



January 21, 2016

Mr. Joseph T. Martella II, Senior Engineer
Rhode Island Department of Environmental Management
Office of Waste Management
Site Remediation Program
235 Promenade Street
Providence, Rhode Island 02908

**RE: Air Monitoring Report
Fourth Quarter, 2015
Retail Complex, Active Sub-Slab Depressurization System
Former Gorham Manufacturing Facility
333 Adelaide Avenue, Providence, Rhode Island
AMEC Project No. 3652150005**

Dear Mr. Martella:

This letter report presents the results of quarterly compliance sampling and analysis conducted by Amec Foster Wheeler (Formerly AMEC) at the retail complex located at the Former Gorham Manufacturing Facility, 333 Adelaide Avenue, Providence, Rhode Island (Site). The reporting period is from October 2015 through December 2015 and includes one quarterly compliance sampling event (December 18, 2015).

The sampling, analysis and reporting are being conducted consistent with the Short Term Response Action Order of Approval, dated July 24, 2008 and the Addendum to the Order of Approval dated August 7, 2008 (collectively referred to as the Orders of Approval).

Background

The active sub-slab depressurization (ASD) system, also called a vapor mitigation system, in the large retail space consists of four extraction wells connected to a 3 hp Rotron regenerative blower. The blower is located in an enclosure located at the north, or rear, of the large retail space (Figure 1)

The small retail spaces consist of the eastern, central, and western retail spaces (Figure 1). The mitigation systems in the small retail spaces consist of one extraction well in each space connected to an individual radon-type fan, located at the north, or rear, of each small retail space.

Small Retail Spaces

The quarterly monitoring event for the three small retail spaces, consistent with the requirements of the Orders of Approval, was completed on December 18, 2015.

Textron, Inc.
Former Gorham Manufacturing Facility, Providence, RI
Retail Complex, Active Sub-Slab Depressurization System
Air Monitoring Report, Fourth Quarter, 2015
January 21, 2016
Project No.: 3652150005

Table 1 summarizes the analytical results at the small retail spaces for the baseline sampling event conducted prior to system start-up in February 2009 and all subsequent sampling events conducted after system start-up through December 18, 2015. Results of the indoor air samples were compared to the Draft Connecticut Industrial/Commercial Indoor Target Air Concentrations (TAC), which were identified as action levels in the Orders of Approval. The laboratory report (15L1060) associated with the December 18, 2015 quarterly sampling event is provided in Appendix A of this letter report. The analytical laboratory's detection limits are provided in Appendix B.

The sampling event included an indoor air sample from each of the small retail spaces (locations IA-5, IA-6, and IA-7), one outdoor air reference sample (location AA-1), and one air sample collected from each of the three vapor extraction wells (EW-5, EW-6, and EW-7). The sampling locations are shown in Figure 1. The outdoor reference air sample (AA-1) was located south of the property, upwind of the retail building. Sub-slab vacuum monitoring (pressure differential measurements) was also conducted at locations VMW-5, VMW-6, and VMW-7 in conjunction with the quarterly air sampling program. The vacuum monitoring results are tabulated in Table 2.

The following conclusions are based on Site observations and the data from Table 1.

- ▶ Indoor air sample results for the December 18, 2015 quarterly sampling event in the small retail spaces (sample locations IA-5 through IA-7) were in compliance with action levels.
- ▶ The eastern small retail space (indoor air sample location IA-5) was occupied by Charter, LLC through December 18, 2015 as a construction office for the Parcel C and Phase II/Phase III Areas remediation.
- ▶ The center small retail space (sample location IA-6) was unoccupied during this sampling event.
- ▶ The western small retail space (sample location IA-7) is intermittently occupied for church functions.
- ▶ The mitigation systems are functioning as designed.

Large Retail Space

The quarterly monitoring event for the large retail space, consistent with the requirements of the Orders of Approval, was completed on December 18, 2015. Table 3 summarizes the analytical results for the large retail space for the baseline sampling event conducted prior to system start-up and all subsequent sampling events conducted after system start-up through December 18, 2015. Results of the indoor air samples were compared to the Draft Connecticut Industrial/Commercial Indoor TAC, which were identified as action levels in the Orders of Approval. The laboratory report (15L1060) associated with December 18, 2015 quarterly sampling event is provided in Appendix A of this letter report. The analytical laboratory's detection limits are provided in Appendix B.

The sampling event included collection of samples from each of the indoor air sampling points in the large retail space (locations IA-1 through IA-4), one outdoor air reference sample (location AA-1), and one air sample collected from the manifold where air from the four vapor extraction wells is collected (EW-Combined). The sampling locations are shown in Figure 1. The outdoor reference air sample (AA-1) was located south of the property upwind of the retail building. Sub-slab vacuum monitoring (pressure differential measurements) was also conducted at locations VMW-1 through VMW-4 in conjunction with the air sampling program. The vacuum monitoring results for the large retail space are tabulated in Table 4.

The following conclusions are based on Site observations and the data from Table 3.

- ▶ Indoor air sample results are in compliance with action levels for the quarterly sampling event in the large retail space on the eastern section (sample locations IA-2 and IA-4). Indoor air results in the unoccupied western section had exceedances for Tetrachloroethene (PCE) in samples IA-1 (7.0 ug/m³ vs. 5.0 ug/m³) and IA-3 (13 ug/m³ vs 5.0 ug/m³). This space has been unoccupied since the ASD system was installed and started operation in January 2009. Since the ASD was started these two indoor air monitoring locations have exceeded the TAC for PCE (5 ug/ m³) four times; January 16, 2009, April 24, 2009, February 17, 2011 (this was associated with the outside air concentrations of PCE) and December 18, 2015. Immediately following each exceedance the PCE concentrations dropped to 0.34U to 0.57 ug/ m³. The PCE concentrations in the combined extracted air (EW-1 through EW-4) are not elevated over the last several rounds of testing. Based on the February 2011 PCE exceedance being directly related to the outside air we have not had any exceedances of the indoor air for PCE in the last six years. However, Textron proposes to conduct the next quarterly round of indoor air sampling at the retail building in February 2016.
- ▶ There was also an exceedance for chloroform in indoor air sample IA-1. The concentration of chloroform in sample from IA-1 was slightly above the TAC (0.67 ug/m³ vs. 0.50 ug/m³). As communicated to RIDEM in previous reports, Chloroform is not a constituent of concern for the Site and is therefore not one of the compounds for which the vapor mitigation system was designed to address.
- ▶ The large retail space has been subdivided into two spaces. The eastern section is currently occupied by a health fitness club which opened in January of 2013. This space was recently updated to change the name of the gym to "Blast" as part of a nationwide revision. This space includes indoor air sample locations IA-2 and IA-4 and sub-slab vacuum monitoring well VMW-2.
- ▶ The western side of the large retail space remains vacant and includes indoor air locations IA-1 and IA-3, vapor extraction well EW-5 and sub-slab vacuum monitoring VMW-1, VMW-3, and VMW-4.

ASD System Monitoring/Maintenance

The ASD system performance is monitored monthly by Clean Harbors Environmental Services. There have been no power failures to entire system since October 1, 2015. Vacuum monitoring conducted at the time of the December 18, 2015 indoor air monitoring event indicated that the desired negative pressure existed at the various sub-slab monitoring points.

Next Reporting Period

The next quarterly report (first quarter 2016) will cover the monitoring period from January 2016 through March 2016 and sampling will be conducted in February 2016 to confirm the anticipated reduction in PCE concentration within the large, unoccupied retail space. The report will be prepared and submitted to the Rhode Island Department of Environmental Management (RIDEM) in March 2016.

Please contact the undersigned at (978) 692-9090 if we can provide additional information or answer any questions concerning these monitoring events and system adjustments.

Sincerely,

Amec Foster Wheeler Environment & Infrastructure, Inc.



Mark Maggiore
Environmental Scientist



David E. Heislein
Senior Project Manager

Enclosures: Table 1. Summary of Analytical Results – Air Sampling for Small Retail Spaces
Table 2. Vacuum Monitoring Results – Small Retail Spaces
Table 3. Summary of Analytical Results – Air Sampling for Large Retail Space
Table 4. Vacuum Monitoring Results – Large Retail Space

Figure 1 Vapor Mitigation Sample Locations

Appendix A – Laboratory Reports
Appendix B – Analytical Laboratory Detection Limits

cc: Don Gralnek, Executive Director - Providence Redevelopment Agency
G. Simpson, Textron, Inc. (Electronic)
Knight Memorial Library Repository
Shane Brackett, Paolino Properties (including tenants)
Joseph P. Salvetti, Norfolk Ram Group, LLC
AMEC Project File

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Textron, Inc.
Former Gorham Manufacturing Facility, Providence, RI
Retail Complex, Active Sub-Slab Depressurization System
Air Monitoring Report, Fourth Quarter, 2015
January 21, 2016
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TABLES

Table 1.
Summary of Analytical Results - Air Sampling for Small Retail Spaces
Former Gorham Manufacturing Site
Providence, Rhode Island

Parameter (ug/m ³)	Outdoor Air Reference Locations																							
	AA-1 011609 1/16/2009	AA-1- 020309 2/3/2009	AA-1- 021109 2/11/2009	AA-1- 021809 2/18/2009	AA-1- 022609 2/26/2009	AA-1- 030609 3/6/2009	AA-1- 033109 3/31/2009	AA-1- 041409 4/14/2009	AA-1- 042409 4/24/2009	AA-1- 051509 5/15/2009	AA-1- 061109 6/11/2009	AA-1- 091709 9/17/2009	AA-1- 092409 9/24/2009	AA-1- 100109 10/1/2009	AA-1- 100809 10/8/2009	AA-1- 122909 12/29/2009	AA-1- 012810 1/28/2010	AA-1- 020510 2/5/2010	AA-1- 021210 2/12/2010	AA-1- 021910 2/19/2010	AA-1- 032610 3/26/2010	AA-1- 043010 4/30/2010	AA-1- 052810 5/28/2010	AA-1- 070110 7/1/2010
1,1,1-Trichloroethane	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.19 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U									
1,1,1,2-Tetrachloroethane	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.24 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U									
1,1,2-Trichloroethane	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.19 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U									
1,1-Dichloroethane	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.14 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U									
1,1-Dichloroethene	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.14 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U									
1,2,4-Trichlorobenzene	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.26 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U									
1,2,4-Trimethylbenzene	0.25 U	0.28	0.52	1.8	0.25 U	0.25 U	0.25 U	0.18 U	0.25 U	0.25 U	0.29	0.30	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	
1,2-Dibromoethane (EDB)	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.27 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U									
1,2-Dichlorobenzene	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.21 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U									
1,2-Dichloroethane	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.14 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U									
1,2-Dichloropropane	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.17 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U									
1,2-Dichlorotetrafluoroethane	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.25 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U									
1,3,5-Trimethylbenzene	0.25 U	0.25	0.25	0.50	0.25 U	0.25 U	0.25 U	0.18 U	0.25 U	0.25 U	0.25	0.25	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	
1,3-Butadiene	0.11 U	0.11 U	0.17	1.3	0.11 U	0.11 U	0.11 U	0.080 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U		
1,3-Dichlorobenzene	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.21 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U									
1,4-Dichlorobenzene	0.30 U	0.30 U	0.30 U	0.53	0.30 U	0.30 U	0.30 U	0.21 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U									
1,4-Dioxane																								
2-Butanone	0.58	1.2	2.4	3.2	1.6	0.67	1.7	0.11 U	1.6	1.6	1.1	1.7	0.84	1.2	1.2	2.0	0.81	1.6	1.6	0.88	1.5	1.4	2.4	2.3
2-Hexanone	0.20 U	0.22	0.57	0.35	0.20 U	0.20 U	0.20 U	0.14 U	0.26	0.39	0.20 U	0.34	0.20 U	0.33	0.23	0.20 U	0.20 U	0.32	0.20 U	0.20 U	0.29	0.29	0.49	
4-Ethyltoluene	0.25 U	0.25 U	0.25 U	0.6	0.25 U	0.25 U	0.25 U	0.18 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U								
4-Methyl-2-pentanone	0.20 U	0.20 U	0.27	0.63	0.20 U	0.20 U	0.20 U	0.14 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U								
Acetone	7.3	8.0	15	22	8.4	5.9	12	1.1	27	9.5	10	9.6	5.4	17	11	3.5	7.6	5.0	3.7	9.5	12	20	13	
Benzene	0.69	0.62	1.3	4.7	0.43	0.69	0.46	0.12 U	0.30	0.40	0.49	0.38	0.35	0.25	0.20	0.42	0.79	0.68	0.63	0.41	0.69	0.35	0.19	0.16 U
Benzyl chloride	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.19 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U								
Bromodichloromethane	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.24 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U								
Bromoform	0.51 U	0.51 U	0.51 U	0.51 U	0.51																			

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	AA-1 011609 1/16/2009	AA-1- 020309 2/3/2009	AA-1- 021109 2/11/2009	AA-1- 021809 2/18/2009	AA-1- 022609 2/26/2009	AA-1- 030609 3/6/2009	AA-1- 033109 3/31/2009	AA-1- 041409 4/14/2009	AA-1- 042409 4/24/2009	AA-1- 051509 5/15/2009	AA-1- 061109 6/11/2009	AA-1- 091709 9/17/2009	AA-1- 092409 9/24/2009	AA-1- 100109 10/1/2009	AA-1- 100809 10/8/2009	AA-1- 122909 12/29/2009	AA-1- 012810 1/28/2010	AA-1- 020510 2/5/2010	AA-1- 021210 2/12/2010	AA-1- 021910 2/19/2010	AA-1- 032610 3/26/2010	AA-1- 043010 4/30/2010	AA-1- 052810 5/28/2010	AA-1- 070110 7/1/2010
Ethanol	4.0	5.4	10	47	4.3	3.5	4.7	0.81	4.9	4.8	8.6	6.6	4.6	3.9	4.9	3.8	5.4	5.1	7.2	1.2	4.9	4.0	3.3	4.0
Ethyl acetate	0.37 U	0.37 U	0.18 U	0.31	0.37 U	0.18 U	0.18 U	0.26 U	0.37 U	0.18 U	0.18 U	0.18 U	0.18 U	1.1	0.18 U	0.18 U	0.18 U	0.18 U						
Ethylbenzene	0.22 U	0.25	0.52	2.0	0.22 U	0.22 U	0.22 U	0.16 U	0.22 U	0.22 U	0.24	0.22 U	0.23	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.82
Hexachlorobutadiene	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	0.75 U	1.1 U	1.1 U	0.53 U	0.53 U	0.53 U	0.53 U	1.1 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	1.1 U	0.53 U	0.53 U	0.53 U	0.53 U
Hexane	1.5	0.75	1.1	2.9	0.38	2.8	2.2	0.13 U	0.56	0.37	0.59	0.48	1.4	0.45	4.5	0.62	0.36	0.53	0.91	0.24	0.23	1.1	0.51	0.37
Isopropyl alcohol	1.4	1.4	1.8	4.3	1.4	0.67	1.4	0.18 U	14	1.0	2.5	2.8	0.87	0.63	0.25 U	0.54	0.56	2.7	1.5	0.80	0.73	0.69	1.6	0.79
m,p-Xylene	0.43 U	0.72	1.4	6.4	0.44	0.43 U	0.31 U	0.43 U	0.49	0.73	0.62	0.59	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	0.50	0.47	0.43 U	0.49	0.43 U	0.43 U	2.2
Methyl methacrylate																								
Methylene chloride	5.5	3.1	0.65	1.5	0.78	7.4	15	2.1	2.8	1.7	1.9	0.70 U	4.2	0.70 U	23	4.6	1.3	1.9	1.7	0.70 U	0.70 U	0.35 U	1.1	
Methyl-t-butyl ether	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.13 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U								
n-Heptane	0.20 U	0.27	0.92	1.6	0.20 U	0.20 U	0.20 U	0.14 U	0.20 U	0.40	0.23	0.20 U	0.26	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U				
o-Xylene	0.22 U	0.27	0.53	2.2	0.22 U	0.22 U	0.22 U	0.16 U	0.22 U	0.24	0.27	0.23	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.46
Propylene (Propene)	0.18 U	0.18 U	0.090 U	0.090 U	0.18 U	0.090 U	0.090 U	0.13 U	0.18 U	0.090 U	0.090 U	0.35 U	0.35 U	0.18 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.87 U	0.87 U
Styrene	0.21 U	0.21 U	0.21 U	0.28	0.21 U	0.21 U	0.21 U	0.15 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U								
Tetrachloroethene	0.34 U	0.34 U	0.73	0.77	0.34 U	0.34 U	0.34 U	0.24 U	0.34 U	0.34 U	0.52	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U					
Tetrahydrofuran	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.11 U	0.15 U	1.2	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.19	0.15 U	0.15 U					
Toluene	0.94	1.5	3.2	14	0.71	0.99	0.82	0.14 U	0.72	2.6	2.1	1.9	2.0	0.61	0.50	0.78	0.94	0.64	0.97	0.46	1.1	0.75	0.63	0.57
trans-1,2-Dichloroethene	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.14 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U									
trans-1,3-Dichloropropene	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U		
Trichloroethene	0.27 U	0.27 U	0.27 U	0.39	0.27 U	0.27 U	0.27 U	0.19 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U									
Trichlorofluoromethane	1.3	1.2	1.7	2.4	1.5	2.0	1.7	0.92	1.3	1.5	2.0	1.1	1.4	1.2	1.5	2.2	1.2	1.2	1.6	1.5	1.5	1.2	1.4	
Trichlorotrifluoroethane	0.68	0.53	0.5	0.47	0.64	0.48	0.51	0.27 U	0.64	0.67	0.56	0.47	0.49	0.45	0.46	0.54	0.49	0.55	0.54	0.54	0.62	0.45	0.58	0.56
Vinyl acetate	0.71 U	0.71 U	0.18 U	0.18 U	0.71 U	0.18 U	0.18 U	0.50 U	0.71 U	0.18 U	0.18 U	0.71 U	0.71 U	0.71 U	0.36 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.36 U	0.71 U	0.18 U	
Vinyl chloride	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.10 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U									

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Parameter (ug/m ³)	Outdoor Air Reference Locations																							
	AA-1-091610 9/16/2010	AA-1-120710 12/7/2010	AA-1-021711 2/17/2011	AA-1-060211 6/2/2011	AA-1-091511 9/15/2011	AA-1-120811 12/8/2011	AA-1-030812 3/8/2012	AA-1-061412 6/14/2012	AA-1-091312 9/13/2012	AA-1-010313 1/3/2013	AA-1-031513 3/15/2013	AA-1-060713 6/7/2013	AA-1-090613 9/6/2013	AA-1-100313 10/3/2013	AA-1-121313 12/13/2013	AA-1-030714 3/7/2014	AA-1-061314 6/13/2014	AA-1-091214 9/12/2014	AA-1-121914 12/19/2014	AA-01-032715 3/27/2015	AA-1-061115 6/11/2015	AA-1-091615 9/16/2015	AA-1-121815 12/18/2015	
1,1,1-Trichloroethane	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.29	0.082 U	0.10	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.18 U	0.19 U	0.19 U	0.055 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.073 J	0.19 U
1,1,1,2-Tetrachloroethane						0.62 U		0.37 U	0.37 U	0.44 U	0.44 U	0.44 U	0.44 U	0.42 U	0.44 U	0.44 U	0.44 U	0.25 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U
1,1,2,2-Tetrachloroethane	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.21 U	0.10 U	0.21 U	0.24 U	0.24 U	0.24 U	0.24 U	0.23 U	0.24 U	0.24 U	0.24 U	0.069 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	
1,1,2-Trichloroethane	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.16 U	0.082 U	0.16 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.18 U	0.19 U	0.19 U	0.11 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	
1,1-Dichloroethane	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.063	0.061 U	0.12 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.04 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	
1,1-Dichloroethene	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.12 U	0.059 U	0.12 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.13 U	0.14 U	0.14 U	0.16	0.04 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	
1,2,4-Trichlorobenzene	0.37 U	0.37 U	0.37 U	0.37 U	0.74 U	0.62	0.45 U	0.12	0.52 U	0.52 U	0.26 U	0.26 U	0.25 U	0.26 U	0.26 U	0.26 U	0.15 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	
1,2,4-Trimethylbenzene	0.94	0.25 U	1.1	0.25 U	0.25 U	0.16	0.15 U	0.15 U	0.26	0.17 U	0.069	0.21	0.17 U	0.19	0.17 U	0.17 U	0.51	0.069 J	0.17 U	0.2	0.059 J	0.29	0.31	
1,2-Dibromoethane (EDB)	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.23 U	0.12 U	0.23 U	0.27 U	0.27 U	0.27 U	0.27 U	0.26 U	0.27 U	0.27 U	0.27 U	0.077 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	
1,2-Dichlorobenzene	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.34	0.18 U	0.18 U	0.21 U	0.21 U	0.21 U	0.21 U	0.20 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	
1,2-Dichloroethane	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.066	0.061 U	0.046	0.14 U	0.14 U	0.057	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.037 J	0.14 U	0.14 U	0.054 J	0.14 U	0.14 U	
1,2-Dichloropropane	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.14 U	0.069 U	0.14 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.046 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	
1,2-Dichlorotetrafluoroethane	0.35 U																						0.25 U	
1,3,5-Trimethylbenzene	0.28	0.25 U	0.33	0.25 U	0.25 U	0.068	0.15 U	0.15 U	0.16	0.17 U	0.17 U	0.17 U	0.17 U	0.047	0.17 U	0.17 U	0.18	0.098 U	0.17 U	0.062 J	0.17 U	0.076 J	0.17 U	
1,3-Butadiene	0.29	0.11 U	0.11 U	0.11 U	0.11 U	0.066 U	0.066 U	0.066 U	0.078 U	0.078 U	0.078 U	0.078 U	0.075 U	0.078 U	0.078 U	0.078 U	0.044 U	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.18	
1,3-Dichlorobenzene	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.18 U	0.18 U	0.18 U	0.21 U	0.21 U	0.21 U	0.21 U	0.20 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U		
1,4-Dichlorobenzene	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.18 U																	1.3 U	
1,4-Dioxane																								
2-Butanone	2.7	0.37	1.8 B	2.9 U	5.9 U	0.35	1.4	1.1	2.0	0.89	1.9	3.9	3.7	0.94	0.82	1.4	2.2	1.1 J	1.2 J	0.96 J	2.1 J	1 J	2 J	
2-Hexanone	0.41	0.20 U	0.20 U	4.1 U	0.67	0.12 U	0.34	0.14	0.27	0.14 U	0.13	0.49	0.32	0.14 U	0.14 U	0.26	0.34	0.16	0.14 U	0.17	0.14 U	0.14 U	0.14 U	
4-Ethyltoluene	0.30	0.25 U	0.34	0.25 U	0.25 U	0.053	0.15 U	0.15 U	0.093	0.17 U	0.17 U	0.17 U	0.17 U	0.063	0.17 U	0.17 U	0.18	0.098 U	0.17 U	0.079 J	0.17 U	0.093 J	0.17 U	
4-Methyl-2-pentanone	2.8	0.20 U	0.20 U	0.20 U	0.20 U	0.12 U	0.12 U	0.23	0.10	0.14 U	0.083	0.24	0.14 U	0.14 U	0.14 U	0.14 U	0.2	0.036 J	0.14 U	0.092 J	0.14 U	0.14 U	0.14 U	
Acetone	14	5.7 B	19 B	8.7 B	20	4.9	9.4	10	12	8.7	18	28	16	12	26	9.3	22	25	10	8.7	10	13	18	
Benzene	1.2	0.28	2.3	0.16 U	0.19	0.40	0.29	0.20	0.68	0.42	1.0	0.31	0.70	0.95	0.43	1.0	0.9	0.2	0.6	0.7	0.41	0.82	1.4	
Benzyl chloride	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.16 U	0.16 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.052 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U		
Bromodichloromethane	0.33 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.20 U	0.10 U	0.20 U	0.24 U	0.24 U	0.24 U	0.24 U	0.23 U	0.24 U	0.24 U	0.24 U	0.067 U	0.24 U	0.24 U	0.24 U	0.24 U		
Bromoform	0.51 U	0.52 U	0.52 U	0.52 U	0.52 U	0.31 U	0.31 U	0.31 U	0.36 U	0.36 U	0.36 U													

Table 1.
Summary of Analytical Results - Air Sampling for Small Retail Spaces
Former Gorham Manufacturing Site
Providence, Rhode Island

Parameter (ug/m ³)	Outdoor Air Reference Locations																							
	AA-1-091610 9/16/2010	AA-1-120710 12/7/2010	AA-1-021711 2/17/2011	AA-1-060211 6/2/2011	AA-1-091511 9/15/2011	AA-1-120811 12/8/2011	AA-1-030812 3/8/2012	AA-1-061412 6/14/2012	AA-1-091312 9/13/2012	AA-1-010313 1/3/2013	AA-1-031513 3/15/2013	AA-1-060713 6/7/2013	AA-1-090613 9/6/2013	AA-1-100313 10/3/2013	AA-1-121313 12/13/2013	AA-1-030714 3/7/2014	AA-1-061314 6/13/2014	AA-1-091214 9/12/2014	AA-1-121914 12/19/2014	AA-01-032715 3/27/2015	AA-1-061115 6/11/2015	AA-1-091615 9/16/2015	AA-1-121815 12/18/2015	
Ethanol	14	2.3	12	2.7	5.8	1.5	4.1	7.4	5.2	2.7	1.2	6.1	6.7	6.7	5.4	9.0	17.0	2.9	2.7	2 J	5	12	7	
Ethyl acetate	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.46	0.56	0.43	0.67	0.35	1.1	0.56	17	0.12 U	0.13 U	0.18	0.13 U	0.17	0.13 U	0.27	0.13 U	0.68	0.14	
Ethylbenzene	1.4	0.22 U	1.1	0.22 U	0.22 U	0.31	0.13 U	0.065	0.19	0.15 U	0.12	0.16	0.15 U	0.21	0.15 U	0.16	0.44	0.047 J	0.046 J	0.19	0.1 J	0.37	0.46	
Hexachlorobutadiene	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.32 U	0.32 U	0.32 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	
Hexane	1.2	0.35 U	3.3	0.88	7.0 U	0.47	0.54	1.3	0.67	1.4	1.3	1.8	2.3	0.81	0.32	0.44	1.2	0.19 J	0.39 J	5.1	0.29 J	1 J	0.64 J	
Isopropyl alcohol	0.25 U	0.29	2.4	1.2 U	4.9 U	0.60	0.88	2.9 U	0.58	0.47	0.52	1.3	6.2	3.3 U	0.77	0.92	3.1	0.61 J	3.4 U	0.65 J	0.44 J	2.7 J	0.68 J	
m,p-Xylene	3.7	0.43 U	3.3	0.43 U	0.43 U	0.41	0.17	0.18	0.64	0.30 U	0.34	0.58	0.21	0.53	0.30 U	0.42	1.4	0.14 J	0.11 J	0.66	0.24 J	1.2	2	
Methyl methacrylate	0.20 U	0.48	0.20 U	0.20 U	0.12 U	0.12 U	0.12 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.082 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U		
Methylene chloride	1.1	0.66	3.0	2.3	1.7 U	1.5	1.6	3.0	2.1	4.4	2.9	2.3	9.1	1.0	0.76	0.55	1.20	0.54 J	0.47 J	0.44 J	0.47 J	0.48 J	0.54 J	
Methyl-t-butyl ether	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.11 U	0.11 U	0.11 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.072 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U		
n-Heptane	0.91	0.20 U	0.95	0.20 U	0.20 U	0.12	0.089	0.11	0.18	0.14 U	0.12	0.21	0.15	0.18	0.14 U	0.21	0.62	0.054 J	0.14 U	0.19	0.14 U	0.39	0.49	
o-Xylene	1.2	0.22 U	1.1	0.22 U	0.22 U	0.22	0.086	0.078	0.31	0.15 U	0.12	0.20	0.15 U	0.24	0.15 U	0.17	0.5	0.054 J	0.046 J	0.25	0.11 J	0.40	0.59	
Propylene (Propene)	1.9	0.86 U	0.86 U	0.86 U	0.86 U	3.4 U	2.1 U	2.1 U	0.77	1.3	2.4 U	2.4 U	2.4 U	2.3 U	2.4 U	2.4 U	1.3	1.4 U	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	
Styrene	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.37	0.13 U	0.10	0.13	0.15 U	0.039	0.15 U	0.15 U	0.052	0.15 U	0.15 U	0.16	0.085 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	
Tetrachloroethene	0.49	0.34 U	5.3	0.34 U	0.34 U	0.73	0.10 U	0.20 U	0.87	0.24 U	0.90	0.24 U	0.24 U	0.30	0.24 U	0.24 U	0.4	0.071	0.09 J	0.22 J	0.29	0.35	0.61	
Tetrahydrofuran	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.057	0.088 U	0.088 U	0.43	0.10 U	0.10 U	0.10 U	1.4	0.10 U	0.10 U	0.23	0.10 U	0.059 U	0.1 U	0.1 U	0.1 U	0.1 U		
Toluene	10	0.19 U	5.3	0.52	0.47	0.56	0.37	0.42	0.81	0.48	0.74	1.2	1.4	1.3	0.35	1.2	2.6	0.33	0.35	1.3	0.51	2.9	3.2	
trans-1,2-Dichloroethene	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.12 U	0.059 U	0.12 U	0.14 U	0.14 U	0.14 U	0.14 U	0.13 U	0.14 U	0.14 U	0.14 U	0.04 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U		
trans-1,3-Dichloropropene	0.22 U	0.23 U	0.23 U	0.23 U	0.23 U	0.14 U	0.068 U	0.14 U	0.16 U	0.16 U	0.16 U	0.16 U	0.15 U	0.16 U	0.16 U	0.16 U	0.045 U	0.16 U	0.064 J	0.16 U	0.16 U	0.16 U		
Trichloroethene	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.67	0.081 U	0.045	0.091	0.19 U	0.26	0.19 U	0.19 U	0.11	0.19 U	0.19 U	0.052 J	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U		
Trichlorofluoromethane	11	1.2	1.7	1.5	1.5	1.7	1.1	1.7	1.5	1.5	1.3	1.8	11	3.3	1.5	1.1	1.4	1.3	1.3	1.1	1.5	1.2	1.7	
Trichlorotrifluoroethane	0.44	0.56	0.66	0.69	0.58	0.89	0.43	0.53	0.59	0.58	0.66	1	0.6	0.55	0.55	0.46	0.54	0.57	0.63	0.49 J	0.65 J	0.57 J	0.6 J	
Vinyl acetate	0.36 U	0.35 U	0.18 U	3.5 U	0.18 U	0.11 U	0.21 U	0.21 U	0.25 U	0.25 U	0.25 U	2.5 U	2.5 U	2.4 U	2.5 U	2.5 U	1.4 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U		
Vinyl chloride	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.077 U	0.038 U	0.077 U	0.090 U	0.090 U	0.090 U	0.090 U	0.090 U	0.087 U	0.090 U	0.090 U	0.026 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U		

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Former Gorham Manufacturing Site
Providence, Rhode Island

Parameter ($\mu\text{g}/\text{m}^3$)	Extraction Well - Eastern Small Retail Space																							
	EW-5-020309 2/3/2009	EW-5-021109 2/11/2009	EW-5-021809 2/18/2009	EW-5-022609 2/26/2009	EW-5-030609 3/6/2009	EW-5-041409 4/14/2009	EW-5-051509 5/15/2009	EW-5-061109 6/11/2009	EW-5-091709 9/17/2009	EW-5-122909 12/29/2009	EW-5-032610 3/26/2010	EW-5-070110 7/1/2010	EW-5-091610 9/16/2010	EW-5-120710 12/7/2010	EW-5-021711 2/17/2011	EW-5-060211 6/2/2011	EW-5-091511 9/15/2011	EW-5-120811 12/8/2011	EW-5-030812 3/8/2012	EW-5-061412 6/14/2012	EW-5-091312 9/13/2012	EW-5-010313 1/3/2013	EW-5-031513 3/15/2013	EW-5-060713 6/7/2013
1,1,1-Trichloroethane	190000	41000	17000	7100	1800	2600	3100	1900	3500	920	540	550	460	210	400	340	430	130	81	100	190	0.55 U	0.55 U	59
1,1,1,2-Tetrachloroethane																		25 U		12 U	1.2 U	1.2 U	1.2 U	1.2 U
1,1,2,2-Tetrachloroethane	6.8 U	6.8 U	6.8 U	6.8 U	1.7 U	68 U	3.4 U	3.4 U	3.4 U	3.4 U	6.8 U	3.4 U	6.8 U	1.4 U	1.4 U	6.9 U	14 U	3.4 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U
1,1,2-Trichloroethane	5.4 U	5.4 U	5.4 U	5.4 U	1.4 U	54 U	2.7 U	2.7 U	2.7 U	5.4 U	2.7 U	5.4 U	1.1 U	1.1 U	5.5 U	11 U	2.7 U	0.55 U	0.55 U	0.55 U	0.55 U	0.55 U	0.55 U	
1,1-Dichloroethane	11000	1900	890	770	190	360	450	430	230	100	50	53	42	29	34	33	44	16	11	12	21	0.40 U	0.40 U	6.4
1,1-Dichloroethene	2500	290	130	190	61	160	160	160	98	30	18	21	15	13	15	11	14	5	4.5	4.5	6.9	0.40 U	0.40 U	1.7
1,2,4-Trichlorobenzene	7.4 U	7.4 U	7.4 U	7.4 U	1.9 U	74 U	3.7 U	3.7 U	7.5 U	15 U	3.7 U	7.4 U	1.5 U	1.5 U	7.4 U	30 U	7.4 U	15 U	1.5 U	1.5 U	1.5 U	1.5 U	0.74 U	
1,2,4-Trimethylbenzene	5.0 U	5.0 U	5.0 U	5.0 U	1.3 U	50 U	2.5 U	2.5 U	2.5 U	5.0 U	2.5 U	5.0 U	0.98 U	0.98 U	4.9 U	9.8 U	2.5 U	4.9 U	0.2	0.63	0.49 U	0.49 U	0.49 U	
1,2-Dibromoethane (EDB)	7.6 U	7.6 U	7.6 U	7.6 U	1.9 U	76 U	3.8 U	3.8 U	3.8 U	7.6 U	3.8 U	7.6 U	1.5 U	1.5 U	7.7 U	15 U	3.8 U	3.8 U	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U	
1,2-Dichlorobenzene	6.0 U	6.0 U	6.0 U	6.0 U	1.5 U	60 U	3.0 U	3.0 U	3.0 U	6.0 U	3.0 U	6.0 U	1.2 U	1.2 U	6.0 U	12 U	3.0 U	6.0 U	0.60 U	0.60 U	0.60 U	0.60 U	0.60 U	
1,2-Dichloroethane	4.0 U	4.0 U	4.0 U	4.0 U	1.0 U	40 U	2.0 U	2.0 U	2.0 U	4.0 U	2.0 U	4.0 U	0.81 U	0.81 U	4.0 U	8.1 U	2.0 U	2.0 U	0.17	0.40 U	0.40 U	0.40 U	0.40 U	
1,2-Dichloropropane	4.6 U	4.6 U	4.6 U	4.6 U	1.2 U	46 U	2.3 U	2.3 U	2.3 U	4.6 U	2.3 U	4.6 U	0.92 U	0.92 U	4.6 U	9.2 U	2.3 U	2.3 U	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U	
1,2-Dichlorotetrafluoroethane	7.0 U	7.0 U	7.0 U	7.0 U	1.8 U	70 U	3.5 U	3.5 U	3.5 U	7.0 U	3.5 U	7.0 U												
1,3,5-Trimethylbenzene	5.0 U	5.0 U	5.0 U	5.0 U	1.3 U	50 U	2.5 U	2.5 U	2.5 U	5.0 U	2.5 U	5.0 U	0.98 U	0.98 U	4.9 U	9.8 U	2.5 U	4.9 U	0.19	0.49 U	0.49 U	0.49 U	0.49 U	
1,3-Butadiene	2.2 U	2.2 U	2.2 U	2.2 U	0.55 U	22 U	1.1 U	1.1 U	2.3 U	1.1 U	2.2 U	1.1 U	0.44 U	0.44 U	2.2 U	4.4 U	1.1 U	2.2 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	
1,3-Dichlorobenzene	6.0 U	6.0 U	6.0 U	6.0 U	1.5 U	60 U	3.0 U	3.0 U	3.0 U	6.0 U	3.0 U	6.0 U	1.2 U	1.2 U	6.0 U	12 U	3.0 U	6.0 U	0.60 U	0.60 U	0.60 U	0.60 U	0.60 U	
1,4-Dichlorobenzene	6.0 U	6.0 U	6.0 U	6.0 U	1.5 U	60 U	3.0 U	3.0 U	3.0 U	6.0 U	3.0 U	6.0 U	1.2 U	1.2 U	6.0 U	12 U	3.0 U	6.0 U	0.60 U	0.60 U	0.60 U	0.60 U	0.60 U	
1,4-Dioxane																		7.2 U						
2-Butanone	6.3	89	75	170	3700	64000	100000	230000	110000	7800	18000	28000	15000	4000	7200 B	17000	13000	2700	1800	870	840	9.5	1.7	1900
2-Hexanone	4.0 U	4.0 U	4.0 U	4.0 U	1.0 U	40 U	2.7	2.0 U	2.0 U	4.0 U	2.0 U	4.0 U	0.82 U	0.82 U	82 U	8.2 U	2.0 U	4.1 U	0.43	0.41 U	0.41 U	0.41 U	0.41 U	
4-Ethyltoluene	5.0 U	5.0 U	5.0 U	5.0 U	1.3 U	50 U	2.5 U	2.5 U	2.5 U	5.0 U	2.5 U	5.0 U	0.98 U	0.98 U	4.9 U	9.8 U	2.5 U	4.9 U	0.18	0.49 U	0.49 U	0.49 U	0.49 U	
4-Methyl-2-pentanone	4.0 U	4.0 U	4.0 U	4.0 U	1.0 U	40 U	2.0 U	2.0 U	2.0 U	4.0 U	2.0 U	4.0 U	0.82 U	0.82 U	4.1 U	8.2 U	2.0 U	4.1 U	0.27	0.34	0.41 U	0.41 U	0.41 U	
Acetone	530	32	52	29	460	5600	14000	6900	9200	1700	3200	6000	4500	2000 B	1800 B	2200 B	3400	710	400	440	670	11	8.5	610
Benzene	13.0	12.0	6.2	4.8	5.6	32 U	11.0	7.1	11.0	6.3	5.5	8.2	5.0	4.2	4.5	4.2	6.4 U	2.8	2.0	1.1	3.7	0.5	0.5	1.0
Benzyl chloride	5.2 U	5.2 U	5.2 U	5.2 U	1.3 U	52 U	2.6 U	2.6 U	2.6 U	5.2 U	2.6 U	5.2 U	1.0 U	1.0 U	5.2 U	10 U	2.6 U	5.2 U	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U	
Bromodichloromethane	6.6 U	6.6 U	6.6 U	6.6 U	1.7 U	66 U	3.3 U	3.3 U	3.3 U	6.6 U	3.3 U	6.6 U	1.3 U	1.3 U	6.7 U	13 U	3.4 U	3.4 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	
Bromoform	11 U	11 U	11 U	11 U	2.6 U	110 U	5.1 U	5.1 U	5.1 U	11 U	5.1 U	11 U	2.1 U	2.1 U	10 U	21 U	5.2 U	10 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	
Bromomethane	3.8 U	3.8 U	3.8 U	3.8 U	0.95 U	38 U	1.9 U	1.9 U	1.9 U	3.8 U	1.9 U													

Table 1.
Summary of Analytical Results - Air Sampling for Small Retail Spaces
Former Gorham Manufacturing Site
Providence, Rhode Island

Parameter (ug/m ³)	Extraction Well - Eastern Small Retail Space																							
	EW-5-020309 2/3/2009	EW-5-021109 2/11/2009	EW-5-021809 2/18/2009	EW-5-022609 2/26/2009	EW-5-030609 3/6/2009	EW-5-041409 4/14/2009	EW-5-051509 5/15/2009	EW-5-061109 6/11/2009	EW-5-091709 9/17/2009	EW-5-122909 12/29/2009	EW-5-032610 3/26/2010	EW-5-070110 7/1/2010	EW-5-091610 9/16/2010	EW-5-120710 12/7/2010	EW-5-021711 2/17/2011	EW-5-060211 6/2/2011	EW-5-091511 9/15/2011	EW-5-120811 12/8/2011	EW-5-030812 3/8/2012	EW-5-061412 6/14/2012	EW-5-091312 9/13/2012	EW-5-010313 1/3/2013	EW-5-031513 3/15/2013	EW-5-060713 6/7/2013
Ethanol	320	36	46	33	22	130	30	26	3.8 U	45	28	68	89	23	19	24 J	150 U	12	290	14	100	9.9	3.5	13
Ethyl acetate	7.3 U	3.6 U	3.6 U	7.3 U	0.90 U	73 U	1.8 U	1.8 U	1.8 U	3.6 U	1.8 U	6.8	3.4	0.72 U	3.8	7.2 U	3.6	26	4.2	30	0.36 U	1.2	2.6	
Ethylbenzene	4.4 U	4.4 U	4.4 U	4.4 U	1.1 U	44 U	2.2 U	2.2 U	2.2 U	4.4 U	2.2 U	4.4 U	0.87 U	0.87 U	4.3 U	8.7 U	2.2 U	4.3 U	0.12	0.69	0.43 U	0.43 U	0.43 U	
Hexachlorobutadiene	22 U	22 U	22 U	22 U	5.4 U	220 U	11 U	11 U	5.3 U	11 U	22 U	5.3 U	11 U	2.1 U	2.1 U	11 U	21 U	4.2	11 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U
Hexane	5	3.6 U	3.6 U	3.6 U	2.3	36 U	3.3	1.8 U	1.8 U	3.6 U	1.8 U	7.1 U	1.4 U	0.70 U	3.5 U	280 U	70 U	9.4	4.3	2	0.74	2.2	14 U	
Isopropyl alcohol	190	5.1	4.6	5.0 U	4.6	290	24	57	35	2.5 U	20	54	59	11	13	25 U	200 U	49 U	13	9.8 U	11	1.1	9.8 U	9.8 U
m,p-Xylene	8.6 U	8.6 U	8.6 U	8.6 U	2.2 U	86 U	4.3 U	4.3 U	4.3 U	8.6 U	4.3 U	8.6 U	1.7 U	1.7 U	8.7 U	17 U	4.3 U	5.4	0.87 U	1.9	0.75	0.87 U	0.87 U	
Methyl methacrylate															0.82 U	4.1 U	8.2 U	2.0 U	4.1 U	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U
Methylene chloride	7.8	7.0 U	9.6	7.0 U	12	720	21	15	7.0 U	25	14 U	8.6	7.0 U	1.4 U	2	6.9 U	69 U	4.2	15	11	2.5	1.8	6.9	1.1
Methyl-t-butyl ether	3.6 U	3.6 U	3.6 U	3.6 U	0.90 U	36 U	1.8 U	1.8 U	1.8 U	3.6 U	1.8 U	3.6 U	0.72 U	0.72 U	3.6 U	7.2 U	1.8 U	3.6 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	
n-Heptane	4.0 U	4.0 U	4.0 U	4.0 U	1.0 U	40 U	2.0 U	2.0 U	2.0 U	4.0 U	2.0 U	4.0 U	0.82 U	0.82 U	4.1 U	8.2 U	2.0 U	4.1 U	0.41 U	0.52	0.41 U	0.41 U	0.41 U	
o-Xylene	4.4 U	4.4 U	4.4 U	4.4 U	1.1 U	44 U	2.2 U	2.2 U	2.2 U	4.4 U	2.2 U	4.4 U	0.87 U	0.87 U	4.3 U	8.7 U	2.2 U	4.3 U	0.14	0.73	0.43 U	0.43 U	0.43 U	
Propylene (Propene)	3.5 U	1.8 U	1.8 U	3.5 U	0.45 U	35 U	0.90 U	0.90 U	3.5 U	3.5 U	6.9 U	8.7 U	6.9 U	1.4 U	3.4 U	17 U	140 U	4.1	15	6.9 U	3.9	6.9 U	6.9 U	
Styrene	4.2 U	17	4.2 U	4.2 U	1.7	42 U	2.2	2.1 U	2.1 U	2.1 U	4.2 U	2.1 U	4.2 U	0.85 U	0.85 U	4.3 U	8.5 U	2.1 U	4.3 U	0.46	0.38	0.43 U	0.43 U	0.43 U
Tetrachloroethene	210	310	190	97	8	68 U	21	25	19	8.9	6.8 U	6.7	6.8 U	4	4100	6.8 U	14 U	3.5	3.4 U	0.92	2.1	0.68 U	0.68 U	0.71
Tetrahydrofuran	16	110	69	140	2200	42000	61000	150000	94000	9700	23000	37000	29000	8200	11000	30000	41000	11000	4500	7700	1000	0.29 U	0.29 U	2300
Toluene	13	4.7	3.8 U	3.8 U	0.95 U	38 U	2.2	3.4	1.9 U	1.9 U	3.8 U	1.9 U	3.8 U	0.75 U	1.6	3.8 U	7.5 U	0.9	37	0.58	5.6	0.66	0.4	0.43
trans-1,2-Dichloroethene	26	6.1	4.0 U	4.7	1.0 U	40 U	2.6	2.8	2.0 U	2.0 U	4.0 U	2.0 U	4.0 U	0.79 U	0.79 U	4.0 U	7.9 U	2.0 U	2.0 U	0.40 U	0.18	0.40 U	0.40 U	0.40 U
trans-1,3-Dichloropropene	4.4 U	4.4 U	4.4 U	4.4 U	1.1 U	44 U	2.2 U	2.2 U	2.2 U	4.4 U	2.2 U	4.4 U	0.91 U	0.91 U	4.5 U	9.1 U	2.3 U	2.3 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	
Trichloroethene	51000	20000	14000	8900	2400	3800	4400	2700	6800	1600	1100	1200	1100	410	660	790	940	290	170	220	400	0.54 U	0.54 U	150
Trichlorofluoromethane	3500	200	120	67	16	56 U	27	41	2.8 U	53	7	7.4	5.8	5.1	5.8	5.6 U	11 U	3.4	5.6 U	4.9	8.5	2.4	1.4	2.9
Trichlorotrifluoroethane	7.6 U	7.6 U	7.6 U	7.6 U	1.9 U	76 U	3.8 U	3.8 U	3.8 U	7.6 U	3.8 U	7.6 U	1.5 U	1.5 U	7.7 U	15 U	3.8 U	3.8 U	0.77 U	0.57	0.77 U	0.61	0.77 U	
Vinyl acetate	15 U	3.6 U	3.6 U	15 U	0.90 U	150 U	1.8 U	1.8 U	7.1 U	3.6 U	7.1 U	1.8 U	7.1 U	1.4 U	0.70 U	70 U	7.0 U	1.8 U	7.0 U	0.70 U	0.70 U	0.70 U	0.70 U	
Vinyl chloride	2.6 U	2.6 U	2.6 U	2.6 U	0.65 U	26 U	1.3 U	5.3	1.3 U	3	3.4	3.1	4.3	2.4	3.7	3.3	6.2	1.3 U	1.3 U	2.9	4.7	0.26 U	0.26 U	0.26 U

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Former Gorham Manufacturing Site
Providence, Rhode Island

Parameter (ug/m ³)	Extraction Well - Eastern Small Retail Space										Extraction Well - Center Small Retail Space													
	EW-5-090613 9/6/2013	EW-5-121313 12/13/2013	EW-5-030714 3/7/2014	EW-5-061314 6/13/2014	EW-5-091214 9/12/2014	EW-5-121914 12/19/2014	EW-05-032715 3/27/2015	EW-5-061115 6/11/2015	EW-5-091615 9/16/2015	EW-5-121815 12/18/2015	EW-6-020309 2/3/2009	EW-6-021109 2/11/2009	EW-6-021809 2/18/2009	EW-6-022609 2/26/2009	EW-6-030609 3/6/2009	EW-6-041409 4/14/2009	EW-6-051509 5/15/2009	EW-6-061109 6/11/2009	EW-6-091709 9/17/2009	EW-6-122909 12/29/2009	EW-6-070110 7/1/2010	EW-6-091610 9/16/2010	EW-6-120710 12/7/2010	
1,1,1-Trichloroethane	180	40	68	54	74	25	14	0.19 J	55	32	69000	32000	21000	16000	16000	5600	8200	5700	5400	1100	430	390	130	
1,1,1,2-Tetrachloroethane	0.39 J	1.2 U	1.2 U	1.2 U	2.5 U	1.2 U	1.2 U	1.2 U	2.5 U															
1,1,2,2-Tetrachloroethane	0.32 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	3.4 U	1.4 U	6.8 U	6.8 U	6.8 U	6.8 U	6.8 U	68 U	3.4 U	3.4 U	0.69 U						
1,1,2-Trichloroethane	0.26 U	0.55 U	0.55 U	0.55 U	1.1 U	0.55 U	0.55 U	0.55 U	2.7 U	1.1 U	5.4 U	5.4 U	5.4 U	5.4 U	54 U	2.7 U	2.7 U	0.55 U						
1,1-Dichloroethane	20	4.8	7	7.4	9.3	4.2	2.9	0.4 U	6.9	4.4	5200	2500	2100	2200	1600	780	1200	1100	930	580	47	38	21	
1,1-Dichloroethene	4.7	1.5	1.8	2	2.4	1	0.9	0.4 U	1.5 J	1.1	850	210	100	110	55	74	87	83	80	6.4	3.5	4.0 U	0.40 U	
1,2,4-Trichlorobenzene	0.35 U	0.74 U	0.74 U	0.74 U	1.5 U	0.74 U	0.74 U	0.74 U	3.7 U	1.5 U	7.4 U	7.4 U	7.4 U	7.4 U	74 U	3.7 U	3.7 U	3.7 U	7.5 U	3.7 U	7.4 U	0.74 U		
1,2,4-Trimethylbenzene	0.37	0.49 U	0.49 U	0.49 U	0.98 U	0.49 U	0.16 J	0.22 J	2.5 U	0.98 U	5.0 U	5.0 U	5.0 U	16	6.2	50 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	5.0 U	0.49 U	
1,2-Dibromoethane (EDB)	0.36 U	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U	3.8 U	1.5 U	7.6 U	7.6 U	7.6 U	7.6 U	76 U	3.8 U	3.8 U	0.77 U						
1,2-Dichlorobenzene	0.28 U	0.60 U	0.60 U	0.60 U	1.2 U	0.6 U	0.6 U	0.6 U	3 U	1.2 U	6.0 U	6.0 U	6.0 U	6.0 U	60 U	3.0 U	3.0 U	6.0 U						
1,2-Dichloroethane	0.19 U	0.40 U	0.40 U	0.40 U	0.4 U	0.4 U	0.4 U	0.4 U	2 U	0.81 U	4.0 U	4.0 U	4.0 U	4.0 U	40 U	2.0 U	2.0 U	0.40 U						
1,2-Dichloropropane	0.22 U	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U	2.3 U	0.92 U	4.6 U	4.6 U	4.6 U	4.6 U	46 U	2.3 U	2.3 U	0.46 U						
1,2-Dichlorotetrafluoroethane										1.4 U	7.0 U	7.0 U	7.0 U	7.0 U	70 U	3.5 U	3.5 U	7.0 U						
1,3,5-Trimethylbenzene	0.23 U	0.49 U	0.49 U	0.49 U	0.98 U	0.49 U	0.49 U	0.11 J	2.5 U	0.98 U	5.0 U	5.0 U	5.0 U	7.3	5.0 U	50 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	5.0 U	0.49 U	
1,3-Butadiene	0.10 U	0.22 U	0.22 U	0.22 U	0.44 U	0.22 U	0.22 U	0.22 U	1.1 U	0.44 U	2.2 U	2.2 U	2.2 U	2.2 U	22 U	1.1 U	1.1 U	2.2 U	0.22 U					
1,3-Dichlorobenzene	0.28 U	0.60 U	0.60 U	0.60 U	1.2 U	0.6 U	0.6 U	0.6 U	3 U	1.2 U	6.0 U	6.0 U	6.0 U	6.0 U	60 U	3.0 U	3.0 U	6.0 U						
1,4-Dichlorobenzene	0.28 U	0.60 U	0.60 U	0.60 U	1.2 U	0.6 U	0.6 U	0.6 U	3 U	1.2 U	6.0 U	6.0 U	6.0 U	6.0 U	60 U	3.0 U	3.0 U	6.0 U						
1,4-Dioxane										7.2 U														
2-Butanone	31000	680	1200	2100	3800	260	91	9.1 J	1700 E	410	120	280	300	130	97	160	37	65	8.7	23	1800	110	20	
2-Hexanone	0.49	0.41 U	0.53	0.41 U	0.82 U	0.41 U	0.16 J	0.34 J	2 U	0.82 U	4.0 U	4.0 U	4.0 U	4.0 U	40 U	2.0 U	2.0 U	4.0 U	0.41 U					
4-Ethyltoluene	0.23 U	0.49 U	0.49 U	0.49 U	0.98 U	0.49 U	0.49 U	0.49 U	2.5 U	0.98 U	5.0 U	5.0 U	5.0 U	5.0 U	50 U	2.5 U	2.5 U	5.0 U	0.49 U					
4-Methyl-2-pentanone	0.56	0.41 U	0.41 U	0.46	0.82 U	0.41 U	0.41 U	0.41 U	2 U	0.82 U	4.0 U	4.0 U	4.0 U	4.0 U	40 U	2.0 U	2.0 U	4.0 U	0.41 U					
Acetone	6800	210	380	610	500	98	49	21	550	120	580	64	81	33	22	410	16	20	4.8 U	27	490	70	15 B	
Benzene	7.1	2.4	3.8	3.0	2.7	3.4	3.1	0.4	2.9	5.0	5.2	5.2	4.1	3.2 U	3.2 U	32 U	1.7	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	3.2 U	0.9
Benzyl chloride	0.24 U	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U	2.6 U	1 U	5.2 U	5.2 U	5.2 U	5.2 U	52 U	2.6 U	2.6 U	5.2 U	0.52 U					
Bromodichloromethane	0.31 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	3.4 U	1.3 U	6.6 U	6.6 U	6.6 U	6.6 U	66 U	3.3 U	3.3 U	6.6 U	0.67 U					
Bromoform	0.48 U	1.0 U	1.0 U	1.0 U	2.1 U	1 U	1 U	1 U	5.2 U	2.1 U	11 U	11 U	11 U	11 U	110 U	5.1 U	5.1 U	5.1 U	5.1 U	5.1 U	5.1 U	11 U	1.0 U	
Bromomethane	0.18 U	0.39 U	0.39 U	0.39 U	0.78 U	0.39 U	0.39 U	0.39 U	1.9 U	0.78 U	3.8 U	3.8 U	3.8 U	3.8 U	38 U	1.9 U	1.9 U	3.8 U	0.39 U					
Carbon disulfide	77	8.9	26	35																				

