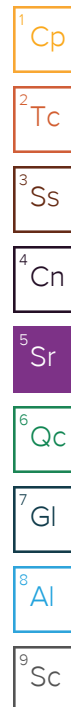


Collected date/time: 05/14/17 13:55

L909544

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	2500	5940	2580	6140		2000	WG980090
Allyl chloride	107-05-1	76.53	400	1250	ND	ND		2000	WG980090
Benzene	71-43-2	78.10	400	1280	ND	ND		2000	WG980090
Benzyl Chloride	100-44-7	127	400	2080	ND	ND		2000	WG980090
Bromodichloromethane	75-27-4	164	400	2680	ND	ND		2000	WG980090
Bromoform	75-25-2	253	1200	12400	ND	ND		2000	WG980090
Bromomethane	74-83-9	94.90	400	1550	ND	ND		2000	WG980090
1,3-Butadiene	106-99-0	54.10	4000	8850	ND	ND		2000	WG980090
Carbon disulfide	75-15-0	76.10	400	1240	ND	ND		2000	WG980090
Carbon tetrachloride	56-23-5	154	400	2520	ND	ND		2000	WG980090
Chlorobenzene	108-90-7	113	400	1850	ND	ND		2000	WG980090
Chloroethane	75-00-3	64.50	400	1060	ND	ND		2000	WG980090
Chloroform	67-66-3	119	400	1950	ND	ND		2000	WG980090
Chloromethane	74-87-3	50.50	400	826	ND	ND		2000	WG980090
2-Chlorotoluene	95-49-8	126	400	2060	ND	ND		2000	WG980090
Cyclohexane	110-82-7	84.20	400	1380	ND	ND		2000	WG980090
Dibromochloromethane	124-48-1	208	400	3400	ND	ND		2000	WG980090
1,2-Dibromoethane	106-93-4	188	400	3080	ND	ND		2000	WG980090
1,2-Dichlorobenzene	95-50-1	147	400	2400	ND	ND		2000	WG980090
1,3-Dichlorobenzene	541-73-1	147	400	2400	ND	ND		2000	WG980090
1,4-Dichlorobenzene	106-46-7	147	400	2400	ND	ND		2000	WG980090
1,2-Dichloroethane	107-06-2	99	400	1620	ND	ND		2000	WG980090
1,1-Dichloroethane	75-34-3	98	400	1600	ND	ND		2000	WG980090
1,1-Dichloroethene	75-35-4	96.90	400	1590	634	2510		2000	WG980090
cis-1,2-Dichloroethene	156-59-2	96.90	400	1590	91100	361000		2000	WG980090
trans-1,2-Dichloroethene	156-60-5	96.90	400	1590	508	2010		2000	WG980090
1,2-Dichloropropane	78-87-5	113	400	1850	ND	ND		2000	WG980090
cis-1,3-Dichloropropene	10061-01-5	111	400	1820	ND	ND		2000	WG980090
trans-1,3-Dichloropropene	10061-02-6	111	400	1820	ND	ND		2000	WG980090
1,4-Dioxane	123-91-1	88.10	400	1440	ND	ND		2000	WG980090
Ethanol	64-17-5	46.10	1260	2380	5190	9780		2000	WG980090
Ethylbenzene	100-41-4	106	400	1730	ND	ND		2000	WG980090
4-Ethyltoluene	622-96-8	120	400	1960	ND	ND		2000	WG980090
Trichlorofluoromethane	75-69-4	137.40	400	2250	ND	ND		2000	WG980090
Dichlorodifluoromethane	75-71-8	120.92	400	1980	ND	ND		2000	WG980090
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	400	3070	ND	ND		2000	WG980090
1,2-Dichlorotetrafluoroethane	76-14-2	171	400	2800	ND	ND		2000	WG980090
Heptane	142-82-5	100	400	1640	ND	ND		2000	WG980090
Hexachloro-1,3-butadiene	87-68-3	261	1260	13500	ND	ND		2000	WG980090
n-Hexane	110-54-3	86.20	400	1410	ND	ND		2000	WG980090
Isopropylbenzene	98-82-8	120.20	400	1970	ND	ND		2000	WG980090
Methylene Chloride	75-09-2	84.90	400	1390	ND	ND		2000	WG980090
Methyl Butyl Ketone	591-78-6	100	2500	10200	ND	ND		2000	WG980090
2-Butanone (MEK)	78-93-3	72.10	2500	7370	ND	ND		2000	WG980090
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	2500	10200	ND	ND		2000	WG980090
Methyl methacrylate	80-62-6	100.12	400	1640	ND	ND		2000	WG980090
MTBE	1634-04-4	88.10	400	1440	ND	ND		2000	WG980090
Naphthalene	91-20-3	128	1260	6600	ND	ND		2000	WG980090
2-Propanol	67-63-0	60.10	2500	6150	ND	ND		2000	WG980090
Propene	115-07-1	42.10	800	1380	ND	ND		2000	WG980090
Styrene	100-42-5	104	400	1700	ND	ND		2000	WG980090
1,1,2,2-Tetrachloroethane	79-34-5	168	400	2750	ND	ND		2000	WG980090
Tetrachloroethylene	127-18-4	166	400	2720	ND	ND		2000	WG980090
Tetrahydrofuran	109-99-9	72.10	400	1180	ND	ND		2000	WG980090
Toluene	108-88-3	92.10	400	1510	ND	ND		2000	WG980090
1,2,4-Trichlorobenzene	120-82-1	181	1260	9330	ND	ND		2000	WG980090



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	400	2180	ND	ND		2000	WG980090
1,1,2-Trichloroethane	79-00-5	133	400	2180	ND	ND		2000	WG980090
Trichloroethylene	79-01-6	131	4000	21400	265000	1420000		20000	WG980842
1,2,4-Trimethylbenzene	95-63-6	120	400	1960	ND	ND		2000	WG980090
1,3,5-Trimethylbenzene	108-67-8	120	400	1960	ND	ND		2000	WG980090
2,2,4-Trimethylpentane	540-84-1	114.22	400	1870	ND	ND		2000	WG980090
Vinyl chloride	75-01-4	62.50	400	1020	18100	46300		2000	WG980090
Vinyl Bromide	593-60-2	106.95	400	1750	ND	ND		2000	WG980090
Vinyl acetate	108-05-4	86.10	400	1410	ND	ND		2000	WG980090
m&p-Xylene	1330-20-7	106	800	3470	ND	ND		2000	WG980090
o-Xylene	95-47-6	106	400	1730	ND	ND		2000	WG980090
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		103				WG980090
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		105				WG980842

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



Collected date/time: 05/14/17 14:00

L909544

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	5000	11900	5140	12200		4000	WG980090
Allyl chloride	107-05-1	76.53	800	2500	ND	ND		4000	WG980090
Benzene	71-43-2	78.10	800	2560	ND	ND		4000	WG980090
Benzyl Chloride	100-44-7	127	800	4160	ND	ND		4000	WG980090
Bromodichloromethane	75-27-4	164	800	5370	ND	ND		4000	WG980090
Bromoform	75-25-2	253	2400	24800	ND	ND		4000	WG980090
Bromomethane	74-83-9	94.90	800	3110	ND	ND		4000	WG980090
1,3-Butadiene	106-99-0	54.10	8000	17700	ND	ND		4000	WG980090
Carbon disulfide	75-15-0	76.10	800	2490	ND	ND		4000	WG980090
Carbon tetrachloride	56-23-5	154	800	5040	ND	ND		4000	WG980090
Chlorobenzene	108-90-7	113	800	3700	ND	ND		4000	WG980090
Chloroethane	75-00-3	64.50	800	2110	ND	ND		4000	WG980090
Chloroform	67-66-3	119	800	3890	ND	ND		4000	WG980090
Chloromethane	74-87-3	50.50	800	1650	ND	ND		4000	WG980090
2-Chlorotoluene	95-49-8	126	800	4120	ND	ND		4000	WG980090
Cyclohexane	110-82-7	84.20	800	2760	ND	ND		4000	WG980090
Dibromochloromethane	124-48-1	208	800	6810	ND	ND		4000	WG980090
1,2-Dibromoethane	106-93-4	188	800	6150	ND	ND		4000	WG980090
1,2-Dichlorobenzene	95-50-1	147	800	4810	ND	ND		4000	WG980090
1,3-Dichlorobenzene	541-73-1	147	800	4810	ND	ND		4000	WG980090
1,4-Dichlorobenzene	106-46-7	147	800	4810	ND	ND		4000	WG980090
1,2-Dichloroethane	107-06-2	99	800	3240	ND	ND		4000	WG980090
1,1-Dichloroethane	75-34-3	98	800	3210	ND	ND		4000	WG980090
1,1-Dichloroethene	75-35-4	96.90	800	3170	ND	ND		4000	WG980090
cis-1,2-Dichloroethene	156-59-2	96.90	800	3170	141000	560000		4000	WG980090
trans-1,2-Dichloroethene	156-60-5	96.90	800	3170	2810	11100		4000	WG980090
1,2-Dichloropropane	78-87-5	113	800	3700	ND	ND		4000	WG980090
cis-1,3-Dichloropropene	10061-01-5	111	800	3630	ND	ND		4000	WG980090