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	EW-5-090613 9/6/2013	EW-5-121313 12/13/2013	EW-5-030714 3/7/2014	EW-5-061314 6/13/2014	EW-5-091214 9/12/2014	EW-5-121914 12/19/2014	EW-05-032715 3/27/2015	EW-5-061115 6/11/2015	EW-5-091615 9/16/2015	EW-5-121815 12/18/2015	EW-6-020309 2/3/2009	EW-6-021109 2/11/2009	EW-6-021809 2/18/2009	EW-6-022609 2/26/2009	EW-6-030609 3/6/2009	EW-6-041409 4/14/2009	EW-6-051509 5/15/2009	EW-6-061109 6/11/2009	EW-6-091709 9/17/2009	EW-6-122909 12/29/2009	EW-6-070110 7/1/2010	EW-6-091610 9/16/2010	EW-6-120710 12/7/2010		
Ethanol	3.5 U	39	43	32	15	33	31	15	17 J	21	360	38	73	38	25	110	18	14	6.7	18	15	19 U	4.6		
Ethyl acetate	0.17 U	5.5	4.8	3.4	3.6	3.6	2.6	0.36 U	1.8 U	2.8	7.3 U	3.6 U	3.6 U	7.3 U	3.6 U	73 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	3.6 U	0.36 U		
Ethylbenzene	0.41	0.43 U	0.43 U	0.43 U	0.87 U	0.43 U	0.16 J	0.15 J	2.2 U	0.87 U	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	44 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	4.4 U	0.43 U		
Hexachlorobutadiene	0.50 U	1.1 U	1.1 U	1.1 U	2.1 U	1.1 U	1.1 U	5.3 U	2.1 U	22 U	22 U	22 U	22 U	22 U	220 U	11 U	11 U	5.3 U	11 U	5.3 U	11 U	11 U	1.1 U		
Hexane	6.6 U	14. U	14 U	14 U	28 U	14 U	7.4 J	1.4 J	70 U	28 U	3.6 U	3.6 U	3.6 U	3.6 U	36 U	1.8 U	1.8 U	7.1 U	0.7 U						
Isopropyl alcohol	4.6 U	2.9	6	11	8.4 J	2 J	9.8 J	9.8 U	49 U	3 J	210	18	33	15	10	230	8.2	11	20	2.5 U	1.2 U	9.4	0.49 U		
m,p-Xylene	1.2	0.87 U	0.56	0.81	1.7 U	0.24 J	0.39 J	0.54 J	4.3 U	1.3 J	8.6 U	8.6 U	8.6 U	8.6 U	8.6 U	120	4.3 U	4.3 U	4.3 U	4.3 U	4.3 U	8.6 U	0.87 U		
Methyl methacrylate	0.19 U	0.41 U	0.41 U	0.41 U	0.82 U	0.41 U	0.41 U	2 U																	
Methylene chloride	3.4	1.1	0.79	0.99	1.6 J	3.5 U	0.44 J	1.9 J	17 U	6.9 U	7.0 U	7.0 U	7.5	7.0 U	7.0 U	780	12	15	7.0 U	27	10	7.0 U	1.3		
Methyl-t-butyl ether	0.17 U	0.36 U	0.36 U	0.36 U	0.72 U	0.36 U	0.36 U	0.36 U	1.8 U	0.72 U	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	36 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	3.6 U	0.36 U		
n-Heptane	0.19 U	0.41 U	0.41 U	0.41 U	0.82 U	0.41 U	0.41 U	0.41 U	0.41 U	2 U	0.82 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	40 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	4.0 U	0.41 U	
o-Xylene	0.5	0.43 U	0.43 U	0.43 U	0.87 U	0.43 U	0.15 J	0.25 J	2.2 U	0.87 U	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	44 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	4.4 U	0.43 U		
Propylene (Propene)	2.3	6.9 U	6.9 U	6.9 U	14 U	6.9 U	6.9 U	6.9 U	34 U	14 U	3.5 U	1.8 U	3.5 U	1.8 U	35 U	0.90 U	0.90 U	3.5 U	3.5 U	8.7 U	6.9 U	0.69 U			
Styrene	0.35	0.43 U	0.43 U	0.43 U	0.85 U	0.43 U	0.43 U	0.43 U	2.1 U	0.85 U	4.2 U	4.2 U	4.2 U	4.2 U	4.2 U	42 U	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U	4.2 U	0.43 U		
Tetrachloroethene	1.7	0.68 U	0.69	1.2	1.2	0.46 J	0.68 U	0.24 J	5.6	1.4 U	330	290	130	290	190	300	190	210	250	68	34	23	8.1		
Tetrahydrofuran	26000	1000	2900	2600	3300	460	320	1.9	2900 E	1100	75	480	260	730	570	130	110	87	9.1	31	42000	53000	480		
Toluene	4.2	0.44	1.4	1.7	1.1	0.36 J	0.55	0.83	0.72 J	0.95	12	3.8 U	3.8 U	3.8 U	3.8 U	38 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	3.8 U	0.38 U		
trans-1,2-Dichloroethene	0.19 U	0.40 U	0.40 U	0.40 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	2 U	0.79 U	12	6.3	4.2	6.4	4.0 U	40 U	2.6	2.7	2	2.1	2.0 U	4.0 U	0.4 U	
trans-1,3-Dichloropropene	0.21 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	2.3 U	0.91 U	4.4 U	4.4 U	4.4 U	4.4 U	44 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	4.4 U	0.45 U		
Trichloroethene	770	80	190	160	200	66	38	0.54 U	160	94	12000	6900	4200	4400	4800	3900	5400	4700	6100	2000	730	650	250		
Trichlorofluoromethane	4.6	3.6	2.7	3.4	4.1	3.1	1.9 J	1.7 J	3.1 J	4.1 J	2300	870	630	350	250	150	230	440	700	320	6.7	25	28		
Trichlorotrifluoroethane	0.64	0.77 U	0.77 U	0.77 U	1.5 U	0.63 J	0.44 J	0.64 J	15 U	6.1 U	7.6 U	7.6 U	7.6 U	7.6 U	7.6 U	76 U	3.8 U	3.8 U	3.8 U	3.8 U	3.8 U	7.6 U	0.77 U		
Vinyl acetate	3.3 U	7.0 U	7.0 U	7 U	14 U	7 U	7 U	7 U	35 U	14 U	15 U	3.6 U	3.6 U	15 U	3.6 U	150 U	1.8 U	1.8 U	7.1 U	3.6 U	1.8 U	7.1 U	0.7 U		
Vinyl chloride	3.5	0.26 U	1.1	1.3	0.26 U	0.28	0.15 J	0.26 U	0.87 J	0.51 U	2.6 U	2.6 U	2.6 U	2.6 U	2.6 U	26 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.7	2.9	0.26 U	

Table 1.
Summary of Analytical Results - Air Sampling for Small Retail Spaces
Former Gorham Manufacturing Site
Providence, Rhode Island

Parameter (ug/m ³)	Extraction Well - Center Small Retail Space																			
	EW-6-021711 2/17/2011	EW-6-060211 6/2/2011	EW-6-091511 9/15/2011	EW-6-120811 12/8/2011	EW-6-030812 3/8/2012	EW-6-061412 6/14/2012	EW-6-0913412 9/13/2012	EW-6-010313 1/3/2013	EW-6-031513 3/15/2013	EW-6-060713 6/7/2013	EW-6-090613 9/6/2013	EW-6-121313 12/13/2013	EW-6-030714 3/7/2014	EW-6-061314 6/13/2014	EW-6-091214 9/12/2014	EW-6-121914 12/19/2014	EW-06-032715 3/27/2015	EW-6-061115 6/11/2015	EW-6-091615 9/16/2015	EW-6-121815 12/18/2015
1,1,1-Trichloroethane	0.55 U	80	230	33	0.27 U	75	0.55 U	0.55 U	0.55 U	4.3	71	18	13	26	58	19	14	13	5.9	27
1,1,1,2-Tetrachloroethane			25 U		1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.44 U	1.2 U	1.2 U	1.2 U	2.5 U	1.2 U	1.2 U	1.2 U	1.2 U	2.5 U	
1,1,2,2-Tetrachloroethane	0.69 U	6.9 U	14 U	3.4 U	0.34 U	0.69 U	0.69 U	0.69 U	0.69 U	0.24 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	1.4 U	1.4 U
1,1,2-Trichloroethane	0.55 U	5.5 U	11 U	2.7 U	0.27 U	0.55 U	0.55 U	0.55 U	0.55 U	0.19 U	0.55 U	0.55 U	0.55 U	1.1 U	0.55 U	0.55 U	0.55 U	0.55 U	1.1 U	1.1 U
1,1-Dichloroethane	0.40 U	12	27	6.4	0.20 U	9.6	0.40 U	0.40 U	0.40 U	0.78	13	2.7	2.2	4.7	8.2	3.5	2.8	2.5	1.1	3.1
1,1-Dichloroethene	0.40 U	4.0 U	7.9 U	2.0 U	0.20 U	0.84	0.40 U	0.40 U	0.40 U	1.1	0.40 U	0.40 U	0.40 U	0.52	0.4 U	0.4 U	0.4 U	0.4 U	0.79 U	0.79 U
1,2,4-Trichlorobenzene	0.74 U	7.4 U	30 U	7.4 U	1.5 U	1.5 U	1.5 U	1.5 U	0.74 U	0.26 U	0.74 U	0.74 U	0.74 U	1.5 U	0.74 U	0.74 U	0.74 U	0.74 U	1.5 U	1.5 U
1,2,4-Trimethylbenzene	0.49 U	4.9 U	9.8 U	2.5 U	0.49 U	0.26	0.6	0.49 U	0.49 U	0.49 U	0.59	0.49 U	0.49 U	0.49 U	0.98 U	0.49 U	0.2 J	0.24 J	0.98 U	0.98 U
1,2-Dibromoethane (EDB)	0.77 U	7.7 U	15 U	3.8 U	0.38 U	0.77 U	0.77 U	0.77 U	0.77 U	0.27 U	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U	1.5 U	1.5 U
1,2-Dichlorobenzene	0.60 U	6.0 U	12 U	3.0 U	0.60 U	0.60 U	0.60 U	0.60 U	0.60 U	0.21 U	0.60 U	0.60 U	0.60 U	1.2 U	0.6 U	0.6 U	0.6 U	0.6 U	1.2 U	1.2 U
1,2-Dichloroethane	0.40 U	4.0 U	8.1 U	2.0 U	0.20 U	0.40 U	0.40 U	0.40 U	0.40 U	0.14 U	0.40 U	0.40 U	0.40 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.81 U	0.81 U
1,2-Dichloropropane	0.46 U	4.6 U	9.2 U	2.3 U	0.23 U	0.46 U	0.46 U	0.46 U	0.46 U	0.16 U	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U	0.92 U	0.92 U
1,2-Dichlorotetrafluoroethane																				1.4 U
1,3,5-Trimethylbenzene	0.49 U	4.9 U	9.8 U	2.5 U	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U	0.3	0.49 U	0.49 U	0.49 U	0.98 U	0.49 U	0.49 U	0.49 U	0.49 U	0.98 U	0.98 U
1,3-Butadiene	0.22 U	2.2 U	4.4 U	1.1 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.078 U	0.22 U	0.22 U	0.22 U	0.44 U	0.22 U	0.22 U	0.22 U	0.22 U	0.44 U	0.44 U
1,3-Dichlorobenzene	0.60 U	6.0 U	12 U	3.0 U	0.60 U	0.60 U	0.60 U	0.60 U	0.60 U	0.21 U	0.60 U	0.60 U	0.60 U	1.2 U	0.6 U	0.6 U	0.6 U	0.6 U	1.2 U	1.2 U
1,4-Dichlorobenzene	0.60 U	6.0 U	12 U	3.0 U	0.60 U	0.60 U	0.60 U	0.60 U	0.60 U	0.21 U	0.60 U	0.60 U	0.60 U	1.2 U	0.6 U	0.6 U	0.6 U	0.6 U	1.2 U	1.2 U
1,4-Dioxane																				7.2 U
2-Butanone	1.9 B	59 U	240 U	13	2.1	200	3.7	0.84	1.9	120	95	4	4	6.8	11 J	5.2 J	11 J	13	7 J	2.2 J
2-Hexanone	0.41 U	82 U	8.2 U	2.0 U	0.41 U	0.7	0.52	0.41 U	0.41 U	0.38	0.41 U	0.41 U	0.41 U	0.82 U	0.41 U	0.32 J	0.18 J	0.82 U	0.82 U	
4-Ethyltoluene	0.49 U	4.9 U	9.8 U	2.5 U	0.49 U	0.49 U	0.28	0.49 U	0.49 U	0.17 U	0.49 U	0.49 U	0.49 U	0.98 U	0.49 U	0.12 J	0.98 U	0.98 U		
4-Methyl-2-pentanone	0.41 U	4.1 U	8.2 U	2.0 U	0.41 U	0.35	0.41 U	0.41 U	0.41 U	0.14 U	0.41 U	0.41 U	0.41 U	0.82 U	0.41 U	0.13 J	0.41 U	0.82 U	0.82 U	
Acetone	15 B	48 U	190 U	21	9.9	36	25	6.4	6.3	42	35	17	16	27	36	35	39	35	44	17 J
Benzene	1.1	3.2 U	6.4 U	1.6 U	0.3	1.2	0.8	0.4	0.4	0.32 U	1.2	0.4	1.0	0.7	1.1	0.7	0.7	0.6	0.56 J	0.64 U
Benzyl chloride	0.52 U	5.2 U	10 U	2.6 U	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U	0.18 U	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U	1 U	1 U
Bromodichloromethane	0.67 U	6.7 U	13 U	3.4 U	0.34 U	0.67 U	0.67 U	0.67 U	0.67 U	0.24 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	1.3 U	1.3 U
Bromoform	1.0 U	10 U	21 U	5.2 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.36 U	1.0 U	10 U	1.0 U	2.1 U	1 U	1 U	1 U	2.1 U	2.1 U	
Bromomethane	0.39 U	3.9 U	7.8 U	1.9 U	0.39 U	0.39 U	0.39 U	0.39 U	0.39 U	0.14	0.39 U	0.39 U	0.39 U	0.78 U	0.39 U	0.39 U	0.39 U	0.39 U	0.78 U	0.78 U
Carbon disulfide	0.31 U	11	62 U	7.1	3.1 U	29	3.1 U	3.1 U	3.1 U	0.35	74	5.6	6.3	31	71	8	15	14	19	6.2 U
Carbon tetrachloride	0.63 U	6.3 U	13 U	3.1 U	0.39	0.34	0.4	0.63 U	0.23	0.63 U	0.48	0.63 U	0.63 U	0.63 U	0.35 J	0.3 J	0.36 J	0.4 J	1.3 U	
Chlorobenzene	0.46 U	4.6 U	9.2 U	2.3 U	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U	0.16 U	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U	0.92 U	0.92 U
Chloroethane	0.26 U	2.6 U	5.3 U	1.3 U	0.26 U	1.4	0.26 U	0.26 U	0.26 U	1.7	0.26 U	0.26 U	0.26 U	0.67	1.1	0.26 U	0.26 U</			

Table 1.
Summary of Analytical Results - Air Sampling for Small Retail Spaces
Former Gorham Manufacturing Site
Providence, Rhode Island

Parameter (ug/m ³)	Extraction Well - Center Small Retail Space																			
	EW-6-021711 2/17/2011	EW-6-060211 6/2/2011	EW-6-091511 9/15/2011	EW-6-120811 12/8/2011	EW-6-030812 3/8/2012	EW-6-061412 6/14/2012	EW-6-0913412 9/13/2012	EW-6-010313 1/3/2013	EW-6-031513 3/15/2013	EW-6-060713 6/7/2013	EW-6-090613 9/6/2013	EW-6-121313 12/13/2013	EW-6-030714 3/7/2014	EW-6-061314 6/13/2014	EW-6-091214 9/12/2014	EW-6-121914 12/19/2014	EW-06-032715 3/27/2015	EW-6-061115 6/11/2015	EW-6-091615 9/16/2015	EW-6-121815 12/18/2015
Ethanol	11	38 U	150 U	38 U	29	5.8	68	8.6	3.5	13	14	4.3	7.5 U	6.9	15 U	3.5 J	5.6 J	27	28	7.2 J
Ethyl acetate	0.36 U	3.6 U	7.2 U	1.8 U	0.52	1.2	24	0.36 U	0.36 U	0.94	0.13 U	0.36 U	0.36 U	0.36 U	0.72 U	0.36 U	0.37	0.36 U	0.72 U	0.72 U
Ethylbenzene	0.43 U	4.3 U	8.7 U	2.2 U	0.43 U	0.18	0.66	0.43 U	0.43 U	0.43 U	0.38	0.43 U	0.43 U	0.43 U	0.87 U	0.43 U	0.34 J	0.43 U	0.87 U	0.87 U
Hexachlorobutadiene	1.1 U	11 U	21 U	5.3 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	0.37 U	1.1 U	1.1 U	1.1 U	2.1 U	1.1 U	1.1 U	1.1 U	2.1 U	2.1 U
Hexane	1.3	3.5 U	280 U	70 U	1.4	1.2	7.6	14. U	0.6	1.6	0.89	14. U	14 U	14 U	28 U	14 U	7.3 J	14 U	28 U	28 U
Isopropyl alcohol	2.9	25 U	200 U	49 U	1.3	9.8 U	7.6	0.69	9.8 U	9.8 U	3.4 U	9.8 U	9.8 U	1.1	5.9 J	9.8 U	1.8 J	5 J	4.4 J	20 U
m,p-Xylene	0.94	8.7 U	17 U	4.3 U	0.87 U	0.24	1.9	0.87 U	0.87 U	0.87 U	0.76	0.87 U	0.87 U	0.52	1.7 U	0.87 U	0.35 J	0.3 J	1.7 U	1.7 U
Methyl methacrylate	0.41 U	4.1 U	8.2 U	2.0 U	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U	0.14 U	0.41 U	0.41 U	0.41 U	0.82 U	0.41 U	0.41 U	0.41 U	0.82 U	
Methylene chloride	2.8	6.9 U	69 U	3.6	4.8	2.5	14	2.1	1.4	3.8	0.84	0.99	0.89	1.2	1.6 J	3.5 U	0.43 J	3.5 U	6.9 U	6.9 U
Methyl-t-butyl ether	0.36 U	3.6 U	7.2 U	1.8 U	0.36 U	0.36 U	0.13	0.36 U	0.36 U	0.36 U	0.13 U	0.36 U	0.36 U	0.36 U	0.72 U	0.36 U	0.36 U	0.36 U	0.72 U	0.72 U
n-Heptane	0.41 U	4.1 U	8.2 U	2.0 U	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U	0.45	0.41 U	0.41 U	0.41 U	0.82 U	0.41 U	0.41 U	0.41 U	0.82 U	0.82 U
o-Xylene	0.43 U	4.3 U	8.7 U	2.2 U	0.43 U	0.16	0.73	0.43 U	0.43 U	0.43 U	0.37	0.43 U	0.43 U	0.43 U	0.87 U	0.43 U	0.16 J	0.43 U	0.87 U	0.87 U
Propylene (Propene)	1.7 U	17 U	140 U	3.8	6.9 U	2.8	6.9 U	6.9 U	6.9 U	6.9 U	2.4 U	6.9 U	6.9 U	1	2.1 J	0.84 J	0.91 J	6.9 U	14 U	14 U
Styrene	0.43 U	4.3 U	8.5 U	2.1 U	0.43 U	0.2	0.35	0.43 U	0.43 U	0.43 U	0.28	0.43 U	0.43 U	0.43 U	0.85 U	0.43 U	0.43 U	0.094 J	0.85 U	0.85 U
Tetrachloroethene	1.2	6.8 U	17	2.4	0.76	4.6	0.88	0.68 U	0.68 U	0.68 U	8.3	1.5	1.1	3.3	5.9	3.1	1.4	1.1	1.4 U	1.7
Tetrahydrofuran	0.29 U	13000	32000	3900	3.7	8100	0.29 U	0.29 U	0.27	58	35000	650	54	1200	4100	260	680	600	170	1.7
Toluene	2.4	3.8 U	9.8	1.9 U	0.36	0.7	5.3	0.46	0.31	0.5	2.5	0.38 U	1	0.97	0.68 J	0.25 J	0.49	0.66	0.92	0.75 U
trans-1,2-Dichloroethene	0.40 U	4.0 U	7.9 U	2.0 U	0.20 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.14 U	0.40 U	0.40 U	0.40 U	0.4 U	0.4 U	0.4 U	0.4 U	0.79 U	0.79 U
trans-1,3-Dichloropropene	0.45 U	4.5 U	9.1 U	2.3 U	0.23 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.16 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.91 U	0.91 U
Trichloroethene	0.54 U	190	390	66	0.27 U	180	0.21	0.54 U	0.54 U	5.7	150	36	28	60	110	44	33	25	2.4	47
Trichlorofluoromethane	1.7	11	34	11	1	15	2	1.9	1.3	4.7	6.2	12	6.9	14	21	15	8.6	12	4.4 J	20
Trichlorotrifluoroethane	0.86	7.7 U	15 U	3.8 U	0.38 U	0.77 U	0.6	0.77 U	0.63	0.77 U	0.72	0.77 U	0.77 U	0.77 U	1.5 U	0.63 J	0.41 J	0.58 J	0.61 J	6.1 U
Vinyl acetate	0.35 U	70 U	7.0 U	1.8 U	0.70 U	0.70 U	0.70 U	0.70 U	0.70 U	7.0 U	2.5 U	7.0 U	7.0 U	7.0 U	2.1 J	7 U	7 U	7 U	14 U	0.79 J
Vinyl chloride	0.26 U	2.6 U	5.1 U	1.3 U	0.13 U	1.5	0.26 U	0.26 U	0.26 U	0.26 U	2.2	0.26 U	0.26 U	0.26 U	0.65	1.3	0.26 U	0.26 U	0.37 J	0.51 U

Table 1.
Summary of Analytical Results - Air Sampling for Small Retail Spaces
Former Gorham Manufacturing Site
Providence, Rhode Island

Parameter (ug/m ³)	Extraction Well - Western Small Retail Space																												
	EW-7-020309 2/3/2009	EW-7-021109 2/11/2009	EW-7-021809 2/18/2009	EW-7-022609 2/26/2009	EW-7-030609 3/6/2009	EW-7-041409 4/14/2009	EW-7-051509 5/15/2009	EW-7-061109 6/11/2009	EW-7-091709 9/17/2009	EW-7-122909 12/29/2009	EW-7-032610 3/26/2010	EW-7-070110 7/1/2010	EW-7-091610 9/16/2010	EW-7-120710 12/7/2010	EW-7-021711 2/17/2011	EW-7-060211 6/2/2011	EW-7-091511 9/15/2011	EW-7-120811 12/8/2011	EW-7-030812 3/8/2012	EW-7-061412 6/14/2012	EW-7-091312 9/13/2012	EW-7-010313 1/3/2013	EW-7-031513 3/15/2013	EW-7-060713 6/7/2013					
1,1,1-Trichloroethane	5600	8500	7800	8200	8100	1600	3600	2600	1400	340	51	250	290	160	110	5.5 U	110	66	11	47	95	0.55 U	3.1	15					
1,1,1,2-Tetrachloroethane																	2.5 U		12 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U				
1,1,2,2-Tetrachloroethane	6.8 U	1.4 U	1.7 U	1.7 U	1.7 U	6.8 U	3.4 U	3.4 U	3.4 U	0.68 U	0.68 U	0.68 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U					
1,1,2-Trichloroethane	5.4 U	1.1 U	1.4 U	1.4 U	1.4 U	5.4 U	2.7 U	2.7 U	2.7 U	0.54 U	0.54 U	0.54 U	0.55 U	0.55 U	0.55 U	0.55 U	0.55 U	0.55 U	0.55 U	0.55 U	0.55 U	0.55 U	0.55 U	0.55 U					
1,1-Dichloroethane	1700	1800	1600	2100	1700	590	1000	1100	970	470	85	320	340	220	150	45	150	80	6.4	42	100	0.40 U	2	7					
1,1-Dichloroethene	14	15	8.5	9.4	6.6	4.0 U	4.2	4.2	4.5	2.0 U	0.40 U	0.81	0.94	0.63	0.40 U	4.0 U	0.79 U	0.13	2.0 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U				
1,2,4-Trichlorobenzene	7.4 U	1.5 U	1.9 U	1.9 U	1.9 U	7.4 U	3.7 U	3.7 U	3.7 U	7.5 U	1.5 U	0.74 U	0.74 U	0.74 U	0.74 U	7.4 U	3.0 U	1.5 U	15 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	0.74 U				
1,2,4-Trimethylbenzene	5.0 U	1.0 U	1.3 U	1.3 U	1.3 U	5.0 U	2.5 U	2.5 U	2.5 U	2.5 U	0.50 U	0.49 U	0.49 U	4.9 U	0.98 U	0.32	4.9 U	0.32	0.97	0.92	0.3	0.49 U							
1,2-Dibromoethane (EDB)	7.6 U	1.6 U	1.9 U	1.9 U	1.9 U	7.6 U	3.8 U	3.8 U	3.8 U	0.76 U	0.76 U	0.77 U	0.77 U	7.7 U	1.5 U	0.77 U	3.8 U	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U				
1,2-Dichlorobenzene	6.0 U	1.2 U	1.5 U	1.5 U	1.5 U	6.0 U	3.0 U	3.0 U	3.0 U	0.60 U	0.60 U	0.60 U	0.60 U	6.0 U	1.2 U	0.60 U	6.0 U	0.60 U	0.60 U	0.60 U	0.60 U	0.60 U	0.60 U	0.60 U	0.60 U				
1,2-Dichloroethane	4.0 U	0.80 U	1.0 U	1.0 U	1.0 U	4.0 U	2.0 U	2.0 U	2.0 U	0.40 U	0.40 U	0.40 U	0.40 U	4.0 U	0.40 U	0.40 U	4.0 U	0.81 U	0.40 U	2.0 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U				
1,2-Dichloropropane	4.6 U	0.92 U	1.2 U	1.2 U	1.2 U	4.6 U	2.3 U	2.3 U	2.3 U	0.46 U	0.46 U	0.46 U	0.46 U	4.6 U	0.92 U	0.46 U	2.3 U	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U				
1,2-Dichlorotetrafluoroethane	7.0 U	1.4 U	1.8 U	1.8 U	1.8 U	7.0 U	3.5 U	3.5 U	3.5 U	0.70 U	0.70 U	0.70 U	0.70 U																
1,3,5-Trimethylbenzene	5.0 U	1.0 U	1.3 U	1.3 U	1.3 U	5.0 U	2.5 U	2.5 U	2.5 U	2.5 U	0.50 U	0.50 U	0.49 U	0.49 U	4.9 U	0.98 U	0.49 U	4.9 U	0.49 U	0.5	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U			
1,3-Butadiene	2.2 U	0.44 U	0.55 U	0.55 U	0.55 U	2.2 U	1.1 U	1.1 U	1.1 U	0.22 U	0.22 U	0.22 U	0.22 U	2.2 U	0.22 U	0.22 U	2.2 U	0.44 U	0.22 U	2.2 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U			
1,3-Dichlorobenzene	6.0 U	1.2 U	1.5 U	1.5 U	1.5 U	6.0 U	3.0 U	3.0 U	3.0 U	0.60 U	0.60 U	0.60 U	0.60 U	6.0 U	1.2 U	0.60 U	6.0 U	0.60 U	0.60 U	0.60 U	0.60 U	0.60 U	0.60 U	0.60 U	0.60 U				
1,4-Dichlorobenzene	6.0 U	1.2 U	1.5 U	1.5 U	1.5 U	6.0 U	3.0 U	3.0 U	3.0 U	0.60 U	0.60 U	0.60 U	0.60 U	6.0 U	1.2 U	0.60 U	6.0 U	0.60 U	0.60 U	0.60 U	0.60 U	0.60 U	0.60 U	0.60 U	0.60 U				
1,4-Dioxane																		0.72 U											
2-Butanone	8.7	12	7.3	8.5	5.5	4.5	7.1	16	4.9	3.5	31	3.8	1.8	4.1	5.3 B	59 U	24 U	6.2	100	14	3.6	18	210	99					
2-Hexanone	4.0 U	0.80 U	1.0 U	1.0 U	1.0 U	4.0 U	2.0 U	2.0 U	2.0 U	0.40 U	1	0.40 U	0.41 U	0.41 U	0.41 U	82 U	0.82 U	0.14	4.1 U	0.28	0.64	0.41 U	0.39	0.41 U					
4-Ethyltoluene	5.0 U	1.0 U	1.3 U	1.3 U	1.3 U	5.0 U	2.5 U	2.5 U	2.5 U	0.50 U	0.50 U	0.49 U	0.49 U	4.9 U	0.98 U	0.49 U	4.9 U	0.49 U	0.21	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U		
4-Methyl-2-pentanone	4.0 U	0.80 U	1.0 U	1.0 U	1.0 U	4.0 U	2.0 U	2.0 U	2.0 U	0.40 U	0.40 U	0.40 U	0.40 U	4.1 U	0.82 U	0.13	4.1 U	1.6	0.31	0.55	0.41 U	0.41 U							
Acetone	580	38	58	30	24	15	24	24	7.9	49	26	25	12	42 B	35 B	48 U	23	12	46	31	17	23	55	28					
Benzene	3.2 U	3.9	4.5	1.9	2.3	3.2 U	2.6	2.8	3.0	2.2	1.5	1.7	2.1	1.4	1.6	3.2 U	2.5	1.6	3.2 U	1.5	1.2	0.9	0.5	0.6					
Benzyl chloride	5.2 U	1.1 U	1.3 U	1.3 U	1.3 U	5.2 U	2.6 U	2.6 U	2.6 U	0.52 U	0.52 U	0.52 U	0.52 U	5.2 U	1.0 U	0.52 U	5.2 U	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U
Bromodichloromethane	6.6 U	1.4 U	1.7 U	1.7 U	1.																								

Table 1.
Summary of Analytical Results - Air Sampling for Small Retail Spaces
Former Gorham Manufacturing Site
Providence, Rhode Island

Parameter (ug/m ³)	Extraction Well - Western Small Retail Space																							
	EW-7-020309 2/3/2009	EW-7-021109 2/11/2009	EW-7-021809 2/18/2009	EW-7-022609 2/26/2009	EW-7-030609 3/6/2009	EW-7-041409 4/14/2009	EW-7-051509 5/15/2009	EW-7-061109 6/11/2009	EW-7-091709 9/17/2009	EW-7-122909 12/29/2009	EW-7-032610 3/26/2010	EW-7-070110 7/1/2010	EW-7-091610 9/16/2010	EW-7-120710 12/7/2010	EW-7-021711 2/17/2011	EW-7-060211 6/2/2011	EW-7-091511 9/15/2011	EW-7-120811 12/8/2011	EW-7-030812 3/8/2012	EW-7-061412 6/14/2012	EW-7-091312 9/13/2012	EW-7-010313 1/3/2013	EW-7-031513 3/15/2013	EW-7-060713 6/7/2013
Ethanol	350	26	29	17	15	3.8 U	19	18	12	18	37	31	1.9 U	1.9 U	18	38 U	22	23	160	31	140	1200	27	22
Ethyl acetate	7.3 U	0.72 U	0.90 U	1.9 U	0.90 U	7.3 U	1.8 U	1.8 U	1.8 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	3.6 U	0.72 U	0.36 U	11	0.63	0.36 U	0.36 U	3	3.6	
Ethylbenzene	4.4 U	0.88 U	1.1 U	1.1 U	1.1 U	4.4 U	2.2 U	2.2 U	2.2 U	0.57	0.44 U	0.44 U	0.43 U	0.43 U	4.3 U	0.87 U	0.26	4.3 U	0.21	0.47	0.44	0.44	0.13	0.43 U
Hexachlorobutadiene	22 U	4.3 U	5.4 U	5.4 U	5.4 U	22 U	11 U	11 U	5.3 U	11 U	2.2 U	1.1 U	1.1 U	1.1 U	11 U	2.1 U	1.1 U	11 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U
Hexane	10	10	7.6	5.5	3.1	3.6 U	4	2.1	1.8 U	1.8 U	0.36 U	0.97	0.71 U	0.87	0.35 U	3.5 U	28 U	14 U	4	0.55	14 U	1.5	3.5	0.78
Isopropyl alcohol	210	18	21	12	8.5	5.0 U	12	17	2.5 U	2.5 U	80	2.2	2.6	2.8	0.25 U	25 U	30	9.8 U	98 U	14	9.8 U	12	9.8 U	9.8 U
m,p-Xylene	8.6 U	1.8 U	2.2 U	2.2 U	2.2 U	8.6 U	4.3 U	4.3 U	4.3 U	1.4	0.93	1	0.87 U	0.87 U	8.7 U	1.7 U	0.82	8.7 U	0.45	1.3	1.5	0.33	0.5	
Methyl methacrylate															0.41 U	4.1 U	0.82 U	0.41 U	4.1 U	0.41 U	0.41 U	0.41 U	0.41 U	
Methylene chloride	9.3	2.6	8	1.8	1.8 U	20	29	16	7.0 U	27	1.4 U	2.4	0.81	1.9	2.4	6.9 U	6.9 U	1.5	33	2.1	5.4	5.6	10	1.5
Methyl-t-butyl ether	3.6 U	3.5	2.9	4.9	3.1	3.6 U	1.8 U	1.8 U	1.8 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	3.6 U	0.72 U	0.36 U	3.6 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	
n-Heptane	4.0 U	1.4	1.0 U	1.0 U	1.0 U	4.0 U	2.0 U	2.0 U	2.0 U	0.40 U	0.40 U	0.40 U	0.41 U	0.41 U	4.1 U	0.82 U	0.22	4.1 U	0.49	0.75	0.41 U	0.41 U	0.41 U	
o-Xylene	4.4 U	0.88 U	1.1 U	1.1 U	1.1 U	4.4 U	2.2 U	2.2 U	2.2 U	0.65	0.44 U	0.44 U	0.43 U	0.43 U	4.3 U	0.87 U	0.38	4.3 U	0.18	0.52	0.51	0.15	0.43 U	
Propylene (Propene)	3.5 U	160	110	0.87 U	0.45 U	3.5 U	0.90 U	0.90 U	3.5 U	3.5 U	0.69 U	1.8 U	0.69 U	0.69 U	1.7 U	17 U	14 U	6.9 U	13	6.9 U	6.9 U	6.9 U	6.9 U	
Styrene	4.2 U	0.84 U	1.1 U	1.1 U	1.1 U	4.2 U	2.1 U	2.1 U	2.1 U	0.42 U	0.67	0.47	0.43 U	0.43 U	4.3 U	0.85 U	0.49	4.3 U	0.66	0.41	0.43 U	0.14	0.43 U	
Tetrachloroethene	66	69	56	84	69	40	140	230	410	130	74	510	610	190	110	120	450	170	5.6	130	200	1.3	3	100
Tetrahydrofuran	41	23	12	14	7.5	3.0 U	5.6	15	4.1	1.5 U	2800	0.7	18	6.1	2.7	3900	7.9	9.9	1000	13	1.1	8.2	120	2000
Toluene	14	2.9	3.6	1.7	0.95 U	3.8 U	1.9 U	1.9 U	1.9 U	1.9 U	5.4	4.8	2.2	0.47	0.88	3.8 U	1.9	1.1	8.1	1.1	1.9	1.6	0.63	1.1
trans-1,2-Dichloroethene	150	140	90	90	80	48	120	140	150	84	22	120	110	78	58	4.0 U	82	54	3.8	37	45	0.40 U	2.1	7.1
trans-1,3-Dichloropropene	4.4 U	0.88 U	1.1 U	1.1 U	1.1 U	4.4 U	2.2 U	2.2 U	2.2 U	0.44 U	0.44 U	0.44 U	0.45 U	0.45 U	4.5 U	0.91 U	0.45 U	2.3 U	0.45 U	0.45 U	0.45 U	0.45 U		
Trichloroethene	230	210	180	180	200	110	330	420	920	420	190	690	730	440	310	260	680	310	53	320	450	1.1	17	170
Trichlorofluoromethane	1800	1400	900	690	640	190	310	660	1400	620	210	690	700	530	740	330	2500	1000	180	1300	2000	3.5	91	280
Trichlorotrifluoroethane	7.6 U	1.6 U	1.9 U	1.9 U	1.9 U	7.6 U	3.8 U	3.8 U	3.8 U	3.8 U	0.76 U	0.76 U	0.76 U	0.89	0.77 U	7.7 U	1.5 U	1	3.8 U	0.78	0.57	0.77 U	0.71	0.77 U
Vinyl acetate	15 U	0.72 U	0.90 U	3.6 U	0.90 U	15 U	1.8 U	1.8 U	7.1 U	3.6 U	0.71 U	0.36 U	0.71 U	0.70 U	0.35 U	70 U	0.70 U	0.35 U	7.0 U	2.2	0.70 U	0.70 U	0.70 U	
Vinyl chloride	280	370	180	48	21	2.6 U	2.7	3.2	1.3 U	1.6	1	0.26 U	1.6	0.41	0.26 U	2.6 U	0.51 U	0.26 U	1.3 U	0.26 U	0.26 U	0.26 U	0.26 U	

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Former Gorham Manufacturing Site
Providence, Rhode Island

Parameter (ug/m³)	Extraction Well - Western Small Retail Space										CT IACTIND 2003 (ug/m³)	Indoor Air - Eastern Small Retail Space											
	EW-7-090613 9/6/2013	EW-7-100313 10/3/2013	EW-7-121313 12/13/2013	EW-7-030714 3/7/2014	EW-7-061314 6/13/2014	EW-7-091214 9/12/2014	EW-7-121914 12/19/2014	EW-07-032715 3/27/2015	EW-7-061115 6/11/2015	EW-7-091615 9/16/2015	EW-7-121815 12/18/2015	IA-5-011609 1/16/2009	IA-5-020309 2/3/2009	IA-5-021109 2/11/2009	IA-5-021809 2/18/2009	IA-5-022609 2/26/2009	IA-5-030609 3/6/2009	IA-5-041409 4/14/2009	IA-5-051509 5/15/2009	IA-5-061109 6/11/2009	IA-5-091709 9/17/2009	IA-5-122909 12/29/2009	
1,1,1-Trichloroethane	76	52	41	30	15	52	6.1	25	14	63	40	500	48	0.92	0.27 U	0.27 U	0.27 U	0.98	0.27 U	0.27 U	0.27 U	0.27 U	
1,1,1,2-Tetrachloroethane	0.44 U	1.2 U	1.2 U	1.2 U	1.2 U	2.5 U	1.2 U	1.2 U	1.2 U	2.5 U		1.1											
1,1,2,2-Tetrachloroethane	0.24 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	1.4 U	1.4 U	0.14	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.24 U	0.34 U	0.34 U	0.34 U	0.34 U	
1,1,2-Trichloroethane	0.19 U	0.55 U	0.55 U	0.55 U	0.55 U	1.1 U	0.55 U	0.55 U	0.55 U	1.1 U	1.1 U	12	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.19 U	0.27 U	0.27 U	0.27 U	0.27 U	
1,1-Dichloroethane	51	25	12	6.9	5.4	20	1.8	4.9	3.7	16	6.5	430	1.8	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.14 U	0.20 U	0.20 U	0.20 U	0.20 U
1,1-Dichloroethene	0.14 U	0.40 U	0.40 U	0.40 U	0.40 U	0.4 U	0.4 U	0.4 U	0.4 U	0.79 U	0.79 U	20	0.58	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.14 U	0.20 U	0.20 U	0.20 U	0.20 U
1,2,4-Trichlorobenzene	0.26 U	0.74 U	0.74 U	0.74 U	0.74 U	1.5 U	0.74 U	0.74 U	0.74 U	1.5 U	1.5 U	NA	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.26 U	0.37 U	0.37 U	0.75 U		
1,2,4-Trimethylbenzene	0.5	0.77	0.58	0.49 U	0.49 U	0.98 U	0.49 U	1.4	0.44 J	0.98 U	0.98 U	52	0.25 U	0.32	0.33	0.36	0.25 U	0.20	0.25 U	0.35	0.25 U	0.25 U	
1,2-Dibromoethane (EDB)	0.27 U	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U	1.5 U	1.5 U	0.038	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.27 U	0.38 U	0.38 U	0.38 U	0.38 U	
1,2-Dichlorobenzene	0.21 U	0.60 U	0.60 U	0.60 U	0.60 U	1.2 U	0.6 U	0.6 U	0.6 U	1.2 U	1.2 U	410	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.21 U	0.30 U	0.30 U	0.30 U	0.30 U	
1,2-Dichloroethane	0.14 U	0.40 U	0.40 U	0.40 U	0.40 U	0.4 U	0.4 U	0.4 U	0.16 J	0.81 U	0.81 U	0.31	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.14 U	0.20 U	0.20 U	0.20 U	0.20 U
1,2-Dichloropropane	0.16 U	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U	0.92 U	0.92 U	0.42	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.17 U	0.23 U	0.23 U	0.23 U	0.23 U	
1,2-Dichlorotetrafluoroethane												NA	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.25 U	0.35 U	0.35 U	0.35 U	0.35 U	
1,3,5-Trimethylbenzene	0.24	0.32	0.49 U	0.49 U	0.49 U	0.98 U	0.49 U	0.69	0.23 J	0.98 U	0.98 U	52	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.18 U	0.25 U	0.25 U	0.25 U	0.25 U
1,3-Butadiene	0.078 U	0.22 U	0.22 U	0.22 U	0.22 U	0.44 U	0.22 U	0.22 U	0.22 U	0.44 U	0.44 U	NA	0.11 U	0.11 U	0.11 U	0.25	0.11 U	0.11 U	0.080 U	0.11 U	0.11 U	0.11 U	0.11 U
1,3-Dichlorobenzene	0.21 U	0.60 U	0.60 U	0.60 U	0.60 U	1.2 U	0.6 U	0.6 U	0.6 U	1.2 U	1.2 U	410	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.21 U	0.30 U	0.30 U	0.30 U	0.30 U	
1,4-Dichlorobenzene	0.21 U	0.60 U	0.60 U	0.60 U	0.60 U	1.2 U	0.6 U	0.6 U	0.17 J	1.2 U	1.2 U	24	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.21 U	0.30 U	0.30 U	0.30 U	0.30 U	
1,4-Dioxane												NA	7.2 U										
2-Butanone	12	8.5	5.9	3.8	9.3	7.2 J	35	9.7 J	8.3 J	5 J	4.6 J	500	7.2	2.4	2.7	2.6	0.75	0.45	3.8	1.9	5.3	2.1	0.79
2-Hexanone	0.51	0.41 U	0.41 U	0.41 U	0.49	0.82 U	0.41 U	1	0.38 J	0.82 U	0.82 U	NA	0.20 U	0.48	0.38	0.27	0.20 U	0.20 U	0.47	0.45	1.1	0.48	0.20 U
4-Ethyltoluene	0.17 U	0.27	0.49 U	0.49 U	0.49 U	0.98 U	0.49 U	0.33 J	0.12 J	0.98 U	0.98 U	NA	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.18 U	0.25 U	0.25 U	0.25 U	0.25 U	
4-Methyl-2-pentanone	0.14 U	0.41 U	0.41 U	0.41 U	0.41 U	0.82 U	0.41 U	0.46	0.41 U	0.82 U	0.82 U	200	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.18	0.20 U	0.68	0.23	0.20 U
Acetone	24	35	14	6.9	19	18 J	9.4 J	13	7.4 J	8.2 J	19 U	500	32	11	21	20	9.5	6.5	14	46	16	15	
Benzene	1.9	1.9	0.9	1.3	1.1	0.59 J	0.5	2.1	2.3	2.3	1.3	3.3	0.79	0.60	0.99	1.6	0.41	0.55	0.62	0.49	0.53	0.35	0.45
Benzyl chloride	0.18 U	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U	1 U	1 U	NA	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.19 U	0.26 U	0.26 U	0.26 U	0.26 U	
Bromodichloromethane	0.24 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	1.3 U	3.9	0.46	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.24 U	0.33 U	0.33 U	0.33 U	0.33 U	
Bromoform	0.36 U	1.0 U	1.0 U	1.0 U	1.0 U	2.1 U	1 U	1 U	2.1 U	2.1 U	7.3	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	0.36 U	0.51 U	0.51 U	0.51 U	0.51 U	
Bromomethane	0.14 U	0.39 U	0.39 U	0.39 U	0.39 U	0.78 U	0.39 U																

Table 1.
Summary of Analytical Results - Air Sampling for Small Retail Spaces
Former Gorham Manufacturing Site
Providence, Rhode Island

Parameter (ug/m ³)	Extraction Well - Western Small Retail Space											CT IACTIND 2003 (ug/m ³)	Indoor Air - Eastern Small Retail Space										
	EW-7-090613 9/6/2013	EW-7-100313 10/3/2013	EW-7-121313 12/13/2013	EW-7-030714 3/7/2014	EW-7-061314 6/13/2014	EW-7-091214 9/12/2014	EW-7-121914 12/19/2014	EW-07-032715 3/27/2015	EW-7-061115 6/11/2015	EW-7-091615 9/16/2015	EW-7-121815 12/18/2015	NA	IA-5-011609 1/16/2009	IA-5-020309 2/3/2009	IA-5-021109 2/11/2009	IA-5-021809 2/18/2009	IA-5-022609 2/26/2009	IA-5-030609 3/6/2009	IA-5-041409 4/14/2009	IA-5-051509 5/15/2009	IA-5-061109 6/11/2009	IA-5-091709 9/17/2009	IA-5-122909 12/29/2009
Ethanol	14	30	12	13	32	18	11	7.5 U	42	93	14 J	NA	590	12	23	140	85	32	41	180	500	62	51
Ethyl acetate	0.13 U	0.36 U	0.94	0.36 U	0.36 U	0.72 U	1.7	29	0.36 U	0.72 U	0.72 U	NA	0.75	0.37 U	0.18 U	0.18 U	0.37 U	0.18 U	0.26 U	0.18 U	0.31	0.18 U	0.18 U
Ethylbenzene	0.44	0.56	0.43 U	0.43 U	0.43 U	0.87 U	0.43 U	1.2	0.23 J	0.87 U	0.87 U	290	0.22 U	0.25	0.33	0.43	0.22 U	0.22 U	0.24	0.22 U	0.30	0.23	0.22 U
Hexachlorobutadiene	0.37 U	1.1 U	1.1 U	1.1 U	2.1 U	1.1 U	1.1 U	1.1 U	2.1 U	2.1 U	2.1 U	NA	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	0.75 U	1.1 U	1.1 U	0.53 U	1.1 U	1.1 U
Hexane	0.9	0.9	14. U	14 U	28 U	14 U	8.1 J	14 U	28 U	28 U	28 U	NA	0.84	0.54	1.1	0.99	0.39	0.5	0.71	0.58	1.0	0.52	0.57
Isopropyl alcohol	3.4 U	17	13	9.8 U	1.8	20 U	4.8 J	12	6.6 J	22	20 U	NA	3.8	3.5	580	2.9	3.0	1.3	1.7	2.0	19	3.5	3.8
m,p-Xylene	1	1.5	0.87 U	0.49	0.9	1.7 U	0.26 J	0.68 J	0.5 J	1.7 U	1.7 U	500	0.60	0.74	0.91	1.2	0.43 U	0.43 U	0.68	0.51	0.88	0.59	0.43 U
Methyl methacrylate	0.14 U	0.41 U	0.41 U	0.41 U	0.41 U	0.82 U	0.41 U	0.41 U	0.82 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methylene chloride	1.7	1.7	1.1	0.82	0.85	1.3 J	3.5 U	0.49 J	3.5 U	6.9 U	6.9 U	17	2.0	3.6	5.2	1.1	1.2	0.74	2.5	2.9	2.0	0.70 U	4.3
Methyl-t-butyl ether	0.13 U	0.36 U	0.36 U	0.36 U	0.36 U	0.72 U	0.36 U	0.36 U	0.36 U	0.72 U	0.72 U	190	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.13 U	0.18 U	0.18 U	0.18 U	0.18 U
n-Heptane	0.59	1.1	0.41 U	0.44	2.2	0.57 J	4.4	0.43	0.15 J	0.82 U	0.82 U	NA	0.20 U	0.20 U	0.36	0.35	0.20 U	0.20 U	0.23	0.38	0.48	0.20 U	0.20 U
o-Xylene	0.4	0.73	0.43 U	0.43 U	0.43 U	0.87 U	0.43 U	0.57	0.22 J	0.87 U	0.87 U	500	0.23	0.27	0.35	0.47	0.22 U	0.22 U	0.23	0.23	0.32	0.22 U	0.22 U
Propylene (Propene)	2.4 U	6.9 U	6.9 U	6.9 U	1.1	14 U	6.9 U	0.96 J	1.6 J	1.3 J	14 U	NA	0.18 U	0.18 U	0.090 U	0.090 U	0.18 U	0.090 U	0.13 U	0.090 U	0.090 U	0.35 U	0.35 U
Styrene	0.41	0.45	0.43 U	0.43 U	0.45	0.85 U	0.43 U	0.34 J	0.46	0.85 U	0.85 U	290	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.15 U	0.21 U	0.15	0.30	0.21 U
Tetrachloroethene	410	150	140	81	110	370	18	81	89	390	170	5	0.39	0.34 U	0.43	0.43	0.34 U	0.34 U	0.24 U	0.47	0.34 U	0.41	0.34 U
Tetrahydrofuran	10	4.6	2100	1400	2100	4.6	350	660	720	3.5	5.8	NA	3.2	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.11 U	0.15 U	0.15 U	0.15 U
Toluene	3.1	6.5	1	1.2	1.4	0.59 J	0.63	0.72	1.0	0.59 J	0.75 U	500	1.3	1.1	3.0	3.3	0.65	0.51	1.5	2.8	2.8	1.5	0.54
trans-1,2-Dichloroethene	64	32	13	9.2	7.7	28	1.9	6.7	4.9	22	7.7	200	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.14 U	0.20 U	0.20 U	0.20 U	0.20 U
trans-1,3-Dichloropropene	0.16 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.91 U	0.91 U	2.9	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.16 U	0.22 U	0.22 U	0.22 U	0.22 U
Trichloroethene	740	350	280	210	190	440	46	180	170	610	380	1	5.5	0.39	0.27 U	0.27 U	0.27 U	0.27 U	0.22	0.27 U	0.27 U	0.27 U	0.27 U
Trichlorofluoromethane	1500	990	1100	690	300	1100	200	460	340	1300	850	500	3.0	1.3	1.7	1.8	1.5	1.7	1.2	1.3	2.0	1.2	1.8
Trichlorotrifluoroethane	1.1	1.1	0.9	0.77 U	0.77 U	1 J	0.78	0.8 J	0.74 J	1.3 J	6.1 U	NA	0.62	0.54	0.48	0.45	0.64	0.48	0.53	0.61	0.54	0.5	0.54
Vinyl acetate	2.5 U	7.0 U	7.0 U	7.0 U	7 U	1.2 J	7 U	7 U	7 U	14 U	14 U	NA	0.71 U	0.71 U	0.18 U	0.18 U	0.71 U	0.18 U	0.50 U	0.18 U	0.18 U	0.71 U	0.36 U
Vinyl chloride	0.090 U	0.26 U	0.26 U	1.5	1.8	0.26 U	0.16 J	0.82	1.4	0.51 U	0.51 U	1.9	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.10 U	0.13 U	0.13 U	0.13 U	0.13 U

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Providence, Rhode Island

Parameter (ug/m ³)	Indoor Air - Eastern Small Retail Space																							
	IA-5-032610 3/26/2010	IA-5-070110 7/1/2010	IA-5-091610 9/16/2010	IA-5-120810 12/8/2010	IA-5-021711 2/17/2011	IA-5-060211 6/2/2011	IA-5-091511 9/15/2011	IA-5-120811 12/8/2011	IA-5-030812 3/8/2012	IA-5-061412 6/14/2012	IA-5-091312 9/13/2012	IA-5-010313 1/3/2013	IA-5-031513 3/15/2013	IA-5-060713 6/7/2013	IA-5-090613 9/6/2013	IA-5-121313 12/13/2013	IA-5-030714 3/7/2014	IA-5-061314 6/13/2014	IA-5-091214 9/12/2014	IA-5-121914 12/19/2014	IA-5-032715 3/27/2015	IA-5-061115 6/11/2015	IA-5-091615 9/16/2015	
1,1,1-Trichloroethane	0.38	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.15	0.082 U	0.065	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.042 J	0.19 U	0.077 J	
1,1,1,2-Tetrachloroethane								0.62 U		0.37 U	0.37 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U
1,1,2,2-Tetrachloroethane	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.16	0.10 U	0.21 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	
1,1,2-Trichloroethane	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.14	0.082 U	0.16 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	
1,1-Dichloroethane	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.12 U	0.061 U	0.12 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	
1,1-Dichloroethene	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.12 U	0.059 U	0.12 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	
1,2,4-Trichlorobenzene	0.75 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.74 U	22	0.45 U	0.45 U	0.52 U	0.52 U	0.52 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	
1,2,4-Trimethylbenzene	0.25 U	0.25 U	0.73	0.25 U	0.25 U	0.25 U	0.25 U	1.3	0.15 U	0.16	0.29	0.17 U	0.072	0.21	0.27	0.17 U	0.69	0.23	0.17 U	0.17 U	0.13 J	0.12 J	0.23 J	
1,2-Dibromoethane (EDB)	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.23 U	0.12 U	0.23 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	
1,2-Dichlorobenzene	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	23	0.18 U	0.18 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	
1,2-Dichloroethane	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.066	0.061 U	0.044	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.045 J	0.14 U	0.14 U	
1,2-Dichloropropane	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.14 U	0.069 U	0.067	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	
1,2-Dichlorotetrafluoroethane	0.35 U	0.35 U	0.35 U																					
1,3,5-Trimethylbenzene	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.39	0.15 U	0.077	0.11	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.038 J	0.038 J	0.066 J
1,3-Butadiene	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.066 U	0.066 U	0.066 U	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.19 U	
1,3-Dichlorobenzene	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.076	0.18 U	0.18 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	
1,4-Dichlorobenzene	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.37	0.18 U	0.18 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	
1,4-Dioxane								0.18 U																
2-Butanone	1.5	2.1	1.4	0.78	0.78 B	3.6	5.9 U	0.98	2.0	0.94	2.3	1.3	1.3	3.2	2.4	2.2	1.8	3.7	0.8 J	0.8 J	2.1 J	1.4 J	1.6 J	
2-Hexanone	0.23	0.44	0.20 U	0.20 U	0.20 U	4.1 U	0.20 U	0.13	0.32	0.081	0.17	0.16	0.16	0.48	0.44	0.14 U	0.32	0.52	0.14 U	0.14 U	0.43	0.16	0.14 U	0.14 U
4-Ethyltoluene	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25	0.15 U	0.053	0.097	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.22	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.041 J	0.079 J
4-Methyl-2-pentanone	0.20 U	0.20 U	1.1	0.20 U	0.20 U	0.31	0.20 U	0.13	0.18	0.34	0.22	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.24	0.35	0.14 U	0.14 U	0.19	0.14 U	0.14 U	0.14 U
Acetone	11	18	17	6.4 B	9.5 B	24 B	15	6.6	11	13	13	9.0	9.7	24	19	40	12	25	10	10	14	12	18	
Benzene	0.65	0.16 U	1.1	0.26	1.1	0.33	0.29	0.38	0.34	0.20	0.53	0.53	0.80	0.27	0.68	0.55	2.9	0.55	0.4	0.4	0.54	0.33	0.76	
Benzyl chloride	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.16 U	0.16 U	0.16 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	
Bromodichloromethane	0.33 U	0.33 U	0.33 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.20 U	0.10 U	0.20 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	
Bromoform	0.51 U	0.51 U	0.51 U	0.52 U	0.52 U	0.52 U	0.52 U	0.31 U	0.31 U	0.31 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	
Bromomethane	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.12 U	0.12 U	0.12 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	
Carbon disulfide	0.16 U	0																						

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	IA-5-032610 3/26/2010	IA-5-070110 7/1/2010	IA-5-091610 9/16/2010	IA-5-120810 12/8/2010	IA-5-021711 2/17/2011	IA-5-060211 6/2/2011	IA-5-091511 9/15/2011	IA-5-120811 12/8/2011	IA-5-030812 3/8/2012	IA-5-061412 6/14/2012	IA-5-091312 9/13/2012	IA-5-010313 1/3/2013	IA-5-031513 3/15/2013	IA-5-060713 6/7/2013	IA-5-090613 9/6/2013	IA-5-121313 12/13/2013	IA-5-030714 3/7/2014	IA-5-061314 6/13/2014	IA-5-091214 9/12/2014	IA-5-121914 12/19/2014	IA-05-032715 3/27/2015	IA-5-061115 6/11/2015	IA-5-091615 9/16/2015
Ethanol	25	58	150	2.4	14	7.7	7.9	5.4	14	43	11	3.9	1.9	12	15	4.5	18	20	7.7	7.7	12	25	13
Ethyl acetate	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.11 U	0.48	0.21	0.66	0.59	0.13 U	1.5	0.29	0.83	0.17	0.43	0.29	0.29	5	0.17	0.61
Ethylbenzene	0.22 U	0.44	0.91	0.22 U	0.30	0.36	0.22 U	1.2	0.13 U	0.16	0.31	0.15	0.091	0.15 U	0.26	0.15 U	0.65	0.3	0.12 J	0.12 J	0.17	0.12 J	0.34
Hexachlorobutadiene	1.1 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.17	0.32 U	0.32 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	
Hexane	0.43	0.48	1.0	0.30	1.3	1.7	7.0 U	0.36	0.48	0.57	1.2	0.95	1.1	1.4	0.75	0.46	1.4	0.56	0.3 J	0.3 J	5.1	0.42 J	0.92 J
Isopropyl alcohol	3.8	1.9	8.2	0.12 U	1.7	1.2 U	6.4	2.9 U	2.9 U	2.9 U	3.3	0.75	3.4 U	3.4 U	3.4 U	2.4	6.5	0.47 J	0.47 J	2.6 J	9.4	5.3	
m,p-Xylene	0.46	1.2	2.4	0.43 U	0.85	0.57	0.53	3.0	0.12	0.36	0.97	0.60	0.24	0.49	0.81	0.3	1.9	1	0.54	0.54	0.5	0.4	1.0
Methyl methacrylate				0.20 U	0.20 U	0.20 U	0.20 U	0.12 U	0.12 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	
Methylene chloride	2.2	1.3	0.75	0.65	2.8	4.2	7.7	1.6	1.6	1.1	2.3	5.2	2.0	3.0	1.1	0.83	0.67	0.73	0.28 J	0.28 J	1 J	0.48 J	0.52 J
Methyl-t-butyl ether	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.039	0.11 U	0.11 U	0.18	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	
n-Heptane	0.20 U	0.20 U	2.1	0.20 U	0.33	0.20 U	0.20 U	0.081	0.089	0.18	0.32	0.14 U	0.14 U	0.18	0.46	0.14 U	0.75	0.56	0.14 U	0.14 U	0.17	0.17	0.35
o-Xylene	0.22 U	0.31	0.87	0.22 U	0.30	0.26	0.22 U	1.0	0.13 U	0.14	0.35	0.19	0.10	0.17	0.33	0.15 U	0.75	0.32	0.13 J	0.13 J	0.18	0.13 J	0.36
Propylene (Propene)	0.35 U	0.87 U	0.35 U	0.86 U	0.86 U	0.86 U	3.4 U	2.1 U	2.1 U	2.1 U	1.4	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	1.1	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U
Styrene	0.35	0.32	0.58	0.21 U	0.21 U	0.21 U	0.21 U	1.0	0.13 U	0.76	0.24	0.15 U	0.15 U	0.20	0.15 U	0.18	0.15 U	0.15 U	0.15 U	0.15 U	0.036 J	0.096 J	0.18
Tetrachloroethene	0.34 U	0.34 U	0.34 U	0.39	2.4	0.34 U	0.58	5.7	0.15	0.15	1.6	0.24 U	0.12	0.24 U	0.24 U	0.39	0.54	0.13 J	0.13 J	0.39	0.2 J	0.18 J	
Tetrahydrofuran	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.10	0.088 U	0.10	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.1 U	0.1 U	0.1 U	0.1 U	
Toluene	1.5	0.70	6.2	0.19 U	1.8	0.90	0.97	1.9	0.28	0.78	2.0	0.56	0.61	0.95	2.6	0.89	3.8	2.2	0.78	0.78	0.74	0.75	2.7
trans-1,2-Dichloroethene	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.12 U	0.059 U	0.12 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	
trans-1,3-Dichloropropene	0.22 U	0.22 U	0.22 U	0.23 U	0.23 U	0.23 U	0.23 U	0.14 U	0.068 U	0.14 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	
Trichloroethene	0.27 U	0.27 U	0.28	0.27 U	0.27 U	0.27 U	0.27 U	0.63	0.081 U	0.045	0.10	0.19 U	0.19 U	0.19 U	0.19 U	0.23	0.19 U	0.19 U	0.19 U	0.19 U	0.083 J	0.19 U	0.17 J
Trichlorofluoromethane	1.4	1.5	6.3	1.3	1.7	1.4	1.7	1.1	0.98	1.7	1.6	1.8	1.3	2.1	1.6	1.6	1.7	1.4	1.3	1.3	1.1	1.5	1.3
Trichlorotrifluoroethane	0.55	0.55	0.43	0.52	0.66	0.69	0.63	0.69	0.46	0.53	0.6	0.61	0.6	1.4	0.63	0.54	0.47	0.58	0.64	0.64	0.49 J	0.67 J	0.59 J
Vinyl acetate	0.36 U	0.18 U	0.36 U	0.43	0.18 U	3.5 U	0.18 U	0.11 U	0.21 U	0.55	0.25 U	0.25 U	0.25 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Vinyl chloride	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.077 U	0.038 U	0.077 U	0.090 U	0.090 U	0.090 U	0.090 U	0.090 U	0.090 U	0.090 U	0.090 U	0.090 U	0.09 U	0.09 U	0.09 U	