trans-1,3-Dichloropropene	10061-02-6	111	800	3630	ND	ND		4000	WG980090
1,4-Dioxane	123-91-1	88.10	800	2880	ND	ND		4000	WG980090
Ethanol	64-17-5	46.10	2520	4750	6050	11400		4000	WG980090
Ethylbenzene	100-41-4	106	800	3470	ND	ND		4000	WG980090
4-Ethyltoluene	622-96-8	120	800	3930	ND	ND		4000	WG980090
Trichlorofluoromethane	75-69-4	137.40	800	4500	ND	ND		4000	WG980090
Dichlorodifluoromethane	75-71-8	120.92	800	3960	ND	ND		4000	WG980090
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	800	6130	ND	ND		4000	WG980090
1,2-Dichlorotetrafluoroethane	76-14-2	171	800	5600	ND	ND		4000	WG980090
Heptane	142-82-5	100	800	3270	ND	ND		4000	WG980090
Hexachloro-1,3-butadiene	87-68-3	261	2520	26900	ND	ND		4000	WG980090
n-Hexane	110-54-3	86.20	800	2820	ND	ND		4000	WG980090
Isopropylbenzene	98-82-8	120.20	800	3930	ND	ND		4000	WG980090
Methylene Chloride	75-09-2	84.90	800	2780	ND	ND		4000	WG980090
Methyl Butyl Ketone	591-78-6	100	5000	20400	ND	ND		4000	WG980090
2-Butanone (MEK)	78-93-3	72.10	5000	14700	ND	ND		4000	WG980090
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	5000	20500	ND	ND		4000	WG980090
Methyl methacrylate	80-62-6	100.12	800	3280	ND	ND		4000	WG980090
MTBE	1634-04-4	88.10	800	2880	ND	ND		4000	WG980090
Naphthalene	91-20-3	128	2520	13200	ND	ND		4000	WG980090
2-Propanol	67-63-0	60.10	5000	12300	ND	ND		4000	WG980090
Propene	115-07-1	42.10	1600	2760	ND	ND		4000	WG980090
Styrene	100-42-5	104	800	3400	ND	ND		4000	WG980090
1,1,2,2-Tetrachloroethane	79-34-5	168	800	5500	ND	ND		4000	WG980090
Tetrachloroethylene	127-18-4	166	800	5430	ND	ND		4000	WG980090
Tetrahydrofuran	109-99-9	72.10	800	2360	ND	ND		4000	WG980090
Toluene	108-88-3	92.10	800	3010	ND	ND		4000	WG980090
1,2,4-Trichlorobenzene	120-82-1	181	2520	18700	ND	ND		4000	WG980090

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
1,1,1-Trichloroethane	71-55-6	133	800	4350	ND	ND		4000	WG980090
1,1,2-Trichloroethane	79-00-5	133	800	4350	ND	ND		4000	WG980090
Trichloroethylene	79-01-6	131	8000	42900	525000	2820000		40000	WG980842
1,2,4-Trimethylbenzene	95-63-6	120	800	3930	ND	ND		4000	WG980090
1,3,5-Trimethylbenzene	108-67-8	120	800	3930	ND	ND		4000	WG980090
2,2,4-Trimethylpentane	540-84-1	114.22	800	3740	ND	ND		4000	WG980090
Vinyl chloride	75-01-4	62.50	800	2040	5160	13200		4000	WG980090
Vinyl Bromide	593-60-2	106.95	800	3500	ND	ND		4000	WG980090
Vinyl acetate	108-05-4	86.10	800	2820	ND	ND		4000	WG980090
m&p-Xylene	1330-20-7	106	1600	6940	ND	ND		4000	WG980090
o-Xylene	95-47-6	106	800	3470	ND	ND		4000	WG980090
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		103				WG980842
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		104				WG980090