Table 1.
Summary of Analytical Results - Air Sampling for Small Retail Spaces
Former Gorham Manufacturing Site
Providence, Rhode Island

Parameter (ug/m ³)	Indoor Air - Center Small Retail Space																								
	IA-5-121815 12/18/2015	IA-6-011609 1/16/2009	IA-6-020309 2/3/2009	IA-6-021109 2/11/2009	IA-6-021809 2/18/2009	IA-6-022609 2/26/2009	IA-6-030609 3/6/2009	IA-6-041409 4/14/2009	IA-6-051509 5/15/2009	IA-6-061109 6/11/2009	IA-6-091709 9/17/2009	IA-6-122909 12/29/2009	IA-6-032610 3/26/2010	IA-6-070110 7/1/2010	IA-6-091610 9/16/2010	IA-6-120710 12/7/2010	IA-6-021711 2/17/2011	IA-6-060211 6/2/2011	IA-6-091511 9/15/2011	IA-6-120811 12/8/2011	IA-6-030812 3/8/2012	IA-6-061412 6/14/2012	IA-6-091312 9/13/2012	IA-6-010313 1/3/2013	
1,1,1-Trichloroethane	0.19 U	110	3.9	0.27 U	0.29	0.27 U	0.27 U	1.6	0.27 U	0.27 U	0.27 U	0.27 U	0.35	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.085	0.082 U	0.072	0.19 U	0.19 U	
1,1,1,2-Tetrachloroethane																				0.62 U		0.37 U	0.37 U	0.44 U	0.44 U
1,1,2,2-Tetrachloroethane	0.24 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.24 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.21 U	0.10 U	0.21 U	0.24 U	0.24 U	
1,1,2-Trichloroethane	0.19 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.19 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.16 U	0.082 U	0.16 U	0.19 U	0.19 U	
1,1-Dichloroethane	0.14 U	3.9	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.14 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.12 U	0.061 U	0.12 U	0.14 U	0.14 U	
1,1-Dichloroethene	0.14 U	1.2	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.14 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.12 U	0.059 U	0.12 U	0.14 U	0.14 U	
1,2,4-Trichlorobenzene	0.26 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.26 U	0.37 U	0.37 U	0.75 U	0.75 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.74 U	0.45 U	0.45 U	2.8	0.52 U	0.52 U	
1,2,4-Trimethylbenzene	0.2	0.75	0.32	0.29	1.5	0.25 U	0.25 U	0.18 U	0.25 U	0.29	0.34	0.25 U	0.25 U	0.33	0.25 U	0.35	0.25 U	0.25	0.16	0.15 U	0.21	0.17 U	0.17 U		
1,2-Dibromoethane (EDB)	0.27 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.27 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.23 U	0.12 U	0.23 U	0.27 U	0.27 U	
1,2-Dichlorobenzene	0.21 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.21 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.18 U	0.18 U	1.7	0.21 U	0.21 U	
1,2-Dichloroethane	0.14 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.14 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.056	0.061 U	0.056	0.14 U	0.14 U	
1,2-Dichloropropane	0.16 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.17 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.14 U	0.069 U	0.061	0.16 U	0.16 U	
1,2-Dichlorotetrafluoroethane	0.25 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.25 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U						
1,3,5-Trimethylbenzene	0.17 U	0.25 U	0.25 U	0.25 U	0.38	0.25 U	0.25 U	0.18 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.059	0.15 U	0.091	0.17 U	0.17 U	
1,3-Butadiene	0.14	0.11 U	0.11 U	0.11 U	1.1	0.11 U	0.11 U	0.080 U	0.11 U	0.11 U	0.23 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.066 U	0.066 U	0.066 U	0.078 U	0.078 U
1,3-Dichlorobenzene	0.21 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.21 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.18 U	0.18 U	0.18 U	0.21 U	0.21 U	
1,4-Dichlorobenzene	0.21 U	0.30 U	0.30 U	0.30 U	0.41	0.30 U	0.30 U	0.21 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.18 U	0.18 U	0.13	0.21 U	0.21 U	
1,4-Dioxane		1.3 U																		0.18 U					
2-Butanone	1.8 J	120	10	3.2	2.9	2.4	2.3	1.0	2.5	4.1	2.4	1.8	1.4	1.1	0.89	0.87	1.9 B	2.9 U	5.9 U	1.3	0.63	1.4	2.8	1.4	
2-Hexanone	0.14 U	0.20 U	0.42	0.37	0.34	0.20 U	0.37	0.14 U	0.62	0.72	0.70	0.20 U	0.26	0.20 U	0.20 U	0.20 U	0.20 U	0.22	4.1 U	0.60	0.15	0.12 U	0.20	0.27	0.14 U
4-Ethyltoluene	0.17 U	0.25 U	0.25 U	0.25 U	0.47	0.25 U	0.25 U	0.18 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.15 U	0.15 U	0.080	0.17 U	0.17 U	
4-Methyl-2-pentanone	0.14 U	0.20 U	0.20 U	0.20 U	0.36	0.20 U	0.20 U	0.14 U	0.34	0.70	0.29	0.20 U	0.20 U	0.40	0.20 U	0.20 U	0.28	0.31	0.13	0.12 U	0.92	0.25	0.14 U		
Acetone	23	44	14	14	25	11	8.5	6.1	11	28	20	14	6.5	14	13	11 B	14 B	19 B	26	10	7.4	15	18	11	
Benzene	0.93	1.0	0.60	0.98	4.1 [a]	0.41	0.70	0.59	0.47	0.43	0.31	0.40	0.55	0.19	0.60	0.44	1.3	0.29	0.31	0.42	0.39	0.20	0.49	0.48	
Benzyl chloride	0.18 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.19 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.16 U	0.16 U	0.16 U	0.18 U	0.18 U	
Bromodichloromethane	0.24 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.24 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.34 U	0.34 U	0.34 U	0.20 U	0.20 U	0.24			

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Ethanol	6.8	41	23	12	40	13	12	8.6	51	31	12	10	7.1	18	36	5.9	10	7.7	14	24	41	67	23	8.4	
Ethyl acetate	0.46	0.37 U	0.37 U	0.18 U	0.22	0.37 U	0.18 U	0.26 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.48	0.69	0.31	1.0	0.42	
Ethylbenzene	0.44	0.29	0.25	0.33	1.6	0.22 U	0.22 U	0.21	0.22 U	0.24	0.23	0.22 U	0.22 U	0.22 U	0.43	0.22 U	0.45	0.22 U	0.22 U	0.15	0.22	0.71	0.23	0.16	
Hexachlorobutadiene	0.37 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	0.75 U	1.1 U	1.1 U	0.53 U	1.1 U	1.1 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.32 U	0.32 U	0.32 U	0.37 U	0.37 U		
Hexane	0.48 J	1.2	0.78	0.70	2.6	0.33	0.40	0.63	0.38	0.68	0.45	0.18 U	0.22	1.3	0.69	0.39	1.5	0.41	7.0 U	0.41	0.48	0.73	1.0	0.64	
Isopropyl alcohol	3.4 U	4.7	6.6	3.2	4.9	1.7	1.6	0.18 U	4.5	22	7.0	1.4	4.9	1.0	3.2	1.1	2.8	1.2 U	11	2.9 U	2.9 U	6.7	3.4 U		
m,p-Xylene	2.1	0.82	0.72	0.84	4.9	0.43 U	0.43 U	0.51	0.43 U	0.67	0.62	0.43 U	0.51	0.58	1.1	0.43 U	1.2	0.48	0.59	0.45	0.54	0.73	0.38	0.58	
Methyl methacrylate																									
Methylene chloride	0.62 J	2.5	5.2	0.59	1.6	0.83	0.69	2.0	2.0	2.6	0.70 U	2.9	0.70 U	4.5	0.64	0.94	3.0	1.0	1.7 U	1.5	1.8	1.5	2.2	1.6	
Methyl-t-butyl ether	0.13 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.13 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.11 U	0.11 U	0.11 U	0.14	0.13 U		
n-Heptane	0.28	0.27	0.20 U	0.32	1.3	0.20 U	0.20 U	0.21	0.20 U	0.26	0.20 U	0.20 U	0.20 U	1.4	0.47	0.20 U	0.35	0.20 U	0.20	0.11	0.15	0.25	0.31	0.095	
o-Xylene	0.6	0.36	0.26	0.34	1.8	0.22 U	0.22 U	0.19	0.22 U	0.25	0.23	0.22 U	0.22 U	0.22 U	0.42	0.22 U	0.40	0.22 U	0.22	0.17	0.13	0.29	0.12	0.18	
Propylene (Propene)	2.4 U	0.18 U	0.18 U	0.090 U	0.090 U	0.18 U	0.090 U	0.13 U	0.090 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.87 U	0.35 U	0.86 U	0.86 U	0.86 U	3.4 U	2.1 U	2.1 U	2.1 U	2.4 U	
Styrene	0.15 U	0.21 U	0.21 U	0.21 U	0.28	0.21 U	0.21 U	0.15 U	0.25	0.21 U	0.23	0.21 U	0.21 U	0.24	0.29	0.21 U	0.21 U	0.27	0.22	0.13	0.13 U	1.2	0.054	0.15 U	
Tetrachloroethene	0.43	1.2	0.34 U	0.45	1.2	0.34 U	0.34 U	0.72	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	1.6	0.34 U	0.58	0.68	0.15	0.57	2.6	0.24 U	
Tetrahydrofuran	0.1 U	77	2.8	0.32	0.15 U	0.15 U	0.15 U	0.22	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15	0.12	0.088 U	0.088 U	0.10 U	0.10 U	
Toluene	2.6	1.8	1.3	2.5	11	0.65	0.71	1.3	0.81	2.0	1.1	0.49	1.6	1.7	2.6	0.40	2.9	0.93	1.2	1.2	1.4	1.1	1.5	0.56	
trans-1,2-Dichloroethene	0.14 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.14 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.12 U	0.059 U	0.12 U	0.14 U	0.14 U		
trans-1,3-Dichloropropene	0.16 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.16 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.23 U	0.23 U	0.23 U	0.23 U	0.14 U	0.068 U	0.14 U	0.16 U	0.16 U		
Trichloroethene	0.19 U	13	1.7	0.27 U	0.34	0.27 U	0.27 U	0.60	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.30	0.27 U	0.27 U	0.27 U	0.27 U	0.19	0.081 U	0.24	0.20	0.19 U	
Trichlorofluoromethane	1.8	4.8	1.3	1.7	2.5	1.5	1.7	1.4	1.2	2.2	1.2	1.7	1.3	1.5	3.1	1.1	1.6	1.1	1.7	1.4	1.0	1.6	1.7	2.0	
Trichlorotrifluoroethane	0.58 J	0.64	0.51	0.48	0.45	0.64	0.48	0.53	0.74	0.63	0.48	0.51	0.55	0.55	0.42	0.52	0.69	0.67	0.56	0.68	0.44	0.57	0.62	0.61	
Vinyl acetate	1.8 J	0.71 U	0.71 U	0.18 U	0.18 U	0.71 U	0.18 U	0.50 U	0.18 U	0.18 U	0.71 U	0.36 U	0.36 U	0.18 U	0.36 U	0.35 U	0.18 U	3.5 U	0.18 U	0.11 U	0.21 U	0.21 U	0.25 U	0.25 U	
Vinyl chloride	0.09 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.10 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.077 U	0.038 U	0.077 U	0.090 U	0.090 U	

Table 1.
Summary of Analytical Results - Air Sampling for Small Retail Spaces
Former Gorham Manufacturing Site
Providence, Rhode Island

Parameter (ug/m ³)	Indoor Air - Western Small Retail Space																						
	IA-6-031513 3/15/2013	IA-6-060713 6/7/2013	IA-6-090613 9/6/2013	IA-6-121313 12/13/2013	IA-6-030714 3/7/2014	IA-6-061314 6/13/2014	IA-6-091214 9/12/2014	IA-6-121914 12/19/2014	IA-6-032715 3/27/2015	IA-6-061115 6/11/2015	IA-6-091615 9/16/2015	IA-6-121815 12/18/2015	IA-7-011609 1/16/2009	IA-7-020309 2/3/2009	IA-7-021109 2/11/2009	IA-7-021809 2/18/2009	IA-7-022609 2/26/2009	IA-7-030609 3/6/2009	IA-7-041409 4/14/2009	IA-7-051509 5/15/2009	IA-7-061109 6/11/2009	IA-7-091709 9/17/2009	IA-7-122909 12/29/2009
1,1,1-Trichloroethane	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.12	0.19 U	0.19 U	0.14 J	0.19 U	44	2.4	0.40	1.3	0.27 U	0.27 U	0.87	0.27 U	0.27 U	0.27 U	0.27 U	
1,1,1,2-Tetrachloroethane	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.25 U	0.44 U	0.44 U	0.44 U	0.44 U												
1,1,2,2-Tetrachloroethane	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.069 U	0.24 U	0.24 U	0.24 U	0.24 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.24 U	0.34 U	0.34 U	0.34 U	0.34 U		
1,1,2-Trichloroethane	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.11 U	0.19 U	0.19 U	0.19 U	0.19 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.19 U	0.27 U	0.27 U	0.27 U	0.27 U		
1,1-Dichloroethane	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.04 U	0.14 U	0.14 U	0.14 U	0.14 U	1.3	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.14 U	0.20 U	0.20 U	0.20 U	0.20 U	
1,1-Dichloroethene	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.04 U	0.14 U	0.14 U	0.14 U	0.14 U	0.52	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.14 U	0.20 U	0.20 U	0.20 U	0.20 U	
1,2,4-Trichlorobenzene	0.52 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.15 U	0.26 U	0.26 U	0.26 U	0.26 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.26 U	0.37 U	0.37 U	0.75 U			
1,2,4-Trimethylbenzene	0.076	0.21	0.27	0.17 U	0.55	0.21	0.29	0.17 U	0.13 J	0.13 J	0.066 J	0.17 U	0.25 U	0.34	0.34	0.99	0.25 U	0.25 U	0.18 U	0.25 U	0.29	0.25 U	
1,2-Dibromoethane (EDB)	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.077 U	0.27 U	0.27 U	0.27 U	0.27 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.27 U	0.38 U	0.38 U	0.38 U	0.38 U		
1,2-Dichlorobenzene	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.12 U	0.21 U	0.21 U	0.21 U	0.21 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.21 U	0.30 U	0.30 U	0.30 U	0.30 U		
1,2-Dichloroethane	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.039 J	0.14 U	0.14 U	0.054 J	0.14 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.14 U	0.20 U	0.20 U	0.20 U	0.20 U		
1,2-Dichloropropane	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.046 U	0.16 U	0.16 U	0.16 U	0.16 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.17 U	0.23 U	0.23 U	0.23 U	0.23 U		
1,2-Dichlorotetrafluoroethane												0.25 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.25 U	0.35 U	0.35 U	0.35 U	0.35 U	
1,3,5-Trimethylbenzene	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.071 J	0.17 U	0.038 J	0.052 J	0.17 U	0.17 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.18 U	0.25 U	0.25 U	0.25 U	0.25 U	
1,3-Butadiene	0.078 U	0.078 U	0.078 U	0.078 U	0.59	0.078 U	0.044 U	0.078 U	0.061 J	0.078 U	0.14	0.11 U	0.11 U	0.14	0.97	0.11 U	0.11 U	0.080 U	0.11 U	0.11 U	0.23 U	0.11 U	
1,3-Dichlorobenzene	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.12 U	0.21 U	0.21 U	0.21 U	0.21 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.21 U	0.30 U	0.30 U	0.30 U	0.30 U		
1,4-Dichlorobenzene	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.12 U	0.21 U	0.21 U	0.21 U	0.21 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.21 U	0.30 U	0.30 U	0.30 U	0.30 U		
1,4-Dioxane												1.3 U											
2-Butanone	1.4	0.91	2.8	2.2	1.6	3.1	0.66 J	0.81 J	1 J	1.2 J	1.1 J	0.73 J	70	6.5	3.9	5.2	2.2	1.3	1.3	2.3	7.3	2.2	0.49
2-Hexanone	0.20	0.14 U	0.48	0.14 U	0.29	0.41	0.043 J	0.14 U	0.18	0.12 J	0.14 U	0.14 U	0.20 U	0.29	0.20 U	0.91	0.20 U	0.20 U	0.14 U	0.53	1.5	0.53	0.20 U
4-Ethyltoluene	0.17 U	0.17 U	0.17 U	0.17 U	0.19	0.17 U	0.073 J	0.17 U	0.045 J	0.055 J	0.059 J	0.17 U	0.25 U	0.25 U	0.25 U	0.27	0.25 U	0.18 U	0.25 U	0.25 U	0.25 U	0.25 U	
4-Methyl-2-pentanone	0.14 U	0.14 U	0.30	0.14 U	0.22	0.24	0.09	0.14 U	0.12 J	0.14 U	0.14 U	0.20 U	0.20 U	0.20 U	0.20 U	0.42	0.20 U	0.20 U	0.14 U	0.22	0.79	0.24	0.20 U
Acetone	10	20	29	27	12	26	9.2	8.2	9.2	11	17	9.3	29	12	13	32	7.8	6.6	6.5	10	31	22	31
Benzene	0.80	0.23	0.70	0.53	2.4	0.7	0.3	0.4	0.5	0.23	0.56	1.1	0.95	0.75	1.1	3.2	0.67	0.73	0.42	0.35	0.52	0.43	0.52
Benzyl chloride	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.052 U	0.18 U	0.18 U	0.18 U	0.18 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.19 U	0.26 U	0.26 U	0.26 U	0.26 U		
Bromodichloromethane	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.067 U	0.24 U	0.24 U	0.24 U	0.24 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.24 U	0.33 U	0.33 U	0.33 U	0.33 U		
Bromoform	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.21 U	0.36 U	0.36 U	0.36 U	0.36 U	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	0.36 U	0.51 U	0.51 U	0.51 U	0.51 U		
Bromomethane	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.078 U	0.14 U															

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Parameter (ug/m ³)	Indoor Air - Western Small Retail Space																						
	IA-6-031513 3/15/2013	IA-6-060713 6/7/2013	IA-6-090613 9/6/2013	IA-6-121313 12/13/2013	IA-6-030714 3/7/2014	IA-6-061314 6/13/2014	IA-6-091214 9/12/2014	IA-6-121914 12/19/2014	IA-06-032715 3/27/2015	IA-6-061115 6/11/2015	IA-6-091615 9/16/2015	IA-6-121815 12/18/2015	IA-7-011609 1/16/2009	IA-7-020309 2/3/2009	IA-7-021109 2/11/2009	IA-7-021809 2/18/2009	IA-7-022609 2/26/2009	IA-7-030609 3/6/2009	IA-7-041409 4/14/2009	IA-7-051509 5/15/2009	IA-7-061109 6/11/2009	IA-7-091709 9/17/2009	IA-7-122909 12/29/2009
Ethanol	2.9	20	21	6.1	20	38	160	9.4	17	29	31	8.5	7.3	16	11	26	7.9	8.4	7.1	11	14	11	10
Ethyl acetate	0.34	0.64	0.42	0.13 U	0.17	0.34	1.7	0.13 U	0.3	0.13 U	0.51	1.6	0.37 U	0.37 U	0.18 U	0.21	0.37 U	0.18 U	0.26 U	0.18 U	0.24	2.6	0.18 U
Ethylbenzene	0.11	0.18	0.29	0.15 U	0.56	0.2	0.18	0.088 J	0.18	0.13 J	0.22	0.26	0.23	0.29	0.36	0.95	0.24	0.22 U	0.16 U	0.22 U	0.25	0.32	0.68
Hexachlorobutadiene	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.21 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	0.75 U	1.1 U	1.1 U	0.53 U	1.1 U	
Hexane	0.76	0.83	0.85	0.38	1.2	0.69	0.35 J	0.29 J	4.9 J	0.32 J	0.72 J	0.9 J	0.90	0.87	0.91	2.0	1.1	0.60	0.69	0.33	1.5	0.88	0.25
Isopropyl alcohol	3.4 U	3.4 U	3.4 U	0.85	1.7	8.1	3.4	0.52 J	3.1 J	4.7	7.7	3.4 U	3.7	6.2	3.6	8.3	0.25 U	2.7	0.18 U	7.0	14	4.0	1.9
m,p-Xylene	0.31	0.54	0.81	0.20	1.6	0.6	0.4	0.3	0.4	0.35	0.53	0.87	0.61	0.82	0.94	2.8	0.73	0.43 U	0.31 U	0.43 U	0.72	0.86	2.8
Methyl methacrylate	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.082 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	
Methylene chloride	1.1	1.3	1.1	0.71	0.64	0.83	0.64 J	0.28 J	0.49 J	0.41 J	0.49 J	1.2 J	1.9	5.7	0.92	1.5	6.3	1.4	4.2	2.3	5.7	0.70 U	2.9
Methyl-t-butyl ether	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.072 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.13 U	0.18 U	0.18 U	0.18 U	
n-Heptane	0.10	0.14	0.47	0.14 U	0.71	1.1	0.16	0.14 U	0.15	0.14 J	0.24	0.36	0.20	0.20 U	0.37	1.2	0.20 U	0.20 U	0.17	0.20 U	0.34	0.37	0.20 U
o-Xylene	0.13	0.21	0.32	0.15 U	0.64	0.24	0.14	0.085 J	0.18	0.13 J	0.17	0.29	0.24	0.31	0.39	0.97	0.24	0.22 U	0.16 U	0.22 U	0.25	0.31	0.60
Propylene (Propene)	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	0.81	1.4 U	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	0.18 U	0.18 U	0.090 U	0.090 U	0.18 U	0.090 U	0.13 U	0.090 U	0.090 U	0.35 U	
Styrene	0.15 U	0.15 U	0.22	0.15 U	0.16	0.15 U	0.077 J	0.15 U	0.036 J	0.093 J	0.06 J	0.15 U	0.21 U	0.21 U	0.21 U	0.26	0.21 U	0.21 U	0.15 U	0.21 U	0.29	0.39	0.21 U
Tetrachloroethene	0.12	0.24 U	0.24 U	0.24 U	0.24	0.32	0.49	0.12 J	0.72	0.21 J	0.34	0.33	1.6	0.34 U	0.65	0.63	0.34 U	0.34 U	0.48	0.34 U	0.34 U	0.34 U	1.0
Tetrahydrofuran	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.17	0.046 J	0.1 U	0.1 U	0.1 U	0.077 J	0.1 U	45	2.1	0.74	0.43	0.15 U	0.15 U	0.27	0.15 U	0.15 U	0.51	0.15 U
Toluene	0.65	1.1	2.6	0.49	3.4	1.3	0.72	0.5	0.76	0.77	1.8	1.7	1.5	1.6	2.7	7.5	1.5	0.76	0.48	0.61	2.3	4.0	0.57
trans-1,2-Dichloroethene	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.04 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.14 U	0.20 U	0.20 U	0.20 U	
trans-1,3-Dichloropropene	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.045 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.16 U	0.22 U	0.22 U	0.22 U	
Trichloroethene	0.072	0.19 U	0.19 U	0.19 U	0.21	0.19 U	0.12	0.19 U	0.075 J	0.19 U	0.44	0.19 U	4.6	1.1	0.28	0.58	0.27 U	0.27 U	0.30	0.27 U	0.27 U	0.27 U	0.40
Trichlorofluoromethane	1.3	2.1	1.7	1.5	1.7	1.3	1.3	1	1.5	1.3	1.7	4.7	1.4	1.7	3.1	1.6	1.7	1.3	1.1	1.9	1.3	1.7	
Trichlorotrifluoroethane	0.65	1	0.66	0.58	0.46	0.53	0.54	0.64	0.47 J	0.67 J	0.58 J	0.61 J	0.62	0.57	0.47	0.44	0.66	0.45	0.54	0.69	0.57	0.51	0.54
Vinyl acetate	0.25 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	1.4 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.71 U	0.71 U	0.18 U	0.18 U	0.71 U	0.18 U	0.50 U	0.18 U	0.18 U	0.71 U	0.36 U
Vinyl chloride	0.33	0.090 U	0.090 U	0.090 U	0.090 U	0.090 U	0.084	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.10 U	0.13 U	0.13 U	0.13 U	

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	IA-7-032610 3/26/2010	IA-7-070110 7/1/2010	IA-7-091610 9/16/2010	IA-7-120710 12/7/2010	IA-7-021711 2/17/2011	IA-7-060211 6/2/2011	IA-7-091511 9/15/2011	IA-7-120811 12/8/2011	IA-7-030812 3/8/2012	IA-7-061412 6/14/2012	IA-7-091312 9/13/2012	IA-7-010313 1/3/2013	IA-7-031513 3/15/2013	IA-7-060713 6/7/2013	IA-7-090613 9/6/2013	IA-7-100313 10/3/2013	IA-7-121313 12/13/2013	IA-7-030714 3/7/2014	IA-7-061314 6/13/2014	IA-7-091214 9/12/2014	IA-7-121914 12/19/2014	IA-7-032715 3/27/2015
1,1,1-Trichloroethane	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.069	0.082 U	0.088	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.18 U	0.19 U	0.19 U	0.055 U	0.19 U	0.19 U	0.19 U	
1,1,1,2-Tetrachloroethane							0.62 U		0.37 U	0.37 U	0.44 U	0.44 U	0.44 U	0.44 U	0.42 U	0.44 U	0.44 U	0.25 U	0.44 U	0.44 U	0.44 U	
1,1,2,2-Tetrachloroethane	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.21 U	0.10 U	0.21 U	0.24 U	0.24 U	0.24 U	0.24 U	0.23 U	0.24 U	0.24 U	0.069 U	0.24 U	0.24 U	0.24 U	
1,1,2-Trichloroethane	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.16 U	0.082 U	0.16 U	0.19 U	0.19 U	0.19 U	0.19 U	0.18 U	0.19 U	0.19 U	0.11 U	0.19 U	0.19 U	0.19 U	
1,1-Dichloroethane	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.12 U	0.061 U	0.12 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.04 U	0.14 U	0.14 U	0.14 U	
1,1-Dichloroethene	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.12 U	0.059 U	0.12 U	0.14 U	0.14 U	0.14 U	0.14 U	0.13 U	0.14 U	0.14 U	0.04 U	0.14 U	0.14 U	0.14 U	
1,2,4-Trichlorobenzene	0.75 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.74 U	0.45 U	0.45 U	0.17	0.52 U	0.52 U	0.26 U	0.26 U	0.25 U	0.26 U	0.26 U	0.15 U	0.26 U	0.26 U	0.26 U	
1,2,4-Trimethylbenzene	0.35	0.36	0.36	0.25 U	0.25 U	0.56	0.41	0.32	0.36	0.21	0.46	0.17 U	0.10	0.58	0.40	0.70	0.25	0.38	0.31	0.37	0.052 J	0.33
1,2-Dibromoethane (EDB)	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.23 U	0.12 U	0.23 U	0.27 U	0.27 U	0.27 U	0.27 U	0.26 U	0.27 U	0.27 U	0.077 U	0.27 U	0.27 U	0.27 U	
1,2-Dichlorobenzene	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.18 U	0.18 U	0.21 U	0.21 U	0.21 U	0.21 U	0.20 U	0.21 U	0.21 U	0.21 U	0.12 U	0.21 U	0.21 U	0.21 U	
1,2-Dichloroethane	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.070	0.061 U	0.051	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.11	0.14 U	0.14 U	0.15	0.14 U	0.15	0.19	
1,2-Dichloropropane	0.23 U	0.30	0.23 U	0.23 U	0.23 U	0.63	0.23 U	0.14 U	0.069 U	0.14 U	0.094	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.085	0.16 U	0.16 U	0.16 U
1,2-Dichlorotetrafluoroethane	0.35 U	0.35 U	0.35 U																			
1,3,5-Trimethylbenzene	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.10	0.15	0.083	0.26	0.17 U	0.17 U	0.17 U	0.17 U	0.23	0.17 U	0.17 U	0.057 J	0.17 U	0.083 J	0.083 J
1,3-Butadiene	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.066 U	0.066 U	0.066 U	0.078 U	0.078 U	0.078 U	0.078 U	0.075 U	0.078 U	0.48	0.078 U	0.044 U	0.078 U	0.078 U	
1,3-Dichlorobenzene	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.18 U	0.18 U	0.21 U	0.21 U	0.21 U	0.21 U	0.20 U	0.21 U	0.21 U	0.21 U	0.06 J	0.21 U	0.21 U	0.21 U	
1,4-Dichlorobenzene	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.18 U	0.18 U	0.065	0.063	0.21 U	0.21 U	0.21 U	0.21 U	0.086	0.21 U	0.21 U	0.12 U	0.21 U	0.16 J	0.15 J
1,4-Dioxane																						
2-Butanone	2.1	4.3	1.8	0.42	1.7 B	4.7	5.9 U	2.1	0.97	1.1	2.8	1.9	1.9	1.7	1.6	3.8	0.69	1.5	3	2.2 J	0.75 J	1.4 J
2-Hexanone	0.20 U	0.82	0.55	0.20 U	0.20 U	1.4 J	0.73	0.12 U	0.081	0.23	0.41	0.20	0.35	0.14 U	0.15	1.1	0.14 U	0.37	0.35	0.41	0.14 U	0.43
4-Ethyltoluene	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.074	0.097	0.065	0.16	0.17 U	0.17 U	0.17 U	0.20	0.17 U	0.17 U	0.065 J	0.17 U	0.09 J	0.069 J	
4-Methyl-2-pentanone	0.20 U	0.43	0.61	0.20 U	0.20 U	0.53	0.36	0.15	0.13	1.4	0.29	0.18	0.14 U	0.21	0.20	0.44	0.14 U	0.34	0.18	0.14 U	0.18	0.15
Acetone	12	41	27	12 B	15 B	48 B	38	17	13	18	24	14	15	49	46	46	20	15	30	41	12	24
Benzene	0.53	0.27	0.56	0.45	1.1	0.41	0.34	0.44	0.36	0.20	0.49	0.58	0.87	0.32	0.43	1.8	0.54	1.9	0.57	0.36	0.4	0.57
Benzyl chloride	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.16 U	0.16 U	0.16 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.052 U	0.18 U	0.18 U	0.18 U	
Bromodichloromethane	0.33 U	0.33 U	0.33 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.20 U	0.10 U	0.20 U	0.24 U	0.24 U	0.24 U	0.23 U	0.24 U	0.24 U	0.067 U	0.24 U	0.24 U	0.24 U	
Bromoform	0.51 U	0.51 U	0.51 U	0.52 U	0.52 U	0.52 U	0.52 U	0.31 U	0.31 U	0.31 U	0.36 U	0.36 U	0.36 U	0.36 U	0.35 U	0.36 U	0.36 U	0.21 U	0.36 U	0.36 U	0.36 U	
Bromomethane	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.12 U	0.12 U	0.12 U	0.14 U	0.14 U	0.14 U	0.14 U	0.13 U	0.14 U	0.14 U	0.056 J	0.14 U	0.14 U	0.14	

Table 1.
Summary of Analytical Results - Air Sampling for Small Retail Spaces
Former Gorham Manufacturing Site
Providence, Rhode Island

Parameter (ug/m ³)	Indoor Air - Western Small Retail Space																						
	IA-7-032610 3/26/2010	IA-7-070110 7/1/2010	IA-7-091610 9/16/2010	IA-7-120710 12/7/2010	IA-7-021711 2/17/2011	IA-7-060211 6/2/2011	IA-7-091511 9/15/2011	IA-7-120811 12/8/2011	IA-7-030812 3/8/2012	IA-7-061412 6/14/2012	IA-7-091312 9/13/2012	IA-7-010313 1/3/2013	IA-7-031513 3/15/2013	IA-7-060713 6/7/2013	IA-7-090613 9/6/2013	IA-7-100313 10/3/2013	IA-7-121313 12/13/2013	IA-7-030714 3/7/2014	IA-7-061314 6/13/2014	IA-7-091214 9/12/2014	IA-7-121914 12/19/2014	IA-7-032715 3/27/2015	IA-7-061115 6/11/2015
Ethanol	13	39	240	13	14	28	76	60	70	110	60	52	11	45	21	40	25	50	79	96	39	110	110
Ethyl acetate	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.70	0.21	1.8	0.94	0.39	0.57	0.77	0.13 U	5.5	1.3	1.9	0.34	0.56	0.41	0.37	0.13 U	0.64	0.39
Ethylbenzene	0.32	0.45	0.45	0.22 U	0.22 U	0.68	0.45	0.24	0.12	0.24	0.45	0.19	0.14	0.36	0.48	0.62	0.15 U	0.43	0.35	0.2	0.085 J	0.58	0.19
Hexachlorobutadiene	1.1 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.32 U	0.32 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.36 U	0.37 U	0.37 U	0.37 U	0.21 U	0.37 U	0.37 U	0.37 U	
Hexane	0.33	0.70	0.64	0.50	1.3	0.58	7.0 U	3.9	0.80	0.67	0.97	0.86	0.87	2.9	1.3	0.97	0.39	1.1	0.9	0.37 J	0.35 J	4.9 J	0.36 J
Isopropyl alcohol	18	5.8	28	2.8	11	1.2 U	77	2.9 U	2.9 U	48	22	3.3	3.4 U	3.4 U	6.0	40	1.9	11.0	2 U	1.4 J	30.0	11	
m,p-Xylene	0.82	1.2	1.2	0.43 U	0.43 J	1.5	1.1	0.72	0.30	0.54	1.4	0.71	0.40	1.1	1.2	1.8	0.25	1.2	1.1	0.54	0.29 J	0.67	0.48
Methyl methacrylate				0.20 U	0.20 U	0.20 U	0.20 U	0.12 U	0.12 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.082 U	0.14 U	0.14 U		
Methylene chloride	0.70 U	1.3	0.60	1.3	2.5	1.1	1.7 U	13	2.8	1.4	2.3	2.6	1.4	6.1	1.3	1.1	0.76	0.68	0.74	0.63 J	0.39 J	0.6 J	0.58 J
Methyl-t-butyl ether	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.11 U	0.11 U	0.11 U	0.11 U	0.13 U	0.13 U	0.13 U	0.12 U	0.13 U	0.13 U	0.13 U	0.13 U	0.072 U	0.13 U	0.13 U	0.063 J
n-Heptane	0.29	0.50	0.68	0.33	0.47	2.0	1.1	0.46	0.47	0.65	0.99	0.14 U	0.16	0.42	1.1	1.6	0.45	1.3	4.6	1.9	4.3	0.19	0.14 J
o-Xylene	0.28	0.43	0.43	0.22 U	0.22 U	0.69	0.41	0.30	0.17	0.20	0.56	0.24	0.15	0.40	0.44	0.85	0.15 U	0.44	0.39	0.19	0.088 J	0.26	0.19
Propylene (Propene)	0.35 U	0.87 U	0.35 U	0.86 U	0.86 U	0.86 U	3.4 U	2.1 U	2.1 U	2.1 U	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	2.3 U	2.4 U	2.4 U	1.5	1.4 U	2.4 U	2.4 U	2.4 U
Styrene	0.26	0.70	0.39	0.21 U	0.21 U	0.97	0.63	0.18	0.097	0.26	0.89	0.15 U	0.081	0.29	2.6	0.37	0.15 U	0.17	0.29	0.24	0.15 U	0.096 J	0.29
Tetrachloroethene	0.34 U	0.34 U	0.36	0.34 U	1.7	0.34 U	0.62	0.66	0.14	0.15	1.7	0.24 U	0.15	0.24 U	5.5	0.22	0.24 U	0.40	0.34	0.13	0.13 J	0.23 J	0.25
Tetrahydrofuran	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.24	0.18	0.088 U	0.088 U	0.088	0.10 U	0.10 U	0.10 U	0.10 U	0.65	0.15	0.10 U	0.10 U	0.14	0.13	0.1 U	0.11	0.15
Toluene	7.2	8.4	3.5	0.48	1.6	6.6	3.7	1.2	0.48	1.4	2.4	0.99	1.0	3.8	4.7	7.8	1.1	2.8	2.2	1.3	0.72	1.1	1
trans-1,2-Dichloroethene	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.12 U	0.059 U	0.12 U	0.14 U	0.14 U	0.14 U	0.14 U	0.13 U	0.14 U	0.14 U	0.14 U	0.14 U	0.04 U	0.14 U	0.14 U	0.14 U	
trans-1,3-Dichloropropene	0.22 U	0.22 U	0.22 U	0.23 U	0.23 U	0.23 U	0.23 U	0.14 U	0.068 U	0.14 U	0.16 U	0.16 U	0.16 U	0.16 U	0.15 U	0.16 U	0.16 U	0.16 U	0.045 U	0.16 U	0.16 U	0.16 U	
Trichloroethene	0.27 U	0.27 U	0.77	0.27 U	0.27 U	0.27 U	0.27 U	0.16	0.081 U	0.077	0.15	0.19 U	0.068	0.19 U	0.53	0.14	0.19 U	0.28	0.19 U	0.077	0.19 U	0.1 J	0.19 U
Trichlorofluoromethane	1.3	1.3	2.9	1.2	1.6	1.3	1.6	1.3	1.1	1.7	1.8	1.8	1.5	2.5	1.8	1.9	1.6	1.7	1.4	1.3	1.4	1.2	1.5
Trichlorotrifluoroethane	0.64	0.54	0.43	0.55	0.67	0.76	0.54	0.67	0.44	0.53	0.58	0.6	0.87	1	0.63	0.52	0.6	0.45	0.52	0.58	0.63	0.64 J	0.65 J
Vinyl acetate	0.36 U	0.18 U	0.36 U	0.35 U	0.18 U	3.5 U	0.18 U	0.11 U	0.21 U	0.21 U	0.25 U	0.25 U	0.25 U	2.5 U	2.5 U	2.4 U	2.5 U	2.5 U	1.4 U	2.5 U	2.5 U	2.5 U	
Vinyl chloride	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.077 U	0.038 U	0.077 U	0.090 U	0.090 U	0.090 U	0.090 U	0.090 U	0.087 U	0.090 U	0.090 U	0.090 U	0.026 U	0.09 U	0.09 U	

Notes:

[a] Benzene and carbon tetrachloride are above the target air concentration, but are not compliance violations as indoor air concentrations are consistent with outdoor air concentrations that were sampled on the same day.

NA - not available

U - Not detected, value is the detection limit

B - Compounds detected in method blank as well as field sample

J - Indicates compound was detected at an estimated value.

D - Result from diluted analyses

ug/m³ - micrograms per cubic meter

Bolded and shaded values are above the CT target

5 indoor air concentration for industrial/commercial scenarios

Table 1.
Summary of Analytical Results - Air Sampling for Small Retail Spaces
Former Gorham Manufacturing Site
Providence, Rhode Island

Parameter (ug/m ³)	Indoor Air - Western Small Retail Space	
	IA-7- 091615 9/16/2015	IA-7- 121815 12/18/2015
1,1,1-Trichloroethane	0.054 J	0.19 U
1,1,1,2-Tetrachloroethane	0.44 U	
1,1,2,2-Tetrachloroethane	0.24 U	0.24 U
1,1,2-Trichloroethane	0.19 U	0.19 U
1,1-Dichloroethane	0.14 U	0.14 U
1,1-Dichloroethene	0.14 U	0.14 U
1,2,4-Trichlorobenzene	0.26 U	0.26 U
1,2,4-Trimethylbenzene	0.15 J	0.28
1,2-Dibromoethane (EDB)	0.27 U	0.27 U
1,2-Dichlorobenzene	0.21 U	0.21 U
1,2-Dichloroethane	0.18	0.14 U
1,2-Dichloropropane	0.16 J	0.16 U
1,2-Dichlorotetrafluoroethane		0.25 U
1,3,5-Trimethylbenzene	0.048 J	0.17 U
1,3-Butadiene	0.078 U	0.14
1,3-Dichlorobenzene	0.21 U	0.21 U
1,4-Dichlorobenzene	0.055 J	0.21 U
1,4-Dioxane		1.3 U
2-Butanone	1.7 J	2 J
2-Hexanone	0.14 U	0.28
4-Ethyltoluene	0.055 J	0.17 U
4-Methyl-2-pentanone	0.14 U	0.18
Acetone	39	15
Benzene	0.91	0.97
Benzyl chloride	0.18 U	0.18 U
Bromodichloromethane	0.24 U	0.24 U
Bromoform	0.36 U	0.36 U
Bromomethane	0.14 U	0.14 U
Carbon disulfide	0.15 J	1.1 U
Carbon tetrachloride	0.39	0.51
Chlorobenzene	0.16 U	0.16 U
Chloroethane	0.093 U	0.093 U
Chloroform	0.23	0.17 U
Chloromethane	1.3	1.4
cis-1,2-Dichloroethene	0.086 J	0.14 U
cis-1,3-Dichloropropene	0.16 U	0.16 U
Cyclohexane	0.12 U	0.46
Dibromochloromethane	0.3 U	0.3 U
Dichlorodifluoromethane	1.8	2.3

Table 1.
Summary of Analytical Results - Air Sampling for Small Retail Spaces
Former Gorham Manufacturing Site
Providence, Rhode Island

Parameter (ug/m ³)	Indoor Air - Western Small Retail Space	
	IA-7- 091615 9/16/2015	IA-7- 121815 12/18/2015
Ethanol	440 E	33
Ethyl acetate	1.1	0.31
Ethylbenzene	0.3	0.25
Hexachlorobutadiene	0.37 U	0.37 U
Hexane	0.67 J	0.52 J
Isopropyl alcohol	30	3.4 U
m,p-Xylene	0.64	0.84
Methyl methacrylate	0.14 U	
Methylene chloride	0.54 J	1.2 J
Methyl-t-butyl ether	0.13 U	0.13 U
n-Heptane	0.25	0.28
o-Xylene	0.23	0.3
Propylene (Propene)	2.4 U	2.4 U
Styrene	0.27	0.18
Tetrachloroethene	0.23 J	0.36
Tetrahydrofuran	0.11	0.1 U
Toluene	2.1	1.6
trans-1,2-Dichloroethene	0.14 U	0.14 U
trans-1,3-Dichloropropene	0.16 U	0.16 U
Trichloroethene	0.31	0.19 U
Trichlorofluoromethane	1.3	1.7
Trichlorotrifluoroethane	0.59 J	0.6 J
Vinyl acetate	2.5 U	2.5 U
Vinyl chloride	0.09 U	0.09 U

Prepared by / Date: AKN 1/6/16
 Checked by / Date: MAM 01/07/16

Table 2.
Vacuum Monitoring Results - Small Retail Spaces
Former Gorham Manufacturing Site
Providence, Rhode Island

Date	Pressure Differential (inches of water)		
	VMW-5	VMW-6	VMW-7
2/3/2009	-0.25	-0.17	0.00
2/18/2009	-0.212	-0.155	-0.011
2/26/2009	-0.230	-0.120	-0.025
3/6/2009	-0.200	-0.086	-0.012
4/14/2009	-0.108	-0.054	-0.014
5/15/2009	-0.081	-0.073	-0.016
6/11/2009	-0.090	-0.076	-0.098
9/17/2009	-0.110	-0.102	+0.074
12/29/2009**	-0.011	-0.010	-0.061
3/26/2010	-0.245	-0.142	-0.018
7/1/2010	-0.542	-0.114	-0.176
9/16/2010	-0.247	-0.874	-0.013
12/7/2010	-0.044	-0.028	+0.022
2/17/2011	-0.212	-0.599	-0.337
6/2/2011	-0.277	-0.236	-0.138**
9/15/2011	-0.234	-0.212	-0.010
12/8/2011	-0.609	-0.115	-0.009
3/8/2012	-0.003	-0.246	-0.114
6/14/2012	-0.237	-0.103	-0.132
9/13/2012	-0.243	-0.119	-0.210
1/3/2013	-0.150	-0.060	-0.052
3/15/2013	-0.228	-0.354	-0.002
6/7/2013	-0.226	-0.123	-0.011
9/6/2013	-0.232	-0.829	-0.007
10/3/2013	NM	NM	-0.006
12/13/2013	-0.215	-0.002	-0.002
3/7/2014	-0.177	-0.002	-0.002
6/13/2014	-0.185	-0.010	-0.011
9/12/2014	-0.258	-0.256	-0.014
12/19/2014	-0.222	-0.100	-0.001
3/27/2015	-0.301	-0.097	-0.036
6/11/2015	-0.23***	-0.1***	NM***
9/16/2015	-0.246	-0.050	-0.013
12/18/2015	-0.378	-0.177	-0.005

** ASD system offline.

NM = Not Measured

*** Due to Digital Manometer reading high range only at the time of measurement, readings are in tenths of inches of water. VMW-7 was not measured due to the low range of the vacuum.

Prepared by/Date: MAM 01/7/16

Checked by/Date: DEH 01/15/16

Table 3.
Summary of Analytical Results - Air Sampling for Large Retail Space
Former Gorham Manufacturing Site
Providence, Rhode Island

Parameter (ug/m ³)	Outdoor Air Reference Locations																					
	AA-1 011609 1/16/2009	AA-1- 020309 2/3/2009	AA-1- 021109 2/11/2009	AA-1- 021809 2/18/2009	AA-1- 022609 2/26/2009	AA-1- 030609 3/6/2009	AA-1- 033109 3/31/2009	AA-1- 041409 4/14/2009	AA-1- 042409 4/24/2009	AA-1- 051509 5/15/2009	AA-1- 061109 6/11/2009	AA-1- 091709 9/17/2009	AA-1- 092409 9/24/2009	AA-1- 100109 10/1/2009	AA-1- 100809 10/8/2009	AA-1- 122909 12/29/09	AA-1- 12810 1/28/2010	AA-1- 20510 2/5/2010	AA-1- 202120 2/12/2010	AA-1- 021910 2/19/2010	AA-1- 032610 3/26/2010	AA-1- 043010 4/30/2010
	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.19 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U										
1,1,1-Trichloroethane	0.27	U	0.27	U	0.27	U	0.27	U	0.27	U	0.27	U	0.27	U	0.27	U	0.27	U	0.27	U	0.27	
1,1,1,2-Tetrachloroethane																						
1,1,2,2-Tetrachloroethane	0.34	U	0.34	U	0.34	U	0.34	U	0.34	U	0.34	U	0.34	U	0.34	U	0.34	U	0.34	U	0.34	
1,1,2-Trichloroethane	0.27	U	0.27	U	0.27	U	0.27	U	0.27	U	0.27	U	0.27	U	0.27	U	0.27	U	0.27	U	0.27	
1,1-Dichloroethane	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	
1,1-Dichloroethene	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	
1,2,4-Trichlorobenzene	0.37	U	0.37	U	0.37	U	0.37	U	0.37	U	0.26	U	0.37	U	0.37	U	0.37	U	0.75	U	0.37	
1,2,4-Trimethylbenzene	0.25	U	0.28	U	0.52	U	1.8	U	0.25	U	0.25	U	0.18	U	0.25	U	0.25	U	0.25	U	0.25	
1,2-Dibromoethane (EDB)	0.38	U	0.38	U	0.38	U	0.38	U	0.38	U	0.38	U	0.27	U	0.38	U	0.38	U	0.38	U	0.38	
1,2-Dichlorobenzene	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.21	U	0.30	U	0.30	U	0.30	U	0.30	
1,2-Dichloroethane	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.14	U	0.20	U	0.20	U	0.20	U	0.20	
1,2-Dichloropropane	0.23	U	0.23	U	0.23	U	0.23	U	0.23	U	0.17	U	0.23	U	0.23	U	0.23	U	0.23	U	0.23	
1,2-Dichlorotetrafluoroethane	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.25	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	
1,3,5-Trimethylbenzene	0.25	U	0.25	U	0.25	U	0.50	U	0.25	U	0.25	U	0.18	U	0.25	U	0.25	U	0.25	U	0.25	
1,3-Butadiene	0.11	U	0.11	U	0.17	U	1.3	U	0.11	U	0.11	U	0.08	U	0.11	U	0.11	U	0.11	U	0.11	
1,3-Dichlorobenzene	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.21	U	0.30	U	0.30	U	0.30	U	0.30	
1,4-Dichlorobenzene	0.30	U	0.30	U	0.30	U	0.53	U	0.30	U	0.30	U	0.21	U	0.30	U	0.30	U	0.30	U	0.30	
1,4-Dioxane																						
2-Butanone	0.58	U	1.2	U	2.4	U	3.2	U	1.6	U	0.67	U	1.7	U	0.11	U	1.6	U	1.6	U	1.6	
2-Hexanone	0.20	U	0.22	U	0.57	U	0.35	U	0.20	U	0.20	U	0.14	U	0.26	U	0.39	U	0.20	U	0.20	
4-Ethyltoluene	0.25	U	0.25	U	0.25	U	0.60	U	0.25	U	0.25	U	0.18	U	0.25	U	0.25	U	0.25	U	0.25	
4-Methyl-2-pentanone	0.20	U	0.20	U	0.27	U	0.63	U	0.20	U	0.20	U	0.14	U	0.20	U	0.20	U	0.20	U	0.20	
Acetone	7.3	U	8.0	U	15	U	22	U	8.4	U	5.9	U	12	U	1.1	U	27	U	9.5	U	10	
Benzene	0.69	U	0.62	U	1.3	U	4.7	U	0.43	U	0.69	U	0.46	U	0.12	U	0.30	U	0.40	U	0.49	
Benzyl chloride	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.19	U	0.26	U	0.26	U	0.26	U	0.26	
Bromodichloromethane	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.24	U	0.33	U	0.33	U	0.33	U	0.33	
Bromoform	0.51	U	0.51	U	0.51	U	0.51	U	0.51	U	0.51	U	0.51	U	0.36	U	0.51	U	0.51	U	0.51	
Bromomethane	0.19	U	0.19	U	0.19	U	0.19	U	0.19	U	0.19	U	0.14	U	0.19	U	0.19	U	0.19	U	0.19	
Carbon disulfide	0.16	U	0.16	U	0.16	U	0.16	U	0.16	U	0.16	U	0.12	U	0.16	U	0.16	U	0.16	U	0.16	
Carbon tetrachloride	0.38	U	0.44	U	0.52	U	0.56	U	0.43	U	0.61	U	0.47	U	0.22	U	0.41	U	0.78	U	0.43	
Chlorobenzene	0.23	U	0.23	U	0.23	U	0.23	U	0.23	U	0.23	U	0.17	U	0.23	U	0.23	U	0.23	U	0.23	
Chloroethane	0.13	U	0.13	U	0.13	U	0.13	U	0.13	U	0.13	U	0.10	U	0.13	U	0.13	U	0.13	U	0.13	
Chloroform	0.24	U	0.24	U	0.24	U	0.24	U	0.24	U	0.24	U	0.17	U	0.24	U	0.24	U	0.24	U	0.24	
Chloromethane	1.1	U	0.90	U	1.4	U	1.5	U	1.1	U	1.1	U	1.3	U	1.1	U	1.2	U	1.2	U	1.3	
cis-1,2-Dichloroethene	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.14	U	0.20	U	0.20	U	0.20	U	0.20	
cis-1,3-Dichloropropene	0.22	U	0.22	U	0.22	U	0.22	U	0.22	U	0.22	U	0.16	U	0.22	U	0.22	U	0.22	U	0.22	
Cyclohexane	0.17	U	0.17	U	0.35	U	1.1	U	0.17	U												

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Summary of Analytical Results - Air Sampling for Large Retail Space
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Providence, Rhode Island

Parameter (ug/m³)	Outdoor Air Reference Locations																					
	AA-1 011609 1/16/2009	AA-1- 020309 2/3/2009	AA-1- 021109 2/11/2009	AA-1- 021809 2/18/2009	AA-1- 022609 2/26/2009	AA-1- 030609 3/6/2009	AA-1- 033109 3/31/2009	AA-1- 041409 4/14/2009	AA-1- 042409 4/24/2009	AA-1- 051509 5/15/2009	AA-1- 061109 6/11/2009	AA-1- 091709 9/17/2009	AA-1- 092409 9/24/2009	AA-1- 100109 10/1/2009	AA-1- 100809 10/8/2009	AA-1- 122909 12/29/09	AA-1- 012810 1/28/2010	AA-1- 020510 2/5/2010	AA-1- 021210 2/12/2010	AA-1- 021910 2/19/2010	AA-1- 032610 3/26/2010	AA-1- 043010 4/30/2010
Ethanol	4.0	5.4	10	47	4.3	3.5	4.7	0.81	4.9	4.8	8.6	6.6	4.6	3.9	4.9	3.8	5.4	5.1	7.2	1.2	4.9	4.0
Ethyl acetate	0.37 U	0.37 U	0.18 U	0.31	0.37 U	0.18 U	0.18 U	0.26 U	0.37 U	0.18 U	0.18 U	0.18 U	0.18 U	1.1	0.18 U	0.18 U						
Ethylbenzene	0.22 U	0.25	0.52	2.0	0.22 U	0.22 U	0.22 U	0.16 U	0.22 U	0.24	0.22 U	0.23	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
Hexachlorobutadiene	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	0.75 U	1.1 U	1.1 U	1.1 U	0.53 U	0.53 U	0.53 U	0.53 U	1.1 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	1.1 U	0.53 U
Hexane	1.5	0.75	1.1	2.9	0.38	2.8	2.2	0.13 U	0.56	0.37	0.59	0.48	1.4	0.45	4.5	0.62	0.36	0.53	0.91	0.24	0.23	1.1
Isopropyl alcohol	1.4	1.4	1.8	4.3	1.4	0.67	1.4	0.18 U	14	1.0	2.5	2.8	0.87	0.63	0.25 U	0.54	0.56	2.7	1.5	0.80	0.73	0.69
m,p-Xylene	0.43 U	0.72	1.4	6.4	0.44	0.43 U	0.43 U	0.31 U	0.43 U	0.49	0.73	0.62	0.59	0.43 U	0.43 U	0.43 U	0.43 U	0.50	0.47	0.43 U	0.49	0.43 U
Methyl methacrylate																						
Methylene chloride	5.5	3.1	0.65	1.5	0.78	7.4	15	2.1	2.8	1.7	1.9	0.70 U	4.2	0.70 U	23	4.6	1.3	1.9	1.7	0.70 U	0.70 U	0.70 U
Methyl-t-butyl ether	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.13 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U									
n-Heptane	0.20 U	0.27	0.92	1.6	0.20 U	0.20 U	0.20 U	0.14 U	0.20 U	0.40	0.23	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.26	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
o-Xylene	0.22 U	0.27	0.53	2.2	0.22 U	0.22 U	0.22 U	0.16 U	0.22 U	0.24	0.27	0.23	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
Propylene (Propene)	0.18 U	0.18 U	0.090 U	0.090 U	0.18 U	0.090 U	0.090 U	0.13 U	0.18 U	0.090 U	0.35 U	0.35 U	0.18 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U
Styrene	0.21 U	0.21 U	0.21 U	0.28	0.21 U	0.21 U	0.21 U	0.15 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U								
Tetrachloroethene	0.34 U	0.34 U	0.73	0.77	0.34 U	0.34 U	0.34 U	0.24 U	0.34 U	0.34 U	0.52	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U
Tetrahydrofuran	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.11 U	0.15 U	1.2	0.15 U	0.15 U	0.15 U	0.15 U	0.19	0.15 U	0.15 U					
Toluene	0.94	1.5	3.2	14	0.71	0.99	0.82	0.14 U	0.72	2.6	2.1	1.9	2	0.61	0.5	0.78	0.94	0.64	0.97	0.46	1.1	0.75
trans-1,2-Dichloroethene	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.14 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U								
trans-1,3-Dichloropropene	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.16 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U								
Trichloroethene	0.27 U	0.27 U	0.27 U	0.39	0.27 U	0.27 U	0.27 U	0.19 U	0.27 U	0.27 U	0.27 U	0.30	0.27 U	0.27 U	0.27 U							
Trichlorofluoromethane	1.3	1.2	1.7	2.4	1.5	2.0	1.7	0.92	1.3	1.5	2.0	1.1	1.4	1.2	1.5	2.2	1.2	1.6	1.5	1.5	1.2	1.2
Trichlorotrifluoroethane	0.68	0.53	0.50	0.47	0.64	0.48	0.51	0.27 U	0.64	0.67	0.56	0.47	0.49	0.45	0.46	0.54	0.49	0.55	0.54	0.54	0.62	0.45
Vinyl acetate	0.71 U	0.71 U	0.18 U	0.18 U	0.71 U	0.18 U	0.18 U	0.50 U	0.71 U	0.18 U	0.18 U	0.71 U	0.71 U	0.71 U	0.36 U	0.71 U	0.71 U	0.71 U	0.71 U	0.36 U	0.71 U	
Vinyl chloride	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.10 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U								