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



Method Blank (MB)

(MB) R3218713-3 05/17/17 02:56

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

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc



Method Blank (MB)

(MB) R3218713-3 05/17/17 02:56

Analyte	MB Result ppbv	MB Qualifier	MB MDL ppbv	MB RDL ppbv
Methylene Chloride	0.0898	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	0.103	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	98.4		60.0-140	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

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

(LCS) R3218713-1 05/17/17 01:29 • (LCSD) R3218713-2 05/17/17 02:12

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	3.58	4.42	95.5	118	52.0-158			20.9	25
Propene	3.75	3.11	3.32	83.0	88.5	54.0-155			6.43	25
Dichlorodifluoromethane	3.75	3.66	3.90	97.6	104	69.0-143			6.33	25
1,2-Dichlorotetrafluoroethane	3.75	3.63	3.98	96.9	106	70.0-130			9.05	25
Chloromethane	3.75	3.32	3.51	88.6	93.5	70.0-130			5.38	25



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

(LCS) R3218713-1 05/17/17 01:29 • (LCSD) R3218713-2 05/17/17 02:12

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	3.24	3.43	86.4	91.6	70.0-130			5.76	25
1,3-Butadiene	3.75	2.83	3.07	75.3	81.7	70.0-130			8.15	25
Bromomethane	3.75	3.09	3.30	82.4	88.0	70.0-130			6.61	25
Chloroethane	3.75	3.74	3.88	99.8	104	70.0-130			3.71	25
Trichlorofluoromethane	3.75	4.06	4.07	108	109	70.0-130			0.260	25
1,1,2-Trichlorotrifluoroethane	3.75	3.88	4.05	103	108	70.0-130			4.38	25
1,1-Dichloroethene	3.75	3.75	3.83	100	102	70.0-130			2.24	25
1,1-Dichloroethane	3.75	3.69	3.76	98.5	100	70.0-130			1.78	25
Acetone	3.75	3.69	3.97	98.4	106	70.0-130			7.23	25
2-Propanol	3.75	3.96	4.12	106	110	66.0-150			4.02	25
Carbon disulfide	3.75	3.57	3.66	95.1	97.6	70.0-130			2.54	25
Methylene Chloride	3.75	3.37	3.48	89.8	92.8	70.0-130			3.27	25
MTBE	3.75	4.02	4.11	107	110	70.0-130			2.20	25
trans-1,2-Dichloroethene	3.75	3.86	3.94	103	105	70.0-130			2.05	25
n-Hexane	3.75	3.74	3.78	99.8	101	70.0-130			1.13	25
Vinyl acetate	3.75	4.16	4.02	111	107	70.0-130			3.51	25
Methyl Ethyl Ketone	3.75	4.03	4.19	108	112	70.0-130			3.94	25
cis-1,2-Dichloroethene	3.75	3.78	3.92	101	104	70.0-130			3.51	25
Chloroform	3.75	3.79	3.83	101	102	70.0-130			1.03	25
Cyclohexane	3.75	3.78	3.84	101	102	70.0-130			1.52	25
1,1,1-Trichloroethane	3.75	3.98	3.99	106	106	70.0-130			0.290	25
Carbon tetrachloride	3.75	4.03	3.97	107	106	70.0-130			1.33	25
Benzene	3.75	3.79	3.80	101	101	70.0-130			0.290	25
1,2-Dichloroethane	3.75	3.92	4.03	105	107	70.0-130			2.65	25
Heptane	3.75	3.66	3.80	97.6	101	70.0-130			3.72	25
Trichloroethylene	3.75	3.88	3.84	103	102	70.0-130			0.980	25
1,2-Dichloropropane	3.75	3.77	3.74	101	99.6	70.0-130			0.940	25
1,4-Dioxane	3.75	3.96	3.96	106	106	70.0-152			0.0100	25
Bromodichloromethane	3.75	4.00	3.97	107	106	70.0-130			0.710	25
cis-1,3-Dichloropropene	3.75	3.92	3.88	105	103	70.0-130			1.20	25
4-Methyl-2-pentanone (MIBK)	3.75	4.14	4.25	110	113	70.0-142			2.60	25
Toluene	3.75	3.80	3.80	101	101	70.0-130			0.220	25
trans-1,3-Dichloropropene	3.75	4.17	4.02	111	107	70.0-130			3.65	25
1,1,2-Trichloroethane	3.75	3.83	3.86	102	103	70.0-130			0.700	25
Tetrachloroethylene	3.75	4.06	4.04	108	108	70.0-130			0.420	25
Methyl Butyl Ketone	3.75	3.76	3.88	100	103	70.0-150			3.14	25
Dibromochloromethane	3.75	3.94	3.99	105	106	70.0-130			1.22	25
1,2-Dibromoethane	3.75	3.60	3.80	96.1	101	70.0-130			5.36	25
Chlorobenzene	3.75	3.04	3.25	81.0	86.7	70.0-130			6.85	25
Ethylbenzene	3.75	4.08	4.02	109	107	70.0-130			1.48	25