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Parameter (ug/m ³)	Outdoor Air Reference Locations																				
	AA-1-052810 5/28/2010	AA-1-070110 7/1/2010	AA-1-091610 9/16/2010	AA-1-120710 12/7/2010	AA-1-021711 2/17/2011	AA-1-060211 6/6/2011	AA-1-091511 9/15/2011	AA-1-120811 12/8/2011	AA-1-030812 3/8/2012	AA-1-061412 6/14/2012	AA-1-091312 9/13/2012	AA-1-010313 1/3/2013	AA-1-031513 3/15/2013	AA-1-060713 6/7/2013	AA-1-090613 9/6/2013	AA-1-100313 10/3/2013	AA-1-121313 12/13/13	AA-1-030714 03/07/14	AA-1-061314 6/13/2014	AA-1-091214 9/12/2014	AA-1-121914 12/19/2014
1,1,1-Trichloroethane	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.29	0.082 U	0.10	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.18 U	0.19 U	0.19 U	0.19 U	0.055 U	0.19 U	
1,1,1,2-Tetrachloroethane								0.62 U	0.37 U	0.37 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.42 U	0.44 U	0.44 U	0.44 U	0.25 U	0.44 U
1,1,2,2-Tetrachloroethane	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.21 U	0.10 U	0.21 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.23 U	0.24 U	0.24 U	0.24 U	0.069 U	0.24 U
1,1,2-Trichloroethane	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.16 U	0.082 U	0.16 U	0.19 U	0.19 U	0.19 U	0.19 U	0.18 U	0.19 U	0.19 U	0.19 U	0.11 U	0.19 U	
1,1-Dichloroethane	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.063	0.061 U	0.12 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.04 U	0.14 U
1,1-Dichloroethene	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.059 U	0.12 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.13 U	0.14 U	0.14 U	0.14 U	0.16	0.04 U	0.14 U
1,2,4-Trichlorobenzene	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.74 U	0.62	0.45 U	0.12	0.52 U	0.52 U	0.52 U	0.26 U	0.25 U	0.26 U	0.26 U	0.26 U	0.26 U	0.15 U	0.26 U
1,2,4-Trimethylbenzene	0.25 U	0.25 U	0.94	0.25 U	1.1	0.25 U	0.25 U	0.16	0.15 U	0.15 U	0.26	0.17 U	0.069	0.21	0.17 U	0.19	0.17 U	0.17 U	0.51	0.069 J	0.17 U
1,2-Dibromoethane (EDB)	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.23 U	0.12 U	0.23 U	0.27 U	0.27 U	0.27 U	0.27 U	0.26 U	0.27 U	0.27 U	0.27 U	0.077 U	0.27 U	
1,2-Dichlorobenzene	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.34	0.18 U	0.18 U	0.21 U	0.21 U	0.21 U	0.21 U	0.20 U	0.21 U	0.21 U	0.21 U	0.12 U	0.21 U	
1,2-Dichloroethane	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.066	0.061 U	0.046	0.14 U	0.14 U	0.057	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.037 J	0.14 U
1,2-Dichloropropane	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.14 U	0.069 U	0.14 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.046 U	0.16 U	
1,2-Dichlortetrafluoroethane	0.35 U	0.35 U	0.35 U																		
1,3,5-Trimethylbenzene	0.25 U	0.25 U	0.28	0.25 U	0.33	0.25 U	0.25 U	0.068	0.15 U	0.15 U	0.16	0.17 U	0.17 U	0.17 U	0.047	0.17 U	0.17 U	0.18	0.098 U	0.17 U	
1,3-Butadiene	0.11 U	0.11 U	0.29	0.11 U	0.11 U	0.11 U	0.11 U	0.066 U	0.066 U	0.066 U	0.078 U	0.078 U	0.078 U	0.078 U	0.075 U	0.078 U	0.078 U	0.078 U	0.044 U	0.078 U	
1,3-Dichlorobenzene	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.18 U	0.18 U	0.18 U	0.21 U	0.21 U	0.21 U	0.21 U	0.20 U	0.21 U	0.21 U	0.21 U	0.12 U	0.21 U	
1,4-Dichlorobenzene	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.18 U	0.18 U	0.18 U	0.21 U	0.21 U	0.21 U	0.21 U	0.20 U	0.21 U	0.21 U	0.21 U	0.12 U	0.21 U	
1,4-Dioxane								0.18 U													
2-Butanone	2.4	2.3	2.7	0.37	1.8 B	2.9 U	5.9 U	0.35	1.4	1.1	2.0	0.89	1.9	3.9	3.7	0.94	0.82	1.4	2.2	1.1 J	1.2 J
2-Hexanone	0.49	0.49	0.41	0.20 U	0.20 U	4.1 U	0.67	0.12 U	0.34	0.14	0.27	0.14 U	0.13	0.49	0.32	0.14 U	0.14 U	0.26	0.34	0.16	0.14 U
4-Ethyltoluene	0.25 U	0.25 U	0.30	0.25 U	0.34	0.25 U	0.25 U	0.053	0.15 U	0.15 U	0.093	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.18	0.098 U	0.17 U
4-Methyl-2-pentanone	0.20 U	0.20 U	2.8	0.20 U	0.20 U	0.20 U	0.12 U	0.12 U	0.23	0.10	0.14 U	0.083	0.24	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.2	0.036 J	0.14 U
Acetone	20	13	14	5.7 B	19 B	8.7 B	20	4.9	9.4	10	12	8.7	18	28	16	12	26	9.3	22	25	10
Benzene	0.19	0.16 U	1.2	0.28	2.3	0.16 U	0.19	0.40	0.29	0.20	0.68	0.42	1.0	0.31	0.70	0.95	0.43	1.0	0.9	0.2	0.6
Benzyl chloride	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.16 U	0.16 U	0.16 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.052 U	0.18 U	
Bromodichloromethane	0.33 U	0.33 U	0.33 U	0.34 U	0.34 U	0.34 U	0.34 U	0.20 U	0.10 U	0.20 U	0.24 U	0.24 U	0.24 U	0.24 U	0.23 U	0.24 U	0.24 U	0.24 U	0.067 U	0.24 U	
Bromoform	0.51 U	0.51 U	0.51 U	0.52 U	0.52 U	0.52 U	0.52 U	0.31 U	0.31 U	0.31 U	0.36 U	0.36 U	0.36 U	0.36 U	0.35 U	0.36 U	0.36 U	0.36 U	0.21 U	0.36 U	
Bromomethane	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.12 U	0.12 U	0.12 U	0.14 U	0.14 U	0.14 U	0.14 U	0.13 U	0.14 U	0.14 U	0.14 U	0.078 U	0.14 U	
Carbon disulfide	0.16 U	0.16 U	0.16 U	0.38	0.16 U	0.16 U	1.6 U	0.058	0.93 U	0.11	1.1 U	1.1 U	0.052	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	0.098 J	1.1 U
Carbon tetrachloride	0.52	0.51	0.43	0.42	0.48	0.53	0.48	0.49	0.43	0.43</											

Table 3.
Summary of Analytical Results - Air Sampling for Large Retail Space
Former Gorham Manufacturing Site
Providence, Rhode Island

Parameter (ug/m ³)	Outdoor Air Reference Locations																				
	AA-1-052810 5/28/2010	AA-1-070110 7/1/2010	AA-1-091610 9/16/2010	AA-1-120710 12/7/2010	AA-1-021711 2/17/2011	AA-1-060211 6/6/2011	AA-1-091511 9/15/2011	AA-1-120811 12/8/2011	AA-1-030812 3/8/2012	AA-1-061412 6/14/2012	AA-1-091312 9/13/2012	AA-1-010313 1/3/2013	AA-1-031513 3/15/2013	AA-1-060713 6/7/2013	AA-1-090613 9/6/2013	AA-1-100313 10/3/2013	AA-1-121313 12/13/13	AA-1-030714 03/07/14	AA-1-061314 6/13/2014	AA-1-091214 9/12/2014	AA-1-121914 12/19/2014
Ethanol	3.3	4.0	14	2.3	12	2.7	5.8	1.5	4.1	7.4	5.2	2.7	1.2	6.1	6.7	6.7	5.4	9.0	17.0	2.9	2.7
Ethyl acetate	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.46	0.56	0.43	0.67	0.35	1.1	0.56	17	0.12 U	0.13 U	0.18	0.13 U	0.17	0.13 U
Ethylbenzene	0.22 U	0.82	1.4	0.22 U	1.1	0.22 U	0.22 U	0.31	0.13 U	0.065	0.19	0.15 U	0.12	0.16	0.15 U	0.21	0.15 U	0.16	0.44	0.047 J	0.046 J
Hexachlorobutadiene	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.32 U	0.32 U	0.32 U	0.37 U	0.37 U	0.37 U	0.37 U	0.36 U	0.37 U	0.37 U	0.37 U	0.21 U	0.37 U	
Hexane	0.51	0.37	1.2	0.35 U	3.3	0.88	7.0 U	0.47	0.54	1.3	0.67	1.4	1.3	1.8	2.3	0.81	0.32	0.44	1.2	0.19 J	0.39 J
Isopropyl alcohol	1.6	0.79	0.25 U	0.29	2.4	1.2 U	4.9 U	0.60	0.88	2.9 U	0.58	0.47	0.52	1.3	6.2	3.3 U	0.77	0.92	3.1	0.61 J	3.4 U
m,p-Xylene	0.43 U	2.2	3.7	0.43 U	3.3	0.43 U	0.43 U	0.41	0.17	0.18	0.64	0.30 U	0.34	0.58	0.21	0.53	0.30 U	0.42	1.4	0.14 J	0.11 J
Methyl methacrylate				0.20 U	0.48	0.20 U	0.20 U	0.12 U	0.12 U	0.12 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.082 U	0.14 U	
Methylene chloride	0.35 U	1.1	1.1	0.66	3.0	2.3	1.7 U	1.5	1.6	3.0	2.1	4.4	2.9	2.3	9.1	1.0	0.76	0.55	1.20	0.54 J	0.47 J
Methyl-t-butyl ether	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.11 U	0.11 U	0.11 U	0.13 U	0.13 U	0.13 U	0.13 U	0.12 U	0.13 U	0.13 U	0.13 U	0.072 U	0.13 U	
n-Heptane	0.20 U	0.20 U	0.91	0.20 U	0.95	0.20 U	0.20 U	0.12	0.089	0.11	0.18	0.14 U	0.12	0.21	0.15	0.18	0.14 U	0.21	0.62	0.054 J	0.14 U
o-Xylene	0.22 U	0.46	1.2	0.22 U	1.1	0.22 U	0.22 U	0.22	0.086	0.078	0.31	0.15 U	0.12	0.20	0.15 U	0.24	0.15 U	0.17	0.5	0.054 J	0.046 J
Propylene (Propene)	0.87 U	0.87 U	1.9	0.86 U	0.86 U	0.86 U	3.4 U	2.1 U	2.1 U	0.77	1.3	2.4 U	2.4 U	2.4 U	2.3 U	2.4 U	2.4 U	2.4 U	1.3	1.4 U	2.4 U
Styrene	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.37	0.13 U	0.10	0.13	0.15 U	0.039	0.15 U	0.15 U	0.052	0.15 U	0.15 U	0.16	0.085 U	0.15 U
Tetrachloroethene	0.34 U	0.34 U	0.49	0.34 U	5.3	0.34 U	0.34 U	0.73	0.10 U	0.20 U	0.87	0.24 U	0.90	0.24 U	0.24 U	0.30	0.24 U	0.40	0.07	0.09 J	
Tetrahydrofuran	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.057	0.088 U	0.088 U	0.43	0.10 U	0.10 U	0.10 U	1.4	0.10 U	0.10 U	0.23	0.10 U	0.059 U	0.1 U
Toluene	0.63	0.57	10	0.19 U	5.3	0.52	0.47	0.56	0.37	0.42	0.81	0.48	0.74	1.2	1.4	1.3	0.35	1.2	2.6	0.33	0.35
trans-1,2-Dichloroethene	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.12	0.059 U	0.12 U	0.14 U	0.14 U	0.14 U	0.14 U	0.13 U	0.14 U	0.14 U	0.14 U	0.04 U	0.14 U	
trans-1,3-Dichloropropene	0.22 U	0.22 U	0.22 U	0.23 U	0.23 U	0.23 U	0.23 U	0.14 U	0.068 U	0.14 U	0.16 U	0.16 U	0.16 U	0.16 U	0.15 U	0.16 U	0.16 U	0.16 U	0.045 U	0.16 U	
Trichloroethene	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.67	0.081 U	0.045	0.091	0.19 U	0.26	0.19 U	0.19 U	0.11	0.19 U	0.19 U	0.19 U	0.052 J	0.19 U
Trichlorofluoromethane	1.4	1.3	11	1.2	1.7	1.5	1.5	1.7	1.1	1.7	1.5	1.5	1.3	1.8	11	3.3	1.5	1.1	1.4	1.3	1.3
Trichlorotrifluoroethane	0.58	0.56	0.44	0.56	0.66	0.69	0.58	0.89	0.43	0.53	0.59	0.58	0.66	1.0	0.60	0.55	0.55	0.46	0.54	0.57	0.63
Vinyl acetate	0.18 U	0.18 U	0.36 U	0.35 U	0.18 U	3.5 U	0.18 U	0.11 U	0.21 U	0.21 U	0.25 U	0.25 U	0.25 U	2.5 U	2.5 U	2.4 U	2.5 U	2.5 U	1.4 U	2.5 U	
Vinyl chloride	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.077 U	0.038 U	0.077 U	0.090 U	0.090 U	0.090 U	0.090 U	0.090 U	0.087 U	0.090 U	0.090 U	0.026 U	0.09 U	

Table 3.
Summary of Analytical Results - Air Sampling for Large Retail Space
Former Gorham Manufacturing Site
Providence, Rhode Island

Parameter (ug/m³)	Outdoor Air Reference Locations				Extraction Well - Large Retail Space																	
	AA-01-032715 3/27/2015	AA-1-061115 6/11/2015	AA-1-091615 9/16/2015	AA-1-121815 12/18/2015	EW-Combined-D-020309 2/3/2009	EW-COMBINE D-021109 2/11/2009	EW-COMBINE D-021809 2/18/2009	EW-COMBINE D-022609 2/26/2009	EW-COMBINE D-041409 4/14/2009	EW-COMBINE D-042409 4/24/2009	EW-COMBINE D-091709 9/17/2009	EW-COMBINE D-092409 9/24/2009	EW-COMBINE D-100109 10/1/2009	EW-COMBINE D-100809 10/8/2009	EW-COMBINE D-012810 1/28/2010	EW-COMBINE D-020510 2/5/2010	EW-COMBINE D-021210 2/12/2010	EW-COMBINED-021910 2/19/2010	EW-COMBINE D-043010 4/30/2010	EW-COMBINE D-052810 5/28/2010	EW-COMBINE D-070110 7/1/2010	
1,1,1-Trichloroethane	0.19 U	0.19 U	0.073 J	0.19 U	190000	91000	73000	32000	3500	19000	11000	8100	7900	6800	1500	2500	150	1200	1400	1700	2000	
1,1,1,2-Tetrachloroethane	0.44 U	0.44 U	0.44 U	0.44 U																		
1,1,2,2-Tetrachloroethane	0.24 U	0.24 U	0.24 U	0.24 U	6.8 U	6.8 U	14 U	14 U	6.8 U	0.34 U	3.4 U	6.8 U	14 U	14 U	0.68 U	6.8 U	0.34 U	0.68 U	0.68 U	0.68 U	0.68 U	
1,1,2-Trichloroethane	0.19 U	0.19 U	0.19 U	0.19 U	5.4 U	5.4 U	11 U	11 U	5.4 U	0.65	2.7 U	5.4 U	11 U	11 U	0.54 U	5.4 U	0.27 U	0.54 U	0.54 U	0.54 U	0.54 U	
1,1-Dichloroethane	0.14 U	0.14 U	0.14 U	0.14 U	19000	7800	5300	4800	390	2200	1600	1900	1900	1700	280	370	31	310	200	270	290	
1,1-Dichloroethene	0.14 U	0.14 U	0.14 U	0.14 U	7800	1800	1000	630	73	420	310	250	260	280	52	66	7.3	62	30	40	52	
1,2,4-Trichlorobenzene	0.26 U	0.26 U	0.26 U	0.26 U	7.4 U	7.4 U	15 U	15 U	7.4 U	0.37 U	3.7 U	7.4 U	15 U	15 U	0.74 U	7.4 U	0.37 U	0.74 U	0.74 U	0.74 U	0.74 U	
1,2,4-Trimethylbenzene	0.2	0.059 J	0.29	0.31	5.0 U	5.0 U	10 U	10 U	5.0 U	0.25 U	2.5 U	5.0 U	10 U	10 U	0.50 U	5.0 U	0.25 U	0.50 U	0.50 U	0.50 U	0.50 U	
1,2-Dibromoethane (EDB)	0.27 U	0.27 U	0.27 U	0.27 U	7.6 U	7.6 U	16 U	16 U	7.6 U	0.38 U	3.8 U	7.6 U	16 U	16 U	0.76 U	7.6 U	0.38 U	0.76 U	0.76 U	0.76 U	0.76 U	
1,2-Dichlorobenzene	0.21 U	0.21 U	0.21 U	0.21 U	6.0 U	6.0 U	12 U	12 U	6.0 U	0.30 U	3.0 U	6.0 U	12 U	12 U	0.60 U	6.0 U	0.30 U	0.60 U	0.60 U	0.60 U	0.60 U	
1,2-Dichloroethane	0.14 U	0.054 J	0.14 U	0.14 U	4.0 U	4.0 U	8.0 U	8.0 U	4.0 U	0.20 U	2.0 U	4.0 U	8.0 U	8.0 U	0.40 U	4.0 U	0.20 U	0.40 U	0.40 U	0.40 U	0.40 U	
1,2-Dichloropropane	0.16 U	0.16 U	0.16 U	0.16 U	4.6 U	4.6 U	9.2 U	9.2 U	4.6 U	0.23 U	2.3 U	4.6 U	9.2 U	9.2 U	0.46 U	4.6 U	0.23 U	0.46 U	0.46 U	0.46 U	0.46 U	
1,2-Dichlortetrafluoroethane					0.25 U	7.0 U	7.0 U	14 U	14 U	7.0 U	0.35 U	3.5 U	7.0 U	14 U	14 U	0.70 U	7.0 U	0.35 U	0.70 U	0.70 U	0.70 U	0.70 U
1,3,5-Trimethylbenzene	0.062 J	0.17 U	0.076 J	0.17 U	5.0 U	5.0 U	10 U	10 U	5.0 U	0.25 U	2.5 U	5.0 U	10 U	10 U	0.50 U	5.0 U	0.25 U	0.50 U	0.50 U	0.50 U	0.50 U	
1,3-Butadiene	0.078 U	0.078 U	0.18	0.23	2.2 U	2.2 U	4.4 U	4.4 U	2.2 U	0.11 U	2.3 U	4.5 U	8.9 U	8.9 U	0.45 U	4.5 U	0.23 U	0.45 U	0.45 U	0.45 U	0.22 U	
1,3-Dichlorobenzene	0.21 U	0.21 U	0.21 U	0.21 U	6.0 U	6.0 U	12 U	12 U	6.0 U	0.30 U	3.0 U	6.0 U	12 U	12 U	0.60 U	6.0 U	0.30 U	0.60 U	0.60 U	0.60 U	0.60 U	
1,4-Dichlorobenzene	0.21 U	0.21 U	0.21 U	0.21 U	6.0 U	6.0 U	12 U	12 U	6.0 U	0.30 U	3.0 U	6.0 U	12 U	12 U	0.60 U	6.0 U	0.30 U	0.60 U	0.60 U	0.60 U	0.60 U	
1,4-Dioxane					1.3 U																	
2-Butanone	0.96 J	2.1 J	1 J	2 J	37	32	48	60	21	40	7.8	31	30	21	4.0	11	10	9.0	12	22	22	
2-Hexanone	0.17	0.17	0.14 U	0.14 U	4.0 U	4.0 U	8.0 U	8.0 U	4.0 U	0.50	2.0 U	4.0 U	8.0 U	8.0 U	0.40 U	4.0 U	0.20 U	0.40 U	0.40 U	0.40 U	0.40 U	
4-Ethyltoluene	0.079 J	0.17 U	0.093 J	0.17 U	5.0 U	5.0 U	10 U	10 U	5.0 U	0.25 U	2.5 U	5.0 U	10 U	10 U	0.50 U	5.0 U	0.25 U	0.50 U	0.50 U	0.50 U	0.50 U	
4-Methyl-2-pentanone	0.092 J	0.14 U	0.14 U	0.14 U	4.0 U	4.0 U	8.0 U	8.0 U	4.0 U	0.59	2.0 U	4.0 U	8.0 U	8.0 U	0.40 U	4.0 U	0.28	0.40 U	0.40 U	0.40 U	0.40 U	
Acetone	8.7	10	13	18	1600	31	75	63	4.8 U	0.24 U	20	9.6 U	20 U	20 U	31	9.6 U	13	0.96 U	16	24	16	
Benzene	0.7	0.41	0.82	1.4	14	7.3	8.4	6.4 U	3.2 U	2.5	2.7	3.2 U	6.4 U	6.4 U	0.61	3.2 U	0.63	0.43	0.74	5.5	0.84	
Benzyl chloride	0.18 U	0.18 U	0.18 U	0.18 U	5.2 U	5.2 U	11 U	11 U	5.2 U	0.26 U	2.6 U	5.2 U	11 U	11 U	0.52 U	5.2 U	0.26 U	0.52 U	0.52 U	0.52 U	0.52 U	
Bromodichloromethane	0.24 U	0.24 U	0.24 U	0.24 U	6.6 U	6.6 U	14 U	14 U	6.6 U	0.33 U	3.3 U	6.6 U	14 U	14 U	0.66 U	6.6 U	0.33 U	0.66 U	0.66 U	0.66 U	0.66 U	
Bromoform	0.36 U	0.36 U	0.36 U	0.36 U	11 U	11 U	21 U	21 U	11 U	0.51 U	5.1 U	11 U	21 U	21 U	1.1 U	11 U	0.51 U	1.1 U	1.1 U	1.1 U	1.1 U	
Bromomethane	0.14 U	0.14 U	0.14 U	0.14 U	3.8 U	3.8 U	7.6 U	7.6 U	3.8 U	0.19 U	1.9 U	3.8 U	7.6 U	7.6 U	0.38 U	3.8 U	0.19 U	0.38 U	0.38 U	0.38 U	0.38 U	
Carbon disulfide	0.057 J	1.1 U	0.09 J	1.1 U	3.2 U	63	32	20	3.2 U	4.6	1.6 U	3.2 U	6.4 U	6.4 U	4.3	3.2 U	0.17	3.8	0.77	3.2 U	1.1	
Carbon tetrachloride	0.34	0.36	0.43	0.55	6.2 U	6.2 U	13 U	13 U	6.2 U	0.57	3.1 U	6.2 U	13 U	13 U	0.62 U	6.2 U	0.38	0.62 U				

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Parameter (ug/m ³)	Outdoor Air Reference Locations				Extraction Well - Large Retail Space																	
	AA-01-032715 3/27/2015	AA-061115 6/11/2015	AA-091615 9/16/2015	AA-121815 12/18/2015	EW-Combined-D-020309 2/3/2009	EW-COMBINE D-021109 2/11/2009	EW-COMBINE D-021809 2/18/2009	EW-COMBINE D-022609 2/26/2009	EW-COMBINE D-041409 4/14/2009	EW-COMBINE D-042409 4/24/2009	EW-COMBINE D-091709 9/17/2009	EW-COMBINE D-092409 9/24/2009	EW-COMBINE D-100109 10/1/2009	EW-COMBINE D-100809 10/8/2009	EW-COMBINE D-012810 1/28/2010	EW-COMBINE D-020510 2/5/2010	EW-COMBINE D-021210 2/12/2010	EW-COMBINED-D-021910 2/19/2010	EW-COMBINE D-043010 4/30/2010	EW-COMBINE D-052810 5/28/2010	EW-COMBINE D-070110 7/1/2010	
Ethanol	2 J	5	12	7.3	960	81	120	120	17	21	200	96	32	33	39	60	23	62	10	19 U	15	
Ethyl acetate	0.27	0.13 U	0.68	0.14	7.3 U	3.6 U	7.2 U	15 U	7.3 U	0.37 U	1.8 U	3.6 U	7.2 U	7.2 U	0.36 U	3.6 U	0.18 U	0.36 U	0.36 U	3.6 U	0.36 U	
Ethylbenzene	0.19	0.1 J	0.37	0.46	9.4	4.4 U	8.8 U	8.8 U	4.4 U	0.22 U	2.2 U	4.4 U	8.8 U	8.8 U	0.44 U	4.4 U	0.22 U	0.44 U	0.44 U	4.4 U	0.44 U	
Hexachlorobutadiene	0.37 U	0.37 U	0.37 U	0.37 U	22 U	22 U	43 U	43 U	22 U	1.1 U	5.3 U	11 U	22 U	22 U	1.1 U	11 U	0.53 U	1.1 U	1.1 U	11 U	1.1 U	
Hexane	5.1	0.29 J	1 J	0.64 J	16	4.9	270	7.2 U	3.6 U	2.3	1.9	3.6 U	7.2 U	7.2 U	0.36 U	3.6 U	0.74	0.36 U	0.92	3.6 U	0.44	
Isopropyl alcohol	0.65 J	0.44 J	2.7 J	0.68 J	610	2.4 U	15	9.9 U	5.0 U	0.25 U	22	5.0 U	9.9 U	9.9 U	2.3	5.0 U	1.0	0.50 U	2.6	2.4 U	0.24 U	
m,p-Xylene	0.66	0.24 J	1.2	2	25	8.6 U	18 U	18 U	8.6 U	0.43 U	4.3 U	8.6 U	18 U	18 U	0.86 U	8.6 U	0.49	0.86 U	0.86 U	8.6 U	0.86 U	
Methyl methacrylate	0.14 U		0.14 U																			
Methylene chloride	0.44 J	0.47 J	0.48 J	0.54 J	12	7.0 U	14 U	14 U	19	2.6	7.0 U	14 U	28 U	28 U	1.4 U	14 U	2.6	1.4 U	1.4 U	7.0 U	2.10	
Methyl-t-butyl ether	0.13 U	0.13 U	0.13 U	0.13 U	3.6 U	3.6 U	7.2 U	7.2 U	3.6 U	0.18 U	1.8 U	3.6 U	7.2 U	7.2 U	0.36 U	3.6 U	0.18 U	0.36 U	0.36 U	3.6 U	0.36 U	
n-Heptane	0.19	0.14 U	0.39	0.49	4.0 U	4.0 U	8.0 U	8.0 U	4.0 U	0.20 U	2.0 U	4.0 U	8.0 U	8.0 U	0.40 U	4.0 U	0.20 U	0.40 U	0.40 U	4.0 U	0.40 U	
o-Xylene	0.25	0.11 J	0.40	0.59	8.4	4.4 U	8.8 U	8.8 U	4.4 U	0.22 U	2.2 U	4.4 U	8.8 U	8.8 U	0.44 U	4.4 U	0.22 U	0.44 U	0.44 U	4.4 U	0.44 U	
Propylene (Propene)	2.4 U	2.4 U	2.4 U	2.4 U	3.5 U	100	3.6 U	6.9 U	3.5 U	0.18 U	3.5 U	6.9 U	6.9 U	14 U	0.69 U	6.9 U	0.35 U	0.69 U	0.69 U	18 U	1.8 U	
Styrene	0.15 U	0.15 U	0.12 J	0.15 U	4.2 U	4.2 U	8.4 U	8.4 U	4.2 U	0.21 U	2.1 U	4.2 U	8.4 U	8.4 U	0.42 U	4.2 U	0.21 U	0.42 U	0.42 U	4.2 U	0.42 U	
Tetrachloroethene	0.22 J	0.29	0.35	0.61	140	60	430	540	47	110	110	260	67	72	4.6	200	4.8	45	450	1300	640	
Tetrahydrofuran	0.1 U	0.1 U	0.1 U	0.1 U	77	77	150	180	66	110	1.5 U	96	85	67	15	32	28	43	34	54	65	
Toluene	1.3	0.51	2.9	3.2	36	3.8 U	7.6 U	7.6 U	3.8 U	0.59	3.4	4.7	7.6 U	7.6 U	0.38 U	3.8 U	3.6	0.38 U	0.75	3.8 U	0.41	
trans-1,2-Dichloroethene	0.14 U	0.14 U	0.14 U	0.14 U	110	61	47	47	4.6	33	29	34	30	26	3.4	4.6	0.36	4.1	3	4.6	5.5	
trans-1,3-Dichloropropene	0.064 J	0.16 U	0.16 U	0.16 U	4.4 U	4.4 U	8.8 U	8.8 U	4.4 U	0.22 U	2.2 U	4.4 U	8.8 U	8.8 U	0.44 U	4.4 U	0.22 U	0.44 U	0.44 U	4.4 U	0.44 U	
Trichloroethene	0.19 U	0.19 U	1.1	0.19 U	36000	17000	26000	13000	1400	6200	4000	3600	4000	4300	390	1400	58	460	1200	2000	1700	
Trichlorofluoromethane	1.1	1.5	1.2	1.7	9900	2300	1800	1000	98	600	1800	1400	1500	1500	260	230	29	230	210	300	440	
Trichlorotrifluoroethane	0.49 J	0.65 J	0.57 J	0.6 J	7.6 U	7.6 U	16 U	16 U	7.6 U	0.74	3.8 U	7.6 U	16 U	16 U	0.76 U	7.6 U	0.53	0.76 U	0.76 U	7.6 U	0.76 U	
Vinyl acetate	2.5 U	2.5 U	2.5 U	2.5 U	15 U	3.6 U	7.2 U	29 U	15 U	0.71 U	7.1 U	15 U	29 U	29 U	1.5 U	15 U	0.71 U	1.5 U	1.5 U	3.6 U	0.36 U	
Vinyl chloride	0.09 U	0.09 U	0.09 U	0.09 U	110	20	10	5.2 U	2.6 U	3.4	1.3 U	2.6 U	5.2 U	5.2 U	0.26 U	2.6 U	0.13 U	0.26 U	0.26 U	2.6 U	0.26 U	

Table 3.
Summary of Analytical Results - Air Sampling for Large Retail Space
Former Gorham Manufacturing Site
Providence, Rhode Island

Parameter (ug/m ³)	Extraction Well - Large Retail Space																				
	EW-COMBINE D-091610 9/16/2010	EW-COMBINE D-120710 12/7/2010	EW-COMBINE D-021711 2/17/2011	EW-COMBINE D 091511 9/15/2011	EW-Combined-120811 12/8/2011	EW-Combined-030812 3/8/2012	EW-Combined-061412 6/14/2012	EW-Combined-091312 9/13/2012	EW-Combined-010313 1/13/2013	EW-Combined-031513 3/15/2013	EW-Combined-060713 6/7/2013	EW-Combined-090613 9/6/2013	EW-Combined-121313 12/13/13	EW-Combined-030714 03/07/14	EW-Combined-061314 6/13/2014	EW-Combined-091214 9/12/2014	EW-Combined-121914 12/19/2014	EW-Combined-032715 3/27/2015	EW-Combined-061115 6/11/2015	EW-Combined-091615 9/16/2015	EW-Combined-121815 12/18/2015
1,1,1-Trichloroethane	4700	280	2500	2400	340	1100	1800	2800	1800	610	850	1900	1500	780	770	1300	420	500	1200	3400 E	1600
1,1,1,2-Tetrachloroethane					2.5 U		12 U	1.2 U	1.2 U	1.2 U	1.2 U	0.44 U	1.2 U	1.2 U	1.2 U	2.5 U	1.2 U	1.2 U	1.2 U	2.5 U	
1,1,2,2-Tetrachloroethane	0.68 U	0.69 U	0.69 U	1.4 U	0.69 U	3.4 U	0.69 U	0.24 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	1.4 U				
1,1,2-Trichloroethane	0.55	0.55 U	0.55 U	1.1 U	0.55 U	2.7 U	0.55 U	0.26	0.55 U	0.55 U	0.19 U	0.55 U	0.55 U	0.55 U	0.55 U	1.1 U	0.55 U	0.55 U	0.28 J	1.1 U	1.1 U
1,1-Dichloroethane	330	36	170	200	70	78	130	200	99	59	68	150	62	53	68	130	55	49	100	190	69
1,1-Dichloroethene	81	7.3	58	44	21	34	42	15	28	24	38	56	24	27	40	52	14	22	46	160	21
1,2,4-Trichlorobenzene	0.74 U	0.74 U	0.74 U	3.0 U	1.5 U	3800	1.5 U	1.5 U	1.5 U	0.74 U	0.26 U	0.74 U	0.74 U	0.74 U	0.74 U	0.74 U	0.74 U	0.74 U	0.74 U	0.74 U	1.5 U
1,2,4-Trimethylbenzene	0.50 U	0.49 U	0.49 U	0.98 U	1.2	4.9 U	0.57	0.24	0.49 U	14	0.49 U	0.21	0.49 U	0.49 U	0.49 U	0.98 U	0.49 U	0.49 U	0.49 U	0.98 U	0.98 U
1,2-Dibromoethane (EDB)	0.76 U	0.77 U	0.77 U	1.5 U	0.77 U	3.8 U	0.77 U	0.77 U	0.77 U	0.77 U	0.27 U	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U	1.5 U
1,2-Dichlorobenzene	0.60 U	0.60 U	0.60 U	1.2 U	0.60 U	7.3	0.60 U	0.60 U	0.60 U	0.60 U	0.21 U	0.60 U	0.60 U	0.60 U	0.60 U	1.2 U	0.6 U	0.6 U	0.6 U	1.2 U	1.2 U
1,2-Dichloroethane	0.40 U	0.40 U	0.40 U	0.81 U	0.40 U	2.0 U	0.40 U	0.40 U	0.40 U	0.40 U	0.14 U	0.40 U	0.40 U	0.40 U	0.40 U	0.4 U	0.4 U	0.4 U	0.4 U	0.81 U	0.81 U
1,2-Dichloropropane	0.46 U	0.46 U	0.46 U	0.92 U	0.46 U	2.3 U	0.46 U	0.46 U	0.46 U	0.46 U	0.16 U	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U	0.92 U
1,2-Dichlorotetrafluoroethane	0.70 U																				1.4 U
1,3,5-Trimethylbenzene	0.50 U	0.49 U	0.49 U	0.98 U	0.29	4.9 U	0.15	0.49 U	0.49 U	3.9	0.49 U	0.17 U	0.49 U	0.49 U	0.49 U	0.98 U	0.49 U	0.49 U	0.49 U	0.98 U	0.98 U
1,3-Butadiene	0.22 U	0.22 U	0.22 U	0.44 U	0.22 U	2.2 U	0.22 U	0.22 U	0.22 U	0.22 U	0.078 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.44 U
1,3-Dichlorobenzene	0.60 U	0.60 U	0.60 U	1.2 U	0.60 U	6.0 U	0.60 U	0.60 U	0.60 U	1.1	0.60 U	0.21 U	0.60 U	0.60 U	0.60 U	1.2 U	0.6 U	0.6 U	0.6 U	1.2 U	1.2 U
1,4-Dichlorobenzene	0.60 U	0.60 U	0.60 U	1.2 U	0.60 U	6.0 U	0.60 U	0.60 U	0.60 U	0.64	0.60 U	0.21 U	0.60 U	0.60 U	0.60 U	1.2 U	0.6 U	0.6 U	0.6 U	1.2 U	1.2 U
1,4-Dioxane						0.72 U															7.2 U
2-Butanone	10	4.5	4.5 B	24 U	1.3	120 U	110	16	2.9	22	5.3	7.6	0.97	2.5	5.1	3.3 J	1.4 J	1.2 J	1.2 J	1.3 J	1.5 J
2-Hexanone	0.40 U	0.41 U	0.41 U	0.82 U	0.16	4.1 U	0.31	0.41 U	0.41 U	1.4	0.41 U	0.26	0.41 U	0.41 U	0.41 U	0.82 U	0.41 U	0.41 U	0.41 U	0.82 U	0.82 U
4-Ethyltoluene	0.50 U	0.49 U	0.49 U	0.98 U	0.27	4.9 U	0.49 U	0.49 U	0.49 U	3.4	0.49 U	0.17 U	0.49 U	0.49 U	0.49 U	0.98 U	0.49 U	0.49 U	0.49 U	0.98 U	0.98 U
4-Methyl-2-pentanone	0.40 U	0.41 U	0.41 U	0.82 U	0.16	4.1 U	0.38	0.41 U	0.41 U	8.7	0.41 U	0.14 U	0.41 U	0.41 U	0.41 U	0.82 U	0.41 U	0.13 J	0.41 U	0.82 U	0.82 U
Acetone	6.6	11 B	6.3 B	19 U	6.6	22	19	14	10	75	12	11	6.6	15	9.8	19 U	6.2 J	6.1 J	9.5 U	12 J	6.7 J
Benzene	1.7	0.5	0.72	0.77	0.56	3.2 U	1.0	0.96	0.45	5.0	0.32 U	0.82	0.32 U	0.63	0.66	0.35 J	0.33	0.39	0.36	0.55 J	0.69
Benzyl chloride	0.52 U	0.52 U	0.52 U	1.0 U	0.52 U	5.2 U	0.52 U	0.52 U	0.52 U	0.52 U	0.18 U	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U	1 U
Bromodichloromethane	0.66 U	0.67 U	0.67 U	1.3 U	0.67 U	3.4 U	10	0.67 U	0.67 U	0.67 U	0.67 U	0.24 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	1.3 U
Bromoform	1.1 U	1.0 U	1.0 U	2.1 U	1.0 U	10 U	1.0 U	1.0 U	1.0 U	1.0 U	0.36 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U	2.1 U	1 U	1 U	1 U	2.1 U
Bromomethane	0.38 U	0.39 U	0.39 U	0.78 U	0.39 U	3.9 U	0.39 U	0.39 U	0.39 U	0.39 U	0.14 U	0.39 U	0.39 U	0.39 U	0.39 U	0.78 U	0.39 U	0.39 U	0.39 U	0.78 U	0.78 U
Carbon disulfide	1.3	0.31 U	0.73	6.2 U	3.1 U	31 U	1.7	3.6	0.43	0.82	3.1 U	0.73	3.1 U	3.1 U	0.40	0.52 J	0.33 J	0.24 J	0.37 J	1 J	6.2 U
Carbon tetrachloride	1.1	0.63 U	0.63	1.3 U	0.48	3.1 U	0.50	0.74	0.63 U	0.63 U	0.68	0.63 U	0.63 U	0.63 U	0.58 J	0.4 J	0.28 J	0.49 J	0.75 J	1.3 U	
Chlorobenzene	0.46 U	0.46 U</																			

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Former Gorham Manufacturing Site
Providence, Rhode Island

Parameter (ug/m ³)	Extraction Well - Large Retail Space																				
	EW-COMBINE D-091610 9/16/2010	EW-COMBINE D-120710 12/7/2010	EW-COMBINE D-021711 2/17/2011	EW-COMBINE D 091511 9/15/2011	EW-Combined-120811 12/8/2011	EW-Combined-030812 3/8/2012	EW-Combined-061412 6/14/2012	EW-Combined-091312 9/13/2012	EW-Combined-010313 1/13/2013	EW-Combined-031513 3/15/2013	EW-Combined-060713 6/7/2013	EW-Combined-090613 9/6/2013	EW-Combined-121313 12/13/13	EW-Combined-030714 03/07/14	EW-Combined-061314 6/13/2014	EW-Combined-091214 9/12/2014	EW-Combined-121914 12/19/2014	EW-Combined-032715 3/27/2015	EW-Combined-061115 6/11/2015	EW-Combined-091615 9/16/2015	EW-Combined-121815 12/18/2015
Ethanol	1.9 U	8.2	17	15 U	9.2	75 U	7.2	12	19	320	34	30	11	38	41	15	12	5.2 J	5.1 J	20	18
Ethyl acetate	0.36 U	0.36 U	0.36 U	0.72 U	1.2	3.6 U	1.3	0.36 U	0.36 U	110	0.36 U	0.13 U	1.8	1.8	0.36 U	0.72 U	0.36 U	11	1.3	0.72 U	0.72 U
Ethylbenzene	0.58	0.43 U	0.43 U	0.87 U	0.58	4.3 U	0.28	0.21	0.43 U	13	0.43 U	0.20	0.43 U	0.43 U	0.43 U	0.87 U	0.43 U	0.43 U	0.43 U	0.87 U	0.87 U
Hexachlorobutadiene	1.1 U	1.1 U	1.1 U	2.1 U	1.1 U	11 U	1.1 U	1.1 U	1.1 U	1.1 U	0.37 U	1.1 U	1.1 U	1.1 U	2.1 U	1.1 U	1.1 U	1.1 U	2.1 U	2.1 U	2.1 U
Hexane	0.71 U	0.7 U	0.8	28 U	0.66	140 U	0.91	1.5	0.53	6.8	14 U	2.2	1.2	0.80	14 U	28 U	14 U	7.9 J	14 U	1.6 J	28 U
Isopropyl alcohol	0.50 U	0.84	0.25 U	20 U	9.8 U	98 U	3.1	2.9	9.8 U	27	9.8 U	3.4 U	3.0	1.6	1.6	2.7 J	9.8 U	9.8 U	3.8 J	3.7 J	20 U
m,p-Xylene	1.6	0.87 U	0.87 J	1.7 U	1.6	8.7 U	0.51	0.59	0.87 U	34	0.87 U	0.40	0.87 U	0.57	0.95	1.7 U	0.25 J	0.87 U	0.87 U	1.7 U	1.7 U
Methyl methacrylate		0.41 U	0.82 U	0.41 U	4.1 U	0.41 U	0.41 U	0.41 U	0.41 U	3.5	0.41 U	0.14 U	0.41 U	0.41 U	0.41 U	0.82 U	0.41 U	0.41 U		0.82 U	
Methylene chloride	0.90	0.78	2.9	6.9 U	2.2	8.1	2.3	2.2	2.2	2.4	1.3	4.6	2.1	1.7	1.1	1.4 J	3.5 U	3.5 U	3.5 U	5.3 J	6.9 U
Methyl-t-butyl ether	0.36 U	0.36 U	0.36 U	0.72 U	0.24	3.6 U	1.1	0.17	0.36 U	0.36 U	0.36 U	0.17	0.36 U	0.36 U	0.36 U	0.72 U	0.36 U	0.2 J	0.2 J	0.72 U	0.72 U
n-Heptane	0.40 U	0.41 U	0.41 U	0.82 U	0.23	4.1 U	0.41 U	0.41 U	0.41 U	4.4	0.41 U	0.14 U	0.41 U	0.41 U	0.41 U	0.82 U	0.41 U	0.41 U	0.41 U	0.82 U	0.82 U
o-Xylene	0.56	0.43 U	0.43 U	0.87 U	0.69	4.3 U	0.28	0.25	0.43 U	16	0.43 U	0.20	0.43 U	0.43 U	0.43 U	0.87 U	0.43 U	0.43 U	0.43 U	0.87 U	0.87 U
Propylene (Propene)	0.69 U	1.8	1.7 U	14 U	6.9 U	13	3.8	6.9 U	6.9 U	6.9 U	2.4 U	6.9 U	6.9 U	6.9 U	14 U	6.9 U	1.6 J	6.9 U	14 U	14 U	14 U
Styrene	0.42 U	0.43 U	0.43 U	0.85 U	0.21	4.3 U	0.54	0.39	0.43 U	14	0.43 U	0.15 U	0.43 U	0.43 U	0.43 U	0.85 U	0.43 U	0.43 U	0.43 U	0.85 U	0.85 U
Tetrachloroethene	750	160	920	440	8.1	170	530	910	850	60	23	250	7.0	260	82	230	100	400	1400	63	86
Tetrahydrofuran	31	11	11	21	0.27	8.3	3800	110	1.8	4.1	7.2	10	0.79	1.7	4.7	2.9	0.85	1.2	0.65	0.59 U	0.59 U
Toluene	3.5	0.38	1.4	0.75 U	2.5	3.8 U	1.4	0.87	0.38 U	74	0.57	0.67	0.38 U	1.1	1.8	0.75 U	0.43	0.2 J	0.15 J	1.2	1.3
trans-1,2-Dichloroethene	6.6	0.6	1.9	3.5	1.1	2.0 U	1.7	1.9	1	0.86	0.62	2.6	0.40 U	1	1	1	1	1	1.1	0.97	0.79 U
trans-1,3-Dichloropropene	0.44 U	0.45 U	0.45 U	0.91 U	0.45 U	2.3 U	0.45 U	0.16 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.91 U	0.91 U				
Trichloroethene	3200	240	1800	1900	97	730	1500	2600	2000	380	280	1200	160	560	560	800	480	490	1300	1200 E	880
Trichlorofluoromethane	410	71	200	610	200	150	260	100	230	130	140	410	200	98	160	360	200	80	170	340	230
Trichlorotrifluoroethane	0.76 U	0.77 U	0.77 U	1.5 U	0.89	3.8 U	0.77 U	0.37	0.77 U	0.92	1.4	1.3	0.77 U	0.77 U	0.86 J	0.89	0.54 J	0.89 J	0.89 J	6.1 U	
Vinyl acetate	0.71 U	0.7 U	0.35 U	0.70 U	0.35 U	7.0 U	1.4	0.70 U	0.70 U	0.70 U	7.0 U	2.5 U	7.0 U	7.0 U	14 U	7 U	7 U	7 U	14 U	14 U	
Vinyl chloride	0.40	0.26 U	0.26 U	0.51 U	0.26 U	1.3 U	0.26 U	0.090 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.51	0.51					

Table 3.
Summary of Analytical Results - Air Sampling for Large Retail Space
Former Gorham Manufacturing Site
Providence, Rhode Island

Parameter (ug/m ³)	Extraction Well - Large Retail Space		Extraction Well - Large Retail Space					Post Treatment - Large Retail Space							CT IACTIND 2003 (ug/m ³)	Indoor Air - Large Retail Space							
	EW-1-030609 3/6/2009	EW-1-033109 3/31/2009	EW-2-030609 3/6/2009	EW-2-033109 3/31/2009	EW-3-030609 3/6/2009	EW-3-033109 3/31/2009	EW-4-030609 3/6/2009	EW-4-033109 3/31/2009	Post-carbon-020309 2/3/2009	POST CARBON-021109 2/11/2009	POST CARBON-021809 2/18/2009	POST CARBON-022609 2/26/2009	POST CARBON-041409 4/14/2009	POST CARBON-100809 10/8/2009	Post-Carbon-010810 1/8/2010	IA-1 011609 1/16/2009	IA-1 020309 2/3/2009	IA-1 021109 2/11/2009	IA-1 021809 2/18/2009	IA-1 022609 2/26/2009	IA-1 030609 3/6/2009		
1,1,1-Trichloroethane	59000	66000	26000	30000	54000	72000	11000	14000	1.0	15	45	1.9	13000	0.56	450	500	10	0.56	1.1	0.99	0.35	1.8	
1,1,1,2-Tetrachloroethane																							
1,1,2,2-Tetrachloroethane	6.8 U	6.8 U	6.8 U	6.8 U	6.8 U	6.8 U	1.7 U	6.8 U	0.34 U	1.7 U	0.68 U	0.68 U	68 U	0.34 U	0.34 U	0.14	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	
1,1,2-Trichloroethane	6.4	10	5.4 U	5.4 U	5.4 U	5.4 U	1.4 U	5.4 U	0.27 U	1.4 U	0.54 U	0.54 U	54 U	0.27 U	0.27 U	12	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	
1,1-Dichloroethane	4100	4400	5700	7000	1600	2300	690	1400	0.20 U	1.0 U	5.4	11000	490	370	610	430	0.71	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.32
1,1-Dichloroethene	570	1200	330	640	340	560	97	210	0.20 U	1.0 U	0.40 U	6400	96	78	87	20	0.38	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
1,2,4-Trichlorobenzene	7.4 U	7.4 U	7.4 U	7.4 U	7.4 U	7.4 U	1.9 U	7.4 U	0.37 U	1.9 U	0.74 U	0.74 U	74 U	0.37 U	0.37 U	NA	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	
1,2,4-Trimethylbenzene	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	1.3 U	5.0 U	0.25 U	1.3 U	0.50 U	0.50 U	50 U	0.25 U	0.25 U	52	0.25 U	0.36	0.70	0.77	0.25 U	0.25 U	
1,2-Dibromoethane (EDB)	7.6 U	7.6 U	7.6 U	7.6 U	7.6 U	7.6 U	1.9 U	7.6 U	0.38 U	1.9 U	0.76 U	0.76 U	76 U	0.38 U	0.38 U	0.038	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	
1,2-Dichlorobenzene	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	1.5 U	6.0 U	0.30 U	1.5 U	0.60 U	0.60 U	60 U	0.30 U	0.30 U	410	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	
1,2-Dichloroethane	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	1.0 U	4.0 U	0.20 U	1.0 U	0.40 U	0.40 U	40 U	0.20 U	0.20 U	0.31	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	
1,2-Dichloropropane	4.6 U	4.6 U	4.6 U	4.6 U	4.6 U	4.6 U	1.2 U	4.6 U	0.23 U	1.2 U	0.46 U	0.46 U	46 U	0.23 U	0.23 U	0.42	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	
1,2-Dichlortetrafluoroethane	7.0 U	7.0 U	7.0 U	7.0 U	7.0 U	7.0 U	1.8 U	7.0 U	0.35 U	1.8 U	0.70 U	0.70 U	70 U	0.35 U	0.35 U	NA	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	
1,3,5-Trimethylbenzene	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	1.3 U	5.0 U	2.1	1.3 U	0.50 U	0.50 U	50 U	0.25 U	0.25 U	52	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	
1,3-Butadiene	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	0.55 U	2.2 U	0.11 U	0.55 U	0.22 U	0.22 U	22 U	0.23 U	0.23 U	NA	0.11 U	0.11 U	0.34	0.84	0.11 U	0.11 U	
1,3-Dichlorobenzene	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	1.5 U	6.0 U	2.9	1.5 U	0.60 U	0.60 U	60 U	0.30 U	0.30 U	410	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	
1,4-Dichlorobenzene	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	1.5 U	6.0 U	0.30 U	1.5 U	0.60 U	0.60 U	60 U	0.30 U	0.30 U	24	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	
1,4-Dioxane																							
2-Butanone	3.5	8.9	12	11	36	10	36	6.4	10	6.3	9.4	5.5	330	1.9	2.0	500	20	3.1	5.8	3.4	2.6	2.2	
2-Hexanone	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	1.0 U	4.0 U	0.20 U	1.0 U	0.40 U	0.40 U	13000	0.27	0.34	NA	0.20 U	0.20 U	0.60	0.42	0.20 U	0.23	
4-Ethyltoluene	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	1.3 U	5.0 U	2.1	1.3 U	0.50 U	0.50 U	50 U	0.25 U	0.25 U	NA	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	
4-Methyl-2-pentanone	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	1.0 U	4.0 U	5.0	1.0 U	0.40 U	0.40 U	40 U	0.20 U	0.20 U	200	0.20 U	0.20 U	0.43	0.30	0.20 U	0.20 U	
Acetone	35	16	9.6 U	9.6 U	53	24	26	12	1200	11	19	12	430	3.6	5.7	500	18	7.7	19	21	10	8.7	
Benzene	5.3	11.0	5.6	7.8	3.2 U	6.8	1.4	3.2 U	1.3	0.80 U	0.32 U	0.32 U	32 U	0.16 U	0.16 U	3.3	1.0	0.68	1.9	3.0	0.69	0.87	
Benzyl chloride	5.2 U	5.2 U	5.2 U	5.2 U	5.2 U	5.2 U	1.3 U	5.2 U	0.26 U	1.3 U	0.52 U	0.52 U	52 U	0.26 U	0.26 U	NA	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	
Bromodichloromethane	6.6 U	6.6 U	6.6 U	6.6 U	6.6 U	6.6 U	1.7 U	6.6 U	0.33 U	1.7 U	0.66 U	0.66 U	66 U	0.33 U	0.33 U	0.46	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	
Bromoform	11 U	11 U	11 U	11 U	11 U	11 U	2.6 U	11 U	0.51 U	2.6 U	1.1 U	1.1 U	110 U	0.51 U	0.51 U	7.3	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	
Bromomethane	3.8 U	3.8 U	3.8 U	3.8 U	3.8 U	3.8 U	0.95 U	3.8 U	0.19 U	0.95 U	0.38 U	0.38 U	38 U	0.19 U	0.19 U	NA</td							

Table 3.
Summary of Analytical Results - Air Sampling for Large Retail Space
Former Gorham Manufacturing Site
Providence, Rhode Island