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) R3218713-1 05/17/17 01:29 • (LCSD) R3218713-2 05/17/17 02:12

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	8.25	8.25	110	110	70.0-130			0.0400	25
o-Xylene	3.75	3.98	3.98	106	106	70.0-130			0.0500	25
Styrene	3.75	4.04	4.12	108	110	70.0-130			2.05	25
Bromoform	3.75	4.08	4.16	109	111	70.0-130			1.95	25
1,1,2,2-Tetrachloroethane	3.75	3.79	3.88	101	103	70.0-130			2.26	25
4-Ethyltoluene	3.75	3.88	3.93	103	105	70.0-130			1.40	25
1,3,5-Trimethylbenzene	3.75	3.64	3.72	97.1	99.1	70.0-130			2.07	25
1,2,4-Trimethylbenzene	3.75	3.86	3.93	103	105	70.0-130			1.86	25
1,3-Dichlorobenzene	3.75	3.78	3.87	101	103	70.0-130			2.16	25
1,4-Dichlorobenzene	3.75	3.50	3.63	93.5	96.7	70.0-130			3.41	25
Benzyl Chloride	3.75	3.94	3.95	105	105	70.0-144			0.0100	25
1,2-Dichlorobenzene	3.75	3.64	3.62	97.1	96.5	70.0-130			0.690	25
1,2,4-Trichlorobenzene	3.75	4.43	4.44	118	118	70.0-155			0.190	25
Hexachloro-1,3-butadiene	3.75	4.16	4.12	111	110	70.0-145			1.05	25
Naphthalene	3.75	4.32	4.35	115	116	70.0-155			0.860	25
Allyl Chloride	3.75	3.60	3.73	96.0	99.4	70.0-130			3.51	25
2-Chlorotoluene	3.75	3.50	3.59	93.4	95.8	70.0-130			2.47	25
Methyl Methacrylate	3.75	3.80	3.87	101	103	70.0-130			2.04	25
Tetrahydrofuran	3.75	3.66	3.81	97.7	102	70.0-140			3.99	25
2,2,4-Trimethylpentane	3.75	3.73	3.83	99.4	102	70.0-130			2.74	25
Vinyl Bromide	3.75	3.80	3.84	101	102	70.0-130			1.04	25
Isopropylbenzene	3.75	3.91	3.98	104	106	70.0-130			1.62	25
(S) 1,4-Bromofluorobenzene				93.7	95.8	60.0-140				

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc



Method Blank (MB)

(MB) R3218963-3 05/17/17 20:01

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	0.0905	J	0.0882	1.25
Ethanol	U		0.0832	0.630
(S) 1,4-Bromofluorobenzene	97.5			60.0-140

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

(LCS) R3218963-1 05/17/17 18:31 • (LCSD) R3218963-2 05/17/17 19:15

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	4.93	4.94	131	132	52.0-158			0.190	25
Acetone	3.75	4.45	4.46	119	119	70.0-130			0.160	25
2-Propanol	3.75	4.52	4.42	121	118	66.0-150			2.34	25
Methyl Ethyl Ketone	3.75	4.56	4.45	122	119	70.0-130			2.39	25
(S) 1,4-Bromofluorobenzene				94.7	97.5	60.0-140				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



Method Blank (MB)

(MB) R3219159-3 05/18/17 09:59

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ppbv		ppbv	ppbv
Trichloroethylene	U		0.0545	0.200
(S) 1,4-Bromofluorobenzene	94.4			60.0-140

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

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

(LCS) R3219159-1 05/18/17 08:20 • (LCSD) R3219159-2 05/18/17 09:09

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ppbv	ppbv	ppbv	%	%	%			%	%
Trichloroethylene	3.75	4.16	4.12	111	110	70.0-130			0.850	25
(S) 1,4-Bromofluorobenzene				99.2	99.5	60.0-140				



Abbreviations and Definitions

SDG	Sample Delivery Group.
MDL	Method Detection Limit.
RDL	Reported Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
U	Not detected at the Reporting Limit (or MDL where applicable).
RPD	Relative Percent Difference.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
Rec.	Recovery.

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

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc



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
Connecticut	PH-0197	North Carolina ¹	DW21704
Florida	E87487	North Carolina ²	41
Georgia	NELAP	North Dakota	R-140
Georgia ¹	923	Ohio–VAP	CL0069
Idaho	TN00003	Oklahoma	9915
Illinois	200008	Oregon	TN200002
Indiana	C-TN-01	Pennsylvania	68-02979
Iowa	364	Rhode Island	221
Kansas	E-10277	South Carolina	84004
Kentucky ¹	90010	South Dakota	n/a
Kentucky ²	16	Tennessee ¹⁴	2006
Louisiana	AI30792	Texas	T 104704245-07-TX
Maine	TN0002	Texas ⁵	LAB0152
Maryland	324	Utah	6157585858
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	109
Minnesota	047-999-395	Washington	C1915
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA
Nebraska	NE-OS-15-05		

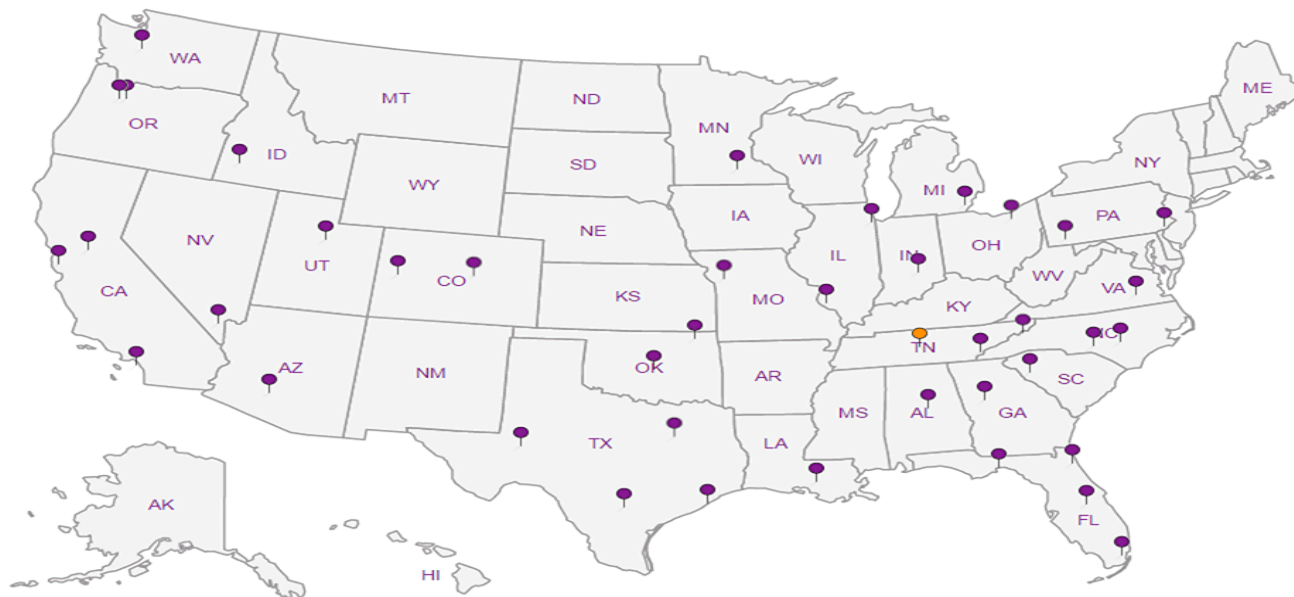
Third Party & Federal Accreditations

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.**



First Environment, Inc.

91 Fulton Street
Boonton, NJ 07005

Report to:
Michael T. Slack

Billing Information:

Project: **EnPro-001-002D**

91 Fulton Street

Boonton, NJ 07005

ATTN: JUSTIN PICCOLI

SPICCOLI@FIRSTENVIRONMENT.COM

Email To: mslack@firstenvironment.com

Pres
Chk

Analysis / Container / Preservative

Chain of Custody Page 1 of 1



L.A.B. S.C.I.E.N.C.E.S.