Parameter (ug/m ³)	Extraction Well - Large Retail Space		Extraction Well - Large Retail Space					Post Treatment - Large Retail Space							CT IACTIND 2003 (ug/m ³)	Indoor Air - Large Retail Space						
	EW-1-030609 3/6/2009	EW-1-033109 3/31/2009	EW-2-030609 3/6/2009	EW-2-033109 3/31/2009	EW-3-030609 3/6/2009	EW-3-033109 3/31/2009	EW-4-030609 3/6/2009	EW-4-033109 3/31/2009	Post-carbon-020309 2/3/2009	POST CARBON-021109 2/11/2009	POST CARBON-021809 2/18/2009	POST CARBON-022609 2/26/2009	POST CARBON-041409 4/14/2009	POST CARBON-100809 10/8/2009	Post-Carbon-010810 1/8/2010	IA-1 011609 1/16/2009	IA-1 020309 2/3/2009	IA-1 021109 2/11/2009	IA-1 021809 2/18/2009	IA-1 022609 2/26/2009	IA-1 030609 3/6/2009	
Ethanol	33	40	12	8.3	39	1.8 U	8.6	1.8 U	740	36	25	9.8	110	0.38 U	2.8	NA	5.7	8.3	14	20	9.8	7.5
Ethyl acetate	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	0.90 U	3.6 U	0.37 U	0.90 U	0.36 U	0.73 U	73 U	0.18 U	0.18 U	NA	0.37 U	0.37 U	0.18 U	0.18 U	0.37 U	0.18 U	
Ethylbenzene	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	1.1 U	4.4 U	10	1.1 U	0.44 U	0.44 U	44 U	0.22 U	0.22 U	290	0.26	0.28	0.66	0.85	0.23	0.22 U	
Hexachlorobutadiene	22 U	22 U	22 U	22 U	22 U	5.4 U	22 U	1.1 U	5.4 U	2.2 U	2.2 U	220 U	0.53 U	0.53 U	NA	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	
Hexane	3.6 U	3.6 U	3.6 U	6.6	3.6 U	3.2	3.6 U	3.0	0.90 U	46	0.36 U	36 U	0.18 U	0.23	NA	0.92	0.74	1.2	1.6	1.0	0.51	
Isopropyl alcohol	28	2.4 U	2.4 U	2.4 U	26	5.9	7.5	7.1	450	2.9	3.1	47	290	0.25 U	1.4	NA	3.4	3.1	5.3	5.8	3.8	2.0
m,p-Xylene	8.6 U	8.6 U	8.6 U	8.6 U	8.6 U	2.2 U	8.6 U	27	2.2 U	0.86 U	0.86 U	86 U	0.43 U	0.43 U	500	0.76	0.87	2.1	2.8	0.80	0.43 U	
Methyl methacrylate															NA							
Methylene chloride	7.0 U	19	7.0 U	17	7.0 U	13	19	12	20	76	17	3.0	810	0.70 U	0.72	17	2.3	33	2.3	1.8	4.4	1.1
Methyl-t-butyl ether	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	0.90 U	3.6 U	0.18 U	0.90 U	0.36 U	0.36 U	36 U	0.18 U	0.18 U	190	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	
n-Heptane	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	1.0 U	4.0 U	1.8	1.0 U	0.40 U	0.40 U	40 U	0.20 U	0.20 U	NA	0.23	0.20 U	0.59	0.75	0.20 U	0.20 U
o-Xylene	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	1.1 U	4.4 U	9.5	1.1 U	0.44 U	0.44 U	44 U	0.22 U	0.22 U	500	0.26	0.33	0.76	0.99	0.30	0.22 U
Propylene (Propene)	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	0.45 U	1.8 U	0.18 U	98	0.18 U	0.35 U	35 U	0.35 U	0.35 U	NA	0.18 U	0.18 U	0.090 U	0.090 U	0.18 U	0.090 U	
Styrene	4.2 U	4.2 U	4.2 U	4.2 U	4.2 U	1.1 U	4.2 U	3.4	1.1 U	0.42 U	0.42 U	42 U	0.21 U	0.21 U	290	0.21 U	0.21 U	0.21	0.28	0.21 U	0.21 U	
Tetrachloroethene	600. [a]	1,200. [a]	2,300. [a]	2,500. [a]	73. [a]	310. [a]	31. [a]	170. [a]	0.72	1.7 U	1.1	0.68 U	68 U	0.52	1.9	5	6.6 [a]	0.57	4.2	3.2	2.6	4.9
Tetrahydrofuran	6.3	21	19	3.0 U	32	14	37	5.1	6.8	22	40	18	210	4.1	6.5	NA	12	1.2	1.3	0.48	0.32	0.15 U
Toluene	3.8 U	3.8 U	3.8 U	3.8 U	3.8 U	1.4	3.8 U	29	0.95 U	0.65	0.38 U	38 U	0.19 U	0.36	500	1.7	1.4	4	5.7	2.3	0.93	
trans-1,2-Dichloroethene	9.2 [a]	23. [a]	69. [a]	180. [a]	4.0 U	8.8 [a]	2.5 [a]	8. [a]	0.20 U	1.0 U	0.40 U	28	40 U	7.7	15	200	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
trans-1,3-Dichloropropene	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	1.1 U	4.4 U	0.22 U	1.1 U	0.44 U	0.44 U	44 U	0.22 U	0.22 U	2.9	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
Trichloroethene	3100	42000	25000	25000	8600	19000	2700	5500	2.0	11	16	2.7	54 U	1.0	1.0	1	4.2	0.46	1.6	1.4	0.65	1.5
Trichlorofluoromethane	520	540	1300	1800	430	840	240	370	0.71	1.4 U	23	6700	84	180	210	500	2.1	1.4	1.7	3.1	1.6	1.7
Trichlorotrifluoroethane	7.6 U	7.6 U	7.6 U	7.6 U	7.6 U	1.9 U	7.6 U	1.3	1.9 U	0.76 U	0.76 U	76 U	0.38 U	0.51	NA	0.65	0.64	0.47	0.46	0.67	0.48	
Vinyl acetate	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	0.90 U	3.6 U	0.71 U	0.90 U	0.36 U	1.5 U	150 U	0.71 U	0.71 U	NA	0.71 U	0.71 U	0.18 U	0.18 U	0.71 U	0.18 U	
Vinyl chloride	2.7	4.8	9.4	8.1	2.6 U	2.6 U	0.65	2.6 U	0.13 U	30	13	4.5	26 U	0.13 U	0.13 U	1.9	0.26	0.13 U	0.22	0.21	0.13 U	0.19

Table 3.
Summary of Analytical Results - Air Sampling for Large Retail Space
Former Gorham Manufacturing Site
Providence, Rhode Island

Parameter (ug/m ³)	Indoor Air - Large Retail Space																					
	IA-1-033109 3/31/2009	IA-1-041409 4/14/2009	IA-1-042409 4/24/2009	IA-1-091709 9/17/2009	IA-1-092409 9/24/2009	IA-1-100109 10/1/2009	IA-1-100809 10/8/2009	IA-1-120209 12/2/2009	IA-1-010810 1/8/2010	IA-1-012810 1/28/2010	IA-1-020510 2/5/2010	IA-1-021210 2/12/2010	IA-1-021910 2/19/2010	IA-1-032610 3/26/2010	IA-1-043010 4/30/2010	IA-1-052810 5/28/2010	IA-1-070110 7/1/2010	IA-1-091610 9/16/2010	IA-1-120710 12/7/2010	IA-1-021711 2/17/2011	IA-1-060211 6/2/2011	IA-1-091511 9/15/2011
	1.1,1-Trichloroethane	1.5	1.4	2.0	0.27 U	0.27 U	0.27 U	0.24	0.27 U	0.27 U	0.76	0.30	0.88	0.27 U	1.2	0.33	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	
1,1,1,2-Tetrachloroethane																					0.62 U	
1,1,2,2-Tetrachloroethane	0.34 U	0.24 U	0.34 U	0.24 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U						
1,1,2-Trichloroethane	0.27 U	0.19 U	0.27 U	0.19 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U						
1,1-Dichloroethane	0.20 U	0.14 U	0.20 U	0.14 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U						
1,1-Dichloroethene	0.20 U	0.14 U	0.20 U	0.14 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U						
1,2,4-Trichlorobenzene	0.37 U	0.26 U	0.37 U	0.52 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.75 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.74 U						
1,2,4-Trimethylbenzene	0.25 U	0.18 U	0.48	0.29	0.35	0.28	0.51	0.52	0.37	0.25 U	0.26	0.25 U	0.25 U	0.25 U	0.40	0.43	0.56	0.25 U	0.55	0.25 U	0.25 U	
1,2-Dibromoethane (EDB)	0.38 U	0.27 U	0.38 U	0.27 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U						
1,2-Dichlorobenzene	0.30 U	0.21 U	0.30 U	0.21 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U						
1,2-Dichloroethane	0.20 U	0.14 U	0.20 U	0.14 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U						
1,2-Dichloropropane	0.23 U	0.17 U	0.23 U	0.17 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U						
1,2-Dichlorotetrafluoroethane	0.35 U	0.25 U	0.35 U	0.25 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U						
1,3,5-Trimethylbenzene	0.25 U	0.18 U	0.25 U	0.18	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U						
1,3-Butadiene	0.11 U	0.08 U	0.11 U	0.23 U	0.23 U	0.23 U	0.23 U	0.17	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.11 U	0.23 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U		
1,3-Dichlorobenzene	0.30 U	0.21 U	0.30 U	0.21 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U						
1,4-Dichlorobenzene	0.30 U	0.21 U	0.30 U	0.21 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U						
1,4-Dioxane																				0.18 U		
2-Butanone	1.3	1.2	4.4	2.0	2.6	2.7	1.3	2.7	1.6	0.30 U	2.4	1.1	1.2	1.3	0.78	2.6	3.3	0.85	0.68	1.7 B	2.9 U	5.9 U
2-Hexanone	0.20 U	0.14 U	0.48	0.43	0.52	0.73	0.31	0.71	0.36	0.20 U	0.47	0.20 U	0.27	0.27	0.20 U	0.67	0.75	0.20 U	0.20 U	0.20 U	4.1 U	0.62
4-Ethyltoluene	0.25 U	0.18 U	0.25 U	0.18	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U					
4-Methyl-2-pentanone	0.20 U	0.14 U	0.52	0.21	0.35	0.32	0.20 U	0.34	0.20 U	0.20 U	0.20 U	0.22	0.20 U	0.20 U	0.20 U	0.28	0.35	0.35	0.20 U	0.20 U	0.20 U	0.23
Acetone	14	12	310	11	18	13	10	13	12	2.0	19	7.3	8.5	7.0	6.5	18	18	11	12 B	15 B	11 B	18
Benzene	0.71	0.56	0.78	0.49	0.47	0.39	0.48	1.1	1.2	0.16 U	0.98	0.64	0.53	0.59	0.64	0.50	0.46	0.8	0.49	1.5	0.25	0.32
Benzyl chloride	0.26 U	0.19 U	0.26 U	0.19 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U					
Bromodichloromethane	0.33 U	0.24 U	0.33 U	0.24 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.34 U	0.34 U					
Bromoform	0.51 U	0.36 U	0.51 U	0.36 U	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	0.52 U	0.52 U					
Bromomethane	0.19 U	0.14 U	0.19 U	0.14 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U					
Carbon disulfide	0.16 U	0.12 U	0.16 U	0.12 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.33	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	1.6 U					
Carbon tetrachloride	0.53	0.31	0.43	0.48	0.38	0.42	0.43	0.48	0.43	0.31 U	0.40	0.31 U	0.45	0.44	0.48	0.55 [a]	0.52	0.50	0.46	0.47	0.53	0.57 [a]
Chlorobenzene	0.23 U	0.17 U	0.23 U	0.17 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U					
Chloroethane	0.13 U	0.10 U	0.13 U</td																			

Table 3.
Summary of Analytical Results - Air Sampling for Large Retail Space
Former Gorham Manufacturing Site
Providence, Rhode Island

Parameter (ug/m³)	Indoor Air - Large Retail Space																						
	IA-1-033109 3/31/2009	IA-1-041409 4/14/2009	IA-1-042409 4/24/2009	IA-1-091709 9/17/2009	IA-1-092409 9/24/2009	IA-1-100109 10/1/2009	IA-1-100809 10/8/2009	IA-1-120209 12/2/2009	IA-1-010810 1/8/2010	IA-1-012810 1/28/2010	IA-1-020510 2/5/2010	IA-1-021210 2/12/2010	IA-1-021910 2/19/2010	IA-1-032610 3/26/2010	IA-1-043010 4/30/2010	IA-1-052810 5/28/2010	IA-1-070110 7/1/2010	IA-1-091610 9/16/2010	IA-1-120710 12/7/2010	IA-1-021711 2/17/2011	IA-1-060211 6/2/2011	IA-1-091511 9/15/2011	
Ethanol	18	5.0	39	6.2	7.0	6.5	8.8	10	8.4	7.0	29	19	43	4.6	4.4	6.0	6.5	9.0	2.7	9.0	2.8	6.4	
Ethyl acetate	0.18 U	0.26 U	0.37 U	0.32	0.18 U	0.18 U	0.13 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U		
Ethylbenzene	0.22 U	0.16 U	0.94	0.23	0.23	0.22 U	0.28	0.46	0.40	0.22 U	0.32	0.22 U	0.22 U	0.23	0.29	0.27	0.51	0.22 U	0.54	0.22 U	0.22 U	0.22 U	
Hexachlorobutadiene	1.1 U	0.75 U	1.1 U	0.53 U	0.53 U	0.53 U	0.53 U	0.75 U	0.53 U	0.53 U	0.53 U	0.53 U	1.1 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	
Hexane	0.53	0.65	1.7	0.99	1.3	0.41	0.77	0.78	0.74	0.18 U	0.82	1.3	0.45	0.20	1.1	0.80	0.46	0.61	0.35 U	1.9	0.43	7.0 U	
Isopropyl alcohol	9.1	0.18 U	240	5.2	5.2	0.25 U	2.7	1.8	2.4	0.25 U	9.4	0.25 U	1.6	0.65	3.4	0.12 U	0.74	1.4	0.25 U	1.7	1.2 U	4.9 U	
m,p-Xylene	0.63	0.31 U	2.5	0.79	0.91	0.73	1.0	1.4	0.43 U	1.0	0.43 U	0.43 U	0.50	0.77	1.1	1.2	1.7	0.43 U	1.6	0.42 J	0.51		
Methyl methacrylate																			0.20 U	0.20 U	0.20 U	0.20 U	
Methylene chloride	6.7	3.5	4.8	1.6	3.6	0.70 U	0.70 U	2.9	0.70 U	1.4	1.5	1.9	0.70 U	0.70 U	0.70 U	0.35 U	1.2	0.56	0.56	4.8	1.3	1.7 U	
Methyl-t-butyl ether	0.18 U	0.13 U	0.18 U	0.13 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U						
n-Heptane	0.20 U	0.14 U	0.67	0.20 U	0.20 U	0.20 U	0.26	0.42	0.35	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.36	0.20 U	0.50	0.20 U	0.20 U
o-Xylene	0.22 U	0.16 U	0.70	0.31	0.40	0.28	0.40	0.52	0.44	0.22 U	0.38	0.22 U	0.22 U	0.28	0.46	0.51	0.69	0.22 U	0.56	0.22 U	0.22 U	0.22 U	
Propylene (Propene)	0.090 U	0.13 U	0.18 U	0.35 U	0.35 U	0.18 U	0.35 U	0.25 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.87 U	0.87 U	0.35 U	0.86 U	0.86 U	0.86 U	3.4 U	
Styrene	0.21 U	0.15 U	0.24	0.21 U	0.21 U	0.21 U	0.21 U	0.19	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.25	0.31	0.24	0.21 U	0.21 U	0.21 U	0.21 U	
Tetrachloroethene	1.5	1.9	6.1 [a]	0.34 U	0.34 U	2.0	1.1	3.2	0.34 U	0.34 U	0.34 U	0.34 U	1.2	0.34 U	4.5	0.55	1.1	0.34 U	3.3	5.6 [a]	0.34 U	0.47	
Tetrahydrofuran	0.15 U	0.23	0.40	0.15 U	0.15 U	0.15 U	0.15 U	0.11 U	0.15 U	0.15 U	0.15 U	0.15 U	0.22	0.15 U	0.15 U	0.15 U	0.24	0.16	0.15 U	0.15 U	0.15 U	0.15 U	
Toluene	1.7	0.72	5.7	1.3	1.1	0.78	1.2	2.8	2.1	0.19 U	0.82	0.69	0.58	0.8	1.3	0.91	0.99	2.5	0.44	3	0.58	0.93	
trans-1,2-Dichloroethene	0.20 U	0.14 U	0.20 U	0.14 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U						
trans-1,3-Dichloropropene	0.22 U	0.16 U	0.22 U	0.16 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.23 U	0.23 U						
Trichloroethene	0.57	0.74	1.6	0.27 U	0.27 U	1.1	0.56	0.69	0.27 U	0.27 U	0.27 U	0.31	0.39	0.27 U	1.5	0.27 U	0.40	0.27 U	1.7	0.27 U	0.27 U	0.27 U	
Trichlorofluoromethane	1.2	1.2	1.5	1.4	1.3	1.2	1.3	2.5	0.81	1.3	1.5	1.5	1.4	1.2	1.3	1.4	2.7	1.2	1.7	1.1	1.8		
Trichlorotrifluoroethane	0.59	0.54	1.7	0.48	0.44	0.45	0.51	0.52	0.63	0.38 U	0.71	0.63	0.55	0.55	0.48	0.59	0.53	0.48	0.57	0.64	0.67	0.59	
Vinyl acetate	0.18 U	0.50 U	0.71 U	0.25 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.36 U	0.71 U	0.18 U	0.18 U	0.36 U	0.35 U	0.18 U	3.5 U	0.18 U					
Vinyl chloride	0.13 U	0.10 U	0.16	0.13 U	0.13 U	0.17	0.13 U	0.10 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	

Table 3.
Summary of Analytical Results - Air Sampling for Large Retail Space
Former Gorham Manufacturing Site
Providence, Rhode Island

Parameter (ug/m ³)	Indoor Air - Large Retail Space																					
	IA-1-120811 12/8/2011	IA-1-030812 3/8/2012	IA-1-061412 6/14/2012	IA-1-091312 9/13/2012	IA-1-010313 1/3/2013	IA-1-031513 3/15/2013	IA-1-060713 6/7/2013	IA-1-090613 9/6/2013	IA-1-121313 12/13/13	IA-1-030714 03/07/14	IA-1-061314 6/13/2014	IA-1-091214 9/12/2014	IA-1-121914 12/19/2014	IA-1-032715 3/27/2015	IA-1-061115 6/11/2015	IA-1-091615 9/16/2015	IA-1-121815 12/18/2015	IA-2-011609 1/16/2009	IA-2-020309 2/3/2009	IA-2-021109 2/11/2009	IA-2-021809 2/18/2009	
1,1,1-Trichloroethane	0.12	0.082 U	0.16 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.11	0.19 U	0.2	0.16 J	0.05 J	0.19 U	0.28	0.19 U	9.9	0.63	1.1	1.1		
1,1,1,2-Tetrachloroethane		0.37 U	0.37 U	0.44 U	0.44 U	0.44 U	0.44 U	0.35 J	0.44 U	0.44 U	0.37 U	0.44 U	0.44 U	0.44 U	0.44 U							
1,1,2,2-Tetrachloroethane	0.21 U	0.10 U	0.21 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.1 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.34 U	0.34 U	0.34 U	0.34 U		
1,1,2-Trichloroethane	0.16 U	0.082 U	0.16 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.16 U	0.19 U	0.19 U	0.065 J	0.19 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U		
1,1-Dichloroethane	0.12 U	0.061 U	0.12 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.082 J	0.14 U	0.72	0.20 U	0.20 U	0.20 U		
1,1-Dichloroethene	0.12 U	0.059 U	0.12 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.059 U	0.14 U	0.14 U	0.078 J	0.14 U	0.41	0.20 U	0.20 U	0.20 U	0.20 U		
1,2,4-Trichlorobenzene	0.45 U	0.45 U	0.45 U	0.52 U	0.52 U	0.52 U	0.26 U	0.26 U	0.26 U	0.26 U	0.22 U	0.26 U	0.26 U	0.26 U	0.26 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U		
1,2,4-Trimethylbenzene	0.10	0.15 U	0.16	0.55	0.17 U	0.17 U	0.21	0.32	0.17 U	0.52	0.25	0.14 J	0.17 U	0.12 J	0.14 J	0.14 J	0.32	0.25 U	0.37	0.70	0.65	
1,2-Dibromoethane (EDB)	0.23 U	0.12 U	0.23 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.12 U	0.27 U	0.27 U	0.27 U	0.27 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U		
1,2-Dichlorobenzene	0.18 U	0.18 U	0.18 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.18 U	0.21 U	0.21 U	0.21 U	0.21 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U		
1,2-Dichloroethane	0.056	0.061 U	0.12 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.061 U	0.14 U	0.14 U	0.06 J	0.099 J	0.14 U	0.20 U	0.20 U	0.20 U	0.20 U		
1,2-Dichloropropane	0.14 U	0.069 U	0.14 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.069 U	0.16 U	0.16 U	0.16 U	0.16 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U		
1,2-Dichlorotetrafluoroethane																	0.25 U	0.35 U	0.35 U	0.35 U	0.35 U	
1,3,5-Trimethylbenzene	0.044	0.15 U	0.059	0.32	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.16	0.17 U	0.068 J	0.17 U	0.041 J	0.069 J	0.059 J	0.17 U	0.25 U	0.25 U	0.25	0.25 U	
1,3-Butadiene	0.066 U	0.066 U	0.066 U	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.55	0.078 U	0.066 U	0.078 U	0.048 J	0.078 U	0.13	0.16	0.11 U	0.11 U	0.30	0.66	
1,3-Dichlorobenzene	0.18 U	0.18 U	0.18 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.18 U	0.21 U	0.21 U	0.21 U	0.21 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	
1,4-Dichlorobenzene	0.18 U	0.18 U	0.18 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.18 U	0.21 U	0.21 U	0.21 U	0.21 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	
1,4-Dioxane																	1.3 U					
2-Butanone	1.8	1.2	1.4	3.0	0.87	0.64	2.9	2.0	0.92	1.6	3.1	2.8 J	0.84 J	1.5 J	1.1 J	1.2 J	1.4 J	21	4.1	4.6	3.0	
2-Hexanone	0.22	0.26	0.12 U	0.28	0.14 U	0.14 U	0.38	0.27	0.14 U	0.30	0.45	0.25	0.14 U	0.30	0.14 U	0.14 U	0.16	0.20 U	0.20 U	0.35	0.26	
4-Ethyltoluene	0.15 U	0.15 U	0.071	0.19	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.15 U	0.17 U	0.045 J	0.17 U	0.055 J	0.17 U	0.25 U	0.25 U	0.25 U	0.25 U	
4-Methyl-2-pentanone	0.39	0.13	0.093	0.26	0.14 U	0.14 U	0.24	0.52	0.14 U	0.23	0.49	0.33	0.14 U	0.14 J	0.08 J	0.14 U	0.21	0.20 U	0.20 U	0.35	0.20 U	
Acetone	8.0	6.0	12	16	7.0	5.0	21	35	19	13	23	13	9.3	12	7.7	17	12	17	9.6	14	18	
Benzene	0.47	0.34	0.19	0.67	0.51	0.72	0.28	0.75	0.54	2.3	0.46	0.39	0.38	0.53	0.23	0.46	0.98	1.0	0.67	1.8	3.0	
Benzyl chloride	0.16 U	0.16 U	0.16 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.078 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	
Bromodichloromethane	0.20 U	0.10 U	0.20 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.1 U	0.24 U	0.24 U	0.12 J	0.24 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	
Bromoform	0.31 U	0.31 U	0.31 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.31 U	0.36 U	0.36 U	0.36 U	0.36 U	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	
Bromomethane	0.12 U	0.12 U	0.12 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.12	0.14 U	0.14 U	0.095 J	0.14 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	
Carbon disulfide	0.93 U	0.93 U	0.93 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	0.23	0.20	1.1 U	0.21	0.11 J	1.1 U	1.1 U	0.22 J	0.97 J	1.1 U	0.16 U	0.16 U	0.16 U	0.16 U
Carbon tetrachloride	0.49	0.46	0.46	0.39																		

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Parameter (ug/m ³)	Indoor Air - Large Retail Space																					
	IA-1-120811 12/8/2011	IA-1-030812 3/8/2012	IA-1-061412 6/14/2012	IA-1-091312 9/13/2012	IA-1-010313 1/3/2013	IA-1-031513 3/15/2013	IA-1-060713 6/7/2013	IA-1-090613 9/6/2013	IA-1-121313 12/13/13	IA-1-030714 03/07/14	IA-1-061314 6/13/2014	IA-1-091214 9/12/2014	IA-1-121914 12/19/2014	IA-1-032715 3/27/2015	IA-1-061115 6/11/2015	IA-1-091615 9/16/2015	IA-1-121815 12/18/2015	IA-2-011609 1/16/2009	IA-2-020309 2/3/2009	IA-2-021109 2/11/2009	IA-2-021809 2/18/2009	
Ethanol	2.2	3.2	4.4	8.5	3.1	2.0	26	23	12	22	80	34	29	9.1	11	21	22	5.5	8.8	12	17	
Ethyl acetate	0.11 U	0.92	0.26	0.57	0.40	0.21	0.33	0.13 U	25	0.34	0.13 U	0.46	0.2	0.57	0.13 U	0.65	0.13 U	0.37 U	0.37 U	0.18 U	0.18 U	
Ethylbenzene	0.14	0.10	0.11	0.47	0.18	0.15 U	0.19	0.35	0.15 U	0.53	0.23	0.17	0.064 J	0.13 J	0.1 J	0.18	0.57	0.26	0.28	0.65	0.79	
Hexachlorobutadiene	0.32 U	0.32 U	0.32 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.32 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	1.1 U	1.1 U	1.1 U	1.1 U		
Hexane	0.39	0.72	0.55	1.3	0.67	0.64	0.79	19	4.9 U	1.2	0.43	0.55 J	0.32 J	5.5	0.35 J	0.68 J	2.2 J	0.88	0.57	1.3	1.6	
Isopropyl alcohol	2.9 U	0.64	2.9 U	1.9	3.4 U	0.36	3.4 U	3.4 U	2.1	1.9	5.5	4	1.5 J	2 J	2 J	2.3 J	3.4 U	3.7	3.1	4.5	4.5	
m,p-Xylene	0.41	0.22	0.36	1.7	0.79	0.30	0.79	1.0	0.19	1.6	0.86	0.59	0.24 J	0.36	0.34	0.58	3	0.76	0.88	2.0	2.6	
Methyl methacrylate	0.12 U	0.12 U	0.12 U	0.14 U	0.14 U	0.14 U	0.14 U	0.15	0.14 U	0.14 U	0.14 U	0.15	0.14 U	0.14 U	0.14 U	0.14 U						
Methylene chloride	1.6	3.3	1.2	1.8	1.3	1.9	1.3	34	0.68	0.80	0.67	0.9 J	0.26 J	6.00	0.51 J	0.74 J	1.1 J	2.0	30	4.0	1.6	
Methyl-t-butyl ether	0.11 U	0.11 U	0.11 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.11 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.18 U	0.18 U	0.18 U	0.18 U		
n-Heptane	0.079	0.12 U	0.093	0.44	0.14 U	0.14 U	0.14 U	0.14 U	0.81	0.14 U	0.67	0.44	0.53	0.14 U	0.15	0.12 J	0.24	0.32	0.23	0.20 U	0.58	0.73
o-Xylene	0.15	0.096	0.14	0.66	0.25	0.15 U	0.27	0.42	0.15 U	0.62	0.32	0.22	0.064 J	0.14 J	0.13 J	0.22	0.8	0.30	0.34	0.76	0.89	
Propylene (Propene)	2.1 U	2.1 U	1.1	1.7	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	2.1 U	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	0.18 U	0.18 U	0.090 U	0.090 U	
Styrene	0.85	0.13 U	0.038	0.14	0.15 U	0.15 U	0.15 U	0.27	0.15 U	0.16	0.29	0.11 J	0.15 U	0.15 U	0.042 J	0.12 J	0.15 U	0.21 U	0.21 U	0.21 U	0.23	
Tetrachloroethene	0.84	0.21	0.065	2.7	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.21	0.31	0.13	0.3	0.24 U	0.22 J	1.2	7	7.5 [a]	0.64	4.2	3.2	
Tetrahydrofuran	0.14	0.088 U	0.088 U	0.10 U	0.10 U	0.10 U	0.10 U	0.27	0.10 U	0.10 U	0.16	0.14	0.1 U	0.1 U	0.1 U	0.099 J	0.1 U	12	1.2	1.2	0.49	
Toluene	1.6	0.3	0.64	2.8	0.47	0.49	1	4.2	0.62	3.2	1.9	2.7	0.58	0.63	0.62	1.3	1.9	1.7	1.3	4	5.5	
trans-1,2-Dichloroethene	0.12 U	0.059 U	0.12 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.059 U	0.14 U	0.14 U	0.14 U	0.053 J	0.14 U	0.20 U	0.20 U	0.20 U	0.20 U		
trans-1,3-Dichloropropene	0.14 U	0.068 U	0.14 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.068 U	0.16 U	0.16 U	0.16 U	0.16 U	0.22 U	0.22 U	0.22 U	0.22 U		
Trichloroethene	0.25	0.081 U	0.16 U	0.21	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.25	0.19 U	0.081	0.14 J	0.087 J	0.19 U	0.44	0.22	4.4	0.56	1.6	1.4	
Trichlorofluoromethane	1.0	0.89	1.8	1.7	1.6	1.3	1.9	2.4	1.4	1.6	1.4	1.3	1.1	1.5	1.3	2.1	2.0	1.2	1.7	2.8		
Trichlorotrifluoroethane	0.69	0.40	0.59	0.57	0.55	0.79	1.1	0.63	0.54	0.45	0.57	0.58	0.62	0.47 J	0.63 J	0.87 J	0.6 J	0.69	0.58	0.49	0.46	
Vinyl acetate	0.11 U	0.21 U	0.21 U	0.25 U	0.25 U	0.25 U	0.25 U	2.5 U	2.5 U	2.5 U	2.5 U	2.1 U	2.5 U	2.5 U	2.5 U	1 J	0.71 U	0.71 U	0.18 U	0.18 U		
Vinyl chloride	0.077 U	0.038 U	0.077 U	0.090 U	0.090 U	0.090 U	0.090 U	0.090 U	0.090 U	0.090 U	0.09 U	0.038 U	0.09 U	0.09 U	0.075 J	0.09 U	0.27	0.13 U	0.18	0.20		

Table 3.
Summary of Analytical Results - Air Sampling for Large Retail Space
Former Gorham Manufacturing Site
Providence, Rhode Island

Parameter (ug/m³)	Indoor Air - Large Retail Space																					
	IA-2-022609 2/26/2009	IA-2-041409 4/14/2009	IA-2-042409 4/24/2009	IA-2-091709 9/17/2009	IA-2-092409 9/24/2009	IA-2-100109 10/1/2009	IA-2-100809 10/8/2009	IA-2-102810 1/28/2010	IA-2-020510 2/5/2010	IA-2-021210 2/12/2010	IA-2-021910 2/19/2010	IA-2-032610 3/26/2010	IA-2-043010 4/30/2010	IA-2-091610 9/16/2010	IA-2-070110 7/1/2010	IA-2-091610 9/16/2010	IA-2-120710 12/7/2010	IA-2-021711 2/17/2011	IA-2-060211 6/2/2011	IA-2-091511 9/15/2011	IA-2-120811 12/8/2011	IA-2-030812 3/8/2012
1,1,1-Trichloroethane	0.44	1.4	2.1	0.27 U	0.27 U	0.27 U	0.27 U	0.44	0.73	0.27 U	0.27 U	0.27 U	1.0	0.27 U	0.28	0.27 U	0.27 U	0.27 U	0.27 U	0.13	0.082 U	
1,1,1,2-Tetrachloroethane																					0.62 U	0.37 U
1,1,2,2-Tetrachloroethane	0.34 U	0.24 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.21 U	0.10 U							
1,1,2-Trichloroethane	0.27 U	0.19 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.16 U	0.082 U							
1,1-Dichloroethane	0.32	0.14 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.061 U							
1,1-Dichloroethene	0.20 U	0.14 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.12 U	0.059 U							
1,2,4-Trichlorobenzene	0.37 U	0.26 U	0.37 U	0.37 U	0.75 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.74 U	0.45 U	0.45 U							
1,2,4-Trimethylbenzene	0.30	0.18 U	0.25 U	0.29	0.39	0.27	0.52	0.55	0.25 U	0.25 U	0.25 U	0.31	0.35	0.48	0.52	0.25 U	0.52	0.25 U	0.25 U	0.088	0.15 U	
1,2-Dibromoethane (EDB)	0.38 U	0.27 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.23 U	0.12 U							
1,2-Dichlorobenzene	0.30 U	0.21 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.18 U	0.18 U							
1,2-Dichloroethane	0.20 U	0.14 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.063	0.061 U							
1,2-Dichloropropane	0.23 U	0.17 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.14 U	0.069 U							
1,2-Dichlorotetrafluoroethane	0.35 U	0.25 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U									
1,3,5-Trimethylbenzene	0.25 U	0.18 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.15 U	0.15 U							
1,3-Butadiene	0.11 U	0.08 U	0.11 U	0.23 U	0.23 U	0.11 U	0.23 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.066 U	0.066 U					
1,3-Dichlorobenzene	0.30 U	0.21 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.18 U	0.18 U							
1,4-Dichlorobenzene	0.30 U	0.21 U	0.30 U	0.30 U	0.34	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.18 U	0.18 U						
1,4-Dioxane																					0.18 U	
2-Butanone	2.9	0.95	1.6	1.1	2.3	0.81	1.0	2.1	0.70	0.44	0.30 U	0.96	1.3	3.1	3.4	0.96	0.36	1.9 B	2.9 U	5.9 U	0.93	0.84
2-Hexanone	0.20 U	0.14 U	0.20 U	0.25	0.54	0.20 U	0.26	0.51	0.20 U	0.20 U	0.20 U	0.26	0.84	0.68	0.20 U	0.20 U	0.24	4.1 U	0.50	0.12 U	0.16	
4-Ethyltoluene	0.25 U	0.18 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.15 U	0.15 U							
4-Methyl-2-pentanone	0.20 U	0.14 U	0.20 U	0.20 U	0.39	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.28	0.49	0.34	0.20 U	0.20 U	0.24	0.10	0.11		
Acetone	9.7	13	39	6.2	17	11	8.8	17	7.8	3.1	0.48 U	6.3	8.2	18	20	11	9.8 B	15 B	8.9 B	18	6.2	5.4
Benzene	0.77	0.58	0.44	0.41	0.47	0.39	0.54	1.2	0.86	0.67	0.16 U	0.58	0.63	0.47	0.48	0.72	0.48	1.5	0.26	0.30	0.39	0.36
Benzyl chloride	0.26 U	0.19 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.16 U	0.16 U							
Bromodichloromethane	0.33 U	0.24 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.34 U	0.34 U	0.20 U	0.10 U							
Bromoform	0.51 U	0.36 U	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	0.52 U	0.52 U	0.31 U	0.31 U							
Bromomethane	0.19 U	0.14 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.12 U	0.12 U							
Carbon disulfide	0.16 U	0.12 U	0.16 U	0.16 U	0.																	

Table 3.
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Parameter ($\mu\text{g}/\text{m}^3$)	Indoor Air - Large Retail Space																						
	IA-2-022609 2/26/2009	IA-2-041409 4/14/2009	IA-2-042409 4/24/2009	IA-2-091709 9/17/2009	IA-2-092409 9/24/2009	IA-2-100109 10/1/2009	IA-2-100809 10/8/2009	IA-2-102810 1/28/2010	IA-2-020510 2/5/2010	IA-2-021210 2/12/2010	IA-2-021910 2/19/2010	IA-2-032610 3/26/2010	IA-2-043010 4/30/2010	IA-2-091610 9/16/2010	IA-2-070110 7/1/2010	IA-2-091610 9/16/2010	IA-2-120710 12/7/2010	IA-2-021711 2/17/2011	IA-2-060211 6/2/2011	IA-2-091511 9/15/2011	IA-2-120811 12/8/2011	IA-2-030812 3/8/2012	
Ethanol	7.9	4.9	7.5	4.8	6.7	7.8	6.2	14	35	17	20	4.4	4.9	5	7.6	9.0	2.7	10	2.5	8.5	2.1	2.1	
Ethyl acetate	0.37 U	0.26 U	0.37 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.22	0.24							
Ethylbenzene	0.30	0.18	0.22 U	0.22 U	0.22 U	0.22 U	0.31	0.42	0.34	0.22 U	0.22 U	0.23	0.24	0.29	0.46	0.22 U	0.5	0.22 U	0.22 U	0.13	0.13 U		
Hexachlorobutadiene	1.1 U	0.75 U	1.1 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	1.1 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.32 U	0.32 U	
Hexane	0.69	0.72	0.74	0.41	0.42	0.71	1.0	0.61	0.64	1.4	0.18 U	0.27	1.6	0.51	0.49	0.53	0.35 U	1.6	0.31	7.0 U	0.32	0.34	
Isopropyl alcohol	4.7	5.6	28	340	5.7	3.3	0.25 U	0.25 U	3.6	0.25 U	0.63	3.2	0.12 U	1.2	0.25 U	0.25 U	2.0	1.2 U	4.9 U	2.9 U	0.76		
m,p-Xylene	0.93	0.61	0.63	0.71	0.93	0.78	1.1	1.3	1.1	0.43 U	0.43 U	0.47	0.75	0.96	1.3	1.5	0.43 U	1.5	0.36 J	0.57	0.39	0.18	
Methyl methacrylate																		0.20 U	0.20 U	0.20 U	0.20 U	0.12 U	0.12 U
Methylene chloride	1.8	4.0	4.2	0.70 U	1.4	0.90	1.9	0.70 U	0.70 U	0.35 U	1.3	0.53	0.61	4.2	1.0	7.5	1.1	1.2					
Methyl-t-butyl ether	0.18 U	0.13 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.11 U	0.11 U							
n-Heptane	0.22	0.15	0.20 U	0.20 U	0.20 U	0.20 U	0.34	0.83	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.091	0.12 U	
o-Xylene	0.34	0.22	0.22	0.27	0.42	0.30	0.44	0.46	0.40	0.22 U	0.22 U	0.29	0.44	0.57	0.63	0.22 U	0.56	0.22 U	0.23	0.14	0.083		
Propylene (Propene)	0.18 U	0.13 U	0.18 U	0.35 U	0.35 U	0.18 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.87 U	0.87 U	0.35 U	0.86 U	0.86 U	0.86 U	0.86 U	3.4 U	2.1 U	2.1 U	
Styrene	0.21 U	0.15 U	0.21 U	0.41	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.25	0.36	0.24	0.21 U	0.21 U	0.21 U	0.21 U	0.059	0.13 U					
Tetrachloroethene	3.3	2.2	7.6 [a]	0.34 U	0.35	1.7	1.0	2.3	0.34 U	0.34 U	0.34 U	0.34 U	3.6	0.43	1.4	0.34 U	3.2	5.2 [a]	0.34 U	0.45	0.92	0.23	
Tetrahydrofuran	0.41	0.21	0.28	0.15 U	1.6	0.15 U	0.27	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.097	0.088 U									
Toluene	2.3	1	1.2	1.1	1.1	1.2	1.5	2.4	0.93	0.64	0.19 U	0.8	1.3	0.91	1.3	2.2	0.41	2.9	0.55	0.99	1.6	0.24	
trans-1,2-Dichloroethene	0.20 U	0.14 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.12 U	0.059 U							
trans-1,3-Dichloropropene	0.22 U	0.16 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.23 U	0.23 U	0.23 U	0.23 U	0.14 U	0.068 U							
Trichloroethene	0.91	0.77	1.9	0.27 U	0.27 U	0.99	0.57	0.79	0.27 U	0.27 U	0.27 U	0.27 U	1.2	0.27 U	0.53	0.27 U	1.7	0.27 U	0.27 U	0.27 U	0.27 U	0.27	0.081 U
Trichlorofluoromethane	1.6	1.3	1.3	1.2	1.2	1.2	1.3	1.4	1.1	1.4	1.3	1.3	1.6	2.5	1.2	1.8	1.2	1.9	1.1	0.94			
Trichlorotrifluoroethane	0.64	0.56	0.74	0.50	0.47	0.46	0.54	0.46	0.53	0.61	0.38 U	0.51	0.44	0.53	0.94	0.45	0.59	0.71	0.71	0.61	0.71	0.42	
Vinyl acetate	0.71 U	0.50 U	0.71 U	0.71 U	0.36 U	0.71 U	0.18 U	0.36 U	0.35 U	0.18 U	0.35 U	0.18 U	0.11 U	0.21 U									
Vinyl chloride	0.13 U	0.10 U	0.18	0.13 U	0.13 U	0.16	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.077 U	0.038 U	

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Parameter (ug/m ³)	Indoor Air - Large Retail Space																					
	IA-2-061412 6/14/2012	IA-2-091312 9/13/2012	IA-2-010313 1/3/2013	IA-2-031513 3/15/2013	IA-2-060713 6/7/2013	IA-2-090613 9/6/2013	IA-2-121313 12/13/13	IA-2-030714 03/07/14	IA-2-061314 6/13/2014	IA-2-091214 9/12/2014	IA-2-121914 12/19/2014	IA-2-032715 3/27/2015	IA-2-061115 6/11/2015	IA-2-091615 9/16/2015	IA-2-121815 12/18/2015	IA-3-011609 1/16/2009	IA-3-020309 2/3/2009	IA-3-021109 2/11/2009	IA-3-021809 2/18/2009	IA-3-022609 2/26/2009	IA-3-041409 4/14/2009	
1,1,1-Trichloroethane	0.16 U	0.08	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.055 U	0.16 J	0.19 U	0.19 U	0.19 U	0.19 U	9.8	0.57	1.1	1.1	0.28	1.5	
1,1,1,2-Tetrachloroethane	0.37 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.25 U	0.44 U	0.44 U	0.44 U	0.44 U								
1,1,2,2-Tetrachloroethane	0.21 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.069 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.24 U	
1,1,2-Trichloroethane	0.16 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.11 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.19 U	
1,1-Dichloroethane	0.12 U	0.043	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.04 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.68	0.20 U	0.20 U	0.20 U	0.20 U	0.14 U	
1,1-Dichloroethene	0.12 U	0.045	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.15	0.04 U	0.14 U	0.14 U	0.14 U	0.14 U	0.35	0.20 U	0.20 U	0.20 U	0.20 U	0.14 U	
1,2,4-Trichlorobenzene	0.45 U	0.52 U	0.52 U	0.52 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.15 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.26 U	
1,2,4-Trimethylbenzene	0.19	0.48	0.98	0.13	0.43	0.20	0.17 U	0.57	0.27	0.2	0.17 U	0.25	0.23	0.17 U	0.48	0.25 U	0.36	0.68	0.61	0.25 U	0.18 U	
1,2-Dibromoethane (EDB)	0.23 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.077 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.27 U	
1,2-Dichlorobenzene	0.18 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.12 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.21 U	
1,2-Dichloroethane	0.051	0.08	0.16	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.04	0.14 U	0.14 U	0.065 J	0.051 J	0.14 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.14 U	
1,2-Dichloropropane	0.14 U	0.16 U	0.16 U	0.11	0.16 U	0.046 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.17 U					
1,2-Dichlorotetrafluoroethane																0.25 U	0.35 U	0.35 U	0.35 U	0.35 U	0.25 U	
1,3,5-Trimethylbenzene	0.080	0.26	0.28	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.059 J	0.17 U	0.079 J	0.069 J	0.17 U	0.17 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.18 U	
1,3-Butadiene	0.066 U	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.44	0.11	0.044 U	0.078 U	0.078 U	0.078 U	0.15	0.2	0.11 U	0.11 U	0.3	0.77	0.11 U	0.08 U	
1,3-Dichlorobenzene	0.18 U	0.08	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.12 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.21 U	
1,4-Dichlorobenzene	0.18 U	0.093	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.12 U	0.21 U	0.063 J	0.097 J	0.21 U	0.21 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.21 U	
1,4-Dioxane																1.3 U						
2-Butanone	1.4	2.8	5.1	2.4	4.2	2.1	1.2	1.8	1.6	4.9	0.92 J	1.7 J	1.8 J	1.7 J	1.7 J	1.9 J	20	4.2	4.6	4.0	1.7	1.6
2-Hexanone	0.15	0.32	0.17	0.22	0.51	0.41	0.14 U	0.39	0.14 U	0.16	0.14 U	0.2	0.12 J	0.14 U	0.18	0.20 U	0.26	0.33	0.3	0.20 U	0.14 U	
4-Ethyltoluene	0.086	0.19	0.24	0.17 U	0.17 U	0.17 U	0.17 U	0.18	0.17 U	0.049 J	0.17 U	0.072 J	0.17 U	0.17 U	0.17 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.18 U	
4-Methyl-2-pentanone	0.12	0.19	3.6	0.14 U	0.54	0.46	0.18	0.57	1.1	1.3	0.14 U	0.84	0.9	1.2	1.1	0.20 U	0.20 U	0.29	0.34	0.20 U	0.14 U	
Acetone	14	17	19	46	32	22	32	32	29	37	9.7	40	29	170 E	33	18	12	17	24	9.7	7.5	
Benzene	0.24	0.62	0.65	0.91	0.56	0.32	0.66	2.0	0.62	0.30	0.36	0.67	0.39	0.66	1.10	1.0	0.71	1.9	3.1	0.69	0.6	
Benzyl chloride	0.16 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.052 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.19 U	
Bromodichloromethane	0.20 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.067 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.24 U	
Bromoform	0.31 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.21 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	0.36 U	
Bromoform	0.12 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.078 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.14 U	
Carbon disulfide	0.93 U	1.1 U	1.9	0.47	0.39	0.33	0.17	0.17	0.56	0.49 J	1.1 U	0.29 J	0.39 J	0.41 J	0.26 J	0.16 U	0.16 U	0.16 U	0.16 U	0.16		

Table 3.
Summary of Analytical Results - Air Sampling for Large Retail Space
Former Gorham Manufacturing Site
Providence, Rhode Island

Parameter (ug/m ³)	Indoor Air - Large Retail Space																				
	IA-2-061412 6/14/2012	IA-2-091312 9/13/2012	IA-2-010313 1/3/2013	IA-2-031513 3/15/2013	IA-2-060713 6/7/2013	IA-2-090613 9/6/2013	IA-2-121313 12/13/13	IA-2-030714 03/07/14	IA-2-061314 6/13/2014	IA-2-091214 9/12/2014	IA-2-121914 12/19/2014	IA-2-032715 3/27/2015	IA-2-061115 6/11/2015	IA-2-091615 9/16/2015	IA-2-121815 12/18/2015	IA-3-011609 1/16/2009	IA-3-020309 2/3/2009	IA-3-021109 2/11/2009	IA-3-021809 2/18/2009	IA-3-022609 2/26/2009	IA-3-041409 4/14/2009
Ethanol	10	9.8	8.1	380	66	46	89	130	240	140	27	150	220	51	72	5.5	9.2	13	18	7.9	4.2
Ethyl acetate	3.5	0.71	0.59	2	0.39	0.28	13	0.36	0.25	0.35	0.17	0.45	0.49	7.5	0.75	0.37 U	0.37 U	0.18 U	0.18 U	0.37 U	0.26 U
Ethylbenzene	0.13 U	0.41	4.1	0.25	0.39	0.17	0.15 U	0.56	0.27	0.14	0.076 J	0.2	0.15	0.16	0.73	0.25	0.29	0.64	0.77	0.22 U	0.16
Hexachlorobutadiene	0.32 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.21 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	0.75 U	
Hexane	2.6	2.4	15	2.3	1.6	0.65	4.9	1.2	0.74	0.56 J	0.29 J	5	0.44 J	1.1 J	2.4 J	0.94	0.87	1.3	1.9	3.7	0.37
Isopropyl alcohol	2.9 U	2.8	3.4 U	3.6	3.4 U	1.7	9.7	4.1	3.4 U	4.4	1.5 J	7.3	3.8	5.4	3.4 U	3.5	4.1	5.5	4.9	3.1	0.18 U
m,p-Xylene	0.38	1.3	17	0.92	1.4	0.48	0.25	1.6	0.88	0.44	0.31	0.61	0.45	0.32	4	0.75	0.9	2.0	2.6	0.65	0.57
Methyl methacrylate	0.12 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.082 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U							
Methylene chloride	6.6	6.4	1.1	3.6	1.5	1.1	7.7	0.65	0.65	0.56 J	0.27 J	0.6 J	0.45 J	0.59 J	1.1 J	2.2	31	3.1	3.5	33	1.2
Methyl-t-butyl ether	0.11 U	0.18	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.072 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.13 U	
n-Heptane	0.11	0.40	3.1	0.33	0.41	0.2	0.14 U	0.64	0.39	0.18	0.14 U	0.21	0.2	0.35	0.41	0.22	0.20 U	0.61	0.77	0.20 U	0.14 U
o-Xylene	0.17	0.55	5.1	0.33	0.52	0.2	0.15 U	0.66	0.34	0.17	0.088 J	0.25	0.19	0.1 J	0.98	0.28	0.33	0.79	0.86	0.23	0.22
Propylene (Propene)	2.1 U	2.4 U	2.4 U	2.4 U	2.4 U	0.7	2.4 U	2.4 U	2.7	1.4 U	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	0.18 U	0.18 U	0.090 U	0.090 U	0.18 U	0.13 U
Styrene	0.097	0.19	0.45	0.12	0.15 U	0.17	0.15 U	0.20	0.35	0.40	0.15 U	0.18	0.23	0.15 U	0.22	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.15 U
Tetrachloroethene	0.090	2.0	0.24	0.18	0.64	0.25	0.24 U	0.28	0.34	0.13	0.32	0.65	0.4	0.41	0.67	6.1 [a]	0.56	4.3	3.3	1.9	2.2
Tetrahydrofuran	0.048	0.10 U	0.24	0.10 U	0.10 U	0.10 U	0.10 U	0.058	0.12	0.09	0.1 U	0.3	0.12	0.11	0.1 U	12	1.1	1.3	0.49	0.15 U	0.24
Toluene	0.9	2.6	5.6	1.5	2.8	1.3	1	3.20	1.90	1.60	0.64	1.40	1.30	4.70	3.00	1.7	1.5	4.7	5.8	2.1	1
trans-1,2-Dichloroethene	0.12 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.04 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.14 U	
trans-1,3-Dichloropropene	0.14 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.045 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.16 U	
Trichloroethene	0.16 U	0.20	0.19 U	0.053	0.19 U	0.19 U	0.19 U	0.23	0.19 U	0.064	0.14 J	0.079 J	0.19 U	0.44	0.19 U	3.9	0.49	1.7	1.5	0.53	0.77
Trichlorofluoromethane	1.8	2.6	2.7	1.3	2.0	1.3	1.6	1.2	1.3	1.3	1.4	1.3	1.5	1.2	2.3	1.9	1.3	1.8	2.8	1.8	1.2
Trichlorotrifluoroethane	0.57	0.64	0.56	0.70	1.7	0.60	0.57	0.46	0.54	0.56	0.63	0.48 J	0.62 J	0.54 J	0.59 J	0.60	0.58	0.49	0.44	0.69	0.53
Vinyl acetate	0.21 U	0.25 U	0.25 U	0.25 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.71 U	0.71 U	0.18 U	0.18 U	0.71 U	0.50 U					
Vinyl chloride	0.077 U	0.090 U	0.090 U	0.090 U	0.090 U	0.090 U	0.090 U	0.090 U	0.026 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.23	0.13 U	0.19	0.21	0.13 U	0.10 U	

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Parameter (ug/m³)	Indoor Air - Large Retail Space																						
	IA-3-042409 4/24/2009	IA-3-091709 9/17/2009	IA-3-092409 9/24/2009	IA-3-100109 10/1/2009	IA-3-100809 10/8/2009	IA-3-012810 1/28/2010	IA-3-020510 2/5/2010	IA-3-021210 2/12/2010	IA-3-021910 2/19/2010	IA-3-032610 3/26/2010	IA-3-043010 4/30/2010	IA-3-052810 5/28/2010	IA-3-070110 7/1/2010	IA-3-091610 9/16/2010	IA-3-120710 12/7/2010	IA-3-021711 2/17/2011	IA-3-060211 6/2/2011	IA-3-091511 9/15/2011	IA-3-120811 12/8/2011	IA-3-030812 3/8/2012	IA-3-061412 6/14/2012	IA-3-091312 9/13/2012	
Ethanol	9.0	6.2	7.5	4.5	5.0	13	40	17	38	3.6	5.3	5.5	7.0	8.0	2.4	9.4	3.6	5.8	2.1	2.2	4.4	6.6	
Ethyl acetate	0.37 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.11 U	0.18 U	0.11 U	0.73	0.37	0.51
Ethylbenzene	0.22 U	0.22 U	0.23	0.22 U	0.24	0.43	0.22 U	0.22 U	0.22 U	0.26	0.23	0.29	0.47	0.22 U	0.47	0.36	0.22 U	0.12	0.11	0.14	0.11	0.42	
Hexachlorobutadiene	1.1 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	1.1 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.32 U	0.32 U	0.32 U	0.32 U	0.37 U	
Hexane	0.77	0.96	0.47	0.37	0.71	0.55	0.44	1.0	0.29	0.19	1.4	0.55	0.45	0.58	0.35 U	1.5	2.6	7.0 U	0.35	0.37	0.74	1.4	
Isopropyl alcohol	33	180	5.9	0.25 U	0.25 U	0.25 U	9.9	0.25 U	2.0	0.64	3.4	0.12 U	0.76	8.8	1.1	1.7	1.2 U	4.9 U	2.9 U	0.56	2.9 U	1.7	
m,p-Xylene	0.66	0.70	0.99	0.65	0.87	1.2	0.69	0.43 U	0.43 U	0.46	0.80	0.99	1.3	1.6	0.43 U	1.4	0.55	0.54	0.38	0.24	0.40	1.5	
Methyl methacrylate																	0.20 U	0.20 U	0.20 U	0.12 U	0.12 U	0.14 U	
Methylene chloride	3.6	2.4	0.70 U	0.70 U	0.70 U	1.4	0.70 U	2.3	0.70 U	0.70 U	0.35 U	1.2	0.57	0.55	4.6	8.0	1.7 U	1.5	1.1	1.3	2.7		
Methyl-t-butyl ether	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.11 U	0.11 U	0.11 U	0.22		
n-Heptane	0.20 U	0.20 U	0.20 U	0.20 U	0.24	0.73	0.20 U	0.20 U	0.20 U	0.36	0.20 U	0.20 U	0.32	0.20 U	0.44	0.20 U	0.20 U	0.074	0.12 U	0.11	0.41		
o-Xylene	0.24	0.26	0.45	0.27	0.34	0.44	0.26	0.22 U	0.22 U	0.32	0.43	0.58	0.64	0.22 U	0.48	0.23	0.23	0.13	0.11	0.16	0.57		
Propylene (Propene)	0.18 U	0.35 U	0.35 U	0.18 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.87 U	0.87 U	0.35 U	0.86 U	0.86 U	0.86 U	0.86 U	3.4 U	2.1 U	2.1 U	1.3	1.8	
Styrene	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.40	0.21 U	0.21 U	0.21 U	0.23	0.34	0.26	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.041	0.13 U	0.10	0.14		
Tetrachloroethene	7.1 [a]	0.34 U	0.34 U	2.0	1.1	2.2	0.34 U	0.34 U	1.3	0.34 U	4.8	0.35	1.1	0.76	3.2	5.2 [a]	0.34 U	0.47	0.91	0.23	0.16	2.3	
Tetrahydrofuran	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.40	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.16	0.24	0.15 U	0.15 U	0.15 U	0.15 U	0.08	0.088 U	0.088 U	0.072		
Toluene	1.2	1.2	1.1	0.73	1.1	2.50	0.78	0.61	0.46	0.81	1.5	0.93	1.1	2.3	0.41	2.7	0.58	0.95	1.5	0.27	0.72	2.8	
trans-1,2-Dichloroethene	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.12 U	0.059 U	0.12 U	0.14 U		
trans-1,3-Dichloropropene	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.23 U	0.23 U	0.23 U	0.23 U	0.14 U	0.068 U	0.14 U	0.16 U		
Trichloroethene	1.8	0.27 U	0.27 U	1.1	0.54	0.75	0.27 U	0.27 U	0.40	0.27 U	1.5	0.27 U	0.47	0.27 U	1.7	0.27 U	0.27 U	0.27 U	0.25	0.081 U	0.16 U	0.17	
Trichlorofluoromethane	1.3	1.4	1.2	1.2	1.2	1.2	1.3	1.4	1.6	1.3	1.2	1.3	1.5	2.8	1.2	1.7	1.6	1.7	1.0	0.92	1.6	1.5	
Trichlorotrifluoroethane	0.74	0.51	0.46	0.49	0.47	0.49	0.52	0.57	0.52	0.57	0.45	0.52	0.54	0.45	0.55	0.67	0.74	0.54	0.69	0.44	0.56	0.54	
Vinyl acetate	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.36 U	0.71 U	0.18 U	0.18 U	0.36 U	0.35 U	0.18 U	3.5 U	0.18 U	0.11 U	0.21 U	0.21 U	0.25 U	
Vinyl chloride	0.17	0.13 U	0.13 U	0.18	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.14	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.077 U	0.038 U	0.077 U	0.090 U	