YOUR LAB OF CHOICE

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



L# **L909SVV**

Tab **L184**

Acctnum: **FIRENVBNJ**

Template: **T122946**

Prelogin: **P600762**

TSR: **341 - John Hawkins**

PB: **5-8-17**

Shipped Via: **FedEX Ground**

Remarks Sample # (lab only)

Project Description: Butler Snow LLP	City/State: WATER VALLEY, MS
Client Project # ENPRO 002D	Collected: BORG WARNER PLANT
Phone: 973-334-0003	Lab Project # FIRENVBNJ-OXFORDMS
Fax: 973-334-0928	P.O. #
Collected by (print): M. SLACK (FE)	Site/Facility ID # BORG WARNER ENPRO 002B D
Collected by (signature): M. SLACK (FE)	Quote #
Immediately Packed on Ice N <u> </u> Y <u> </u>	Rush? (Lab MUST Be Notified) ☐ Same Day ☐ Five Day ☒ Next Day ☐ 5 Day (Rad Only) ☐ Two Day ☐ 10 Day (Rad Only) ☐ Three Day
Date Results Needed	No. of Cntrs

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	TO-15 Summa	TEDLAR BAG - TD-15	Remarks	Sample # (lab only)
IA-1(SSD) - MOUNT.	COMP	AIR	—	5/14/17 0940	5/15/17 0940	1	X			01
IA-2(SSD) - ATS ROOM	COMP	AIR	—	5/14/17 0945	5/15/17 0945	1	X			02
IA-6(SSD) - TRAINING ROOM	COMP	AIR	—	5/14/17 0915	5/15/17 0900	1	X			03
IA-G13(SSD)	COMP	AIR	—	5/14/17 10:00	5/15/17 1010	1	X			04
IA-17(SSD) - CAFETERIA	COMP	AIR	—	5/14/17 0930	5/15/17 0930	1	X			05
EP#1	GRAB	AIR	—	5/15/17	13:55	1	X			06
EP#2	GRAB	AIR	—	5/15/17	14:00	1	X			07

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

Remarks:

1 6liter canister, 1 24 hour flow controller, 1 4 feet section of teflon tubing with swagelok fittings, 1 in line filter

pH Temp

Flow Other

Samples returned via:

☐ UPS ☐ FedEx ☐ Courier

Tracking #

Relinquished by: (Signature)

Date:

Time:

Received by: (Signature)

Trip Blank Received: Yes / No
HCL / MeOH
TBR

Relinquished by: (Signature)

Date:

Time:

Received by: (Signature)

Temp Amb °C Bottles Received: 7

Relinquished by: (Signature)

Date:

Time:

Received for lab by: (Signature)

Date: 5/16/17 Time: 0845

Hold:

Condition:
NCF / OK

Sample Receipt Checklist

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

If preservation required by Login: Date/Time

Vapor Intrusion Investigation
Borg Warner Facility
Water Valley, Yalobusha Co., MS
May 14-15, 2017
SSD System - Indoor Air (IA) Sampling Event

Sample ID	Sample Location	Flow Controller ID	Canister ID	Canister Size (liters)	Initial Date/time Vacuum	Final Date/time Vacuum	Sampler
IA-1 (SSD)	Maintenance Room	007430	005105	6	5/14/17 0940 30" Hg	5/15/17 0940 4" Hg	M. Slack
IA-2 (SSD)	ATS Room	006382	006512	6	5/14/17 0945 26" Hg	5/15/17 0945 2" Hg	M. Slack
IA-6 (SSD)	Training Room	007427	005365	6	5/14/17 0915 27" Hg	5/15/17 0900 0" Hg	M. Slack
IA-G13 (SSD)	I-Beam G13	006046	00771	6	5/14/17 1000 28" Hg	5/15/17 1010 5" Hg	M. Slack
IA-17 (SSD)	Cafeteria	007549	007690	6	5/14/17 0930 30" Hg	5/15/17 0930 6" Hg	M. Slack
EP#1	Extraction Point (EP) ATS Room	—	—	Tedlar Bag	5/15/17 13:55 —	— —	M. Slack
EP#2	Extraction Point (EP) Original Degreaser Location	—	—	Tedlar Bag	5/15/17 14:00 —	— —	M. Slack

FIELD - LOG
MICHAEL SLACK (FE)
5/14-15/17