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Parameter (ug/m ³)	Indoor Air - Large Retail Space																					
	IA-3-010313 1/3/2013	IA-3-031513 3/15/2013	IA-3-060713 6/7/2013	IA-3-090613 9/6/2013	IA-3-121313 12/13/13	IA-3-030714 03/07/14	IA-3-061314 6/13/2014	IA-3-091214 9/12/2014	IA-3-121914 12/19/2014	IA-3-032715 3/27/2015	IA-3-061115 6/11/2015	IA-3-091615 9/16/2015	IA-3-121815 12/18/2015	IA-4-011609 1/16/2009	IA-4-020309 2/3/2009	IA-4-021109 2/11/2009	IA-4-021809 2/18/2009	IA-4-022609 2/26/2009	IA-4-041409 4/14/2009	IA-4-042409 4/24/2009	IA-4-091709 9/17/2009	
1,1,1-Trichloroethane	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19	0.16 J	0.05 J	0.19 U	0.092 J	0.19 U	10	0.62	1.1	1.1	0.45	1.5	2.2	0.27 U	
1,1,1,2-Tetrachloroethane	0.44 U	0.44 U	0.44 U	0.46	0.44 U	0.44 U	0.44 U	0.25 U	0.44 U	0.44 U	0.44 U	0.44 U										
1,1,2,2-Tetrachloroethane	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.069 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.24 U	0.34 U	0.34 U	
1,1,2-Trichloroethane	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.11 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.19 U	0.27 U	0.27 U	
1,1-Dichloroethane	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.04 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.73	0.20 U	0.20 U	0.20 U	0.31	0.14 U	0.20 U	0.20 U	
1,1-Dichloroethene	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.04 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.42	0.20 U	0.20 U	0.20 U	0.20 U	0.14 U	0.20 U	0.20 U	
1,2,4-Trichlorobenzene	0.52 U	0.52 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.15 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.26 U	0.37 U	0.37 U	
1,2,4-Trimethylbenzene	0.17 U	0.076	0.26	0.33	0.17 U	0.53	0.23	0.32	0.12 J	0.12 J	0.13 J	0.13 J	0.17 U	0.26	0.37	0.74	0.65	0.29	0.18 U	0.25 U	0.25 U	
1,2-Dibromoethane (EDB)	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.077 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.27 U	0.38 U	0.38 U	
1,2-Dichlorobenzene	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.12 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.21 U	0.30 U	0.30 U	
1,2-Dichloroethane	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.032 J	0.14 U	0.14 U	0.057 J	0.14 U	0.14 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.14 U	0.20 U	0.20 U	
1,2-Dichloropropane	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.046 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.17 U	0.23 U	0.23 U	0.23 U	
1,2-Dichlorotetrafluoroethane													0.25 U	0.35 U	0.35 U	0.35 U	0.35 U	0.25 U	0.35 U	0.35 U	0.35 U	
1,3,5-Trimethylbenzene	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.069 J	0.17 U	0.038 J	0.079 J	0.041 J	0.17 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.18 U	0.25 U	0.25 U	
1,3-Butadiene	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.55	0.078 U	0.044 U	0.078 U	0.045 J	0.078 U	0.062 J	0.17	0.11 U	0.11 U	0.33	0.77	0.11 U	0.08 U	0.11 U	0.23 U	
1,3-Dichlorobenzene	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.12 U	0.21 U	0.21 U	0.21 U	0.21 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.21 U	0.30 U	0.30 U	0.30 U	
1,4-Dichlorobenzene	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.12 U	0.068 J	0.21 U	0.21 U	0.21 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.21 U	0.30 U	0.30 U	0.30 U	
1,4-Dioxane													1.3 U									
2-Butanone	0.93	2.2	2.0	2.9	0.66	1.1	1.5	2.1 J	1.1 J	1.4 J	1.5 J	0.96 J	0.99 J	21	4.4	6.0	3.2	2.5	1.1	1.6	1.5	
2-Hexanone	0.14 U	0.32	0.28	0.31	0.14 U	0.14 U	0.14 U	0.21	0.14 U	0.27	0.14	0.14 U	0.14 U	0.20 U	0.33	0.73	0.39	0.20 U	0.14 U	0.20 U	0.29	
4-Ethyltoluene	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.18	0.17 U	0.051 J	0.059 J	0.086 J	0.045 J	0.066 J	0.17 U	0.25 U	0.25 U	0.25 U	0.25 U	0.18 U	0.25 U	0.25 U		
4-Methyl-2-pentanone	0.14 U	0.14 U	0.19	0.36	0.14 U	0.17	0.35	0.26	0.27	0.15	0.13 J	0.14 U	0.24	0.20 U	0.20 U	0.43	0.28	0.20 U	0.14 U	0.20 U	0.20 U	
Acetone	6.7	12	28	16	14	11	15	42	29	11	10	15	9.9	17	10	15	20	7.8	7.9	20	9.3	
Benzene	0.53	0.75	0.23	0.75	0.54	2.4	0.41	0.29	0.5	0.5	0.28	0.43	1.1	1.1	0.68	1.8	3.0	0.76	0.59	0.44	0.40	
Benzyl chloride	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.052 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.26 U	0.26 U	0.26 U	0.26 U	0.19 U	0.26 U	0.26 U		
Bromodichloromethane	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.067 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.24 U	0.33 U	0.33 U	
Bromoform	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.21 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	0.36 U	0.51 U	0.51 U	
Bromomethane	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.16	0.099	0.14 U	0.14 U	0.14 U	0.14 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.14 U	0.19 U	0.19 U	
Carbon disulfide	1.1 U	1.1 U	1.1 U	0.25	1.1 U	1.1 U	0.15	0.16 J	0.24 J	1.1 U	0.092 J	0.13 J	1.1 U	0.16 U	0.16 U	0.16 U	0.16 U	0				

Table 3.
Summary of Analytical Results - Air Sampling for Large Retail Space
Former Gorham Manufacturing Site
Providence, Rhode Island

Parameter ($\mu\text{g}/\text{m}^3$)	Indoor Air - Large Retail Space																				
	IA-3-010313 1/3/2013	IA-3-031513 3/15/2013	IA-3-060713 6/7/2013	IA-3-090613 9/6/2013	IA-3-121313 12/13/13	IA-3-030714 03/07/14	IA-3-061314 6/13/2014	IA-3-091214 9/12/2014	IA-3-121914 12/19/2014	IA-3-032715 3/27/2015	IA-3-061115 6/11/2015	IA-3-091615 9/16/2015	IA-3-121815 12/18/2015	IA-4-011609 1/16/2009	IA-4-020309 2/3/2009	IA-4-021109 2/11/2009	IA-4-021809 2/18/2009	IA-4-022609 2/26/2009	IA-4-041409 4/14/2009	IA-4-042409 4/24/2009	IA-4-091709 9/17/2009
Ethanol	2.7	2.5	21	27	11	24	64	41	580	8.7	16	25	14	5.3	8.9	12	18	8.0	5.2	5.5	6.0
Ethyl acetate	0.68	0.44	0.28	0.34	2.6	2.5	0.13 U	0.25	0.47	0.27	0.13 U	4.5	0.13 U	0.37 U	0.37 U	0.18 U	0.19	0.37 U	0.26 U	0.37 U	0.18 U
Ethylbenzene	0.27	0.098	0.18	0.36	0.15 U	0.55	0.22	0.17	0.14 J	0.13 J	0.12 J	0.15 J	0.41	0.25	0.29	0.65	0.78	0.29	0.16	0.22 U	0.22 U
Hexachlorobutadiene	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.21 U	0.37 U	0.37 U	0.37 U	0.37 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	0.75 U	1.1 U	0.53 U	
Hexane	0.89	1.0	0.68	0.94	0.76	2.1	0.44	0.43 J	0.41 J	5.1	0.45 J	0.72 J	1.9 J	0.90	0.66	1.2	1.7	0.66	0.43	0.34	0.42
Isopropyl alcohol	0.57	0.62	3.4 U	3.4 U	1.9	2.1	5.2	4.8	7.7	1.9 J	0.87 J	2.1 J	3.4 U	3.5	3.3	4.7	4.8	3.9	0.18 U	13	5.6
m,p-Xylene	1.0	0.31	0.72	1.1	0.19	1.6	0.84	0.62	0.58	0.37	0.39	0.5	1.7	0.76	0.89	2.1	2.6	0.89	0.58	0.49	0.61
Methyl methacrylate	0.14 U	0.14 U	0.14 U	0.18	0.14 U	0.14 U	0.14 U	0.16	0.14 U	0.14 U	0.14 U	0.14 U									
Methylene chloride	3.3	2.1	1.1	1.2	1.3	2.2	0.77	0.58 J	0.29 J	2.1	0.54 J	0.73 J	1.2	2.3	29	1.7	2.5	1.3	1.9	2.2	0.70 U
Methyl-t-butyl ether	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.072 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.13 U	0.18 U	0.18 U	
n-Heptane	0.14 U	0.083	0.15	0.83	0.14 U	0.65	0.43	0.52	0.14 U	0.13 J	0.19	0.17	0.39	0.23	0.20 U	0.58	0.79	0.21	0.14 U	0.20 U	0.20 U
o-Xylene	0.35	0.13	0.26	0.46	0.15 U	0.62	0.30	0.22	0.18	0.14 J	0.14 J	0.19	0.41	0.27	0.33	0.78	0.87	0.33	0.22	0.22 U	0.22 U
Propylene (Propene)	2.4 U	1.1	2.4 U	2.4 U	2.4 U	2.4 U	1.8	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	0.18 U	0.18 U	0.090 U	0.090 U	0.18 U	0.13 U	0.18 U	0.35 U	
Styrene	0.15 U	0.15 U	0.15 U	0.3	0.15 U	0.18	0.16	0.15	0.12 J	0.15 U	0.033 J	0.087 J	0.15 U	0.21 U	0.21 U	0.22	0.23	0.21 U	0.15 U	0.21 U	0.21 U
Tetrachloroethene	0.25	0.095	0.30	0.24 U	0.24 U	0.24 U	0.30	0.12	1.90	0.24 U	0.26	0.2 J	13.00	7.3 [a]	0.58	4.4	3.4	3.4	2.4	7.9 [a]	0.75
Tetrahydrofuran	0.10 U	0.10 U	0.14	0.73	0.10 U	0.10 U	0.13	0.16	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	13	1.2	1.3	0.47	0.34	0.21	0.25	0.15 U
Toluene	0.62	0.56	0.9	4.6	0.66	3.4	1.8	2.5	1.3	0.63	0.77	1.3	1.6	1.8	1.3	4.3	5.8	2.3	1	1	1.1
trans-1,2-Dichloroethene	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.04 U	0.14 U	0.14 U	0.14 U	0.14 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.14 U	0.20 U	0.20 U	
trans-1,3-Dichloropropene	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.045 U	0.16 U	0.16 U	0.16 U	0.16 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.16 U	0.22 U	0.22 U	
Trichloroethene	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.26	0.19 U	0.075	0.64	0.072 J	0.19 U	0.22	0.64	4.7	0.48	1.7	1.5	0.88	0.78	2.0	0.27 U
Trichlorofluoromethane	1.2	1.3	1.5	1.6	1.4	1.7	1.4	1.3	1.3	1	1.7	1.3	1.6	2.0	1.3	1.6	3.0	1.7	1.3	1.3	1.2
Trichlorotrifluoroethane	0.59	0.65	0.65	0.62	0.61	0.51	0.59	0.57	0.63	0.47 J	0.69 J	0.55 J	0.59 J	0.72	0.59	0.51	0.45	0.57	0.54	0.61	0.49
Vinyl acetate	0.25 U	0.25 U	2.5 U	1.4 U	2.5 U	2.5 U	2.5 U	2.5 U	0.71 U	0.71 U	0.18 U	0.18 U	0.71 U	0.50 U	0.71 U	0.71 U	0.71 U				
Vinyl chloride	0.090 U	0.090 U	0.090 U	0.090 U	0.090 U	0.090 U	0.09 U	0.026 U	0.09 U	0.09 U	0.09 U	0.09 U	0.29	0.13 U	0.20	0.22	0.13 U	0.10 U	0.20	0.13 U	0.13 U

Table 3.
Summary of Analytical Results - Air Sampling for Large Retail Space
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Parameter (ug/m³)	Indoor Air - Large Retail Space																					
	IA-4-092409 9/24/2009	IA-4-100109 10/1/2009	IA-4-100809 10/8/2009	IA-4-012810 1/28/2010	IA-4-020510 2/5/2010	IA-4-021210 2/12/2010	IA-4-021910 2/19/2010	IA-4-032610 3/26/2010	IA-4-043010 4/30/2010	IA-4-052810 5/28/2010	IA-4-070110 7/1/2010	IA-4-091610 9/16/2010	IA-4-120710 12/7/2010	IA-4-021711 2/17/2011	IA-4-060211 6/2/2011	IA-4-091511 9/15/2011	IA-4-120811 12/8/2011	IA-4-030812 3/8/2012	IA-4-061412 6/14/2012	IA-4-091312 9/13/2012	IA-4-010313 1/3/2013	IA-4-031513 3/15/2013
Ethanol	6.5	4.9	5.6	7.7	34	17	31	3.9	4.9	6.1	8.7	9.8	3.4	8.9	5.3	7.0	2.4	2.5	9.4	7.3	7.5	46
Ethyl acetate	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.26	0.18 U	0.18 U	0.16	0.21	0.38	2.4	0.13 U	0.73	
Ethylbenzene	0.27	0.22 U	0.26	0.22 U	0.26	0.22 U	0.22 U	0.22 U	0.25	0.25	0.29	0.44	0.22 U	0.49	0.22 U	0.22 U	0.16	0.17	0.14	0.38	4.1	0.32
Hexachlorobutadiene	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	1.1 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.32 U	0.32 U	0.32 U	0.37 U	0.37 U	0.37 U	
Hexane	2.2	0.49	0.93	0.18 U	0.37	1.3	0.49	0.19	1.3	0.55	2.8	0.61	0.38	1.7	1.0	7.0 U	0.35	0.55	0.47	5.0	17	0.89
Isopropyl alcohol	5.2	0.25 U	0.25 U	0.96	0.25 U	0.25 U	1.9	0.66	3.4	4.4	1.8	8.3	0.48	1.7	1.2 U	4.9 U	2.9 U	2.9 U	1.4	2.6	3.4 U	
m,p-Xylene	0.93	0.69	1.0	0.43 U	0.81	0.43 U	0.43 U	0.49	0.80	0.98	1.1	1.4	0.43 U	1.4	0.41 J	0.53	0.41	0.27	0.38	1.2	17	1.1
Methyl methacrylate													0.20 U	0.20 U	0.20 U	0.20 U	0.12 U	0.12 U	0.13	0.14 U	0.14 U	0.14 U
Methylene chloride	9.7	0.70 U	0.70 U	1.5	0.70 U	1.9	0.71	0.70 U	0.70 U	0.35 U	7.7	0.68	0.79	5.1	3.2	1.7 U	1.5	2.0	0.72	12	1.3	0.97
Methyl-t-butyl ether	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.11 U	0.11 U	0.11 U	0.19	0.13 U	0.13 U	
n-Heptane	0.20 U	0.20 U	0.26	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.22	0.32	0.20 U	0.51	0.20 U	0.20 U	0.071	0.12 U	0.11	0.41	1.6	0.32
o-Xylene	0.42	0.28	0.4	0.22 U	0.31	0.22 U	0.22 U	0.22 U	0.30	0.44	0.50	0.57	0.22 U	0.53	0.22 U	0.22 U	0.15	0.11	0.17	0.41	5.1	0.43
Propylene (Propene)	0.35 U	0.18 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.87 U	1.1	0.35 U	0.86 U	0.86 U	0.86 U	3.4 U	2.1 U	2.1 U	2.1 U	1.7	2.4 U	2.4 U
Styrene	0.21	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.22	0.29	0.21 U	0.21 U	0.21 U	0.21 U	0.077	0.092	0.55	0.093	0.52	0.099	
Tetrachloroethene	0.34 U	2.0	1.1	0.34 U	0.34 U	0.34 U	1.4	0.34 U	4.4	0.44	1.1	0.34 U	3.4	5.0	0.34 U	0.45	1.2	0.31	0.12	1.7	0.18	0.21
Tetrahydrofuran	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.19	0.24	0.15 U	0.15 U	0.15 U	0.15 U	0.076	0.088 U	0.055	0.10 U	0.28	0.10 U	
Toluene	1.3	0.76	1.2	0.19 U	0.79	0.63	0.47	0.83	1.4	0.98	1	2	0.43	2.7	0.56	0.95	1.6	0.32	0.8	2.9	4.8	1.5
trans-1,2-Dichloroethene	0.20 U	1.1	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.12 U	0.059 U	0.12 U	0.14 U	0.14 U	0.14 U	
trans-1,3-Dichloropropene	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.23 U	0.23 U	0.23 U	0.23 U	0.14 U	0.068 U	0.14 U	0.16 U	0.16 U	0.16 U
Trichloroethene	0.27 U	1.1	0.57	0.27 U	0.27 U	0.27 U	0.40	0.27 U	1.4	0.27 U	0.44	0.27 U	1.8	0.27 U	0.27 U	0.35	0.15	0.052	0.12	0.19 U	0.057	
Trichlorofluoromethane	1.5	1.2	1.2	0.93	1.3	1.4	1.6	1.5	1.3	1.3	1.9	2.4	1.2	1.8	1.4	1.8	1.3	0.87	1.5	1.7	2.8	1.2
Trichlorotrifluoroethane	0.48	0.47	0.50	0.38 U	0.55	0.58	0.55	1.3	0.48	0.51	0.59	0.43	0.54	0.70	0.71	0.52	0.71	0.44	0.56	0.59	0.60	0.66
Vinyl acetate	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.36 U	0.71 U	0.18 U	0.18 U	0.36 U	0.38	0.18 U	3.5 U	0.18 U	0.11 U	0.21 U	0.21 U	0.25 U	0.25 U	
Vinyl chloride	0.13 U	0.16	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.16	0.13 U	0.13 U	0.13 U	0.077 U	0.038 U	0.077 U	0.090 U	0.090 U	0.090 U	

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Former Gorham Manufacturing Site
Providence, Rhode Island

Parameter (ug/m ³)	Indoor Air - Large Retail Space																					
	IA-4-060713 6/7/2013	IA-4-090613 9/6/2013	IA-4-121313 12/13/13	IA-4-030714 03/07/14	IA-4-061314 6/13/2014	IA-4-091214 9/12/2014	IA-4-121914 12/19/2014	IA-4-032715 3/27/2015	IA-4-061115 6/11/2015	IA-4-091615 9/16/2015	IA-4-121815 12/18/2015	LRAIR01 5/15/2009	LRAIR02 5/15/2009	LRAIR03 5/15/2009	LRAIR04 5/15/2009	LRAIR05 5/15/2009	LRAIR06 5/15/2009	LRAIR07 5/15/2009	LRAIR08 5/15/2009	LRAIR09 5/15/2009	LRAIR10 5/15/2009	
1,1,1-Trichloroethane	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.055 U	0.28	0.19 U	0.19 U	0.054 J	0.19 U	0.45	0.52	0.65	0.57	0.51	0.44	0.69	0.50	0.49	0.53	
1,1,1,2-Tetrachloroethane	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.25 U	0.44 U	0.44 U	0.44 U	0.44 U	0.19 U											
1,1,2,2-Tetrachloroethane	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.069 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	
1,1,2-Trichloroethane	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.11 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	
1,1-Dichloroethane	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.04 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	
1,1-Dichloroethene	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.04 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	
1,2,4-Trichlorobenzene	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.15 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	
1,2,4-Trimethylbenzene	0.47	0.20	0.17 U	0.56	0.26	0.17	0.14 J	0.25	0.2	0.22	0.45	0.25 U	0.25 U	0.25 U	0.29	0.25 U						
1,2-Dibromoethane (EDB)	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.077 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	
1,2-Dichlorobenzene	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.12 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	
1,2-Dichloroethane	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.04 U	0.14 U	0.14 U	0.051 J	0.14 U	0.14 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	
1,2-Dichloropropane	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.046 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	
1,2-Dichlorotetrafluoroethane												0.25 U	0.35 U									
1,3,5-Trimethylbenzene	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.098 U	0.17 U	0.066 J	0.066 J	0.066 J	0.17 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	
1,3-Butadiene	0.078 U	0.078 U	0.078 U	0.47	0.11	0.044 U	0.078 U	0.078 U	0.078 U	0.16	0.1	0.11 U										
1,3-Dichlorobenzene	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.12 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	
1,4-Dichlorobenzene	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.12 U	0.08 J	0.063 J	0.12 J	0.084 J	0.21 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	
1,4-Dioxane												1.3 U										
2-Butanone	3.9	0.95	1.2	1.1	2.9	4.6	1.1 J	1.9 J	1.9 J	1.8 J	2.5 J	3.3	3.4	2.1	2.6	2.0	1.6	3.1	2.5	2.6	1.4	
2-Hexanone	0.51	0.14 U	0.14 U	0.15	0.36	0.2	0.14 U	0.25	0.14 U	0.14 U	0.22	0.73	0.66	0.38	0.51	0.37	0.38	0.61	0.48	0.43	0.29	
4-Ethyltoluene	0.17 U	0.17 U	0.17 U	0.18	0.17 U	0.098 U	0.055 J	0.069 J	0.041 J	0.076 J	0.17 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	
4-Methyl-2-pentanone	0.56	0.47	0.16	0.48	1.3	1	0.34	0.89	0.97	1.6	1.5	0.42	0.39	0.32	0.36	0.54	0.27	0.32	0.30	0.61	0.23	
Acetone	36	18	29	29	37	38	27	42	28	170 E	28	12	13	10	11	8.5	7.7	13	11	9.8	6.9	
Benzene	0.55	0.47	0.56	2.2	0.68	0.39	0.47	0.69	0.36	0.79	1.1	0.54	0.60	0.67	0.55	0.56	0.51	0.53	0.60	0.51	0.57	
Benzyl chloride	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.052 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	
Bromodichloromethane	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.067 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	
Bromoform	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.21 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	
Bromomethane	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.078 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	
Carbon disulfide	0.38	0.39	0.15	0.19	0.62	0.46 J	0.27 J	0.31 J	0.35 J	0.44 J	0.31 J	0.16 U										
Carbon tetrachloride	0.65 [a]	0.45	0.46	0.45</																		

Table 3.
Summary of Analytical Results - Air Sampling for Large Retail Space
Former Gorham Manufacturing Site
Providence, Rhode Island

Parameter (ug/m ³)	Indoor Air - Large Retail Space																					
	IA-4-060713 6/7/2013	IA-4-090613 9/6/2013	IA-4-121313 12/13/13	IA-4-030714 03/07/14	IA-4-061314 6/13/2014	IA-4-091214 9/12/2014	IA-4-121914 12/19/2014	IA-4-032715 3/27/2015	IA-4-091115 6/11/2015	IA-4-091615 9/16/2015	IA-4-121815 12/18/2015	LRAIR01 5/15/2009	LRAIR02 5/15/2009	LRAIR03 5/15/2009	LRAIR04 5/15/2009	LRAIR05 5/15/2009	LRAIR06 5/15/2009	LRAIR07 5/15/2009	LRAIR08 5/15/2009	LRAIR09 5/15/2009	LRAIR10 5/15/2009	
Ethanol	79	71	91	83	240	150	260	190	330	57	69	65	9.0	6.5	5.9	6.0	5.6	5.9	14	44	14	
Ethyl acetate	0.94	0.13 U	0.13 U	0.88	0.26	0.38	0.46	0.69	0.69	9.9	0.6	0.18 U										
Ethylbenzene	0.43	0.19	0.15 U	0.57	0.27	0.12	0.14 J	0.19	0.16	0.34	0.86	0.22 U	0.27	0.22 U								
Hexachlorobutadiene	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.21 U	0.37 U	0.37 U	0.37 U	0.37 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	
Hexane	2.8	0.53	4.9 U	1.3	0.75	0.58 J	0.44 J	5.6	0.45 J	1.6 J	2.5 J	1.1	0.21	0.18 U	0.18	0.24	0.18 U	0.19	0.21	0.20	0.18 U	
Isopropyl alcohol	4.0	1.6	8.4	4.4	3.9	4.8	8.2	7.1	3.9	7.1	3.4 U	3.3	3.4	3.7	3.5	3.6	3.4	4.4	3.6	2.8	3.2	
m,p-Xylene	1.6	0.53	0.28	1.6	0.86	0.4	0.56	0.62	0.46	1.1	4.4	0.58	0.57	0.58	0.55	0.49	0.50	0.48	0.53	1.0	0.50	
Methyl methacrylate	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.082 U	0.14 U	0.14 U	0.14 U	0.14 U												
Methylene chloride	3.1	0.89	0.69	0.72	0.61	0.64 J	0.29 J	1.5	0.45 J	1.7	0.94 J	5.9	1.5	1.5	1.6	1.9	1.6	1.5	1.6	1.6	1.4	
Methyl-t-butyl ether	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.072 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U		
n-Heptane	0.53	0.16	0.14 U	0.66	0.39	0.17	0.11 J	0.22	0.17	0.42	0.49	0.20 U										
o-Xylene	0.57	0.23	0.15 U	0.66	0.33	0.16	0.17	0.25	0.19	0.4	1.1	0.28	0.28	0.27	0.27	0.25	0.26	0.25	0.27	0.34	0.26	
Propylene (Propene)	2.4 U	2.4 U	2.4 U	2.4 U	3.0	1.4 U	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	0.090 U	0.090 U	0.090 U	0.090 U	0.090 U	0.090 U	0.090 U	0.090 U	0.090 U	0.090 U	
Styrene	0.15 U	0.15 U	0.15 U	0.23	0.46	0.4	0.15 J	0.19	0.38	0.29	0.24	0.23	0.21 U	0.21 U	0.22	0.21 U	0.21 U	0.37	0.21 U	0.21 U	0.21 U	
Tetrachloroethene	0.45	0.30	0.24 U	0.31	0.32	0.23	3.2	0.98	0.36	0.58	0.5	0.47	0.47	0.54	0.66	0.64	0.60	0.73	0.53	0.46	0.46	
Tetrahydrofuran	0.10 U	0.10 U	0.10 U	0.10 U	0.12	0.094	0.1 U	0.24	0.11	0.11	0.1 U	0.15 U	0.15 U	0.15 U	0.15 U	0.20	0.15 U					
Toluene	3	1.4	0.75	3.4	1.9	1.4	1.4	1.4	1.2	7.1	3	0.73	0.7	0.58	0.59	0.51	0.53	0.57	0.53	0.54	0.47	
trans-1,2-Dichloroethene	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.04 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U		
trans-1,3-Dichloropropene	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.045 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U		
Trichloroethene	0.19 U	0.19 U	0.19 U	0.24	0.19 U	0.054 U	1.2	0.083 J	0.19 U	0.51	0.19 U	0.27 U	0.28	0.27	0.29	0.34	0.27	0.28	0.27 U	0.27 U	0.27 U	
Trichlorofluoromethane	2.2	1.3	1.5	1.3	1.4	1.3	1.3	1.4	1.4	1.3	1.6	1.3	1.3	1.2	1.1	1.4	1.3	1.1	1.4	1.0	1.4	
Trichlorotrifluoroethane	1.6	0.65	0.58	0.49	0.54	0.55	0.62	0.52 J	0.65 J	0.58 J	0.6 J	0.63	0.60	0.65	0.62	0.64	0.57	0.59	0.68	0.62	0.58	
Vinyl acetate	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	1.4 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	
Vinyl chloride	0.090 U	0.090 U	0.090 U	0.090 U	0.09 U	0.026 U	0.072 J	0.09 U	0.09 U	0.09 U	0.09 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U		

Notes:

[a] Carbon tetrachloride and tetrachloroethene are above the target air concentration, but are not compliance violations as indoor air concentrations are consistent with outdoor air concentrations that were sampled on the same day.

NA - not available

U - Not detected, value is the detection limit

B - Compounds detected in method blank as well as field sample

D - Result from diluted analyses

J - Indicates compound was detected at an estimated value.

ug/m³ - micrograms per cubic meter

Prepared by / Date: AKN 1/6/16

Checked by / Date: 01/07/16

5 Bolded and shaded values are above the CT target indoor air concentration for industrial/commercial scenarios

Table 4.
Vacuum Monitoring Results - Large Retail Space
Former Gorham Manufacturing Site
Providence, Rhode Island

Date	Pressure Differential (inches of water)			
	VMW-1	VMW-2	VMW-3	VMW-4
2/3/2009	-0.20	-0.62	-0.15	-0.12
2/18/2009	-0.509	-0.738	-0.650	-0.253
2/26/2009	-0.511	-0.710	-0.665	-0.273
3/6/2009	-0.507	-0.610	-0.715	-0.251
3/6/2009*	-0.120	-0.195	-0.230	-0.028
3/31/2009	-0.148	-0.221	-0.244	-0.072
4/14/2009	-0.140	-0.210	-0.215	-0.081
5/15/2009	-0.133	-0.193	-0.208	-0.087
9/17/2009	-0.132	-0.172	-0.209	-0.087
9/24/2009	-0.146	-0.189	-0.254	-0.094
10/1/2009	-0.181	-0.232	-0.233	-0.097
10/8/2009	-0.197	-0.212	-0.255	-0.087
12/29/2009**	-0.021	-0.020	-0.160	-0.023
1/28/2010	-0.947	-0.642	-0.709	-0.237
2/5/2010	-0.497	-0.714	-0.510	-0.258
2/12/2010	-0.509	-0.706	-0.537	-0.261
2/19/2010	-0.526	-0.733	-0.667	-0.242
3/26/2010	-0.636	-0.860	-0.671	-0.331
4/30/2010	-0.519	-0.713	-0.378	-0.287
5/28/2010	-0.546	-0.727	+1.371	-0.279
7/1/2010	-0.505	-0.678	+1.568	-0.272
9/16/2010	-0.496	-0.654	+0.980	-0.272
12/7/2010	-0.126	-0.202	-0.155	-0.052
2/17/2011	-0.491	-0.683	-0.737	-0.263
6/2/2011	-0.561	-0.767	-0.393	-0.290
9/15/2011	-0.517	-0.710	+1.071	-0.260
12/8/2011	-0.609	-0.826	+1.502	-0.313
3/8/2012	-0.422	-0.680	+0.329	-0.288
6/14/2012	-0.372	-0.767	+2.389	-0.280
9/13/2012	-0.543	-1.021	-0.665	-0.283
1/3/2013	-0.495	-0.628	-1.141	-0.674
3/15/2013	-0.539	-0.636	-0.754	-0.254
6/7/2013	-0.121	-0.681	-0.787	-0.223
9/6/2013	-0.421	-0.743	-0.766	-0.265
12/13/2013	-0.435	-0.580	-0.031	-0.190
3/7/2014	-0.311	-0.541	-0.741	-0.157
6/13/2014	-0.538	-0.627	-0.010	-0.058
9/12/2014	-0.549	-0.528	-0.295	-0.002
12/19/2014	-0.492	-0.427	-0.002	-0.143
3/27/2015	-0.433	-0.655	-0.011	-0.108
6/11/2015	-0.49***	-0.66***	-0.5***	-0.15***
9/16/2015	-0.535	-0.409	-0.611	-0.123
12/18/2015	-0.436	-0.495	-0.692	-0.181

* vacuum reduced at extraction wells

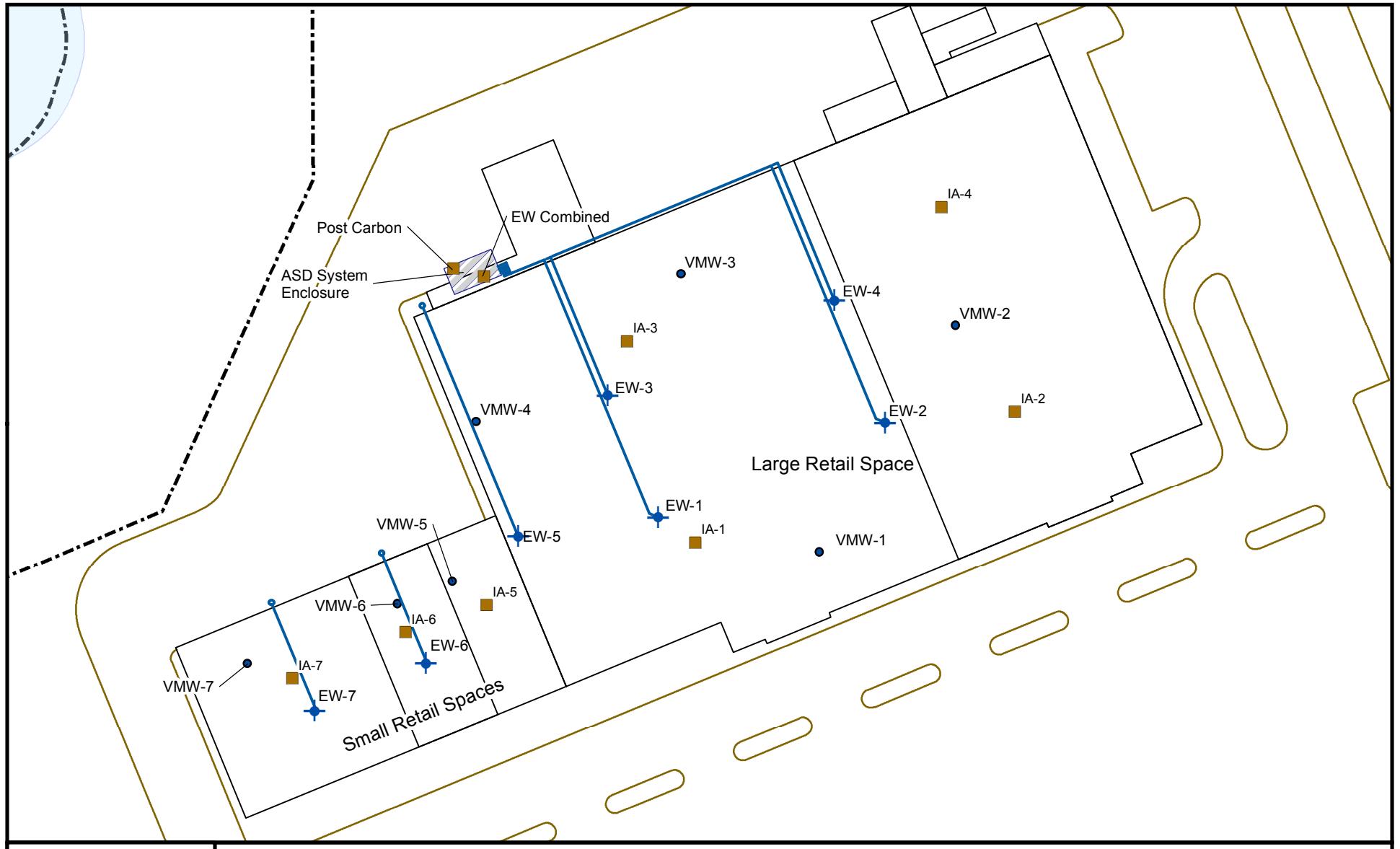
** ASD system offline

*** Due to Digital Manometer reading high range only at the time of measurement, readings are in tenths of inches of water.

Prepared by/Date: MAM 01/06/16

Checked by/Date: DEH 01/15/16

FIGURE



All locations are approximate

N

0 30 60
Feet

Prepared/Date: BJR 04/20/15 Checked/Date: MAM 04/20/15

Legend

- Air Sample Location
- Current Building
- Vacuum Monitoring Well
- Pavement Outline
- ◆ Extraction Well
- Effluent Location
- Extraction Well Piping

Figure 1
Vapor Mitigation
Sample Locations

Former Gorham Manufacturing Facility
333 Adelaide Avenue
Providence, Rhode Island

APPENDIX A



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

December 30, 2015

David Heislein
AMEC - MA
271 Mill Road
Chelmsford, MA 01824

Project Location: Providence, RI

Client Job Number:

Project Number: 3652150005

Laboratory Work Order Number: 15L1060

Enclosed are results of analyses for samples received by the laboratory on December 18, 2015. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Aaron L. Benoit". It is written in a cursive style with some variations in line thickness.

Aaron L. Benoit
Project Manager

Table of Contents

Sample Summary	3
Case Narrative	4
Sample Results	7
Sample Preparation Information	31
QC Data	32
Air Toxics by EPA Compendium Methods	32
B138770	32
Flag/Qualifier Summary	37
Certifications	38
Chain of Custody/Sample Receipt	40



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

AMEC - MA
271 Mill Road
Chelmsford, MA 01824
ATTN: David Heislein

REPORT DATE: 12/30/2015

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 3652150005

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 15L1060

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: Providence, RI

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
IA-1-121815	15L1060-01	Indoor air		EPA TO-15	
IA-2-121815	15L1060-02	Indoor air		EPA TO-15	
IA-3-121815	15L1060-03	Indoor air		EPA TO-15	
IA-4-121815	15L1060-04	Indoor air		EPA TO-15	
IA-5-121815	15L1060-05	Indoor air		EPA TO-15	
IA-6-121815	15L1060-06	Indoor air		EPA TO-15	
IA-7-121815	15L1060-07	Indoor air		EPA TO-15	
AA-1-121815	15L1060-08	Ambient Air		EPA TO-15	
EW-5-121815	15L1060-09	Sub Slab		EPA TO-15	
EW-6-121815	15L1060-10	Sub Slab		EPA TO-15	
EW-7-121815	15L1060-11	Sub Slab		EPA TO-15	
EW-combined-121815	15L1060-12	Sub Slab		EPA TO-15	



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

EPA TO-15

Qualifications:

L-03

Laboratory fortified blank/laboratory control sample recovery is outside of control limits. Reported value for this compound is likely to be biased on the low side.

Analyte & Samples(s) Qualified:

Hexane

15L1060-01[IA-1-121815], 15L1060-02[IA-2-121815], 15L1060-03[IA-3-121815], 15L1060-04[IA-4-121815], 15L1060-05[IA-5-121815], 15L1060-06[IA-6-121815],
15L1060-07[IA-7-121815], 15L1060-08[AA-1-121815], 15L1060-09[EW-5-121815], 15L1060-10[EW-6-121815], 15L1060-11[EW-7-121815],
15L1060-12[EW-combined-121815], B138770-BLK1, B138770-BS1

Methyl tert-Butyl Ether (MTBE)

15L1060-01[IA-1-121815], 15L1060-02[IA-2-121815], 15L1060-03[IA-3-121815], 15L1060-04[IA-4-121815], 15L1060-05[IA-5-121815], 15L1060-06[IA-6-121815],
15L1060-07[IA-7-121815], 15L1060-08[AA-1-121815], 15L1060-09[EW-5-121815], 15L1060-10[EW-6-121815], 15L1060-11[EW-7-121815],
15L1060-12[EW-combined-121815], B138770-BLK1, B138770-BS1

L-05

Laboratory fortified blank/laboratory control sample recovery is outside of control limits. Reported value for this compound is likely to be biased on the high side.

Analyte & Samples(s) Qualified:

Cyclohexane

15L1060-01[IA-1-121815], 15L1060-02[IA-2-121815], 15L1060-03[IA-3-121815], 15L1060-04[IA-4-121815], 15L1060-05[IA-5-121815], 15L1060-06[IA-6-121815],
15L1060-07[IA-7-121815], 15L1060-08[AA-1-121815], B138770-BS1

R-01

Duplicate RPD is outside of control limits. Reduced precision is anticipated for reported result.

Analyte & Samples(s) Qualified:

1,3-Butadiene

B138770-DUP1

Chloromethane

B138770-DUP1

Ethanol

B138770-DUP1

Trichlorofluoromethane (Freon 11)

B138770-DUP1

V-05

Continuing calibration did not meet method specifications and was biased on the low side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the low side.

Analyte & Samples(s) Qualified:

Hexane

15L1060-01[IA-1-121815], 15L1060-02[IA-2-121815], 15L1060-03[IA-3-121815], 15L1060-04[IA-4-121815], 15L1060-05[IA-5-121815], 15L1060-06[IA-6-121815],
15L1060-07[IA-7-121815], 15L1060-08[AA-1-121815], 15L1060-09[EW-5-121815], 15L1060-10[EW-6-121815], 15L1060-11[EW-7-121815],
15L1060-12[EW-combined-121815], B138770-BLK1, B138770-BS1

Methyl tert-Butyl Ether (MTBE)

15L1060-01[IA-1-121815], 15L1060-02[IA-2-121815], 15L1060-03[IA-3-121815], 15L1060-04[IA-4-121815], 15L1060-05[IA-5-121815], 15L1060-06[IA-6-121815],
15L1060-07[IA-7-121815], 15L1060-08[AA-1-121815], 15L1060-09[EW-5-121815], 15L1060-10[EW-6-121815], 15L1060-11[EW-7-121815],
15L1060-12[EW-combined-121815], B138770-BLK1, B138770-BS1

V-06

Continuing calibration did not meet method specifications and was biased on the high side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the high side.

Analyte & Samples(s) Qualified:

1,4-Dioxane

B138770-BS1

4-Methyl-2-pentanone (MIBK)

15L1060-01[IA-1-121815], 15L1060-02[IA-2-121815], 15L1060-03[IA-3-121815], 15L1060-04[IA-4-121815], 15L1060-07[IA-7-121815], B138770-BS1

Cyclohexane

15L1060-01[IA-1-121815], 15L1060-02[IA-2-121815], 15L1060-03[IA-3-121815], 15L1060-04[IA-4-121815], 15L1060-05[IA-5-121815], 15L1060-06[IA-6-121815],
15L1060-07[IA-7-121815], 15L1060-08[AA-1-121815], B138770-BS1

Heptane

15L1060-01[IA-1-121815], 15L1060-02[IA-2-121815], 15L1060-03[IA-3-121815], 15L1060-04[IA-4-121815], 15L1060-05[IA-5-121815], 15L1060-06[IA-6-121815],
15L1060-07[IA-7-121815], 15L1060-08[AA-1-121815], B138770-BS1



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

A handwritten signature in black ink, appearing to read "Johanna K. Harrington".

Johanna K. Harrington
Manager, Laboratory Reporting



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: Providence, RI

Date Received: 12/18/2015

Field Sample #: IA-1-121815

Sample ID: 15L1060-01

Sample Matrix: Indoor air

Sampled: 12/18/2015 08:04

Sample Description/Location:

Sub Description/Location:

Canister ID: 1018

Canister Size: 6 liter

Flow Controller ID: 4039

Sample Type: 30 min

Work Order: 15L1060

Initial Vacuum(in Hg): -29

Final Vacuum(in Hg): -9

Receipt Vacuum(in Hg): -8

Flow Controller Type: Fixed-Orifice

Flow Controller Calibration

RPD Pre and Post-Sampling:

EPA TO-15

Analyte	ppbv			ug/m3			Dilution	Date/Time Analyzed	Analyst
	Results	RL	Flag/Qual	Results	RL				
Acetone	5.0	1.4		12	3.3		0.702	12/29/15 1:18	CMR
Benzene	0.31	0.035		0.98	0.11		0.702	12/29/15 1:18	CMR
Benzyl chloride	ND	0.035		ND	0.18		0.702	12/29/15 1:18	CMR
Bromodichloromethane	ND	0.035		ND	0.24		0.702	12/29/15 1:18	CMR
Bromoform	ND	0.035		ND	0.36		0.702	12/29/15 1:18	CMR
Bromomethane	ND	0.035		ND	0.14		0.702	12/29/15 1:18	CMR
1,3-Butadiene	0.070	0.035		0.16	0.078		0.702	12/29/15 1:18	CMR
2-Butanone (MEK)	ND	1.4		ND	4.1		0.702	12/29/15 1:18	CMR
Carbon Disulfide	ND	0.35		ND	1.1		0.702	12/29/15 1:18	CMR
Carbon Tetrachloride	0.080	0.035		0.50	0.22		0.702	12/29/15 1:18	CMR
Chlorobenzene	ND	0.035		ND	0.16		0.702	12/29/15 1:18	CMR
Chloroethane	ND	0.035		ND	0.093		0.702	12/29/15 1:18	CMR
Chloroform	0.14	0.035		0.67	0.17		0.702	12/29/15 1:18	CMR
Chloromethane	0.71	0.070		1.5	0.14		0.702	12/29/15 1:18	CMR
Cyclohexane	0.24	0.035	L-05, V-06	0.84	0.12		0.702	12/29/15 1:18	CMR
Dibromochloromethane	ND	0.035		ND	0.30		0.702	12/29/15 1:18	CMR
1,2-Dibromoethane (EDB)	ND	0.035		ND	0.27		0.702	12/29/15 1:18	CMR
1,2-Dichlorobenzene	ND	0.035		ND	0.21		0.702	12/29/15 1:18	CMR
1,3-Dichlorobenzene	ND	0.035		ND	0.21		0.702	12/29/15 1:18	CMR
1,4-Dichlorobenzene	ND	0.035		ND	0.21		0.702	12/29/15 1:18	CMR
Dichlorodifluoromethane (Freon 12)	0.45	0.035		2.2	0.17		0.702	12/29/15 1:18	CMR
1,1-Dichloroethane	ND	0.035		ND	0.14		0.702	12/29/15 1:18	CMR
1,2-Dichloroethane	ND	0.035		ND	0.14		0.702	12/29/15 1:18	CMR
1,1-Dichloroethylene	ND	0.035		ND	0.14		0.702	12/29/15 1:18	CMR
cis-1,2-Dichloroethylene	ND	0.035		ND	0.14		0.702	12/29/15 1:18	CMR
trans-1,2-Dichloroethylene	ND	0.035		ND	0.14		0.702	12/29/15 1:18	CMR
1,2-Dichloropropane	ND	0.035		ND	0.16		0.702	12/29/15 1:18	CMR
cis-1,3-Dichloropropene	ND	0.035		ND	0.16		0.702	12/29/15 1:18	CMR
trans-1,3-Dichloropropene	ND	0.035		ND	0.16		0.702	12/29/15 1:18	CMR
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.035		ND	0.25		0.702	12/29/15 1:18	CMR
1,4-Dioxane	ND	0.35		ND	1.3		0.702	12/29/15 1:18	CMR
Ethanol	11	1.4		22	2.6		0.702	12/29/15 1:18	CMR
Ethyl Acetate	ND	0.035		ND	0.13		0.702	12/29/15 1:18	CMR
Ethylbenzene	0.13	0.035		0.57	0.15		0.702	12/29/15 1:18	CMR
4-Ethyltoluene	ND	0.035		ND	0.17		0.702	12/29/15 1:18	CMR
Heptane	0.077	0.035	V-06	0.32	0.14		0.702	12/29/15 1:18	CMR
Hexachlorobutadiene	ND	0.035		ND	0.37		0.702	12/29/15 1:18	CMR



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: Providence, RI

Date Received: 12/18/2015

Field Sample #: IA-1-121815

Sample ID: 15L1060-01

Sample Matrix: Indoor air

Sampled: 12/18/2015 08:04

Sample Description/Location:

Sub Description/Location:

Canister ID: 1018

Canister Size: 6 liter

Flow Controller ID: 4039

Sample Type: 30 min

Work Order: 15L1060

Initial Vacuum(in Hg): -29

Final Vacuum(in Hg): -9

Receipt Vacuum(in Hg): -8

Flow Controller Type: Fixed-Orifice

Flow Controller Calibration

RPD Pre and Post-Sampling:

EPA TO-15

Analyte	ppbv			ug/m3			Dilution	Date/Time Analyzed	Analyst
	Results	RL	Flag/Qual	Results	RL				
Hexane	ND	1.4	L-03, V-05	ND	4.9		0.702	12/29/15 1:18	CMR
2-Hexanone (MBK)	0.040	0.035		0.16	0.14		0.702	12/29/15 1:18	CMR
Isopropanol	ND	1.4		ND	3.4		0.702	12/29/15 1:18	CMR
Methyl tert-Butyl Ether (MTBE)	ND	0.035	L-03, V-05	ND	0.13		0.702	12/29/15 1:18	CMR
Methylene Chloride	ND	0.35		ND	1.2		0.702	12/29/15 1:18	CMR
4-Methyl-2-pentanone (MIBK)	0.051	0.035	V-06	0.21	0.14		0.702	12/29/15 1:18	CMR
Naphthalene	ND	0.035		ND	0.18		0.702	12/29/15 1:18	CMR
Propene	ND	1.4		ND	2.4		0.702	12/29/15 1:18	CMR
Styrene	ND	0.035		ND	0.15		0.702	12/29/15 1:18	CMR
1,1,2,2-Tetrachloroethane	ND	0.035		ND	0.24		0.702	12/29/15 1:18	CMR
Tetrachloroethylene	1.0	0.035		7.0	0.24		0.702	12/29/15 1:18	CMR
Tetrahydrofuran	ND	0.035		ND	0.10		0.702	12/29/15 1:18	CMR
Toluene	0.50	0.035		1.9	0.13		0.702	12/29/15 1:18	CMR
1,2,4-Trichlorobenzene	ND	0.035		ND	0.26		0.702	12/29/15 1:18	CMR
1,1,1-Trichloroethane	ND	0.035		ND	0.19		0.702	12/29/15 1:18	CMR
1,1,2-Trichloroethane	ND	0.035		ND	0.19		0.702	12/29/15 1:18	CMR
Trichloroethylene	0.041	0.035		0.22	0.19		0.702	12/29/15 1:18	CMR
Trichlorofluoromethane (Freon 11)	0.38	0.14		2.1	0.79		0.702	12/29/15 1:18	CMR
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.14		ND	1.1		0.702	12/29/15 1:18	CMR
1,2,4-Trimethylbenzene	0.065	0.035		0.32	0.17		0.702	12/29/15 1:18	CMR
1,3,5-Trimethylbenzene	ND	0.035		ND	0.17		0.702	12/29/15 1:18	CMR
Vinyl Acetate	ND	0.70		ND	2.5		0.702	12/29/15 1:18	CMR
Vinyl Chloride	ND	0.035		ND	0.090		0.702	12/29/15 1:18	CMR
m&p-Xylene	0.69	0.070		3.0	0.30		0.702	12/29/15 1:18	CMR
o-Xylene	0.18	0.035		0.80	0.15		0.702	12/29/15 1:18	CMR

Surrogates

% Recovery

% REC Limits

4-Bromofluorobenzene (1)

113

70-130

12/29/15 1:18



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: Providence, RI

Date Received: 12/18/2015

Field Sample #: IA-2-121815

Sample ID: 15L1060-02

Sample Matrix: Indoor air

Sampled: 12/18/2015 10:52

Sample Description/Location:

Sub Description/Location:

Canister ID: 1858

Canister Size: 6 liter

Flow Controller ID: 4210

Sample Type: 30 min

Work Order: 15L1060

Initial Vacuum(in Hg): -29

Final Vacuum(in Hg): -4

Receipt Vacuum(in Hg): -4.4

Flow Controller Type: Fixed-Orifice

Flow Controller Calibration

RPD Pre and Post-Sampling:

EPA TO-15

Analyte	ppbv		ug/m3		Dilution	Date/Time Analyzed	Analyst	
	Results	RL	Flag/Qual	Results	RL			
Acetone	14	1.4		33	3.3	0.702	12/29/15 2:01	CMR
Benzene	0.35	0.035		1.1	0.11	0.702	12/29/15 2:01	CMR
Benzyl chloride	ND	0.035		ND	0.18	0.702	12/29/15 2:01	CMR
Bromodichloromethane	ND	0.035		ND	0.24	0.702	12/29/15 2:01	CMR
Bromoform	ND	0.035		ND	0.36	0.702	12/29/15 2:01	CMR
Bromomethane	ND	0.035		ND	0.14	0.702	12/29/15 2:01	CMR
1,3-Butadiene	0.090	0.035		0.20	0.078	0.702	12/29/15 2:01	CMR
2-Butanone (MEK)	ND	1.4		ND	4.1	0.702	12/29/15 2:01	CMR
Carbon Disulfide	ND	0.35		ND	1.1	0.702	12/29/15 2:01	CMR
Carbon Tetrachloride	0.078	0.035		0.49	0.22	0.702	12/29/15 2:01	CMR
Chlorobenzene	ND	0.035		ND	0.16	0.702	12/29/15 2:01	CMR
Chloroethane	ND	0.035		ND	0.093	0.702	12/29/15 2:01	CMR
Chloroform	0.067	0.035		0.33	0.17	0.702	12/29/15 2:01	CMR
Chloromethane	0.80	0.070		1.7	0.14	0.702	12/29/15 2:01	CMR
Cyclohexane	0.26	0.035	L-05, V-06	0.89	0.12	0.702	12/29/15 2:01	CMR
Dibromochloromethane	ND	0.035		ND	0.30	0.702	12/29/15 2:01	CMR
1,2-Dibromoethane (EDB)	ND	0.035		ND	0.27	0.702	12/29/15 2:01	CMR
1,2-Dichlorobenzene	ND	0.035		ND	0.21	0.702	12/29/15 2:01	CMR
1,3-Dichlorobenzene	ND	0.035		ND	0.21	0.702	12/29/15 2:01	CMR
1,4-Dichlorobenzene	ND	0.035		ND	0.21	0.702	12/29/15 2:01	CMR
Dichlorodifluoromethane (Freon 12)	0.48	0.035		2.4	0.17	0.702	12/29/15 2:01	CMR
1,1-Dichloroethane	ND	0.035		ND	0.14	0.702	12/29/15 2:01	CMR
1,2-Dichloroethane	ND	0.035		ND	0.14	0.702	12/29/15 2:01	CMR
1,1-Dichloroethylene	ND	0.035		ND	0.14	0.702	12/29/15 2:01	CMR
cis-1,2-Dichloroethylene	ND	0.035		ND	0.14	0.702	12/29/15 2:01	CMR
trans-1,2-Dichloroethylene	ND	0.035		ND	0.14	0.702	12/29/15 2:01	CMR
1,2-Dichloropropane	ND	0.035		ND	0.16	0.702	12/29/15 2:01	CMR
cis-1,3-Dichloropropene	ND	0.035		ND	0.16	0.702	12/29/15 2:01	CMR
trans-1,3-Dichloropropene	ND	0.035		ND	0.16	0.702	12/29/15 2:01	CMR
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.035		ND	0.25	0.702	12/29/15 2:01	CMR
1,4-Dioxane	ND	0.35		ND	1.3	0.702	12/29/15 2:01	CMR
Ethanol	38	1.4		72	2.6	0.702	12/29/15 2:01	CMR
Ethyl Acetate	0.21	0.035		0.75	0.13	0.702	12/29/15 2:01	CMR
Ethylbenzene	0.17	0.035		0.73	0.15	0.702	12/29/15 2:01	CMR
4-Ethyltoluene	ND	0.035		ND	0.17	0.702	12/29/15 2:01	CMR
Heptane	0.10	0.035	V-06	0.41	0.14	0.702	12/29/15 2:01	CMR
Hexachlorobutadiene	ND	0.035		ND	0.37	0.702	12/29/15 2:01	CMR



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: Providence, RI

Date Received: 12/18/2015

Field Sample #: IA-2-121815

Sample ID: 15L1060-02

Sample Matrix: Indoor air

Sampled: 12/18/2015 10:52

Sample Description/Location:

Sub Description/Location:

Canister ID: 1858

Canister Size: 6 liter

Flow Controller ID: 4210

Sample Type: 30 min

Work Order: 15L1060

Initial Vacuum(in Hg): -29

Final Vacuum(in Hg): -4

Receipt Vacuum(in Hg): -4.4

Flow Controller Type: Fixed-Orifice

Flow Controller Calibration

RPD Pre and Post-Sampling:

EPA TO-15

Analyte	ppbv			ug/m3			Dilution	Date/Time Analyzed	Analyst
	Results	RL	Flag/Qual	Results	RL				
Hexane	ND	1.4	L-03, V-05	ND	4.9		0.702	12/29/15 2:01	CMR
2-Hexanone (MBK)	0.043	0.035		0.18	0.14		0.702	12/29/15 2:01	CMR
Isopropanol	ND	1.4		ND	3.4		0.702	12/29/15 2:01	CMR
Methyl tert-Butyl Ether (MTBE)	ND	0.035	L-03, V-05	ND	0.13		0.702	12/29/15 2:01	CMR
Methylene Chloride	ND	0.35		ND	1.2		0.702	12/29/15 2:01	CMR
4-Methyl-2-pentanone (MIBK)	0.27	0.035	V-06	1.1	0.14		0.702	12/29/15 2:01	CMR
Naphthalene	ND	0.035		ND	0.18		0.702	12/29/15 2:01	CMR
Propene	ND	1.4		ND	2.4		0.702	12/29/15 2:01	CMR
Styrene	0.053	0.035		0.22	0.15		0.702	12/29/15 2:01	CMR
1,1,2,2-Tetrachloroethane	ND	0.035		ND	0.24		0.702	12/29/15 2:01	CMR
Tetrachloroethylene	0.098	0.035		0.67	0.24		0.702	12/29/15 2:01	CMR
Tetrahydrofuran	ND	0.035		ND	0.10		0.702	12/29/15 2:01	CMR
Toluene	0.80	0.035		3.0	0.13		0.702	12/29/15 2:01	CMR
1,2,4-Trichlorobenzene	ND	0.035		ND	0.26		0.702	12/29/15 2:01	CMR
1,1,1-Trichloroethane	ND	0.035		ND	0.19		0.702	12/29/15 2:01	CMR
1,1,2-Trichloroethane	ND	0.035		ND	0.19		0.702	12/29/15 2:01	CMR
Trichloroethylene	ND	0.035		ND	0.19		0.702	12/29/15 2:01	CMR
Trichlorofluoromethane (Freon 11)	0.42	0.14		2.3	0.79		0.702	12/29/15 2:01	CMR
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.14		ND	1.1		0.702	12/29/15 2:01	CMR
1,2,4-Trimethylbenzene	0.098	0.035		0.48	0.17		0.702	12/29/15 2:01	CMR
1,3,5-Trimethylbenzene	ND	0.035		ND	0.17		0.702	12/29/15 2:01	CMR
Vinyl Acetate	ND	0.70		ND	2.5		0.702	12/29/15 2:01	CMR
Vinyl Chloride	ND	0.035		ND	0.090		0.702	12/29/15 2:01	CMR
m&p-Xylene	0.91	0.070		4.0	0.30		0.702	12/29/15 2:01	CMR
o-Xylene	0.23	0.035		0.98	0.15		0.702	12/29/15 2:01	CMR

Surrogates

% Recovery

% REC Limits

4-Bromofluorobenzene (1)

112

70-130

12/29/15 2:01



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: Providence, RI

Date Received: 12/18/2015

Field Sample #: IA-3-121815

Sample ID: 15L1060-03

Sample Matrix: Indoor air

Sampled: 12/18/2015 08:05

Sample Description/Location:

Sub Description/Location:

Canister ID: 1277

Canister Size: 6 liter

Flow Controller ID: 4107

Sample Type: 30 min

Work Order: 15L1060

Initial Vacuum(in Hg): -29

Final Vacuum(in Hg): -6

Receipt Vacuum(in Hg): -6.5

Flow Controller Type: Fixed-Orifice

Flow Controller Calibration

RPD Pre and Post-Sampling:

EPA TO-15

Analyte	ppbv		ug/m3		Dilution	Date/Time Analyzed	Analyst	
	Results	RL	Flag/Qual	Results	RL			
Acetone	4.2	1.4		9.9	3.3	0.702	12/29/15 2:45	CMR
Benzene	0.33	0.035		1.1	0.11	0.702	12/29/15 2:45	CMR
Benzyl chloride	ND	0.035		ND	0.18	0.702	12/29/15 2:45	CMR
Bromodichloromethane	ND	0.035		ND	0.24	0.702	12/29/15 2:45	CMR
Bromoform	ND	0.035		ND	0.36	0.702	12/29/15 2:45	CMR
Bromomethane	ND	0.035		ND	0.14	0.702	12/29/15 2:45	CMR
1,3-Butadiene	0.076	0.035		0.17	0.078	0.702	12/29/15 2:45	CMR
2-Butanone (MEK)	ND	1.4		ND	4.1	0.702	12/29/15 2:45	CMR
Carbon Disulfide	ND	0.35		ND	1.1	0.702	12/29/15 2:45	CMR
Carbon Tetrachloride	0.084	0.035		0.53	0.22	0.702	12/29/15 2:45	CMR
Chlorobenzene	ND	0.035		ND	0.16	0.702	12/29/15 2:45	CMR
Chloroethane	ND	0.035		ND	0.093	0.702	12/29/15 2:45	CMR
Chloroform	0.057	0.035		0.28	0.17	0.702	12/29/15 2:45	CMR
Chloromethane	0.66	0.070		1.4	0.14	0.702	12/29/15 2:45	CMR
Cyclohexane	0.30	0.035	L-05, V-06	1.0	0.12	0.702	12/29/15 2:45	CMR
Dibromochloromethane	ND	0.035		ND	0.30	0.702	12/29/15 2:45	CMR
1,2-Dibromoethane (EDB)	ND	0.035		ND	0.27	0.702	12/29/15 2:45	CMR
1,2-Dichlorobenzene	ND	0.035		ND	0.21	0.702	12/29/15 2:45	CMR
1,3-Dichlorobenzene	ND	0.035		ND	0.21	0.702	12/29/15 2:45	CMR
1,4-Dichlorobenzene	ND	0.035		ND	0.21	0.702	12/29/15 2:45	CMR
Dichlorodifluoromethane (Freon 12)	0.49	0.035		2.4	0.17	0.702	12/29/15 2:45	CMR
1,1-Dichloroethane	ND	0.035		ND	0.14	0.702	12/29/15 2:45	CMR
1,2-Dichloroethane	ND	0.035		ND	0.14	0.702	12/29/15 2:45	CMR
1,1-Dichloroethylene	ND	0.035		ND	0.14	0.702	12/29/15 2:45	CMR
cis-1,2-Dichloroethylene	0.037	0.035		0.15	0.14	0.702	12/29/15 2:45	CMR
trans-1,2-Dichloroethylene	ND	0.035		ND	0.14	0.702	12/29/15 2:45	CMR
1,2-Dichloropropane	ND	0.035		ND	0.16	0.702	12/29/15 2:45	CMR
cis-1,3-Dichloropropene	ND	0.035		ND	0.16	0.702	12/29/15 2:45	CMR
trans-1,3-Dichloropropene	ND	0.035		ND	0.16	0.702	12/29/15 2:45	CMR
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.035		ND	0.25	0.702	12/29/15 2:45	CMR
1,4-Dioxane	ND	0.35		ND	1.3	0.702	12/29/15 2:45	CMR
Ethanol	7.6	1.4		14	2.6	0.702	12/29/15 2:45	CMR
Ethyl Acetate	ND	0.035		ND	0.13	0.702	12/29/15 2:45	CMR
Ethylbenzene	0.094	0.035		0.41	0.15	0.702	12/29/15 2:45	CMR
4-Ethyltoluene	ND	0.035		ND	0.17	0.702	12/29/15 2:45	CMR
Heptane	0.096	0.035	V-06	0.39	0.14	0.702	12/29/15 2:45	CMR
Hexachlorobutadiene	ND	0.035		ND	0.37	0.702	12/29/15 2:45	CMR



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: Providence, RI

Date Received: 12/18/2015

Field Sample #: IA-3-121815

Sample ID: 15L1060-03

Sample Matrix: Indoor air

Sampled: 12/18/2015 08:05

Sample Description/Location:

Sub Description/Location:

Canister ID: 1277

Canister Size: 6 liter

Flow Controller ID: 4107

Sample Type: 30 min

Work Order: 15L1060

Initial Vacuum(in Hg): -29

Final Vacuum(in Hg): -6

Receipt Vacuum(in Hg): -6.5

Flow Controller Type: Fixed-Orifice

Flow Controller Calibration

RPD Pre and Post-Sampling:

EPA TO-15

Analyte	ppbv			ug/m3			Dilution	Date/Time Analyzed	Analyst
	Results	RL	Flag/Qual	Results	RL				
Hexane	ND	1.4	L-03, V-05	ND	4.9		0.702	12/29/15 2:45	CMR
2-Hexanone (MBK)	ND	0.035		ND	0.14		0.702	12/29/15 2:45	CMR
Isopropanol	ND	1.4		ND	3.4		0.702	12/29/15 2:45	CMR
Methyl tert-Butyl Ether (MTBE)	ND	0.035	L-03, V-05	ND	0.13		0.702	12/29/15 2:45	CMR
Methylene Chloride	0.36	0.35		1.2	1.2		0.702	12/29/15 2:45	CMR
4-Methyl-2-pentanone (MIBK)	0.058	0.035	V-06	0.24	0.14		0.702	12/29/15 2:45	CMR
Naphthalene	ND	0.035		ND	0.18		0.702	12/29/15 2:45	CMR
Propene	ND	1.4		ND	2.4		0.702	12/29/15 2:45	CMR
Styrene	ND	0.035		ND	0.15		0.702	12/29/15 2:45	CMR
1,1,2,2-Tetrachloroethane	ND	0.035		ND	0.24		0.702	12/29/15 2:45	CMR
Tetrachloroethylene	2.0	0.035		13	0.24		0.702	12/29/15 2:45	CMR
Tetrahydrofuran	ND	0.035		ND	0.10		0.702	12/29/15 2:45	CMR
Toluene	0.43	0.035		1.6	0.13		0.702	12/29/15 2:45	CMR
1,2,4-Trichlorobenzene	ND	0.035		ND	0.26		0.702	12/29/15 2:45	CMR
1,1,1-Trichloroethane	ND	0.035		ND	0.19		0.702	12/29/15 2:45	CMR
1,1,2-Trichloroethane	ND	0.035		ND	0.19		0.702	12/29/15 2:45	CMR
Trichloroethylene	0.12	0.035		0.64	0.19		0.702	12/29/15 2:45	CMR
Trichlorofluoromethane (Freon 11)	0.29	0.14		1.6	0.79		0.702	12/29/15 2:45	CMR
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.14		ND	1.1		0.702	12/29/15 2:45	CMR
1,2,4-Trimethylbenzene	ND	0.035		ND	0.17		0.702	12/29/15 2:45	CMR
1,3,5-Trimethylbenzene	ND	0.035		ND	0.17		0.702	12/29/15 2:45	CMR
Vinyl Acetate	ND	0.70		ND	2.5		0.702	12/29/15 2:45	CMR
Vinyl Chloride	ND	0.035		ND	0.090		0.702	12/29/15 2:45	CMR
m&p-Xylene	0.38	0.070		1.7	0.30		0.702	12/29/15 2:45	CMR
o-Xylene	0.095	0.035		0.41	0.15		0.702	12/29/15 2:45	CMR

Surrogates

% Recovery

% REC Limits

4-Bromofluorobenzene (1)

109

70-130

12/29/15 2:45



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: Providence, RI

Date Received: 12/18/2015

Field Sample #: IA-4-121815

Sample ID: 15L1060-04

Sample Matrix: Indoor air

Sampled: 12/18/2015 10:54

Sample Description/Location:

Sub Description/Location:

Canister ID: 1948

Canister Size: 6 liter

Flow Controller ID: 4211

Sample Type: 30 min

Work Order: 15L1060

Initial Vacuum(in Hg): -28

Final Vacuum(in Hg): -4

Receipt Vacuum(in Hg): -4.7

Flow Controller Type: Fixed-Orifice

Flow Controller Calibration

RPD Pre and Post-Sampling:

EPA TO-15

Analyte	ppbv		ug/m3		Dilution	Date/Time Analyzed	Analyst	
	Results	RL	Flag/Qual	Results	RL			
Acetone	12	1.4		28	3.3	0.702	12/29/15 3:28	CMR
Benzene	0.36	0.035		1.1	0.11	0.702	12/29/15 3:28	CMR
Benzyl chloride	ND	0.035		ND	0.18	0.702	12/29/15 3:28	CMR
Bromodichloromethane	ND	0.035		ND	0.24	0.702	12/29/15 3:28	CMR
Bromoform	ND	0.035		ND	0.36	0.702	12/29/15 3:28	CMR
Bromomethane	ND	0.035		ND	0.14	0.702	12/29/15 3:28	CMR
1,3-Butadiene	0.046	0.035		0.10	0.078	0.702	12/29/15 3:28	CMR
2-Butanone (MEK)	ND	1.4		ND	4.1	0.702	12/29/15 3:28	CMR
Carbon Disulfide	ND	0.35		ND	1.1	0.702	12/29/15 3:28	CMR
Carbon Tetrachloride	0.086	0.035		0.54	0.22	0.702	12/29/15 3:28	CMR
Chlorobenzene	ND	0.035		ND	0.16	0.702	12/29/15 3:28	CMR
Chloroethane	ND	0.035		ND	0.093	0.702	12/29/15 3:28	CMR
Chloroform	0.070	0.035		0.34	0.17	0.702	12/29/15 3:28	CMR
Chloromethane	0.61	0.070		1.3	0.14	0.702	12/29/15 3:28	CMR
Cyclohexane	0.37	0.035	L-05, V-06	1.3	0.12	0.702	12/29/15 3:28	CMR
Dibromochloromethane	ND	0.035		ND	0.30	0.702	12/29/15 3:28	CMR
1,2-Dibromoethane (EDB)	ND	0.035		ND	0.27	0.702	12/29/15 3:28	CMR
1,2-Dichlorobenzene	ND	0.035		ND	0.21	0.702	12/29/15 3:28	CMR
1,3-Dichlorobenzene	ND	0.035		ND	0.21	0.702	12/29/15 3:28	CMR
1,4-Dichlorobenzene	ND	0.035		ND	0.21	0.702	12/29/15 3:28	CMR
Dichlorodifluoromethane (Freon 12)	0.45	0.035		2.2	0.17	0.702	12/29/15 3:28	CMR
1,1-Dichloroethane	ND	0.035		ND	0.14	0.702	12/29/15 3:28	CMR
1,2-Dichloroethane	ND	0.035		ND	0.14	0.702	12/29/15 3:28	CMR
1,1-Dichloroethylene	ND	0.035		ND	0.14	0.702	12/29/15 3:28	CMR
cis-1,2-Dichloroethylene	ND	0.035		ND	0.14	0.702	12/29/15 3:28	CMR
trans-1,2-Dichloroethylene	ND	0.035		ND	0.14	0.702	12/29/15 3:28	CMR
1,2-Dichloropropane	ND	0.035		ND	0.16	0.702	12/29/15 3:28	CMR
cis-1,3-Dichloropropene	ND	0.035		ND	0.16	0.702	12/29/15 3:28	CMR
trans-1,3-Dichloropropene	ND	0.035		ND	0.16	0.702	12/29/15 3:28	CMR
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.035		ND	0.25	0.702	12/29/15 3:28	CMR
1,4-Dioxane	ND	0.35		ND	1.3	0.702	12/29/15 3:28	CMR
Ethanol	37	1.4		69	2.6	0.702	12/29/15 3:28	CMR
Ethyl Acetate	0.17	0.035		0.60	0.13	0.702	12/29/15 3:28	CMR
Ethylbenzene	0.20	0.035		0.86	0.15	0.702	12/29/15 3:28	CMR
4-Ethyltoluene	ND	0.035		ND	0.17	0.702	12/29/15 3:28	CMR
Heptane	0.12	0.035	V-06	0.49	0.14	0.702	12/29/15 3:28	CMR
Hexachlorobutadiene	ND	0.035		ND	0.37	0.702	12/29/15 3:28	CMR



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: Providence, RI

Date Received: 12/18/2015

Field Sample #: IA-4-121815

Sample ID: 15L1060-04

Sample Matrix: Indoor air

Sampled: 12/18/2015 10:54

Sample Description/Location:

Sub Description/Location:

Canister ID: 1948

Canister Size: 6 liter

Flow Controller ID: 4211

Sample Type: 30 min

Work Order: 15L1060

Initial Vacuum(in Hg): -28

Final Vacuum(in Hg): -4

Receipt Vacuum(in Hg): -4.7

Flow Controller Type: Fixed-Orifice

Flow Controller Calibration

RPD Pre and Post-Sampling:

EPA TO-15

Analyte	ppbv			ug/m3			Dilution	Date/Time Analyzed	Analyst
	Results	RL	Flag/Qual	Results	RL				
Hexane	ND	1.4	L-03, V-05	ND	4.9		0.702	12/29/15 3:28	CMR
2-Hexanone (MBK)	0.053	0.035		0.22	0.14		0.702	12/29/15 3:28	CMR
Isopropanol	ND	1.4		ND	3.4		0.702	12/29/15 3:28	CMR
Methyl tert-Butyl Ether (MTBE)	ND	0.035	L-03, V-05	ND	0.13		0.702	12/29/15 3:28	CMR
Methylene Chloride	ND	0.35		ND	1.2		0.702	12/29/15 3:28	CMR
4-Methyl-2-pentanone (MIBK)	0.36	0.035	V-06	1.5	0.14		0.702	12/29/15 3:28	CMR
Naphthalene	ND	0.035		ND	0.18		0.702	12/29/15 3:28	CMR
Propene	ND	1.4		ND	2.4		0.702	12/29/15 3:28	CMR
Styrene	0.056	0.035		0.24	0.15		0.702	12/29/15 3:28	CMR
1,1,2,2-Tetrachloroethane	ND	0.035		ND	0.24		0.702	12/29/15 3:28	CMR
Tetrachloroethylene	0.074	0.035		0.50	0.24		0.702	12/29/15 3:28	CMR
Tetrahydrofuran	ND	0.035		ND	0.10		0.702	12/29/15 3:28	CMR
Toluene	0.81	0.035		3.0	0.13		0.702	12/29/15 3:28	CMR
1,2,4-Trichlorobenzene	ND	0.035		ND	0.26		0.702	12/29/15 3:28	CMR
1,1,1-Trichloroethane	ND	0.035		ND	0.19		0.702	12/29/15 3:28	CMR
1,1,2-Trichloroethane	ND	0.035		ND	0.19		0.702	12/29/15 3:28	CMR
Trichloroethylene	ND	0.035		ND	0.19		0.702	12/29/15 3:28	CMR
Trichlorofluoromethane (Freon 11)	0.29	0.14		1.6	0.79		0.702	12/29/15 3:28	CMR
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.14		ND	1.1		0.702	12/29/15 3:28	CMR
1,2,4-Trimethylbenzene	0.091	0.035		0.45	0.17		0.702	12/29/15 3:28	CMR
1,3,5-Trimethylbenzene	ND	0.035		ND	0.17		0.702	12/29/15 3:28	CMR
Vinyl Acetate	ND	0.70		ND	2.5		0.702	12/29/15 3:28	CMR
Vinyl Chloride	ND	0.035		ND	0.090		0.702	12/29/15 3:28	CMR
m&p-Xylene	1.0	0.070		4.4	0.30		0.702	12/29/15 3:28	CMR
o-Xylene	0.26	0.035		1.1	0.15		0.702	12/29/15 3:28	CMR

Surrogates

% Recovery

% REC Limits

4-Bromofluorobenzene (1)

110

70-130

12/29/15 3:28



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: Providence, RI

Date Received: 12/18/2015

Field Sample #: IA-5-121815

Sample ID: 15L1060-05

Sample Matrix: Indoor air

Sampled: 12/18/2015 09:10

Sample Description/Location:

Sub Description/Location:

Canister ID: 1941

Canister Size: 6 liter

Flow Controller ID: 4177

Sample Type: 30 min

Work Order: 15L1060

Initial Vacuum(in Hg): -28

Final Vacuum(in Hg): -5

Receipt Vacuum(in Hg): -6.6

Flow Controller Type: Fixed-Orifice

Flow Controller Calibration

RPD Pre and Post-Sampling:

EPA TO-15

Analyte	ppbv		ug/m3		Dilution	Date/Time Analyzed	Analyst	
	Results	RL	Flag/Qual	Results	RL			
Acetone	9.6	1.4		23	3.3	0.702	12/29/15 4:12	CMR
Benzene	0.29	0.035		0.93	0.11	0.702	12/29/15 4:12	CMR
Benzyl chloride	ND	0.035		ND	0.18	0.702	12/29/15 4:12	CMR
Bromodichloromethane	ND	0.035		ND	0.24	0.702	12/29/15 4:12	CMR
Bromoform	ND	0.035		ND	0.36	0.702	12/29/15 4:12	CMR
Bromomethane	ND	0.035		ND	0.14	0.702	12/29/15 4:12	CMR
1,3-Butadiene	0.065	0.035		0.14	0.078	0.702	12/29/15 4:12	CMR
2-Butanone (MEK)	ND	1.4		ND	4.1	0.702	12/29/15 4:12	CMR
Carbon Disulfide	ND	0.35		ND	1.1	0.702	12/29/15 4:12	CMR
Carbon Tetrachloride	0.075	0.035		0.47	0.22	0.702	12/29/15 4:12	CMR
Chlorobenzene	ND	0.035		ND	0.16	0.702	12/29/15 4:12	CMR
Chloroethane	ND	0.035		ND	0.093	0.702	12/29/15 4:12	CMR
Chloroform	0.035	0.035		0.17	0.17	0.702	12/29/15 4:12	CMR
Chloromethane	0.65	0.070		1.3	0.14	0.702	12/29/15 4:12	CMR
Cyclohexane	0.11	0.035	L-05, V-06	0.39	0.12	0.702	12/29/15 4:12	CMR
Dibromochloromethane	ND	0.035		ND	0.30	0.702	12/29/15 4:12	CMR
1,2-Dibromoethane (EDB)	ND	0.035		ND	0.27	0.702	12/29/15 4:12	CMR
1,2-Dichlorobenzene	ND	0.035		ND	0.21	0.702	12/29/15 4:12	CMR
1,3-Dichlorobenzene	ND	0.035		ND	0.21	0.702	12/29/15 4:12	CMR
1,4-Dichlorobenzene	ND	0.035		ND	0.21	0.702	12/29/15 4:12	CMR
Dichlorodifluoromethane (Freon 12)	0.49	0.035		2.4	0.17	0.702	12/29/15 4:12	CMR
1,1-Dichloroethane	ND	0.035		ND	0.14	0.702	12/29/15 4:12	CMR
1,2-Dichloroethane	ND	0.035		ND	0.14	0.702	12/29/15 4:12	CMR
1,1-Dichloroethylene	ND	0.035		ND	0.14	0.702	12/29/15 4:12	CMR
cis-1,2-Dichloroethylene	ND	0.035		ND	0.14	0.702	12/29/15 4:12	CMR
trans-1,2-Dichloroethylene	ND	0.035		ND	0.14	0.702	12/29/15 4:12	CMR
1,2-Dichloropropane	ND	0.035		ND	0.16	0.702	12/29/15 4:12	CMR
cis-1,3-Dichloropropene	ND	0.035		ND	0.16	0.702	12/29/15 4:12	CMR
trans-1,3-Dichloropropene	ND	0.035		ND	0.16	0.702	12/29/15 4:12	CMR
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.035		ND	0.25	0.702	12/29/15 4:12	CMR
1,4-Dioxane	ND	0.35		ND	1.3	0.702	12/29/15 4:12	CMR
Ethanol	3.6	1.4		6.8	2.6	0.702	12/29/15 4:12	CMR
Ethyl Acetate	0.13	0.035		0.46	0.13	0.702	12/29/15 4:12	CMR
Ethylbenzene	0.10	0.035		0.44	0.15	0.702	12/29/15 4:12	CMR
4-Ethyltoluene	ND	0.035		ND	0.17	0.702	12/29/15 4:12	CMR
Heptane	0.067	0.035	V-06	0.28	0.14	0.702	12/29/15 4:12	CMR
Hexachlorobutadiene	ND	0.035		ND	0.37	0.702	12/29/15 4:12	CMR



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: Providence, RI

Date Received: 12/18/2015

Field Sample #: IA-5-121815

Sample ID: 15L1060-05

Sample Matrix: Indoor air

Sampled: 12/18/2015 09:10

Sample Description/Location:

Sub Description/Location:

Canister ID: 1941

Canister Size: 6 liter

Flow Controller ID: 4177

Sample Type: 30 min

Work Order: 15L1060

Initial Vacuum(in Hg): -28

Final Vacuum(in Hg): -5

Receipt Vacuum(in Hg): -6.6

Flow Controller Type: Fixed-Orifice

Flow Controller Calibration

RPD Pre and Post-Sampling:

EPA TO-15

Analyte	ppbv			ug/m3			Dilution	Date/Time Analyzed	Analyst
	Results	RL	Flag/Qual	Results	RL				
Hexane	ND	1.4	L-03, V-05	ND	4.9		0.702	12/29/15 4:12	CMR
2-Hexanone (MBK)	ND	0.035		ND	0.14		0.702	12/29/15 4:12	CMR
Isopropanol	ND	1.4		ND	3.4		0.702	12/29/15 4:12	CMR
Methyl tert-Butyl Ether (MTBE)	ND	0.035	L-03, V-05	ND	0.13		0.702	12/29/15 4:12	CMR
Methylene Chloride	ND	0.35		ND	1.2		0.702	12/29/15 4:12	CMR
4-Methyl-2-pentanone (MIBK)	ND	0.035		ND	0.14		0.702	12/29/15 4:12	CMR
Naphthalene	ND	0.035		ND	0.18		0.702	12/29/15 4:12	CMR
Propene	ND	1.4		ND	2.4		0.702	12/29/15 4:12	CMR
Styrene	ND	0.035		ND	0.15		0.702	12/29/15 4:12	CMR
1,1,2,2-Tetrachloroethane	ND	0.035		ND	0.24		0.702	12/29/15 4:12	CMR
Tetrachloroethylene	0.064	0.035		0.43	0.24		0.702	12/29/15 4:12	CMR
Tetrahydrofuran	ND	0.035		ND	0.10		0.702	12/29/15 4:12	CMR
Toluene	0.69	0.035		2.6	0.13		0.702	12/29/15 4:12	CMR
1,2,4-Trichlorobenzene	ND	0.035		ND	0.26		0.702	12/29/15 4:12	CMR
1,1,1-Trichloroethane	ND	0.035		ND	0.19		0.702	12/29/15 4:12	CMR
1,1,2-Trichloroethane	ND	0.035		ND	0.19		0.702	12/29/15 4:12	CMR
Trichloroethylene	ND	0.035		ND	0.19		0.702	12/29/15 4:12	CMR
Trichlorofluoromethane (Freon 11)	0.32	0.14		1.8	0.79		0.702	12/29/15 4:12	CMR
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.14		ND	1.1		0.702	12/29/15 4:12	CMR
1,2,4-Trimethylbenzene	0.041	0.035		0.20	0.17		0.702	12/29/15 4:12	CMR
1,3,5-Trimethylbenzene	ND	0.035		ND	0.17		0.702	12/29/15 4:12	CMR
Vinyl Acetate	ND	0.70		ND	2.5		0.702	12/29/15 4:12	CMR
Vinyl Chloride	ND	0.035		ND	0.090		0.702	12/29/15 4:12	CMR
m&p-Xylene	0.48	0.070		2.1	0.30		0.702	12/29/15 4:12	CMR
o-Xylene	0.14	0.035		0.60	0.15		0.702	12/29/15 4:12	CMR

Surrogates

% Recovery

% REC Limits

4-Bromofluorobenzene (1)

111

70-130

12/29/15 4:12



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: Providence, RI

Date Received: 12/18/2015

Field Sample #: IA-6-121815

Sample ID: 15L1060-06

Sample Matrix: Indoor air

Sampled: 12/18/2015 09:28

Sample Description/Location:

Sub Description/Location:

Canister ID: 1343

Canister Size: 6 liter

Flow Controller ID: 4201

Sample Type: 30 min

Work Order: 15L1060

Initial Vacuum(in Hg): -30

Final Vacuum(in Hg): -6

Receipt Vacuum(in Hg): -5.7

Flow Controller Type: Fixed-Orifice

Flow Controller Calibration

RPD Pre and Post-Sampling:

EPA TO-15

Analyte	ppbv		ug/m3		Dilution	Date/Time Analyzed	Analyst	
	Results	RL	Flag/Qual	Results	RL			
Acetone	3.9	1.4		9.3	3.3	0.702	12/29/15 4:55	CMR
Benzene	0.34	0.035		1.1	0.11	0.702	12/29/15 4:55	CMR
Benzyl chloride	ND	0.035		ND	0.18	0.702	12/29/15 4:55	CMR
Bromodichloromethane	ND	0.035		ND	0.24	0.702	12/29/15 4:55	CMR
Bromoform	ND	0.035		ND	0.36	0.702	12/29/15 4:55	CMR
Bromomethane	ND	0.035		ND	0.14	0.702	12/29/15 4:55	CMR
1,3-Butadiene	0.055	0.035		0.12	0.078	0.702	12/29/15 4:55	CMR
2-Butanone (MEK)	ND	1.4		ND	4.1	0.702	12/29/15 4:55	CMR
Carbon Disulfide	ND	0.35		ND	1.1	0.702	12/29/15 4:55	CMR
Carbon Tetrachloride	0.086	0.035		0.54	0.22	0.702	12/29/15 4:55	CMR
Chlorobenzene	ND	0.035		ND	0.16	0.702	12/29/15 4:55	CMR
Chloroethane	ND	0.035		ND	0.093	0.702	12/29/15 4:55	CMR
Chloroform	ND	0.035		ND	0.17	0.702	12/29/15 4:55	CMR
Chloromethane	0.61	0.070		1.3	0.14	0.702	12/29/15 4:55	CMR
Cyclohexane	0.14	0.035	L-05, V-06	0.49	0.12	0.702	12/29/15 4:55	CMR
Dibromochloromethane	ND	0.035		ND	0.30	0.702	12/29/15 4:55	CMR
1,2-Dibromoethane (EDB)	ND	0.035		ND	0.27	0.702	12/29/15 4:55	CMR
1,2-Dichlorobenzene	ND	0.035		ND	0.21	0.702	12/29/15 4:55	CMR
1,3-Dichlorobenzene	ND	0.035		ND	0.21	0.702	12/29/15 4:55	CMR
1,4-Dichlorobenzene	ND	0.035		ND	0.21	0.702	12/29/15 4:55	CMR
Dichlorodifluoromethane (Freon 12)	0.46	0.035		2.3	0.17	0.702	12/29/15 4:55	CMR
1,1-Dichloroethane	ND	0.035		ND	0.14	0.702	12/29/15 4:55	CMR
1,2-Dichloroethane	ND	0.035		ND	0.14	0.702	12/29/15 4:55	CMR
1,1-Dichloroethylene	ND	0.035		ND	0.14	0.702	12/29/15 4:55	CMR
cis-1,2-Dichloroethylene	ND	0.035		ND	0.14	0.702	12/29/15 4:55	CMR
trans-1,2-Dichloroethylene	ND	0.035		ND	0.14	0.702	12/29/15 4:55	CMR
1,2-Dichloropropane	ND	0.035		ND	0.16	0.702	12/29/15 4:55	CMR
cis-1,3-Dichloropropene	ND	0.035		ND	0.16	0.702	12/29/15 4:55	CMR
trans-1,3-Dichloropropene	ND	0.035		ND	0.16	0.702	12/29/15 4:55	CMR
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.035		ND	0.25	0.702	12/29/15 4:55	CMR
1,4-Dioxane	ND	0.35		ND	1.3	0.702	12/29/15 4:55	CMR
Ethanol	4.5	1.4		8.5	2.6	0.702	12/29/15 4:55	CMR
Ethyl Acetate	0.43	0.035		1.6	0.13	0.702	12/29/15 4:55	CMR
Ethylbenzene	0.060	0.035		0.26	0.15	0.702	12/29/15 4:55	CMR
4-Ethyltoluene	ND	0.035		ND	0.17	0.702	12/29/15 4:55	CMR
Heptane	0.087	0.035	V-06	0.36	0.14	0.702	12/29/15 4:55	CMR
Hexachlorobutadiene	ND	0.035		ND	0.37	0.702	12/29/15 4:55	CMR



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: Providence, RI

Date Received: 12/18/2015

Field Sample #: IA-6-121815

Sample ID: 15L1060-06

Sample Matrix: Indoor air

Sampled: 12/18/2015 09:28

Sample Description/Location:

Sub Description/Location:

Canister ID: 1343

Canister Size: 6 liter

Flow Controller ID: 4201

Sample Type: 30 min

Work Order: 15L1060

Initial Vacuum(in Hg): -30

Final Vacuum(in Hg): -6

Receipt Vacuum(in Hg): -5.7

Flow Controller Type: Fixed-Orifice

Flow Controller Calibration

RPD Pre and Post-Sampling:

EPA TO-15

Analyte	ppbv			ug/m3			Dilution	Date/Time Analyzed	Analyst
	Results	RL	Flag/Qual	Results	RL				
Hexane	ND	1.4	L-03, V-05	ND	4.9		0.702	12/29/15 4:55	CMR
2-Hexanone (MBK)	ND	0.035		ND	0.14		0.702	12/29/15 4:55	CMR
Isopropanol	ND	1.4		ND	3.4		0.702	12/29/15 4:55	CMR
Methyl tert-Butyl Ether (MTBE)	ND	0.035	L-03, V-05	ND	0.13		0.702	12/29/15 4:55	CMR
Methylene Chloride	ND	0.35		ND	1.2		0.702	12/29/15 4:55	CMR
4-Methyl-2-pentanone (MIBK)	ND	0.035		ND	0.14		0.702	12/29/15 4:55	CMR
Naphthalene	ND	0.035		ND	0.18		0.702	12/29/15 4:55	CMR
Propene	ND	1.4		ND	2.4		0.702	12/29/15 4:55	CMR
Styrene	ND	0.035		ND	0.15		0.702	12/29/15 4:55	CMR
1,1,2,2-Tetrachloroethane	ND	0.035		ND	0.24		0.702	12/29/15 4:55	CMR
Tetrachloroethylene	0.049	0.035		0.33	0.24		0.702	12/29/15 4:55	CMR
Tetrahydrofuran	ND	0.035		ND	0.10		0.702	12/29/15 4:55	CMR
Toluene	0.46	0.035		1.7	0.13		0.702	12/29/15 4:55	CMR
1,2,4-Trichlorobenzene	ND	0.035		ND	0.26		0.702	12/29/15 4:55	CMR
1,1,1-Trichloroethane	ND	0.035		ND	0.19		0.702	12/29/15 4:55	CMR
1,1,2-Trichloroethane	ND	0.035		ND	0.19		0.702	12/29/15 4:55	CMR
Trichloroethylene	ND	0.035		ND	0.19		0.702	12/29/15 4:55	CMR
Trichlorofluoromethane (Freon 11)	0.30	0.14		1.7	0.79		0.702	12/29/15 4:55	CMR
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.14		ND	1.1		0.702	12/29/15 4:55	CMR
1,2,4-Trimethylbenzene	ND	0.035		ND	0.17		0.702	12/29/15 4:55	CMR
1,3,5-Trimethylbenzene	ND	0.035		ND	0.17		0.702	12/29/15 4:55	CMR
Vinyl Acetate	ND	0.70		ND	2.5		0.702	12/29/15 4:55	CMR
Vinyl Chloride	ND	0.035		ND	0.090		0.702	12/29/15 4:55	CMR
m&p-Xylene	0.20	0.070		0.87	0.30		0.702	12/29/15 4:55	CMR
o-Xylene	0.067	0.035		0.29	0.15		0.702	12/29/15 4:55	CMR

Surrogates

% Recovery

% REC Limits

4-Bromofluorobenzene (1)

108

70-130

12/29/15 4:55



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: Providence, RI

Date Received: 12/18/2015

Field Sample #: IA-7-121815

Sample ID: 15L1060-07

Sample Matrix: Indoor air

Sampled: 12/18/2015 09:58

Sample Description/Location:

Sub Description/Location:

Canister ID: 1831

Canister Size: 6 liter

Flow Controller ID: 4069

Sample Type: 30 min

Work Order: 15L1060

Initial Vacuum(in Hg): -29

Final Vacuum(in Hg): -6

Receipt Vacuum(in Hg): -6.2

Flow Controller Type: Fixed-Orifice

Flow Controller Calibration

RPD Pre and Post-Sampling:

EPA TO-15

Analyte	ppbv		ug/m3		Dilution	Date/Time Analyzed	Analyst	
	Results	RL	Flag/Qual	Results	RL			
Acetone	6.4	1.4		15	3.3	0.702	12/29/15 5:39	CMR
Benzene	0.30	0.035		0.97	0.11	0.702	12/29/15 5:39	CMR
Benzyl chloride	ND	0.035		ND	0.18	0.702	12/29/15 5:39	CMR
Bromodichloromethane	ND	0.035		ND	0.24	0.702	12/29/15 5:39	CMR
Bromoform	ND	0.035		ND	0.36	0.702	12/29/15 5:39	CMR
Bromomethane	ND	0.035		ND	0.14	0.702	12/29/15 5:39	CMR
1,3-Butadiene	0.063	0.035		0.14	0.078	0.702	12/29/15 5:39	CMR
2-Butanone (MEK)	ND	1.4		ND	4.1	0.702	12/29/15 5:39	CMR
Carbon Disulfide	ND	0.35		ND	1.1	0.702	12/29/15 5:39	CMR
Carbon Tetrachloride	0.081	0.035		0.51	0.22	0.702	12/29/15 5:39	CMR
Chlorobenzene	ND	0.035		ND	0.16	0.702	12/29/15 5:39	CMR
Chloroethane	ND	0.035		ND	0.093	0.702	12/29/15 5:39	CMR
Chloroform	ND	0.035		ND	0.17	0.702	12/29/15 5:39	CMR
Chloromethane	0.66	0.070		1.4	0.14	0.702	12/29/15 5:39	CMR
Cyclohexane	0.13	0.035	L-05, V-06	0.46	0.12	0.702	12/29/15 5:39	CMR
Dibromochloromethane	ND	0.035		ND	0.30	0.702	12/29/15 5:39	CMR
1,2-Dibromoethane (EDB)	ND	0.035		ND	0.27	0.702	12/29/15 5:39	CMR
1,2-Dichlorobenzene	ND	0.035		ND	0.21	0.702	12/29/15 5:39	CMR
1,3-Dichlorobenzene	ND	0.035		ND	0.21	0.702	12/29/15 5:39	CMR
1,4-Dichlorobenzene	ND	0.035		ND	0.21	0.702	12/29/15 5:39	CMR
Dichlorodifluoromethane (Freon 12)	0.46	0.035		2.3	0.17	0.702	12/29/15 5:39	CMR
1,1-Dichloroethane	ND	0.035		ND	0.14	0.702	12/29/15 5:39	CMR
1,2-Dichloroethane	ND	0.035		ND	0.14	0.702	12/29/15 5:39	CMR
1,1-Dichloroethylene	ND	0.035		ND	0.14	0.702	12/29/15 5:39	CMR
cis-1,2-Dichloroethylene	ND	0.035		ND	0.14	0.702	12/29/15 5:39	CMR
trans-1,2-Dichloroethylene	ND	0.035		ND	0.14	0.702	12/29/15 5:39	CMR
1,2-Dichloropropane	ND	0.035		ND	0.16	0.702	12/29/15 5:39	CMR
cis-1,3-Dichloropropene	ND	0.035		ND	0.16	0.702	12/29/15 5:39	CMR
trans-1,3-Dichloropropene	ND	0.035		ND	0.16	0.702	12/29/15 5:39	CMR
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.035		ND	0.25	0.702	12/29/15 5:39	CMR
1,4-Dioxane	ND	0.35		ND	1.3	0.702	12/29/15 5:39	CMR
Ethanol	18	1.4		33	2.6	0.702	12/29/15 5:39	CMR
Ethyl Acetate	0.086	0.035		0.31	0.13	0.702	12/29/15 5:39	CMR
Ethylbenzene	0.058	0.035		0.25	0.15	0.702	12/29/15 5:39	CMR
4-Ethyltoluene	ND	0.035		ND	0.17	0.702	12/29/15 5:39	CMR
Heptane	0.069	0.035	V-06	0.28	0.14	0.702	12/29/15 5:39	CMR
Hexachlorobutadiene	ND	0.035		ND	0.37	0.702	12/29/15 5:39	CMR



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: Providence, RI

Date Received: 12/18/2015

Field Sample #: IA-7-121815

Sample ID: 15L1060-07

Sample Matrix: Indoor air

Sampled: 12/18/2015 09:58

Sample Description/Location:

Sub Description/Location:

Canister ID: 1831

Canister Size: 6 liter

Flow Controller ID: 4069

Sample Type: 30 min

Work Order: 15L1060

Initial Vacuum(in Hg): -29

Final Vacuum(in Hg): -6

Receipt Vacuum(in Hg): -6.2

Flow Controller Type: Fixed-Orifice

Flow Controller Calibration

RPD Pre and Post-Sampling:

EPA TO-15

Analyte	ppbv			ug/m3			Dilution	Date/Time Analyzed	Analyst
	Results	RL	Flag/Qual	Results	RL				
Hexane	ND	1.4	L-03, V-05	ND	4.9		0.702	12/29/15 5:39	CMR
2-Hexanone (MBK)	0.069	0.035		0.28	0.14		0.702	12/29/15 5:39	CMR
Isopropanol	ND	1.4		ND	3.4		0.702	12/29/15 5:39	CMR
Methyl tert-Butyl Ether (MTBE)	ND	0.035	L-03, V-05	ND	0.13		0.702	12/29/15 5:39	CMR
Methylene Chloride	ND	0.35		ND	1.2		0.702	12/29/15 5:39	CMR
4-Methyl-2-pentanone (MIBK)	0.045	0.035	V-06	0.18	0.14		0.702	12/29/15 5:39	CMR
Naphthalene	ND	0.035		ND	0.18		0.702	12/29/15 5:39	CMR
Propene	ND	1.4		ND	2.4		0.702	12/29/15 5:39	CMR
Styrene	0.042	0.035		0.18	0.15		0.702	12/29/15 5:39	CMR
1,1,2,2-Tetrachloroethane	ND	0.035		ND	0.24		0.702	12/29/15 5:39	CMR
Tetrachloroethylene	0.053	0.035		0.36	0.24		0.702	12/29/15 5:39	CMR
Tetrahydrofuran	ND	0.035		ND	0.10		0.702	12/29/15 5:39	CMR
Toluene	0.43	0.035		1.6	0.13		0.702	12/29/15 5:39	CMR
1,2,4-Trichlorobenzene	ND	0.035		ND	0.26		0.702	12/29/15 5:39	CMR
1,1,1-Trichloroethane	ND	0.035		ND	0.19		0.702	12/29/15 5:39	CMR
1,1,2-Trichloroethane	ND	0.035		ND	0.19		0.702	12/29/15 5:39	CMR
Trichloroethylene	ND	0.035		ND	0.19		0.702	12/29/15 5:39	CMR
Trichlorofluoromethane (Freon 11)	0.30	0.14		1.7	0.79		0.702	12/29/15 5:39	CMR
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.14		ND	1.1		0.702	12/29/15 5:39	CMR
1,2,4-Trimethylbenzene	0.058	0.035		0.28	0.17		0.702	12/29/15 5:39	CMR
1,3,5-Trimethylbenzene	ND	0.035		ND	0.17		0.702	12/29/15 5:39	CMR
Vinyl Acetate	ND	0.70		ND	2.5		0.702	12/29/15 5:39	CMR
Vinyl Chloride	ND	0.035		ND	0.090		0.702	12/29/15 5:39	CMR
m&p-Xylene	0.19	0.070		0.84	0.30		0.702	12/29/15 5:39	CMR
o-Xylene	0.069	0.035		0.30	0.15		0.702	12/29/15 5:39	CMR

Surrogates

% Recovery

% REC Limits

4-Bromofluorobenzene (1)

110

70-130

12/29/15 5:39



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: Providence, RI
 Date Received: 12/18/2015
Field Sample #: AA-1-121815
Sample ID: 15L1060-08
 Sample Matrix: Ambient Air
 Sampled: 12/18/2015 08:11

Sample Description/Location:
 Sub Description/Location:
 Canister ID: 1927
 Canister Size: 6 liter
 Flow Controller ID: 4204
 Sample Type: 30 min

Work Order: 15L1060
 Initial Vacuum(in Hg): -29
 Final Vacuum(in Hg): -1
 Receipt Vacuum(in Hg): -1
 Flow Controller Type: Fixed-Orifice
 Flow Controller Calibration
 RPD Pre and Post-Sampling:

EPA TO-15

Analyte	ppbv		ug/m3		Dilution	Date/Time Analyzed	Analyst	
	Results	RL	Flag/Qual	Results	RL			
Acetone	7.5	1.4		18	3.3	0.702	12/29/15 6:22	CMR
Benzene	0.45	0.035		1.4	0.11	0.702	12/29/15 6:22	CMR
Benzyl chloride	ND	0.035		ND	0.18	0.702	12/29/15 6:22	CMR
Bromodichloromethane	ND	0.035		ND	0.24	0.702	12/29/15 6:22	CMR
Bromoform	ND	0.035		ND	0.36	0.702	12/29/15 6:22	CMR
Bromomethane	ND	0.035		ND	0.14	0.702	12/29/15 6:22	CMR
1,3-Butadiene	0.10	0.035		0.23	0.078	0.702	12/29/15 6:22	CMR
2-Butanone (MEK)	ND	1.4		ND	4.1	0.702	12/29/15 6:22	CMR
Carbon Disulfide	ND	0.35		ND	1.1	0.702	12/29/15 6:22	CMR
Carbon Tetrachloride	0.088	0.035		0.55	0.22	0.702	12/29/15 6:22	CMR
Chlorobenzene	ND	0.035		ND	0.16	0.702	12/29/15 6:22	CMR
Chloroethane	ND	0.035		ND	0.093	0.702	12/29/15 6:22	CMR
Chloroform	0.063	0.035		0.31	0.17	0.702	12/29/15 6:22	CMR
Chloromethane	0.57	0.070		1.2	0.14	0.702	12/29/15 6:22	CMR
Cyclohexane	0.17	0.035	L-05, V-06	0.59	0.12	0.702	12/29/15 6:22	CMR
Dibromochloromethane	ND	0.035		ND	0.30	0.702	12/29/15 6:22	CMR
1,2-Dibromoethane (EDB)	ND	0.035		ND	0.27	0.702	12/29/15 6:22	CMR
1,2-Dichlorobenzene	ND	0.035		ND	0.21	0.702	12/29/15 6:22	CMR
1,3-Dichlorobenzene	ND	0.035		ND	0.21	0.702	12/29/15 6:22	CMR
1,4-Dichlorobenzene	ND	0.035		ND	0.21	0.702	12/29/15 6:22	CMR
Dichlorodifluoromethane (Freon 12)	0.54	0.035		2.7	0.17	0.702	12/29/15 6:22	CMR
1,1-Dichloroethane	ND	0.035		ND	0.14	0.702	12/29/15 6:22	CMR
1,2-Dichloroethane	ND	0.035		ND	0.14	0.702	12/29/15 6:22	CMR
1,1-Dichloroethylene	ND	0.035		ND	0.14	0.702	12/29/15 6:22	CMR
cis-1,2-Dichloroethylene	ND	0.035		ND	0.14	0.702	12/29/15 6:22	CMR
trans-1,2-Dichloroethylene	ND	0.035		ND	0.14	0.702	12/29/15 6:22	CMR
1,2-Dichloropropane	ND	0.035		ND	0.16	0.702	12/29/15 6:22	CMR
cis-1,3-Dichloropropene	ND	0.035		ND	0.16	0.702	12/29/15 6:22	CMR
trans-1,3-Dichloropropene	ND	0.035		ND	0.16	0.702	12/29/15 6:22	CMR
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.035		ND	0.25	0.702	12/29/15 6:22	CMR
1,4-Dioxane	ND	0.35		ND	1.3	0.702	12/29/15 6:22	CMR
Ethanol	3.9	1.4		7.3	2.6	0.702	12/29/15 6:22	CMR
Ethyl Acetate	0.039	0.035		0.14	0.13	0.702	12/29/15 6:22	CMR
Ethylbenzene	0.11	0.035		0.46	0.15	0.702	12/29/15 6:22	CMR
4-Ethyltoluene	ND	0.035		ND	0.17	0.702	12/29/15 6:22	CMR
Heptane	0.12	0.035	V-06	0.49	0.14	0.702	12/29/15 6:22	CMR
Hexachlorobutadiene	ND	0.035		ND	0.37	0.702	12/29/15 6:22	CMR



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: Providence, RI

Date Received: 12/18/2015

Field Sample #: AA-1-121815

Sample ID: 15L1060-08

Sample Matrix: Ambient Air

Sampled: 12/18/2015 08:11

Sample Description/Location:

Sub Description/Location:

Canister ID: 1927

Canister Size: 6 liter

Flow Controller ID: 4204

Sample Type: 30 min

Work Order: 15L1060

Initial Vacuum(in Hg): -29

Final Vacuum(in Hg): -1

Receipt Vacuum(in Hg): -1

Flow Controller Type: Fixed-Orifice

Flow Controller Calibration

RPD Pre and Post-Sampling:

EPA TO-15

Analyte	ppbv			ug/m3			Dilution	Date/Time Analyzed	Analyst
	Results	RL	Flag/Qual	Results	RL				
Hexane	ND	1.4	L-03, V-05	ND	4.9		0.702	12/29/15 6:22	CMR
2-Hexanone (MBK)	ND	0.035		ND	0.14		0.702	12/29/15 6:22	CMR
Isopropanol	ND	1.4		ND	3.4		0.702	12/29/15 6:22	CMR
Methyl tert-Butyl Ether (MTBE)	ND	0.035	V-05, L-03	ND	0.13		0.702	12/29/15 6:22	CMR
Methylene Chloride	ND	0.35		ND	1.2		0.702	12/29/15 6:22	CMR
4-Methyl-2-pentanone (MIBK)	ND	0.035		ND	0.14		0.702	12/29/15 6:22	CMR
Naphthalene	ND	0.035		ND	0.18		0.702	12/29/15 6:22	CMR
Propene	ND	1.4		ND	2.4		0.702	12/29/15 6:22	CMR
Styrene	ND	0.035		ND	0.15		0.702	12/29/15 6:22	CMR
1,1,2,2-Tetrachloroethane	ND	0.035		ND	0.24		0.702	12/29/15 6:22	CMR
Tetrachloroethylene	0.090	0.035		0.61	0.24		0.702	12/29/15 6:22	CMR
Tetrahydrofuran	ND	0.035		ND	0.10		0.702	12/29/15 6:22	CMR
Toluene	0.85	0.035		3.2	0.13		0.702	12/29/15 6:22	CMR
1,2,4-Trichlorobenzene	ND	0.035		ND	0.26		0.702	12/29/15 6:22	CMR
1,1,1-Trichloroethane	ND	0.035		ND	0.19		0.702	12/29/15 6:22	CMR
1,1,2-Trichloroethane	ND	0.035		ND	0.19		0.702	12/29/15 6:22	CMR
Trichloroethylene	ND	0.035		ND	0.19		0.702	12/29/15 6:22	CMR
Trichlorofluoromethane (Freon 11)	0.31	0.14		1.7	0.79		0.702	12/29/15 6:22	CMR
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.14		ND	1.1		0.702	12/29/15 6:22	CMR
1,2,4-Trimethylbenzene	0.063	0.035		0.31	0.17		0.702	12/29/15 6:22	CMR
1,3,5-Trimethylbenzene	ND	0.035		ND	0.17		0.702	12/29/15 6:22	CMR
Vinyl Acetate	ND	0.70		ND	2.5		0.702	12/29/15 6:22	CMR
Vinyl Chloride	ND	0.035		ND	0.090		0.702	12/29/15 6:22	CMR
m&p-Xylene	0.47	0.070		2.0	0.30		0.702	12/29/15 6:22	CMR
o-Xylene	0.14	0.035		0.59	0.15		0.702	12/29/15 6:22	CMR

Surrogates

% Recovery

% REC Limits

4-Bromofluorobenzene (1)	110	70-130	12/29/15 6:22
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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: Providence, RI
 Date Received: 12/18/2015
Field Sample #: EW-5-121815
Sample ID: 15L1060-09
 Sample Matrix: Sub Slab
 Sampled: 12/18/2015 08:37

Sample Description/Location:
 Sub Description/Location:
 Canister ID: 1955
 Canister Size: 6 liter
 Flow Controller ID: 4205
 Sample Type: 30 min

Work Order: 15L1060
 Initial Vacuum(in Hg): -28
 Final Vacuum(in Hg): -5
 Receipt Vacuum(in Hg): -5.5
 Flow Controller Type: Fixed-Orifice
 Flow Controller Calibration
 RPD Pre and Post-Sampling:

EPA TO-15

Analyte	ppbv		ug/m3		Dilution	Date/Time Analyzed	Analyst	
	Results	RL	Flag/Qual	Results	RL			
Acetone	50	8.0		120	19	4	12/29/15 7:42	CMR
Benzene	1.6	0.20		5.0	0.64	4	12/29/15 7:42	CMR
Benzyl chloride	ND	0.20		ND	1.0	4	12/29/15 7:42	CMR
Bromodichloromethane	ND	0.20		ND	1.3	4	12/29/15 7:42	CMR
Bromoform	ND	0.20		ND	2.1	4	12/29/15 7:42	CMR
Bromomethane	ND	0.20		ND	0.78	4	12/29/15 7:42	CMR
1,3-Butadiene	ND	0.20		ND	0.44	4	12/29/15 7:42	CMR
2-Butanone (MEK)	140	8.0		410	24	4	12/29/15 7:42	CMR
Carbon Disulfide	6.0	2.0		19	6.2	4	12/29/15 7:42	CMR
Carbon Tetrachloride	ND	0.20		ND	1.3	4	12/29/15 7:42	CMR
Chlorobenzene	ND	0.20		ND	0.92	4	12/29/15 7:42	CMR
Chloroethane	ND	0.20		ND	0.53	4	12/29/15 7:42	CMR
Chloroform	ND	0.20		ND	0.98	4	12/29/15 7:42	CMR
Chloromethane	40	0.40		83	0.83	4	12/29/15 7:42	CMR
Cyclohexane	ND	0.20		ND	0.69	4	12/29/15 7:42	CMR
Dibromochloromethane	ND	0.20		ND	1.7	4	12/29/15 7:42	CMR
1,2-Dibromoethane (EDB)	ND	0.20		ND	1.5	4	12/29/15 7:42	CMR
1,2-Dichlorobenzene	ND	0.20		ND	1.2	4	12/29/15 7:42	CMR
1,3-Dichlorobenzene	ND	0.20		ND	1.2	4	12/29/15 7:42	CMR
1,4-Dichlorobenzene	ND	0.20		ND	1.2	4	12/29/15 7:42	CMR
Dichlorodifluoromethane (Freon 12)	0.62	0.20		3.1	0.99	4	12/29/15 7:42	CMR
1,1-Dichloroethane	1.1	0.20		4.4	0.81	4	12/29/15 7:42	CMR
1,2-Dichloroethane	ND	0.20		ND	0.81	4	12/29/15 7:42	CMR
1,1-Dichloroethylene	0.27	0.20		1.1	0.79	4	12/29/15 7:42	CMR
cis-1,2-Dichloroethylene	0.34	0.20		1.3	0.79	4	12/29/15 7:42	CMR
trans-1,2-Dichloroethylene	ND	0.20		ND	0.79	4	12/29/15 7:42	CMR
1,2-Dichloropropane	ND	0.20		ND	0.92	4	12/29/15 7:42	CMR
cis-1,3-Dichloropropene	ND	0.20		ND	0.91	4	12/29/15 7:42	CMR
trans-1,3-Dichloropropene	ND	0.20		ND	0.91	4	12/29/15 7:42	CMR
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.20		ND	1.4	4	12/29/15 7:42	CMR
1,4-Dioxane	ND	2.0		ND	7.2	4	12/29/15 7:42	CMR
Ethanol	11	8.0		21	15	4	12/29/15 7:42	CMR
Ethyl Acetate	0.78	0.20		2.8	0.72	4	12/29/15 7:42	CMR
Ethylbenzene	ND	0.20		ND	0.87	4	12/29/15 7:42	CMR
4-Ethyltoluene	ND	0.20		ND	0.98	4	12/29/15 7:42	CMR
Heptane	ND	0.20		ND	0.82	4	12/29/15 7:42	CMR
Hexachlorobutadiene	ND	0.20		ND	2.1	4	12/29/15 7:42	CMR



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: Providence, RI
 Date Received: 12/18/2015
Field Sample #: EW-5-121815
Sample ID: 15L1060-09
 Sample Matrix: Sub Slab
 Sampled: 12/18/2015 08:37

Sample Description/Location:
 Sub Description/Location:
 Canister ID: 1955
 Canister Size: 6 liter
 Flow Controller ID: 4205
 Sample Type: 30 min

Work Order: 15L1060
 Initial Vacuum(in Hg): -28
 Final Vacuum(in Hg): -5
 Receipt Vacuum(in Hg): -5.5
 Flow Controller Type: Fixed-Orifice
 Flow Controller Calibration
 RPD Pre and Post-Sampling:

EPA TO-15

Analyte	ppbv			ug/m3			Dilution	Date/Time Analyzed	Analyst
	Results	RL	Flag/Qual	Results	RL				
Hexane	ND	8.0	L-03, V-05	ND	28		4	12/29/15 7:42	CMR
2-Hexanone (MBK)	ND	0.20		ND	0.82		4	12/29/15 7:42	CMR
Isopropanol	ND	8.0		ND	20		4	12/29/15 7:42	CMR
Methyl tert-Butyl Ether (MTBE)	ND	0.20	L-03, V-05	ND	0.72		4	12/29/15 7:42	CMR
Methylene Chloride	ND	2.0		ND	6.9		4	12/29/15 7:42	CMR
4-Methyl-2-pentanone (MIBK)	ND	0.20		ND	0.82		4	12/29/15 7:42	CMR
Naphthalene	ND	0.20		ND	1.0		4	12/29/15 7:42	CMR
Propene	ND	8.0		ND	14		4	12/29/15 7:42	CMR
Styrene	ND	0.20		ND	0.85		4	12/29/15 7:42	CMR
1,1,2,2-Tetrachloroethane	ND	0.20		ND	1.4		4	12/29/15 7:42	CMR
Tetrachloroethylene	ND	0.20		ND	1.4		4	12/29/15 7:42	CMR
Tetrahydrofuran	360	0.20		1100	0.59		4	12/29/15 7:42	CMR
Toluene	0.25	0.20		0.95	0.75		4	12/29/15 7:42	CMR
1,2,4-Trichlorobenzene	ND	0.20		ND	1.5		4	12/29/15 7:42	CMR
1,1,1-Trichloroethane	5.8	0.20		32	1.1		4	12/29/15 7:42	CMR
1,1,2-Trichloroethane	ND	0.20		ND	1.1		4	12/29/15 7:42	CMR
Trichloroethylene	18	0.20		94	1.1		4	12/29/15 7:42	CMR
Trichlorofluoromethane (Freon 11)	ND	0.80		ND	4.5		4	12/29/15 7:42	CMR
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.80		ND	6.1		4	12/29/15 7:42	CMR
1,2,4-Trimethylbenzene	ND	0.20		ND	0.98		4	12/29/15 7:42	CMR
1,3,5-Trimethylbenzene	ND	0.20		ND	0.98		4	12/29/15 7:42	CMR
Vinyl Acetate	ND	4.0		ND	14		4	12/29/15 7:42	CMR
Vinyl Chloride	ND	0.20		ND	0.51		4	12/29/15 7:42	CMR
m&p-Xylene	ND	0.40		ND	1.7		4	12/29/15 7:42	CMR
o-Xylene	ND	0.20		ND	0.87		4	12/29/15 7:42	CMR

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	110	70-130	12/29/15 7:42



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: Providence, RI
 Date Received: 12/18/2015
Field Sample #: EW-6-121815
Sample ID: 15L1060-10
 Sample Matrix: Sub Slab
 Sampled: 12/18/2015 09:29

Sample Description/Location:
 Sub Description/Location:
 Canister ID: 1271
 Canister Size: 6 liter
 Flow Controller ID: 4072
 Sample Type: 30 min

Work Order: 15L1060
 Initial Vacuum(in Hg): -27
 Final Vacuum(in Hg): -7
 Receipt Vacuum(in Hg): -8.5
 Flow Controller Type: Fixed-Orifice
 Flow Controller Calibration
 RPD Pre and Post-Sampling:

EPA TO-15

Analyte	ppbv		ug/m3		Dilution	Date/Time Analyzed	Analyst	
	Results	RL	Flag/Qual	Results	RL			
Acetone	ND	8.0		ND	19	4	12/29/15 8:18	CMR
Benzene	ND	0.20		ND	0.64	4	12/29/15 8:18	CMR
Benzyl chloride	ND	0.20		ND	1.0	4	12/29/15 8:18	CMR
Bromodichloromethane	ND	0.20		ND	1.3	4	12/29/15 8:18	CMR
Bromoform	ND	0.20		ND	2.1	4	12/29/15 8:18	CMR
Bromomethane	ND	0.20		ND	0.78	4	12/29/15 8:18	CMR
1,3-Butadiene	ND	0.20		ND	0.44	4	12/29/15 8:18	CMR
2-Butanone (MEK)	ND	8.0		ND	24	4	12/29/15 8:18	CMR
Carbon Disulfide	ND	2.0		ND	6.2	4	12/29/15 8:18	CMR
Carbon Tetrachloride	ND	0.20		ND	1.3	4	12/29/15 8:18	CMR
Chlorobenzene	ND	0.20		ND	0.92	4	12/29/15 8:18	CMR
Chloroethane	ND	0.20		ND	0.53	4	12/29/15 8:18	CMR
Chloroform	ND	0.20		ND	0.98	4	12/29/15 8:18	CMR
Chloromethane	0.58	0.40		1.2	0.83	4	12/29/15 8:18	CMR
Cyclohexane	ND	0.20		ND	0.69	4	12/29/15 8:18	CMR
Dibromochloromethane	ND	0.20		ND	1.7	4	12/29/15 8:18	CMR
1,2-Dibromoethane (EDB)	ND	0.20		ND	1.5	4	12/29/15 8:18	CMR
1,2-Dichlorobenzene	ND	0.20		ND	1.2	4	12/29/15 8:18	CMR
1,3-Dichlorobenzene	ND	0.20		ND	1.2	4	12/29/15 8:18	CMR
1,4-Dichlorobenzene	ND	0.20		ND	1.2	4	12/29/15 8:18	CMR
Dichlorodifluoromethane (Freon 12)	0.64	0.20		3.1	0.99	4	12/29/15 8:18	CMR
1,1-Dichloroethane	0.76	0.20		3.1	0.81	4	12/29/15 8:18	CMR
1,2-Dichloroethane	ND	0.20		ND	0.81	4	12/29/15 8:18	CMR
1,1-Dichloroethylene	ND	0.20		ND	0.79	4	12/29/15 8:18	CMR
cis-1,2-Dichloroethylene	ND	0.20		ND	0.79	4	12/29/15 8:18	CMR
trans-1,2-Dichloroethylene	ND	0.20		ND	0.79	4	12/29/15 8:18	CMR
1,2-Dichloropropane	ND	0.20		ND	0.92	4	12/29/15 8:18	CMR
cis-1,3-Dichloropropene	ND	0.20		ND	0.91	4	12/29/15 8:18	CMR
trans-1,3-Dichloropropene	ND	0.20		ND	0.91	4	12/29/15 8:18	CMR
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.20		ND	1.4	4	12/29/15 8:18	CMR
1,4-Dioxane	ND	2.0		ND	7.2	4	12/29/15 8:18	CMR
Ethanol	ND	8.0		ND	15	4	12/29/15 8:18	CMR
Ethyl Acetate	ND	0.20		ND	0.72	4	12/29/15 8:18	CMR
Ethylbenzene	ND	0.20		ND	0.87	4	12/29/15 8:18	CMR
4-Ethyltoluene	ND	0.20		ND	0.98	4	12/29/15 8:18	CMR
Heptane	ND	0.20		ND	0.82	4	12/29/15 8:18	CMR
Hexachlorobutadiene	ND	0.20		ND	2.1	4	12/29/15 8:18	CMR



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: Providence, RI

Date Received: 12/18/2015

Field Sample #: EW-6-121815

Sample ID: 15L1060-10

Sample Matrix: Sub Slab

Sampled: 12/18/2015 09:29

Sample Description/Location:

Sub Description/Location:

Canister ID: 1271

Canister Size: 6 liter

Flow Controller ID: 4072

Sample Type: 30 min

Work Order: 15L1060

Initial Vacuum(in Hg): -27

Final Vacuum(in Hg): -7

Receipt Vacuum(in Hg): -8.5

Flow Controller Type: Fixed-Orifice

Flow Controller Calibration

RPD Pre and Post-Sampling:

EPA TO-15

Analyte	ppbv		ug/m3		Dilution	Date/Time Analyzed	Analyst	
	Results	RL	Flag/Qual	Results	RL			
Hexane	ND	8.0	L-03, V-05	ND	28	4	12/29/15 8:18	CMR
2-Hexanone (MBK)	ND	0.20		ND	0.82	4	12/29/15 8:18	CMR
Isopropanol	ND	8.0		ND	20	4	12/29/15 8:18	CMR
Methyl tert-Butyl Ether (MTBE)	ND	0.20	L-03, V-05	ND	0.72	4	12/29/15 8:18	CMR
Methylene Chloride	ND	2.0		ND	6.9	4	12/29/15 8:18	CMR
4-Methyl-2-pentanone (MIBK)	ND	0.20		ND	0.82	4	12/29/15 8:18	CMR
Naphthalene	ND	0.20		ND	1.0	4	12/29/15 8:18	CMR
Propene	ND	8.0		ND	14	4	12/29/15 8:18	CMR
Styrene	ND	0.20		ND	0.85	4	12/29/15 8:18	CMR
1,1,2,2-Tetrachloroethane	ND	0.20		ND	1.4	4	12/29/15 8:18	CMR
Tetrachloroethylene	0.24	0.20		1.7	1.4	4	12/29/15 8:18	CMR
Tetrahydrofuran	0.59	0.20		1.7	0.59	4	12/29/15 8:18	CMR
Toluene	ND	0.20		ND	0.75	4	12/29/15 8:18	CMR
1,2,4-Trichlorobenzene	ND	0.20		ND	1.5	4	12/29/15 8:18	CMR
1,1,1-Trichloroethane	5.0	0.20		27	1.1	4	12/29/15 8:18	CMR
1,1,2-Trichloroethane	ND	0.20		ND	1.1	4	12/29/15 8:18	CMR
Trichloroethylene	8.7	0.20		47	1.1	4	12/29/15 8:18	CMR
Trichlorofluoromethane (Freon 11)	3.6	0.80		20	4.5	4	12/29/15 8:18	CMR
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.80		ND	6.1	4	12/29/15 8:18	CMR
1,2,4-Trimethylbenzene	ND	0.20		ND	0.98	4	12/29/15 8:18	CMR
1,3,5-Trimethylbenzene	ND	0.20		ND	0.98	4	12/29/15 8:18	CMR
Vinyl Acetate	ND	4.0		ND	14	4	12/29/15 8:18	CMR
Vinyl Chloride	ND	0.20		ND	0.51	4	12/29/15 8:18	CMR
m&p-Xylene	ND	0.40		ND	1.7	4	12/29/15 8:18	CMR
o-Xylene	ND	0.20		ND	0.87	4	12/29/15 8:18	CMR

Surrogates

% Recovery

% REC Limits

4-Bromofluorobenzene (1)	110	70-130	12/29/15 8:18
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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: Providence, RI
 Date Received: 12/18/2015
Field Sample #: EW-7-121815
Sample ID: 15L1060-11
 Sample Matrix: Sub Slab
 Sampled: 12/18/2015 09:59

Sample Description/Location:
 Sub Description/Location:
 Canister ID: 1024
 Canister Size: 6 liter
 Flow Controller ID: 4068
 Sample Type: 30 min

Work Order: 15L1060
 Initial Vacuum(in Hg): -29
 Final Vacuum(in Hg): -8
 Receipt Vacuum(in Hg): -7.6
 Flow Controller Type: Fixed-Orifice
 Flow Controller Calibration
 RPD Pre and Post-Sampling:

EPA TO-15

Analyte	ppbv		ug/m3		Dilution	Date/Time Analyzed	Analyst	
	Results	RL	Flag/Qual	Results	RL			
Acetone	ND	8.0		ND	19	4	12/29/15 8:54	CMR
Benzene	0.40	0.20		1.3	0.64	4	12/29/15 8:54	CMR
Benzyl chloride	ND	0.20		ND	1.0	4	12/29/15 8:54	CMR
Bromodichloromethane	0.59	0.20		3.9	1.3	4	12/29/15 8:54	CMR
Bromoform	ND	0.20		ND	2.1	4	12/29/15 8:54	CMR
Bromomethane	ND	0.20		ND	0.78	4	12/29/15 8:54	CMR
1,3-Butadiene	ND	0.20		ND	0.44	4	12/29/15 8:54	CMR
2-Butanone (MEK)	ND	8.0		ND	24	4	12/29/15 8:54	CMR
Carbon Disulfide	ND	2.0		ND	6.2	4	12/29/15 8:54	CMR
Carbon Tetrachloride	ND	0.20		ND	1.3	4	12/29/15 8:54	CMR
Chlorobenzene	ND	0.20		ND	0.92	4	12/29/15 8:54	CMR
Chloroethane	ND	0.20		ND	0.53	4	12/29/15 8:54	CMR
Chloroform	0.57	0.20		2.8	0.98	4	12/29/15 8:54	CMR
Chloromethane	ND	0.40		ND	0.83	4	12/29/15 8:54	CMR
Cyclohexane	ND	0.20		ND	0.69	4	12/29/15 8:54	CMR
Dibromochloromethane	ND	0.20		ND	1.7	4	12/29/15 8:54	CMR
1,2-Dibromoethane (EDB)	ND	0.20		ND	1.5	4	12/29/15 8:54	CMR
1,2-Dichlorobenzene	ND	0.20		ND	1.2	4	12/29/15 8:54	CMR
1,3-Dichlorobenzene	ND	0.20		ND	1.2	4	12/29/15 8:54	CMR
1,4-Dichlorobenzene	ND	0.20		ND	1.2	4	12/29/15 8:54	CMR
Dichlorodifluoromethane (Freon 12)	0.64	0.20		3.2	0.99	4	12/29/15 8:54	CMR
1,1-Dichloroethane	1.6	0.20		6.5	0.81	4	12/29/15 8:54	CMR
1,2-Dichloroethane	ND	0.20		ND	0.81	4	12/29/15 8:54	CMR
1,1-Dichloroethylene	ND	0.20		ND	0.79	4	12/29/15 8:54	CMR
cis-1,2-Dichloroethylene	0.67	0.20		2.7	0.79	4	12/29/15 8:54	CMR
trans-1,2-Dichloroethylene	1.9	0.20		7.7	0.79	4	12/29/15 8:54	CMR
1,2-Dichloropropane	ND	0.20		ND	0.92	4	12/29/15 8:54	CMR
cis-1,3-Dichloropropene	ND	0.20		ND	0.91	4	12/29/15 8:54	CMR
trans-1,3-Dichloropropene	ND	0.20		ND	0.91	4	12/29/15 8:54	CMR
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.20		ND	1.4	4	12/29/15 8:54	CMR
1,4-Dioxane	ND	2.0		ND	7.2	4	12/29/15 8:54	CMR
Ethanol	ND	8.0		ND	15	4	12/29/15 8:54	CMR
Ethyl Acetate	ND	0.20		ND	0.72	4	12/29/15 8:54	CMR
Ethylbenzene	ND	0.20		ND	0.87	4	12/29/15 8:54	CMR
4-Ethyltoluene	ND	0.20		ND	0.98	4	12/29/15 8:54	CMR
Heptane	ND	0.20		ND	0.82	4	12/29/15 8:54	CMR
Hexachlorobutadiene	ND	0.20		ND	2.1	4	12/29/15 8:54	CMR



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: Providence, RI
 Date Received: 12/18/2015
Field Sample #: EW-7-121815
Sample ID: 15L1060-11
 Sample Matrix: Sub Slab
 Sampled: 12/18/2015 09:59

Sample Description/Location:
 Sub Description/Location:
 Canister ID: 1024
 Canister Size: 6 liter
 Flow Controller ID: 4068
 Sample Type: 30 min

Work Order: 15L1060
 Initial Vacuum(in Hg): -29
 Final Vacuum(in Hg): -8
 Receipt Vacuum(in Hg): -7.6
 Flow Controller Type: Fixed-Orifice
 Flow Controller Calibration
 RPD Pre and Post-Sampling:

EPA TO-15

Analyte	ppbv			ug/m3			Dilution	Date/Time Analyzed	Analyst
	Results	RL	Flag/Qual	Results	RL				
Hexane	ND	8.0	L-03, V-05	ND	28		4	12/29/15 8:54	CMR
2-Hexanone (MBK)	ND	0.20		ND	0.82		4	12/29/15 8:54	CMR
Isopropanol	ND	8.0		ND	20		4	12/29/15 8:54	CMR
Methyl tert-Butyl Ether (MTBE)	ND	0.20	V-05, L-03	ND	0.72		4	12/29/15 8:54	CMR
Methylene Chloride	ND	2.0		ND	6.9		4	12/29/15 8:54	CMR
4-Methyl-2-pentanone (MIBK)	ND	0.20		ND	0.82		4	12/29/15 8:54	CMR
Naphthalene	ND	0.20		ND	1.0		4	12/29/15 8:54	CMR
Propene	ND	8.0		ND	14		4	12/29/15 8:54	CMR
Styrene	ND	0.20		ND	0.85		4	12/29/15 8:54	CMR
1,1,2,2-Tetrachloroethane	ND	0.20		ND	1.4		4	12/29/15 8:54	CMR
Tetrachloroethylene	25	0.20		170	1.4		4	12/29/15 8:54	CMR
Tetrahydrofuran	2.0	0.20		5.8	0.59		4	12/29/15 8:54	CMR
Toluene	ND	0.20		ND	0.75		4	12/29/15 8:54	CMR
1,2,4-Trichlorobenzene	ND	0.20		ND	1.5		4	12/29/15 8:54	CMR
1,1,1-Trichloroethane	7.3	0.20		40	1.1		4	12/29/15 8:54	CMR
1,1,2-Trichloroethane	ND	0.20		ND	1.1		4	12/29/15 8:54	CMR
Trichloroethylene	70	0.20		380	1.1		4	12/29/15 8:54	CMR
Trichlorofluoromethane (Freon 11)	150	0.80		850	4.5		4	12/29/15 8:54	CMR
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.80		ND	6.1		4	12/29/15 8:54	CMR
1,2,4-Trimethylbenzene	ND	0.20		ND	0.98		4	12/29/15 8:54	CMR
1,3,5-Trimethylbenzene	ND	0.20		ND	0.98		4	12/29/15 8:54	CMR
Vinyl Acetate	ND	4.0		ND	14		4	12/29/15 8:54	CMR
Vinyl Chloride	ND	0.20		ND	0.51		4	12/29/15 8:54	CMR
m&p-Xylene	ND	0.40		ND	1.7		4	12/29/15 8:54	CMR
o-Xylene	ND	0.20		ND	0.87		4	12/29/15 8:54	CMR

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	110	70-130	12/29/15 8:54



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: Providence, RI

Date Received: 12/18/2015

Field Sample #: EW-combined-121815

Sample ID: 15L1060-12

Sample Matrix: Sub Slab

Sampled: 12/18/2015 09:43

Sample Description/Location:

Sub Description/Location:

Canister ID: 1822

Canister Size: 6 liter

Flow Controller ID: 4073

Sample Type: 30 min

Work Order: 15L1060

Initial Vacuum(in Hg): -29

Final Vacuum(in Hg): -5

Receipt Vacuum(in Hg): -6

Flow Controller Type: Fixed-Orifice

Flow Controller Calibration

RPD Pre and Post-Sampling:

EPA TO-15

Analyte	ppbv		ug/m3		Dilution	Date/Time Analyzed	Analyst	
	Results	RL	Flag/Qual	Results	RL			
Acetone	ND	8.0		ND	19	4	12/29/15 9:31	CMR
Benzene	0.22	0.20		0.69	0.64	4	12/29/15 9:31	CMR
Benzyl chloride	ND	0.20		ND	1.0	4	12/29/15 9:31	CMR
Bromodichloromethane	1.4	0.20		9.1	1.3	4	12/29/15 9:31	CMR
Bromoform	ND	0.20		ND	2.1	4	12/29/15 9:31	CMR
Bromomethane	ND	0.20		ND	0.78	4	12/29/15 9:31	CMR
1,3-Butadiene	ND	0.20		ND	0.44	4	12/29/15 9:31	CMR
2-Butanone (MEK)	ND	8.0		ND	24	4	12/29/15 9:31	CMR
Carbon Disulfide	ND	2.0		ND	6.2	4	12/29/15 9:31	CMR
Carbon Tetrachloride	ND	0.20		ND	1.3	4	12/29/15 9:31	CMR
Chlorobenzene	ND	0.20		ND	0.92	4	12/29/15 9:31	CMR
Chloroethane	0.35	0.20		0.93	0.53	4	12/29/15 9:31	CMR
Chloroform	0.64	0.20		3.1	0.98	4	12/29/15 9:31	CMR
Chloromethane	7.4	0.40		15	0.83	4	12/29/15 9:31	CMR
Cyclohexane	ND	0.20		ND	0.69	4	12/29/15 9:31	CMR
Dibromochloromethane	ND	0.20		ND	1.7	4	12/29/15 9:31	CMR
1,2-Dibromoethane (EDB)	ND	0.20		ND	1.5	4	12/29/15 9:31	CMR
1,2-Dichlorobenzene	ND	0.20		ND	1.2	4	12/29/15 9:31	CMR
1,3-Dichlorobenzene	ND	0.20		ND	1.2	4	12/29/15 9:31	CMR
1,4-Dichlorobenzene	ND	0.20		ND	1.2	4	12/29/15 9:31	CMR
Dichlorodifluoromethane (Freon 12)	0.64	0.20		3.2	0.99	4	12/29/15 9:31	CMR
1,1-Dichloroethane	17	0.20		69	0.81	4	12/29/15 9:31	CMR
1,2-Dichloroethane	ND	0.20		ND	0.81	4	12/29/15 9:31	CMR
1,1-Dichloroethylene	5.4	0.20		21	0.79	4	12/29/15 9:31	CMR
cis-1,2-Dichloroethylene	5.1	0.20		20	0.79	4	12/29/15 9:31	CMR
trans-1,2-Dichloroethylene	ND	0.20		ND	0.79	4	12/29/15 9:31	CMR
1,2-Dichloropropane	ND	0.20		ND	0.92	4	12/29/15 9:31	CMR
cis-1,3-Dichloropropene	ND	0.20		ND	0.91	4	12/29/15 9:31	CMR
trans-1,3-Dichloropropene	ND	0.20		ND	0.91	4	12/29/15 9:31	CMR
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.20		ND	1.4	4	12/29/15 9:31	CMR
1,4-Dioxane	ND	2.0		ND	7.2	4	12/29/15 9:31	CMR
Ethanol	9.6	8.0		18	15	4	12/29/15 9:31	CMR
Ethyl Acetate	ND	0.20		ND	0.72	4	12/29/15 9:31	CMR
Ethylbenzene	ND	0.20		ND	0.87	4	12/29/15 9:31	CMR
4-Ethyltoluene	ND	0.20		ND	0.98	4	12/29/15 9:31	CMR
Heptane	ND	0.20		ND	0.82	4	12/29/15 9:31	CMR
Hexachlorobutadiene	ND	0.20		ND	2.1	4	12/29/15 9:31	CMR



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: Providence, RI

Date Received: 12/18/2015

Field Sample #: EW-combined-121815

Sample ID: 15L1060-12

Sample Matrix: Sub Slab

Sampled: 12/18/2015 09:43

Sample Description/Location:

Sub Description/Location:

Canister ID: 1822

Canister Size: 6 liter

Flow Controller ID: 4073

Sample Type: 30 min

Work Order: 15L1060

Initial Vacuum(in Hg): -29

Final Vacuum(in Hg): -5

Receipt Vacuum(in Hg): -6

Flow Controller Type: Fixed-Orifice

Flow Controller Calibration

RPD Pre and Post-Sampling:

EPA TO-15

Analyte	ppbv			ug/m3			Dilution	Date/Time Analyzed	Analyst
	Results	RL	Flag/Qual	Results	RL				
Hexane	ND	8.0	L-03, V-05	ND	28		4	12/29/15 9:31	CMR
2-Hexanone (MBK)	ND	0.20		ND	0.82		4	12/29/15 9:31	CMR
Isopropanol	ND	8.0		ND	20		4	12/29/15 9:31	CMR
Methyl tert-Butyl Ether (MTBE)	ND	0.20	L-03, V-05	ND	0.72		4	12/29/15 9:31	CMR
Methylene Chloride	ND	2.0		ND	6.9		4	12/29/15 9:31	CMR
4-Methyl-2-pentanone (MIBK)	ND	0.20		ND	0.82		4	12/29/15 9:31	CMR
Naphthalene	ND	0.20		ND	1.0		4	12/29/15 9:31	CMR
Propene	ND	8.0		ND	14		4	12/29/15 9:31	CMR
Styrene	ND	0.20		ND	0.85		4	12/29/15 9:31	CMR
1,1,2,2-Tetrachloroethane	ND	0.20		ND	1.4		4	12/29/15 9:31	CMR
Tetrachloroethylene	13	0.20		86	1.4		4	12/29/15 9:31	CMR
Tetrahydrofuran	ND	0.20		ND	0.59		4	12/29/15 9:31	CMR
Toluene	0.33	0.20		1.3	0.75		4	12/29/15 9:31	CMR
1,2,4-Trichlorobenzene	ND	0.20		ND	1.5		4	12/29/15 9:31	CMR
1,1,1-Trichloroethane	290	2.0		1600	11		40	12/28/15 23:57	CMR
1,1,2-Trichloroethane	ND	0.20		ND	1.1		4	12/29/15 9:31	CMR
Trichloroethylene	160	0.20		880	1.1		4	12/29/15 9:31	CMR
Trichlorofluoromethane (Freon 11)	41	0.80		230	4.5		4	12/29/15 9:31	CMR
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.80		ND	6.1		4	12/29/15 9:31	CMR
1,2,4-Trimethylbenzene	ND	0.20		ND	0.98		4	12/29/15 9:31	CMR
1,3,5-Trimethylbenzene	ND	0.20		ND	0.98		4	12/29/15 9:31	CMR
Vinyl Acetate	ND	4.0		ND	14		4	12/29/15 9:31	CMR
Vinyl Chloride	ND	0.20		ND	0.51		4	12/29/15 9:31	CMR
m&p-Xylene	ND	0.40		ND	1.7		4	12/29/15 9:31	CMR
o-Xylene	ND	0.20		ND	0.87		4	12/29/15 9:31	CMR

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	111	70-130	12/28/15 23:57
4-Bromofluorobenzene (1)	109	70-130	12/29/15 9:31



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Sample Extraction Data

Prep Method: TO-15 Prep-EPA TO-15

Lab Number [Field ID]	Batch	Pressure Dilution	Pre Dilution	Pre-Dil Initial mL	Pre-Dil Final mL	Default Injection mL	Actual Injection mL	Date
15L1060-01 [IA-1-121815]	B138770	1.5	1	N/A	1000	400	855	12/28/15
15L1060-02 [IA-2-121815]	B138770	1.5	1	N/A	1000	400	855	12/28/15
15L1060-03 [IA-3-121815]	B138770	1.5	1	N/A	1000	400	855	12/28/15
15L1060-04 [IA-4-121815]	B138770	1.5	1	N/A	1000	400	855	12/28/15
15L1060-05 [IA-5-121815]	B138770	1.5	1	N/A	1000	400	855	12/28/15
15L1060-06 [IA-6-121815]	B138770	1.5	1	N/A	1000	400	855	12/28/15
15L1060-07 [IA-7-121815]	B138770	1.5	1	N/A	1000	400	855	12/28/15
15L1060-08 [AA-1-121815]	B138770	1.5	1	N/A	1000	400	855	12/28/15
15L1060-09 [EW-5-121815]	B138770	1.5	1	N/A	1000	400	150	12/28/15
15L1060-10 [EW-6-121815]	B138770	1.5	1	N/A	1000	400	150	12/28/15
15L1060-11 [EW-7-121815]	B138770	1.5	1	N/A	1000	400	150	12/28/15
15L1060-12 [EW-combined-121815]	B138770	1.5	1	N/A	1000	400	150	12/28/15
15L1060-12RE1 [EW-combined-121815]	B138770	1.5	1	N/A	1000	400	15	12/28/15



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL**Air Toxics by EPA Compendium Methods - Quality Control**

Analyte	ppbv Results	RL	ug/m3 Results	RL	Spike Level ppbv	Source Result	%REC	%REC Limits	RPD RPD	RPD Limit	Flag/Qual
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Batch B138770 - TO-15 Prep**Blank (B138770-BLK1)**

Prepared & Analyzed: 12/28/15

Acetone	ND	1.4									
Benzene	ND	0.035									
Benzyl chloride	ND	0.035									
Bromodichloromethane	ND	0.035									
Bromoform	ND	0.035									
Bromomethane	ND	0.035									
1,3-Butadiene	ND	0.035									
2-Butanone (MEK)	ND	1.4									
Carbon Disulfide	ND	0.35									
Carbon Tetrachloride	ND	0.035									
Chlorobenzene	ND	0.035									
Chloroethane	ND	0.035									
Chloroform	ND	0.035									
Chloromethane	ND	0.070									
Cyclohexane	ND	0.035									
Dibromochloromethane	ND	0.035									
1,2-Dibromoethane (EDB)	ND	0.035									
1,2-Dichlorobenzene	ND	0.035									
1,3-Dichlorobenzene	ND	0.035									
1,4-Dichlorobenzene	ND	0.035									
Dichlorodifluoromethane (Freon 12)	ND	0.035									
1,1-Dichloroethane	ND	0.035									
1,2-Dichloroethane	ND	0.035									
1,1-Dichloroethylene	ND	0.035									
cis-1,2-Dichloroethylene	ND	0.035									
trans-1,2-Dichloroethylene	ND	0.035									
1,2-Dichloroproppane	ND	0.035									
cis-1,3-Dichloropropene	ND	0.035									
trans-1,3-Dichloropropene	ND	0.035									
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.035									
1,4-Dioxane	ND	0.35									
Ethanol	ND	1.4									
Ethyl Acetate	ND	0.035									
Ethylbenzene	ND	0.035									
4-Ethyltoluene	ND	0.035									
Heptane	ND	0.035									
Hexachlorobutadiene	ND	0.035									
Hexane	ND	1.4									L-03, V-05
2-Hexanone (MBK)	ND	0.035									
Isopropanol	ND	1.4									
Methyl tert-Butyl Ether (MTBE)	ND	0.035									L-03, V-05
Methylene Chloride	ND	0.35									
4-Methyl-2-pentanone (MIBK)	ND	0.035									
Naphthalene	ND	0.035									
Propene	ND	1.4									
Styrene	ND	0.035									

L-03, V-05

L-03, V-05



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL**Air Toxics by EPA Compendium Methods - Quality Control**

Analyte	ppbv Results	RL	ug/m3 Results	RL	Spike Level ppbv	Source Result	%REC %REC	RPD Limits	RPD RPD	RPD Limit	Flag/Qual
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Batch B138770 - TO-15 Prep

Blank (B138770-BLK1)	Prepared & Analyzed: 12/28/15							
1,1,2,2-Tetrachloroethane	ND	0.035						
Tetrachloroethylene	ND	0.035						
Tetrahydrofuran	ND	0.035						
Toluene	ND	0.035						
1,2,4-Trichlorobenzene	ND	0.035						
1,1,1-Trichloroethane	ND	0.035						
1,1,2-Trichloroethane	ND	0.035						
Trichloroethylene	ND	0.035						
Trichlorofluoromethane (Freon 11)	ND	0.14						
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.14						
1,2,4-Trimethylbenzene	ND	0.035						
1,3,5-Trimethylbenzene	ND	0.035						
Vinyl Acetate	ND	0.70						
Vinyl Chloride	ND	0.035						
m&p-Xylene	ND	0.070						
o-Xylene	ND	0.035						

<i>Surrogate: 4-Bromofluorobenzene (I)</i>	8.87	8.00	III	70-130
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LCS (B138770-BS1)	Prepared & Analyzed: 12/28/15						
Acetone	4.62		5.00	92.3	70-130		
Benzene	5.66		5.00	113	70-130		
Benzyl chloride	4.16		5.00	83.2	70-130		
Bromodichloromethane	5.94		5.00	119	70-130		
Bromoform	5.04		5.00	101	70-130		
Bromomethane	4.87		5.00	97.5	70-130		
1,3-Butadiene	4.24		5.00	84.8	70-130		
2-Butanone (MEK)	5.10		5.00	102	70-130		
Carbon Disulfide	4.36		5.00	87.2	70-130		
Carbon Tetrachloride	5.94		5.00	119	70-130		
Chlorobenzene	5.09		5.00	102	70-130		
Chloroethane	4.48		5.00	89.5	70-130		
Chloroform	4.96		5.00	99.2	70-130		
Chloromethane	4.39		5.00	87.8	70-130		
Cyclohexane	7.30		5.00	146 *	70-130		L-05, V-06
Dibromochloromethane	4.62		5.00	92.4	70-130		
1,2-Dibromoethane (EDB)	4.47		5.00	89.5	70-130		
1,2-Dichlorobenzene	5.22		5.00	104	70-130		
1,3-Dichlorobenzene	5.54		5.00	111	70-130		
1,4-Dichlorobenzene	5.42		5.00	108	70-130		
Dichlorodifluoromethane (Freon 12)	5.98		5.00	120	70-130		
1,1-Dichloroethane	4.67		5.00	93.4	70-130		
1,2-Dichloroethane	4.50		5.00	89.9	70-130		
1,1-Dichloroethylene	4.72		5.00	94.5	70-130		
cis-1,2-Dichloroethylene	4.51		5.00	90.1	70-130		
trans-1,2-Dichloroethylene	4.08		5.00	81.7	70-130		
1,2-Dichloropropane	5.35		5.00	107	70-130		



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL**Air Toxics by EPA Compendium Methods - Quality Control**

Analyte	ppbv Results	RL	ug/m3 Results	RL	Spike Level ppbv	Source Result	%REC %REC	Limits	RPD RPD	Limit	Flag/Qual
Batch B138770 - TO-15 Prep											
LCS (B138770-BSI)											
Prepared & Analyzed: 12/28/15											
cis-1,3-Dichloropropene	5.37		5.00		107	70-130					
trans-1,3-Dichloropropene	3.92		5.00		78.4	70-130					
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	5.00		5.00		100	70-130					
1,4-Dioxane	6.17		5.00		123	70-130					V-06
Ethanol	5.20		5.00		104	70-130					
Ethyl Acetate	4.98		5.00		99.6	70-130					
Ethylbenzene	4.89		5.00		97.8	70-130					
4-Ethyltoluene	4.68		5.00		93.5	70-130					
Heptane	6.26		5.00		125	70-130					V-06
Hexachlorobutadiene	5.81		5.00		116	70-130					
Hexane	3.40		5.00		67.9 *	70-130					L-03, V-05
2-Hexanone (MBK)	4.72		5.00		94.3	70-130					
Isopropanol	3.83		5.00		76.6	70-130					
Methyl tert-Butyl Ether (MTBE)	3.23		5.00		64.6 *	70-130					L-03, V-05
Methylene Chloride	5.16		5.00		103	70-130					
4-Methyl-2-pentanone (MIBK)	6.14		5.00		123	70-130					V-06
Naphthalene	4.70		5.00		94.1	70-130					
Propene	5.96		5.00		119	70-130					
Styrene	4.06		5.00		81.3	70-130					
1,1,2,2-Tetrachloroethane	4.89		5.00		97.9	70-130					
Tetrachloroethylene	4.14		5.00		82.8	70-130					
Tetrahydrofuran	4.92		5.00		98.5	70-130					
Toluene	4.49		5.00		89.8	70-130					
1,2,4-Trichlorobenzene	5.44		5.00		109	70-130					
1,1,1-Trichloroethane	5.48		5.00		110	70-130					
1,1,2-Trichloroethane	4.43		5.00		88.6	70-130					
Trichloroethylene	5.68		5.00		114	70-130					
Trichlorofluoromethane (Freon 11)	6.38		5.00		128	70-130					
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	5.43		5.00		109	70-130					
1,2,4-Trimethylbenzene	4.75		5.00		95.0	70-130					
1,3,5-Trimethylbenzene	4.70		5.00		93.9	70-130					
Vinyl Acetate	4.64		5.00		92.8	70-130					
Vinyl Chloride	4.52		5.00		90.4	70-130					
m&p-Xylene	10.4		10.0		104	70-130					
o-Xylene	4.96		5.00		99.3	70-130					
<i>Surrogate: 4-Bromofluorobenzene (I)</i>	8.98		8.00		112	70-130					

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL**Air Toxics by EPA Compendium Methods - Quality Control**

Analyte	ppbv Results	RL	ug/m3 Results	RL	Spike Level ppbv	Source Result	%REC %REC	RPD Limits	RPD RPD	RPD Limit	Flag/Qual
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Batch B138770 - TO-15 Prep

Duplicate (B138770-DUP1)	Source: 15L1060-08				Prepared: 12/28/15 Analyzed: 12/29/15						
Acetone	9.2	1.4	22	3.3		7.5			19.7	25	
Benzene	0.41	0.035	1.3	0.11		0.45			8.14	25	
Benzyl chloride	ND	0.035	ND	0.18		ND				25	
Bromodichloromethane	ND	0.035	ND	0.24		ND				25	
Bromoform	ND	0.035	ND	0.36		ND				25	
Bromomethane	ND	0.035	ND	0.14		ND				25	
1,3-Butadiene	0.17	0.035	0.37	0.078		0.10			48.2	25	R-01
2-Butanone (MEK)	0.71	1.4	2.1	4.1		0.68			4.13	25	
Carbon Disulfide	ND	0.35	ND	1.1		ND				25	
Carbon Tetrachloride	0.084	0.035	0.53	0.22		0.088			4.08	25	
Chlorobenzene	ND	0.035	ND	0.16		ND				25	
Chloroethane	ND	0.035	ND	0.093		ND				25	
Chloroform	0.064	0.035	0.31	0.17		0.063			1.10	25	
Chloromethane	0.92	0.070	1.9	0.14		0.57			46.2	25	R-01
Cyclohexane	0.15	0.035	0.51	0.12		0.17			15.8	25	
Dibromochloromethane	ND	0.035	ND	0.30		ND				25	
1,2-Dibromoethane (EDB)	ND	0.035	ND	0.27		ND				25	
1,2-Dichlorobenzene	ND	0.035	ND	0.21		ND				25	
1,3-Dichlorobenzene	ND	0.035	ND	0.21		ND				25	
1,4-Dichlorobenzene	ND	0.035	ND	0.21		ND				25	
Dichlorodifluoromethane (Freon 12)	0.58	0.035	2.8	0.17		0.54			7.06	25	
1,1-Dichloroethane	ND	0.035	ND	0.14		ND				25	
1,2-Dichloroethane	ND	0.035	ND	0.14		ND				25	
1,1-Dichloroethylene	ND	0.035	ND	0.14		ND				25	
cis-1,2-Dichloroethylene	ND	0.035	ND	0.14		ND				25	
trans-1,2-Dichloroethylene	ND	0.035	ND	0.14		ND				25	
1,2-Dichloropropane	ND	0.035	ND	0.16		ND				25	
cis-1,3-Dichloropropene	ND	0.035	ND	0.16		ND				25	
trans-1,3-Dichloropropene	ND	0.035	ND	0.16		ND				25	
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.035	ND	0.25		ND				25	
1,4-Dioxane	ND	0.35	ND	1.3		ND				25	
Ethanol	6.0	1.4	11	2.6		3.9			42.3	25	R-01
Ethyl Acetate	0.046	0.035	0.17	0.13		0.039			18.2	25	
Ethylbenzene	0.11	0.035	0.47	0.15		0.11			1.31	25	
4-Ethyltoluene	ND	0.035	ND	0.17		ND				25	
Heptane	0.10	0.035	0.43	0.14		0.12			14.4	25	
Hexachlorobutadiene	ND	0.035	ND	0.37		ND				25	
Hexane	0.20	1.4	0.72	4.9		0.18			11.3	25	
2-Hexanone (MBK)	ND	0.035	ND	0.14		ND				25	
Isopropanol	0.35	1.4	0.86	3.4		0.28			23.8	25	
Methyl tert-Butyl Ether (MTBE)	ND	0.035	ND	0.13		ND				25	
Methylene Chloride	0.16	0.35	0.56	1.2		0.16			4.42	25	
4-Methyl-2-pentanone (MIBK)	ND	0.035	ND	0.14		ND				25	
Naphthalene	ND	0.035	ND	0.18		ND				25	
Propene	ND	1.4	ND	2.4		ND				25	
Styrene	ND	0.035	ND	0.15		ND				25	



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Air Toxics by EPA Compendium Methods - Quality Control

Analyte	ppbv Results	RL	ug/m3 Results	RL	Spike Level ppbv	Source Result	%REC %REC	RPD Limits	RPD RPD	Flag/Qual
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Batch B138770 - TO-15 Prep

Duplicate (B138770-DUP1)		Source: 15L1060-08			Prepared: 12/28/15 Analyzed: 12/29/15					
1,1,2,2-Tetrachloroethane	ND	0.035	ND	0.24		ND				25
Tetrachloroethylene	0.098	0.035	0.67	0.24		0.090			8.96	25
Tetrahydrofuran	ND	0.035	ND	0.10		ND				25
Toluene	0.90	0.035	3.4	0.13		0.85			5.94	25
1,2,4-Trichlorobenzene	ND	0.035	ND	0.26		ND				25
1,1,1-Trichloroethane	ND	0.035	ND	0.19		ND				25
1,1,2-Trichloroethane	ND	0.035	ND	0.19		ND				25
Trichloroethylene	ND	0.035	ND	0.19		ND				25
Trichlorofluoromethane (Freon 11)	0.40	0.14	2.3	0.79		0.31			27.4	25
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.084	0.14	0.64	1.1		0.079			6.06	25
1,2,4-Trimethylbenzene	0.064	0.035	0.31	0.17		0.063			1.10	25
1,3,5-Trimethylbenzene	ND	0.035	ND	0.17		ND				25
Vinyl Acetate	ND	0.70	ND	2.5		ND				25
Vinyl Chloride	ND	0.035	ND	0.090		ND				25
m&p-Xylene	0.50	0.070	2.2	0.30		0.47			7.09	25
o-Xylene	0.15	0.035	0.66	0.15		0.14			10.7	25

Surrogate: 4-Bromofluorobenzene (l) 8.98 8.00 112 70-130



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

FLAG/QUALIFIER SUMMARY

* QC result is outside of established limits.

† Wide recovery limits established for difficult compound.

‡ Wide RPD limits established for difficult compound.

Data exceeded client recommended or regulatory level

RL Reporting Limit

DL Method Detection Limit

MCL Maximum Contaminant Level

Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.

No results have been blank subtracted unless specified in the case narrative section.

L-03 Laboratory fortified blank/laboratory control sample recovery is outside of control limits. Reported value for this compound is likely to be biased on the low side.

L-05 Laboratory fortified blank/laboratory control sample recovery is outside of control limits. Reported value for this compound is likely to be biased on the high side.

R-01 Duplicate RPD is outside of control limits. Reduced precision is anticipated for reported result.

V-05 Continuing calibration did not meet method specifications and was biased on the low side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the low side.

V-06 Continuing calibration did not meet method specifications and was biased on the high side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the high side.



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
EPA TO-15 in Air	
Acetone	AIHA,NY,ME
Benzene	AIHA,FL,NJ,NY,VA,ME
Benzyl chloride	AIHA,FL,NJ,NY,VA,ME
Bromodichloromethane	AIHA,NJ,NY,VA,ME
Bromoform	AIHA,NJ,NY,VA,ME
Bromomethane	AIHA,FL,NJ,NY,ME
1,3-Butadiene	AIHA,NJ,NY,VA,ME
2-Butanone (MEK)	AIHA,FL,NJ,NY,VA,ME
Carbon Disulfide	AIHA,NJ,NY,VA,ME
Carbon Tetrachloride	AIHA,FL,NJ,NY,VA,ME
Chlorobenzene	AIHA,FL,NJ,NY,VA,ME
Chloroethane	AIHA,FL,NJ,NY,VA,ME
Chloroform	AIHA,FL,NJ,NY,VA,ME
Chloromethane	AIHA,FL,NJ,NY,VA,ME
Cyclohexane	AIHA,NJ,NY,VA,ME
Dibromochloromethane	AIHA,NY,ME
1,2-Dibromoethane (EDB)	AIHA,NJ,NY,ME
1,2-Dichlorobenzene	AIHA,FL,NJ,NY,VA,ME
1,3-Dichlorobenzene	AIHA,NJ,NY,ME
1,4-Dichlorobenzene	AIHA,FL,NJ,NY,VA,ME
Dichlorodifluoromethane (Freon 12)	AIHA,NY,ME
1,1-Dichloroethane	AIHA,FL,NJ,NY,VA,ME
1,2-Dichloroethane	AIHA,FL,NJ,NY,VA,ME
1,1-Dichloroethylene	AIHA,FL,NJ,NY,VA,ME
cis-1,2-Dichloroethylene	AIHA,FL,NY,VA,ME
trans-1,2-Dichloroethylene	AIHA,NJ,NY,VA,ME
1,2-Dichloropropane	AIHA,FL,NJ,NY,VA,ME
cis-1,3-Dichloropropene	AIHA,FL,NJ,NY,VA,ME
trans-1,3-Dichloropropene	AIHA,NY,ME
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	AIHA,NJ,NY,VA,ME
1,4-Dioxane	AIHA,NJ,NY,VA,ME
Ethanol	AIHA
Ethyl Acetate	AIHA
Ethylbenzene	AIHA,FL,NJ,NY,VA,ME
4-Ethyltoluene	AIHA,NJ
Heptane	AIHA,NJ,NY,VA,ME
Hexachlorobutadiene	AIHA,NJ,NY,VA,ME
Hexane	AIHA,FL,NJ,NY,VA,ME
2-Hexanone (MBK)	AIHA
Isopropanol	AIHA,NY,ME
Methyl tert-Butyl Ether (MTBE)	AIHA,FL,NJ,NY,VA,ME
Methylene Chloride	AIHA,FL,NJ,NY,VA,ME
4-Methyl-2-pentanone (MIBK)	AIHA,FL,NJ,NY,ME
Naphthalene	NY,ME
Propene	AIHA
Styrene	AIHA,FL,NJ,NY,VA,ME
1,1,2,2-Tetrachloroethane	AIHA,FL,NJ,NY,VA,ME



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
EPA TO-15 in Air	
Tetrachloroethylene	AIHA,FL,NJ,NY,VA,ME
Tetrahydrofuran	AIHA
Toluene	AIHA,FL,NJ,NY,VA,ME
1,2,4-Trichlorobenzene	AIHA,NJ,NY,VA,ME
1,1,1-Trichloroethane	AIHA,FL,NJ,NY,VA,ME
1,1,2-Trichloroethane	AIHA,FL,NJ,NY,VA,ME
Trichloroethylene	AIHA,FL,NJ,NY,VA,ME
Trichlorofluoromethane (Freon 11)	AIHA,NY,ME
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	AIHA,NJ,NY,VA,ME
1,2,4-Trimethylbenzene	AIHA,NJ,NY,ME
1,3,5-Trimethylbenzene	AIHA,NJ,NY,ME
Vinyl Acetate	AIHA,FL,NJ,NY,VA,ME
Vinyl Chloride	AIHA,FL,NJ,NY,VA,ME
m&p-Xylene	AIHA,FL,NJ,NY,VA,ME
o-Xylene	AIHA,FL,NJ,NY,VA,ME

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC	100033	02/1/2016
MA	Massachusetts DEP	M-MA100	06/30/2016
CT	Connecticut Department of Public Health	PH-0567	09/30/2017
NY	New York State Department of Health	10899 NELAP	04/1/2016
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2016
RI	Rhode Island Department of Health	LAO00112	12/30/2015
NC	North Carolina Div. of Water Quality	652	12/31/2016
NJ	New Jersey DEP	MA007 NELAP	06/30/2016
FL	Florida Department of Health	E871027 NELAP	06/30/2016
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2016
WA	State of Washington Department of Ecology	C2065	02/23/2016
ME	State of Maine	2011028	06/9/2017
VA	Commonwealth of Virginia	460217	12/14/2016
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2016



Phone: 413-525-2332 AIR SAMPLE CHAIN OF CUSTODY
RECORD Fax: 413-525-6405 Email: info@contestlabs.com

39 SPRUCE ST
EAST LONGMEADOW, MA 01028
151000

Page 2 of 2
DOC#284
Rev. Feb 2014

Company Name: Amec Foster Wheeler
Address: 271 Mill Rd.
Chesterfield, MA 01825

Attention: David Heileman
Mark Messinger
Project Location: Providence, RI
Massachusetts
Sampled By:

yes
Proposal Provided? (For Billing purposes)

Telephone: 339-917-3747
Project # 3C52150001
Client PO # C012206368

Fax #: 508-452-1500
Email: mark.messinger@amec.com

DATA DELIVERY (check one):
 FAX EMAIL WEBSITE CLIENT EPP

Format: EXCEL PDF GIS KEY OTHER

Date Sampled ONLY USE WHEN USING PUMPS

Field ID	Sample Description	Media Lab #	Start Date Time	Stop Date Time	Total Minutes Sampled	Flow Rate M ³ /Min	Volume Liters or M ³	Matrix Code
Ew-5-121815	S SG	807	12-18-15 03:27	12-18-15 03:32	30	200	6	SS X
Ew-6-121815	S 10	859	12-18-15 03:25	12-18-15 03:25	30	200	6	SS X
Ew-7-121815	S 11	927	12-18-15 03:57	12-18-15 03:57	30	200	6	SS Y
Ew- Combined-wells	S 12	813	12-18-15 03:43	12-18-15 03:43	30	200	6	SS Y

Laboratory Comments:

CLIENT COMMENTS:

Relinquished by: (signature)	Date/Time:	Turnaround**	Special Requirements	Matrix Code
Received by: (signature)	12/18/15 11:11	<input type="checkbox"/> 7-Day <input type="checkbox"/> 10-Day <input type="checkbox"/> Other _____	Regulations: <input checked="" type="checkbox"/> C5 <input type="checkbox"/> Data Enhancement/RCP? <input type="checkbox"/> Y <input checked="" type="checkbox"/> N <input type="checkbox"/> Enhanced Data Package <input type="checkbox"/> Y <input checked="" type="checkbox"/> N (Surcharge Applies) RUSH: <input type="checkbox"/> 24-Hr <input type="checkbox"/> 48-Hr <input type="checkbox"/> 72-Hr <input type="checkbox"/> 4-Day Approval Required _____	"Media Codes: SG = SOIL GAS IA= INDOOR AIR AMB=AMBIENT SS = SUB SLAB D = DUP BL = BLANK O = other 0 = Other
Relinquished by: (signature)	12/18/15 11:11		Required Detection Limits: CT Other: _____	
Received by: (signature)	12/18/15 11:11			
Received by: (signature)	12/18/15 11:11			

TURNAROUND TIME STARTS AT 9:00 AM THE DAY AFTER SAMPLE RECEIPT UNLESS THERE ARE QUESTIONS ON YOUR CHAN. IF THIS FORM IS NOT FILLED OUT COMPLETELY OR IS CORRECT, TURNAROUND TIME WILL NOT START UNTIL ALL QUESTIONS ARE ANSWERED BY OUR CLIENT. NELAC & AIHA-LAP, LLC Accredited/WBE/DBE Certified



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Page 1 of 2

39 Spruce St.
East Longmeadow, MA.
01028
P: 413-525-2332
F: 413-525-6405

AIR Only Receipt Checklist

CLIENT NAME: Amec

RECEIVED BY: PLF

DATE: 12/18/15

1) Was the chain(s) of custody relinquished and signed? Yes No

2) Does the chain agree with the samples?

If not, explain:

3) Are all the samples in good condition?

If not, explain:

4) Are there any samples "On Hold"?

Yes No Stored where:

5) Are there any RUSH or SHORT HOLDING TIME samples?

Yes No

Who was notified _____ Date _____ Time _____

6) Location where samples are stored:

Air lab

Permission to subcontract samples? Yes No

(Walk-in clients only) if not already approved

Client Signature: _____

7) Number of cans Individually Certified or Batch Certified? None

Containers received at Con-Test

		# of Containers	Types (Size, Duration)
Summa Cans (TO-14/TO-15/APH)		13	6L
Tedlar Bags			
TO-17 Tubes			
Regulators		13	30 mm
Restrictors			
Hg/Hopcalite Tube (NIOSH 6009) (TO-4A/ TO-10A/TO-13) PUFs			
PCB Florisil Tubes (NIOSH 5503)			
Air cassette			
PM 2.5/PM 10			
TO-11A Cartridges			
Other			

Unused Summas/PUF Media:

2178 (-09.4)

Unused Regulators:

4042

1) Was all media (used & unused) checked into the WASP?

2) Were all returned summa cans, Restrictors & Regulators and PUF's documented as returned in the Air Lab Inbound/Outbound Excel Spreadsheet?

Laboratory Comments:

1018 1077 1941 1831 1955
1858 1948 1343 1907 1071

4039	4107	4177	4069	4255
4010	4011	4001	4004	4072

1084 1630

4066 4073

Doc # 278 Rev. 5 October 2014

Page 42 of 43

Page 2 of 2

Login Sample Receipt Checklist(Rejection Criteria Listing - Using Sample Acceptance Policy)Any False statement will be brought to the attention of Client

<u>Question</u>	<u>Answer (True/False)</u>	<u>Comment</u>
	T/F/NA	
1) The coolers'/boxes' custody seal, if present, is intact.	T	
2) The cooler or samples do not appear to have been compromised or tampered with.	T	
3) Samples were received on ice.	NA	
4) Cooler Temperature is acceptable.	NA	
5) Cooler Temperature is recorded.	NA	
6) COC is filled out in ink and legible.	T	
7) COC is filled out with all pertinent information.	T	
8) Field Sampler's name present on COC.	T	
9) Samples are received within Holding Time.	T	
10) Sample containers have legible labels.	T	
11) Containers/media are not broken or leaking and valves and caps are closed tightly.	T	
12) Sample collection date/times are provided.	T	
13) Appropriate sample/media containers are used.	T	
14) There is sufficient volume for all requested analyses, including any requested MS/MSDs.	T	
15) Trip blanks provided if applicable.	T	

Who notified of False statements?

Date/Time:

Doc #278 Rev. 5 October 2014

Log-In Technician Initials:

Date/Time:

RLF 12/18/15 1700

nut/female set? 4

tubing: 4 ft

APPENDIX B

Con-Test Analytical Laboratory

1/30/2015

Analytical Method Information

Analyte	MDL	Reporting Limit	Surrogate %R	Duplicate RPD	Matrix Spike %R	Blank Spike / LCS %R	Blank Spike / LCS RPD
TO-15 ppbv low level in Air (EPA TO-15)							
Preservation: NA							
Container: SUMMA Canister			Amount Required:		Hold Time: 30 days		
Acetone	0.69	2.0 ppbv		25		70 - 130	
Benzene	0.026	0.050 ppbv		25		70 - 130	
Benzyl chloride	0.0097	0.050 ppbv		25		70 - 130	
Bromodichloromethane	0.011	0.050 ppbv		25		70 - 130	
Bromoform	0.0096	0.050 ppbv		25		70 - 130	
Bromomethane	0.034	0.050 ppbv		25		70 - 130	
1,3-Butadiene	0.026	0.050 ppbv		25		70 - 130	
2-Butanone (MEK)	0.037	2.0 ppbv		25		70 - 130	
Carbon Disulfide	0.017	0.50 ppbv		25		70 - 130	
Carbon Tetrachloride	0.012	0.050 ppbv		25		70 - 130	
Chlorobenzene	0.017	0.050 ppbv		25		70 - 130	
Chloroethane	0.019	0.050 ppbv		25		70 - 130	
Chloroform	0.012	0.050 ppbv		25		70 - 130	
Chloromethane	0.022	0.10 ppbv		25		70 - 130	
Cyclohexane	0.029	0.050 ppbv		25		70 - 130	
Dibromochloromethane	0.013	0.050 ppbv		25		70 - 130	
1,2-Dibromoethane (EDB)	0.011	0.050 ppbv		25		70 - 130	
1,2-Dichlorobenzene	0.013	0.050 ppbv		25		70 - 130	
1,3-Dichlorobenzene	0.011	0.050 ppbv		25		70 - 130	
1,4-Dichlorobenzene	0.013	0.050 ppbv		25		70 - 130	
Dichlorodifluoromethane (Freon 12)	0.022	0.050 ppbv		25		70 - 130	
1,1-Dichloroethane	0.014	0.050 ppbv		25		70 - 130	
1,2-Dichloroethane	0.014	0.050 ppbv		25		70 - 130	
1,1-Dichloroethylene	0.012	0.050 ppbv		25		70 - 130	
cis-1,2-Dichloroethylene	0.019	0.050 ppbv		25		70 - 130	
trans-1,2-Dichloroethylene	0.013	0.050 ppbv		25		70 - 130	
1,2-Dichloropropane	0.017	0.050 ppbv		25		70 - 130	
cis-1,3-Dichloropropene	0.013	0.050 ppbv		25		70 - 130	
trans-1,3-Dichloropropene	0.013	0.050 ppbv		25		70 - 130	
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	0.012	0.050 ppbv		25		70 - 130	
1,4-Dioxane	0.32	0.50 ppbv		25		70 - 130	
Ethanol	0.89	2.0 ppbv		25		70 - 130	
Ethyl Acetate	0.037	0.050 ppbv		25		70 - 130	
Ethylbenzene	0.014	0.050 ppbv		25		70 - 130	
4-Ethyltoluene	0.011	0.050 ppbv		25		70 - 130	
Heptane	0.016	0.050 ppbv		25		70 - 130	
Hexachlorobutadiene	0.019	0.050 ppbv		25		70 - 130	
Hexane	0.088	2.0 ppbv		25		70 - 130	
2-Hexanone (MBK)	0.013	0.050 ppbv		25		70 - 130	
Isopropanol	0.061	2.0 ppbv		25		70 - 130	
Methyl tert-Butyl Ether (MTBE)	0.015	0.050 ppbv		25		70 - 130	
Methylene Chloride	0.061	0.50 ppbv		25		70 - 130	
4-Methyl-2-pentanone (MIBK)	0.012	0.050 ppbv		25		70 - 130	
Naphthalene	0.027	0.050 ppbv		25		70 - 130	
Propene	0.15	2.0 ppbv		25		70 - 130	
Styrene	0.0097	0.050 ppbv		25		70 - 130	

Con-Test Analytical Laboratory

1/30/2015

Analytical Method Information

Analyte	MDL	Reporting Limit	Surrogate %R	Duplicate RPD	Matrix Spike %R	Blank Spike / LCS %R	RPD
1,1,2,2-Tetrachloroethane	0.012	0.050 ppbv		25		70 - 130	
Tetrachloroethylene	0.014	0.050 ppbv		25		70 - 130	
Tetrahydrofuran	0.021	0.050 ppbv		25		70 - 130	
Toluene	0.016	0.050 ppbv		25		70 - 130	
1,2,4-Trichlorobenzene	0.019	0.050 ppbv		25		70 - 130	
1,1,1-Trichloroethane	0.0090	0.050 ppbv		25		70 - 130	
1,1,2-Trichloroethane	0.015	0.050 ppbv		25		70 - 130	
Trichloroethylene	0.015	0.050 ppbv		25		70 - 130	
Trichlorofluoromethane (Freon 11)	0.017	0.050 ppbv		25		70 - 130	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freo	0.014	0.050 ppbv		25		70 - 130	
1,2,4-Trimethylbenzene	0.012	0.050 ppbv		25		70 - 130	
1,3,5-Trimethylbenzene	0.010	0.050 ppbv		25		70 - 130	
Vinyl Acetate	0.025	1.0 ppbv		25		70 - 130	
Vinyl Chloride	0.021	0.050 ppbv		25		70 - 130	
m&p-Xylene	0.025	0.10 ppbv		25		70 - 130	
o-Xylene	0.014	0.050 ppbv		25		70 - 130	
surr: 4-Bromofluorobenzene (1)			70 - 130				
Bromochloromethane (1)							
1,4-Difluorobenzene (1)							
Chlorobenzene-d5 (1)							